



# Full wwPDB X-ray Structure Validation Report ⓘ

Mar 15, 2026 – 02:39 PM UTC

PDB ID : 4V4Y / pdb\_00004v4y  
Title : Crystal structure of the 70S *Thermus thermophilus* ribosome with translocated and rotated Shine-Dalgarno Duplex.  
Authors : Jenner, L.; Yusupova, G.; Rees, B.; Moras, D.; Yusupov, M.  
Deposited on : 2006-06-27  
Resolution : 5.50 Å (reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

---

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

|                                |   |                                                                  |
|--------------------------------|---|------------------------------------------------------------------|
| MolProbity                     | : | 4-5-2 with Phenix2.0                                             |
| Xtriage (Phenix)               | : | 2.0                                                              |
| EDS                            | : | 3.0                                                              |
| Percentile statistics          | : | 20250101.v01 (using entries in the PDB archive January 1st 2025) |
| CCP4                           | : | 9.0.010 (Gargrove)                                               |
| Density-Fitness                | : | 1.0.12                                                           |
| Ideal geometry (proteins)      | : | Engh & Huber (2001)                                              |
| Ideal geometry (DNA, RNA)      | : | Parkinson et al. (1996)                                          |
| Validation Pipeline (wwPDB-VP) | : | 2.49                                                             |

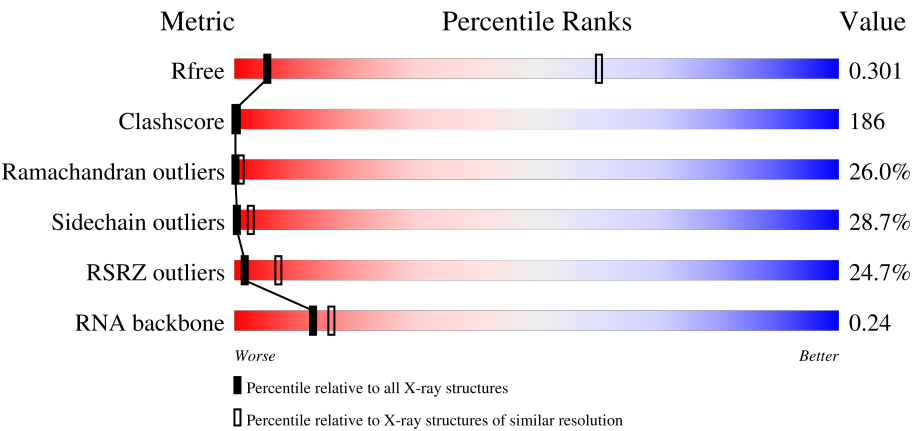
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 5.50 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



| Metric                | Whole archive<br>(#Entries) | Similar resolution<br>(#Entries, resolution range(Å)) |
|-----------------------|-----------------------------|-------------------------------------------------------|
| R <sub>free</sub>     | 180053                      | 1088 (7.00-4.00)                                      |
| Clashscore            | 190562                      | 1147 (7.00-4.00)                                      |
| Ramachandran outliers | 187476                      | 1012 (7.02-3.98)                                      |
| Sidechain outliers    | 187428                      | 1023 (7.04-3.96)                                      |
| RSRZ outliers         | 180081                      | 1081 (7.00-4.00)                                      |
| RNA backbone          | 3983                        | 1052 (7.80-3.10)                                      |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain                                                                                      |
|-----|-------|--------|-------------------------------------------------------------------------------------------------------|
| 1   | AA    | 1522   | <div><div>13%</div><div><div></div><div>57%</div><div>32%</div><div>9%</div></div><div></div></div>   |
| 2   | A1    | 50     | <div><div>76%</div><div><div></div><div>50%</div><div>38%</div><div>10%</div></div><div></div></div>  |
| 3   | AB    | 76     | <div><div>71%</div><div><div>7%</div><div>49%</div><div>37%</div><div>8%</div></div><div></div></div> |
| 3   | AC    | 76     | <div><div>5%</div><div><div></div><div>59%</div><div>34%</div><div>7%</div></div><div></div></div>    |

Continued on next page...

Continued from previous page...

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 3   | AD    | 76     |                  |
| 4   | AE    | 256    |                  |
| 5   | AF    | 239    |                  |
| 6   | AG    | 209    |                  |
| 7   | AH    | 162    |                  |
| 8   | AI    | 101    |                  |
| 9   | AJ    | 156    |                  |
| 10  | AK    | 138    |                  |
| 11  | AL    | 128    |                  |
| 12  | AM    | 105    |                  |
| 13  | AN    | 129    |                  |
| 14  | AO    | 132    |                  |
| 15  | AP    | 126    |                  |
| 16  | AQ    | 61     |                  |
| 17  | AR    | 89     |                  |
| 18  | AS    | 88     |                  |
| 19  | AT    | 105    |                  |
| 20  | AU    | 88     |                  |
| 21  | AV    | 93     |                  |
| 22  | AW    | 106    |                  |
| 23  | AX    | 27     |                  |
| 24  | BA    | 2916   |                  |
| 25  | BB    | 123    |                  |
| 26  | BC    | 229    |                  |
| 27  | BD    | 276    |                  |

Continued on next page...

Continued from previous page...

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 28  | BE    | 206    |                  |
| 29  | BF    | 210    |                  |
| 30  | BG    | 182    |                  |
| 31  | BH    | 180    |                  |
| 32  | BK    | 148    |                  |
| 33  | BL    | 147    |                  |
| 34  | BM    | 140    |                  |
| 35  | BN    | 122    |                  |
| 36  | BO    | 150    |                  |
| 37  | BP    | 141    |                  |
| 38  | BQ    | 118    |                  |
| 39  | BR    | 112    |                  |
| 40  | BS    | 146    |                  |
| 41  | BT    | 118    |                  |
| 42  | BU    | 101    |                  |
| 43  | BV    | 113    |                  |
| 44  | BW    | 96     |                  |
| 45  | BX    | 110    |                  |
| 46  | BY    | 206    |                  |
| 47  | BZ    | 85     |                  |
| 48  | B1    | 67     |                  |
| 49  | B2    | 60     |                  |
| 50  | B3    | 71     |                  |
| 51  | B4    | 60     |                  |
| 52  | B5    | 54     |                  |

Continued on next page...

Continued from previous page...

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 53  | B6    | 49     |                  |
| 54  | B7    | 65     |                  |
| 55  | B8    | 37     |                  |

## 2 Entry composition

There are 55 unique types of molecules in this entry. The entry contains 151691 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 16S ribosomal RNA.

| Mol | Chain | Residues | Atoms |       |      |       |      | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-------|------|-------|------|---------|---------|-------|
| 1   | AA    | 1515     | Total | C     | N    | O     | P    | 0       | 0       | 0     |
|     |       |          | 32554 | 14490 | 6022 | 10527 | 1515 |         |         |       |

- Molecule 2 is a RNA chain called mRNA.

| Mol | Chain | Residues | Atoms |     |     |     |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|----|---------|---------|-------|
| 2   | A1    | 50       | Total | C   | N   | O   | P  | 0       | 0       | 0     |
|     |       |          | 1025  | 459 | 128 | 388 | 50 |         |         |       |

- Molecule 3 is a RNA chain called tRNA PHE (unmodified bases).

| Mol | Chain | Residues | Atoms |     |     |     |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|----|---------|---------|-------|
| 3   | AC    | 76       | Total | C   | N   | O   | P  | 0       | 0       | 0     |
|     |       |          | 1623  | 723 | 290 | 534 | 76 |         |         |       |
| 3   | AD    | 76       | Total | C   | N   | O   | P  | 0       | 0       | 0     |
|     |       |          | 1623  | 723 | 290 | 534 | 76 |         |         |       |
| 3   | AB    | 76       | Total | C   | N   | O   | P  | 0       | 0       | 0     |
|     |       |          | 1623  | 723 | 290 | 534 | 76 |         |         |       |

- Molecule 4 is a protein called 30S ribosomal protein S2.

| Mol | Chain | Residues | Atoms |      |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 4   | AE    | 234      | Total | C    | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1900  | 1213 | 341 | 341 | 5 |         |         |       |

- Molecule 5 is a protein called 30S ribosomal protein S3.

| Mol | Chain | Residues | Atoms |      |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 5   | AF    | 206      | Total | C    | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1612  | 1016 | 314 | 281 | 1 |         |         |       |

- Molecule 6 is a protein called 30S ribosomal protein S4.

| Mol | Chain | Residues | Atoms |      |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 6   | AG    | 208      | Total | C    | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1703  | 1066 | 339 | 291 | 7 |         |         |       |

- Molecule 7 is a protein called 30S ribosomal protein S5.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 7   | AH    | 150      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1146  | 724 | 217 | 201 | 4 |         |         |       |

- Molecule 8 is a protein called 30S ribosomal protein S6.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 8   | AI    | 101      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 843   | 531 | 155 | 154 | 3 |         |         |       |

- Molecule 9 is a protein called 30S ribosomal protein S7.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 9   | AJ    | 155      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1257  | 781 | 252 | 218 | 6 |         |         |       |

- Molecule 10 is a protein called 30S ribosomal protein S8.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 10  | AK    | 138      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1116  | 705 | 215 | 193 | 3 |         |         |       |

- Molecule 11 is a protein called 30S ribosomal protein S9.

| Mol | Chain | Residues | Atoms |     |     |     |  | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|--|---------|---------|-------|
| 11  | AL    | 127      | Total | C   | N   | O   |  | 0       | 0       | 0     |
|     |       |          | 1010  | 639 | 197 | 174 |  |         |         |       |

- Molecule 12 is a protein called 30S ribosomal protein S10.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 12  | AM    | 98       | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 794   | 499 | 156 | 138 | 1 |         |         |       |

- Molecule 13 is a protein called 30S ribosomal protein S11.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 13  | AN    | 119      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 885   | 549 | 168 | 165 | 3 |         |         |       |

- Molecule 14 is a protein called 30S ribosomal protein S12.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 14  | AO    | 124      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 970   | 611 | 195 | 163 | 1 |         |         |       |

- Molecule 15 is a protein called 30S ribosomal protein S13.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 15  | AP    | 125      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 997   | 617 | 207 | 171 | 2 |         |         |       |

- Molecule 16 is a protein called 30S ribosomal protein S14.

| Mol | Chain | Residues | Atoms |     |     |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---|---------|---------|-------|
| 16  | AQ    | 60       | Total | C   | N   | O  | S | 0       | 0       | 0     |
|     |       |          | 492   | 312 | 104 | 72 | 4 |         |         |       |

- Molecule 17 is a protein called 30S ribosomal protein S15.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 17  | AR    | 88       | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 734   | 459 | 147 | 126 | 2 |         |         |       |

- Molecule 18 is a protein called 30S ribosomal protein S16.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 18  | AS    | 83       | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 700   | 443 | 139 | 117 | 1 |         |         |       |

- Molecule 19 is a protein called 30S ribosomal protein S17.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 19  | AT    | 104      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 857   | 547 | 161 | 147 | 2 |         |         |       |

- Molecule 20 is a protein called 30S ribosomal protein S18.

| Mol | Chain | Residues | Atoms |     |     |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---------|---------|-------|
| 20  | AU    | 73       | Total | C   | N   | O  | 0       | 0       | 0     |
|     |       |          | 597   | 380 | 118 | 99 |         |         |       |

- Molecule 21 is a protein called 30S ribosomal protein S19.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 21  | AV    | 80       | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 647   | 414 | 119 | 112 | 2 |         |         |       |

- Molecule 22 is a protein called 30S ribosomal protein S20.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 22  | AW    | 99       | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 763   | 470 | 162 | 129 | 2 |         |         |       |

- Molecule 23 is a protein called 30S ribosomal protein Thx.

| Mol | Chain | Residues | Atoms |     |    |    | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 23  | AX    | 24       | Total | C   | N  | O  | 0       | 0       | 0     |
|     |       |          | 208   | 128 | 50 | 30 |         |         |       |

- Molecule 24 is a RNA chain called 23S ribosomal RNA.

| Mol | Chain | Residues | Atoms |       |       |       |      | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-------|-------|-------|------|---------|---------|-------|
| 24  | BA    | 2889     | Total | C     | N     | O     | P    | 0       | 0       | 0     |
|     |       |          | 62218 | 27691 | 11629 | 20009 | 2889 |         |         |       |

There is a discrepancy between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment   | Reference |
|-------|---------|----------|--------|-----------|-----------|
| BA    | 493     | G        | -      | insertion | GB 48268  |

- Molecule 25 is a RNA chain called 5S ribosomal RNA.

| Mol | Chain | Residues | Atoms |      |     |     |     | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|-----|---------|---------|-------|
| 25  | BB    | 123      | Total | C    | N   | O   | P   | 0       | 0       | 0     |
|     |       |          | 2641  | 1175 | 488 | 855 | 123 |         |         |       |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment   | Reference |
|-------|---------|----------|--------|-----------|-----------|
| BB    | -1      | A        | -      | insertion | GB 48271  |

*Continued on next page...*

*Continued from previous page...*

| Chain | Residue | Modelled | Actual | Comment   | Reference |
|-------|---------|----------|--------|-----------|-----------|
| BB    | 120     | U        | -      | insertion | GB 48271  |

- Molecule 26 is a protein called 50S ribosomal protein L1.

| Mol | Chain | Residues | Atoms |      |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 26  | BC    | 228      | Total | C    | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1742  | 1102 | 318 | 319 | 3 |         |         |       |

- Molecule 27 is a protein called 50S ribosomal protein L2.

| Mol | Chain | Residues | Atoms |      |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 27  | BD    | 272      | Total | C    | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 2124  | 1339 | 424 | 358 | 3 |         |         |       |

- Molecule 28 is a protein called 50S ribosomal protein L3.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 28  | BE    | 206      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1578  | 997 | 302 | 273 | 6 |         |         |       |

- Molecule 29 is a protein called 50S ribosomal protein L4.

| Mol | Chain | Residues | Atoms |      |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| 29  | BF    | 208      | Total | C    | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1625  | 1034 | 303 | 286 | 2 |         |         |       |

- Molecule 30 is a protein called 50S ribosomal protein L5.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 30  | BG    | 182      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1482  | 947 | 269 | 261 | 5 |         |         |       |

- Molecule 31 is a protein called 50S ribosomal protein L6.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 31  | BH    | 174      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1328  | 844 | 248 | 235 | 1 |         |         |       |

- Molecule 32 is a protein called 50S ribosomal protein L9.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 32  | BK    | 148      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1155  | 737 | 205 | 212 | 1 |         |         |       |

- Molecule 33 is a protein called 50S ribosomal protein L11.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 33  | BL    | 138      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1025  | 654 | 181 | 185 | 5 |         |         |       |

- Molecule 34 is a protein called 50S ribosomal protein L13.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 34  | BM    | 139      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1113  | 717 | 207 | 186 | 3 |         |         |       |

- Molecule 35 is a protein called 50S ribosomal protein L14.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 35  | BN    | 122      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 932   | 587 | 171 | 170 | 4 |         |         |       |

- Molecule 36 is a protein called 50S ribosomal protein L15.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 36  | BO    | 145      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1106  | 688 | 226 | 190 | 2 |         |         |       |

- Molecule 37 is a protein called 50S ribosomal protein L16.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 37  | BP    | 136      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1080  | 688 | 204 | 183 | 5 |         |         |       |

- Molecule 38 is a protein called 50S ribosomal protein L17.

| Mol | Chain | Residues | Atoms |     |     |     | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 38  | BQ    | 117      | Total | C   | N   | O   | 0       | 0       | 0     |
|     |       |          | 960   | 599 | 202 | 159 |         |         |       |

- Molecule 39 is a protein called 50S ribosomal protein L18.

| Mol | Chain | Residues | Atoms |     |     |     | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 39  | BR    | 110      | Total | C   | N   | O   |         |         |       |
|     |       |          | 877   | 553 | 175 | 149 | 0       | 0       | 0     |

- Molecule 40 is a protein called 50S ribosomal protein L19.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 40  | BS    | 117      | Total | C   | N   | O   | S |         |         |       |
|     |       |          | 976   | 614 | 197 | 164 | 1 | 0       | 0       | 0     |

- Molecule 41 is a protein called 50S ribosomal protein L20.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 41  | BT    | 117      | Total | C   | N   | O   | S |         |         |       |
|     |       |          | 964   | 610 | 202 | 151 | 1 | 0       | 0       | 0     |

- Molecule 42 is a protein called 50S ribosomal protein L21.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 42  | BU    | 101      | Total | C   | N   | O   | S |         |         |       |
|     |       |          | 779   | 501 | 142 | 135 | 1 | 0       | 0       | 0     |

- Molecule 43 is a protein called 50S ribosomal protein L22.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 43  | BV    | 110      | Total | C   | N   | O   | S |         |         |       |
|     |       |          | 876   | 552 | 171 | 151 | 2 | 0       | 0       | 0     |

- Molecule 44 is a protein called 50S ribosomal protein L23.

| Mol | Chain | Residues | Atoms |     |     |     | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 44  | BW    | 94       | Total | C   | N   | O   |         |         |       |
|     |       |          | 742   | 483 | 133 | 126 | 0       | 0       | 0     |

- Molecule 45 is a protein called 50S ribosomal protein L24.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 45  | BX    | 110      | Total | C   | N   | O   | S |         |         |       |
|     |       |          | 844   | 539 | 158 | 141 | 6 | 0       | 0       | 0     |

- Molecule 46 is a protein called 50S ribosomal protein L25.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 46  | BY    | 180      | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 1435  | 916 | 256 | 260 | 3 |         |         |       |

- Molecule 47 is a protein called Ribosomal protein L27.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 47  | BZ    | 85       | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 670   | 415 | 141 | 112 | 2 |         |         |       |

- Molecule 48 is a protein called 50S ribosomal protein L29.

| Mol | Chain | Residues | Atoms |     |     |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---|---------|---------|-------|
| 48  | B1    | 67       | Total | C   | N   | O  | S | 0       | 0       | 0     |
|     |       |          | 567   | 350 | 116 | 99 | 2 |         |         |       |

- Molecule 49 is a protein called 50S ribosomal protein L30.

| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 49  | B2    | 59       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 469   | 298 | 90 | 81 |   |         |         |       |

- Molecule 50 is a protein called 50S ribosomal protein L31.

| Mol | Chain | Residues | Atoms |     |     |     |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 50  | B3    | 71       | Total | C   | N   | O   | S | 0       | 0       | 0     |
|     |       |          | 581   | 364 | 108 | 104 | 5 |         |         |       |

- Molecule 51 is a protein called 50S ribosomal protein L32.

| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 51  | B4    | 57       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 445   | 279 | 87 | 74 | 5 |         |         |       |

- Molecule 52 is a protein called 50S ribosomal protein L33.

| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 52  | B5    | 49       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 426   | 265 | 87 | 70 | 4 |         |         |       |

- Molecule 53 is a protein called 50S ribosomal protein L34.

| Mol | Chain | Residues | Atoms |     |     |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---|---------|---------|-------|
| 53  | B6    | 49       | Total | C   | N   | O  | S | 0       | 0       | 0     |
|     |       |          | 430   | 263 | 108 | 57 | 2 |         |         |       |

- Molecule 54 is a protein called 50S ribosomal protein L35.

| Mol | Chain | Residues | Atoms |     |     |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|----|---|---------|---------|-------|
| 54  | B7    | 64       | Total | C   | N   | O  | S | 0       | 0       | 0     |
|     |       |          | 515   | 331 | 102 | 79 | 3 |         |         |       |

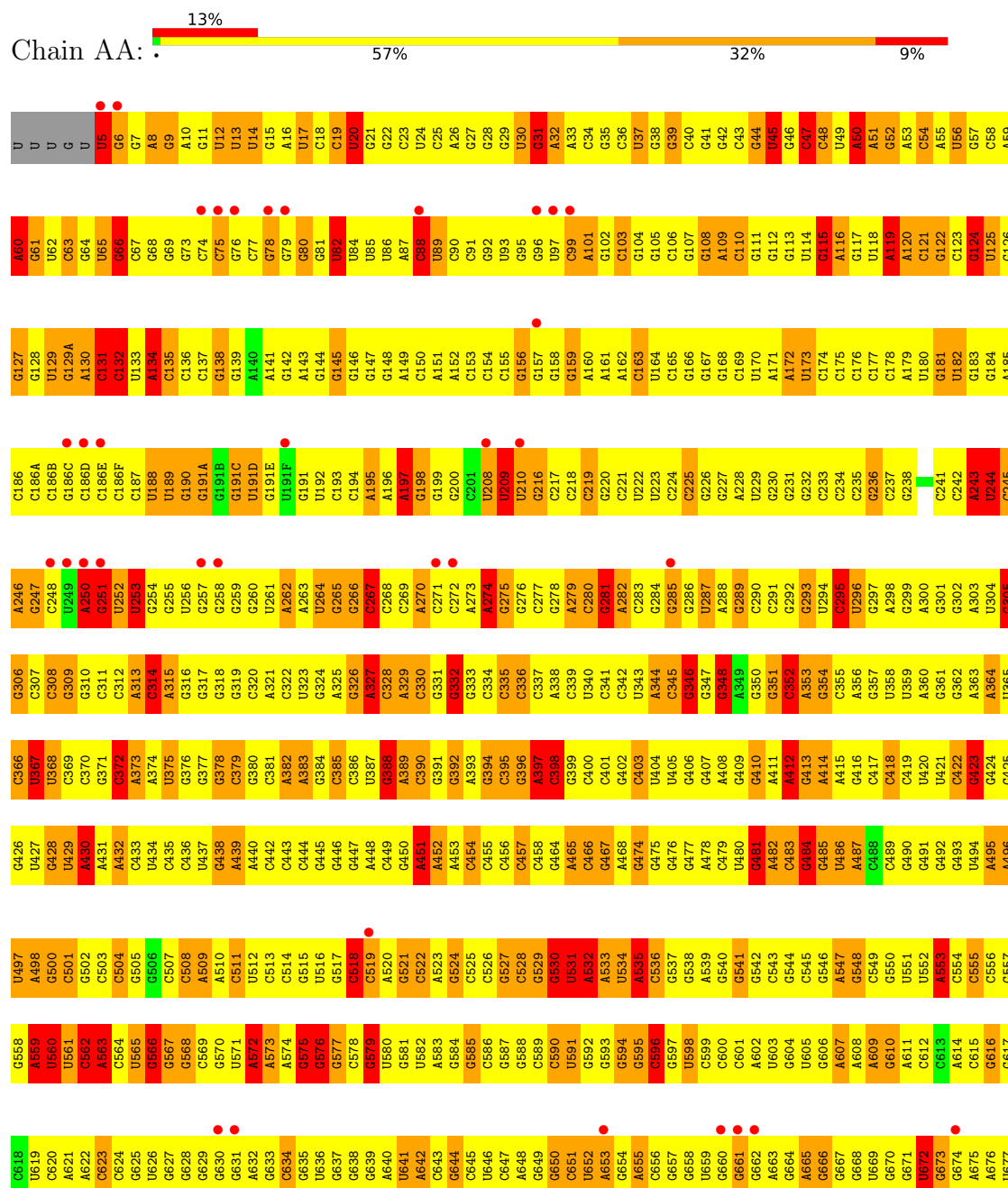
- Molecule 55 is a protein called 50S ribosomal protein L36.

| Mol | Chain | Residues | Atoms |     |    |    |   | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 55  | B8    | 37       | Total | C   | N  | O  | S | 0       | 0       | 0     |
|     |       |          | 307   | 188 | 68 | 47 | 4 |         |         |       |

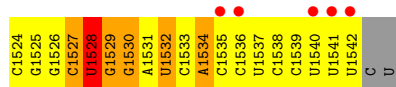
### 3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

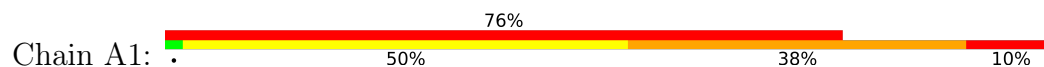
#### • Molecule 1: 16S ribosomal RNA



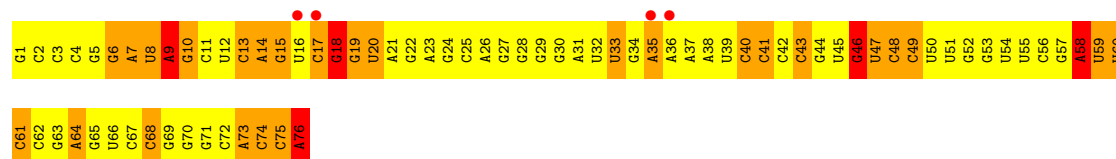
|       |       |       |       |       |       |       |        |      |      |      |      |      |
|-------|-------|-------|-------|-------|-------|-------|--------|------|------|------|------|------|
| G1464 | C1389 | A1340 | G1220 | U1159 | G1099 | C1039 | C984   | C924 | A864 | G798 | C738 | U678 |
| C1465 | C1400 | U1341 | G1221 | G1160 | C1100 | U1040 | C985   | G925 | A865 | G799 | C739 | C679 |
| C1466 | C1282 | C1342 | G1222 | C1161 | A1101 | A1041 | A986   | G926 | C866 | G800 | U740 | C680 |
| C1467 | C1283 | C1343 | C1223 | C1162 | A1102 | G1042 | G987   | G927 | G867 | U801 | G741 | C681 |
| C1468 | C1284 | C1344 | C1224 | C1163 | G1103 | A1043 | C988   | G928 | C868 | G803 | G742 | G682 |
| C1469 | C1403 | U1345 | A1285 | G1164 | G1104 | G1044 | C989   | G929 | G869 | G803 | U743 | G683 |
| G1470 | C1404 | A1286 | C1226 | C1165 | A1105 | C1045 | C990   | C930 | U870 | U804 | C744 | A684 |
| A1346 | A1287 | A1287 | A1227 | G1166 | A1106 | A1046 | U991   | C931 | U871 | C805 | C745 | G685 |
| G1347 | A1288 | A1288 | C1228 | A1167 | G1107 | G1047 | U992   | C932 | A872 | C806 | C746 | U686 |
| U1348 | A1289 | A1289 | A1229 | C1168 | G1108 | U1048 | A993   | G933 | A873 | C807 | C747 | A687 |
| A1473 | G1290 | A1349 | C1230 | A1170 | C1109 | U1049 | A994   | C934 | G874 | C808 | C748 | C688 |
| A1408 | G1291 | A1350 | C1231 | G1171 | A1110 | G1050 | A995   | A935 | C875 | G809 | C749 | C689 |
| A1409 | G1292 | U1351 | U1232 | C1172 | A1111 | C1051 | A996   | C936 | G876 | C810 | G750 | G690 |
| A1410 | U1293 | C1352 | G1233 | G1173 | C1112 | U1052 | U997   | A937 | C877 | C811 | U751 | G691 |
| A1411 | G1294 | G1353 | C1234 | G1174 | C1113 | G1053 | C998   | A938 | C878 | C812 | G752 | U692 |
| A1412 | G1295 | C1354 | U1235 | G1175 | C1114 | C1054 | C999   | A939 | C879 | C813 | A753 | U693 |
| A1413 | C1296 | G1355 | A1236 | A1176 | C1115 | A1055 | U999   | C940 | C880 | A814 | C754 | A694 |
| U1414 | G1297 | G1356 | C1237 | G1177 | C1116 | U1056 | A1000  | G941 | G881 | A815 | C755 | A695 |
| G1415 | C1298 | A1357 | U1238 | G1178 | C1117 | G1057 | G1001  | G942 | C882 | A816 | C756 | A696 |
| G1416 | G1299 | U1358 | A1239 | G1179 | C1118 | G1058 | G1002  | U943 | C883 | C817 | U757 | U697 |
| G1417 | G1300 | C1359 | U1240 | A1180 | C1119 | C1059 | G1003  | G944 | U884 | C818 | G758 | C698 |
| G1418 | U1301 | A1360 | G1241 | G1181 | G1120 | A1060 | A1004  | G945 | G885 | A819 | A759 | C699 |
| G1419 | G1302 | C1361 | C1242 | G1182 | U1121 | G1061 | A1005  | A946 | G886 | U820 | G760 | G700 |
| G1420 | C1303 | C1362 | C1243 | A1183 | U1122 | U1062 | C1006  | G947 | G887 | G821 | G761 | C701 |
| G1421 | G1304 | A1363 | C1244 | G1184 | U1123 | G1063 | C1007  | C948 | G888 | C822 | C762 | A702 |
| G1422 | G1305 | U1364 | A1245 | G1185 | G1124 | G1064 | C1008  | A949 | A889 | G823 | G763 | G703 |
| G1423 | A1306 | C1365 | C1246 | G1186 | U1125 | U1065 | G1009  | U950 | G890 | C824 | G764 | A704 |
| G1424 | U1307 | U1366 | U1247 | G1187 | C1126 | C1066 | G951   | U957 | U891 | G825 | G765 | U705 |
| G1425 | G1308 | C1367 | A1248 | A1188 | G1127 | A1067 | G1011  | U952 | A892 | C826 | A766 | A706 |
| G1426 | U1309 | G1368 | C1249 | C1189 | C1128 | G1068 | G1012  | C899 | C893 | U827 | A767 | C707 |
| G1427 | G1310 | C1369 | A1250 | G1190 | C1129 | C1069 | G1013  | G954 | G894 | A828 | G768 | C708 |
| G1428 | G1311 | C1370 | A1251 | A1191 | A1130 | U1070 | A1014  | U955 | G895 | G829 | G769 | C709 |
| G1429 | C1312 | U1371 | C1252 | C1192 | G1131 | G1071 | A1015  | U956 | G896 | G830 | C770 | G710 |
| G1430 | U1313 | G1372 | G1253 | G1193 | C1132 | U1072 | A1016  | U957 | C897 | U831 | G771 | G711 |
| G1431 | C1314 | C1373 | C1254 | U1194 | G1133 | U1073 | G1017  | A958 | G898 | C832 | U772 | A712 |
| G1432 | U1315 | U1374 | G1255 | C1195 | G1134 | G1074 | C1018  | A959 | C899 | U833 | G773 | G713 |
| G1433 | G1316 | A1375 | C1256 | U1196 | U1135 | C1075 | C1019  | U960 | A900 | C834 | G774 | G714 |
| G1434 | C1317 | U1376 | U1257 | G1197 | U1136 | C1076 | U1020  | U861 | A891 | U835 | G775 | A715 |
| G1435 | A1318 | C1377 | G1258 | G1198 | C1137 | G1077 | G1021  | C962 | G902 | G836 | G776 | A716 |
| G1436 | U1319 | U1378 | C1259 | U1199 | G1138 | U1078 | G1022  | G963 | G903 | G837 | A777 | C717 |
| G1437 | C1320 | C1379 | A1260 | C1200 | G1139 | G1079 | G1023  | A964 | C904 | G838 | G778 | G718 |
| G1438 | C1321 | U1380 | C1261 | A1201 | C1140 | A1080 | U1024  | A965 | U905 | U841 | C779 | C719 |
| G1439 | G1322 | C1381 | C1262 | G1202 | G1141 | G1081 | U1025  | G966 | G906 | C942 | A780 | C720 |
| G1440 | C1323 | U1382 | G1263 | C1203 | G1142 | G1082 | G1026  | C967 | A907 | U843 | A781 | G721 |
| G1441 | A1324 | C1383 | C1264 | A1204 | G1143 | U1083 | C1027  | A968 | A908 | C948 | A782 | A722 |
| G1442 | C1325 | C1384 | G1265 | U1205 | C1144 | C1084 | C1028  | A969 | A909 | C949 | A783 | U723 |
| G1443 | C1326 | U1385 | G1266 | G1206 | G1145 | U1085 | C1028A | C970 | C910 | U850 | C784 | U724 |
| G1444 | C1327 | C1386 | C1267 | C1207 | A1146 | U1086 | C1028B | G971 | U911 | G851 | G785 | G725 |
| G1445 | C1328 | G1387 | A1268 | G1208 | C1147 | G1087 | G1029  | C972 | C912 | G852 | G786 | C726 |
| G1446 | A1329 | C1388 | A1269 | C1209 | U1148 | C1088 | C1030  | G973 | A913 | G853 | A787 | G727 |
| G1447 | U1330 | C1389 | C1270 | C1210 | C1149 | G1089 | G1031  | A974 | A914 | G854 | U788 | A728 |
| G1448 | G1331 | U1390 | G1271 | U1211 | U1150 | U1090 | A1032  | A975 | A915 | G855 | U789 | A729 |
| G1449 | A1332 | C1391 | G1272 | U1212 | A1151 | U1091 | G1032A | G976 | C916 | C956 | A790 | G730 |
| G1450 | C1333 | U1392 | C1273 | A1213 | A1152 | A1092 | G1032B | A977 | G917 | C957 | G791 | G731 |
| G1451 | G1334 | C1393 | G1274 | C1214 | C1153 | A1093 | G1033  | A978 | A918 | A978 | A792 | C732 |
| G1452 | C1335 | U1394 | A1275 | G1215 | G1154 | G1094 | G1034  | C979 | A859 | A859 | U793 | A733 |
| G1453 | G1336 | C1395 | G1276 | G1216 | G1155 | U1095 | A1035  | C980 | U920 | A860 | A794 | G734 |
| G1454 | U1337 | C1396 | C1277 | C1217 | G1156 | C1096 | G1036  | U921 | G921 | G861 | C795 | C735 |
| G1455 | G1338 | U1397 | U1278 | A1157 | C1157 | C1097 | C1037  | U981 | U982 | C962 | C796 | C736 |
| G1456 | A1339 | C1398 | A1279 | U1219 | C1158 | C1098 | C1038  | A983 | A923 | U863 | C797 | A737 |



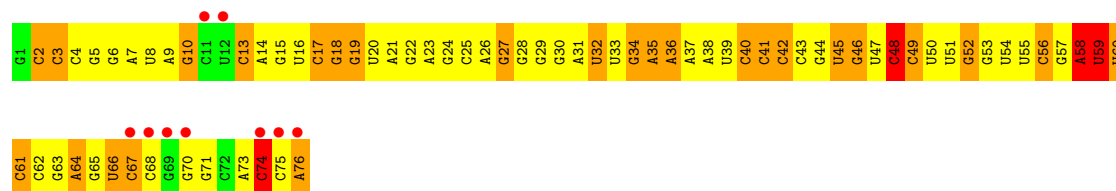
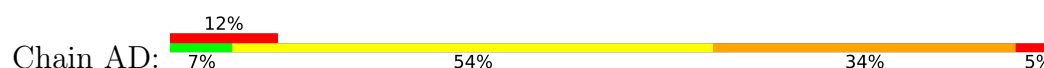
• Molecule 2: mRNA



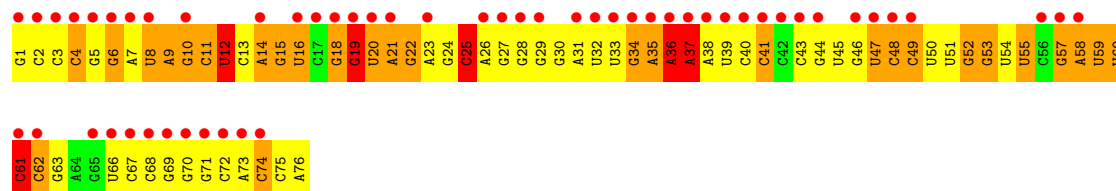
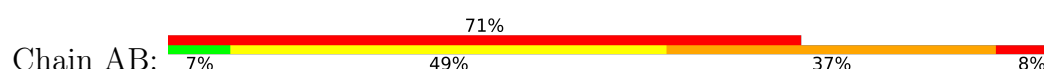
• Molecule 3: tRNA PHE (unmodified bases)



• Molecule 3: tRNA PHE (unmodified bases)

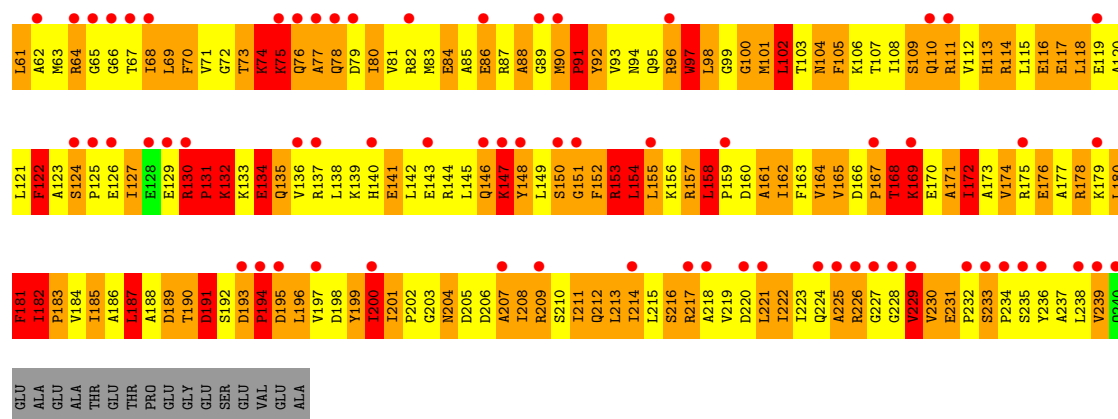


• Molecule 3: tRNA PHE (unmodified bases)

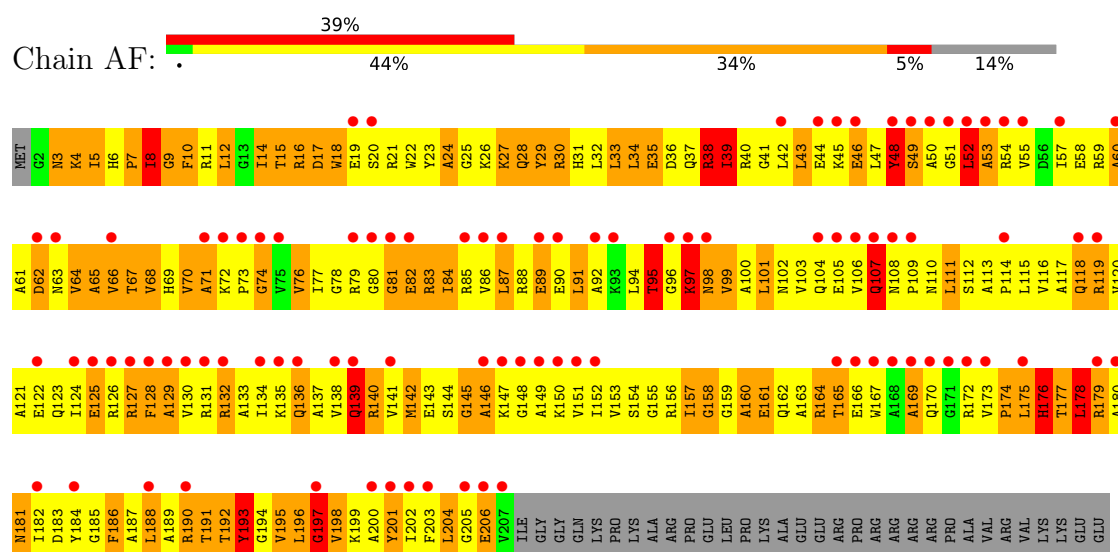


• Molecule 4: 30S ribosomal protein S2

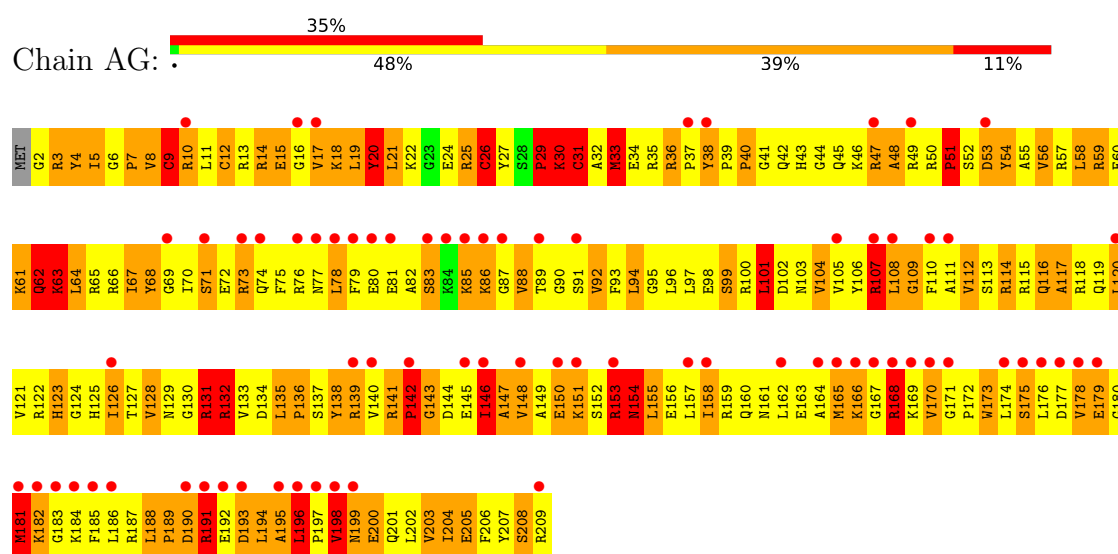




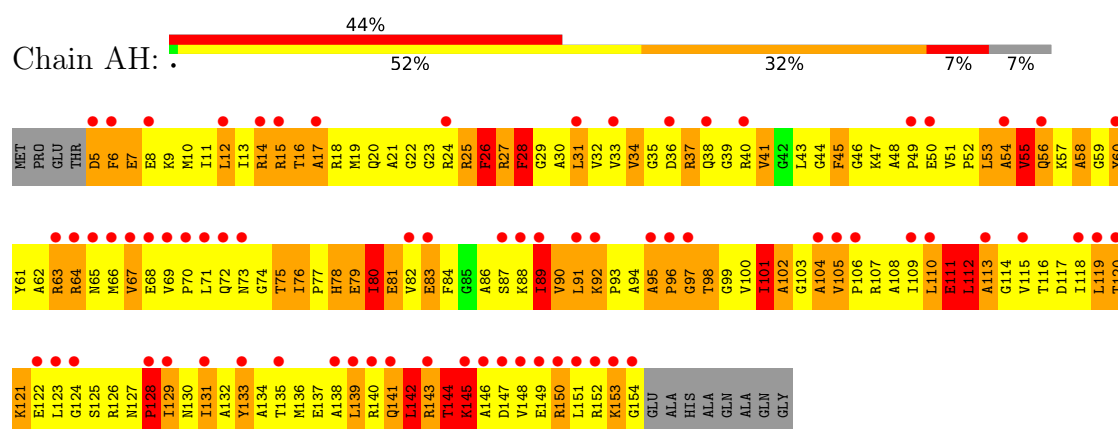
### • Molecule 5: 30S ribosomal protein S3



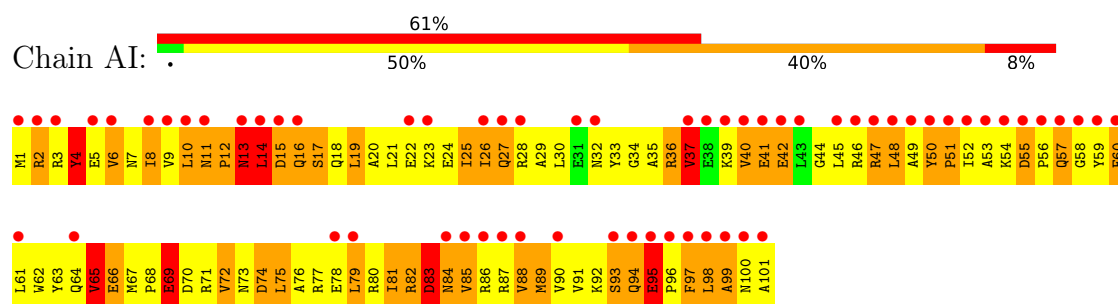
### • Molecule 6: 30S ribosomal protein S4



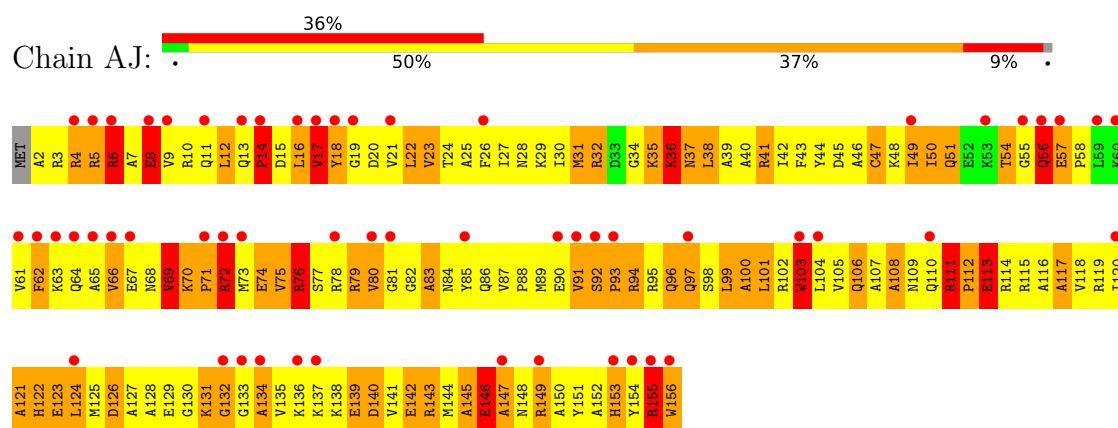
### • Molecule 7: 30S ribosomal protein S5



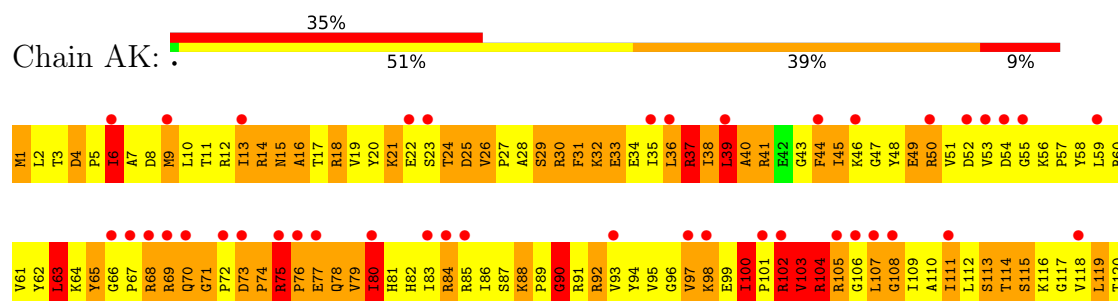
• Molecule 8: 30S ribosomal protein S6

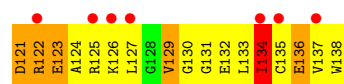


• Molecule 9: 30S ribosomal protein S7



• Molecule 10: 30S ribosomal protein S8

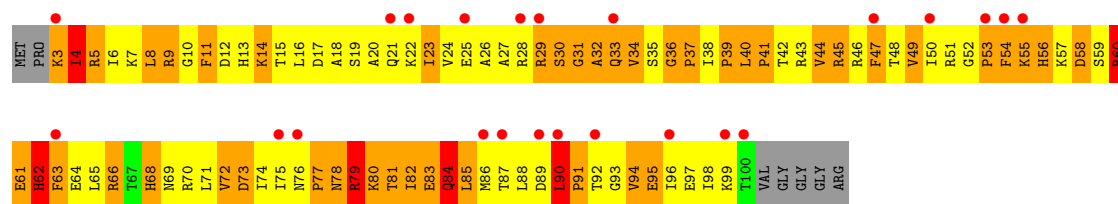




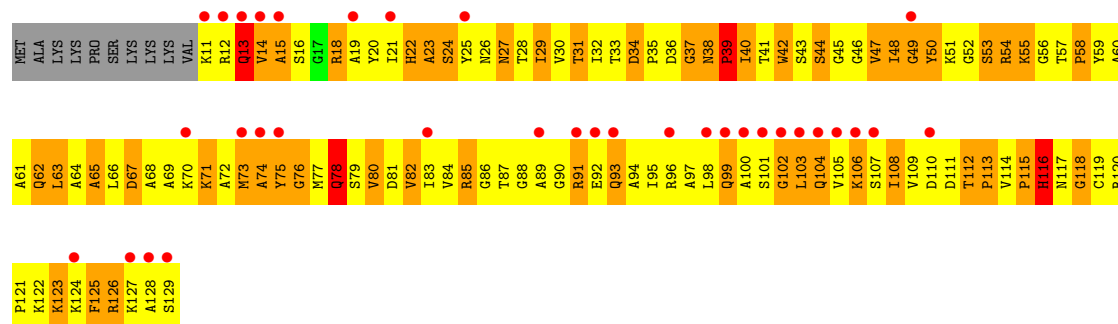
• Molecule 11: 30S ribosomal protein S9



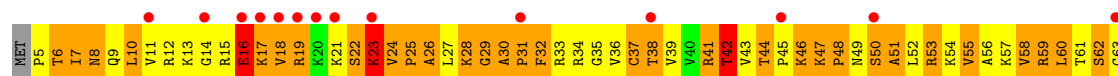
• Molecule 12: 30S ribosomal protein S10

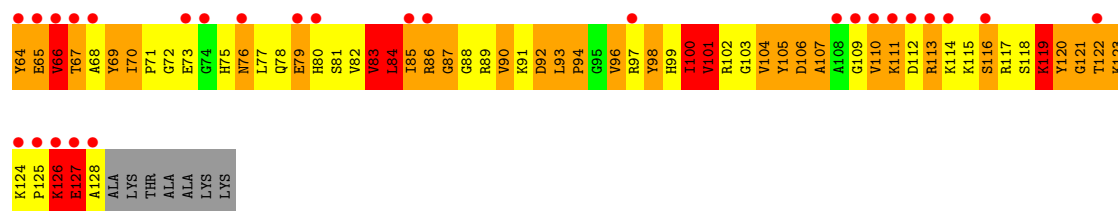


• Molecule 13: 30S ribosomal protein S11



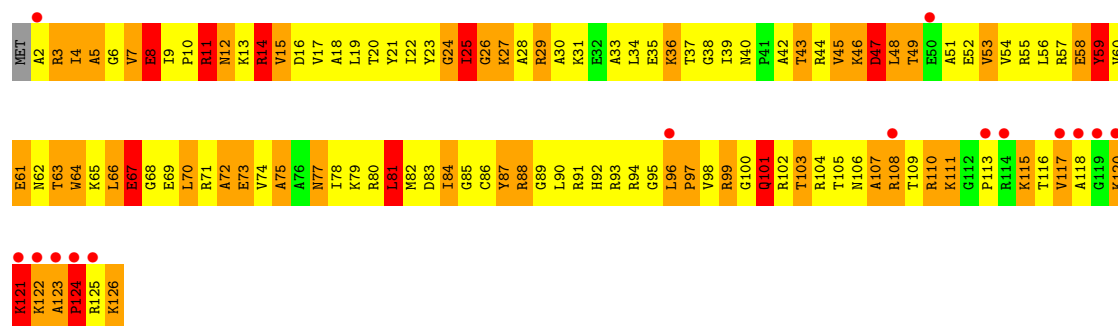
• Molecule 14: 30S ribosomal protein S12





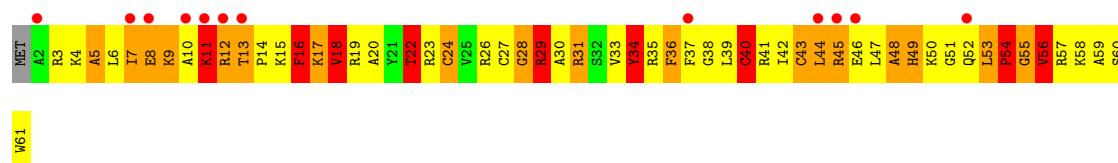
• Molecule 15: 30S ribosomal protein S13

Chain AP: 12% 6% 50% 35% 9%



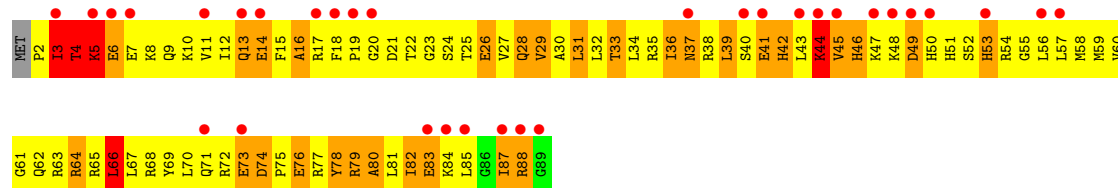
• Molecule 16: 30S ribosomal protein S14

Chain AQ: 20% 7% 48% 30% 15%



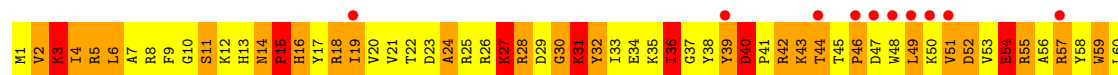
• Molecule 17: 30S ribosomal protein S15

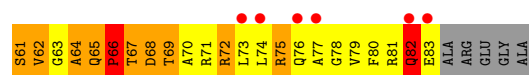
Chain AR: 36% 58% 33% 6%



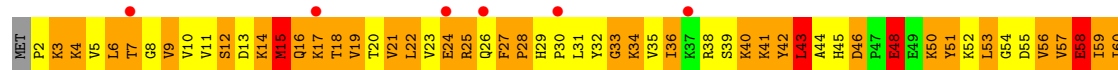
• Molecule 18: 30S ribosomal protein S16

Chain AS: 18% 47% 38% 10% 6%

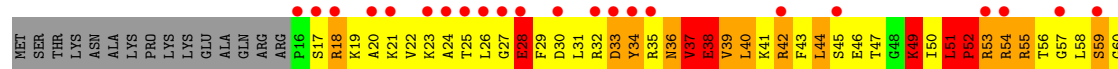




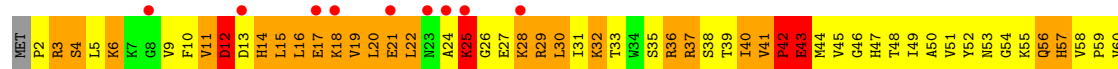
• Molecule 19: 30S ribosomal protein S17



• Molecule 20: 30S ribosomal protein S18



• Molecule 21: 30S ribosomal protein S19



• Molecule 22: 30S ribosomal protein S20



• Molecule 23: 30S ribosomal protein Thx

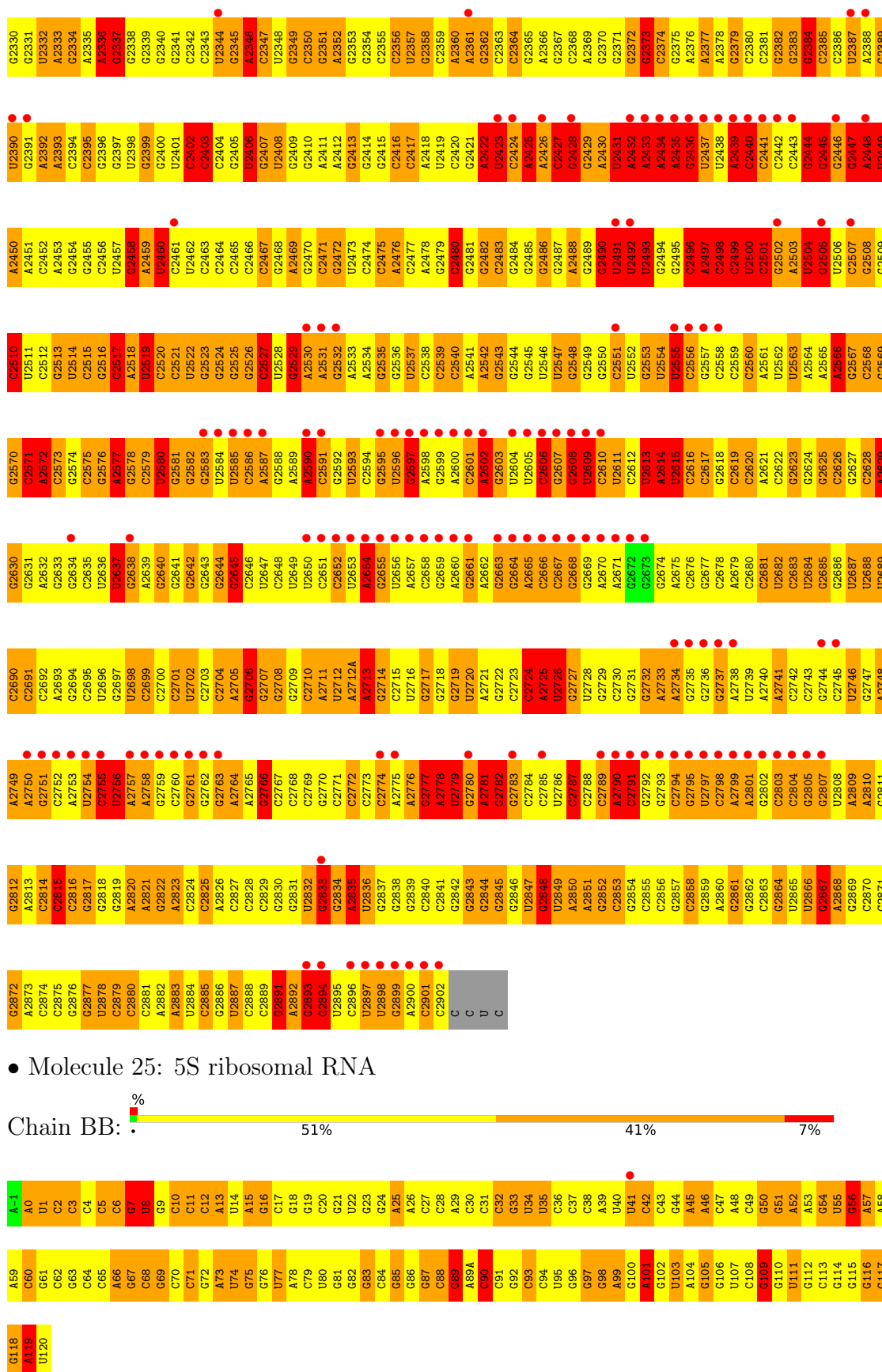


Chain BA: 

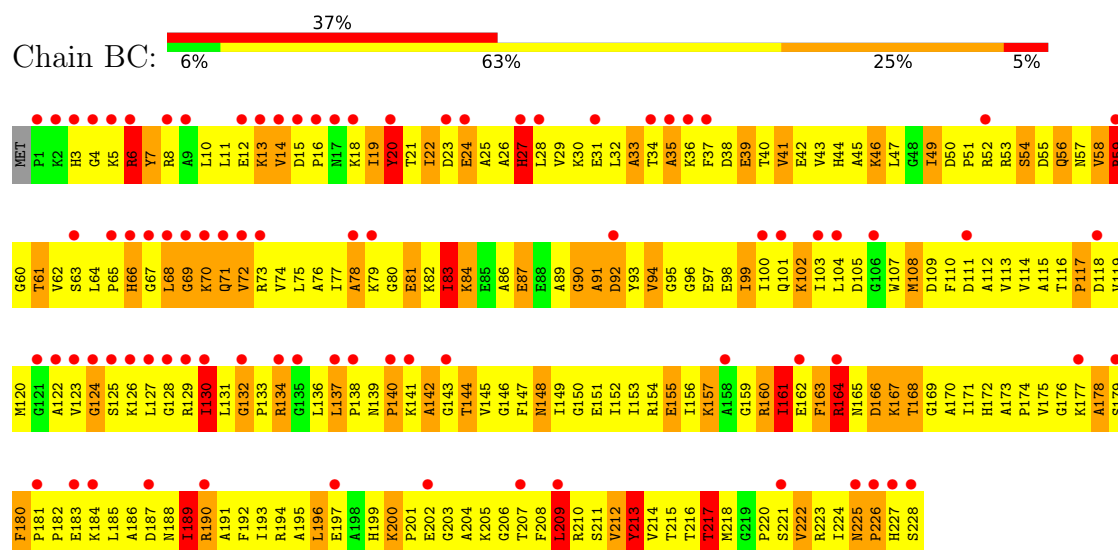


|       |       |       |       |       |       |       |       |      |      |      |      |      |
|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| U1454 | A1395 | U1335 | A1214 | C1153 | U1094 | G1034 | C974A | C914 | G853 | A793 | G733 | C673 |
| G1455 | U1396 | A1336 | G1215 | G1154 | A1095 | U1035 | G975  | C915 | G854 | G794 | A734 | G674 |
| A1456 | U1397 | G1337 | C1217 | A1155 | A1096 | G1036 | C976  | G916 | G855 | A735 | A735 | A676 |
| A1457 | C1398 | A1278 | C1217 | A1156 | U1097 | G1037 | G977  | G917 | C856 | C796 | C736 | A677 |
| C1458 | C1399 | G1279 | C1217 | A1157 | A1098 | C1038 | G978  | G918 | G857 | C797 | C737 | A678 |
| G1459 | G1400 | G1280 | A1220 | C1158 | G1099 | U1039 | G979  | G919 | U858 | G798 | G738 | C679 |
| A1460 | G1401 | G1281 | C1221 | U1159 | C1100 | C1040 | A980  | G920 | G859 | G799 | G739 | C680 |
| G1461 | C1402 | U1282 | C1222 | G1160 | U1101 | G1041 | A981  | G921 | U860 | G800 | U740 | G681 |
| C1462 | C1403 | G1283 | C1223 | C1161 | C1102 | G1042 | C982  | G922 | U861 | G801 | G741 | G682 |
| C1463 | C1404 | A1284 | G1224 | A1162 | A1103 | C1043 | A983  | C923 | G862 | A802 | G742 | G683 |
| C1464 | U1405 | G1285 | C1225 | G1163 | C1104 | G1044 | A984  | C924 | A863 | U803 | G743 | C684 |
| G1465 | U1406 | A1286 | G1226 | G1164 | U1105 | A1045 | C985  | C925 | G864 | A804 | G744 | G685 |
| G1466 | A1287 | G1227 | A1227 | U1165 | G1106 | A1046 | C986  | A926 | C865 | G805 | G745 | G686 |
| G1347 | U1288 | G1228 | G1228 | C1166 | G1107 | G1047 | G987  | G928 | A866 | C806 | A746 | C687 |
| G1348 | C1289 | G1229 | G1229 | U1167 | G1108 | A1048 | A988  | G929 | C867 | U807 | U747 | C688 |
| A1349 | C1290 | C1230 | G1230 | G1168 | U1109 | C1049 | G989  | U930 | G868 | G808 | G748 | U688 |
| A1469 | C1291 | G1231 | G1231 | G1169 | G1110 | A1050 | A990  | G931 | G869 | G809 | C749 | A689 |
| C1351 | U1292 | G1232 | G1232 | G1170 | A1111 | G1051 | C991  | G932 | A870 | U810 | A750 | G690 |
| A1352 | C1293 | C1233 | C1233 | G1171 | U1112 | C1052 | C992  | A933 | U871 | U811 | A751 | C691 |
| A1353 | C1294 | U1234 | U1234 | G1172 | U1113 | C1053 | C993  | G934 | A872 | C812 | A752 | C692 |
| A1354 | U1295 | G1235 | G1235 | A1173 | G1114 | A1054 | C994  | C935 | G873 | U813 | C753 | C693 |
| G1355 | G1296 | A1236 | G1236 | U1175 | G1115 | G1055 | C995  | C936 | G874 | C814 | C754 | U694 |
| G1356 | C1297 | G1237 | G1237 | G1176 | C1116 | G1056 | A996  | U937 | G875 | C815 | C755 | G695 |
| U1357 | C1298 | G1238 | G1238 | A1177 | G1117 | A1057 | G997  | G938 | C876 | C816 | C756 | G696 |
| G1358 | G1299 | G1239 | G1239 | C1178 | U1118 | G1058 | C998  | G939 | U877 | C817 | U757 | C697 |
| A1359 | U1300 | U1240 | U1240 | C1179 | C1119 | G1059 | U999  | G940 | A878 | G818 | C758 | C698 |
| A1360 | A1301 | A1241 | A1241 | C1180 | G1120 | U1060 | A1000 | A941 | G879 | A819 | G759 | A699 |
| G1361 | A1302 | G1242 | G1242 | C1181 | G1121 | U1061 | A1001 | G942 | G880 | A820 | G760 | G700 |
| C1362 | G1303 | G1243 | G1243 | A1182 | G1122 | G1062 | G1002 | G881 | G881 | A821 | A761 | G701 |
| C1363 | C1304 | G1244 | G1244 | G1183 | C1123 | G1063 | G1003 | G882 | G882 | U822 | U762 | G702 |
| A1364 | C1305 | G1245 | G1245 | G1184 | G1124 | G1064 | C1004 | A945 | G883 | G823 | G763 | U703 |
| A1365 | C1306 | A1246 | A1246 | C1185 | G1125 | U1065 | C1005 | G946 | C884 | A824 | A764 | G704 |
| A1366 | A1307 | A1247 | A1247 | G1186 | A1126 | U1066 | C1006 | G947 | C885 | C825 | G765 | G705 |
| G1367 | A1308 | G1248 | G1248 | C1187 | A1127 | A1067 | C1007 | G948 | C886 | U826 | C766 | A706 |
| G1368 | G1309 | U1249 | U1249 | U1188 | A1128 | G1068 | C1008 | G949 | A887 | U827 | U767 | G707 |
| G1369 | G1310 | C1250 | G1250 | A1189 | A1129 | A1069 | A1009 | G950 | C888 | U828 | G768 | C708 |
| G1370 | G1311 | C1251 | C1251 | G1190 | U1130 | A1070 | A1010 | C951 | C889 | A829 | G769 | U709 |
| G1371 | U1312 | G1252 | G1252 | G1191 | G1131 | G1071 | G1011 | G952 | A890 | G830 | G770 | G710 |
| A1372 | U1313 | A1253 | A1253 | G1192 | A1132 | C1072 | U1012 | A953 | G892 | G831 | G771 | G711 |
| A1373 | C1314 | U1254 | U1254 | G1193 | U1133 | A1073 | C1013 | G954 | C893 | G832 | C772 | G712 |
| C1374 | C1315 | U1255 | U1255 | A1194 | G1134 | G1074 | U1014 | G955 | C894 | U833 | U773 | G713 |
| C1375 | U1316 | G1256 | G1256 | G1195 | C1135 | C1075 | G1015 | G956 | U895 | C834 | A774 | U714 |
| C1376 | A1317 | C1257 | C1257 | C1196 | G1136 | A1076 | G1016 | A957 | A896 | A835 | G775 | G715 |
| G1377 | C1318 | G1258 | G1258 | G1197 | G1137 | A1077 | G1017 | U958 | C897 | G836 | G776 | A716 |
| A1378 | G1319 | G1259 | G1259 | U1198 | G1138 | U1078 | C1018 | A959 | C898 | C837 | A777 | G717 |
| A1379 | C1320 | G1260 | G1260 | U1199 | G1139 | C1079 | U1019 | A960 | A899 | C838 | G778 | A718 |
| G1380 | A1321 | C1261 | C1261 | C1200 | G1140 | C1080 | A1020 | A961 | A900 | U839 | U779 | C719 |
| G1381 | A1322 | A1262 | A1262 | U1141 | U1141 | U1081 | A1021 | G962 | A901 | C940 | G780 | C720 |
| G1382 | U1323 | U1263 | U1263 | C1201 | U1142 | U1082 | G1022 | U963 | C902 | A841 | A781 | C721 |
| C1383 | U1324 | G1264 | G1264 | G1202 | U1143 | U1083 | U1023 | C964 | C903 | G842 | A782 | A722 |
| A1384 | G1325 | A1265 | A1265 | A1203 | A1143 | A1084 | G1024 | C965 | C904 | G843 | A783 | G723 |
| G1385 | U1326 | G1266 | G1266 | U1205 | G1144 | A1085 | G1025 | G966 | U905 | C944 | A784 | U724 |
| G1386 | C1327 | A1267 | A1267 | G1206 | C1145 | A1086 | U1026 | G967 | G906 | G945 | G785 | G725 |
| G1387 | G1328 | A1268 | A1268 | C1207 | C1146 | G1087 | U1027 | C968 | U907 | C946 | C786 | G726 |
| G1388 | U1329 | A1269 | A1269 | G1208 | C1147 | A1088 | A1028 | U969 | C908 | U847 | U787 | A727 |
| C1389 | C1330 | C1270 | C1270 | G1209 | A1148 | G1089 | A1029 | U970 | A909 | G848 | A788 | G728 |
| U1390 | A1331 | G1271 | G1271 | A1210 | G1149 | U1090 | G1030 | C971 | A910 | A849 | A789 | G729 |
| U1391 | C1332 | U1272 | U1272 | U1211 | C1150 | G1091 | G1031 | G972 | C912 | C850 | C790 | C730 |
| A1392 | C1333 | U1273 | U1273 | G1212 | G1151 | C1092 | A1032 | G973 | C913 | U851 | C791 | C731 |
| A1393 | G1334 | A1274 | A1274 | A1213 | C1152 | G1093 | U1033 | G974 | U913 | G852 | G792 | C732 |

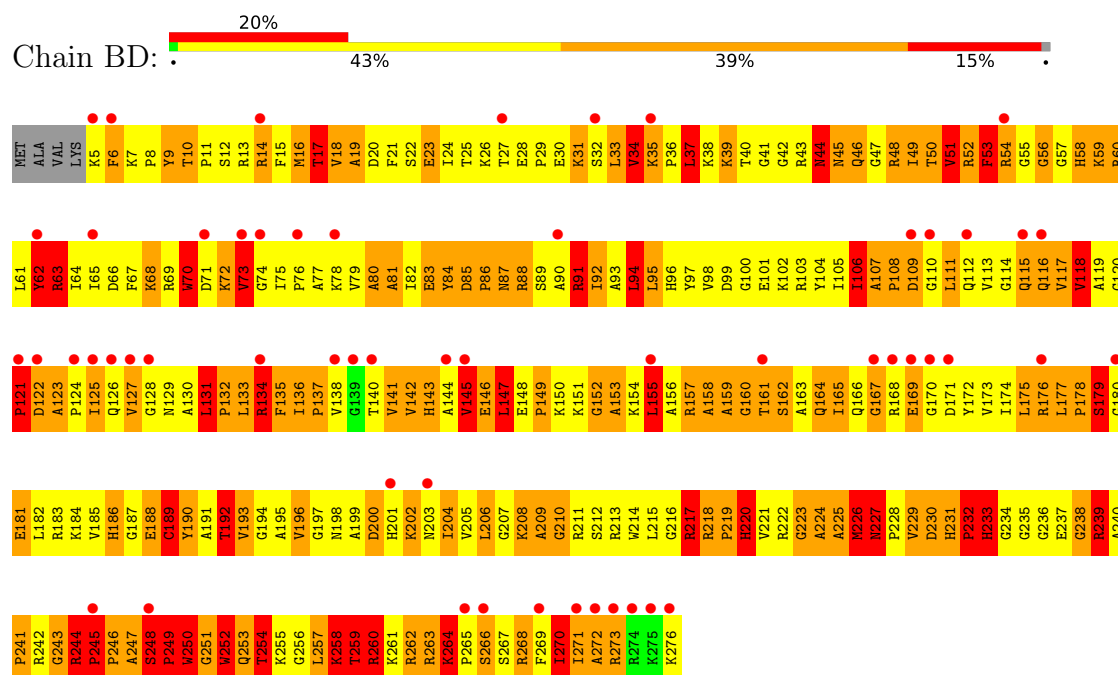
|       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| G2270 | G2271 | G2272 | G2273 | A2274 | G2275 | G2276 | G2277 | A2278 | G2279 | G2280 | G2281 | G2282 | G2283 | G2284 | G2285 | A2286 | A2287 | G2288 | G2289 | G2290 | G2291 | G2292 | G2293 | G2294 | G2295 | G2296 | A2297 | G2298 | G2299 | G2300 | G2301 | G2302 | G2303 | G2304 | A2305 | G2306 | G2307 | G2308 | A2309 | A2310 | A2311 | G2312 | G2313 | G2314 | G2315 | G2316 | G2317 | G2318 | G2319 | A2320 | G2321 | A2322 | G2323 | G2324 | G2325 | A2326 | A2327 | G2328 | G2329 |       |       |       |       |       |       |       |       |       |
| C2205 | C2206 | C2207 | C2208 | C2209 | G2210 | G2211 | A2212 | G2213 | G2214 | G2215 | G2216 | G2217 | G2218 | G2219 | G2220 | C2221 | A2222 | C2223 | C2224 | C2225 | C2226 | A2227 | C2228 | C2229 | C2230 | C2231 | G2232 | G2233 | G2234 | C2235 | C2236 | G2237 | C2238 | G2239 | C2240 | A2241 | G2242 | G2243 | G2244 | U2245 | G2246 | C2247 | C2248 | U2249 | G2250 | G2251 | G2252 | G2253 | G2254 | G2255 | G2256 | U2257 | C2258 | C2259 | G2260 | G2261 | G2262 | C2263 | C2264 | A2265 | A2266 | A2267 | A2268 | A2269 |       |       |       |       |
| C2140 | C2141 | C2142 | C2143 | U2144 | C2145 | C2146 | C2147 | G2148 | G2149 | U2150 | G2151 | G2152 | G2153 | G2154 | G2155 | G2156 | G2157 | A2158 | C2159 | G2160 | C2161 | G2162 | C2163 | G2164 | G2165 | G2166 | G2167 | G2168 | A2169 | A2170 | A2171 | G2172 | A2173 | G2174 | C2175 | A2176 | C2177 | C2178 | G2179 | U2180 | G2181 | G2182 | G2183 | G2184 | G2185 | G2186 | G2187 | C2188 | U2189 | G2190 | G2191 | G2192 | G2193 | G2194 | C2195 | C2196 | U2197 | A2198 | A2199 |       |       |       |       |       |       |       |       |       |
| U2079 | G2080 | C2081 | A2082 | G2083 | C2084 | C2085 | U2086 | G2087 | G2088 | U2089 | G2090 | U2091 | G2092 | G2093 | G2094 | G2095 | U2096 | C2097 | U2098 | G2099 | G2100 | G2101 | U2102 | C2103 | G2104 | C2105 | G2106 | C2107 | G2110 | G2111 | G2112 | G2113 | A2114 | G2115 | G2116 | A2117 | U2118 | A2119 | G2120 | G2121 | U2122 | G2123 | G2124 | G2125 | A2126 | G2127 | C2128 | C2129 | U2130 | G2131 | U2132 | G2133 | A2134 | A2135 | C2136 | C2137 | C2138 | C2139 |       |       |       |       |       |       |       |       |       |       |
| A2019 | A2020 | C2021 | U2022 | G2023 | G2024 | C2025 | C2026 | G2027 | U2028 | G2029 | A2030 | A2031 | G2032 | A2033 | U2034 | G2035 | C2036 | G2037 | G2038 | C2039 | C2040 | U2041 | A2042 | C2043 | C2044 | C2045 | U2046 | U2047 | G2048 | G2049 | C2050 | A2051 | G2052 | C2053 | A2054 | C2055 | G2056 | A2057 | A2058 | A2059 | A2060 | G2061 | C2062 | C2063 | C2064 | C2065 | C2066 | C2067 | U2068 | G2069 | G2070 | A2071 | G2072 | C2073 | A2074 | U2075 | U2076 | A2077 | C2078 |       |       |       |       |       |       |       |       |       |
| G1959 | A1960 | C1961 | C1962 | U1963 | G1964 | C1965 | A1966 | C1967 | G1968 | A1969 | A1970 | A1971 | A1972 | G1973 | C1974 | G1975 | U1976 | A1977 | A1978 | C1979 | C2039 | A1981 | C1982 | C1983 | G1984 | G1985 | A1986 | G1987 | C1988 | G1989 | A1990 | G1991 | G1992 | C1993 | U1994 | C1995 | U1996 | A1997 | G1998 | C1999 | G2000 | A2001 | G2002 | C2003 | G2004 | A2005 | C2006 | C2007 | C2008 | G2009 | G2010 | U2011 | G2012 | A2013 | A2014 | U2015 | U2016 | U2017 | C2018 |       |       |       |       |       |       |       |       |       |
| G1899 | A1900 | C1901 | C1902 | G1903 | G1904 | C1905 | G1906 | G1907 | C1908 | C1909 | G1910 | U1911 | A1912 | A1913 | C1914 | U1915 | A1916 | U1917 | A1918 | A1919 | C1920 | G1921 | G1922 | U1923 | C1924 | C1925 | U1926 | A1927 | A1928 | G1929 | A1930 | U1931 | A1932 | G1933 | C1934 | U1935 | A1936 | A1937 | A1938 | U1939 | U1940 | C1941 | C1942 | U1943 | G2004 | U1944 | G1945 | U1946 | C1947 | G1948 | U1949 | G1950 | U1951 | A1952 | A1953 | G1954 | U1955 | U1956 | C1957 | C1958 |       |       |       |       |       |       |       |       |
| C1830 | C1831 | C1832 | U1833 | U1834 | G1835 | C1836 | C1837 | C1838 | G1839 | G1840 | U1841 | G1842 | C1843 | C1844 | G1845 | G1846 | A1847 | A1848 | G1849 | G1850 | U1851 | C1852 | A1853 | A1854 | G1855 | G1856 | G1857 | G1858 | A1859 | G1860 | C1861 | G1862 | C1863 | U1864 | G1865 | C1866 | C1867 | A1868 | C1869 | C1870 | A1871 | A1872 | G1873 | G1874 | A1875 | A1876 | A1877 | A1878 | A1879 | C1880 | C1881 | C1882 | G1883 | A1884 | A1885 | C1886 | C1887 | G1888 | A1889 | A1890 | G1891 | C1892 | C1893 | A1894 | C1895 | G1896 | A1897 | U1898 |
| G1770 | C1771 | G1772 | A1773 | C1774 | U1775 | G1776 | U1777 | U1778 | U1779 | A1780 | C1781 | C1782 | A1783 | A1784 | A1785 | A1786 | A1787 | C1788 | A1789 | C1790 | A1791 | G1792 | C1793 | U1794 | C1795 | U1796 | C1797 | U1798 | G1799 | C1800 | G1801 | A1802 | C1803 | C1804 | U1805 | C1806 | G1807 | U1808 | A1809 | A1810 | G1811 | A1812 | G1813 | G1814 | A1815 | G1816 | C1817 | U1818 | A1819 | U1820 | A1821 | G1822 | G1823 | A1824 | G1825 | G1826 | C1827 | G1828 | A1829 |       |       |       |       |       |       |       |       |       |
| C1694 | G1695 | C1696 | G1697 | A1698 | C1699 | A1700 | A1701 | G1702 | G1703 | G1704 | G1705 | U1706 | G1707 | C1708 | A1709 | G1710 | C1711 | C1712 | U1713 | G1714 | G1715 | G1716 | G1717 | A1718 | A1655 | C1656 | G1725 | G1726 | C1657 | C1658 | C1733 | C1734 | A1665 | G1666 | G1667 | A1668 | A1669 | A1670 | C1671 | U1672 | G1673 | A1674 | C1675 | A1676 | A1677 | G1678 | U1679 | U1680 | G1681 | G1682 | C1683 | A1684 | C1685 | G1686 | G1687 | U1688 | A1689 | A1690 | C1691 | U1692 | A1693 |       |       |       |       |       |       |       |
| C1574 | C1575 | U1576 | C1577 | U1578 | U1579 | A1580 | A1581 | C1582 | A1583 | C1584 | C1585 | A1586 | A1587 | C1588 | A1589 | U1590 | G1591 | C1592 | G1593 | G1594 | A1595 | A1596 | A1597 | C1598 | C1599 | C1600 | G1601 | A1602 | C1662 | A1663 | A1664 | A1665 | G1666 | G1667 | A1668 | A1669 | A1670 | C1671 | U1672 | G1673 | A1674 | C1675 | A1676 | A1677 | G1678 | U1679 | U1680 | G1681 | G1682 | C1683 | C1684 | C1685 | G1686 | G1687 | U1688 | A1689 | A1690 | C1691 | U1692 | A1693 |       |       |       |       |       |       |       |       |
| C1515 | U1516 | C1517 | C1518 | U1519 | U1520 | G1521 | G1522 | U1523 | C1524 | G1525 | A1526 | G1527 | A1528 | A1529 | G1530 | C1531 | G1532 | C1533 | G1534 | U1535 | A1536 | C1537 | G1538 | C1539 | G1540 | U1541 | U1542 | A1543 | C1544 | A1545 | A1546 | C1547 | A1548 | C1549 | C1550 | C1551 | G1552 | A1553 | A1554 | G1555 | C1556 | C1557 | A1558 | G1559 | G1560 | U1561 | A1562 | C1563 | C1564 | C1565 | A1566 | A1567 | G1568 | A1569 | A1570 | A1571 | A1572 | G1573 |       |       |       |       |       |       |       |       |       |       |



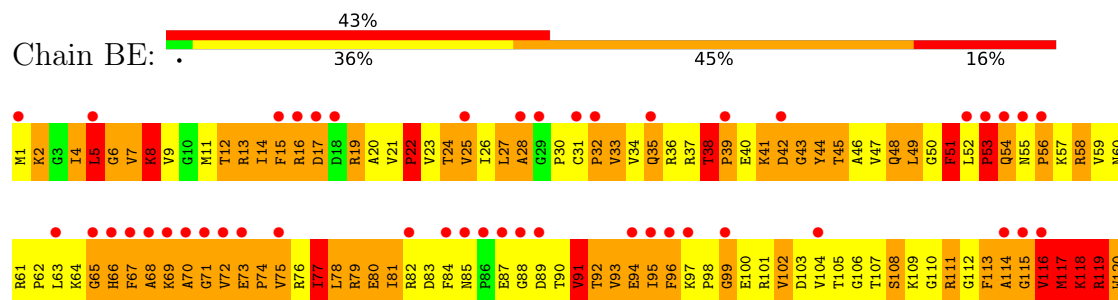
- Molecule 26: 50S ribosomal protein L1

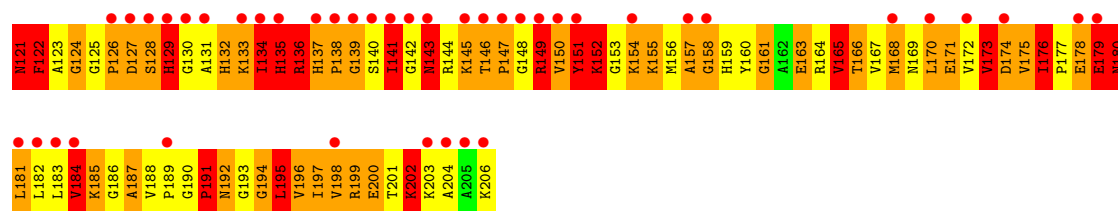


- Molecule 27: 50S ribosomal protein L2

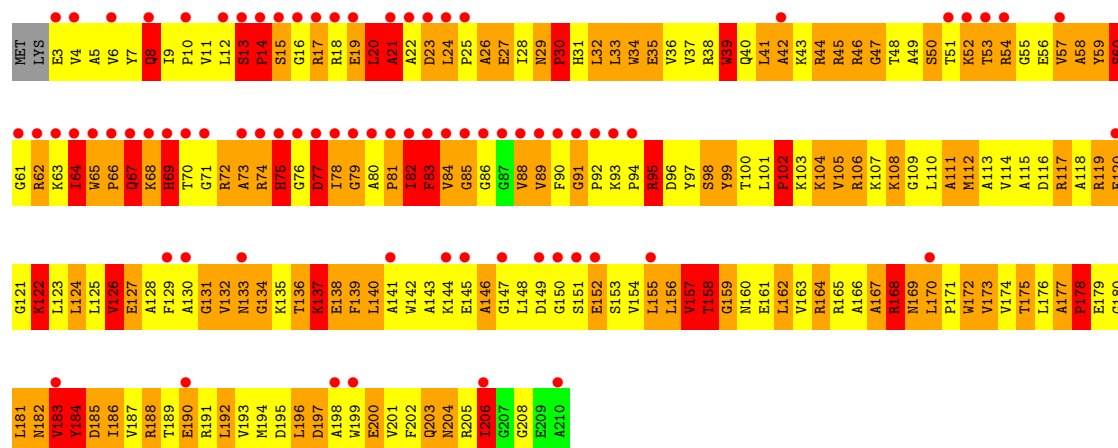


- Molecule 28: 50S ribosomal protein L3

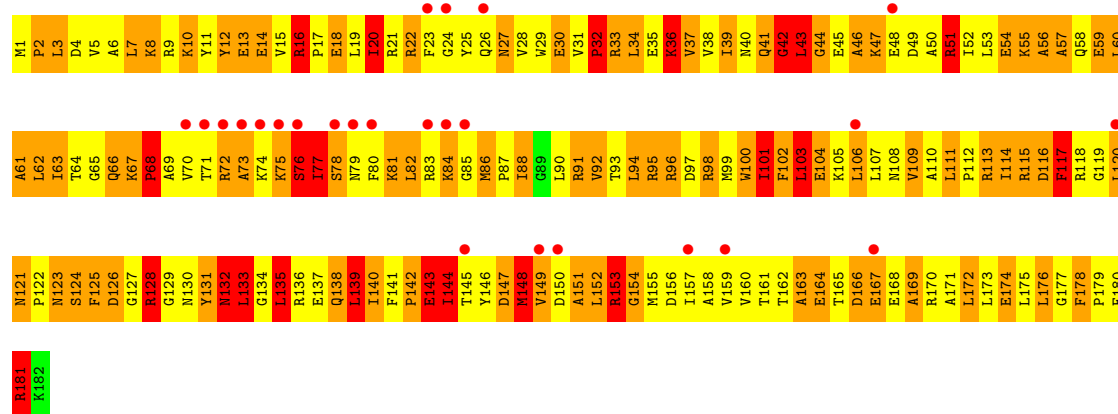




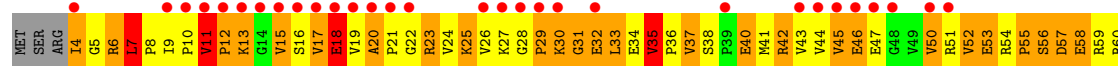
• Molecule 29: 50S ribosomal protein L4

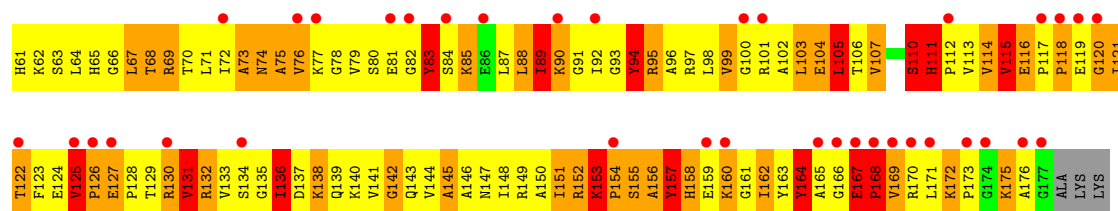


• Molecule 30: 50S ribosomal protein L5

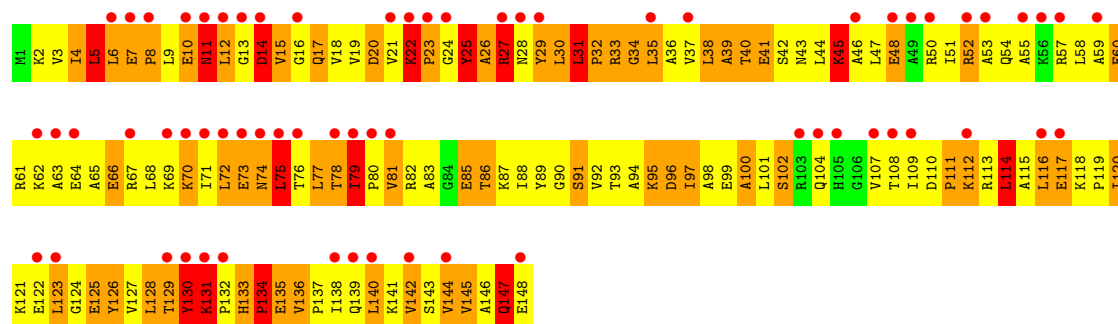


• Molecule 31: 50S ribosomal protein L6

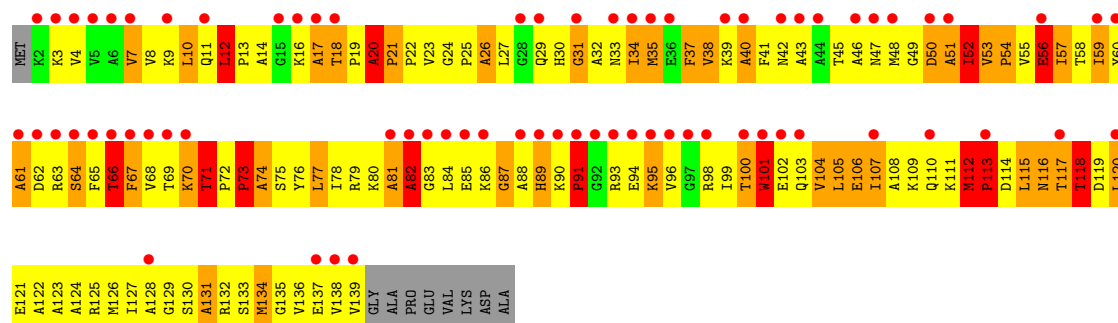




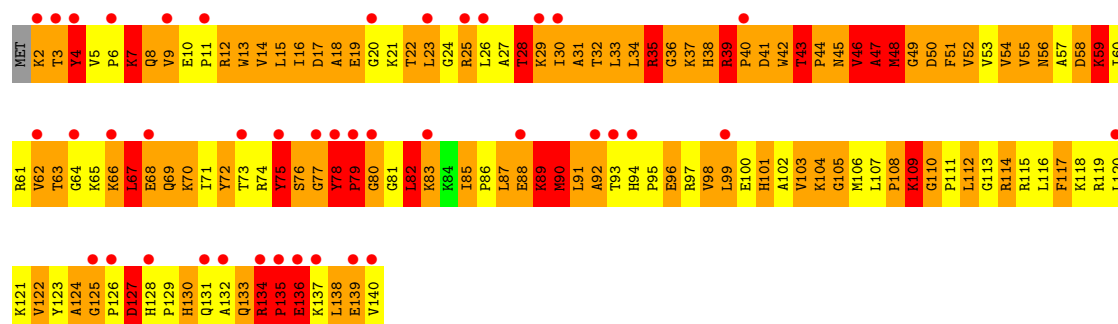
• Molecule 32: 50S ribosomal protein L9



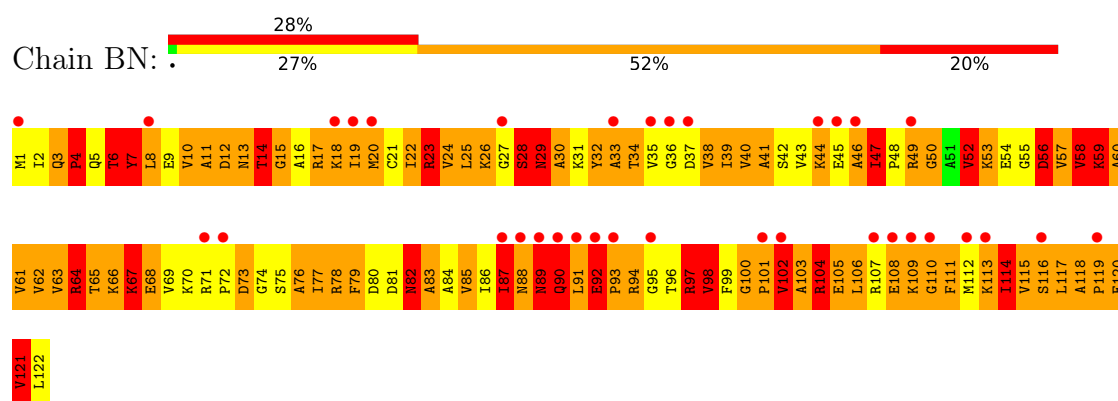
• Molecule 33: 50S ribosomal protein L11



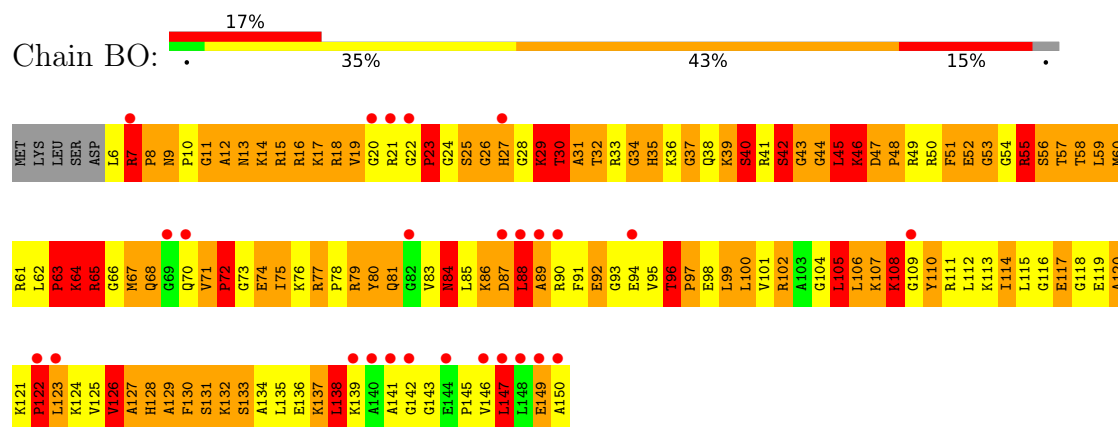
• Molecule 34: 50S ribosomal protein L13



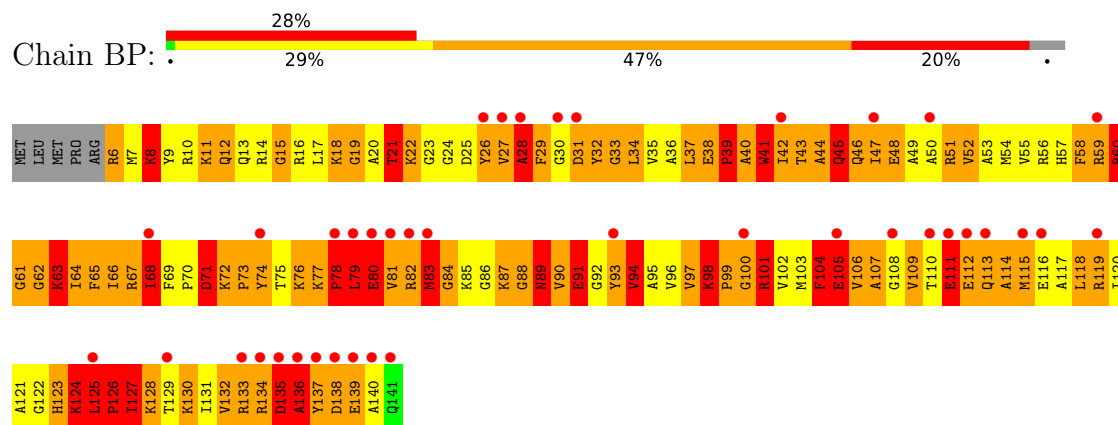
• Molecule 35: 50S ribosomal protein L14



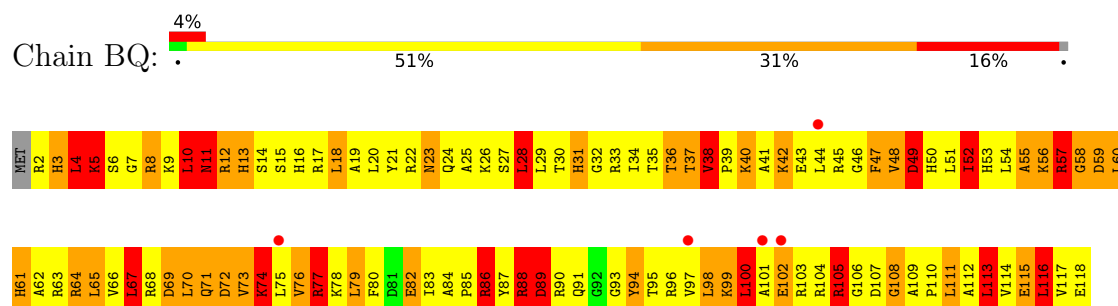
• Molecule 36: 50S ribosomal protein L15



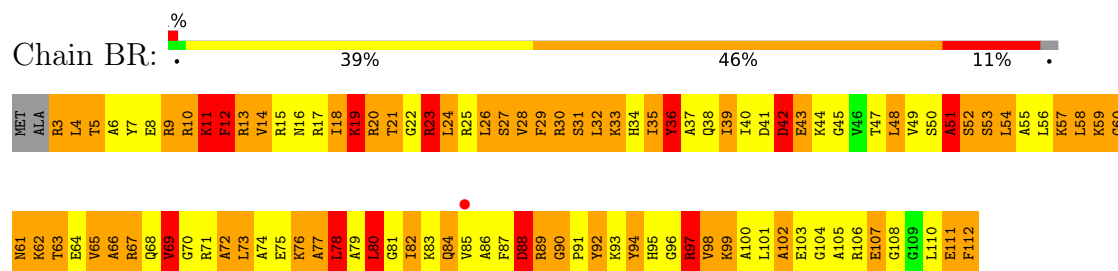
• Molecule 37: 50S ribosomal protein L16



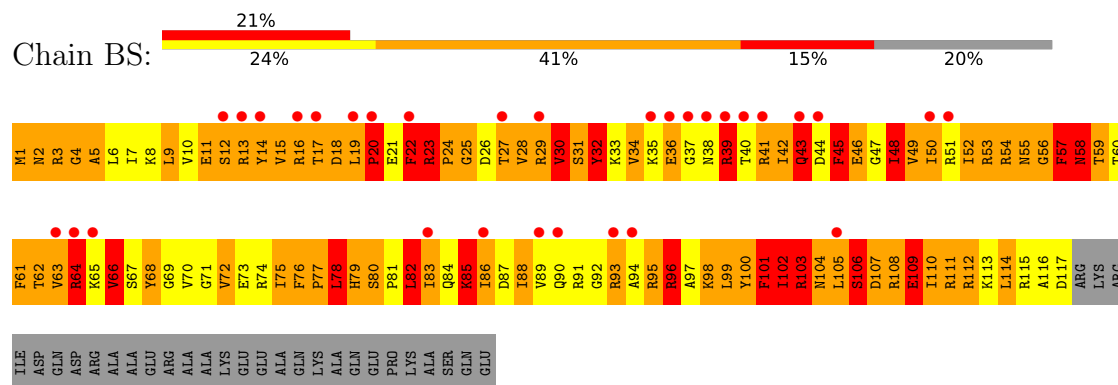
• Molecule 38: 50S ribosomal protein L17



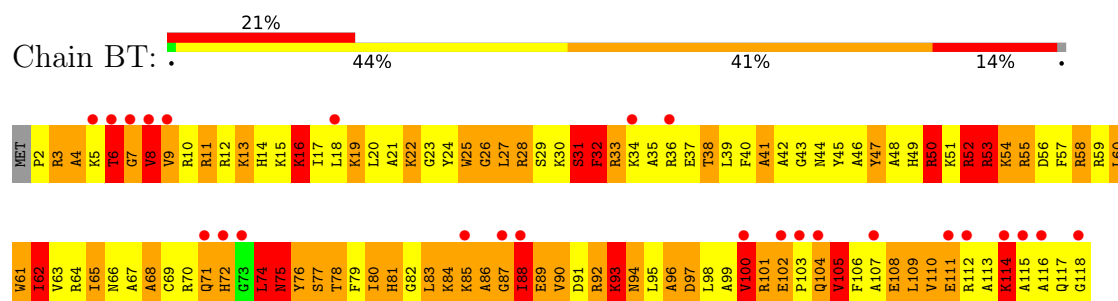
- Molecule 39: 50S ribosomal protein L18



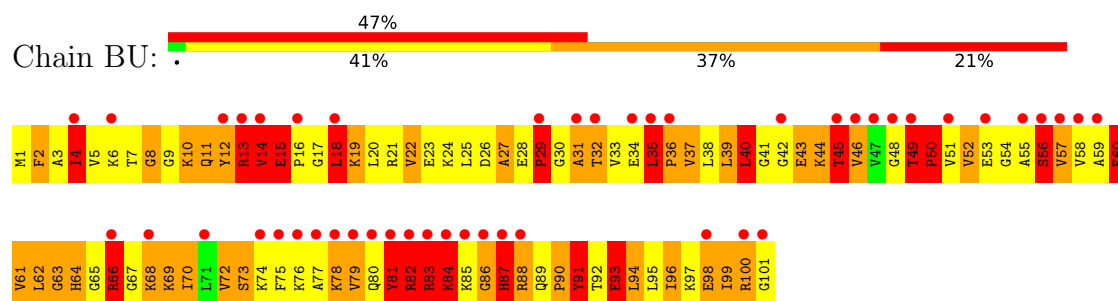
- Molecule 40: 50S ribosomal protein L19



- Molecule 41: 50S ribosomal protein L20

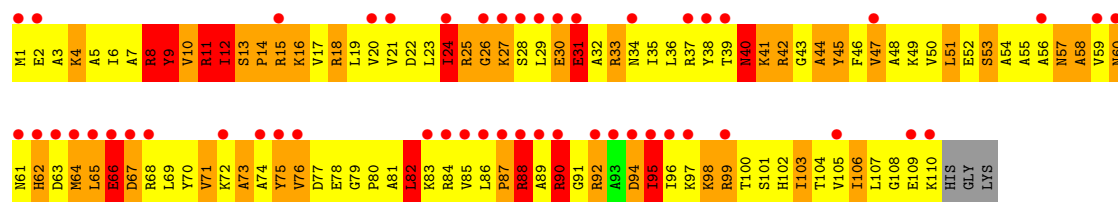


- Molecule 42: 50S ribosomal protein L21

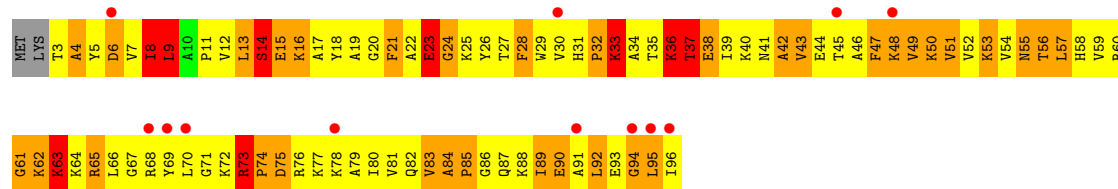


- Molecule 43: 50S ribosomal protein L22

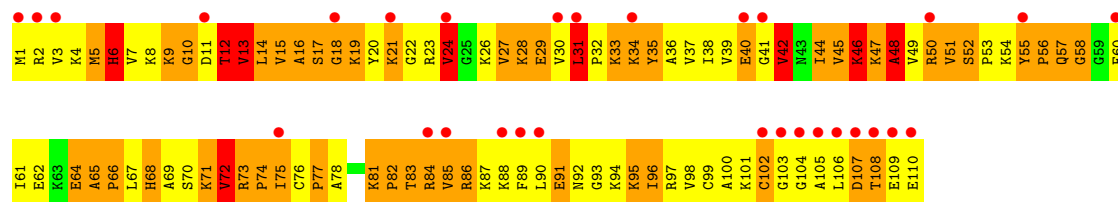




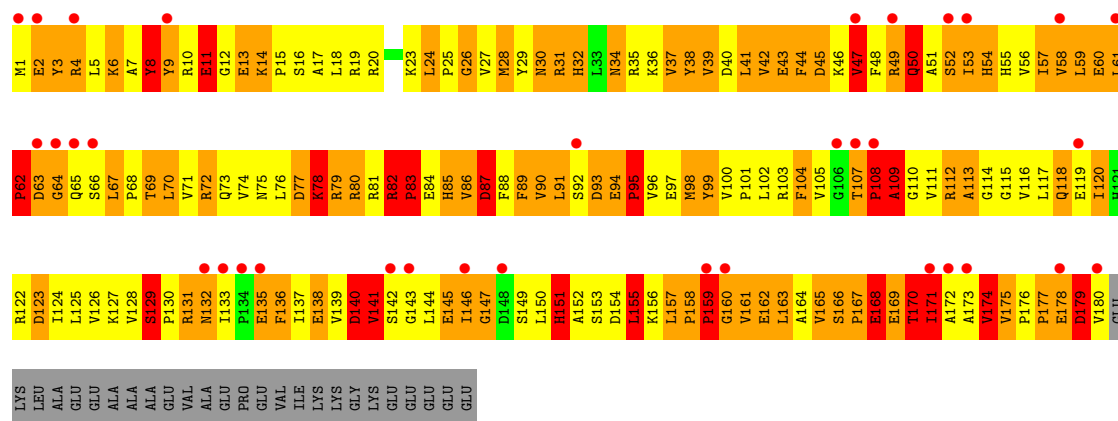
• Molecule 44: 50S ribosomal protein L23



• Molecule 45: 50S ribosomal protein L24



• Molecule 46: 50S ribosomal protein L25

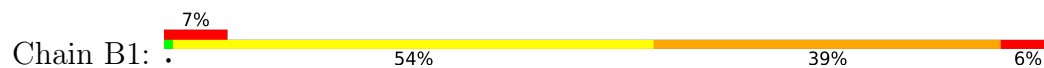


• Molecule 47: Ribosomal protein L27

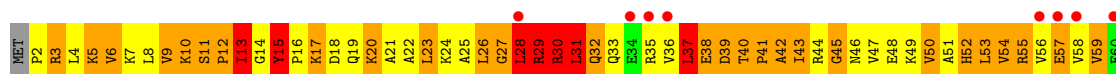




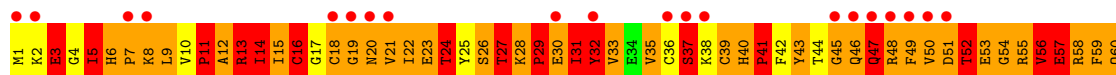
• Molecule 48: 50S ribosomal protein L29



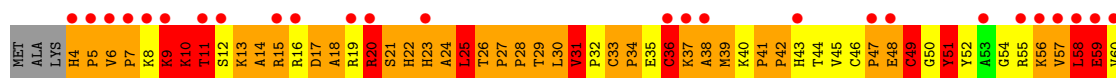
• Molecule 49: 50S ribosomal protein L30



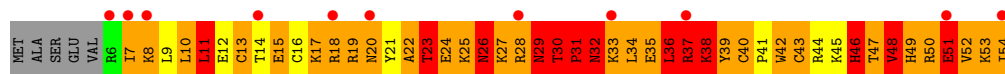
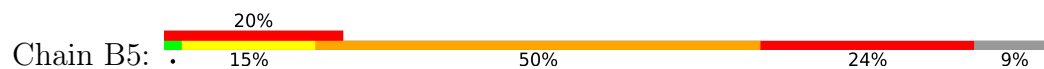
• Molecule 50: 50S ribosomal protein L31



• Molecule 51: 50S ribosomal protein L32



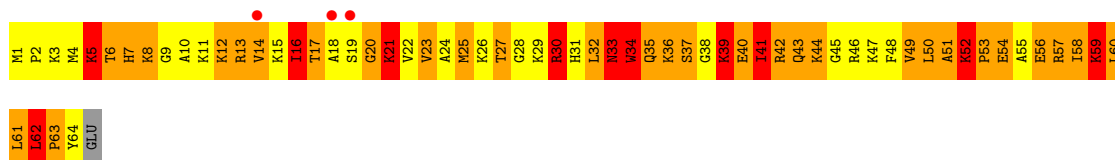
• Molecule 52: 50S ribosomal protein L33



• Molecule 53: 50S ribosomal protein L34



- Molecule 54: 50S ribosomal protein L35



- Molecule 55: 50S ribosomal protein L36



## 4 Data and refinement statistics

| Property                                                                | Value                                                       | Source           |
|-------------------------------------------------------------------------|-------------------------------------------------------------|------------------|
| Space group                                                             | I 4 2 2                                                     | Depositor        |
| Cell constants<br>a, b, c, $\alpha$ , $\beta$ , $\gamma$                | 508.54Å 508.54Å 806.29Å<br>90.00° 90.00° 90.00°             | Depositor        |
| Resolution (Å)                                                          | 300.00 – 5.50<br>300.00 – 5.50                              | Depositor<br>EDS |
| % Data completeness<br>(in resolution range)                            | 96.7 (300.00-5.50)<br>99.0 (300.00-5.50)                    | Depositor<br>EDS |
| $R_{merge}$                                                             | 0.10                                                        | Depositor        |
| $R_{sym}$                                                               | (Not available)                                             | Depositor        |
| $\langle I/\sigma(I) \rangle$ <sup>1</sup>                              | 0.00 (at 4.88Å)                                             | Xtriage          |
| Refinement program                                                      | CNS                                                         | Depositor        |
| R, $R_{free}$                                                           | 0.243 , 0.326<br>0.245 , 0.301                              | Depositor<br>DCC |
| $R_{free}$ test set                                                     | 10840 reflections (4.78%)                                   | wwPDB-VP         |
| Wilson B-factor (Å <sup>2</sup> )                                       | 108.9                                                       | Xtriage          |
| Anisotropy                                                              | 0.045                                                       | Xtriage          |
| Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> ) | 0.12 , 80.0                                                 | EDS              |
| L-test for twinning <sup>2</sup>                                        | $\langle  L  \rangle = 0.53$ , $\langle L^2 \rangle = 0.37$ | Xtriage          |
| Estimated twinning fraction                                             | No twinning to report.                                      | Xtriage          |
| $F_o, F_c$ correlation                                                  | 0.89                                                        | EDS              |
| Total number of atoms                                                   | 151691                                                      | wwPDB-VP         |
| Average B, all atoms (Å <sup>2</sup> )                                  | 226.0                                                       | wwPDB-VP         |

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.63% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Chain | Bond lengths |                 | Bond angles |                   |
|-----|-------|--------------|-----------------|-------------|-------------------|
|     |       | RMSZ         | $\# Z  > 5$     | RMSZ        | $\# Z  > 5$       |
| 1   | AA    | 0.59         | 2/36438 (0.0%)  | 0.98        | 148/56869 (0.3%)  |
| 2   | A1    | 0.49         | 0/1133          | 0.93        | 5/1753 (0.3%)     |
| 3   | AB    | 0.52         | 0/1813          | 0.95        | 10/2823 (0.4%)    |
| 3   | AC    | 0.62         | 0/1813          | 0.97        | 4/2823 (0.1%)     |
| 3   | AD    | 0.50         | 0/1813          | 0.88        | 3/2823 (0.1%)     |
| 4   | AE    | 0.87         | 1/1935 (0.1%)   | 1.50        | 38/2609 (1.5%)    |
| 5   | AF    | 0.70         | 0/1636          | 1.33        | 21/2205 (1.0%)    |
| 6   | AG    | 0.89         | 3/1733 (0.2%)   | 1.42        | 27/2318 (1.2%)    |
| 7   | AH    | 0.86         | 0/1162          | 1.47        | 22/1564 (1.4%)    |
| 8   | AI    | 0.85         | 0/856           | 1.28        | 7/1154 (0.6%)     |
| 9   | AJ    | 0.77         | 0/1276          | 1.37        | 21/1709 (1.2%)    |
| 10  | AK    | 0.85         | 0/1136          | 1.34        | 13/1527 (0.9%)    |
| 11  | AL    | 0.75         | 0/1029          | 1.16        | 9/1379 (0.7%)     |
| 12  | AM    | 0.69         | 0/807           | 1.33        | 10/1085 (0.9%)    |
| 13  | AN    | 0.85         | 0/900           | 1.58        | 23/1213 (1.9%)    |
| 14  | AO    | 0.78         | 0/986           | 1.49        | 21/1320 (1.6%)    |
| 15  | AP    | 0.67         | 0/1008          | 1.28        | 14/1347 (1.0%)    |
| 16  | AQ    | 0.72         | 0/501           | 1.34        | 8/664 (1.2%)      |
| 17  | AR    | 0.83         | 0/745           | 1.33        | 9/992 (0.9%)      |
| 18  | AS    | 0.87         | 0/716           | 1.35        | 12/963 (1.2%)     |
| 19  | AT    | 0.98         | 1/870 (0.1%)    | 1.51        | 20/1159 (1.7%)    |
| 20  | AU    | 0.79         | 0/603           | 1.61        | 13/799 (1.6%)     |
| 21  | AV    | 0.67         | 0/661           | 1.22        | 4/890 (0.4%)      |
| 22  | AW    | 0.93         | 0/765           | 1.28        | 8/1007 (0.8%)     |
| 23  | AX    | 0.57         | 0/212           | 1.26        | 3/277 (1.1%)      |
| 24  | BA    | 0.66         | 16/69685 (0.0%) | 1.05        | 370/108786 (0.3%) |
| 25  | BB    | 0.56         | 0/2954          | 0.95        | 5/4606 (0.1%)     |
| 26  | BC    | 0.79         | 0/1775          | 1.36        | 32/2393 (1.3%)    |
| 27  | BD    | 0.97         | 1/2174 (0.0%)   | 1.76        | 57/2927 (1.9%)    |
| 28  | BE    | 1.06         | 5/1611 (0.3%)   | 1.66        | 43/2171 (2.0%)    |
| 29  | BF    | 0.84         | 0/1660          | 1.51        | 35/2247 (1.6%)    |
| 30  | BG    | 0.83         | 1/1507 (0.1%)   | 1.53        | 34/2027 (1.7%)    |
| 31  | BH    | 0.82         | 2/1354 (0.1%)   | 1.48        | 28/1831 (1.5%)    |
| 32  | BK    | 0.85         | 1/1170 (0.1%)   | 1.61        | 36/1581 (2.3%)    |

| Mol | Chain | Bond lengths |                  | Bond angles |                    |
|-----|-------|--------------|------------------|-------------|--------------------|
|     |       | RMSZ         | # Z  >5          | RMSZ        | # Z  >5            |
| 33  | BL    | 0.94         | 0/1044           | 1.49        | 27/1415 (1.9%)     |
| 34  | BM    | 1.02         | 1/1140 (0.1%)    | 1.64        | 30/1537 (2.0%)     |
| 35  | BN    | 1.24         | 3/942 (0.3%)     | 1.97        | 48/1268 (3.8%)     |
| 36  | BO    | 1.00         | 2/1123 (0.2%)    | 1.63        | 33/1493 (2.2%)     |
| 37  | BP    | 0.99         | 0/1100           | 1.76        | 35/1470 (2.4%)     |
| 38  | BQ    | 0.98         | 1/974 (0.1%)     | 1.60        | 28/1302 (2.2%)     |
| 39  | BR    | 1.00         | 0/887            | 1.66        | 28/1180 (2.4%)     |
| 40  | BS    | 1.14         | 2/990 (0.2%)     | 1.85        | 34/1325 (2.6%)     |
| 41  | BT    | 1.03         | 1/982 (0.1%)     | 1.50        | 21/1306 (1.6%)     |
| 42  | BU    | 1.16         | 3/790 (0.4%)     | 1.93        | 32/1057 (3.0%)     |
| 43  | BV    | 0.89         | 1/886 (0.1%)     | 1.52        | 17/1189 (1.4%)     |
| 44  | BW    | 0.77         | 0/756            | 1.38        | 16/1015 (1.6%)     |
| 45  | BX    | 0.75         | 0/857            | 1.57        | 21/1142 (1.8%)     |
| 46  | BY    | 0.92         | 1/1467 (0.1%)    | 1.78        | 55/1992 (2.8%)     |
| 47  | BZ    | 0.86         | 0/679            | 1.59        | 20/902 (2.2%)      |
| 48  | B1    | 0.83         | 0/569            | 1.31        | 8/751 (1.1%)       |
| 49  | B2    | 0.86         | 1/474 (0.2%)     | 1.62        | 13/635 (2.0%)      |
| 50  | B3    | 1.10         | 0/594            | 1.85        | 26/795 (3.3%)      |
| 51  | B4    | 1.03         | 2/459 (0.4%)     | 1.76        | 20/621 (3.2%)      |
| 52  | B5    | 1.10         | 0/433            | 1.88        | 15/576 (2.6%)      |
| 53  | B6    | 0.97         | 0/438            | 1.35        | 4/575 (0.7%)       |
| 54  | B7    | 0.83         | 0/523            | 1.62        | 18/690 (2.6%)      |
| 55  | B8    | 0.81         | 0/310            | 1.56        | 6/407 (1.5%)       |
| All | All   | 0.72         | 51/164854 (0.0%) | 1.18        | 1668/246484 (0.7%) |

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1   | AA    | 0                   | 175                 |
| 2   | A1    | 0                   | 3                   |
| 3   | AB    | 0                   | 6                   |
| 3   | AC    | 0                   | 8                   |
| 3   | AD    | 0                   | 8                   |
| 6   | AG    | 0                   | 1                   |
| 8   | AI    | 0                   | 1                   |
| 13  | AN    | 0                   | 1                   |
| 15  | AP    | 0                   | 1                   |
| 16  | AQ    | 0                   | 1                   |
| 24  | BA    | 0                   | 463                 |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 25  | BB    | 0                   | 18                  |
| 26  | BC    | 0                   | 1                   |
| 28  | BE    | 0                   | 1                   |
| 34  | BM    | 0                   | 1                   |
| 37  | BP    | 0                   | 1                   |
| 40  | BS    | 0                   | 1                   |
| 42  | BU    | 0                   | 1                   |
| 50  | B3    | 0                   | 1                   |
| 51  | B4    | 0                   | 1                   |
| All | All   | 0                   | 694                 |

All (51) bond length outliers are listed below:

| Mol | Chain | Res  | Type | Atoms   | Z      | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|--------|-------------|----------|
| 24  | BA    | 1203 | G    | O3'-P   | -27.76 | 1.19        | 1.61     |
| 6   | AG    | 146  | ILE  | CA-CB   | -13.42 | 1.45        | 1.55     |
| 24  | BA    | 2500 | U    | O3'-P   | -12.13 | 1.43        | 1.61     |
| 24  | BA    | 2448 | A    | O3'-P   | -11.53 | 1.43        | 1.61     |
| 24  | BA    | 1240 | U    | O3'-P   | -10.77 | 1.45        | 1.61     |
| 24  | BA    | 2756 | U    | O3'-P   | 10.66  | 1.77        | 1.61     |
| 35  | BN    | 98   | VAL  | CA-C    | 8.71   | 1.60        | 1.52     |
| 19  | AT    | 21   | VAL  | CA-CB   | -8.57  | 1.42        | 1.55     |
| 27  | BD    | 245  | PRO  | CA-C    | 7.92   | 1.59        | 1.52     |
| 24  | BA    | 1202 | C    | O3'-P   | -7.86  | 1.49        | 1.61     |
| 24  | BA    | 2499 | C    | O3'-P   | 7.50   | 1.72        | 1.61     |
| 24  | BA    | 2500 | U    | C4-O4   | 7.41   | 1.38        | 1.23     |
| 6   | AG    | 12   | CYS  | CA-CB   | 7.25   | 1.65        | 1.53     |
| 24  | BA    | 2755 | C    | O3'-P   | 7.07   | 1.71        | 1.61     |
| 28  | BE    | 135  | HIS  | CA-C    | 6.97   | 1.62        | 1.52     |
| 24  | BA    | 607  | U    | N3-C4   | -6.54  | 1.25        | 1.38     |
| 35  | BN    | 98   | VAL  | CA-CB   | 6.43   | 1.62        | 1.53     |
| 42  | BU    | 61   | VAL  | CA-C    | -6.43  | 1.44        | 1.52     |
| 24  | BA    | 2447 | G    | O3'-P   | -6.25  | 1.51        | 1.61     |
| 34  | BM    | 46   | VAL  | CA-CB   | 6.03   | 1.62        | 1.54     |
| 24  | BA    | 1204 | A    | O3'-P   | 6.00   | 1.70        | 1.61     |
| 31  | BH    | 11   | VAL  | CA-CB   | 6.00   | 1.61        | 1.54     |
| 28  | BE    | 25   | VAL  | CA-CB   | -5.90  | 1.47        | 1.54     |
| 51  | B4    | 11   | THR  | CA-CB   | 5.85   | 1.63        | 1.53     |
| 43  | BV    | 96   | ILE  | CA-CB   | -5.72  | 1.46        | 1.55     |
| 24  | BA    | 621  | A    | C6-N6   | 5.64   | 1.45        | 1.33     |
| 46  | BY    | 39   | VAL  | CA-CB   | 5.63   | 1.60        | 1.53     |
| 1   | AA    | 1494 | G    | C3'-O3' | 5.62   | 1.50        | 1.42     |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24  | BA    | 2448 | A    | C5'-C4' | 5.62  | 1.59        | 1.51     |
| 36  | BO    | 71   | VAL  | CA-CB   | 5.57  | 1.61        | 1.54     |
| 1   | AA    | 579  | G    | C3'-O3' | 5.47  | 1.50        | 1.42     |
| 28  | BE    | 135  | HIS  | CA-CB   | 5.47  | 1.62        | 1.53     |
| 41  | BT    | 89   | GLU  | CA-C    | 5.43  | 1.58        | 1.52     |
| 36  | BO    | 71   | VAL  | CA-C    | 5.39  | 1.58        | 1.52     |
| 51  | B4    | 11   | THR  | N-CA    | 5.36  | 1.53        | 1.46     |
| 24  | BA    | 2195 | C    | C3'-O3' | 5.34  | 1.50        | 1.42     |
| 38  | BQ    | 36   | THR  | CA-CB   | 5.32  | 1.59        | 1.54     |
| 40  | BS    | 66   | VAL  | CA-CB   | -5.32 | 1.47        | 1.54     |
| 6   | AG    | 12   | CYS  | N-CA    | 5.31  | 1.52        | 1.46     |
| 49  | B2    | 13   | ILE  | CA-CB   | 5.31  | 1.61        | 1.54     |
| 31  | BH    | 17   | VAL  | CA-CB   | 5.28  | 1.60        | 1.53     |
| 28  | BE    | 198  | VAL  | CA-CB   | -5.27 | 1.46        | 1.55     |
| 30  | BG    | 149  | VAL  | CA-CB   | 5.26  | 1.61        | 1.54     |
| 32  | BK    | 133  | HIS  | C-O     | -5.20 | 1.20        | 1.24     |
| 40  | BS    | 34   | VAL  | CA-CB   | -5.19 | 1.47        | 1.54     |
| 42  | BU    | 81   | TYR  | CB-CG   | 5.15  | 1.62        | 1.51     |
| 24  | BA    | 1993 | U    | N1-C2   | 5.14  | 1.48        | 1.38     |
| 4   | AE    | 214  | ILE  | CA-CB   | -5.13 | 1.48        | 1.54     |
| 35  | BN    | 83   | ALA  | CA-CB   | -5.12 | 1.45        | 1.53     |
| 28  | BE    | 135  | HIS  | N-CA    | 5.05  | 1.52        | 1.46     |
| 42  | BU    | 99   | ILE  | CA-CB   | 5.02  | 1.59        | 1.53     |

All (1668) bond angle outliers are listed below:

| Mol | Chain | Res  | Type | Atoms       | Z      | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|--------|-------------|----------|
| 24  | BA    | 2448 | A    | C5'-C4'-O4' | -21.85 | 76.33       | 109.10   |
| 24  | BA    | 1203 | G    | P-O3'-C3'   | 21.82  | 152.94      | 120.20   |
| 1   | AA    | 1064 | G    | N1-C2-N2    | -21.50 | 51.71       | 116.20   |
| 5   | AF    | 48   | TYR  | N-CA-C      | -21.19 | 86.17       | 113.72   |
| 40  | BS    | 66   | VAL  | N-CA-C      | -17.80 | 82.48       | 108.12   |
| 39  | BR    | 63   | THR  | N-CA-C      | -16.50 | 93.07       | 112.87   |
| 42  | BU    | 49   | THR  | CA-C-N      | 16.50  | 140.47      | 119.84   |
| 42  | BU    | 49   | THR  | C-N-CA      | 16.50  | 140.47      | 119.84   |
| 52  | B5    | 24   | GLU  | N-CA-C      | 16.28  | 136.19      | 113.56   |
| 40  | BS    | 29   | ARG  | N-CA-C      | -15.90 | 85.77       | 110.42   |
| 37  | BP    | 125  | LEU  | CA-C-N      | -15.90 | 99.97       | 119.84   |
| 37  | BP    | 125  | LEU  | C-N-CA      | -15.90 | 99.97       | 119.84   |
| 27  | BD    | 63   | ARG  | N-CA-C      | 15.27  | 133.07      | 110.48   |
| 46  | BY    | 52   | SER  | N-CA-C      | -14.74 | 93.18       | 112.34   |
| 3   | AB    | 19   | G    | O3'-P-O5'   | -14.67 | 82.00       | 104.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms      | Z      | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|--------|-------------|----------|
| 1   | AA    | 973  | G    | O3'-P-O5'  | 14.56  | 125.85      | 104.00   |
| 27  | BD    | 250  | TRP  | N-CA-C     | 14.08  | 128.70      | 110.53   |
| 30  | BG    | 95   | ARG  | N-CA-C     | 14.06  | 131.32      | 112.90   |
| 35  | BN    | 98   | VAL  | N-CA-C     | 13.79  | 120.97      | 106.21   |
| 46  | BY    | 39   | VAL  | N-CA-C     | 13.68  | 126.45      | 108.12   |
| 1   | AA    | 1064 | G    | N3-C2-N2   | 13.47  | 160.30      | 119.90   |
| 34  | BM    | 49   | GLY  | N-CA-C     | -13.43 | 99.10       | 115.08   |
| 39  | BR    | 65   | VAL  | N-CA-C     | -13.41 | 95.34       | 110.62   |
| 38  | BQ    | 38   | VAL  | CA-C-N     | -13.28 | 106.14      | 119.56   |
| 38  | BQ    | 38   | VAL  | C-N-CA     | -13.28 | 106.14      | 119.56   |
| 27  | BD    | 260  | ARG  | N-CA-C     | -13.14 | 97.01       | 111.07   |
| 20  | AU    | 51   | LEU  | CA-C-N     | 13.05  | 136.16      | 119.84   |
| 20  | AU    | 51   | LEU  | C-N-CA     | 13.05  | 136.16      | 119.84   |
| 31  | BH    | 165  | ALA  | N-CA-C     | -12.96 | 95.91       | 112.23   |
| 24  | BA    | 1203 | G    | O3'-P-O5'  | 12.71  | 123.07      | 104.00   |
| 27  | BD    | 80   | ALA  | N-CA-C     | -12.71 | 97.50       | 111.36   |
| 24  | BA    | 1204 | A    | N9-C1'-C2' | 12.65  | 132.97      | 114.00   |
| 27  | BD    | 220  | HIS  | N-CA-C     | 12.63  | 124.36      | 108.45   |
| 27  | BD    | 159  | ALA  | N-CA-C     | -12.57 | 98.20       | 113.15   |
| 27  | BD    | 248  | SER  | CA-C-N     | 12.42  | 135.36      | 119.84   |
| 27  | BD    | 248  | SER  | C-N-CA     | 12.42  | 135.36      | 119.84   |
| 27  | BD    | 19   | ALA  | N-CA-C     | -12.27 | 99.10       | 113.21   |
| 13  | AN    | 126  | ARG  | N-CA-C     | -12.23 | 98.48       | 113.41   |
| 42  | BU    | 98   | GLU  | N-CA-C     | 12.10  | 127.98      | 109.96   |
| 28  | BE    | 5    | LEU  | N-CA-C     | 12.08  | 127.43      | 109.07   |
| 42  | BU    | 94   | LEU  | N-CA-C     | -12.07 | 92.41       | 110.28   |
| 9   | AJ    | 132  | GLY  | N-CA-C     | 12.00  | 127.05      | 111.09   |
| 32  | BK    | 32   | PRO  | N-CA-C     | -11.89 | 96.47       | 113.47   |
| 27  | BD    | 45   | ASN  | N-CA-C     | -11.64 | 91.44       | 110.17   |
| 27  | BD    | 131  | LEU  | N-CA-C     | 11.56  | 118.63      | 108.22   |
| 34  | BM    | 104  | LYS  | N-CA-C     | -11.56 | 97.24       | 111.11   |
| 6   | AG    | 19   | LEU  | N-CA-C     | -11.52 | 94.07       | 111.81   |
| 46  | BY    | 61   | LEU  | CA-C-N     | 11.46  | 134.16      | 119.84   |
| 46  | BY    | 61   | LEU  | C-N-CA     | 11.46  | 134.16      | 119.84   |
| 51  | B4    | 13   | LYS  | N-CA-C     | -11.41 | 92.54       | 111.37   |
| 35  | BN    | 74   | GLY  | N-CA-C     | -11.39 | 92.15       | 112.54   |
| 36  | BO    | 71   | VAL  | CA-C-N     | 11.24  | 133.89      | 119.84   |
| 36  | BO    | 71   | VAL  | C-N-CA     | 11.24  | 133.89      | 119.84   |
| 43  | BV    | 76   | VAL  | N-CA-C     | 11.21  | 124.88      | 108.96   |
| 27  | BD    | 51   | VAL  | N-CA-C     | 11.19  | 123.64      | 107.75   |
| 6   | AG    | 26   | CYS  | N-CA-C     | -11.17 | 99.68       | 113.20   |
| 24  | BA    | 2459 | A    | N9-C1'-C2' | 11.16  | 128.74      | 112.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms      | Z      | Observed(°) | Ideal(°) |
|-----|-------|------|------|------------|--------|-------------|----------|
| 32  | BK    | 133  | HIS  | CA-C-N     | 11.08  | 133.69      | 119.84   |
| 32  | BK    | 133  | HIS  | C-N-CA     | 11.08  | 133.69      | 119.84   |
| 28  | BE    | 195  | LEU  | N-CA-C     | 11.04  | 126.85      | 109.07   |
| 50  | B3    | 31   | ILE  | N-CA-C     | 11.04  | 124.96      | 107.73   |
| 41  | BT    | 28   | ARG  | N-CA-C     | -11.03 | 100.02      | 113.15   |
| 39  | BR    | 62   | LYS  | N-CA-C     | 10.98  | 126.09      | 109.62   |
| 38  | BQ    | 69   | ASP  | N-CA-C     | 10.93  | 125.14      | 111.69   |
| 30  | BG    | 47   | LYS  | N-CA-C     | 10.87  | 124.35      | 110.33   |
| 52  | B5    | 39   | TYR  | N-CA-C     | 10.83  | 133.86      | 110.80   |
| 34  | BM    | 124  | ALA  | N-CA-C     | -10.81 | 100.32      | 113.19   |
| 4   | AE    | 132  | LYS  | N-CA-C     | -10.81 | 99.28       | 111.71   |
| 24  | BA    | 1240 | U    | O3'-P-O5'  | 10.74  | 120.11      | 104.00   |
| 24  | BA    | 2501 | C    | O3'-P-O5'  | 10.70  | 120.05      | 104.00   |
| 4   | AE    | 214  | ILE  | N-CA-C     | 10.69  | 120.57      | 110.53   |
| 45  | BX    | 5    | MET  | N-CA-C     | 10.67  | 122.32      | 108.34   |
| 45  | BX    | 50   | ARG  | N-CA-C     | -10.65 | 99.82       | 112.92   |
| 27  | BD    | 245  | PRO  | N-CA-C     | 10.62  | 123.65      | 110.70   |
| 45  | BX    | 12   | THR  | N-CA-C     | 10.60  | 123.80      | 108.86   |
| 1   | AA    | 974  | A    | O3'-P-O5'  | 10.58  | 119.87      | 104.00   |
| 24  | BA    | 2384 | G    | N9-C1'-C2' | 10.58  | 129.87      | 114.00   |
| 35  | BN    | 94   | ARG  | N-CA-C     | 10.55  | 123.27      | 110.19   |
| 43  | BV    | 62   | HIS  | N-CA-C     | -10.54 | 99.16       | 113.18   |
| 20  | AU    | 79   | LEU  | CA-C-N     | 10.51  | 132.98      | 119.84   |
| 20  | AU    | 79   | LEU  | C-N-CA     | 10.51  | 132.98      | 119.84   |
| 29  | BF    | 198  | ALA  | N-CA-C     | -10.51 | 99.51       | 110.97   |
| 9   | AJ    | 100  | ALA  | N-CA-C     | -10.50 | 99.64       | 111.71   |
| 27  | BD    | 272  | ALA  | N-CA-C     | 10.46  | 127.62      | 108.58   |
| 41  | BT    | 104  | GLN  | N-CA-C     | -10.46 | 99.57       | 110.97   |
| 14  | AO    | 29   | GLY  | N-CA-C     | -10.46 | 101.56      | 113.79   |
| 32  | BK    | 144  | VAL  | N-CA-C     | -10.43 | 91.74       | 108.95   |
| 6   | AG    | 10   | ARG  | N-CA-C     | -10.38 | 99.97       | 111.28   |
| 40  | BS    | 14   | TYR  | N-CA-C     | 10.35  | 122.32      | 111.14   |
| 13  | AN    | 112  | THR  | CA-C-N     | 10.30  | 132.72      | 119.84   |
| 13  | AN    | 112  | THR  | C-N-CA     | 10.30  | 132.72      | 119.84   |
| 28  | BE    | 65   | GLY  | N-CA-C     | -10.28 | 100.29      | 112.83   |
| 37  | BP    | 82   | ARG  | N-CA-C     | -10.28 | 93.59       | 109.52   |
| 7   | AH    | 111  | GLU  | N-CA-C     | -10.27 | 100.09      | 111.28   |
| 42  | BU    | 12   | TYR  | N-CA-C     | 10.25  | 124.99      | 109.41   |
| 50  | B3    | 69   | LYS  | N-CA-C     | -10.24 | 100.11      | 111.07   |
| 35  | BN    | 100  | GLY  | CA-C-N     | 10.20  | 132.59      | 119.84   |
| 35  | BN    | 100  | GLY  | C-N-CA     | 10.20  | 132.59      | 119.84   |
| 46  | BY    | 6    | LYS  | N-CA-C     | 10.17  | 123.75      | 110.43   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z      | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|--------|-------------|----------|
| 14  | AO    | 119  | LYS  | N-CA-C      | -10.14 | 96.20       | 110.50   |
| 52  | B5    | 22   | ALA  | N-CA-C      | 10.11  | 125.94      | 113.50   |
| 46  | BY    | 82   | ARG  | CA-C-N      | -10.08 | 107.24      | 119.84   |
| 46  | BY    | 82   | ARG  | C-N-CA      | -10.08 | 107.24      | 119.84   |
| 35  | BN    | 6    | THR  | N-CA-C      | 10.02  | 125.88      | 108.75   |
| 3   | AB    | 18   | G    | OP2-P-O3'   | 9.96   | 137.87      | 108.00   |
| 47  | BZ    | 26   | TYR  | N-CA-C      | 9.96   | 124.88      | 110.24   |
| 6   | AG    | 33   | MET  | N-CA-C      | -9.95  | 100.27      | 111.71   |
| 19  | AT    | 77   | VAL  | N-CA-C      | -9.94  | 103.85      | 111.90   |
| 51  | B4    | 41   | PRO  | N-CA-C      | -9.92  | 98.60       | 110.70   |
| 40  | BS    | 64   | ARG  | N-CA-C      | 9.89   | 122.58      | 110.41   |
| 38  | BQ    | 48   | VAL  | N-CA-C      | -9.88  | 97.53       | 111.17   |
| 39  | BR    | 13   | ARG  | N-CA-C      | -9.87  | 99.12       | 111.75   |
| 40  | BS    | 60   | THR  | N-CA-C      | -9.86  | 93.72       | 109.59   |
| 20  | AU    | 53   | ARG  | N-CA-C      | -9.82  | 99.45       | 111.33   |
| 34  | BM    | 56   | ASN  | N-CA-C      | -9.82  | 100.29      | 112.47   |
| 17  | AR    | 37   | ASN  | N-CA-C      | 9.81   | 121.66      | 110.97   |
| 24  | BA    | 1666 | G    | C2'-C3'-O3' | -9.81  | 98.99       | 113.70   |
| 46  | BY    | 171  | ILE  | N-CA-C      | -9.79  | 100.33      | 111.00   |
| 30  | BG    | 67   | LYS  | CA-C-N      | 9.74   | 132.02      | 119.84   |
| 30  | BG    | 67   | LYS  | C-N-CA      | 9.74   | 132.02      | 119.84   |
| 36  | BO    | 65   | ARG  | N-CA-C      | 9.74   | 121.61      | 107.88   |
| 43  | BV    | 57   | ASN  | N-CA-C      | -9.71  | 99.45       | 111.11   |
| 24  | BA    | 2460 | U    | N1-C1'-C2'  | 9.69   | 126.53      | 112.00   |
| 24  | BA    | 2581 | G    | N9-C1'-C2'  | 9.68   | 126.51      | 112.00   |
| 24  | BA    | 2522 | U    | N1-C1'-C2'  | 9.66   | 126.49      | 112.00   |
| 29  | BF    | 41   | LEU  | N-CA-C      | -9.64  | 100.78      | 111.28   |
| 1   | AA    | 1492 | A    | C3'-C2'-O2' | -9.63  | 96.25       | 110.70   |
| 33  | BL    | 53   | VAL  | N-CA-C      | 9.59   | 119.02      | 107.61   |
| 12  | AM    | 62   | HIS  | N-CA-C      | 9.59   | 123.25      | 108.96   |
| 27  | BD    | 251  | GLY  | N-CA-C      | -9.58  | 94.10       | 111.25   |
| 12  | AM    | 32   | ALA  | N-CA-C      | -9.58  | 100.91      | 112.59   |
| 49  | B2    | 10   | LYS  | N-CA-C      | 9.55   | 123.85      | 108.76   |
| 34  | BM    | 139  | GLU  | N-CA-C      | 9.55   | 123.03      | 108.52   |
| 41  | BT    | 11   | ARG  | N-CA-C      | -9.54  | 99.67       | 111.11   |
| 48  | B1    | 10   | LYS  | N-CA-C      | 9.53   | 122.65      | 111.02   |
| 46  | BY    | 151  | HIS  | N-CA-C      | 9.51   | 120.46      | 108.19   |
| 6   | AG    | 20   | TYR  | N-CA-C      | -9.50  | 99.58       | 111.75   |
| 18  | AS    | 16   | HIS  | N-CA-C      | -9.49  | 96.83       | 110.59   |
| 24  | BA    | 1625 | C    | N1-C1'-C2'  | 9.49   | 126.23      | 112.00   |
| 50  | B3    | 37   | SER  | N-CA-C      | 9.49   | 120.77      | 108.24   |
| 45  | BX    | 13   | VAL  | N-CA-C      | 9.48   | 122.63      | 109.55   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 29  | BF    | 179  | GLU  | N-CA-C      | -9.47 | 100.32      | 113.20   |
| 49  | B2    | 54   | VAL  | N-CA-C      | 9.46  | 121.76      | 108.23   |
| 23  | AX    | 16   | GLY  | N-CA-C      | -9.45 | 102.11      | 115.43   |
| 35  | BN    | 40   | VAL  | N-CA-C      | 9.45  | 122.23      | 108.53   |
| 36  | BO    | 7    | ARG  | CA-C-N      | 9.44  | 131.64      | 119.84   |
| 36  | BO    | 7    | ARG  | C-N-CA      | 9.44  | 131.64      | 119.84   |
| 24  | BA    | 2790 | A    | C2'-C3'-O3' | -9.43 | 99.56       | 113.70   |
| 46  | BY    | 77   | ASP  | N-CA-C      | 9.42  | 130.87      | 110.80   |
| 24  | BA    | 2491 | U    | O4'-C1'-C2' | -9.42 | 98.18       | 107.60   |
| 23  | AX    | 5    | ASP  | N-CA-C      | -9.42 | 100.89      | 112.38   |
| 1   | AA    | 1494 | G    | N9-C1'-C2'  | 9.38  | 126.08      | 112.00   |
| 54  | B7    | 59   | LYS  | N-CA-C      | -9.37 | 100.75      | 110.97   |
| 13  | AN    | 47   | VAL  | N-CA-C      | -9.36 | 100.80      | 111.00   |
| 27  | BD    | 16   | MET  | N-CA-C      | -9.35 | 92.25       | 108.52   |
| 32  | BK    | 147  | GLN  | N-CA-C      | -9.34 | 100.48      | 113.37   |
| 27  | BD    | 94   | LEU  | N-CA-C      | -9.33 | 94.13       | 108.96   |
| 9   | AJ    | 57   | GLU  | N-CA-C      | 9.25  | 122.84      | 110.08   |
| 53  | B6    | 45   | ALA  | N-CA-C      | -9.24 | 101.90      | 113.55   |
| 24  | BA    | 2490 | G    | N9-C1'-C2'  | 9.23  | 127.85      | 114.00   |
| 29  | BF    | 173  | VAL  | N-CA-C      | 9.23  | 122.46      | 108.71   |
| 12  | AM    | 4    | ILE  | N-CA-C      | 9.21  | 121.00      | 108.11   |
| 29  | BF    | 162  | LEU  | N-CA-C      | -9.18 | 100.66      | 112.23   |
| 52  | B5    | 26   | ASN  | N-CA-C      | 9.17  | 130.33      | 110.80   |
| 6   | AG    | 132  | ARG  | N-CA-C      | 9.16  | 122.06      | 108.14   |
| 26  | BC    | 189  | ILE  | N-CA-C      | -9.13 | 100.77      | 110.36   |
| 46  | BY    | 87   | ASP  | N-CA-C      | 9.13  | 123.40      | 108.52   |
| 14  | AO    | 86   | ARG  | N-CA-C      | -9.12 | 101.71      | 112.92   |
| 18  | AS    | 46   | PRO  | N-CA-C      | -9.10 | 102.48      | 113.86   |
| 50  | B3    | 47   | GLN  | N-CA-C      | 9.10  | 124.14      | 108.76   |
| 38  | BQ    | 102  | GLU  | N-CA-C      | 9.10  | 120.26      | 108.34   |
| 42  | BU    | 50   | PRO  | N-CA-C      | 9.09  | 131.20      | 112.47   |
| 19  | AT    | 91   | ARG  | N-CA-C      | -9.09 | 101.26      | 111.71   |
| 1   | AA    | 484  | G    | C2'-C3'-O3' | 9.08  | 123.12      | 109.50   |
| 45  | BX    | 51   | VAL  | N-CA-C      | -9.06 | 102.02      | 110.53   |
| 8   | AI    | 19   | LEU  | N-CA-C      | -9.04 | 100.27      | 111.11   |
| 28  | BE    | 184  | VAL  | N-CA-C      | 9.03  | 121.87      | 113.20   |
| 24  | BA    | 1938 | A    | N9-C1'-C2'  | 9.03  | 127.54      | 114.00   |
| 7   | AH    | 101  | ILE  | N-CA-C      | 9.01  | 120.83      | 106.32   |
| 24  | BA    | 1951 | U    | N1-C1'-C2'  | 9.01  | 125.51      | 112.00   |
| 13  | AN    | 65   | ALA  | N-CA-C      | -8.99 | 100.05      | 111.02   |
| 24  | BA    | 686  | G    | C2'-C3'-O3' | -8.97 | 100.24      | 113.70   |
| 28  | BE    | 176  | ILE  | CA-C-N      | 8.96  | 129.14      | 119.28   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 28  | BE    | 176  | ILE  | C-N-CA      | 8.96  | 129.14      | 119.28   |
| 24  | BA    | 2448 | A    | O5'-C5'-C4' | -8.93 | 98.31       | 111.70   |
| 44  | BW    | 94   | GLY  | N-CA-C      | -8.92 | 101.85      | 112.64   |
| 19  | AT    | 61   | GLU  | N-CA-C      | -8.91 | 96.68       | 109.96   |
| 4   | AE    | 216  | SER  | N-CA-C      | -8.91 | 101.26      | 110.97   |
| 35  | BN    | 44   | LYS  | N-CA-C      | -8.91 | 101.31      | 112.72   |
| 37  | BP    | 8    | LYS  | N-CA-C      | -8.91 | 100.36      | 112.03   |
| 1   | AA    | 372  | C    | C2'-C3'-O3' | 8.91  | 122.86      | 109.50   |
| 27  | BD    | 135  | PHE  | N-CA-C      | -8.90 | 102.97      | 113.21   |
| 46  | BY    | 32   | HIS  | N-CA-C      | 8.88  | 123.48      | 112.47   |
| 32  | BK    | 52   | ARG  | N-CA-C      | -8.86 | 100.22      | 111.02   |
| 43  | BV    | 24   | ILE  | N-CA-C      | 8.85  | 122.15      | 111.09   |
| 12  | AM    | 23   | ILE  | N-CA-C      | 8.84  | 119.64      | 110.72   |
| 4   | AE    | 146  | GLN  | N-CA-C      | -8.83 | 101.23      | 111.03   |
| 4   | AE    | 90   | MET  | CA-C-N      | 8.82  | 130.87      | 119.84   |
| 4   | AE    | 90   | MET  | C-N-CA      | 8.82  | 130.87      | 119.84   |
| 24  | BA    | 1313 | U    | N1-C1'-C2'  | 8.82  | 125.23      | 112.00   |
| 24  | BA    | 2491 | U    | C2'-C3'-O3' | 8.82  | 126.93      | 113.70   |
| 6   | AG    | 62   | GLN  | N-CA-C      | 8.81  | 120.57      | 110.97   |
| 1   | AA    | 1004 | A    | C2'-C3'-O3' | 8.80  | 122.69      | 109.50   |
| 45  | BX    | 9    | LYS  | N-CA-C      | -8.77 | 101.73      | 111.28   |
| 42  | BU    | 87   | HIS  | N-CA-C      | 8.76  | 121.21      | 108.86   |
| 30  | BG    | 75   | LYS  | N-CA-C      | -8.76 | 102.55      | 113.23   |
| 27  | BD    | 49   | ILE  | N-CA-C      | -8.75 | 91.14       | 109.34   |
| 40  | BS    | 17   | THR  | N-CA-C      | -8.74 | 98.99       | 110.53   |
| 42  | BU    | 96   | ILE  | N-CA-C      | 8.73  | 122.15      | 108.87   |
| 28  | BE    | 141  | ILE  | N-CA-C      | 8.73  | 127.50      | 109.34   |
| 30  | BG    | 77   | ILE  | N-CA-C      | -8.70 | 100.17      | 111.05   |
| 6   | AG    | 205  | GLU  | N-CA-C      | -8.69 | 101.50      | 110.97   |
| 49  | B2    | 38   | GLU  | N-CA-C      | -8.66 | 96.67       | 109.15   |
| 38  | BQ    | 31   | HIS  | N-CA-C      | 8.66  | 124.08      | 113.17   |
| 37  | BP    | 44   | ALA  | N-CA-C      | -8.63 | 100.76      | 111.11   |
| 36  | BO    | 51   | PHE  | N-CA-C      | -8.62 | 100.51      | 111.02   |
| 7   | AH    | 110  | LEU  | N-CA-C      | 8.60  | 120.74      | 111.36   |
| 28  | BE    | 114  | ALA  | N-CA-C      | 8.59  | 122.39      | 109.25   |
| 41  | BT    | 16   | LYS  | N-CA-C      | -8.59 | 100.55      | 111.02   |
| 24  | BA    | 1992 | G    | N9-C1'-C2'  | 8.57  | 126.85      | 114.00   |
| 7   | AH    | 83   | GLU  | N-CA-C      | -8.56 | 94.63       | 108.41   |
| 49  | B2    | 15   | TYR  | N-CA-C      | 8.55  | 115.83      | 108.13   |
| 26  | BC    | 6    | ARG  | N-CA-C      | -8.54 | 102.30      | 112.89   |
| 46  | BY    | 8    | TYR  | N-CA-C      | -8.54 | 100.98      | 111.40   |
| 4   | AE    | 164  | VAL  | N-CA-C      | 8.54  | 121.68      | 108.44   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 29  | BF    | 60   | SER  | N-CA-C      | -8.54 | 95.29       | 109.46   |
| 36  | BO    | 105  | LEU  | N-CA-C      | 8.54  | 122.47      | 107.61   |
| 1   | AA    | 314  | C    | C2'-C3'-O3' | -8.53 | 100.90      | 113.70   |
| 50  | B3    | 32   | TYR  | N-CA-C      | 8.52  | 128.95      | 110.80   |
| 1   | AA    | 173  | U    | P-O3'-C3'   | 8.52  | 132.97      | 120.20   |
| 37  | BP    | 114  | ALA  | N-CA-C      | -8.52 | 100.89      | 111.11   |
| 1   | AA    | 974  | A    | N9-C1'-C2'  | 8.48  | 126.72      | 114.00   |
| 52  | B5    | 42   | TRP  | N-CA-C      | -8.46 | 102.87      | 113.02   |
| 18  | AS    | 40   | ASP  | CA-C-N      | 8.46  | 128.10      | 119.56   |
| 18  | AS    | 40   | ASP  | C-N-CA      | 8.46  | 128.10      | 119.56   |
| 54  | B7    | 6    | THR  | N-CA-C      | -8.46 | 93.19       | 108.58   |
| 37  | BP    | 76   | LYS  | N-CA-C      | -8.44 | 102.54      | 112.92   |
| 36  | BO    | 30   | THR  | N-CA-C      | 8.44  | 128.77      | 110.80   |
| 14  | AO    | 120  | TYR  | N-CA-C      | -8.44 | 100.35      | 111.74   |
| 35  | BN    | 117  | LEU  | N-CA-C      | 8.42  | 120.15      | 110.97   |
| 17  | AR    | 53   | HIS  | N-CA-C      | -8.41 | 100.76      | 111.02   |
| 50  | B3    | 40   | HIS  | CA-C-N      | 8.35  | 130.27      | 119.84   |
| 50  | B3    | 40   | HIS  | C-N-CA      | 8.35  | 130.27      | 119.84   |
| 24  | BA    | 1498 | C    | N1-C1'-C2'  | 8.34  | 124.51      | 112.00   |
| 9   | AJ    | 76   | ARG  | N-CA-C      | -8.33 | 96.55       | 108.96   |
| 1   | AA    | 172  | A    | OP1-P-O3'   | 8.31  | 132.95      | 108.00   |
| 47  | BZ    | 44   | ARG  | N-CA-C      | -8.29 | 103.14      | 113.18   |
| 9   | AJ    | 145  | ALA  | N-CA-C      | -8.29 | 99.08       | 110.35   |
| 34  | BM    | 51   | PHE  | N-CA-C      | -8.29 | 93.98       | 108.23   |
| 24  | BA    | 775  | G    | N9-C1'-C2'  | 8.28  | 124.42      | 112.00   |
| 14  | AO    | 58   | VAL  | N-CA-C      | 8.27  | 121.26      | 108.44   |
| 40  | BS    | 43   | GLN  | N-CA-C      | -8.26 | 94.08       | 108.20   |
| 24  | BA    | 2446 | G    | P-O3'-C3'   | 8.24  | 132.56      | 120.20   |
| 13  | AN    | 103  | LEU  | N-CA-C      | -8.23 | 102.26      | 112.47   |
| 1   | AA    | 172  | A    | O3'-P-O5'   | -8.23 | 91.66       | 104.00   |
| 24  | BA    | 2501 | C    | P-O3'-C3'   | -8.22 | 107.86      | 120.20   |
| 40  | BS    | 57   | PHE  | N-CA-C      | 8.21  | 126.29      | 107.48   |
| 4   | AE    | 43   | ASP  | N-CA-C      | 8.19  | 122.99      | 109.06   |
| 24  | BA    | 2032 | G    | N9-C1'-C2'  | 8.20  | 126.29      | 114.00   |
| 31  | BH    | 111  | HIS  | N-CA-C      | 8.18  | 127.89      | 109.81   |
| 24  | BA    | 801  | G    | N9-C1'-C2'  | 8.17  | 126.26      | 114.00   |
| 37  | BP    | 113  | GLN  | N-CA-C      | -8.17 | 102.31      | 111.14   |
| 47  | BZ    | 11   | ARG  | N-CA-C      | 8.16  | 123.13      | 108.69   |
| 16  | AQ    | 40   | CYS  | N-CA-C      | -8.14 | 98.44       | 110.48   |
| 24  | BA    | 2591 | C    | C4'-C3'-O3' | -8.13 | 100.80      | 113.00   |
| 33  | BL    | 59   | ILE  | N-CA-C      | -8.13 | 95.40       | 107.51   |
| 32  | BK    | 75   | LEU  | N-CA-C      | 8.13  | 121.40      | 110.35   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|--------|------|------------|-------|-------------|----------|
| 21  | AV    | 4      | SER  | N-CA-C     | 8.12  | 121.62      | 107.49   |
| 1   | AA    | 793    | U    | N1-C1'-C2' | 8.11  | 126.17      | 114.00   |
| 52  | B5    | 37     | ARG  | N-CA-C     | 8.10  | 128.05      | 110.80   |
| 34  | BM    | 82     | LEU  | N-CA-C     | -8.09 | 103.49      | 112.72   |
| 35  | BN    | 15     | GLY  | N-CA-C     | -8.09 | 94.00       | 113.18   |
| 44  | BW    | 21     | PHE  | N-CA-C     | -8.08 | 101.41      | 111.11   |
| 29  | BF    | 79     | GLY  | N-CA-C     | -8.08 | 94.04       | 113.18   |
| 27  | BD    | 193    | VAL  | N-CA-C     | 8.07  | 119.39      | 109.30   |
| 39  | BR    | 88     | ASP  | N-CA-C     | 8.07  | 118.54      | 107.73   |
| 36  | BO    | 40     | SER  | N-CA-C     | 8.06  | 121.68      | 112.57   |
| 37  | BP    | 83     | MET  | N-CA-C     | 8.06  | 122.38      | 109.24   |
| 24  | BA    | 776    | G    | N9-C1'-C2' | 8.04  | 126.06      | 114.00   |
| 13  | AN    | 80     | VAL  | N-CA-C     | 8.04  | 118.97      | 107.88   |
| 24  | BA    | 974(A) | C    | N1-C1'-C2' | 8.04  | 126.06      | 114.00   |
| 41  | BT    | 68     | ALA  | N-CA-C     | 8.04  | 119.67      | 111.07   |
| 16  | AQ    | 53     | LEU  | CA-C-N     | 8.02  | 129.87      | 119.84   |
| 16  | AQ    | 53     | LEU  | C-N-CA     | 8.02  | 129.87      | 119.84   |
| 37  | BP    | 72     | LYS  | CA-C-N     | 8.02  | 129.86      | 119.84   |
| 37  | BP    | 72     | LYS  | C-N-CA     | 8.02  | 129.86      | 119.84   |
| 35  | BN    | 23     | ARG  | N-CA-C     | 8.01  | 119.12      | 108.07   |
| 42  | BU    | 27     | ALA  | N-CA-C     | -8.01 | 103.23      | 113.16   |
| 4   | AE    | 187    | LEU  | N-CA-C     | -8.00 | 97.20       | 109.85   |
| 28  | BE    | 158    | GLY  | N-CA-C     | 8.00  | 127.59      | 112.62   |
| 31  | BH    | 83     | TYR  | N-CA-C     | 8.00  | 123.01      | 107.98   |
| 1   | AA    | 1528   | U    | N1-C1'-C2' | 7.98  | 125.97      | 114.00   |
| 46  | BY    | 2      | GLU  | N-CA-C     | 7.96  | 121.01      | 109.14   |
| 30  | BG    | 100    | TRP  | N-CA-C     | 7.96  | 119.96      | 111.28   |
| 33  | BL    | 40     | ALA  | N-CA-C     | -7.96 | 101.70      | 111.33   |
| 35  | BN    | 18     | LYS  | N-CA-C     | 7.94  | 122.75      | 108.69   |
| 24  | BA    | 1800   | C    | N1-C1'-C2' | -7.94 | 100.09      | 112.00   |
| 42  | BU    | 83     | ARG  | N-CA-C     | 7.93  | 120.64      | 108.42   |
| 46  | BY    | 69     | THR  | N-CA-C     | 7.93  | 121.12      | 109.07   |
| 30  | BG    | 101    | ILE  | N-CA-C     | -7.93 | 101.14      | 111.05   |
| 10  | AK    | 75     | ARG  | CA-C-N     | 7.92  | 129.74      | 119.84   |
| 10  | AK    | 75     | ARG  | C-N-CA     | 7.92  | 129.74      | 119.84   |
| 14  | AO    | 75     | HIS  | N-CA-C     | 7.92  | 119.16      | 108.23   |
| 34  | BM    | 75     | TYR  | N-CA-C     | -7.91 | 98.32       | 111.37   |
| 24  | BA    | 2035   | G    | N9-C1'-C2' | 7.91  | 123.86      | 112.00   |
| 6   | AG    | 9      | CYS  | N-CA-C     | -7.89 | 103.41      | 112.87   |
| 38  | BQ    | 3      | HIS  | N-CA-C     | 7.88  | 122.66      | 110.20   |
| 10  | AK    | 16     | ALA  | N-CA-C     | -7.87 | 101.81      | 111.33   |
| 40  | BS    | 85     | LYS  | N-CA-C     | 7.86  | 122.62      | 110.20   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 7   | AH    | 76   | ILE  | CA-C-N      | 7.86  | 129.66      | 119.84   |
| 7   | AH    | 76   | ILE  | C-N-CA      | 7.86  | 129.66      | 119.84   |
| 13  | AN    | 58   | PRO  | N-CA-C      | -7.86 | 103.62      | 113.84   |
| 24  | BA    | 331  | A    | C2'-C3'-O3' | 7.86  | 121.29      | 109.50   |
| 3   | AB    | 18   | G    | OP1-P-O3'   | -7.84 | 84.47       | 108.00   |
| 35  | BN    | 108  | GLU  | N-CA-C      | -7.84 | 101.71      | 111.75   |
| 26  | BC    | 139  | ASN  | CA-C-N      | 7.84  | 129.64      | 119.84   |
| 26  | BC    | 139  | ASN  | C-N-CA      | 7.84  | 129.64      | 119.84   |
| 3   | AB    | 18   | G    | O3'-P-O5'   | -7.83 | 92.26       | 104.00   |
| 24  | BA    | 2491 | U    | O4'-C4'-C3' | -7.83 | 96.17       | 104.00   |
| 34  | BM    | 117  | PHE  | N-CA-C      | -7.83 | 101.86      | 111.33   |
| 42  | BU    | 70   | ILE  | N-CA-C      | -7.83 | 98.56       | 109.21   |
| 13  | AN    | 29   | ILE  | N-CA-C      | 7.82  | 121.48      | 108.81   |
| 24  | BA    | 1477 | A    | C2'-C3'-O3' | -7.82 | 101.97      | 113.70   |
| 27  | BD    | 60   | ARG  | N-CA-C      | 7.82  | 121.22      | 107.61   |
| 28  | BE    | 136  | ARG  | N-CA-C      | 7.82  | 122.21      | 109.85   |
| 31  | BH    | 111  | HIS  | CA-C-N      | -7.82 | 110.06      | 119.84   |
| 31  | BH    | 111  | HIS  | C-N-CA      | -7.82 | 110.06      | 119.84   |
| 24  | BA    | 2755 | C    | OP1-P-O3'   | -7.82 | 84.55       | 108.00   |
| 26  | BC    | 213  | TYR  | N-CA-C      | 7.81  | 119.87      | 108.86   |
| 8   | AI    | 93   | SER  | N-CA-C      | 7.80  | 122.78      | 108.58   |
| 4   | AE    | 30   | ARG  | N-CA-C      | 7.80  | 121.74      | 111.75   |
| 24  | BA    | 2587 | A    | N9-C1'-C2'  | 7.77  | 123.66      | 112.00   |
| 40  | BS    | 49   | VAL  | N-CA-C      | -7.77 | 97.09       | 108.89   |
| 1   | AA    | 173  | U    | O3'-P-O5'   | -7.76 | 92.36       | 104.00   |
| 26  | BC    | 33   | ALA  | N-CA-C      | 7.75  | 121.13      | 108.26   |
| 24  | BA    | 199  | A    | N9-C1'-C2'  | 7.75  | 125.62      | 114.00   |
| 38  | BQ    | 67   | LEU  | N-CA-C      | -7.75 | 102.78      | 111.07   |
| 5   | AF    | 107  | GLN  | N-CA-C      | 7.75  | 123.05      | 112.90   |
| 55  | B8    | 15   | LYS  | N-CA-C      | 7.74  | 122.06      | 109.76   |
| 19  | AT    | 62   | SER  | N-CA-C      | 7.73  | 120.42      | 108.12   |
| 38  | BQ    | 116  | LEU  | N-CA-C      | -7.73 | 98.37       | 109.96   |
| 31  | BH    | 35   | VAL  | CA-C-N      | 7.72  | 127.77      | 119.89   |
| 31  | BH    | 35   | VAL  | C-N-CA      | 7.72  | 127.77      | 119.89   |
| 37  | BP    | 28   | ALA  | N-CA-C      | -7.72 | 94.36       | 110.80   |
| 7   | AH    | 14   | ARG  | N-CA-C      | 7.71  | 121.48      | 109.07   |
| 28  | BE    | 25   | VAL  | CB-CA-C     | -7.70 | 100.37      | 110.84   |
| 53  | B6    | 16   | HIS  | N-CA-C      | 7.70  | 121.46      | 109.07   |
| 54  | B7    | 35   | GLN  | N-CA-C      | -7.70 | 94.40       | 110.80   |
| 46  | BY    | 140  | ASP  | N-CA-C      | 7.69  | 120.77      | 109.07   |
| 46  | BY    | 107  | THR  | CA-C-N      | 7.69  | 129.46      | 119.84   |
| 46  | BY    | 107  | THR  | C-N-CA      | 7.69  | 129.46      | 119.84   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 8   | AI    | 89   | MET  | N-CA-C      | 7.69  | 120.95      | 108.34   |
| 9   | AJ    | 147  | ALA  | N-CA-C      | -7.68 | 102.03      | 111.33   |
| 26  | BC    | 3    | HIS  | N-CA-C      | 7.68  | 121.09      | 109.41   |
| 24  | BA    | 280  | C    | N1-C1'-C2'  | 7.68  | 125.52      | 114.00   |
| 28  | BE    | 132  | HIS  | N-CA-C      | -7.67 | 98.81       | 110.70   |
| 29  | BF    | 73   | ALA  | N-CA-C      | 7.67  | 121.31      | 110.50   |
| 27  | BD    | 227  | ASN  | CA-C-N      | 7.67  | 129.42      | 119.84   |
| 27  | BD    | 227  | ASN  | C-N-CA      | 7.67  | 129.42      | 119.84   |
| 4   | AE    | 182  | ILE  | CA-C-N      | 7.66  | 129.42      | 119.84   |
| 4   | AE    | 182  | ILE  | C-N-CA      | 7.66  | 129.42      | 119.84   |
| 54  | B7    | 17   | THR  | N-CA-C      | -7.66 | 96.03       | 108.52   |
| 24  | BA    | 184  | C    | N1-C1'-C2'  | 7.65  | 123.47      | 112.00   |
| 24  | BA    | 774  | A    | C2'-C3'-O3' | 7.65  | 120.97      | 109.50   |
| 26  | BC    | 24   | GLU  | N-CA-C      | -7.64 | 101.69      | 111.02   |
| 27  | BD    | 48   | ARG  | N-CA-C      | 7.64  | 122.32      | 113.38   |
| 32  | BK    | 72   | LEU  | N-CA-C      | 7.63  | 119.39      | 111.14   |
| 17  | AR    | 66   | LEU  | N-CA-C      | -7.62 | 101.72      | 111.02   |
| 32  | BK    | 79   | ILE  | N-CA-C      | 7.62  | 115.44      | 109.19   |
| 32  | BK    | 140  | LEU  | N-CA-C      | 7.62  | 120.94      | 108.99   |
| 14  | AO    | 59   | ARG  | N-CA-C      | -7.61 | 96.99       | 109.40   |
| 35  | BN    | 118  | ALA  | CA-C-N      | -7.61 | 110.32      | 119.84   |
| 35  | BN    | 118  | ALA  | C-N-CA      | -7.61 | 110.32      | 119.84   |
| 18  | AS    | 31   | LYS  | N-CA-C      | -7.61 | 100.51      | 110.33   |
| 24  | BA    | 2491 | U    | C4'-C3'-O3' | 7.61  | 124.41      | 113.00   |
| 24  | BA    | 2458 | G    | C4'-C3'-O3' | -7.60 | 101.60      | 113.00   |
| 35  | BN    | 102  | VAL  | N-CA-C      | 7.60  | 125.14      | 109.34   |
| 37  | BP    | 33   | GLY  | N-CA-C      | 7.60  | 124.23      | 110.71   |
| 19  | AT    | 84   | LEU  | N-CA-C      | -7.59 | 102.00      | 111.11   |
| 46  | BY    | 112  | ARG  | N-CA-C      | -7.59 | 103.90      | 113.01   |
| 6   | AG    | 12   | CYS  | N-CA-C      | -7.59 | 98.92       | 111.37   |
| 51  | B4    | 27   | PRO  | CA-C-N      | 7.59  | 131.62      | 120.46   |
| 51  | B4    | 27   | PRO  | C-N-CA      | 7.59  | 131.62      | 120.46   |
| 24  | BA    | 2756 | U    | N1-C1'-C2'  | 7.59  | 125.39      | 114.00   |
| 40  | BS    | 76   | PHE  | CA-C-N      | 7.59  | 129.33      | 119.84   |
| 40  | BS    | 76   | PHE  | C-N-CA      | 7.59  | 129.33      | 119.84   |
| 27  | BD    | 192  | THR  | N-CA-C      | -7.58 | 97.71       | 109.76   |
| 24  | BA    | 1240 | U    | P-O3'-C3'   | 7.56  | 131.54      | 120.20   |
| 35  | BN    | 61   | VAL  | N-CA-C      | 7.56  | 125.06      | 109.34   |
| 41  | BT    | 61   | TRP  | N-CA-C      | -7.54 | 102.75      | 110.97   |
| 30  | BG    | 72   | ARG  | N-CA-C      | 7.54  | 119.87      | 109.54   |
| 13  | AN    | 44   | SER  | N-CA-C      | 7.52  | 118.48      | 107.88   |
| 36  | BO    | 132  | LYS  | N-CA-C      | -7.51 | 103.17      | 111.36   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 39  | BR    | 83   | LYS  | N-CA-C      | 7.50  | 120.63      | 108.34   |
| 22  | AW    | 71   | THR  | N-CA-C      | -7.49 | 104.11      | 113.55   |
| 24  | BA    | 2815 | C    | C3'-C2'-O2' | 7.49  | 121.93      | 110.70   |
| 31  | BH    | 130  | ARG  | N-CA-C      | -7.49 | 97.04       | 109.24   |
| 35  | BN    | 4    | PRO  | N-CA-C      | -7.47 | 97.07       | 112.47   |
| 15  | AP    | 107  | ALA  | N-CA-C      | -7.47 | 94.89       | 110.80   |
| 45  | BX    | 68   | HIS  | N-CA-C      | -7.46 | 101.91      | 113.02   |
| 1   | AA    | 1493 | A    | C2'-C3'-O3' | -7.45 | 102.52      | 113.70   |
| 24  | BA    | 1604 | C    | N1-C1'-C2'  | 7.45  | 123.18      | 112.00   |
| 3   | AB    | 18   | G    | P-O3'-C3'   | -7.45 | 109.03      | 120.20   |
| 19  | AT    | 58   | GLU  | N-CA-C      | 7.44  | 121.61      | 109.85   |
| 35  | BN    | 32   | TYR  | N-CA-C      | 7.43  | 121.19      | 107.60   |
| 27  | BD    | 218  | ARG  | N-CA-C      | 7.42  | 119.00      | 109.65   |
| 35  | BN    | 73   | ASP  | N-CA-C      | -7.42 | 101.72      | 111.74   |
| 31  | BH    | 121  | ILE  | N-CA-C      | 7.42  | 118.07      | 108.12   |
| 29  | BF    | 157  | VAL  | N-CA-C      | 7.39  | 118.70      | 107.77   |
| 13  | AN    | 38   | ASN  | CA-C-N      | -7.38 | 110.61      | 119.84   |
| 13  | AN    | 38   | ASN  | C-N-CA      | -7.38 | 110.61      | 119.84   |
| 24  | BA    | 2492 | U    | C2'-C3'-O3' | -7.38 | 102.63      | 113.70   |
| 17  | AR    | 31   | LEU  | N-CA-C      | 7.38  | 119.01      | 110.97   |
| 24  | BA    | 669  | G    | C2'-C3'-O3' | -7.36 | 102.66      | 113.70   |
| 29  | BF    | 32   | LEU  | N-CA-C      | -7.35 | 102.87      | 111.03   |
| 34  | BM    | 36   | GLY  | N-CA-C      | -7.35 | 95.75       | 113.18   |
| 24  | BA    | 1130 | U    | C2'-C3'-O3' | 7.35  | 120.52      | 109.50   |
| 37  | BP    | 15   | GLY  | N-CA-C      | 7.33  | 121.85      | 111.14   |
| 3   | AC    | 76   | A    | C4'-C3'-O3' | 7.33  | 124.00      | 113.00   |
| 5   | AF    | 111  | LEU  | N-CA-C      | -7.33 | 104.14      | 113.23   |
| 15  | AP    | 47   | ASP  | N-CA-C      | 7.33  | 122.41      | 113.17   |
| 24  | BA    | 911  | A    | N9-C1'-C2'  | 7.33  | 123.00      | 112.00   |
| 24  | BA    | 554  | U    | N1-C1'-C2'  | 7.33  | 122.99      | 112.00   |
| 35  | BN    | 41   | ALA  | N-CA-C      | 7.32  | 119.27      | 108.14   |
| 5   | AF    | 132  | ARG  | N-CA-C      | -7.32 | 102.09      | 111.02   |
| 24  | BA    | 527  | C    | N1-C1'-C2'  | 7.31  | 122.97      | 112.00   |
| 37  | BP    | 111  | GLU  | N-CA-C      | 7.30  | 126.36      | 110.80   |
| 42  | BU    | 63   | GLY  | N-CA-C      | -7.30 | 95.88       | 113.18   |
| 53  | B6    | 9    | ARG  | N-CA-C      | -7.30 | 99.40       | 111.37   |
| 36  | BO    | 62   | LEU  | CA-C-N      | 7.28  | 128.94      | 119.84   |
| 36  | BO    | 62   | LEU  | C-N-CA      | 7.28  | 128.94      | 119.84   |
| 28  | BE    | 6    | GLY  | N-CA-C      | -7.28 | 95.93       | 113.18   |
| 1   | AA    | 1498 | U    | N1-C1'-C2'  | 7.27  | 122.91      | 112.00   |
| 36  | BO    | 129  | ALA  | N-CA-C      | 7.27  | 121.17      | 108.52   |
| 34  | BM    | 125  | GLY  | N-CA-C      | -7.27 | 97.52       | 112.34   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 36  | BO    | 80   | TYR  | N-CA-C      | -7.27 | 103.30      | 111.07   |
| 7   | AH    | 80   | ILE  | N-CA-C      | 7.26  | 119.69      | 108.44   |
| 37  | BP    | 71   | ASP  | N-CA-C      | 7.26  | 126.26      | 110.80   |
| 32  | BK    | 73   | GLU  | N-CA-C      | -7.26 | 102.55      | 111.33   |
| 29  | BF    | 15   | SER  | N-CA-C      | 7.25  | 117.81      | 108.24   |
| 42  | BU    | 88   | ARG  | N-CA-C      | 7.25  | 121.65      | 109.76   |
| 50  | B3    | 65   | ASP  | N-CA-C      | -7.25 | 102.56      | 111.33   |
| 1   | AA    | 451  | A    | N9-C1'-C2'  | 7.24  | 124.86      | 114.00   |
| 51  | B4    | 28   | PRO  | CA-C-N      | 7.23  | 131.09      | 120.90   |
| 51  | B4    | 28   | PRO  | C-N-CA      | 7.23  | 131.09      | 120.90   |
| 28  | BE    | 175  | VAL  | N-CA-C      | 7.23  | 118.28      | 107.80   |
| 46  | BY    | 136  | PHE  | N-CA-C      | 7.22  | 119.29      | 107.23   |
| 1   | AA    | 1225 | A    | C2'-C3'-O3' | -7.22 | 102.88      | 113.70   |
| 5   | AF    | 118  | GLN  | N-CA-C      | -7.21 | 102.60      | 111.33   |
| 24  | BA    | 387  | U    | N1-C1'-C2'  | 7.20  | 122.80      | 112.00   |
| 36  | BO    | 133  | SER  | N-CA-C      | -7.20 | 102.62      | 111.33   |
| 14  | AO    | 84   | LEU  | N-CA-C      | 7.19  | 119.10      | 108.60   |
| 1   | AA    | 1285 | A    | C2'-C3'-O3' | 7.18  | 120.28      | 109.50   |
| 45  | BX    | 31   | LEU  | CA-C-N      | -7.18 | 110.86      | 119.84   |
| 45  | BX    | 31   | LEU  | C-N-CA      | -7.18 | 110.86      | 119.84   |
| 24  | BA    | 865  | C    | N1-C1'-C2'  | 7.18  | 122.77      | 112.00   |
| 43  | BV    | 95   | ILE  | N-CA-C      | 7.18  | 120.09      | 108.97   |
| 1   | AA    | 1123 | A    | N9-C1'-C2'  | 7.17  | 122.75      | 112.00   |
| 33  | BL    | 21   | PRO  | N-CA-C      | 7.17  | 119.44      | 110.70   |
| 28  | BE    | 69   | LYS  | N-CA-C      | -7.15 | 104.16      | 113.17   |
| 54  | B7    | 49   | VAL  | CB-CA-C     | -7.15 | 100.52      | 110.96   |
| 42  | BU    | 56   | SER  | N-CA-C      | 7.15  | 126.02      | 110.80   |
| 24  | BA    | 2498 | C    | C5'-C4'-C3' | -7.13 | 105.31      | 116.00   |
| 1   | AA    | 1442 | G    | C2'-C3'-O3' | -7.12 | 103.01      | 113.70   |
| 1   | AA    | 397  | A    | C4'-C3'-O3' | -7.12 | 102.33      | 113.00   |
| 19  | AT    | 9    | VAL  | N-CA-C      | 7.11  | 118.37      | 107.99   |
| 1   | AA    | 813  | U    | N1-C1'-C2'  | 7.11  | 122.66      | 112.00   |
| 33  | BL    | 106  | GLU  | N-CA-C      | 7.10  | 118.92      | 111.03   |
| 1   | AA    | 1279 | A    | N9-C1'-C2'  | 7.10  | 122.65      | 112.00   |
| 40  | BS    | 59   | THR  | CA-C-N      | 7.10  | 133.22      | 122.93   |
| 40  | BS    | 59   | THR  | C-N-CA      | 7.10  | 133.22      | 122.93   |
| 32  | BK    | 8    | PRO  | N-CA-C      | 7.09  | 127.07      | 112.47   |
| 24  | BA    | 615  | G    | N9-C1'-C2'  | 7.09  | 122.63      | 112.00   |
| 49  | B2    | 20   | LYS  | N-CA-C      | -7.09 | 102.75      | 111.33   |
| 24  | BA    | 2779 | U    | N1-C1'-C2'  | -7.08 | 101.38      | 112.00   |
| 24  | BA    | 2158 | A    | C2'-C3'-O3' | 7.08  | 120.11      | 109.50   |
| 50  | B3    | 52   | THR  | N-CA-C      | 7.08  | 125.87      | 110.80   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24  | BA    | 1635 | G    | C5'-C4'-C3' | -7.07 | 105.39      | 116.00   |
| 49  | B2    | 37   | LEU  | N-CA-C      | 7.07  | 120.29      | 108.20   |
| 18  | AS    | 3    | LYS  | N-CA-C      | 7.07  | 120.18      | 109.23   |
| 37  | BP    | 135  | ASP  | N-CA-C      | 7.07  | 124.21      | 113.61   |
| 1   | AA    | 1492 | A    | N9-C1'-C2'  | 7.06  | 122.59      | 112.00   |
| 24  | BA    | 1428 | C    | C2'-C3'-O3' | 7.06  | 120.09      | 109.50   |
| 24  | BA    | 1791 | A    | C2'-C3'-O3' | -7.06 | 103.11      | 113.70   |
| 24  | BA    | 1329 | U    | C4'-C3'-O3' | -7.05 | 102.42      | 113.00   |
| 28  | BE    | 174  | ASP  | N-CA-C      | 7.05  | 120.16      | 109.23   |
| 1   | AA    | 1492 | A    | C1'-C2'-O2' | 7.05  | 118.98      | 108.40   |
| 47  | BZ    | 37   | LEU  | N-CA-C      | 7.05  | 121.57      | 112.12   |
| 28  | BE    | 91   | VAL  | N-CA-C      | 7.05  | 118.11      | 111.48   |
| 30  | BG    | 56   | ALA  | N-CA-C      | -7.04 | 102.81      | 111.33   |
| 35  | BN    | 47   | ILE  | CA-C-N      | -7.04 | 112.71      | 119.89   |
| 35  | BN    | 47   | ILE  | C-N-CA      | -7.04 | 112.71      | 119.89   |
| 24  | BA    | 1143 | A    | N9-C1'-C2'  | 7.04  | 122.55      | 112.00   |
| 1   | AA    | 115  | G    | C2'-C3'-O3' | 7.03  | 120.05      | 109.50   |
| 1   | AA    | 397  | A    | N9-C1'-C2'  | 7.03  | 122.54      | 112.00   |
| 1   | AA    | 1377 | A    | C2'-C3'-O3' | 7.02  | 120.03      | 109.50   |
| 41  | BT    | 114  | LYS  | N-CA-C      | -7.02 | 102.69      | 111.11   |
| 13  | AN    | 127  | LYS  | N-CA-C      | -7.02 | 104.84      | 113.19   |
| 33  | BL    | 134  | MET  | N-CA-C      | 7.01  | 118.81      | 111.03   |
| 24  | BA    | 1955 | U    | N1-C1'-C2'  | 7.00  | 122.50      | 112.00   |
| 24  | BA    | 2336 | A    | N9-C1'-C2'  | 7.00  | 122.50      | 112.00   |
| 30  | BG    | 139  | LEU  | N-CA-C      | -7.00 | 103.68      | 113.20   |
| 30  | BG    | 144  | ILE  | N-CA-C      | 7.00  | 123.90      | 109.34   |
| 4   | AE    | 86   | GLU  | N-CA-C      | -7.00 | 102.86      | 111.33   |
| 47  | BZ    | 45   | PHE  | N-CA-C      | 6.99  | 119.81      | 108.41   |
| 54  | B7    | 51   | ALA  | N-CA-C      | -6.99 | 97.00       | 108.67   |
| 46  | BY    | 166  | SER  | N-CA-C      | 6.98  | 116.35      | 108.25   |
| 39  | BR    | 23   | ARG  | N-CA-C      | 6.98  | 125.66      | 110.80   |
| 47  | BZ    | 72   | ARG  | N-CA-C      | -6.98 | 101.99      | 111.55   |
| 5   | AF    | 68   | VAL  | N-CA-C      | -6.96 | 98.44       | 109.17   |
| 51  | B4    | 34   | PRO  | N-CA-C      | -6.96 | 104.79      | 113.84   |
| 36  | BO    | 88   | LEU  | N-CA-C      | 6.95  | 125.61      | 110.80   |
| 1   | AA    | 727  | G    | N9-C1'-C2'  | -6.95 | 101.57      | 112.00   |
| 24  | BA    | 1667 | G    | C5'-C4'-C3' | 6.95  | 126.42      | 116.00   |
| 24  | BA    | 2320 | A    | N9-C1'-C2'  | 6.95  | 122.43      | 112.00   |
| 36  | BO    | 138  | LEU  | N-CA-C      | -6.95 | 103.31      | 111.03   |
| 42  | BU    | 91   | TYR  | N-CA-C      | 6.95  | 119.90      | 108.99   |
| 24  | BA    | 2756 | U    | P-O3'-C3'   | 6.94  | 130.60      | 120.20   |
| 24  | BA    | 2615 | U    | C2'-C3'-O3' | -6.93 | 103.30      | 113.70   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24  | BA    | 725  | G    | N9-C1'-C2'  | 6.93  | 122.40      | 112.00   |
| 35  | BN    | 58   | VAL  | N-CA-C      | -6.93 | 98.60       | 108.65   |
| 50  | B3    | 13   | ARG  | N-CA-C      | 6.93  | 125.56      | 110.80   |
| 13  | AN    | 108  | ILE  | N-CA-C      | 6.93  | 118.28      | 108.17   |
| 37  | BP    | 87   | LYS  | N-CA-C      | -6.93 | 103.93      | 113.56   |
| 24  | BA    | 2051 | A    | N9-C1'-C2'  | 6.92  | 124.38      | 114.00   |
| 24  | BA    | 1815 | A    | N9-C1'-C2'  | 6.91  | 122.37      | 112.00   |
| 33  | BL    | 35   | MET  | N-CA-C      | 6.91  | 119.83      | 111.82   |
| 51  | B4    | 6    | VAL  | CA-C-N      | 6.91  | 128.47      | 119.84   |
| 51  | B4    | 6    | VAL  | C-N-CA      | 6.91  | 128.47      | 119.84   |
| 20  | AU    | 44   | LEU  | N-CA-C      | 6.90  | 119.83      | 111.82   |
| 33  | BL    | 131  | ALA  | N-CA-C      | -6.90 | 103.69      | 111.07   |
| 46  | BY    | 4    | ARG  | N-CA-C      | 6.90  | 117.35      | 108.24   |
| 24  | BA    | 1179 | C    | C2'-C3'-O3' | 6.90  | 119.85      | 109.50   |
| 24  | BA    | 2447 | G    | C2'-C3'-O3' | 6.90  | 119.85      | 109.50   |
| 24  | BA    | 730  | C    | N1-C1'-C2'  | 6.90  | 124.34      | 114.00   |
| 10  | AK    | 134  | ILE  | CB-CA-C     | -6.89 | 99.99       | 111.29   |
| 1   | AA    | 119  | A    | C2'-C3'-O3' | 6.89  | 119.83      | 109.50   |
| 1   | AA    | 243  | A    | C2'-C3'-O3' | 6.88  | 119.82      | 109.50   |
| 27  | BD    | 44   | ASN  | N-CA-C      | -6.87 | 96.18       | 110.80   |
| 5   | AF    | 60   | ALA  | N-CA-C      | -6.86 | 104.10      | 113.30   |
| 42  | BU    | 66   | ARG  | N-CA-C      | 6.86  | 125.42      | 110.80   |
| 46  | BY    | 157  | LEU  | CA-C-N      | 6.86  | 127.45      | 120.38   |
| 46  | BY    | 157  | LEU  | C-N-CA      | 6.86  | 127.45      | 120.38   |
| 24  | BA    | 2196 | C    | N1-C1'-C2'  | 6.86  | 122.29      | 112.00   |
| 28  | BE    | 166  | THR  | N-CA-C      | 6.86  | 119.36      | 109.14   |
| 40  | BS    | 63   | VAL  | N-CA-C      | -6.85 | 97.04       | 107.73   |
| 35  | BN    | 13   | ASN  | N-CA-C      | -6.85 | 104.91      | 112.72   |
| 5   | AF    | 161  | GLU  | N-CA-C      | -6.84 | 102.99      | 111.75   |
| 1   | AA    | 1100 | C    | N1-C1'-C2'  | 6.84  | 122.26      | 112.00   |
| 6   | AG    | 189  | PRO  | N-CA-C      | -6.84 | 101.55      | 111.33   |
| 26  | BC    | 83   | ILE  | N-CA-C      | -6.83 | 103.18      | 110.36   |
| 24  | BA    | 390  | A    | C2'-C3'-O3' | -6.83 | 103.45      | 113.70   |
| 5   | AF    | 128  | PHE  | N-CA-C      | 6.83  | 117.51      | 107.88   |
| 54  | B7    | 60   | LEU  | N-CA-C      | 6.83  | 118.41      | 110.97   |
| 24  | BA    | 138  | G    | N9-C1'-C2'  | -6.82 | 101.78      | 112.00   |
| 54  | B7    | 40   | GLU  | N-CA-C      | -6.81 | 103.78      | 111.07   |
| 4   | AE    | 233  | SER  | N-CA-C      | 6.81  | 114.13      | 108.07   |
| 15  | AP    | 25   | ILE  | N-CA-C      | 6.80  | 117.59      | 108.27   |
| 32  | BK    | 41   | GLU  | N-CA-C      | -6.80 | 103.80      | 111.07   |
| 14  | AO    | 44   | THR  | CA-C-N      | 6.80  | 128.34      | 119.84   |
| 14  | AO    | 44   | THR  | C-N-CA      | 6.80  | 128.34      | 119.84   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24  | BA    | 1674 | G    | C2'-C3'-O3' | -6.79 | 103.52      | 113.70   |
| 29  | BF    | 44   | ARG  | N-CA-C      | -6.79 | 103.57      | 110.97   |
| 1   | AA    | 792  | A    | N9-C1'-C2'  | 6.78  | 124.17      | 114.00   |
| 39  | BR    | 111  | GLU  | N-CA-C      | 6.78  | 120.75      | 111.54   |
| 24  | BA    | 101  | G    | N9-C1'-C2'  | 6.77  | 122.16      | 112.00   |
| 24  | BA    | 828  | U    | N1-C1'-C2'  | 6.77  | 122.16      | 112.00   |
| 36  | BO    | 136  | GLU  | N-CA-C      | 6.77  | 118.35      | 110.97   |
| 24  | BA    | 2597 | G    | C4'-C3'-O3' | -6.77 | 102.84      | 113.00   |
| 35  | BN    | 120  | GLU  | N-CA-C      | 6.77  | 125.22      | 110.80   |
| 20  | AU    | 52   | PRO  | N-CA-C      | 6.76  | 126.40      | 112.47   |
| 12  | AM    | 29   | ARG  | N-CA-C      | -6.75 | 102.44      | 110.41   |
| 24  | BA    | 685  | A    | C2'-C3'-O3' | 6.75  | 119.62      | 109.50   |
| 48  | B1    | 11   | LEU  | N-CA-C      | 6.75  | 118.71      | 110.41   |
| 24  | BA    | 1986 | A    | C4'-C3'-O3' | -6.74 | 102.89      | 113.00   |
| 27  | BD    | 223  | GLY  | N-CA-C      | 6.74  | 121.17      | 112.54   |
| 1   | AA    | 913  | A    | C2'-C3'-O3' | 6.73  | 119.59      | 109.50   |
| 1   | AA    | 1049 | U    | C2'-C3'-O3' | 6.73  | 123.79      | 113.70   |
| 26  | BC    | 168  | THR  | N-CA-C      | 6.72  | 121.09      | 113.02   |
| 1   | AA    | 1298 | C    | N1-C1'-C2'  | 6.71  | 122.07      | 112.00   |
| 19  | AT    | 104  | LYS  | N-CA-C      | 6.71  | 125.10      | 110.80   |
| 24  | BA    | 2060 | A    | C4'-C3'-O3' | -6.71 | 102.93      | 113.00   |
| 24  | BA    | 776  | G    | C2'-C3'-O3' | 6.71  | 119.57      | 109.50   |
| 32  | BK    | 95   | LYS  | N-CA-C      | -6.71 | 103.89      | 111.07   |
| 24  | BA    | 1363 | C    | N1-C1'-C2'  | -6.70 | 101.95      | 112.00   |
| 5   | AF    | 193  | TYR  | N-CA-C      | -6.69 | 104.93      | 113.23   |
| 5   | AF    | 154  | SER  | N-CA-C      | 6.69  | 120.07      | 108.76   |
| 37  | BP    | 104  | PHE  | N-CA-C      | 6.69  | 119.84      | 107.99   |
| 24  | BA    | 745  | G    | N9-C1'-C2'  | 6.69  | 122.04      | 112.00   |
| 24  | BA    | 1980 | G    | C2'-C3'-O3' | 6.69  | 119.53      | 109.50   |
| 28  | BE    | 77   | ILE  | N-CA-C      | 6.69  | 117.98      | 108.42   |
| 52  | B5    | 35   | GLU  | N-CA-C      | 6.69  | 120.79      | 112.03   |
| 40  | BS    | 45   | PHE  | N-CA-C      | -6.68 | 96.57       | 110.80   |
| 49  | B2    | 58   | VAL  | N-CA-C      | 6.68  | 116.86      | 107.37   |
| 45  | BX    | 46   | LYS  | N-CA-C      | 6.68  | 125.03      | 110.80   |
| 24  | BA    | 676  | A    | N9-C1'-C2'  | 6.68  | 122.02      | 112.00   |
| 24  | BA    | 2076 | U    | N1-C1'-C2'  | 6.67  | 124.01      | 114.00   |
| 25  | BB    | 119  | A    | N9-C1'-C2'  | -6.67 | 101.99      | 112.00   |
| 39  | BR    | 99   | LYS  | N-CA-C      | -6.67 | 103.26      | 111.33   |
| 41  | BT    | 76   | TYR  | N-CA-C      | 6.67  | 119.53      | 111.40   |
| 46  | BY    | 157  | LEU  | N-CA-C      | 6.66  | 118.05      | 109.72   |
| 30  | BG    | 42   | GLY  | N-CA-C      | 6.66  | 128.96      | 113.18   |
| 22  | AW    | 79   | ARG  | N-CA-C      | -6.66 | 103.12      | 111.11   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24  | BA    | 2198 | A    | N9-C1'-C2'  | 6.66  | 121.98      | 112.00   |
| 20  | AU    | 18   | ARG  | N-CA-C      | 6.65  | 119.31      | 107.80   |
| 30  | BG    | 121  | ASN  | N-CA-C      | 6.65  | 118.49      | 109.24   |
| 32  | BK    | 22   | LYS  | CA-C-N      | 6.65  | 128.15      | 119.84   |
| 32  | BK    | 22   | LYS  | C-N-CA      | 6.65  | 128.15      | 119.84   |
| 28  | BE    | 146  | THR  | N-CA-C      | -6.65 | 95.12       | 109.81   |
| 1   | AA    | 1490 | C    | C4'-C3'-O3' | -6.65 | 103.03      | 113.00   |
| 28  | BE    | 147  | PRO  | N-CA-C      | -6.64 | 98.78       | 112.47   |
| 14  | AO    | 13   | LYS  | N-CA-C      | 6.64  | 121.61      | 112.04   |
| 28  | BE    | 127  | ASP  | N-CA-C      | 6.64  | 119.55      | 108.13   |
| 46  | BY    | 39   | VAL  | CB-CA-C     | -6.63 | 104.12      | 111.35   |
| 6   | AG    | 146  | ILE  | CB-CA-C     | -6.63 | 105.50      | 111.74   |
| 38  | BQ    | 77   | ARG  | N-CA-C      | -6.63 | 103.98      | 111.14   |
| 27  | BD    | 70   | TRP  | N-CA-C      | -6.63 | 96.68       | 110.80   |
| 46  | BY    | 179  | ASP  | N-CA-C      | 6.62  | 124.89      | 110.80   |
| 22  | AW    | 66   | ALA  | N-CA-C      | -6.61 | 103.77      | 110.97   |
| 11  | AL    | 35   | GLU  | N-CA-C      | -6.61 | 101.45      | 111.56   |
| 19  | AT    | 19   | VAL  | N-CA-C      | 6.61  | 117.81      | 108.17   |
| 24  | BA    | 1324 | G    | N9-C1'-C2'  | 6.60  | 121.91      | 112.00   |
| 11  | AL    | 112  | LYS  | N-CA-C      | -6.60 | 99.45       | 109.95   |
| 24  | BA    | 229  | A    | C2'-C3'-O3' | -6.60 | 103.80      | 113.70   |
| 24  | BA    | 562  | U    | N1-C1'-C2'  | 6.60  | 121.89      | 112.00   |
| 51  | B4    | 28   | PRO  | N-CA-C      | 6.59  | 121.03      | 110.21   |
| 32  | BK    | 134  | PRO  | N-CA-C      | 6.59  | 126.05      | 112.47   |
| 46  | BY    | 98   | MET  | N-CA-C      | 6.59  | 119.55      | 108.02   |
| 24  | BA    | 740  | U    | C1'-C2'-O2' | -6.58 | 101.92      | 111.80   |
| 24  | BA    | 196  | A    | N9-C1'-C2'  | 6.58  | 123.87      | 114.00   |
| 24  | BA    | 2496 | C    | C2'-C3'-O3' | -6.58 | 103.83      | 113.70   |
| 24  | BA    | 2092 | U    | N1-C1'-C2'  | 6.58  | 121.87      | 112.00   |
| 9   | AJ    | 36   | LYS  | N-CA-C      | -6.58 | 103.37      | 111.33   |
| 9   | AJ    | 8    | GLU  | N-CA-C      | 6.57  | 124.80      | 110.80   |
| 50  | B3    | 5    | ILE  | CB-CA-C     | -6.57 | 100.51      | 111.29   |
| 54  | B7    | 54   | GLU  | N-CA-C      | -6.57 | 103.13      | 112.13   |
| 47  | BZ    | 46   | LYS  | CA-C-N      | 6.57  | 128.05      | 119.84   |
| 47  | BZ    | 46   | LYS  | C-N-CA      | 6.57  | 128.05      | 119.84   |
| 24  | BA    | 1204 | A    | C2'-C3'-O3' | 6.57  | 119.35      | 109.50   |
| 31  | BH    | 23   | ARG  | CA-C-N      | -6.56 | 113.91      | 122.37   |
| 31  | BH    | 23   | ARG  | C-N-CA      | -6.56 | 113.91      | 122.37   |
| 18  | AS    | 68   | ASP  | N-CA-C      | -6.56 | 103.75      | 111.03   |
| 3   | AB    | 35   | A    | C1'-C2'-O2' | -6.55 | 98.57       | 108.40   |
| 49  | B2    | 40   | THR  | CA-C-N      | -6.55 | 111.87      | 119.47   |
| 49  | B2    | 40   | THR  | C-N-CA      | -6.55 | 111.87      | 119.47   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24  | BA    | 2717 | G    | C4'-C3'-O3' | -6.55 | 103.17      | 113.00   |
| 32  | BK    | 136  | VAL  | CA-C-N      | 6.55  | 128.03      | 119.84   |
| 32  | BK    | 136  | VAL  | C-N-CA      | 6.55  | 128.03      | 119.84   |
| 2   | A1    | 50   | U    | C2'-C3'-O3' | 6.55  | 119.32      | 109.50   |
| 40  | BS    | 57   | PHE  | CB-CA-C     | -6.55 | 101.82      | 111.77   |
| 4   | AE    | 57   | PHE  | N-CA-C      | -6.54 | 104.08      | 111.07   |
| 24  | BA    | 1784 | A    | C3'-C2'-O2' | 6.54  | 124.40      | 114.60   |
| 47  | BZ    | 24   | LYS  | N-CA-C      | 6.54  | 121.09      | 111.87   |
| 26  | BC    | 94   | VAL  | N-CA-C      | 6.53  | 118.11      | 108.45   |
| 19  | AT    | 7    | THR  | N-CA-C      | 6.52  | 119.62      | 109.52   |
| 37  | BP    | 60   | ARG  | N-CA-C      | 6.51  | 120.64      | 111.52   |
| 14  | AO    | 55   | VAL  | N-CA-C      | 6.51  | 116.84      | 108.12   |
| 31  | BH    | 142  | GLY  | N-CA-C      | -6.51 | 104.89      | 112.83   |
| 24  | BA    | 2482 | G    | C3'-C2'-O2' | 6.51  | 120.46      | 110.70   |
| 27  | BD    | 190  | TYR  | N-CA-C      | 6.51  | 118.66      | 108.96   |
| 38  | BQ    | 40   | LYS  | N-CA-C      | -6.51 | 100.64      | 111.37   |
| 46  | BY    | 38   | TYR  | CA-C-N      | 6.51  | 132.62      | 121.63   |
| 46  | BY    | 38   | TYR  | C-N-CA      | 6.51  | 132.62      | 121.63   |
| 24  | BA    | 2597 | G    | N9-C1'-C2'  | 6.50  | 121.76      | 112.00   |
| 24  | BA    | 741  | G    | C5'-C4'-C3' | 6.50  | 125.75      | 116.00   |
| 8   | AI    | 25   | ILE  | N-CA-C      | -6.50 | 103.53      | 110.36   |
| 24  | BA    | 889  | C    | N1-C1'-C2'  | 6.50  | 121.75      | 112.00   |
| 28  | BE    | 79   | ARG  | N-CA-C      | 6.50  | 119.60      | 109.52   |
| 32  | BK    | 126  | TYR  | N-CA-C      | -6.50 | 97.64       | 108.75   |
| 5   | AF    | 86   | VAL  | N-CA-C      | -6.49 | 102.93      | 111.05   |
| 36  | BO    | 42   | SER  | N-CA-C      | 6.49  | 124.62      | 110.80   |
| 55  | B8    | 8    | LYS  | N-CA-C      | -6.49 | 100.78      | 110.06   |
| 27  | BD    | 14   | ARG  | N-CA-C      | 6.48  | 119.95      | 107.44   |
| 24  | BA    | 2614 | A    | C4'-C3'-O3' | -6.48 | 103.28      | 113.00   |
| 32  | BK    | 120  | ILE  | N-CA-C      | -6.48 | 99.06       | 108.71   |
| 38  | BQ    | 98   | LEU  | N-CA-C      | 6.47  | 120.12      | 108.48   |
| 19  | AT    | 56   | VAL  | N-CA-C      | -6.45 | 99.29       | 108.58   |
| 24  | BA    | 1791 | A    | N9-C1'-C2'  | 6.45  | 121.67      | 112.00   |
| 27  | BD    | 147  | LEU  | N-CA-C      | -6.45 | 101.24      | 110.59   |
| 33  | BL    | 20   | ALA  | CA-C-N      | -6.45 | 113.74      | 120.38   |
| 33  | BL    | 20   | ALA  | C-N-CA      | -6.45 | 113.74      | 120.38   |
| 26  | BC    | 19   | ILE  | N-CA-C      | -6.44 | 106.45      | 112.83   |
| 39  | BR    | 84   | GLN  | N-CA-C      | 6.44  | 118.01      | 108.60   |
| 24  | BA    | 1559 | G    | O4'-C1'-C2' | -6.44 | 101.16      | 107.60   |
| 24  | BA    | 2681 | C    | N1-C1'-C2'  | 6.43  | 121.65      | 112.00   |
| 30  | BG    | 48   | GLU  | N-CA-C      | -6.43 | 97.10       | 110.80   |
| 54  | B7    | 16   | ILE  | N-CA-C      | 6.43  | 117.74      | 108.48   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 38  | BQ    | 11   | ASN  | N-CA-C      | 6.43  | 118.95      | 109.69   |
| 6   | AG    | 203  | VAL  | N-CA-C      | 6.43  | 116.59      | 110.42   |
| 18  | AS    | 42   | ARG  | N-CA-C      | -6.42 | 104.92      | 112.89   |
| 6   | AG    | 30   | LYS  | N-CA-C      | 6.42  | 124.48      | 110.80   |
| 24  | BA    | 1992 | G    | C2'-C3'-O3' | 6.42  | 119.13      | 109.50   |
| 30  | BG    | 2    | PRO  | N-CA-C      | -6.42 | 105.70      | 113.98   |
| 15  | AP    | 29   | ARG  | N-CA-C      | -6.41 | 103.98      | 110.97   |
| 1   | AA    | 1133 | G    | N9-C1'-C2'  | -6.41 | 102.38      | 112.00   |
| 17  | AR    | 28   | GLN  | N-CA-C      | -6.41 | 100.79      | 111.37   |
| 46  | BY    | 135  | GLU  | N-CA-C      | -6.41 | 105.32      | 113.01   |
| 50  | B3    | 30   | GLU  | N-CA-C      | -6.41 | 97.15       | 110.80   |
| 39  | BR    | 90   | GLY  | CA-C-N      | -6.40 | 113.57      | 121.00   |
| 39  | BR    | 90   | GLY  | C-N-CA      | -6.40 | 113.57      | 121.00   |
| 1   | AA    | 397  | A    | C5'-C4'-C3' | -6.40 | 106.40      | 116.00   |
| 7   | AH    | 90   | VAL  | N-CA-C      | 6.40  | 117.51      | 108.17   |
| 24  | BA    | 2267 | A    | C2'-C3'-O3' | -6.39 | 104.11      | 113.70   |
| 1   | AA    | 1443 | G    | C2'-C3'-O3' | -6.39 | 104.12      | 113.70   |
| 46  | BY    | 147  | GLY  | N-CA-C      | -6.38 | 98.05       | 113.18   |
| 52  | B5    | 36   | LEU  | CA-C-N      | 6.38  | 133.74      | 121.54   |
| 52  | B5    | 36   | LEU  | C-N-CA      | 6.38  | 133.74      | 121.54   |
| 41  | BT    | 102  | GLU  | CA-C-N      | 6.38  | 127.82      | 119.84   |
| 41  | BT    | 102  | GLU  | C-N-CA      | 6.38  | 127.82      | 119.84   |
| 51  | B4    | 31   | VAL  | CA-C-N      | -6.38 | 111.87      | 119.84   |
| 51  | B4    | 31   | VAL  | C-N-CA      | -6.38 | 111.87      | 119.84   |
| 4   | AE    | 65   | GLY  | N-CA-C      | -6.38 | 106.09      | 115.72   |
| 35  | BN    | 100  | GLY  | N-CA-C      | 6.37  | 125.34      | 112.34   |
| 1   | AA    | 80   | G    | N9-C1'-C2'  | 6.37  | 121.56      | 112.00   |
| 3   | AD    | 58   | A    | C3'-C2'-O2' | 6.37  | 120.26      | 110.70   |
| 9   | AJ    | 75   | VAL  | N-CA-C      | 6.37  | 119.47      | 108.90   |
| 24  | BA    | 2614 | A    | N9-C1'-C2'  | 6.37  | 121.56      | 112.00   |
| 38  | BQ    | 105  | ARG  | N-CA-C      | 6.37  | 118.08      | 110.19   |
| 27  | BD    | 132  | PRO  | N-CA-C      | -6.37 | 101.20      | 111.19   |
| 47  | BZ    | 66   | VAL  | N-CA-C      | -6.37 | 100.55      | 109.21   |
| 49  | B2    | 57   | GLU  | N-CA-C      | 6.37  | 119.88      | 109.06   |
| 40  | BS    | 72   | VAL  | N-CA-C      | -6.36 | 96.10       | 109.34   |
| 1   | AA    | 594  | G    | C2'-C3'-O3' | -6.36 | 104.16      | 113.70   |
| 33  | BL    | 52   | ILE  | CA-C-N      | -6.36 | 117.80      | 123.33   |
| 33  | BL    | 52   | ILE  | C-N-CA      | -6.36 | 117.80      | 123.33   |
| 42  | BU    | 40   | LEU  | N-CA-C      | -6.36 | 97.26       | 110.80   |
| 11  | AL    | 84   | ALA  | N-CA-C      | -6.35 | 103.49      | 111.11   |
| 50  | B3    | 16   | CYS  | N-CA-C      | 6.35  | 116.83      | 107.88   |
| 24  | BA    | 650  | C    | N1-C1'-C2'  | 6.34  | 121.51      | 112.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 31  | BH    | 73   | ALA  | N-CA-C      | -6.34 | 103.66      | 111.33   |
| 37  | BP    | 21   | THR  | N-CA-C      | 6.34  | 124.30      | 110.80   |
| 24  | BA    | 1203 | G    | OP2-P-O3'   | -6.33 | 89.00       | 108.00   |
| 13  | AN    | 31   | THR  | N-CA-C      | 6.33  | 118.93      | 108.99   |
| 43  | BV    | 8    | ARG  | N-CA-C      | 6.33  | 124.28      | 110.80   |
| 37  | BP    | 123  | HIS  | N-CA-C      | -6.32 | 97.33       | 110.80   |
| 50  | B3    | 43   | TYR  | N-CA-C      | 6.32  | 120.01      | 109.95   |
| 24  | BA    | 829  | A    | C2'-C3'-O3' | -6.32 | 100.02      | 109.50   |
| 1   | AA    | 562  | C    | C2'-C3'-O3' | -6.32 | 104.22      | 113.70   |
| 24  | BA    | 2428 | G    | C2'-C3'-O3' | -6.32 | 104.22      | 113.70   |
| 24  | BA    | 1608 | A    | C4'-C3'-O3' | 6.31  | 118.87      | 109.40   |
| 24  | BA    | 1904 | G    | C2'-C3'-O3' | -6.31 | 104.23      | 113.70   |
| 24  | BA    | 2422 | A    | N9-C1'-C2'  | 6.31  | 123.47      | 114.00   |
| 1   | AA    | 563  | A    | N9-C1'-C2'  | 6.31  | 123.46      | 114.00   |
| 24  | BA    | 446  | G    | N9-C1'-C2'  | 6.30  | 121.45      | 112.00   |
| 24  | BA    | 2713 | A    | C4'-C3'-O3' | -6.30 | 103.55      | 113.00   |
| 42  | BU    | 86   | GLY  | N-CA-C      | 6.30  | 122.81      | 111.03   |
| 24  | BA    | 1127 | A    | C4'-C3'-O3' | 6.29  | 122.44      | 113.00   |
| 33  | BL    | 37   | PHE  | N-CA-C      | -6.29 | 104.50      | 111.36   |
| 33  | BL    | 12   | LEU  | CA-C-N      | 6.29  | 127.71      | 119.84   |
| 33  | BL    | 12   | LEU  | C-N-CA      | 6.29  | 127.71      | 119.84   |
| 1   | AA    | 1239 | A    | C2'-C3'-O3' | -6.29 | 104.26      | 113.70   |
| 40  | BS    | 23   | ARG  | CA-C-N      | 6.29  | 127.70      | 119.84   |
| 40  | BS    | 23   | ARG  | C-N-CA      | 6.29  | 127.70      | 119.84   |
| 46  | BY    | 34   | ASN  | N-CA-C      | 6.29  | 119.74      | 109.24   |
| 24  | BA    | 1947 | C    | C5'-C4'-C3' | -6.29 | 106.57      | 116.00   |
| 44  | BW    | 75   | ASP  | N-CA-C      | 6.29  | 118.66      | 108.41   |
| 29  | BF    | 50   | SER  | N-CA-C      | -6.28 | 100.98      | 110.28   |
| 47  | BZ    | 75   | LEU  | N-CA-C      | -6.28 | 103.71      | 111.75   |
| 24  | BA    | 1128 | A    | C5'-C4'-C3' | 6.28  | 125.42      | 116.00   |
| 1   | AA    | 1139 | G    | N9-C1'-C2'  | 6.28  | 121.41      | 112.00   |
| 30  | BG    | 68   | PRO  | N-CA-C      | 6.28  | 125.39      | 112.47   |
| 4   | AE    | 113  | HIS  | N-CA-C      | -6.27 | 104.36      | 111.07   |
| 48  | B1    | 2    | ARG  | N-CA-C      | -6.27 | 103.72      | 111.75   |
| 24  | BA    | 1941 | C    | O4'-C4'-C3' | -6.26 | 97.74       | 104.00   |
| 39  | BR    | 42   | ASP  | N-CA-C      | -6.25 | 101.02      | 110.28   |
| 30  | BG    | 142  | PRO  | N-CA-C      | -6.25 | 99.59       | 112.47   |
| 45  | BX    | 55   | TYR  | CA-C-N      | 6.25  | 127.66      | 119.84   |
| 45  | BX    | 55   | TYR  | C-N-CA      | 6.25  | 127.66      | 119.84   |
| 29  | BF    | 13   | SER  | N-CA-C      | -6.25 | 95.99       | 109.81   |
| 30  | BG    | 59   | GLU  | N-CA-C      | 6.25  | 118.64      | 111.02   |
| 37  | BP    | 136  | ALA  | CA-C-N      | 6.25  | 133.47      | 121.54   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 37  | BP    | 136  | ALA  | C-N-CA      | 6.25  | 133.47      | 121.54   |
| 10  | AK    | 80   | ILE  | N-CA-C      | -6.25 | 96.35       | 109.34   |
| 47  | BZ    | 57   | PHE  | N-CA-C      | -6.24 | 102.63      | 111.56   |
| 11  | AL    | 59   | PHE  | N-CA-C      | 6.24  | 119.57      | 109.40   |
| 43  | BV    | 11   | ARG  | N-CA-C      | 6.24  | 124.09      | 110.80   |
| 21  | AV    | 14   | HIS  | N-CA-C      | -6.24 | 103.76      | 111.75   |
| 24  | BA    | 2602 | A    | C2'-C3'-O3' | 6.24  | 118.86      | 109.50   |
| 24  | BA    | 2517 | C    | N1-C1'-C2'  | 6.24  | 121.35      | 112.00   |
| 24  | BA    | 687  | C    | N1-C1'-C2'  | 6.23  | 121.35      | 112.00   |
| 31  | BH    | 29   | PRO  | N-CA-C      | -6.23 | 105.86      | 114.27   |
| 4   | AE    | 100  | GLY  | N-CA-C      | -6.22 | 107.32      | 115.47   |
| 14  | AO    | 50   | SER  | N-CA-C      | 6.22  | 119.28      | 108.76   |
| 13  | AN    | 63   | LEU  | N-CA-C      | 6.22  | 118.61      | 111.02   |
| 34  | BM    | 130  | HIS  | N-CA-C      | -6.22 | 104.50      | 111.28   |
| 6   | AG    | 204  | ILE  | CB-CA-C     | -6.22 | 103.75      | 112.14   |
| 24  | BA    | 1348 | G    | C4'-C3'-O3' | -6.22 | 103.68      | 113.00   |
| 39  | BR    | 18   | ILE  | N-CA-C      | 6.21  | 116.69      | 110.23   |
| 28  | BE    | 138  | PRO  | N-CA-C      | 6.21  | 120.60      | 111.03   |
| 14  | AO    | 67   | THR  | N-CA-C      | 6.21  | 119.59      | 109.59   |
| 5   | AF    | 38   | ARG  | N-CA-C      | -6.21 | 103.82      | 111.33   |
| 34  | BM    | 43   | THR  | N-CA-C      | 6.20  | 123.52      | 109.81   |
| 24  | BA    | 621  | A    | N9-C1'-C2'  | -6.20 | 102.70      | 112.00   |
| 19  | AT    | 75   | ARG  | N-CA-C      | 6.20  | 117.96      | 108.42   |
| 31  | BH    | 131  | VAL  | O-C-N       | 6.20  | 130.31      | 122.57   |
| 33  | BL    | 112  | MET  | N-CA-C      | 6.19  | 123.50      | 109.81   |
| 44  | BW    | 9    | LEU  | N-CA-C      | 6.19  | 116.74      | 108.38   |
| 1   | AA    | 209  | U    | N1-C1'-C2'  | 6.19  | 121.28      | 112.00   |
| 24  | BA    | 2458 | G    | N9-C1'-C2'  | 6.18  | 121.27      | 112.00   |
| 39  | BR    | 53   | SER  | N-CA-C      | -6.18 | 100.89      | 110.10   |
| 40  | BS    | 56   | GLY  | CA-C-O      | -6.18 | 114.58      | 120.64   |
| 43  | BV    | 31   | GLU  | N-CA-C      | 6.18  | 117.71      | 110.97   |
| 50  | B3    | 70   | GLY  | N-CA-C      | -6.18 | 105.17      | 112.64   |
| 55  | B8    | 17   | ILE  | N-CA-C      | 6.18  | 117.19      | 108.36   |
| 30  | BG    | 103  | LEU  | N-CA-C      | -6.17 | 101.18      | 111.37   |
| 35  | BN    | 114  | ILE  | N-CA-C      | -6.17 | 103.88      | 110.36   |
| 1   | AA    | 1504 | G    | C2'-C3'-O3' | 6.17  | 122.95      | 113.70   |
| 48  | B1    | 28   | MET  | N-CA-C      | -6.17 | 103.49      | 111.02   |
| 29  | BF    | 8    | GLN  | N-CA-C      | 6.17  | 118.22      | 108.79   |
| 4   | AE    | 38   | GLY  | N-CA-C      | 6.16  | 121.81      | 114.48   |
| 31  | BH    | 7    | LEU  | CA-C-N      | 6.15  | 127.53      | 119.84   |
| 31  | BH    | 7    | LEU  | C-N-CA      | 6.15  | 127.53      | 119.84   |
| 34  | BM    | 77   | GLY  | N-CA-C      | -6.15 | 98.60       | 113.18   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 1   | AA    | 535  | A    | C4'-C3'-O3' | 6.15  | 118.63      | 109.40   |
| 24  | BA    | 1247 | A    | C2'-C3'-O3' | 6.15  | 118.73      | 109.50   |
| 1   | AA    | 1054 | C    | O4'-C4'-C3' | -6.15 | 97.85       | 104.00   |
| 26  | BC    | 13   | LYS  | N-CA-C      | -6.15 | 103.73      | 111.11   |
| 11  | AL    | 50   | LEU  | N-CA-C      | -6.14 | 104.51      | 112.68   |
| 18  | AS    | 19   | ILE  | N-CA-C      | -6.14 | 97.54       | 106.88   |
| 24  | BA    | 602  | G    | N9-C1'-C2'  | 6.14  | 121.22      | 112.00   |
| 10  | AK    | 100  | ILE  | N-CA-C      | -6.14 | 95.61       | 108.88   |
| 9   | AJ    | 117  | ALA  | N-CA-C      | -6.14 | 104.59      | 111.28   |
| 7   | AH    | 54   | ALA  | N-CA-C      | -6.14 | 103.90      | 111.33   |
| 20  | AU    | 39   | VAL  | CB-CA-C     | -6.14 | 104.03      | 111.88   |
| 24  | BA    | 1785 | A    | N9-C1'-C2'  | 6.14  | 121.20      | 112.00   |
| 25  | BB    | 56   | G    | C4'-C3'-O3' | -6.14 | 103.80      | 113.00   |
| 46  | BY    | 178  | GLU  | N-CA-C      | -6.14 | 103.17      | 110.41   |
| 34  | BM    | 39   | ARG  | N-CA-C      | -6.13 | 101.63      | 110.40   |
| 4   | AE    | 213  | LEU  | N-CA-C      | -6.13 | 103.54      | 111.02   |
| 42  | BU    | 60   | GLU  | CA-C-N      | -6.13 | 114.48      | 122.51   |
| 42  | BU    | 60   | GLU  | C-N-CA      | -6.13 | 114.48      | 122.51   |
| 7   | AH    | 92   | LYS  | N-CA-C      | -6.13 | 98.76       | 109.48   |
| 43  | BV    | 53   | SER  | N-CA-C      | -6.13 | 104.52      | 111.07   |
| 24  | BA    | 846  | C    | C2'-C3'-O3' | 6.12  | 118.69      | 109.50   |
| 24  | BA    | 2025 | C    | C2'-C3'-O3' | -6.12 | 104.51      | 113.70   |
| 1   | AA    | 723  | U    | N1-C1'-C2'  | 6.12  | 121.18      | 112.00   |
| 7   | AH    | 28   | PHE  | N-CA-C      | 6.12  | 118.48      | 109.24   |
| 27  | BD    | 35   | LYS  | N-CA-C      | 6.12  | 123.33      | 109.81   |
| 24  | BA    | 791  | C    | N1-C1'-C2'  | 6.12  | 121.17      | 112.00   |
| 19  | AT    | 42   | TYR  | N-CA-C      | -6.11 | 100.13      | 108.38   |
| 24  | BA    | 2346 | A    | C2'-C3'-O3' | -6.11 | 104.54      | 113.70   |
| 24  | BA    | 1791 | A    | C4'-C3'-O3' | -6.11 | 103.84      | 113.00   |
| 1   | AA    | 367  | U    | N1-C1'-C2'  | 6.11  | 123.16      | 114.00   |
| 4   | AE    | 168  | THR  | N-CA-C      | -6.10 | 97.80       | 110.80   |
| 22  | AW    | 94   | ALA  | N-CA-C      | -6.10 | 103.27      | 111.87   |
| 6   | AG    | 123  | HIS  | N-CA-C      | 6.10  | 120.45      | 113.19   |
| 1   | AA    | 1124 | G    | N9-C1'-C2'  | 6.10  | 121.15      | 112.00   |
| 48  | B1    | 62   | LYS  | N-CA-C      | 6.09  | 117.61      | 110.97   |
| 35  | BN    | 67   | LYS  | N-CA-C      | 6.09  | 123.77      | 110.80   |
| 49  | B2    | 27   | GLY  | N-CA-C      | -6.09 | 98.75       | 113.18   |
| 45  | BX    | 52   | SER  | N-CA-C      | -6.09 | 96.36       | 109.81   |
| 26  | BC    | 7    | TYR  | N-CA-C      | -6.08 | 104.43      | 112.34   |
| 35  | BN    | 76   | ALA  | N-CA-C      | 6.08  | 117.47      | 108.60   |
| 46  | BY    | 109  | ALA  | N-CA-C      | -6.07 | 97.87       | 110.80   |
| 23  | AX    | 19   | GLY  | N-CA-C      | 6.07  | 122.03      | 110.86   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|--------|------|-------------|-------|-------------|----------|
| 15  | AP    | 111    | LYS  | N-CA-C      | 6.06  | 117.89      | 111.28   |
| 1   | AA    | 530    | G    | C5'-C4'-O4' | -6.05 | 100.72      | 109.80   |
| 24  | BA    | 1966   | A    | C3'-C2'-O2' | 6.05  | 119.78      | 110.70   |
| 11  | AL    | 110    | GLU  | N-CA-C      | 6.05  | 123.69      | 110.80   |
| 24  | BA    | 2761   | G    | C5'-C4'-C3' | 6.05  | 125.07      | 116.00   |
| 33  | BL    | 100    | THR  | N-CA-C      | 6.05  | 119.33      | 109.59   |
| 36  | BO    | 86     | LYS  | N-CA-C      | 6.05  | 123.68      | 110.80   |
| 1   | AA    | 31     | G    | C2'-C3'-O3' | -6.04 | 104.64      | 113.70   |
| 24  | BA    | 2602   | A    | N9-C1'-C2'  | 6.04  | 123.06      | 114.00   |
| 12  | AM    | 68     | HIS  | N-CA-C      | -6.04 | 99.82       | 109.96   |
| 36  | BO    | 96     | THR  | CA-C-N      | -6.03 | 112.30      | 119.84   |
| 36  | BO    | 96     | THR  | C-N-CA      | -6.03 | 112.30      | 119.84   |
| 41  | BT    | 109    | LEU  | N-CA-C      | -6.03 | 97.97       | 110.80   |
| 24  | BA    | 620    | G    | N9-C1'-C2'  | 6.02  | 123.03      | 114.00   |
| 34  | BM    | 99     | LEU  | N-CA-C      | -6.02 | 103.88      | 111.11   |
| 51  | B4    | 22     | HIS  | N-CA-C      | -6.02 | 104.04      | 111.75   |
| 24  | BA    | 2867   | G    | N9-C1'-C2'  | 6.02  | 121.03      | 112.00   |
| 44  | BW    | 23     | GLU  | N-CA-C      | 6.02  | 122.48      | 114.12   |
| 28  | BE    | 200    | GLU  | N-CA-C      | 6.01  | 118.54      | 108.02   |
| 46  | BY    | 91     | LEU  | N-CA-C      | 6.01  | 119.85      | 110.17   |
| 24  | BA    | 1544   | C    | N1-C1'-C2'  | 6.01  | 121.02      | 112.00   |
| 28  | BE    | 196    | VAL  | N-CA-C      | 6.01  | 116.82      | 108.23   |
| 24  | BA    | 1416   | G    | N9-C1'-C2'  | 6.01  | 121.01      | 112.00   |
| 38  | BQ    | 113    | LEU  | N-CA-C      | -6.01 | 100.01      | 109.50   |
| 28  | BE    | 192    | ASN  | N-CA-C      | -6.00 | 99.18       | 108.42   |
| 35  | BN    | 68     | GLU  | N-CA-C      | -6.00 | 96.59       | 107.75   |
| 24  | BA    | 1240   | U    | OP2-P-O3'   | -6.00 | 90.00       | 108.00   |
| 1   | AA    | 60     | A    | C2'-C3'-O3' | 5.99  | 118.49      | 109.50   |
| 24  | BA    | 1699   | G    | N9-C1'-C2'  | 5.99  | 122.98      | 114.00   |
| 7   | AH    | 58     | ALA  | N-CA-C      | -5.98 | 101.50      | 111.37   |
| 24  | BA    | 1694   | C    | N1-C1'-C2'  | 5.98  | 122.97      | 114.00   |
| 24  | BA    | 270(M) | U    | C2'-C3'-O3' | -5.97 | 100.54      | 109.50   |
| 36  | BO    | 45     | LEU  | N-CA-C      | 5.97  | 118.31      | 111.02   |
| 1   | AA    | 1053   | G    | C2'-C3'-O3' | -5.97 | 104.74      | 113.70   |
| 4   | AE    | 134    | GLU  | N-CA-C      | -5.97 | 104.11      | 111.33   |
| 7   | AH    | 144    | THR  | N-CA-C      | 5.97  | 123.51      | 110.80   |
| 39  | BR    | 85     | VAL  | N-CA-C      | 5.97  | 116.88      | 108.17   |
| 30  | BG    | 98     | ARG  | N-CA-C      | -5.96 | 101.53      | 111.37   |
| 44  | BW    | 42     | ALA  | N-CA-C      | -5.96 | 103.95      | 111.11   |
| 37  | BP    | 128    | LYS  | N-CA-C      | -5.96 | 100.14      | 109.25   |
| 46  | BY    | 138    | GLU  | N-CA-C      | 5.96  | 118.02      | 109.14   |
| 24  | BA    | 532    | A    | N9-C1'-C2'  | 5.95  | 120.93      | 112.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|--------|------|-------------|-------|-------------|----------|
| 24  | BA    | 1455   | G    | N9-C1'-C2'  | -5.95 | 103.07      | 112.00   |
| 20  | AU    | 66     | LEU  | N-CA-C      | -5.95 | 104.71      | 111.07   |
| 34  | BM    | 96     | GLU  | N-CA-C      | -5.95 | 104.14      | 111.33   |
| 54  | B7    | 12     | LYS  | N-CA-C      | -5.95 | 98.13       | 110.80   |
| 5   | AF    | 17     | ASP  | N-CA-C      | 5.94  | 118.11      | 109.07   |
| 26  | BC    | 91     | ALA  | N-CA-C      | 5.94  | 119.94      | 109.96   |
| 1   | AA    | 530    | G    | C2'-C3'-O3' | -5.94 | 104.79      | 113.70   |
| 24  | BA    | 2472   | G    | C5'-C4'-C3' | -5.94 | 107.09      | 116.00   |
| 25  | BB    | 50     | G    | C4'-C3'-O3' | 5.94  | 121.91      | 113.00   |
| 30  | BG    | 60     | LEU  | N-CA-C      | -5.94 | 104.14      | 111.33   |
| 30  | BG    | 84     | LYS  | N-CA-C      | 5.94  | 123.45      | 110.80   |
| 27  | BD    | 264    | LYS  | N-CA-C      | 5.94  | 122.93      | 109.81   |
| 46  | BY    | 72     | ARG  | N-CA-C      | -5.94 | 105.87      | 114.12   |
| 2   | A1    | 17     | U    | C2'-C3'-O3' | 5.93  | 118.39      | 109.50   |
| 26  | BC    | 87     | GLU  | N-CA-C      | -5.93 | 103.79      | 111.02   |
| 43  | BV    | 82     | LEU  | N-CA-C      | -5.93 | 100.33      | 109.76   |
| 24  | BA    | 280    | C    | C2'-C3'-O3' | 5.93  | 118.39      | 109.50   |
| 24  | BA    | 1312   | U    | C3'-C2'-O2' | 5.93  | 119.59      | 110.70   |
| 1   | AA    | 88     | C    | N1-C1'-C2'  | 5.92  | 120.89      | 112.00   |
| 24  | BA    | 2501   | C    | OP2-P-O3'   | -5.92 | 90.23       | 108.00   |
| 24  | BA    | 2713   | A    | N9-C1'-C2'  | 5.92  | 120.88      | 112.00   |
| 13  | AN    | 73     | MET  | N-CA-C      | -5.92 | 104.74      | 111.07   |
| 46  | BY    | 37     | VAL  | N-CA-C      | -5.92 | 99.89       | 108.89   |
| 24  | BA    | 270(L) | U    | C2'-C3'-O3' | 5.91  | 118.37      | 109.50   |
| 30  | BG    | 46     | ALA  | N-CA-C      | -5.91 | 105.21      | 113.37   |
| 38  | BQ    | 10     | LEU  | N-CA-C      | 5.91  | 117.95      | 109.14   |
| 13  | AN    | 91     | ARG  | N-CA-C      | -5.91 | 104.18      | 111.75   |
| 30  | BG    | 10     | LYS  | N-CA-C      | 5.91  | 117.39      | 111.07   |
| 35  | BN    | 60     | ALA  | CA-C-N      | 5.91  | 132.60      | 121.97   |
| 35  | BN    | 60     | ALA  | C-N-CA      | 5.91  | 132.60      | 121.97   |
| 47  | BZ    | 71     | ASP  | N-CA-C      | -5.90 | 100.91      | 109.59   |
| 49  | B2    | 58     | VAL  | CB-CA-C     | -5.90 | 105.54      | 111.80   |
| 24  | BA    | 698    | C    | N1-C1'-C2'  | 5.90  | 120.85      | 112.00   |
| 24  | BA    | 2249   | U    | N1-C1'-C2'  | 5.90  | 120.85      | 112.00   |
| 32  | BK    | 31     | LEU  | CA-C-N      | -5.90 | 112.84      | 118.97   |
| 32  | BK    | 31     | LEU  | C-N-CA      | -5.90 | 112.84      | 118.97   |
| 40  | BS    | 31     | SER  | N-CA-C      | 5.90  | 118.25      | 108.99   |
| 40  | BS    | 15     | VAL  | CB-CA-C     | -5.89 | 104.34      | 112.24   |
| 7   | AH    | 17     | ALA  | N-CA-C      | 5.88  | 118.80      | 110.50   |
| 10  | AK    | 114    | THR  | N-CA-C      | -5.88 | 101.48      | 109.95   |
| 15  | AP    | 36     | LYS  | N-CA-C      | 5.88  | 117.69      | 111.28   |
| 17  | AR    | 80     | ALA  | N-CA-C      | -5.88 | 103.84      | 111.02   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24  | BA    | 1005 | C    | N1-C1'-C2'  | 5.88  | 120.82      | 112.00   |
| 27  | BD    | 161  | THR  | N-CA-C      | -5.88 | 99.22       | 108.63   |
| 1   | AA    | 965  | A    | C2'-C3'-O3' | 5.88  | 118.32      | 109.50   |
| 1   | AA    | 575  | G    | N9-C1'-C2'  | 5.88  | 120.82      | 112.00   |
| 24  | BA    | 2073 | C    | C4'-C3'-O3' | -5.87 | 104.20      | 113.00   |
| 27  | BD    | 141  | VAL  | N-CA-C      | 5.87  | 117.20      | 108.46   |
| 43  | BV    | 99   | ARG  | N-CA-C      | 5.87  | 117.60      | 109.15   |
| 1   | AA    | 1493 | A    | C4'-C3'-C2' | 5.86  | 108.46      | 102.60   |
| 32  | BK    | 97   | ILE  | N-CA-C      | -5.86 | 104.13      | 110.23   |
| 51  | B4    | 57   | VAL  | N-CA-C      | 5.86  | 116.80      | 108.42   |
| 32  | BK    | 26   | ALA  | N-CA-C      | -5.86 | 104.08      | 111.11   |
| 43  | BV    | 13   | SER  | CA-C-N      | 5.86  | 127.17      | 119.84   |
| 43  | BV    | 13   | SER  | C-N-CA      | 5.86  | 127.17      | 119.84   |
| 44  | BW    | 61   | GLY  | N-CA-C      | 5.86  | 121.99      | 111.62   |
| 20  | AU    | 33   | ASP  | N-CA-C      | 5.86  | 115.22      | 108.49   |
| 24  | BA    | 1510 | A    | N9-C1'-C2'  | 5.86  | 120.78      | 112.00   |
| 35  | BN    | 22   | ILE  | N-CA-C      | -5.86 | 97.16       | 109.34   |
| 52  | B5    | 23   | THR  | N-CA-C      | 5.85  | 123.27      | 110.80   |
| 24  | BA    | 1828 | G    | C2'-C3'-O3' | 5.85  | 118.28      | 109.50   |
| 33  | BL    | 57   | ILE  | N-CA-C      | 5.85  | 118.29      | 108.81   |
| 37  | BP    | 105  | GLU  | N-CA-C      | 5.85  | 117.93      | 108.34   |
| 6   | AG    | 188  | LEU  | CA-C-N      | -5.84 | 113.57      | 120.11   |
| 6   | AG    | 188  | LEU  | C-N-CA      | -5.84 | 113.57      | 120.11   |
| 24  | BA    | 2243 | U    | N1-C1'-C2'  | 5.84  | 120.75      | 112.00   |
| 26  | BC    | 134  | ARG  | N-CA-C      | -5.84 | 106.29      | 113.41   |
| 24  | BA    | 2116 | G    | C2'-C3'-O3' | -5.83 | 104.95      | 113.70   |
| 36  | BO    | 23   | PRO  | N-CA-C      | 5.83  | 124.48      | 112.47   |
| 37  | BP    | 63   | LYS  | N-CA-C      | 5.83  | 123.22      | 110.80   |
| 24  | BA    | 164  | U    | N1-C1'-C2'  | 5.83  | 120.74      | 112.00   |
| 24  | BA    | 858  | U    | C2'-C3'-O3' | -5.83 | 104.96      | 113.70   |
| 24  | BA    | 2195 | C    | N1-C1'-C2'  | 5.83  | 120.74      | 112.00   |
| 4   | AE    | 117  | GLU  | N-CA-C      | -5.83 | 104.93      | 111.28   |
| 16  | AQ    | 18   | VAL  | N-CA-C      | 5.82  | 121.45      | 109.34   |
| 24  | BA    | 762  | U    | N1-C1'-C2'  | 5.82  | 122.73      | 114.00   |
| 27  | BD    | 239  | ARG  | N-CA-C      | 5.82  | 123.19      | 110.80   |
| 27  | BD    | 137  | PRO  | N-CA-C      | -5.81 | 100.50      | 112.47   |
| 33  | BL    | 64   | SER  | N-CA-C      | 5.81  | 117.62      | 108.96   |
| 17  | AR    | 74   | ASP  | CA-C-N      | 5.81  | 126.68      | 120.47   |
| 17  | AR    | 74   | ASP  | C-N-CA      | 5.81  | 126.68      | 120.47   |
| 14  | AO    | 16   | GLU  | N-CA-C      | 5.80  | 123.16      | 110.80   |
| 24  | BA    | 2447 | G    | N9-C1'-C2'  | 5.80  | 122.70      | 114.00   |
| 28  | BE    | 194  | GLY  | CA-C-N      | -5.80 | 115.00      | 123.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res     | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|---------|------|-------------|-------|-------------|----------|
| 28  | BE    | 194     | GLY  | C-N-CA      | -5.80 | 115.00      | 123.00   |
| 3   | AB    | 25      | C    | N1-C1'-C2'  | -5.80 | 103.30      | 112.00   |
| 1   | AA    | 305     | G    | C2'-C3'-O3' | 5.79  | 118.19      | 109.50   |
| 37  | BP    | 38      | GLU  | CA-C-N      | -5.79 | 112.60      | 119.84   |
| 37  | BP    | 38      | GLU  | C-N-CA      | -5.79 | 112.60      | 119.84   |
| 41  | BT    | 52      | ARG  | N-CA-C      | 5.79  | 120.34      | 113.28   |
| 36  | BO    | 96      | THR  | N-CA-C      | 5.79  | 122.60      | 109.81   |
| 39  | BR    | 92      | TYR  | N-CA-C      | 5.78  | 116.03      | 107.88   |
| 41  | BT    | 50      | ARG  | N-CA-C      | -5.78 | 105.06      | 111.71   |
| 15  | AP    | 63      | THR  | N-CA-C      | -5.78 | 105.39      | 113.37   |
| 1   | AA    | 1506    | U    | C2'-C3'-O3' | -5.78 | 105.03      | 113.70   |
| 24  | BA    | 1477    | A    | N9-C1'-C2'  | 5.78  | 120.67      | 112.00   |
| 29  | BF    | 47      | GLY  | N-CA-C      | 5.78  | 126.87      | 113.18   |
| 47  | BZ    | 22      | GLY  | N-CA-C      | 5.78  | 121.40      | 112.45   |
| 31  | BH    | 110     | SER  | N-CA-C      | -5.77 | 98.50       | 110.80   |
| 18  | AS    | 5       | ARG  | N-CA-C      | -5.77 | 101.18      | 108.45   |
| 24  | BA    | 508     | G    | C4'-C3'-O3' | 5.77  | 118.05      | 109.40   |
| 48  | B1    | 44      | LYS  | N-CA-C      | -5.77 | 104.35      | 111.33   |
| 6   | AG    | 26      | CYS  | CA-C-N      | 5.76  | 131.28      | 122.23   |
| 6   | AG    | 26      | CYS  | C-N-CA      | 5.76  | 131.28      | 122.23   |
| 1   | AA    | 531     | U    | N1-C1'-C2'  | 5.76  | 122.64      | 114.00   |
| 1   | AA    | 1148    | U    | N1-C1'-C2'  | 5.76  | 120.64      | 112.00   |
| 1   | AA    | 197     | A    | P-O3'-C3'   | -5.76 | 111.56      | 120.20   |
| 9   | AJ    | 16      | LEU  | N-CA-C      | -5.76 | 104.42      | 112.25   |
| 24  | BA    | 1706    | U    | N1-C1'-C2'  | 5.75  | 120.63      | 112.00   |
| 24  | BA    | 1929    | G    | C2'-C3'-O3' | -5.75 | 105.07      | 113.70   |
| 24  | BA    | 2894    | G    | N9-C1'-C2'  | 5.75  | 120.63      | 112.00   |
| 27  | BD    | 189     | CYS  | CA-C-N      | -5.75 | 112.43      | 121.87   |
| 27  | BD    | 189     | CYS  | C-N-CA      | -5.75 | 112.43      | 121.87   |
| 24  | BA    | 1566    | A    | C4'-C3'-O3' | -5.75 | 100.78      | 109.40   |
| 7   | AH    | 89      | ILE  | N-CA-C      | 5.74  | 116.75      | 108.48   |
| 29  | BF    | 95      | ARG  | N-CA-C      | 5.74  | 116.16      | 108.23   |
| 50  | B3    | 19      | GLY  | N-CA-C      | -5.74 | 99.57       | 113.18   |
| 1   | AA    | 423     | G    | N9-C1'-C2'  | 5.74  | 120.61      | 112.00   |
| 24  | BA    | 150     | C    | N1-C1'-C2'  | 5.74  | 120.61      | 112.00   |
| 15  | AP    | 11      | ARG  | N-CA-C      | 5.74  | 123.02      | 110.80   |
| 33  | BL    | 81      | ALA  | N-CA-C      | -5.74 | 104.95      | 111.14   |
| 1   | AA    | 47      | C    | N1-C1'-C2'  | 5.73  | 122.59      | 114.00   |
| 33  | BL    | 110     | GLN  | N-CA-C      | 5.73  | 117.98      | 111.11   |
| 24  | BA    | 2061    | G    | N9-C1'-C2'  | 5.73  | 120.59      | 112.00   |
| 24  | BA    | 1444(A) | A    | N9-C1'-C2'  | 5.72  | 122.59      | 114.00   |
| 24  | BA    | 2726    | U    | C2'-C3'-O3' | 5.72  | 118.09      | 109.50   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27  | BD    | 62   | TYR  | N-CA-C      | 5.72  | 122.99      | 110.80   |
| 24  | BA    | 728  | G    | N9-C1'-C2'  | 5.72  | 120.58      | 112.00   |
| 24  | BA    | 647  | G    | N9-C1'-C2'  | 5.72  | 120.58      | 112.00   |
| 32  | BK    | 45   | LYS  | N-CA-C      | -5.72 | 104.05      | 111.02   |
| 1   | AA    | 1502 | A    | N9-C1'-C2'  | 5.71  | 122.57      | 114.00   |
| 24  | BA    | 36   | G    | C4'-C3'-O3' | -5.71 | 104.43      | 113.00   |
| 24  | BA    | 2778 | A    | C4'-C3'-O3' | 5.71  | 117.97      | 109.40   |
| 24  | BA    | 1247 | A    | N9-C1'-C2'  | 5.71  | 122.57      | 114.00   |
| 26  | BC    | 157  | LYS  | N-CA-C      | 5.71  | 118.72      | 111.69   |
| 24  | BA    | 746  | A    | N9-C1'-C2'  | -5.71 | 105.44      | 114.00   |
| 1   | AA    | 1305 | G    | C4'-C3'-O3' | -5.71 | 104.44      | 113.00   |
| 29  | BF    | 122  | LYS  | N-CA-C      | 5.71  | 117.71      | 108.41   |
| 38  | BQ    | 36   | THR  | N-CA-CB     | 5.71  | 115.33      | 109.51   |
| 1   | AA    | 47   | C    | C2'-C3'-O3' | 5.71  | 118.06      | 109.50   |
| 1   | AA    | 559  | A    | C2'-C3'-O3' | 5.70  | 118.06      | 109.50   |
| 21  | AV    | 22   | LEU  | N-CA-C      | -5.70 | 105.15      | 111.71   |
| 22  | AW    | 72   | LEU  | N-CA-C      | -5.70 | 100.84      | 109.85   |
| 24  | BA    | 2500 | U    | O3'-P-O5'   | -5.70 | 95.44       | 104.00   |
| 24  | BA    | 1429 | G    | N9-C1'-C2'  | 5.70  | 120.55      | 112.00   |
| 24  | BA    | 2833 | G    | C2'-C3'-O3' | -5.70 | 105.15      | 113.70   |
| 37  | BP    | 94   | VAL  | N-CA-C      | 5.70  | 121.19      | 109.34   |
| 4   | AE    | 225  | ALA  | N-CA-C      | -5.70 | 105.15      | 111.36   |
| 52  | B5    | 38   | LYS  | CA-C-N      | 5.70  | 132.42      | 121.54   |
| 52  | B5    | 38   | LYS  | C-N-CA      | 5.70  | 132.42      | 121.54   |
| 24  | BA    | 2041 | U    | C4'-C3'-O3' | -5.69 | 104.47      | 113.00   |
| 47  | BZ    | 2    | ALA  | N-CA-C      | 5.69  | 122.91      | 110.80   |
| 32  | BK    | 131  | LYS  | CA-C-N      | 5.68  | 126.94      | 119.84   |
| 32  | BK    | 131  | LYS  | C-N-CA      | 5.68  | 126.94      | 119.84   |
| 51  | B4    | 36   | CYS  | CA-CB-SG    | 5.68  | 127.47      | 114.40   |
| 34  | BM    | 89   | LYS  | N-CA-C      | -5.68 | 105.09      | 111.28   |
| 1   | AA    | 13   | U    | N1-C1'-C2'  | 5.68  | 120.52      | 112.00   |
| 3   | AB    | 37   | A    | C4'-C3'-O3' | -5.68 | 104.48      | 113.00   |
| 28  | BE    | 73   | GLU  | CA-C-N      | 5.68  | 126.94      | 119.84   |
| 28  | BE    | 73   | GLU  | C-N-CA      | 5.68  | 126.94      | 119.84   |
| 21  | AV    | 56   | GLN  | N-CA-C      | 5.68  | 118.97      | 109.95   |
| 24  | BA    | 738  | G    | C2'-C3'-O3' | -5.68 | 105.18      | 113.70   |
| 24  | BA    | 1199 | U    | N1-C1'-C2'  | 5.68  | 120.51      | 112.00   |
| 47  | BZ    | 5    | LYS  | CB-CA-C     | -5.68 | 109.03      | 115.79   |
| 50  | B3    | 41   | PRO  | N-CA-C      | 5.68  | 124.16      | 112.47   |
| 29  | BF    | 42   | ALA  | N-CA-C      | 5.67  | 117.94      | 111.02   |
| 29  | BF    | 83   | PHE  | N-CA-C      | 5.67  | 116.86      | 107.73   |
| 34  | BM    | 134  | ARG  | CA-C-N      | 5.67  | 126.93      | 119.84   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 34  | BM    | 134  | ARG  | C-N-CA      | 5.67  | 126.93      | 119.84   |
| 37  | BP    | 39   | PRO  | N-CA-C      | 5.67  | 124.14      | 112.47   |
| 14  | AO    | 47   | LYS  | CA-C-N      | -5.67 | 112.76      | 119.84   |
| 14  | AO    | 47   | LYS  | C-N-CA      | -5.67 | 112.76      | 119.84   |
| 24  | BA    | 748  | G    | C2'-C3'-O3' | -5.67 | 105.20      | 113.70   |
| 28  | BE    | 43   | GLY  | N-CA-C      | -5.66 | 99.76       | 113.18   |
| 38  | BQ    | 65   | LEU  | CA-C-N      | -5.66 | 111.52      | 120.47   |
| 38  | BQ    | 65   | LEU  | C-N-CA      | -5.66 | 111.52      | 120.47   |
| 5   | AF    | 71   | ALA  | N-CA-C      | -5.66 | 104.25      | 113.19   |
| 26  | BC    | 124  | GLY  | N-CA-C      | 5.66  | 119.52      | 112.73   |
| 46  | BY    | 99   | TYR  | N-CA-C      | -5.66 | 101.74      | 109.71   |
| 44  | BW    | 56   | THR  | N-CA-C      | 5.65  | 117.99      | 109.23   |
| 47  | BZ    | 74   | ARG  | N-CA-C      | 5.65  | 122.83      | 110.80   |
| 14  | AO    | 69   | TYR  | N-CA-C      | 5.64  | 119.12      | 110.20   |
| 24  | BA    | 805  | G    | C2'-C3'-O3' | -5.64 | 105.23      | 113.70   |
| 7   | AH    | 120  | THR  | N-CA-C      | 5.64  | 117.64      | 109.07   |
| 35  | BN    | 87   | ILE  | N-CA-C      | -5.64 | 100.27      | 108.17   |
| 1   | AA    | 251  | G    | C2'-C3'-O3' | -5.64 | 105.24      | 113.70   |
| 9   | AJ    | 49   | ILE  | CB-CA-C     | -5.64 | 104.66      | 111.88   |
| 24  | BA    | 980  | A    | C4'-C3'-O3' | -5.64 | 104.54      | 113.00   |
| 26  | BC    | 142  | ALA  | N-CA-C      | -5.64 | 103.56      | 110.61   |
| 48  | B1    | 65   | GLN  | N-CA-C      | -5.64 | 104.35      | 111.11   |
| 44  | BW    | 84   | ALA  | CA-C-N      | 5.63  | 126.88      | 119.84   |
| 44  | BW    | 84   | ALA  | C-N-CA      | 5.63  | 126.88      | 119.84   |
| 24  | BA    | 279  | C    | N1-C1'-C2'  | 5.63  | 120.45      | 112.00   |
| 24  | BA    | 962  | G    | N9-C1'-C2'  | 5.63  | 120.45      | 112.00   |
| 24  | BA    | 2577 | A    | C2'-C3'-O3' | -5.63 | 105.25      | 113.70   |
| 30  | BG    | 176  | LEU  | N-CA-C      | 5.63  | 118.35      | 111.82   |
| 1   | AA    | 1493 | A    | O3'-P-O5'   | -5.63 | 95.56       | 104.00   |
| 28  | BE    | 39   | PRO  | N-CA-C      | -5.63 | 106.52      | 113.84   |
| 40  | BS    | 12   | SER  | N-CA-C      | -5.63 | 102.08      | 111.37   |
| 24  | BA    | 1204 | A    | C5'-C4'-C3' | 5.62  | 123.64      | 115.20   |
| 13  | AN    | 24   | SER  | N-CA-C      | -5.62 | 101.25      | 109.63   |
| 47  | BZ    | 31   | VAL  | N-CA-C      | 5.62  | 116.22      | 107.28   |
| 1   | AA    | 813  | U    | C4'-C3'-O3' | -5.62 | 104.57      | 113.00   |
| 24  | BA    | 602  | G    | C4'-C3'-O3' | -5.62 | 104.57      | 113.00   |
| 4   | AE    | 231  | GLU  | N-CA-C      | 5.62  | 118.44      | 110.24   |
| 27  | BD    | 68   | LYS  | N-CA-C      | 5.62  | 117.56      | 108.34   |
| 43  | BV    | 9    | TYR  | N-CA-C      | 5.62  | 122.77      | 110.80   |
| 1   | AA    | 572  | A    | C4'-C3'-O3' | -5.62 | 104.58      | 113.00   |
| 24  | BA    | 1128 | A    | C2'-C3'-O3' | -5.62 | 105.28      | 113.70   |
| 33  | BL    | 104  | VAL  | N-CA-C      | 5.62  | 115.70      | 110.42   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 46  | BY    | 38   | TYR  | N-CA-C      | 5.62  | 118.56      | 109.40   |
| 52  | B5    | 31   | PRO  | N-CA-C      | 5.61  | 124.03      | 112.47   |
| 1   | AA    | 172  | A    | OP2-P-O3'   | -5.61 | 91.17       | 108.00   |
| 1   | AA    | 748  | C    | O4'-C1'-C2' | -5.61 | 101.99      | 107.60   |
| 24  | BA    | 750  | A    | C4'-C3'-O3' | -5.61 | 104.59      | 113.00   |
| 24  | BA    | 2425 | A    | N9-C1'-C2'  | 5.61  | 120.41      | 112.00   |
| 50  | B3    | 57   | GLU  | N-CA-C      | 5.61  | 117.52      | 108.32   |
| 40  | BS    | 16   | ARG  | N-CA-C      | -5.60 | 99.01       | 109.32   |
| 24  | BA    | 2490 | G    | C1'-C2'-O2' | -5.60 | 103.40      | 111.80   |
| 28  | BE    | 24   | THR  | N-CA-C      | 5.60  | 117.85      | 107.99   |
| 18  | AS    | 49   | LEU  | N-CA-C      | 5.60  | 116.92      | 108.46   |
| 24  | BA    | 222  | A    | N9-C1'-C2'  | 5.60  | 120.40      | 112.00   |
| 24  | BA    | 1008 | C    | N1-C1'-C2'  | 5.59  | 120.39      | 112.00   |
| 3   | AB    | 52   | G    | C4'-C3'-O3' | -5.59 | 104.61      | 113.00   |
| 24  | BA    | 2525 | G    | C2'-C3'-O3' | -5.59 | 105.31      | 113.70   |
| 27  | BD    | 136  | ILE  | CA-C-N      | -5.59 | 112.85      | 119.84   |
| 27  | BD    | 136  | ILE  | C-N-CA      | -5.59 | 112.85      | 119.84   |
| 45  | BX    | 52   | SER  | CA-C-N      | -5.59 | 114.20      | 119.90   |
| 45  | BX    | 52   | SER  | C-N-CA      | -5.59 | 114.20      | 119.90   |
| 26  | BC    | 98   | GLU  | N-CA-C      | -5.59 | 104.82      | 111.69   |
| 35  | BN    | 40   | VAL  | CB-CA-C     | -5.58 | 102.32      | 110.81   |
| 54  | B7    | 21   | LYS  | N-CA-C      | 5.58  | 115.92      | 108.38   |
| 50  | B3    | 12   | ALA  | N-CA-C      | 5.58  | 122.69      | 110.80   |
| 1   | AA    | 5    | U    | C2'-C3'-O3' | 5.58  | 117.87      | 109.50   |
| 5   | AF    | 175  | LEU  | N-CA-C      | -5.58 | 105.30      | 111.71   |
| 24  | BA    | 1776 | G    | N9-C1'-C2'  | 5.58  | 120.36      | 112.00   |
| 33  | BL    | 70   | LYS  | N-CA-C      | 5.58  | 119.43      | 107.67   |
| 1   | AA    | 1166 | G    | N9-C1'-C2'  | -5.57 | 103.64      | 112.00   |
| 54  | B7    | 16   | ILE  | CB-CA-C     | -5.57 | 102.32      | 110.62   |
| 11  | AL    | 74   | ILE  | CB-CA-C     | -5.57 | 104.57      | 111.70   |
| 39  | BR    | 19   | LYS  | N-CA-C      | -5.57 | 104.43      | 111.11   |
| 4   | AE    | 200  | ILE  | N-CA-C      | 5.57  | 120.92      | 109.34   |
| 24  | BA    | 2774 | C    | C4'-C3'-O3' | -5.57 | 104.65      | 113.00   |
| 29  | BF    | 20   | LEU  | N-CA-C      | 5.57  | 117.64      | 109.24   |
| 37  | BP    | 101  | ARG  | N-CA-C      | 5.57  | 119.13      | 110.17   |
| 34  | BM    | 80   | GLY  | N-CA-C      | -5.56 | 100.00      | 113.18   |
| 24  | BA    | 1205 | U    | C1'-O4'-C4' | -5.56 | 104.34      | 109.90   |
| 3   | AC    | 58   | A    | C2'-C3'-O3' | 5.56  | 117.84      | 109.50   |
| 27  | BD    | 50   | THR  | CA-C-N      | -5.56 | 115.88      | 122.11   |
| 27  | BD    | 50   | THR  | C-N-CA      | -5.56 | 115.88      | 122.11   |
| 46  | BY    | 67   | LEU  | N-CA-C      | 5.56  | 117.22      | 108.55   |
| 46  | BY    | 39   | VAL  | CA-C-N      | -5.56 | 114.24      | 122.41   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 46  | BY    | 39   | VAL  | C-N-CA      | -5.56 | 114.24      | 122.41   |
| 5   | AF    | 8    | ILE  | N-CA-C      | -5.55 | 106.39      | 111.67   |
| 19  | AT    | 22   | LEU  | N-CA-C      | 5.55  | 118.14      | 108.76   |
| 24  | BA    | 1941 | C    | C2'-C3'-O3' | -5.55 | 105.37      | 113.70   |
| 1   | AA    | 875  | C    | C4'-C3'-O3' | -5.55 | 104.67      | 113.00   |
| 46  | BY    | 174  | VAL  | N-CA-C      | 5.55  | 116.58      | 108.53   |
| 24  | BA    | 2373 | G    | N9-C1'-C2'  | 5.55  | 120.32      | 112.00   |
| 24  | BA    | 2566 | A    | N9-C1'-C2'  | 5.54  | 120.31      | 112.00   |
| 29  | BF    | 21   | ALA  | N-CA-C      | -5.54 | 99.00       | 110.80   |
| 54  | B7    | 30   | ARG  | N-CA-C      | 5.54  | 122.60      | 110.80   |
| 13  | AN    | 71   | LYS  | N-CA-C      | -5.54 | 104.94      | 110.97   |
| 36  | BO    | 77   | ARG  | N-CA-C      | 5.53  | 120.90      | 109.11   |
| 39  | BR    | 51   | ALA  | N-CA-C      | 5.53  | 122.59      | 110.80   |
| 41  | BT    | 100  | VAL  | CB-CA-C     | -5.53 | 102.21      | 111.29   |
| 44  | BW    | 37   | THR  | N-CA-C      | -5.53 | 105.35      | 111.71   |
| 24  | BA    | 1022 | G    | C1'-C2'-O2' | -5.53 | 103.50      | 111.80   |
| 24  | BA    | 1800 | C    | O4'-C4'-C3' | -5.53 | 98.47       | 104.00   |
| 24  | BA    | 2724 | C    | C2'-C3'-O3' | -5.53 | 105.40      | 113.70   |
| 1   | AA    | 871  | U    | C4'-C3'-O3' | 5.53  | 117.70      | 109.40   |
| 12  | AM    | 44   | VAL  | N-CA-C      | 5.53  | 116.44      | 108.48   |
| 24  | BA    | 1189 | A    | N9-C1'-C2'  | -5.53 | 103.70      | 112.00   |
| 38  | BQ    | 28   | LEU  | N-CA-C      | -5.53 | 104.94      | 110.97   |
| 40  | BS    | 101  | PHE  | N-CA-C      | -5.53 | 105.61      | 112.47   |
| 4   | AE    | 90   | MET  | N-CA-C      | 5.53  | 119.78      | 107.95   |
| 14  | AO    | 25   | PRO  | N-CA-C      | -5.53 | 104.00      | 113.12   |
| 24  | BA    | 1635 | G    | C2'-C3'-O3' | 5.53  | 121.99      | 113.70   |
| 19  | AT    | 59   | ILE  | CB-CA-C     | -5.53 | 101.85      | 110.69   |
| 24  | BA    | 788  | A    | C2'-C3'-O3' | 5.53  | 117.79      | 109.50   |
| 24  | BA    | 2027 | G    | C5'-C4'-C3' | 5.53  | 124.29      | 116.00   |
| 24  | BA    | 2726 | U    | N1-C1'-C2'  | 5.52  | 122.28      | 114.00   |
| 1   | AA    | 1392 | G    | C4'-C3'-O3' | -5.52 | 104.72      | 113.00   |
| 19  | AT    | 43   | LEU  | N-CA-C      | -5.52 | 100.68      | 109.07   |
| 1   | AA    | 394  | G    | N9-C1'-C2'  | 5.52  | 120.28      | 112.00   |
| 7   | AH    | 145  | LYS  | N-CA-C      | -5.52 | 104.68      | 111.75   |
| 6   | AG    | 63   | LYS  | N-CA-C      | -5.52 | 105.27      | 111.28   |
| 24  | BA    | 558  | G    | C2'-C3'-O3' | -5.52 | 105.42      | 113.70   |
| 33  | BL    | 82   | ALA  | N-CA-C      | 5.52  | 122.55      | 110.80   |
| 46  | BY    | 158  | PRO  | CA-C-N      | 5.51  | 126.73      | 119.84   |
| 46  | BY    | 158  | PRO  | C-N-CA      | 5.51  | 126.73      | 119.84   |
| 1   | AA    | 818  | G    | N9-C1'-C2'  | 5.51  | 122.27      | 114.00   |
| 24  | BA    | 1585 | C    | C2'-C3'-O3' | -5.51 | 101.23      | 109.50   |
| 24  | BA    | 1908 | C    | C4'-C3'-O3' | -5.51 | 104.73      | 113.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 1   | AA    | 1054 | C    | N1-C1'-C2'  | -5.51 | 103.74      | 112.00   |
| 1   | AA    | 1395 | C    | N1-C1'-C2'  | 5.51  | 120.26      | 112.00   |
| 8   | AI    | 99   | ALA  | N-CA-C      | -5.51 | 101.88      | 110.42   |
| 24  | BA    | 311  | A    | N9-C1'-C2'  | 5.51  | 120.26      | 112.00   |
| 24  | BA    | 2668 | G    | O4'-C4'-C3' | -5.51 | 98.49       | 104.00   |
| 39  | BR    | 107  | GLU  | N-CA-C      | -5.51 | 105.18      | 111.07   |
| 9   | AJ    | 69   | VAL  | N-CA-C      | 5.50  | 117.97      | 111.09   |
| 24  | BA    | 2590 | A    | C3'-C2'-O2' | 5.50  | 118.96      | 110.70   |
| 16  | AQ    | 11   | LYS  | N-CA-C      | -5.50 | 106.64      | 113.19   |
| 30  | BG    | 76   | SER  | N-CA-C      | 5.50  | 122.52      | 110.80   |
| 34  | BM    | 47   | ALA  | N-CA-C      | -5.50 | 99.08       | 110.80   |
| 46  | BY    | 9    | TYR  | N-CA-C      | -5.50 | 103.12      | 110.55   |
| 13  | AN    | 112  | THR  | N-CA-C      | -5.50 | 101.02      | 112.40   |
| 24  | BA    | 745  | G    | O4'-C4'-C3' | 5.50  | 109.50      | 104.00   |
| 36  | BO    | 72   | PRO  | N-CA-C      | 5.50  | 123.79      | 112.47   |
| 27  | BD    | 244  | ARG  | CA-C-N      | 5.50  | 126.04      | 120.38   |
| 27  | BD    | 244  | ARG  | C-N-CA      | 5.50  | 126.04      | 120.38   |
| 24  | BA    | 1663 | C    | C2'-C3'-O3' | -5.49 | 105.46      | 113.70   |
| 19  | AT    | 46   | ASP  | CA-C-N      | 5.49  | 126.71      | 119.84   |
| 19  | AT    | 46   | ASP  | C-N-CA      | 5.49  | 126.71      | 119.84   |
| 34  | BM    | 133  | GLN  | N-CA-C      | -5.49 | 98.97       | 108.52   |
| 13  | AN    | 85   | ARG  | N-CA-C      | 5.49  | 118.72      | 107.69   |
| 32  | BK    | 17   | GLN  | N-CA-C      | 5.49  | 117.52      | 109.24   |
| 14  | AO    | 37   | CYS  | N-CA-C      | 5.48  | 117.95      | 110.55   |
| 24  | BA    | 763  | G    | O4'-C4'-C3' | -5.48 | 98.52       | 104.00   |
| 47  | BZ    | 10   | THR  | N-CA-C      | -5.48 | 99.13       | 110.80   |
| 33  | BL    | 56   | GLU  | N-CA-C      | -5.48 | 100.31      | 109.24   |
| 38  | BQ    | 111  | LEU  | N-CA-C      | 5.47  | 118.19      | 109.65   |
| 44  | BW    | 59   | VAL  | N-CA-C      | 5.47  | 115.77      | 108.27   |
| 1   | AA    | 1493 | A    | C3'-C2'-O2' | 5.47  | 118.91      | 110.70   |
| 24  | BA    | 2445 | G    | N9-C1'-C2'  | 5.47  | 120.21      | 112.00   |
| 24  | BA    | 1300 | U    | C2'-C3'-O3' | 5.47  | 117.70      | 109.50   |
| 35  | BN    | 6    | THR  | CA-C-N      | 5.47  | 131.09      | 122.34   |
| 35  | BN    | 6    | THR  | C-N-CA      | 5.47  | 131.09      | 122.34   |
| 35  | BN    | 57   | VAL  | N-CA-C      | -5.47 | 97.96       | 109.34   |
| 24  | BA    | 2195 | C    | O4'-C4'-C3' | 5.47  | 109.47      | 104.00   |
| 38  | BQ    | 55   | ALA  | N-CA-C      | -5.47 | 102.35      | 111.37   |
| 26  | BC    | 27   | HIS  | N-CA-C      | 5.46  | 116.93      | 110.97   |
| 24  | BA    | 60   | G    | C2'-C3'-O3' | 5.46  | 117.69      | 109.50   |
| 24  | BA    | 689  | A    | C4'-C3'-O3' | -5.46 | 104.81      | 113.00   |
| 33  | BL    | 107  | ILE  | N-CA-C      | -5.46 | 104.22      | 111.05   |
| 24  | BA    | 1675 | C    | N1-C1'-C2'  | 5.46  | 120.19      | 112.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27  | BD    | 162  | SER  | N-CA-C      | 5.46  | 122.43      | 110.80   |
| 40  | BS    | 45   | PHE  | CA-C-N      | -5.46 | 114.49      | 122.19   |
| 40  | BS    | 45   | PHE  | C-N-CA      | -5.46 | 114.49      | 122.19   |
| 24  | BA    | 823  | G    | C2'-C3'-O3' | -5.46 | 105.52      | 113.70   |
| 27  | BD    | 85   | ASP  | CA-C-N      | 5.46  | 126.66      | 119.84   |
| 27  | BD    | 85   | ASP  | C-N-CA      | 5.46  | 126.66      | 119.84   |
| 35  | BN    | 90   | GLN  | N-CA-C      | -5.45 | 99.19       | 110.80   |
| 41  | BT    | 101  | ARG  | N-CA-C      | 5.45  | 117.22      | 111.28   |
| 39  | BR    | 4    | LEU  | N-CA-C      | -5.45 | 104.77      | 111.75   |
| 1   | AA    | 457  | C    | N1-C1'-C2'  | -5.45 | 103.83      | 112.00   |
| 4   | AE    | 158  | LEU  | N-CA-C      | 5.45  | 121.85      | 109.81   |
| 34  | BM    | 101  | HIS  | CA-C-N      | -5.45 | 113.46      | 120.65   |
| 34  | BM    | 101  | HIS  | C-N-CA      | -5.45 | 113.46      | 120.65   |
| 25  | BB    | 56   | G    | C2'-C3'-O3' | 5.45  | 121.87      | 113.70   |
| 1   | AA    | 518  | C    | C2'-C3'-O3' | 5.45  | 117.67      | 109.50   |
| 24  | BA    | 2491 | U    | C3'-C2'-C1' | -5.45 | 95.86       | 101.30   |
| 1   | AA    | 764  | C    | C2'-C3'-O3' | -5.44 | 105.53      | 113.70   |
| 1   | AA    | 481  | G    | C2'-C3'-O3' | -5.44 | 105.53      | 113.70   |
| 15  | AP    | 24   | GLY  | N-CA-C      | -5.44 | 107.02      | 115.67   |
| 24  | BA    | 2497 | A    | C2'-C3'-O3' | -5.44 | 105.53      | 113.70   |
| 24  | BA    | 1956 | U    | C5'-C4'-C3' | -5.44 | 107.84      | 116.00   |
| 40  | BS    | 53   | ARG  | N-CA-C      | 5.44  | 122.38      | 110.80   |
| 32  | BK    | 14   | ASP  | N-CA-C      | 5.44  | 122.38      | 110.80   |
| 1   | AA    | 1063 | C    | C2'-C3'-O3' | -5.43 | 105.55      | 113.70   |
| 24  | BA    | 2091 | U    | C2'-C3'-O3' | -5.43 | 105.55      | 113.70   |
| 36  | BO    | 63   | PRO  | N-CA-C      | 5.43  | 123.66      | 112.47   |
| 51  | B4    | 10   | LYS  | N-CA-C      | 5.42  | 122.35      | 110.80   |
| 24  | BA    | 1984 | G    | C2'-C3'-O3' | -5.42 | 105.56      | 113.70   |
| 24  | BA    | 785  | G    | C3'-C2'-O2' | 5.42  | 118.82      | 110.70   |
| 1   | AA    | 1399 | C    | C2'-C3'-O3' | 5.41  | 117.62      | 109.50   |
| 6   | AG    | 158  | ILE  | N-CA-C      | -5.41 | 98.08       | 109.34   |
| 24  | BA    | 81   | G    | C2'-C3'-O3' | -5.41 | 105.58      | 113.70   |
| 39  | BR    | 39   | ILE  | N-CA-C      | 5.41  | 117.09      | 108.87   |
| 34  | BM    | 62   | VAL  | CB-CA-C     | -5.41 | 103.66      | 111.34   |
| 15  | AP    | 58   | GLU  | N-CA-C      | -5.41 | 105.39      | 111.28   |
| 24  | BA    | 1266 | G    | C5'-C4'-C3' | 5.41  | 124.11      | 116.00   |
| 22  | AW    | 12   | ALA  | N-CA-C      | -5.40 | 99.29       | 110.80   |
| 24  | BA    | 1779 | U    | O4'-C1'-C2' | -5.40 | 102.20      | 107.60   |
| 26  | BC    | 178  | ALA  | CA-C-N      | 5.40  | 132.74      | 121.94   |
| 26  | BC    | 178  | ALA  | C-N-CA      | 5.40  | 132.74      | 121.94   |
| 4   | AE    | 21   | ARG  | N-CA-C      | 5.40  | 118.45      | 110.46   |
| 10  | AK    | 21   | LYS  | N-CA-C      | -5.40 | 101.67      | 110.20   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 36  | BO    | 18   | ARG  | N-CA-C      | 5.40  | 118.94      | 111.71   |
| 41  | BT    | 74   | LEU  | N-CA-C      | 5.40  | 117.17      | 108.32   |
| 4   | AE    | 18   | GLY  | N-CA-C      | 5.39  | 118.96      | 110.71   |
| 24  | BA    | 776  | G    | O4'-C1'-C2' | 5.39  | 111.19      | 105.80   |
| 28  | BE    | 38   | THR  | N-CA-C      | -5.39 | 97.89       | 109.81   |
| 24  | BA    | 2448 | A    | P-O3'-C3'   | -5.39 | 112.12      | 120.20   |
| 12  | AM    | 66   | ARG  | N-CA-C      | 5.39  | 115.35      | 108.24   |
| 12  | AM    | 84   | GLN  | N-CA-C      | -5.39 | 105.93      | 112.88   |
| 24  | BA    | 1397 | U    | N1-C1'-C2'  | 5.39  | 120.08      | 112.00   |
| 38  | BQ    | 52   | ILE  | N-CA-C      | -5.39 | 104.48      | 110.62   |
| 29  | BF    | 139  | PHE  | N-CA-C      | -5.38 | 104.65      | 111.11   |
| 32  | BK    | 79   | ILE  | CA-C-N      | 5.38  | 126.57      | 119.84   |
| 32  | BK    | 79   | ILE  | C-N-CA      | 5.38  | 126.57      | 119.84   |
| 35  | BN    | 56   | ASP  | N-CA-CB     | -5.38 | 101.40      | 110.49   |
| 4   | AE    | 231  | GLU  | CA-C-N      | 5.38  | 126.56      | 119.84   |
| 4   | AE    | 231  | GLU  | C-N-CA      | 5.38  | 126.56      | 119.84   |
| 8   | AI    | 4    | TYR  | N-CA-C      | -5.38 | 101.23      | 109.41   |
| 7   | AH    | 97   | GLY  | N-CA-C      | -5.38 | 100.44      | 113.18   |
| 1   | AA    | 372  | C    | N1-C1'-C2'  | 5.37  | 122.06      | 114.00   |
| 10  | AK    | 9    | MET  | N-CA-C      | -5.37 | 105.50      | 111.36   |
| 24  | BA    | 279  | C    | C4'-C3'-O3' | -5.37 | 104.94      | 113.00   |
| 24  | BA    | 2459 | A    | C4-N9-C1'   | 5.37  | 142.42      | 126.30   |
| 24  | BA    | 2756 | U    | C4'-C3'-O3' | -5.37 | 101.34      | 109.40   |
| 26  | BC    | 209  | LEU  | N-CA-C      | -5.37 | 100.03      | 108.63   |
| 36  | BO    | 45   | LEU  | CA-CB-CG    | -5.37 | 97.49       | 116.30   |
| 51  | B4    | 25   | LEU  | N-CA-C      | 5.37  | 117.50      | 107.99   |
| 1   | AA    | 1280 | A    | C2'-C3'-O3' | -5.37 | 105.64      | 113.70   |
| 24  | BA    | 2510 | C    | N1-C1'-C2'  | -5.37 | 103.94      | 112.00   |
| 42  | BU    | 35   | LEU  | CA-C-N      | 5.37  | 126.56      | 119.84   |
| 42  | BU    | 35   | LEU  | C-N-CA      | 5.37  | 126.56      | 119.84   |
| 24  | BA    | 36   | G    | N9-C1'-C2'  | 5.37  | 120.05      | 112.00   |
| 24  | BA    | 1153 | C    | N1-C1'-C2'  | 5.37  | 120.05      | 112.00   |
| 24  | BA    | 2572 | A    | C2'-C3'-O3' | -5.37 | 105.65      | 113.70   |
| 24  | BA    | 1260 | G    | C4'-C3'-O3' | -5.37 | 104.95      | 113.00   |
| 51  | B4    | 27   | PRO  | N-CA-C      | 5.37  | 117.25      | 110.70   |
| 24  | BA    | 1332 | G    | C2'-C3'-O3' | -5.37 | 105.65      | 113.70   |
| 35  | BN    | 7    | TYR  | N-CA-C      | -5.37 | 97.89       | 107.98   |
| 1   | AA    | 50   | A    | C2'-C3'-O3' | -5.36 | 105.66      | 113.70   |
| 32  | BK    | 11   | ASN  | N-CA-C      | -5.36 | 99.38       | 110.80   |
| 35  | BN    | 60   | ALA  | N-CA-C      | 5.36  | 118.20      | 109.24   |
| 24  | BA    | 1554 | A    | C4'-C3'-O3' | -5.36 | 104.96      | 113.00   |
| 24  | BA    | 1614 | A    | C2'-C3'-O3' | -5.36 | 105.66      | 113.70   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 42  | BU    | 4    | ILE  | N-CA-C      | 5.36  | 115.76      | 107.78   |
| 24  | BA    | 1775 | U    | C4'-C3'-O3' | -5.35 | 104.97      | 113.00   |
| 32  | BK    | 5    | LEU  | N-CA-C      | 5.35  | 118.12      | 109.40   |
| 24  | BA    | 869  | G    | C5'-C4'-C3' | 5.35  | 124.03      | 116.00   |
| 29  | BF    | 59   | TYR  | N-CA-C      | 5.35  | 122.20      | 110.80   |
| 24  | BA    | 1778 | U    | C2'-C3'-O3' | 5.35  | 121.72      | 113.70   |
| 24  | BA    | 2402 | C    | N1-C1'-C2'  | 5.35  | 120.02      | 112.00   |
| 39  | BR    | 52   | SER  | N-CA-C      | 5.35  | 118.88      | 107.70   |
| 1   | AA    | 973  | G    | OP1-P-O3'   | -5.35 | 91.96       | 108.00   |
| 24  | BA    | 455  | C    | C2'-C3'-O3' | -5.35 | 105.68      | 113.70   |
| 24  | BA    | 948  | G    | C2'-C3'-O3' | -5.35 | 105.68      | 113.70   |
| 24  | BA    | 2766 | G    | C4'-C3'-O3' | -5.34 | 104.99      | 113.00   |
| 10  | AK    | 68   | ARG  | N-CA-C      | -5.34 | 103.44      | 110.33   |
| 24  | BA    | 1286 | A    | C2'-C3'-O3' | -5.34 | 105.69      | 113.70   |
| 1   | AA    | 1336 | C    | C2'-C3'-O3' | -5.34 | 105.69      | 113.70   |
| 11  | AL    | 61   | ALA  | N-CA-C      | 5.34  | 117.44      | 107.99   |
| 24  | BA    | 2449 | U    | C4'-C3'-O3' | -5.34 | 105.00      | 113.00   |
| 11  | AL    | 12   | GLU  | N-CA-C      | 5.33  | 119.08      | 112.47   |
| 36  | BO    | 84   | ASN  | N-CA-C      | 5.33  | 122.16      | 110.80   |
| 2   | A1    | 51   | U    | C2'-C3'-O3' | 5.33  | 117.50      | 109.50   |
| 24  | BA    | 1537 | C    | N1-C1'-C2'  | -5.33 | 104.00      | 112.00   |
| 24  | BA    | 2266 | A    | C1'-C2'-O2' | 5.33  | 116.39      | 108.40   |
| 20  | AU    | 40   | LEU  | N-CA-C      | -5.33 | 105.16      | 110.97   |
| 26  | BC    | 130  | ILE  | N-CA-C      | 5.33  | 116.73      | 111.67   |
| 35  | BN    | 33   | ALA  | N-CA-C      | -5.33 | 99.45       | 110.80   |
| 1   | AA    | 790  | A    | N9-C1'-C2'  | -5.33 | 104.01      | 112.00   |
| 24  | BA    | 653  | A    | N9-C1'-C2'  | 5.33  | 119.99      | 112.00   |
| 36  | BO    | 46   | LYS  | N-CA-C      | 5.32  | 116.72      | 107.93   |
| 1   | AA    | 397  | A    | C4-N9-C1'   | 5.32  | 142.26      | 126.30   |
| 24  | BA    | 2570 | G    | C4'-C3'-O3' | -5.32 | 105.02      | 113.00   |
| 28  | BE    | 152  | LYS  | N-CA-C      | 5.32  | 122.33      | 114.09   |
| 24  | BA    | 2835 | A    | N9-C1'-C2'  | 5.32  | 121.97      | 114.00   |
| 45  | BX    | 6    | HIS  | CB-CA-C     | -5.32 | 107.75      | 114.40   |
| 47  | BZ    | 34   | GLY  | N-CA-C      | -5.32 | 107.17      | 114.67   |
| 9   | AJ    | 108  | ALA  | N-CA-C      | -5.31 | 105.39      | 111.07   |
| 24  | BA    | 1102 | C    | N1-C1'-C2'  | 5.31  | 119.97      | 112.00   |
| 43  | BV    | 40   | ASN  | N-CA-C      | 5.31  | 117.54      | 110.53   |
| 39  | BR    | 12   | PHE  | CA-C-N      | -5.31 | 112.63      | 120.38   |
| 39  | BR    | 12   | PHE  | C-N-CA      | -5.31 | 112.63      | 120.38   |
| 24  | BA    | 1186 | G    | N9-C1'-C2'  | 5.31  | 119.97      | 112.00   |
| 44  | BW    | 62   | LYS  | N-CA-C      | 5.31  | 117.47      | 108.02   |
| 4   | AE    | 130  | ARG  | CA-C-N      | 5.31  | 126.47      | 119.84   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 4   | AE    | 130  | ARG  | C-N-CA      | 5.31  | 126.47      | 119.84   |
| 9   | AJ    | 62   | PHE  | N-CA-C      | -5.30 | 105.19      | 110.97   |
| 29  | BF    | 77   | ASP  | N-CA-C      | 5.30  | 117.89      | 109.24   |
| 1   | AA    | 1439 | C    | C2'-C3'-O3' | -5.30 | 105.75      | 113.70   |
| 37  | BP    | 90   | VAL  | N-CA-C      | -5.30 | 100.83      | 108.89   |
| 19  | AT    | 41   | LYS  | N-CA-C      | -5.30 | 102.67      | 110.52   |
| 24  | BA    | 1294 | U    | C5'-C4'-C3' | -5.30 | 108.05      | 116.00   |
| 24  | BA    | 1607 | C    | N1-C1'-C2'  | 5.30  | 119.95      | 112.00   |
| 32  | BK    | 96   | ASP  | N-CA-C      | -5.30 | 104.75      | 111.11   |
| 49  | B2    | 29   | ARG  | N-CA-C      | -5.30 | 99.51       | 110.80   |
| 1   | AA    | 993  | G    | N9-C1'-C2'  | 5.30  | 119.95      | 112.00   |
| 26  | BC    | 68   | LEU  | N-CA-C      | 5.30  | 117.04      | 109.14   |
| 5   | AF    | 9    | GLY  | N-CA-C      | -5.30 | 106.37      | 112.83   |
| 9   | AJ    | 83   | ALA  | N-CA-C      | 5.30  | 116.49      | 108.07   |
| 17  | AR    | 4    | THR  | N-CA-C      | 5.30  | 117.56      | 109.62   |
| 24  | BA    | 746  | A    | C3'-C2'-O2' | 5.30  | 122.54      | 114.60   |
| 24  | BA    | 2079 | U    | C4'-C3'-O3' | -5.30 | 105.06      | 113.00   |
| 24  | BA    | 2553 | G    | C4'-C3'-O3' | -5.30 | 105.06      | 113.00   |
| 2   | A1    | 37   | U    | C5'-C4'-C3' | -5.29 | 108.06      | 116.00   |
| 33  | BL    | 71   | THR  | N-CA-C      | 5.29  | 121.51      | 109.81   |
| 24  | BA    | 1626 | G    | C5'-C4'-O4' | 5.29  | 117.04      | 109.10   |
| 28  | BE    | 81   | ILE  | CB-CA-C     | -5.29 | 102.61      | 111.29   |
| 35  | BN    | 82   | ASN  | N-CA-C      | 5.29  | 116.57      | 108.52   |
| 37  | BP    | 41   | TRP  | N-CA-C      | -5.29 | 102.69      | 110.52   |
| 1   | AA    | 641  | U    | N1-C1'-C2'  | 5.29  | 119.94      | 112.00   |
| 1   | AA    | 769  | G    | N9-C1'-C2'  | 5.29  | 119.93      | 112.00   |
| 1   | AA    | 553  | A    | N9-C1'-C2'  | 5.29  | 119.93      | 112.00   |
| 38  | BQ    | 108  | GLY  | N-CA-C      | -5.29 | 107.26      | 115.67   |
| 1   | AA    | 689  | C    | C2'-C3'-O3' | -5.28 | 105.77      | 113.70   |
| 9   | AJ    | 70   | LYS  | CA-C-N      | 5.28  | 126.44      | 119.84   |
| 9   | AJ    | 70   | LYS  | C-N-CA      | 5.28  | 126.44      | 119.84   |
| 24  | BA    | 1310 | G    | C4'-C3'-O3' | -5.28 | 105.08      | 113.00   |
| 3   | AB    | 36   | A    | N9-C1'-C2'  | -5.28 | 104.08      | 112.00   |
| 28  | BE    | 19   | ARG  | N-CA-C      | -5.28 | 103.06      | 110.35   |
| 40  | BS    | 42   | ILE  | N-CA-C      | -5.28 | 98.89       | 106.55   |
| 1   | AA    | 1362 | C    | N1-C1'-C2'  | 5.28  | 119.92      | 112.00   |
| 24  | BA    | 2032 | G    | O4'-C1'-C2' | 5.28  | 111.08      | 105.80   |
| 24  | BA    | 1085 | A    | C2'-C3'-O3' | 5.28  | 117.41      | 109.50   |
| 29  | BF    | 39   | TRP  | N-CA-C      | 5.28  | 117.46      | 111.02   |
| 50  | B3    | 9    | LEU  | N-CA-C      | 5.28  | 117.12      | 108.52   |
| 24  | BA    | 1698 | A    | N9-C1'-C2'  | 5.27  | 119.91      | 112.00   |
| 2   | A1    | 42   | U    | N1-C1'-C2'  | 5.27  | 119.91      | 112.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 38  | BQ    | 47   | PHE  | N-CA-C      | 5.27  | 122.03      | 110.80   |
| 1   | AA    | 250  | A    | C2'-C3'-O3' | 5.27  | 117.41      | 109.50   |
| 24  | BA    | 1022 | G    | N9-C1'-C2'  | 5.27  | 121.91      | 114.00   |
| 5   | AF    | 197  | GLY  | N-CA-C      | 5.27  | 125.67      | 113.18   |
| 24  | BA    | 309  | G    | N9-C1'-C2'  | 5.27  | 119.90      | 112.00   |
| 24  | BA    | 2259 | G    | N9-C1'-C2'  | -5.27 | 104.09      | 112.00   |
| 29  | BF    | 65   | TRP  | N-CA-C      | -5.27 | 101.98      | 109.62   |
| 10  | AK    | 113  | SER  | N-CA-C      | -5.27 | 99.94       | 108.52   |
| 24  | BA    | 1275 | A    | C2'-C3'-O3' | -5.27 | 105.80      | 113.70   |
| 52  | B5    | 11   | LEU  | N-CA-C      | 5.27  | 117.32      | 108.73   |
| 30  | BG    | 67   | LYS  | N-CA-C      | 5.27  | 121.45      | 109.81   |
| 1   | AA    | 820  | U    | C4'-C3'-O3' | -5.26 | 105.11      | 113.00   |
| 24  | BA    | 2755 | C    | OP2-P-O3'   | 5.26  | 123.78      | 108.00   |
| 54  | B7    | 7    | HIS  | N-CA-C      | -5.26 | 99.60       | 110.80   |
| 24  | BA    | 2279 | G    | C3'-C2'-O2' | 5.26  | 118.59      | 110.70   |
| 39  | BR    | 22   | GLY  | CA-C-N      | 5.26  | 131.58      | 121.54   |
| 39  | BR    | 22   | GLY  | C-N-CA      | 5.26  | 131.58      | 121.54   |
| 55  | B8    | 6    | SER  | CB-CA-C     | -5.26 | 110.08      | 117.23   |
| 44  | BW    | 14   | SER  | N-CA-C      | 5.25  | 117.93      | 110.10   |
| 27  | BD    | 9    | TYR  | N-CA-C      | -5.25 | 99.88       | 108.76   |
| 31  | BH    | 35   | VAL  | CA-C-O      | 5.25  | 123.03      | 119.20   |
| 34  | BM    | 41   | ASP  | CA-C-N      | 5.25  | 129.85      | 121.66   |
| 34  | BM    | 41   | ASP  | C-N-CA      | 5.25  | 129.85      | 121.66   |
| 16  | AQ    | 8    | GLU  | N-CA-C      | -5.25 | 107.25      | 113.97   |
| 40  | BS    | 18   | ASP  | N-CA-C      | -5.25 | 106.13      | 113.37   |
| 48  | B1    | 5    | LEU  | N-CA-C      | -5.25 | 104.81      | 111.11   |
| 24  | BA    | 1818 | U    | C3'-C2'-O2' | 5.25  | 118.57      | 110.70   |
| 24  | BA    | 2571 | C    | C4'-C3'-O3' | -5.25 | 105.13      | 113.00   |
| 1   | AA    | 566  | G    | C2'-C3'-O3' | -5.24 | 105.83      | 113.70   |
| 5   | AF    | 169  | ALA  | N-CA-C      | 5.24  | 116.81      | 108.79   |
| 7   | AH    | 45   | PHE  | N-CA-C      | -5.24 | 99.24       | 108.20   |
| 24  | BA    | 1888 | G    | N9-C1'-C2'  | 5.24  | 119.86      | 112.00   |
| 50  | B3    | 35   | VAL  | N-CA-C      | 5.24  | 117.59      | 108.95   |
| 54  | B7    | 43   | GLN  | N-CA-C      | 5.24  | 117.15      | 107.73   |
| 24  | BA    | 586  | A    | C2'-C3'-O3' | -5.23 | 105.85      | 113.70   |
| 24  | BA    | 2403 | C    | N1-C1'-C2'  | 5.23  | 119.85      | 112.00   |
| 3   | AD    | 74   | C    | C2'-C3'-O3' | -5.23 | 105.86      | 113.70   |
| 24  | BA    | 1590 | U    | C2'-C3'-O3' | -5.23 | 105.85      | 113.70   |
| 24  | BA    | 2782 | G    | C5'-C4'-C3' | 5.23  | 123.85      | 116.00   |
| 46  | BY    | 132  | ASN  | N-CA-C      | 5.23  | 117.17      | 107.60   |
| 1   | AA    | 873  | A    | C4'-C3'-O3' | 5.23  | 117.24      | 109.40   |
| 27  | BD    | 165  | ILE  | CB-CA-C     | -5.23 | 104.33      | 111.33   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 50  | B3    | 43   | TYR  | CA-CB-CG    | 5.23  | 123.31      | 113.90   |
| 1   | AA    | 1492 | A    | O4'-C4'-C3' | 5.22  | 109.22      | 104.00   |
| 19  | AT    | 21   | VAL  | N-CA-C      | 5.22  | 115.89      | 108.42   |
| 8   | AI    | 41   | GLU  | N-CA-C      | 5.22  | 121.92      | 110.80   |
| 46  | BY    | 155  | LEU  | N-CA-C      | 5.22  | 121.92      | 110.80   |
| 1   | AA    | 969  | A    | C4'-C3'-O3' | -5.22 | 105.17      | 113.00   |
| 31  | BH    | 82   | GLY  | N-CA-C      | -5.22 | 100.82      | 113.18   |
| 24  | BA    | 1936 | A    | N9-C1'-C2'  | 5.21  | 121.82      | 114.00   |
| 24  | BA    | 2848 | G    | C2'-C3'-O3' | 5.21  | 117.32      | 109.50   |
| 31  | BH    | 18   | GLU  | N-CA-C      | 5.21  | 117.11      | 109.24   |
| 1   | AA    | 751  | U    | C2'-C3'-O3' | -5.21 | 105.88      | 113.70   |
| 5   | AF    | 39   | ILE  | CB-CA-C     | -5.21 | 102.74      | 111.29   |
| 16  | AQ    | 16   | PHE  | N-CA-C      | -5.21 | 99.70       | 110.80   |
| 29  | BF    | 164  | ARG  | N-CA-C      | -5.21 | 105.29      | 110.97   |
| 28  | BE    | 179  | GLU  | N-CA-C      | -5.21 | 99.71       | 110.80   |
| 53  | B6    | 37   | LYS  | N-CA-C      | -5.21 | 105.61      | 111.28   |
| 24  | BA    | 1314 | C    | C5'-C4'-C3' | -5.20 | 108.19      | 116.00   |
| 9   | AJ    | 79   | ARG  | N-CA-C      | -5.20 | 98.83       | 108.24   |
| 32  | BK    | 130  | TYR  | N-CA-C      | -5.20 | 98.78       | 107.99   |
| 6   | AG    | 164  | ALA  | N-CA-C      | -5.20 | 105.73      | 111.71   |
| 31  | BH    | 89   | ILE  | CB-CA-C     | -5.20 | 103.95      | 111.34   |
| 9   | AJ    | 66   | VAL  | CB-CA-C     | -5.20 | 105.05      | 111.70   |
| 29  | BF    | 66   | PRO  | N-CA-C      | -5.19 | 101.78      | 112.47   |
| 42  | BU    | 37   | VAL  | N-CA-C      | -5.19 | 100.84      | 108.11   |
| 12  | AM    | 90   | LEU  | N-CA-C      | 5.19  | 121.28      | 109.81   |
| 24  | BA    | 1626 | G    | N9-C1'-C2'  | 5.19  | 121.78      | 114.00   |
| 45  | BX    | 48   | ALA  | N-CA-C      | -5.19 | 99.75       | 110.80   |
| 24  | BA    | 637  | A    | N9-C1'-C2'  | 5.18  | 121.78      | 114.00   |
| 31  | BH    | 167  | GLU  | CA-C-N      | 5.18  | 126.32      | 119.84   |
| 31  | BH    | 167  | GLU  | C-N-CA      | 5.18  | 126.32      | 119.84   |
| 55  | B8    | 10   | ILE  | N-CA-C      | 5.18  | 120.12      | 109.34   |
| 1   | AA    | 397  | A    | C8-N9-C1'   | -5.18 | 112.16      | 127.70   |
| 43  | BV    | 88   | ARG  | N-CA-C      | 5.18  | 117.86      | 109.83   |
| 31  | BH    | 145  | ALA  | N-CA-C      | -5.18 | 104.70      | 111.02   |
| 24  | BA    | 459  | U    | C2'-C3'-O3' | -5.18 | 105.94      | 113.70   |
| 1   | AA    | 1505 | G    | C4'-C3'-O3' | -5.17 | 105.24      | 113.00   |
| 3   | AC    | 9    | A    | C2'-C3'-O3' | -5.17 | 105.94      | 113.70   |
| 3   | AC    | 13   | C    | C2'-C3'-O3' | -5.17 | 105.94      | 113.70   |
| 31  | BH    | 122  | THR  | N-CA-C      | -5.17 | 100.98      | 109.40   |
| 29  | BF    | 26   | ALA  | N-CA-C      | -5.17 | 105.77      | 111.71   |
| 40  | BS    | 48   | ILE  | N-CA-C      | -5.17 | 100.89      | 108.85   |
| 24  | BA    | 2519 | U    | C2'-C3'-O3' | -5.16 | 105.95      | 113.70   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res     | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|---------|------|-------------|-------|-------------|----------|
| 55  | B8    | 23      | VAL  | N-CA-C      | -5.16 | 98.60       | 109.34   |
| 1   | AA    | 1322    | C    | C2'-C3'-O3' | -5.16 | 101.76      | 109.50   |
| 28  | BE    | 117     | MET  | N-CA-C      | -5.16 | 99.80       | 110.80   |
| 42  | BU    | 84      | LYS  | N-CA-C      | 5.16  | 121.79      | 110.80   |
| 24  | BA    | 2440    | C    | C2'-C3'-O3' | -5.16 | 105.97      | 113.70   |
| 6   | AG    | 38      | TYR  | N-CA-C      | 5.16  | 121.20      | 109.81   |
| 24  | BA    | 654     | A    | N9-C1'-C2'  | -5.16 | 104.27      | 112.00   |
| 24  | BA    | 941     | A    | N9-C1'-C2'  | 5.16  | 119.73      | 112.00   |
| 24  | BA    | 1646    | C    | N1-C1'-C2'  | 5.16  | 119.73      | 112.00   |
| 46  | BY    | 158     | PRO  | N-CA-C      | 5.16  | 116.99      | 110.70   |
| 39  | BR    | 77      | ALA  | N-CA-C      | -5.15 | 105.57      | 111.14   |
| 1   | AA    | 1085    | U    | C2'-C3'-O3' | 5.15  | 117.23      | 109.50   |
| 24  | BA    | 301     | G    | C2'-C3'-O3' | -5.15 | 105.97      | 113.70   |
| 24  | BA    | 1012    | U    | O4'-C4'-C3' | -5.15 | 98.85       | 104.00   |
| 1   | AA    | 327     | A    | C4'-C3'-O3' | 5.15  | 117.13      | 109.40   |
| 24  | BA    | 961     | C    | C2'-C3'-O3' | 5.15  | 117.23      | 109.50   |
| 24  | BA    | 1205    | U    | C5'-C4'-O4' | 5.15  | 117.53      | 109.80   |
| 29  | BF    | 131     | GLY  | N-CA-C      | -5.15 | 100.97      | 113.18   |
| 41  | BT    | 8       | VAL  | N-CA-CB     | -5.15 | 102.73      | 111.23   |
| 24  | BA    | 2431    | U    | O4'-C4'-C3' | -5.15 | 98.85       | 104.00   |
| 24  | BA    | 1315    | C    | C4'-C3'-O3' | -5.15 | 105.28      | 113.00   |
| 40  | BS    | 52      | ILE  | N-CA-C      | 5.15  | 120.05      | 109.34   |
| 51  | B4    | 21      | SER  | CA-C-N      | -5.15 | 112.86      | 120.38   |
| 51  | B4    | 21      | SER  | C-N-CA      | -5.15 | 112.86      | 120.38   |
| 24  | BA    | 1981    | A    | C2'-C3'-O3' | -5.15 | 105.98      | 113.70   |
| 52  | B5    | 36      | LEU  | O-C-N       | 5.15  | 129.43      | 122.59   |
| 1   | AA    | 568     | G    | N9-C1'-C2'  | 5.14  | 119.72      | 112.00   |
| 24  | BA    | 1758    | G    | C4'-C3'-O3' | -5.14 | 105.28      | 113.00   |
| 1   | AA    | 1054    | C    | C4'-C3'-O3' | 5.14  | 120.71      | 113.00   |
| 42  | BU    | 82      | ARG  | N-CA-C      | 5.14  | 121.75      | 110.80   |
| 42  | BU    | 93      | GLU  | O-C-N       | -5.14 | 118.11      | 123.56   |
| 24  | BA    | 1955    | U    | C2'-C3'-O3' | -5.14 | 105.99      | 113.70   |
| 24  | BA    | 2608    | G    | N9-C1'-C2'  | 5.14  | 119.71      | 112.00   |
| 26  | BC    | 217     | THR  | N-CA-C      | -5.14 | 99.86       | 110.80   |
| 26  | BC    | 225     | ASN  | CA-C-N      | 5.14  | 126.26      | 119.84   |
| 26  | BC    | 225     | ASN  | C-N-CA      | 5.14  | 126.26      | 119.84   |
| 6   | AG    | 153     | ARG  | N-CA-C      | -5.14 | 99.86       | 110.80   |
| 10  | AK    | 40      | ALA  | N-CA-C      | -5.14 | 105.59      | 111.14   |
| 24  | BA    | 1142(A) | A    | C5'-C4'-C3' | -5.14 | 108.29      | 116.00   |
| 24  | BA    | 2460    | U    | C4'-C3'-O3' | -5.14 | 105.30      | 113.00   |
| 28  | BE    | 15      | PHE  | N-CA-C      | -5.14 | 101.62      | 108.86   |
| 1   | AA    | 1380    | U    | N1-C1'-C2'  | 5.13  | 119.70      | 112.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 3   | AD    | 48   | C    | N1-C1'-C2'  | 5.13  | 119.70      | 112.00   |
| 41  | BT    | 80   | ILE  | N-CA-C      | -5.13 | 105.32      | 110.30   |
| 7   | AH    | 116  | THR  | N-CA-C      | -5.13 | 104.74      | 112.99   |
| 24  | BA    | 1992 | G    | C5'-C4'-C3' | 5.12  | 122.89      | 115.20   |
| 24  | BA    | 587  | C    | C2'-C3'-O3' | 5.12  | 117.18      | 109.50   |
| 24  | BA    | 2287 | A    | C2'-C3'-O3' | -5.12 | 106.02      | 113.70   |
| 24  | BA    | 2497 | A    | C4'-C3'-O3' | 5.12  | 120.68      | 113.00   |
| 29  | BF    | 82   | ILE  | N-CA-C      | 5.12  | 120.00      | 109.34   |
| 30  | BG    | 147  | ASP  | N-CA-C      | -5.12 | 104.32      | 110.88   |
| 24  | BA    | 1792 | G    | N9-C1'-C2'  | -5.12 | 104.32      | 112.00   |
| 24  | BA    | 2459 | A    | C8-N9-C1'   | -5.12 | 112.34      | 127.70   |
| 24  | BA    | 1771 | C    | C4'-C3'-O3' | -5.12 | 105.32      | 113.00   |
| 35  | BN    | 97   | ARG  | CA-C-N      | 5.12  | 126.46      | 121.65   |
| 35  | BN    | 97   | ARG  | C-N-CA      | 5.12  | 126.46      | 121.65   |
| 44  | BW    | 36   | LYS  | N-CA-C      | -5.12 | 105.78      | 111.36   |
| 24  | BA    | 2144 | U    | N1-C1'-C2'  | 5.12  | 119.68      | 112.00   |
| 30  | BG    | 43   | LEU  | N-CA-C      | 5.12  | 121.70      | 110.80   |
| 40  | BS    | 78   | LEU  | N-CA-C      | 5.12  | 117.75      | 108.69   |
| 24  | BA    | 1153 | C    | C5'-C4'-C3' | 5.11  | 123.67      | 116.00   |
| 30  | BG    | 132  | ASN  | N-CA-C      | 5.11  | 121.69      | 110.80   |
| 1   | AA    | 20   | U    | N1-C1'-C2'  | 5.11  | 119.67      | 112.00   |
| 15  | AP    | 81   | LEU  | CA-CB-CG    | 5.11  | 134.19      | 116.30   |
| 45  | BX    | 81   | LYS  | CA-C-N      | 5.11  | 126.23      | 119.84   |
| 45  | BX    | 81   | LYS  | C-N-CA      | 5.11  | 126.23      | 119.84   |
| 24  | BA    | 2275 | C    | C4'-C3'-O3' | -5.11 | 101.74      | 109.40   |
| 45  | BX    | 56   | PRO  | N-CA-C      | 5.11  | 122.99      | 112.47   |
| 27  | BD    | 121  | PRO  | N-CA-C      | 5.11  | 122.99      | 112.47   |
| 50  | B3    | 40   | HIS  | N-CA-C      | 5.11  | 121.09      | 109.81   |
| 20  | AU    | 80   | PRO  | N-CA-C      | 5.10  | 122.98      | 112.47   |
| 22  | AW    | 63   | ILE  | N-CA-C      | -5.10 | 104.92      | 110.23   |
| 1   | AA    | 1064 | G    | N1-C2-N3    | -5.10 | 108.59      | 123.90   |
| 1   | AA    | 1212 | U    | C4'-C3'-O3' | -5.10 | 105.35      | 113.00   |
| 42  | BU    | 15   | GLU  | CA-C-N      | -5.10 | 113.46      | 119.84   |
| 42  | BU    | 15   | GLU  | C-N-CA      | -5.10 | 113.46      | 119.84   |
| 24  | BA    | 1746 | G    | O4'-C4'-C3' | -5.10 | 98.90       | 104.00   |
| 1   | AA    | 779  | C    | C5'-C4'-C3' | -5.10 | 108.35      | 116.00   |
| 4   | AE    | 199  | TYR  | CA-C-N      | 5.10  | 131.15      | 121.97   |
| 4   | AE    | 199  | TYR  | C-N-CA      | 5.10  | 131.15      | 121.97   |
| 38  | BQ    | 73   | VAL  | N-CA-C      | 5.10  | 115.53      | 110.23   |
| 24  | BA    | 1707 | G    | C4'-C3'-O3' | -5.09 | 105.36      | 113.00   |
| 24  | BA    | 458  | G    | C4'-C3'-O3' | -5.09 | 105.36      | 113.00   |
| 24  | BA    | 1379 | A    | N9-C1'-C2'  | 5.09  | 121.63      | 114.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 1   | AA    | 820  | U    | N1-C1'-C2'  | 5.09  | 119.63      | 112.00   |
| 29  | BF    | 206  | ILE  | N-CA-C      | -5.09 | 104.82      | 110.62   |
| 7   | AH    | 55   | VAL  | N-CA-C      | 5.08  | 119.91      | 109.34   |
| 24  | BA    | 777  | A    | C5'-C4'-C3' | 5.08  | 123.62      | 116.00   |
| 24  | BA    | 1726 | G    | N9-C1'-C2'  | 5.08  | 119.62      | 112.00   |
| 24  | BA    | 1971 | A    | N9-C1'-C2'  | -5.08 | 104.38      | 112.00   |
| 46  | BY    | 170  | THR  | N-CA-C      | 5.08  | 121.62      | 110.80   |
| 26  | BC    | 196  | LEU  | N-CA-C      | -5.08 | 105.43      | 110.97   |
| 1   | AA    | 960  | U    | C2'-C3'-O3' | 5.08  | 121.31      | 113.70   |
| 4   | AE    | 17   | PHE  | N-CA-C      | 5.08  | 121.61      | 110.80   |
| 35  | BN    | 79   | PHE  | N-CA-C      | -5.08 | 101.32      | 109.39   |
| 1   | AA    | 295  | C    | C2'-C3'-O3' | -5.07 | 106.09      | 113.70   |
| 1   | AA    | 388  | G    | N9-C1'-C2'  | 5.07  | 119.61      | 112.00   |
| 24  | BA    | 282  | A    | N9-C1'-C2'  | -5.07 | 104.39      | 112.00   |
| 45  | BX    | 24   | VAL  | N-CA-C      | 5.07  | 119.89      | 109.34   |
| 36  | BO    | 147  | LEU  | N-CA-C      | 5.07  | 116.15      | 107.28   |
| 50  | B3    | 56   | VAL  | N-CA-C      | 5.07  | 119.89      | 109.34   |
| 1   | AA    | 1380 | U    | C4'-C3'-O3' | -5.07 | 105.40      | 113.00   |
| 29  | BF    | 146  | ALA  | N-CA-C      | -5.07 | 107.16      | 113.19   |
| 1   | AA    | 346  | G    | N9-C1'-C2'  | 5.06  | 119.60      | 112.00   |
| 1   | AA    | 88   | C    | O4'-C1'-N1  | 5.06  | 116.09      | 108.50   |
| 28  | BE    | 73   | GLU  | N-CA-C      | 5.06  | 117.85      | 108.94   |
| 15  | AP    | 26   | GLY  | N-CA-C      | -5.06 | 103.34      | 111.59   |
| 1   | AA    | 817  | C    | C2'-C3'-O3' | 5.06  | 117.09      | 109.50   |
| 24  | BA    | 1691 | C    | C3'-C2'-O2' | 5.06  | 118.29      | 110.70   |
| 24  | BA    | 1183 | G    | C2'-C3'-O3' | 5.06  | 117.08      | 109.50   |
| 30  | BG    | 37   | VAL  | N-CA-C      | 5.06  | 115.31      | 107.78   |
| 42  | BU    | 93   | GLU  | CA-C-N      | -5.06 | 113.69      | 120.87   |
| 42  | BU    | 93   | GLU  | C-N-CA      | -5.06 | 113.69      | 120.87   |
| 24  | BA    | 2613 | U    | N1-C1'-C2'  | 5.06  | 121.58      | 114.00   |
| 38  | BQ    | 38   | VAL  | N-CA-C      | 5.06  | 119.80      | 108.88   |
| 54  | B7    | 34   | TRP  | N-CA-C      | 5.06  | 121.57      | 110.80   |
| 25  | BB    | 7    | G    | C4'-C3'-O3' | -5.05 | 105.42      | 113.00   |
| 41  | BT    | 86   | ALA  | N-CA-C      | 5.05  | 117.80      | 110.42   |
| 54  | B7    | 25   | MET  | N-CA-C      | -5.05 | 103.28      | 110.35   |
| 24  | BA    | 2449 | U    | N1-C1'-C2'  | 5.05  | 119.58      | 112.00   |
| 24  | BA    | 2864 | G    | C4'-C3'-O3' | -5.05 | 105.42      | 113.00   |
| 15  | AP    | 67   | GLU  | N-CA-C      | 5.05  | 121.56      | 110.80   |
| 24  | BA    | 1968 | G    | C2'-C3'-O3' | -5.05 | 106.13      | 113.70   |
| 1   | AA    | 651  | C    | N1-C1'-C2'  | 5.05  | 119.57      | 112.00   |
| 24  | BA    | 703  | U    | C2'-C3'-O3' | -5.05 | 106.13      | 113.70   |
| 1   | AA    | 1402 | C    | N1-C1'-C2'  | -5.05 | 104.43      | 112.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 4   | AE    | 97   | TRP  | N-CA-C      | 5.05  | 121.55      | 110.80   |
| 24  | BA    | 729  | G    | N9-C1'-C2'  | 5.05  | 119.57      | 112.00   |
| 42  | BU    | 45   | THR  | N-CA-C      | 5.04  | 121.55      | 110.80   |
| 6   | AG    | 71   | SER  | N-CA-C      | 5.04  | 121.54      | 110.80   |
| 34  | BM    | 54   | VAL  | N-CA-C      | 5.04  | 115.97      | 108.46   |
| 1   | AA    | 1393 | U    | N1-C1'-C2'  | -5.04 | 104.44      | 112.00   |
| 28  | BE    | 99   | GLY  | N-CA-C      | -5.04 | 107.14      | 114.90   |
| 16  | AQ    | 48   | ALA  | N-CA-C      | -5.04 | 105.68      | 111.07   |
| 24  | BA    | 1359 | A    | N9-C1'-C2'  | -5.04 | 104.44      | 112.00   |
| 24  | BA    | 2893 | G    | C3'-C2'-O2' | 5.04  | 118.25      | 110.70   |
| 43  | BV    | 13   | SER  | N-CA-C      | 5.04  | 120.94      | 109.81   |
| 31  | BH    | 7    | LEU  | N-CA-C      | 5.03  | 120.94      | 109.81   |
| 31  | BH    | 88   | LEU  | N-CA-C      | 5.03  | 116.83      | 108.02   |
| 15  | AP    | 14   | ARG  | N-CA-C      | 5.03  | 121.52      | 110.80   |
| 24  | BA    | 1138 | G    | C3'-C2'-O2' | 5.03  | 118.25      | 110.70   |
| 24  | BA    | 2596 | U    | N1-C1'-C2'  | -5.03 | 104.45      | 112.00   |
| 27  | BD    | 143  | HIS  | N-CA-C      | -5.03 | 100.99      | 107.73   |
| 18  | AS    | 67   | THR  | N-CA-C      | -5.03 | 100.08      | 110.80   |
| 24  | BA    | 2488 | A    | C3'-C2'-O2' | 5.03  | 118.25      | 110.70   |
| 41  | BT    | 31   | SER  | N-CA-C      | 5.03  | 121.52      | 110.80   |
| 24  | BA    | 2654 | A    | C2'-C3'-O3' | -5.03 | 101.96      | 109.50   |
| 24  | BA    | 1650 | G    | C5'-C4'-C3' | -5.03 | 108.46      | 116.00   |
| 24  | BA    | 1667 | G    | C4'-C3'-C2' | -5.03 | 97.58       | 102.60   |
| 24  | BA    | 2572 | A    | N9-C1'-C2'  | 5.03  | 119.54      | 112.00   |
| 29  | BF    | 173  | VAL  | CB-CA-C     | -5.03 | 103.89      | 110.98   |
| 46  | BY    | 11   | GLU  | N-CA-C      | 5.03  | 121.50      | 110.80   |
| 14  | AO    | 83   | VAL  | N-CA-C      | -5.02 | 98.89       | 109.34   |
| 50  | B3    | 45   | GLY  | N-CA-C      | 5.02  | 120.21      | 110.66   |
| 10  | AK    | 90   | GLY  | N-CA-C      | -5.02 | 101.28      | 113.18   |
| 1   | AA    | 982  | U    | C2'-C3'-O3' | -5.02 | 106.17      | 113.70   |
| 26  | BC    | 140  | PRO  | N-CA-C      | 5.02  | 122.81      | 112.47   |
| 24  | BA    | 978  | G    | N9-C1'-C2'  | 5.02  | 119.53      | 112.00   |
| 24  | BA    | 1746 | G    | C3'-C2'-O2' | 5.02  | 118.22      | 110.70   |
| 24  | BA    | 2428 | G    | N9-C1'-C2'  | 5.02  | 119.53      | 112.00   |
| 1   | AA    | 1065 | U    | N1-C1'-C2'  | 5.02  | 119.53      | 112.00   |
| 50  | B3    | 20   | ASN  | N-CA-C      | 5.02  | 116.43      | 108.96   |
| 13  | AN    | 23   | ALA  | N-CA-C      | 5.01  | 117.32      | 108.75   |
| 37  | BP    | 91   | GLU  | N-CA-C      | 5.01  | 121.48      | 110.80   |
| 6   | AG    | 126  | ILE  | N-CA-C      | -5.01 | 100.69      | 108.81   |
| 46  | BY    | 26   | GLY  | CA-C-N      | -5.01 | 116.48      | 122.90   |
| 46  | BY    | 26   | GLY  | C-N-CA      | -5.01 | 116.48      | 122.90   |
| 1   | AA    | 960  | U    | N1-C1'-C2'  | 5.01  | 119.52      | 112.00   |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24  | BA    | 528  | A    | C2'-C3'-O3' | -5.01 | 106.18      | 113.70   |
| 24  | BA    | 1945 | G    | C4'-C3'-O3' | -5.01 | 105.48      | 113.00   |
| 30  | BG    | 169  | ALA  | CA-C-N      | 5.01  | 127.26      | 120.65   |
| 30  | BG    | 169  | ALA  | C-N-CA      | 5.01  | 127.26      | 120.65   |
| 34  | BM    | 70   | LYS  | N-CA-C      | 5.01  | 116.69      | 108.52   |
| 38  | BQ    | 115  | GLU  | N-CA-C      | 5.01  | 114.85      | 108.24   |
| 1   | AA    | 396  | G    | C4'-C3'-O3' | -5.01 | 105.48      | 113.00   |
| 24  | BA    | 147  | U    | N1-C1'-C2'  | 5.01  | 119.52      | 112.00   |
| 24  | BA    | 2199 | A    | C4'-C3'-O3' | -5.01 | 105.49      | 113.00   |
| 41  | BT    | 85   | LYS  | N-CA-C      | -5.01 | 100.13      | 110.80   |
| 22  | AW    | 36   | LEU  | CA-CB-CG    | -5.01 | 98.78       | 116.30   |
| 24  | BA    | 1460 | A    | C2'-C3'-O3' | -5.00 | 106.19      | 113.70   |
| 9   | AJ    | 9    | VAL  | CB-CA-C     | -5.00 | 106.98      | 112.68   |
| 27  | BD    | 34   | VAL  | N-CA-C      | 5.00  | 117.20      | 108.90   |
| 44  | BW    | 41   | ASN  | N-CA-C      | 5.00  | 116.54      | 111.14   |

There are no chirality outliers.

All (694) planarity outliers are listed below:

| Mol | Chain | Res     | Type | Group     |
|-----|-------|---------|------|-----------|
| 2   | A1    | 31      | U    | Sidechain |
| 2   | A1    | 38      | U    | Sidechain |
| 2   | A1    | 41      | U    | Sidechain |
| 1   | AA    | 1012    | U    | Sidechain |
| 1   | AA    | 1027    | C    | Sidechain |
| 1   | AA    | 1028(A) | C    | Sidechain |
| 1   | AA    | 1037    | C    | Sidechain |
| 1   | AA    | 1038    | C    | Sidechain |
| 1   | AA    | 1039    | C    | Sidechain |
| 1   | AA    | 1040    | U    | Sidechain |
| 1   | AA    | 1048    | G    | Sidechain |
| 1   | AA    | 1052    | U    | Sidechain |
| 1   | AA    | 1054    | C    | Sidechain |
| 1   | AA    | 1056    | U    | Sidechain |
| 1   | AA    | 1065    | U    | Sidechain |
| 1   | AA    | 1067    | A    | Sidechain |
| 1   | AA    | 1073    | U    | Sidechain |
| 1   | AA    | 1078    | U    | Sidechain |
| 1   | AA    | 1083    | U    | Sidechain |
| 1   | AA    | 1097    | C    | Sidechain |
| 1   | AA    | 1100    | C    | Sidechain |
| 1   | AA    | 1121    | U    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Group     |
|-----|-------|------|------|-----------|
| 1   | AA    | 1122 | U    | Sidechain |
| 1   | AA    | 1124 | G    | Sidechain |
| 1   | AA    | 1128 | C    | Sidechain |
| 1   | AA    | 1133 | G    | Sidechain |
| 1   | AA    | 1143 | G    | Sidechain |
| 1   | AA    | 115  | G    | Sidechain |
| 1   | AA    | 1150 | U    | Sidechain |
| 1   | AA    | 1165 | C    | Sidechain |
| 1   | AA    | 1195 | C    | Sidechain |
| 1   | AA    | 1199 | U    | Sidechain |
| 1   | AA    | 12   | U    | Sidechain |
| 1   | AA    | 1226 | C    | Sidechain |
| 1   | AA    | 1235 | U    | Sidechain |
| 1   | AA    | 124  | G    | Sidechain |
| 1   | AA    | 1246 | C    | Sidechain |
| 1   | AA    | 125  | U    | Sidechain |
| 1   | AA    | 1263 | C    | Sidechain |
| 1   | AA    | 1266 | G    | Sidechain |
| 1   | AA    | 1277 | C    | Sidechain |
| 1   | AA    | 1285 | A    | Sidechain |
| 1   | AA    | 129  | U    | Sidechain |
| 1   | AA    | 1298 | C    | Sidechain |
| 1   | AA    | 1302 | U    | Sidechain |
| 1   | AA    | 131  | C    | Sidechain |
| 1   | AA    | 1314 | C    | Sidechain |
| 1   | AA    | 132  | C    | Sidechain |
| 1   | AA    | 1327 | C    | Sidechain |
| 1   | AA    | 1328 | C    | Sidechain |
| 1   | AA    | 1330 | U    | Sidechain |
| 1   | AA    | 134  | A    | Sidechain |
| 1   | AA    | 1347 | G    | Sidechain |
| 1   | AA    | 135  | C    | Sidechain |
| 1   | AA    | 1352 | C    | Sidechain |
| 1   | AA    | 1362 | C    | Sidechain |
| 1   | AA    | 1370 | G    | Sidechain |
| 1   | AA    | 1377 | A    | Sidechain |
| 1   | AA    | 138  | G    | Sidechain |
| 1   | AA    | 1402 | C    | Sidechain |
| 1   | AA    | 1404 | C    | Sidechain |
| 1   | AA    | 1405 | G    | Sidechain |
| 1   | AA    | 1422 | G    | Sidechain |
| 1   | AA    | 1427 | U    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | Group     |
|-----|-------|--------|------|-----------|
| 1   | AA    | 1442   | G    | Sidechain |
| 1   | AA    | 145    | G    | Sidechain |
| 1   | AA    | 146    | G    | Sidechain |
| 1   | AA    | 1472   | U    | Sidechain |
| 1   | AA    | 1477   | C    | Sidechain |
| 1   | AA    | 1481   | U    | Sidechain |
| 1   | AA    | 1489   | G    | Sidechain |
| 1   | AA    | 1495   | U    | Sidechain |
| 1   | AA    | 1500   | A    | Sidechain |
| 1   | AA    | 1541   | U    | Sidechain |
| 1   | AA    | 156    | G    | Sidechain |
| 1   | AA    | 158    | G    | Sidechain |
| 1   | AA    | 159    | G    | Sidechain |
| 1   | AA    | 17     | U    | Sidechain |
| 1   | AA    | 191(C) | G    | Sidechain |
| 1   | AA    | 191(D) | U    | Sidechain |
| 1   | AA    | 219    | C    | Sidechain |
| 1   | AA    | 225    | C    | Sidechain |
| 1   | AA    | 244    | U    | Sidechain |
| 1   | AA    | 253    | U    | Sidechain |
| 1   | AA    | 267    | C    | Sidechain |
| 1   | AA    | 274    | A    | Sidechain |
| 1   | AA    | 281    | G    | Sidechain |
| 1   | AA    | 285    | G    | Sidechain |
| 1   | AA    | 287    | U    | Sidechain |
| 1   | AA    | 295    | C    | Sidechain |
| 1   | AA    | 31     | G    | Sidechain |
| 1   | AA    | 332    | G    | Sidechain |
| 1   | AA    | 335    | C    | Sidechain |
| 1   | AA    | 348    | G    | Sidechain |
| 1   | AA    | 352    | C    | Sidechain |
| 1   | AA    | 367    | U    | Sidechain |
| 1   | AA    | 37     | U    | Sidechain |
| 1   | AA    | 375    | U    | Sidechain |
| 1   | AA    | 385    | C    | Sidechain |
| 1   | AA    | 395    | C    | Sidechain |
| 1   | AA    | 397    | A    | Sidechain |
| 1   | AA    | 398    | C    | Sidechain |
| 1   | AA    | 403    | C    | Sidechain |
| 1   | AA    | 412    | A    | Sidechain |
| 1   | AA    | 418    | C    | Sidechain |
| 1   | AA    | 430    | A    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type | Group     |
|-----|-------|-----|------|-----------|
| 1   | AA    | 432 | A    | Sidechain |
| 1   | AA    | 45  | U    | Sidechain |
| 1   | AA    | 451 | A    | Sidechain |
| 1   | AA    | 47  | C    | Sidechain |
| 1   | AA    | 484 | G    | Sidechain |
| 1   | AA    | 501 | C    | Sidechain |
| 1   | AA    | 504 | C    | Sidechain |
| 1   | AA    | 518 | C    | Sidechain |
| 1   | AA    | 529 | G    | Sidechain |
| 1   | AA    | 531 | U    | Sidechain |
| 1   | AA    | 532 | A    | Sidechain |
| 1   | AA    | 54  | C    | Sidechain |
| 1   | AA    | 56  | U    | Sidechain |
| 1   | AA    | 560 | U    | Sidechain |
| 1   | AA    | 563 | A    | Sidechain |
| 1   | AA    | 575 | G    | Sidechain |
| 1   | AA    | 576 | G    | Sidechain |
| 1   | AA    | 579 | G    | Sidechain |
| 1   | AA    | 590 | C    | Sidechain |
| 1   | AA    | 591 | U    | Sidechain |
| 1   | AA    | 596 | C    | Sidechain |
| 1   | AA    | 610 | G    | Sidechain |
| 1   | AA    | 616 | G    | Sidechain |
| 1   | AA    | 63  | C    | Sidechain |
| 1   | AA    | 634 | C    | Sidechain |
| 1   | AA    | 644 | G    | Sidechain |
| 1   | AA    | 66  | G    | Sidechain |
| 1   | AA    | 661 | G    | Sidechain |
| 1   | AA    | 666 | G    | Sidechain |
| 1   | AA    | 672 | U    | Sidechain |
| 1   | AA    | 689 | C    | Sidechain |
| 1   | AA    | 690 | G    | Sidechain |
| 1   | AA    | 717 | C    | Sidechain |
| 1   | AA    | 727 | G    | Sidechain |
| 1   | AA    | 729 | A    | Sidechain |
| 1   | AA    | 734 | G    | Sidechain |
| 1   | AA    | 739 | C    | Sidechain |
| 1   | AA    | 741 | G    | Sidechain |
| 1   | AA    | 75  | C    | Sidechain |
| 1   | AA    | 760 | G    | Sidechain |
| 1   | AA    | 763 | G    | Sidechain |
| 1   | AA    | 770 | C    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | Group     |
|-----|-------|--------|------|-----------|
| 1   | AA    | 779    | C    | Sidechain |
| 1   | AA    | 792    | A    | Sidechain |
| 1   | AA    | 808    | C    | Sidechain |
| 1   | AA    | 813    | U    | Sidechain |
| 1   | AA    | 817    | C    | Sidechain |
| 1   | AA    | 82     | U    | Sidechain |
| 1   | AA    | 834    | C    | Sidechain |
| 1   | AA    | 853    | G    | Sidechain |
| 1   | AA    | 862    | C    | Sidechain |
| 1   | AA    | 863    | U    | Sidechain |
| 1   | AA    | 875    | C    | Sidechain |
| 1   | AA    | 88     | C    | Sidechain |
| 1   | AA    | 883    | C    | Sidechain |
| 1   | AA    | 887    | G    | Sidechain |
| 1   | AA    | 895    | G    | Sidechain |
| 1   | AA    | 898    | G    | Sidechain |
| 1   | AA    | 901    | A    | Sidechain |
| 1   | AA    | 902    | G    | Sidechain |
| 1   | AA    | 904    | C    | Sidechain |
| 1   | AA    | 905    | U    | Sidechain |
| 1   | AA    | 911    | U    | Sidechain |
| 1   | AA    | 912    | C    | Sidechain |
| 1   | AA    | 923    | A    | Sidechain |
| 1   | AA    | 947    | G    | Sidechain |
| 1   | AA    | 955    | U    | Sidechain |
| 1   | AA    | 961    | U    | Sidechain |
| 1   | AA    | 974    | A    | Sidechain |
| 1   | AA    | 983    | A    | Sidechain |
| 1   | AA    | 989    | C    | Sidechain |
| 1   | AA    | 998(A) | C    | Sidechain |
| 3   | AB    | 11     | C    | Sidechain |
| 3   | AB    | 12     | U    | Sidechain |
| 3   | AB    | 37     | A    | Sidechain |
| 3   | AB    | 53     | G    | Sidechain |
| 3   | AB    | 60     | U    | Sidechain |
| 3   | AB    | 61     | C    | Sidechain |
| 3   | AC    | 14     | A    | Sidechain |
| 3   | AC    | 18     | G    | Sidechain |
| 3   | AC    | 33     | U    | Sidechain |
| 3   | AC    | 35     | A    | Sidechain |
| 3   | AC    | 46     | G    | Sidechain |
| 3   | AC    | 58     | A    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Group     |
|-----|-------|------|------|-----------|
| 3   | AC    | 68   | C    | Sidechain |
| 3   | AC    | 9    | A    | Sidechain |
| 3   | AD    | 2    | C    | Sidechain |
| 3   | AD    | 3    | C    | Sidechain |
| 3   | AD    | 32   | U    | Sidechain |
| 3   | AD    | 59   | U    | Sidechain |
| 3   | AD    | 60   | U    | Sidechain |
| 3   | AD    | 64   | A    | Sidechain |
| 3   | AD    | 66   | U    | Sidechain |
| 3   | AD    | 67   | C    | Sidechain |
| 6   | AG    | 54   | TYR  | Sidechain |
| 8   | AI    | 4    | TYR  | Sidechain |
| 13  | AN    | 75   | TYR  | Sidechain |
| 15  | AP    | 59   | TYR  | Sidechain |
| 16  | AQ    | 34   | TYR  | Sidechain |
| 50  | B3    | 32   | TYR  | Sidechain |
| 51  | B4    | 29   | THR  | Mainchain |
| 24  | BA    | 1000 | A    | Sidechain |
| 24  | BA    | 1012 | U    | Sidechain |
| 24  | BA    | 1018 | C    | Sidechain |
| 24  | BA    | 1020 | A    | Sidechain |
| 24  | BA    | 1022 | G    | Sidechain |
| 24  | BA    | 1024 | G    | Sidechain |
| 24  | BA    | 1026 | U    | Sidechain |
| 24  | BA    | 1040 | C    | Sidechain |
| 24  | BA    | 1042 | G    | Sidechain |
| 24  | BA    | 1043 | C    | Sidechain |
| 24  | BA    | 1052 | C    | Sidechain |
| 24  | BA    | 1053 | C    | Sidechain |
| 24  | BA    | 1063 | G    | Sidechain |
| 24  | BA    | 1064 | C    | Sidechain |
| 24  | BA    | 1080 | C    | Sidechain |
| 24  | BA    | 1082 | U    | Sidechain |
| 24  | BA    | 1092 | C    | Sidechain |
| 24  | BA    | 1099 | G    | Sidechain |
| 24  | BA    | 1101 | U    | Sidechain |
| 24  | BA    | 1102 | C    | Sidechain |
| 24  | BA    | 1104 | C    | Sidechain |
| 24  | BA    | 1107 | G    | Sidechain |
| 24  | BA    | 1108 | U    | Sidechain |
| 24  | BA    | 1113 | U    | Sidechain |
| 24  | BA    | 1116 | C    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Group     |
|-----|-------|------|------|-----------|
| 24  | BA    | 1133 | U    | Sidechain |
| 24  | BA    | 114  | U    | Sidechain |
| 24  | BA    | 1141 | U    | Sidechain |
| 24  | BA    | 1142 | U    | Sidechain |
| 24  | BA    | 1143 | A    | Sidechain |
| 24  | BA    | 1154 | G    | Sidechain |
| 24  | BA    | 1155 | A    | Sidechain |
| 24  | BA    | 1160 | G    | Sidechain |
| 24  | BA    | 1169 | G    | Sidechain |
| 24  | BA    | 1179 | C    | Sidechain |
| 24  | BA    | 1182 | A    | Sidechain |
| 24  | BA    | 1183 | G    | Sidechain |
| 24  | BA    | 1194 | A    | Sidechain |
| 24  | BA    | 1195 | G    | Sidechain |
| 24  | BA    | 1206 | G    | Sidechain |
| 24  | BA    | 1238 | G    | Sidechain |
| 24  | BA    | 1240 | U    | Sidechain |
| 24  | BA    | 1242 | A    | Sidechain |
| 24  | BA    | 1247 | A    | Sidechain |
| 24  | BA    | 1262 | A    | Sidechain |
| 24  | BA    | 1269 | A    | Sidechain |
| 24  | BA    | 1273 | U    | Sidechain |
| 24  | BA    | 1284 | A    | Sidechain |
| 24  | BA    | 1288 | U    | Sidechain |
| 24  | BA    | 1297 | C    | Sidechain |
| 24  | BA    | 1301 | A    | Sidechain |
| 24  | BA    | 1310 | G    | Sidechain |
| 24  | BA    | 135  | G    | Sidechain |
| 24  | BA    | 1357 | U    | Sidechain |
| 24  | BA    | 1359 | A    | Sidechain |
| 24  | BA    | 1363 | C    | Sidechain |
| 24  | BA    | 1367 | A    | Sidechain |
| 24  | BA    | 1368 | G    | Sidechain |
| 24  | BA    | 1372 | U    | Sidechain |
| 24  | BA    | 1379 | A    | Sidechain |
| 24  | BA    | 138  | G    | Sidechain |
| 24  | BA    | 1384 | A    | Sidechain |
| 24  | BA    | 1392 | A    | Sidechain |
| 24  | BA    | 1393 | A    | Sidechain |
| 24  | BA    | 1397 | U    | Sidechain |
| 24  | BA    | 14   | A    | Sidechain |
| 24  | BA    | 1405 | U    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res     | Type | Group     |
|-----|-------|---------|------|-----------|
| 24  | BA    | 141(A)  | C    | Sidechain |
| 24  | BA    | 1416    | G    | Sidechain |
| 24  | BA    | 1418    | G    | Sidechain |
| 24  | BA    | 1444(A) | A    | Sidechain |
| 24  | BA    | 1450    | C    | Sidechain |
| 24  | BA    | 1473    | G    | Sidechain |
| 24  | BA    | 1474    | C    | Sidechain |
| 24  | BA    | 1477    | A    | Sidechain |
| 24  | BA    | 1478    | G    | Sidechain |
| 24  | BA    | 1479    | G    | Sidechain |
| 24  | BA    | 1489    | U    | Sidechain |
| 24  | BA    | 1497    | U    | Sidechain |
| 24  | BA    | 1513    | C    | Sidechain |
| 24  | BA    | 1515    | C    | Sidechain |
| 24  | BA    | 1516    | U    | Sidechain |
| 24  | BA    | 1523    | U    | Sidechain |
| 24  | BA    | 1525    | G    | Sidechain |
| 24  | BA    | 1527    | G    | Sidechain |
| 24  | BA    | 1532    | C    | Sidechain |
| 24  | BA    | 1537    | C    | Sidechain |
| 24  | BA    | 1539    | G    | Sidechain |
| 24  | BA    | 1541    | U    | Sidechain |
| 24  | BA    | 1559    | G    | Sidechain |
| 24  | BA    | 1564    | C    | Sidechain |
| 24  | BA    | 1565    | C    | Sidechain |
| 24  | BA    | 1568    | G    | Sidechain |
| 24  | BA    | 1574    | C    | Sidechain |
| 24  | BA    | 1576    | U    | Sidechain |
| 24  | BA    | 1590    | U    | Sidechain |
| 24  | BA    | 1597    | A    | Sidechain |
| 24  | BA    | 1604    | C    | Sidechain |
| 24  | BA    | 1606    | G    | Sidechain |
| 24  | BA    | 1609    | A    | Sidechain |
| 24  | BA    | 1623    | G    | Sidechain |
| 24  | BA    | 1625    | C    | Sidechain |
| 24  | BA    | 1648    | C    | Sidechain |
| 24  | BA    | 1651    | G    | Sidechain |
| 24  | BA    | 1655    | A    | Sidechain |
| 24  | BA    | 1657    | C    | Sidechain |
| 24  | BA    | 1659    | U    | Sidechain |
| 24  | BA    | 1661    | G    | Sidechain |
| 24  | BA    | 1667    | G    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Group     |
|-----|-------|------|------|-----------|
| 24  | BA    | 1677 | A    | Sidechain |
| 24  | BA    | 1681 | G    | Sidechain |
| 24  | BA    | 1684 | C    | Sidechain |
| 24  | BA    | 1685 | C    | Sidechain |
| 24  | BA    | 1686 | C    | Sidechain |
| 24  | BA    | 1687 | G    | Sidechain |
| 24  | BA    | 1688 | U    | Sidechain |
| 24  | BA    | 1691 | C    | Sidechain |
| 24  | BA    | 1693 | U    | Sidechain |
| 24  | BA    | 1694 | C    | Sidechain |
| 24  | BA    | 1699 | G    | Sidechain |
| 24  | BA    | 1704 | G    | Sidechain |
| 24  | BA    | 1711 | C    | Sidechain |
| 24  | BA    | 1716 | U    | Sidechain |
| 24  | BA    | 1718 | G    | Sidechain |
| 24  | BA    | 1727 | U    | Sidechain |
| 24  | BA    | 1735 | C    | Sidechain |
| 24  | BA    | 1741 | C    | Sidechain |
| 24  | BA    | 1742 | C    | Sidechain |
| 24  | BA    | 1743 | G    | Sidechain |
| 24  | BA    | 176  | G    | Sidechain |
| 24  | BA    | 1766 | U    | Sidechain |
| 24  | BA    | 1768 | U    | Sidechain |
| 24  | BA    | 1774 | C    | Sidechain |
| 24  | BA    | 1775 | U    | Sidechain |
| 24  | BA    | 1776 | G    | Sidechain |
| 24  | BA    | 1777 | U    | Sidechain |
| 24  | BA    | 1778 | U    | Sidechain |
| 24  | BA    | 1779 | U    | Sidechain |
| 24  | BA    | 1780 | A    | Sidechain |
| 24  | BA    | 1783 | A    | Sidechain |
| 24  | BA    | 1786 | A    | Sidechain |
| 24  | BA    | 1790 | C    | Sidechain |
| 24  | BA    | 1791 | A    | Sidechain |
| 24  | BA    | 1794 | U    | Sidechain |
| 24  | BA    | 1798 | U    | Sidechain |
| 24  | BA    | 1800 | C    | Sidechain |
| 24  | BA    | 1808 | U    | Sidechain |
| 24  | BA    | 1809 | A    | Sidechain |
| 24  | BA    | 1810 | A    | Sidechain |
| 24  | BA    | 1815 | A    | Sidechain |
| 24  | BA    | 1822 | G    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Group     |
|-----|-------|------|------|-----------|
| 24  | BA    | 1831 | G    | Sidechain |
| 24  | BA    | 1843 | C    | Sidechain |
| 24  | BA    | 185  | U    | Sidechain |
| 24  | BA    | 188  | G    | Sidechain |
| 24  | BA    | 1902 | C    | Sidechain |
| 24  | BA    | 1904 | G    | Sidechain |
| 24  | BA    | 1911 | U    | Sidechain |
| 24  | BA    | 1916 | A    | Sidechain |
| 24  | BA    | 1918 | A    | Sidechain |
| 24  | BA    | 1919 | A    | Sidechain |
| 24  | BA    | 192  | C    | Sidechain |
| 24  | BA    | 1921 | G    | Sidechain |
| 24  | BA    | 1923 | U    | Sidechain |
| 24  | BA    | 1926 | U    | Sidechain |
| 24  | BA    | 1928 | A    | Sidechain |
| 24  | BA    | 1931 | U    | Sidechain |
| 24  | BA    | 1940 | U    | Sidechain |
| 24  | BA    | 1962 | C    | Sidechain |
| 24  | BA    | 1964 | G    | Sidechain |
| 24  | BA    | 1965 | C    | Sidechain |
| 24  | BA    | 1967 | C    | Sidechain |
| 24  | BA    | 1971 | A    | Sidechain |
| 24  | BA    | 1981 | A    | Sidechain |
| 24  | BA    | 1982 | C    | Sidechain |
| 24  | BA    | 1983 | C    | Sidechain |
| 24  | BA    | 1985 | G    | Sidechain |
| 24  | BA    | 1989 | G    | Sidechain |
| 24  | BA    | 199  | A    | Sidechain |
| 24  | BA    | 1998 | G    | Sidechain |
| 24  | BA    | 2017 | U    | Sidechain |
| 24  | BA    | 2021 | C    | Sidechain |
| 24  | BA    | 2026 | C    | Sidechain |
| 24  | BA    | 2033 | A    | Sidechain |
| 24  | BA    | 2042 | A    | Sidechain |
| 24  | BA    | 2048 | G    | Sidechain |
| 24  | BA    | 2049 | G    | Sidechain |
| 24  | BA    | 2051 | A    | Sidechain |
| 24  | BA    | 2061 | G    | Sidechain |
| 24  | BA    | 2068 | U    | Sidechain |
| 24  | BA    | 2075 | U    | Sidechain |
| 24  | BA    | 2076 | U    | Sidechain |
| 24  | BA    | 2089 | U    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Group     |
|-----|-------|------|------|-----------|
| 24  | BA    | 2094 | G    | Sidechain |
| 24  | BA    | 2095 | C    | Sidechain |
| 24  | BA    | 2096 | U    | Sidechain |
| 24  | BA    | 2098 | U    | Sidechain |
| 24  | BA    | 2103 | C    | Sidechain |
| 24  | BA    | 2119 | A    | Sidechain |
| 24  | BA    | 212  | G    | Sidechain |
| 24  | BA    | 2126 | A    | Sidechain |
| 24  | BA    | 2130 | U    | Sidechain |
| 24  | BA    | 2138 | C    | Sidechain |
| 24  | BA    | 2148 | G    | Sidechain |
| 24  | BA    | 2161 | C    | Sidechain |
| 24  | BA    | 2185 | C    | Sidechain |
| 24  | BA    | 2189 | U    | Sidechain |
| 24  | BA    | 2190 | G    | Sidechain |
| 24  | BA    | 2193 | G    | Sidechain |
| 24  | BA    | 2195 | C    | Sidechain |
| 24  | BA    | 221  | A    | Sidechain |
| 24  | BA    | 2215 | G    | Sidechain |
| 24  | BA    | 224  | G    | Sidechain |
| 24  | BA    | 2246 | G    | Sidechain |
| 24  | BA    | 2259 | G    | Sidechain |
| 24  | BA    | 2262 | U    | Sidechain |
| 24  | BA    | 2263 | C    | Sidechain |
| 24  | BA    | 2265 | U    | Sidechain |
| 24  | BA    | 2267 | A    | Sidechain |
| 24  | BA    | 2274 | A    | Sidechain |
| 24  | BA    | 2278 | A    | Sidechain |
| 24  | BA    | 2284 | C    | Sidechain |
| 24  | BA    | 2287 | A    | Sidechain |
| 24  | BA    | 2293 | C    | Sidechain |
| 24  | BA    | 2295 | C    | Sidechain |
| 24  | BA    | 2296 | U    | Sidechain |
| 24  | BA    | 2297 | C    | Sidechain |
| 24  | BA    | 2299 | G    | Sidechain |
| 24  | BA    | 2314 | C    | Sidechain |
| 24  | BA    | 2326 | C    | Sidechain |
| 24  | BA    | 2332 | U    | Sidechain |
| 24  | BA    | 2336 | A    | Sidechain |
| 24  | BA    | 2337 | G    | Sidechain |
| 24  | BA    | 2352 | A    | Sidechain |
| 24  | BA    | 2364 | C    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Group     |
|-----|-------|------|------|-----------|
| 24  | BA    | 237  | C    | Sidechain |
| 24  | BA    | 2384 | G    | Sidechain |
| 24  | BA    | 2395 | C    | Sidechain |
| 24  | BA    | 2399 | G    | Sidechain |
| 24  | BA    | 2406 | U    | Sidechain |
| 24  | BA    | 2408 | U    | Sidechain |
| 24  | BA    | 2413 | G    | Sidechain |
| 24  | BA    | 2422 | A    | Sidechain |
| 24  | BA    | 2423 | U    | Sidechain |
| 24  | BA    | 2425 | A    | Sidechain |
| 24  | BA    | 2427 | C    | Sidechain |
| 24  | BA    | 2431 | U    | Sidechain |
| 24  | BA    | 2432 | A    | Sidechain |
| 24  | BA    | 2433 | A    | Sidechain |
| 24  | BA    | 2434 | A    | Sidechain |
| 24  | BA    | 2435 | A    | Sidechain |
| 24  | BA    | 2436 | G    | Sidechain |
| 24  | BA    | 2439 | A    | Sidechain |
| 24  | BA    | 2444 | G    | Sidechain |
| 24  | BA    | 2449 | U    | Sidechain |
| 24  | BA    | 2450 | A    | Sidechain |
| 24  | BA    | 2458 | G    | Sidechain |
| 24  | BA    | 2467 | C    | Sidechain |
| 24  | BA    | 2471 | C    | Sidechain |
| 24  | BA    | 2480 | C    | Sidechain |
| 24  | BA    | 2483 | C    | Sidechain |
| 24  | BA    | 2486 | G    | Sidechain |
| 24  | BA    | 2490 | G    | Sidechain |
| 24  | BA    | 2491 | U    | Sidechain |
| 24  | BA    | 2493 | U    | Sidechain |
| 24  | BA    | 2498 | C    | Sidechain |
| 24  | BA    | 25   | U    | Sidechain |
| 24  | BA    | 2500 | U    | Sidechain |
| 24  | BA    | 2501 | C    | Sidechain |
| 24  | BA    | 2504 | U    | Sidechain |
| 24  | BA    | 2505 | G    | Sidechain |
| 24  | BA    | 2507 | C    | Sidechain |
| 24  | BA    | 2508 | G    | Sidechain |
| 24  | BA    | 251  | A    | Sidechain |
| 24  | BA    | 2510 | C    | Sidechain |
| 24  | BA    | 2514 | U    | Sidechain |
| 24  | BA    | 2515 | C    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | Group     |
|-----|-------|------|------|-----------|
| 24  | BA    | 2516 | G    | Sidechain |
| 24  | BA    | 2517 | C    | Sidechain |
| 24  | BA    | 2519 | U    | Sidechain |
| 24  | BA    | 2521 | C    | Sidechain |
| 24  | BA    | 2524 | G    | Sidechain |
| 24  | BA    | 2527 | C    | Sidechain |
| 24  | BA    | 2529 | G    | Sidechain |
| 24  | BA    | 253  | C    | Sidechain |
| 24  | BA    | 2530 | A    | Sidechain |
| 24  | BA    | 2537 | U    | Sidechain |
| 24  | BA    | 2540 | C    | Sidechain |
| 24  | BA    | 2555 | U    | Sidechain |
| 24  | BA    | 2560 | C    | Sidechain |
| 24  | BA    | 2568 | C    | Sidechain |
| 24  | BA    | 2569 | G    | Sidechain |
| 24  | BA    | 257  | A    | Sidechain |
| 24  | BA    | 2579 | C    | Sidechain |
| 24  | BA    | 2580 | U    | Sidechain |
| 24  | BA    | 2583 | G    | Sidechain |
| 24  | BA    | 2590 | A    | Sidechain |
| 24  | BA    | 2595 | G    | Sidechain |
| 24  | BA    | 2597 | G    | Sidechain |
| 24  | BA    | 2601 | C    | Sidechain |
| 24  | BA    | 2602 | A    | Sidechain |
| 24  | BA    | 2606 | C    | Sidechain |
| 24  | BA    | 2607 | G    | Sidechain |
| 24  | BA    | 2608 | G    | Sidechain |
| 24  | BA    | 2609 | U    | Sidechain |
| 24  | BA    | 2613 | U    | Sidechain |
| 24  | BA    | 2615 | U    | Sidechain |
| 24  | BA    | 2619 | C    | Sidechain |
| 24  | BA    | 2623 | G    | Sidechain |
| 24  | BA    | 2629 | A    | Sidechain |
| 24  | BA    | 2637 | U    | Sidechain |
| 24  | BA    | 2642 | G    | Sidechain |
| 24  | BA    | 2645 | G    | Sidechain |
| 24  | BA    | 2652 | C    | Sidechain |
| 24  | BA    | 2665 | A    | Sidechain |
| 24  | BA    | 2667 | C    | Sidechain |
| 24  | BA    | 2684 | U    | Sidechain |
| 24  | BA    | 2687 | U    | Sidechain |
| 24  | BA    | 2698 | U    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | Group     |
|-----|-------|--------|------|-----------|
| 24  | BA    | 270(C) | C    | Sidechain |
| 24  | BA    | 270(D) | C    | Sidechain |
| 24  | BA    | 270(G) | C    | Sidechain |
| 24  | BA    | 270(Q) | C    | Sidechain |
| 24  | BA    | 2706   | G    | Sidechain |
| 24  | BA    | 2713   | A    | Sidechain |
| 24  | BA    | 2724   | C    | Sidechain |
| 24  | BA    | 2725   | A    | Sidechain |
| 24  | BA    | 273(C) | C    | Sidechain |
| 24  | BA    | 273(D) | C    | Sidechain |
| 24  | BA    | 2737   | G    | Sidechain |
| 24  | BA    | 2741   | A    | Sidechain |
| 24  | BA    | 2746   | U    | Sidechain |
| 24  | BA    | 2763   | G    | Sidechain |
| 24  | BA    | 2764   | A    | Sidechain |
| 24  | BA    | 2777   | G    | Sidechain |
| 24  | BA    | 2781   | A    | Sidechain |
| 24  | BA    | 2787   | C    | Sidechain |
| 24  | BA    | 2791   | C    | Sidechain |
| 24  | BA    | 2794   | C    | Sidechain |
| 24  | BA    | 280    | C    | Sidechain |
| 24  | BA    | 2816   | C    | Sidechain |
| 24  | BA    | 2817   | G    | Sidechain |
| 24  | BA    | 2825   | C    | Sidechain |
| 24  | BA    | 2853   | C    | Sidechain |
| 24  | BA    | 2867   | G    | Sidechain |
| 24  | BA    | 2885   | C    | Sidechain |
| 24  | BA    | 2887   | U    | Sidechain |
| 24  | BA    | 2891   | G    | Sidechain |
| 24  | BA    | 2897   | U    | Sidechain |
| 24  | BA    | 2898   | U    | Sidechain |
| 24  | BA    | 2901   | C    | Sidechain |
| 24  | BA    | 296    | C    | Sidechain |
| 24  | BA    | 3      | U    | Sidechain |
| 24  | BA    | 31     | C    | Sidechain |
| 24  | BA    | 32     | C    | Sidechain |
| 24  | BA    | 322    | A    | Sidechain |
| 24  | BA    | 337    | C    | Sidechain |
| 24  | BA    | 350    | U    | Sidechain |
| 24  | BA    | 351    | G    | Sidechain |
| 24  | BA    | 353    | G    | Sidechain |
| 24  | BA    | 358    | U    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | Group     |
|-----|-------|--------|------|-----------|
| 24  | BA    | 360    | G    | Sidechain |
| 24  | BA    | 362    | U    | Sidechain |
| 24  | BA    | 366    | C    | Sidechain |
| 24  | BA    | 380    | U    | Sidechain |
| 24  | BA    | 383    | U    | Sidechain |
| 24  | BA    | 386    | G    | Sidechain |
| 24  | BA    | 417    | C    | Sidechain |
| 24  | BA    | 427    | U    | Sidechain |
| 24  | BA    | 433    | C    | Sidechain |
| 24  | BA    | 445    | C    | Sidechain |
| 24  | BA    | 446    | G    | Sidechain |
| 24  | BA    | 448    | U    | Sidechain |
| 24  | BA    | 459    | U    | Sidechain |
| 24  | BA    | 474    | G    | Sidechain |
| 24  | BA    | 511    | U    | Sidechain |
| 24  | BA    | 513    | A    | Sidechain |
| 24  | BA    | 514    | A    | Sidechain |
| 24  | BA    | 525    | U    | Sidechain |
| 24  | BA    | 534    | U    | Sidechain |
| 24  | BA    | 553    | U    | Sidechain |
| 24  | BA    | 584    | C    | Sidechain |
| 24  | BA    | 585    | G    | Sidechain |
| 24  | BA    | 601    | C    | Sidechain |
| 24  | BA    | 605    | C    | Sidechain |
| 24  | BA    | 606    | U    | Sidechain |
| 24  | BA    | 607    | U    | Sidechain |
| 24  | BA    | 608    | A    | Sidechain |
| 24  | BA    | 610    | C    | Sidechain |
| 24  | BA    | 611    | C    | Sidechain |
| 24  | BA    | 618(A) | C    | Sidechain |
| 24  | BA    | 621    | A    | Sidechain |
| 24  | BA    | 639    | U    | Sidechain |
| 24  | BA    | 641    | C    | Sidechain |
| 24  | BA    | 643    | A    | Sidechain |
| 24  | BA    | 646    | A    | Sidechain |
| 24  | BA    | 647    | G    | Sidechain |
| 24  | BA    | 650    | C    | Sidechain |
| 24  | BA    | 658    | C    | Sidechain |
| 24  | BA    | 67     | U    | Sidechain |
| 24  | BA    | 670    | A    | Sidechain |
| 24  | BA    | 679    | C    | Sidechain |
| 24  | BA    | 697    | C    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type | Group     |
|-----|-------|-----|------|-----------|
| 24  | BA    | 703 | U    | Sidechain |
| 24  | BA    | 704 | G    | Sidechain |
| 24  | BA    | 709 | U    | Sidechain |
| 24  | BA    | 715 | G    | Sidechain |
| 24  | BA    | 724 | U    | Sidechain |
| 24  | BA    | 729 | G    | Sidechain |
| 24  | BA    | 730 | C    | Sidechain |
| 24  | BA    | 733 | G    | Sidechain |
| 24  | BA    | 744 | G    | Sidechain |
| 24  | BA    | 750 | A    | Sidechain |
| 24  | BA    | 758 | C    | Sidechain |
| 24  | BA    | 76  | C    | Sidechain |
| 24  | BA    | 762 | U    | Sidechain |
| 24  | BA    | 767 | U    | Sidechain |
| 24  | BA    | 774 | A    | Sidechain |
| 24  | BA    | 775 | G    | Sidechain |
| 24  | BA    | 776 | G    | Sidechain |
| 24  | BA    | 779 | U    | Sidechain |
| 24  | BA    | 786 | C    | Sidechain |
| 24  | BA    | 792 | G    | Sidechain |
| 24  | BA    | 795 | C    | Sidechain |
| 24  | BA    | 800 | A    | Sidechain |
| 24  | BA    | 801 | G    | Sidechain |
| 24  | BA    | 805 | G    | Sidechain |
| 24  | BA    | 807 | U    | Sidechain |
| 24  | BA    | 811 | U    | Sidechain |
| 24  | BA    | 821 | A    | Sidechain |
| 24  | BA    | 830 | G    | Sidechain |
| 24  | BA    | 832 | G    | Sidechain |
| 24  | BA    | 835 | A    | Sidechain |
| 24  | BA    | 843 | G    | Sidechain |
| 24  | BA    | 847 | U    | Sidechain |
| 24  | BA    | 848 | G    | Sidechain |
| 24  | BA    | 858 | U    | Sidechain |
| 24  | BA    | 860 | U    | Sidechain |
| 24  | BA    | 865 | C    | Sidechain |
| 24  | BA    | 879 | G    | Sidechain |
| 24  | BA    | 9   | U    | Sidechain |
| 24  | BA    | 904 | C    | Sidechain |
| 24  | BA    | 907 | U    | Sidechain |
| 24  | BA    | 913 | U    | Sidechain |
| 24  | BA    | 915 | C    | Sidechain |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | Group     |
|-----|-------|--------|------|-----------|
| 24  | BA    | 922    | U    | Sidechain |
| 24  | BA    | 924    | C    | Sidechain |
| 24  | BA    | 930    | U    | Sidechain |
| 24  | BA    | 931    | G    | Sidechain |
| 24  | BA    | 944    | G    | Sidechain |
| 24  | BA    | 946    | G    | Sidechain |
| 24  | BA    | 955    | C    | Sidechain |
| 24  | BA    | 965    | C    | Sidechain |
| 24  | BA    | 969    | U    | Sidechain |
| 24  | BA    | 971    | C    | Sidechain |
| 24  | BA    | 972    | G    | Sidechain |
| 24  | BA    | 974(A) | C    | Sidechain |
| 24  | BA    | 978    | G    | Sidechain |
| 24  | BA    | 980    | A    | Sidechain |
| 24  | BA    | 981    | A    | Sidechain |
| 24  | BA    | 986    | C    | Sidechain |
| 24  | BA    | 987    | G    | Sidechain |
| 24  | BA    | 990    | A    | Sidechain |
| 25  | BB    | 10     | C    | Sidechain |
| 25  | BB    | 101    | A    | Sidechain |
| 25  | BB    | 109    | G    | Sidechain |
| 25  | BB    | 11     | C    | Sidechain |
| 25  | BB    | 33     | G    | Sidechain |
| 25  | BB    | 34     | U    | Sidechain |
| 25  | BB    | 55     | U    | Sidechain |
| 25  | BB    | 60     | C    | Sidechain |
| 25  | BB    | 68     | C    | Sidechain |
| 25  | BB    | 7      | G    | Sidechain |
| 25  | BB    | 71     | C    | Sidechain |
| 25  | BB    | 77     | U    | Sidechain |
| 25  | BB    | 8      | U    | Sidechain |
| 25  | BB    | 89     | G    | Sidechain |
| 25  | BB    | 90     | C    | Sidechain |
| 25  | BB    | 93     | C    | Sidechain |
| 25  | BB    | 97     | G    | Sidechain |
| 25  | BB    | 98     | G    | Sidechain |
| 26  | BC    | 179    | SER  | Mainchain |
| 28  | BE    | 151    | TYR  | Sidechain |
| 34  | BM    | 4      | TYR  | Sidechain |
| 37  | BP    | 93     | TYR  | Sidechain |
| 40  | BS    | 32     | TYR  | Sidechain |
| 42  | BU    | 91     | TYR  | Sidechain |

## 5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | AA    | 32554 | 0        | 16431    | 6725    | 0            |
| 2   | A1    | 1025  | 0        | 511      | 175     | 0            |
| 3   | AB    | 1623  | 0        | 821      | 224     | 0            |
| 3   | AC    | 1623  | 0        | 821      | 321     | 0            |
| 3   | AD    | 1623  | 0        | 821      | 289     | 0            |
| 4   | AE    | 1900  | 0        | 1951     | 1080    | 0            |
| 5   | AF    | 1612  | 0        | 1677     | 745     | 0            |
| 6   | AG    | 1703  | 0        | 1763     | 900     | 0            |
| 7   | AH    | 1146  | 0        | 1207     | 602     | 0            |
| 8   | AI    | 843   | 0        | 857      | 404     | 0            |
| 9   | AJ    | 1257  | 0        | 1296     | 600     | 0            |
| 10  | AK    | 1116  | 0        | 1177     | 742     | 0            |
| 11  | AL    | 1010  | 0        | 1037     | 485     | 0            |
| 12  | AM    | 794   | 0        | 840      | 367     | 0            |
| 13  | AN    | 885   | 0        | 904      | 478     | 0            |
| 14  | AO    | 970   | 0        | 1057     | 524     | 0            |
| 15  | AP    | 997   | 0        | 1072     | 535     | 0            |
| 16  | AQ    | 492   | 0        | 529      | 286     | 0            |
| 17  | AR    | 734   | 0        | 771      | 346     | 0            |
| 18  | AS    | 700   | 0        | 720      | 365     | 0            |
| 19  | AT    | 857   | 0        | 930      | 471     | 0            |
| 20  | AU    | 597   | 0        | 668      | 383     | 0            |
| 21  | AV    | 647   | 0        | 673      | 320     | 0            |
| 22  | AW    | 763   | 0        | 861      | 383     | 0            |
| 23  | AX    | 208   | 0        | 221      | 84      | 0            |
| 24  | BA    | 62218 | 0        | 31356    | 15266   | 0            |
| 25  | BB    | 2641  | 0        | 1337     | 603     | 1            |
| 26  | BC    | 1742  | 0        | 1796     | 749     | 0            |
| 27  | BD    | 2124  | 0        | 2207     | 1521    | 0            |
| 28  | BE    | 1578  | 0        | 1647     | 1118    | 0            |
| 29  | BF    | 1625  | 0        | 1666     | 841     | 0            |
| 30  | BG    | 1482  | 0        | 1546     | 923     | 0            |
| 31  | BH    | 1328  | 0        | 1408     | 716     | 0            |
| 32  | BK    | 1155  | 0        | 1244     | 517     | 0            |
| 33  | BL    | 1025  | 0        | 1074     | 454     | 0            |
| 34  | BM    | 1113  | 0        | 1183     | 809     | 0            |
| 35  | BN    | 932   | 0        | 994      | 731     | 0            |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Non-H  | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|--------|----------|----------|---------|--------------|
| 36  | BO    | 1106   | 0        | 1183     | 809     | 0            |
| 37  | BP    | 1080   | 0        | 1127     | 769     | 0            |
| 38  | BQ    | 960    | 0        | 1021     | 612     | 0            |
| 39  | BR    | 877    | 0        | 938      | 538     | 0            |
| 40  | BS    | 976    | 0        | 1033     | 654     | 0            |
| 41  | BT    | 964    | 0        | 1022     | 755     | 0            |
| 42  | BU    | 779    | 0        | 852      | 584     | 0            |
| 43  | BV    | 876    | 0        | 941      | 468     | 0            |
| 44  | BW    | 742    | 0        | 800      | 376     | 0            |
| 45  | BX    | 844    | 0        | 930      | 433     | 0            |
| 46  | BY    | 1435   | 0        | 1463     | 750     | 0            |
| 47  | BZ    | 670    | 0        | 700      | 360     | 0            |
| 48  | B1    | 567    | 0        | 621      | 327     | 0            |
| 49  | B2    | 469    | 0        | 518      | 329     | 0            |
| 50  | B3    | 581    | 0        | 577      | 403     | 0            |
| 51  | B4    | 445    | 0        | 459      | 282     | 0            |
| 52  | B5    | 426    | 0        | 452      | 286     | 0            |
| 53  | B6    | 430    | 0        | 480      | 282     | 0            |
| 54  | B7    | 515    | 0        | 587      | 403     | 0            |
| 55  | B8    | 307    | 0        | 335      | 154     | 0            |
| All | All   | 151691 | 0        | 103113   | 47112   | 1            |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 186.

All (47112) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:2447:G:C8   | 24:BA:2500:U:H3'  | 1.23                     | 1.61              |
| 24:BA:1202:C:C5   | 24:BA:1203:G:H1'  | 1.39                     | 1.55              |
| 24:BA:1203:G:O6   | 24:BA:1240:U:C2   | 1.66                     | 1.48              |
| 24:BA:2459:A:N3   | 24:BA:2460:U:H1'  | 1.38                     | 1.38              |
| 24:BA:2596:U:H2'  | 27:BD:242:ARG:CZ  | 1.55                     | 1.35              |
| 27:BD:8:PRO:O     | 27:BD:25:THR:HA   | 1.22                     | 1.35              |
| 46:BY:27:VAL:HG23 | 46:BY:85:HIS:NE2  | 1.39                     | 1.34              |
| 35:BN:97:ARG:NH2  | 35:BN:97:ARG:HB2  | 1.44                     | 1.32              |
| 1:AA:38:G:N2      | 1:AA:397:A:H5''   | 1.43                     | 1.32              |
| 50:B3:43:TYR:HA   | 50:B3:61:ARG:NH2  | 1.45                     | 1.32              |
| 50:B3:58:ARG:O    | 50:B3:61:ARG:HB2  | 1.29                     | 1.31              |
| 28:BE:92:THR:CA   | 28:BE:95:ILE:HB   | 1.59                     | 1.31              |
| 37:BP:67:ARG:CZ   | 37:BP:103:MET:HB3 | 1.60                     | 1.30              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 29:BF:19:GLU:C    | 29:BF:20:LEU:HD23 | 1.55                     | 1.30              |
| 32:BK:92:VAL:HB   | 32:BK:120:ILE:O   | 1.25                     | 1.30              |
| 24:BA:1241:A:H5'' | 24:BA:1241:A:N3   | 1.46                     | 1.30              |
| 28:BE:92:THR:HA   | 28:BE:95:ILE:CB   | 1.60                     | 1.30              |
| 35:BN:3:GLN:NE2   | 35:BN:33:ALA:HB3  | 1.45                     | 1.29              |
| 46:BY:27:VAL:HG23 | 46:BY:85:HIS:CE1  | 1.65                     | 1.29              |
| 9:AJ:78:ARG:O     | 9:AJ:84:ASN:HA    | 1.33                     | 1.28              |
| 42:BU:32:THR:HA   | 42:BU:64:HIS:O    | 1.32                     | 1.28              |
| 41:BT:44:ASN:O    | 41:BT:47:TYR:HB2  | 1.31                     | 1.28              |
| 24:BA:1559:G:N1   | 24:BA:1560:G:H4'  | 1.47                     | 1.28              |
| 35:BN:6:THR:O     | 35:BN:20:MET:HA   | 1.29                     | 1.28              |
| 32:BK:87:LYS:HA   | 32:BK:121:LYS:O   | 1.30                     | 1.27              |
| 27:BD:51:VAL:HB   | 27:BD:52:ARG:CZ   | 1.64                     | 1.27              |
| 46:BY:24:LEU:O    | 46:BY:39:VAL:HB   | 1.32                     | 1.27              |
| 24:BA:2447:G:C8   | 24:BA:2500:U:C3'  | 2.19                     | 1.25              |
| 24:BA:1128:A:N6   | 24:BA:2518:A:H61  | 1.31                     | 1.25              |
| 46:BY:27:VAL:CG2  | 46:BY:85:HIS:CE1  | 2.19                     | 1.25              |
| 55:B8:19:ARG:O    | 55:B8:22:ARG:HB2  | 1.31                     | 1.25              |
| 24:BA:2491:U:C6   | 24:BA:2491:U:H3'  | 1.69                     | 1.24              |
| 24:BA:1202:C:C4   | 24:BA:1203:G:H1'  | 1.69                     | 1.24              |
| 1:AA:1443:G:H4'   | 1:AA:1446:A:C5'   | 1.68                     | 1.24              |
| 24:BA:1222:C:H42  | 24:BA:1227:A:N6   | 1.34                     | 1.24              |
| 36:BO:74:GLU:HB3  | 36:BO:111:ARG:O   | 1.37                     | 1.23              |
| 24:BA:2591:C:H2'  | 24:BA:2592:G:C8   | 1.73                     | 1.23              |
| 24:BA:2445:G:H2'  | 24:BA:2446:G:C8   | 1.72                     | 1.23              |
| 39:BR:17:ARG:CZ   | 39:BR:89:ARG:HB2  | 1.67                     | 1.23              |
| 24:BA:2459:A:H2'  | 24:BA:2460:U:O4'  | 1.30                     | 1.23              |
| 34:BM:43:THR:HB   | 34:BM:44:PRO:CD   | 1.70                     | 1.22              |
| 24:BA:2748:A:N3   | 31:BH:67:LEU:HD21 | 1.53                     | 1.22              |
| 1:AA:901:A:C2     | 1:AA:902:G:H1'    | 1.74                     | 1.22              |
| 1:AA:1062:U:H2'   | 1:AA:1063:C:C5    | 1.74                     | 1.21              |
| 18:AS:18:ARG:NH1  | 18:AS:35:LYS:HB2  | 1.53                     | 1.21              |
| 24:BA:1312:U:H2'  | 24:BA:1313:U:O4'  | 1.34                     | 1.21              |
| 29:BF:4:VAL:O     | 29:BF:20:LEU:CD1  | 1.87                     | 1.21              |
| 40:BS:33:LYS:HA   | 40:BS:46:GLU:O    | 1.41                     | 1.21              |
| 41:BT:89:GLU:HB3  | 42:BU:52:VAL:N    | 1.56                     | 1.21              |
| 1:AA:1261:A:H61   | 1:AA:1274:G:H1'   | 1.04                     | 1.21              |
| 38:BQ:77:ARG:HH11 | 38:BQ:77:ARG:HB2  | 1.06                     | 1.21              |
| 24:BA:811:U:O4    | 36:BO:22:GLY:HA3  | 1.37                     | 1.20              |
| 29:BF:19:GLU:O    | 29:BF:20:LEU:HD23 | 1.34                     | 1.20              |
| 1:AA:449:C:C2     | 1:AA:450:G:H1'    | 1.76                     | 1.20              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:931:G:C8    | 24:BA:932:G:H1'   | 1.76                     | 1.20              |
| 24:BA:1206:G:H2'  | 24:BA:1207:C:O4'  | 1.39                     | 1.19              |
| 40:BS:53:ARG:HB2  | 40:BS:65:LYS:O    | 1.42                     | 1.19              |
| 6:AG:19:LEU:HA    | 6:AG:21:LEU:HD12  | 1.20                     | 1.19              |
| 24:BA:2333:A:H1'  | 24:BA:2335:A:N3   | 1.54                     | 1.19              |
| 24:BA:2553:G:N2   | 24:BA:2554:U:H1'  | 1.56                     | 1.19              |
| 27:BD:246:PRO:HD2 | 27:BD:250:TRP:HB3 | 1.21                     | 1.19              |
| 40:BS:32:TYR:O    | 40:BS:47:GLY:HA2  | 1.41                     | 1.19              |
| 50:B3:65:ASP:HA   | 50:B3:68:ARG:HH22 | 1.06                     | 1.19              |
| 38:BQ:32:GLY:O    | 38:BQ:115:GLU:HB2 | 1.39                     | 1.19              |
| 1:AA:41:G:H2'     | 1:AA:42:G:H8      | 1.08                     | 1.18              |
| 32:BK:93:THR:HG22 | 32:BK:96:ASP:CG   | 1.68                     | 1.18              |
| 41:BT:15:LYS:HA   | 41:BT:18:LEU:HD23 | 1.25                     | 1.18              |
| 10:AK:6:ILE:HG23  | 10:AK:7:ALA:H     | 1.06                     | 1.18              |
| 24:BA:2375:G:H21  | 24:BA:2378:A:N6   | 1.41                     | 1.18              |
| 29:BF:7:TYR:O     | 29:BF:18:ARG:HG3  | 1.44                     | 1.18              |
| 35:BN:25:LEU:HB3  | 35:BN:38:VAL:O    | 1.38                     | 1.18              |
| 15:AP:24:GLY:HA3  | 15:AP:66:LEU:HB2  | 1.26                     | 1.18              |
| 24:BA:280:C:O3'   | 24:BA:281:G:H3'   | 1.40                     | 1.18              |
| 36:BO:73:GLY:HA2  | 36:BO:111:ARG:NH1 | 1.56                     | 1.18              |
| 24:BA:197:A:N6    | 24:BA:248:G:H22   | 1.41                     | 1.18              |
| 24:BA:586:A:H5'   | 29:BF:89:VAL:HG21 | 1.19                     | 1.18              |
| 24:BA:1203:G:C6   | 24:BA:1241:A:H8   | 1.60                     | 1.18              |
| 24:BA:1475:G:H1   | 24:BA:1477:A:N6   | 1.42                     | 1.18              |
| 49:B2:6:VAL:HG23  | 49:B2:35:ARG:HG3  | 1.22                     | 1.18              |
| 24:BA:729:G:H2'   | 24:BA:730:C:H4'   | 1.18                     | 1.17              |
| 42:BU:27:ALA:HB1  | 42:BU:33:VAL:HG11 | 1.26                     | 1.17              |
| 48:B1:44:LYS:O    | 48:B1:48:LEU:HB2  | 1.41                     | 1.17              |
| 15:AP:23:TYR:HB3  | 15:AP:67:GLU:HA   | 1.27                     | 1.17              |
| 24:BA:2132:U:H3'  | 24:BA:2133:G:C5'  | 1.75                     | 1.17              |
| 27:BD:55:GLY:N    | 27:BD:219:PRO:HD2 | 1.59                     | 1.17              |
| 22:AW:44:ALA:HB3  | 22:AW:91:LEU:HD12 | 1.19                     | 1.17              |
| 24:BA:1804:C:H4'  | 27:BD:250:TRP:CH2 | 1.78                     | 1.17              |
| 27:BD:142:VAL:O   | 27:BD:163:ALA:HB3 | 1.41                     | 1.17              |
| 1:AA:1443:G:C4'   | 1:AA:1446:A:H5'   | 1.73                     | 1.17              |
| 14:AO:36:VAL:O    | 14:AO:58:VAL:HG13 | 1.44                     | 1.17              |
| 24:BA:1677:A:H2'  | 24:BA:1678:G:C8   | 1.80                     | 1.17              |
| 24:BA:2447:G:H5'' | 24:BA:2500:U:OP2  | 1.44                     | 1.17              |
| 37:BP:137:TYR:O   | 37:BP:138:ASP:CG  | 1.86                     | 1.17              |
| 38:BQ:78:LYS:O    | 38:BQ:82:GLU:HB2  | 0.99                     | 1.17              |
| 40:BS:64:ARG:HD3  | 40:BS:65:LYS:H    | 1.05                     | 1.17              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 20:AU:58:LEU:HB3  | 20:AU:62:GLU:HB3   | 1.27                     | 1.17              |
| 24:BA:559:G:H2'   | 24:BA:560:C:C6     | 1.79                     | 1.17              |
| 24:BA:2239:G:H3'  | 24:BA:2240:C:H5''  | 1.23                     | 1.17              |
| 24:BA:2701:C:H3'  | 24:BA:2702:U:H5''  | 1.17                     | 1.17              |
| 37:BP:48:GLU:O    | 37:BP:51:ARG:HG3   | 1.44                     | 1.17              |
| 54:B7:34:TRP:C    | 54:B7:36:LYS:H     | 1.41                     | 1.17              |
| 54:B7:50:LEU:HD23 | 54:B7:51:ALA:H     | 1.08                     | 1.17              |
| 1:AA:665:A:H2'    | 1:AA:725:G:N2      | 1.58                     | 1.16              |
| 12:AM:50:ILE:HA   | 12:AM:60:ARG:HG3   | 1.21                     | 1.16              |
| 21:AV:5:LEU:HB2   | 21:AV:9:VAL:HG22   | 1.17                     | 1.16              |
| 24:BA:1203:G:C6   | 24:BA:1241:A:C8    | 2.33                     | 1.16              |
| 24:BA:2658:C:C2'  | 24:BA:2659:G:H5'   | 1.74                     | 1.16              |
| 34:BM:89:LYS:H    | 34:BM:89:LYS:HE2   | 1.00                     | 1.16              |
| 37:BP:34:LEU:O    | 37:BP:103:MET:HB2  | 1.43                     | 1.16              |
| 42:BU:6:LYS:HB3   | 42:BU:10:LYS:HA    | 1.25                     | 1.16              |
| 52:B5:36:LEU:O    | 52:B5:51:GLU:HB3   | 1.44                     | 1.16              |
| 10:AK:84:ARG:HH11 | 10:AK:84:ARG:HB3   | 1.07                     | 1.16              |
| 24:BA:1270:C:H1'  | 24:BA:1325:G:N7    | 1.58                     | 1.16              |
| 39:BR:62:LYS:HD2  | 39:BR:64:GLU:HB3   | 1.17                     | 1.16              |
| 6:AG:59:ARG:HA    | 6:AG:59:ARG:NH1    | 1.61                     | 1.16              |
| 9:AJ:76:ARG:HB2   | 9:AJ:156:TRP:HE1   | 1.01                     | 1.16              |
| 19:AT:5:VAL:HG22  | 19:AT:60:ILE:HA    | 1.18                     | 1.16              |
| 24:BA:1555:G:H2'  | 24:BA:1556:C:C6    | 1.80                     | 1.16              |
| 37:BP:44:ALA:O    | 37:BP:47:ILE:HB    | 1.40                     | 1.16              |
| 38:BQ:25:ALA:O    | 38:BQ:29:LEU:HG    | 1.42                     | 1.16              |
| 24:BA:28:A:H1'    | 24:BA:513:A:N1     | 1.61                     | 1.16              |
| 50:B3:66:SER:HA   | 50:B3:69:LYS:HD2   | 1.27                     | 1.16              |
| 3:AB:52:G:O4'     | 24:BA:2471:C:H5'   | 1.44                     | 1.16              |
| 9:AJ:126:ASP:HA   | 9:AJ:131:LYS:HE3   | 1.25                     | 1.16              |
| 24:BA:675:A:H4'   | 29:BF:67:GLN:HE22  | 1.06                     | 1.16              |
| 24:BA:1543:A:H3'  | 24:BA:1544:C:H4'   | 1.20                     | 1.16              |
| 27:BD:127:VAL:HA  | 27:BD:193:VAL:HG12 | 1.25                     | 1.16              |
| 28:BE:117:MET:SD  | 28:BE:136:ARG:HG2  | 1.86                     | 1.16              |
| 29:BF:30:PRO:O    | 29:BF:33:LEU:HG    | 1.46                     | 1.16              |
| 47:BZ:5:LYS:HG2   | 47:BZ:6:GLY:H      | 1.05                     | 1.16              |
| 1:AA:953:G:O2'    | 15:AP:125:ARG:HA   | 1.46                     | 1.15              |
| 18:AS:39:TYR:HB2  | 18:AS:49:LEU:HD13  | 1.17                     | 1.15              |
| 34:BM:69:GLN:HE22 | 34:BM:87:LEU:HD22  | 1.10                     | 1.15              |
| 27:BD:181:GLU:HG3 | 27:BD:270:ILE:HB   | 1.26                     | 1.15              |
| 31:BH:38:SER:HB3  | 31:BH:41:MET:HG3   | 1.19                     | 1.15              |
| 42:BU:40:LEU:HG   | 42:BU:55:ALA:N     | 1.60                     | 1.15              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2               | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|----------------------|--------------------------|-------------------|
| 1:AA:266:G:H3'     | 19:AT:67:LYS:HD2     | 1.22                     | 1.15              |
| 1:AA:1405:G:N2     | 1:AA:1517:G:H22      | 1.41                     | 1.15              |
| 24:BA:820:A:H2'    | 24:BA:821:A:H5'      | 1.28                     | 1.15              |
| 24:BA:966:G:H1'    | 24:BA:2267:A:N6      | 1.61                     | 1.15              |
| 24:BA:1202:C:C5    | 24:BA:1203:G:C1'     | 2.29                     | 1.15              |
| 24:BA:1542:G:H1'   | 24:BA:1543:A:C6      | 1.81                     | 1.15              |
| 35:BN:62:VAL:HG23  | 35:BN:83:ALA:HA      | 1.26                     | 1.15              |
| 36:BO:107:LYS:NZ   | 36:BO:110:TYR:HB3    | 1.61                     | 1.15              |
| 38:BQ:86:ARG:HB3   | 38:BQ:86:ARG:HH11    | 1.09                     | 1.15              |
| 42:BU:14:VAL:HG11  | 42:BU:19:LYS:HG3     | 1.26                     | 1.15              |
| 52:B5:20:ASN:HD22  | 52:B5:41:PRO:HB2     | 1.09                     | 1.15              |
| 1:AA:764:C:H2'     | 1:AA:765:G:C8        | 1.81                     | 1.15              |
| 7:AH:48:ALA:CB     | 7:AH:53:LEU:HB3      | 1.77                     | 1.15              |
| 20:AU:74:ARG:HG2   | 20:AU:81:PHE:HB3     | 1.25                     | 1.15              |
| 24:BA:1646:C:H3'   | 24:BA:1647:G:H5'     | 1.23                     | 1.15              |
| 27:BD:142:VAL:HG12 | 27:BD:193:VAL:HA     | 1.28                     | 1.15              |
| 28:BE:116:VAL:HG21 | 28:BE:138:PRO:HA     | 1.17                     | 1.15              |
| 38:BQ:32:GLY:CA    | 38:BQ:116:LEU:HD21   | 1.76                     | 1.15              |
| 46:BY:57:ILE:HG12  | 46:BY:70:LEU:HB3     | 1.16                     | 1.15              |
| 6:AG:31:CYS:SG     | 6:AG:33:MET:SD       | 2.44                     | 1.15              |
| 24:BA:783:A:H5''   | 24:BA:2589:A:OP1     | 1.46                     | 1.15              |
| 24:BA:2416:C:C2'   | 24:BA:2417:C:H5''    | 1.77                     | 1.15              |
| 24:BA:2712:U:H2'   | 24:BA:2712(A):A:H5'' | 1.28                     | 1.15              |
| 25:BB:71:C:C2'     | 25:BB:72:G:H5'       | 1.76                     | 1.15              |
| 45:BX:22:GLY:HA3   | 45:BX:73:ARG:NH1     | 1.60                     | 1.15              |
| 1:AA:888:G:N2      | 1:AA:909:A:H62       | 1.41                     | 1.14              |
| 6:AG:121:VAL:HB    | 6:AG:136:PRO:HG3     | 1.26                     | 1.14              |
| 24:BA:1203:G:C6    | 24:BA:1240:U:C2      | 2.35                     | 1.14              |
| 24:BA:2416:C:H2'   | 24:BA:2417:C:H5''    | 1.16                     | 1.14              |
| 38:BQ:78:LYS:O     | 38:BQ:82:GLU:CB      | 1.94                     | 1.14              |
| 43:BV:19:LEU:HB3   | 51:B4:25:LEU:HD13    | 1.20                     | 1.14              |
| 27:BD:105:ILE:HG13 | 27:BD:106:ILE:HG12   | 1.29                     | 1.14              |
| 32:BK:21:VAL:HB    | 32:BK:26:ALA:HB2     | 1.24                     | 1.14              |
| 41:BT:88:ILE:C     | 42:BU:52:VAL:HA      | 1.70                     | 1.14              |
| 46:BY:24:LEU:HB2   | 46:BY:41:LEU:HD21    | 1.26                     | 1.14              |
| 51:B4:58:LEU:HD22  | 51:B4:59:GLU:H       | 1.03                     | 1.14              |
| 7:AH:31:LEU:HD12   | 7:AH:129:ILE:HG23    | 1.28                     | 1.14              |
| 22:AW:87:LYS:HG3   | 22:AW:91:LEU:HD21    | 1.30                     | 1.14              |
| 24:BA:2034:U:H3'   | 24:BA:2035:G:H5''    | 1.16                     | 1.14              |
| 24:BA:2489:G:H2'   | 24:BA:2490:G:C8      | 1.82                     | 1.14              |
| 24:BA:2581:G:N1    | 24:BA:2610:C:H2'     | 1.62                     | 1.14              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 24:BA:2596:U:H2'   | 27:BD:242:ARG:NH1   | 1.62                     | 1.14              |
| 26:BC:19:ILE:HD12  | 26:BC:223:ARG:HB3   | 1.26                     | 1.14              |
| 27:BD:196:VAL:HG12 | 27:BD:197:GLY:H     | 1.03                     | 1.14              |
| 9:AJ:103:TRP:CH2   | 9:AJ:138:LYS:HA     | 1.81                     | 1.14              |
| 13:AN:57:THR:HG23  | 13:AN:60:ALA:H      | 1.13                     | 1.14              |
| 14:AO:117:ARG:HH21 | 14:AO:124:LYS:HA    | 1.06                     | 1.14              |
| 24:BA:662:G:H4'    | 36:BO:18:ARG:H      | 1.11                     | 1.14              |
| 24:BA:2286:A:H4'   | 24:BA:2287:A:H1'    | 1.29                     | 1.14              |
| 30:BG:61:ALA:HB2   | 30:BG:67:LYS:HB3    | 1.22                     | 1.14              |
| 1:AA:80:G:H2'      | 1:AA:81:G:O4'       | 1.46                     | 1.14              |
| 11:AL:55:ALA:CB    | 11:AL:58:HIS:CE1    | 2.30                     | 1.14              |
| 19:AT:25:ARG:HH21  | 19:AT:40:LYS:HD3    | 1.07                     | 1.14              |
| 28:BE:13:ARG:NH2   | 28:BE:20:ALA:HB3    | 1.61                     | 1.14              |
| 30:BG:68:PRO:HB3   | 30:BG:72:ARG:HH22   | 1.00                     | 1.14              |
| 34:BM:23:LEU:HD12  | 34:BM:63:THR:HG23   | 1.26                     | 1.14              |
| 24:BA:1568:G:OP1   | 27:BD:61:LEU:HB2    | 1.47                     | 1.13              |
| 24:BA:2805:G:H3'   | 24:BA:2807:G:H5''   | 1.26                     | 1.13              |
| 30:BG:170:ARG:O    | 30:BG:174:GLU:HB3   | 1.48                     | 1.13              |
| 39:BR:74:ALA:HB1   | 39:BR:108:GLY:CA    | 1.76                     | 1.13              |
| 40:BS:64:ARG:HA    | 40:BS:64:ARG:NH1    | 1.61                     | 1.13              |
| 21:AV:53:ASN:HD21  | 21:AV:56:GLN:HB2    | 1.05                     | 1.13              |
| 24:BA:1252:G:H8    | 24:BA:1253:A:H1'    | 1.09                     | 1.13              |
| 24:BA:1275:A:H2    | 38:BQ:16:HIS:HA     | 1.11                     | 1.13              |
| 24:BA:2047:U:H2'   | 24:BA:2048:G:H8     | 1.02                     | 1.13              |
| 24:BA:2327:A:H2'   | 24:BA:2328:A:H8     | 1.09                     | 1.13              |
| 24:BA:2431:U:H2'   | 24:BA:2432:A:H5''   | 1.27                     | 1.13              |
| 27:BD:196:VAL:CG1  | 27:BD:197:GLY:H     | 1.61                     | 1.13              |
| 32:BK:4:ILE:O      | 32:BK:36:ALA:HB1    | 1.45                     | 1.13              |
| 32:BK:127:VAL:HG22 | 32:BK:141:LYS:HA    | 1.26                     | 1.13              |
| 40:BS:50:ILE:CB    | 40:BS:66:VAL:HB     | 1.77                     | 1.13              |
| 49:B2:9:VAL:HG23   | 49:B2:10:LYS:H      | 1.07                     | 1.13              |
| 6:AG:55:ALA:O      | 6:AG:59:ARG:HG2     | 1.48                     | 1.13              |
| 14:AO:37:CYS:HA    | 14:AO:58:VAL:HG22   | 1.20                     | 1.13              |
| 24:BA:612:G:H4'    | 24:BA:616:A:N6      | 1.62                     | 1.13              |
| 24:BA:1128:A:H62   | 24:BA:2518:A:N6     | 1.45                     | 1.13              |
| 24:BA:2278:A:OP1   | 37:BP:14:ARG:HG3    | 1.47                     | 1.13              |
| 38:BQ:105:ARG:HA   | 38:BQ:105:ARG:CZ    | 1.79                     | 1.13              |
| 2:A1:29:G:H2'      | 2:A1:30:U:H5''      | 1.18                     | 1.13              |
| 19:AT:5:VAL:HG13   | 19:AT:59:ILE:O      | 1.49                     | 1.13              |
| 24:BA:974:G:H3'    | 24:BA:974(A):C:H5'' | 1.23                     | 1.13              |
| 24:BA:1024:G:N2    | 24:BA:1139:G:H1     | 1.44                     | 1.13              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1956:U:H2'   | 24:BA:1957:C:C6    | 1.83                     | 1.13              |
| 30:BG:19:LEU:HG    | 30:BG:22:ARG:CZ    | 1.77                     | 1.13              |
| 32:BK:54:GLN:HE21  | 32:BK:58:LEU:HG    | 0.96                     | 1.13              |
| 46:BY:176:PRO:HB2  | 46:BY:179:ASP:HA   | 1.14                     | 1.13              |
| 1:AA:551:U:H2'     | 1:AA:552:U:C6      | 1.84                     | 1.13              |
| 1:AA:599:C:H4'     | 10:AK:130:GLY:HA3  | 1.17                     | 1.12              |
| 24:BA:953:A:H2'    | 24:BA:954:G:H5'    | 1.15                     | 1.12              |
| 28:BE:195:LEU:HD13 | 28:BE:196:VAL:N    | 1.60                     | 1.12              |
| 29:BF:200:GLU:OE1  | 29:BF:201:VAL:HG23 | 1.49                     | 1.12              |
| 34:BM:27:ALA:HA    | 34:BM:30:ILE:HD12  | 1.31                     | 1.12              |
| 1:AA:47:C:H4'      | 1:AA:48:C:H5''     | 1.30                     | 1.12              |
| 1:AA:1077:G:N2     | 1:AA:1079:G:H3'    | 1.63                     | 1.12              |
| 24:BA:287:C:H2'    | 24:BA:288:C:C5     | 1.84                     | 1.12              |
| 30:BG:41:GLN:HE22  | 30:BG:155:MET:HG3  | 1.06                     | 1.12              |
| 31:BH:38:SER:H     | 31:BH:41:MET:HE2   | 0.96                     | 1.12              |
| 35:BN:39:ILE:HG12  | 35:BN:59:LYS:HZ1   | 1.11                     | 1.12              |
| 37:BP:109:VAL:HG11 | 37:BP:114:ALA:HB2  | 1.30                     | 1.12              |
| 1:AA:371:G:H2'     | 1:AA:372:C:H5'     | 1.13                     | 1.12              |
| 9:AJ:46:ALA:HA     | 9:AJ:49:ILE:HD13   | 1.29                     | 1.12              |
| 18:AS:75:ARG:HG2   | 18:AS:80:PHE:HB3   | 1.30                     | 1.12              |
| 24:BA:242:G:H3'    | 54:B7:4:MET:HG3    | 1.19                     | 1.12              |
| 24:BA:2332:U:H4'   | 24:BA:2336:A:H62   | 1.07                     | 1.12              |
| 26:BC:97:GLU:HA    | 26:BC:100:ILE:HD12 | 1.30                     | 1.12              |
| 27:BD:169:GLU:HB3  | 27:BD:184:LYS:HZ1  | 1.14                     | 1.12              |
| 27:BD:244:ARG:N    | 27:BD:245:PRO:HD3  | 1.60                     | 1.12              |
| 39:BR:11:LYS:O     | 39:BR:14:VAL:HB    | 1.47                     | 1.12              |
| 40:BS:30:VAL:CG2   | 40:BS:90:GLN:HA    | 1.80                     | 1.12              |
| 45:BX:28:LYS:H     | 45:BX:28:LYS:HE2   | 1.11                     | 1.12              |
| 47:BZ:12:ASN:HA    | 47:BZ:14:ARG:CZ    | 1.78                     | 1.12              |
| 48:B1:52:ILE:HA    | 48:B1:55:LEU:HD22  | 1.29                     | 1.12              |
| 24:BA:269:U:H5''   | 24:BA:270(Y):G:H2' | 1.23                     | 1.12              |
| 24:BA:2447:G:N7    | 24:BA:2500:U:H3'   | 1.62                     | 1.12              |
| 24:BA:2496:C:OP1   | 37:BP:82:ARG:HG3   | 1.46                     | 1.12              |
| 27:BD:7:LYS:HG2    | 27:BD:25:THR:HG22  | 1.15                     | 1.12              |
| 27:BD:168:ARG:HG2  | 27:BD:173:VAL:HG13 | 1.28                     | 1.12              |
| 35:BN:10:VAL:HG13  | 35:BN:11:ALA:H     | 1.06                     | 1.12              |
| 38:BQ:79:LEU:HD23  | 38:BQ:80:PHE:N     | 1.64                     | 1.12              |
| 1:AA:939:G:H5''    | 9:AJ:102:ARG:NH2   | 1.64                     | 1.12              |
| 5:AF:126:ARG:HB3   | 5:AF:128:PHE:HE1   | 1.03                     | 1.12              |
| 13:AN:61:ALA:HB1   | 13:AN:94:ALA:HB2   | 1.13                     | 1.12              |
| 15:AP:48:LEU:HD21  | 15:AP:52:GLU:HB2   | 1.28                     | 1.12              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1466:G:H2'   | 24:BA:1547:C:H41   | 1.10                     | 1.12              |
| 24:BA:2416:C:H5''  | 36:BO:59:LEU:HB2   | 1.16                     | 1.12              |
| 24:BA:2848:G:H22   | 24:BA:2867:G:H1'   | 1.12                     | 1.12              |
| 31:BH:103:LEU:HB2  | 31:BH:115:VAL:HB   | 1.24                     | 1.12              |
| 44:BW:44:GLU:HG3   | 44:BW:51:VAL:HG23  | 1.28                     | 1.12              |
| 1:AA:408:A:H2'     | 1:AA:409:G:C8      | 1.85                     | 1.11              |
| 9:AJ:115:ARG:HB2   | 9:AJ:118:VAL:HG23  | 1.26                     | 1.11              |
| 21:AV:41:VAL:HB    | 21:AV:42:PRO:HD2   | 1.24                     | 1.11              |
| 24:BA:261:G:H4'    | 24:BA:608:A:C2     | 1.84                     | 1.11              |
| 24:BA:270(C):C:H2' | 24:BA:270(D):C:H6  | 1.10                     | 1.11              |
| 24:BA:828:U:H2'    | 24:BA:829:A:H8     | 1.01                     | 1.11              |
| 28:BE:8:LYS:HZ2    | 28:BE:9:VAL:HG13   | 1.15                     | 1.11              |
| 30:BG:130:ASN:O    | 30:BG:159:VAL:HG23 | 1.50                     | 1.11              |
| 34:BM:46:VAL:HG12  | 34:BM:47:ALA:H     | 0.98                     | 1.11              |
| 36:BO:46:LYS:HB2   | 36:BO:49:ARG:HB2   | 1.31                     | 1.11              |
| 38:BQ:99:LYS:HD2   | 38:BQ:99:LYS:H     | 1.05                     | 1.11              |
| 40:BS:50:ILE:HB    | 40:BS:66:VAL:CB    | 1.80                     | 1.11              |
| 40:BS:62:THR:HG22  | 40:BS:79:HIS:CA    | 1.79                     | 1.11              |
| 48:B1:27:LEU:HA    | 48:B1:30:LEU:HG    | 1.24                     | 1.11              |
| 1:AA:587:G:H1'     | 1:AA:755:G:N2      | 1.65                     | 1.11              |
| 1:AA:1080:A:H5'    | 7:AH:14:ARG:NH2    | 1.65                     | 1.11              |
| 2:A1:30:U:H2'      | 2:A1:31:U:O4'      | 1.49                     | 1.11              |
| 4:AE:219:VAL:HG12  | 4:AE:223:ILE:HD11  | 1.25                     | 1.11              |
| 24:BA:1872:A:H2'   | 24:BA:1878:G:H5'   | 1.24                     | 1.11              |
| 24:BA:2148:G:H2'   | 24:BA:2149:G:C8    | 1.86                     | 1.11              |
| 24:BA:2564:A:H2'   | 24:BA:2565:A:C8    | 1.84                     | 1.11              |
| 24:BA:2780:G:N2    | 34:BM:97:ARG:HH12  | 1.46                     | 1.11              |
| 27:BD:44:ASN:HB2   | 27:BD:217:ARG:HH22 | 1.15                     | 1.11              |
| 37:BP:23:GLY:HA3   | 37:BP:101:ARG:NH2  | 1.63                     | 1.11              |
| 3:AC:40:C:H2'      | 3:AC:41:C:H5'      | 1.28                     | 1.11              |
| 3:AD:18:G:H4'      | 3:AD:60:U:H3       | 1.12                     | 1.11              |
| 14:AO:56:ALA:HB3   | 14:AO:68:ALA:O     | 1.45                     | 1.11              |
| 24:BA:221:A:H4'    | 24:BA:222:A:H5'    | 1.15                     | 1.11              |
| 24:BA:1012:U:O4    | 34:BM:25:ARG:HB3   | 1.47                     | 1.11              |
| 24:BA:1520:U:H2'   | 24:BA:1521:G:H5''  | 1.13                     | 1.11              |
| 24:BA:1718:G:H2'   | 24:BA:1725:G:C8    | 1.84                     | 1.11              |
| 24:BA:2416:C:OP1   | 36:BO:59:LEU:HA    | 1.49                     | 1.11              |
| 25:BB:101:A:H2'    | 25:BB:102:G:H8     | 1.13                     | 1.11              |
| 26:BC:100:ILE:HG23 | 26:BC:127:LEU:HG   | 1.28                     | 1.11              |
| 27:BD:246:PRO:CD   | 27:BD:250:TRP:HB3  | 1.80                     | 1.11              |
| 28:BE:104:VAL:HG22 | 28:BE:198:VAL:HG13 | 1.29                     | 1.11              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 39:BR:3:ARG:HG2    | 39:BR:4:LEU:HG     | 1.31                     | 1.11              |
| 41:BT:44:ASN:HD21  | 42:BU:78:LYS:HG2   | 1.05                     | 1.11              |
| 49:B2:4:LEU:HB3    | 49:B2:37:LEU:HD23  | 1.28                     | 1.11              |
| 1:AA:955:U:H1'     | 1:AA:1227:A:H61    | 1.14                     | 1.11              |
| 20:AU:66:LEU:HD12  | 20:AU:67:ALA:N     | 1.65                     | 1.11              |
| 24:BA:775:G:H2'    | 24:BA:794:G:N7     | 1.66                     | 1.11              |
| 24:BA:1324:G:H1'   | 24:BA:1616:A:N6    | 1.65                     | 1.11              |
| 24:BA:2346:A:H1'   | 24:BA:2383:G:C8    | 1.84                     | 1.11              |
| 27:BD:127:VAL:HG13 | 27:BD:194:GLY:HA3  | 1.25                     | 1.11              |
| 31:BH:35:VAL:HG11  | 31:BH:72:ILE:HA    | 1.20                     | 1.11              |
| 43:BV:69:LEU:HD23  | 43:BV:107:LEU:HD21 | 1.33                     | 1.11              |
| 7:AH:109:ILE:HG21  | 7:AH:135:THR:HG21  | 1.18                     | 1.11              |
| 24:BA:452:G:H3'    | 24:BA:453:C:H5''   | 1.24                     | 1.11              |
| 24:BA:636:G:H22    | 36:BO:75:ILE:HD12  | 0.94                     | 1.11              |
| 24:BA:869:G:H2'    | 24:BA:870:A:H5''   | 1.11                     | 1.11              |
| 24:BA:2047:U:H2'   | 24:BA:2048:G:C8    | 1.84                     | 1.11              |
| 24:BA:2254:C:H2'   | 24:BA:2255:G:H5'   | 1.29                     | 1.11              |
| 27:BD:134:ARG:HA   | 27:BD:168:ARG:NH1  | 1.63                     | 1.11              |
| 35:BN:3:GLN:HE22   | 35:BN:33:ALA:CB    | 1.63                     | 1.11              |
| 41:BT:89:GLU:HG2   | 42:BU:52:VAL:HG23  | 1.11                     | 1.11              |
| 50:B3:5:ILE:HG22   | 50:B3:7:PRO:HD2    | 1.18                     | 1.11              |
| 3:AB:74:C:H42      | 24:BA:2555:U:H2'   | 1.03                     | 1.10              |
| 7:AH:121:LYS:NZ    | 7:AH:122:GLU:H     | 1.48                     | 1.10              |
| 7:AH:144:THR:HG22  | 7:AH:146:ALA:H     | 1.11                     | 1.10              |
| 10:AK:22:GLU:HA    | 10:AK:63:LEU:HD22  | 1.33                     | 1.10              |
| 10:AK:37:ARG:HD3   | 10:AK:41:ARG:HG3   | 1.27                     | 1.10              |
| 15:AP:60:VAL:HA    | 15:AP:63:THR:HG22  | 1.32                     | 1.10              |
| 15:AP:97:PRO:HG2   | 15:AP:103:THR:HG22 | 1.15                     | 1.10              |
| 20:AU:72:ARG:HA    | 20:AU:75:ILE:HD12  | 1.28                     | 1.10              |
| 24:BA:112:U:H3'    | 24:BA:113:G:H5''   | 1.12                     | 1.10              |
| 24:BA:364:C:H2'    | 24:BA:365:C:C6     | 1.86                     | 1.10              |
| 24:BA:781:A:H1'    | 27:BD:222:ARG:HH12 | 1.07                     | 1.10              |
| 24:BA:1598:C:H5''  | 44:BW:36:LYS:HB3   | 1.27                     | 1.10              |
| 35:BN:96:THR:HA    | 35:BN:117:LEU:HD11 | 1.26                     | 1.10              |
| 37:BP:7:MET:H      | 37:BP:70:PRO:HG2   | 1.04                     | 1.10              |
| 38:BQ:88:ARG:HB2   | 38:BQ:88:ARG:HH11  | 0.98                     | 1.10              |
| 51:B4:20:ARG:O     | 51:B4:23:HIS:HB2   | 1.49                     | 1.10              |
| 1:AA:371:G:C2'     | 1:AA:372:C:H5'     | 1.80                     | 1.10              |
| 4:AE:56:ARG:NH1    | 4:AE:56:ARG:HB3    | 1.66                     | 1.10              |
| 6:AG:101:LEU:O     | 6:AG:104:VAL:HG22  | 1.49                     | 1.10              |
| 10:AK:86:ILE:HG21  | 10:AK:133:LEU:HB2  | 1.26                     | 1.10              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 11:AL:50:LEU:HD11  | 11:AL:56:LEU:HA    | 1.32                     | 1.10              |
| 14:AO:23:LYS:HE3   | 14:AO:23:LYS:HA    | 1.29                     | 1.10              |
| 20:AU:33:ASP:CG    | 20:AU:34:TYR:H     | 1.57                     | 1.10              |
| 24:BA:220:G:H4'    | 24:BA:234:C:H4'    | 1.28                     | 1.10              |
| 24:BA:2572:A:H4'   | 24:BA:2573:C:H5''  | 1.19                     | 1.10              |
| 26:BC:213:TYR:HB3  | 26:BC:223:ARG:HA   | 1.33                     | 1.10              |
| 40:BS:62:THR:CG2   | 40:BS:79:HIS:HA    | 1.80                     | 1.10              |
| 53:B6:21:ARG:HB3   | 53:B6:31:LEU:HD11  | 1.30                     | 1.10              |
| 40:BS:54:ARG:HG2   | 40:BS:100:TYR:HB3  | 1.29                     | 1.10              |
| 48:B1:55:LEU:O     | 48:B1:58:VAL:HG13  | 1.51                     | 1.10              |
| 53:B6:32:LYS:HA    | 53:B6:35:ARG:HH11  | 1.06                     | 1.10              |
| 1:AA:313:A:H2'     | 1:AA:314:C:C6      | 1.85                     | 1.10              |
| 4:AE:213:LEU:HD22  | 4:AE:214:ILE:HD13  | 1.29                     | 1.10              |
| 6:AG:20:TYR:HA     | 6:AG:26:CYS:SG     | 1.92                     | 1.10              |
| 13:AN:58:PRO:HB2   | 13:AN:93:GLN:HB2   | 1.31                     | 1.10              |
| 24:BA:323:G:H2'    | 29:BF:170:LEU:HB2  | 1.34                     | 1.10              |
| 24:BA:965:C:H5'    | 24:BA:2273:A:H1'   | 1.30                     | 1.10              |
| 24:BA:2725:A:H2'   | 24:BA:2726:U:H3'   | 1.30                     | 1.10              |
| 25:BB:46:A:H2'     | 25:BB:47:C:C6      | 1.86                     | 1.10              |
| 26:BC:180:PHE:HB3  | 26:BC:185:LEU:HD21 | 1.30                     | 1.10              |
| 27:BD:183:ARG:HG2  | 27:BD:268:ARG:HB2  | 1.25                     | 1.10              |
| 30:BG:53:LEU:HG    | 30:BG:72:ARG:HD2   | 1.12                     | 1.10              |
| 30:BG:75:LYS:HG2   | 30:BG:84:LYS:HB2   | 1.27                     | 1.10              |
| 32:BK:81:VAL:HB    | 32:BK:88:ILE:HG12  | 1.31                     | 1.10              |
| 34:BM:89:LYS:H     | 34:BM:89:LYS:CE    | 1.62                     | 1.10              |
| 35:BN:39:ILE:HG12  | 35:BN:59:LYS:NZ    | 1.67                     | 1.10              |
| 35:BN:64:ARG:HH12  | 35:BN:77:ILE:HB    | 1.03                     | 1.10              |
| 35:BN:68:GLU:OE2   | 35:BN:76:ALA:HB3   | 1.51                     | 1.10              |
| 52:B5:16:CYS:HB2   | 52:B5:49:HIS:HA    | 1.16                     | 1.10              |
| 4:AE:184:VAL:O     | 4:AE:198:ASP:HB2   | 1.52                     | 1.10              |
| 8:AI:23:LYS:O      | 8:AI:26:ILE:HB     | 1.52                     | 1.10              |
| 22:AW:50:GLU:H     | 22:AW:99:LEU:HD12  | 1.03                     | 1.10              |
| 24:BA:1174:A:H2'   | 24:BA:1175:U:H5''  | 1.30                     | 1.10              |
| 24:BA:2392:A:H1'   | 36:BO:55:ARG:NH1   | 1.66                     | 1.10              |
| 28:BE:8:LYS:HA     | 28:BE:8:LYS:HE2    | 1.33                     | 1.10              |
| 33:BL:23:VAL:HG13  | 33:BL:27:LEU:HD12  | 1.11                     | 1.10              |
| 35:BN:60:ALA:O     | 35:BN:83:ALA:HB1   | 1.51                     | 1.10              |
| 37:BP:106:VAL:HG22 | 37:BP:107:ALA:H    | 1.00                     | 1.10              |
| 42:BU:64:HIS:HB3   | 42:BU:96:ILE:HA    | 1.28                     | 1.10              |
| 43:BV:11:ARG:HB2   | 43:BV:98:LYS:HE3   | 1.30                     | 1.10              |
| 46:BY:4:ARG:HG2    | 46:BY:5:LEU:H      | 1.14                     | 1.10              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 50:B3:7:PRO:HD3   | 50:B3:56:VAL:HG13  | 1.34                     | 1.10              |
| 55:B8:17:ILE:HD12 | 55:B8:26:ILE:HD12  | 1.24                     | 1.10              |
| 55:B8:20:HIS:HB2  | 55:B8:22:ARG:HG3   | 1.30                     | 1.10              |
| 1:AA:677:U:H2'    | 1:AA:678:U:C5      | 1.86                     | 1.09              |
| 1:AA:684:A:H4'    | 13:AN:12:ARG:HH22  | 1.13                     | 1.09              |
| 1:AA:761:G:H5'    | 19:AT:102:GLY:HA3  | 1.30                     | 1.09              |
| 4:AE:59:GLU:HB3   | 4:AE:221:LEU:HD21  | 1.29                     | 1.09              |
| 4:AE:88:ALA:HB2   | 4:AE:219:VAL:HG22  | 1.13                     | 1.09              |
| 6:AG:82:ALA:HB3   | 6:AG:89:THR:HG23   | 1.34                     | 1.09              |
| 16:AQ:58:LYS:HD3  | 16:AQ:59:ALA:N     | 1.67                     | 1.09              |
| 21:AV:69:HIS:HB2  | 21:AV:74:PHE:HZ    | 1.17                     | 1.09              |
| 24:BA:2421:G:H2'  | 24:BA:2422:A:C8    | 1.87                     | 1.09              |
| 30:BG:148:MET:HG2 | 30:BG:151:ALA:HA   | 1.17                     | 1.09              |
| 41:BT:98:LEU:HD12 | 41:BT:105:VAL:HG21 | 1.34                     | 1.09              |
| 1:AA:263:A:H2'    | 1:AA:264:U:H5''    | 1.19                     | 1.09              |
| 24:BA:265:A:H8    | 24:BA:265:A:H3'    | 1.08                     | 1.09              |
| 24:BA:1114:G:N2   | 24:BA:1115:G:H1'   | 1.65                     | 1.09              |
| 24:BA:1488:G:H2'  | 24:BA:1489:U:H5'   | 1.33                     | 1.09              |
| 24:BA:1535:U:H2'  | 24:BA:1536:A:O4'   | 1.51                     | 1.09              |
| 24:BA:1967:C:H42  | 24:BA:1968:G:N2    | 1.48                     | 1.09              |
| 24:BA:2371:G:H4'  | 52:B5:46:HIS:HB3   | 1.34                     | 1.09              |
| 24:BA:2564:A:H2'  | 24:BA:2565:A:H8    | 1.04                     | 1.09              |
| 24:BA:2581:G:H1   | 24:BA:2610:C:H2'   | 0.97                     | 1.09              |
| 24:BA:2645:G:H4'  | 24:BA:2732:G:O2'   | 1.49                     | 1.09              |
| 24:BA:2748:A:H1'  | 31:BH:67:LEU:HD22  | 1.27                     | 1.09              |
| 25:BB:71:C:H2'    | 25:BB:72:G:H5'     | 1.18                     | 1.09              |
| 26:BC:22:ILE:HG21 | 26:BC:190:ARG:HH12 | 1.16                     | 1.09              |
| 28:BE:13:ARG:HG3  | 28:BE:22:PRO:HD3   | 1.15                     | 1.09              |
| 35:BN:64:ARG:HH11 | 35:BN:67:LYS:N     | 1.50                     | 1.09              |
| 43:BV:13:SER:OG   | 43:BV:14:PRO:HD2   | 1.50                     | 1.09              |
| 50:B3:68:ARG:HH11 | 50:B3:68:ARG:N     | 1.49                     | 1.09              |
| 20:AU:70:ILE:HG22 | 20:AU:74:ARG:HE    | 1.18                     | 1.09              |
| 24:BA:712:G:H2'   | 24:BA:713:G:H8     | 0.98                     | 1.09              |
| 24:BA:1405:U:H2'  | 24:BA:1406:U:C6    | 1.86                     | 1.09              |
| 24:BA:1613:G:H3'  | 24:BA:1614:A:H5'   | 1.32                     | 1.09              |
| 24:BA:2572:A:H4'  | 24:BA:2573:C:C5'   | 1.81                     | 1.09              |
| 28:BE:146:THR:HB  | 28:BE:147:PRO:HD3  | 1.30                     | 1.09              |
| 31:BH:98:LEU:HG   | 31:BH:123:PHE:HB2  | 1.33                     | 1.09              |
| 46:BY:176:PRO:CB  | 46:BY:179:ASP:HA   | 1.82                     | 1.09              |
| 52:B5:19:ARG:NH1  | 52:B5:41:PRO:HG3   | 1.66                     | 1.09              |
| 54:B7:56:GLU:CD   | 54:B7:56:GLU:H     | 1.57                     | 1.09              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 4:AE:174:VAL:O     | 4:AE:178:ARG:HG2   | 1.50                     | 1.09              |
| 5:AF:150:LYS:HB2   | 5:AF:173:VAL:HG21  | 1.33                     | 1.09              |
| 17:AR:62:GLN:HE21  | 17:AR:66:LEU:HD21  | 1.09                     | 1.09              |
| 24:BA:270(X):G:H2' | 24:BA:270(Y):G:H5' | 1.32                     | 1.09              |
| 24:BA:1050:A:H2    | 24:BA:2751:G:H5'   | 1.12                     | 1.09              |
| 24:BA:1085:A:H1'   | 24:BA:1086:A:H4'   | 1.32                     | 1.09              |
| 24:BA:1754:C:O2    | 24:BA:1755:A:H1'   | 1.50                     | 1.09              |
| 24:BA:1788:C:H2'   | 27:BD:222:ARG:NH2  | 1.66                     | 1.09              |
| 24:BA:2148:G:H2'   | 24:BA:2149:G:H8    | 1.00                     | 1.09              |
| 24:BA:2654:A:H1'   | 24:BA:2656:U:O4    | 1.51                     | 1.09              |
| 27:BD:146:GLU:HB2  | 27:BD:154:LYS:H    | 1.15                     | 1.09              |
| 27:BD:147:LEU:HG   | 27:BD:154:LYS:HD2  | 1.25                     | 1.09              |
| 29:BF:197:ASP:HA   | 29:BF:200:GLU:CG   | 1.81                     | 1.09              |
| 30:BG:49:ASP:O     | 30:BG:53:LEU:HB2   | 1.52                     | 1.09              |
| 30:BG:91:ARG:HB2   | 30:BG:91:ARG:HH21  | 1.05                     | 1.09              |
| 30:BG:92:VAL:HG13  | 30:BG:94:LEU:HD13  | 1.25                     | 1.09              |
| 35:BN:19:ILE:HG22  | 35:BN:43:VAL:HA    | 1.34                     | 1.09              |
| 46:BY:98:MET:HG3   | 46:BY:133:ILE:HG21 | 1.35                     | 1.09              |
| 52:B5:19:ARG:HG2   | 52:B5:19:ARG:HH11  | 1.12                     | 1.09              |
| 1:AA:38:G:H22      | 1:AA:397:A:C5'     | 1.66                     | 1.09              |
| 1:AA:570:G:H5'     | 1:AA:820:U:H1'     | 1.33                     | 1.09              |
| 3:AB:63:G:H4'      | 24:BA:2482:G:O3'   | 1.49                     | 1.09              |
| 8:AI:6:VAL:HG22    | 8:AI:8:ILE:HD11    | 1.33                     | 1.09              |
| 24:BA:545:G:H1'    | 24:BA:549:G:H22    | 1.14                     | 1.09              |
| 24:BA:1475:G:N1    | 24:BA:1477:A:N6    | 2.01                     | 1.09              |
| 24:BA:2344:U:H5''  | 52:B5:38:LYS:HG3   | 1.14                     | 1.09              |
| 24:BA:2421:G:H2'   | 24:BA:2422:A:H8    | 1.04                     | 1.09              |
| 28:BE:36:ARG:HG3   | 28:BE:79:ARG:HH11  | 1.06                     | 1.09              |
| 28:BE:45:THR:HB    | 28:BE:81:ILE:HA    | 1.10                     | 1.09              |
| 31:BH:104:GLU:O    | 31:BH:113:VAL:HB   | 1.52                     | 1.09              |
| 35:BN:62:VAL:O     | 35:BN:63:VAL:HG22  | 1.52                     | 1.09              |
| 41:BT:55:ARG:HG3   | 41:BT:58:ARG:HH21  | 1.05                     | 1.09              |
| 1:AA:678:U:H2'     | 1:AA:679:C:C6      | 1.87                     | 1.08              |
| 1:AA:770:C:H1'     | 1:AA:900:A:H2      | 1.12                     | 1.08              |
| 1:AA:1107:C:H2'    | 1:AA:1108:G:H5'    | 1.09                     | 1.08              |
| 3:AC:6:G:H2'       | 3:AC:7:A:H8        | 1.15                     | 1.08              |
| 5:AF:38:ARG:HB3    | 5:AF:38:ARG:HH11   | 0.94                     | 1.08              |
| 5:AF:189:ALA:HB1   | 5:AF:196:LEU:HG    | 1.17                     | 1.08              |
| 9:AJ:155:ARG:HA    | 9:AJ:155:ARG:CZ    | 1.82                     | 1.08              |
| 10:AK:34:GLU:O     | 10:AK:37:ARG:HB3   | 1.53                     | 1.08              |
| 10:AK:87:SER:HB2   | 10:AK:92:ARG:HA    | 1.18                     | 1.08              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 16:AQ:45:ARG:HB2   | 16:AQ:45:ARG:HH11  | 1.17                     | 1.08              |
| 17:AR:77:ARG:HH12  | 17:AR:81:LEU:HB2   | 1.08                     | 1.08              |
| 24:BA:1813:G:H4'   | 27:BD:46:GLN:CB    | 1.80                     | 1.08              |
| 24:BA:2025:C:H5'   | 34:BM:78:TYR:OH    | 1.54                     | 1.08              |
| 29:BF:18:ARG:O     | 29:BF:19:GLU:HG3   | 1.50                     | 1.08              |
| 30:BG:148:MET:HG2  | 30:BG:151:ALA:CA   | 1.82                     | 1.08              |
| 34:BM:28:THR:O     | 34:BM:31:ALA:HB3   | 1.53                     | 1.08              |
| 35:BN:122:LEU:N    | 40:BS:70:VAL:HG12  | 1.67                     | 1.08              |
| 45:BX:42:VAL:H     | 45:BX:61:ILE:HB    | 1.11                     | 1.08              |
| 46:BY:55:HIS:CB    | 46:BY:101:PRO:HG3  | 1.83                     | 1.08              |
| 49:B2:3:ARG:NH1    | 49:B2:3:ARG:HB3    | 1.66                     | 1.08              |
| 1:AA:262:A:H2'     | 1:AA:263:A:C8      | 1.87                     | 1.08              |
| 1:AA:558:G:H3'     | 1:AA:559:A:H5''    | 1.26                     | 1.08              |
| 15:AP:82:MET:HE1   | 15:AP:93:ARG:HA    | 1.28                     | 1.08              |
| 24:BA:858:U:O2'    | 24:BA:2268:A:H2'   | 1.53                     | 1.08              |
| 24:BA:911:A:H8     | 24:BA:2264:C:H1'   | 1.08                     | 1.08              |
| 24:BA:976:C:H5'    | 24:BA:1156:A:H62   | 0.98                     | 1.08              |
| 24:BA:1024:G:H5''  | 24:BA:1025:G:C5'   | 1.82                     | 1.08              |
| 24:BA:1788:C:H2'   | 27:BD:222:ARG:HH21 | 1.09                     | 1.08              |
| 28:BE:105:THR:HB   | 28:BE:166:THR:HB   | 1.29                     | 1.08              |
| 28:BE:118:LYS:HA   | 28:BE:118:LYS:HE2  | 1.35                     | 1.08              |
| 29:BF:164:ARG:HB2  | 29:BF:177:ALA:HB2  | 1.30                     | 1.08              |
| 36:BO:45:LEU:HD23  | 36:BO:46:LYS:HG3   | 1.27                     | 1.08              |
| 37:BP:34:LEU:HA    | 37:BP:131:ILE:HG12 | 1.23                     | 1.08              |
| 39:BR:3:ARG:HG2    | 39:BR:4:LEU:H      | 1.04                     | 1.08              |
| 41:BT:112:ARG:HH12 | 42:BU:50:PRO:HG3   | 0.95                     | 1.08              |
| 44:BW:32:PRO:HA    | 44:BW:77:LYS:HD2   | 1.35                     | 1.08              |
| 46:BY:94:GLU:H     | 46:BY:95:PRO:HD3   | 1.12                     | 1.08              |
| 50:B3:18:CYS:H     | 50:B3:33:VAL:HB    | 1.10                     | 1.08              |
| 54:B7:5:LYS:CB     | 54:B7:60:LEU:HA    | 1.83                     | 1.08              |
| 13:AN:48:ILE:HD12  | 13:AN:63:LEU:HD22  | 1.31                     | 1.08              |
| 24:BA:1637:A:H4'   | 24:BA:2711:A:O2'   | 1.52                     | 1.08              |
| 27:BD:37:LEU:HD22  | 27:BD:64:ILE:HG22  | 1.10                     | 1.08              |
| 29:BF:36:VAL:HG21  | 29:BF:183:VAL:HG21 | 1.36                     | 1.08              |
| 35:BN:4:PRO:HG2    | 35:BN:5:GLN:H      | 1.14                     | 1.08              |
| 37:BP:23:GLY:HA3   | 37:BP:101:ARG:HH21 | 0.99                     | 1.08              |
| 37:BP:66:ILE:HG22  | 37:BP:67:ARG:H     | 0.92                     | 1.08              |
| 40:BS:48:ILE:HD13  | 40:BS:50:ILE:HD13  | 1.35                     | 1.08              |
| 43:BV:59:VAL:HA    | 43:BV:63:ASP:HA    | 1.27                     | 1.08              |
| 54:B7:8:LYS:HD3    | 54:B7:11:LYS:HZ2   | 1.10                     | 1.08              |
| 1:AA:815:A:H1'     | 1:AA:817:C:N4      | 1.68                     | 1.08              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1477:C:H2'    | 1:AA:1478:C:H6     | 1.18                     | 1.08              |
| 6:AG:148:VAL:HB    | 6:AG:181:MET:HE3   | 1.21                     | 1.08              |
| 17:AR:71:GLN:HG3   | 17:AR:75:PRO:HB3   | 1.32                     | 1.08              |
| 24:BA:729:G:H2'    | 24:BA:730:C:C4'    | 1.84                     | 1.08              |
| 24:BA:811:U:O2'    | 24:BA:1251:C:H1'   | 1.53                     | 1.08              |
| 24:BA:1566:A:C2    | 27:BD:215:LEU:HD13 | 1.88                     | 1.08              |
| 24:BA:1697:G:H3'   | 24:BA:1698:A:C5'   | 1.80                     | 1.08              |
| 24:BA:2348:U:H3'   | 54:B7:42:ARG:HH22  | 0.98                     | 1.08              |
| 27:BD:5:LYS:HZ3    | 27:BD:31:LYS:NZ    | 1.51                     | 1.08              |
| 27:BD:147:LEU:HB3  | 27:BD:185:VAL:HG22 | 1.28                     | 1.08              |
| 27:BD:196:VAL:HG12 | 27:BD:197:GLY:N    | 1.66                     | 1.08              |
| 28:BE:51:PHE:O     | 28:BE:74:PRO:HB3   | 1.53                     | 1.08              |
| 38:BQ:98:LEU:O     | 38:BQ:112:ALA:HB1  | 1.54                     | 1.08              |
| 41:BT:57:PHE:HA    | 41:BT:60:LEU:HG    | 1.34                     | 1.08              |
| 46:BY:100:VAL:HG21 | 46:BY:137:ILE:HD12 | 1.33                     | 1.08              |
| 20:AU:74:ARG:HB3   | 20:AU:81:PHE:HD2   | 1.10                     | 1.08              |
| 24:BA:684:G:H2'    | 24:BA:687:C:N4     | 1.69                     | 1.08              |
| 24:BA:962:G:H2'    | 24:BA:963:U:C6     | 1.87                     | 1.08              |
| 24:BA:988:A:H62    | 49:B2:13:ILE:HG13  | 1.13                     | 1.08              |
| 24:BA:1520:U:C2'   | 24:BA:1521:G:H5''  | 1.82                     | 1.08              |
| 24:BA:2058:A:H2'   | 24:BA:2059:A:H8    | 1.16                     | 1.08              |
| 30:BG:68:PRO:HB3   | 30:BG:72:ARG:NH2   | 1.67                     | 1.08              |
| 41:BT:50:ARG:HB2   | 41:BT:50:ARG:NH1   | 1.69                     | 1.08              |
| 1:AA:373:A:H1'     | 1:AA:481:G:H1'     | 1.35                     | 1.07              |
| 2:A1:29:G:C2'      | 2:A1:30:U:H5''     | 1.84                     | 1.07              |
| 6:AG:43:HIS:HB3    | 6:AG:46:LYS:HG3    | 1.30                     | 1.07              |
| 20:AU:58:LEU:HB3   | 20:AU:62:GLU:CB    | 1.84                     | 1.07              |
| 24:BA:71:A:H4'     | 24:BA:72:U:H5''    | 1.33                     | 1.07              |
| 24:BA:112:U:H3'    | 24:BA:113:G:C5'    | 1.84                     | 1.07              |
| 24:BA:1255:U:H5'   | 24:BA:1256:G:C5'   | 1.82                     | 1.07              |
| 24:BA:1258:C:H5'   | 29:BF:84:VAL:HG21  | 1.34                     | 1.07              |
| 24:BA:2658:C:H2'   | 24:BA:2659:G:C5'   | 1.82                     | 1.07              |
| 27:BD:6:PHE:O      | 27:BD:27:THR:HA    | 1.53                     | 1.07              |
| 29:BF:157:VAL:HA   | 29:BF:176:LEU:O    | 1.54                     | 1.07              |
| 29:BF:197:ASP:HA   | 29:BF:200:GLU:HG3  | 1.09                     | 1.07              |
| 34:BM:4:TYR:HB2    | 41:BT:64:ARG:HH12  | 1.19                     | 1.07              |
| 34:BM:16:ILE:HD11  | 34:BM:52:VAL:HG22  | 1.17                     | 1.07              |
| 35:BN:59:LYS:HA    | 35:BN:86:ILE:HD12  | 1.35                     | 1.07              |
| 37:BP:124:LYS:HZ2  | 37:BP:124:LYS:HB3  | 0.93                     | 1.07              |
| 43:BV:23:LEU:HD11  | 51:B4:26:THR:O     | 1.54                     | 1.07              |
| 45:BX:14:LEU:HB2   | 45:BX:20:TYR:HA    | 1.32                     | 1.07              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 4:AE:50:GLU:HG3    | 4:AE:200:ILE:O     | 1.52                     | 1.07              |
| 11:AL:85:LEU:HD23  | 11:AL:96:LEU:HD13  | 1.31                     | 1.07              |
| 14:AO:86:ARG:HH12  | 14:AO:119:LYS:HG3  | 1.09                     | 1.07              |
| 20:AU:46:GLU:HB3   | 20:AU:85:LEU:HD13  | 1.37                     | 1.07              |
| 24:BA:1186:G:H3'   | 24:BA:1187:G:H8    | 1.12                     | 1.07              |
| 24:BA:1649:G:H21   | 38:BQ:107:ASP:HB2  | 0.96                     | 1.07              |
| 24:BA:2619:C:H4'   | 28:BE:152:LYS:HA   | 1.11                     | 1.07              |
| 29:BF:104:LYS:HG3  | 29:BF:108:LYS:HZ1  | 1.18                     | 1.07              |
| 29:BF:158:THR:HG21 | 29:BF:196:LEU:H    | 0.98                     | 1.07              |
| 34:BM:74:ARG:HG3   | 34:BM:82:LEU:HD22  | 1.21                     | 1.07              |
| 35:BN:97:ARG:HG3   | 35:BN:117:LEU:HD21 | 1.37                     | 1.07              |
| 36:BO:63:PRO:HB2   | 36:BO:64:LYS:HE2   | 1.34                     | 1.07              |
| 37:BP:8:LYS:HE3    | 37:BP:93:TYR:HB3   | 1.34                     | 1.07              |
| 41:BT:105:VAL:O    | 41:BT:109:LEU:HG   | 1.53                     | 1.07              |
| 1:AA:43:C:H5''     | 18:AS:12:LYS:HB3   | 1.09                     | 1.07              |
| 1:AA:291:C:H3'     | 1:AA:305:G:H22     | 1.11                     | 1.07              |
| 2:A1:32:U:H2'      | 2:A1:33:U:H6       | 1.09                     | 1.07              |
| 7:AH:78:HIS:HB3    | 10:AK:107:LEU:HD21 | 1.31                     | 1.07              |
| 8:AI:12:PRO:HB3    | 8:AI:58:GLY:HA2    | 1.31                     | 1.07              |
| 17:AR:54:ARG:HA    | 17:AR:57:LEU:HD22  | 1.35                     | 1.07              |
| 24:BA:27:G:H1      | 24:BA:512:G:H2'    | 1.11                     | 1.07              |
| 24:BA:966:G:H1'    | 24:BA:2267:A:H62   | 1.08                     | 1.07              |
| 24:BA:1827:C:H2'   | 24:BA:1828:G:O4'   | 1.53                     | 1.07              |
| 24:BA:2025:C:H2'   | 24:BA:2026:C:C6    | 1.90                     | 1.07              |
| 24:BA:2296:U:H1'   | 24:BA:2335:A:H61   | 1.15                     | 1.07              |
| 25:BB:89(A):A:H2'  | 25:BB:90:C:H5'     | 1.08                     | 1.07              |
| 36:BO:23:PRO:HB2   | 36:BO:28:GLY:HA2   | 1.35                     | 1.07              |
| 41:BT:65:ILE:HD12  | 41:BT:96:ALA:HB2   | 1.35                     | 1.07              |
| 49:B2:13:ILE:HG23  | 49:B2:14:GLY:H     | 1.14                     | 1.07              |
| 53:B6:28:ARG:HA    | 53:B6:31:LEU:HD12  | 1.08                     | 1.07              |
| 1:AA:558:G:C3'     | 1:AA:559:A:H5''    | 1.85                     | 1.07              |
| 1:AA:1242:C:H5''   | 23:AX:10:ARG:HH12  | 1.14                     | 1.07              |
| 1:AA:1277:C:H4'    | 1:AA:1282:C:H1'    | 1.36                     | 1.07              |
| 4:AE:222:ILE:O     | 4:AE:226:ARG:HB2   | 1.53                     | 1.07              |
| 24:BA:443:A:H5'    | 29:BF:45:ARG:NH1   | 1.69                     | 1.07              |
| 24:BA:729:G:C2'    | 24:BA:730:C:H4'    | 1.84                     | 1.07              |
| 24:BA:2243:U:H2'   | 24:BA:2244:U:H6    | 1.12                     | 1.07              |
| 25:BB:76:G:OP2     | 46:BY:11:GLU:HA    | 1.54                     | 1.07              |
| 29:BF:89:VAL:HG12  | 29:BF:90:PHE:H     | 0.99                     | 1.07              |
| 39:BR:63:THR:O     | 39:BR:66:ALA:HB3   | 1.54                     | 1.07              |
| 40:BS:52:ILE:HA    | 40:BS:66:VAL:HG13  | 1.35                     | 1.07              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 42:BU:43:GLU:H     | 42:BU:44:LYS:NZ   | 1.53                     | 1.07              |
| 43:BV:17:VAL:O     | 43:BV:20:VAL:HG12 | 1.53                     | 1.07              |
| 1:AA:559:A:C4'     | 1:AA:560:U:H5'    | 1.82                     | 1.07              |
| 5:AF:20:SER:HB2    | 5:AF:40:ARG:HH22  | 1.13                     | 1.07              |
| 5:AF:182:ILE:HA    | 5:AF:204:LEU:HG   | 1.37                     | 1.07              |
| 12:AM:65:LEU:HD12  | 16:AQ:56:VAL:HG22 | 1.36                     | 1.07              |
| 18:AS:49:LEU:HD11  | 18:AS:51:VAL:HG22 | 1.33                     | 1.07              |
| 22:AW:62:LEU:HA    | 22:AW:65:LYS:HG2  | 1.34                     | 1.07              |
| 24:BA:1625:C:H2'   | 24:BA:1626:G:H4'  | 1.07                     | 1.07              |
| 24:BA:2286:A:H2    | 52:B5:27:LYS:HB3  | 1.13                     | 1.07              |
| 24:BA:2591:C:H2'   | 24:BA:2592:G:H8   | 1.01                     | 1.07              |
| 24:BA:2657:A:C2    | 24:BA:2665:A:H1'  | 1.90                     | 1.07              |
| 24:BA:2832:U:H1'   | 24:BA:2834:G:H21  | 1.13                     | 1.07              |
| 34:BM:15:LEU:HD21  | 34:BM:137:LYS:CA  | 1.84                     | 1.07              |
| 37:BP:44:ALA:HA    | 37:BP:47:ILE:HD12 | 1.35                     | 1.07              |
| 42:BU:17:GLY:HA3   | 42:BU:19:LYS:NZ   | 1.70                     | 1.07              |
| 46:BY:10:ARG:HB3   | 46:BY:36:LYS:HD2  | 1.36                     | 1.07              |
| 1:AA:50:A:H5''     | 1:AA:51:A:H5'     | 1.16                     | 1.06              |
| 1:AA:736:C:H5''    | 20:AU:72:ARG:HH22 | 1.11                     | 1.06              |
| 22:AW:33:ILE:HD13  | 22:AW:63:ILE:HA   | 1.34                     | 1.06              |
| 24:BA:685:A:H5''   | 24:BA:686:G:N2    | 1.70                     | 1.06              |
| 24:BA:786:C:O2'    | 24:BA:787:U:H5'   | 1.54                     | 1.06              |
| 24:BA:1029:A:H2'   | 24:BA:1030:G:O4'  | 1.54                     | 1.06              |
| 24:BA:1203:G:C5    | 24:BA:1241:A:H8   | 1.73                     | 1.06              |
| 24:BA:2025:C:H5'   | 34:BM:78:TYR:HH   | 1.18                     | 1.06              |
| 36:BO:114:ILE:HD13 | 36:BO:129:ALA:O   | 1.54                     | 1.06              |
| 40:BS:64:ARG:HH11  | 40:BS:64:ARG:CA   | 1.67                     | 1.06              |
| 46:BY:55:HIS:HB3   | 46:BY:101:PRO:HG3 | 1.36                     | 1.06              |
| 51:B4:51:TYR:HB3   | 51:B4:55:ARG:HA   | 1.28                     | 1.06              |
| 52:B5:48:VAL:HG13  | 52:B5:49:HIS:H    | 1.20                     | 1.06              |
| 1:AA:781:A:H2'     | 1:AA:782:A:H5'    | 1.35                     | 1.06              |
| 1:AA:926:G:H2'     | 1:AA:1505:G:H21   | 0.99                     | 1.06              |
| 1:AA:959:A:H3'     | 1:AA:960:U:H5''   | 1.37                     | 1.06              |
| 6:AG:74:GLN:HA     | 6:AG:77:ASN:HD22  | 1.13                     | 1.06              |
| 12:AM:23:ILE:HG23  | 12:AM:85:LEU:HD23 | 1.37                     | 1.06              |
| 17:AR:6:GLU:HG2    | 17:AR:7:GLU:H     | 1.11                     | 1.06              |
| 22:AW:12:ALA:H     | 22:AW:13:LEU:HD12 | 1.10                     | 1.06              |
| 24:BA:259:G:H2'    | 24:BA:260:G:H8    | 1.15                     | 1.06              |
| 24:BA:861:A:H62    | 24:BA:916:G:N2    | 1.50                     | 1.06              |
| 24:BA:917:A:H3'    | 24:BA:917:A:H8    | 1.18                     | 1.06              |
| 24:BA:1203:G:H2'   | 24:BA:1203:G:N3   | 1.61                     | 1.06              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1351:C:H2'   | 24:BA:1352:U:H6    | 1.12                     | 1.06              |
| 24:BA:1993:U:H2'   | 24:BA:1994:C:H6    | 1.20                     | 1.06              |
| 24:BA:2058:A:H2'   | 24:BA:2059:A:C8    | 1.89                     | 1.06              |
| 24:BA:2306:C:N3    | 30:BG:46:ALA:HB2   | 1.69                     | 1.06              |
| 27:BD:125:ILE:HG21 | 27:BD:137:PRO:HG3  | 1.37                     | 1.06              |
| 29:BF:110:LEU:HA   | 29:BF:183:VAL:HG22 | 1.35                     | 1.06              |
| 30:BG:107:LEU:O    | 30:BG:111:LEU:HB2  | 1.53                     | 1.06              |
| 33:BL:7:VAL:HG12   | 33:BL:58:THR:HG21  | 1.10                     | 1.06              |
| 33:BL:10:LEU:HD12  | 33:BL:12:LEU:HD11  | 1.32                     | 1.06              |
| 37:BP:83:MET:HE2   | 37:BP:83:MET:O     | 1.53                     | 1.06              |
| 38:BQ:83:ILE:HA    | 38:BQ:86:ARG:HG3   | 1.34                     | 1.06              |
| 39:BR:20:ARG:HB3   | 39:BR:20:ARG:NH2   | 1.70                     | 1.06              |
| 47:BZ:46:LYS:HG3   | 47:BZ:78:TYR:CE2   | 1.90                     | 1.06              |
| 49:B2:45:GLY:HA2   | 49:B2:48:GLU:CD    | 1.80                     | 1.06              |
| 1:AA:611:A:N6      | 1:AA:629:G:H1      | 1.53                     | 1.06              |
| 3:AD:47:U:H2'      | 3:AD:48:C:H5''     | 1.32                     | 1.06              |
| 4:AE:209:ARG:HH12  | 4:AE:213:LEU:HD12  | 1.19                     | 1.06              |
| 9:AJ:73:MET:HE3    | 9:AJ:146:GLU:HB2   | 1.36                     | 1.06              |
| 10:AK:10:LEU:HD11  | 10:AK:85:ARG:HD3   | 1.38                     | 1.06              |
| 24:BA:687:C:H5''   | 53:B6:4:THR:HB     | 1.36                     | 1.06              |
| 24:BA:1819:A:H5''  | 27:BD:178:PRO:HG3  | 1.32                     | 1.06              |
| 24:BA:1933:G:H21   | 24:BA:1974:C:H5'   | 1.17                     | 1.06              |
| 24:BA:1995:U:H5''  | 24:BA:1996:C:C5'   | 1.85                     | 1.06              |
| 25:BB:89:G:H2'     | 25:BB:89(A):A:C8   | 1.90                     | 1.06              |
| 28:BE:127:ASP:HB2  | 28:BE:135:HIS:HA   | 1.35                     | 1.06              |
| 28:BE:171:GLU:HB2  | 28:BE:185:LYS:HZ2  | 1.21                     | 1.06              |
| 29:BF:74:ARG:NE    | 29:BF:75:HIS:H     | 1.52                     | 1.06              |
| 37:BP:42:ILE:HD12  | 37:BP:47:ILE:HG13  | 1.29                     | 1.06              |
| 39:BR:106:ARG:HH12 | 39:BR:110:LEU:HB2  | 1.17                     | 1.06              |
| 41:BT:82:GLY:HA2   | 41:BT:117:GLN:HG2  | 1.37                     | 1.06              |
| 42:BU:36:PRO:HA    | 42:BU:60:GLU:O     | 1.55                     | 1.06              |
| 50:B3:59:PHE:HA    | 50:B3:62:ARG:HD2   | 1.36                     | 1.06              |
| 1:AA:9:G:H5''      | 7:AH:126:ARG:HD3   | 1.29                     | 1.06              |
| 1:AA:1156:G:H1'    | 1:AA:1179:A:H61    | 1.17                     | 1.06              |
| 5:AF:91:LEU:HD21   | 5:AF:98:ASN:HA     | 1.37                     | 1.06              |
| 15:AP:108:ARG:HA   | 15:AP:108:ARG:NH1  | 1.68                     | 1.06              |
| 18:AS:44:THR:HG23  | 18:AS:45:THR:H     | 1.09                     | 1.06              |
| 24:BA:364:C:H2'    | 24:BA:365:C:C5     | 1.90                     | 1.06              |
| 24:BA:861:A:N6     | 24:BA:916:G:H21    | 1.53                     | 1.06              |
| 24:BA:977:G:H2'    | 24:BA:978:G:O4'    | 1.55                     | 1.06              |
| 24:BA:1668:A:N1    | 24:BA:1993:U:H1'   | 1.69                     | 1.06              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2387:U:H1'   | 47:BZ:41:ARG:NH2   | 1.70                     | 1.06              |
| 28:BE:50:GLY:C     | 28:BE:76:ARG:HE    | 1.62                     | 1.06              |
| 29:BF:119:ARG:HB2  | 29:BF:119:ARG:NH2  | 1.69                     | 1.06              |
| 29:BF:119:ARG:HB2  | 29:BF:119:ARG:HH21 | 1.21                     | 1.06              |
| 32:BK:4:ILE:HA     | 32:BK:18:VAL:HG22  | 1.31                     | 1.06              |
| 34:BM:23:LEU:CD1   | 34:BM:63:THR:H     | 1.68                     | 1.06              |
| 35:BN:52:VAL:HG22  | 35:BN:53:LYS:H     | 1.21                     | 1.06              |
| 41:BT:83:LEU:O     | 41:BT:86:ALA:HB3   | 1.55                     | 1.06              |
| 46:BY:165:VAL:HG12 | 46:BY:166:SER:H    | 1.18                     | 1.06              |
| 1:AA:132:C:H5'     | 1:AA:262:A:H1'     | 1.38                     | 1.06              |
| 1:AA:551:U:H5'     | 14:AO:119:LYS:NZ   | 1.71                     | 1.06              |
| 1:AA:926:G:H2'     | 1:AA:1505:G:N2     | 1.71                     | 1.06              |
| 4:AE:42:ILE:HD11   | 4:AE:202:PRO:HB2   | 1.38                     | 1.06              |
| 12:AM:45:ARG:HB3   | 12:AM:45:ARG:HH11  | 1.14                     | 1.06              |
| 12:AM:94:VAL:HG12  | 12:AM:95:GLU:H     | 1.13                     | 1.06              |
| 18:AS:20:VAL:HG22  | 18:AS:35:LYS:HA    | 1.37                     | 1.06              |
| 23:AX:10:ARG:O     | 23:AX:13:ILE:HG22  | 1.55                     | 1.06              |
| 24:BA:1024:G:H5''  | 24:BA:1025:G:H5''  | 1.06                     | 1.06              |
| 24:BA:2544:G:H5'   | 24:BA:2645:G:N7    | 1.71                     | 1.06              |
| 27:BD:68:LYS:HB3   | 27:BD:70:TRP:HE1   | 1.21                     | 1.06              |
| 27:BD:134:ARG:HA   | 27:BD:168:ARG:HH12 | 0.94                     | 1.06              |
| 28:BE:136:ARG:C    | 28:BE:137:HIS:HD1  | 1.61                     | 1.06              |
| 28:BE:173:VAL:HG13 | 28:BE:184:VAL:HA   | 1.32                     | 1.06              |
| 29:BF:6:VAL:HA     | 29:BF:20:LEU:HD21  | 1.34                     | 1.06              |
| 32:BK:5:LEU:HB2    | 32:BK:8:PRO:HD2    | 1.35                     | 1.06              |
| 33:BL:17:ALA:HB1   | 33:BL:38:VAL:HG13  | 1.35                     | 1.06              |
| 34:BM:23:LEU:HD11  | 34:BM:63:THR:H     | 1.14                     | 1.06              |
| 47:BZ:37:LEU:CD1   | 47:BZ:59:LEU:HB3   | 1.86                     | 1.06              |
| 4:AE:69:LEU:HA     | 4:AE:91:PRO:O      | 1.53                     | 1.05              |
| 6:AG:107:ARG:HH11  | 6:AG:107:ARG:HA    | 1.18                     | 1.05              |
| 15:AP:57:ARG:O     | 15:AP:61:GLU:HB2   | 1.54                     | 1.05              |
| 24:BA:828:U:H2'    | 24:BA:829:A:C8     | 1.91                     | 1.05              |
| 24:BA:1241:A:N3    | 24:BA:1241:A:C5'   | 2.18                     | 1.05              |
| 24:BA:1995:U:H5''  | 24:BA:1996:C:H5'   | 1.31                     | 1.05              |
| 24:BA:2491:U:H3'   | 24:BA:2491:U:H6    | 0.98                     | 1.05              |
| 24:BA:2746:U:O4    | 24:BA:2756:U:C5    | 2.09                     | 1.05              |
| 30:BG:60:LEU:HD21  | 30:BG:90:LEU:HD11  | 1.38                     | 1.05              |
| 35:BN:23:ARG:HH11  | 35:BN:23:ARG:HB2   | 1.20                     | 1.05              |
| 37:BP:26:TYR:N     | 37:BP:102:VAL:HB   | 1.71                     | 1.05              |
| 46:BY:151:HIS:HA   | 46:BY:171:ILE:HG22 | 1.38                     | 1.05              |
| 53:B6:21:ARG:HG2   | 53:B6:31:LEU:HD21  | 1.35                     | 1.05              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:978:A:N6      | 1:AA:1361:G:H22    | 1.54                     | 1.05              |
| 1:AA:1236:A:H4'    | 1:AA:1304:G:H4'    | 1.38                     | 1.05              |
| 1:AA:1242:C:O2'    | 1:AA:1303:C:H5''   | 1.55                     | 1.05              |
| 3:AC:6:G:H2'       | 3:AC:7:A:C8        | 1.91                     | 1.05              |
| 11:AL:9:ARG:HD2    | 11:AL:14:VAL:HG22  | 1.38                     | 1.05              |
| 12:AM:8:LEU:HD13   | 12:AM:94:VAL:HG11  | 1.36                     | 1.05              |
| 19:AT:43:LEU:HD22  | 19:AT:44:ALA:N     | 1.71                     | 1.05              |
| 24:BA:251:A:H2'    | 24:BA:252:G:O4'    | 1.55                     | 1.05              |
| 24:BA:477:A:H62    | 24:BA:502:A:N6     | 1.53                     | 1.05              |
| 24:BA:1144:G:H2'   | 24:BA:1145:C:C6    | 1.92                     | 1.05              |
| 29:BF:123:LEU:HD12 | 29:BF:193:VAL:HG22 | 1.38                     | 1.05              |
| 31:BH:43:VAL:HG22  | 31:BH:52:VAL:HA    | 1.11                     | 1.05              |
| 35:BN:122:LEU:HA   | 40:BS:74:ARG:HH12  | 1.11                     | 1.05              |
| 42:BU:61:VAL:O     | 42:BU:99:ILE:HB    | 1.55                     | 1.05              |
| 43:BV:25:ARG:HH21  | 43:BV:74:ALA:N     | 1.54                     | 1.05              |
| 45:BX:47:LYS:HD3   | 45:BX:49:VAL:HG21  | 1.35                     | 1.05              |
| 1:AA:1004:A:H8     | 1:AA:1036:G:O6     | 1.39                     | 1.05              |
| 20:AU:62:GLU:O     | 20:AU:66:LEU:HG    | 1.56                     | 1.05              |
| 24:BA:484:C:H2'    | 24:BA:485:C:C6     | 1.91                     | 1.05              |
| 24:BA:2447:G:O3'   | 24:BA:2499:C:P     | 2.14                     | 1.05              |
| 24:BA:2461:C:H1'   | 24:BA:2492:U:C5    | 1.92                     | 1.05              |
| 24:BA:2507:C:H5''  | 24:BA:2573:C:H41   | 1.20                     | 1.05              |
| 27:BD:5:LYS:HD3    | 27:BD:29:PRO:HB3   | 1.38                     | 1.05              |
| 28:BE:91:VAL:HG21  | 28:BE:93:VAL:HG13  | 1.38                     | 1.05              |
| 29:BF:6:VAL:HA     | 29:BF:20:LEU:CD2   | 1.87                     | 1.05              |
| 35:BN:106:LEU:HB2  | 40:BS:39:ARG:HH22  | 1.20                     | 1.05              |
| 39:BR:73:LEU:O     | 39:BR:76:LYS:HD3   | 1.57                     | 1.05              |
| 39:BR:106:ARG:NH2  | 39:BR:110:LEU:HD22 | 1.72                     | 1.05              |
| 41:BT:76:TYR:CD2   | 41:BT:80:ILE:HD11  | 1.92                     | 1.05              |
| 43:BV:25:ARG:NH2   | 43:BV:74:ALA:H     | 1.55                     | 1.05              |
| 43:BV:56:ALA:O     | 43:BV:60:ASN:HB3   | 1.54                     | 1.05              |
| 1:AA:389:A:H2'     | 1:AA:390:C:H5'     | 1.37                     | 1.05              |
| 1:AA:932:C:H3'     | 9:AJ:3:ARG:HG3     | 1.31                     | 1.05              |
| 1:AA:1417:G:H2'    | 1:AA:1482:G:N2     | 1.72                     | 1.05              |
| 1:AA:1464:G:H2'    | 1:AA:1465:C:C5     | 1.90                     | 1.05              |
| 3:AB:34:G:C2       | 3:AB:35:A:H1'      | 1.92                     | 1.05              |
| 10:AK:29:SER:HB2   | 10:AK:32:LYS:HE2   | 1.36                     | 1.05              |
| 10:AK:91:ARG:HG2   | 19:AT:34:LYS:HB2   | 1.39                     | 1.05              |
| 14:AO:84:LEU:HB3   | 14:AO:104:VAL:HG11 | 1.30                     | 1.05              |
| 24:BA:242:G:H3'    | 54:B7:4:MET:CG     | 1.87                     | 1.05              |
| 24:BA:308:G:C2     | 24:BA:309:G:H1'    | 1.92                     | 1.05              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:326:G:H2'   | 24:BA:327:G:H8     | 1.20                     | 1.05              |
| 24:BA:2063:C:H3'  | 24:BA:2064:C:H5''  | 1.33                     | 1.05              |
| 25:BB:12:C:C6     | 47:BZ:74:ARG:HB2   | 1.91                     | 1.05              |
| 27:BD:63:ARG:NH1  | 27:BD:85:ASP:HB2   | 1.70                     | 1.05              |
| 28:BE:154:LYS:HZ3 | 28:BE:156:MET:HE2  | 1.21                     | 1.05              |
| 34:BM:26:LEU:HG   | 34:BM:30:ILE:HD11  | 1.38                     | 1.05              |
| 37:BP:22:LYS:HD2  | 37:BP:99:PRO:HG3   | 1.36                     | 1.05              |
| 37:BP:42:ILE:HD11 | 37:BP:46:GLN:HB3   | 1.38                     | 1.05              |
| 39:BR:20:ARG:HB3  | 39:BR:20:ARG:HH21  | 0.92                     | 1.05              |
| 42:BU:65:GLY:O    | 42:BU:66:ARG:HG2   | 1.56                     | 1.05              |
| 43:BV:16:LYS:N    | 43:BV:16:LYS:HZ2   | 1.52                     | 1.05              |
| 45:BX:2:ARG:HD2   | 45:BX:3:VAL:H      | 1.19                     | 1.05              |
| 46:BY:144:LEU:HB3 | 46:BY:174:VAL:HG11 | 1.33                     | 1.05              |
| 46:BY:145:GLU:N   | 46:BY:174:VAL:HG21 | 1.71                     | 1.05              |
| 49:B2:3:ARG:HH12  | 49:B2:59:VAL:HB    | 1.17                     | 1.05              |
| 1:AA:765:G:O2'    | 1:AA:766:A:H5'     | 1.56                     | 1.05              |
| 1:AA:1286:A:H5'   | 23:AX:25:LYS:HG2   | 1.35                     | 1.05              |
| 10:AK:10:LEU:O    | 10:AK:13:ILE:HB    | 1.56                     | 1.05              |
| 24:BA:142:G:H4'   | 44:BW:35:THR:HG21  | 1.30                     | 1.05              |
| 24:BA:261:G:H4'   | 24:BA:608:A:H2     | 1.10                     | 1.05              |
| 24:BA:578:A:H2'   | 24:BA:2018:G:H5''  | 1.38                     | 1.05              |
| 24:BA:1182:A:H3'  | 24:BA:1183:G:H3'   | 1.39                     | 1.05              |
| 24:BA:1702:G:H2'  | 24:BA:1703:G:H5''  | 1.05                     | 1.05              |
| 25:BB:102:G:H2'   | 46:BY:73:GLN:HE21  | 1.20                     | 1.05              |
| 44:BW:92:LEU:O    | 44:BW:95:LEU:HB2   | 1.56                     | 1.05              |
| 46:BY:151:HIS:HB3 | 46:BY:170:THR:H    | 1.21                     | 1.05              |
| 48:B1:2:ARG:HA    | 48:B1:5:LEU:HD13   | 1.39                     | 1.05              |
| 1:AA:886:G:O2'    | 1:AA:887:G:H5'     | 1.57                     | 1.04              |
| 1:AA:1004:A:H3'   | 1:AA:1025:U:N3     | 1.71                     | 1.04              |
| 4:AE:55:PHE:HA    | 4:AE:58:ILE:HD12   | 1.35                     | 1.04              |
| 7:AH:89:ILE:HG12  | 7:AH:131:ILE:HD12  | 1.36                     | 1.04              |
| 24:BA:2277:G:H3'  | 24:BA:2278:A:H5''  | 1.39                     | 1.04              |
| 24:BA:2349:G:H3'  | 24:BA:2350:C:H5''  | 1.39                     | 1.04              |
| 24:BA:2447:G:O3'  | 24:BA:2499:C:OP2   | 1.75                     | 1.04              |
| 24:BA:2841:C:H2'  | 24:BA:2842:G:H8    | 1.22                     | 1.04              |
| 32:BK:87:LYS:HE2  | 32:BK:121:LYS:HG3  | 1.34                     | 1.04              |
| 38:BQ:32:GLY:HA2  | 38:BQ:116:LEU:CD2  | 1.87                     | 1.04              |
| 41:BT:53:ARG:HA   | 41:BT:56:ASP:OD2   | 1.56                     | 1.04              |
| 42:BU:6:LYS:HG2   | 42:BU:12:TYR:H     | 1.22                     | 1.04              |
| 53:B6:41:ARG:HB2  | 53:B6:41:ARG:HH11  | 1.17                     | 1.04              |
| 1:AA:50:A:N6      | 1:AA:361:G:H4'     | 1.70                     | 1.04              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:64:G:H4'     | 1:AA:65:U:H5''     | 1.39                     | 1.04              |
| 1:AA:571:U:C3'    | 1:AA:572:A:H5''    | 1.87                     | 1.04              |
| 1:AA:939:G:H5''   | 9:AJ:102:ARG:HH22  | 0.91                     | 1.04              |
| 1:AA:946:A:H2'    | 1:AA:947:G:C8      | 1.92                     | 1.04              |
| 13:AN:32:ILE:HG22 | 13:AN:40:ILE:HD11  | 1.36                     | 1.04              |
| 18:AS:18:ARG:HH12 | 18:AS:35:LYS:CB    | 1.70                     | 1.04              |
| 24:BA:52:A:H2'    | 24:BA:53:A:H8      | 1.21                     | 1.04              |
| 24:BA:215:G:H4'   | 24:BA:216:A:O5'    | 1.53                     | 1.04              |
| 24:BA:1155:A:H2'  | 24:BA:1156:A:H5''  | 1.39                     | 1.04              |
| 24:BA:1204:A:O4'  | 24:BA:1204:A:OP2   | 1.73                     | 1.04              |
| 24:BA:2353:G:H4'  | 47:BZ:32:ARG:HH22  | 1.17                     | 1.04              |
| 24:BA:2681:C:O2'  | 24:BA:2682:U:H5'   | 1.56                     | 1.04              |
| 38:BQ:20:LEU:HD21 | 38:BQ:24:GLN:HG3   | 1.35                     | 1.04              |
| 44:BW:47:PHE:HE2  | 44:BW:89:ILE:HA    | 1.22                     | 1.04              |
| 4:AE:155:LEU:HB2  | 4:AE:159:PRO:HG3   | 1.39                     | 1.04              |
| 11:AL:55:ALA:HB1  | 11:AL:58:HIS:CE1   | 1.90                     | 1.04              |
| 12:AM:30:SER:HB2  | 12:AM:81:THR:HA    | 1.35                     | 1.04              |
| 17:AR:16:ALA:HB1  | 17:AR:21:ASP:HB3   | 1.35                     | 1.04              |
| 17:AR:62:GLN:HA   | 17:AR:65:ARG:NH2   | 1.72                     | 1.04              |
| 24:BA:663:G:H5'   | 36:BO:18:ARG:HB3   | 1.36                     | 1.04              |
| 24:BA:712:G:H2'   | 24:BA:713:G:C8     | 1.91                     | 1.04              |
| 27:BD:87:ASN:N    | 27:BD:87:ASN:HD22  | 1.53                     | 1.04              |
| 28:BE:8:LYS:HD3   | 28:BE:9:VAL:HG22   | 1.36                     | 1.04              |
| 50:B3:5:ILE:HD11  | 50:B3:10:VAL:HG23  | 1.39                     | 1.04              |
| 6:AG:133:VAL:HG11 | 6:AG:138:TYR:HD1   | 1.21                     | 1.04              |
| 7:AH:84:PHE:CZ    | 7:AH:133:TYR:HB3   | 1.93                     | 1.04              |
| 11:AL:42:ARG:HB3  | 11:AL:74:ILE:HD13  | 1.33                     | 1.04              |
| 12:AM:43:ARG:O    | 12:AM:66:ARG:HB2   | 1.58                     | 1.04              |
| 14:AO:93:LEU:HD12 | 14:AO:96:VAL:HG21  | 1.35                     | 1.04              |
| 24:BA:956:G:O6    | 24:BA:958:U:H1'    | 1.57                     | 1.04              |
| 24:BA:1557:C:H2'  | 24:BA:1558:A:H8    | 1.15                     | 1.04              |
| 24:BA:1762:A:H3'  | 24:BA:1762:A:C8    | 1.92                     | 1.04              |
| 24:BA:2431:U:C2'  | 24:BA:2432:A:H5''  | 1.87                     | 1.04              |
| 24:BA:2576:G:H4'  | 24:BA:2577:A:H5'   | 1.07                     | 1.04              |
| 28:BE:173:VAL:CG1 | 28:BE:184:VAL:HA   | 1.86                     | 1.04              |
| 32:BK:69:LYS:HG2  | 32:BK:70:LYS:N     | 1.68                     | 1.04              |
| 39:BR:106:ARG:NH1 | 39:BR:110:LEU:HB2  | 1.73                     | 1.04              |
| 42:BU:28:GLU:HB3  | 42:BU:94:LEU:HD12  | 1.34                     | 1.04              |
| 42:BU:40:LEU:HA   | 42:BU:54:GLY:HA3   | 1.39                     | 1.04              |
| 46:BY:152:ALA:HA  | 46:BY:155:LEU:HD13 | 1.38                     | 1.04              |
| 50:B3:46:GLN:HE22 | 50:B3:69:LYS:HE2   | 1.17                     | 1.04              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:754:C:H5'     | 1:AA:755:G:C8      | 1.93                     | 1.04              |
| 1:AA:1320:C:N4     | 21:AV:36:ARG:HH11  | 1.54                     | 1.04              |
| 6:AG:132:ARG:HG2   | 6:AG:132:ARG:HH11  | 1.21                     | 1.04              |
| 11:AL:19:LEU:HD21  | 11:AL:59:PHE:HB3   | 1.07                     | 1.04              |
| 14:AO:28:LYS:NZ    | 14:AO:33:ARG:HH22  | 1.56                     | 1.04              |
| 16:AQ:26:ARG:HD2   | 16:AQ:47:LEU:HD12  | 1.40                     | 1.04              |
| 16:AQ:29:ARG:HB3   | 16:AQ:29:ARG:HH11  | 1.22                     | 1.04              |
| 24:BA:764:A:H62    | 24:BA:1776:G:H1'   | 1.17                     | 1.04              |
| 24:BA:783:A:H2'    | 24:BA:784:A:H4'    | 1.34                     | 1.04              |
| 24:BA:785:G:H2'    | 24:BA:786:C:C6     | 1.93                     | 1.04              |
| 24:BA:979:G:H3'    | 24:BA:980:A:H5''   | 1.39                     | 1.04              |
| 24:BA:1024:G:C5'   | 24:BA:1025:G:H5''  | 1.86                     | 1.04              |
| 24:BA:2637:U:H5''  | 28:BE:81:ILE:HD11  | 1.40                     | 1.04              |
| 26:BC:115:ALA:HB3  | 26:BC:120:MET:SD   | 1.97                     | 1.04              |
| 30:BG:163:ALA:HB1  | 30:BG:169:ALA:HA   | 1.34                     | 1.04              |
| 35:BN:105:GLU:O    | 35:BN:111:PHE:HZ   | 1.38                     | 1.04              |
| 45:BX:22:GLY:CA    | 45:BX:73:ARG:HH12  | 1.69                     | 1.04              |
| 48:B1:38:GLN:H     | 48:B1:41:GLN:NE2   | 1.55                     | 1.04              |
| 55:B8:2:LYS:CG     | 55:B8:35:ARG:HB2   | 1.87                     | 1.04              |
| 55:B8:10:ILE:HD13  | 55:B8:32:HIS:CD2   | 1.93                     | 1.04              |
| 1:AA:1253:G:H1     | 1:AA:1285:A:N6     | 1.55                     | 1.03              |
| 1:AA:1403:C:H1'    | 1:AA:1500:A:N6     | 1.72                     | 1.03              |
| 5:AF:33:LEU:HD11   | 16:AQ:53:LEU:HA    | 1.38                     | 1.03              |
| 6:AG:12:CYS:HA     | 6:AG:19:LEU:HB2    | 1.37                     | 1.03              |
| 10:AK:12:ARG:HH11  | 10:AK:27:PRO:HD3   | 1.21                     | 1.03              |
| 16:AQ:45:ARG:HH11  | 16:AQ:45:ARG:CB    | 1.71                     | 1.03              |
| 24:BA:371:A:H5''   | 24:BA:423:A:N7     | 1.73                     | 1.03              |
| 24:BA:388:G:H2'    | 24:BA:390:A:N7     | 1.73                     | 1.03              |
| 24:BA:630:G:H5''   | 54:B7:46:ARG:HH12  | 1.20                     | 1.03              |
| 24:BA:785:G:H2'    | 24:BA:786:C:H6     | 1.22                     | 1.03              |
| 24:BA:1255:U:H5'   | 24:BA:1256:G:H5''  | 1.40                     | 1.03              |
| 24:BA:1657:C:H5'   | 28:BE:133:LYS:HD3  | 1.36                     | 1.03              |
| 24:BA:1841:U:H2'   | 24:BA:1842:G:H8    | 1.22                     | 1.03              |
| 24:BA:1911:U:C2'   | 24:BA:1912:A:H5'   | 1.88                     | 1.03              |
| 27:BD:77:ALA:HB1   | 27:BD:95:LEU:HD21  | 1.38                     | 1.03              |
| 28:BE:13:ARG:HG3   | 28:BE:22:PRO:CD    | 1.88                     | 1.03              |
| 31:BH:73:ALA:O     | 31:BH:76:VAL:HG22  | 1.58                     | 1.03              |
| 31:BH:103:LEU:HD13 | 31:BH:115:VAL:HG11 | 1.39                     | 1.03              |
| 38:BQ:46:GLY:O     | 38:BQ:49:ASP:HB3   | 1.58                     | 1.03              |
| 1:AA:37:U:H6       | 1:AA:37:U:H3'      | 1.21                     | 1.03              |
| 1:AA:82:U:H2'      | 1:AA:85:U:H5       | 1.22                     | 1.03              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:962:C:H4'     | 1:AA:1200:C:H41    | 1.18                     | 1.03              |
| 3:AC:28:G:H2'      | 3:AC:29:G:H8       | 1.21                     | 1.03              |
| 4:AE:178:ARG:NE    | 4:AE:196:LEU:HD13  | 1.73                     | 1.03              |
| 5:AF:38:ARG:HB3    | 5:AF:38:ARG:NH1    | 1.70                     | 1.03              |
| 9:AJ:35:LYS:NZ     | 9:AJ:38:LEU:HD22   | 1.73                     | 1.03              |
| 14:AO:24:VAL:HG23  | 14:AO:97:ARG:HG2   | 1.38                     | 1.03              |
| 24:BA:270(P):C:H5' | 32:BK:45:LYS:HG2   | 1.40                     | 1.03              |
| 24:BA:1203:G:C6    | 24:BA:1240:U:N3    | 2.27                     | 1.03              |
| 24:BA:2832:U:H1'   | 24:BA:2834:G:N2    | 1.73                     | 1.03              |
| 26:BC:32:LEU:HB3   | 26:BC:220:PRO:HG2  | 1.35                     | 1.03              |
| 27:BD:61:LEU:HD22  | 27:BD:63:ARG:NH2   | 1.73                     | 1.03              |
| 37:BP:6:ARG:HB2    | 37:BP:44:ALA:HB1   | 1.36                     | 1.03              |
| 37:BP:34:LEU:HB2   | 37:BP:67:ARG:HH22  | 1.23                     | 1.03              |
| 37:BP:42:ILE:HG22  | 37:BP:95:ALA:HB3   | 1.39                     | 1.03              |
| 38:BQ:13:HIS:HB3   | 38:BQ:16:HIS:CD2   | 1.94                     | 1.03              |
| 40:BS:100:TYR:HA   | 40:BS:102:ILE:HD13 | 1.36                     | 1.03              |
| 43:BV:19:LEU:HD22  | 51:B4:25:LEU:HB3   | 1.41                     | 1.03              |
| 43:BV:36:LEU:HD23  | 43:BV:51:LEU:HD21  | 1.39                     | 1.03              |
| 45:BX:52:SER:HB3   | 45:BX:56:PRO:HB3   | 1.39                     | 1.03              |
| 46:BY:30:ASN:HB2   | 46:BY:90:VAL:HG23  | 1.40                     | 1.03              |
| 49:B2:9:VAL:HG22   | 49:B2:53:LEU:C     | 1.81                     | 1.03              |
| 1:AA:559:A:H4'     | 1:AA:560:U:C5'     | 1.87                     | 1.03              |
| 1:AA:571:U:H3'     | 1:AA:572:A:H5''    | 1.05                     | 1.03              |
| 6:AG:141:ARG:HD3   | 6:AG:142:PRO:HD2   | 1.40                     | 1.03              |
| 7:AH:52:PRO:O      | 7:AH:55:VAL:HB     | 1.59                     | 1.03              |
| 10:AK:64:LYS:HG2   | 10:AK:79:VAL:HG21  | 1.36                     | 1.03              |
| 15:AP:88:ARG:HG2   | 15:AP:98:VAL:HG12  | 1.38                     | 1.03              |
| 15:AP:108:ARG:HH11 | 15:AP:108:ARG:CA   | 1.71                     | 1.03              |
| 24:BA:29:U:H2'     | 24:BA:30:G:N7      | 1.72                     | 1.03              |
| 24:BA:519:U:H6     | 24:BA:519:U:H5'    | 1.23                     | 1.03              |
| 24:BA:1700:A:H2'   | 24:BA:1701:A:H5'   | 1.40                     | 1.03              |
| 24:BA:2327:A:H2'   | 24:BA:2328:A:C8    | 1.93                     | 1.03              |
| 25:BB:103:U:H2'    | 25:BB:104:A:H5'    | 1.33                     | 1.03              |
| 27:BD:23:GLU:HB2   | 27:BD:205:VAL:HG12 | 1.35                     | 1.03              |
| 27:BD:76:PRO:O     | 27:BD:98:VAL:HG23  | 1.57                     | 1.03              |
| 27:BD:244:ARG:H    | 27:BD:245:PRO:HD3  | 1.16                     | 1.03              |
| 34:BM:66:LYS:HA    | 34:BM:87:LEU:HD11  | 1.36                     | 1.03              |
| 35:BN:76:ALA:HA    | 40:BS:77:PRO:CD    | 1.88                     | 1.03              |
| 36:BO:65:ARG:NH1   | 36:BO:67:MET:H     | 1.56                     | 1.03              |
| 50:B3:6:HIS:NE2    | 50:B3:55:ARG:HD3   | 1.74                     | 1.03              |
| 1:AA:306:G:H2'     | 1:AA:307:C:H6      | 1.19                     | 1.03              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:355:C:H1'    | 1:AA:388:G:H2'     | 1.40                     | 1.03              |
| 3:AD:19:G:N2      | 3:AD:57:G:H1'      | 1.73                     | 1.03              |
| 4:AE:95:GLN:HE21  | 4:AE:148:TYR:HB3   | 1.23                     | 1.03              |
| 24:BA:1324:G:H3'  | 24:BA:1325:G:H4'   | 1.35                     | 1.03              |
| 24:BA:1965:C:H3'  | 24:BA:1966:A:C8    | 1.93                     | 1.03              |
| 24:BA:2582:G:N2   | 24:BA:2583:G:H1'   | 1.73                     | 1.03              |
| 32:BK:66:GLU:HA   | 32:BK:69:LYS:HD3   | 1.37                     | 1.03              |
| 32:BK:125:GLU:HB3 | 32:BK:143:SER:HB3  | 1.07                     | 1.03              |
| 35:BN:77:ILE:HG21 | 40:BS:65:LYS:HE2   | 1.40                     | 1.03              |
| 42:BU:62:LEU:HD12 | 42:BU:96:ILE:HB    | 1.06                     | 1.03              |
| 49:B2:50:VAL:HG13 | 49:B2:53:LEU:HD12  | 1.39                     | 1.03              |
| 54:B7:14:VAL:O    | 54:B7:15:LYS:HE2   | 1.56                     | 1.03              |
| 55:B8:25:VAL:HB   | 55:B8:34:GLN:HB2   | 1.40                     | 1.03              |
| 1:AA:22:G:H2'     | 1:AA:23:C:C6       | 1.93                     | 1.03              |
| 1:AA:770:C:H1'    | 1:AA:900:A:C2      | 1.91                     | 1.03              |
| 3:AD:75:C:H3'     | 3:AD:76:A:H4'      | 1.39                     | 1.03              |
| 10:AK:14:ARG:NH1  | 10:AK:14:ARG:HB3   | 1.73                     | 1.03              |
| 12:AM:25:GLU:HA   | 12:AM:28:ARG:HD2   | 1.41                     | 1.03              |
| 19:AT:4:LYS:HD2   | 19:AT:5:VAL:H      | 1.18                     | 1.03              |
| 21:AV:18:LYS:HE3  | 21:AV:18:LYS:HA    | 1.37                     | 1.03              |
| 24:BA:104:U:H2'   | 24:BA:105:C:O4'    | 1.57                     | 1.03              |
| 24:BA:424:G:O2'   | 24:BA:425:G:H5'    | 1.59                     | 1.03              |
| 24:BA:445:C:H3'   | 41:BT:3:ARG:HE     | 1.23                     | 1.03              |
| 28:BE:105:THR:HB  | 28:BE:166:THR:CB   | 1.88                     | 1.03              |
| 32:BK:81:VAL:HG13 | 32:BK:144:VAL:HG21 | 1.38                     | 1.03              |
| 34:BM:14:VAL:HG13 | 34:BM:138:LEU:HB3  | 1.40                     | 1.03              |
| 40:BS:10:VAL:O    | 40:BS:13:ARG:HB3   | 1.58                     | 1.03              |
| 40:BS:18:ASP:HB3  | 40:BS:81:PRO:HA    | 1.35                     | 1.03              |
| 41:BT:8:VAL:HG23  | 41:BT:9:VAL:H      | 1.20                     | 1.03              |
| 41:BT:64:ARG:O    | 41:BT:67:ALA:HB3   | 1.58                     | 1.03              |
| 41:BT:112:ARG:NH1 | 42:BU:50:PRO:HG3   | 1.72                     | 1.03              |
| 5:AF:122:GLU:HA   | 5:AF:125:GLU:HG2   | 1.36                     | 1.02              |
| 11:AL:40:LEU:HB3  | 11:AL:42:ARG:HB2   | 1.38                     | 1.02              |
| 14:AO:37:CYS:CA   | 14:AO:58:VAL:HG22  | 1.88                     | 1.02              |
| 24:BA:944:G:H5''  | 24:BA:945:A:H5''   | 1.40                     | 1.02              |
| 26:BC:153:ILE:HA  | 26:BC:156:ILE:HD12 | 1.40                     | 1.02              |
| 27:BD:58:HIS:O    | 27:BD:59:LYS:HG3   | 1.58                     | 1.02              |
| 30:BG:47:LYS:HD3  | 30:BG:72:ARG:C     | 1.84                     | 1.02              |
| 34:BM:53:VAL:HA   | 34:BM:121:LYS:O    | 1.58                     | 1.02              |
| 39:BR:23:ARG:NH1  | 39:BR:42:ASP:HB3   | 1.72                     | 1.02              |
| 50:B3:5:ILE:HG21  | 50:B3:60:GLN:OE1   | 1.59                     | 1.02              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 1:AA:38:G:H22       | 1:AA:397:A:H5''    | 0.86                     | 1.02              |
| 6:AG:50:ARG:HG2     | 6:AG:51:PRO:HD2    | 1.34                     | 1.02              |
| 20:AU:36:ASN:O      | 20:AU:40:LEU:HG    | 1.59                     | 1.02              |
| 24:BA:270(C):C:H2'  | 24:BA:270(D):C:C6  | 1.94                     | 1.02              |
| 24:BA:270(O):U:H5'' | 24:BA:270(P):C:H5  | 1.23                     | 1.02              |
| 24:BA:630:G:H5''    | 54:B7:46:ARG:NH1   | 1.74                     | 1.02              |
| 24:BA:1158:C:H4'    | 49:B2:32:GLN:HE21  | 1.23                     | 1.02              |
| 26:BC:108:MET:HE3   | 26:BC:136:LEU:HD12 | 1.40                     | 1.02              |
| 27:BD:39:LYS:HA     | 27:BD:62:TYR:HB2   | 1.41                     | 1.02              |
| 27:BD:76:PRO:HG2    | 27:BD:98:VAL:HG21  | 1.39                     | 1.02              |
| 28:BE:49:LEU:HD22   | 28:BE:76:ARG:C     | 1.85                     | 1.02              |
| 29:BF:103:LYS:HA    | 29:BF:106:ARG:HG2  | 1.41                     | 1.02              |
| 34:BM:69:GLN:NE2    | 34:BM:87:LEU:HD22  | 1.73                     | 1.02              |
| 35:BN:64:ARG:NH1    | 35:BN:67:LYS:H     | 1.55                     | 1.02              |
| 36:BO:75:ILE:HG22   | 36:BO:115:LEU:HD11 | 1.35                     | 1.02              |
| 37:BP:25:ASP:HB2    | 37:BP:101:ARG:HD2  | 1.39                     | 1.02              |
| 1:AA:1005:A:H5''    | 1:AA:1006:C:C5     | 1.95                     | 1.02              |
| 1:AA:1053:G:H5'     | 1:AA:1054:C:H5'    | 1.40                     | 1.02              |
| 4:AE:155:LEU:CB     | 4:AE:159:PRO:HG3   | 1.89                     | 1.02              |
| 4:AE:178:ARG:HD2    | 4:AE:184:VAL:HG11  | 1.42                     | 1.02              |
| 8:AI:3:ARG:CA       | 8:AI:67:MET:HE1    | 1.89                     | 1.02              |
| 10:AK:95:VAL:HG22   | 10:AK:133:LEU:HD21 | 1.38                     | 1.02              |
| 14:AO:83:VAL:HG22   | 14:AO:84:LEU:H     | 1.24                     | 1.02              |
| 14:AO:88:GLY:H      | 14:AO:98:TYR:HA    | 1.20                     | 1.02              |
| 24:BA:196:A:N1      | 24:BA:828:U:H5''   | 1.72                     | 1.02              |
| 24:BA:616:A:H3'     | 24:BA:616:A:OP2    | 1.60                     | 1.02              |
| 24:BA:1702:G:H2'    | 24:BA:1703:G:C5'   | 1.88                     | 1.02              |
| 24:BA:1718:G:H2'    | 24:BA:1725:G:H8    | 1.15                     | 1.02              |
| 24:BA:1772:G:H2'    | 24:BA:1773:A:H4'   | 1.36                     | 1.02              |
| 24:BA:1780:A:H3'    | 24:BA:1781:C:H5'   | 1.35                     | 1.02              |
| 24:BA:2213:U:H5'    | 24:BA:2215:G:N7    | 1.75                     | 1.02              |
| 31:BH:118:PRO:HD2   | 31:BH:121:ILE:HD13 | 1.42                     | 1.02              |
| 34:BM:46:VAL:HG12   | 34:BM:47:ALA:N     | 1.68                     | 1.02              |
| 35:BN:3:GLN:HG2     | 35:BN:6:THR:HB     | 1.39                     | 1.02              |
| 36:BO:107:LYS:HE2   | 36:BO:110:TYR:HD1  | 1.20                     | 1.02              |
| 37:BP:78:PRO:HB3    | 37:BP:81:VAL:HG23  | 1.41                     | 1.02              |
| 43:BV:20:VAL:HG22   | 43:BV:24:ILE:HD11  | 1.40                     | 1.02              |
| 44:BW:66:LEU:HG     | 44:BW:69:TYR:O     | 1.60                     | 1.02              |
| 50:B3:65:ASP:O      | 50:B3:69:LYS:HG3   | 1.59                     | 1.02              |
| 1:AA:570:G:H1       | 1:AA:866:C:N4      | 1.55                     | 1.02              |
| 1:AA:716:A:H1'      | 13:AN:118:GLY:HA2  | 1.37                     | 1.02              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 4:AE:163:PHE:HA    | 4:AE:185:ILE:O    | 1.59                     | 1.02              |
| 5:AF:52:LEU:HA     | 5:AF:70:VAL:HG22  | 1.41                     | 1.02              |
| 8:AI:52:ILE:HD13   | 8:AI:87:ARG:NH2   | 1.73                     | 1.02              |
| 13:AN:50:TYR:HB3   | 13:AN:55:LYS:HG2  | 1.39                     | 1.02              |
| 19:AT:59:ILE:HD11  | 19:AT:71:PHE:HB3  | 1.38                     | 1.02              |
| 24:BA:586:A:C5'    | 29:BF:89:VAL:HG21 | 1.90                     | 1.02              |
| 24:BA:745:G:O2'    | 24:BA:748:G:H1'   | 1.58                     | 1.02              |
| 24:BA:1438:U:H2'   | 24:BA:1439:A:H5'  | 1.42                     | 1.02              |
| 24:BA:1646:C:H3'   | 24:BA:1647:G:C5'  | 1.89                     | 1.02              |
| 24:BA:2332:U:C4'   | 24:BA:2336:A:H62  | 1.73                     | 1.02              |
| 35:BN:18:LYS:HB3   | 35:BN:45:GLU:HG3  | 1.38                     | 1.02              |
| 39:BR:37:ALA:O     | 39:BR:51:ALA:HB2  | 1.59                     | 1.02              |
| 39:BR:89:ARG:HG3   | 39:BR:90:GLY:H    | 1.24                     | 1.02              |
| 41:BT:70:ARG:HG2   | 41:BT:75:ASN:HA   | 1.35                     | 1.02              |
| 43:BV:78:GLU:CD    | 43:BV:99:ARG:HB3  | 1.83                     | 1.02              |
| 46:BY:2:GLU:OE2    | 46:BY:58:VAL:HB   | 1.59                     | 1.02              |
| 47:BZ:64:ASP:HB3   | 47:BZ:84:LEU:HD13 | 1.36                     | 1.02              |
| 1:AA:12:U:H2'      | 1:AA:13:U:H5      | 1.21                     | 1.02              |
| 1:AA:263:A:C2'     | 1:AA:264:U:H5''   | 1.89                     | 1.02              |
| 1:AA:408:A:H2'     | 1:AA:409:G:H8     | 1.16                     | 1.02              |
| 1:AA:1005:A:H3'    | 1:AA:1006:C:H6    | 1.24                     | 1.02              |
| 1:AA:1192:C:H6     | 1:AA:1192:C:H3'   | 1.25                     | 1.02              |
| 1:AA:1428:A:H2'    | 1:AA:1429:C:C6    | 1.94                     | 1.02              |
| 2:A1:36:U:H4'      | 2:A1:37:U:OP2     | 1.59                     | 1.02              |
| 5:AF:59:ARG:NE     | 5:AF:64:VAL:HA    | 1.74                     | 1.02              |
| 20:AU:21:LYS:HZ1   | 20:AU:23:LYS:HB3  | 1.21                     | 1.02              |
| 24:BA:248:G:N3     | 24:BA:2431:U:H5'  | 1.75                     | 1.02              |
| 24:BA:1111:A:O2'   | 24:BA:1112:G:H1'  | 1.60                     | 1.02              |
| 24:BA:1252:G:C8    | 24:BA:1253:A:H1'  | 1.93                     | 1.02              |
| 24:BA:1475:G:H21   | 24:BA:1476:C:H5'' | 1.23                     | 1.02              |
| 28:BE:111:ARG:N    | 28:BE:161:GLY:HA3 | 1.75                     | 1.02              |
| 29:BF:130:ALA:HB3  | 29:BF:142:TRP:HB2 | 1.05                     | 1.02              |
| 29:BF:192:LEU:HD11 | 29:BF:194:MET:HG3 | 1.42                     | 1.02              |
| 37:BP:66:ILE:CG2   | 37:BP:67:ARG:H    | 1.68                     | 1.02              |
| 37:BP:115:MET:O    | 37:BP:118:LEU:HG  | 1.60                     | 1.02              |
| 44:BW:12:VAL:HB    | 44:BW:27:THR:O    | 1.60                     | 1.02              |
| 52:B5:11:LEU:HD13  | 54:B7:35:GLN:NE2  | 1.75                     | 1.02              |
| 52:B5:24:GLU:HG2   | 54:B7:37:SER:HB2  | 1.37                     | 1.02              |
| 1:AA:91:C:H2'      | 1:AA:92:G:H8      | 1.23                     | 1.01              |
| 1:AA:1064:G:H1'    | 1:AA:1066:C:C4    | 1.94                     | 1.01              |
| 1:AA:1205:U:H4'    | 5:AF:195:VAL:HG13 | 1.41                     | 1.01              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 5:AF:126:ARG:HB3   | 5:AF:128:PHE:CE1  | 1.95                     | 1.01              |
| 6:AG:93:PHE:HA     | 6:AG:96:LEU:HD12  | 1.39                     | 1.01              |
| 8:AI:30:LEU:HA     | 8:AI:75:LEU:HD11  | 1.37                     | 1.01              |
| 10:AK:84:ARG:HB3   | 10:AK:84:ARG:NH1  | 1.75                     | 1.01              |
| 24:BA:325:G:H2'    | 24:BA:326:G:H8    | 1.24                     | 1.01              |
| 24:BA:592:G:O2'    | 54:B7:2:PRO:HA    | 1.60                     | 1.01              |
| 24:BA:627:A:H2'    | 24:BA:628:G:O4'   | 1.59                     | 1.01              |
| 24:BA:976:C:H5'    | 24:BA:1156:A:N6   | 1.75                     | 1.01              |
| 24:BA:1252:G:H22   | 41:BT:37:GLU:HG3  | 1.22                     | 1.01              |
| 24:BA:2122:U:H2'   | 24:BA:2123:G:H5'' | 1.40                     | 1.01              |
| 24:BA:2584:U:H2'   | 24:BA:2585:U:C5   | 1.95                     | 1.01              |
| 27:BD:166:GLN:O    | 27:BD:174:ILE:HB  | 1.58                     | 1.01              |
| 29:BF:34:TRP:HB3   | 29:BF:38:ARG:CZ   | 1.88                     | 1.01              |
| 29:BF:131:GLY:HA2  | 29:BF:138:GLU:HG3 | 1.41                     | 1.01              |
| 37:BP:41:TRP:HA    | 37:BP:95:ALA:O    | 1.59                     | 1.01              |
| 39:BR:95:HIS:N     | 39:BR:99:LYS:HB2  | 1.74                     | 1.01              |
| 53:B6:48:LYS:HG3   | 53:B6:49:ARG:N    | 1.65                     | 1.01              |
| 5:AF:59:ARG:HE     | 5:AF:64:VAL:HA    | 1.26                     | 1.01              |
| 6:AG:106:TYR:HA    | 6:AG:111:ALA:HB3  | 1.43                     | 1.01              |
| 12:AM:49:VAL:HG13  | 16:AQ:41:ARG:HD2  | 1.37                     | 1.01              |
| 20:AU:61:LYS:HD2   | 20:AU:64:ARG:HH22 | 1.25                     | 1.01              |
| 22:AW:43:LEU:HD12  | 22:AW:55:ILE:HD11 | 1.36                     | 1.01              |
| 24:BA:627:A:C6     | 24:BA:637:A:H1'   | 1.96                     | 1.01              |
| 24:BA:1288:U:H5''  | 24:BA:1289:C:OP2  | 1.57                     | 1.01              |
| 24:BA:2115:G:H2'   | 24:BA:2117:A:N7   | 1.75                     | 1.01              |
| 28:BE:102:VAL:HG13 | 28:BE:170:LEU:HG  | 1.41                     | 1.01              |
| 28:BE:109:LYS:HG3  | 28:BE:191:PRO:HG3 | 1.36                     | 1.01              |
| 29:BF:64:ILE:HD13  | 29:BF:65:TRP:N    | 1.75                     | 1.01              |
| 29:BF:153:SER:O    | 29:BF:190:GLU:HB2 | 1.61                     | 1.01              |
| 32:BK:21:VAL:HB    | 32:BK:26:ALA:CB   | 1.89                     | 1.01              |
| 32:BK:132:PRO:HD2  | 32:BK:137:PRO:HA  | 1.40                     | 1.01              |
| 42:BU:11:GLN:HE22  | 42:BU:24:LYS:NZ   | 1.58                     | 1.01              |
| 42:BU:20:LEU:HD13  | 42:BU:68:LYS:HZ3  | 1.21                     | 1.01              |
| 43:BV:64:MET:HG2   | 43:BV:109:GLU:HG3 | 1.42                     | 1.01              |
| 45:BX:12:THR:HG22  | 45:BX:13:VAL:H    | 1.21                     | 1.01              |
| 46:BY:2:GLU:O      | 46:BY:60:GLU:HA   | 1.60                     | 1.01              |
| 47:BZ:72:ARG:HB3   | 47:BZ:75:LEU:HD13 | 1.38                     | 1.01              |
| 51:B4:34:PRO:HD3   | 51:B4:40:LYS:HD2  | 1.42                     | 1.01              |
| 1:AA:279:A:N1      | 19:AT:98:LEU:HG   | 1.75                     | 1.01              |
| 1:AA:475:G:H2'     | 1:AA:476:G:C8     | 1.95                     | 1.01              |
| 4:AE:84:GLU:HG2    | 4:AE:234:PRO:HD2  | 1.42                     | 1.01              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:AF:15:THR:HG21  | 5:AF:181:ASN:HA    | 1.41                     | 1.01              |
| 7:AH:48:ALA:HB3   | 7:AH:53:LEU:HB3    | 1.40                     | 1.01              |
| 7:AH:79:GLU:HB3   | 7:AH:92:LYS:HA     | 1.39                     | 1.01              |
| 15:AP:7:VAL:HG13  | 30:BG:114:ILE:HD13 | 1.39                     | 1.01              |
| 19:AT:89:LEU:O    | 19:AT:92:ARG:HB3   | 1.60                     | 1.01              |
| 24:BA:549:G:H2'   | 24:BA:550:G:H8     | 1.24                     | 1.01              |
| 24:BA:1774:C:C6   | 24:BA:1775:U:H5    | 1.79                     | 1.01              |
| 24:BA:1785:A:H5'' | 24:BA:1982:C:O2'   | 1.58                     | 1.01              |
| 24:BA:2210:G:C6   | 27:BD:150:LYS:HA   | 1.94                     | 1.01              |
| 25:BB:14:U:O2'    | 25:BB:107:U:H1'    | 1.59                     | 1.01              |
| 26:BC:87:GLU:HG3  | 26:BC:94:VAL:HG21  | 1.36                     | 1.01              |
| 29:BF:155:LEU:HG  | 29:BF:189:THR:HG21 | 1.42                     | 1.01              |
| 32:BK:39:ALA:O    | 32:BK:43:ASN:HB2   | 1.58                     | 1.01              |
| 34:BM:15:LEU:HG   | 34:BM:138:LEU:O    | 1.60                     | 1.01              |
| 35:BN:9:GLU:HB2   | 35:BN:82:ASN:HB3   | 1.39                     | 1.01              |
| 51:B4:45:VAL:HB   | 51:B4:50:GLY:HA2   | 1.39                     | 1.01              |
| 1:AA:232:G:H2'    | 1:AA:233:C:C6      | 1.94                     | 1.01              |
| 1:AA:792:A:H2'    | 1:AA:794:A:H62     | 1.18                     | 1.01              |
| 1:AA:973:G:N2     | 1:AA:974:A:N6      | 2.09                     | 1.01              |
| 4:AE:54:THR:HG21  | 4:AE:201:ILE:HD11  | 1.42                     | 1.01              |
| 9:AJ:143:ARG:HH11 | 9:AJ:144:MET:HB2   | 1.25                     | 1.01              |
| 12:AM:34:VAL:HG12 | 12:AM:35:SER:H     | 1.23                     | 1.01              |
| 16:AQ:24:CYS:HB2  | 16:AQ:40:CYS:N     | 1.76                     | 1.01              |
| 17:AR:7:GLU:O     | 17:AR:10:LYS:HG2   | 1.60                     | 1.01              |
| 24:BA:1518:C:H3'  | 24:BA:1519:G:H5''  | 1.43                     | 1.01              |
| 24:BA:2041:U:H2'  | 24:BA:2042:A:H8    | 1.23                     | 1.01              |
| 24:BA:2093:G:H4'  | 32:BK:25:TYR:HA    | 1.38                     | 1.01              |
| 24:BA:2765:A:H2'  | 24:BA:2765:A:N3    | 1.72                     | 1.01              |
| 25:BB:33:G:H2'    | 25:BB:34:U:C6      | 1.94                     | 1.01              |
| 27:BD:202:LYS:HD2 | 27:BD:202:LYS:H    | 1.25                     | 1.01              |
| 30:BG:5:VAL:HG12  | 30:BG:9:ARG:HH22   | 1.22                     | 1.01              |
| 34:BM:96:GLU:O    | 34:BM:99:LEU:HG    | 1.61                     | 1.01              |
| 37:BP:63:LYS:HD3  | 37:BP:64:ILE:H     | 1.25                     | 1.01              |
| 39:BR:9:ARG:NH1   | 39:BR:9:ARG:HB2    | 1.76                     | 1.01              |
| 42:BU:40:LEU:HD21 | 42:BU:55:ALA:HB2   | 1.43                     | 1.01              |
| 1:AA:1119:C:H2'   | 1:AA:1120:G:C8     | 1.96                     | 1.01              |
| 6:AG:100:ARG:O    | 6:AG:104:VAL:HG13  | 1.61                     | 1.01              |
| 6:AG:104:VAL:HG11 | 6:AG:140:VAL:HG21  | 1.37                     | 1.01              |
| 11:AL:55:ALA:HB3  | 11:AL:58:HIS:CE1   | 1.94                     | 1.01              |
| 19:AT:62:SER:HB3  | 19:AT:72:ARG:NE    | 1.76                     | 1.01              |
| 19:AT:88:TYR:N    | 19:AT:91:ARG:HH21  | 1.56                     | 1.01              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:296:C:H2'    | 24:BA:297:C:H6     | 1.19                     | 1.01              |
| 24:BA:1312:U:H3'   | 24:BA:1313:U:C5    | 1.96                     | 1.01              |
| 24:BA:1718:G:N2    | 24:BA:1742:C:N3    | 2.09                     | 1.01              |
| 24:BA:1824:G:O2'   | 27:BD:246:PRO:HB3  | 1.59                     | 1.01              |
| 24:BA:2345:G:N7    | 24:BA:2371:G:N2    | 2.08                     | 1.01              |
| 27:BD:136:ILE:HB   | 27:BD:168:ARG:NH2  | 1.75                     | 1.01              |
| 35:BN:85:VAL:O     | 35:BN:93:PRO:HD3   | 1.61                     | 1.01              |
| 35:BN:96:THR:HG22  | 35:BN:97:ARG:H     | 1.21                     | 1.01              |
| 36:BO:46:LYS:HB3   | 36:BO:49:ARG:CZ    | 1.91                     | 1.01              |
| 42:BU:69:LYS:O     | 42:BU:91:TYR:O     | 1.79                     | 1.01              |
| 46:BY:179:ASP:O    | 46:BY:180:VAL:HG23 | 1.60                     | 1.01              |
| 49:B2:29:ARG:HB2   | 49:B2:30:ARG:NH2   | 1.73                     | 1.01              |
| 50:B3:57:GLU:C     | 50:B3:61:ARG:HG3   | 1.85                     | 1.01              |
| 53:B6:34:ARG:HB3   | 53:B6:34:ARG:HH11  | 1.24                     | 1.01              |
| 1:AA:572:A:H4'     | 1:AA:917:G:H5'     | 1.40                     | 1.00              |
| 1:AA:922:G:H4'     | 7:AH:20:GLN:HA     | 1.37                     | 1.00              |
| 4:AE:91:PRO:HG3    | 4:AE:154:LEU:HB3   | 1.40                     | 1.00              |
| 6:AG:187:ARG:NE    | 6:AG:188:LEU:HG    | 1.76                     | 1.00              |
| 8:AI:47:ARG:HD3    | 8:AI:57:GLN:HB3    | 1.42                     | 1.00              |
| 14:AO:57:LYS:HG2   | 14:AO:67:THR:HG22  | 1.41                     | 1.00              |
| 24:BA:112:U:C3'    | 24:BA:113:G:H5''   | 1.89                     | 1.00              |
| 24:BA:594:U:H2'    | 24:BA:595:C:C6     | 1.96                     | 1.00              |
| 24:BA:685:A:H5''   | 24:BA:686:G:H21    | 1.25                     | 1.00              |
| 24:BA:871:U:H4'    | 37:BP:69:PHE:CZ    | 1.96                     | 1.00              |
| 24:BA:957:A:OP2    | 37:BP:77:LYS:HD3   | 1.59                     | 1.00              |
| 24:BA:996:A:H4'    | 41:BT:93:LYS:HG3   | 1.43                     | 1.00              |
| 24:BA:1939:U:H1'   | 24:BA:2592:G:C1'   | 1.91                     | 1.00              |
| 24:BA:2091:U:H2'   | 24:BA:2092:U:H5'   | 1.41                     | 1.00              |
| 24:BA:2243:U:H2'   | 24:BA:2244:U:C6    | 1.95                     | 1.00              |
| 24:BA:2847:U:H3'   | 40:BS:99:LEU:CD1   | 1.90                     | 1.00              |
| 27:BD:105:ILE:HD12 | 27:BD:106:ILE:H    | 1.21                     | 1.00              |
| 27:BD:216:GLY:O    | 27:BD:217:ARG:HB3  | 1.58                     | 1.00              |
| 28:BE:52:LEU:HA    | 28:BE:74:PRO:HA    | 1.42                     | 1.00              |
| 28:BE:136:ARG:C    | 28:BE:137:HIS:ND1  | 2.19                     | 1.00              |
| 28:BE:179:GLU:O    | 28:BE:181:LEU:HG   | 1.59                     | 1.00              |
| 30:BG:36:LYS:HE2   | 30:BG:38:VAL:HG13  | 1.41                     | 1.00              |
| 31:BH:145:ALA:O    | 31:BH:148:ILE:HG22 | 1.60                     | 1.00              |
| 35:BN:76:ALA:HA    | 40:BS:77:PRO:HD2   | 1.39                     | 1.00              |
| 36:BO:56:SER:HB3   | 54:B7:13:ARG:CZ    | 1.91                     | 1.00              |
| 41:BT:93:LYS:HG2   | 42:BU:10:LYS:HZ1   | 1.22                     | 1.00              |
| 41:BT:111:GLU:HA   | 41:BT:114:LYS:HZ1  | 1.24                     | 1.00              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 43:BV:5:ALA:HB2    | 43:BV:54:ALA:HB2   | 1.39                     | 1.00              |
| 49:B2:26:LEU:HD23  | 49:B2:28:LEU:HD11  | 1.40                     | 1.00              |
| 51:B4:39:MET:HE1   | 51:B4:41:PRO:HD3   | 1.41                     | 1.00              |
| 1:AA:684:A:H4'     | 13:AN:12:ARG:NH2   | 1.75                     | 1.00              |
| 1:AA:952:U:H5'     | 1:AA:972:C:H41     | 1.23                     | 1.00              |
| 1:AA:1310:G:H3'    | 21:AV:2:PRO:HD2    | 1.39                     | 1.00              |
| 4:AE:55:PHE:HA     | 4:AE:58:ILE:CD1    | 1.91                     | 1.00              |
| 5:AF:36:ASP:O      | 5:AF:39:ILE:HB     | 1.61                     | 1.00              |
| 6:AG:18:LYS:HG2    | 6:AG:33:MET:HB3    | 1.40                     | 1.00              |
| 11:AL:48:GLU:HB3   | 11:AL:78:LYS:HZ3   | 1.24                     | 1.00              |
| 13:AN:111:ASP:OD2  | 13:AN:113:PRO:HD3  | 1.61                     | 1.00              |
| 15:AP:78:ILE:HA    | 15:AP:81:LEU:HD13  | 1.41                     | 1.00              |
| 15:AP:104:ARG:HG2  | 15:AP:105:THR:HG23 | 1.38                     | 1.00              |
| 17:AR:62:GLN:NE2   | 17:AR:66:LEU:HD21  | 1.76                     | 1.00              |
| 24:BA:988:A:N6     | 49:B2:13:ILE:HG13  | 1.74                     | 1.00              |
| 24:BA:1677:A:H2'   | 24:BA:1678:G:H8    | 1.21                     | 1.00              |
| 24:BA:1996:C:H6    | 24:BA:1996:C:H5''  | 1.20                     | 1.00              |
| 27:BD:54:ARG:HA    | 27:BD:219:PRO:HG2  | 1.43                     | 1.00              |
| 27:BD:246:PRO:HG3  | 27:BD:252:TRP:CE3  | 1.97                     | 1.00              |
| 28:BE:104:VAL:HG13 | 28:BE:197:ILE:O    | 1.59                     | 1.00              |
| 29:BF:31:HIS:HB2   | 36:BO:14:LYS:HZ2   | 1.25                     | 1.00              |
| 29:BF:160:ASN:O    | 29:BF:163:VAL:HB   | 1.61                     | 1.00              |
| 30:BG:49:ASP:HA    | 30:BG:53:LEU:HD22  | 1.40                     | 1.00              |
| 30:BG:60:LEU:HB3   | 30:BG:66:GLN:O     | 1.61                     | 1.00              |
| 34:BM:43:THR:CB    | 34:BM:44:PRO:HD2   | 1.88                     | 1.00              |
| 50:B3:4:GLY:HA2    | 50:B3:11:PRO:HB3   | 1.40                     | 1.00              |
| 52:B5:16:CYS:CB    | 52:B5:49:HIS:HA    | 1.90                     | 1.00              |
| 55:B8:2:LYS:HG2    | 55:B8:35:ARG:CB    | 1.91                     | 1.00              |
| 1:AA:291:C:H3'     | 1:AA:305:G:N2      | 1.76                     | 1.00              |
| 1:AA:1288:A:H2'    | 1:AA:1289:A:H8     | 1.27                     | 1.00              |
| 3:AD:8:U:H3        | 3:AD:14:A:N6       | 1.59                     | 1.00              |
| 3:AB:52:G:H4'      | 24:BA:2471:C:OP1   | 1.60                     | 1.00              |
| 7:AH:76:ILE:HD13   | 7:AH:142:LEU:HB2   | 1.41                     | 1.00              |
| 9:AJ:69:VAL:HG21   | 9:AJ:104:LEU:HD21  | 1.43                     | 1.00              |
| 16:AQ:54:PRO:O     | 16:AQ:56:VAL:HG23  | 1.60                     | 1.00              |
| 19:AT:62:SER:OG    | 19:AT:72:ARG:HG2   | 1.61                     | 1.00              |
| 24:BA:183:C:H1'    | 24:BA:433:C:H1'    | 1.40                     | 1.00              |
| 24:BA:602:G:O3'    | 24:BA:603:A:H4'    | 1.57                     | 1.00              |
| 24:BA:869:G:C2'    | 24:BA:870:A:H5''   | 1.90                     | 1.00              |
| 24:BA:1275:A:C2    | 38:BQ:16:HIS:HA    | 1.96                     | 1.00              |
| 24:BA:2418:A:H2'   | 24:BA:2419:U:O4'   | 1.61                     | 1.00              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:148:GLU:HB2  | 27:BD:154:LYS:HZ2  | 1.24                     | 1.00              |
| 29:BF:66:PRO:C     | 29:BF:68:LYS:H     | 1.64                     | 1.00              |
| 29:BF:89:VAL:HG12  | 29:BF:90:PHE:N     | 1.73                     | 1.00              |
| 35:BN:97:ARG:HH11  | 35:BN:98:VAL:C     | 1.68                     | 1.00              |
| 37:BP:27:VAL:HG22  | 37:BP:28:ALA:H     | 1.21                     | 1.00              |
| 37:BP:134:ARG:HE   | 37:BP:137:TYR:HA   | 1.25                     | 1.00              |
| 24:BA:297:C:H5'    | 45:BX:83:THR:OG1   | 1.62                     | 1.00              |
| 24:BA:781:A:H1'    | 27:BD:222:ARG:NH1  | 1.74                     | 1.00              |
| 24:BA:2286:A:C2    | 52:B5:27:LYS:HB3   | 1.96                     | 1.00              |
| 24:BA:2780:G:H22   | 34:BM:97:ARG:NH1   | 1.59                     | 1.00              |
| 25:BB:37:C:H2'     | 25:BB:38:C:O4'     | 1.61                     | 1.00              |
| 41:BT:55:ARG:HG2   | 41:BT:55:ARG:HH11  | 1.23                     | 1.00              |
| 46:BY:56:VAL:HG21  | 46:BY:135:GLU:HA   | 1.41                     | 1.00              |
| 52:B5:16:CYS:SG    | 52:B5:19:ARG:CZ    | 2.49                     | 1.00              |
| 6:AG:24:GLU:O      | 6:AG:27:TYR:HB3    | 1.62                     | 1.00              |
| 17:AR:60:VAL:O     | 17:AR:63:ARG:HG3   | 1.60                     | 1.00              |
| 24:BA:325:G:H2'    | 24:BA:326:G:C8     | 1.97                     | 1.00              |
| 24:BA:1203:G:O6    | 24:BA:1240:U:O2    | 1.78                     | 1.00              |
| 24:BA:1799:G:H1    | 27:BD:157:ARG:HH12 | 1.02                     | 1.00              |
| 24:BA:1802:A:H61   | 24:BA:1822:G:H1'   | 1.24                     | 1.00              |
| 27:BD:177:LEU:HB2  | 27:BD:178:PRO:HD2  | 1.40                     | 1.00              |
| 31:BH:17:VAL:HG21  | 31:BH:45:VAL:HG11  | 1.44                     | 1.00              |
| 31:BH:38:SER:N     | 31:BH:41:MET:HE2   | 1.77                     | 1.00              |
| 38:BQ:38:VAL:HB    | 38:BQ:39:PRO:HD3   | 1.41                     | 1.00              |
| 42:BU:5:VAL:HG11   | 42:BU:37:VAL:HG13  | 1.44                     | 1.00              |
| 46:BY:127:LYS:HD2  | 46:BY:163:LEU:HA   | 1.39                     | 1.00              |
| 46:BY:152:ALA:HB3  | 46:BY:168:GLU:HA   | 1.43                     | 1.00              |
| 52:B5:14:THR:HB    | 52:B5:51:GLU:HA    | 1.43                     | 1.00              |
| 24:BA:265:A:H3'    | 24:BA:265:A:C8     | 1.96                     | 1.00              |
| 24:BA:270(M):U:C4' | 24:BA:270(N):G:H4' | 1.91                     | 1.00              |
| 24:BA:636:G:N2     | 36:BO:75:ILE:HD12  | 1.77                     | 1.00              |
| 24:BA:2023:G:H2'   | 24:BA:2024:G:C8    | 1.97                     | 1.00              |
| 24:BA:2075:U:H3    | 24:BA:2238:G:H1    | 1.01                     | 1.00              |
| 24:BA:2254:C:C2'   | 24:BA:2255:G:H5'   | 1.90                     | 1.00              |
| 24:BA:2619:C:C4'   | 28:BE:152:LYS:HA   | 1.91                     | 1.00              |
| 24:BA:2876:G:H4'   | 40:BS:1:MET:H2     | 1.27                     | 1.00              |
| 41:BT:13:LYS:HD2   | 41:BT:13:LYS:H     | 1.21                     | 1.00              |
| 42:BU:39:LEU:HG    | 42:BU:58:VAL:O     | 1.62                     | 1.00              |
| 43:BV:82:LEU:HD12  | 43:BV:84:ARG:HG3   | 1.43                     | 1.00              |
| 52:B5:16:CYS:HB2   | 52:B5:49:HIS:CA    | 1.90                     | 1.00              |
| 4:AE:187:LEU:HA    | 4:AE:201:ILE:O     | 1.59                     | 1.00              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:AF:30:ARG:HG2   | 5:AF:31:HIS:H      | 1.27                     | 1.00              |
| 5:AF:33:LEU:HD11  | 16:AQ:54:PRO:HD2   | 1.38                     | 1.00              |
| 6:AG:20:TYR:HD1   | 6:AG:21:LEU:N      | 1.58                     | 1.00              |
| 7:AH:78:HIS:ND1   | 10:AK:107:LEU:HD11 | 1.76                     | 1.00              |
| 9:AJ:140:ASP:HA   | 9:AJ:143:ARG:CZ    | 1.91                     | 1.00              |
| 10:AK:68:ARG:HD3  | 10:AK:69:ARG:H     | 1.26                     | 1.00              |
| 15:AP:7:VAL:HG12  | 30:BG:140:ILE:HG21 | 1.44                     | 1.00              |
| 19:AT:18:THR:HG22 | 19:AT:43:LEU:HD21  | 1.42                     | 1.00              |
| 24:BA:914:C:H6    | 24:BA:914:C:H3'    | 1.25                     | 1.00              |
| 24:BA:1466:G:C2'  | 24:BA:1547:C:H41   | 1.73                     | 1.00              |
| 24:BA:1819:A:H3'  | 27:BD:178:PRO:HB2  | 1.43                     | 1.00              |
| 24:BA:1913:A:H1'  | 24:BA:1918:A:H61   | 1.25                     | 1.00              |
| 24:BA:2124:G:C4'  | 26:BC:42:GLU:HG3   | 1.92                     | 1.00              |
| 27:BD:133:LEU:HB3 | 27:BD:136:ILE:HD11 | 1.38                     | 1.00              |
| 28:BE:11:MET:O    | 28:BE:22:PRO:HD2   | 1.62                     | 1.00              |
| 33:BL:9:LYS:HA    | 33:BL:56:GLU:HG2   | 1.43                     | 1.00              |
| 42:BU:6:LYS:HD3   | 42:BU:10:LYS:HG2   | 1.39                     | 1.00              |
| 43:BV:39:THR:OG1  | 51:B4:28:PRO:HG3   | 1.61                     | 1.00              |
| 44:BW:73:ARG:HB3  | 44:BW:73:ARG:HH11  | 1.26                     | 1.00              |
| 48:B1:12:SER:HB3  | 48:B1:13:PRO:HD2   | 1.41                     | 1.00              |
| 50:B3:65:ASP:HA   | 50:B3:68:ARG:NH2   | 1.76                     | 1.00              |
| 8:AI:3:ARG:HA     | 8:AI:67:MET:HE1    | 1.03                     | 0.99              |
| 10:AK:80:ILE:HD12 | 10:AK:80:ILE:H     | 1.25                     | 0.99              |
| 15:AP:48:LEU:CD2  | 15:AP:52:GLU:HB2   | 1.91                     | 0.99              |
| 24:BA:759:G:H2'   | 24:BA:760:G:H8     | 1.27                     | 0.99              |
| 24:BA:853:G:H2'   | 24:BA:854:G:H8     | 1.24                     | 0.99              |
| 24:BA:1224:G:H2'  | 42:BU:87:HIS:NE2   | 1.78                     | 0.99              |
| 24:BA:1257:C:O2'  | 29:BF:84:VAL:HG23  | 1.61                     | 0.99              |
| 24:BA:1995:U:C5'  | 24:BA:1996:C:H5'   | 1.91                     | 0.99              |
| 24:BA:2239:G:H5'  | 24:BA:2240:C:OP2   | 1.60                     | 0.99              |
| 24:BA:2344:U:H5'' | 52:B5:38:LYS:CG    | 1.91                     | 0.99              |
| 27:BD:138:VAL:HA  | 27:BD:165:ILE:HG21 | 1.44                     | 0.99              |
| 46:BY:4:ARG:HG2   | 46:BY:5:LEU:N      | 1.74                     | 0.99              |
| 52:B5:12:GLU:HG2  | 52:B5:13:CYS:H     | 1.22                     | 0.99              |
| 53:B6:28:ARG:O    | 53:B6:31:LEU:HB2   | 1.60                     | 0.99              |
| 53:B6:48:LYS:CG   | 53:B6:49:ARG:H     | 1.71                     | 0.99              |
| 1:AA:112:G:H5'    | 1:AA:389:A:H4'     | 1.41                     | 0.99              |
| 1:AA:791:G:H22    | 1:AA:1498:U:P      | 1.84                     | 0.99              |
| 1:AA:1137:C:H4'   | 1:AA:1138:G:C2     | 1.98                     | 0.99              |
| 1:AA:1405:G:H21   | 1:AA:1517:G:N2     | 1.57                     | 0.99              |
| 24:BA:1917:U:H2'  | 24:BA:1918:A:O4'   | 1.61                     | 0.99              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 32:BK:123:LEU:HD11 | 32:BK:145:VAL:HA   | 1.42                     | 0.99              |
| 41:BT:107:ALA:O    | 41:BT:110:VAL:HB   | 1.60                     | 0.99              |
| 49:B2:45:GLY:O     | 49:B2:48:GLU:HG2   | 1.61                     | 0.99              |
| 1:AA:191:G:H1'     | 22:AW:105:SER:HA   | 1.43                     | 0.99              |
| 5:AF:69:HIS:ND1    | 5:AF:104:GLN:HB2   | 1.77                     | 0.99              |
| 8:AI:14:LEU:CD1    | 8:AI:15:ASP:H      | 1.75                     | 0.99              |
| 24:BA:270:A:N1     | 24:BA:370:G:H1'    | 1.75                     | 0.99              |
| 28:BE:8:LYS:NZ     | 28:BE:9:VAL:HG13   | 1.76                     | 0.99              |
| 31:BH:110:SER:O    | 31:BH:112:PRO:HD2  | 1.61                     | 0.99              |
| 40:BS:58:ASN:N     | 40:BS:58:ASN:HD22  | 1.55                     | 0.99              |
| 40:BS:96:ARG:HD3   | 40:BS:117:ASP:OD2  | 1.63                     | 0.99              |
| 46:BY:94:GLU:H     | 46:BY:95:PRO:CD    | 1.73                     | 0.99              |
| 50:B3:68:ARG:N     | 50:B3:68:ARG:HD3   | 1.77                     | 0.99              |
| 1:AA:174:C:H2'     | 1:AA:175:C:H6      | 1.27                     | 0.99              |
| 1:AA:1327:C:H5''   | 23:AX:20:LYS:HD3   | 1.41                     | 0.99              |
| 4:AE:178:ARG:HH21  | 4:AE:196:LEU:HB2   | 1.22                     | 0.99              |
| 7:AH:12:LEU:HB3    | 7:AH:31:LEU:HB3    | 1.44                     | 0.99              |
| 20:AU:21:LYS:NZ    | 20:AU:23:LYS:HB3   | 1.77                     | 0.99              |
| 24:BA:948:G:H1'    | 24:BA:984:A:C2     | 1.97                     | 0.99              |
| 24:BA:1498:C:C6    | 24:BA:1576:U:H4'   | 1.97                     | 0.99              |
| 24:BA:2348:U:H3'   | 54:B7:42:ARG:NH2   | 1.76                     | 0.99              |
| 28:BE:30:PRO:HA    | 28:BE:49:LEU:O     | 1.59                     | 0.99              |
| 36:BO:38:GLN:C     | 36:BO:40:SER:H     | 1.62                     | 0.99              |
| 36:BO:131:SER:O    | 36:BO:134:ALA:HB3  | 1.62                     | 0.99              |
| 41:BT:17:ILE:CA    | 41:BT:20:LEU:HG    | 1.93                     | 0.99              |
| 42:BU:14:VAL:HG12  | 42:BU:15:GLU:H     | 1.27                     | 0.99              |
| 1:AA:1234:C:H5'    | 1:AA:1364:U:O2'    | 1.63                     | 0.99              |
| 4:AE:95:GLN:HG3    | 4:AE:148:TYR:HB3   | 1.39                     | 0.99              |
| 12:AM:30:SER:HB2   | 12:AM:81:THR:CA    | 1.91                     | 0.99              |
| 24:BA:663:G:O2'    | 24:BA:940:G:H4'    | 1.61                     | 0.99              |
| 24:BA:1363:C:N4    | 50:B3:2:LYS:HE2    | 1.77                     | 0.99              |
| 24:BA:1649:G:N2    | 38:BQ:107:ASP:HB2  | 1.77                     | 0.99              |
| 24:BA:1913:A:C2    | 24:BA:1917:U:C5    | 2.51                     | 0.99              |
| 24:BA:1918:A:H8    | 24:BA:1918:A:OP2   | 1.44                     | 0.99              |
| 24:BA:2311:A:H3'   | 24:BA:2312:U:C5    | 1.96                     | 0.99              |
| 26:BC:62:VAL:HB    | 26:BC:195:ALA:CB   | 1.92                     | 0.99              |
| 27:BD:120:GLY:O    | 27:BD:131:LEU:HD11 | 1.60                     | 0.99              |
| 36:BO:45:LEU:HD13  | 54:B7:59:LYS:CE    | 1.91                     | 0.99              |
| 39:BR:9:ARG:HH11   | 39:BR:9:ARG:CB     | 1.75                     | 0.99              |
| 41:BT:27:LEU:O     | 41:BT:31:SER:HB3   | 1.63                     | 0.99              |
| 41:BT:93:LYS:HA    | 41:BT:93:LYS:HZ2   | 1.19                     | 0.99              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 1:AA:164:U:H2'      | 1:AA:165:C:C5      | 1.97                     | 0.99              |
| 1:AA:902:G:O2'      | 1:AA:903:G:H5'     | 1.62                     | 0.99              |
| 1:AA:1256:A:O3'     | 1:AA:1257:U:H4'    | 1.62                     | 0.99              |
| 4:AE:222:ILE:HB     | 4:AE:226:ARG:NH2   | 1.77                     | 0.99              |
| 10:AK:29:SER:HB2    | 10:AK:32:LYS:CE    | 1.91                     | 0.99              |
| 24:BA:1557:C:H2'    | 24:BA:1558:A:C8    | 1.97                     | 0.99              |
| 24:BA:1570:A:N6     | 24:BA:1571:A:H62   | 1.60                     | 0.99              |
| 28:BE:49:LEU:HG     | 28:BE:74:PRO:HG2   | 1.43                     | 0.99              |
| 29:BF:19:GLU:O      | 29:BF:20:LEU:CD2   | 2.10                     | 0.99              |
| 35:BN:7:TYR:HD1     | 35:BN:7:TYR:N      | 1.56                     | 0.99              |
| 37:BP:74:TYR:OH     | 37:BP:94:VAL:HG22  | 1.62                     | 0.99              |
| 43:BV:29:LEU:O      | 43:BV:33:ARG:HB2   | 1.61                     | 0.99              |
| 48:B1:60:ASN:O      | 48:B1:64:ARG:HB2   | 1.63                     | 0.99              |
| 1:AA:983:A:H1'      | 1:AA:1201:A:N7     | 1.77                     | 0.99              |
| 1:AA:1197:G:OP1     | 1:AA:1197:G:H3'    | 1.62                     | 0.99              |
| 4:AE:161:ALA:HA     | 4:AE:183:PRO:HB2   | 1.42                     | 0.99              |
| 9:AJ:69:VAL:HG22    | 9:AJ:135:VAL:HG22  | 1.39                     | 0.99              |
| 24:BA:355:G:H2'     | 24:BA:356:G:C8     | 1.97                     | 0.99              |
| 24:BA:2019:A:H3'    | 24:BA:2020:A:H5''  | 1.43                     | 0.99              |
| 27:BD:91:ARG:HH12   | 27:BD:198:ASN:HB2  | 1.23                     | 0.99              |
| 35:BN:122:LEU:H     | 40:BS:70:VAL:HG12  | 0.85                     | 0.99              |
| 49:B2:4:LEU:O       | 49:B2:37:LEU:HB3   | 1.60                     | 0.99              |
| 1:AA:723:U:H5       | 2:A1:30:U:HO2'     | 1.01                     | 0.99              |
| 3:AB:74:C:C4        | 24:BA:2556:C:O4'   | 2.16                     | 0.99              |
| 24:BA:1178:C:H2'    | 24:BA:1179:C:C6    | 1.98                     | 0.99              |
| 24:BA:1625:C:C2'    | 24:BA:1626:G:H4'   | 1.91                     | 0.99              |
| 24:BA:1803:A:H4'    | 27:BD:257:LEU:HD13 | 1.41                     | 0.99              |
| 24:BA:2206:C:H2'    | 24:BA:2207:C:H6    | 1.27                     | 0.99              |
| 24:BA:2319:G:H4'    | 24:BA:2320:A:OP1   | 1.62                     | 0.99              |
| 24:BA:2701:C:H3'    | 24:BA:2702:U:C5'   | 1.92                     | 0.99              |
| 35:BN:7:TYR:HB3     | 35:BN:18:LYS:NZ    | 1.76                     | 0.99              |
| 35:BN:117:LEU:O     | 35:BN:119:PRO:HD3  | 1.61                     | 0.99              |
| 40:BS:17:THR:HB     | 40:BS:20:PRO:HD3   | 1.41                     | 0.99              |
| 24:BA:270(O):U:H5'' | 24:BA:270(P):C:C5  | 1.97                     | 0.99              |
| 24:BA:289:A:H2'     | 24:BA:351:G:H1     | 1.23                     | 0.99              |
| 24:BA:1151:G:H5''   | 41:BT:81:HIS:NE2   | 1.76                     | 0.99              |
| 24:BA:1326:U:H2'    | 24:BA:1327:C:H5'   | 1.44                     | 0.99              |
| 24:BA:2135:A:H4'    | 24:BA:2136:C:C5    | 1.98                     | 0.99              |
| 26:BC:103:ILE:HB    | 26:BC:127:LEU:HD21 | 1.44                     | 0.99              |
| 27:BD:7:LYS:CG      | 27:BD:25:THR:HG22  | 1.93                     | 0.99              |
| 30:BG:54:GLU:O      | 30:BG:57:ALA:HB3   | 1.60                     | 0.99              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 33:BL:37:PHE:HB3   | 33:BL:57:ILE:HD12  | 1.45                     | 0.99              |
| 35:BN:64:ARG:HH21  | 35:BN:64:ARG:HG3   | 1.28                     | 0.99              |
| 40:BS:11:GLU:H     | 40:BS:11:GLU:CD    | 1.71                     | 0.99              |
| 49:B2:12:PRO:HA    | 49:B2:15:TYR:CE2   | 1.98                     | 0.99              |
| 54:B7:8:LYS:H      | 54:B7:8:LYS:HE2    | 1.28                     | 0.99              |
| 1:AA:8:A:H1'       | 7:AH:102:ALA:O     | 1.61                     | 0.99              |
| 1:AA:37:U:H3'      | 1:AA:37:U:C6       | 1.96                     | 0.99              |
| 1:AA:37:U:OP1      | 14:AO:123:LYS:HB3  | 1.63                     | 0.99              |
| 10:AK:98:LYS:N     | 10:AK:98:LYS:HZ2   | 1.60                     | 0.99              |
| 12:AM:18:ALA:HB3   | 12:AM:91:PRO:HB3   | 1.41                     | 0.99              |
| 24:BA:270(M):U:H4' | 24:BA:270(N):G:H4' | 1.01                     | 0.99              |
| 24:BA:479:A:H1'    | 24:BA:480:A:N7     | 1.76                     | 0.99              |
| 24:BA:1342:A:C2'   | 24:BA:1345:C:H41   | 1.73                     | 0.99              |
| 24:BA:1842:G:H2'   | 24:BA:1843:C:H6    | 1.28                     | 0.99              |
| 24:BA:2120:G:N2    | 26:BC:167:LYS:NZ   | 2.11                     | 0.99              |
| 29:BF:183:VAL:HA   | 29:BF:186:ILE:HD12 | 1.43                     | 0.99              |
| 37:BP:121:ALA:O    | 37:BP:125:LEU:HG   | 1.62                     | 0.99              |
| 48:B1:20:VAL:HG23  | 48:B1:52:ILE:HG23  | 1.43                     | 0.99              |
| 53:B6:30:VAL:HG13  | 53:B6:33:ARG:CZ    | 1.90                     | 0.99              |
| 1:AA:781:A:H2'     | 1:AA:782:A:C5'     | 1.92                     | 0.98              |
| 24:BA:241:A:H1'    | 24:BA:243:U:H1'    | 1.41                     | 0.98              |
| 24:BA:747:U:H2'    | 24:BA:2613:U:O4    | 1.61                     | 0.98              |
| 24:BA:1450:C:O2'   | 24:BA:1451:C:H4'   | 1.63                     | 0.98              |
| 28:BE:116:VAL:CG2  | 28:BE:138:PRO:HA   | 1.93                     | 0.98              |
| 30:BG:163:ALA:HB2  | 30:BG:172:LEU:HD23 | 1.43                     | 0.98              |
| 36:BO:72:PRO:HB2   | 36:BO:111:ARG:HB3  | 1.41                     | 0.98              |
| 45:BX:22:GLY:HA3   | 45:BX:73:ARG:HH12  | 0.85                     | 0.98              |
| 1:AA:1413:A:N6     | 1:AA:1488:G:C6     | 2.31                     | 0.98              |
| 6:AG:60:GLU:OE2    | 6:AG:199:ASN:HB3   | 1.61                     | 0.98              |
| 38:BQ:10:LEU:HD13  | 38:BQ:21:TYR:OH    | 1.64                     | 0.98              |
| 38:BQ:16:HIS:O     | 38:BQ:19:ALA:HB3   | 1.64                     | 0.98              |
| 1:AA:186(B):C:H4'  | 22:AW:89:ARG:HH12  | 1.27                     | 0.98              |
| 1:AA:475:G:H2'     | 1:AA:476:G:H8      | 1.26                     | 0.98              |
| 1:AA:888:G:H21     | 1:AA:909:A:N6      | 1.60                     | 0.98              |
| 1:AA:1077:G:H22    | 1:AA:1079:G:H3'    | 1.21                     | 0.98              |
| 10:AK:100:ILE:HD12 | 10:AK:100:ILE:H    | 1.27                     | 0.98              |
| 10:AK:129:VAL:HG22 | 10:AK:130:GLY:H    | 1.26                     | 0.98              |
| 15:AP:74:VAL:HG12  | 15:AP:78:ILE:HD11  | 1.45                     | 0.98              |
| 21:AV:69:HIS:HB2   | 21:AV:74:PHE:CZ    | 1.96                     | 0.98              |
| 24:BA:1186:G:H8    | 24:BA:1187:G:C8    | 1.80                     | 0.98              |
| 24:BA:1359:A:H62   | 24:BA:1371:G:H21   | 1.02                     | 0.98              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 32:BK:125:GLU:HB3  | 32:BK:143:SER:CB   | 1.93                     | 0.98              |
| 35:BN:24:VAL:HA    | 35:BN:39:ILE:HG22  | 1.45                     | 0.98              |
| 39:BR:71:ARG:O     | 39:BR:74:ALA:HB3   | 1.62                     | 0.98              |
| 43:BV:6:ILE:HG12   | 43:BV:104:THR:HA   | 1.44                     | 0.98              |
| 54:B7:26:LYS:HA    | 54:B7:47:LYS:HG2   | 1.45                     | 0.98              |
| 1:AA:1206:G:H5'    | 5:AF:194:GLY:HA2   | 1.45                     | 0.98              |
| 1:AA:1241:G:H2'    | 1:AA:1242:C:C6     | 1.98                     | 0.98              |
| 9:AJ:75:VAL:HA     | 9:AJ:89:MET:HE1    | 1.46                     | 0.98              |
| 19:AT:82:MET:O     | 19:AT:85:VAL:HB    | 1.61                     | 0.98              |
| 24:BA:27:G:N1      | 24:BA:512:G:H2'    | 1.78                     | 0.98              |
| 24:BA:150:C:H42    | 24:BA:176:G:H1     | 1.01                     | 0.98              |
| 24:BA:1022:G:OP1   | 24:BA:1022:G:H4'   | 1.62                     | 0.98              |
| 24:BA:1697:G:C5'   | 24:BA:1698:A:H5'   | 1.93                     | 0.98              |
| 27:BD:61:LEU:HB2   | 27:BD:86:PRO:HG2   | 1.43                     | 0.98              |
| 27:BD:133:LEU:HD11 | 27:BD:185:VAL:HG12 | 1.43                     | 0.98              |
| 31:BH:84:SER:HA    | 31:BH:134:SER:HA   | 1.42                     | 0.98              |
| 40:BS:53:ARG:NE    | 40:BS:53:ARG:HA    | 1.73                     | 0.98              |
| 41:BT:44:ASN:ND2   | 42:BU:78:LYS:HG2   | 1.76                     | 0.98              |
| 41:BT:93:LYS:HA    | 41:BT:93:LYS:NZ    | 1.76                     | 0.98              |
| 44:BW:36:LYS:HD2   | 44:BW:54:VAL:HG12  | 1.42                     | 0.98              |
| 46:BY:157:LEU:HD13 | 46:BY:161:VAL:HG13 | 1.44                     | 0.98              |
| 6:AG:59:ARG:C      | 6:AG:63:LYS:HZ2    | 1.70                     | 0.98              |
| 14:AO:60:LEU:HD13  | 14:AO:60:LEU:H     | 1.25                     | 0.98              |
| 24:BA:279:C:N4     | 24:BA:359:A:N3     | 2.11                     | 0.98              |
| 24:BA:623:G:H3'    | 36:BO:105:LEU:HD22 | 1.45                     | 0.98              |
| 24:BA:839:U:H2'    | 24:BA:840:C:C6     | 1.96                     | 0.98              |
| 24:BA:2023:G:H2'   | 24:BA:2024:G:H8    | 1.21                     | 0.98              |
| 30:BG:77:ILE:HA    | 30:BG:83:ARG:HE    | 1.26                     | 0.98              |
| 32:BK:54:GLN:NE2   | 32:BK:58:LEU:HG    | 1.76                     | 0.98              |
| 37:BP:12:GLN:HE22  | 37:BP:13:GLN:NE2   | 1.59                     | 0.98              |
| 38:BQ:41:ALA:HB1   | 38:BQ:114:VAL:HG21 | 1.43                     | 0.98              |
| 46:BY:158:PRO:HB2  | 46:BY:159:PRO:HD2  | 1.45                     | 0.98              |
| 1:AA:169:C:H2'     | 1:AA:170:U:C6      | 1.98                     | 0.98              |
| 1:AA:384:G:H2'     | 1:AA:385:C:C6      | 1.98                     | 0.98              |
| 1:AA:1323:G:H2'    | 1:AA:1324:A:H8     | 1.27                     | 0.98              |
| 1:AA:1339:A:H2'    | 1:AA:1340:A:H5'    | 1.44                     | 0.98              |
| 25:BB:48:A:H2'     | 25:BB:49:C:C6      | 1.98                     | 0.98              |
| 28:BE:117:MET:HG2  | 28:BE:136:ARG:HE   | 1.25                     | 0.98              |
| 34:BM:109:LYS:HZ2  | 34:BM:110:GLY:H    | 1.02                     | 0.98              |
| 42:BU:62:LEU:HD22  | 42:BU:99:ILE:H     | 1.25                     | 0.98              |
| 52:B5:26:ASN:O     | 52:B5:27:LYS:HB2   | 1.63                     | 0.98              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 55:B8:2:LYS:HG2    | 55:B8:35:ARG:HB2   | 1.00                     | 0.98              |
| 1:AA:1066:C:H3'    | 1:AA:1067:A:H8     | 1.27                     | 0.98              |
| 2:A1:30:U:H6       | 2:A1:30:U:H5'      | 1.26                     | 0.98              |
| 10:AK:38:ILE:HG13  | 10:AK:118:VAL:HG11 | 1.43                     | 0.98              |
| 15:AP:56:LEU:O     | 15:AP:59:TYR:HB3   | 1.64                     | 0.98              |
| 24:BA:185:U:H2'    | 24:BA:186:G:C8     | 1.99                     | 0.98              |
| 24:BA:477:A:N6     | 24:BA:502:A:H61    | 1.58                     | 0.98              |
| 24:BA:1244:G:H5'   | 36:BO:9:ASN:HB3    | 1.44                     | 0.98              |
| 24:BA:2018:G:H1'   | 41:BT:34:LYS:HZ2   | 1.28                     | 0.98              |
| 25:BB:71:C:H2'     | 25:BB:72:G:C5'     | 1.93                     | 0.98              |
| 43:BV:16:LYS:H     | 43:BV:16:LYS:HD3   | 1.24                     | 0.98              |
| 44:BW:73:ARG:HB3   | 44:BW:73:ARG:NH1   | 1.79                     | 0.98              |
| 52:B5:31:PRO:HB3   | 52:B5:34:LEU:HD12  | 1.44                     | 0.98              |
| 53:B6:48:LYS:HG3   | 53:B6:49:ARG:H     | 0.83                     | 0.98              |
| 54:B7:30:ARG:HH21  | 54:B7:43:GLN:C     | 1.72                     | 0.98              |
| 1:AA:22:G:H2'      | 1:AA:23:C:H6       | 1.22                     | 0.98              |
| 1:AA:1349:A:OP2    | 11:AL:118:LYS:HD2  | 1.62                     | 0.98              |
| 6:AG:53:ASP:O      | 6:AG:56:VAL:HB     | 1.60                     | 0.98              |
| 15:AP:108:ARG:HA   | 15:AP:108:ARG:HH11 | 0.82                     | 0.98              |
| 24:BA:271(B):G:H4' | 24:BA:271(C):U:OP2 | 1.64                     | 0.98              |
| 24:BA:559:G:H8     | 24:BA:559:G:H5'    | 1.28                     | 0.98              |
| 27:BD:183:ARG:HG2  | 27:BD:268:ARG:CB   | 1.93                     | 0.98              |
| 35:BN:68:GLU:HA    | 35:BN:104:ARG:NH1  | 1.79                     | 0.98              |
| 50:B3:5:ILE:HG23   | 50:B3:57:GLU:HB2   | 1.42                     | 0.98              |
| 1:AA:259:G:H2'     | 1:AA:260:G:C8      | 1.99                     | 0.98              |
| 4:AE:47:THR:O      | 4:AE:51:LEU:HG     | 1.64                     | 0.98              |
| 4:AE:111:ARG:HH11  | 4:AE:111:ARG:HA    | 1.25                     | 0.98              |
| 10:AK:26:VAL:HG22  | 10:AK:27:PRO:HD2   | 1.42                     | 0.98              |
| 11:AL:47:LEU:HD12  | 11:AL:51:ARG:HH22  | 1.24                     | 0.98              |
| 24:BA:1300:U:H2'   | 24:BA:1626:G:N2    | 1.79                     | 0.98              |
| 24:BA:1966:A:H1'   | 24:BA:2593:U:H5'   | 1.45                     | 0.98              |
| 27:BD:46:GLN:OE1   | 27:BD:51:VAL:HG23  | 1.61                     | 0.98              |
| 28:BE:108:SER:OG   | 28:BE:164:ARG:HA   | 1.64                     | 0.98              |
| 35:BN:11:ALA:CB    | 35:BN:97:ARG:HH12  | 1.76                     | 0.98              |
| 46:BY:43:GLU:CD    | 46:BY:43:GLU:H     | 1.68                     | 0.98              |
| 46:BY:57:ILE:HG23  | 46:BY:69:THR:O     | 1.62                     | 0.98              |
| 1:AA:50:A:C5'      | 1:AA:51:A:H5'      | 1.93                     | 0.98              |
| 4:AE:217:ARG:HA    | 4:AE:220:ASP:OD2   | 1.64                     | 0.98              |
| 6:AG:11:LEU:O      | 6:AG:19:LEU:HD12   | 1.64                     | 0.98              |
| 6:AG:19:LEU:H      | 6:AG:33:MET:HE1    | 1.24                     | 0.98              |
| 9:AJ:5:ARG:HD2     | 9:AJ:7:ALA:H       | 1.29                     | 0.98              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:603:A:N6    | 24:BA:624:C:N4     | 2.11                     | 0.98              |
| 24:BA:1050:A:C2   | 24:BA:2751:G:H5'   | 1.99                     | 0.98              |
| 24:BA:2103:C:H2'  | 24:BA:2104:G:H8    | 1.26                     | 0.98              |
| 25:BB:24:G:O6     | 25:BB:56:G:H2'     | 1.64                     | 0.98              |
| 28:BE:154:LYS:NZ  | 28:BE:156:MET:HE2  | 1.77                     | 0.98              |
| 32:BK:77:LEU:HD12 | 32:BK:142:VAL:HG13 | 1.41                     | 0.98              |
| 32:BK:96:ASP:HA   | 32:BK:99:GLU:OE1   | 1.64                     | 0.98              |
| 35:BN:24:VAL:HG21 | 35:BN:26:LYS:HE3   | 1.44                     | 0.98              |
| 42:BU:20:LEU:HB2  | 42:BU:95:LEU:HD22  | 1.46                     | 0.98              |
| 1:AA:1080:A:H5'   | 7:AH:14:ARG:HH21   | 1.24                     | 0.97              |
| 7:AH:51:VAL:HB    | 7:AH:52:PRO:HD3    | 1.45                     | 0.97              |
| 7:AH:152:ARG:CZ   | 10:AK:43:GLY:HA3   | 1.93                     | 0.97              |
| 18:AS:4:ILE:HG23  | 18:AS:21:VAL:CG1   | 1.93                     | 0.97              |
| 18:AS:60:LEU:HA   | 18:AS:64:ALA:HB3   | 1.46                     | 0.97              |
| 24:BA:411:G:H21   | 24:BA:2408:U:H3    | 1.12                     | 0.97              |
| 24:BA:451:C:H41   | 24:BA:453:C:H3'    | 1.26                     | 0.97              |
| 24:BA:1241:A:N3   | 24:BA:1241:A:H3'   | 1.79                     | 0.97              |
| 24:BA:1697:G:H5'' | 24:BA:1698:A:H5'   | 1.46                     | 0.97              |
| 24:BA:2126:A:C5   | 24:BA:2163:C:H4'   | 1.99                     | 0.97              |
| 24:BA:2392:A:H1'  | 36:BO:55:ARG:HH12  | 0.84                     | 0.97              |
| 24:BA:2623:G:N2   | 51:B4:22:HIS:HE1   | 1.60                     | 0.97              |
| 30:BG:53:LEU:HD23 | 30:BG:71:THR:H     | 1.26                     | 0.97              |
| 33:BL:76:TYR:O    | 33:BL:80:LYS:HD3   | 1.61                     | 0.97              |
| 36:BO:46:LYS:H    | 36:BO:46:LYS:HE3   | 1.21                     | 0.97              |
| 1:AA:495:A:H1'    | 1:AA:496:A:C8      | 1.98                     | 0.97              |
| 1:AA:528:C:N4     | 14:AO:49:ASN:HD21  | 1.62                     | 0.97              |
| 1:AA:1477:C:H2'   | 1:AA:1478:C:C6     | 1.97                     | 0.97              |
| 6:AG:20:TYR:HA    | 6:AG:26:CYS:O      | 1.61                     | 0.97              |
| 24:BA:575:A:O2'   | 24:BA:576:U:H5'    | 1.63                     | 0.97              |
| 24:BA:627:A:H61   | 24:BA:638:G:H1'    | 1.27                     | 0.97              |
| 24:BA:653:A:H62   | 24:BA:655:A:H1'    | 1.28                     | 0.97              |
| 24:BA:674:G:H4'   | 29:BF:74:ARG:CZ    | 1.94                     | 0.97              |
| 24:BA:2392:A:C1'  | 36:BO:55:ARG:HH12  | 1.77                     | 0.97              |
| 24:BA:2459:A:N3   | 24:BA:2460:U:C1'   | 2.26                     | 0.97              |
| 25:BB:77:U:O3'    | 46:BY:78:LYS:HE3   | 1.62                     | 0.97              |
| 43:BV:48:ALA:HA   | 43:BV:51:LEU:HD22  | 1.46                     | 0.97              |
| 46:BY:28:MET:HE2  | 46:BY:28:MET:HA    | 1.46                     | 0.97              |
| 49:B2:4:LEU:HD21  | 49:B2:56:VAL:HG23  | 1.42                     | 0.97              |
| 1:AA:129(A):G:H2' | 1:AA:189:U:C6      | 1.98                     | 0.97              |
| 1:AA:1314:C:H3'   | 21:AV:6:LYS:HD3    | 1.47                     | 0.97              |
| 4:AE:166:ASP:O    | 4:AE:169:LYS:HB3   | 1.64                     | 0.97              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 9:AJ:155:ARG:NH1   | 9:AJ:156:TRP:H    | 1.62                     | 0.97              |
| 20:AU:74:ARG:HB3   | 20:AU:81:PHE:CD2  | 1.98                     | 0.97              |
| 24:BA:2491:U:C6    | 24:BA:2492:U:H5'  | 1.98                     | 0.97              |
| 25:BB:89(A):A:C2'  | 25:BB:90:C:H5'    | 1.93                     | 0.97              |
| 26:BC:83:ILE:O     | 26:BC:87:GLU:HB2  | 1.63                     | 0.97              |
| 28:BE:30:PRO:HB2   | 28:BE:48:GLN:HB2  | 1.45                     | 0.97              |
| 30:BG:56:ALA:HA    | 30:BG:59:GLU:OE1  | 1.64                     | 0.97              |
| 40:BS:54:ARG:C     | 40:BS:64:ARG:HB2  | 1.88                     | 0.97              |
| 40:BS:62:THR:HG22  | 40:BS:79:HIS:HA   | 0.98                     | 0.97              |
| 1:AA:863:U:H2'     | 1:AA:863:U:O2     | 1.64                     | 0.97              |
| 1:AA:962:C:H4'     | 1:AA:1200:C:N4    | 1.78                     | 0.97              |
| 4:AE:102:LEU:H     | 4:AE:102:LEU:CD1  | 1.77                     | 0.97              |
| 12:AM:7:LYS:O      | 12:AM:97:GLU:HB2  | 1.64                     | 0.97              |
| 24:BA:296:C:H2'    | 24:BA:297:C:C6    | 1.98                     | 0.97              |
| 24:BA:728:G:HO2'   | 24:BA:729:G:H8    | 0.98                     | 0.97              |
| 24:BA:2812:G:H2'   | 24:BA:2813:A:C8   | 1.99                     | 0.97              |
| 28:BE:27:LEU:HD11  | 28:BE:30:PRO:HD3  | 1.46                     | 0.97              |
| 32:BK:2:LYS:HD2    | 32:BK:39:ALA:HB2  | 1.44                     | 0.97              |
| 39:BR:25:ARG:HA    | 39:BR:87:PHE:O    | 1.64                     | 0.97              |
| 40:BS:64:ARG:HA    | 40:BS:64:ARG:HH11 | 0.80                     | 0.97              |
| 43:BV:14:PRO:HD3   | 43:BV:78:GLU:OE1  | 1.62                     | 0.97              |
| 46:BY:165:VAL:HG12 | 46:BY:166:SER:N   | 1.75                     | 0.97              |
| 54:B7:25:MET:O     | 54:B7:27:THR:HG22 | 1.64                     | 0.97              |
| 1:AA:279:A:H5'     | 1:AA:280:C:H3'    | 1.47                     | 0.97              |
| 1:AA:1241:G:H2'    | 1:AA:1242:C:H6    | 1.29                     | 0.97              |
| 3:AB:63:G:O2'      | 24:BA:2482:G:H4'  | 1.63                     | 0.97              |
| 6:AG:36:ARG:HB3    | 6:AG:38:TYR:CZ    | 1.98                     | 0.97              |
| 9:AJ:31:MET:HG2    | 9:AJ:32:ARG:N     | 1.77                     | 0.97              |
| 24:BA:570:G:N1     | 24:BA:2498:C:H4'  | 1.79                     | 0.97              |
| 24:BA:988:A:C3'    | 49:B2:10:LYS:HZ1  | 1.78                     | 0.97              |
| 24:BA:1203:G:C5    | 24:BA:1241:A:C8   | 2.49                     | 0.97              |
| 24:BA:1405:U:H2'   | 24:BA:1406:U:C5   | 2.00                     | 0.97              |
| 24:BA:1453:A:H61   | 38:BQ:63:ARG:HH21 | 0.98                     | 0.97              |
| 24:BA:2128:C:H5''  | 26:BC:218:MET:HE1 | 1.46                     | 0.97              |
| 24:BA:2542:A:H4'   | 24:BA:2543:G:OP1  | 1.62                     | 0.97              |
| 1:AA:625:G:OP1     | 18:AS:9:PHE:HB3   | 1.65                     | 0.97              |
| 1:AA:781:A:H4'     | 1:AA:1522:U:O2'   | 1.64                     | 0.97              |
| 1:AA:979:C:H5''    | 1:AA:1222:G:O6    | 1.63                     | 0.97              |
| 8:AI:76:ALA:HB1    | 8:AI:80:ARG:HH12  | 1.25                     | 0.97              |
| 9:AJ:113:GLU:HG3   | 9:AJ:118:VAL:HB   | 1.42                     | 0.97              |
| 11:AL:79:LEU:HD13  | 11:AL:101:PHE:HB3 | 1.47                     | 0.97              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 20:AU:43:PHE:O     | 20:AU:51:LEU:HD13  | 1.64                     | 0.97              |
| 24:BA:1202:C:C6    | 24:BA:1203:G:H1'   | 1.97                     | 0.97              |
| 24:BA:2064:C:H1'   | 24:BA:2450:A:N6    | 1.79                     | 0.97              |
| 24:BA:2361:A:OP2   | 54:B7:28:GLY:HA2   | 1.62                     | 0.97              |
| 24:BA:2491:U:C6    | 24:BA:2491:U:C3'   | 2.46                     | 0.97              |
| 24:BA:2581:G:N1    | 24:BA:2610:C:H6    | 1.60                     | 0.97              |
| 24:BA:2677:G:O2'   | 24:BA:2678:C:H5'   | 1.64                     | 0.97              |
| 27:BD:171:ASP:O    | 27:BD:186:HIS:HA   | 1.64                     | 0.97              |
| 32:BK:127:VAL:HG13 | 32:BK:140:LEU:C    | 1.90                     | 0.97              |
| 37:BP:23:GLY:CA    | 37:BP:101:ARG:HH21 | 1.77                     | 0.97              |
| 41:BT:17:ILE:HA    | 41:BT:20:LEU:CG    | 1.93                     | 0.97              |
| 45:BX:97:ARG:HA    | 45:BX:101:LYS:HG3  | 1.46                     | 0.97              |
| 53:B6:17:GLY:H     | 53:B6:21:ARG:HH22  | 1.07                     | 0.97              |
| 1:AA:265:G:O2'     | 1:AA:266:G:H5'     | 1.65                     | 0.97              |
| 19:AT:59:ILE:HD12  | 19:AT:60:ILE:H     | 1.28                     | 0.97              |
| 24:BA:566:U:H5''   | 42:BU:82:ARG:NH1   | 1.80                     | 0.97              |
| 24:BA:1044:G:H4'   | 24:BA:1047:G:H1'   | 1.43                     | 0.97              |
| 24:BA:1264:G:H3'   | 24:BA:1265:A:H5''  | 1.43                     | 0.97              |
| 24:BA:1555:G:H2'   | 24:BA:1556:C:H6    | 1.16                     | 0.97              |
| 27:BD:60:ARG:HD3   | 27:BD:62:TYR:HE2   | 1.28                     | 0.97              |
| 27:BD:63:ARG:HH11  | 27:BD:85:ASP:HB2   | 1.27                     | 0.97              |
| 27:BD:134:ARG:CA   | 27:BD:168:ARG:HH12 | 1.77                     | 0.97              |
| 27:BD:147:LEU:HA   | 27:BD:185:VAL:HG13 | 1.46                     | 0.97              |
| 28:BE:49:LEU:HA    | 28:BE:76:ARG:O     | 1.65                     | 0.97              |
| 34:BM:86:PRO:HB2   | 34:BM:89:LYS:NZ    | 1.79                     | 0.97              |
| 34:BM:111:PRO:O    | 34:BM:114:ARG:HB3  | 1.65                     | 0.97              |
| 43:BV:28:SER:HA    | 43:BV:70:TYR:HA    | 1.45                     | 0.97              |
| 50:B3:68:ARG:NH1   | 50:B3:68:ARG:H     | 1.62                     | 0.97              |
| 54:B7:23:VAL:HG22  | 54:B7:47:LYS:O     | 1.65                     | 0.97              |
| 1:AA:665:A:H2'     | 1:AA:725:G:H22     | 1.22                     | 0.97              |
| 4:AE:20:GLU:HA     | 4:AE:21:ARG:HH21   | 1.29                     | 0.97              |
| 6:AG:162:LEU:HD13  | 6:AG:181:MET:HG2   | 1.42                     | 0.97              |
| 12:AM:23:ILE:HG13  | 12:AM:85:LEU:HB3   | 1.45                     | 0.97              |
| 24:BA:68:G:H2'     | 24:BA:69:C:C6      | 1.99                     | 0.97              |
| 24:BA:1488:G:C2'   | 24:BA:1489:U:H5'   | 1.93                     | 0.97              |
| 24:BA:1786:A:H4'   | 24:BA:1938:A:H61   | 1.27                     | 0.97              |
| 24:BA:2346:A:N6    | 52:B5:37:ARG:HH12  | 1.62                     | 0.97              |
| 24:BA:2598:A:OP1   | 27:BD:234:GLY:HA3  | 1.64                     | 0.97              |
| 25:BB:7:G:H4'      | 39:BR:29:PHE:CE2   | 1.99                     | 0.97              |
| 43:BV:4:LYS:HA     | 43:BV:106:ILE:HD12 | 1.45                     | 0.97              |
| 49:B2:4:LEU:HB3    | 49:B2:37:LEU:CD2   | 1.95                     | 0.97              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 54:B7:50:LEU:CD2  | 54:B7:51:ALA:H     | 1.78                     | 0.97              |
| 1:AA:587:G:H1'    | 1:AA:755:G:H22     | 1.29                     | 0.97              |
| 17:AR:62:GLN:O    | 17:AR:66:LEU:HD23  | 1.65                     | 0.97              |
| 24:BA:343:C:O2'   | 24:BA:344:G:H5'    | 1.63                     | 0.97              |
| 24:BA:469:G:H22   | 53:B6:40:TRP:HZ2   | 0.97                     | 0.97              |
| 24:BA:1086:A:H3'  | 24:BA:1087:G:H5'   | 1.44                     | 0.97              |
| 24:BA:1844:C:OP1  | 27:BD:255:LYS:HA   | 1.64                     | 0.97              |
| 24:BA:1977:A:H2'  | 24:BA:1978:A:C8    | 1.99                     | 0.97              |
| 24:BA:2124:G:H4'  | 26:BC:42:GLU:CG    | 1.94                     | 0.97              |
| 24:BA:2445:G:H2'  | 24:BA:2446:G:H8    | 1.27                     | 0.97              |
| 28:BE:45:THR:CB   | 28:BE:81:ILE:HA    | 1.95                     | 0.97              |
| 29:BF:70:THR:C    | 29:BF:72:ARG:H     | 1.70                     | 0.97              |
| 30:BG:131:TYR:CG  | 30:BG:132:ASN:N    | 2.29                     | 0.97              |
| 34:BM:19:GLU:HB2  | 34:BM:56:ASN:HB3   | 1.46                     | 0.97              |
| 34:BM:109:LYS:NZ  | 34:BM:110:GLY:H    | 1.63                     | 0.97              |
| 42:BU:11:GLN:NE2  | 42:BU:24:LYS:HZ3   | 1.61                     | 0.97              |
| 50:B3:47:GLN:HA   | 50:B3:52:THR:CB    | 1.95                     | 0.97              |
| 53:B6:42:LEU:HB3  | 53:B6:44:PRO:HG2   | 1.46                     | 0.97              |
| 3:AC:9:A:H1'      | 3:AC:46:G:H1'      | 1.42                     | 0.97              |
| 4:AE:144:ARG:HA   | 4:AE:147:LYS:HB2   | 1.47                     | 0.97              |
| 10:AK:46:LYS:HE3  | 10:AK:64:LYS:HG3   | 1.44                     | 0.97              |
| 10:AK:87:SER:CB   | 10:AK:92:ARG:HA    | 1.95                     | 0.97              |
| 14:AO:101:VAL:O   | 14:AO:104:VAL:HG23 | 1.64                     | 0.97              |
| 24:BA:185:U:H2'   | 24:BA:186:G:H8     | 1.30                     | 0.97              |
| 24:BA:343:C:C2'   | 24:BA:344:G:H5'    | 1.95                     | 0.97              |
| 24:BA:612:G:H4'   | 24:BA:616:A:H61    | 1.15                     | 0.97              |
| 24:BA:624:C:H41   | 36:BO:104:GLY:HA2  | 1.27                     | 0.97              |
| 29:BF:122:LYS:HE3 | 29:BF:192:LEU:HD12 | 1.45                     | 0.97              |
| 30:BG:2:PRO:O     | 30:BG:5:VAL:HB     | 1.65                     | 0.97              |
| 33:BL:56:GLU:O    | 33:BL:67:PHE:HB3   | 1.64                     | 0.97              |
| 37:BP:121:ALA:O   | 37:BP:124:LYS:HB2  | 1.63                     | 0.97              |
| 40:BS:111:ARG:HA  | 40:BS:114:LEU:HD12 | 1.44                     | 0.97              |
| 41:BT:53:ARG:HB2  | 41:BT:53:ARG:HH11  | 1.29                     | 0.97              |
| 46:BY:57:ILE:CG1  | 46:BY:70:LEU:HB3   | 1.94                     | 0.97              |
| 50:B3:5:ILE:HG21  | 50:B3:60:GLN:CD    | 1.89                     | 0.97              |
| 1:AA:1180:A:OP1   | 11:AL:102:LEU:HD12 | 1.65                     | 0.96              |
| 5:AF:142:MET:HE3  | 5:AF:143:GLU:HA    | 1.43                     | 0.96              |
| 9:AJ:87:VAL:HG13  | 9:AJ:152:ALA:HA    | 1.44                     | 0.96              |
| 9:AJ:143:ARG:NH1  | 9:AJ:144:MET:HB2   | 1.79                     | 0.96              |
| 10:AK:36:LEU:H    | 10:AK:36:LEU:HD23  | 1.30                     | 0.96              |
| 10:AK:64:LYS:HD3  | 10:AK:79:VAL:HG11  | 1.47                     | 0.96              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 20:AU:41:LYS:O     | 20:AU:44:LEU:HG    | 1.63                     | 0.96              |
| 22:AW:51:GLU:HA    | 22:AW:54:LYS:CD    | 1.95                     | 0.96              |
| 24:BA:593:G:OP1    | 54:B7:62:LEU:HD21  | 1.63                     | 0.96              |
| 24:BA:640:C:H2'    | 24:BA:641:C:C5'    | 1.94                     | 0.96              |
| 24:BA:1061:U:H4'   | 24:BA:1070:A:C4'   | 1.95                     | 0.96              |
| 24:BA:1222:C:N4    | 24:BA:1227:A:N6    | 2.12                     | 0.96              |
| 24:BA:2596:U:C2'   | 27:BD:242:ARG:CZ   | 2.43                     | 0.96              |
| 27:BD:232:PRO:HG2  | 27:BD:247:ALA:CA   | 1.95                     | 0.96              |
| 34:BM:85:ILE:HB    | 34:BM:90:MET:HE1   | 1.47                     | 0.96              |
| 36:BO:128:HIS:HA   | 36:BO:147:LEU:HD21 | 1.44                     | 0.96              |
| 37:BP:106:VAL:HG22 | 37:BP:107:ALA:N    | 1.79                     | 0.96              |
| 38:BQ:83:ILE:HG23  | 38:BQ:86:ARG:CZ    | 1.95                     | 0.96              |
| 45:BX:75:ILE:HG22  | 45:BX:100:ALA:HB2  | 1.44                     | 0.96              |
| 1:AA:194:C:H2'     | 1:AA:195:A:H5''    | 1.47                     | 0.96              |
| 10:AK:45:ILE:CD1   | 10:AK:48:TYR:HB3   | 1.94                     | 0.96              |
| 21:AV:27:GLU:HG2   | 21:AV:29:ARG:H     | 1.29                     | 0.96              |
| 24:BA:176:G:H2'    | 24:BA:177:G:O4'    | 1.64                     | 0.96              |
| 24:BA:673:C:H4'    | 29:BF:82:ILE:HD12  | 1.45                     | 0.96              |
| 24:BA:763:G:O2'    | 24:BA:764:A:H5''   | 1.65                     | 0.96              |
| 24:BA:1364:G:N7    | 50:B3:2:LYS:HB2    | 1.80                     | 0.96              |
| 28:BE:105:THR:O    | 28:BE:196:VAL:HG13 | 1.63                     | 0.96              |
| 31:BH:18:GLU:OE2   | 31:BH:25:LYS:HB3   | 1.66                     | 0.96              |
| 36:BO:13:ASN:HD22  | 36:BO:14:LYS:H     | 1.12                     | 0.96              |
| 38:BQ:58:GLY:HA2   | 38:BQ:80:PHE:CE2   | 2.00                     | 0.96              |
| 39:BR:28:VAL:HG22  | 39:BR:29:PHE:H     | 1.24                     | 0.96              |
| 40:BS:30:VAL:HG22  | 40:BS:32:TYR:CE2   | 1.99                     | 0.96              |
| 49:B2:3:ARG:NH1    | 49:B2:59:VAL:HB    | 1.79                     | 0.96              |
| 1:AA:265:G:H2'     | 1:AA:267:C:H5      | 1.27                     | 0.96              |
| 1:AA:1004:A:H3'    | 1:AA:1025:U:C4     | 2.01                     | 0.96              |
| 14:AO:28:LYS:HZ2   | 14:AO:33:ARG:HH22  | 1.08                     | 0.96              |
| 24:BA:349:G:H2'    | 24:BA:350:U:C6     | 2.00                     | 0.96              |
| 24:BA:1071:G:H2'   | 24:BA:1072:C:H5'   | 1.47                     | 0.96              |
| 24:BA:1206:G:H3'   | 24:BA:1206:G:H8    | 1.28                     | 0.96              |
| 24:BA:1788:C:C2'   | 27:BD:222:ARG:HH21 | 1.79                     | 0.96              |
| 26:BC:86:ALA:HA    | 26:BC:150:GLY:HA2  | 1.45                     | 0.96              |
| 27:BD:168:ARG:HD3  | 27:BD:173:VAL:HG22 | 1.45                     | 0.96              |
| 28:BE:133:LYS:NZ   | 28:BE:137:HIS:HB3  | 1.81                     | 0.96              |
| 30:BG:39:ILE:HG23  | 30:BG:157:ILE:HB   | 1.47                     | 0.96              |
| 33:BL:57:ILE:HA    | 33:BL:66:THR:O     | 1.64                     | 0.96              |
| 42:BU:62:LEU:HD22  | 42:BU:98:GLU:HA    | 1.44                     | 0.96              |
| 46:BY:127:LYS:NZ   | 46:BY:165:VAL:HB   | 1.80                     | 0.96              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 53:B6:32:LYS:HA   | 53:B6:35:ARG:NH1   | 1.81                     | 0.96              |
| 1:AA:1329:A:OP1   | 15:AP:29:ARG:HG2   | 1.64                     | 0.96              |
| 4:AE:81:VAL:HG12  | 4:AE:92:TYR:HD1    | 1.27                     | 0.96              |
| 12:AM:63:PHE:HB3  | 16:AQ:58:LYS:HA    | 1.47                     | 0.96              |
| 12:AM:79:ARG:HD3  | 12:AM:79:ARG:C     | 1.91                     | 0.96              |
| 19:AT:59:ILE:CD1  | 19:AT:71:PHE:HB3   | 1.95                     | 0.96              |
| 24:BA:308:G:N2    | 24:BA:309:G:H1'    | 1.80                     | 0.96              |
| 24:BA:636:G:N2    | 36:BO:75:ILE:HG23  | 1.80                     | 0.96              |
| 24:BA:1818:U:H5'' | 27:BD:158:ALA:HB2  | 1.45                     | 0.96              |
| 24:BA:2018:G:H1'  | 41:BT:34:LYS:NZ    | 1.80                     | 0.96              |
| 27:BD:133:LEU:C   | 27:BD:136:ILE:HG13 | 1.89                     | 0.96              |
| 29:BF:183:VAL:O   | 29:BF:186:ILE:HB   | 1.66                     | 0.96              |
| 33:BL:78:ILE:HD13 | 33:BL:131:ALA:HB2  | 1.44                     | 0.96              |
| 38:BQ:103:ARG:HB2 | 38:BQ:108:GLY:C    | 1.90                     | 0.96              |
| 52:B5:25:LYS:HE3  | 54:B7:35:GLN:O     | 1.66                     | 0.96              |
| 1:AA:41:G:H2'     | 1:AA:42:G:C8       | 1.98                     | 0.96              |
| 4:AE:78:GLN:HG3   | 4:AE:94:ASN:HB3    | 1.45                     | 0.96              |
| 10:AK:12:ARG:NH1  | 10:AK:27:PRO:HD3   | 1.80                     | 0.96              |
| 14:AO:39:VAL:HB   | 14:AO:57:LYS:HB2   | 1.47                     | 0.96              |
| 17:AR:54:ARG:O    | 17:AR:57:LEU:HB2   | 1.63                     | 0.96              |
| 17:AR:80:ALA:O    | 17:AR:83:GLU:HB3   | 1.63                     | 0.96              |
| 18:AS:21:VAL:HG21 | 18:AS:59:TRP:NE1   | 1.80                     | 0.96              |
| 24:BA:125:G:N2    | 53:B6:10:ARG:HA    | 1.80                     | 0.96              |
| 24:BA:740:U:H1'   | 24:BA:1784:A:N7    | 1.80                     | 0.96              |
| 24:BA:1351:C:H2'  | 24:BA:1352:U:C6    | 2.00                     | 0.96              |
| 27:BD:70:TRP:HA   | 27:BD:73:VAL:HG13  | 1.44                     | 0.96              |
| 34:BM:67:LEU:H    | 34:BM:87:LEU:CD2   | 1.77                     | 0.96              |
| 37:BP:16:ARG:HG3  | 37:BP:72:LYS:HD2   | 1.47                     | 0.96              |
| 37:BP:66:ILE:HG22 | 37:BP:67:ARG:N     | 1.69                     | 0.96              |
| 41:BT:59:ARG:O    | 41:BT:62:ILE:HB    | 1.65                     | 0.96              |
| 44:BW:85:PRO:HG2  | 44:BW:87:GLN:HG2   | 1.47                     | 0.96              |
| 54:B7:21:LYS:HB2  | 54:B7:21:LYS:HZ2   | 1.29                     | 0.96              |
| 1:AA:1129:C:H5'   | 1:AA:1130:A:OP1    | 1.64                     | 0.96              |
| 4:AE:187:LEU:HD22 | 4:AE:188:ALA:H     | 1.31                     | 0.96              |
| 5:AF:108:ASN:HD21 | 5:AF:110:ASN:HB2   | 1.27                     | 0.96              |
| 5:AF:189:ALA:CB   | 5:AF:196:LEU:HG    | 1.96                     | 0.96              |
| 6:AG:147:ALA:HB2  | 6:AG:182:LYS:HA    | 1.46                     | 0.96              |
| 11:AL:47:LEU:HD13 | 11:AL:50:LEU:HB3   | 1.44                     | 0.96              |
| 14:AO:126:LYS:N   | 14:AO:126:LYS:HE3  | 1.80                     | 0.96              |
| 24:BA:531:C:H42   | 41:BT:38:THR:HA    | 1.25                     | 0.96              |
| 24:BA:1061:U:H5'' | 24:BA:1070:A:H4'   | 1.47                     | 0.96              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1309:G:O2'   | 24:BA:1310:G:H5'   | 1.65                     | 0.96              |
| 25:BB:67:G:H2'     | 25:BB:68:C:C6      | 2.00                     | 0.96              |
| 30:BG:101:ILE:O    | 30:BG:101:ILE:HD13 | 1.65                     | 0.96              |
| 37:BP:12:GLN:HE22  | 37:BP:13:GLN:HE21  | 1.09                     | 0.96              |
| 39:BR:9:ARG:HB2    | 39:BR:9:ARG:HH11   | 1.25                     | 0.96              |
| 40:BS:70:VAL:HB    | 40:BS:74:ARG:NH1   | 1.79                     | 0.96              |
| 41:BT:74:LEU:HD13  | 41:BT:78:THR:HG21  | 1.48                     | 0.96              |
| 46:BY:118:GLN:HB2  | 46:BY:144:LEU:HD22 | 1.44                     | 0.96              |
| 1:AA:296:U:H1'     | 1:AA:302:G:N2      | 1.81                     | 0.96              |
| 1:AA:1342:C:H1'    | 11:AL:124:GLN:OE1  | 1.65                     | 0.96              |
| 24:BA:1314:C:OP1   | 24:BA:1332:G:H5'   | 1.66                     | 0.96              |
| 24:BA:1977:A:H2'   | 24:BA:1978:A:H8    | 1.28                     | 0.96              |
| 24:BA:2607:G:H2'   | 24:BA:2608:G:H5'   | 1.48                     | 0.96              |
| 31:BH:7:LEU:HG     | 31:BH:51:ARG:HH21  | 1.28                     | 0.96              |
| 34:BM:30:ILE:O     | 34:BM:34:LEU:HD12  | 1.64                     | 0.96              |
| 38:BQ:20:LEU:CD2   | 38:BQ:24:GLN:HG3   | 1.94                     | 0.96              |
| 52:B5:19:ARG:HH12  | 52:B5:41:PRO:HG3   | 1.21                     | 0.96              |
| 10:AK:82:HIS:O     | 10:AK:137:VAL:HA   | 1.64                     | 0.96              |
| 11:AL:48:GLU:HB3   | 11:AL:78:LYS:NZ    | 1.81                     | 0.96              |
| 14:AO:85:ILE:HD11  | 14:AO:99:HIS:N     | 1.80                     | 0.96              |
| 24:BA:865:C:H42    | 24:BA:909:A:N6     | 1.62                     | 0.96              |
| 24:BA:969:U:H2'    | 24:BA:970:C:O4'    | 1.63                     | 0.96              |
| 33:BL:10:LEU:HD21  | 33:BL:57:ILE:HG12  | 1.46                     | 0.96              |
| 33:BL:12:LEU:HB3   | 33:BL:19:PRO:HG3   | 1.48                     | 0.96              |
| 39:BR:49:VAL:HG11  | 39:BR:80:LEU:HG    | 1.48                     | 0.96              |
| 40:BS:29:ARG:HG2   | 40:BS:51:ARG:HG2   | 1.45                     | 0.96              |
| 47:BZ:29:GLN:O     | 47:BZ:67:VAL:HG23  | 1.64                     | 0.96              |
| 4:AE:150:SER:HA    | 4:AE:153:ARG:HB2   | 1.48                     | 0.96              |
| 8:AI:48:LEU:HB3    | 20:AU:78:LEU:HD23  | 1.45                     | 0.96              |
| 9:AJ:49:ILE:HG21   | 9:AJ:121:ALA:HB1   | 1.48                     | 0.96              |
| 24:BA:221:A:H61    | 24:BA:265:A:N6     | 1.63                     | 0.96              |
| 24:BA:614:U:H3'    | 24:BA:615:G:H4'    | 1.48                     | 0.96              |
| 24:BA:976:C:N4     | 24:BA:988:A:C2     | 2.34                     | 0.96              |
| 24:BA:1669:A:H5''  | 24:BA:2550:G:OP1   | 1.65                     | 0.96              |
| 24:BA:1773:A:N6    | 24:BA:1829:A:H1'   | 1.80                     | 0.96              |
| 24:BA:2528:U:O2'   | 24:BA:2529:G:H3'   | 1.66                     | 0.96              |
| 28:BE:114:ALA:HB3  | 28:BE:118:LYS:HB2  | 1.45                     | 0.96              |
| 32:BK:31:LEU:HD11  | 32:BK:36:ALA:HB3   | 1.47                     | 0.96              |
| 37:BP:118:LEU:HD13 | 37:BP:131:ILE:HG21 | 1.43                     | 0.96              |
| 43:BV:34:ASN:HA    | 43:BV:37:ARG:HE    | 1.30                     | 0.96              |
| 47:BZ:46:LYS:HG3   | 47:BZ:78:TYR:CZ    | 2.01                     | 0.96              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1464:G:H2'   | 1:AA:1465:C:H5     | 1.25                     | 0.96              |
| 13:AN:61:ALA:HB1  | 13:AN:94:ALA:CB    | 1.95                     | 0.96              |
| 15:AP:66:LEU:HA   | 15:AP:70:LEU:HD12  | 1.47                     | 0.96              |
| 24:BA:931:G:H8    | 24:BA:932:G:H1'    | 1.27                     | 0.96              |
| 24:BA:993:G:H1'   | 42:BU:91:TYR:CE2   | 1.99                     | 0.96              |
| 24:BA:995:C:H1'   | 41:BT:57:PHE:CE2   | 2.01                     | 0.96              |
| 24:BA:1248:G:C8   | 41:BT:2:PRO:HA     | 2.00                     | 0.96              |
| 24:BA:1507:A:H2'  | 24:BA:1507:A:N3    | 1.80                     | 0.96              |
| 24:BA:2576:G:C4'  | 24:BA:2577:A:H5'   | 1.96                     | 0.96              |
| 24:BA:2627:G:H2'  | 24:BA:2628:C:H5'   | 1.48                     | 0.96              |
| 24:BA:2757:A:H2'  | 24:BA:2758:A:H5'   | 1.46                     | 0.96              |
| 25:BB:43:C:O2     | 30:BG:95:ARG:HB2   | 1.66                     | 0.96              |
| 31:BH:153:LYS:N   | 31:BH:154:PRO:HD2  | 1.81                     | 0.96              |
| 34:BM:34:LEU:C    | 34:BM:49:GLY:HA2   | 1.90                     | 0.96              |
| 37:BP:12:GLN:NE2  | 37:BP:13:GLN:HG2   | 1.80                     | 0.96              |
| 37:BP:16:ARG:CZ   | 37:BP:73:PRO:HD3   | 1.96                     | 0.96              |
| 37:BP:25:ASP:HB3  | 37:BP:102:VAL:H    | 1.29                     | 0.96              |
| 41:BT:17:ILE:HA   | 41:BT:20:LEU:HG    | 0.99                     | 0.96              |
| 41:BT:53:ARG:HB2  | 41:BT:53:ARG:NH1   | 1.81                     | 0.96              |
| 1:AA:1128:C:H1'   | 1:AA:1146:A:H61    | 1.29                     | 0.95              |
| 17:AR:5:LYS:O     | 17:AR:8:LYS:HB3    | 1.66                     | 0.95              |
| 18:AS:6:LEU:HD13  | 18:AS:6:LEU:H      | 1.29                     | 0.95              |
| 24:BA:862:G:C2    | 24:BA:863:A:H1'    | 2.01                     | 0.95              |
| 24:BA:1272:A:OP2  | 24:BA:1646:C:H2'   | 1.66                     | 0.95              |
| 24:BA:2698:U:H2'  | 24:BA:2699:C:C6    | 2.01                     | 0.95              |
| 27:BD:27:THR:HG22 | 27:BD:29:PRO:CD    | 1.96                     | 0.95              |
| 34:BM:15:LEU:HD21 | 34:BM:137:LYS:HA   | 1.45                     | 0.95              |
| 34:BM:25:ARG:O    | 34:BM:28:THR:HG23  | 1.65                     | 0.95              |
| 37:BP:99:PRO:O    | 37:BP:101:ARG:HD3  | 1.66                     | 0.95              |
| 45:BX:74:PRO:HB3  | 45:BX:101:LYS:C    | 1.90                     | 0.95              |
| 49:B2:54:VAL:HG22 | 49:B2:55:ARG:N     | 1.81                     | 0.95              |
| 10:AK:98:LYS:HZ2  | 10:AK:98:LYS:H     | 1.06                     | 0.95              |
| 22:AW:87:LYS:HA   | 22:AW:87:LYS:HE3   | 1.46                     | 0.95              |
| 24:BA:442:G:H4'   | 29:BF:46:ARG:HG3   | 1.48                     | 0.95              |
| 26:BC:122:ALA:HB1 | 26:BC:126:LYS:HD3  | 1.46                     | 0.95              |
| 38:BQ:32:GLY:HA2  | 38:BQ:116:LEU:HD21 | 0.96                     | 0.95              |
| 39:BR:74:ALA:HB1  | 39:BR:108:GLY:N    | 1.81                     | 0.95              |
| 39:BR:76:LYS:O    | 39:BR:80:LEU:HB2   | 1.66                     | 0.95              |
| 45:BX:47:LYS:NZ   | 45:BX:51:VAL:HG21  | 1.82                     | 0.95              |
| 49:B2:9:VAL:HG22  | 49:B2:53:LEU:O     | 1.63                     | 0.95              |
| 5:AF:12:LEU:HD21  | 16:AQ:57:ARG:HG3   | 1.48                     | 0.95              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:AG:148:VAL:HG21  | 6:AG:162:LEU:HD11  | 1.49                     | 0.95              |
| 15:AP:8:GLU:HG3    | 15:AP:22:ILE:HG12  | 1.47                     | 0.95              |
| 20:AU:45:SER:CB    | 20:AU:51:LEU:HD11  | 1.95                     | 0.95              |
| 24:BA:270(X):G:C2' | 24:BA:270(Y):G:H5' | 1.96                     | 0.95              |
| 24:BA:469:G:N2     | 53:B6:40:TRP:HZ2   | 1.63                     | 0.95              |
| 24:BA:477:A:H2'    | 24:BA:478:A:H8     | 1.28                     | 0.95              |
| 24:BA:2447:G:N7    | 24:BA:2500:U:C3'   | 2.25                     | 0.95              |
| 24:BA:2583:G:H2'   | 24:BA:2584:U:O2    | 1.65                     | 0.95              |
| 27:BD:134:ARG:HD2  | 27:BD:188:GLU:HA   | 1.46                     | 0.95              |
| 28:BE:49:LEU:HD11  | 28:BE:74:PRO:HB2   | 1.48                     | 0.95              |
| 31:BH:38:SER:HB3   | 31:BH:41:MET:CG    | 1.97                     | 0.95              |
| 37:BP:7:MET:N      | 37:BP:70:PRO:HG2   | 1.80                     | 0.95              |
| 37:BP:112:GLU:O    | 37:BP:115:MET:HB2  | 1.65                     | 0.95              |
| 42:BU:40:LEU:HD23  | 42:BU:51:VAL:HG12  | 1.45                     | 0.95              |
| 42:BU:43:GLU:H     | 42:BU:44:LYS:HZ1   | 0.97                     | 0.95              |
| 44:BW:27:THR:HB    | 44:BW:80:ILE:HD12  | 1.48                     | 0.95              |
| 50:B3:18:CYS:N     | 50:B3:33:VAL:HB    | 1.82                     | 0.95              |
| 1:AA:101:A:H2'     | 1:AA:102:G:H8      | 1.30                     | 0.95              |
| 1:AA:778:G:O2'     | 1:AA:779:C:H5'     | 1.67                     | 0.95              |
| 2:A1:43:U:H2'      | 2:A1:44:U:C5       | 2.01                     | 0.95              |
| 5:AF:189:ALA:HB3   | 5:AF:196:LEU:H     | 1.29                     | 0.95              |
| 9:AJ:76:ARG:HB2    | 9:AJ:156:TRP:NE1   | 1.81                     | 0.95              |
| 15:AP:97:PRO:HB2   | 15:AP:101:GLN:HB2  | 1.48                     | 0.95              |
| 19:AT:68:ARG:H     | 19:AT:70:ARG:NH2   | 1.62                     | 0.95              |
| 24:BA:2063:C:H1'   | 24:BA:2451:A:C2    | 2.01                     | 0.95              |
| 26:BC:82:LYS:HD2   | 26:BC:116:THR:HG21 | 1.47                     | 0.95              |
| 34:BM:68:GLU:H     | 34:BM:70:LYS:HZ1   | 1.01                     | 0.95              |
| 37:BP:83:MET:N     | 37:BP:83:MET:SD    | 2.26                     | 0.95              |
| 37:BP:109:VAL:HG11 | 37:BP:114:ALA:CB   | 1.95                     | 0.95              |
| 42:BU:66:ARG:HE    | 42:BU:95:LEU:HB2   | 1.30                     | 0.95              |
| 47:BZ:68:GLU:CB    | 47:BZ:80:HIS:O     | 2.15                     | 0.95              |
| 1:AA:678:U:H2'     | 1:AA:679:C:H6      | 1.26                     | 0.95              |
| 3:AD:19:G:H21      | 3:AD:57:G:H1'      | 1.32                     | 0.95              |
| 4:AE:184:VAL:HB    | 4:AE:198:ASP:OD1   | 1.65                     | 0.95              |
| 7:AH:33:VAL:HG22   | 7:AH:43:LEU:HD12   | 1.49                     | 0.95              |
| 24:BA:598:G:H4'    | 36:BO:12:ALA:HB3   | 1.45                     | 0.95              |
| 27:BD:37:LEU:HD11  | 27:BD:63:ARG:C     | 1.90                     | 0.95              |
| 27:BD:56:GLY:H     | 27:BD:217:ARG:HD2  | 1.26                     | 0.95              |
| 35:BN:94:ARG:HG3   | 35:BN:95:GLY:N     | 1.78                     | 0.95              |
| 37:BP:94:VAL:HG23  | 37:BP:95:ALA:N     | 1.80                     | 0.95              |
| 46:BY:39:VAL:HG22  | 46:BY:44:PHE:CE2   | 2.01                     | 0.95              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 47:BZ:65:GLY:HA3   | 47:BZ:81:VAL:HG12  | 1.45                     | 0.95              |
| 50:B3:7:PRO:HD3    | 50:B3:56:VAL:CG1   | 1.96                     | 0.95              |
| 50:B3:65:ASP:CA    | 50:B3:68:ARG:HH22  | 1.79                     | 0.95              |
| 1:AA:1143:G:H2'    | 1:AA:1144:G:H8     | 1.27                     | 0.95              |
| 1:AA:1179:A:H4'    | 11:AL:103:THR:OG1  | 1.67                     | 0.95              |
| 12:AM:15:THR:OG1   | 12:AM:94:VAL:HG23  | 1.66                     | 0.95              |
| 24:BA:451:C:N4     | 24:BA:453:C:H3'    | 1.80                     | 0.95              |
| 24:BA:911:A:C8     | 24:BA:2264:C:H1'   | 2.00                     | 0.95              |
| 24:BA:1270:C:H4'   | 24:BA:1271:G:C5'   | 1.96                     | 0.95              |
| 24:BA:1695:G:H3'   | 24:BA:1695:G:N3    | 1.80                     | 0.95              |
| 24:BA:1967:C:N4    | 24:BA:1968:G:N2    | 2.14                     | 0.95              |
| 24:BA:2124:G:H4'   | 26:BC:42:GLU:HG3   | 0.98                     | 0.95              |
| 24:BA:2587:A:C2'   | 24:BA:2588:G:H5'   | 1.95                     | 0.95              |
| 26:BC:75:LEU:HD11  | 26:BC:99:ILE:HG21  | 1.48                     | 0.95              |
| 26:BC:82:LYS:HE3   | 26:BC:147:PHE:HD1  | 1.31                     | 0.95              |
| 28:BE:8:LYS:CD     | 28:BE:9:VAL:HG22   | 1.96                     | 0.95              |
| 31:BH:164:TYR:HE2  | 31:BH:167:GLU:H    | 1.09                     | 0.95              |
| 35:BN:47:ILE:HD12  | 35:BN:52:VAL:HG22  | 1.48                     | 0.95              |
| 46:BY:39:VAL:HG13  | 46:BY:44:PHE:CD2   | 2.01                     | 0.95              |
| 49:B2:31:LEU:HD12  | 49:B2:32:GLN:HE22  | 1.28                     | 0.95              |
| 1:AA:523:A:H61     | 14:AO:53:ARG:NH2   | 1.65                     | 0.95              |
| 1:AA:1204:A:C2     | 5:AF:195:VAL:HG21  | 2.02                     | 0.95              |
| 1:AA:1239:A:H4'    | 1:AA:1240:U:H5''   | 1.47                     | 0.95              |
| 7:AH:11:ILE:HG22   | 7:AH:12:LEU:H      | 1.29                     | 0.95              |
| 8:AI:97:PHE:HD2    | 20:AU:31:LEU:HD13  | 1.32                     | 0.95              |
| 10:AK:7:ALA:HA     | 10:AK:10:LEU:HD12  | 1.49                     | 0.95              |
| 10:AK:87:SER:HB2   | 10:AK:92:ARG:CA    | 1.97                     | 0.95              |
| 11:AL:103:THR:HG22 | 11:AL:104:ARG:H    | 1.32                     | 0.95              |
| 24:BA:545:G:H1'    | 24:BA:549:G:N2     | 1.80                     | 0.95              |
| 24:BA:2120:G:N2    | 26:BC:167:LYS:HZ1  | 1.65                     | 0.95              |
| 24:BA:2573:C:OP1   | 24:BA:2574:G:H5''  | 1.66                     | 0.95              |
| 24:BA:2615:U:H1'   | 51:B4:7:PRO:HB3    | 1.45                     | 0.95              |
| 24:BA:2815:C:O2'   | 24:BA:2816:C:H5'   | 1.67                     | 0.95              |
| 26:BC:108:MET:SD   | 26:BC:131:LEU:HD23 | 2.07                     | 0.95              |
| 27:BD:95:LEU:HD22  | 27:BD:96:HIS:H     | 1.31                     | 0.95              |
| 28:BE:64:LYS:HA    | 28:BE:67:PHE:HB2   | 1.46                     | 0.95              |
| 31:BH:115:VAL:HG13 | 31:BH:116:GLU:N    | 1.79                     | 0.95              |
| 37:BP:8:LYS:HZ2    | 37:BP:93:TYR:HD2   | 0.98                     | 0.95              |
| 38:BQ:14:SER:O     | 38:BQ:17:ARG:HG2   | 1.67                     | 0.95              |
| 42:BU:40:LEU:HD23  | 42:BU:51:VAL:O     | 1.66                     | 0.95              |
| 42:BU:64:HIS:HA    | 42:BU:97:LYS:HD2   | 1.46                     | 0.95              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 43:BV:38:TYR:CD2   | 51:B4:39:MET:HE2   | 2.02                     | 0.95              |
| 44:BW:72:LYS:O     | 44:BW:73:ARG:HB2   | 1.65                     | 0.95              |
| 1:AA:1425:U:H2'    | 1:AA:1426:C:H6     | 1.31                     | 0.95              |
| 24:BA:954:G:H2'    | 24:BA:955:C:O4'    | 1.67                     | 0.95              |
| 24:BA:1966:A:N3    | 24:BA:2593:U:H5'   | 1.81                     | 0.95              |
| 25:BB:67:G:H2'     | 25:BB:68:C:H6      | 1.28                     | 0.95              |
| 28:BE:110:GLY:HA2  | 28:BE:161:GLY:O    | 1.66                     | 0.95              |
| 31:BH:24:VAL:HG22  | 31:BH:35:VAL:O     | 1.67                     | 0.95              |
| 33:BL:10:LEU:HD13  | 33:BL:27:LEU:HD21  | 1.48                     | 0.95              |
| 38:BQ:88:ARG:HB2   | 38:BQ:88:ARG:NH1   | 1.81                     | 0.95              |
| 45:BX:46:LYS:NZ    | 45:BX:52:SER:HB2   | 1.82                     | 0.95              |
| 47:BZ:38:VAL:O     | 47:BZ:59:LEU:HB2   | 1.65                     | 0.95              |
| 54:B7:8:LYS:CD     | 54:B7:11:LYS:HZ2   | 1.78                     | 0.95              |
| 1:AA:1010:G:N2     | 1:AA:1020:U:H1'    | 1.81                     | 0.95              |
| 6:AG:82:ALA:CB     | 6:AG:89:THR:HG23   | 1.97                     | 0.95              |
| 21:AV:32:LYS:HA    | 21:AV:50:ALA:HB3   | 1.48                     | 0.95              |
| 24:BA:535:C:H4'    | 41:BT:53:ARG:HD2   | 1.47                     | 0.95              |
| 24:BA:1708:C:C2'   | 24:BA:1709:U:H5''  | 1.97                     | 0.95              |
| 24:BA:2320:A:H1'   | 24:BA:2333:A:N6    | 1.81                     | 0.95              |
| 27:BD:176:ARG:HH22 | 27:BD:270:ILE:HD11 | 1.29                     | 0.95              |
| 28:BE:146:THR:HB   | 28:BE:147:PRO:CD   | 1.96                     | 0.95              |
| 29:BF:65:TRP:NE1   | 29:BF:73:ALA:HB3   | 1.81                     | 0.95              |
| 34:BM:87:LEU:O     | 34:BM:90:MET:HB2   | 1.67                     | 0.95              |
| 37:BP:124:LYS:HB3  | 37:BP:124:LYS:NZ   | 1.78                     | 0.95              |
| 41:BT:67:ALA:HA    | 41:BT:70:ARG:HH21  | 1.27                     | 0.95              |
| 45:BX:50:ARG:HA    | 45:BX:54:LYS:HA    | 1.49                     | 0.95              |
| 49:B2:10:LYS:HZ3   | 49:B2:12:PRO:HG3   | 1.30                     | 0.95              |
| 1:AA:375:U:O3'     | 18:AS:6:LEU:HD21   | 1.67                     | 0.95              |
| 3:AC:75:C:N4       | 24:BA:2451:A:H4'   | 1.82                     | 0.95              |
| 3:AD:34:G:H3'      | 3:AD:35:A:C5'      | 1.97                     | 0.95              |
| 10:AK:18:ARG:HA    | 10:AK:18:ARG:NH1   | 1.82                     | 0.95              |
| 10:AK:90:GLY:O     | 14:AO:7:ILE:HG21   | 1.65                     | 0.95              |
| 17:AR:70:LEU:HG    | 17:AR:78:TYR:CG    | 2.02                     | 0.95              |
| 24:BA:234:C:N4     | 24:BA:430:G:H22    | 1.65                     | 0.95              |
| 24:BA:279:C:N4     | 24:BA:359:A:H1'    | 1.82                     | 0.95              |
| 24:BA:674:G:H5''   | 29:BF:74:ARG:HH11  | 1.31                     | 0.95              |
| 24:BA:740:U:H5'    | 24:BA:1784:A:OP1   | 1.65                     | 0.95              |
| 24:BA:932:G:H2'    | 24:BA:933:A:C8     | 2.02                     | 0.95              |
| 24:BA:1993:U:H2'   | 24:BA:1994:C:C6    | 2.02                     | 0.95              |
| 24:BA:2453:A:O2'   | 24:BA:2454:G:H5'   | 1.65                     | 0.95              |
| 24:BA:2461:C:H1'   | 24:BA:2492:U:H5    | 1.22                     | 0.95              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2875:C:H5'' | 40:BS:3:ARG:HD2    | 1.44                     | 0.95              |
| 37:BP:81:VAL:HG12 | 37:BP:82:ARG:H     | 1.31                     | 0.95              |
| 40:BS:35:LYS:HG3  | 40:BS:84:GLN:O     | 1.67                     | 0.95              |
| 1:AA:416:G:H2'    | 1:AA:417:C:C6      | 2.01                     | 0.94              |
| 1:AA:736:C:H5''   | 20:AU:72:ARG:NH2   | 1.82                     | 0.94              |
| 3:AB:54:U:OP1     | 37:BP:60:ARG:HG2   | 1.67                     | 0.94              |
| 6:AG:47:ARG:NH1   | 6:AG:47:ARG:HB2    | 1.81                     | 0.94              |
| 7:AH:145:LYS:O    | 7:AH:148:VAL:HB    | 1.65                     | 0.94              |
| 10:AK:33:GLU:HG2  | 10:AK:59:LEU:HD11  | 1.49                     | 0.94              |
| 11:AL:19:LEU:CD2  | 11:AL:59:PHE:HB3   | 1.96                     | 0.94              |
| 22:AW:49:ALA:HA   | 22:AW:92:LEU:HD22  | 1.47                     | 0.94              |
| 24:BA:60:G:H21    | 24:BA:74:A:H4'     | 1.30                     | 0.94              |
| 24:BA:470:A:C2    | 24:BA:471:A:H1'    | 2.01                     | 0.94              |
| 24:BA:1006:C:H1'  | 34:BM:106:MET:SD   | 2.07                     | 0.94              |
| 24:BA:1049:C:H42  | 24:BA:1050:A:H62   | 0.97                     | 0.94              |
| 24:BA:1259:G:H2'  | 24:BA:1260:G:H8    | 1.30                     | 0.94              |
| 24:BA:1543:A:OP2  | 24:BA:1544:C:H6    | 1.49                     | 0.94              |
| 24:BA:1777:U:O2'  | 24:BA:1778:U:H5'   | 1.66                     | 0.94              |
| 24:BA:1804:C:H4'  | 27:BD:250:TRP:HH2  | 1.12                     | 0.94              |
| 27:BD:176:ARG:HG3 | 27:BD:176:ARG:HH11 | 1.30                     | 0.94              |
| 28:BE:2:LYS:NZ    | 28:BE:83:ASP:HB2   | 1.82                     | 0.94              |
| 31:BH:43:VAL:HG13 | 31:BH:51:ARG:O     | 1.65                     | 0.94              |
| 32:BK:5:LEU:HD11  | 32:BK:17:GLN:HB2   | 1.48                     | 0.94              |
| 34:BM:23:LEU:HD11 | 34:BM:63:THR:N     | 1.82                     | 0.94              |
| 41:BT:55:ARG:CG   | 41:BT:58:ARG:HH21  | 1.79                     | 0.94              |
| 49:B2:20:LYS:HA   | 49:B2:23:LEU:HD22  | 1.46                     | 0.94              |
| 1:AA:12:U:H2'     | 1:AA:13:U:C5       | 2.00                     | 0.94              |
| 1:AA:520:A:H62    | 1:AA:529:G:H21     | 1.02                     | 0.94              |
| 9:AJ:145:ALA:O    | 9:AJ:146:GLU:HB3   | 1.66                     | 0.94              |
| 10:AK:102:ARG:HB3 | 10:AK:102:ARG:CZ   | 1.93                     | 0.94              |
| 11:AL:78:LYS:HZ2  | 11:AL:101:PHE:HE2  | 1.14                     | 0.94              |
| 24:BA:447:A:H1'   | 24:BA:449:A:H61    | 1.32                     | 0.94              |
| 24:BA:535:C:H5'   | 41:BT:49:HIS:HB3   | 1.44                     | 0.94              |
| 24:BA:687:C:H1'   | 24:BA:788:A:H5'    | 1.49                     | 0.94              |
| 24:BA:1809:A:H5'' | 24:BA:1810:A:C2    | 2.01                     | 0.94              |
| 24:BA:1939:U:H1'  | 24:BA:2592:G:O4'   | 1.66                     | 0.94              |
| 24:BA:2210:G:C5   | 27:BD:150:LYS:HA   | 2.01                     | 0.94              |
| 24:BA:2282:G:H1   | 24:BA:2427:C:H42   | 1.10                     | 0.94              |
| 24:BA:2850:A:C2   | 24:BA:2869:G:H4'   | 2.03                     | 0.94              |
| 28:BE:120:TRP:CZ2 | 28:BE:122:PHE:HB2  | 2.02                     | 0.94              |
| 38:BQ:12:ARG:CZ   | 38:BQ:16:HIS:HB3   | 1.97                     | 0.94              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 41:BT:19:LYS:HB2  | 41:BT:19:LYS:NZ    | 1.81                     | 0.94              |
| 41:BT:93:LYS:H    | 42:BU:10:LYS:HZ2   | 0.98                     | 0.94              |
| 49:B2:18:ASP:O    | 49:B2:21:ALA:HB3   | 1.66                     | 0.94              |
| 24:BA:91:A:H2'    | 24:BA:91:A:N3      | 1.81                     | 0.94              |
| 24:BA:455:C:H4'   | 24:BA:456:C:OP1    | 1.67                     | 0.94              |
| 24:BA:674:G:H4'   | 29:BF:74:ARG:NE    | 1.82                     | 0.94              |
| 24:BA:972:G:OP1   | 24:BA:974(A):C:H5' | 1.67                     | 0.94              |
| 24:BA:1425:G:H2'  | 24:BA:1426:G:C8    | 2.02                     | 0.94              |
| 24:BA:1498:C:H6   | 24:BA:1576:U:H4'   | 1.31                     | 0.94              |
| 24:BA:1647:G:H4'  | 24:BA:1648:C:OP1   | 1.63                     | 0.94              |
| 24:BA:1809:A:H2'  | 24:BA:1810:A:H5'   | 1.49                     | 0.94              |
| 27:BD:119:ALA:HB2 | 27:BD:130:ALA:H    | 1.32                     | 0.94              |
| 29:BF:130:ALA:HB3 | 29:BF:142:TRP:CB   | 1.97                     | 0.94              |
| 37:BP:134:ARG:CZ  | 37:BP:137:TYR:H    | 1.79                     | 0.94              |
| 38:BQ:57:ARG:NE   | 38:BQ:62:ALA:HB2   | 1.80                     | 0.94              |
| 43:BV:38:TYR:HD2  | 51:B4:39:MET:HE2   | 1.30                     | 0.94              |
| 50:B3:5:ILE:CG2   | 50:B3:7:PRO:HD2    | 1.95                     | 0.94              |
| 51:B4:46:CYS:HB2  | 51:B4:47:PRO:HD2   | 1.50                     | 0.94              |
| 1:AA:564:C:C4     | 19:AT:31:LEU:HD11  | 2.02                     | 0.94              |
| 6:AG:143:GLY:HA2  | 6:AG:185:PHE:HB3   | 1.50                     | 0.94              |
| 8:AI:23:LYS:HA    | 8:AI:26:ILE:CD1    | 1.97                     | 0.94              |
| 8:AI:72:VAL:HG23  | 8:AI:73:ASN:H      | 1.32                     | 0.94              |
| 9:AJ:86:GLN:HB2   | 9:AJ:148:ASN:ND2   | 1.81                     | 0.94              |
| 11:AL:97:LYS:HZ1  | 11:AL:102:LEU:HD13 | 1.32                     | 0.94              |
| 17:AR:77:ARG:HH12 | 17:AR:81:LEU:CB    | 1.79                     | 0.94              |
| 24:BA:351:G:H1'   | 24:BA:352:G:N7     | 1.82                     | 0.94              |
| 24:BA:447:A:H1'   | 24:BA:449:A:N6     | 1.82                     | 0.94              |
| 24:BA:472:A:H2'   | 24:BA:473:G:H5''   | 1.45                     | 0.94              |
| 24:BA:1264:G:H5'' | 24:BA:1265:A:H5''  | 1.50                     | 0.94              |
| 24:BA:1312:U:H3'  | 24:BA:1313:U:C6    | 2.01                     | 0.94              |
| 24:BA:2491:U:H6   | 24:BA:2491:U:C3'   | 1.79                     | 0.94              |
| 24:BA:2812:G:H2'  | 24:BA:2813:A:H8    | 1.26                     | 0.94              |
| 31:BH:120:GLY:HA3 | 31:BH:136:ILE:HG22 | 1.47                     | 0.94              |
| 32:BK:83:ALA:HB2  | 32:BK:88:ILE:HA    | 1.45                     | 0.94              |
| 35:BN:34:THR:O    | 35:BN:61:VAL:HG11  | 1.68                     | 0.94              |
| 52:B5:32:ASN:CG   | 52:B5:33:LYS:H     | 1.69                     | 0.94              |
| 52:B5:37:ARG:O    | 52:B5:38:LYS:HB2   | 1.65                     | 0.94              |
| 1:AA:1226:C:C4    | 15:AP:104:ARG:HG3  | 2.02                     | 0.94              |
| 1:AA:1261:A:N6    | 1:AA:1274:G:H1'    | 1.83                     | 0.94              |
| 6:AG:57:ARG:HB3   | 6:AG:206:PHE:HB2   | 1.47                     | 0.94              |
| 22:AW:45:GLN:HE21 | 22:AW:91:LEU:HD13  | 1.32                     | 0.94              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:270(M):U:H4' | 24:BA:270(N):G:C4' | 1.95                     | 0.94              |
| 24:BA:1533:C:N3    | 24:BA:1539:G:N2    | 2.15                     | 0.94              |
| 24:BA:1710:C:H2'   | 24:BA:1711:C:H6    | 1.32                     | 0.94              |
| 24:BA:2132:U:H3'   | 24:BA:2133:G:H5'   | 1.48                     | 0.94              |
| 25:BB:102:G:H2'    | 46:BY:73:GLN:NE2   | 1.81                     | 0.94              |
| 26:BC:162:GLU:HG2  | 26:BC:163:PHE:H    | 1.30                     | 0.94              |
| 30:BG:105:LYS:O    | 30:BG:109:VAL:HG22 | 1.67                     | 0.94              |
| 41:BT:97:ASP:C     | 41:BT:101:ARG:HE   | 1.75                     | 0.94              |
| 52:B5:14:THR:HG22  | 52:B5:51:GLU:HG2   | 1.47                     | 0.94              |
| 53:B6:34:ARG:HH22  | 53:B6:42:LEU:HA    | 1.30                     | 0.94              |
| 1:AA:345:C:H4'     | 1:AA:346:G:O5'     | 1.66                     | 0.94              |
| 1:AA:781:A:C2'     | 1:AA:782:A:H5'     | 1.98                     | 0.94              |
| 4:AE:23:ARG:HH11   | 4:AE:24:TRP:N      | 1.65                     | 0.94              |
| 15:AP:64:TRP:O     | 15:AP:65:LYS:HD2   | 1.68                     | 0.94              |
| 24:BA:917:A:C3'    | 24:BA:918:A:H5''   | 1.96                     | 0.94              |
| 24:BA:1049:C:N4    | 24:BA:1050:A:H62   | 1.64                     | 0.94              |
| 24:BA:1272:A:O2'   | 24:BA:1273:U:OP1   | 1.85                     | 0.94              |
| 24:BA:1341:U:H3    | 24:BA:1398:C:H5'   | 1.31                     | 0.94              |
| 24:BA:1784:A:O2'   | 24:BA:1785:A:OP2   | 1.82                     | 0.94              |
| 24:BA:1819:A:H5''  | 27:BD:178:PRO:CG   | 1.96                     | 0.94              |
| 27:BD:109:ASP:O    | 27:BD:111:LEU:HD22 | 1.68                     | 0.94              |
| 28:BE:53:PRO:HG3   | 28:BE:75:VAL:CG2   | 1.98                     | 0.94              |
| 30:BG:41:GLN:NE2   | 30:BG:155:MET:HG3  | 1.83                     | 0.94              |
| 41:BT:89:GLU:HB3   | 42:BU:51:VAL:C     | 1.93                     | 0.94              |
| 43:BV:11:ARG:HH21  | 43:BV:11:ARG:H     | 1.10                     | 0.94              |
| 52:B5:19:ARG:C     | 52:B5:43:CYS:HG    | 1.74                     | 0.94              |
| 1:AA:7:G:H21       | 7:AH:121:LYS:HG3   | 1.32                     | 0.94              |
| 1:AA:923:A:H2'     | 1:AA:924:C:C6      | 2.01                     | 0.94              |
| 1:AA:1375:A:H2'    | 1:AA:1376:U:C6     | 2.02                     | 0.94              |
| 4:AE:178:ARG:HE    | 4:AE:196:LEU:HD13  | 1.25                     | 0.94              |
| 5:AF:116:VAL:O     | 5:AF:119:ARG:HB3   | 1.67                     | 0.94              |
| 10:AK:13:ILE:HG22  | 10:AK:14:ARG:N     | 1.81                     | 0.94              |
| 13:AN:65:ALA:HB1   | 13:AN:98:LEU:HD23  | 1.48                     | 0.94              |
| 18:AS:4:ILE:HG23   | 18:AS:21:VAL:HG12  | 1.50                     | 0.94              |
| 24:BA:1565:C:N3    | 24:BA:1567:A:H1'   | 1.81                     | 0.94              |
| 24:BA:1860:G:H5''  | 26:BC:206:GLY:HA3  | 1.48                     | 0.94              |
| 24:BA:1911:U:O2'   | 24:BA:1912:A:H5'   | 1.67                     | 0.94              |
| 24:BA:2296:U:H1'   | 24:BA:2335:A:N6    | 1.82                     | 0.94              |
| 26:BC:117:PRO:HD3  | 26:BC:146:GLY:C    | 1.93                     | 0.94              |
| 26:BC:162:GLU:C    | 26:BC:163:PHE:HD2  | 1.74                     | 0.94              |
| 27:BD:9:TYR:HH     | 27:BD:91:ARG:NH2   | 1.66                     | 0.94              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 35:BN:8:LEU:HD22  | 35:BN:9:GLU:H     | 1.30                     | 0.94              |
| 35:BN:24:VAL:HA   | 35:BN:39:ILE:CG2  | 1.97                     | 0.94              |
| 37:BP:32:TYR:HB2  | 37:BP:105:GLU:O   | 1.67                     | 0.94              |
| 37:BP:75:THR:HG22 | 37:BP:77:LYS:HD2  | 1.50                     | 0.94              |
| 1:AA:866:C:C5     | 1:AA:867:G:H1'    | 2.03                     | 0.94              |
| 1:AA:1124:G:N2    | 1:AA:1126:U:H3    | 1.64                     | 0.94              |
| 2:A1:32:U:H2'     | 2:A1:33:U:C6      | 2.01                     | 0.94              |
| 3:AB:38:A:H2'     | 3:AB:39:U:H5      | 1.32                     | 0.94              |
| 3:AB:70:G:H2'     | 3:AB:71:G:H8      | 1.32                     | 0.94              |
| 4:AE:14:GLY:HA3   | 4:AE:209:ARG:HH21 | 1.33                     | 0.94              |
| 6:AG:105:VAL:HG21 | 6:AG:121:VAL:HG22 | 1.47                     | 0.94              |
| 12:AM:15:THR:HG23 | 12:AM:16:LEU:HD22 | 1.47                     | 0.94              |
| 13:AN:121:PRO:HG2 | 13:AN:126:ARG:HG2 | 1.48                     | 0.94              |
| 15:AP:16:ASP:HA   | 15:AP:19:LEU:HG   | 1.47                     | 0.94              |
| 20:AU:79:LEU:HD13 | 20:AU:79:LEU:O    | 1.68                     | 0.94              |
| 24:BA:72:U:H1'    | 48:B1:56:LEU:HD23 | 1.50                     | 0.94              |
| 24:BA:221:A:H61   | 24:BA:265:A:H62   | 0.96                     | 0.94              |
| 24:BA:324:A:H62   | 24:BA:339:U:H1'   | 1.32                     | 0.94              |
| 24:BA:479:A:H1'   | 24:BA:480:A:C8    | 2.03                     | 0.94              |
| 24:BA:997:G:H5''  | 41:BT:92:ARG:NH1  | 1.83                     | 0.94              |
| 24:BA:1005:C:H5   | 24:BA:1143:A:OP1  | 1.51                     | 0.94              |
| 24:BA:1281:G:H2'  | 24:BA:1282:U:H6   | 1.33                     | 0.94              |
| 24:BA:1466:G:H2'  | 24:BA:1547:C:N4   | 1.83                     | 0.94              |
| 24:BA:1799:G:H3'  | 27:BD:183:ARG:NH2 | 1.82                     | 0.94              |
| 25:BB:44:G:N2     | 25:BB:48:A:H1'    | 1.82                     | 0.94              |
| 25:BB:100:G:H2'   | 25:BB:101:A:C8    | 2.03                     | 0.94              |
| 26:BC:75:LEU:HD23 | 26:BC:77:ILE:HD11 | 1.49                     | 0.94              |
| 28:BE:2:LYS:HZ3   | 28:BE:83:ASP:HB2  | 1.32                     | 0.94              |
| 28:BE:8:LYS:HB3   | 28:BE:24:THR:HB   | 1.46                     | 0.94              |
| 31:BH:24:VAL:HG23 | 31:BH:35:VAL:HG23 | 1.50                     | 0.94              |
| 31:BH:94:TYR:H    | 31:BH:95:ARG:NH2  | 1.65                     | 0.94              |
| 36:BO:72:PRO:HB2  | 36:BO:111:ARG:CB  | 1.98                     | 0.94              |
| 36:BO:107:LYS:HE2 | 36:BO:110:TYR:CD1 | 2.02                     | 0.94              |
| 43:BV:11:ARG:HA   | 43:BV:100:THR:HA  | 1.50                     | 0.94              |
| 45:BX:49:VAL:HG21 | 45:BX:51:VAL:HB   | 1.46                     | 0.94              |
| 50:B3:31:ILE:HD13 | 50:B3:31:ILE:H    | 1.29                     | 0.94              |
| 52:B5:19:ARG:HH12 | 52:B5:43:CYS:HB2  | 1.29                     | 0.94              |
| 1:AA:186(A):C:H1' | 22:AW:104:LEU:CD2 | 1.96                     | 0.94              |
| 15:AP:24:GLY:HA3  | 15:AP:66:LEU:CB   | 1.97                     | 0.94              |
| 21:AV:53:ASN:ND2  | 21:AV:56:GLN:HB2  | 1.83                     | 0.94              |
| 24:BA:494:G:H4'   | 43:BV:6:ILE:O     | 1.67                     | 0.94              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:783:A:H4'   | 24:BA:2588:G:O3'   | 1.66                     | 0.94              |
| 24:BA:1005:C:O2   | 34:BM:28:THR:HB    | 1.68                     | 0.94              |
| 24:BA:1177:A:H2'  | 24:BA:1178:C:C6    | 2.03                     | 0.94              |
| 24:BA:1725:G:N2   | 24:BA:1726:G:H1'   | 1.82                     | 0.94              |
| 24:BA:2051:A:H4'  | 28:BE:141:ILE:HD11 | 1.50                     | 0.94              |
| 24:BA:2161:C:H2'  | 24:BA:2162:G:H8    | 1.32                     | 0.94              |
| 24:BA:2661:G:H2'  | 24:BA:2662:A:H8    | 1.32                     | 0.94              |
| 33:BL:38:VAL:O    | 33:BL:41:PHE:HB2   | 1.68                     | 0.94              |
| 34:BM:45:ASN:O    | 34:BM:46:VAL:HG23  | 1.66                     | 0.94              |
| 34:BM:102:ALA:O   | 34:BM:105:GLY:HA3  | 1.68                     | 0.94              |
| 35:BN:18:LYS:HZ1  | 35:BN:44:LYS:HZ2   | 1.14                     | 0.94              |
| 38:BQ:45:ARG:HB2  | 38:BQ:95:THR:HG21  | 1.48                     | 0.94              |
| 41:BT:55:ARG:HG3  | 41:BT:58:ARG:NH2   | 1.82                     | 0.94              |
| 45:BX:14:LEU:HB2  | 45:BX:20:TYR:CA    | 1.98                     | 0.94              |
| 51:B4:13:LYS:HD3  | 51:B4:13:LYS:H     | 1.29                     | 0.94              |
| 52:B5:7:ILE:C     | 52:B5:9:LEU:H      | 1.69                     | 0.94              |
| 1:AA:7:G:H1'      | 1:AA:298:A:C8      | 2.02                     | 0.94              |
| 1:AA:858:G:H22    | 1:AA:869:G:C3'     | 1.81                     | 0.94              |
| 1:AA:1226:C:C5    | 15:AP:104:ARG:HA   | 2.03                     | 0.94              |
| 3:AD:8:U:H3       | 3:AD:14:A:H62      | 1.01                     | 0.94              |
| 4:AE:135:GLN:C    | 4:AE:139:LYS:HZ2   | 1.74                     | 0.94              |
| 15:AP:108:ARG:NH1 | 15:AP:111:LYS:HB3  | 1.82                     | 0.94              |
| 22:AW:11:SER:HA   | 22:AW:13:LEU:HD11  | 1.48                     | 0.94              |
| 24:BA:280:C:OP2   | 24:BA:280:C:H6     | 1.50                     | 0.94              |
| 26:BC:41:VAL:HG22 | 26:BC:216:THR:HG22 | 1.48                     | 0.94              |
| 37:BP:109:VAL:CG1 | 37:BP:114:ALA:HB2  | 1.97                     | 0.94              |
| 43:BV:17:VAL:HG23 | 43:BV:76:VAL:HG11  | 1.48                     | 0.94              |
| 1:AA:538:G:O3'    | 14:AO:114:LYS:HD3  | 1.68                     | 0.93              |
| 1:AA:553:A:H2'    | 1:AA:554:C:C6      | 2.03                     | 0.93              |
| 1:AA:1107:C:C2'   | 1:AA:1108:G:H5'    | 1.98                     | 0.93              |
| 4:AE:17:PHE:HD1   | 4:AE:18:GLY:N      | 1.66                     | 0.93              |
| 4:AE:75:LYS:HA    | 4:AE:75:LYS:HZ3    | 1.33                     | 0.93              |
| 11:AL:116:LYS:HB3 | 11:AL:122:ALA:HA   | 1.46                     | 0.93              |
| 13:AN:58:PRO:HB3  | 13:AN:90:GLY:HA3   | 1.50                     | 0.93              |
| 24:BA:391:G:H2'   | 24:BA:392:C:C6     | 2.03                     | 0.93              |
| 24:BA:917:A:H3'   | 24:BA:917:A:C8     | 2.02                     | 0.93              |
| 24:BA:1244:G:H5'  | 36:BO:9:ASN:CB     | 1.98                     | 0.93              |
| 24:BA:1754:C:H2'  | 24:BA:1755:A:O4'   | 1.68                     | 0.93              |
| 24:BA:1809:A:H61  | 50:B3:3:GLU:HG3    | 1.31                     | 0.93              |
| 24:BA:2306:C:H4'  | 30:BG:153:ARG:NH2  | 1.83                     | 0.93              |
| 26:BC:74:VAL:HG22 | 26:BC:112:ALA:HB3  | 1.47                     | 0.93              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 27:BD:169:GLU:CB  | 27:BD:184:LYS:HZ1  | 1.81                     | 0.93              |
| 28:BE:37:ARG:O    | 28:BE:38:THR:HB    | 1.66                     | 0.93              |
| 29:BF:176:LEU:HG  | 29:BF:178:PRO:HD2  | 1.48                     | 0.93              |
| 33:BL:79:ARG:HD3  | 33:BL:134:MET:HG3  | 1.50                     | 0.93              |
| 37:BP:51:ARG:O    | 37:BP:55:VAL:HG23  | 1.68                     | 0.93              |
| 39:BR:8:GLU:O     | 39:BR:9:ARG:C      | 2.11                     | 0.93              |
| 1:AA:817:C:O2'    | 1:AA:818:G:H5''    | 1.69                     | 0.93              |
| 1:AA:1159:U:H5'   | 1:AA:1160:G:OP1    | 1.68                     | 0.93              |
| 3:AD:62:C:O2'     | 26:BC:53:ARG:HG2   | 1.68                     | 0.93              |
| 3:AB:74:C:H42     | 24:BA:2555:U:C2'   | 1.79                     | 0.93              |
| 9:AJ:74:GLU:HG2   | 9:AJ:75:VAL:H      | 1.30                     | 0.93              |
| 12:AM:65:LEU:HB2  | 16:AQ:56:VAL:HG13  | 1.50                     | 0.93              |
| 18:AS:75:ARG:CG   | 18:AS:80:PHE:HB3   | 1.97                     | 0.93              |
| 24:BA:247:G:H22   | 54:B7:8:LYS:HD2    | 1.30                     | 0.93              |
| 24:BA:371:A:N7    | 24:BA:424:G:O4'    | 2.02                     | 0.93              |
| 24:BA:443:A:H5'   | 29:BF:45:ARG:HH12  | 1.27                     | 0.93              |
| 24:BA:1690:A:C2   | 24:BA:1691:C:H1'   | 2.04                     | 0.93              |
| 24:BA:1996:C:H2'  | 24:BA:1997:G:C5'   | 1.97                     | 0.93              |
| 24:BA:2589:A:O2'  | 24:BA:2590:A:H5'   | 1.68                     | 0.93              |
| 24:BA:2848:G:N2   | 24:BA:2867:G:H1'   | 1.81                     | 0.93              |
| 25:BB:51:G:H5'    | 39:BR:60:GLY:HA2   | 1.50                     | 0.93              |
| 27:BD:13:ARG:NH1  | 27:BD:19:ALA:HB1   | 1.83                     | 0.93              |
| 27:BD:258:LYS:HA  | 27:BD:261:LYS:HZ2  | 1.32                     | 0.93              |
| 29:BF:80:ALA:H    | 29:BF:83:PHE:HE2   | 1.11                     | 0.93              |
| 42:BU:15:GLU:HA   | 42:BU:100:ARG:HH12 | 1.33                     | 0.93              |
| 53:B6:28:ARG:HA   | 53:B6:31:LEU:CD1   | 1.97                     | 0.93              |
| 1:AA:1271:G:OP1   | 1:AA:1314:C:H5''   | 1.68                     | 0.93              |
| 5:AF:85:ARG:HH21  | 5:AF:89:GLU:HB2    | 1.33                     | 0.93              |
| 6:AG:20:TYR:CA    | 6:AG:26:CYS:SG     | 2.56                     | 0.93              |
| 9:AJ:72:ARG:HH22  | 9:AJ:138:LYS:HZ3   | 1.13                     | 0.93              |
| 17:AR:70:LEU:HG   | 17:AR:78:TYR:CD1   | 2.02                     | 0.93              |
| 22:AW:13:LEU:HD12 | 22:AW:13:LEU:H     | 1.30                     | 0.93              |
| 24:BA:1026:U:O2   | 24:BA:1026:U:H2'   | 1.63                     | 0.93              |
| 24:BA:1689:A:N6   | 24:BA:1698:A:C2    | 2.35                     | 0.93              |
| 24:BA:2212:A:H2'  | 24:BA:2212:A:N3    | 1.79                     | 0.93              |
| 24:BA:2553:G:N7   | 24:BA:2583:G:H4'   | 1.83                     | 0.93              |
| 36:BO:107:LYS:HZ3 | 36:BO:110:TYR:HB3  | 1.33                     | 0.93              |
| 39:BR:51:ALA:HB1  | 39:BR:73:LEU:HG    | 1.51                     | 0.93              |
| 40:BS:30:VAL:HG23 | 40:BS:89:VAL:O     | 1.68                     | 0.93              |
| 40:BS:64:ARG:HD3  | 40:BS:65:LYS:N     | 1.81                     | 0.93              |
| 1:AA:449:C:H2'    | 1:AA:450:G:O4'     | 1.68                     | 0.93              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1504:G:OP1   | 1:AA:1507:A:H4'    | 1.67                     | 0.93              |
| 4:AE:193:ASP:OD2  | 4:AE:196:LEU:HD11  | 1.68                     | 0.93              |
| 15:AP:14:ARG:HG3  | 15:AP:17:VAL:HG23  | 1.46                     | 0.93              |
| 24:BA:1014:U:O2'  | 24:BA:1015:G:H5'   | 1.66                     | 0.93              |
| 24:BA:1061:U:C5'  | 24:BA:1070:A:H4'   | 1.97                     | 0.93              |
| 24:BA:1160:G:C6   | 24:BA:1161:C:N4    | 2.37                     | 0.93              |
| 24:BA:1689:A:N6   | 24:BA:1698:A:H2    | 1.64                     | 0.93              |
| 24:BA:2121:G:H1'  | 26:BC:167:LYS:NZ   | 1.82                     | 0.93              |
| 24:BA:2211:G:H3'  | 24:BA:2211:G:N3    | 1.83                     | 0.93              |
| 24:BA:2346:A:H62  | 52:B5:37:ARG:HH12  | 0.93                     | 0.93              |
| 31:BH:153:LYS:HB2 | 31:BH:162:ILE:HG23 | 1.47                     | 0.93              |
| 33:BL:35:MET:HA   | 33:BL:38:VAL:HB    | 1.47                     | 0.93              |
| 34:BM:7:LYS:HE3   | 34:BM:8:GLN:N      | 1.83                     | 0.93              |
| 37:BP:134:ARG:NH2 | 37:BP:137:TYR:H    | 1.64                     | 0.93              |
| 39:BR:49:VAL:HG13 | 39:BR:76:LYS:HE3   | 1.50                     | 0.93              |
| 39:BR:57:LYS:HZ2  | 39:BR:65:VAL:CA    | 1.81                     | 0.93              |
| 50:B3:56:VAL:HG12 | 50:B3:57:GLU:H     | 1.32                     | 0.93              |
| 53:B6:17:GLY:H    | 53:B6:21:ARG:NH2   | 1.66                     | 0.93              |
| 1:AA:939:G:C5'    | 9:AJ:102:ARG:HH22  | 1.80                     | 0.93              |
| 2:A1:6:U:H2'      | 2:A1:7:U:C5        | 2.03                     | 0.93              |
| 4:AE:42:ILE:CD1   | 4:AE:202:PRO:HB2   | 1.97                     | 0.93              |
| 19:AT:92:ARG:O    | 19:AT:95:TYR:HB2   | 1.69                     | 0.93              |
| 24:BA:289:A:H2'   | 24:BA:351:G:N1     | 1.82                     | 0.93              |
| 24:BA:470:A:OP1   | 24:BA:470:A:H4'    | 1.67                     | 0.93              |
| 24:BA:2116:G:H5'  | 24:BA:2117:A:OP2   | 1.69                     | 0.93              |
| 24:BA:2307:G:H3'  | 24:BA:2308:G:O4'   | 1.68                     | 0.93              |
| 24:BA:2455:G:H2'  | 24:BA:2456:C:C6    | 2.04                     | 0.93              |
| 27:BD:111:LEU:HB3 | 27:BD:115:GLN:NE2  | 1.84                     | 0.93              |
| 33:BL:18:THR:HG23 | 33:BL:38:VAL:HG11  | 1.51                     | 0.93              |
| 36:BO:137:LYS:HA  | 36:BO:137:LYS:HE3  | 1.49                     | 0.93              |
| 54:B7:29:LYS:HB3  | 54:B7:34:TRP:CH2   | 2.02                     | 0.93              |
| 1:AA:169:C:H2'    | 1:AA:170:U:H6      | 1.31                     | 0.93              |
| 1:AA:950:U:H5''   | 15:AP:102:ARG:HH22 | 1.33                     | 0.93              |
| 1:AA:1394:A:N7    | 1:AA:1501:C:H1'    | 1.82                     | 0.93              |
| 6:AG:98:GLU:HA    | 6:AG:103:ASN:ND2   | 1.84                     | 0.93              |
| 6:AG:170:VAL:H    | 6:AG:176:LEU:HD22  | 1.34                     | 0.93              |
| 8:AI:33:TYR:CD1   | 8:AI:75:LEU:HG     | 2.01                     | 0.93              |
| 20:AU:72:ARG:O    | 20:AU:75:ILE:HB    | 1.68                     | 0.93              |
| 24:BA:1417:C:H42  | 24:BA:1581:G:H1    | 1.01                     | 0.93              |
| 24:BA:1809:A:H4'  | 24:BA:1809:A:OP1   | 1.66                     | 0.93              |
| 24:BA:2122:U:H4'  | 26:BC:166:ASP:HB2  | 1.51                     | 0.93              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:2213:U:H5'   | 24:BA:2215:G:C5   | 2.04                     | 0.93              |
| 24:BA:2889:C:H2'   | 24:BA:2891:G:C8   | 2.03                     | 0.93              |
| 29:BF:131:GLY:HA2  | 29:BF:138:GLU:HB2 | 1.49                     | 0.93              |
| 35:BN:64:ARG:HG3   | 35:BN:65:THR:H    | 1.34                     | 0.93              |
| 37:BP:46:GLN:O     | 37:BP:49:ALA:HB3  | 1.68                     | 0.93              |
| 40:BS:70:VAL:CG2   | 40:BS:74:ARG:HD3  | 1.98                     | 0.93              |
| 46:BY:111:VAL:HG22 | 46:BY:117:LEU:HG  | 1.48                     | 0.93              |
| 46:BY:157:LEU:HD21 | 46:BY:161:VAL:HA  | 1.50                     | 0.93              |
| 1:AA:761:G:H5'     | 19:AT:102:GLY:CA  | 1.99                     | 0.93              |
| 1:AA:1100:C:H2'    | 4:AE:98:LEU:CD1   | 1.98                     | 0.93              |
| 7:AH:100:VAL:HG11  | 7:AH:107:ARG:HG3  | 1.48                     | 0.93              |
| 12:AM:30:SER:CB    | 12:AM:81:THR:HA   | 1.99                     | 0.93              |
| 22:AW:63:ILE:CD1   | 22:AW:80:ARG:HB3  | 1.98                     | 0.93              |
| 24:BA:34:C:H2'     | 24:BA:455:C:N4    | 1.84                     | 0.93              |
| 24:BA:529:A:O2'    | 24:BA:530:G:N7    | 2.02                     | 0.93              |
| 24:BA:559:G:H2'    | 24:BA:560:C:H6    | 1.21                     | 0.93              |
| 24:BA:1270:C:O2'   | 24:BA:1648:C:OP2  | 1.87                     | 0.93              |
| 24:BA:2405:G:H2'   | 24:BA:2411:A:N6   | 1.84                     | 0.93              |
| 31:BH:139:GLN:HG3  | 31:BH:140:LYS:H   | 1.33                     | 0.93              |
| 35:BN:1:MET:HB3    | 35:BN:66:LYS:HB3  | 1.49                     | 0.93              |
| 36:BO:46:LYS:HE3   | 36:BO:46:LYS:N    | 1.83                     | 0.93              |
| 38:BQ:79:LEU:HD23  | 38:BQ:80:PHE:CA   | 1.99                     | 0.93              |
| 39:BR:57:LYS:HZ2   | 39:BR:65:VAL:HA   | 1.32                     | 0.93              |
| 41:BT:49:HIS:CD2   | 41:BT:52:ARG:HH22 | 1.85                     | 0.93              |
| 42:BU:18:LEU:HD12  | 42:BU:66:ARG:HH12 | 1.33                     | 0.93              |
| 49:B2:6:VAL:HG12   | 49:B2:55:ARG:O    | 1.68                     | 0.93              |
| 52:B5:19:ARG:NH1   | 52:B5:43:CYS:HB2  | 1.82                     | 0.93              |
| 1:AA:198:G:H8      | 1:AA:198:G:OP2    | 1.52                     | 0.93              |
| 1:AA:329:A:H4'     | 1:AA:330:C:OP1    | 1.65                     | 0.93              |
| 1:AA:620:C:C2      | 6:AG:135:LEU:HD13 | 2.04                     | 0.93              |
| 1:AA:1099:G:O2'    | 1:AA:1542:U:H4'   | 1.68                     | 0.93              |
| 1:AA:1135:U:H4'    | 1:AA:1136:U:H5    | 1.33                     | 0.93              |
| 1:AA:1229:A:H2'    | 1:AA:1230:C:H6    | 1.33                     | 0.93              |
| 1:AA:1338:G:N2     | 3:AC:41:C:H1'     | 1.84                     | 0.93              |
| 24:BA:627:A:H4'    | 24:BA:627:A:OP2   | 1.67                     | 0.93              |
| 24:BA:674:G:H5''   | 29:BF:74:ARG:NH1  | 1.81                     | 0.93              |
| 24:BA:675:A:H4'    | 29:BF:67:GLN:NE2  | 1.82                     | 0.93              |
| 24:BA:1448:G:H4'   | 24:BA:1543:A:C6   | 2.04                     | 0.93              |
| 24:BA:1473:G:H1    | 24:BA:1519:G:H1'  | 1.30                     | 0.93              |
| 24:BA:2330:G:H1    | 24:BA:2385:C:H42  | 1.01                     | 0.93              |
| 31:BH:19:VAL:HG12  | 31:BH:24:VAL:HG12 | 1.51                     | 0.93              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 38:BQ:41:ALA:HB1  | 38:BQ:97:VAL:HG13  | 1.51                     | 0.93              |
| 54:B7:39:LYS:HB3  | 54:B7:39:LYS:HZ3   | 1.34                     | 0.93              |
| 55:B8:19:ARG:O    | 55:B8:22:ARG:CB    | 2.16                     | 0.93              |
| 1:AA:273:A:C2     | 1:AA:274:A:H1'     | 2.04                     | 0.93              |
| 1:AA:362:G:H8     | 14:AO:34:ARG:HH22  | 0.98                     | 0.93              |
| 6:AG:173:TRP:NE1  | 6:AG:189:PRO:HB3   | 1.83                     | 0.93              |
| 8:AI:14:LEU:HD11  | 8:AI:19:LEU:N      | 1.84                     | 0.93              |
| 24:BA:234:C:H42   | 24:BA:430:G:H22    | 1.05                     | 0.93              |
| 24:BA:301:G:H2'   | 24:BA:302:C:C6     | 2.03                     | 0.93              |
| 24:BA:450:G:H5'   | 29:BF:52:LYS:HD3   | 1.50                     | 0.93              |
| 24:BA:687:C:O2    | 24:BA:787:U:O3'    | 1.85                     | 0.93              |
| 28:BE:104:VAL:CG2 | 28:BE:198:VAL:HG13 | 1.99                     | 0.93              |
| 30:BG:16:ARG:HG3  | 30:BG:16:ARG:HH21  | 1.32                     | 0.93              |
| 31:BH:105:LEU:HB2 | 31:BH:113:VAL:HG11 | 1.51                     | 0.93              |
| 33:BL:66:THR:O    | 33:BL:67:PHE:HB2   | 1.69                     | 0.93              |
| 35:BN:39:ILE:CG1  | 35:BN:59:LYS:HZ1   | 1.81                     | 0.93              |
| 38:BQ:99:LYS:H    | 38:BQ:99:LYS:CD    | 1.74                     | 0.93              |
| 49:B2:3:ARG:HB3   | 49:B2:3:ARG:HH11   | 1.34                     | 0.93              |
| 49:B2:26:LEU:HG   | 49:B2:47:VAL:HG22  | 1.50                     | 0.93              |
| 1:AA:275:G:O3'    | 19:AT:14:LYS:HD3   | 1.69                     | 0.93              |
| 1:AA:306:G:H2'    | 1:AA:307:C:C6      | 2.03                     | 0.93              |
| 1:AA:764:C:H2'    | 1:AA:765:G:N7      | 1.84                     | 0.93              |
| 1:AA:1048:G:H5''  | 16:AQ:3:ARG:HH11   | 1.34                     | 0.93              |
| 1:AA:1084:G:C4    | 1:AA:1085:U:H5     | 1.87                     | 0.93              |
| 1:AA:1153:C:H2'   | 1:AA:1154:G:C8     | 2.04                     | 0.93              |
| 4:AE:31:TYR:CE2   | 4:AE:200:ILE:HG21  | 2.03                     | 0.93              |
| 8:AI:75:LEU:HD22  | 8:AI:79:LEU:HD21   | 1.47                     | 0.93              |
| 21:AV:22:LEU:HG   | 21:AV:25:LYS:HZ1   | 1.33                     | 0.93              |
| 24:BA:684:G:H2'   | 24:BA:687:C:H41    | 1.25                     | 0.93              |
| 24:BA:807:U:O2'   | 24:BA:808:G:H5'    | 1.67                     | 0.93              |
| 24:BA:1650:G:N2   | 24:BA:1651:G:H1'   | 1.83                     | 0.93              |
| 24:BA:1655:A:H4'  | 28:BE:113:PHE:O    | 1.69                     | 0.93              |
| 24:BA:1660:C:N4   | 24:BA:2001:A:H61   | 1.65                     | 0.93              |
| 25:BB:29:A:H2'    | 25:BB:30:C:C6      | 2.04                     | 0.93              |
| 27:BD:9:TYR:HH    | 27:BD:91:ARG:HH21  | 1.14                     | 0.93              |
| 40:BS:18:ASP:OD1  | 40:BS:81:PRO:HG3   | 1.67                     | 0.93              |
| 49:B2:9:VAL:HG23  | 49:B2:10:LYS:N     | 1.83                     | 0.93              |
| 51:B4:58:LEU:HD22 | 51:B4:59:GLU:N     | 1.83                     | 0.93              |
| 5:AF:29:TYR:CZ    | 16:AQ:54:PRO:HB2   | 2.03                     | 0.92              |
| 9:AJ:72:ARG:HH11  | 9:AJ:72:ARG:HB3    | 1.32                     | 0.92              |
| 15:AP:52:GLU:O    | 15:AP:56:LEU:HG    | 1.69                     | 0.92              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:107:C:H4'   | 24:BA:293:U:H1'    | 1.49                     | 0.92              |
| 24:BA:988:A:H3'   | 49:B2:10:LYS:HZ1   | 1.32                     | 0.92              |
| 24:BA:1264:G:H3'  | 24:BA:1265:A:C5'   | 1.98                     | 0.92              |
| 34:BM:110:GLY:O   | 34:BM:114:ARG:HB2  | 1.67                     | 0.92              |
| 1:AA:720:C:C5     | 1:AA:721:G:H2'     | 2.04                     | 0.92              |
| 1:AA:827:U:H4'    | 10:AK:19:VAL:HG21  | 1.51                     | 0.92              |
| 1:AA:1278:U:H4'   | 1:AA:1279:A:O4'    | 1.69                     | 0.92              |
| 13:AN:84:VAL:HG21 | 20:AU:88:LYS:HD3   | 1.51                     | 0.92              |
| 17:AR:77:ARG:NH1  | 17:AR:81:LEU:HB2   | 1.82                     | 0.92              |
| 22:AW:73:HIS:H    | 22:AW:76:ALA:CB    | 1.82                     | 0.92              |
| 24:BA:1656:C:H2'  | 24:BA:1657:C:C5    | 2.03                     | 0.92              |
| 24:BA:2051:A:C4'  | 28:BE:141:ILE:HD11 | 2.00                     | 0.92              |
| 24:BA:2305:A:H8   | 24:BA:2306:C:H5''  | 1.32                     | 0.92              |
| 26:BC:64:LEU:HD23 | 26:BC:191:ALA:HB3  | 1.48                     | 0.92              |
| 27:BD:226:MET:HE1 | 27:BD:237:GLU:H    | 1.33                     | 0.92              |
| 28:BE:133:LYS:HB3 | 28:BE:137:HIS:NE2  | 1.84                     | 0.92              |
| 30:BG:55:LYS:HD3  | 30:BG:147:ASP:O    | 1.68                     | 0.92              |
| 40:BS:70:VAL:HB   | 40:BS:74:ARG:HH11  | 1.30                     | 0.92              |
| 44:BW:44:GLU:HG3  | 44:BW:51:VAL:CG2   | 1.98                     | 0.92              |
| 45:BX:29:GLU:OE1  | 45:BX:32:PRO:HG2   | 1.69                     | 0.92              |
| 49:B2:26:LEU:HB2  | 49:B2:28:LEU:HD21  | 1.51                     | 0.92              |
| 52:B5:17:LYS:O    | 52:B5:19:ARG:HD2   | 1.69                     | 0.92              |
| 1:AA:944:G:H21    | 1:AA:1339:A:H62    | 1.01                     | 0.92              |
| 3:AB:52:G:O2'     | 24:BA:2470:G:O3'   | 1.85                     | 0.92              |
| 4:AE:115:LEU:HD12 | 4:AE:118:LEU:HD13  | 1.50                     | 0.92              |
| 5:AF:91:LEU:CD2   | 5:AF:98:ASN:HA     | 1.99                     | 0.92              |
| 10:AK:24:THR:HG22 | 10:AK:61:VAL:O     | 1.68                     | 0.92              |
| 15:AP:88:ARG:O    | 15:AP:91:ARG:HB2   | 1.67                     | 0.92              |
| 19:AT:10:VAL:HG23 | 19:AT:55:ASP:O     | 1.70                     | 0.92              |
| 22:AW:50:GLU:N    | 22:AW:99:LEU:HD12  | 1.83                     | 0.92              |
| 24:BA:1779:U:O2'  | 24:BA:1783:A:N6    | 2.00                     | 0.92              |
| 24:BA:2041:U:H2'  | 24:BA:2042:A:C8    | 2.04                     | 0.92              |
| 24:BA:2371:G:H5'  | 52:B5:45:LYS:HB3   | 1.47                     | 0.92              |
| 24:BA:2557:G:H2'  | 24:BA:2558:C:C6    | 2.03                     | 0.92              |
| 25:BB:62:C:H2'    | 25:BB:63:G:H8      | 1.34                     | 0.92              |
| 30:BG:57:ALA:HA   | 30:BG:68:PRO:CD    | 1.98                     | 0.92              |
| 35:BN:10:VAL:HG13 | 35:BN:11:ALA:N     | 1.81                     | 0.92              |
| 38:BQ:99:LYS:HD2  | 38:BQ:99:LYS:N     | 1.83                     | 0.92              |
| 42:BU:43:GLU:O    | 42:BU:44:LYS:HD3   | 1.68                     | 0.92              |
| 45:BX:1:MET:N     | 45:BX:33:LYS:HE3   | 1.84                     | 0.92              |
| 53:B6:5:TRP:CH2   | 53:B6:7:PRO:HB3    | 2.04                     | 0.92              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1104:G:H4'   | 4:AE:111:ARG:HE    | 1.35                     | 0.92              |
| 4:AE:69:LEU:O     | 4:AE:162:ILE:HA    | 1.69                     | 0.92              |
| 6:AG:100:ARG:HH22 | 6:AG:137:SER:HA    | 1.34                     | 0.92              |
| 10:AK:14:ARG:HB3  | 10:AK:14:ARG:HH11  | 1.32                     | 0.92              |
| 13:AN:58:PRO:O    | 13:AN:61:ALA:HB3   | 1.68                     | 0.92              |
| 15:AP:48:LEU:HD11 | 15:AP:56:LEU:HD12  | 1.50                     | 0.92              |
| 19:AT:7:THR:CG2   | 19:AT:56:VAL:HG12  | 1.98                     | 0.92              |
| 24:BA:1717:G:N2   | 24:BA:1718:G:N3    | 2.17                     | 0.92              |
| 24:BA:1820:U:H2'  | 27:BD:202:LYS:HG3  | 1.49                     | 0.92              |
| 24:BA:1913:A:C2   | 24:BA:1917:U:H5    | 1.87                     | 0.92              |
| 24:BA:2083:G:H2'  | 24:BA:2084:C:C6    | 2.03                     | 0.92              |
| 24:BA:2439:A:C8   | 24:BA:2586:C:H4'   | 2.04                     | 0.92              |
| 29:BF:5:ALA:C     | 29:BF:20:LEU:HD13  | 1.93                     | 0.92              |
| 29:BF:131:GLY:HA2 | 29:BF:138:GLU:CG   | 1.99                     | 0.92              |
| 30:BG:61:ALA:CB   | 30:BG:67:LYS:HE2   | 1.98                     | 0.92              |
| 32:BK:77:LEU:HD11 | 32:BK:140:LEU:HB3  | 1.51                     | 0.92              |
| 38:BQ:45:ARG:O    | 38:BQ:49:ASP:CB    | 2.17                     | 0.92              |
| 46:BY:176:PRO:HB2 | 46:BY:179:ASP:CA   | 1.99                     | 0.92              |
| 1:AA:828:A:N1     | 1:AA:859:A:O4'     | 2.02                     | 0.92              |
| 1:AA:1229:A:H2'   | 1:AA:1230:C:C6     | 2.04                     | 0.92              |
| 1:AA:1263:C:H2'   | 1:AA:1264:C:H6     | 1.34                     | 0.92              |
| 1:AA:1433:A:N6    | 1:AA:1467:G:H21    | 1.67                     | 0.92              |
| 4:AE:20:GLU:CD    | 4:AE:189:ASP:OD2   | 2.13                     | 0.92              |
| 10:AK:25:ASP:HB3  | 10:AK:58:TYR:HB3   | 1.51                     | 0.92              |
| 24:BA:459:U:H3'   | 53:B6:40:TRP:CH2   | 2.05                     | 0.92              |
| 24:BA:621:A:H2'   | 24:BA:622:G:H5'    | 1.49                     | 0.92              |
| 24:BA:847:U:H3    | 24:BA:933:A:H2     | 1.13                     | 0.92              |
| 24:BA:1309:G:C2'  | 24:BA:1310:G:H5'   | 1.99                     | 0.92              |
| 24:BA:1800:C:H3'  | 24:BA:1800:C:C6    | 2.04                     | 0.92              |
| 24:BA:2332:U:H4'  | 24:BA:2336:A:N6    | 1.85                     | 0.92              |
| 24:BA:2440:C:H5'' | 24:BA:2587:A:H4'   | 1.48                     | 0.92              |
| 24:BA:2862:G:H2'  | 24:BA:2863:C:H6    | 1.32                     | 0.92              |
| 27:BD:181:GLU:HB2 | 27:BD:268:ARG:HH21 | 1.33                     | 0.92              |
| 28:BE:164:ARG:O   | 28:BE:165:VAL:HG22 | 1.68                     | 0.92              |
| 30:BG:57:ALA:C    | 30:BG:67:LYS:HB2   | 1.94                     | 0.92              |
| 37:BP:23:GLY:H    | 37:BP:99:PRO:HG3   | 1.34                     | 0.92              |
| 37:BP:67:ARG:HB2  | 37:BP:103:MET:SD   | 2.09                     | 0.92              |
| 37:BP:75:THR:HG22 | 37:BP:77:LYS:H     | 1.33                     | 0.92              |
| 37:BP:75:THR:HG23 | 37:BP:91:GLU:OE1   | 1.69                     | 0.92              |
| 41:BT:44:ASN:HD21 | 42:BU:78:LYS:CG    | 1.83                     | 0.92              |
| 54:B7:30:ARG:CZ   | 54:B7:44:LYS:HB2   | 1.99                     | 0.92              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:20:U:H5'     | 1:AA:572:A:N6      | 1.84                     | 0.92              |
| 1:AA:1230:C:H1'   | 15:AP:126:LYS:HG3  | 1.49                     | 0.92              |
| 9:AJ:69:VAL:CG2   | 9:AJ:104:LEU:HD21  | 1.98                     | 0.92              |
| 9:AJ:122:HIS:O    | 9:AJ:125:MET:HG3   | 1.69                     | 0.92              |
| 18:AS:35:LYS:HZ1  | 18:AS:37:GLY:H     | 1.17                     | 0.92              |
| 24:BA:1491:G:H2'  | 24:BA:1492:G:H4'   | 1.48                     | 0.92              |
| 27:BD:131:LEU:HG  | 27:BD:132:PRO:HD2  | 1.49                     | 0.92              |
| 35:BN:25:LEU:HD22 | 35:BN:38:VAL:HG23  | 1.47                     | 0.92              |
| 39:BR:78:LEU:HD13 | 39:BR:79:ALA:N     | 1.84                     | 0.92              |
| 1:AA:529:G:H1     | 14:AO:49:ASN:HB3   | 1.35                     | 0.92              |
| 1:AA:1054:C:H2'   | 1:AA:1055:A:H5''   | 1.50                     | 0.92              |
| 1:AA:1180:A:H2'   | 1:AA:1181:G:H5'    | 1.51                     | 0.92              |
| 6:AG:155:LEU:HB2  | 6:AG:158:ILE:HG12  | 1.47                     | 0.92              |
| 7:AH:94:ALA:HB1   | 7:AH:98:THR:HG21   | 1.52                     | 0.92              |
| 8:AI:6:VAL:CG2    | 8:AI:8:ILE:HD11    | 1.99                     | 0.92              |
| 10:AK:120:THR:O   | 10:AK:123:GLU:HB3  | 1.69                     | 0.92              |
| 11:AL:16:ARG:HG2  | 11:AL:18:PHE:CE1   | 2.05                     | 0.92              |
| 14:AO:85:ILE:HD11 | 14:AO:98:TYR:CB    | 1.99                     | 0.92              |
| 15:AP:67:GLU:CD   | 15:AP:68:GLY:H     | 1.77                     | 0.92              |
| 21:AV:62:ILE:HD11 | 21:AV:67:VAL:HA    | 1.50                     | 0.92              |
| 24:BA:472:A:H2'   | 24:BA:473:G:C5'    | 1.99                     | 0.92              |
| 24:BA:566:U:H5''  | 42:BU:82:ARG:CZ    | 1.99                     | 0.92              |
| 24:BA:1186:G:H3'  | 24:BA:1187:G:C8    | 2.05                     | 0.92              |
| 24:BA:1774:C:C5   | 24:BA:1775:U:C5    | 2.57                     | 0.92              |
| 24:BA:2261:C:P    | 47:BZ:17:GLN:HB2   | 2.09                     | 0.92              |
| 24:BA:2636:U:C4'  | 28:BE:79:ARG:HD3   | 1.99                     | 0.92              |
| 24:BA:2754:U:H2'  | 24:BA:2755:C:H5''  | 1.51                     | 0.92              |
| 28:BE:119:ARG:CZ  | 28:BE:155:LYS:HB3  | 2.00                     | 0.92              |
| 30:BG:94:LEU:HB2  | 30:BG:99:MET:HE3   | 1.52                     | 0.92              |
| 36:BO:76:LYS:HA   | 36:BO:101:VAL:HG11 | 1.52                     | 0.92              |
| 39:BR:26:LEU:HD21 | 39:BR:37:ALA:HB1   | 1.51                     | 0.92              |
| 39:BR:99:LYS:O    | 39:BR:102:ALA:HB3  | 1.69                     | 0.92              |
| 1:AA:237:C:H5''   | 19:AT:25:ARG:CZ    | 1.99                     | 0.92              |
| 5:AF:14:ILE:HG21  | 5:AF:179:ARG:HA    | 1.49                     | 0.92              |
| 24:BA:179:G:H5'   | 53:B6:32:LYS:NZ    | 1.84                     | 0.92              |
| 24:BA:789:A:OP1   | 24:BA:789:A:H3'    | 1.69                     | 0.92              |
| 24:BA:1205:U:C4   | 24:BA:1207:C:N4    | 2.37                     | 0.92              |
| 27:BD:134:ARG:C   | 27:BD:168:ARG:HH22 | 1.78                     | 0.92              |
| 34:BM:97:ARG:HA   | 34:BM:100:GLU:HG2  | 1.50                     | 0.92              |
| 35:BN:89:ASN:ND2  | 35:BN:91:LEU:HB2   | 1.85                     | 0.92              |
| 36:BO:55:ARG:O    | 36:BO:56:SER:HB2   | 1.70                     | 0.92              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 46:BY:151:HIS:HB2  | 46:BY:168:GLU:HG2  | 1.51                     | 0.92              |
| 50:B3:13:ARG:O     | 50:B3:14:ILE:HG12  | 1.70                     | 0.92              |
| 1:AA:186(D):C:H2'  | 1:AA:186(E):C:C6   | 2.05                     | 0.92              |
| 1:AA:191:G:C4      | 22:AW:105:SER:HB3  | 2.04                     | 0.92              |
| 1:AA:994:A:N7      | 1:AA:1216:G:H4'    | 1.84                     | 0.92              |
| 3:AC:58:A:H2'      | 3:AC:61:C:H41      | 1.33                     | 0.92              |
| 5:AF:60:ALA:HB2    | 12:AM:92:THR:OG1   | 1.70                     | 0.92              |
| 14:AO:59:ARG:HA    | 14:AO:64:TYR:O     | 1.68                     | 0.92              |
| 24:BA:84:A:H5'     | 45:BX:8:LYS:HE2    | 1.49                     | 0.92              |
| 24:BA:637:A:C2     | 24:BA:651:G:H5''   | 2.05                     | 0.92              |
| 24:BA:1005:C:H2'   | 24:BA:1006:C:H6    | 1.34                     | 0.92              |
| 24:BA:2459:A:C2'   | 24:BA:2460:U:O4'   | 2.18                     | 0.92              |
| 27:BD:8:PRO:HD2    | 27:BD:26:LYS:O     | 1.69                     | 0.92              |
| 27:BD:68:LYS:HB3   | 27:BD:70:TRP:NE1   | 1.84                     | 0.92              |
| 34:BM:58:ASP:O     | 34:BM:60:ILE:N     | 2.02                     | 0.92              |
| 36:BO:56:SER:HB3   | 54:B7:13:ARG:NH2   | 1.82                     | 0.92              |
| 39:BR:89:ARG:HH11  | 39:BR:91:PRO:HA    | 1.34                     | 0.92              |
| 41:BT:49:HIS:HA    | 41:BT:52:ARG:CZ    | 1.98                     | 0.92              |
| 41:BT:111:GLU:HA   | 41:BT:114:LYS:NZ   | 1.85                     | 0.92              |
| 46:BY:104:PHE:HZ   | 46:BY:120:ILE:HG22 | 1.32                     | 0.92              |
| 47:BZ:68:GLU:HB3   | 47:BZ:80:HIS:O     | 1.70                     | 0.92              |
| 1:AA:96:G:H2'      | 1:AA:97:U:C6       | 2.05                     | 0.92              |
| 1:AA:703:G:H4'     | 1:AA:704:A:O5'     | 1.70                     | 0.92              |
| 1:AA:979:C:N4      | 16:AQ:18:VAL:HB    | 1.85                     | 0.92              |
| 1:AA:1180:A:C2'    | 1:AA:1181:G:H5'    | 2.01                     | 0.92              |
| 5:AF:38:ARG:HH11   | 5:AF:38:ARG:CB     | 1.82                     | 0.92              |
| 8:AI:10:LEU:H      | 8:AI:10:LEU:HD23   | 1.33                     | 0.92              |
| 10:AK:5:PRO:O      | 10:AK:8:ASP:HB3    | 1.70                     | 0.92              |
| 12:AM:50:ILE:CA    | 12:AM:60:ARG:HG3   | 2.00                     | 0.92              |
| 14:AO:60:LEU:HD13  | 14:AO:60:LEU:N     | 1.80                     | 0.92              |
| 15:AP:52:GLU:HA    | 15:AP:55:ARG:NE    | 1.85                     | 0.92              |
| 24:BA:1617:C:H4'   | 24:BA:1617:C:OP2   | 1.69                     | 0.92              |
| 24:BA:2574:G:H1'   | 28:BE:143:ASN:HD22 | 1.33                     | 0.92              |
| 24:BA:2620:C:H4'   | 28:BE:156:MET:CB   | 2.00                     | 0.92              |
| 24:BA:2881:C:H2'   | 24:BA:2882:A:H8    | 1.35                     | 0.92              |
| 27:BD:57:GLY:H     | 27:BD:217:ARG:HD2  | 1.33                     | 0.92              |
| 27:BD:117:VAL:HG22 | 27:BD:126:GLN:NE2  | 1.85                     | 0.92              |
| 32:BK:127:VAL:HA   | 32:BK:140:LEU:O    | 1.68                     | 0.92              |
| 37:BP:12:GLN:HE21  | 37:BP:13:GLN:HG2   | 1.33                     | 0.92              |
| 42:BU:69:LYS:HG2   | 42:BU:70:ILE:HG13  | 1.52                     | 0.92              |
| 43:BV:33:ARG:HE    | 43:BV:33:ARG:HA    | 1.35                     | 0.92              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 50:B3:43:TYR:HA    | 50:B3:61:ARG:HH22 | 1.19                     | 0.92              |
| 1:AA:410:G:H1'     | 1:AA:432:A:H61    | 1.33                     | 0.91              |
| 1:AA:783:C:O2'     | 1:AA:784:C:H5'    | 1.69                     | 0.91              |
| 1:AA:911:U:H2'     | 1:AA:912:C:H6     | 1.31                     | 0.91              |
| 7:AH:9:LYS:HB2     | 7:AH:33:VAL:HB    | 1.51                     | 0.91              |
| 7:AH:43:LEU:H      | 7:AH:65:ASN:HD22  | 1.03                     | 0.91              |
| 7:AH:121:LYS:HZ2   | 7:AH:122:GLU:N    | 1.67                     | 0.91              |
| 10:AK:70:GLN:NE2   | 10:AK:72:PRO:HD2  | 1.85                     | 0.91              |
| 10:AK:85:ARG:HG2   | 10:AK:85:ARG:HH11 | 1.35                     | 0.91              |
| 14:AO:83:VAL:HG23  | 14:AO:104:VAL:HB  | 1.53                     | 0.91              |
| 19:AT:43:LEU:HD13  | 19:AT:43:LEU:C    | 1.94                     | 0.91              |
| 19:AT:88:TYR:O     | 19:AT:92:ARG:HB2  | 1.71                     | 0.91              |
| 22:AW:50:GLU:HG3   | 22:AW:54:LYS:HE3  | 1.51                     | 0.91              |
| 24:BA:1291:C:H5''  | 24:BA:1536:A:H5'  | 1.52                     | 0.91              |
| 24:BA:1774:C:C5    | 24:BA:1775:U:H5   | 1.89                     | 0.91              |
| 24:BA:1790:C:H4'   | 27:BD:213:ARG:NH1 | 1.85                     | 0.91              |
| 24:BA:1791:A:H3'   | 24:BA:1792:G:H8   | 1.33                     | 0.91              |
| 24:BA:2027:G:H1'   | 24:BA:2037:G:N2   | 1.83                     | 0.91              |
| 24:BA:2120:G:H21   | 26:BC:167:LYS:HZ2 | 1.17                     | 0.91              |
| 24:BA:2329:G:H1    | 24:BA:2386:C:N4   | 1.67                     | 0.91              |
| 29:BF:158:THR:HG21 | 29:BF:196:LEU:N   | 1.84                     | 0.91              |
| 30:BG:91:ARG:HH21  | 30:BG:91:ARG:CB   | 1.82                     | 0.91              |
| 37:BP:34:LEU:HD11  | 37:BP:105:GLU:HB2 | 1.51                     | 0.91              |
| 37:BP:67:ARG:NH1   | 37:BP:103:MET:HB3 | 1.85                     | 0.91              |
| 40:BS:3:ARG:O      | 40:BS:7:ILE:HG12  | 1.70                     | 0.91              |
| 40:BS:51:ARG:C     | 40:BS:66:VAL:HG12 | 1.95                     | 0.91              |
| 40:BS:52:ILE:HA    | 40:BS:66:VAL:CG1  | 2.01                     | 0.91              |
| 40:BS:68:TYR:CE2   | 40:BS:70:VAL:HG22 | 2.05                     | 0.91              |
| 42:BU:34:GLU:HA    | 42:BU:62:LEU:O    | 1.69                     | 0.91              |
| 48:B1:2:ARG:O      | 48:B1:5:LEU:HB2   | 1.70                     | 0.91              |
| 55:B8:10:ILE:HD13  | 55:B8:32:HIS:HD2  | 1.32                     | 0.91              |
| 1:AA:599:C:C4'     | 10:AK:130:GLY:HA3 | 2.01                     | 0.91              |
| 3:AB:74:C:N4       | 24:BA:2555:U:H2'  | 1.86                     | 0.91              |
| 24:BA:68:G:H2'     | 24:BA:69:C:H6     | 1.34                     | 0.91              |
| 24:BA:979:G:H3'    | 24:BA:980:A:C5'   | 1.99                     | 0.91              |
| 24:BA:2433:A:N6    | 50:B3:32:TYR:HE2  | 1.68                     | 0.91              |
| 25:BB:75:G:N3      | 46:BY:27:VAL:HG21 | 1.84                     | 0.91              |
| 26:BC:6:ARG:HD2    | 26:BC:6:ARG:C     | 1.95                     | 0.91              |
| 27:BD:129:ASN:O    | 27:BD:193:VAL:HB  | 1.69                     | 0.91              |
| 27:BD:155:LEU:HG   | 27:BD:157:ARG:NE  | 1.85                     | 0.91              |
| 29:BF:103:LYS:HB3  | 29:BF:107:LYS:HE3 | 1.52                     | 0.91              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 35:BN:112:MET:O   | 35:BN:115:VAL:HB   | 1.71                     | 0.91              |
| 39:BR:3:ARG:CG    | 39:BR:4:LEU:H      | 1.80                     | 0.91              |
| 41:BT:83:LEU:HD12 | 41:BT:83:LEU:H     | 1.34                     | 0.91              |
| 46:BY:4:ARG:HE    | 46:BY:44:PHE:HZ    | 0.94                     | 0.91              |
| 46:BY:48:PHE:CZ   | 46:BY:86:VAL:HG11  | 2.05                     | 0.91              |
| 54:B7:4:MET:HE1   | 54:B7:62:LEU:HG    | 1.51                     | 0.91              |
| 1:AA:356:A:O3'    | 1:AA:367:U:H2'     | 1.70                     | 0.91              |
| 4:AE:118:LEU:HD21 | 4:AE:142:LEU:HB2   | 1.52                     | 0.91              |
| 7:AH:70:PRO:HB2   | 7:AH:143:ARG:HA    | 1.52                     | 0.91              |
| 11:AL:55:ALA:HB3  | 11:AL:58:HIS:HE1   | 1.31                     | 0.91              |
| 24:BA:653:A:N6    | 24:BA:655:A:H1'    | 1.84                     | 0.91              |
| 24:BA:826:U:H5''  | 24:BA:2428:G:O3'   | 1.69                     | 0.91              |
| 24:BA:1142:U:H3'  | 24:BA:1142(A):A:N7 | 1.86                     | 0.91              |
| 24:BA:1281:G:H2'  | 24:BA:1282:U:C6    | 2.04                     | 0.91              |
| 24:BA:1448:G:O3'  | 24:BA:1543:A:N1    | 2.02                     | 0.91              |
| 24:BA:1559:G:H1   | 24:BA:1560:G:H4'   | 1.27                     | 0.91              |
| 24:BA:1762:A:H3'  | 24:BA:1762:A:H8    | 1.31                     | 0.91              |
| 24:BA:2075:U:H2'  | 24:BA:2076:U:C5'   | 2.00                     | 0.91              |
| 24:BA:2543:G:C2   | 24:BA:2765:A:C2    | 2.57                     | 0.91              |
| 30:BG:47:LYS:HB2  | 30:BG:53:LEU:HD11  | 1.52                     | 0.91              |
| 41:BT:46:ALA:O    | 41:BT:50:ARG:HD3   | 1.70                     | 0.91              |
| 42:BU:62:LEU:HD12 | 42:BU:96:ILE:CB    | 1.98                     | 0.91              |
| 45:BX:14:LEU:HD13 | 45:BX:20:TYR:C     | 1.95                     | 0.91              |
| 46:BY:27:VAL:CG2  | 46:BY:85:HIS:NE2   | 2.26                     | 0.91              |
| 52:B5:7:ILE:O     | 52:B5:9:LEU:N      | 2.04                     | 0.91              |
| 1:AA:628:G:H2'    | 1:AA:629:G:C8      | 2.06                     | 0.91              |
| 1:AA:942:G:H21    | 11:AL:124:GLN:HE22 | 1.12                     | 0.91              |
| 7:AH:71:LEU:HD11  | 7:AH:74:GLY:HA2    | 1.52                     | 0.91              |
| 9:AJ:69:VAL:HG21  | 9:AJ:104:LEU:CD2   | 1.99                     | 0.91              |
| 14:AO:58:VAL:O    | 14:AO:65:GLU:HA    | 1.70                     | 0.91              |
| 24:BA:917:A:C2'   | 24:BA:918:A:H5''   | 2.01                     | 0.91              |
| 24:BA:1058:G:H21  | 33:BL:116:ASN:ND2  | 1.66                     | 0.91              |
| 24:BA:1222:C:H42  | 24:BA:1227:A:H62   | 1.17                     | 0.91              |
| 24:BA:2122:U:C2'  | 24:BA:2123:G:H5''  | 1.99                     | 0.91              |
| 24:BA:2469:A:H8   | 24:BA:2469:A:H5'   | 1.34                     | 0.91              |
| 24:BA:2615:U:C1'  | 51:B4:7:PRO:HB3    | 2.01                     | 0.91              |
| 24:BA:2848:G:C8   | 40:BS:99:LEU:HD11  | 2.06                     | 0.91              |
| 26:BC:77:ILE:HG21 | 26:BC:123:VAL:HG22 | 1.50                     | 0.91              |
| 28:BE:66:HIS:CD2  | 28:BE:71:GLY:H     | 1.89                     | 0.91              |
| 28:BE:80:GLU:HG2  | 28:BE:83:ASP:OD2   | 1.70                     | 0.91              |
| 28:BE:105:THR:CB  | 28:BE:166:THR:HB   | 1.99                     | 0.91              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 29:BF:122:LYS:HZ3 | 29:BF:122:LYS:HA   | 1.35                     | 0.91              |
| 29:BF:197:ASP:CA  | 29:BF:200:GLU:HG3  | 1.98                     | 0.91              |
| 36:BO:72:PRO:CB   | 36:BO:111:ARG:HB3  | 2.00                     | 0.91              |
| 37:BP:6:ARG:HB2   | 37:BP:44:ALA:CB    | 2.00                     | 0.91              |
| 38:BQ:86:ARG:HB3  | 38:BQ:86:ARG:NH1   | 1.85                     | 0.91              |
| 40:BS:111:ARG:O   | 40:BS:114:LEU:HB2  | 1.70                     | 0.91              |
| 41:BT:88:ILE:N    | 42:BU:52:VAL:HG22  | 1.86                     | 0.91              |
| 48:B1:20:VAL:HA   | 48:B1:55:LEU:HD23  | 1.52                     | 0.91              |
| 1:AA:600:C:OP1    | 10:AK:97:VAL:N     | 2.04                     | 0.91              |
| 1:AA:777:A:H2'    | 1:AA:778:G:H8      | 1.36                     | 0.91              |
| 1:AA:1191:A:OP1   | 5:AF:4:LYS:HG2     | 1.69                     | 0.91              |
| 5:AF:33:LEU:CD1   | 16:AQ:54:PRO:HD2   | 1.99                     | 0.91              |
| 24:BA:484:C:H2'   | 24:BA:485:C:H6     | 1.29                     | 0.91              |
| 24:BA:510:C:P     | 24:BA:512:G:H1     | 1.93                     | 0.91              |
| 24:BA:1138:G:H21  | 24:BA:1139:G:H1'   | 1.33                     | 0.91              |
| 26:BC:10:LEU:HD21 | 26:BC:220:PRO:HD3  | 1.51                     | 0.91              |
| 31:BH:8:PRO:HB3   | 31:BH:51:ARG:HH12  | 1.36                     | 0.91              |
| 32:BK:21:VAL:O    | 32:BK:25:TYR:HB2   | 1.70                     | 0.91              |
| 34:BM:30:ILE:O    | 34:BM:33:LEU:HB3   | 1.71                     | 0.91              |
| 35:BN:122:LEU:HA  | 40:BS:74:ARG:NH1   | 1.85                     | 0.91              |
| 36:BO:96:THR:HG21 | 36:BO:112:LEU:HD13 | 1.53                     | 0.91              |
| 36:BO:113:LYS:HZ2 | 36:BO:115:LEU:HD12 | 1.35                     | 0.91              |
| 37:BP:59:ARG:HH22 | 46:BY:177:PRO:HB3  | 1.30                     | 0.91              |
| 39:BR:62:LYS:HB3  | 39:BR:65:VAL:H     | 1.35                     | 0.91              |
| 41:BT:89:GLU:CG   | 42:BU:52:VAL:HG23  | 2.01                     | 0.91              |
| 42:BU:62:LEU:HD11 | 42:BU:98:GLU:HG2   | 1.52                     | 0.91              |
| 50:B3:66:SER:O    | 50:B3:69:LYS:HB2   | 1.70                     | 0.91              |
| 1:AA:363:A:OP2    | 14:AO:34:ARG:HB3   | 1.70                     | 0.91              |
| 1:AA:828:A:H2'    | 1:AA:829:G:O4'     | 1.71                     | 0.91              |
| 1:AA:975:A:O2'    | 1:AA:1358:U:H1'    | 1.71                     | 0.91              |
| 7:AH:109:ILE:HD13 | 7:AH:135:THR:HB    | 1.53                     | 0.91              |
| 12:AM:24:VAL:HG22 | 12:AM:72:VAL:HG13  | 1.52                     | 0.91              |
| 18:AS:19:ILE:HB   | 18:AS:37:GLY:O     | 1.69                     | 0.91              |
| 22:AW:73:HIS:H    | 22:AW:76:ALA:HB3   | 1.36                     | 0.91              |
| 24:BA:920:G:O2'   | 24:BA:921:G:H5'    | 1.70                     | 0.91              |
| 24:BA:1646:C:C3'  | 24:BA:1647:G:H5'   | 2.01                     | 0.91              |
| 24:BA:2341:G:H2'  | 24:BA:2342:C:C6    | 2.06                     | 0.91              |
| 24:BA:2563:U:H4'  | 35:BN:28:SER:OG    | 1.69                     | 0.91              |
| 27:BD:5:LYS:NZ    | 27:BD:31:LYS:HZ1   | 1.68                     | 0.91              |
| 27:BD:211:ARG:O   | 27:BD:215:LEU:HD12 | 1.70                     | 0.91              |
| 30:BG:49:ASP:HA   | 30:BG:53:LEU:CD2   | 2.00                     | 0.91              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 31:BH:94:TYR:HA    | 31:BH:106:THR:O    | 1.70                     | 0.91              |
| 39:BR:62:LYS:HD2   | 39:BR:64:GLU:CB    | 2.01                     | 0.91              |
| 39:BR:62:LYS:C     | 39:BR:64:GLU:H     | 1.77                     | 0.91              |
| 42:BU:5:VAL:H      | 42:BU:12:TYR:HD2   | 0.96                     | 0.91              |
| 45:BX:12:THR:HG21  | 45:BX:71:LYS:C     | 1.95                     | 0.91              |
| 45:BX:47:LYS:HB2   | 45:BX:49:VAL:HG22  | 1.51                     | 0.91              |
| 1:AA:509:A:H2'     | 1:AA:510:A:C8      | 2.05                     | 0.91              |
| 5:AF:67:THR:HG22   | 5:AF:104:GLN:HG2   | 1.49                     | 0.91              |
| 6:AG:121:VAL:HA    | 6:AG:126:ILE:HD11  | 1.52                     | 0.91              |
| 7:AH:48:ALA:HB1    | 7:AH:53:LEU:HB3    | 1.51                     | 0.91              |
| 9:AJ:111:ARG:NH1   | 9:AJ:112:PRO:HD2   | 1.85                     | 0.91              |
| 24:BA:789:A:H4'    | 24:BA:790:C:OP1    | 1.69                     | 0.91              |
| 27:BD:181:GLU:HA   | 27:BD:270:ILE:HD12 | 1.52                     | 0.91              |
| 27:BD:183:ARG:CG   | 27:BD:268:ARG:HB2  | 2.01                     | 0.91              |
| 31:BH:35:VAL:HG21  | 31:BH:72:ILE:HG23  | 1.52                     | 0.91              |
| 34:BM:43:THR:HB    | 34:BM:44:PRO:HD2   | 0.92                     | 0.91              |
| 34:BM:109:LYS:HZ2  | 34:BM:110:GLY:N    | 1.69                     | 0.91              |
| 35:BN:77:ILE:CG2   | 40:BS:65:LYS:HE2   | 2.00                     | 0.91              |
| 45:BX:42:VAL:N     | 45:BX:61:ILE:HB    | 1.83                     | 0.91              |
| 1:AA:776:G:H5''    | 1:AA:777:A:OP1     | 1.70                     | 0.91              |
| 1:AA:974:A:OP2     | 16:AQ:31:ARG:HG2   | 1.70                     | 0.91              |
| 2:A1:52:U:H4'      | 6:AG:50:ARG:HA     | 1.50                     | 0.91              |
| 3:AB:38:A:H2'      | 3:AB:39:U:C5       | 2.06                     | 0.91              |
| 4:AE:82:ARG:HD2    | 4:AE:92:TYR:OH     | 1.70                     | 0.91              |
| 6:AG:94:LEU:HA     | 6:AG:97:LEU:CD1    | 2.00                     | 0.91              |
| 17:AR:62:GLN:HA    | 17:AR:65:ARG:HH22  | 1.31                     | 0.91              |
| 24:BA:739:G:O3'    | 24:BA:1784:A:N1    | 2.04                     | 0.91              |
| 24:BA:1061:U:H4'   | 24:BA:1070:A:H4'   | 1.52                     | 0.91              |
| 24:BA:1080:C:H1'   | 33:BL:126:MET:HA   | 1.52                     | 0.91              |
| 24:BA:1864:U:H2'   | 24:BA:1869:G:H5'   | 1.50                     | 0.91              |
| 24:BA:1934:C:H5'   | 24:BA:1974:C:H4'   | 1.50                     | 0.91              |
| 24:BA:2175:C:H1'   | 26:BC:218:MET:HA   | 1.53                     | 0.91              |
| 24:BA:2344:U:C5'   | 52:B5:38:LYS:HG3   | 2.00                     | 0.91              |
| 24:BA:2764:A:OP1   | 24:BA:2764:A:H4'   | 1.68                     | 0.91              |
| 27:BD:61:LEU:CB    | 27:BD:86:PRO:HG2   | 2.00                     | 0.91              |
| 28:BE:4:ILE:HD11   | 28:BE:76:ARG:CZ    | 2.01                     | 0.91              |
| 28:BE:72:VAL:HG23  | 28:BE:74:PRO:HD3   | 1.53                     | 0.91              |
| 29:BF:11:VAL:HG13  | 29:BF:127:GLU:HB2  | 1.49                     | 0.91              |
| 29:BF:157:VAL:HG22 | 29:BF:194:MET:HB3  | 1.52                     | 0.91              |
| 34:BM:78:TYR:HB3   | 34:BM:79:PRO:HD2   | 1.53                     | 0.91              |
| 41:BT:112:ARG:HH12 | 42:BU:50:PRO:CG    | 1.83                     | 0.91              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 46:BY:110:GLY:O   | 46:BY:113:ALA:HB3  | 1.71                     | 0.91              |
| 23:AX:14:TRP:HZ3  | 23:AX:15:ARG:CZ    | 1.83                     | 0.91              |
| 24:BA:570:G:H1    | 24:BA:2498:C:H4'   | 1.34                     | 0.91              |
| 24:BA:1614:A:H3'  | 24:BA:1614:A:N3    | 1.85                     | 0.91              |
| 24:BA:1697:G:C8   | 24:BA:1698:A:H5''  | 2.06                     | 0.91              |
| 24:BA:2408:U:O5'  | 24:BA:2408:U:H6    | 1.52                     | 0.91              |
| 28:BE:33:VAL:HG22 | 28:BE:47:VAL:O     | 1.70                     | 0.91              |
| 28:BE:50:GLY:H    | 28:BE:76:ARG:HG3   | 1.34                     | 0.91              |
| 35:BN:15:GLY:CA   | 35:BN:52:VAL:HG21  | 2.01                     | 0.91              |
| 54:B7:56:GLU:N    | 54:B7:56:GLU:OE2   | 2.03                     | 0.91              |
| 1:AA:191(C):G:H2' | 1:AA:191(D):U:C6   | 2.06                     | 0.91              |
| 1:AA:911:U:H2'    | 1:AA:912:C:C6      | 2.06                     | 0.91              |
| 8:AI:23:LYS:HA    | 8:AI:26:ILE:HD12   | 1.53                     | 0.91              |
| 18:AS:23:ASP:OD2  | 18:AS:33:ILE:HD11  | 1.71                     | 0.91              |
| 24:BA:390:A:H5''  | 24:BA:391:G:OP1    | 1.70                     | 0.91              |
| 24:BA:716:A:H2'   | 24:BA:717:G:H5'    | 1.50                     | 0.91              |
| 24:BA:821:A:H2'   | 24:BA:946:G:C8     | 2.06                     | 0.91              |
| 24:BA:1789:A:OP1  | 27:BD:222:ARG:HG2  | 1.71                     | 0.91              |
| 24:BA:2571:C:H1'  | 28:BE:146:THR:HG23 | 1.51                     | 0.91              |
| 24:BA:2581:G:H1   | 24:BA:2610:C:C2'   | 1.83                     | 0.91              |
| 27:BD:246:PRO:HD2 | 27:BD:250:TRP:CB   | 2.01                     | 0.91              |
| 29:BF:74:ARG:NH1  | 29:BF:75:HIS:HA    | 1.86                     | 0.91              |
| 32:BK:32:PRO:HG2  | 32:BK:33:ARG:H     | 1.35                     | 0.91              |
| 34:BM:23:LEU:HD12 | 34:BM:63:THR:CG2   | 2.01                     | 0.91              |
| 34:BM:67:LEU:H    | 34:BM:87:LEU:HD21  | 1.35                     | 0.91              |
| 35:BN:10:VAL:H    | 35:BN:17:ARG:HG2   | 1.36                     | 0.91              |
| 36:BO:93:GLY:HA2  | 36:BO:112:LEU:CD1  | 2.01                     | 0.91              |
| 38:BQ:57:ARG:HE   | 38:BQ:62:ALA:HB2   | 1.35                     | 0.91              |
| 39:BR:69:VAL:O    | 39:BR:73:LEU:HD13  | 1.69                     | 0.91              |
| 1:AA:1200:C:H3'   | 1:AA:1201:A:H5'    | 1.50                     | 0.90              |
| 1:AA:1403:C:H1'   | 1:AA:1500:A:H61    | 1.31                     | 0.90              |
| 6:AG:100:ARG:NH2  | 6:AG:137:SER:HA    | 1.86                     | 0.90              |
| 9:AJ:98:SER:O     | 9:AJ:101:LEU:HB3   | 1.71                     | 0.90              |
| 15:AP:22:ILE:HB   | 15:AP:25:ILE:CD1   | 2.01                     | 0.90              |
| 22:AW:13:LEU:HB2  | 22:AW:17:ARG:HH21  | 1.33                     | 0.90              |
| 24:BA:468:G:H2'   | 24:BA:469:G:O4'    | 1.71                     | 0.90              |
| 24:BA:728:G:C2    | 24:BA:762:U:H3'    | 2.06                     | 0.90              |
| 24:BA:784:A:N6    | 24:BA:792:G:N3     | 2.17                     | 0.90              |
| 24:BA:1325:G:H21  | 43:BV:86:LEU:HD13  | 1.35                     | 0.90              |
| 24:BA:1543:A:H3'  | 24:BA:1544:C:C4'   | 1.99                     | 0.90              |
| 24:BA:1856:G:H2'  | 24:BA:1857:G:H5'   | 1.51                     | 0.90              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1935:G:H1    | 24:BA:1962:C:H2'   | 1.36                     | 0.90              |
| 24:BA:2117:A:N6    | 24:BA:2171:A:N1    | 2.19                     | 0.90              |
| 24:BA:2326:C:N3    | 24:BA:2389:G:N1    | 2.19                     | 0.90              |
| 27:BD:5:LYS:HB3    | 27:BD:82:ILE:HB    | 1.52                     | 0.90              |
| 29:BF:164:ARG:HB2  | 29:BF:177:ALA:CB   | 2.01                     | 0.90              |
| 30:BG:44:GLY:O     | 30:BG:47:LYS:HB3   | 1.71                     | 0.90              |
| 35:BN:64:ARG:NH1   | 35:BN:77:ILE:HB    | 1.85                     | 0.90              |
| 1:AA:43:C:H5''     | 18:AS:12:LYS:CB    | 2.01                     | 0.90              |
| 1:AA:858:G:H22     | 1:AA:869:G:H3'     | 1.32                     | 0.90              |
| 3:AD:34:G:H3'      | 3:AD:35:A:H5''     | 1.52                     | 0.90              |
| 5:AF:108:ASN:HD22  | 5:AF:111:LEU:HD13  | 1.36                     | 0.90              |
| 24:BA:549:G:H2'    | 24:BA:550:G:C8     | 2.06                     | 0.90              |
| 24:BA:1138:G:N2    | 24:BA:1139:G:H1'   | 1.86                     | 0.90              |
| 24:BA:1475:G:N2    | 24:BA:1477:A:H62   | 1.70                     | 0.90              |
| 24:BA:1667:G:H2'   | 24:BA:1667:G:N3    | 1.87                     | 0.90              |
| 24:BA:2665:A:C8    | 24:BA:2665:A:H3'   | 2.04                     | 0.90              |
| 24:BA:2731:G:H4'   | 28:BE:168:MET:SD   | 2.12                     | 0.90              |
| 26:BC:64:LEU:HB3   | 26:BC:188:ASN:CG   | 1.96                     | 0.90              |
| 28:BE:107:THR:O    | 28:BE:190:GLY:HA3  | 1.71                     | 0.90              |
| 33:BL:18:THR:HA    | 33:BL:38:VAL:HG21  | 1.49                     | 0.90              |
| 33:BL:23:VAL:HG13  | 33:BL:27:LEU:CD1   | 2.00                     | 0.90              |
| 34:BM:3:THR:O      | 34:BM:4:TYR:HB2    | 1.69                     | 0.90              |
| 34:BM:89:LYS:HE2   | 34:BM:89:LYS:N     | 1.85                     | 0.90              |
| 34:BM:107:LEU:HD21 | 34:BM:113:GLY:HA3  | 1.52                     | 0.90              |
| 37:BP:71:ASP:OD2   | 37:BP:95:ALA:HA    | 1.71                     | 0.90              |
| 41:BT:102:GLU:O    | 41:BT:105:VAL:HG12 | 1.70                     | 0.90              |
| 42:BU:57:VAL:HG12  | 42:BU:58:VAL:H     | 1.33                     | 0.90              |
| 46:BY:152:ALA:HA   | 46:BY:155:LEU:CD1  | 2.01                     | 0.90              |
| 49:B2:3:ARG:HH22   | 49:B2:59:VAL:HG11  | 1.35                     | 0.90              |
| 49:B2:6:VAL:O      | 49:B2:35:ARG:HG2   | 1.68                     | 0.90              |
| 1:AA:272:C:H2'     | 1:AA:273:A:H8      | 1.36                     | 0.90              |
| 1:AA:376:G:H2'     | 1:AA:377:G:H8      | 1.33                     | 0.90              |
| 1:AA:384:G:H2'     | 1:AA:385:C:H6      | 1.34                     | 0.90              |
| 1:AA:692:U:O2      | 1:AA:694:A:H3'     | 1.72                     | 0.90              |
| 1:AA:1408:A:C2     | 1:AA:1495:U:C5     | 2.58                     | 0.90              |
| 4:AE:48:MET:SD     | 4:AE:48:MET:N      | 2.44                     | 0.90              |
| 4:AE:160:ASP:HB3   | 4:AE:182:ILE:HG21  | 1.50                     | 0.90              |
| 9:AJ:69:VAL:HG22   | 9:AJ:135:VAL:CG2   | 2.00                     | 0.90              |
| 10:AK:83:ILE:HA    | 10:AK:137:VAL:HG22 | 1.54                     | 0.90              |
| 13:AN:82:VAL:HB    | 13:AN:108:ILE:HG12 | 1.53                     | 0.90              |
| 24:BA:20:C:O2'     | 24:BA:21:A:H5'     | 1.70                     | 0.90              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:234:C:H42    | 24:BA:430:G:N2     | 1.69                     | 0.90              |
| 24:BA:323:G:H5'    | 24:BA:324:A:OP1    | 1.71                     | 0.90              |
| 24:BA:365:C:H2'    | 24:BA:366:C:C6     | 2.06                     | 0.90              |
| 24:BA:1044:G:N2    | 24:BA:1111:A:H4'   | 1.86                     | 0.90              |
| 24:BA:1186:G:C8    | 24:BA:1187:G:C8    | 2.58                     | 0.90              |
| 24:BA:1270:C:H4'   | 24:BA:1271:G:H5'   | 1.50                     | 0.90              |
| 24:BA:1773:A:C6    | 24:BA:1829:A:H1'   | 2.05                     | 0.90              |
| 24:BA:2076:U:H4'   | 24:BA:2077:A:OP1   | 1.70                     | 0.90              |
| 24:BA:2305:A:H2'   | 24:BA:2306:C:H5''  | 1.51                     | 0.90              |
| 24:BA:2320:A:H5'   | 24:BA:2321:G:C5    | 2.07                     | 0.90              |
| 27:BD:95:LEU:HD22  | 27:BD:96:HIS:N     | 1.86                     | 0.90              |
| 27:BD:206:LEU:HD13 | 27:BD:206:LEU:N    | 1.87                     | 0.90              |
| 27:BD:258:LYS:HA   | 27:BD:261:LYS:NZ   | 1.85                     | 0.90              |
| 28:BE:91:VAL:HG22  | 28:BE:93:VAL:H     | 1.36                     | 0.90              |
| 31:BH:115:VAL:HG13 | 31:BH:116:GLU:H    | 1.35                     | 0.90              |
| 35:BN:97:ARG:HB2   | 35:BN:97:ARG:HH21  | 1.11                     | 0.90              |
| 38:BQ:33:ARG:HB2   | 38:BQ:113:LEU:HD11 | 1.51                     | 0.90              |
| 41:BT:53:ARG:HA    | 41:BT:56:ASP:CG    | 1.95                     | 0.90              |
| 44:BW:7:VAL:HG11   | 48:B1:31:ARG:HH22  | 1.37                     | 0.90              |
| 50:B3:21:VAL:HG12  | 50:B3:22:ILE:H     | 1.37                     | 0.90              |
| 1:AA:1433:A:H62    | 1:AA:1467:G:N2     | 1.67                     | 0.90              |
| 4:AE:77:ALA:HA     | 4:AE:208:ILE:HD11  | 1.50                     | 0.90              |
| 6:AG:59:ARG:HA     | 6:AG:59:ARG:HH11   | 1.35                     | 0.90              |
| 14:AO:85:ILE:HG13  | 14:AO:87:GLY:H     | 1.35                     | 0.90              |
| 20:AU:18:ARG:HH21  | 20:AU:21:LYS:HB2   | 1.36                     | 0.90              |
| 24:BA:46:C:OP2     | 24:BA:215:G:H3'    | 1.71                     | 0.90              |
| 24:BA:270(I):G:C2  | 24:BA:270(J):G:H1' | 2.07                     | 0.90              |
| 24:BA:530:G:N1     | 24:BA:2022:U:OP1   | 2.03                     | 0.90              |
| 24:BA:640:C:C2'    | 24:BA:641:C:H5''   | 2.01                     | 0.90              |
| 24:BA:665:C:H2'    | 24:BA:666:G:H8     | 1.35                     | 0.90              |
| 24:BA:2244:U:H1'   | 24:BA:2434:A:C5    | 2.07                     | 0.90              |
| 24:BA:2305:A:H2'   | 30:BG:154:GLY:HA2  | 1.52                     | 0.90              |
| 26:BC:51:PRO:HB3   | 26:BC:165:ASN:HD21 | 1.35                     | 0.90              |
| 27:BD:11:PRO:HB2   | 27:BD:24:ILE:HB    | 1.53                     | 0.90              |
| 28:BE:198:VAL:HG12 | 28:BE:200:GLU:OE2  | 1.71                     | 0.90              |
| 32:BK:92:VAL:CB    | 32:BK:120:ILE:O    | 2.17                     | 0.90              |
| 35:BN:64:ARG:HH12  | 35:BN:77:ILE:CB    | 1.84                     | 0.90              |
| 40:BS:24:PRO:HG2   | 40:BS:25:GLY:H     | 1.32                     | 0.90              |
| 44:BW:62:LYS:O     | 44:BW:63:LYS:HB2   | 1.69                     | 0.90              |
| 45:BX:38:ILE:HA    | 45:BX:62:GLU:HG3   | 1.51                     | 0.90              |
| 46:BY:53:ILE:HG12  | 46:BY:58:VAL:HG21  | 1.51                     | 0.90              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 47:BZ:46:LYS:HG2  | 47:BZ:77:ARG:O    | 1.72                     | 0.90              |
| 1:AA:275:G:H5'    | 19:AT:14:LYS:NZ   | 1.86                     | 0.90              |
| 1:AA:1062:U:H2'   | 1:AA:1063:C:C6    | 2.04                     | 0.90              |
| 3:AB:71:G:N2      | 3:AB:72:C:H1'     | 1.86                     | 0.90              |
| 20:AU:74:ARG:HG3  | 20:AU:79:LEU:HD22 | 1.52                     | 0.90              |
| 24:BA:691:C:H1'   | 27:BD:45:ASN:HD21 | 1.37                     | 0.90              |
| 24:BA:818:G:O2'   | 24:BA:819:A:H5''  | 1.71                     | 0.90              |
| 24:BA:1157:G:OP2  | 24:BA:1157:G:H3'  | 1.71                     | 0.90              |
| 24:BA:1624:G:C2   | 24:BA:1625:C:N4   | 2.39                     | 0.90              |
| 24:BA:1820:U:C2   | 27:BD:202:LYS:HG2 | 2.07                     | 0.90              |
| 24:BA:1863:G:H2'  | 24:BA:1864:U:C6   | 2.07                     | 0.90              |
| 24:BA:2028:U:H2'  | 24:BA:2029:G:C8   | 2.07                     | 0.90              |
| 24:BA:2314:C:H2'  | 24:BA:2315:G:H8   | 1.37                     | 0.90              |
| 24:BA:2329:G:N2   | 24:BA:2386:C:H42  | 1.69                     | 0.90              |
| 24:BA:2361:A:H3'  | 24:BA:2362:G:H8   | 1.36                     | 0.90              |
| 24:BA:2524:G:H5'  | 24:BA:2764:A:O2'  | 1.69                     | 0.90              |
| 27:BD:181:GLU:HB3 | 27:BD:268:ARG:HE  | 1.37                     | 0.90              |
| 30:BG:5:VAL:HG12  | 30:BG:9:ARG:NH2   | 1.87                     | 0.90              |
| 30:BG:57:ALA:HA   | 30:BG:68:PRO:N    | 1.87                     | 0.90              |
| 39:BR:9:ARG:HD3   | 39:BR:12:PHE:HE2  | 1.35                     | 0.90              |
| 42:BU:40:LEU:CA   | 42:BU:54:GLY:HA3  | 2.00                     | 0.90              |
| 43:BV:76:VAL:HG23 | 43:BV:103:ILE:HA  | 1.53                     | 0.90              |
| 48:B1:27:LEU:CA   | 48:B1:30:LEU:HG   | 2.01                     | 0.90              |
| 52:B5:19:ARG:NH1  | 52:B5:19:ARG:HG2  | 1.80                     | 0.90              |
| 1:AA:508:C:HO2'   | 1:AA:509:A:H8     | 0.94                     | 0.90              |
| 1:AA:857:C:H2'    | 1:AA:858:G:O4'    | 1.71                     | 0.90              |
| 1:AA:961:U:O2'    | 1:AA:962:C:H5'    | 1.70                     | 0.90              |
| 1:AA:1348:U:H4'   | 11:AL:120:ARG:NH1 | 1.85                     | 0.90              |
| 4:AE:102:LEU:HD22 | 4:AE:176:GLU:HB3  | 1.51                     | 0.90              |
| 4:AE:118:LEU:HD13 | 4:AE:142:LEU:HD12 | 1.52                     | 0.90              |
| 5:AF:30:ARG:HB3   | 16:AQ:36:PHE:O    | 1.71                     | 0.90              |
| 22:AW:12:ALA:N    | 22:AW:13:LEU:HD12 | 1.86                     | 0.90              |
| 24:BA:64:A:N3     | 44:BW:66:LEU:HD22 | 1.87                     | 0.90              |
| 30:BG:76:SER:O    | 30:BG:83:ARG:HG3  | 1.71                     | 0.90              |
| 36:BO:122:PRO:HG3 | 36:BO:137:LYS:C   | 1.97                     | 0.90              |
| 37:BP:43:THR:HA   | 37:BP:94:VAL:HG11 | 1.52                     | 0.90              |
| 41:BT:57:PHE:HA   | 41:BT:60:LEU:CG   | 2.00                     | 0.90              |
| 48:B1:44:LYS:HG3  | 48:B1:48:LEU:HD22 | 1.52                     | 0.90              |
| 49:B2:41:PRO:HA   | 49:B2:44:ARG:HH11 | 1.35                     | 0.90              |
| 55:B8:7:VAL:HG11  | 55:B8:36:GLN:HE22 | 1.33                     | 0.90              |
| 55:B8:23:VAL:HB   | 55:B8:36:GLN:CG   | 2.01                     | 0.90              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:449:C:N3      | 1:AA:450:G:H1'     | 1.86                     | 0.90              |
| 1:AA:697:U:H2'     | 1:AA:698:G:C8      | 2.06                     | 0.90              |
| 4:AE:102:LEU:HB2   | 4:AE:176:GLU:OE1   | 1.69                     | 0.90              |
| 5:AF:134:ILE:O     | 5:AF:138:VAL:HG23  | 1.71                     | 0.90              |
| 8:AI:8:ILE:CG2     | 8:AI:88:VAL:HA     | 2.00                     | 0.90              |
| 10:AK:104:ARG:HG2  | 10:AK:104:ARG:HH11 | 1.36                     | 0.90              |
| 11:AL:55:ALA:CB    | 11:AL:58:HIS:HE1   | 1.79                     | 0.90              |
| 21:AV:45:VAL:HG22  | 21:AV:67:VAL:HG21  | 1.53                     | 0.90              |
| 24:BA:64:A:O2'     | 24:BA:65:C:H5'     | 1.72                     | 0.90              |
| 24:BA:64:A:O2'     | 44:BW:71:GLY:HA3   | 1.72                     | 0.90              |
| 24:BA:265:A:H8     | 24:BA:265:A:C3'    | 1.85                     | 0.90              |
| 24:BA:961:C:N4     | 24:BA:2031:A:N3    | 2.19                     | 0.90              |
| 24:BA:1071:G:H2'   | 24:BA:1072:C:C5'   | 2.01                     | 0.90              |
| 24:BA:1423:G:H2'   | 24:BA:1424:G:H8    | 1.35                     | 0.90              |
| 24:BA:1657:C:H2'   | 24:BA:1658:C:H6    | 1.37                     | 0.90              |
| 24:BA:1764:G:O2'   | 24:BA:1765:C:H5'   | 1.70                     | 0.90              |
| 24:BA:1996:C:O2'   | 28:BE:123:ALA:HB3  | 1.72                     | 0.90              |
| 24:BA:2348:U:C3'   | 54:B7:42:ARG:HH22  | 1.83                     | 0.90              |
| 24:BA:2618:G:N3    | 28:BE:150:VAL:HG11 | 1.86                     | 0.90              |
| 25:BB:101:A:H2'    | 25:BB:102:G:C8     | 2.04                     | 0.90              |
| 26:BC:116:THR:HA   | 26:BC:146:GLY:O    | 1.72                     | 0.90              |
| 31:BH:7:LEU:CB     | 31:BH:52:VAL:HG13  | 2.02                     | 0.90              |
| 34:BM:34:LEU:HA    | 34:BM:49:GLY:O     | 1.71                     | 0.90              |
| 37:BP:134:ARG:NH2  | 37:BP:137:TYR:HD1  | 1.69                     | 0.90              |
| 42:BU:17:GLY:HA3   | 42:BU:19:LYS:HZ2   | 1.30                     | 0.90              |
| 54:B7:7:HIS:HB2    | 54:B7:8:LYS:HZ3    | 1.36                     | 0.90              |
| 1:AA:1198:G:H2'    | 1:AA:1199:U:O4'    | 1.72                     | 0.90              |
| 2:A1:6:U:H2'       | 2:A1:7:U:H5        | 1.33                     | 0.90              |
| 7:AH:23:GLY:HA3    | 7:AH:25:ARG:NH1    | 1.86                     | 0.90              |
| 8:AI:76:ALA:HB3    | 8:AI:80:ARG:HH22   | 1.35                     | 0.90              |
| 9:AJ:111:ARG:HB2   | 9:AJ:119:ARG:HG2   | 1.51                     | 0.90              |
| 15:AP:7:VAL:HG13   | 30:BG:114:ILE:CD1  | 2.00                     | 0.90              |
| 15:AP:67:GLU:CG    | 15:AP:68:GLY:H     | 1.85                     | 0.90              |
| 17:AR:75:PRO:HA    | 17:AR:78:TYR:HB3   | 1.53                     | 0.90              |
| 24:BA:30:G:H2'     | 24:BA:31:C:O4'     | 1.72                     | 0.90              |
| 24:BA:1819:A:H1'   | 24:BA:1821:A:C2    | 2.07                     | 0.90              |
| 24:BA:2059:A:N1    | 24:BA:2503:A:N7    | 2.19                     | 0.90              |
| 26:BC:76:ALA:HB2   | 26:BC:153:ILE:CD1  | 2.01                     | 0.90              |
| 26:BC:97:GLU:HG2   | 26:BC:122:ALA:HB3  | 1.54                     | 0.90              |
| 27:BD:106:ILE:HD12 | 27:BD:192:THR:HG21 | 1.52                     | 0.90              |
| 28:BE:33:VAL:HG13  | 28:BE:48:GLN:HA    | 1.54                     | 0.90              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 29:BF:33:LEU:O     | 29:BF:36:VAL:HG12  | 1.71                     | 0.90              |
| 42:BU:11:GLN:HE22  | 42:BU:24:LYS:HZ3   | 0.91                     | 0.90              |
| 44:BW:48:LYS:O     | 44:BW:88:LYS:HG3   | 1.69                     | 0.90              |
| 47:BZ:37:LEU:HG    | 47:BZ:59:LEU:O     | 1.72                     | 0.90              |
| 53:B6:34:ARG:NH2   | 53:B6:42:LEU:HA    | 1.87                     | 0.90              |
| 54:B7:34:TRP:C     | 54:B7:36:LYS:N     | 2.20                     | 0.90              |
| 54:B7:55:ALA:HA    | 54:B7:58:ILE:HD11  | 1.54                     | 0.90              |
| 1:AA:707:C:O2'     | 1:AA:708:C:H5'     | 1.72                     | 0.90              |
| 1:AA:1321:C:H4'    | 15:AP:87:TYR:OH    | 1.72                     | 0.90              |
| 4:AE:80:ILE:HD12   | 4:AE:208:ILE:HG12  | 1.53                     | 0.90              |
| 8:AI:3:ARG:HA      | 8:AI:67:MET:CE     | 1.98                     | 0.90              |
| 8:AI:26:ILE:O      | 8:AI:30:LEU:HG     | 1.72                     | 0.90              |
| 9:AJ:50:ILE:O      | 9:AJ:54:THR:HG23   | 1.70                     | 0.90              |
| 17:AR:36:ILE:HD11  | 17:AR:60:VAL:HG13  | 1.52                     | 0.90              |
| 24:BA:1180:C:OP2   | 24:BA:1180:C:H3'   | 1.71                     | 0.90              |
| 24:BA:1470:G:H21   | 24:BA:1522:G:H1    | 0.92                     | 0.90              |
| 24:BA:1788:C:C4    | 24:BA:1789:A:C8    | 2.60                     | 0.90              |
| 24:BA:2056:G:N2    | 51:B4:4:HIS:CD2    | 2.40                     | 0.90              |
| 24:BA:2553:G:N2    | 24:BA:2554:U:CI'   | 2.35                     | 0.90              |
| 24:BA:2786:U:O2    | 28:BE:61:ARG:HG3   | 1.72                     | 0.90              |
| 27:BD:89:SER:OG    | 27:BD:158:ALA:HB1  | 1.71                     | 0.90              |
| 29:BF:131:GLY:HA2  | 29:BF:138:GLU:CB   | 2.02                     | 0.90              |
| 30:BG:111:LEU:HB3  | 30:BG:112:PRO:CD   | 2.02                     | 0.90              |
| 44:BW:92:LEU:HD12  | 44:BW:92:LEU:H     | 1.34                     | 0.90              |
| 46:BY:175:VAL:HG22 | 46:BY:176:PRO:HD2  | 1.54                     | 0.90              |
| 54:B7:8:LYS:HD3    | 54:B7:11:LYS:NZ    | 1.86                     | 0.90              |
| 1:AA:1048:G:H5''   | 16:AQ:3:ARG:NH1    | 1.87                     | 0.90              |
| 1:AA:1204:A:H2     | 5:AF:195:VAL:HG21  | 1.32                     | 0.90              |
| 4:AE:82:ARG:N      | 4:AE:94:ASN:HD21   | 1.70                     | 0.90              |
| 6:AG:60:GLU:CD     | 6:AG:202:LEU:HD12  | 1.95                     | 0.90              |
| 6:AG:125:HIS:HB3   | 6:AG:152:SER:HB2   | 1.52                     | 0.90              |
| 7:AH:51:VAL:O      | 7:AH:55:VAL:HG23   | 1.71                     | 0.90              |
| 9:AJ:125:MET:HG3   | 9:AJ:126:ASP:H     | 1.35                     | 0.90              |
| 21:AV:20:LEU:O     | 21:AV:22:LEU:N     | 2.05                     | 0.90              |
| 24:BA:532:A:OP1    | 24:BA:2021:C:N4    | 2.04                     | 0.90              |
| 24:BA:1375:C:H2'   | 24:BA:1376:C:H6    | 1.36                     | 0.90              |
| 24:BA:2266:A:H5'   | 24:BA:2267:A:N3    | 1.85                     | 0.90              |
| 24:BA:2286:A:H2    | 52:B5:27:LYS:CB    | 1.84                     | 0.90              |
| 27:BD:133:LEU:O    | 27:BD:136:ILE:HG13 | 1.72                     | 0.90              |
| 41:BT:85:LYS:HD3   | 41:BT:116:ALA:O    | 1.72                     | 0.90              |
| 41:BT:114:LYS:HG2  | 41:BT:115:ALA:N    | 1.86                     | 0.90              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 44:BW:7:VAL:HG23   | 48:B1:28:MET:HE3   | 1.54                     | 0.90              |
| 46:BY:96:VAL:HA    | 46:BY:128:VAL:HG13 | 1.52                     | 0.90              |
| 55:B8:23:VAL:HB    | 55:B8:36:GLN:HG2   | 1.54                     | 0.90              |
| 1:AA:790:A:N6      | 1:AA:791:G:C2      | 2.40                     | 0.89              |
| 1:AA:1521:G:H2'    | 1:AA:1522:U:H6     | 1.34                     | 0.89              |
| 4:AE:95:GLN:HG3    | 4:AE:148:TYR:CB    | 2.02                     | 0.89              |
| 9:AJ:15:ASP:CG     | 9:AJ:23:VAL:HG11   | 1.96                     | 0.89              |
| 24:BA:198:C:O2'    | 24:BA:199:A:H8     | 1.54                     | 0.89              |
| 24:BA:269:U:H3     | 24:BA:270:A:H62    | 1.20                     | 0.89              |
| 24:BA:621:A:N6     | 24:BA:622:G:N3     | 2.19                     | 0.89              |
| 24:BA:672:C:H3'    | 36:BO:38:GLN:HE22  | 1.35                     | 0.89              |
| 24:BA:976:C:C5'    | 24:BA:1156:A:H62   | 1.85                     | 0.89              |
| 24:BA:1154:G:OP1   | 41:BT:62:ILE:HD11  | 1.70                     | 0.89              |
| 24:BA:1291:C:H5'   | 24:BA:1535:U:O2'   | 1.71                     | 0.89              |
| 24:BA:1775:U:O2'   | 24:BA:1776:G:H5'   | 1.72                     | 0.89              |
| 24:BA:1824:G:H2'   | 24:BA:1825:A:O4'   | 1.72                     | 0.89              |
| 24:BA:1903:G:H2'   | 24:BA:1904:G:H8    | 1.34                     | 0.89              |
| 24:BA:2225:A:H5'   | 24:BA:2226:C:O4'   | 1.70                     | 0.89              |
| 24:BA:2433:A:H62   | 50:B3:32:TYR:HE2   | 0.95                     | 0.89              |
| 24:BA:2636:U:H4'   | 28:BE:79:ARG:HH21  | 1.36                     | 0.89              |
| 24:BA:2690:C:H6    | 24:BA:2690:C:H3'   | 1.37                     | 0.89              |
| 24:BA:2700:C:H2'   | 24:BA:2701:C:H5''  | 1.51                     | 0.89              |
| 25:BB:51:G:H2'     | 25:BB:52:A:O5'     | 1.72                     | 0.89              |
| 26:BC:38:ASP:OD2   | 26:BC:178:ALA:HB3  | 1.71                     | 0.89              |
| 26:BC:62:VAL:HB    | 26:BC:195:ALA:HB3  | 1.53                     | 0.89              |
| 27:BD:37:LEU:HD11  | 27:BD:63:ARG:HA    | 1.50                     | 0.89              |
| 27:BD:177:LEU:HD11 | 27:BD:268:ARG:NH2  | 1.87                     | 0.89              |
| 30:BG:57:ALA:HA    | 30:BG:68:PRO:HD2   | 1.54                     | 0.89              |
| 30:BG:58:GLN:O     | 30:BG:61:ALA:HB3   | 1.71                     | 0.89              |
| 30:BG:75:LYS:HB3   | 30:BG:84:LYS:H     | 1.35                     | 0.89              |
| 31:BH:38:SER:H     | 31:BH:41:MET:CE    | 1.83                     | 0.89              |
| 33:BL:14:ALA:HB3   | 33:BL:49:GLY:HA2   | 1.53                     | 0.89              |
| 34:BM:16:ILE:HB    | 34:BM:54:VAL:HG23  | 1.50                     | 0.89              |
| 50:B3:5:ILE:HG22   | 50:B3:7:PRO:CD     | 2.02                     | 0.89              |
| 1:AA:1253:G:N1     | 1:AA:1285:A:N6     | 2.17                     | 0.89              |
| 4:AE:130:ARG:HB3   | 4:AE:131:PRO:HD2   | 1.53                     | 0.89              |
| 6:AG:18:LYS:HA     | 6:AG:33:MET:HE2    | 1.54                     | 0.89              |
| 6:AG:191:ARG:HD3   | 6:AG:192:GLU:N     | 1.86                     | 0.89              |
| 10:AK:32:LYS:HG2   | 10:AK:33:GLU:H     | 1.37                     | 0.89              |
| 12:AM:68:HIS:HB3   | 12:AM:70:ARG:HH21  | 1.35                     | 0.89              |
| 14:AO:54:LYS:HB3   | 14:AO:70:ILE:HB    | 1.54                     | 0.89              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 14:AO:84:LEU:CB   | 14:AO:104:VAL:HG11 | 2.02                     | 0.89              |
| 20:AU:74:ARG:HA   | 20:AU:79:LEU:CD1   | 2.01                     | 0.89              |
| 24:BA:574:C:O2'   | 24:BA:575:A:OP2    | 1.91                     | 0.89              |
| 24:BA:1237:A:O2'  | 24:BA:1238:G:O4'   | 1.89                     | 0.89              |
| 24:BA:1913:A:H1'  | 24:BA:1918:A:N6    | 1.87                     | 0.89              |
| 24:BA:2051:A:H5'' | 24:BA:2578:G:H5''  | 1.52                     | 0.89              |
| 24:BA:2556:C:H2'  | 24:BA:2557:G:O4'   | 1.71                     | 0.89              |
| 24:BA:2749:A:H4'  | 31:BH:62:LYS:HG3   | 1.53                     | 0.89              |
| 29:BF:41:LEU:HB2  | 29:BF:44:ARG:HH11  | 1.35                     | 0.89              |
| 32:BK:87:LYS:CA   | 32:BK:121:LYS:O    | 2.20                     | 0.89              |
| 33:BL:13:PRO:HB2  | 33:BL:16:LYS:HD3   | 1.54                     | 0.89              |
| 37:BP:27:VAL:HG22 | 37:BP:28:ALA:N     | 1.82                     | 0.89              |
| 42:BU:68:LYS:HG2  | 42:BU:95:LEU:HD21  | 1.52                     | 0.89              |
| 45:BX:2:ARG:HD2   | 45:BX:3:VAL:N      | 1.86                     | 0.89              |
| 48:B1:23:LYS:O    | 48:B1:26:GLU:HB3   | 1.72                     | 0.89              |
| 48:B1:52:ILE:O    | 48:B1:56:LEU:HD22  | 1.72                     | 0.89              |
| 1:AA:1245:A:H2'   | 1:AA:1246:C:C6     | 2.06                     | 0.89              |
| 4:AE:61:LEU:HD11  | 4:AE:68:ILE:CD1    | 2.02                     | 0.89              |
| 4:AE:139:LYS:HG3  | 4:AE:140:HIS:N     | 1.87                     | 0.89              |
| 8:AI:33:TYR:CG    | 8:AI:75:LEU:HG     | 2.06                     | 0.89              |
| 15:AP:55:ARG:NH2  | 15:AP:56:LEU:HD21  | 1.87                     | 0.89              |
| 17:AR:34:LEU:HG   | 17:AR:35:ARG:H     | 1.37                     | 0.89              |
| 24:BA:1024:G:N2   | 24:BA:1139:G:N1    | 2.20                     | 0.89              |
| 24:BA:1265:A:H1'  | 24:BA:1267:U:C4    | 2.08                     | 0.89              |
| 24:BA:1841:U:H2'  | 24:BA:1842:G:C8    | 2.06                     | 0.89              |
| 24:BA:2637:U:C5'  | 28:BE:81:ILE:HD11  | 2.03                     | 0.89              |
| 26:BC:183:GLU:H   | 26:BC:183:GLU:CD   | 1.80                     | 0.89              |
| 27:BD:13:ARG:CZ   | 27:BD:19:ALA:HB1   | 2.03                     | 0.89              |
| 27:BD:120:GLY:O   | 27:BD:122:ASP:N    | 2.05                     | 0.89              |
| 27:BD:246:PRO:CG  | 27:BD:250:TRP:HB3  | 2.02                     | 0.89              |
| 30:BG:62:LEU:HD23 | 30:BG:143:GLU:CB   | 2.02                     | 0.89              |
| 30:BG:74:LYS:HD3  | 30:BG:87:PRO:HG3   | 1.53                     | 0.89              |
| 30:BG:96:ARG:O    | 30:BG:99:MET:HB2   | 1.72                     | 0.89              |
| 31:BH:126:PRO:O   | 31:BH:127:GLU:HG2  | 1.69                     | 0.89              |
| 33:BL:138:VAL:O   | 33:BL:139:VAL:HG23 | 1.71                     | 0.89              |
| 42:BU:18:LEU:H    | 42:BU:18:LEU:HD23  | 1.37                     | 0.89              |
| 50:B3:52:THR:HG22 | 50:B3:53:GLU:N     | 1.84                     | 0.89              |
| 1:AA:255:G:H4'    | 19:AT:16:GLN:O     | 1.71                     | 0.89              |
| 1:AA:307:C:C4     | 1:AA:308:C:H5      | 1.89                     | 0.89              |
| 1:AA:346:G:H2'    | 1:AA:347:G:O4'     | 1.72                     | 0.89              |
| 1:AA:1107:C:H2'   | 1:AA:1108:G:C5'    | 2.02                     | 0.89              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 22:AW:13:LEU:HD12 | 22:AW:13:LEU:N     | 1.84                     | 0.89              |
| 22:AW:44:ALA:CB   | 22:AW:91:LEU:HD12  | 2.02                     | 0.89              |
| 24:BA:49:A:H5'    | 24:BA:50:U:OP1     | 1.71                     | 0.89              |
| 24:BA:673:C:H2'   | 24:BA:674:G:H5'    | 1.53                     | 0.89              |
| 24:BA:1697:G:H3'  | 24:BA:1698:A:H5'   | 1.52                     | 0.89              |
| 24:BA:1785:A:OP1  | 24:BA:1982:C:H5'   | 1.72                     | 0.89              |
| 24:BA:1812:A:H2'  | 24:BA:1813:G:O4'   | 1.70                     | 0.89              |
| 24:BA:2209:C:H4'  | 27:BD:150:LYS:HB3  | 1.51                     | 0.89              |
| 24:BA:2723:C:O2'  | 38:BQ:2:ARG:HA     | 1.72                     | 0.89              |
| 32:BK:112:LYS:H   | 32:BK:112:LYS:HD2  | 1.36                     | 0.89              |
| 35:BN:107:ARG:O   | 35:BN:109:LYS:HE2  | 1.72                     | 0.89              |
| 36:BO:91:PHE:H    | 36:BO:125:VAL:HG11 | 1.35                     | 0.89              |
| 38:BQ:102:GLU:CD  | 38:BQ:103:ARG:H    | 1.80                     | 0.89              |
| 39:BR:62:LYS:C    | 39:BR:64:GLU:N     | 2.21                     | 0.89              |
| 40:BS:91:ARG:O    | 40:BS:93:ARG:NH2   | 2.04                     | 0.89              |
| 44:BW:64:LYS:O    | 44:BW:70:LEU:HG    | 1.72                     | 0.89              |
| 44:BW:73:ARG:HG2  | 44:BW:74:PRO:HD2   | 1.53                     | 0.89              |
| 45:BX:12:THR:HA   | 45:BX:73:ARG:HD2   | 1.52                     | 0.89              |
| 1:AA:105:G:H2'    | 1:AA:106:C:C6      | 2.08                     | 0.89              |
| 1:AA:1339:A:C2'   | 1:AA:1340:A:H5'    | 2.03                     | 0.89              |
| 13:AN:68:ALA:HA   | 13:AN:71:LYS:HD2   | 1.55                     | 0.89              |
| 15:AP:72:ALA:O    | 15:AP:75:ALA:HB3   | 1.73                     | 0.89              |
| 19:AT:5:VAL:HG22  | 19:AT:60:ILE:CA    | 2.00                     | 0.89              |
| 19:AT:75:ARG:HH22 | 19:AT:77:VAL:HG22  | 1.35                     | 0.89              |
| 22:AW:85:MET:HB2  | 22:AW:104:LEU:HD21 | 1.52                     | 0.89              |
| 24:BA:832:G:H2'   | 24:BA:833:U:H5     | 1.33                     | 0.89              |
| 24:BA:953:A:C2'   | 24:BA:954:G:H5'    | 2.02                     | 0.89              |
| 24:BA:1612:C:O2'  | 53:B6:5:TRP:HB3    | 1.70                     | 0.89              |
| 24:BA:2052:G:H1'  | 28:BE:149:ARG:C    | 1.97                     | 0.89              |
| 24:BA:2120:G:H21  | 26:BC:167:LYS:NZ   | 1.68                     | 0.89              |
| 24:BA:2171:A:H4'  | 24:BA:2172:U:OP1   | 1.73                     | 0.89              |
| 24:BA:2425:A:OP2  | 24:BA:2427:C:H5''  | 1.71                     | 0.89              |
| 24:BA:2512:C:H5'' | 28:BE:120:TRP:CH2  | 2.07                     | 0.89              |
| 26:BC:33:ALA:O    | 26:BC:39:GLU:HB2   | 1.72                     | 0.89              |
| 27:BD:9:TYR:OH    | 27:BD:91:ARG:NH2   | 2.04                     | 0.89              |
| 27:BD:156:ALA:O   | 27:BD:158:ALA:N    | 2.05                     | 0.89              |
| 28:BE:36:ARG:HD2  | 28:BE:41:LYS:NZ    | 1.85                     | 0.89              |
| 29:BF:121:GLY:HA3 | 29:BF:191:ARG:HE   | 1.37                     | 0.89              |
| 30:BG:61:ALA:HB2  | 30:BG:67:LYS:CB    | 2.01                     | 0.89              |
| 36:BO:23:PRO:CB   | 36:BO:29:LYS:H     | 1.84                     | 0.89              |
| 37:BP:26:TYR:HD1  | 37:BP:27:VAL:H     | 1.01                     | 0.89              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 41:BT:55:ARG:HB3  | 41:BT:58:ARG:HE    | 1.35                     | 0.89              |
| 41:BT:93:LYS:N    | 42:BU:10:LYS:HZ2   | 1.69                     | 0.89              |
| 43:BV:13:SER:O    | 43:BV:17:VAL:HG13  | 1.73                     | 0.89              |
| 43:BV:36:LEU:HD21 | 43:BV:47:VAL:HB    | 1.55                     | 0.89              |
| 50:B3:68:ARG:HH11 | 50:B3:68:ARG:H     | 1.08                     | 0.89              |
| 1:AA:266:G:H8     | 19:AT:67:LYS:HZ3   | 0.92                     | 0.89              |
| 1:AA:468:A:H4'    | 18:AS:82:GLN:HB3   | 1.53                     | 0.89              |
| 1:AA:789:U:C6     | 1:AA:790:A:H5''    | 2.07                     | 0.89              |
| 5:AF:11:ARG:HD3   | 5:AF:15:THR:HG23   | 1.53                     | 0.89              |
| 9:AJ:135:VAL:O    | 9:AJ:138:LYS:HB3   | 1.71                     | 0.89              |
| 22:AW:72:LEU:HD13 | 22:AW:77:ALA:HB2   | 1.54                     | 0.89              |
| 24:BA:95:G:H4'    | 48:B1:39:LEU:O     | 1.72                     | 0.89              |
| 24:BA:594:U:H2'   | 24:BA:595:C:C5     | 2.06                     | 0.89              |
| 24:BA:636:G:H22   | 36:BO:75:ILE:CD1   | 1.83                     | 0.89              |
| 24:BA:1179:C:O2'  | 24:BA:1180:C:H6    | 1.56                     | 0.89              |
| 24:BA:1471:A:H62  | 24:BA:1519:G:N2    | 1.70                     | 0.89              |
| 24:BA:1492:G:N2   | 24:BA:1499:C:C4    | 2.41                     | 0.89              |
| 24:BA:2832:U:C1'  | 24:BA:2834:G:H21   | 1.86                     | 0.89              |
| 27:BD:142:VAL:C   | 27:BD:163:ALA:HB3  | 1.96                     | 0.89              |
| 28:BE:7:VAL:HG11  | 28:BE:196:VAL:HG23 | 1.52                     | 0.89              |
| 34:BM:4:TYR:CB    | 41:BT:64:ARG:HH12  | 1.84                     | 0.89              |
| 34:BM:38:HIS:HB3  | 34:BM:48:MET:HE3   | 1.53                     | 0.89              |
| 34:BM:54:VAL:HG12 | 34:BM:122:VAL:HB   | 1.52                     | 0.89              |
| 38:BQ:55:ALA:HB2  | 38:BQ:79:LEU:HD11  | 1.55                     | 0.89              |
| 38:BQ:87:TYR:OH   | 38:BQ:116:LEU:HB2  | 1.71                     | 0.89              |
| 45:BX:28:LYS:HE2  | 45:BX:28:LYS:N     | 1.88                     | 0.89              |
| 50:B3:29:PRO:HG2  | 50:B3:31:ILE:HG23  | 1.54                     | 0.89              |
| 6:AG:20:TYR:HD1   | 6:AG:21:LEU:H      | 1.08                     | 0.89              |
| 11:AL:74:ILE:HA   | 11:AL:77:ILE:HD12  | 1.51                     | 0.89              |
| 18:AS:39:TYR:CZ   | 18:AS:41:PRO:HG3   | 2.08                     | 0.89              |
| 24:BA:310:A:H2'   | 24:BA:312:G:N7     | 1.87                     | 0.89              |
| 24:BA:751:A:H5'   | 43:BV:90:ARG:NH2   | 1.88                     | 0.89              |
| 24:BA:1443:G:C2   | 24:BA:1444:G:H1'   | 2.07                     | 0.89              |
| 24:BA:1454:U:H5'  | 24:BA:1455:G:OP2   | 1.72                     | 0.89              |
| 24:BA:1954:G:C2   | 24:BA:2551:C:H5''  | 2.08                     | 0.89              |
| 24:BA:2311:A:H3'  | 24:BA:2312:U:H5    | 1.35                     | 0.89              |
| 24:BA:2597:G:C4'  | 27:BD:242:ARG:HE   | 1.85                     | 0.89              |
| 24:BA:2665:A:H3'  | 24:BA:2665:A:H8    | 1.36                     | 0.89              |
| 31:BH:43:VAL:HG22 | 31:BH:52:VAL:CA    | 2.03                     | 0.89              |
| 35:BN:96:THR:HG22 | 35:BN:97:ARG:N     | 1.86                     | 0.89              |
| 37:BP:39:PRO:HG3  | 37:BP:127:ILE:HG12 | 1.54                     | 0.89              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 40:BS:30:VAL:HG23 | 40:BS:90:GLN:HA    | 1.54                     | 0.89              |
| 43:BV:5:ALA:HB3   | 43:BV:105:VAL:O    | 1.70                     | 0.89              |
| 45:BX:95:LYS:HG3  | 45:BX:103:GLY:CA   | 2.02                     | 0.89              |
| 4:AE:219:VAL:HG12 | 4:AE:223:ILE:CD1   | 2.03                     | 0.89              |
| 10:AK:51:VAL:HG21 | 10:AK:60:ARG:HH21  | 1.37                     | 0.89              |
| 24:BA:1813:G:H4'  | 27:BD:46:GLN:HB2   | 1.50                     | 0.89              |
| 24:BA:1981:A:H5'' | 24:BA:1982:C:OP2   | 1.71                     | 0.89              |
| 24:BA:2286:A:N6   | 52:B5:29:ASN:O     | 2.05                     | 0.89              |
| 24:BA:2852:G:H2'  | 24:BA:2853:C:C6    | 2.08                     | 0.89              |
| 28:BE:117:MET:CG  | 28:BE:136:ARG:HE   | 1.84                     | 0.89              |
| 29:BF:4:VAL:C     | 29:BF:20:LEU:CD1   | 2.45                     | 0.89              |
| 29:BF:9:ILE:HG12  | 29:BF:124:LEU:HB2  | 1.52                     | 0.89              |
| 30:BG:7:LEU:HD22  | 30:BG:11:TYR:HE1   | 1.38                     | 0.89              |
| 31:BH:6:ARG:HA    | 31:BH:6:ARG:NH1    | 1.88                     | 0.89              |
| 33:BL:27:LEU:HD11 | 33:BL:57:ILE:HD11  | 1.53                     | 0.89              |
| 38:BQ:20:LEU:HD13 | 38:BQ:20:LEU:C     | 1.97                     | 0.89              |
| 39:BR:11:LYS:C    | 39:BR:14:VAL:HB    | 1.97                     | 0.89              |
| 43:BV:16:LYS:H    | 43:BV:16:LYS:CD    | 1.84                     | 0.89              |
| 44:BW:85:PRO:CG   | 44:BW:87:GLN:HG2   | 2.01                     | 0.89              |
| 52:B5:20:ASN:HD21 | 52:B5:43:CYS:N     | 1.70                     | 0.89              |
| 1:AA:429:U:H4'    | 1:AA:430:A:O5'     | 1.71                     | 0.89              |
| 1:AA:1238:A:H62   | 1:AA:1301:U:H3     | 1.21                     | 0.89              |
| 1:AA:1261:A:H61   | 1:AA:1274:G:C1'    | 1.85                     | 0.89              |
| 4:AE:69:LEU:HD13  | 4:AE:92:TYR:HA     | 1.53                     | 0.89              |
| 6:AG:91:SER:HA    | 6:AG:94:LEU:HD12   | 1.53                     | 0.89              |
| 7:AH:43:LEU:HD23  | 7:AH:44:GLY:N      | 1.88                     | 0.89              |
| 24:BA:210:C:H5''  | 53:B6:29:LYS:HZ1   | 1.38                     | 0.89              |
| 24:BA:792:G:N2    | 24:BA:2072:G:H1'   | 1.88                     | 0.89              |
| 24:BA:951:C:O2'   | 24:BA:952:G:H5'    | 1.73                     | 0.89              |
| 24:BA:1198:U:H2'  | 24:BA:1199:U:C5    | 2.07                     | 0.89              |
| 24:BA:1530:G:H2'  | 24:BA:1531:C:C6    | 2.06                     | 0.89              |
| 24:BA:1992:G:H1'  | 24:BA:1993:U:C5    | 2.07                     | 0.89              |
| 24:BA:1996:C:H5'' | 24:BA:1996:C:C6    | 2.08                     | 0.89              |
| 24:BA:2468:G:H3'  | 24:BA:2476:A:C2    | 2.08                     | 0.89              |
| 24:BA:2602:A:O2'  | 24:BA:2603:G:OP2   | 1.90                     | 0.89              |
| 24:BA:2791:C:H2'  | 24:BA:2792:G:H8    | 1.38                     | 0.89              |
| 30:BG:59:GLU:OE1  | 30:BG:152:LEU:HD22 | 1.72                     | 0.89              |
| 31:BH:45:VAL:HG22 | 31:BH:50:VAL:HG13  | 1.55                     | 0.89              |
| 35:BN:77:ILE:HG23 | 40:BS:75:ILE:HD12  | 1.54                     | 0.89              |
| 42:BU:49:THR:HG22 | 42:BU:50:PRO:HD2   | 1.53                     | 0.89              |
| 43:BV:69:LEU:HD12 | 43:BV:109:GLU:OE1  | 1.72                     | 0.89              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 46:BY:42:VAL:HG12  | 46:BY:46:LYS:HZ3  | 1.36                     | 0.89              |
| 46:BY:151:HIS:CB   | 46:BY:170:THR:H   | 1.86                     | 0.89              |
| 1:AA:108:G:H5''    | 1:AA:109:A:H5''   | 1.51                     | 0.89              |
| 1:AA:322:C:O2'     | 1:AA:323:U:H5'    | 1.73                     | 0.89              |
| 1:AA:571:U:H3'     | 1:AA:572:A:C5'    | 1.99                     | 0.89              |
| 1:AA:1111:A:H2'    | 1:AA:1112:C:C6    | 2.07                     | 0.89              |
| 1:AA:1188:A:H5'    | 12:AM:61:GLU:OE2  | 1.73                     | 0.89              |
| 3:AD:22:G:H2'      | 3:AD:23:A:C8      | 2.08                     | 0.89              |
| 6:AG:20:TYR:O      | 6:AG:22:LYS:N     | 2.05                     | 0.89              |
| 17:AR:7:GLU:HA     | 17:AR:10:LYS:HD3  | 1.54                     | 0.89              |
| 24:BA:70:G:H4'     | 24:BA:71:A:C5'    | 2.02                     | 0.89              |
| 24:BA:988:A:H62    | 49:B2:13:ILE:CG1  | 1.86                     | 0.89              |
| 24:BA:1793:C:N4    | 24:BA:1825:A:H61  | 1.71                     | 0.89              |
| 24:BA:2286:A:H62   | 52:B5:32:ASN:N    | 1.70                     | 0.89              |
| 24:BA:2393:A:OP2   | 54:B7:32:LEU:HD11 | 1.72                     | 0.89              |
| 24:BA:2581:G:H1    | 24:BA:2610:C:H6   | 1.20                     | 0.89              |
| 24:BA:2788:C:H4'   | 24:BA:2810:A:H5'  | 1.54                     | 0.89              |
| 28:BE:44:TYR:HB3   | 28:BE:82:ARG:NH1  | 1.88                     | 0.89              |
| 33:BL:115:LEU:HD21 | 33:BL:126:MET:SD  | 2.13                     | 0.89              |
| 37:BP:45:GLN:O     | 37:BP:48:GLU:HG2  | 1.73                     | 0.89              |
| 41:BT:74:LEU:HD22  | 41:BT:78:THR:HG21 | 1.52                     | 0.89              |
| 43:BV:14:PRO:C     | 43:BV:16:LYS:HZ1  | 1.81                     | 0.89              |
| 46:BY:48:PHE:HD2   | 46:BY:54:HIS:HE2  | 1.21                     | 0.89              |
| 52:B5:16:CYS:HB3   | 52:B5:49:HIS:ND1  | 1.87                     | 0.89              |
| 1:AA:1158:C:C4     | 1:AA:1160:G:H1'   | 2.07                     | 0.88              |
| 4:AE:56:ARG:HB3    | 4:AE:56:ARG:HH11  | 1.34                     | 0.88              |
| 4:AE:97:TRP:HZ2    | 4:AE:102:LEU:HD13 | 1.38                     | 0.88              |
| 6:AG:20:TYR:N      | 6:AG:33:MET:SD    | 2.47                     | 0.88              |
| 8:AI:76:ALA:HB1    | 8:AI:80:ARG:NH1   | 1.87                     | 0.88              |
| 10:AK:28:ALA:C     | 10:AK:32:LYS:HD2  | 1.97                     | 0.88              |
| 10:AK:86:ILE:CG2   | 10:AK:133:LEU:HB2 | 2.04                     | 0.88              |
| 16:AQ:45:ARG:HB2   | 16:AQ:45:ARG:NH1  | 1.86                     | 0.88              |
| 24:BA:481:G:H1     | 24:BA:509:C:H42   | 1.21                     | 0.88              |
| 24:BA:662:G:H4'    | 36:BO:18:ARG:N    | 1.88                     | 0.88              |
| 24:BA:748:G:H5'    | 43:BV:88:ARG:NH1  | 1.88                     | 0.88              |
| 24:BA:966:G:C1'    | 24:BA:2267:A:N6   | 2.36                     | 0.88              |
| 24:BA:1443:G:N2    | 24:BA:1444:G:H1'  | 1.87                     | 0.88              |
| 24:BA:1817:G:P     | 27:BD:88:ARG:HH12 | 1.96                     | 0.88              |
| 24:BA:1935:G:O2'   | 24:BA:1937:A:H2   | 1.56                     | 0.88              |
| 24:BA:1943:U:N1    | 24:BA:1945:G:H5'' | 1.87                     | 0.88              |
| 24:BA:2496:C:OP1   | 37:BP:83:MET:HE1  | 1.73                     | 0.88              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 26:BC:30:LYS:NZ    | 26:BC:182:PRO:HD3  | 1.88                     | 0.88              |
| 29:BF:156:LEU:HD12 | 29:BF:167:ALA:CB   | 2.03                     | 0.88              |
| 30:BG:8:LYS:NZ     | 30:BG:103:LEU:HG   | 1.87                     | 0.88              |
| 30:BG:181:ARG:HD2  | 30:BG:181:ARG:H    | 1.38                     | 0.88              |
| 31:BH:155:SER:HB2  | 31:BH:158:HIS:O    | 1.73                     | 0.88              |
| 32:BK:83:ALA:HA    | 32:BK:89:TYR:CE1   | 2.08                     | 0.88              |
| 37:BP:8:LYS:HZ3    | 37:BP:11:LYS:NZ    | 1.71                     | 0.88              |
| 41:BT:67:ALA:HB1   | 41:BT:71:GLN:HE22  | 1.37                     | 0.88              |
| 42:BU:6:LYS:HE2    | 42:BU:10:LYS:O     | 1.73                     | 0.88              |
| 48:B1:20:VAL:O     | 48:B1:24:LYS:HG3   | 1.73                     | 0.88              |
| 1:AA:61:G:H2'      | 1:AA:62:U:C6       | 2.08                     | 0.88              |
| 1:AA:287:U:H2'     | 1:AA:287:U:O2      | 1.74                     | 0.88              |
| 1:AA:633:G:H2'     | 1:AA:634:C:H6      | 1.34                     | 0.88              |
| 4:AE:39:ILE:HG23   | 4:AE:41:ILE:HD11   | 1.55                     | 0.88              |
| 14:AO:86:ARG:NH1   | 14:AO:119:LYS:HG3  | 1.88                     | 0.88              |
| 20:AU:58:LEU:HD22  | 20:AU:62:GLU:HG3   | 1.56                     | 0.88              |
| 24:BA:223:A:N1     | 24:BA:407:G:O2'    | 2.06                     | 0.88              |
| 24:BA:554:U:H2'    | 24:BA:556:G:N7     | 1.87                     | 0.88              |
| 24:BA:670:A:H2'    | 36:BO:41:ARG:CZ    | 2.03                     | 0.88              |
| 24:BA:988:A:H4'    | 24:BA:1155:A:H2    | 1.36                     | 0.88              |
| 24:BA:1725:G:N2    | 24:BA:1726:G:C1'   | 2.36                     | 0.88              |
| 26:BC:91:ALA:HB2   | 26:BC:153:ILE:HG21 | 1.53                     | 0.88              |
| 28:BE:5:LEU:HD21   | 28:BE:196:VAL:HB   | 1.55                     | 0.88              |
| 30:BG:116:ASP:HB3  | 30:BG:118:ARG:HH21 | 1.37                     | 0.88              |
| 40:BS:21:GLU:O     | 40:BS:23:ARG:HD3   | 1.72                     | 0.88              |
| 46:BY:6:LYS:HG2    | 46:BY:7:ALA:N      | 1.86                     | 0.88              |
| 54:B7:38:GLY:O     | 54:B7:40:GLU:N     | 2.06                     | 0.88              |
| 1:AA:650:G:O2'     | 1:AA:651:C:H5'     | 1.74                     | 0.88              |
| 1:AA:1028:C:H2'    | 1:AA:1028(A):C:C6  | 2.08                     | 0.88              |
| 1:AA:1066:C:H3'    | 1:AA:1067:A:C8     | 2.08                     | 0.88              |
| 1:AA:1228:C:H4'    | 15:AP:116:THR:HA   | 1.52                     | 0.88              |
| 1:AA:1425:U:H2'    | 1:AA:1426:C:C6     | 2.08                     | 0.88              |
| 5:AF:38:ARG:HB2    | 5:AF:94:LEU:HD11   | 1.52                     | 0.88              |
| 5:AF:83:ARG:HG3    | 5:AF:87:LEU:HD11   | 1.55                     | 0.88              |
| 8:AI:81:ILE:HG22   | 8:AI:82:ARG:N      | 1.87                     | 0.88              |
| 12:AM:79:ARG:HH22  | 12:AM:82:ILE:HD12  | 1.37                     | 0.88              |
| 24:BA:228:A:H2'    | 24:BA:229:A:H5'    | 1.55                     | 0.88              |
| 24:BA:848:G:H2'    | 24:BA:849:A:C8     | 2.08                     | 0.88              |
| 24:BA:924:C:H2'    | 24:BA:925:C:H6     | 1.38                     | 0.88              |
| 24:BA:1312:U:H2'   | 24:BA:1313:U:C6    | 2.07                     | 0.88              |
| 24:BA:1326:U:C2'   | 24:BA:1327:C:H5'   | 2.03                     | 0.88              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1672:C:H3'   | 24:BA:1673:U:H5''  | 1.56                     | 0.88              |
| 24:BA:2636:U:H4'   | 28:BE:79:ARG:HD3   | 1.55                     | 0.88              |
| 29:BF:18:ARG:C     | 29:BF:19:GLU:HG3   | 1.98                     | 0.88              |
| 29:BF:66:PRO:O     | 29:BF:68:LYS:N     | 2.06                     | 0.88              |
| 29:BF:201:VAL:HG12 | 29:BF:205:ARG:HE   | 1.36                     | 0.88              |
| 32:BK:77:LEU:N     | 32:BK:77:LEU:HD23  | 1.89                     | 0.88              |
| 37:BP:42:ILE:HD13  | 37:BP:43:THR:N     | 1.88                     | 0.88              |
| 38:BQ:46:GLY:C     | 38:BQ:49:ASP:HB3   | 1.97                     | 0.88              |
| 38:BQ:97:VAL:HA    | 38:BQ:114:VAL:HG13 | 1.55                     | 0.88              |
| 46:BY:51:ALA:C     | 46:BY:53:ILE:N     | 2.24                     | 0.88              |
| 50:B3:5:ILE:HD13   | 50:B3:60:GLN:HE22  | 1.39                     | 0.88              |
| 1:AA:256:U:H2'     | 1:AA:257:G:O4'     | 1.73                     | 0.88              |
| 1:AA:414:A:H2'     | 1:AA:415:A:H8      | 1.37                     | 0.88              |
| 1:AA:576:G:N7      | 1:AA:881:G:H1'     | 1.89                     | 0.88              |
| 5:AF:108:ASN:ND2   | 5:AF:110:ASN:HB2   | 1.87                     | 0.88              |
| 24:BA:70:G:H5''    | 24:BA:71:A:OP1     | 1.73                     | 0.88              |
| 24:BA:569:U:H5'    | 24:BA:946:G:H1'    | 1.51                     | 0.88              |
| 24:BA:1376:C:H2'   | 24:BA:1377:G:O4'   | 1.73                     | 0.88              |
| 24:BA:2346:A:H4'   | 24:BA:2383:G:H5''  | 1.56                     | 0.88              |
| 27:BD:111:LEU:HB3  | 27:BD:115:GLN:HE22 | 1.37                     | 0.88              |
| 27:BD:117:VAL:HG13 | 27:BD:129:ASN:OD1  | 1.71                     | 0.88              |
| 28:BE:165:VAL:HG12 | 28:BE:166:THR:H    | 1.39                     | 0.88              |
| 31:BH:28:GLY:HA3   | 31:BH:79:VAL:HB    | 1.56                     | 0.88              |
| 32:BK:114:LEU:HA   | 32:BK:130:TYR:HB3  | 1.53                     | 0.88              |
| 33:BL:23:VAL:HG12  | 33:BL:34:ILE:HA    | 1.53                     | 0.88              |
| 35:BN:52:VAL:HG22  | 35:BN:53:LYS:N     | 1.86                     | 0.88              |
| 36:BO:113:LYS:NZ   | 36:BO:115:LEU:HD12 | 1.88                     | 0.88              |
| 40:BS:15:VAL:HG13  | 40:BS:81:PRO:HB3   | 1.54                     | 0.88              |
| 44:BW:54:VAL:HG22  | 44:BW:81:VAL:HG23  | 1.55                     | 0.88              |
| 45:BX:52:SER:HB3   | 45:BX:56:PRO:CB    | 2.03                     | 0.88              |
| 46:BY:118:GLN:HE21 | 46:BY:120:ILE:HG23 | 1.38                     | 0.88              |
| 4:AE:186:ALA:O     | 4:AE:201:ILE:HB    | 1.74                     | 0.88              |
| 5:AF:53:ALA:HB2    | 5:AF:115:LEU:HD21  | 1.56                     | 0.88              |
| 6:AG:13:ARG:HH21   | 6:AG:40:PRO:HA     | 1.39                     | 0.88              |
| 10:AK:12:ARG:HD3   | 10:AK:26:VAL:CG2   | 2.04                     | 0.88              |
| 11:AL:26:VAL:O     | 11:AL:32:ASP:HA    | 1.72                     | 0.88              |
| 24:BA:612:G:N2     | 24:BA:617:G:O6     | 2.06                     | 0.88              |
| 24:BA:728:G:N1     | 24:BA:762:U:H3'    | 1.88                     | 0.88              |
| 24:BA:1206:G:H3'   | 24:BA:1206:G:C8    | 2.07                     | 0.88              |
| 24:BA:1996:C:C5'   | 24:BA:1996:C:H6    | 1.86                     | 0.88              |
| 24:BA:2162:G:H2'   | 24:BA:2163:C:H5'   | 1.55                     | 0.88              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2298:A:H2'   | 24:BA:2299:G:O4'   | 1.73                     | 0.88              |
| 24:BA:2864:G:H2'   | 24:BA:2865:U:C6    | 2.09                     | 0.88              |
| 25:BB:116:G:C4     | 25:BB:117:G:H1'    | 2.07                     | 0.88              |
| 36:BO:13:ASN:HD22  | 36:BO:14:LYS:N     | 1.71                     | 0.88              |
| 37:BP:42:ILE:HD12  | 37:BP:47:ILE:CG1   | 2.03                     | 0.88              |
| 37:BP:78:PRO:O     | 37:BP:79:LEU:HD23  | 1.73                     | 0.88              |
| 41:BT:50:ARG:HB2   | 41:BT:50:ARG:HH11  | 1.39                     | 0.88              |
| 43:BV:25:ARG:HH21  | 43:BV:74:ALA:H     | 0.88                     | 0.88              |
| 45:BX:2:ARG:HH21   | 45:BX:4:LYS:HB2    | 1.37                     | 0.88              |
| 1:AA:573:A:H2'     | 1:AA:574:A:C8      | 2.07                     | 0.88              |
| 1:AA:979:C:H42     | 16:AQ:18:VAL:HB    | 1.39                     | 0.88              |
| 1:AA:1346:A:C2     | 9:AJ:10:ARG:HD3    | 2.08                     | 0.88              |
| 1:AA:1404:C:H1'    | 1:AA:1499:A:C2     | 2.08                     | 0.88              |
| 3:AD:9:A:H62       | 3:AD:23:A:H62      | 1.16                     | 0.88              |
| 5:AF:67:THR:HA     | 5:AF:102:ASN:HB2   | 1.56                     | 0.88              |
| 6:AG:11:LEU:HA     | 6:AG:14:ARG:HB3    | 1.53                     | 0.88              |
| 6:AG:127:THR:C     | 6:AG:146:ILE:HG22  | 1.98                     | 0.88              |
| 7:AH:147:ASP:HA    | 7:AH:150:ARG:HB2   | 1.56                     | 0.88              |
| 18:AS:3:LYS:HE2    | 18:AS:24:ALA:HB2   | 1.52                     | 0.88              |
| 24:BA:780:G:H2'    | 24:BA:782:A:N7     | 1.89                     | 0.88              |
| 24:BA:898:C:H3'    | 24:BA:899:A:H5''   | 1.55                     | 0.88              |
| 24:BA:914:C:H3'    | 24:BA:914:C:C6     | 2.09                     | 0.88              |
| 24:BA:919:G:H2'    | 24:BA:920:G:H8     | 1.39                     | 0.88              |
| 24:BA:997:G:H5''   | 41:BT:92:ARG:HH11  | 1.37                     | 0.88              |
| 24:BA:1303:G:N2    | 24:BA:1626:G:O2'   | 2.04                     | 0.88              |
| 24:BA:2218:G:H4'   | 27:BD:186:HIS:CE1  | 2.09                     | 0.88              |
| 24:BA:2551:C:H2'   | 24:BA:2552:U:H6    | 1.39                     | 0.88              |
| 24:BA:2681:C:N4    | 24:BA:2725:A:H62   | 1.71                     | 0.88              |
| 26:BC:18:LYS:HG2   | 26:BC:20:TYR:H     | 1.38                     | 0.88              |
| 27:BD:161:THR:HG23 | 27:BD:195:ALA:HB1  | 1.55                     | 0.88              |
| 27:BD:234:GLY:H    | 27:BD:241:PRO:HG2  | 1.38                     | 0.88              |
| 28:BE:12:THR:HG23  | 28:BE:21:VAL:HB    | 1.56                     | 0.88              |
| 28:BE:23:VAL:HG23  | 28:BE:184:VAL:HG23 | 1.56                     | 0.88              |
| 30:BG:141:PHE:C    | 30:BG:143:GLU:H    | 1.82                     | 0.88              |
| 31:BH:43:VAL:CG2   | 31:BH:52:VAL:HA    | 2.02                     | 0.88              |
| 34:BM:57:ALA:HB3   | 34:BM:124:ALA:HA   | 1.53                     | 0.88              |
| 37:BP:33:GLY:O     | 37:BP:131:ILE:HG23 | 1.73                     | 0.88              |
| 41:BT:13:LYS:HD2   | 41:BT:13:LYS:N     | 1.80                     | 0.88              |
| 41:BT:114:LYS:HG2  | 41:BT:115:ALA:H    | 1.39                     | 0.88              |
| 43:BV:11:ARG:HB3   | 43:BV:11:ARG:NH2   | 1.88                     | 0.88              |
| 46:BY:68:PRO:O     | 46:BY:90:VAL:HA    | 1.73                     | 0.88              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 46:BY:104:PHE:CZ  | 46:BY:120:ILE:HG22 | 2.08                     | 0.88              |
| 47:BZ:5:LYS:HG2   | 47:BZ:6:GLY:N      | 1.89                     | 0.88              |
| 49:B2:9:VAL:HG13  | 49:B2:54:VAL:HA    | 1.56                     | 0.88              |
| 49:B2:10:LYS:HZ3  | 49:B2:12:PRO:CG    | 1.85                     | 0.88              |
| 50:B3:8:LYS:HG2   | 50:B3:9:LEU:H      | 1.38                     | 0.88              |
| 55:B8:11:CYS:HB3  | 55:B8:32:HIS:NE2   | 1.87                     | 0.88              |
| 1:AA:64:G:H4'     | 1:AA:65:U:C5'      | 2.02                     | 0.88              |
| 1:AA:279:A:H1'    | 1:AA:281:G:C2      | 2.08                     | 0.88              |
| 4:AE:146:GLN:NE2  | 4:AE:150:SER:HB2   | 1.89                     | 0.88              |
| 12:AM:50:ILE:HB   | 16:AQ:41:ARG:NE    | 1.88                     | 0.88              |
| 17:AR:28:GLN:O    | 17:AR:32:LEU:HD23  | 1.72                     | 0.88              |
| 24:BA:76:C:H2'    | 24:BA:77:C:H5'     | 1.55                     | 0.88              |
| 24:BA:387:U:OP2   | 50:B3:31:ILE:HG21  | 1.73                     | 0.88              |
| 24:BA:1153:C:C2   | 24:BA:1154:G:N7    | 2.42                     | 0.88              |
| 24:BA:1344:G:H4'  | 24:BA:1384:A:N1    | 1.86                     | 0.88              |
| 24:BA:1824:G:H21  | 27:BD:253:GLN:HG2  | 1.38                     | 0.88              |
| 24:BA:1971:A:N3   | 27:BD:240:ALA:N    | 2.20                     | 0.88              |
| 24:BA:2287:A:N7   | 24:BA:2289:G:C5    | 2.42                     | 0.88              |
| 24:BA:2507:C:C5'  | 24:BA:2573:C:H41   | 1.87                     | 0.88              |
| 24:BA:2533:A:H5'' | 24:BA:2665:A:H5'   | 1.56                     | 0.88              |
| 30:BG:47:LYS:HE2  | 30:BG:73:ALA:HB3   | 1.55                     | 0.88              |
| 34:BM:73:THR:HB   | 34:BM:75:TYR:HE1   | 1.36                     | 0.88              |
| 34:BM:78:TYR:O    | 34:BM:79:PRO:C     | 2.17                     | 0.88              |
| 36:BO:81:GLN:HG2  | 36:BO:86:LYS:HE3   | 1.56                     | 0.88              |
| 45:BX:64:GLU:OE2  | 45:BX:64:GLU:HA    | 1.74                     | 0.88              |
| 45:BX:65:ALA:HB3  | 45:BX:66:PRO:HD3   | 1.55                     | 0.88              |
| 53:B6:33:ARG:HG2  | 53:B6:37:LYS:HD3   | 1.53                     | 0.88              |
| 53:B6:33:ARG:O    | 53:B6:37:LYS:HB2   | 1.73                     | 0.88              |
| 1:AA:7:G:N2       | 7:AH:121:LYS:HG3   | 1.88                     | 0.88              |
| 1:AA:942:G:H21    | 11:AL:124:GLN:NE2  | 1.71                     | 0.88              |
| 1:AA:1338:G:H2'   | 1:AA:1339:A:C8     | 2.08                     | 0.88              |
| 5:AF:38:ARG:HB2   | 5:AF:94:LEU:HD21   | 1.55                     | 0.88              |
| 7:AH:43:LEU:H     | 7:AH:65:ASN:ND2    | 1.72                     | 0.88              |
| 7:AH:144:THR:HG22 | 7:AH:146:ALA:N     | 1.88                     | 0.88              |
| 16:AQ:58:LYS:HD3  | 16:AQ:59:ALA:H     | 1.33                     | 0.88              |
| 24:BA:592:G:H5'   | 24:BA:593:G:OP2    | 1.74                     | 0.88              |
| 24:BA:1814:G:OP1  | 27:BD:43:ARG:HB2   | 1.73                     | 0.88              |
| 24:BA:2443:C:H2'  | 24:BA:2444:G:H8    | 1.36                     | 0.88              |
| 28:BE:100:GLU:H   | 28:BE:172:VAL:CG2  | 1.86                     | 0.88              |
| 29:BF:178:PRO:C   | 29:BF:180:GLY:H    | 1.82                     | 0.88              |
| 32:BK:146:ALA:C   | 32:BK:148:GLU:H    | 1.79                     | 0.88              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 36:BO:55:ARG:HH21 | 36:BO:55:ARG:CB    | 1.87                     | 0.88              |
| 37:BP:25:ASP:HB3  | 37:BP:102:VAL:HG12 | 1.54                     | 0.88              |
| 38:BQ:77:ARG:HH11 | 38:BQ:77:ARG:CB    | 1.84                     | 0.88              |
| 39:BR:13:ARG:HD3  | 39:BR:90:GLY:O     | 1.72                     | 0.88              |
| 41:BT:28:ARG:HB2  | 41:BT:38:THR:HG21  | 1.52                     | 0.88              |
| 4:AE:15:VAL:HG22  | 4:AE:209:ARG:NE    | 1.88                     | 0.88              |
| 6:AG:78:LEU:HD22  | 6:AG:96:LEU:HD13   | 1.56                     | 0.88              |
| 15:AP:23:TYR:O    | 15:AP:66:LEU:HD12  | 1.74                     | 0.88              |
| 18:AS:20:VAL:HG13 | 18:AS:34:GLU:O     | 1.74                     | 0.88              |
| 19:AT:86:GLU:OE2  | 19:AT:89:LEU:HD12  | 1.74                     | 0.88              |
| 24:BA:197:A:N6    | 24:BA:248:G:N2     | 2.21                     | 0.88              |
| 24:BA:242:G:H8    | 54:B7:4:MET:CG     | 1.86                     | 0.88              |
| 24:BA:613:U:H5'   | 24:BA:614:U:C5     | 2.08                     | 0.88              |
| 24:BA:669:G:N3    | 24:BA:669:G:H2'    | 1.85                     | 0.88              |
| 24:BA:1954:G:O2'  | 24:BA:1955:U:H5'   | 1.74                     | 0.88              |
| 24:BA:2020:A:H2'  | 24:BA:2021:C:H5''  | 1.53                     | 0.88              |
| 24:BA:2227:A:C1'  | 27:BD:262:ARG:HD2  | 2.03                     | 0.88              |
| 24:BA:2244:U:H1'  | 24:BA:2434:A:C6    | 2.09                     | 0.88              |
| 27:BD:17:THR:O    | 27:BD:19:ALA:N     | 2.07                     | 0.88              |
| 28:BE:36:ARG:HG3  | 28:BE:79:ARG:NH1   | 1.89                     | 0.88              |
| 28:BE:133:LYS:HB3 | 28:BE:137:HIS:CE1  | 2.08                     | 0.88              |
| 32:BK:79:ILE:O    | 32:BK:144:VAL:HA   | 1.72                     | 0.88              |
| 35:BN:7:TYR:CA    | 35:BN:18:LYS:HE3   | 2.04                     | 0.88              |
| 35:BN:79:PHE:HB2  | 40:BS:73:GLU:CG    | 2.04                     | 0.88              |
| 42:BU:41:GLY:HA2  | 42:BU:51:VAL:HG22  | 1.55                     | 0.88              |
| 54:B7:50:LEU:HD23 | 54:B7:51:ALA:N     | 1.89                     | 0.88              |
| 1:AA:27:G:N2      | 1:AA:557:G:H1'     | 1.89                     | 0.88              |
| 1:AA:496:A:H4'    | 1:AA:497:U:OP1     | 1.74                     | 0.88              |
| 1:AA:533:A:H2'    | 1:AA:535:A:OP2     | 1.74                     | 0.88              |
| 1:AA:545:C:O2'    | 1:AA:546:G:H5'     | 1.74                     | 0.88              |
| 3:AC:40:C:H2'     | 3:AC:41:C:C5'      | 2.04                     | 0.88              |
| 4:AE:115:LEU:HD13 | 4:AE:145:LEU:HB3   | 1.56                     | 0.88              |
| 9:AJ:63:LYS:HA    | 9:AJ:63:LYS:HE2    | 1.54                     | 0.88              |
| 24:BA:612:G:H4'   | 24:BA:616:A:C6     | 2.09                     | 0.88              |
| 24:BA:1024:G:C5   | 24:BA:1025:G:C8    | 2.62                     | 0.88              |
| 24:BA:1143:A:H2'  | 24:BA:1144:G:C8    | 2.09                     | 0.88              |
| 24:BA:1359:A:H2'  | 24:BA:1360:A:H5'   | 1.56                     | 0.88              |
| 24:BA:1470:G:N2   | 24:BA:1522:G:H1    | 1.72                     | 0.88              |
| 24:BA:1782:C:H42  | 24:BA:2587:A:N6    | 1.72                     | 0.88              |
| 24:BA:2329:G:H22  | 24:BA:2386:C:H42   | 1.20                     | 0.88              |
| 24:BA:2331:G:O3'  | 47:BZ:43:THR:HB    | 1.73                     | 0.88              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2468:G:H22  | 24:BA:2481:G:H2'   | 1.37                     | 0.88              |
| 24:BA:2583:G:H2'  | 24:BA:2584:U:C2    | 2.09                     | 0.88              |
| 29:BF:106:ARG:HG3 | 29:BF:107:LYS:N    | 1.87                     | 0.88              |
| 29:BF:110:LEU:CA  | 29:BF:183:VAL:HG22 | 2.03                     | 0.88              |
| 34:BM:97:ARG:HA   | 34:BM:100:GLU:CG   | 2.03                     | 0.88              |
| 34:BM:115:ARG:O   | 34:BM:118:LYS:HB2  | 1.74                     | 0.88              |
| 46:BY:10:ARG:CZ   | 46:BY:36:LYS:H     | 1.86                     | 0.88              |
| 46:BY:57:ILE:CG2  | 46:BY:58:VAL:N     | 2.37                     | 0.88              |
| 49:B2:10:LYS:HE2  | 49:B2:31:LEU:HD21  | 1.55                     | 0.88              |
| 1:AA:21:G:H2'     | 1:AA:22:G:H8       | 1.38                     | 0.87              |
| 1:AA:448:A:H2'    | 1:AA:449:C:H6      | 1.39                     | 0.87              |
| 1:AA:655:A:H2'    | 1:AA:656:C:C6      | 2.09                     | 0.87              |
| 1:AA:1244:C:OP2   | 23:AX:9:ARG:HD3    | 1.74                     | 0.87              |
| 1:AA:1346:A:H4'   | 1:AA:1347:G:O5'    | 1.72                     | 0.87              |
| 4:AE:42:ILE:HG12  | 4:AE:43:ASP:H      | 1.38                     | 0.87              |
| 7:AH:102:ALA:HB2  | 7:AH:120:THR:HG22  | 1.54                     | 0.87              |
| 7:AH:121:LYS:NZ   | 7:AH:122:GLU:N     | 2.19                     | 0.87              |
| 10:AK:6:ILE:HG23  | 10:AK:7:ALA:N      | 1.86                     | 0.87              |
| 10:AK:14:ARG:O    | 10:AK:17:THR:HB    | 1.73                     | 0.87              |
| 24:BA:292:C:H3'   | 24:BA:293:U:N3     | 1.89                     | 0.87              |
| 24:BA:1144:G:H2'  | 24:BA:1145:C:H6    | 1.38                     | 0.87              |
| 24:BA:1775:U:C6   | 27:BD:208:LYS:HD2  | 2.09                     | 0.87              |
| 24:BA:1901:A:H4'  | 27:BD:244:ARG:HH12 | 1.40                     | 0.87              |
| 24:BA:2207:C:H3'  | 24:BA:2208:U:H5''  | 1.56                     | 0.87              |
| 24:BA:2432:A:H2   | 50:B3:30:GLU:HA    | 1.39                     | 0.87              |
| 24:BA:2522:U:O2'  | 24:BA:2647:U:OP1   | 1.92                     | 0.87              |
| 25:BB:75:G:H4'    | 46:BY:36:LYS:HE2   | 1.57                     | 0.87              |
| 25:BB:97:G:H2'    | 25:BB:98:G:H5'     | 1.55                     | 0.87              |
| 28:BE:49:LEU:HG   | 28:BE:74:PRO:CG    | 2.04                     | 0.87              |
| 28:BE:53:PRO:HG3  | 28:BE:75:VAL:HG22  | 1.54                     | 0.87              |
| 30:BG:16:ARG:HD2  | 30:BG:20:ILE:HG13  | 1.54                     | 0.87              |
| 37:BP:101:ARG:HG3 | 37:BP:101:ARG:HH11 | 1.39                     | 0.87              |
| 40:BS:28:VAL:O    | 40:BS:52:ILE:HG13  | 1.74                     | 0.87              |
| 40:BS:39:ARG:HG3  | 40:BS:42:ILE:HD12  | 1.57                     | 0.87              |
| 41:BT:40:PHE:HB3  | 42:BU:78:LYS:HD2   | 1.56                     | 0.87              |
| 41:BT:108:GLU:OE1 | 41:BT:109:LEU:HG   | 1.73                     | 0.87              |
| 44:BW:21:PHE:HE2  | 44:BW:27:THR:H     | 1.19                     | 0.87              |
| 45:BX:71:LYS:HD2  | 45:BX:71:LYS:H     | 1.38                     | 0.87              |
| 1:AA:598:U:H4'    | 10:AK:94:TYR:HD2   | 1.37                     | 0.87              |
| 1:AA:787:A:H2'    | 1:AA:788:U:H5'     | 1.54                     | 0.87              |
| 1:AA:1137:C:H4'   | 1:AA:1138:G:N2     | 1.89                     | 0.87              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 14:AO:117:ARG:HG3  | 14:AO:117:ARG:HH11 | 1.37                     | 0.87              |
| 18:AS:6:LEU:HD23   | 18:AS:17:TYR:HD2   | 1.37                     | 0.87              |
| 22:AW:72:LEU:HD22  | 22:AW:77:ALA:N     | 1.89                     | 0.87              |
| 24:BA:350:U:H2'    | 24:BA:350:U:O2     | 1.72                     | 0.87              |
| 24:BA:647:G:H2'    | 24:BA:648:G:C8     | 2.09                     | 0.87              |
| 24:BA:704:G:H21    | 24:BA:725:G:N2     | 1.72                     | 0.87              |
| 24:BA:2357:U:H2'   | 24:BA:2358:G:H5''  | 1.55                     | 0.87              |
| 25:BB:51:G:C5'     | 39:BR:60:GLY:HA2   | 2.05                     | 0.87              |
| 30:BG:101:ILE:O    | 30:BG:104:GLU:HB3  | 1.73                     | 0.87              |
| 35:BN:43:VAL:HG11  | 35:BN:54:GLU:CD    | 1.99                     | 0.87              |
| 36:BO:105:LEU:O    | 36:BO:106:LEU:HG   | 1.75                     | 0.87              |
| 47:BZ:12:ASN:HA    | 47:BZ:14:ARG:NH2   | 1.89                     | 0.87              |
| 47:BZ:38:VAL:HB    | 47:BZ:59:LEU:HD12  | 1.56                     | 0.87              |
| 48:B1:27:LEU:HD13  | 48:B1:52:ILE:HD11  | 1.56                     | 0.87              |
| 1:AA:118:U:O4      | 1:AA:288:A:H2'     | 1.74                     | 0.87              |
| 1:AA:611:A:H61     | 1:AA:629:G:H1      | 0.88                     | 0.87              |
| 1:AA:1263:C:H2'    | 1:AA:1264:C:C6     | 2.09                     | 0.87              |
| 3:AC:20:U:O2       | 3:AC:20:U:H2'      | 1.72                     | 0.87              |
| 3:AC:75:C:OP1      | 24:BA:2602:A:H5'   | 1.75                     | 0.87              |
| 4:AE:212:GLN:HB3   | 4:AE:235:SER:OG    | 1.74                     | 0.87              |
| 7:AH:89:ILE:HG12   | 7:AH:131:ILE:CD1   | 2.03                     | 0.87              |
| 11:AL:98:PRO:C     | 11:AL:100:GLY:H    | 1.79                     | 0.87              |
| 15:AP:52:GLU:HA    | 15:AP:55:ARG:CD    | 2.04                     | 0.87              |
| 24:BA:231:C:N4     | 24:BA:232:G:N2     | 2.21                     | 0.87              |
| 24:BA:1814:G:H2'   | 24:BA:1815:A:C8    | 2.09                     | 0.87              |
| 24:BA:2210:G:C8    | 27:BD:68:LYS:HD3   | 2.10                     | 0.87              |
| 24:BA:2781:A:H3'   | 24:BA:2781:A:C8    | 2.08                     | 0.87              |
| 27:BD:145:VAL:HG13 | 27:BD:191:ALA:HB2  | 1.56                     | 0.87              |
| 31:BH:25:LYS:HZ3   | 31:BH:32:GLU:HB2   | 1.38                     | 0.87              |
| 31:BH:125:VAL:HA   | 31:BH:131:VAL:CG2  | 2.05                     | 0.87              |
| 35:BN:59:LYS:HB2   | 35:BN:84:ALA:O     | 1.73                     | 0.87              |
| 37:BP:106:VAL:CG2  | 37:BP:107:ALA:H    | 1.83                     | 0.87              |
| 40:BS:6:LEU:HD23   | 40:BS:7:ILE:H      | 1.39                     | 0.87              |
| 54:B7:5:LYS:HB2    | 54:B7:60:LEU:HA    | 1.55                     | 0.87              |
| 54:B7:23:VAL:HG22  | 54:B7:47:LYS:C     | 1.99                     | 0.87              |
| 55:B8:2:LYS:O      | 55:B8:3:VAL:HG23   | 1.74                     | 0.87              |
| 1:AA:770:C:C1'     | 1:AA:900:A:H2      | 1.87                     | 0.87              |
| 1:AA:1274:G:N2     | 1:AA:1275:A:H62    | 1.71                     | 0.87              |
| 2:A1:22:C:H2'      | 2:A1:23:A:C8       | 2.08                     | 0.87              |
| 4:AE:71:VAL:HG13   | 4:AE:93:VAL:O      | 1.71                     | 0.87              |
| 6:AG:191:ARG:NH2   | 6:AG:194:LEU:O     | 2.07                     | 0.87              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:AJ:115:ARG:HB2  | 9:AJ:118:VAL:CG2   | 2.04                     | 0.87              |
| 10:AK:46:LYS:NZ   | 10:AK:64:LYS:HA    | 1.88                     | 0.87              |
| 24:BA:242:G:H8    | 54:B7:4:MET:HG3    | 1.37                     | 0.87              |
| 24:BA:292:C:H2'   | 24:BA:293:U:O2     | 1.75                     | 0.87              |
| 24:BA:298:G:H8    | 24:BA:298:G:O5'    | 1.58                     | 0.87              |
| 24:BA:606:U:OP1   | 29:BF:103:LYS:N    | 2.06                     | 0.87              |
| 24:BA:832:G:H2'   | 24:BA:833:U:C5     | 2.09                     | 0.87              |
| 24:BA:1044:G:H2'  | 24:BA:1111:A:N3    | 1.90                     | 0.87              |
| 24:BA:1255:U:H5'  | 24:BA:1256:G:O5'   | 1.72                     | 0.87              |
| 24:BA:1585:C:H5'' | 24:BA:1586:A:OP1   | 1.73                     | 0.87              |
| 24:BA:2296:U:H6   | 24:BA:2296:U:H3'   | 1.39                     | 0.87              |
| 24:BA:2748:A:N3   | 31:BH:67:LEU:CD2   | 2.38                     | 0.87              |
| 25:BB:55:U:O2'    | 25:BB:56:G:H5'     | 1.74                     | 0.87              |
| 29:BF:65:TRP:HE1  | 29:BF:73:ALA:HB3   | 1.35                     | 0.87              |
| 30:BG:53:LEU:HG   | 30:BG:72:ARG:CD    | 2.04                     | 0.87              |
| 32:BK:94:ALA:HA   | 32:BK:97:ILE:HG13  | 1.57                     | 0.87              |
| 37:BP:74:TYR:CZ   | 37:BP:94:VAL:HG22  | 2.09                     | 0.87              |
| 44:BW:19:ALA:O    | 44:BW:22:ALA:HB3   | 1.74                     | 0.87              |
| 45:BX:26:LYS:HB2  | 45:BX:38:ILE:HD11  | 1.55                     | 0.87              |
| 46:BY:151:HIS:HB3 | 46:BY:170:THR:N    | 1.89                     | 0.87              |
| 48:B1:27:LEU:HA   | 48:B1:30:LEU:CG    | 2.05                     | 0.87              |
| 1:AA:938:A:O2'    | 1:AA:939:G:H5'     | 1.75                     | 0.87              |
| 1:AA:1390:U:H2'   | 1:AA:1391:U:C6     | 2.08                     | 0.87              |
| 1:AA:1413:A:O2'   | 1:AA:1414:U:H5'    | 1.74                     | 0.87              |
| 1:AA:1417:G:H2'   | 1:AA:1482:G:H22    | 1.32                     | 0.87              |
| 7:AH:50:GLU:O     | 7:AH:53:LEU:HB2    | 1.74                     | 0.87              |
| 9:AJ:138:LYS:HE2  | 9:AJ:142:GLU:OE1   | 1.75                     | 0.87              |
| 14:AO:71:PRO:HD2  | 14:AO:100:ILE:HG12 | 1.56                     | 0.87              |
| 15:AP:48:LEU:HD21 | 15:AP:52:GLU:CB    | 2.05                     | 0.87              |
| 17:AR:51:HIS:O    | 17:AR:54:ARG:HB3   | 1.74                     | 0.87              |
| 20:AU:74:ARG:N    | 20:AU:79:LEU:HD21  | 1.89                     | 0.87              |
| 24:BA:51:G:H1'    | 24:BA:118:A:N6     | 1.89                     | 0.87              |
| 24:BA:775:G:H4'   | 24:BA:777:A:C4     | 2.09                     | 0.87              |
| 24:BA:1050:A:N6   | 24:BA:2751:G:C6    | 2.42                     | 0.87              |
| 24:BA:1155:A:C2'  | 24:BA:1156:A:H5''  | 2.05                     | 0.87              |
| 24:BA:1241:A:H5'' | 24:BA:1241:A:C2    | 2.08                     | 0.87              |
| 24:BA:1697:G:C3'  | 24:BA:1698:A:H5'   | 2.05                     | 0.87              |
| 24:BA:2206:C:H2'  | 24:BA:2207:C:C6    | 2.09                     | 0.87              |
| 24:BA:2514:U:H2'  | 24:BA:2515:C:C6    | 2.08                     | 0.87              |
| 24:BA:2593:U:O4   | 27:BD:239:ARG:NH1  | 2.08                     | 0.87              |
| 24:BA:2787:C:O5'  | 28:BE:64:LYS:HD2   | 1.74                     | 0.87              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 25:BB:103:U:C2'    | 25:BB:104:A:H5'    | 2.04                     | 0.87              |
| 27:BD:37:LEU:CD2   | 27:BD:64:ILE:HG22  | 2.01                     | 0.87              |
| 27:BD:107:ALA:H    | 27:BD:108:PRO:HD3  | 1.39                     | 0.87              |
| 27:BD:130:ALA:HA   | 27:BD:193:VAL:HG23 | 1.55                     | 0.87              |
| 32:BK:77:LEU:HG    | 32:BK:141:LYS:O    | 1.75                     | 0.87              |
| 34:BM:39:ARG:HB3   | 34:BM:48:MET:CG    | 2.05                     | 0.87              |
| 36:BO:29:LYS:C     | 36:BO:30:THR:HG23  | 2.00                     | 0.87              |
| 37:BP:34:LEU:CB    | 37:BP:67:ARG:HH22  | 1.86                     | 0.87              |
| 38:BQ:74:LYS:O     | 38:BQ:78:LYS:HB2   | 1.74                     | 0.87              |
| 41:BT:93:LYS:HG2   | 42:BU:10:LYS:NZ    | 1.89                     | 0.87              |
| 50:B3:28:LYS:HE3   | 50:B3:29:PRO:HD2   | 1.56                     | 0.87              |
| 1:AA:819:A:H5''    | 1:AA:820:U:OP2     | 1.74                     | 0.87              |
| 1:AA:1258:G:H2'    | 1:AA:1259:C:C6     | 2.09                     | 0.87              |
| 4:AE:115:LEU:HD22  | 4:AE:149:LEU:HD13  | 1.56                     | 0.87              |
| 4:AE:223:ILE:O     | 4:AE:226:ARG:HB3   | 1.74                     | 0.87              |
| 6:AG:105:VAL:HG21  | 6:AG:121:VAL:CG2   | 2.03                     | 0.87              |
| 9:AJ:69:VAL:CG2    | 9:AJ:104:LEU:HD11  | 2.04                     | 0.87              |
| 10:AK:38:ILE:HG13  | 10:AK:118:VAL:CG1  | 2.03                     | 0.87              |
| 10:AK:45:ILE:HD11  | 10:AK:48:TYR:HB3   | 1.55                     | 0.87              |
| 11:AL:106:ALA:O    | 11:AL:107:ARG:HG3  | 1.75                     | 0.87              |
| 24:BA:263:C:H2'    | 24:BA:263:C:O2     | 1.74                     | 0.87              |
| 24:BA:392:C:H2'    | 24:BA:393:C:H6     | 1.38                     | 0.87              |
| 24:BA:852:G:H5'    | 49:B2:45:GLY:HA3   | 1.54                     | 0.87              |
| 24:BA:910:A:C6     | 37:BP:17:LEU:HD11  | 2.10                     | 0.87              |
| 24:BA:1479:G:H2'   | 24:BA:1480:G:C8    | 2.09                     | 0.87              |
| 24:BA:1479:G:H2'   | 24:BA:1480:G:H8    | 1.37                     | 0.87              |
| 24:BA:1605:C:H2'   | 24:BA:1606:G:O4'   | 1.73                     | 0.87              |
| 24:BA:2103:C:H2'   | 24:BA:2104:G:C8    | 2.08                     | 0.87              |
| 25:BB:89(A):A:H2'  | 25:BB:90:C:C5'     | 2.00                     | 0.87              |
| 26:BC:119:VAL:O    | 26:BC:123:VAL:HG23 | 1.74                     | 0.87              |
| 28:BE:66:HIS:ND1   | 28:BE:67:PHE:N     | 2.23                     | 0.87              |
| 28:BE:100:GLU:O    | 28:BE:172:VAL:HG13 | 1.73                     | 0.87              |
| 28:BE:147:PRO:HG2  | 28:BE:149:ARG:CD   | 2.04                     | 0.87              |
| 30:BG:75:LYS:O     | 30:BG:83:ARG:HA    | 1.75                     | 0.87              |
| 30:BG:110:ALA:HB1  | 30:BG:139:LEU:HG   | 1.55                     | 0.87              |
| 33:BL:7:VAL:HG11   | 33:BL:67:PHE:CE1   | 2.10                     | 0.87              |
| 35:BN:106:LEU:HD22 | 40:BS:39:ARG:NH1   | 1.90                     | 0.87              |
| 36:BO:95:VAL:O     | 36:BO:97:PRO:HD2   | 1.74                     | 0.87              |
| 42:BU:67:GLY:O     | 42:BU:68:LYS:HB2   | 1.73                     | 0.87              |
| 55:B8:7:VAL:HB     | 55:B8:36:GLN:OE1   | 1.75                     | 0.87              |
| 1:AA:1509:C:O2'    | 1:AA:1510:U:H5'    | 1.73                     | 0.87              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:AC:28:G:H2'     | 3:AC:29:G:C8      | 2.10                     | 0.87              |
| 4:AE:213:LEU:HD22 | 4:AE:214:ILE:CD1  | 2.04                     | 0.87              |
| 6:AG:31:CYS:SG    | 6:AG:31:CYS:O     | 2.32                     | 0.87              |
| 6:AG:58:LEU:HD13  | 6:AG:59:ARG:HH11  | 1.38                     | 0.87              |
| 8:AI:10:LEU:HD23  | 8:AI:10:LEU:N     | 1.89                     | 0.87              |
| 14:AO:117:ARG:NH2 | 14:AO:124:LYS:HA  | 1.90                     | 0.87              |
| 17:AR:29:VAL:HG21 | 17:AR:81:LEU:HD11 | 1.55                     | 0.87              |
| 18:AS:9:PHE:CZ    | 18:AS:18:ARG:HG3  | 2.09                     | 0.87              |
| 24:BA:370:G:C2    | 24:BA:424:G:N7    | 2.42                     | 0.87              |
| 24:BA:1178:C:H2'  | 24:BA:1179:C:H6   | 1.37                     | 0.87              |
| 24:BA:1179:C:O2'  | 24:BA:1180:C:O5'  | 1.93                     | 0.87              |
| 24:BA:1956:U:H2'  | 24:BA:1957:C:H6   | 1.32                     | 0.87              |
| 24:BA:2390:U:O2'  | 24:BA:2391:G:H5'  | 1.75                     | 0.87              |
| 32:BK:32:PRO:CG   | 32:BK:33:ARG:H    | 1.87                     | 0.87              |
| 43:BV:14:PRO:O    | 43:BV:17:VAL:HG22 | 1.73                     | 0.87              |
| 43:BV:25:ARG:HD3  | 43:BV:74:ALA:HB3  | 1.55                     | 0.87              |
| 43:BV:48:ALA:O    | 43:BV:51:LEU:HB2  | 1.75                     | 0.87              |
| 45:BX:23:ARG:HD2  | 45:BX:39:VAL:HG22 | 1.56                     | 0.87              |
| 1:AA:735:C:H2'    | 1:AA:736:C:H6     | 1.37                     | 0.87              |
| 1:AA:955:U:H1'    | 1:AA:1227:A:N6    | 1.90                     | 0.87              |
| 1:AA:1313:U:C5    | 21:AV:4:SER:HB2   | 2.09                     | 0.87              |
| 1:AA:1401:G:H2'   | 1:AA:1402:C:O4'   | 1.74                     | 0.87              |
| 1:AA:1408:A:C2    | 1:AA:1495:U:H5    | 1.93                     | 0.87              |
| 3:AB:75:C:O2      | 24:BA:2508:G:H5'  | 1.75                     | 0.87              |
| 5:AF:40:ARG:HA    | 5:AF:43:LEU:HD13  | 1.55                     | 0.87              |
| 7:AH:109:ILE:CG2  | 7:AH:135:THR:HG21 | 2.04                     | 0.87              |
| 10:AK:14:ARG:HA   | 10:AK:17:THR:OG1  | 1.72                     | 0.87              |
| 15:AP:88:ARG:HG2  | 15:AP:98:VAL:CG1  | 2.05                     | 0.87              |
| 19:AT:59:ILE:HD12 | 19:AT:72:ARG:O    | 1.74                     | 0.87              |
| 24:BA:88:G:H5'    | 24:BA:89:G:OP2    | 1.75                     | 0.87              |
| 24:BA:187:G:H2'   | 24:BA:1365:A:H2   | 1.38                     | 0.87              |
| 24:BA:586:A:H5'   | 29:BF:89:VAL:CG2  | 2.02                     | 0.87              |
| 24:BA:1176:G:H2'  | 24:BA:1177:A:H5'  | 1.56                     | 0.87              |
| 24:BA:1786:A:O2'  | 24:BA:1787:A:H5'  | 1.75                     | 0.87              |
| 24:BA:1838:C:H2'  | 24:BA:1898:U:C4   | 2.10                     | 0.87              |
| 24:BA:2544:G:H2'  | 24:BA:2545:G:O4'  | 1.75                     | 0.87              |
| 24:BA:2886:G:O2'  | 51:B4:31:VAL:HB   | 1.73                     | 0.87              |
| 25:BB:42:C:C2     | 30:BG:93:THR:HB   | 2.10                     | 0.87              |
| 25:BB:43:C:H6     | 25:BB:43:C:O5'    | 1.56                     | 0.87              |
| 27:BD:252:TRP:H   | 27:BD:255:LYS:NZ  | 1.73                     | 0.87              |
| 29:BF:41:LEU:O    | 29:BF:44:ARG:HG3  | 1.75                     | 0.87              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 30:BG:75:LYS:CG    | 30:BG:84:LYS:HB2   | 2.05                     | 0.87              |
| 35:BN:19:ILE:HD12  | 35:BN:19:ILE:O     | 1.75                     | 0.87              |
| 37:BP:137:TYR:OH   | 46:BY:124:ILE:HD11 | 1.73                     | 0.87              |
| 40:BS:65:LYS:HD3   | 40:BS:75:ILE:HD13  | 1.56                     | 0.87              |
| 41:BT:65:ILE:CD1   | 41:BT:96:ALA:HB2   | 2.04                     | 0.87              |
| 43:BV:74:ALA:CB    | 43:BV:105:VAL:HG23 | 2.04                     | 0.87              |
| 52:B5:19:ARG:HH12  | 52:B5:41:PRO:CG    | 1.88                     | 0.87              |
| 53:B6:43:THR:N     | 53:B6:44:PRO:HD2   | 1.89                     | 0.87              |
| 54:B7:22:VAL:HG12  | 54:B7:23:VAL:N     | 1.89                     | 0.87              |
| 1:AA:299:G:H2'     | 1:AA:300:A:N7      | 1.89                     | 0.87              |
| 1:AA:713:G:H21     | 1:AA:777:A:C1'     | 1.88                     | 0.87              |
| 1:AA:944:G:H21     | 1:AA:1339:A:N6     | 1.72                     | 0.87              |
| 1:AA:1160:G:H2'    | 1:AA:1160:G:N3     | 1.89                     | 0.87              |
| 1:AA:1399:C:N4     | 1:AA:1502:A:N7     | 2.22                     | 0.87              |
| 3:AC:60:U:H5'      | 3:AC:61:C:OP2      | 1.75                     | 0.87              |
| 5:AF:156:ARG:HB3   | 5:AF:193:TYR:HD1   | 1.39                     | 0.87              |
| 10:AK:37:ARG:HD2   | 10:AK:38:ILE:HD13  | 1.55                     | 0.87              |
| 15:AP:97:PRO:CG    | 15:AP:103:THR:HG22 | 2.03                     | 0.87              |
| 24:BA:28:A:H1'     | 24:BA:513:A:C2     | 2.09                     | 0.87              |
| 24:BA:64:A:C2'     | 24:BA:65:C:H5'     | 2.05                     | 0.87              |
| 24:BA:182:A:H2'    | 24:BA:183:C:C6     | 2.09                     | 0.87              |
| 24:BA:450:G:H5''   | 24:BA:451:C:OP2    | 1.73                     | 0.87              |
| 24:BA:557:U:O2'    | 34:BM:112:LEU:HD11 | 1.74                     | 0.87              |
| 24:BA:764:A:H1'    | 27:BD:214:TRP:CD1  | 2.10                     | 0.87              |
| 24:BA:931:G:H3'    | 24:BA:932:G:O4'    | 1.74                     | 0.87              |
| 24:BA:1695:G:H2'   | 24:BA:1696:G:H5'   | 1.57                     | 0.87              |
| 24:BA:1789:A:H3'   | 24:BA:1790:C:O4'   | 1.73                     | 0.87              |
| 24:BA:2064:C:H1'   | 24:BA:2450:A:H62   | 1.37                     | 0.87              |
| 24:BA:2213:U:O2    | 24:BA:2213:U:H3'   | 1.75                     | 0.87              |
| 24:BA:2239:G:C3'   | 24:BA:2240:C:H5''  | 2.03                     | 0.87              |
| 25:BB:78:A:C5      | 25:BB:99:A:N6      | 2.43                     | 0.87              |
| 26:BC:64:LEU:CD1   | 26:BC:161:ILE:HG12 | 2.05                     | 0.87              |
| 27:BD:80:ALA:HB3   | 27:BD:94:LEU:O     | 1.73                     | 0.87              |
| 27:BD:117:VAL:HG22 | 27:BD:126:GLN:HE21 | 1.40                     | 0.87              |
| 31:BH:111:HIS:O    | 31:BH:113:VAL:HG23 | 1.73                     | 0.87              |
| 34:BM:96:GLU:O     | 34:BM:100:GLU:HG2  | 1.73                     | 0.87              |
| 35:BN:96:THR:O     | 35:BN:97:ARG:HB3   | 1.74                     | 0.87              |
| 37:BP:56:ARG:CZ    | 37:BP:57:HIS:HB2   | 2.05                     | 0.87              |
| 37:BP:85:LYS:C     | 37:BP:87:LYS:H     | 1.81                     | 0.87              |
| 42:BU:62:LEU:HB2   | 42:BU:64:HIS:CE1   | 2.10                     | 0.87              |
| 46:BY:57:ILE:HG12  | 46:BY:70:LEU:CB    | 2.01                     | 0.87              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 47:BZ:49:LYS:H    | 47:BZ:80:HIS:CE1   | 1.92                     | 0.87              |
| 52:B5:50:ARG:CZ   | 52:B5:52:VAL:HG21  | 2.05                     | 0.87              |
| 1:AA:66:G:H4'     | 1:AA:173:U:C5      | 2.10                     | 0.86              |
| 1:AA:164:U:H2'    | 1:AA:165:C:H5      | 1.38                     | 0.86              |
| 1:AA:197:A:N6     | 1:AA:221:C:H5'     | 1.90                     | 0.86              |
| 1:AA:520:A:N6     | 1:AA:529:G:H21     | 1.73                     | 0.86              |
| 1:AA:551:U:H5'    | 14:AO:119:LYS:HZ1  | 1.36                     | 0.86              |
| 1:AA:598:U:H4'    | 10:AK:94:TYR:CD2   | 2.09                     | 0.86              |
| 1:AA:1163:C:O2'   | 1:AA:1164:G:H5'    | 1.75                     | 0.86              |
| 4:AE:219:VAL:O    | 4:AE:223:ILE:HG13  | 1.75                     | 0.86              |
| 11:AL:50:LEU:HD22 | 11:AL:51:ARG:HH12  | 1.40                     | 0.86              |
| 13:AN:95:ILE:HA   | 13:AN:98:LEU:HG    | 1.54                     | 0.86              |
| 20:AU:78:LEU:C    | 20:AU:79:LEU:HD12  | 2.00                     | 0.86              |
| 24:BA:511:U:H5    | 24:BA:512:G:N3     | 1.71                     | 0.86              |
| 24:BA:670:A:H2'   | 36:BO:41:ARG:NH1   | 1.89                     | 0.86              |
| 24:BA:948:G:C1'   | 24:BA:984:A:C2     | 2.58                     | 0.86              |
| 24:BA:1339:G:H5'  | 44:BW:16:LYS:HD3   | 1.54                     | 0.86              |
| 24:BA:1406:U:H2'  | 24:BA:1407:C:H6    | 1.37                     | 0.86              |
| 24:BA:1444:G:H3'  | 24:BA:1445:C:C5    | 2.09                     | 0.86              |
| 24:BA:1524:G:H2'  | 24:BA:1525:G:H8    | 1.37                     | 0.86              |
| 24:BA:1969:A:H4'  | 24:BA:1970:A:H5'   | 1.55                     | 0.86              |
| 28:BE:8:LYS:HD3   | 28:BE:9:VAL:N      | 1.90                     | 0.86              |
| 30:BG:47:LYS:HD2  | 30:BG:49:ASP:OD2   | 1.74                     | 0.86              |
| 30:BG:118:ARG:CG  | 30:BG:119:GLY:H    | 1.87                     | 0.86              |
| 33:BL:7:VAL:HG12  | 33:BL:58:THR:CG2   | 2.01                     | 0.86              |
| 34:BM:86:PRO:O    | 34:BM:89:LYS:HE3   | 1.74                     | 0.86              |
| 36:BO:81:GLN:HA   | 36:BO:86:LYS:HE3   | 1.56                     | 0.86              |
| 38:BQ:97:VAL:HG13 | 38:BQ:114:VAL:HG21 | 1.56                     | 0.86              |
| 41:BT:8:VAL:O     | 41:BT:11:ARG:HG2   | 1.75                     | 0.86              |
| 41:BT:111:GLU:HA  | 41:BT:114:LYS:CE   | 2.05                     | 0.86              |
| 47:BZ:21:LEU:HG   | 47:BZ:22:GLY:H     | 1.40                     | 0.86              |
| 1:AA:21:G:H2'     | 1:AA:22:G:C8       | 2.10                     | 0.86              |
| 1:AA:47:C:H4'     | 1:AA:48:C:C5'      | 2.04                     | 0.86              |
| 1:AA:309:G:O2'    | 1:AA:310:G:H5'     | 1.75                     | 0.86              |
| 1:AA:557:G:H3'    | 1:AA:558:G:C8      | 2.09                     | 0.86              |
| 1:AA:851:G:N2     | 1:AA:852:G:H1'     | 1.90                     | 0.86              |
| 1:AA:878:G:C5'    | 10:AK:89:PRO:HG2   | 2.04                     | 0.86              |
| 1:AA:975:A:O2'    | 1:AA:976:G:OP2     | 1.91                     | 0.86              |
| 1:AA:1192:C:H3'   | 1:AA:1192:C:C6     | 2.09                     | 0.86              |
| 1:AA:1454:G:H2'   | 1:AA:1455:G:H8     | 1.37                     | 0.86              |
| 11:AL:55:ALA:HB1  | 11:AL:58:HIS:ND1   | 1.90                     | 0.86              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 13:AN:99:GLN:HB3  | 13:AN:105:VAL:HG11 | 1.56                     | 0.86              |
| 17:AR:49:ASP:CG   | 17:AR:49:ASP:O     | 2.18                     | 0.86              |
| 19:AT:45:HIS:O    | 19:AT:73:VAL:HG23  | 1.75                     | 0.86              |
| 24:BA:392:C:H2'   | 24:BA:393:C:C6     | 2.10                     | 0.86              |
| 24:BA:775:G:H2'   | 24:BA:794:G:C5     | 2.09                     | 0.86              |
| 24:BA:1265:A:OP2  | 24:BA:2615:U:OP1   | 1.93                     | 0.86              |
| 24:BA:1491:G:C2'  | 24:BA:1492:G:H4'   | 2.05                     | 0.86              |
| 24:BA:2161:C:H2'  | 24:BA:2162:G:C8    | 2.09                     | 0.86              |
| 24:BA:2207:C:H2'  | 24:BA:2208:U:H4'   | 1.57                     | 0.86              |
| 24:BA:2286:A:N6   | 52:B5:32:ASN:N     | 2.23                     | 0.86              |
| 24:BA:2581:G:N1   | 24:BA:2610:C:C6    | 2.42                     | 0.86              |
| 24:BA:2746:U:H5'  | 31:BH:139:GLN:HA   | 1.54                     | 0.86              |
| 25:BB:88:C:N4     | 25:BB:89:G:N3      | 2.23                     | 0.86              |
| 27:BD:54:ARG:C    | 27:BD:219:PRO:HD2  | 1.99                     | 0.86              |
| 29:BF:4:VAL:O     | 29:BF:20:LEU:HD13  | 1.72                     | 0.86              |
| 29:BF:130:ALA:CB  | 29:BF:142:TRP:HB2  | 1.99                     | 0.86              |
| 31:BH:103:LEU:HB2 | 31:BH:115:VAL:CB   | 2.05                     | 0.86              |
| 32:BK:81:VAL:CB   | 32:BK:88:ILE:HG12  | 2.04                     | 0.86              |
| 34:BM:23:LEU:CD1  | 34:BM:63:THR:N     | 2.38                     | 0.86              |
| 34:BM:68:GLU:H    | 34:BM:70:LYS:NZ    | 1.72                     | 0.86              |
| 35:BN:24:VAL:HG13 | 35:BN:30:ALA:HB1   | 1.56                     | 0.86              |
| 36:BO:76:LYS:O    | 36:BO:115:LEU:HB2  | 1.75                     | 0.86              |
| 43:BV:95:ILE:HD12 | 43:BV:95:ILE:H     | 1.38                     | 0.86              |
| 54:B7:7:HIS:HB2   | 54:B7:8:LYS:NZ     | 1.91                     | 0.86              |
| 1:AA:731:G:H2'    | 1:AA:732:C:H6      | 1.39                     | 0.86              |
| 1:AA:797:C:O2'    | 1:AA:798:G:H5'     | 1.76                     | 0.86              |
| 1:AA:1336:C:H4'   | 1:AA:1337:G:C2     | 2.10                     | 0.86              |
| 3:AB:33:U:C2      | 3:AB:35:A:H5''     | 2.09                     | 0.86              |
| 4:AE:134:GLU:O    | 4:AE:138:LEU:HG    | 1.74                     | 0.86              |
| 6:AG:26:CYS:O     | 6:AG:33:MET:HG3    | 1.75                     | 0.86              |
| 7:AH:78:HIS:CB    | 10:AK:107:LEU:HD21 | 2.04                     | 0.86              |
| 16:AQ:26:ARG:HB2  | 16:AQ:43:CYS:HB2   | 1.54                     | 0.86              |
| 24:BA:546:C:H2'   | 24:BA:547:A:C8     | 2.10                     | 0.86              |
| 24:BA:740:U:O2'   | 24:BA:741:G:P      | 2.33                     | 0.86              |
| 24:BA:869:G:H2'   | 24:BA:870:A:C5'    | 2.01                     | 0.86              |
| 24:BA:974:G:H3'   | 24:BA:974(A):C:C5' | 2.04                     | 0.86              |
| 24:BA:1255:U:C5'  | 24:BA:1256:G:H5''  | 2.04                     | 0.86              |
| 24:BA:1799:G:H1   | 27:BD:157:ARG:NH1  | 1.73                     | 0.86              |
| 24:BA:2570:G:H5'  | 24:BA:2571:C:OP2   | 1.75                     | 0.86              |
| 25:BB:7:G:H4'     | 39:BR:29:PHE:HE2   | 1.37                     | 0.86              |
| 25:BB:50:G:H4'    | 39:BR:61:ASN:OD1   | 1.73                     | 0.86              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2               | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|----------------------|--------------------------|-------------------|
| 28:BE:173:VAL:HG22 | 28:BE:174:ASP:N      | 1.90                     | 0.86              |
| 30:BG:39:ILE:HG23  | 30:BG:157:ILE:CB     | 2.05                     | 0.86              |
| 32:BK:129:THR:HB   | 32:BK:139:GLN:OE1    | 1.74                     | 0.86              |
| 34:BM:19:GLU:HB2   | 34:BM:56:ASN:CB      | 2.05                     | 0.86              |
| 34:BM:87:LEU:C     | 34:BM:90:MET:HB2     | 2.00                     | 0.86              |
| 36:BO:37:GLY:C     | 36:BO:40:SER:HB3     | 2.00                     | 0.86              |
| 39:BR:3:ARG:HG2    | 39:BR:4:LEU:N        | 1.89                     | 0.86              |
| 44:BW:39:ILE:HG21  | 44:BW:54:VAL:HG13    | 1.57                     | 0.86              |
| 45:BX:82:PRO:CD    | 45:BX:97:ARG:H       | 1.87                     | 0.86              |
| 52:B5:19:ARG:O     | 52:B5:43:CYS:SG      | 2.33                     | 0.86              |
| 1:AA:43:C:C5'      | 18:AS:12:LYS:HB3     | 2.01                     | 0.86              |
| 1:AA:1342:C:H4'    | 11:AL:125:TYR:HB2    | 1.57                     | 0.86              |
| 1:AA:1400:C:H4'    | 1:AA:1401:G:OP2      | 1.75                     | 0.86              |
| 4:AE:74:LYS:CE     | 4:AE:76:GLN:HB2      | 2.04                     | 0.86              |
| 11:AL:25:LYS:O     | 11:AL:61:ALA:HB3     | 1.73                     | 0.86              |
| 20:AU:73:ALA:O     | 20:AU:79:LEU:HD11    | 1.73                     | 0.86              |
| 24:BA:628:G:H8     | 24:BA:628:G:O5'      | 1.56                     | 0.86              |
| 24:BA:1341:U:H2'   | 24:BA:1341:U:O2      | 1.74                     | 0.86              |
| 24:BA:1513:C:C4    | 24:BA:1514:U:O4      | 2.28                     | 0.86              |
| 24:BA:1581:G:H2'   | 24:BA:1582:C:O4'     | 1.73                     | 0.86              |
| 24:BA:1687:G:C6    | 24:BA:1688:U:H5      | 1.92                     | 0.86              |
| 24:BA:2010:G:H2'   | 24:BA:2011:U:H5'     | 1.57                     | 0.86              |
| 24:BA:2061:G:O2'   | 24:BA:2062:A:H5''    | 1.76                     | 0.86              |
| 24:BA:2456:C:O2'   | 24:BA:2457:U:H5'     | 1.75                     | 0.86              |
| 24:BA:2656:U:O2    | 24:BA:2656:U:H2'     | 1.73                     | 0.86              |
| 24:BA:2711:A:H5'   | 24:BA:2712:U:H5'     | 1.55                     | 0.86              |
| 24:BA:2712:U:C2'   | 24:BA:2712(A):A:H5'' | 2.05                     | 0.86              |
| 25:BB:27:C:N4      | 25:BB:56:G:N1        | 2.24                     | 0.86              |
| 27:BD:202:LYS:HD2  | 27:BD:202:LYS:N      | 1.83                     | 0.86              |
| 34:BM:46:VAL:CG1   | 34:BM:47:ALA:H       | 1.70                     | 0.86              |
| 34:BM:70:LYS:HD2   | 34:BM:86:PRO:HG3     | 1.57                     | 0.86              |
| 35:BN:70:LYS:NZ    | 35:BN:102:VAL:HG13   | 1.89                     | 0.86              |
| 37:BP:35:VAL:HG23  | 37:BP:101:ARG:O      | 1.76                     | 0.86              |
| 40:BS:34:VAL:HG11  | 40:BS:78:LEU:HD11    | 1.56                     | 0.86              |
| 1:AA:6:G:H1        | 7:AH:96:PRO:HG2      | 1.38                     | 0.86              |
| 1:AA:907:A:H2'     | 1:AA:908:A:H8        | 1.40                     | 0.86              |
| 3:AD:23:A:H2'      | 3:AD:24:G:H8         | 1.39                     | 0.86              |
| 3:AB:52:G:O4'      | 24:BA:2471:C:C5'     | 2.22                     | 0.86              |
| 4:AE:115:LEU:HD23  | 4:AE:149:LEU:HD22    | 1.56                     | 0.86              |
| 8:AI:95:GLU:H      | 8:AI:96:PRO:CD       | 1.88                     | 0.86              |
| 9:AJ:29:LYS:HD2    | 9:AJ:101:LEU:HD22    | 1.57                     | 0.86              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:AJ:31:MET:HG2   | 9:AJ:32:ARG:H      | 1.40                     | 0.86              |
| 11:AL:4:TYR:HE1   | 11:AL:59:PHE:HE2   | 1.22                     | 0.86              |
| 22:AW:83:ARG:O    | 22:AW:86:ARG:HG2   | 1.75                     | 0.86              |
| 24:BA:247:G:H5'   | 24:BA:386:G:H3'    | 1.57                     | 0.86              |
| 24:BA:269:U:H3    | 24:BA:270:A:N6     | 1.74                     | 0.86              |
| 24:BA:270(Z):U:N3 | 24:BA:271(C):U:H1' | 1.90                     | 0.86              |
| 24:BA:503:A:H4'   | 24:BA:504:U:C5'    | 2.05                     | 0.86              |
| 24:BA:853:G:H2'   | 24:BA:854:G:C8     | 2.09                     | 0.86              |
| 24:BA:943:U:O4'   | 24:BA:943:U:OP1    | 1.92                     | 0.86              |
| 24:BA:1802:A:N3   | 24:BA:1802:A:H2'   | 1.87                     | 0.86              |
| 28:BE:58:ARG:NH2  | 28:BE:58:ARG:HB2   | 1.90                     | 0.86              |
| 29:BF:40:GLN:O    | 29:BF:44:ARG:HG2   | 1.75                     | 0.86              |
| 30:BG:41:GLN:HE22 | 30:BG:155:MET:CG   | 1.87                     | 0.86              |
| 31:BH:94:TYR:C    | 31:BH:95:ARG:HD2   | 2.00                     | 0.86              |
| 33:BL:48:MET:O    | 33:BL:53:VAL:HG21  | 1.75                     | 0.86              |
| 37:BP:22:LYS:HD2  | 37:BP:99:PRO:CG    | 2.04                     | 0.86              |
| 41:BT:59:ARG:HA   | 41:BT:62:ILE:HD12  | 1.54                     | 0.86              |
| 42:BU:68:LYS:O    | 42:BU:69:LYS:HB2   | 1.71                     | 0.86              |
| 1:AA:1068:G:O2'   | 1:AA:1069:C:H5'    | 1.75                     | 0.86              |
| 3:AD:18:G:H4'     | 3:AD:60:U:N3       | 1.90                     | 0.86              |
| 8:AI:7:ASN:ND2    | 8:AI:62:TRP:HD1    | 1.73                     | 0.86              |
| 13:AN:80:VAL:O    | 13:AN:106:LYS:HB3  | 1.75                     | 0.86              |
| 22:AW:56:MET:HG2  | 22:AW:88:VAL:HG21  | 1.55                     | 0.86              |
| 22:AW:89:ARG:O    | 22:AW:93:GLU:HG3   | 1.74                     | 0.86              |
| 24:BA:270(I):G:N3 | 24:BA:270(J):G:H1' | 1.89                     | 0.86              |
| 24:BA:851:U:H5''  | 49:B2:49:LYS:HD2   | 1.58                     | 0.86              |
| 24:BA:1418:G:H1'  | 24:BA:1581:G:H21   | 1.38                     | 0.86              |
| 24:BA:1579:A:N6   | 24:BA:1581:G:N2    | 2.24                     | 0.86              |
| 24:BA:2056:G:N2   | 51:B4:4:HIS:HD2    | 1.70                     | 0.86              |
| 24:BA:2399:G:C2   | 24:BA:2400:G:H1'   | 2.11                     | 0.86              |
| 24:BA:2712:U:H3'  | 24:BA:2714:G:OP2   | 1.75                     | 0.86              |
| 26:BC:182:PRO:HG2 | 26:BC:183:GLU:OE2  | 1.76                     | 0.86              |
| 28:BE:44:TYR:HB3  | 28:BE:82:ARG:HH11  | 1.41                     | 0.86              |
| 31:BH:102:ALA:C   | 31:BH:115:VAL:HG12 | 2.00                     | 0.86              |
| 36:BO:45:LEU:HD13 | 54:B7:59:LYS:HE3   | 1.57                     | 0.86              |
| 36:BO:108:LYS:HD3 | 36:BO:109:GLY:H    | 1.40                     | 0.86              |
| 46:BY:122:ARG:HG2 | 46:BY:171:ILE:HA   | 1.56                     | 0.86              |
| 50:B3:1:MET:HE1   | 50:B3:9:LEU:HD21   | 1.57                     | 0.86              |
| 50:B3:5:ILE:CG2   | 50:B3:57:GLU:HB2   | 2.06                     | 0.86              |
| 50:B3:20:ASN:HB2  | 50:B3:30:GLU:CD    | 2.01                     | 0.86              |
| 54:B7:5:LYS:HB3   | 54:B7:60:LEU:HA    | 1.56                     | 0.86              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:38:G:N2       | 1:AA:397:A:C5      | 2.43                     | 0.86              |
| 1:AA:65:U:H4'      | 1:AA:66:G:C5'      | 2.06                     | 0.86              |
| 4:AE:145:LEU:O     | 4:AE:149:LEU:HB2   | 1.75                     | 0.86              |
| 10:AK:111:ILE:HD12 | 10:AK:111:ILE:N    | 1.91                     | 0.86              |
| 18:AS:35:LYS:NZ    | 18:AS:37:GLY:H     | 1.73                     | 0.86              |
| 20:AU:70:ILE:HG22  | 20:AU:74:ARG:NE    | 1.89                     | 0.86              |
| 24:BA:319:C:H2'    | 24:BA:320:A:C8     | 2.11                     | 0.86              |
| 24:BA:587:C:C5     | 36:BO:30:THR:HG21  | 2.11                     | 0.86              |
| 24:BA:705:A:H2'    | 24:BA:705:A:N3     | 1.91                     | 0.86              |
| 24:BA:746:A:N7     | 24:BA:2612:C:P     | 2.48                     | 0.86              |
| 24:BA:957:A:O3'    | 24:BA:958:U:H4'    | 1.74                     | 0.86              |
| 24:BA:1655:A:H61   | 24:BA:2005:A:H1'   | 1.41                     | 0.86              |
| 24:BA:1790:C:H2'   | 24:BA:1791:A:N7    | 1.90                     | 0.86              |
| 24:BA:2369:A:H2'   | 24:BA:2370:G:H8    | 1.39                     | 0.86              |
| 24:BA:2447:G:H8    | 24:BA:2500:U:C3'   | 1.73                     | 0.86              |
| 24:BA:2749:A:C5    | 24:BA:2750:A:N7    | 2.43                     | 0.86              |
| 24:BA:2900:A:H2'   | 24:BA:2901:C:C6    | 2.09                     | 0.86              |
| 27:BD:252:TRP:H    | 27:BD:255:LYS:HZ1  | 1.20                     | 0.86              |
| 29:BF:108:LYS:O    | 29:BF:111:ALA:HB3  | 1.75                     | 0.86              |
| 32:BK:59:ALA:HA    | 32:BK:62:LYS:HD2   | 1.54                     | 0.86              |
| 34:BM:99:LEU:HD12  | 34:BM:100:GLU:N    | 1.89                     | 0.86              |
| 34:BM:127:ASP:H    | 34:BM:129:PRO:HD2  | 1.37                     | 0.86              |
| 34:BM:128:HIS:N    | 34:BM:129:PRO:HD2  | 1.90                     | 0.86              |
| 1:AA:266:G:H2'     | 19:AT:67:LYS:NZ    | 1.91                     | 0.86              |
| 1:AA:761:G:H5'     | 19:AT:103:GLY:H    | 1.41                     | 0.86              |
| 1:AA:1226:C:C6     | 15:AP:104:ARG:HA   | 2.11                     | 0.86              |
| 1:AA:1516:G:H22    | 1:AA:1518:A:H3'    | 1.41                     | 0.86              |
| 3:AD:23:A:H2'      | 3:AD:24:G:C8       | 2.10                     | 0.86              |
| 3:AD:58:A:H2'      | 3:AD:61:C:C4       | 2.11                     | 0.86              |
| 4:AE:82:ARG:HA     | 4:AE:92:TYR:CE1    | 2.11                     | 0.86              |
| 7:AH:105:VAL:HG11  | 7:AH:131:ILE:HG22  | 1.58                     | 0.86              |
| 9:AJ:99:LEU:O      | 9:AJ:103:TRP:HB2   | 1.76                     | 0.86              |
| 13:AN:110:ASP:HB2  | 20:AU:88:LYS:CB    | 2.05                     | 0.86              |
| 20:AU:45:SER:HB3   | 20:AU:51:LEU:HD11  | 1.56                     | 0.86              |
| 24:BA:1202:C:H2'   | 24:BA:1203:G:H4'   | 1.57                     | 0.86              |
| 24:BA:1308:A:C2    | 24:BA:1309:G:H1'   | 2.10                     | 0.86              |
| 24:BA:1527:G:H1'   | 24:BA:1528:A:N3    | 1.91                     | 0.86              |
| 24:BA:1527:G:H1'   | 24:BA:1528:A:C2    | 2.09                     | 0.86              |
| 27:BD:76:PRO:HA    | 27:BD:118:VAL:CG2  | 2.05                     | 0.86              |
| 27:BD:227:ASN:O    | 27:BD:229:VAL:HG12 | 1.75                     | 0.86              |
| 28:BE:158:GLY:O    | 28:BE:160:TYR:HD1  | 1.59                     | 0.86              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 29:BF:74:ARG:NE    | 29:BF:75:HIS:N     | 2.23                     | 0.86              |
| 32:BK:93:THR:CG2   | 32:BK:96:ASP:H     | 1.88                     | 0.86              |
| 34:BM:107:LEU:HD23 | 34:BM:107:LEU:C    | 2.00                     | 0.86              |
| 35:BN:47:ILE:HD11  | 35:BN:52:VAL:HG13  | 1.57                     | 0.86              |
| 38:BQ:38:VAL:HB    | 38:BQ:39:PRO:CD    | 2.06                     | 0.86              |
| 39:BR:106:ARG:HH22 | 39:BR:110:LEU:HD13 | 1.39                     | 0.86              |
| 46:BY:111:VAL:CG2  | 46:BY:117:LEU:HG   | 2.06                     | 0.86              |
| 47:BZ:19:LYS:C     | 47:BZ:20:ARG:HD2   | 2.01                     | 0.86              |
| 1:AA:20:U:H5'      | 1:AA:572:A:H61     | 1.38                     | 0.86              |
| 1:AA:37:U:OP2      | 14:AO:123:LYS:HD2  | 1.76                     | 0.86              |
| 1:AA:800:G:H8      | 1:AA:800:G:O5'     | 1.59                     | 0.86              |
| 1:AA:1490:C:C2'    | 1:AA:1491:G:H5'    | 2.05                     | 0.86              |
| 9:AJ:45:ASP:HA     | 9:AJ:48:LYS:NZ     | 1.90                     | 0.86              |
| 24:BA:270(B):A:H1' | 24:BA:270(C):C:C5  | 2.11                     | 0.86              |
| 24:BA:1257:C:H4'   | 29:BF:83:PHE:CD1   | 2.11                     | 0.86              |
| 24:BA:1275:A:N3    | 38:BQ:12:ARG:NH2   | 2.24                     | 0.86              |
| 24:BA:2027:G:H2'   | 24:BA:2028:U:H6    | 1.41                     | 0.86              |
| 24:BA:2226:C:O2    | 24:BA:2226:C:H2'   | 1.76                     | 0.86              |
| 27:BD:27:THR:HG22  | 27:BD:29:PRO:HD2   | 1.56                     | 0.86              |
| 41:BT:102:GLU:HB3  | 41:BT:105:VAL:HB   | 1.58                     | 0.86              |
| 43:BV:47:VAL:O     | 43:BV:51:LEU:HD13  | 1.76                     | 0.86              |
| 52:B5:33:LYS:HE2   | 52:B5:34:LEU:N     | 1.91                     | 0.86              |
| 1:AA:529:G:C8      | 1:AA:529:G:H3'     | 2.10                     | 0.86              |
| 1:AA:684:A:H2'     | 1:AA:685:G:C8      | 2.11                     | 0.86              |
| 1:AA:713:G:H2'     | 1:AA:714:G:C8      | 2.11                     | 0.86              |
| 1:AA:1073:U:H2'    | 1:AA:1074:G:H8     | 1.41                     | 0.86              |
| 4:AE:46:LYS:HA     | 4:AE:46:LYS:HE2    | 1.56                     | 0.86              |
| 10:AK:97:VAL:HG22  | 10:AK:98:LYS:H     | 1.41                     | 0.86              |
| 24:BA:39:C:H2'     | 24:BA:40:C:C6      | 2.11                     | 0.86              |
| 24:BA:273(B):C:H2' | 24:BA:273(C):C:C6  | 2.11                     | 0.86              |
| 24:BA:389:G:C8     | 24:BA:2413:G:H4'   | 2.11                     | 0.86              |
| 24:BA:725:G:H2'    | 24:BA:726:G:O4'    | 1.76                     | 0.86              |
| 24:BA:889:C:H2'    | 24:BA:890:A:O4'    | 1.76                     | 0.86              |
| 24:BA:1934:C:C5'   | 24:BA:1974:C:H4'   | 2.06                     | 0.86              |
| 24:BA:2009:G:OP1   | 43:BV:41:LYS:HD2   | 1.75                     | 0.86              |
| 24:BA:2209:C:C2'   | 24:BA:2210:G:H3'   | 2.05                     | 0.86              |
| 24:BA:2332:U:C4'   | 24:BA:2336:A:N6    | 2.36                     | 0.86              |
| 24:BA:2447:G:N7    | 24:BA:2500:U:C2'   | 2.39                     | 0.86              |
| 24:BA:2748:A:H1'   | 31:BH:67:LEU:CD2   | 2.06                     | 0.86              |
| 27:BD:8:PRO:O      | 27:BD:25:THR:CA    | 2.17                     | 0.86              |
| 27:BD:181:GLU:CA   | 27:BD:270:ILE:HD12 | 2.05                     | 0.86              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 30:BG:173:LEU:HD12 | 30:BG:176:LEU:HD12 | 1.55                     | 0.86              |
| 31:BH:11:VAL:HG23  | 31:BH:50:VAL:HG21  | 1.55                     | 0.86              |
| 32:BK:5:LEU:HB2    | 32:BK:8:PRO:CD     | 2.06                     | 0.86              |
| 39:BR:26:LEU:O     | 39:BR:88:ASP:HB2   | 1.74                     | 0.86              |
| 42:BU:18:LEU:HB2   | 42:BU:66:ARG:HH22  | 1.39                     | 0.86              |
| 1:AA:562:C:O2'     | 14:AO:15:ARG:HD3   | 1.76                     | 0.85              |
| 1:AA:607:A:H2'     | 1:AA:608:A:O4'     | 1.75                     | 0.85              |
| 1:AA:1058:G:H2'    | 1:AA:1059:C:O4'    | 1.76                     | 0.85              |
| 1:AA:1251:A:H2'    | 1:AA:1252:A:C8     | 2.11                     | 0.85              |
| 4:AE:61:LEU:HD23   | 4:AE:62:ALA:N      | 1.91                     | 0.85              |
| 4:AE:187:LEU:HD21  | 4:AE:203:GLY:O     | 1.76                     | 0.85              |
| 9:AJ:74:GLU:O      | 9:AJ:88:PRO:HA     | 1.75                     | 0.85              |
| 10:AK:26:VAL:HG22  | 10:AK:27:PRO:CD    | 2.06                     | 0.85              |
| 13:AN:110:ASP:HB2  | 20:AU:88:LYS:HB2   | 1.56                     | 0.85              |
| 16:AQ:24:CYS:HB2   | 16:AQ:39:LEU:C     | 2.01                     | 0.85              |
| 17:AR:53:HIS:O     | 17:AR:57:LEU:HD13  | 1.76                     | 0.85              |
| 19:AT:43:LEU:HD13  | 19:AT:43:LEU:O     | 1.75                     | 0.85              |
| 20:AU:68:LYS:O     | 20:AU:71:LYS:HB2   | 1.74                     | 0.85              |
| 24:BA:84:A:H5''    | 45:BX:8:LYS:HG3    | 1.56                     | 0.85              |
| 24:BA:429:A:H2'    | 24:BA:430:G:C8     | 2.11                     | 0.85              |
| 24:BA:587:C:H5     | 36:BO:30:THR:HG21  | 1.41                     | 0.85              |
| 24:BA:1534:G:H21   | 24:BA:1537:C:H5    | 1.21                     | 0.85              |
| 24:BA:2138:C:H2'   | 24:BA:2139:C:C6    | 2.10                     | 0.85              |
| 24:BA:2453:A:H4'   | 24:BA:2572:A:O2'   | 1.76                     | 0.85              |
| 29:BF:36:VAL:HG11  | 29:BF:183:VAL:CB   | 2.04                     | 0.85              |
| 39:BR:16:ASN:O     | 39:BR:20:ARG:HG2   | 1.74                     | 0.85              |
| 42:BU:9:GLY:O      | 42:BU:10:LYS:HB2   | 1.76                     | 0.85              |
| 1:AA:722:A:H2'     | 1:AA:724:G:C8      | 2.10                     | 0.85              |
| 1:AA:728:A:H8      | 17:AR:54:ARG:CZ    | 1.88                     | 0.85              |
| 1:AA:854:G:H3'     | 1:AA:871:U:O4      | 1.76                     | 0.85              |
| 10:AK:12:ARG:HD3   | 10:AK:26:VAL:HG22  | 1.57                     | 0.85              |
| 10:AK:103:VAL:HB   | 10:AK:108:GLY:HA3  | 1.58                     | 0.85              |
| 18:AS:55:ARG:HE    | 18:AS:55:ARG:HA    | 1.41                     | 0.85              |
| 21:AV:11:VAL:HG22  | 21:AV:39:THR:HB    | 1.58                     | 0.85              |
| 24:BA:242:G:C3'    | 54:B7:4:MET:HG3    | 2.06                     | 0.85              |
| 24:BA:365:C:H2'    | 24:BA:366:C:H6     | 1.41                     | 0.85              |
| 24:BA:586:A:C2     | 24:BA:809:G:N2     | 2.43                     | 0.85              |
| 24:BA:775:G:H5'    | 24:BA:777:A:H1'    | 1.59                     | 0.85              |
| 24:BA:858:U:H2'    | 24:BA:2268:A:C8    | 2.11                     | 0.85              |
| 24:BA:1742:C:H3'   | 24:BA:1743:G:H5''  | 1.58                     | 0.85              |
| 27:BD:108:PRO:HA   | 27:BD:195:ALA:O    | 1.76                     | 0.85              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 28:BE:101:ARG:HH21 | 28:BE:171:GLU:HG2 | 1.40                     | 0.85              |
| 29:BF:63:LYS:HA    | 29:BF:76:GLY:O    | 1.75                     | 0.85              |
| 29:BF:125:LEU:C    | 29:BF:127:GLU:H   | 1.84                     | 0.85              |
| 30:BG:47:LYS:CE    | 30:BG:73:ALA:HB3  | 2.04                     | 0.85              |
| 32:BK:21:VAL:CB    | 32:BK:26:ALA:HB2  | 2.05                     | 0.85              |
| 35:BN:10:VAL:C     | 35:BN:17:ARG:HG3  | 2.01                     | 0.85              |
| 35:BN:12:ASP:OD2   | 35:BN:85:VAL:N    | 2.08                     | 0.85              |
| 36:BO:72:PRO:HG3   | 36:BO:110:TYR:CD2 | 2.12                     | 0.85              |
| 38:BQ:8:ARG:NE     | 38:BQ:10:LEU:HD11 | 1.91                     | 0.85              |
| 42:BU:49:THR:CB    | 42:BU:50:PRO:HD2  | 2.04                     | 0.85              |
| 46:BY:78:LYS:HE2   | 46:BY:84:GLU:OE2  | 1.75                     | 0.85              |
| 50:B3:41:PRO:HB3   | 50:B3:58:ARG:HD2  | 1.56                     | 0.85              |
| 53:B6:20:ALA:HA    | 53:B6:23:ARG:HD2  | 1.55                     | 0.85              |
| 1:AA:522:C:H5''    | 14:AO:120:TYR:OH  | 1.76                     | 0.85              |
| 1:AA:901:A:C2      | 1:AA:902:G:C1'    | 2.57                     | 0.85              |
| 3:AD:58:A:H2'      | 3:AD:61:C:C5      | 2.11                     | 0.85              |
| 4:AE:97:TRP:HH2    | 4:AE:176:GLU:CD   | 1.84                     | 0.85              |
| 5:AF:191:THR:OG1   | 5:AF:196:LEU:HD11 | 1.75                     | 0.85              |
| 24:BA:280:C:N4     | 24:BA:283:A:H62   | 1.73                     | 0.85              |
| 24:BA:326:G:H2'    | 24:BA:327:G:C8    | 2.10                     | 0.85              |
| 24:BA:729:G:C4     | 24:BA:730:C:H1'   | 2.11                     | 0.85              |
| 24:BA:976:C:O2'    | 24:BA:977:G:H5'   | 1.76                     | 0.85              |
| 24:BA:1081:U:H5''  | 33:BL:122:ALA:HA  | 1.56                     | 0.85              |
| 24:BA:1448:G:H4'   | 24:BA:1543:A:N6   | 1.91                     | 0.85              |
| 24:BA:1788:C:H2'   | 27:BD:222:ARG:CZ  | 2.06                     | 0.85              |
| 24:BA:1902:C:H5'   | 27:BD:244:ARG:NE  | 1.91                     | 0.85              |
| 24:BA:2065:C:H2'   | 24:BA:2066:C:O4'  | 1.76                     | 0.85              |
| 27:BD:112:GLN:H    | 27:BD:115:GLN:NE2 | 1.74                     | 0.85              |
| 28:BE:127:ASP:HB2  | 28:BE:135:HIS:CA  | 2.07                     | 0.85              |
| 28:BE:195:LEU:HD13 | 28:BE:196:VAL:H   | 1.38                     | 0.85              |
| 29:BF:36:VAL:HG21  | 29:BF:183:VAL:CG2 | 2.06                     | 0.85              |
| 36:BO:91:PHE:O     | 36:BO:95:VAL:HB   | 1.75                     | 0.85              |
| 36:BO:138:LEU:HD21 | 36:BO:145:PRO:HD3 | 1.58                     | 0.85              |
| 41:BT:31:SER:O     | 41:BT:32:PHE:C    | 2.19                     | 0.85              |
| 43:BV:55:ALA:O     | 43:BV:58:ALA:HB3  | 1.76                     | 0.85              |
| 47:BZ:21:LEU:HD12  | 47:BZ:39:ARG:HB3  | 1.59                     | 0.85              |
| 47:BZ:37:LEU:HD11  | 47:BZ:59:LEU:HB3  | 1.55                     | 0.85              |
| 47:BZ:68:GLU:OE2   | 47:BZ:82:ARG:HB2  | 1.74                     | 0.85              |
| 48:B1:33:GLN:O     | 48:B1:35:SER:N    | 2.08                     | 0.85              |
| 53:B6:20:ALA:HB3   | 53:B6:21:ARG:NH2  | 1.91                     | 0.85              |
| 1:AA:363:A:N7      | 14:AO:30:ALA:HB1  | 1.91                     | 0.85              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1163:C:C2'    | 1:AA:1164:G:H5'    | 2.07                     | 0.85              |
| 1:AA:1516:G:N2     | 1:AA:1518:A:H3'    | 1.92                     | 0.85              |
| 10:AK:88:LYS:H     | 10:AK:88:LYS:HZ2   | 1.23                     | 0.85              |
| 21:AV:5:LEU:CD1    | 21:AV:9:VAL:HG13   | 2.07                     | 0.85              |
| 24:BA:198:C:HO2'   | 24:BA:199:A:H8     | 0.91                     | 0.85              |
| 24:BA:530:G:H22    | 24:BA:2021:C:H3'   | 1.41                     | 0.85              |
| 24:BA:564:C:H1'    | 41:BT:37:GLU:CD    | 2.01                     | 0.85              |
| 24:BA:764:A:N6     | 24:BA:1776:G:H1'   | 1.91                     | 0.85              |
| 24:BA:1526:G:H5''  | 24:BA:1527:G:OP1   | 1.76                     | 0.85              |
| 24:BA:1567:A:H4'   | 24:BA:1568:G:C2    | 2.10                     | 0.85              |
| 24:BA:1662:C:H2'   | 24:BA:1663:C:C6    | 2.11                     | 0.85              |
| 24:BA:1667:G:N2    | 24:BA:1991:U:C4    | 2.44                     | 0.85              |
| 24:BA:2246:G:H2'   | 24:BA:2247:A:C8    | 2.11                     | 0.85              |
| 24:BA:2447:G:O2'   | 24:BA:2448:A:OP2   | 1.93                     | 0.85              |
| 24:BA:2539:C:O2'   | 24:BA:2540:C:H5'   | 1.76                     | 0.85              |
| 24:BA:2755:C:HO2'  | 24:BA:2756:U:H6    | 0.88                     | 0.85              |
| 26:BC:177:LYS:HB2  | 26:BC:180:PHE:HB2  | 1.57                     | 0.85              |
| 28:BE:196:VAL:HG12 | 28:BE:197:ILE:N    | 1.91                     | 0.85              |
| 28:BE:200:GLU:HB3  | 28:BE:202:LYS:HZ3  | 1.41                     | 0.85              |
| 30:BG:92:VAL:HG11  | 30:BG:94:LEU:HD22  | 1.58                     | 0.85              |
| 32:BK:130:TYR:O    | 32:BK:132:PRO:HD3  | 1.76                     | 0.85              |
| 34:BM:116:LEU:O    | 34:BM:116:LEU:HD23 | 1.76                     | 0.85              |
| 35:BN:10:VAL:CG1   | 35:BN:17:ARG:HA    | 2.06                     | 0.85              |
| 35:BN:68:GLU:O     | 35:BN:68:GLU:HG3   | 1.73                     | 0.85              |
| 36:BO:88:LEU:HD11  | 36:BO:124:LYS:HZ1  | 1.40                     | 0.85              |
| 43:BV:11:ARG:HB2   | 43:BV:98:LYS:CE    | 2.05                     | 0.85              |
| 48:B1:45:ILE:HG13  | 48:B1:46:ARG:H     | 1.41                     | 0.85              |
| 49:B2:7:LYS:O      | 49:B2:54:VAL:HG23  | 1.76                     | 0.85              |
| 49:B2:26:LEU:HG    | 49:B2:35:ARG:NH1   | 1.92                     | 0.85              |
| 55:B8:10:ILE:HD11  | 55:B8:34:GLN:HE21  | 1.41                     | 0.85              |
| 1:AA:389:A:C6      | 1:AA:390:C:H1'     | 2.10                     | 0.85              |
| 1:AA:1286:A:H5'    | 23:AX:25:LYS:CG    | 2.06                     | 0.85              |
| 3:AD:40:C:C3'      | 3:AD:41:C:H5''     | 2.05                     | 0.85              |
| 4:AE:95:GLN:NE2    | 4:AE:148:TYR:HB3   | 1.91                     | 0.85              |
| 4:AE:157:ARG:C     | 4:AE:158:LEU:HD23  | 2.02                     | 0.85              |
| 4:AE:167:PRO:O     | 4:AE:169:LYS:N     | 2.09                     | 0.85              |
| 4:AE:217:ARG:O     | 4:AE:220:ASP:HB2   | 1.76                     | 0.85              |
| 22:AW:63:ILE:HD13  | 22:AW:80:ARG:HB3   | 1.56                     | 0.85              |
| 23:AX:9:ARG:HH12   | 23:AX:21:TYR:HD2   | 1.21                     | 0.85              |
| 24:BA:259:G:H2'    | 24:BA:260:G:C8     | 2.08                     | 0.85              |
| 24:BA:1351:C:O2'   | 24:BA:1571:A:H1'   | 1.77                     | 0.85              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1476:C:N4    | 24:BA:1517:G:C8    | 2.44                     | 0.85              |
| 24:BA:1820:U:C2'   | 27:BD:202:LYS:HG3  | 2.06                     | 0.85              |
| 24:BA:2020:A:OP2   | 41:BT:27:LEU:HD13  | 1.76                     | 0.85              |
| 26:BC:120:MET:HE1  | 26:BC:138:PRO:HB2  | 1.57                     | 0.85              |
| 27:BD:72:LYS:O     | 27:BD:74:GLY:N     | 2.10                     | 0.85              |
| 27:BD:106:ILE:HG13 | 27:BD:108:PRO:HD3  | 1.58                     | 0.85              |
| 32:BK:115:ALA:HB2  | 32:BK:129:THR:O    | 1.75                     | 0.85              |
| 33:BL:122:ALA:O    | 33:BL:126:MET:HG3  | 1.76                     | 0.85              |
| 34:BM:35:ARG:N     | 34:BM:49:GLY:HA2   | 1.91                     | 0.85              |
| 35:BN:97:ARG:C     | 35:BN:97:ARG:NE    | 2.34                     | 0.85              |
| 36:BO:38:GLN:C     | 36:BO:40:SER:N     | 2.33                     | 0.85              |
| 38:BQ:97:VAL:HA    | 38:BQ:114:VAL:HG22 | 1.55                     | 0.85              |
| 46:BY:73:GLN:O     | 46:BY:87:ASP:HB2   | 1.77                     | 0.85              |
| 53:B6:43:THR:O     | 53:B6:46:VAL:N     | 2.09                     | 0.85              |
| 1:AA:1101:A:H4'    | 1:AA:1102:A:O5'    | 1.73                     | 0.85              |
| 1:AA:1118:C:H5'    | 11:AL:103:THR:HG23 | 1.56                     | 0.85              |
| 1:AA:1510:U:H2'    | 1:AA:1511:G:C8     | 2.12                     | 0.85              |
| 5:AF:12:LEU:CD2    | 16:AQ:57:ARG:HG3   | 2.05                     | 0.85              |
| 7:AH:11:ILE:HB     | 7:AH:31:LEU:HD22   | 1.58                     | 0.85              |
| 10:AK:95:VAL:CG2   | 10:AK:133:LEU:HD21 | 2.07                     | 0.85              |
| 12:AM:24:VAL:HA    | 12:AM:34:VAL:HG21  | 1.59                     | 0.85              |
| 13:AN:78:GLN:O     | 13:AN:104:GLN:HB3  | 1.76                     | 0.85              |
| 18:AS:3:LYS:HB3    | 18:AS:3:LYS:NZ     | 1.91                     | 0.85              |
| 18:AS:3:LYS:HB3    | 18:AS:3:LYS:HZ2    | 1.38                     | 0.85              |
| 19:AT:62:SER:HB3   | 19:AT:72:ARG:HE    | 1.40                     | 0.85              |
| 21:AV:30:LEU:HA    | 21:AV:49:ILE:HA    | 1.58                     | 0.85              |
| 22:AW:25:ARG:HG2   | 22:AW:29:LYS:HE3   | 1.59                     | 0.85              |
| 24:BA:90:U:O2'     | 24:BA:91:A:H5''    | 1.77                     | 0.85              |
| 24:BA:501:A:H8     | 24:BA:501:A:O5'    | 1.59                     | 0.85              |
| 24:BA:1154:G:H5''  | 41:BT:58:ARG:HD3   | 1.58                     | 0.85              |
| 24:BA:1936:A:H5'   | 24:BA:1937:A:N3    | 1.92                     | 0.85              |
| 24:BA:2075:U:H2'   | 24:BA:2076:U:H5''  | 1.56                     | 0.85              |
| 28:BE:101:ARG:HD2  | 28:BE:169:ASN:HD21 | 1.42                     | 0.85              |
| 32:BK:93:THR:HG23  | 32:BK:96:ASP:H     | 1.38                     | 0.85              |
| 33:BL:27:LEU:CD1   | 33:BL:57:ILE:HD11  | 2.05                     | 0.85              |
| 34:BM:18:ALA:HB3   | 34:BM:55:VAL:O     | 1.77                     | 0.85              |
| 35:BN:37:ASP:H     | 35:BN:61:VAL:HB    | 1.41                     | 0.85              |
| 36:BO:45:LEU:HD13  | 54:B7:59:LYS:NZ    | 1.91                     | 0.85              |
| 37:BP:44:ALA:CA    | 37:BP:47:ILE:HD12  | 2.07                     | 0.85              |
| 43:BV:59:VAL:CA    | 43:BV:63:ASP:HA    | 2.07                     | 0.85              |
| 46:BY:39:VAL:HG21  | 46:BY:86:VAL:HG23  | 1.59                     | 0.85              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 49:B2:40:THR:HG22  | 49:B2:42:ALA:H     | 1.41                     | 0.85              |
| 55:B8:20:HIS:C     | 55:B8:22:ARG:H     | 1.81                     | 0.85              |
| 1:AA:186(A):C:H1'  | 22:AW:104:LEU:HD23 | 1.59                     | 0.85              |
| 1:AA:310:G:H2'     | 1:AA:311:C:C6      | 2.12                     | 0.85              |
| 1:AA:610:G:O2'     | 1:AA:611:A:H5'     | 1.76                     | 0.85              |
| 1:AA:1378:C:N3     | 1:AA:1379:G:H1'    | 1.91                     | 0.85              |
| 1:AA:1388:C:H2'    | 1:AA:1389:C:H6     | 1.42                     | 0.85              |
| 4:AE:54:THR:O      | 4:AE:58:ILE:HG13   | 1.76                     | 0.85              |
| 4:AE:176:GLU:O     | 4:AE:180:LEU:HG    | 1.76                     | 0.85              |
| 11:AL:49:PRO:HD3   | 11:AL:78:LYS:HG2   | 1.56                     | 0.85              |
| 11:AL:101:PHE:C    | 11:AL:102:LEU:HD23 | 2.01                     | 0.85              |
| 12:AM:10:GLY:HA3   | 12:AM:94:VAL:HG22  | 1.57                     | 0.85              |
| 24:BA:718:A:H3'    | 24:BA:719:C:H6     | 1.42                     | 0.85              |
| 24:BA:917:A:H2'    | 24:BA:918:A:H5''   | 1.58                     | 0.85              |
| 24:BA:1406:U:H2'   | 24:BA:1407:C:C6    | 2.11                     | 0.85              |
| 24:BA:1582:C:H3'   | 24:BA:1583:A:H5''  | 1.59                     | 0.85              |
| 24:BA:2323:G:H2'   | 24:BA:2324:C:C6    | 2.11                     | 0.85              |
| 24:BA:2416:C:C5'   | 36:BO:59:LEU:HB2   | 2.05                     | 0.85              |
| 24:BA:2493:U:H3'   | 24:BA:2493:U:C6    | 2.11                     | 0.85              |
| 24:BA:2742:C:OP1   | 55:B8:2:LYS:HE2    | 1.75                     | 0.85              |
| 24:BA:2881:C:H2'   | 24:BA:2882:A:C8    | 2.10                     | 0.85              |
| 26:BC:100:ILE:HD11 | 26:BC:123:VAL:HG22 | 1.56                     | 0.85              |
| 28:BE:8:LYS:HE2    | 28:BE:8:LYS:CA     | 2.06                     | 0.85              |
| 33:BL:10:LEU:CD2   | 33:BL:57:ILE:HG12  | 2.06                     | 0.85              |
| 35:BN:2:ILE:HG21   | 35:BN:32:TYR:HB3   | 1.58                     | 0.85              |
| 37:BP:7:MET:H      | 37:BP:70:PRO:CG    | 1.89                     | 0.85              |
| 41:BT:55:ARG:O     | 41:BT:58:ARG:HB3   | 1.75                     | 0.85              |
| 45:BX:16:ALA:HB3   | 45:BX:68:HIS:ND1   | 1.91                     | 0.85              |
| 52:B5:8:LYS:O      | 52:B5:28:ARG:HB3   | 1.76                     | 0.85              |
| 1:AA:668:G:H4'     | 17:AR:48:LYS:O     | 1.77                     | 0.85              |
| 1:AA:684:A:C4'     | 13:AN:12:ARG:HH22  | 1.89                     | 0.85              |
| 1:AA:691:G:O6      | 13:AN:55:LYS:HE2   | 1.75                     | 0.85              |
| 1:AA:1064:G:H1'    | 1:AA:1066:C:N3     | 1.91                     | 0.85              |
| 1:AA:1129:C:N4     | 1:AA:1139:G:C6     | 2.45                     | 0.85              |
| 1:AA:1143:G:H2'    | 1:AA:1144:G:C8     | 2.11                     | 0.85              |
| 1:AA:1298:C:C5     | 9:AJ:114:ARG:HD3   | 2.11                     | 0.85              |
| 1:AA:1490:C:O2'    | 1:AA:1491:G:H5'    | 1.77                     | 0.85              |
| 4:AE:78:GLN:HE22   | 4:AE:96:ARG:HH12   | 1.25                     | 0.85              |
| 9:AJ:69:VAL:HG21   | 9:AJ:104:LEU:HD11  | 1.58                     | 0.85              |
| 10:AK:18:ARG:HG3   | 10:AK:18:ARG:HH11  | 1.41                     | 0.85              |
| 15:AP:14:ARG:HA    | 15:AP:44:ARG:HA    | 1.57                     | 0.85              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 15:AP:23:TYR:CE2   | 15:AP:70:LEU:HD22 | 2.12                     | 0.85              |
| 18:AS:8:ARG:HH12   | 18:AS:11:SER:N    | 1.75                     | 0.85              |
| 19:AT:91:ARG:HA    | 19:AT:94:ASN:HD22 | 1.40                     | 0.85              |
| 20:AU:47:THR:H     | 20:AU:49:LYS:HZ3  | 1.24                     | 0.85              |
| 24:BA:29:U:H2'     | 24:BA:30:G:C8     | 2.10                     | 0.85              |
| 24:BA:34:C:H2'     | 24:BA:455:C:H41   | 1.40                     | 0.85              |
| 24:BA:51:G:H5'     | 24:BA:52:A:OP1    | 1.76                     | 0.85              |
| 24:BA:189:G:H2'    | 24:BA:205:G:H22   | 1.42                     | 0.85              |
| 24:BA:239:U:H1'    | 24:BA:259:G:N2    | 1.90                     | 0.85              |
| 24:BA:1222:C:H42   | 24:BA:1227:A:H61  | 1.23                     | 0.85              |
| 24:BA:1911:U:H2'   | 24:BA:1912:A:H5'  | 1.57                     | 0.85              |
| 24:BA:2083:G:H2'   | 24:BA:2084:C:H6   | 1.35                     | 0.85              |
| 24:BA:2353:G:H4'   | 47:BZ:32:ARG:NH2  | 1.90                     | 0.85              |
| 24:BA:2821:A:H5''  | 28:BE:110:GLY:HA3 | 1.58                     | 0.85              |
| 27:BD:232:PRO:HG2  | 27:BD:247:ALA:HA  | 1.57                     | 0.85              |
| 27:BD:234:GLY:N    | 27:BD:241:PRO:HG2 | 1.90                     | 0.85              |
| 35:BN:52:VAL:CG2   | 35:BN:53:LYS:N    | 2.39                     | 0.85              |
| 35:BN:62:VAL:CG2   | 35:BN:83:ALA:HA   | 2.05                     | 0.85              |
| 40:BS:44:ASP:O     | 40:BS:46:GLU:N    | 2.10                     | 0.85              |
| 49:B2:54:VAL:HG22  | 49:B2:55:ARG:H    | 1.38                     | 0.85              |
| 54:B7:15:LYS:O     | 54:B7:22:VAL:HG13 | 1.75                     | 0.85              |
| 1:AA:559:A:H4'     | 1:AA:560:U:H5'    | 0.92                     | 0.85              |
| 1:AA:952:U:C5'     | 1:AA:972:C:H41    | 1.88                     | 0.85              |
| 1:AA:983:A:H3'     | 1:AA:983:A:N3     | 1.91                     | 0.85              |
| 1:AA:1247:U:H2'    | 1:AA:1248:A:H8    | 1.42                     | 0.85              |
| 1:AA:1347:G:H8     | 11:AL:107:ARG:HB3 | 1.42                     | 0.85              |
| 4:AE:69:LEU:HB3    | 4:AE:162:ILE:HG22 | 1.56                     | 0.85              |
| 13:AN:58:PRO:HB3   | 13:AN:90:GLY:CA   | 2.06                     | 0.85              |
| 24:BA:388:G:O5'    | 50:B3:23:GLU:HB3  | 1.76                     | 0.85              |
| 24:BA:449:A:H2'    | 24:BA:450:G:O4'   | 1.77                     | 0.85              |
| 24:BA:482:A:N3     | 24:BA:482:A:H2'   | 1.88                     | 0.85              |
| 24:BA:483:A:O3'    | 45:BX:48:ALA:HB2  | 1.77                     | 0.85              |
| 24:BA:1353:A:H2'   | 24:BA:1354:A:C8   | 2.12                     | 0.85              |
| 24:BA:1810:A:H2'   | 24:BA:1811:G:H5'  | 1.57                     | 0.85              |
| 24:BA:1913:A:C4    | 24:BA:1918:A:N6   | 2.44                     | 0.85              |
| 24:BA:2405:G:H2'   | 24:BA:2411:A:H61  | 1.38                     | 0.85              |
| 25:BB:12:C:O4'     | 47:BZ:74:ARG:NE   | 2.10                     | 0.85              |
| 29:BF:158:THR:HG21 | 29:BF:195:ASP:HB2 | 1.56                     | 0.85              |
| 30:BG:32:PRO:HB2   | 30:BG:163:ALA:HA  | 1.59                     | 0.85              |
| 30:BG:53:LEU:HD23  | 30:BG:71:THR:N    | 1.92                     | 0.85              |
| 30:BG:57:ALA:HB2   | 30:BG:68:PRO:O    | 1.75                     | 0.85              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 31:BH:126:PRO:HG2   | 31:BH:132:ARG:HH22 | 1.41                     | 0.85              |
| 34:BM:68:GLU:N      | 34:BM:70:LYS:HZ1   | 1.74                     | 0.85              |
| 35:BN:64:ARG:HG3    | 35:BN:64:ARG:NH2   | 1.89                     | 0.85              |
| 35:BN:70:LYS:HZ3    | 35:BN:102:VAL:HG13 | 1.42                     | 0.85              |
| 35:BN:97:ARG:HB2    | 35:BN:97:ARG:CZ    | 2.04                     | 0.85              |
| 36:BO:128:HIS:HA    | 36:BO:147:LEU:CD2  | 2.06                     | 0.85              |
| 37:BP:96:VAL:HG12   | 37:BP:98:LYS:NZ    | 1.92                     | 0.85              |
| 38:BQ:45:ARG:O      | 38:BQ:49:ASP:HB2   | 1.75                     | 0.85              |
| 38:BQ:51:LEU:HD21   | 38:BQ:70:LEU:HD21  | 1.59                     | 0.85              |
| 42:BU:5:VAL:N       | 42:BU:12:TYR:HD2   | 1.74                     | 0.85              |
| 53:B6:21:ARG:HG2    | 53:B6:31:LEU:CD2   | 2.06                     | 0.85              |
| 1:AA:186(B):C:H4'   | 22:AW:89:ARG:NH1   | 1.92                     | 0.85              |
| 4:AE:16:HIS:C       | 4:AE:204:ASN:HB2   | 2.02                     | 0.85              |
| 4:AE:115:LEU:CD2    | 4:AE:149:LEU:HD13  | 2.06                     | 0.85              |
| 5:AF:11:ARG:HG3     | 5:AF:16:ARG:HH21   | 1.40                     | 0.85              |
| 5:AF:33:LEU:O       | 5:AF:36:ASP:HB3    | 1.77                     | 0.85              |
| 5:AF:150:LYS:HA     | 5:AF:169:ALA:HB2   | 1.58                     | 0.85              |
| 8:AI:98:LEU:HD22    | 8:AI:101:ALA:HB2   | 1.57                     | 0.85              |
| 9:AJ:69:VAL:HG11    | 9:AJ:104:LEU:HG    | 1.58                     | 0.85              |
| 10:AK:126:LYS:NZ    | 10:AK:127:LEU:HD23 | 1.91                     | 0.85              |
| 11:AL:19:LEU:HD21   | 11:AL:59:PHE:CB    | 2.01                     | 0.85              |
| 21:AV:5:LEU:CB      | 21:AV:9:VAL:HG22   | 2.04                     | 0.85              |
| 21:AV:15:LEU:HD12   | 21:AV:44:MET:HE1   | 1.58                     | 0.85              |
| 24:BA:271(B):G:H5'' | 24:BA:271(C):U:O4' | 1.77                     | 0.85              |
| 24:BA:1241:A:N3     | 24:BA:1241:A:C3'   | 2.39                     | 0.85              |
| 24:BA:1542:G:H1'    | 24:BA:1543:A:N1    | 1.91                     | 0.85              |
| 24:BA:2514:U:H2'    | 24:BA:2515:C:H6    | 1.41                     | 0.85              |
| 27:BD:7:LYS:HE2     | 27:BD:25:THR:HB    | 1.59                     | 0.85              |
| 34:BM:37:LYS:HD2    | 34:BM:43:THR:HA    | 1.57                     | 0.85              |
| 35:BN:39:ILE:C      | 35:BN:59:LYS:NZ    | 2.35                     | 0.85              |
| 39:BR:51:ALA:CB     | 39:BR:73:LEU:HG    | 2.06                     | 0.85              |
| 42:BU:67:GLY:HA2    | 42:BU:93:GLU:O     | 1.76                     | 0.85              |
| 1:AA:595:G:C8       | 1:AA:641:U:C4      | 2.64                     | 0.84              |
| 3:AB:55:U:H2'       | 3:AB:55:U:O2       | 1.77                     | 0.84              |
| 4:AE:91:PRO:HB3     | 4:AE:152:PHE:CD1   | 2.12                     | 0.84              |
| 6:AG:57:ARG:HG3     | 6:AG:202:LEU:O     | 1.77                     | 0.84              |
| 6:AG:126:ILE:O      | 6:AG:149:ALA:HB2   | 1.76                     | 0.84              |
| 7:AH:102:ALA:CB     | 7:AH:106:PRO:HB2   | 2.07                     | 0.84              |
| 8:AI:50:TYR:OH      | 20:AU:77:GLY:HA2   | 1.77                     | 0.84              |
| 9:AJ:23:VAL:HG13    | 9:AJ:43:PHE:CZ     | 2.12                     | 0.84              |
| 12:AM:30:SER:HB3    | 12:AM:80:LYS:HG3   | 1.59                     | 0.84              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 21:AV:13:ASP:HA    | 21:AV:16:LEU:HB2   | 1.59                     | 0.84              |
| 24:BA:83:G:O6      | 24:BA:102:G:H1'    | 1.76                     | 0.84              |
| 24:BA:576:U:H2'    | 24:BA:577:G:C8     | 2.13                     | 0.84              |
| 24:BA:594:U:H5''   | 54:B7:61:LEU:HD13  | 1.59                     | 0.84              |
| 24:BA:704:G:N2     | 24:BA:726:G:O2'    | 2.10                     | 0.84              |
| 24:BA:806:C:H2'    | 24:BA:807:U:H6     | 1.42                     | 0.84              |
| 24:BA:878:A:N3     | 24:BA:879:G:H5''   | 1.92                     | 0.84              |
| 24:BA:1700:A:H2'   | 24:BA:1701:A:C5'   | 2.07                     | 0.84              |
| 24:BA:2089:U:H2'   | 24:BA:2090:G:H8    | 1.42                     | 0.84              |
| 24:BA:2416:C:OP1   | 36:BO:59:LEU:CA    | 2.25                     | 0.84              |
| 24:BA:2602:A:N3    | 47:BZ:1:MET:HA     | 1.92                     | 0.84              |
| 26:BC:50:ASP:OD1   | 26:BC:52:ARG:HG2   | 1.75                     | 0.84              |
| 27:BD:89:SER:O     | 27:BD:159:ALA:HB2  | 1.77                     | 0.84              |
| 27:BD:175:LEU:HD22 | 27:BD:176:ARG:N    | 1.92                     | 0.84              |
| 31:BH:125:VAL:HA   | 31:BH:131:VAL:HG22 | 1.59                     | 0.84              |
| 39:BR:12:PHE:CD1   | 39:BR:13:ARG:N     | 2.45                     | 0.84              |
| 41:BT:49:HIS:CD2   | 41:BT:52:ARG:NH2   | 2.44                     | 0.84              |
| 41:BT:91:ASP:O     | 41:BT:95:LEU:HD21  | 1.76                     | 0.84              |
| 48:B1:4:GLN:HA     | 48:B1:7:GLU:OE1    | 1.77                     | 0.84              |
| 1:AA:327:A:H4'     | 1:AA:328:C:OP1     | 1.77                     | 0.84              |
| 1:AA:628:G:H2'     | 1:AA:629:G:H8      | 1.42                     | 0.84              |
| 4:AE:7:VAL:HG23    | 4:AE:8:LYS:H       | 1.42                     | 0.84              |
| 5:AF:84:ILE:HG13   | 5:AF:101:LEU:HD22  | 1.59                     | 0.84              |
| 6:AG:70:ILE:HD12   | 6:AG:100:ARG:HH21  | 1.41                     | 0.84              |
| 13:AN:84:VAL:HG22  | 13:AN:109:VAL:O    | 1.77                     | 0.84              |
| 18:AS:4:ILE:N      | 18:AS:4:ILE:HD13   | 1.92                     | 0.84              |
| 18:AS:53:VAL:O     | 18:AS:56:ALA:HB3   | 1.77                     | 0.84              |
| 24:BA:61:G:H2'     | 24:BA:62:C:C6      | 2.11                     | 0.84              |
| 24:BA:472:A:C2'    | 24:BA:473:G:H5''   | 2.06                     | 0.84              |
| 24:BA:533:G:OP2    | 41:BT:25:TRP:HB2   | 1.77                     | 0.84              |
| 24:BA:672:C:O5'    | 36:BO:38:GLN:NE2   | 2.10                     | 0.84              |
| 24:BA:722:A:H2'    | 24:BA:723:G:H8     | 1.39                     | 0.84              |
| 24:BA:931:G:H21    | 49:B2:24:LYS:HB3   | 1.40                     | 0.84              |
| 24:BA:1113:U:H2'   | 24:BA:1114:G:C8    | 2.13                     | 0.84              |
| 24:BA:1342:A:H2'   | 24:BA:1345:C:H41   | 1.42                     | 0.84              |
| 24:BA:1349:A:H2    | 24:BA:1598:C:N3    | 1.75                     | 0.84              |
| 24:BA:1458:C:H4'   | 24:BA:1459:G:C8    | 2.12                     | 0.84              |
| 24:BA:1955:U:H3    | 24:BA:2552:U:HO2'  | 1.23                     | 0.84              |
| 24:BA:2055:C:H2'   | 24:BA:2504:U:H5'   | 1.59                     | 0.84              |
| 24:BA:2691:C:C4    | 24:BA:2719:G:N2    | 2.45                     | 0.84              |
| 24:BA:2795:G:N3    | 24:BA:2795:G:H2'   | 1.93                     | 0.84              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 36:BO:55:ARG:HH21 | 36:BO:55:ARG:HB3   | 1.40                     | 0.84              |
| 37:BP:112:GLU:HA  | 37:BP:115:MET:CG   | 2.06                     | 0.84              |
| 38:BQ:59:ASP:O    | 38:BQ:63:ARG:HG3   | 1.77                     | 0.84              |
| 45:BX:31:LEU:HB3  | 45:BX:32:PRO:CD    | 2.07                     | 0.84              |
| 49:B2:17:LYS:HA   | 49:B2:20:LYS:CE    | 2.07                     | 0.84              |
| 52:B5:19:ARG:NH1  | 52:B5:43:CYS:CB    | 2.40                     | 0.84              |
| 52:B5:52:VAL:HG12 | 52:B5:53:LYS:N     | 1.92                     | 0.84              |
| 2:A1:38:U:H2'     | 2:A1:39:U:C6       | 2.11                     | 0.84              |
| 6:AG:133:VAL:HG11 | 6:AG:138:TYR:CD1   | 2.11                     | 0.84              |
| 6:AG:145:GLU:HB3  | 6:AG:184:LYS:HG2   | 1.57                     | 0.84              |
| 13:AN:58:PRO:HB2  | 13:AN:93:GLN:CB    | 2.07                     | 0.84              |
| 15:AP:11:ARG:HG3  | 15:AP:11:ARG:HH11  | 1.43                     | 0.84              |
| 17:AR:75:PRO:C    | 17:AR:78:TYR:HB3   | 2.02                     | 0.84              |
| 24:BA:511:U:C5    | 24:BA:512:G:N3     | 2.45                     | 0.84              |
| 24:BA:1065:U:C1'  | 24:BA:1074:G:H22   | 1.90                     | 0.84              |
| 24:BA:1137:G:O2'  | 34:BM:105:GLY:HA3  | 1.77                     | 0.84              |
| 24:BA:1658:C:OP1  | 28:BE:134:ILE:HB   | 1.77                     | 0.84              |
| 24:BA:1965:C:H3'  | 24:BA:1966:A:H8    | 1.31                     | 0.84              |
| 24:BA:2348:U:O4   | 24:BA:2382:G:N2    | 2.08                     | 0.84              |
| 24:BA:2530:A:C3'  | 24:BA:2531:A:H5''  | 2.07                     | 0.84              |
| 24:BA:2644:G:H8   | 24:BA:2644:G:O5'   | 1.59                     | 0.84              |
| 26:BC:97:GLU:HG3  | 26:BC:119:VAL:HB   | 1.57                     | 0.84              |
| 27:BD:5:LYS:HB3   | 27:BD:29:PRO:HD3   | 1.59                     | 0.84              |
| 27:BD:147:LEU:CG  | 27:BD:154:LYS:HD2  | 2.07                     | 0.84              |
| 28:BE:41:LYS:C    | 28:BE:43:GLY:H     | 1.81                     | 0.84              |
| 29:BF:118:ALA:HB2 | 29:BF:122:LYS:HE2  | 1.59                     | 0.84              |
| 29:BF:122:LYS:HA  | 29:BF:122:LYS:NZ   | 1.90                     | 0.84              |
| 30:BG:36:LYS:CE   | 30:BG:38:VAL:HG13  | 2.06                     | 0.84              |
| 32:BK:68:LEU:O    | 32:BK:72:LEU:HG    | 1.75                     | 0.84              |
| 32:BK:91:SER:HA   | 32:BK:121:LYS:HD2  | 1.59                     | 0.84              |
| 35:BN:64:ARG:HH22 | 35:BN:77:ILE:HA    | 1.41                     | 0.84              |
| 36:BO:149:GLU:CD  | 36:BO:150:ALA:H    | 1.84                     | 0.84              |
| 40:BS:27:THR:HB   | 40:BS:93:ARG:O     | 1.78                     | 0.84              |
| 40:BS:53:ARG:HH22 | 40:BS:101:PHE:N    | 1.72                     | 0.84              |
| 41:BT:108:GLU:HB2 | 41:BT:111:GLU:CD   | 2.01                     | 0.84              |
| 43:BV:35:ILE:HG13 | 51:B4:28:PRO:HG3   | 1.59                     | 0.84              |
| 46:BY:127:LYS:HD2 | 46:BY:163:LEU:CA   | 2.07                     | 0.84              |
| 46:BY:129:SER:HB3 | 46:BY:133:ILE:HG22 | 1.59                     | 0.84              |
| 46:BY:166:SER:OG  | 46:BY:167:PRO:HD2  | 1.76                     | 0.84              |
| 52:B5:20:ASN:ND2  | 52:B5:43:CYS:N     | 2.25                     | 0.84              |
| 1:AA:854:G:H5''   | 1:AA:871:U:H3      | 1.42                     | 0.84              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:939:G:H2'     | 1:AA:940:C:C6      | 2.11                     | 0.84              |
| 4:AE:74:LYS:HE2    | 4:AE:76:GLN:HB2    | 1.59                     | 0.84              |
| 4:AE:213:LEU:CD2   | 4:AE:214:ILE:HD13  | 2.08                     | 0.84              |
| 5:AF:12:LEU:CG     | 16:AQ:57:ARG:HG3   | 2.08                     | 0.84              |
| 5:AF:21:ARG:HB2    | 5:AF:58:GLU:HG2    | 1.59                     | 0.84              |
| 6:AG:18:LYS:HA     | 6:AG:33:MET:CE     | 2.07                     | 0.84              |
| 7:AH:32:VAL:O      | 7:AH:43:LEU:HG     | 1.77                     | 0.84              |
| 11:AL:8:GLY:O      | 11:AL:76:ALA:HB1   | 1.77                     | 0.84              |
| 14:AO:88:GLY:HA3   | 14:AO:99:HIS:NE2   | 1.92                     | 0.84              |
| 24:BA:281:G:N2     | 24:BA:282:A:N7     | 2.25                     | 0.84              |
| 24:BA:665:C:H2'    | 24:BA:666:G:C8     | 2.12                     | 0.84              |
| 24:BA:723:G:N2     | 24:BA:724:U:H1'    | 1.92                     | 0.84              |
| 24:BA:873:G:H4'    | 37:BP:65:PHE:CE2   | 2.12                     | 0.84              |
| 24:BA:1061:U:H4'   | 24:BA:1070:A:C1'   | 2.07                     | 0.84              |
| 24:BA:1144:G:H2'   | 24:BA:1145:C:C5    | 2.11                     | 0.84              |
| 24:BA:1204:A:H5'   | 24:BA:1206:G:OP1   | 1.76                     | 0.84              |
| 24:BA:1540:G:C5    | 24:BA:1541:U:H1'   | 2.12                     | 0.84              |
| 24:BA:1651:G:H2'   | 24:BA:1652:A:C8    | 2.11                     | 0.84              |
| 24:BA:1913:A:H2    | 24:BA:1917:U:C5    | 1.92                     | 0.84              |
| 24:BA:1918:A:OP2   | 24:BA:1918:A:C8    | 2.30                     | 0.84              |
| 24:BA:2034:U:H3'   | 24:BA:2035:G:C5'   | 2.04                     | 0.84              |
| 25:BB:12:C:H5''    | 47:BZ:74:ARG:HG2   | 1.56                     | 0.84              |
| 27:BD:9:TYR:CZ     | 27:BD:25:THR:HG21  | 2.11                     | 0.84              |
| 27:BD:61:LEU:HD13  | 27:BD:86:PRO:HD3   | 1.58                     | 0.84              |
| 27:BD:96:HIS:CE1   | 27:BD:102:LYS:HD3  | 2.12                     | 0.84              |
| 27:BD:246:PRO:HG3  | 27:BD:252:TRP:HE3  | 1.36                     | 0.84              |
| 31:BH:7:LEU:H      | 31:BH:8:PRO:CD     | 1.90                     | 0.84              |
| 31:BH:121:ILE:HG13 | 31:BH:133:VAL:HG21 | 1.59                     | 0.84              |
| 32:BK:7:GLU:N      | 32:BK:8:PRO:HD3    | 1.92                     | 0.84              |
| 33:BL:79:ARG:HD3   | 33:BL:134:MET:SD   | 2.17                     | 0.84              |
| 35:BN:122:LEU:H    | 40:BS:70:VAL:CG1   | 1.81                     | 0.84              |
| 39:BR:37:ALA:O     | 39:BR:51:ALA:CB    | 2.25                     | 0.84              |
| 39:BR:99:LYS:HG2   | 39:BR:103:GLU:OE1  | 1.76                     | 0.84              |
| 44:BW:63:LYS:N     | 44:BW:63:LYS:HE2   | 1.91                     | 0.84              |
| 45:BX:95:LYS:HG3   | 45:BX:103:GLY:HA3  | 1.59                     | 0.84              |
| 47:BZ:44:ARG:O     | 47:BZ:77:ARG:HB2   | 1.76                     | 0.84              |
| 52:B5:15:GLU:HA    | 52:B5:21:TYR:HA    | 1.60                     | 0.84              |
| 1:AA:453:A:C6      | 1:AA:454:C:N4      | 2.45                     | 0.84              |
| 1:AA:1342:C:O2'    | 11:AL:124:GLN:HB2  | 1.77                     | 0.84              |
| 4:AE:80:ILE:CD1    | 4:AE:208:ILE:HG23  | 2.08                     | 0.84              |
| 9:AJ:155:ARG:HA    | 9:AJ:155:ARG:NH1   | 1.93                     | 0.84              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 12:AM:60:ARG:N     | 12:AM:60:ARG:HH11 | 1.76                     | 0.84              |
| 18:AS:39:TYR:CB    | 18:AS:49:LEU:HD13 | 2.04                     | 0.84              |
| 22:AW:40:ALA:HA    | 22:AW:55:ILE:CD1  | 2.06                     | 0.84              |
| 23:AX:18:TYR:HB3   | 23:AX:22:ARG:O    | 1.76                     | 0.84              |
| 24:BA:95:G:H2'     | 48:B1:43:HIS:NE2  | 1.91                     | 0.84              |
| 24:BA:95:G:O5'     | 48:B1:39:LEU:HB3  | 1.76                     | 0.84              |
| 24:BA:451:C:H5     | 24:BA:453:C:H5'   | 1.41                     | 0.84              |
| 24:BA:576:U:H2'    | 24:BA:577:G:H8    | 1.42                     | 0.84              |
| 24:BA:1113:U:H2'   | 24:BA:1114:G:H8   | 1.41                     | 0.84              |
| 24:BA:1263:U:C2    | 24:BA:1264:G:N2   | 2.46                     | 0.84              |
| 24:BA:1543:A:OP2   | 24:BA:1544:C:C6   | 2.31                     | 0.84              |
| 24:BA:1784:A:O2'   | 24:BA:1785:A:P    | 2.35                     | 0.84              |
| 24:BA:2178:C:H5''  | 26:BC:46:LYS:HZ2  | 1.43                     | 0.84              |
| 24:BA:2331:G:N2    | 24:BA:2385:C:N4   | 2.24                     | 0.84              |
| 24:BA:2584:U:H2'   | 24:BA:2585:U:C6   | 2.12                     | 0.84              |
| 24:BA:2688:U:O2    | 24:BA:2688:U:H2'  | 1.78                     | 0.84              |
| 25:BB:32:C:H2'     | 25:BB:33:G:C8     | 2.12                     | 0.84              |
| 26:BC:22:ILE:HG21  | 26:BC:190:ARG:NH1 | 1.91                     | 0.84              |
| 27:BD:51:VAL:CB    | 27:BD:52:ARG:CZ   | 2.53                     | 0.84              |
| 28:BE:4:ILE:O      | 28:BE:27:LEU:HD22 | 1.78                     | 0.84              |
| 28:BE:147:PRO:HG2  | 28:BE:149:ARG:HD3 | 1.60                     | 0.84              |
| 31:BH:136:ILE:HG23 | 31:BH:137:ASP:H   | 1.42                     | 0.84              |
| 34:BM:3:THR:HG22   | 34:BM:4:TYR:H     | 1.41                     | 0.84              |
| 39:BR:93:LYS:HE2   | 39:BR:95:HIS:HB3  | 1.58                     | 0.84              |
| 44:BW:17:ALA:HB1   | 44:BW:27:THR:OG1  | 1.76                     | 0.84              |
| 46:BY:79:ARG:C     | 46:BY:80:ARG:HD2  | 2.02                     | 0.84              |
| 53:B6:41:ARG:HH11  | 53:B6:41:ARG:CB   | 1.90                     | 0.84              |
| 55:B8:9:ARG:HA     | 55:B8:34:GLN:HE22 | 1.42                     | 0.84              |
| 1:AA:233:C:O2'     | 1:AA:234:C:H5'    | 1.78                     | 0.84              |
| 1:AA:524:G:H2'     | 1:AA:525:C:C6     | 2.13                     | 0.84              |
| 1:AA:1327:C:OP1    | 23:AX:20:LYS:HB3  | 1.76                     | 0.84              |
| 2:A1:29:G:H2'      | 2:A1:30:U:C5'     | 2.05                     | 0.84              |
| 10:AK:21:LYS:O     | 10:AK:63:LEU:HB3  | 1.76                     | 0.84              |
| 13:AN:95:ILE:HA    | 13:AN:98:LEU:CD1  | 2.08                     | 0.84              |
| 13:AN:126:ARG:NH1  | 13:AN:126:ARG:HB3 | 1.93                     | 0.84              |
| 17:AR:36:ILE:CD1   | 17:AR:63:ARG:HD3  | 2.07                     | 0.84              |
| 17:AR:39:LEU:CD2   | 17:AR:56:LEU:HD22 | 2.08                     | 0.84              |
| 17:AR:64:ARG:HA    | 17:AR:67:LEU:HD12 | 1.58                     | 0.84              |
| 19:AT:19:VAL:HG21  | 19:AT:46:ASP:HB2  | 1.57                     | 0.84              |
| 19:AT:66:SER:CB    | 19:AT:69:LYS:HZ3  | 1.90                     | 0.84              |
| 20:AU:33:ASP:CG    | 20:AU:34:TYR:N    | 2.33                     | 0.84              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:70:G:O2'    | 24:BA:71:A:H5'     | 1.75                     | 0.84              |
| 24:BA:175:G:N2    | 24:BA:176:G:H1'    | 1.92                     | 0.84              |
| 24:BA:714:U:H2'   | 24:BA:715:G:C8     | 2.11                     | 0.84              |
| 24:BA:727:A:H2'   | 24:BA:727:A:N3     | 1.91                     | 0.84              |
| 24:BA:806:C:H2'   | 24:BA:807:U:C6     | 2.12                     | 0.84              |
| 24:BA:2043:C:N4   | 24:BA:2777:G:N3    | 2.25                     | 0.84              |
| 24:BA:2847:U:H3'  | 40:BS:99:LEU:HD11  | 1.59                     | 0.84              |
| 27:BD:232:PRO:CD  | 27:BD:247:ALA:HA   | 2.08                     | 0.84              |
| 28:BE:1:MET:C     | 28:BE:2:LYS:HG3    | 2.02                     | 0.84              |
| 28:BE:91:VAL:CG1  | 28:BE:93:VAL:HG22  | 2.08                     | 0.84              |
| 28:BE:133:LYS:HD2 | 28:BE:137:HIS:CG   | 2.13                     | 0.84              |
| 30:BG:8:LYS:HZ1   | 30:BG:176:LEU:HD11 | 1.42                     | 0.84              |
| 35:BN:57:VAL:HG21 | 35:BN:85:VAL:HG13  | 1.58                     | 0.84              |
| 43:BV:74:ALA:HB1  | 43:BV:105:VAL:HG23 | 1.58                     | 0.84              |
| 44:BW:4:ALA:HB3   | 48:B1:21:ARG:HH12  | 1.39                     | 0.84              |
| 47:BZ:5:LYS:CG    | 47:BZ:6:GLY:H      | 1.82                     | 0.84              |
| 47:BZ:51:VAL:HG11 | 47:BZ:79:VAL:CG2   | 2.06                     | 0.84              |
| 52:B5:20:ASN:ND2  | 52:B5:42:TRP:HD1   | 1.75                     | 0.84              |
| 1:AA:163:C:H2'    | 1:AA:164:U:O4'     | 1.77                     | 0.84              |
| 1:AA:734:G:H2'    | 1:AA:735:C:C6      | 2.13                     | 0.84              |
| 1:AA:866:C:H5     | 1:AA:867:G:H1'     | 1.38                     | 0.84              |
| 1:AA:1483:A:O5'   | 1:AA:1483:A:H8     | 1.61                     | 0.84              |
| 4:AE:200:ILE:O    | 4:AE:202:PRO:HD3   | 1.75                     | 0.84              |
| 4:AE:219:VAL:HG13 | 4:AE:222:ILE:HD11  | 1.60                     | 0.84              |
| 4:AE:222:ILE:HB   | 4:AE:226:ARG:HH21  | 1.42                     | 0.84              |
| 6:AG:31:CYS:O     | 6:AG:33:MET:HG2    | 1.78                     | 0.84              |
| 7:AH:94:ALA:CB    | 7:AH:98:THR:HG21   | 2.08                     | 0.84              |
| 9:AJ:29:LYS:HZ3   | 9:AJ:102:ARG:HB2   | 1.42                     | 0.84              |
| 10:AK:18:ARG:HA   | 10:AK:18:ARG:HH11  | 1.40                     | 0.84              |
| 14:AO:83:VAL:CG2  | 14:AO:104:VAL:HB   | 2.07                     | 0.84              |
| 15:AP:81:LEU:HD11 | 15:AP:88:ARG:HH22  | 1.42                     | 0.84              |
| 18:AS:21:VAL:HG13 | 18:AS:36:ILE:CD1   | 2.07                     | 0.84              |
| 22:AW:43:LEU:HD22 | 22:AW:48:LYS:HB2   | 1.58                     | 0.84              |
| 24:BA:397:G:OP2   | 50:B3:41:PRO:HG3   | 1.77                     | 0.84              |
| 24:BA:727:A:N1    | 24:BA:729:G:C6     | 2.45                     | 0.84              |
| 24:BA:1202:C:C4   | 24:BA:1203:G:C1'   | 2.57                     | 0.84              |
| 24:BA:1798:U:H5'  | 27:BD:257:LEU:HD12 | 1.57                     | 0.84              |
| 24:BA:1971:A:H3'  | 24:BA:1971:A:H8    | 1.42                     | 0.84              |
| 24:BA:2434:A:O2'  | 24:BA:2435:A:H5''  | 1.78                     | 0.84              |
| 24:BA:2492:U:H2'  | 24:BA:2492:U:O2    | 1.75                     | 0.84              |
| 24:BA:2787:C:H1'  | 28:BE:61:ARG:HD2   | 1.60                     | 0.84              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 29:BF:41:LEU:HA    | 29:BF:44:ARG:NE    | 1.92                     | 0.84              |
| 29:BF:157:VAL:CG1  | 29:BF:176:LEU:HD23 | 2.07                     | 0.84              |
| 30:BG:55:LYS:HE3   | 30:BG:152:LEU:HD21 | 1.59                     | 0.84              |
| 31:BH:149:ARG:CZ   | 31:BH:164:TYR:HD1  | 1.91                     | 0.84              |
| 34:BM:76:SER:C     | 34:BM:78:TYR:H     | 1.85                     | 0.84              |
| 35:BN:64:ARG:HH21  | 35:BN:64:ARG:CG    | 1.90                     | 0.84              |
| 37:BP:28:ALA:O     | 37:BP:29:PHE:HB2   | 1.76                     | 0.84              |
| 37:BP:42:ILE:HG12  | 37:BP:46:GLN:NE2   | 1.93                     | 0.84              |
| 40:BS:30:VAL:HG21  | 40:BS:90:GLN:HA    | 1.59                     | 0.84              |
| 50:B3:38:LYS:O     | 50:B3:39:CYS:HB2   | 1.75                     | 0.84              |
| 50:B3:68:ARG:HH11  | 50:B3:68:ARG:CA    | 1.90                     | 0.84              |
| 52:B5:11:LEU:HD22  | 54:B7:35:GLN:OE1   | 1.78                     | 0.84              |
| 1:AA:859:A:H2'     | 1:AA:860:A:O4'     | 1.77                     | 0.84              |
| 1:AA:872:A:O2'     | 1:AA:873:A:H5''    | 1.76                     | 0.84              |
| 1:AA:1109:C:H2'    | 1:AA:1110:A:O4'    | 1.76                     | 0.84              |
| 1:AA:1128:C:O2     | 1:AA:1130:A:N6     | 2.08                     | 0.84              |
| 1:AA:1231:G:OP1    | 11:AL:127:LYS:HG2  | 1.78                     | 0.84              |
| 1:AA:1327:C:H5''   | 23:AX:20:LYS:CD    | 2.07                     | 0.84              |
| 1:AA:1350:A:OP2    | 11:AL:118:LYS:HG3  | 1.76                     | 0.84              |
| 3:AD:28:G:H2'      | 3:AD:29:G:H8       | 1.43                     | 0.84              |
| 4:AE:71:VAL:HG22   | 4:AE:93:VAL:HB     | 1.59                     | 0.84              |
| 6:AG:7:PRO:O       | 6:AG:10:ARG:HB3    | 1.77                     | 0.84              |
| 6:AG:20:TYR:CD1    | 6:AG:21:LEU:N      | 2.45                     | 0.84              |
| 6:AG:197:PRO:O     | 6:AG:198:VAL:HG13  | 1.78                     | 0.84              |
| 10:AK:50:ARG:HG2   | 10:AK:50:ARG:HH11  | 1.39                     | 0.84              |
| 10:AK:103:VAL:HB   | 10:AK:108:GLY:CA   | 2.08                     | 0.84              |
| 19:AT:44:ALA:HB1   | 19:AT:72:ARG:HA    | 1.57                     | 0.84              |
| 24:BA:1028:A:OP2   | 24:BA:1126:A:N6    | 2.11                     | 0.84              |
| 24:BA:1135:C:H2'   | 24:BA:1136:G:H8    | 1.42                     | 0.84              |
| 24:BA:1161:C:H1'   | 42:BU:22:VAL:HG11  | 1.60                     | 0.84              |
| 24:BA:1213:A:N6    | 24:BA:1236:G:H1'   | 1.92                     | 0.84              |
| 24:BA:1263:U:H5''  | 51:B4:10:LYS:NZ    | 1.92                     | 0.84              |
| 24:BA:1324:G:C3'   | 24:BA:1325:G:H4'   | 2.07                     | 0.84              |
| 24:BA:2305:A:O2'   | 30:BG:136:ARG:HA   | 1.77                     | 0.84              |
| 27:BD:136:ILE:HD13 | 27:BD:173:VAL:HG11 | 1.59                     | 0.84              |
| 29:BF:44:ARG:HG3   | 29:BF:45:ARG:H     | 1.41                     | 0.84              |
| 29:BF:110:LEU:HD11 | 29:BF:181:LEU:HD23 | 1.57                     | 0.84              |
| 31:BH:11:VAL:CG2   | 31:BH:50:VAL:HG21  | 2.07                     | 0.84              |
| 32:BK:7:GLU:HA     | 32:BK:14:ASP:CG    | 2.02                     | 0.84              |
| 32:BK:94:ALA:HB1   | 32:BK:114:LEU:HD12 | 1.60                     | 0.84              |
| 32:BK:95:LYS:O     | 32:BK:98:ALA:HB3   | 1.78                     | 0.84              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 33:BL:9:LYS:HG2    | 33:BL:56:GLU:CG    | 2.08                     | 0.84              |
| 34:BM:70:LYS:NZ    | 34:BM:86:PRO:HB3   | 1.93                     | 0.84              |
| 42:BU:32:THR:CA    | 42:BU:64:HIS:O     | 2.21                     | 0.84              |
| 46:BY:152:ALA:O    | 46:BY:155:LEU:HD22 | 1.77                     | 0.84              |
| 1:AA:363:A:O2'     | 1:AA:364:A:H5'     | 1.76                     | 0.84              |
| 1:AA:1085:U:H5'    | 1:AA:1094:G:N2     | 1.93                     | 0.84              |
| 1:AA:1100:C:O2     | 1:AA:1102:A:H5'    | 1.76                     | 0.84              |
| 5:AF:11:ARG:HB3    | 5:AF:15:THR:O      | 1.78                     | 0.84              |
| 10:AK:18:ARG:HH11  | 10:AK:18:ARG:CA    | 1.90                     | 0.84              |
| 15:AP:48:LEU:HD22  | 15:AP:53:VAL:HG23  | 1.58                     | 0.84              |
| 24:BA:295:G:C2     | 24:BA:344:G:H1'    | 2.12                     | 0.84              |
| 24:BA:295:G:O2'    | 24:BA:296:C:H5'    | 1.78                     | 0.84              |
| 24:BA:371:A:H5''   | 24:BA:423:A:C8     | 2.12                     | 0.84              |
| 24:BA:578:A:C2'    | 24:BA:2018:G:H5''  | 2.07                     | 0.84              |
| 24:BA:678:C:H2'    | 24:BA:679:C:H6     | 1.42                     | 0.84              |
| 24:BA:724:U:O2'    | 24:BA:725:G:H5'    | 1.77                     | 0.84              |
| 24:BA:1006:C:O2'   | 34:BM:106:MET:HB3  | 1.78                     | 0.84              |
| 24:BA:1151:G:H2'   | 24:BA:1152:C:C6    | 2.11                     | 0.84              |
| 24:BA:1692:U:H1'   | 24:BA:1696:G:N2    | 1.93                     | 0.84              |
| 24:BA:2111:C:OP2   | 24:BA:2111:C:H6    | 1.60                     | 0.84              |
| 24:BA:2142:C:H2'   | 24:BA:2143:C:C6    | 2.11                     | 0.84              |
| 24:BA:2197:U:H2'   | 24:BA:2224:G:H22   | 1.42                     | 0.84              |
| 24:BA:2438:U:H4'   | 24:BA:2440:C:OP1   | 1.78                     | 0.84              |
| 24:BA:2548:G:H8    | 24:BA:2548:G:H5'   | 1.43                     | 0.84              |
| 24:BA:2712:U:O2    | 24:BA:2712(A):A:N7 | 2.09                     | 0.84              |
| 24:BA:2756:U:N3    | 24:BA:2758:A:C6    | 2.46                     | 0.84              |
| 24:BA:2841:C:H2'   | 24:BA:2842:G:C8    | 2.09                     | 0.84              |
| 27:BD:175:LEU:O    | 27:BD:182:LEU:HA   | 1.78                     | 0.84              |
| 28:BE:44:TYR:HD2   | 28:BE:45:THR:N     | 1.76                     | 0.84              |
| 28:BE:118:LYS:HE2  | 28:BE:118:LYS:CA   | 2.08                     | 0.84              |
| 30:BG:74:LYS:HG2   | 30:BG:75:LYS:HD2   | 1.58                     | 0.84              |
| 35:BN:117:LEU:HD23 | 35:BN:117:LEU:C    | 2.03                     | 0.84              |
| 40:BS:15:VAL:HG12  | 40:BS:16:ARG:O     | 1.78                     | 0.84              |
| 45:BX:82:PRO:CG    | 45:BX:97:ARG:H     | 1.91                     | 0.84              |
| 50:B3:5:ILE:HD13   | 50:B3:60:GLN:NE2   | 1.93                     | 0.84              |
| 1:AA:713:G:N2      | 1:AA:777:A:H1'     | 1.93                     | 0.84              |
| 1:AA:1288:A:N1     | 1:AA:1371:G:H1'    | 1.92                     | 0.84              |
| 4:AE:215:LEU:O     | 4:AE:218:ALA:HB3   | 1.78                     | 0.84              |
| 7:AH:118:ILE:C     | 7:AH:119:LEU:HD23  | 2.03                     | 0.84              |
| 8:AI:3:ARG:HG3     | 8:AI:65:VAL:O      | 1.78                     | 0.84              |
| 11:AL:63:ILE:HD12  | 11:AL:63:ILE:N     | 1.92                     | 0.84              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 13:AN:40:ILE:HD13  | 13:AN:40:ILE:N     | 1.93                     | 0.84              |
| 18:AS:44:THR:HG23  | 18:AS:45:THR:N     | 1.93                     | 0.84              |
| 20:AU:53:ARG:HA    | 20:AU:63:GLN:NE2   | 1.92                     | 0.84              |
| 24:BA:242:G:H2'    | 24:BA:254:G:C6     | 2.11                     | 0.84              |
| 24:BA:422:A:N3     | 24:BA:422:A:H2'    | 1.92                     | 0.84              |
| 24:BA:514:A:H2     | 24:BA:515:A:N9     | 1.75                     | 0.84              |
| 24:BA:996:A:H2'    | 24:BA:997:G:H8     | 1.42                     | 0.84              |
| 24:BA:1143:A:H2'   | 24:BA:1144:G:H8    | 1.42                     | 0.84              |
| 24:BA:1814:G:H2'   | 24:BA:1815:A:N7    | 1.92                     | 0.84              |
| 24:BA:1908:C:N4    | 24:BA:1923:U:H3    | 1.75                     | 0.84              |
| 24:BA:2275:C:H4'   | 24:BA:2276:G:O5'   | 1.77                     | 0.84              |
| 27:BD:106:ILE:HD12 | 27:BD:192:THR:CG2  | 2.08                     | 0.84              |
| 27:BD:140:THR:O    | 27:BD:165:ILE:HD13 | 1.77                     | 0.84              |
| 30:BG:163:ALA:HB2  | 30:BG:172:LEU:CD2  | 2.08                     | 0.84              |
| 31:BH:124:GLU:OE1  | 31:BH:133:VAL:HA   | 1.78                     | 0.84              |
| 35:BN:12:ASP:HB3   | 35:BN:93:PRO:HG2   | 1.59                     | 0.84              |
| 37:BP:43:THR:O     | 37:BP:47:ILE:HG13  | 1.77                     | 0.84              |
| 39:BR:9:ARG:HH11   | 39:BR:9:ARG:CA     | 1.90                     | 0.84              |
| 40:BS:30:VAL:HG22  | 40:BS:32:TYR:CZ    | 2.13                     | 0.84              |
| 41:BT:81:HIS:O     | 41:BT:84:LYS:HB2   | 1.78                     | 0.84              |
| 44:BW:8:ILE:HD11   | 44:BW:42:ALA:HB2   | 1.59                     | 0.84              |
| 45:BX:2:ARG:CD     | 45:BX:3:VAL:H      | 1.91                     | 0.84              |
| 46:BY:48:PHE:HB3   | 46:BY:54:HIS:HE1   | 1.42                     | 0.84              |
| 49:B2:8:LEU:HD12   | 49:B2:31:LEU:O     | 1.78                     | 0.84              |
| 49:B2:10:LYS:HG2   | 49:B2:12:PRO:HD3   | 1.60                     | 0.84              |
| 50:B3:47:GLN:HA    | 50:B3:52:THR:HG21  | 1.60                     | 0.84              |
| 1:AA:133:U:H3      | 1:AA:229:U:H3      | 1.26                     | 0.83              |
| 1:AA:451:A:N6      | 1:AA:480:U:H2'     | 1.92                     | 0.83              |
| 1:AA:761:G:C5'     | 19:AT:102:GLY:HA3  | 2.07                     | 0.83              |
| 1:AA:1344:C:H4'    | 11:AL:120:ARG:HB3  | 1.59                     | 0.83              |
| 1:AA:1348:U:H4'    | 11:AL:120:ARG:HH11 | 1.43                     | 0.83              |
| 1:AA:1472:U:O2'    | 1:AA:1473:A:H5'    | 1.78                     | 0.83              |
| 12:AM:27:ALA:HB2   | 12:AM:85:LEU:CG    | 2.08                     | 0.83              |
| 24:BA:31:C:O2'     | 24:BA:32:C:H5'     | 1.78                     | 0.83              |
| 24:BA:221:A:N6     | 24:BA:265:A:H62    | 1.74                     | 0.83              |
| 24:BA:251:A:H2'    | 24:BA:252:G:C4'    | 2.08                     | 0.83              |
| 24:BA:1071:G:O4'   | 24:BA:1089:G:N7    | 2.11                     | 0.83              |
| 24:BA:1270:C:C5'   | 24:BA:1271:G:H5''  | 2.07                     | 0.83              |
| 24:BA:1813:G:H4'   | 27:BD:46:GLN:HB3   | 1.59                     | 0.83              |
| 24:BA:1943:U:C1'   | 24:BA:1945:G:H5''  | 2.09                     | 0.83              |
| 24:BA:2232:U:O2'   | 24:BA:2233:U:H5'   | 1.78                     | 0.83              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:2675:A:H5'   | 35:BN:29:ASN:HB3  | 1.58                     | 0.83              |
| 24:BA:2821:A:OP2   | 24:BA:2821:A:H3'  | 1.76                     | 0.83              |
| 29:BF:158:THR:CG2  | 29:BF:196:LEU:H   | 1.88                     | 0.83              |
| 32:BK:70:LYS:O     | 32:BK:74:ASN:HB2  | 1.77                     | 0.83              |
| 42:BU:11:GLN:O     | 42:BU:21:ARG:HD2  | 1.78                     | 0.83              |
| 42:BU:96:ILE:HD12  | 42:BU:96:ILE:O    | 1.78                     | 0.83              |
| 43:BV:18:ARG:HD3   | 43:BV:76:VAL:HG12 | 1.59                     | 0.83              |
| 46:BY:79:ARG:HB2   | 46:BY:80:ARG:NH1  | 1.92                     | 0.83              |
| 1:AA:1075:C:H4'    | 1:AA:1101:A:N6    | 1.93                     | 0.83              |
| 1:AA:1151:A:N3     | 12:AM:39:PRO:HG3  | 1.92                     | 0.83              |
| 1:AA:1293:G:H2'    | 1:AA:1294:G:H8    | 1.41                     | 0.83              |
| 5:AF:12:LEU:HD21   | 16:AQ:57:ARG:CG   | 2.07                     | 0.83              |
| 11:AL:47:LEU:HD12  | 11:AL:51:ARG:NH2  | 1.93                     | 0.83              |
| 12:AM:61:GLU:HG2   | 12:AM:62:HIS:H    | 1.42                     | 0.83              |
| 17:AR:62:GLN:HA    | 17:AR:65:ARG:CZ   | 2.07                     | 0.83              |
| 20:AU:76:LEU:H     | 20:AU:76:LEU:HD22 | 1.41                     | 0.83              |
| 24:BA:775:G:C2'    | 24:BA:794:G:N7    | 2.41                     | 0.83              |
| 24:BA:860:U:C5     | 24:BA:2267:A:H4'  | 2.12                     | 0.83              |
| 24:BA:1183:G:H1'   | 24:BA:1184:G:C8   | 2.13                     | 0.83              |
| 24:BA:1626:G:N2    | 24:BA:1634:A:H1'  | 1.92                     | 0.83              |
| 25:BB:114:G:H1'    | 39:BR:38:GLN:NE2  | 1.92                     | 0.83              |
| 26:BC:75:LEU:HD22  | 26:BC:110:PHE:CZ  | 2.12                     | 0.83              |
| 27:BD:118:VAL:H    | 27:BD:129:ASN:ND2 | 1.74                     | 0.83              |
| 29:BF:9:ILE:HG21   | 29:BF:124:LEU:HB3 | 1.60                     | 0.83              |
| 29:BF:103:LYS:CA   | 29:BF:106:ARG:HG2 | 2.08                     | 0.83              |
| 35:BN:121:VAL:HG12 | 40:BS:70:VAL:O    | 1.78                     | 0.83              |
| 36:BO:95:VAL:C     | 36:BO:97:PRO:HD2  | 2.03                     | 0.83              |
| 41:BT:88:ILE:CG1   | 42:BU:52:VAL:HG13 | 2.08                     | 0.83              |
| 42:BU:27:ALA:O     | 42:BU:33:VAL:HG21 | 1.78                     | 0.83              |
| 43:BV:41:LYS:HZ3   | 43:BV:41:LYS:HB3  | 1.42                     | 0.83              |
| 45:BX:72:VAL:HG21  | 45:BX:96:ILE:HG12 | 1.60                     | 0.83              |
| 46:BY:42:VAL:HG12  | 46:BY:46:LYS:NZ   | 1.93                     | 0.83              |
| 52:B5:20:ASN:ND2   | 52:B5:41:PRO:HB2  | 1.92                     | 0.83              |
| 1:AA:570:G:N1      | 1:AA:866:C:N4     | 2.26                     | 0.83              |
| 1:AA:817:C:O2'     | 1:AA:818:G:C5'    | 2.25                     | 0.83              |
| 1:AA:1135:U:H4'    | 1:AA:1136:U:C5    | 2.13                     | 0.83              |
| 3:AC:15:G:H22      | 3:AC:48:C:H42     | 1.25                     | 0.83              |
| 5:AF:73:PRO:HB3    | 5:AF:105:GLU:OE1  | 1.78                     | 0.83              |
| 7:AH:91:LEU:HD23   | 7:AH:91:LEU:C     | 2.03                     | 0.83              |
| 9:AJ:111:ARG:HD2   | 9:AJ:123:GLU:HB2  | 1.59                     | 0.83              |
| 12:AM:34:VAL:HA    | 12:AM:74:ILE:HG12 | 1.59                     | 0.83              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 19:AT:76:LEU:HD11  | 19:AT:79:SER:OG    | 1.77                     | 0.83              |
| 22:AW:75:ASN:O     | 22:AW:78:ALA:HB3   | 1.78                     | 0.83              |
| 24:BA:270(A):A:H5' | 24:BA:270(B):A:OP2 | 1.78                     | 0.83              |
| 24:BA:541:C:H2'    | 24:BA:542:C:C6     | 2.13                     | 0.83              |
| 24:BA:1547:C:O2'   | 24:BA:1548:C:H5'   | 1.77                     | 0.83              |
| 24:BA:1559:G:C4    | 24:BA:1559:G:H3'   | 2.11                     | 0.83              |
| 24:BA:1700:A:H3'   | 24:BA:1701:A:H8    | 1.41                     | 0.83              |
| 24:BA:1971:A:H3'   | 24:BA:1971:A:C8    | 2.13                     | 0.83              |
| 24:BA:2037:G:H2'   | 24:BA:2038:G:C8    | 2.13                     | 0.83              |
| 24:BA:2327:A:C2'   | 24:BA:2328:A:H8    | 1.90                     | 0.83              |
| 24:BA:2334:G:H22   | 25:BB:12:C:H42     | 1.23                     | 0.83              |
| 24:BA:2399:G:N2    | 24:BA:2400:G:H1'   | 1.93                     | 0.83              |
| 26:BC:89:ALA:HA    | 26:BC:154:ARG:HG3  | 1.60                     | 0.83              |
| 26:BC:181:PRO:HD2  | 26:BC:184:LYS:HD2  | 1.59                     | 0.83              |
| 27:BD:51:VAL:HB    | 27:BD:52:ARG:NE    | 1.93                     | 0.83              |
| 30:BG:169:ALA:O    | 30:BG:172:LEU:HB3  | 1.78                     | 0.83              |
| 32:BK:50:ARG:O     | 32:BK:53:ALA:HB3   | 1.79                     | 0.83              |
| 35:BN:18:LYS:HE2   | 35:BN:44:LYS:HD3   | 1.60                     | 0.83              |
| 35:BN:122:LEU:HG   | 40:BS:71:GLY:C     | 2.03                     | 0.83              |
| 37:BP:101:ARG:HG3  | 37:BP:101:ARG:NH1  | 1.93                     | 0.83              |
| 38:BQ:88:ARG:HH11  | 38:BQ:88:ARG:CB    | 1.88                     | 0.83              |
| 42:BU:43:GLU:N     | 42:BU:44:LYS:HZ1   | 1.74                     | 0.83              |
| 43:BV:12:ILE:HG12  | 43:BV:101:SER:HB2  | 1.59                     | 0.83              |
| 44:BW:55:ASN:N     | 44:BW:55:ASN:HD22  | 1.76                     | 0.83              |
| 44:BW:60:ARG:HD3   | 44:BW:62:LYS:NZ    | 1.93                     | 0.83              |
| 51:B4:10:LYS:HE3   | 51:B4:15:ARG:CZ    | 2.08                     | 0.83              |
| 54:B7:54:GLU:N     | 54:B7:56:GLU:OE2   | 2.11                     | 0.83              |
| 1:AA:754:C:H3'     | 1:AA:754:C:O2      | 1.78                     | 0.83              |
| 4:AE:168:THR:OG1   | 4:AE:192:SER:HA    | 1.79                     | 0.83              |
| 4:AE:209:ARG:NH1   | 4:AE:213:LEU:HD12  | 1.94                     | 0.83              |
| 6:AG:20:TYR:CA     | 6:AG:33:MET:SD     | 2.66                     | 0.83              |
| 9:AJ:64:GLN:HG3    | 9:AJ:128:ALA:O     | 1.77                     | 0.83              |
| 10:AK:36:LEU:HD12  | 10:AK:48:TYR:HB2   | 1.60                     | 0.83              |
| 15:AP:34:LEU:HD23  | 15:AP:39:ILE:HG13  | 1.59                     | 0.83              |
| 24:BA:24:G:H2'     | 24:BA:25:U:C6      | 2.13                     | 0.83              |
| 24:BA:111:A:H2'    | 24:BA:112:U:C6     | 2.14                     | 0.83              |
| 24:BA:239:U:O2'    | 24:BA:240:G:H5'    | 1.79                     | 0.83              |
| 24:BA:269:U:H5''   | 24:BA:270(Y):G:C2' | 2.08                     | 0.83              |
| 24:BA:623:G:C8     | 36:BO:105:LEU:HD13 | 2.14                     | 0.83              |
| 24:BA:784:A:OP1    | 24:BA:2588:G:H5''  | 1.78                     | 0.83              |
| 24:BA:811:U:C4     | 36:BO:22:GLY:HA3   | 2.13                     | 0.83              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1006:C:O2    | 34:BM:106:MET:HG2  | 1.78                     | 0.83              |
| 24:BA:1530:G:H22   | 24:BA:1541:U:H2'   | 1.43                     | 0.83              |
| 24:BA:1966:A:H1'   | 24:BA:2593:U:C5'   | 2.08                     | 0.83              |
| 24:BA:2026:C:O2'   | 24:BA:2027:G:H5'   | 1.79                     | 0.83              |
| 24:BA:2185:C:H2'   | 24:BA:2186:G:H8    | 1.43                     | 0.83              |
| 24:BA:2329:G:H22   | 24:BA:2386:C:N4    | 1.75                     | 0.83              |
| 24:BA:2781:A:H2'   | 24:BA:2782:G:O2'   | 1.78                     | 0.83              |
| 28:BE:136:ARG:NH2  | 28:BE:136:ARG:O    | 2.11                     | 0.83              |
| 29:BF:156:LEU:HG   | 29:BF:173:VAL:HG23 | 1.60                     | 0.83              |
| 30:BG:50:ALA:N     | 30:BG:70:VAL:HG13  | 1.93                     | 0.83              |
| 30:BG:114:ILE:HD12 | 30:BG:115:ARG:H    | 1.42                     | 0.83              |
| 34:BM:39:ARG:HB3   | 34:BM:48:MET:HG3   | 1.60                     | 0.83              |
| 34:BM:57:ALA:HB3   | 34:BM:124:ALA:CA   | 2.07                     | 0.83              |
| 34:BM:74:ARG:O     | 34:BM:74:ARG:HG2   | 1.74                     | 0.83              |
| 38:BQ:18:LEU:HB3   | 38:BQ:22:ARG:HH21  | 1.42                     | 0.83              |
| 39:BR:97:ARG:O     | 39:BR:100:ALA:HB3  | 1.77                     | 0.83              |
| 40:BS:87:ASP:C     | 40:BS:88:ILE:HG13  | 2.03                     | 0.83              |
| 41:BT:94:ASN:ND2   | 42:BU:6:LYS:HE3    | 1.92                     | 0.83              |
| 46:BY:144:LEU:C    | 46:BY:174:VAL:HG21 | 2.02                     | 0.83              |
| 48:B1:1:MET:HB3    | 48:B1:4:GLN:HB2    | 1.61                     | 0.83              |
| 55:B8:11:CYS:HB3   | 55:B8:32:HIS:CE1   | 2.13                     | 0.83              |
| 1:AA:218:C:H5'     | 1:AA:466:C:N4      | 1.94                     | 0.83              |
| 1:AA:1202:G:C4     | 16:AQ:42:ILE:HD13  | 2.13                     | 0.83              |
| 1:AA:1481:U:H2'    | 1:AA:1482:G:C8     | 2.13                     | 0.83              |
| 3:AD:17:C:H3'      | 3:AD:18:G:H8       | 1.43                     | 0.83              |
| 4:AE:82:ARG:HB2    | 4:AE:94:ASN:ND2    | 1.94                     | 0.83              |
| 6:AG:13:ARG:NH2    | 6:AG:40:PRO:HA     | 1.92                     | 0.83              |
| 13:AN:33:THR:HA    | 13:AN:39:PRO:HA    | 1.58                     | 0.83              |
| 13:AN:41:THR:OG1   | 13:AN:71:LYS:HD3   | 1.78                     | 0.83              |
| 15:AP:78:ILE:HA    | 15:AP:81:LEU:CD1   | 2.07                     | 0.83              |
| 17:AR:56:LEU:O     | 17:AR:60:VAL:HG23  | 1.77                     | 0.83              |
| 22:AW:58:LYS:O     | 22:AW:61:SER:OG    | 1.97                     | 0.83              |
| 24:BA:775:G:N2     | 24:BA:787:U:C2'    | 2.41                     | 0.83              |
| 24:BA:813:U:OP2    | 36:BO:26:GLY:HA2   | 1.77                     | 0.83              |
| 24:BA:893:C:H2'    | 24:BA:894:C:H6     | 1.43                     | 0.83              |
| 24:BA:987:G:O2'    | 24:BA:1000:A:H1'   | 1.77                     | 0.83              |
| 24:BA:1196:C:H2'   | 24:BA:1197:G:C8    | 2.13                     | 0.83              |
| 24:BA:1299:G:N2    | 24:BA:1640:C:H5'   | 1.94                     | 0.83              |
| 24:BA:1541:U:H2'   | 24:BA:1541:U:O2    | 1.77                     | 0.83              |
| 24:BA:1716:U:O2    | 24:BA:1716:U:H2'   | 1.77                     | 0.83              |
| 27:BD:18:VAL:C     | 27:BD:20:ASP:H     | 1.86                     | 0.83              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 27:BD:221:VAL:O   | 27:BD:222:ARG:HG3 | 1.77                     | 0.83              |
| 28:BE:54:GLN:CD   | 28:BE:56:PRO:HD2  | 2.03                     | 0.83              |
| 31:BH:42:ARG:O    | 31:BH:53:GLU:HG2  | 1.79                     | 0.83              |
| 36:BO:107:LYS:HZ1 | 36:BO:110:TYR:HB3 | 1.44                     | 0.83              |
| 38:BQ:20:LEU:HD21 | 38:BQ:24:GLN:CG   | 2.07                     | 0.83              |
| 39:BR:20:ARG:HH21 | 39:BR:20:ARG:CB   | 1.84                     | 0.83              |
| 47:BZ:54:GLY:O    | 47:BZ:56:ASP:N    | 2.10                     | 0.83              |
| 1:AA:910:C:O2'    | 1:AA:911:U:H5'    | 1.78                     | 0.83              |
| 3:AB:74:C:C4      | 24:BA:2555:U:C2   | 2.67                     | 0.83              |
| 14:AO:92:ASP:C    | 14:AO:93:LEU:HD23 | 2.04                     | 0.83              |
| 19:AT:4:LYS:HE2   | 19:AT:5:VAL:O     | 1.78                     | 0.83              |
| 24:BA:176:G:H2'   | 24:BA:177:G:C8    | 2.13                     | 0.83              |
| 24:BA:387:U:O5'   | 50:B3:29:PRO:HG3  | 1.77                     | 0.83              |
| 24:BA:456:C:H5    | 44:BW:68:ARG:NH1  | 1.76                     | 0.83              |
| 24:BA:949:C:H2'   | 24:BA:950:G:H8    | 1.42                     | 0.83              |
| 24:BA:1170:G:H2'  | 24:BA:1170:G:N3   | 1.94                     | 0.83              |
| 24:BA:1266:G:N7   | 43:BV:16:LYS:HD2  | 1.93                     | 0.83              |
| 24:BA:1315:C:H2'  | 24:BA:1316:U:C6   | 2.13                     | 0.83              |
| 24:BA:2052:G:H2'  | 24:BA:2053:G:H8   | 1.41                     | 0.83              |
| 24:BA:2305:A:H8   | 24:BA:2306:C:C5'  | 1.90                     | 0.83              |
| 24:BA:2862:G:H2'  | 24:BA:2863:C:C6   | 2.12                     | 0.83              |
| 25:BB:13:A:H2     | 25:BB:69:G:H21    | 1.24                     | 0.83              |
| 28:BE:49:LEU:HD13 | 28:BE:76:ARG:CG   | 2.09                     | 0.83              |
| 29:BF:64:ILE:HD13 | 29:BF:65:TRP:H    | 1.43                     | 0.83              |
| 30:BG:87:PRO:O    | 30:BG:88:ILE:HG13 | 1.79                     | 0.83              |
| 31:BH:66:GLY:O    | 31:BH:69:ARG:HG2  | 1.79                     | 0.83              |
| 34:BM:11:PRO:HB2  | 34:BM:13:TRP:HZ3  | 1.43                     | 0.83              |
| 38:BQ:54:LEU:HA   | 38:BQ:57:ARG:HG3  | 1.61                     | 0.83              |
| 41:BT:13:LYS:O    | 41:BT:17:ILE:HG12 | 1.78                     | 0.83              |
| 42:BU:5:VAL:HG13  | 42:BU:38:LEU:O    | 1.76                     | 0.83              |
| 43:BV:4:LYS:HA    | 43:BV:106:ILE:CD1 | 2.08                     | 0.83              |
| 44:BW:7:VAL:HG21  | 48:B1:31:ARG:NH2  | 1.94                     | 0.83              |
| 45:BX:7:VAL:HG13  | 45:BX:71:LYS:HB3  | 1.59                     | 0.83              |
| 49:B2:37:LEU:HD21 | 49:B2:39:ASP:HA   | 1.60                     | 0.83              |
| 1:AA:34:C:O2'     | 1:AA:35:G:H5'     | 1.77                     | 0.83              |
| 1:AA:317:G:O2'    | 1:AA:318:G:H5'    | 1.78                     | 0.83              |
| 9:AJ:73:MET:HE1   | 9:AJ:149:ARG:HH21 | 1.44                     | 0.83              |
| 14:AO:28:LYS:HE3  | 14:AO:33:ARG:HH12 | 1.43                     | 0.83              |
| 14:AO:93:LEU:CD1  | 14:AO:96:VAL:HG21 | 2.08                     | 0.83              |
| 15:AP:60:VAL:HA   | 15:AP:63:THR:CG2  | 2.08                     | 0.83              |
| 16:AQ:13:THR:HG22 | 16:AQ:15:LYS:HB2  | 1.59                     | 0.83              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:75:G:H4'     | 48:B1:50:ARG:NH1  | 1.94                     | 0.83              |
| 24:BA:152:G:H22    | 24:BA:175:G:H1'   | 1.41                     | 0.83              |
| 24:BA:197:A:H62    | 24:BA:248:G:H22   | 1.24                     | 0.83              |
| 24:BA:640:C:H2'    | 24:BA:641:C:H5''  | 1.55                     | 0.83              |
| 24:BA:672:C:H2'    | 24:BA:673:C:C6    | 2.14                     | 0.83              |
| 24:BA:824:A:H5''   | 24:BA:825:C:OP2   | 1.77                     | 0.83              |
| 24:BA:1180:C:H2'   | 24:BA:1181:C:C6   | 2.12                     | 0.83              |
| 24:BA:1842:G:H2'   | 24:BA:1843:C:C6   | 2.12                     | 0.83              |
| 24:BA:2227:A:H4'   | 27:BD:262:ARG:HG3 | 1.61                     | 0.83              |
| 24:BA:2246:G:C2    | 24:BA:2247:A:C5   | 2.67                     | 0.83              |
| 24:BA:2286:A:H4'   | 24:BA:2287:A:C1'  | 2.08                     | 0.83              |
| 26:BC:75:LEU:HD11  | 26:BC:99:ILE:HD13 | 1.60                     | 0.83              |
| 28:BE:104:VAL:HG12 | 28:BE:105:THR:N   | 1.94                     | 0.83              |
| 29:BF:18:ARG:HG2   | 29:BF:18:ARG:HH11 | 1.43                     | 0.83              |
| 29:BF:38:ARG:NH1   | 36:BO:10:PRO:HA   | 1.93                     | 0.83              |
| 34:BM:23:LEU:CD2   | 34:BM:61:ARG:O    | 2.26                     | 0.83              |
| 35:BN:67:LYS:HA    | 35:BN:67:LYS:HE2  | 1.61                     | 0.83              |
| 37:BP:8:LYS:NZ     | 37:BP:93:TYR:HD2  | 1.76                     | 0.83              |
| 38:BQ:98:LEU:HD23  | 38:BQ:99:LYS:HZ1  | 1.42                     | 0.83              |
| 41:BT:89:GLU:OE1   | 42:BU:50:PRO:HB3  | 1.79                     | 0.83              |
| 42:BU:26:ASP:O     | 42:BU:29:PRO:HD2  | 1.79                     | 0.83              |
| 1:AA:564:C:C5      | 19:AT:31:LEU:HD21 | 2.14                     | 0.83              |
| 1:AA:1100:C:H2'    | 4:AE:98:LEU:HD11  | 1.59                     | 0.83              |
| 3:AC:72:C:H2'      | 3:AC:73:A:C8      | 2.14                     | 0.83              |
| 10:AK:75:ARG:CZ    | 10:AK:75:ARG:HB2  | 2.07                     | 0.83              |
| 24:BA:216:A:H2'    | 24:BA:217:G:C8    | 2.14                     | 0.83              |
| 24:BA:1312:U:C2'   | 24:BA:1313:U:O4'  | 2.23                     | 0.83              |
| 24:BA:1334:G:H5''  | 44:BW:65:ARG:NH1  | 1.93                     | 0.83              |
| 24:BA:1359:A:N6    | 24:BA:1371:G:H21  | 1.76                     | 0.83              |
| 24:BA:1454:U:O2    | 24:BA:1454:U:H2'  | 1.75                     | 0.83              |
| 24:BA:1826:G:H2'   | 24:BA:1827:C:H5'  | 1.61                     | 0.83              |
| 24:BA:2525:G:N2    | 24:BA:2539:C:C4   | 2.46                     | 0.83              |
| 27:BD:133:LEU:HD11 | 27:BD:185:VAL:CG1 | 2.08                     | 0.83              |
| 28:BE:14:ILE:HD12  | 28:BE:14:ILE:H    | 1.42                     | 0.83              |
| 28:BE:154:LYS:NZ   | 28:BE:156:MET:HB2 | 1.94                     | 0.83              |
| 31:BH:121:ILE:HD11 | 31:BH:123:PHE:CE1 | 2.12                     | 0.83              |
| 34:BM:15:LEU:HD21  | 34:BM:137:LYS:C   | 2.04                     | 0.83              |
| 39:BR:103:GLU:O    | 39:BR:106:ARG:HB3 | 1.79                     | 0.83              |
| 43:BV:44:ALA:O     | 43:BV:47:VAL:HG23 | 1.79                     | 0.83              |
| 46:BY:127:LYS:HB3  | 46:BY:162:GLU:O   | 1.79                     | 0.83              |
| 49:B2:19:GLN:NE2   | 49:B2:50:VAL:HA   | 1.94                     | 0.83              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 51:B4:55:ARG:O     | 51:B4:56:LYS:HG2  | 1.79                     | 0.83              |
| 53:B6:21:ARG:HB2   | 53:B6:21:ARG:NH1  | 1.94                     | 0.83              |
| 1:AA:55:A:C2'      | 1:AA:56:U:H5'     | 2.09                     | 0.83              |
| 1:AA:128:G:H5''    | 19:AT:2:PRO:HA    | 1.61                     | 0.83              |
| 1:AA:246:A:O2'     | 1:AA:247:G:O4'    | 1.97                     | 0.83              |
| 1:AA:265:G:H2'     | 1:AA:267:C:C5     | 2.14                     | 0.83              |
| 1:AA:279:A:C5'     | 1:AA:280:C:H3'    | 2.08                     | 0.83              |
| 1:AA:296:U:H2'     | 1:AA:297:G:C8     | 2.13                     | 0.83              |
| 1:AA:399:G:H2'     | 1:AA:400:C:H6     | 1.41                     | 0.83              |
| 1:AA:659:U:H2'     | 1:AA:660:G:H8     | 1.42                     | 0.83              |
| 1:AA:677:U:H2'     | 1:AA:678:U:C6     | 2.14                     | 0.83              |
| 1:AA:762:C:H2'     | 1:AA:763:G:C8     | 2.13                     | 0.83              |
| 1:AA:1507:A:O2'    | 1:AA:1508:G:H5'   | 1.79                     | 0.83              |
| 3:AB:74:C:C5       | 24:BA:2555:U:C4   | 2.66                     | 0.83              |
| 4:AE:223:ILE:CG2   | 4:AE:229:VAL:HA   | 2.08                     | 0.83              |
| 5:AF:84:ILE:HA     | 5:AF:87:LEU:HD12  | 1.59                     | 0.83              |
| 7:AH:107:ARG:O     | 7:AH:111:GLU:HG3  | 1.76                     | 0.83              |
| 18:AS:72:ARG:HH21  | 18:AS:73:LEU:HD23 | 1.43                     | 0.83              |
| 22:AW:77:ALA:O     | 22:AW:80:ARG:HB2  | 1.79                     | 0.83              |
| 24:BA:673:C:H4'    | 29:BF:82:ILE:CD1  | 2.07                     | 0.83              |
| 24:BA:1156:A:OP1   | 41:BT:55:ARG:CZ   | 2.26                     | 0.83              |
| 24:BA:1203:G:N3    | 24:BA:1203:G:C2'  | 2.42                     | 0.83              |
| 24:BA:1460:A:H5'   | 24:BA:1461:G:OP2  | 1.79                     | 0.83              |
| 24:BA:1660:C:N4    | 24:BA:2001:A:N6   | 2.26                     | 0.83              |
| 24:BA:1770:G:O2'   | 24:BA:1771:C:H5'  | 1.79                     | 0.83              |
| 24:BA:1943:U:H4'   | 24:BA:1944:U:O5'  | 1.78                     | 0.83              |
| 24:BA:2277:G:C3'   | 24:BA:2278:A:H5'' | 2.09                     | 0.83              |
| 24:BA:2415:G:OP1   | 36:BO:61:ARG:HD2  | 1.77                     | 0.83              |
| 24:BA:2468:G:O2'   | 24:BA:2469:A:H5'  | 1.79                     | 0.83              |
| 24:BA:2576:G:H5''  | 24:BA:2577:A:OP1  | 1.78                     | 0.83              |
| 24:BA:2607:G:C2'   | 24:BA:2608:G:H5'  | 2.08                     | 0.83              |
| 24:BA:2875:C:H4'   | 40:BS:4:GLY:H     | 1.44                     | 0.83              |
| 27:BD:63:ARG:NH1   | 27:BD:87:ASN:HD21 | 1.75                     | 0.83              |
| 27:BD:67:PHE:HD1   | 27:BD:153:ALA:HB3 | 1.42                     | 0.83              |
| 28:BE:173:VAL:HG22 | 28:BE:174:ASP:H   | 1.40                     | 0.83              |
| 29:BF:8:GLN:C      | 29:BF:9:ILE:HD12  | 2.04                     | 0.83              |
| 29:BF:89:VAL:CG1   | 29:BF:90:PHE:H    | 1.84                     | 0.83              |
| 29:BF:128:ALA:HA   | 29:BF:142:TRP:CH2 | 2.14                     | 0.83              |
| 34:BM:104:LYS:HA   | 34:BM:117:PHE:CZ  | 2.13                     | 0.83              |
| 37:BP:43:THR:HA    | 37:BP:94:VAL:CG1  | 2.07                     | 0.83              |
| 37:BP:81:VAL:HG12  | 37:BP:82:ARG:N    | 1.90                     | 0.83              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 38:BQ:61:HIS:HA    | 38:BQ:64:ARG:HD3  | 1.59                     | 0.83              |
| 38:BQ:100:LEU:HB2  | 38:BQ:112:ALA:HA  | 1.61                     | 0.83              |
| 40:BS:54:ARG:HD3   | 40:BS:55:ASN:ND2  | 1.94                     | 0.83              |
| 45:BX:50:ARG:HG3   | 45:BX:54:LYS:HB2  | 1.61                     | 0.83              |
| 50:B3:7:PRO:HG2    | 50:B3:60:GLN:OE1  | 1.79                     | 0.83              |
| 50:B3:46:GLN:NE2   | 50:B3:69:LYS:HE2  | 1.93                     | 0.83              |
| 1:AA:1005:A:H5''   | 1:AA:1006:C:C6    | 2.13                     | 0.83              |
| 4:AE:102:LEU:H     | 4:AE:102:LEU:HD12 | 1.43                     | 0.83              |
| 7:AH:151:LEU:HD21  | 10:AK:67:PRO:HG3  | 1.59                     | 0.83              |
| 8:AI:85:VAL:HG11   | 8:AI:88:VAL:HG13  | 1.58                     | 0.83              |
| 9:AJ:69:VAL:HG21   | 9:AJ:104:LEU:CD1  | 2.09                     | 0.83              |
| 15:AP:59:TYR:CZ    | 15:AP:63:THR:HG21 | 2.14                     | 0.83              |
| 17:AR:33:THR:O     | 17:AR:36:ILE:HG22 | 1.79                     | 0.83              |
| 20:AU:74:ARG:HG2   | 20:AU:74:ARG:HH11 | 1.43                     | 0.83              |
| 24:BA:640:C:H2'    | 24:BA:641:C:H5'   | 1.58                     | 0.83              |
| 24:BA:752:A:N6     | 24:BA:1781:C:H1'  | 1.94                     | 0.83              |
| 24:BA:1438:U:C2'   | 24:BA:1439:A:H5'  | 2.08                     | 0.83              |
| 24:BA:1451:C:H5'   | 24:BA:1453:A:OP2  | 1.79                     | 0.83              |
| 24:BA:2001:A:H2'   | 24:BA:2002:G:H8   | 1.42                     | 0.83              |
| 24:BA:2132:U:H3'   | 24:BA:2133:G:H5'' | 1.59                     | 0.83              |
| 24:BA:2446:G:O2'   | 24:BA:2448:A:H5'' | 1.79                     | 0.83              |
| 25:BB:12:C:C5'     | 47:BZ:74:ARG:HG2  | 2.08                     | 0.83              |
| 25:BB:102:G:C2'    | 46:BY:73:GLN:HE21 | 1.91                     | 0.83              |
| 27:BD:119:ALA:HB1  | 27:BD:130:ALA:O   | 1.79                     | 0.83              |
| 27:BD:169:GLU:HB3  | 27:BD:184:LYS:NZ  | 1.94                     | 0.83              |
| 27:BD:172:TYR:HB3  | 27:BD:184:LYS:HG2 | 1.59                     | 0.83              |
| 28:BE:91:VAL:CG2   | 28:BE:93:VAL:HG13 | 2.09                     | 0.83              |
| 28:BE:201:THR:C    | 28:BE:202:LYS:HD3 | 2.04                     | 0.83              |
| 29:BF:52:LYS:O     | 29:BF:53:THR:HG23 | 1.78                     | 0.83              |
| 30:BG:92:VAL:HG13  | 30:BG:94:LEU:CD1  | 2.09                     | 0.83              |
| 32:BK:114:LEU:HD22 | 32:BK:130:TYR:HB3 | 1.58                     | 0.83              |
| 35:BN:10:VAL:HG12  | 35:BN:17:ARG:HA   | 1.60                     | 0.83              |
| 36:BO:114:ILE:HG12 | 36:BO:130:PHE:HA  | 1.60                     | 0.83              |
| 36:BO:117:GLU:O    | 36:BO:121:LYS:HG2 | 1.77                     | 0.83              |
| 37:BP:40:ALA:HA    | 37:BP:98:LYS:HG3  | 1.60                     | 0.83              |
| 43:BV:64:MET:HG2   | 43:BV:109:GLU:CG  | 2.08                     | 0.83              |
| 45:BX:81:LYS:HG2   | 45:BX:96:ILE:HG23 | 1.60                     | 0.83              |
| 1:AA:37:U:C6       | 1:AA:37:U:C3'     | 2.59                     | 0.82              |
| 1:AA:52:G:H2'      | 1:AA:53:A:H8      | 1.43                     | 0.82              |
| 1:AA:482:A:N3      | 1:AA:482:A:H2'    | 1.93                     | 0.82              |
| 3:AC:76:A:N7       | 24:BA:2585:U:H1'  | 1.94                     | 0.82              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 4:AE:180:LEU:O     | 4:AE:181:PHE:HB2  | 1.78                     | 0.82              |
| 10:AK:22:GLU:O     | 10:AK:62:TYR:HA   | 1.79                     | 0.82              |
| 13:AN:80:VAL:H     | 13:AN:104:GLN:NE2 | 1.77                     | 0.82              |
| 17:AR:67:LEU:O     | 17:AR:70:LEU:HB3  | 1.79                     | 0.82              |
| 24:BA:190:A:H2'    | 24:BA:191:A:C8    | 2.14                     | 0.82              |
| 24:BA:411:G:N2     | 24:BA:2408:U:N3   | 2.24                     | 0.82              |
| 24:BA:924:C:H2'    | 24:BA:925:C:C6    | 2.14                     | 0.82              |
| 24:BA:1076:C:H4'   | 33:BL:93:ARG:NH2  | 1.94                     | 0.82              |
| 24:BA:2649:U:H2'   | 24:BA:2650:U:C6   | 2.13                     | 0.82              |
| 26:BC:130:ILE:HD12 | 26:BC:130:ILE:N   | 1.94                     | 0.82              |
| 28:BE:51:PHE:CE1   | 28:BE:53:PRO:HD3  | 2.14                     | 0.82              |
| 29:BF:157:VAL:O    | 29:BF:194:MET:HB2 | 1.78                     | 0.82              |
| 30:BG:135:LEU:HD22 | 30:BG:136:ARG:N   | 1.92                     | 0.82              |
| 31:BH:7:LEU:HG     | 31:BH:51:ARG:NH2  | 1.93                     | 0.82              |
| 33:BL:23:VAL:HG11  | 33:BL:38:VAL:HG23 | 1.61                     | 0.82              |
| 36:BO:47:ASP:HB3   | 36:BO:48:PRO:CD   | 2.09                     | 0.82              |
| 37:BP:112:GLU:HA   | 37:BP:115:MET:HG3 | 1.60                     | 0.82              |
| 41:BT:32:PHE:O     | 41:BT:35:ALA:HB3  | 1.78                     | 0.82              |
| 42:BU:6:LYS:HG2    | 42:BU:12:TYR:N    | 1.93                     | 0.82              |
| 42:BU:49:THR:CG2   | 42:BU:50:PRO:HD2  | 2.08                     | 0.82              |
| 1:AA:50:A:H5''     | 1:AA:51:A:C5'     | 2.06                     | 0.82              |
| 1:AA:319:G:O2'     | 1:AA:320:C:H5'    | 1.79                     | 0.82              |
| 1:AA:1045:C:H2'    | 1:AA:1046:A:H8    | 1.43                     | 0.82              |
| 3:AC:38:A:H2'      | 3:AC:39:U:O4'     | 1.79                     | 0.82              |
| 3:AB:14:A:N6       | 3:AB:22:G:H1'     | 1.94                     | 0.82              |
| 4:AE:81:VAL:HG12   | 4:AE:92:TYR:CD1   | 2.13                     | 0.82              |
| 4:AE:192:SER:C     | 4:AE:194:PRO:HD3  | 2.03                     | 0.82              |
| 5:AF:3:ASN:ND2     | 5:AF:4:LYS:H      | 1.77                     | 0.82              |
| 10:AK:115:SER:C    | 10:AK:116:LYS:HD2 | 2.04                     | 0.82              |
| 14:AO:32:PHE:HB2   | 14:AO:84:LEU:HD11 | 1.61                     | 0.82              |
| 17:AR:17:ARG:NH1   | 17:AR:77:ARG:HD3  | 1.94                     | 0.82              |
| 17:AR:31:LEU:HA    | 17:AR:34:LEU:CD2  | 2.09                     | 0.82              |
| 18:AS:26:ARG:HD2   | 18:AS:31:LYS:N    | 1.94                     | 0.82              |
| 19:AT:75:ARG:NH2   | 19:AT:77:VAL:HG22 | 1.94                     | 0.82              |
| 20:AU:53:ARG:HH22  | 20:AU:60:GLY:N    | 1.76                     | 0.82              |
| 24:BA:443:A:H4'    | 24:BA:1201:C:H5'  | 1.58                     | 0.82              |
| 24:BA:558:G:P      | 34:BM:112:LEU:HG  | 2.18                     | 0.82              |
| 24:BA:783:A:H2'    | 24:BA:784:A:C4'   | 2.09                     | 0.82              |
| 24:BA:1312:U:H5''  | 44:BW:62:LYS:HB3  | 1.59                     | 0.82              |
| 24:BA:1523:U:C2    | 24:BA:1524:G:C8   | 2.67                     | 0.82              |
| 24:BA:1996:C:H2'   | 24:BA:1997:G:H4'  | 1.59                     | 0.82              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2123:G:H4'  | 26:BC:172:HIS:CG   | 2.13                     | 0.82              |
| 24:BA:2346:A:H62  | 52:B5:37:ARG:NH1   | 1.77                     | 0.82              |
| 24:BA:2468:G:N2   | 24:BA:2481:G:H2'   | 1.94                     | 0.82              |
| 24:BA:2807:G:N2   | 24:BA:2892:A:H62   | 1.77                     | 0.82              |
| 32:BK:97:ILE:O    | 32:BK:100:ALA:HB3  | 1.79                     | 0.82              |
| 37:BP:53:ALA:O    | 37:BP:56:ARG:HG3   | 1.78                     | 0.82              |
| 39:BR:11:LYS:HA   | 39:BR:14:VAL:CG2   | 2.08                     | 0.82              |
| 40:BS:48:ILE:HD13 | 40:BS:50:ILE:CD1   | 2.09                     | 0.82              |
| 43:BV:6:ILE:CG1   | 43:BV:104:THR:HA   | 2.08                     | 0.82              |
| 46:BY:24:LEU:O    | 46:BY:39:VAL:CB    | 2.21                     | 0.82              |
| 51:B4:35:GLU:HB3  | 51:B4:49:CYS:HB3   | 1.61                     | 0.82              |
| 1:AA:1269:A:H2'   | 1:AA:1270:C:C4'    | 2.09                     | 0.82              |
| 5:AF:48:TYR:HA    | 5:AF:52:LEU:HD22   | 1.59                     | 0.82              |
| 6:AG:155:LEU:HD23 | 6:AG:158:ILE:HD11  | 1.61                     | 0.82              |
| 8:AI:48:LEU:N     | 8:AI:48:LEU:HD23   | 1.94                     | 0.82              |
| 12:AM:96:ILE:O    | 12:AM:96:ILE:HG13  | 1.79                     | 0.82              |
| 18:AS:20:VAL:HA   | 18:AS:36:ILE:CG1   | 2.08                     | 0.82              |
| 18:AS:54:GLU:C    | 18:AS:54:GLU:CD    | 2.46                     | 0.82              |
| 24:BA:146:G:H3'   | 24:BA:147:U:H5''   | 1.61                     | 0.82              |
| 24:BA:833:U:O4'   | 36:BO:48:PRO:HD2   | 1.78                     | 0.82              |
| 24:BA:864:G:H2'   | 24:BA:865:C:C1'    | 2.08                     | 0.82              |
| 24:BA:1051:G:H4'  | 24:BA:2752:C:C1'   | 2.10                     | 0.82              |
| 24:BA:1302:A:H5'' | 24:BA:1303:G:OP2   | 1.79                     | 0.82              |
| 24:BA:1487:G:O2'  | 24:BA:1488:G:H5'   | 1.79                     | 0.82              |
| 24:BA:1493:C:N4   | 24:BA:1499:C:N3    | 2.26                     | 0.82              |
| 24:BA:1743:G:H3'  | 24:BA:1746:G:H8    | 1.42                     | 0.82              |
| 24:BA:2234:G:O2'  | 24:BA:2235:G:H5'   | 1.78                     | 0.82              |
| 28:BE:11:MET:O    | 28:BE:21:VAL:HG23  | 1.79                     | 0.82              |
| 28:BE:12:THR:HG21 | 28:BE:19:ARG:NH2   | 1.93                     | 0.82              |
| 31:BH:97:ARG:HB3  | 31:BH:104:GLU:HG3  | 1.60                     | 0.82              |
| 31:BH:163:TYR:HB3 | 31:BH:166:GLY:HA2  | 1.61                     | 0.82              |
| 34:BM:37:LYS:HA   | 34:BM:42:TRP:HB2   | 1.59                     | 0.82              |
| 36:BO:65:ARG:NH1  | 36:BO:68:GLN:NE2   | 2.28                     | 0.82              |
| 37:BP:25:ASP:CB   | 37:BP:102:VAL:H    | 1.92                     | 0.82              |
| 38:BQ:77:ARG:HB2  | 38:BQ:77:ARG:NH1   | 1.91                     | 0.82              |
| 38:BQ:104:ARG:HB2 | 38:BQ:111:LEU:HD11 | 1.61                     | 0.82              |
| 41:BT:88:ILE:N    | 41:BT:88:ILE:HD13  | 1.94                     | 0.82              |
| 43:BV:90:ARG:NH2  | 43:BV:90:ARG:H     | 1.76                     | 0.82              |
| 1:AA:275:G:H5'    | 19:AT:14:LYS:HZ3   | 1.39                     | 0.82              |
| 1:AA:582:U:H5'    | 17:AR:64:ARG:HH21  | 1.43                     | 0.82              |
| 1:AA:944:G:C3'    | 1:AA:945:G:H5''    | 2.08                     | 0.82              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1327:C:C5'    | 23:AX:20:LYS:HD3   | 2.08                     | 0.82              |
| 1:AA:1405:G:N2     | 1:AA:1517:G:N2     | 2.22                     | 0.82              |
| 6:AG:26:CYS:HA     | 6:AG:31:CYS:HB3    | 1.61                     | 0.82              |
| 6:AG:29:PRO:HA     | 6:AG:34:GLU:HG2    | 1.59                     | 0.82              |
| 7:AH:31:LEU:HD12   | 7:AH:129:ILE:CG2   | 2.07                     | 0.82              |
| 7:AH:109:ILE:HD13  | 7:AH:135:THR:CG2   | 2.09                     | 0.82              |
| 15:AP:23:TYR:HE2   | 15:AP:70:LEU:HD22  | 1.42                     | 0.82              |
| 18:AS:74:LEU:O     | 18:AS:77:ALA:HB3   | 1.77                     | 0.82              |
| 24:BA:220:G:H4'    | 24:BA:234:C:C4'    | 2.09                     | 0.82              |
| 24:BA:414:C:H1'    | 24:BA:1864:U:H1'   | 1.61                     | 0.82              |
| 24:BA:457:A:H1'    | 24:BA:459:U:N3     | 1.94                     | 0.82              |
| 24:BA:606:U:H6     | 24:BA:606:U:O5'    | 1.61                     | 0.82              |
| 24:BA:963:U:H1'    | 24:BA:2250:G:H21   | 1.44                     | 0.82              |
| 24:BA:1153:C:H2'   | 24:BA:1154:G:H8    | 1.45                     | 0.82              |
| 24:BA:1206:G:H2'   | 24:BA:1207:C:Cl'   | 2.09                     | 0.82              |
| 24:BA:1300:U:H4'   | 24:BA:1301:A:O5'   | 1.79                     | 0.82              |
| 24:BA:1334:G:H5''  | 44:BW:65:ARG:HH12  | 1.44                     | 0.82              |
| 24:BA:1394:U:H4'   | 24:BA:1603:A:H4'   | 1.60                     | 0.82              |
| 24:BA:1664:A:H3'   | 24:BA:1664:A:H8    | 1.44                     | 0.82              |
| 24:BA:1794:U:O2'   | 24:BA:1795:C:H5'   | 1.78                     | 0.82              |
| 24:BA:2847:U:H3'   | 40:BS:99:LEU:HD12  | 1.58                     | 0.82              |
| 25:BB:9:G:H4'      | 39:BR:43:GLU:OE2   | 1.80                     | 0.82              |
| 26:BC:211:SER:HB2  | 26:BC:223:ARG:HH21 | 1.41                     | 0.82              |
| 27:BD:60:ARG:HD3   | 27:BD:62:TYR:CE2   | 2.15                     | 0.82              |
| 28:BE:179:GLU:HB2  | 28:BE:181:LEU:HD11 | 1.61                     | 0.82              |
| 29:BF:7:TYR:O      | 29:BF:18:ARG:CG    | 2.27                     | 0.82              |
| 29:BF:82:ILE:HD13  | 29:BF:82:ILE:N     | 1.93                     | 0.82              |
| 30:BG:36:LYS:HB2   | 30:BG:95:ARG:HD3   | 1.61                     | 0.82              |
| 35:BN:7:TYR:HD1    | 35:BN:7:TYR:H      | 0.88                     | 0.82              |
| 35:BN:43:VAL:HG11  | 35:BN:54:GLU:HA    | 1.61                     | 0.82              |
| 41:BT:15:LYS:CA    | 41:BT:18:LEU:HD23  | 2.07                     | 0.82              |
| 41:BT:112:ARG:HH22 | 42:BU:49:THR:HG22  | 1.44                     | 0.82              |
| 43:BV:88:ARG:NE    | 43:BV:88:ARG:HA    | 1.92                     | 0.82              |
| 46:BY:113:ALA:HB1  | 46:BY:145:GLU:OE1  | 1.79                     | 0.82              |
| 1:AA:186(D):C:H2'  | 1:AA:186(E):C:H6   | 1.43                     | 0.82              |
| 1:AA:551:U:H5'     | 14:AO:119:LYS:HZ3  | 1.44                     | 0.82              |
| 1:AA:558:G:H3'     | 1:AA:559:A:C5'     | 2.09                     | 0.82              |
| 1:AA:570:G:HO2'    | 1:AA:819:A:H8      | 1.23                     | 0.82              |
| 1:AA:764:C:C2'     | 1:AA:765:G:C8      | 2.61                     | 0.82              |
| 1:AA:1037:C:H2'    | 1:AA:1038:C:H6     | 1.45                     | 0.82              |
| 1:AA:1114:C:H1'    | 16:AQ:60:SER:HB3   | 1.61                     | 0.82              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1338:G:H21   | 3:AC:41:C:H1'     | 1.43                     | 0.82              |
| 4:AE:88:ALA:CB    | 4:AE:219:VAL:HG22 | 2.05                     | 0.82              |
| 9:AJ:106:GLN:HA   | 9:AJ:106:GLN:HE21 | 1.45                     | 0.82              |
| 14:AO:84:LEU:HB3  | 14:AO:104:VAL:CG1 | 2.10                     | 0.82              |
| 15:AP:27:LYS:HD2  | 15:AP:31:LYS:NZ   | 1.93                     | 0.82              |
| 19:AT:31:LEU:O    | 19:AT:32:TYR:HD2  | 1.62                     | 0.82              |
| 24:BA:265:A:C8    | 24:BA:265:A:C3'   | 2.56                     | 0.82              |
| 24:BA:448:U:H2'   | 24:BA:448:U:O2    | 1.79                     | 0.82              |
| 24:BA:572:A:H2'   | 24:BA:573:G:H1'   | 1.62                     | 0.82              |
| 24:BA:997:G:C5'   | 41:BT:92:ARG:HH11 | 1.92                     | 0.82              |
| 24:BA:1464:C:H5'  | 24:BA:1528:A:O2'  | 1.78                     | 0.82              |
| 24:BA:1475:G:H1   | 24:BA:1477:A:H62  | 1.20                     | 0.82              |
| 24:BA:1725:G:H22  | 24:BA:1726:G:H1'  | 1.39                     | 0.82              |
| 24:BA:2312:U:HO2' | 30:BG:40:ASN:CG   | 1.86                     | 0.82              |
| 24:BA:2402:C:H5'' | 24:BA:2403:C:OP1  | 1.79                     | 0.82              |
| 24:BA:2484:G:H1'  | 37:BP:124:LYS:HZ1 | 1.43                     | 0.82              |
| 25:BB:24:G:N3     | 25:BB:27:C:N4     | 2.27                     | 0.82              |
| 31:BH:110:SER:C   | 31:BH:112:PRO:HD2 | 2.04                     | 0.82              |
| 35:BN:4:PRO:HG2   | 35:BN:5:GLN:N     | 1.91                     | 0.82              |
| 36:BO:52:GLU:HA   | 36:BO:55:ARG:HG3  | 1.59                     | 0.82              |
| 38:BQ:99:LYS:HG2  | 51:B4:43:HIS:NE2  | 1.93                     | 0.82              |
| 40:BS:3:ARG:O     | 40:BS:6:LEU:HD23  | 1.79                     | 0.82              |
| 42:BU:88:ARG:O    | 42:BU:90:PRO:HD3  | 1.79                     | 0.82              |
| 43:BV:41:LYS:HB3  | 43:BV:41:LYS:NZ   | 1.94                     | 0.82              |
| 44:BW:43:VAL:CG1  | 44:BW:51:VAL:HG22 | 2.09                     | 0.82              |
| 48:B1:51:GLN:HA   | 48:B1:54:ARG:NE   | 1.94                     | 0.82              |
| 53:B6:19:ARG:HB3  | 53:B6:23:ARG:NH2  | 1.95                     | 0.82              |
| 53:B6:21:ARG:CG   | 53:B6:31:LEU:HD21 | 2.08                     | 0.82              |
| 1:AA:915:A:C2'    | 1:AA:916:G:H5'    | 2.08                     | 0.82              |
| 4:AE:104:ASN:OD1  | 4:AE:108:ILE:HG12 | 1.80                     | 0.82              |
| 6:AG:10:ARG:C     | 6:AG:10:ARG:HD3   | 2.05                     | 0.82              |
| 6:AG:129:ASN:OD1  | 6:AG:144:ASP:HB3  | 1.79                     | 0.82              |
| 14:AO:60:LEU:N    | 14:AO:60:LEU:CD1  | 2.42                     | 0.82              |
| 15:AP:81:LEU:HD22 | 15:AP:82:MET:HG2  | 1.61                     | 0.82              |
| 20:AU:74:ARG:HG2  | 20:AU:74:ARG:NH1  | 1.94                     | 0.82              |
| 24:BA:607:U:H2'   | 24:BA:607:U:O2    | 1.78                     | 0.82              |
| 24:BA:783:A:H3'   | 27:BD:227:ASN:ND2 | 1.94                     | 0.82              |
| 24:BA:931:G:N2    | 49:B2:24:LYS:HB3  | 1.93                     | 0.82              |
| 24:BA:1119:C:H2'  | 24:BA:1120:G:C8   | 2.15                     | 0.82              |
| 24:BA:2767:C:C2   | 24:BA:2768:C:C5   | 2.68                     | 0.82              |
| 27:BD:8:PRO:HD2   | 27:BD:26:LYS:C    | 2.04                     | 0.82              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 27:BD:181:GLU:HA  | 27:BD:270:ILE:HG21 | 1.61                     | 0.82              |
| 28:BE:111:ARG:H   | 28:BE:161:GLY:HA3  | 1.43                     | 0.82              |
| 28:BE:124:GLY:HA3 | 28:BE:136:ARG:CB   | 2.09                     | 0.82              |
| 29:BF:139:PHE:O   | 29:BF:142:TRP:HB3  | 1.78                     | 0.82              |
| 31:BH:26:VAL:HG12 | 31:BH:79:VAL:HG11  | 1.62                     | 0.82              |
| 31:BH:29:PRO:HD3  | 31:BH:79:VAL:O     | 1.79                     | 0.82              |
| 33:BL:79:ARG:HD3  | 33:BL:134:MET:CG   | 2.09                     | 0.82              |
| 36:BO:16:ARG:CD   | 36:BO:19:VAL:HG22  | 2.10                     | 0.82              |
| 40:BS:51:ARG:O    | 40:BS:66:VAL:HA    | 1.80                     | 0.82              |
| 41:BT:99:ALA:HA   | 41:BT:106:PHE:CG   | 2.14                     | 0.82              |
| 50:B3:47:GLN:HA   | 50:B3:52:THR:CG2   | 2.10                     | 0.82              |
| 1:AA:9:G:H5''     | 7:AH:126:ARG:CD    | 2.10                     | 0.82              |
| 1:AA:166:G:O2'    | 1:AA:167:G:H5'     | 1.80                     | 0.82              |
| 1:AA:370:C:O2'    | 1:AA:371:G:H5'     | 1.78                     | 0.82              |
| 1:AA:573:A:N3     | 1:AA:883:C:O2'     | 2.13                     | 0.82              |
| 1:AA:1044:A:H2'   | 1:AA:1045:C:H5'    | 1.62                     | 0.82              |
| 4:AE:17:PHE:O     | 4:AE:42:ILE:HG22   | 1.79                     | 0.82              |
| 5:AF:10:PHE:HD1   | 5:AF:178:LEU:HD22  | 1.44                     | 0.82              |
| 6:AG:194:LEU:N    | 6:AG:194:LEU:HD22  | 1.95                     | 0.82              |
| 10:AK:123:GLU:CD  | 10:AK:124:ALA:N    | 2.38                     | 0.82              |
| 15:AP:90:LEU:HD23 | 15:AP:93:ARG:HD2   | 1.61                     | 0.82              |
| 19:AT:8:GLY:O     | 19:AT:56:VAL:HG13  | 1.80                     | 0.82              |
| 24:BA:141:A:C2    | 24:BA:1596:A:O2'   | 2.32                     | 0.82              |
| 24:BA:221:A:H4'   | 24:BA:222:A:C5'    | 2.07                     | 0.82              |
| 24:BA:558:G:H5'   | 34:BM:112:LEU:CD1  | 2.09                     | 0.82              |
| 24:BA:574:C:C2    | 24:BA:2055:C:H5    | 1.98                     | 0.82              |
| 24:BA:702:G:O2'   | 24:BA:703:U:H5'    | 1.78                     | 0.82              |
| 24:BA:828:U:C2'   | 24:BA:829:A:H8     | 1.89                     | 0.82              |
| 24:BA:960:A:H5''  | 24:BA:961:C:OP1    | 1.79                     | 0.82              |
| 24:BA:1531:C:H2'  | 24:BA:1532:C:C5    | 2.15                     | 0.82              |
| 24:BA:1780:A:C3'  | 24:BA:1781:C:H5'   | 2.09                     | 0.82              |
| 24:BA:1783:A:H5'' | 24:BA:1784:A:OP1   | 1.79                     | 0.82              |
| 24:BA:1813:G:O2'  | 27:BD:52:ARG:NH2   | 2.12                     | 0.82              |
| 24:BA:1941:C:H2'  | 24:BA:1942:C:O5'   | 1.77                     | 0.82              |
| 24:BA:2063:C:H1'  | 24:BA:2451:A:H2    | 1.43                     | 0.82              |
| 24:BA:2345:G:O2'  | 24:BA:2346:A:OP2   | 1.98                     | 0.82              |
| 24:BA:2799:A:O2'  | 24:BA:2802:G:C6    | 2.33                     | 0.82              |
| 29:BF:34:TRP:CD2  | 36:BO:8:PRO:HB2    | 2.15                     | 0.82              |
| 32:BK:93:THR:HG23 | 32:BK:95:LYS:HB3   | 1.61                     | 0.82              |
| 33:BL:98:ARG:HD3  | 33:BL:139:VAL:HB   | 1.60                     | 0.82              |
| 34:BM:86:PRO:HB2  | 34:BM:89:LYS:HZ2   | 1.44                     | 0.82              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 35:BN:77:ILE:HD13 | 40:BS:65:LYS:CE    | 2.10                     | 0.82              |
| 38:BQ:42:LYS:O    | 38:BQ:45:ARG:HB3   | 1.80                     | 0.82              |
| 39:BR:11:LYS:HA   | 39:BR:14:VAL:HG21  | 1.60                     | 0.82              |
| 42:BU:26:ASP:C    | 42:BU:29:PRO:HD2   | 2.03                     | 0.82              |
| 47:BZ:32:ARG:HB2  | 47:BZ:32:ARG:NH1   | 1.95                     | 0.82              |
| 51:B4:47:PRO:C    | 51:B4:58:LEU:HG    | 2.05                     | 0.82              |
| 51:B4:55:ARG:HD3  | 51:B4:55:ARG:H     | 1.45                     | 0.82              |
| 5:AF:55:VAL:HG22  | 5:AF:68:VAL:HG13   | 1.62                     | 0.82              |
| 5:AF:120:VAL:O    | 5:AF:123:GLN:HB2   | 1.79                     | 0.82              |
| 8:AI:89:MET:HB2   | 20:AU:76:LEU:HD11  | 1.60                     | 0.82              |
| 8:AI:97:PHE:CD2   | 20:AU:31:LEU:HD13  | 2.13                     | 0.82              |
| 10:AK:40:ALA:CA   | 10:AK:45:ILE:HG23  | 2.08                     | 0.82              |
| 19:AT:4:LYS:HD2   | 19:AT:5:VAL:N      | 1.95                     | 0.82              |
| 19:AT:29:HIS:ND1  | 19:AT:31:LEU:N     | 2.27                     | 0.82              |
| 24:BA:6:A:H4'     | 34:BM:132:ALA:O    | 1.78                     | 0.82              |
| 24:BA:570:G:H1    | 24:BA:2498:C:C4'   | 1.92                     | 0.82              |
| 24:BA:627:A:H5''  | 36:BO:75:ILE:HB    | 1.59                     | 0.82              |
| 24:BA:756:C:H2'   | 24:BA:757:U:H5'    | 1.59                     | 0.82              |
| 24:BA:816:C:H5'   | 24:BA:816:C:H6     | 1.45                     | 0.82              |
| 24:BA:1085:A:H1'  | 24:BA:1086:A:C4'   | 2.10                     | 0.82              |
| 24:BA:1341:U:OP2  | 24:BA:1397:U:N3    | 2.13                     | 0.82              |
| 24:BA:1430:C:H2'  | 24:BA:1431:U:C6    | 2.15                     | 0.82              |
| 24:BA:1791:A:O4'  | 27:BD:209:ALA:HB2  | 1.79                     | 0.82              |
| 24:BA:1819:A:H1'  | 24:BA:1821:A:N3    | 1.94                     | 0.82              |
| 24:BA:2074:U:O2'  | 24:BA:2598:A:H1'   | 1.80                     | 0.82              |
| 24:BA:2208:U:H4'  | 27:BD:151:LYS:NZ   | 1.94                     | 0.82              |
| 24:BA:2459:A:C5   | 24:BA:2493:U:O4    | 2.33                     | 0.82              |
| 24:BA:2690:C:C5   | 38:BQ:14:SER:HB2   | 2.15                     | 0.82              |
| 27:BD:21:PHE:O    | 27:BD:205:VAL:HG22 | 1.79                     | 0.82              |
| 27:BD:118:VAL:O   | 27:BD:129:ASN:HA   | 1.79                     | 0.82              |
| 27:BD:143:HIS:C   | 27:BD:145:VAL:H    | 1.86                     | 0.82              |
| 30:BG:6:ALA:HA    | 30:BG:9:ARG:NH2    | 1.94                     | 0.82              |
| 32:BK:22:LYS:HB3  | 32:BK:23:PRO:HD2   | 1.61                     | 0.82              |
| 32:BK:87:LYS:HE3  | 32:BK:122:GLU:OE2  | 1.78                     | 0.82              |
| 35:BN:7:TYR:N     | 35:BN:7:TYR:CD1    | 2.25                     | 0.82              |
| 35:BN:24:VAL:CG2  | 35:BN:26:LYS:HG2   | 2.10                     | 0.82              |
| 46:BY:144:LEU:CB  | 46:BY:174:VAL:HG11 | 2.10                     | 0.82              |
| 46:BY:177:PRO:HG2 | 46:BY:178:GLU:H    | 1.44                     | 0.82              |
| 1:AA:179:A:H3'    | 1:AA:180:U:C5      | 2.13                     | 0.82              |
| 1:AA:1237:C:O2    | 1:AA:1335:C:H5'    | 1.80                     | 0.82              |
| 1:AA:1315:U:O2'   | 1:AA:1360:A:C4     | 2.32                     | 0.82              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1514:C:H2'    | 1:AA:1515:C:C6     | 2.15                     | 0.82              |
| 4:AE:16:HIS:O      | 4:AE:204:ASN:HB2   | 1.79                     | 0.82              |
| 10:AK:41:ARG:HB3   | 10:AK:41:ARG:NH1   | 1.93                     | 0.82              |
| 12:AM:9:ARG:O      | 12:AM:94:VAL:HG13  | 1.79                     | 0.82              |
| 14:AO:86:ARG:HH12  | 14:AO:119:LYS:CG   | 1.90                     | 0.82              |
| 18:AS:44:THR:CG2   | 18:AS:45:THR:H     | 1.90                     | 0.82              |
| 24:BA:270(P):C:H2' | 24:BA:270(Q):C:C6  | 2.14                     | 0.82              |
| 24:BA:878:A:C4     | 24:BA:879:G:N7     | 2.47                     | 0.82              |
| 24:BA:1423:G:H2'   | 24:BA:1424:G:C8    | 2.14                     | 0.82              |
| 24:BA:1743:G:H4'   | 24:BA:1743:G:OP1   | 1.78                     | 0.82              |
| 24:BA:1944:U:H1'   | 24:BA:1955:U:C1'   | 2.09                     | 0.82              |
| 24:BA:2012:G:OP1   | 43:BV:98:LYS:HG3   | 1.80                     | 0.82              |
| 24:BA:2375:G:N2    | 24:BA:2378:A:N6    | 2.26                     | 0.82              |
| 28:BE:154:LYS:C    | 28:BE:154:LYS:HD2  | 2.05                     | 0.82              |
| 28:BE:170:LEU:N    | 28:BE:170:LEU:HD23 | 1.95                     | 0.82              |
| 30:BG:141:PHE:C    | 30:BG:143:GLU:N    | 2.36                     | 0.82              |
| 35:BN:106:LEU:HB2  | 40:BS:39:ARG:NH2   | 1.95                     | 0.82              |
| 37:BP:42:ILE:CD1   | 37:BP:47:ILE:HG13  | 2.10                     | 0.82              |
| 37:BP:42:ILE:CG2   | 37:BP:95:ALA:HB3   | 2.09                     | 0.82              |
| 48:B1:52:ILE:O     | 48:B1:55:LEU:HB2   | 1.80                     | 0.82              |
| 49:B2:22:ALA:HB1   | 49:B2:46:ASN:OD1   | 1.80                     | 0.82              |
| 50:B3:59:PHE:HA    | 50:B3:62:ARG:CD    | 2.10                     | 0.82              |
| 52:B5:11:LEU:HD13  | 54:B7:35:GLN:HE22  | 1.45                     | 0.82              |
| 52:B5:12:GLU:HG2   | 52:B5:13:CYS:N     | 1.94                     | 0.82              |
| 1:AA:789:U:H6      | 1:AA:790:A:H5''    | 1.43                     | 0.82              |
| 1:AA:872:A:C2'     | 1:AA:873:A:H5''    | 2.08                     | 0.82              |
| 1:AA:959:A:H2'     | 1:AA:960:U:H4'     | 1.59                     | 0.82              |
| 4:AE:134:GLU:HG3   | 4:AE:138:LEU:HD11  | 1.62                     | 0.82              |
| 4:AE:188:ALA:HB1   | 4:AE:192:SER:OG    | 1.78                     | 0.82              |
| 5:AF:182:ILE:HG23  | 5:AF:202:ILE:O     | 1.79                     | 0.82              |
| 6:AG:135:LEU:O     | 6:AG:137:SER:N     | 2.11                     | 0.82              |
| 7:AH:91:LEU:HD23   | 7:AH:91:LEU:O      | 1.80                     | 0.82              |
| 12:AM:72:VAL:O     | 12:AM:73:ASP:HB2   | 1.78                     | 0.82              |
| 13:AN:84:VAL:HG21  | 13:AN:110:ASP:HA   | 1.61                     | 0.82              |
| 24:BA:303:U:H2'    | 24:BA:304:G:O4'    | 1.78                     | 0.82              |
| 24:BA:663:G:H4'    | 36:BO:18:ARG:HH11  | 1.45                     | 0.82              |
| 24:BA:881:G:N2     | 24:BA:896:A:N6     | 2.27                     | 0.82              |
| 24:BA:1343:G:H1'   | 24:BA:1597:A:C2    | 2.15                     | 0.82              |
| 24:BA:1375:C:H2'   | 24:BA:1376:C:C6    | 2.13                     | 0.82              |
| 24:BA:1510:A:H2'   | 24:BA:1511:A:C2    | 2.15                     | 0.82              |
| 24:BA:1775:U:H2'   | 24:BA:1776:G:O4'   | 1.78                     | 0.82              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1834:U:H1'   | 24:BA:1969:A:C2   | 2.14                     | 0.82              |
| 24:BA:2091:U:C2'   | 24:BA:2092:U:H5'  | 2.09                     | 0.82              |
| 24:BA:2121:G:H1'   | 26:BC:167:LYS:HZ3 | 1.41                     | 0.82              |
| 24:BA:2269:A:H3'   | 24:BA:2269:A:OP1  | 1.80                     | 0.82              |
| 24:BA:2497:A:H2'   | 24:BA:2498:C:OP2  | 1.79                     | 0.82              |
| 24:BA:2568:C:C2'   | 24:BA:2569:G:H5'  | 2.10                     | 0.82              |
| 24:BA:2747:G:O6    | 24:BA:2755:C:H5'  | 1.80                     | 0.82              |
| 27:BD:117:VAL:HG11 | 27:BD:128:GLY:C   | 2.04                     | 0.82              |
| 27:BD:147:LEU:HG   | 27:BD:154:LYS:CD  | 2.10                     | 0.82              |
| 29:BF:4:VAL:C      | 29:BF:20:LEU:HD13 | 2.03                     | 0.82              |
| 30:BG:78:SER:HB2   | 30:BG:82:LEU:CB   | 2.10                     | 0.82              |
| 30:BG:139:LEU:HB3  | 30:BG:142:PRO:HB3 | 1.60                     | 0.82              |
| 32:BK:76:THR:C     | 32:BK:77:LEU:HD23 | 2.04                     | 0.82              |
| 34:BM:10:GLU:OE2   | 34:BM:39:ARG:HD2  | 1.79                     | 0.82              |
| 34:BM:23:LEU:CD1   | 34:BM:63:THR:HG23 | 2.09                     | 0.82              |
| 35:BN:11:ALA:HB3   | 35:BN:97:ARG:HH12 | 1.43                     | 0.82              |
| 38:BQ:53:HIS:O     | 38:BQ:56:LYS:HG3  | 1.80                     | 0.82              |
| 38:BQ:83:ILE:HD12  | 38:BQ:86:ARG:HE   | 1.43                     | 0.82              |
| 39:BR:78:LEU:HD22  | 39:BR:78:LEU:C    | 2.03                     | 0.82              |
| 42:BU:41:GLY:CA    | 42:BU:51:VAL:HG22 | 2.09                     | 0.82              |
| 43:BV:14:PRO:CD    | 43:BV:78:GLU:OE1  | 2.26                     | 0.82              |
| 43:BV:33:ARG:HH12  | 43:BV:48:ALA:HB2  | 1.43                     | 0.82              |
| 44:BW:16:LYS:H     | 44:BW:16:LYS:HE2  | 1.44                     | 0.82              |
| 45:BX:74:PRO:C     | 45:BX:76:CYS:H    | 1.86                     | 0.82              |
| 47:BZ:23:VAL:HA    | 47:BZ:38:VAL:HG13 | 1.62                     | 0.82              |
| 1:AA:42:G:H2'      | 1:AA:43:C:C6      | 2.14                     | 0.81              |
| 1:AA:87:A:N7       | 1:AA:88:C:C4      | 2.48                     | 0.81              |
| 1:AA:264:U:O2      | 1:AA:264:U:H2'    | 1.78                     | 0.81              |
| 1:AA:474:G:H5'     | 18:AS:81:ARG:HG3  | 1.60                     | 0.81              |
| 1:AA:915:A:H2'     | 1:AA:916:G:H5'    | 1.59                     | 0.81              |
| 1:AA:988:G:H2'     | 1:AA:989:C:O4'    | 1.80                     | 0.81              |
| 1:AA:1312:G:O2'    | 1:AA:1313:U:H5'   | 1.79                     | 0.81              |
| 3:AD:22:G:H2'      | 3:AD:23:A:H8      | 1.45                     | 0.81              |
| 4:AE:165:VAL:HG23  | 4:AE:166:ASP:H    | 1.43                     | 0.81              |
| 7:AH:72:GLN:NE2    | 7:AH:144:THR:HG23 | 1.93                     | 0.81              |
| 10:AK:18:ARG:NH1   | 10:AK:18:ARG:CA   | 2.43                     | 0.81              |
| 24:BA:647:G:H2'    | 24:BA:648:G:H8    | 1.45                     | 0.81              |
| 24:BA:746:A:O2'    | 24:BA:747:U:P     | 2.37                     | 0.81              |
| 24:BA:855:G:H21    | 47:BZ:27:GLU:CB   | 1.93                     | 0.81              |
| 24:BA:1664:A:H2'   | 24:BA:1665:A:C8   | 2.15                     | 0.81              |
| 24:BA:1778:U:H2'   | 24:BA:1779:U:C6   | 2.15                     | 0.81              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2102:U:H2'  | 24:BA:2103:C:C6    | 2.15                     | 0.81              |
| 24:BA:2458:G:N7   | 24:BA:2490:G:C6    | 2.47                     | 0.81              |
| 24:BA:2459:A:H2   | 24:BA:2492:U:O4    | 1.63                     | 0.81              |
| 24:BA:2809:A:O4'  | 24:BA:2811:G:N7    | 2.13                     | 0.81              |
| 24:BA:2820:A:H5'  | 24:BA:2821:A:N7    | 1.95                     | 0.81              |
| 28:BE:22:PRO:HA   | 28:BE:185:LYS:HA   | 1.59                     | 0.81              |
| 29:BF:25:PRO:O    | 29:BF:28:ILE:HG22  | 1.78                     | 0.81              |
| 36:BO:45:LEU:HB3  | 36:BO:46:LYS:HE2   | 1.62                     | 0.81              |
| 40:BS:111:ARG:HA  | 40:BS:114:LEU:CD1  | 2.10                     | 0.81              |
| 41:BT:13:LYS:O    | 41:BT:16:LYS:HB3   | 1.80                     | 0.81              |
| 47:BZ:19:LYS:HG2  | 47:BZ:20:ARG:H     | 1.45                     | 0.81              |
| 48:B1:12:SER:HB3  | 48:B1:13:PRO:CD    | 2.09                     | 0.81              |
| 49:B2:35:ARG:HH12 | 49:B2:47:VAL:HG22  | 1.45                     | 0.81              |
| 1:AA:29:G:H5'     | 1:AA:296:U:OP1     | 1.80                     | 0.81              |
| 1:AA:867:G:H2'    | 1:AA:868:C:C6      | 2.16                     | 0.81              |
| 1:AA:917:G:O2'    | 1:AA:918:A:H5'     | 1.80                     | 0.81              |
| 1:AA:1156:G:H1'   | 1:AA:1179:A:N6     | 1.94                     | 0.81              |
| 1:AA:1226:C:H5''  | 15:AP:103:THR:O    | 1.78                     | 0.81              |
| 3:AD:21:A:H2'     | 3:AD:22:G:O4'      | 1.79                     | 0.81              |
| 4:AE:69:LEU:HD22  | 4:AE:91:PRO:C      | 2.05                     | 0.81              |
| 5:AF:190:ARG:HE   | 5:AF:190:ARG:HA    | 1.43                     | 0.81              |
| 9:AJ:109:ASN:O    | 9:AJ:119:ARG:CZ    | 2.28                     | 0.81              |
| 10:AK:82:HIS:O    | 10:AK:137:VAL:HG13 | 1.80                     | 0.81              |
| 14:AO:12:ARG:HB3  | 14:AO:12:ARG:NH1   | 1.95                     | 0.81              |
| 14:AO:27:LEU:O    | 14:AO:29:GLY:N     | 2.12                     | 0.81              |
| 21:AV:25:LYS:HD2  | 21:AV:25:LYS:C     | 2.06                     | 0.81              |
| 24:BA:150:C:H2'   | 24:BA:150:C:O2     | 1.78                     | 0.81              |
| 24:BA:241:A:H1'   | 24:BA:243:U:C1'    | 2.10                     | 0.81              |
| 24:BA:269:U:C5'   | 24:BA:270(Y):G:H2' | 2.09                     | 0.81              |
| 24:BA:970:C:H2'   | 24:BA:971:C:C6     | 2.15                     | 0.81              |
| 24:BA:1460:A:N1   | 24:BA:1732:A:N1    | 2.28                     | 0.81              |
| 24:BA:1542:G:C1'  | 24:BA:1543:A:C6    | 2.63                     | 0.81              |
| 24:BA:1642:G:O2'  | 24:BA:1643:G:H5'   | 1.79                     | 0.81              |
| 24:BA:2384:G:OP2  | 24:BA:2384:G:H8    | 1.63                     | 0.81              |
| 24:BA:2415:G:H5'' | 36:BO:61:ARG:HD2   | 1.62                     | 0.81              |
| 24:BA:2416:C:H2'  | 24:BA:2417:C:C5'   | 2.05                     | 0.81              |
| 24:BA:2537:U:H2'  | 24:BA:2538:C:C6    | 2.15                     | 0.81              |
| 24:BA:2816:C:O2'  | 24:BA:2817:G:H5'   | 1.79                     | 0.81              |
| 24:BA:2876:G:H4'  | 40:BS:1:MET:N      | 1.95                     | 0.81              |
| 25:BB:46:A:H2'    | 25:BB:47:C:H6      | 1.41                     | 0.81              |
| 25:BB:76:G:H4'    | 46:BY:85:HIS:HB2   | 1.59                     | 0.81              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 28:BE:92:THR:H    | 28:BE:95:ILE:HD13  | 1.43                     | 0.81              |
| 29:BF:38:ARG:HH12 | 36:BO:10:PRO:HA    | 1.44                     | 0.81              |
| 30:BG:49:ASP:CA   | 30:BG:53:LEU:HD22  | 2.09                     | 0.81              |
| 30:BG:102:PHE:CD2 | 30:BG:106:LEU:HD12 | 2.15                     | 0.81              |
| 32:BK:23:PRO:O    | 32:BK:27:ARG:HB2   | 1.79                     | 0.81              |
| 34:BM:89:LYS:HG2  | 34:BM:90:MET:N     | 1.96                     | 0.81              |
| 35:BN:21:CYS:HA   | 35:BN:41:ALA:HB2   | 1.62                     | 0.81              |
| 35:BN:97:ARG:HG3  | 35:BN:117:LEU:CD2  | 2.10                     | 0.81              |
| 42:BU:6:LYS:HZ3   | 42:BU:10:LYS:HB3   | 1.44                     | 0.81              |
| 44:BW:4:ALA:HB3   | 48:B1:21:ARG:NH1   | 1.94                     | 0.81              |
| 44:BW:84:ALA:HB3  | 44:BW:85:PRO:HD3   | 1.62                     | 0.81              |
| 45:BX:41:GLY:HA3  | 45:BX:61:ILE:O     | 1.79                     | 0.81              |
| 51:B4:15:ARG:HG3  | 51:B4:16:ARG:H     | 1.44                     | 0.81              |
| 52:B5:12:GLU:CG   | 52:B5:13:CYS:H     | 1.93                     | 0.81              |
| 1:AA:194:C:H5''   | 22:AW:65:LYS:HZ3   | 1.45                     | 0.81              |
| 1:AA:523:A:H61    | 14:AO:53:ARG:HH22  | 1.23                     | 0.81              |
| 1:AA:620:C:H2'    | 1:AA:621:A:O4'     | 1.81                     | 0.81              |
| 1:AA:657:G:H2'    | 1:AA:658:G:H5'     | 1.61                     | 0.81              |
| 1:AA:958:A:C2     | 21:AV:55:LYS:HB2   | 2.16                     | 0.81              |
| 3:AC:17:C:H5''    | 3:AC:19:G:OP2      | 1.79                     | 0.81              |
| 3:AC:40:C:C2'     | 3:AC:41:C:H5'      | 2.08                     | 0.81              |
| 3:AC:50:U:H2'     | 3:AC:51:U:O4'      | 1.79                     | 0.81              |
| 3:AD:56:C:H5''    | 26:BC:133:PRO:HG2  | 1.62                     | 0.81              |
| 3:AB:63:G:O4'     | 24:BA:2482:G:O2'   | 1.97                     | 0.81              |
| 4:AE:16:HIS:HA    | 4:AE:204:ASN:HB2   | 1.62                     | 0.81              |
| 4:AE:61:LEU:HA    | 4:AE:64:ARG:HD3    | 1.61                     | 0.81              |
| 4:AE:181:PHE:CD1  | 10:AK:71:GLY:HA3   | 2.15                     | 0.81              |
| 6:AG:30:LYS:N     | 6:AG:34:GLU:HB3    | 1.95                     | 0.81              |
| 6:AG:168:ARG:H    | 6:AG:168:ARG:CD    | 1.94                     | 0.81              |
| 13:AN:95:ILE:HA   | 13:AN:98:LEU:CG    | 2.09                     | 0.81              |
| 18:AS:56:ALA:HB3  | 18:AS:79:VAL:HG11  | 1.61                     | 0.81              |
| 19:AT:4:LYS:CD    | 19:AT:5:VAL:H      | 1.94                     | 0.81              |
| 20:AU:45:SER:OG   | 20:AU:51:LEU:HD11  | 1.80                     | 0.81              |
| 20:AU:74:ARG:CG   | 20:AU:81:PHE:HB3   | 2.09                     | 0.81              |
| 22:AW:51:GLU:HB3  | 22:AW:54:LYS:NZ    | 1.95                     | 0.81              |
| 22:AW:64:ASP:O    | 22:AW:67:ALA:N     | 2.12                     | 0.81              |
| 24:BA:221:A:N6    | 24:BA:265:A:N6     | 2.27                     | 0.81              |
| 24:BA:477:A:H2'   | 24:BA:478:A:C8     | 2.14                     | 0.81              |
| 24:BA:624:C:H3'   | 24:BA:624:C:C6     | 2.15                     | 0.81              |
| 24:BA:970:C:H2'   | 24:BA:971:C:H6     | 1.45                     | 0.81              |
| 24:BA:1085:A:O2'  | 24:BA:1086:A:O4'   | 1.98                     | 0.81              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1312:U:H2'  | 24:BA:1313:U:H6    | 1.40                     | 0.81              |
| 24:BA:1488:G:H2'  | 24:BA:1489:U:C5'   | 2.10                     | 0.81              |
| 24:BA:1511:A:H2'  | 24:BA:1512:G:C5'   | 2.10                     | 0.81              |
| 24:BA:1802:A:H3'  | 24:BA:1803:A:C8    | 2.14                     | 0.81              |
| 24:BA:1864:U:H4'  | 24:BA:2409:G:H22   | 1.44                     | 0.81              |
| 24:BA:1983:C:O2'  | 24:BA:1984:G:H5'   | 1.79                     | 0.81              |
| 24:BA:2261:C:OP2  | 47:BZ:17:GLN:HB2   | 1.81                     | 0.81              |
| 24:BA:2330:G:H1   | 24:BA:2385:C:N4    | 1.78                     | 0.81              |
| 24:BA:2352:A:H2'  | 24:BA:2353:G:O4'   | 1.81                     | 0.81              |
| 24:BA:2498:C:H2'  | 24:BA:2499:C:H5''  | 1.59                     | 0.81              |
| 24:BA:2865:U:C4   | 24:BA:2866:U:C5    | 2.69                     | 0.81              |
| 25:BB:11:C:H3'    | 47:BZ:74:ARG:CZ    | 2.11                     | 0.81              |
| 25:BB:40:U:H1'    | 25:BB:45:A:H62     | 1.43                     | 0.81              |
| 26:BC:62:VAL:HG22 | 26:BC:63:SER:H     | 1.46                     | 0.81              |
| 26:BC:77:ILE:HD12 | 26:BC:123:VAL:HG13 | 1.62                     | 0.81              |
| 27:BD:108:PRO:HB2 | 27:BD:111:LEU:HD21 | 1.63                     | 0.81              |
| 28:BE:5:LEU:HD13  | 28:BE:196:VAL:O    | 1.79                     | 0.81              |
| 28:BE:7:VAL:CG2   | 28:BE:192:ASN:HA   | 2.10                     | 0.81              |
| 28:BE:173:VAL:CG2 | 28:BE:174:ASP:N    | 2.42                     | 0.81              |
| 29:BF:4:VAL:O     | 29:BF:20:LEU:HD12  | 1.76                     | 0.81              |
| 29:BF:104:LYS:HG3 | 29:BF:108:LYS:NZ   | 1.94                     | 0.81              |
| 30:BG:30:GLU:HA   | 30:BG:33:ARG:HG2   | 1.63                     | 0.81              |
| 30:BG:52:ILE:HG12 | 30:BG:148:MET:SD   | 2.19                     | 0.81              |
| 30:BG:77:ILE:CA   | 30:BG:83:ARG:HE    | 1.91                     | 0.81              |
| 31:BH:11:VAL:HG12 | 31:BH:11:VAL:O     | 1.80                     | 0.81              |
| 32:BK:86:THR:HG22 | 32:BK:87:LYS:H     | 1.45                     | 0.81              |
| 34:BM:4:TYR:OH    | 41:BT:101:ARG:HB3  | 1.80                     | 0.81              |
| 34:BM:33:LEU:HD13 | 34:BM:34:LEU:HG    | 1.60                     | 0.81              |
| 34:BM:37:LYS:CD   | 34:BM:43:THR:HA    | 2.10                     | 0.81              |
| 36:BO:15:ARG:NH2  | 36:BO:16:ARG:HB2   | 1.94                     | 0.81              |
| 36:BO:92:GLU:OE1  | 36:BO:126:VAL:HG13 | 1.79                     | 0.81              |
| 40:BS:5:ALA:O     | 40:BS:9:LEU:HG     | 1.79                     | 0.81              |
| 40:BS:53:ARG:CZ   | 40:BS:102:ILE:HG12 | 2.11                     | 0.81              |
| 41:BT:55:ARG:HG2  | 41:BT:55:ARG:NH1   | 1.87                     | 0.81              |
| 44:BW:27:THR:CB   | 44:BW:80:ILE:HD12  | 2.09                     | 0.81              |
| 45:BX:82:PRO:HG3  | 45:BX:97:ARG:H     | 1.43                     | 0.81              |
| 45:BX:86:ARG:HG2  | 45:BX:91:GLU:HB3   | 1.59                     | 0.81              |
| 46:BY:24:LEU:HD23 | 46:BY:25:PRO:HD2   | 1.62                     | 0.81              |
| 46:BY:45:ASP:O    | 46:BY:46:LYS:C     | 2.22                     | 0.81              |
| 47:BZ:72:ARG:HG3  | 47:BZ:78:TYR:HB2   | 1.63                     | 0.81              |
| 48:B1:20:VAL:HG21 | 48:B1:56:LEU:HD11  | 1.61                     | 0.81              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 50:B3:68:ARG:NH1   | 50:B3:68:ARG:HB2   | 1.95                     | 0.81              |
| 1:AA:228:A:H2'     | 1:AA:229:U:H5'     | 1.61                     | 0.81              |
| 4:AE:102:LEU:CD2   | 4:AE:176:GLU:HB3   | 2.09                     | 0.81              |
| 6:AG:21:LEU:HD13   | 6:AG:67:ILE:HG22   | 1.62                     | 0.81              |
| 7:AH:74:GLY:C      | 7:AH:115:VAL:HG12  | 2.04                     | 0.81              |
| 9:AJ:29:LYS:HE3    | 9:AJ:101:LEU:HD13  | 1.61                     | 0.81              |
| 18:AS:27:LYS:N     | 18:AS:27:LYS:HZ2   | 1.79                     | 0.81              |
| 19:AT:97:SER:O     | 19:AT:98:LEU:HD22  | 1.80                     | 0.81              |
| 22:AW:81:LYS:HB3   | 22:AW:85:MET:HE3   | 1.62                     | 0.81              |
| 24:BA:400:G:H1     | 50:B3:63:TYR:HH    | 1.26                     | 0.81              |
| 24:BA:2297:C:H2'   | 24:BA:2298:A:C8    | 2.15                     | 0.81              |
| 24:BA:2331:G:N2    | 24:BA:2385:C:C4    | 2.49                     | 0.81              |
| 26:BC:10:LEU:HD11  | 26:BC:32:LEU:HB3   | 1.62                     | 0.81              |
| 26:BC:22:ILE:HB    | 26:BC:190:ARG:HH22 | 1.45                     | 0.81              |
| 27:BD:159:ALA:C    | 27:BD:196:VAL:HG21 | 2.05                     | 0.81              |
| 27:BD:172:TYR:O    | 27:BD:184:LYS:HE2  | 1.80                     | 0.81              |
| 28:BE:8:LYS:O      | 28:BE:192:ASN:HB2  | 1.79                     | 0.81              |
| 31:BH:17:VAL:HG22  | 31:BH:45:VAL:HG21  | 1.61                     | 0.81              |
| 33:BL:24:GLY:HA2   | 33:BL:34:ILE:HG12  | 1.63                     | 0.81              |
| 35:BN:59:LYS:N     | 35:BN:59:LYS:HE2   | 1.96                     | 0.81              |
| 35:BN:117:LEU:HD23 | 35:BN:118:ALA:N    | 1.95                     | 0.81              |
| 37:BP:51:ARG:HD3   | 37:BP:52:VAL:N     | 1.96                     | 0.81              |
| 41:BT:55:ARG:HD2   | 41:BT:55:ARG:H     | 1.46                     | 0.81              |
| 43:BV:39:THR:HG23  | 51:B4:28:PRO:HB3   | 1.62                     | 0.81              |
| 45:BX:74:PRO:HG2   | 45:BX:76:CYS:HB3   | 1.61                     | 0.81              |
| 51:B4:15:ARG:HG3   | 51:B4:16:ARG:N     | 1.95                     | 0.81              |
| 1:AA:129(A):G:N2   | 1:AA:191(A):G:C5   | 2.49                     | 0.81              |
| 1:AA:174:C:H2'     | 1:AA:175:C:C6      | 2.14                     | 0.81              |
| 1:AA:423:G:H2'     | 1:AA:424:G:O4'     | 1.80                     | 0.81              |
| 1:AA:761:G:H5'     | 19:AT:103:GLY:N    | 1.96                     | 0.81              |
| 1:AA:1037:C:H2'    | 1:AA:1038:C:C6     | 2.16                     | 0.81              |
| 1:AA:1145:C:H1'    | 1:AA:1146:A:C8     | 2.15                     | 0.81              |
| 1:AA:1202:G:H2'    | 1:AA:1203:C:C6     | 2.15                     | 0.81              |
| 1:AA:1323:G:H2'    | 1:AA:1324:A:C8     | 2.15                     | 0.81              |
| 3:AD:76:A:C3'      | 24:BA:2432:A:H4'   | 2.11                     | 0.81              |
| 4:AE:150:SER:HA    | 4:AE:153:ARG:CB    | 2.09                     | 0.81              |
| 5:AF:46:GLU:HB3    | 5:AF:47:LEU:HD22   | 1.62                     | 0.81              |
| 6:AG:155:LEU:H     | 6:AG:158:ILE:HG13  | 1.45                     | 0.81              |
| 7:AH:115:VAL:HG21  | 7:AH:118:ILE:HD12  | 1.61                     | 0.81              |
| 9:AJ:35:LYS:HZ1    | 9:AJ:38:LEU:HD22   | 1.43                     | 0.81              |
| 11:AL:19:LEU:HD23  | 11:AL:60:ASP:O     | 1.81                     | 0.81              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 11:AL:97:LYS:NZ   | 11:AL:102:LEU:HD13 | 1.95                     | 0.81              |
| 14:AO:8:ASN:ND2   | 14:AO:8:ASN:H      | 1.77                     | 0.81              |
| 20:AU:55:ARG:HB3  | 20:AU:55:ARG:HH11  | 1.44                     | 0.81              |
| 22:AW:85:MET:HA   | 22:AW:88:VAL:HG23  | 1.63                     | 0.81              |
| 24:BA:704:G:N2    | 24:BA:725:G:N2     | 2.27                     | 0.81              |
| 24:BA:775:G:N2    | 24:BA:787:U:H2'    | 1.95                     | 0.81              |
| 24:BA:860:U:C6    | 24:BA:2267:A:H4'   | 2.15                     | 0.81              |
| 24:BA:1139:G:H2'  | 24:BA:1140:C:H5''  | 1.59                     | 0.81              |
| 24:BA:1203:G:N1   | 24:BA:1241:A:H8    | 1.78                     | 0.81              |
| 24:BA:1889:A:H2'  | 24:BA:1890:A:C8    | 2.16                     | 0.81              |
| 24:BA:2289:G:H5'  | 24:BA:2384:G:H1'   | 1.61                     | 0.81              |
| 27:BD:57:GLY:N    | 27:BD:217:ARG:HD2  | 1.94                     | 0.81              |
| 31:BH:7:LEU:HB2   | 31:BH:52:VAL:HG13  | 1.61                     | 0.81              |
| 32:BK:113:ARG:NH2 | 32:BK:132:PRO:HB3  | 1.95                     | 0.81              |
| 32:BK:115:ALA:HB1 | 32:BK:128:LEU:HD22 | 1.63                     | 0.81              |
| 35:BN:9:GLU:HA    | 35:BN:17:ARG:O     | 1.80                     | 0.81              |
| 37:BP:12:GLN:NE2  | 37:BP:13:GLN:HE21  | 1.78                     | 0.81              |
| 38:BQ:54:LEU:O    | 38:BQ:57:ARG:HB2   | 1.81                     | 0.81              |
| 39:BR:33:LYS:HE2  | 39:BR:54:LEU:HD21  | 1.60                     | 0.81              |
| 39:BR:73:LEU:HD13 | 39:BR:73:LEU:H     | 1.44                     | 0.81              |
| 39:BR:74:ALA:HB1  | 39:BR:108:GLY:HA3  | 1.61                     | 0.81              |
| 45:BX:37:VAL:HG12 | 45:BX:64:GLU:HG2   | 1.63                     | 0.81              |
| 48:B1:28:MET:HA   | 48:B1:31:ARG:HG3   | 1.61                     | 0.81              |
| 1:AA:114:U:H2'    | 1:AA:115:G:C8      | 2.15                     | 0.81              |
| 1:AA:410:G:N3     | 1:AA:432:A:N6      | 2.28                     | 0.81              |
| 1:AA:1395:C:OP2   | 1:AA:1395:C:H3'    | 1.81                     | 0.81              |
| 7:AH:29:GLY:HA2   | 7:AH:46:GLY:O      | 1.80                     | 0.81              |
| 8:AI:48:LEU:HD12  | 8:AI:50:TYR:O      | 1.79                     | 0.81              |
| 10:AK:33:GLU:HA   | 10:AK:36:LEU:HD21  | 1.61                     | 0.81              |
| 13:AN:54:ARG:HG3  | 13:AN:54:ARG:HH11  | 1.44                     | 0.81              |
| 20:AU:38:GLU:CD   | 20:AU:38:GLU:H     | 1.89                     | 0.81              |
| 22:AW:11:SER:HA   | 22:AW:13:LEU:CD1   | 2.11                     | 0.81              |
| 24:BA:242:G:H5''  | 54:B7:4:MET:HE3    | 1.62                     | 0.81              |
| 24:BA:336:C:C2'   | 24:BA:337:C:H5'    | 2.09                     | 0.81              |
| 24:BA:450:G:C5'   | 29:BF:52:LYS:HD3   | 2.10                     | 0.81              |
| 24:BA:475:U:H4'   | 24:BA:510:C:OP2    | 1.80                     | 0.81              |
| 24:BA:829:A:H5''  | 24:BA:830:G:H5''   | 1.62                     | 0.81              |
| 24:BA:987:G:OP1   | 49:B2:13:ILE:HG21  | 1.81                     | 0.81              |
| 24:BA:1049:C:H42  | 24:BA:1050:A:N6    | 1.77                     | 0.81              |
| 24:BA:1125:G:H4'  | 55:B8:4:ARG:HB3    | 1.60                     | 0.81              |
| 24:BA:1131:G:OP1  | 34:BM:79:PRO:HD3   | 1.80                     | 0.81              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1264:G:O6    | 24:BA:1265:A:N7    | 2.13                     | 0.81              |
| 24:BA:1403:C:H4'   | 24:BA:1471:A:H5'   | 1.62                     | 0.81              |
| 24:BA:1503:U:H2'   | 24:BA:1504:C:C6    | 2.15                     | 0.81              |
| 24:BA:1742:C:H2'   | 24:BA:1743:G:H4'   | 1.61                     | 0.81              |
| 24:BA:2195:C:H2'   | 24:BA:2196:C:O4'   | 1.81                     | 0.81              |
| 24:BA:2620:C:H4'   | 28:BE:156:MET:HB3  | 1.62                     | 0.81              |
| 24:BA:2623:G:H5'   | 24:BA:2826:A:H1'   | 1.63                     | 0.81              |
| 25:BB:102:G:N3     | 46:BY:73:GLN:NE2   | 2.27                     | 0.81              |
| 26:BC:108:MET:HE3  | 26:BC:136:LEU:CD1  | 2.10                     | 0.81              |
| 26:BC:167:LYS:HG3  | 26:BC:168:THR:N    | 1.95                     | 0.81              |
| 28:BE:77:ILE:HG12  | 28:BE:78:LEU:N     | 1.94                     | 0.81              |
| 31:BH:11:VAL:CB    | 31:BH:50:VAL:HG21  | 2.11                     | 0.81              |
| 35:BN:77:ILE:HD13  | 40:BS:65:LYS:HE2   | 1.61                     | 0.81              |
| 35:BN:96:THR:CG2   | 35:BN:97:ARG:H     | 1.89                     | 0.81              |
| 37:BP:69:PHE:HB3   | 37:BP:71:ASP:OD1   | 1.79                     | 0.81              |
| 39:BR:11:LYS:HD3   | 39:BR:11:LYS:H     | 1.42                     | 0.81              |
| 42:BU:18:LEU:HB2   | 42:BU:66:ARG:NH2   | 1.95                     | 0.81              |
| 42:BU:27:ALA:HB1   | 42:BU:33:VAL:CG1   | 2.08                     | 0.81              |
| 42:BU:73:SER:OG    | 42:BU:89:GLN:HB2   | 1.80                     | 0.81              |
| 43:BV:3:ALA:HB3    | 43:BV:107:LEU:HB3  | 1.62                     | 0.81              |
| 1:AA:132:C:H5'     | 1:AA:262:A:C1'     | 2.10                     | 0.81              |
| 1:AA:1433:A:H2'    | 1:AA:1434:A:O4'    | 1.81                     | 0.81              |
| 4:AE:150:SER:CA    | 4:AE:153:ARG:HB2   | 2.09                     | 0.81              |
| 10:AK:103:VAL:HB   | 10:AK:108:GLY:C    | 2.06                     | 0.81              |
| 11:AL:6:GLY:HA3    | 11:AL:80:GLY:O     | 1.79                     | 0.81              |
| 14:AO:25:PRO:C     | 14:AO:27:LEU:H     | 1.84                     | 0.81              |
| 15:AP:77:ASN:O     | 15:AP:80:ARG:HG3   | 1.80                     | 0.81              |
| 17:AR:6:GLU:HG2    | 17:AR:7:GLU:N      | 1.94                     | 0.81              |
| 22:AW:19:SER:O     | 22:AW:23:ARG:HB3   | 1.81                     | 0.81              |
| 24:BA:270:A:C2     | 24:BA:370:G:H1'    | 2.14                     | 0.81              |
| 24:BA:642:G:N2     | 24:BA:644:A:C2     | 2.49                     | 0.81              |
| 24:BA:1252:G:H3'   | 24:BA:1253:A:O4'   | 1.81                     | 0.81              |
| 24:BA:1790:C:H2'   | 24:BA:1791:A:C8    | 2.15                     | 0.81              |
| 24:BA:2409:G:N2    | 24:BA:2410:G:H1'   | 1.95                     | 0.81              |
| 24:BA:2597:G:H5'   | 27:BD:242:ARG:HG2  | 1.62                     | 0.81              |
| 24:BA:2597:G:C1'   | 27:BD:242:ARG:HH21 | 1.93                     | 0.81              |
| 24:BA:2654:A:H4'   | 24:BA:2656:U:C5    | 2.15                     | 0.81              |
| 26:BC:29:VAL:HA    | 26:BC:32:LEU:HD12  | 1.61                     | 0.81              |
| 27:BD:130:ALA:O    | 27:BD:131:LEU:HD13 | 1.81                     | 0.81              |
| 27:BD:157:ARG:HB3  | 27:BD:160:GLY:O    | 1.80                     | 0.81              |
| 27:BD:175:LEU:HD13 | 27:BD:175:LEU:C    | 2.06                     | 0.81              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 28:BE:100:GLU:H    | 28:BE:172:VAL:HG21 | 1.44                     | 0.81              |
| 28:BE:131:ALA:HB1  | 28:BE:134:ILE:HG13 | 1.60                     | 0.81              |
| 30:BG:11:TYR:O     | 30:BG:15:VAL:HG13  | 1.81                     | 0.81              |
| 30:BG:113:ARG:HD3  | 30:BG:139:LEU:CD2  | 2.11                     | 0.81              |
| 32:BK:19:VAL:HG12  | 32:BK:20:ASP:N     | 1.95                     | 0.81              |
| 33:BL:19:PRO:HB2   | 33:BL:22:PRO:HG2   | 1.63                     | 0.81              |
| 36:BO:74:GLU:HA    | 36:BO:107:LYS:HD3  | 1.62                     | 0.81              |
| 36:BO:101:VAL:HG23 | 36:BO:112:LEU:HD22 | 1.61                     | 0.81              |
| 41:BT:88:ILE:O     | 42:BU:52:VAL:HA    | 1.79                     | 0.81              |
| 41:BT:88:ILE:HG22  | 42:BU:55:ALA:CB    | 2.10                     | 0.81              |
| 43:BV:76:VAL:HG22  | 43:BV:77:ASP:H     | 1.45                     | 0.81              |
| 46:BY:127:LYS:HD3  | 46:BY:165:VAL:HG23 | 1.60                     | 0.81              |
| 1:AA:451:A:H1'     | 1:AA:452:A:C4      | 2.15                     | 0.81              |
| 1:AA:558:G:H2'     | 1:AA:559:A:H2      | 1.45                     | 0.81              |
| 1:AA:582:U:H5'     | 17:AR:64:ARG:NH2   | 1.96                     | 0.81              |
| 1:AA:1104:G:H4'    | 4:AE:111:ARG:NE    | 1.95                     | 0.81              |
| 1:AA:1347:G:H8     | 11:AL:107:ARG:CB   | 1.93                     | 0.81              |
| 3:AD:76:A:N7       | 24:BA:2432:A:N3    | 2.29                     | 0.81              |
| 4:AE:10:LEU:HD23   | 4:AE:11:LEU:CD2    | 2.11                     | 0.81              |
| 6:AG:13:ARG:HE     | 6:AG:40:PRO:HB3    | 1.45                     | 0.81              |
| 6:AG:166:LYS:HE2   | 6:AG:178:VAL:HG12  | 1.62                     | 0.81              |
| 8:AI:80:ARG:HG2    | 8:AI:88:VAL:HG21   | 1.62                     | 0.81              |
| 9:AJ:72:ARG:NH2    | 9:AJ:138:LYS:HZ3   | 1.79                     | 0.81              |
| 15:AP:70:LEU:O     | 15:AP:74:VAL:HG23  | 1.81                     | 0.81              |
| 24:BA:47:C:O5'     | 24:BA:47:C:H6      | 1.64                     | 0.81              |
| 24:BA:464:U:O5'    | 24:BA:464:U:H6     | 1.63                     | 0.81              |
| 24:BA:620:G:H5'    | 24:BA:621:A:OP1    | 1.79                     | 0.81              |
| 24:BA:764:A:N6     | 24:BA:1789:A:C2    | 2.47                     | 0.81              |
| 24:BA:972:G:H5''   | 24:BA:973:A:O3'    | 1.80                     | 0.81              |
| 24:BA:1061:U:C4'   | 24:BA:1070:A:H4'   | 2.09                     | 0.81              |
| 24:BA:1319:G:O2'   | 24:BA:1320:C:H5'   | 1.80                     | 0.81              |
| 24:BA:1416:G:C2    | 24:BA:1583:A:N6    | 2.49                     | 0.81              |
| 24:BA:1559:G:N1    | 24:BA:1560:G:C4'   | 2.39                     | 0.81              |
| 24:BA:2393:A:P     | 54:B7:32:LEU:HD11  | 2.21                     | 0.81              |
| 24:BA:2453:A:O2'   | 24:BA:2572:A:H1'   | 1.80                     | 0.81              |
| 24:BA:2637:U:H5''  | 28:BE:81:ILE:CD1   | 2.09                     | 0.81              |
| 24:BA:2740:A:H2'   | 24:BA:2741:A:C8    | 2.15                     | 0.81              |
| 25:BB:75:G:H2'     | 46:BY:85:HIS:HE1   | 1.43                     | 0.81              |
| 27:BD:177:LEU:HD23 | 27:BD:181:GLU:O    | 1.81                     | 0.81              |
| 28:BE:38:THR:OG1   | 28:BE:44:TYR:HB2   | 1.80                     | 0.81              |
| 28:BE:52:LEU:HB2   | 28:BE:73:GLU:O     | 1.81                     | 0.81              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 28:BE:91:VAL:HG11 | 28:BE:93:VAL:HG22  | 1.61                     | 0.81              |
| 30:BG:181:ARG:HD2 | 30:BG:181:ARG:N    | 1.95                     | 0.81              |
| 31:BH:41:MET:SD   | 31:BH:68:THR:OG1   | 2.39                     | 0.81              |
| 32:BK:101:LEU:HG  | 32:BK:102:SER:H    | 1.44                     | 0.81              |
| 34:BM:85:ILE:HB   | 34:BM:90:MET:CE    | 2.11                     | 0.81              |
| 34:BM:109:LYS:NZ  | 34:BM:110:GLY:N    | 2.27                     | 0.81              |
| 37:BP:137:TYR:CZ  | 46:BY:124:ILE:HD11 | 2.16                     | 0.81              |
| 43:BV:64:MET:O    | 43:BV:66:GLU:N     | 2.13                     | 0.81              |
| 51:B4:25:LEU:HG   | 51:B4:25:LEU:O     | 1.79                     | 0.81              |
| 52:B5:24:GLU:CG   | 54:B7:37:SER:HB2   | 2.10                     | 0.81              |
| 1:AA:477:G:H2'    | 1:AA:478:A:C8      | 2.16                     | 0.81              |
| 1:AA:859:A:O2'    | 1:AA:860:A:H5'     | 1.81                     | 0.81              |
| 1:AA:1068:G:N7    | 1:AA:1094:G:C8     | 2.49                     | 0.81              |
| 1:AA:1118:C:OP1   | 11:AL:104:ARG:HG3  | 1.81                     | 0.81              |
| 3:AD:34:G:O5'     | 3:AD:35:A:H5'      | 1.80                     | 0.81              |
| 3:AB:4:C:H2'      | 3:AB:5:G:H8        | 1.44                     | 0.81              |
| 3:AB:52:G:H2'     | 3:AB:53:G:C8       | 2.16                     | 0.81              |
| 4:AE:187:LEU:HD22 | 4:AE:188:ALA:N     | 1.95                     | 0.81              |
| 5:AF:58:GLU:H     | 5:AF:65:ALA:HB3    | 1.46                     | 0.81              |
| 6:AG:165:MET:HE3  | 6:AG:167:GLY:H     | 1.46                     | 0.81              |
| 9:AJ:45:ASP:HA    | 9:AJ:48:LYS:HZ3    | 1.45                     | 0.81              |
| 9:AJ:115:ARG:CB   | 9:AJ:118:VAL:HG23  | 2.11                     | 0.81              |
| 13:AN:84:VAL:CG2  | 13:AN:110:ASP:HA   | 2.11                     | 0.81              |
| 14:AO:9:GLN:HA    | 14:AO:12:ARG:HH12  | 1.46                     | 0.81              |
| 19:AT:12:SER:N    | 19:AT:20:THR:OG1   | 2.14                     | 0.81              |
| 21:AV:41:VAL:HB   | 21:AV:42:PRO:CD    | 2.07                     | 0.81              |
| 24:BA:1222:C:C4   | 24:BA:1223:C:H5    | 1.99                     | 0.81              |
| 24:BA:1312:U:C3'  | 24:BA:1313:U:C6    | 2.63                     | 0.81              |
| 24:BA:1387:C:H2'  | 24:BA:1388:G:C8    | 2.16                     | 0.81              |
| 24:BA:1431:U:H2'  | 24:BA:1432:C:O4'   | 1.80                     | 0.81              |
| 24:BA:1508:A:H5'' | 24:BA:1510:A:C5    | 2.16                     | 0.81              |
| 24:BA:2059:A:N1   | 24:BA:2503:A:C5    | 2.48                     | 0.81              |
| 24:BA:2590:A:H2'  | 24:BA:2591:C:C6    | 2.15                     | 0.81              |
| 24:BA:2687:U:H2'  | 24:BA:2687:U:O2    | 1.81                     | 0.81              |
| 24:BA:2805:G:H3'  | 24:BA:2807:G:C5'   | 2.10                     | 0.81              |
| 26:BC:68:LEU:HD23 | 26:BC:69:GLY:N     | 1.95                     | 0.81              |
| 26:BC:89:ALA:HB1  | 26:BC:154:ARG:CA   | 2.10                     | 0.81              |
| 27:BD:181:GLU:HG3 | 27:BD:270:ILE:CB   | 2.11                     | 0.81              |
| 30:BG:55:LYS:HE2  | 30:BG:151:ALA:HB1  | 1.61                     | 0.81              |
| 30:BG:73:ALA:N    | 30:BG:88:ILE:HD11  | 1.96                     | 0.81              |
| 34:BM:70:LYS:HZ2  | 34:BM:86:PRO:HB3   | 1.44                     | 0.81              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 37:BP:63:LYS:HD3   | 37:BP:64:ILE:N     | 1.95                     | 0.81              |
| 43:BV:90:ARG:H     | 43:BV:90:ARG:HH21  | 1.27                     | 0.81              |
| 44:BW:66:LEU:HG    | 44:BW:69:TYR:C     | 2.05                     | 0.81              |
| 45:BX:8:LYS:HA     | 45:BX:28:LYS:HD2   | 1.60                     | 0.81              |
| 45:BX:49:VAL:CG2   | 45:BX:51:VAL:HB    | 2.10                     | 0.81              |
| 52:B5:15:GLU:CD    | 52:B5:21:TYR:HB3   | 2.06                     | 0.81              |
| 1:AA:91:C:H2'      | 1:AA:92:G:C8       | 2.13                     | 0.81              |
| 1:AA:399:G:H2'     | 1:AA:400:C:C6      | 2.15                     | 0.81              |
| 1:AA:722:A:H2'     | 1:AA:724:G:H8      | 1.45                     | 0.81              |
| 1:AA:994:A:C2      | 16:AQ:5:ALA:HA     | 2.16                     | 0.81              |
| 1:AA:1256:A:N1     | 1:AA:1278:U:O2'    | 2.14                     | 0.81              |
| 1:AA:1507:A:H2'    | 1:AA:1508:G:O4'    | 1.81                     | 0.81              |
| 2:A1:28:G:O2'      | 2:A1:29:G:H5'      | 1.81                     | 0.81              |
| 4:AE:234:PRO:HA    | 4:AE:238:LEU:HD13  | 1.61                     | 0.81              |
| 6:AG:61:LYS:HG3    | 6:AG:207:TYR:HE1   | 1.46                     | 0.81              |
| 6:AG:88:VAL:HG22   | 7:AH:97:GLY:N      | 1.96                     | 0.81              |
| 8:AI:65:VAL:HG23   | 8:AI:66:GLU:N      | 1.96                     | 0.81              |
| 9:AJ:137:LYS:HA    | 9:AJ:140:ASP:OD2   | 1.81                     | 0.81              |
| 10:AK:109:ILE:HG12 | 10:AK:137:VAL:O    | 1.81                     | 0.81              |
| 12:AM:8:LEU:HD13   | 12:AM:16:LEU:HD13  | 1.61                     | 0.81              |
| 17:AR:60:VAL:HA    | 17:AR:63:ARG:HD3   | 1.62                     | 0.81              |
| 20:AU:49:LYS:H     | 20:AU:49:LYS:HE3   | 1.43                     | 0.81              |
| 20:AU:70:ILE:O     | 20:AU:74:ARG:HD2   | 1.81                     | 0.81              |
| 24:BA:24:G:H2'     | 24:BA:25:U:H6      | 1.42                     | 0.81              |
| 24:BA:1238:G:O2'   | 24:BA:1239:G:H5'   | 1.80                     | 0.81              |
| 24:BA:1580:A:H2'   | 24:BA:1581:G:N9    | 1.95                     | 0.81              |
| 24:BA:2786:U:O2'   | 24:BA:2787:C:H5'   | 1.81                     | 0.81              |
| 25:BB:24:G:H2'     | 25:BB:56:G:O6      | 1.81                     | 0.81              |
| 28:BE:4:ILE:HG13   | 28:BE:27:LEU:HD13  | 1.62                     | 0.81              |
| 28:BE:81:ILE:HG22  | 28:BE:82:ARG:N     | 1.96                     | 0.81              |
| 29:BF:43:LYS:HA    | 29:BF:97:TYR:O     | 1.81                     | 0.81              |
| 31:BH:103:LEU:HG   | 31:BH:105:LEU:HD11 | 1.62                     | 0.81              |
| 35:BN:18:LYS:HE2   | 35:BN:44:LYS:CD    | 2.12                     | 0.81              |
| 36:BO:72:PRO:O     | 36:BO:111:ARG:HB3  | 1.80                     | 0.81              |
| 41:BT:69:CYS:SG    | 41:BT:70:ARG:HG3   | 2.20                     | 0.81              |
| 42:BU:5:VAL:HG22   | 42:BU:39:LEU:HA    | 1.61                     | 0.81              |
| 42:BU:81:TYR:O     | 42:BU:82:ARG:HB2   | 1.81                     | 0.81              |
| 47:BZ:19:LYS:O     | 47:BZ:20:ARG:HD2   | 1.79                     | 0.81              |
| 1:AA:263:A:H2'     | 1:AA:264:U:C5'     | 2.07                     | 0.80              |
| 1:AA:551:U:H2'     | 1:AA:552:U:C5      | 2.16                     | 0.80              |
| 1:AA:952:U:O2'     | 1:AA:965:A:N6      | 2.14                     | 0.80              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1104:G:C4'    | 4:AE:111:ARG:HE    | 1.93                     | 0.80              |
| 4:AE:84:GLU:CG     | 4:AE:234:PRO:HD2   | 2.10                     | 0.80              |
| 5:AF:20:SER:HB2    | 5:AF:40:ARG:NH2    | 1.95                     | 0.80              |
| 6:AG:200:GLU:O     | 6:AG:204:ILE:HD12  | 1.80                     | 0.80              |
| 7:AH:78:HIS:H      | 7:AH:78:HIS:CD2    | 1.99                     | 0.80              |
| 7:AH:136:MET:O     | 7:AH:139:LEU:HB2   | 1.79                     | 0.80              |
| 9:AJ:28:ASN:O      | 9:AJ:31:MET:HB3    | 1.80                     | 0.80              |
| 10:AK:80:ILE:H     | 10:AK:80:ILE:CD1   | 1.94                     | 0.80              |
| 15:AP:3:ARG:NH2    | 30:BG:113:ARG:CZ   | 2.44                     | 0.80              |
| 15:AP:51:ALA:O     | 15:AP:55:ARG:HG3   | 1.81                     | 0.80              |
| 17:AR:35:ARG:NH1   | 17:AR:59:MET:HE2   | 1.94                     | 0.80              |
| 19:AT:10:VAL:HG21  | 19:AT:55:ASP:HB2   | 1.61                     | 0.80              |
| 24:BA:125:G:H21    | 53:B6:13:ALA:HB3   | 1.45                     | 0.80              |
| 24:BA:245:G:N2     | 24:BA:254:G:H1'    | 1.96                     | 0.80              |
| 24:BA:247:G:N2     | 54:B7:8:LYS:HD2    | 1.95                     | 0.80              |
| 24:BA:386:G:H2'    | 24:BA:386:G:N3     | 1.95                     | 0.80              |
| 24:BA:477:A:N6     | 24:BA:502:A:N6     | 2.24                     | 0.80              |
| 24:BA:663:G:H4'    | 36:BO:18:ARG:NH1   | 1.96                     | 0.80              |
| 24:BA:729:G:P      | 27:BD:13:ARG:HH22  | 2.03                     | 0.80              |
| 24:BA:825:C:H1'    | 24:BA:2428:G:N2    | 1.96                     | 0.80              |
| 24:BA:902:C:H2'    | 24:BA:903:C:C6     | 2.16                     | 0.80              |
| 24:BA:1188:U:O2    | 24:BA:1188:U:H2'   | 1.80                     | 0.80              |
| 24:BA:1299:G:H21   | 24:BA:1640:C:H6    | 1.27                     | 0.80              |
| 24:BA:1708:C:H2'   | 24:BA:1709:U:H5''  | 1.61                     | 0.80              |
| 24:BA:1809:A:N6    | 50:B3:3:GLU:HG3    | 1.95                     | 0.80              |
| 24:BA:2269:A:C2    | 24:BA:2270:G:H1'   | 2.16                     | 0.80              |
| 24:BA:2468:G:H3'   | 24:BA:2476:A:N1    | 1.96                     | 0.80              |
| 24:BA:2687:U:C2    | 24:BA:2688:U:H6    | 2.00                     | 0.80              |
| 24:BA:2780:G:O2'   | 24:BA:2781:A:H5''  | 1.81                     | 0.80              |
| 28:BE:92:THR:C     | 28:BE:94:GLU:H     | 1.88                     | 0.80              |
| 28:BE:176:ILE:HD12 | 28:BE:179:GLU:O    | 1.80                     | 0.80              |
| 30:BG:94:LEU:CB    | 30:BG:99:MET:HE3   | 2.10                     | 0.80              |
| 33:BL:12:LEU:HD23  | 33:BL:22:PRO:HB2   | 1.63                     | 0.80              |
| 33:BL:14:ALA:HB2   | 33:BL:53:VAL:HB    | 1.63                     | 0.80              |
| 35:BN:25:LEU:CB    | 35:BN:38:VAL:O     | 2.28                     | 0.80              |
| 37:BP:74:TYR:HD2   | 37:BP:74:TYR:N     | 1.78                     | 0.80              |
| 39:BR:95:HIS:HA    | 39:BR:99:LYS:HD2   | 1.63                     | 0.80              |
| 46:BY:152:ALA:CA   | 46:BY:155:LEU:HD13 | 2.11                     | 0.80              |
| 48:B1:52:ILE:HA    | 48:B1:55:LEU:CD2   | 2.11                     | 0.80              |
| 49:B2:22:ALA:O     | 49:B2:26:LEU:HD22  | 1.81                     | 0.80              |
| 49:B2:31:LEU:HD12  | 49:B2:32:GLN:NE2   | 1.95                     | 0.80              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 50:B3:21:VAL:HG12 | 50:B3:22:ILE:N     | 1.92                     | 0.80              |
| 52:B5:19:ARG:HD3  | 52:B5:19:ARG:H     | 1.46                     | 0.80              |
| 1:AA:1035:A:H2'   | 1:AA:1036:G:H5'    | 1.63                     | 0.80              |
| 4:AE:60:ASP:HB3   | 4:AE:64:ARG:HH12   | 1.47                     | 0.80              |
| 5:AF:48:TYR:HA    | 5:AF:52:LEU:CD2    | 2.11                     | 0.80              |
| 11:AL:97:LYS:HB3  | 11:AL:98:PRO:HD3   | 1.62                     | 0.80              |
| 19:AT:11:VAL:HG23 | 19:AT:21:VAL:HA    | 1.63                     | 0.80              |
| 22:AW:62:LEU:HA   | 22:AW:65:LYS:CG    | 2.10                     | 0.80              |
| 24:BA:67:U:H2'    | 24:BA:68:G:C8      | 2.16                     | 0.80              |
| 24:BA:531:C:N4    | 41:BT:38:THR:HA    | 1.95                     | 0.80              |
| 24:BA:820:A:C2'   | 24:BA:821:A:H5'    | 2.08                     | 0.80              |
| 24:BA:1555:G:OP2  | 24:BA:1555:G:H3'   | 1.80                     | 0.80              |
| 24:BA:1964:G:C2   | 24:BA:1967:C:C5    | 2.70                     | 0.80              |
| 24:BA:2021:C:H2'  | 24:BA:2022:U:OP1   | 1.80                     | 0.80              |
| 24:BA:2447:G:H3'  | 24:BA:2499:C:P     | 2.21                     | 0.80              |
| 24:BA:2453:A:H61  | 24:BA:2500:U:H3    | 1.29                     | 0.80              |
| 24:BA:2877:G:H3'  | 24:BA:2878:U:C6    | 2.17                     | 0.80              |
| 25:BB:76:G:H5'    | 46:BY:85:HIS:ND1   | 1.95                     | 0.80              |
| 26:BC:64:LEU:HB3  | 26:BC:188:ASN:OD1  | 1.80                     | 0.80              |
| 26:BC:131:LEU:HB3 | 26:BC:136:LEU:C    | 2.06                     | 0.80              |
| 28:BE:197:ILE:N   | 28:BE:197:ILE:HD12 | 1.95                     | 0.80              |
| 29:BF:153:SER:HA  | 29:BF:172:TRP:O    | 1.81                     | 0.80              |
| 29:BF:171:PRO:HB2 | 29:BF:172:TRP:HE3  | 1.46                     | 0.80              |
| 30:BG:131:TYR:CZ  | 30:BG:157:ILE:O    | 2.34                     | 0.80              |
| 31:BH:167:GLU:O   | 31:BH:169:VAL:HG13 | 1.81                     | 0.80              |
| 34:BM:91:LEU:HD23 | 34:BM:98:VAL:HG21  | 1.61                     | 0.80              |
| 36:BO:49:ARG:O    | 36:BO:52:GLU:HG2   | 1.82                     | 0.80              |
| 37:BP:110:THR:O   | 37:BP:111:GLU:HB2  | 1.81                     | 0.80              |
| 40:BS:7:ILE:HG13  | 40:BS:8:LYS:H      | 1.46                     | 0.80              |
| 41:BT:13:LYS:HA   | 41:BT:16:LYS:HZ2   | 1.46                     | 0.80              |
| 44:BW:12:VAL:HG23 | 44:BW:28:PHE:HA    | 1.61                     | 0.80              |
| 44:BW:63:LYS:H    | 44:BW:72:LYS:HG2   | 1.46                     | 0.80              |
| 45:BX:98:VAL:O    | 45:BX:100:ALA:O    | 1.98                     | 0.80              |
| 49:B2:3:ARG:HH12  | 49:B2:59:VAL:CB    | 1.91                     | 0.80              |
| 53:B6:43:THR:C    | 53:B6:45:ALA:H     | 1.89                     | 0.80              |
| 54:B7:13:ARG:HD2  | 54:B7:24:ALA:HB1   | 1.63                     | 0.80              |
| 1:AA:333:G:H4'    | 22:AW:16:HIS:CD2   | 2.16                     | 0.80              |
| 1:AA:477:G:H2'    | 1:AA:478:A:H8      | 1.45                     | 0.80              |
| 1:AA:1239:A:H4'   | 1:AA:1240:U:C5'    | 2.11                     | 0.80              |
| 5:AF:8:ILE:HG21   | 16:AQ:50:LYS:O     | 1.81                     | 0.80              |
| 11:AL:52:ALA:O    | 11:AL:95:LYS:HD2   | 1.80                     | 0.80              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 13:AN:84:VAL:HG21   | 20:AU:88:LYS:CD    | 2.11                     | 0.80              |
| 14:AO:24:VAL:HG22   | 14:AO:98:TYR:CZ    | 2.17                     | 0.80              |
| 18:AS:14:ASN:HA     | 18:AS:42:ARG:CZ    | 2.10                     | 0.80              |
| 24:BA:120:U:O2'     | 24:BA:121:G:H5''   | 1.81                     | 0.80              |
| 24:BA:209:C:C2'     | 24:BA:210:C:H5'    | 2.10                     | 0.80              |
| 24:BA:604:G:C6      | 24:BA:605:C:N4     | 2.50                     | 0.80              |
| 24:BA:900:A:C8      | 24:BA:901:A:C8     | 2.69                     | 0.80              |
| 24:BA:1022:G:N2     | 24:BA:1023:U:O4    | 2.14                     | 0.80              |
| 24:BA:1142(A):A:H3' | 24:BA:1143:A:C5'   | 2.11                     | 0.80              |
| 24:BA:1155:A:H2'    | 24:BA:1156:A:C5'   | 2.11                     | 0.80              |
| 24:BA:1355:G:N2     | 24:BA:1377:G:H1'   | 1.95                     | 0.80              |
| 24:BA:1617:C:H2'    | 24:BA:1617:C:O2    | 1.79                     | 0.80              |
| 24:BA:2333:A:H1'    | 24:BA:2335:A:C4    | 2.16                     | 0.80              |
| 24:BA:2394:C:N4     | 24:BA:2422:A:H61   | 1.79                     | 0.80              |
| 24:BA:2568:C:H2'    | 24:BA:2569:G:H5'   | 1.63                     | 0.80              |
| 24:BA:2627:G:C2'    | 24:BA:2628:C:H5'   | 2.10                     | 0.80              |
| 24:BA:2839:G:H4'    | 38:BQ:49:ASP:OD1   | 1.81                     | 0.80              |
| 26:BC:8:ARG:HH11    | 26:BC:11:LEU:HD23  | 1.46                     | 0.80              |
| 27:BD:95:LEU:HD13   | 27:BD:95:LEU:C     | 2.07                     | 0.80              |
| 27:BD:133:LEU:O     | 27:BD:135:PHE:N    | 2.14                     | 0.80              |
| 28:BE:33:VAL:HG21   | 28:BE:77:ILE:CD1   | 2.10                     | 0.80              |
| 29:BF:157:VAL:HG12  | 29:BF:176:LEU:HD23 | 1.63                     | 0.80              |
| 29:BF:201:VAL:HG12  | 29:BF:205:ARG:NE   | 1.96                     | 0.80              |
| 31:BH:98:LEU:CG     | 31:BH:123:PHE:HB2  | 2.11                     | 0.80              |
| 33:BL:41:PHE:CZ     | 33:BL:57:ILE:HD13  | 2.15                     | 0.80              |
| 35:BN:97:ARG:CZ     | 35:BN:98:VAL:N     | 2.44                     | 0.80              |
| 36:BO:93:GLY:HA2    | 36:BO:112:LEU:HD11 | 1.61                     | 0.80              |
| 37:BP:26:TYR:HD1    | 37:BP:27:VAL:N     | 1.78                     | 0.80              |
| 48:B1:5:LEU:O       | 48:B1:8:ALA:HB3    | 1.82                     | 0.80              |
| 1:AA:270:A:H2'      | 1:AA:271:C:H6      | 1.45                     | 0.80              |
| 1:AA:449:C:O2       | 18:AS:42:ARG:HG2   | 1.81                     | 0.80              |
| 1:AA:775:G:N3       | 1:AA:776:G:N7      | 2.29                     | 0.80              |
| 1:AA:858:G:H1       | 1:AA:869:G:H3'     | 1.44                     | 0.80              |
| 1:AA:1145:C:H1'     | 1:AA:1146:A:N7     | 1.95                     | 0.80              |
| 3:AC:21:A:N6        | 3:AC:46:G:N2       | 2.30                     | 0.80              |
| 4:AE:47:THR:OG1     | 4:AE:202:PRO:HG2   | 1.82                     | 0.80              |
| 4:AE:101:MET:HA     | 4:AE:108:ILE:HG13  | 1.64                     | 0.80              |
| 4:AE:224:GLN:HG2    | 4:AE:229:VAL:HG21  | 1.61                     | 0.80              |
| 10:AK:14:ARG:HG2    | 10:AK:18:ARG:HE    | 1.46                     | 0.80              |
| 22:AW:51:GLU:HA     | 22:AW:54:LYS:HD2   | 1.61                     | 0.80              |
| 24:BA:163:U:O4      | 24:BA:171:G:H1'    | 1.81                     | 0.80              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:371:A:O2'   | 24:BA:372:G:OP1   | 1.99                     | 0.80              |
| 24:BA:535:C:H5'   | 41:BT:49:HIS:CB   | 2.10                     | 0.80              |
| 24:BA:1047:G:H2'  | 24:BA:1110:G:N1   | 1.97                     | 0.80              |
| 24:BA:1114:G:C2   | 24:BA:1115:G:H1'  | 2.15                     | 0.80              |
| 24:BA:1387:C:H2'  | 24:BA:1388:G:H8   | 1.46                     | 0.80              |
| 24:BA:1418:G:OP1  | 24:BA:1588:C:H4'  | 1.81                     | 0.80              |
| 24:BA:1800:C:H3'  | 24:BA:1800:C:H6   | 1.45                     | 0.80              |
| 24:BA:2226:C:H2'  | 24:BA:2227:A:O4'  | 1.80                     | 0.80              |
| 24:BA:2286:A:H1'  | 52:B5:37:ARG:NH2  | 1.96                     | 0.80              |
| 24:BA:2557:G:H2'  | 24:BA:2558:C:H6   | 1.43                     | 0.80              |
| 26:BC:30:LYS:HG2  | 26:BC:178:ALA:O   | 1.81                     | 0.80              |
| 26:BC:46:LYS:HG3  | 26:BC:211:SER:OG  | 1.81                     | 0.80              |
| 27:BD:80:ALA:HB2  | 27:BD:96:HIS:HD1  | 1.45                     | 0.80              |
| 30:BG:53:LEU:HB3  | 30:BG:69:ALA:O    | 1.80                     | 0.80              |
| 30:BG:118:ARG:HG3 | 30:BG:119:GLY:H   | 1.43                     | 0.80              |
| 30:BG:171:ALA:HA  | 30:BG:174:GLU:OE1 | 1.81                     | 0.80              |
| 36:BO:81:GLN:HB3  | 36:BO:86:LYS:HG3  | 1.64                     | 0.80              |
| 38:BQ:36:THR:O    | 38:BQ:111:LEU:HB3 | 1.80                     | 0.80              |
| 40:BS:78:LEU:HD21 | 40:BS:84:GLN:OE1  | 1.81                     | 0.80              |
| 42:BU:20:LEU:HD13 | 42:BU:68:LYS:NZ   | 1.96                     | 0.80              |
| 45:BX:12:THR:HG23 | 45:BX:73:ARG:HG3  | 1.63                     | 0.80              |
| 1:AA:232:G:H2'    | 1:AA:233:C:C5     | 2.15                     | 0.80              |
| 1:AA:389:A:H2'    | 1:AA:390:C:C5'    | 2.10                     | 0.80              |
| 1:AA:1003:G:C5    | 1:AA:1004:A:H1'   | 2.15                     | 0.80              |
| 1:AA:1126:U:H5'   | 1:AA:1281:U:O4'   | 1.81                     | 0.80              |
| 1:AA:1189:C:H5''  | 5:AF:5:ILE:HG12   | 1.63                     | 0.80              |
| 1:AA:1240:U:H2'   | 9:AJ:32:ARG:HH21  | 1.46                     | 0.80              |
| 3:AC:19:G:H21     | 3:AC:57:G:H1'     | 1.46                     | 0.80              |
| 5:AF:24:ALA:HB1   | 5:AF:28:GLN:OE1   | 1.80                     | 0.80              |
| 8:AI:6:VAL:HG22   | 8:AI:8:ILE:CD1    | 2.11                     | 0.80              |
| 8:AI:75:LEU:HD22  | 8:AI:79:LEU:CD2   | 2.11                     | 0.80              |
| 10:AK:68:ARG:HD3  | 10:AK:69:ARG:N    | 1.96                     | 0.80              |
| 12:AM:49:VAL:HG13 | 16:AQ:41:ARG:CD   | 2.11                     | 0.80              |
| 14:AO:60:LEU:C    | 14:AO:60:LEU:HD22 | 2.07                     | 0.80              |
| 15:AP:11:ARG:O    | 15:AP:45:VAL:HB   | 1.80                     | 0.80              |
| 24:BA:152:G:H2'   | 24:BA:153:C:O4'   | 1.80                     | 0.80              |
| 24:BA:389:G:OP2   | 50:B3:24:THR:HG23 | 1.82                     | 0.80              |
| 24:BA:728:G:C6    | 24:BA:762:U:H2'   | 2.17                     | 0.80              |
| 24:BA:1212:G:HO2' | 24:BA:1213:A:H8   | 1.27                     | 0.80              |
| 24:BA:1299:G:H22  | 24:BA:1640:C:H5'  | 1.46                     | 0.80              |
| 24:BA:1602:U:H3'  | 24:BA:1602:U:C6   | 2.17                     | 0.80              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1624:G:H2'   | 24:BA:1625:C:H5    | 1.46                     | 0.80              |
| 24:BA:1913:A:N9    | 24:BA:1918:A:N6    | 2.29                     | 0.80              |
| 24:BA:1943:U:C2    | 24:BA:1945:G:H5''  | 2.17                     | 0.80              |
| 24:BA:2262:U:H4'   | 24:BA:2328:A:C2    | 2.17                     | 0.80              |
| 26:BC:64:LEU:HB3   | 26:BC:188:ASN:ND2  | 1.97                     | 0.80              |
| 28:BE:13:ARG:CG    | 28:BE:22:PRO:HD3   | 2.07                     | 0.80              |
| 28:BE:173:VAL:HG22 | 28:BE:183:LEU:O    | 1.80                     | 0.80              |
| 30:BG:131:TYR:CE1  | 30:BG:157:ILE:O    | 2.35                     | 0.80              |
| 31:BH:99:VAL:CG2   | 31:BH:104:GLU:HG2  | 2.11                     | 0.80              |
| 31:BH:118:PRO:HG3  | 31:BH:144:VAL:HG21 | 1.61                     | 0.80              |
| 32:BK:78:THR:C     | 32:BK:79:ILE:HD12  | 2.06                     | 0.80              |
| 34:BM:25:ARG:HA    | 34:BM:28:THR:CG2   | 2.11                     | 0.80              |
| 35:BN:47:ILE:CD1   | 35:BN:52:VAL:HG13  | 2.11                     | 0.80              |
| 37:BP:36:ALA:O     | 37:BP:37:LEU:HG    | 1.81                     | 0.80              |
| 39:BR:7:TYR:O      | 39:BR:10:ARG:HB2   | 1.81                     | 0.80              |
| 39:BR:49:VAL:HG13  | 39:BR:76:LYS:CE    | 2.12                     | 0.80              |
| 39:BR:62:LYS:HB3   | 39:BR:65:VAL:N     | 1.96                     | 0.80              |
| 39:BR:67:ARG:HH21  | 39:BR:67:ARG:HG2   | 1.47                     | 0.80              |
| 41:BT:57:PHE:CA    | 41:BT:60:LEU:HG    | 2.12                     | 0.80              |
| 43:BV:36:LEU:HD23  | 43:BV:51:LEU:CD2   | 2.11                     | 0.80              |
| 45:BX:32:PRO:HB2   | 45:BX:34:LYS:HG3   | 1.64                     | 0.80              |
| 46:BY:152:ALA:HB3  | 46:BY:168:GLU:CA   | 2.10                     | 0.80              |
| 49:B2:50:VAL:HG13  | 49:B2:53:LEU:CD1   | 2.11                     | 0.80              |
| 55:B8:10:ILE:O     | 55:B8:12:ASP:N     | 2.13                     | 0.80              |
| 1:AA:450:G:O6      | 1:AA:481:G:H2'     | 1.81                     | 0.80              |
| 1:AA:474:G:C5'     | 18:AS:81:ARG:HG3   | 2.12                     | 0.80              |
| 4:AE:80:ILE:HD12   | 4:AE:208:ILE:CG1   | 2.11                     | 0.80              |
| 13:AN:57:THR:HG23  | 13:AN:60:ALA:N     | 1.95                     | 0.80              |
| 15:AP:91:ARG:HB3   | 15:AP:98:VAL:HG22  | 1.62                     | 0.80              |
| 18:AS:21:VAL:HG21  | 18:AS:59:TRP:HE1   | 1.43                     | 0.80              |
| 19:AT:65:ILE:HG23  | 19:AT:69:LYS:HD2   | 1.64                     | 0.80              |
| 22:AW:23:ARG:HA    | 22:AW:26:ASN:OD1   | 1.81                     | 0.80              |
| 24:BA:287:C:C2'    | 24:BA:288:C:C5     | 2.64                     | 0.80              |
| 24:BA:508:G:O2'    | 24:BA:509:C:H5''   | 1.81                     | 0.80              |
| 24:BA:697:C:H2'    | 24:BA:698:C:H5''   | 1.62                     | 0.80              |
| 24:BA:1592:C:H2'   | 24:BA:1593:G:H8    | 1.47                     | 0.80              |
| 24:BA:1950:G:N7    | 24:BA:1951:U:C5    | 2.50                     | 0.80              |
| 26:BC:59:ARG:HG3   | 26:BC:60:GLY:N     | 1.95                     | 0.80              |
| 28:BE:5:LEU:HD11   | 28:BE:196:VAL:HG12 | 1.63                     | 0.80              |
| 30:BG:55:LYS:O     | 30:BG:59:GLU:HG2   | 1.81                     | 0.80              |
| 31:BH:117:PRO:HA   | 31:BH:121:ILE:HD13 | 1.64                     | 0.80              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 36:BO:46:LYS:HB3   | 36:BO:49:ARG:NH2   | 1.96                     | 0.80              |
| 37:BP:16:ARG:NE    | 37:BP:73:PRO:HD3   | 1.96                     | 0.80              |
| 39:BR:14:VAL:HG12  | 39:BR:15:ARG:N     | 1.96                     | 0.80              |
| 40:BS:52:ILE:N     | 40:BS:66:VAL:HG12  | 1.97                     | 0.80              |
| 41:BT:7:GLY:O      | 41:BT:8:VAL:C      | 2.24                     | 0.80              |
| 41:BT:38:THR:O     | 41:BT:41:ALA:HB3   | 1.81                     | 0.80              |
| 45:BX:35:TYR:O     | 45:BX:64:GLU:HB3   | 1.82                     | 0.80              |
| 1:AA:270:A:O2'     | 1:AA:271:C:H5'     | 1.82                     | 0.80              |
| 1:AA:495:A:H1'     | 1:AA:496:A:N7      | 1.97                     | 0.80              |
| 1:AA:518:C:O2'     | 1:AA:519:C:OP2     | 2.00                     | 0.80              |
| 1:AA:552:U:O2'     | 1:AA:553:A:H5'     | 1.82                     | 0.80              |
| 3:AD:62:C:H4'      | 26:BC:52:ARG:HD3   | 1.61                     | 0.80              |
| 4:AE:59:GLU:CB     | 4:AE:221:LEU:HD21  | 2.09                     | 0.80              |
| 4:AE:97:TRP:HZ2    | 4:AE:102:LEU:CD1   | 1.94                     | 0.80              |
| 4:AE:221:LEU:HD13  | 4:AE:221:LEU:C     | 2.06                     | 0.80              |
| 11:AL:42:ARG:HB3   | 11:AL:74:ILE:CD1   | 2.11                     | 0.80              |
| 13:AN:73:MET:HE2   | 13:AN:103:LEU:HD22 | 1.64                     | 0.80              |
| 17:AR:36:ILE:HD12  | 17:AR:63:ARG:HD3   | 1.63                     | 0.80              |
| 18:AS:6:LEU:HD23   | 18:AS:17:TYR:CD2   | 2.17                     | 0.80              |
| 24:BA:90:U:H4'     | 24:BA:91:A:O5'     | 1.80                     | 0.80              |
| 24:BA:185:U:N3     | 24:BA:212:G:N2     | 2.30                     | 0.80              |
| 24:BA:562:U:O2     | 24:BA:572:A:H1'    | 1.81                     | 0.80              |
| 24:BA:1123:C:H2'   | 24:BA:1124:C:H6    | 1.45                     | 0.80              |
| 24:BA:1142(A):A:N1 | 24:BA:1143:A:C8    | 2.50                     | 0.80              |
| 24:BA:1496:A:C2    | 24:BA:1498:C:N4    | 2.50                     | 0.80              |
| 24:BA:1582:C:H3'   | 24:BA:1583:A:C5'   | 2.12                     | 0.80              |
| 24:BA:1670:C:H3'   | 24:BA:1671:U:C6    | 2.15                     | 0.80              |
| 24:BA:1762:A:C8    | 24:BA:1762:A:C3'   | 2.60                     | 0.80              |
| 24:BA:1784:A:HO2'  | 24:BA:1785:A:P     | 2.04                     | 0.80              |
| 24:BA:2756:U:N3    | 24:BA:2758:A:N6    | 2.29                     | 0.80              |
| 25:BB:30:C:H2'     | 25:BB:31:C:H5'     | 1.62                     | 0.80              |
| 26:BC:56:GLN:O     | 26:BC:58:VAL:HG22  | 1.80                     | 0.80              |
| 29:BF:74:ARG:HH11  | 29:BF:75:HIS:HA    | 1.46                     | 0.80              |
| 34:BM:89:LYS:CE    | 34:BM:89:LYS:N     | 2.43                     | 0.80              |
| 35:BN:69:VAL:N     | 35:BN:104:ARG:NH2  | 2.29                     | 0.80              |
| 36:BO:16:ARG:HD3   | 36:BO:19:VAL:HG22  | 1.62                     | 0.80              |
| 38:BQ:73:VAL:HG23  | 38:BQ:74:LYS:H     | 1.47                     | 0.80              |
| 41:BT:98:LEU:HB3   | 41:BT:105:VAL:CG1  | 2.11                     | 0.80              |
| 46:BY:102:LEU:HD13 | 46:BY:137:ILE:O    | 1.80                     | 0.80              |
| 49:B2:28:LEU:N     | 49:B2:28:LEU:HD23  | 1.96                     | 0.80              |
| 50:B3:65:ASP:CA    | 50:B3:68:ARG:NH2   | 2.42                     | 0.80              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 54:B7:22:VAL:CG1  | 54:B7:23:VAL:N     | 2.45                     | 0.80              |
| 1:AA:1196:U:H5'   | 1:AA:1197:G:H5'    | 1.64                     | 0.80              |
| 1:AA:1206:G:H2'   | 1:AA:1207:G:O4'    | 1.82                     | 0.80              |
| 1:AA:1245:A:H2'   | 1:AA:1246:C:H6     | 1.47                     | 0.80              |
| 1:AA:1414:U:H2'   | 1:AA:1415:G:H8     | 1.44                     | 0.80              |
| 3:AC:75:C:P       | 24:BA:2602:A:H5'   | 2.22                     | 0.80              |
| 4:AE:97:TRP:CH2   | 4:AE:176:GLU:HG3   | 2.15                     | 0.80              |
| 4:AE:208:ILE:HA   | 4:AE:211:ILE:HB    | 1.63                     | 0.80              |
| 7:AH:12:LEU:HG    | 7:AH:129:ILE:CD1   | 2.12                     | 0.80              |
| 11:AL:27:THR:HB   | 11:AL:62:TYR:CD1   | 2.17                     | 0.80              |
| 11:AL:29:ASN:OD1  | 11:AL:64:THR:HA    | 1.82                     | 0.80              |
| 12:AM:6:ILE:CG2   | 12:AM:98:ILE:HG13  | 2.11                     | 0.80              |
| 20:AU:55:ARG:HB3  | 20:AU:55:ARG:NH1   | 1.96                     | 0.80              |
| 24:BA:339:U:H2'   | 24:BA:340:A:C8     | 2.16                     | 0.80              |
| 24:BA:1113:U:O5'  | 24:BA:1113:U:H6    | 1.65                     | 0.80              |
| 24:BA:1475:G:H21  | 24:BA:1476:C:C5'   | 1.93                     | 0.80              |
| 24:BA:1670:C:H2'  | 24:BA:1671:U:O4'   | 1.82                     | 0.80              |
| 24:BA:2022:U:H5'  | 24:BA:2023:G:OP2   | 1.81                     | 0.80              |
| 24:BA:2127:G:H5'  | 26:BC:36:LYS:HG2   | 1.64                     | 0.80              |
| 24:BA:2597:G:C5'  | 27:BD:242:ARG:HE   | 1.94                     | 0.80              |
| 24:BA:2771:C:H2'  | 24:BA:2772:C:C6    | 2.17                     | 0.80              |
| 25:BB:82:G:H2'    | 25:BB:83:G:H8      | 1.46                     | 0.80              |
| 26:BC:43:VAL:HG22 | 26:BC:214:VAL:HG22 | 1.62                     | 0.80              |
| 30:BG:29:TRP:O    | 30:BG:31:VAL:N     | 2.14                     | 0.80              |
| 30:BG:44:GLY:O    | 30:BG:72:ARG:HB3   | 1.80                     | 0.80              |
| 30:BG:60:LEU:O    | 30:BG:63:ILE:HG22  | 1.81                     | 0.80              |
| 40:BS:28:VAL:HB   | 40:BS:52:ILE:HD12  | 1.64                     | 0.80              |
| 43:BV:40:ASN:OD1  | 43:BV:41:LYS:HG3   | 1.81                     | 0.80              |
| 46:BY:24:LEU:HD13 | 46:BY:83:PRO:HD2   | 1.63                     | 0.80              |
| 49:B2:3:ARG:HH22  | 49:B2:59:VAL:CG1   | 1.94                     | 0.80              |
| 54:B7:20:GLY:O    | 54:B7:21:LYS:HG3   | 1.81                     | 0.80              |
| 55:B8:10:ILE:HD12 | 55:B8:10:ILE:N     | 1.97                     | 0.80              |
| 1:AA:11:G:H2'     | 1:AA:12:U:O4'      | 1.81                     | 0.80              |
| 1:AA:1135:U:H2'   | 1:AA:1137:C:C6     | 2.16                     | 0.80              |
| 1:AA:1277:C:H4'   | 1:AA:1282:C:C1'    | 2.11                     | 0.80              |
| 3:AB:63:G:C2'     | 24:BA:2482:G:H4'   | 2.11                     | 0.80              |
| 4:AE:90:MET:SD    | 4:AE:91:PRO:HD2    | 2.21                     | 0.80              |
| 5:AF:15:THR:HG21  | 5:AF:181:ASN:CA    | 2.12                     | 0.80              |
| 6:AG:55:ALA:O     | 6:AG:59:ARG:CG     | 2.28                     | 0.80              |
| 6:AG:94:LEU:HA    | 6:AG:97:LEU:HD12   | 1.64                     | 0.80              |
| 7:AH:109:ILE:HD13 | 7:AH:135:THR:CB    | 2.11                     | 0.80              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 8:AI:30:LEU:HA    | 8:AI:75:LEU:CD1    | 2.12                     | 0.80              |
| 11:AL:47:LEU:HD11 | 11:AL:56:LEU:HG    | 1.62                     | 0.80              |
| 12:AM:94:VAL:HG12 | 12:AM:95:GLU:N     | 1.93                     | 0.80              |
| 13:AN:87:THR:HA   | 13:AN:91:ARG:NH1   | 1.96                     | 0.80              |
| 14:AO:77:LEU:HD11 | 14:AO:107:ALA:HB2  | 1.61                     | 0.80              |
| 17:AR:75:PRO:CA   | 17:AR:78:TYR:HB3   | 2.11                     | 0.80              |
| 24:BA:374:A:H3'   | 24:BA:375:C:H6     | 1.46                     | 0.80              |
| 24:BA:820:A:H2'   | 24:BA:821:A:C5'    | 2.11                     | 0.80              |
| 24:BA:871:U:H5''  | 37:BP:9:TYR:CZ     | 2.16                     | 0.80              |
| 24:BA:917:A:H3'   | 24:BA:918:A:H5''   | 1.62                     | 0.80              |
| 24:BA:1051:G:H4'  | 24:BA:2752:C:H1'   | 1.63                     | 0.80              |
| 24:BA:1265:A:H8   | 24:BA:1267:U:O4    | 1.65                     | 0.80              |
| 24:BA:1299:G:O6   | 24:BA:1639:U:H5''  | 1.80                     | 0.80              |
| 24:BA:1453:A:N6   | 38:BQ:63:ARG:HH21  | 1.77                     | 0.80              |
| 24:BA:2051:A:H4'  | 28:BE:141:ILE:CD1  | 2.11                     | 0.80              |
| 24:BA:2055:C:H4'  | 24:BA:2056:G:H5''  | 1.62                     | 0.80              |
| 24:BA:2507:C:O3'  | 24:BA:2573:C:N4    | 2.15                     | 0.80              |
| 27:BD:155:LEU:O   | 27:BD:155:LEU:HD23 | 1.81                     | 0.80              |
| 28:BE:47:VAL:HG22 | 28:BE:79:ARG:HB2   | 1.64                     | 0.80              |
| 28:BE:119:ARG:NE  | 28:BE:155:LYS:HB3  | 1.97                     | 0.80              |
| 31:BH:7:LEU:HD13  | 31:BH:65:HIS:NE2   | 1.97                     | 0.80              |
| 31:BH:98:LEU:HG   | 31:BH:123:PHE:CB   | 2.11                     | 0.80              |
| 33:BL:129:GLY:HA2 | 33:BL:132:ARG:CZ   | 2.12                     | 0.80              |
| 34:BM:91:LEU:O    | 34:BM:95:PRO:HD3   | 1.82                     | 0.80              |
| 35:BN:122:LEU:HG  | 40:BS:71:GLY:O     | 1.80                     | 0.80              |
| 38:BQ:99:LYS:HA   | 38:BQ:112:ALA:HB2  | 1.63                     | 0.80              |
| 40:BS:32:TYR:N    | 40:BS:32:TYR:CD1   | 2.48                     | 0.80              |
| 44:BW:40:LYS:HA   | 44:BW:51:VAL:HG11  | 1.63                     | 0.80              |
| 46:BY:4:ARG:O     | 46:BY:5:LEU:HD23   | 1.81                     | 0.80              |
| 46:BY:113:ALA:HB1 | 46:BY:145:GLU:CD   | 2.07                     | 0.80              |
| 51:B4:34:PRO:HD3  | 51:B4:40:LYS:CD    | 2.12                     | 0.80              |
| 1:AA:112:G:O2'    | 1:AA:113:G:H5'     | 1.81                     | 0.80              |
| 1:AA:232:G:H2'    | 1:AA:233:C:H6      | 1.45                     | 0.80              |
| 1:AA:412:A:O2'    | 1:AA:413:G:H5''    | 1.82                     | 0.80              |
| 1:AA:655:A:H2'    | 1:AA:656:C:H6      | 1.46                     | 0.80              |
| 1:AA:907:A:H2'    | 1:AA:908:A:C8      | 2.17                     | 0.80              |
| 1:AA:913:A:O2'    | 1:AA:914:A:O4'     | 1.98                     | 0.80              |
| 1:AA:1224:G:H1    | 1:AA:1362(A):C:N4  | 1.80                     | 0.80              |
| 1:AA:1394:A:O2'   | 1:AA:1395:C:OP1    | 2.00                     | 0.80              |
| 7:AH:60:TYR:O     | 7:AH:64:ARG:HG2    | 1.82                     | 0.80              |
| 8:AI:46:ARG:HH22  | 20:AU:37:VAL:CG2   | 1.94                     | 0.80              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 10:AK:14:ARG:HH11 | 10:AK:14:ARG:CB     | 1.94                     | 0.80              |
| 15:AP:98:VAL:HG23 | 15:AP:110:ARG:HH21  | 1.47                     | 0.80              |
| 20:AU:21:LYS:HD2  | 20:AU:22:VAL:H      | 1.47                     | 0.80              |
| 24:BA:280:C:C4    | 24:BA:283:A:N7      | 2.50                     | 0.80              |
| 24:BA:718:A:H5''  | 24:BA:719:C:C5      | 2.17                     | 0.80              |
| 24:BA:865:C:O2'   | 24:BA:866:A:N7      | 2.15                     | 0.80              |
| 24:BA:973:A:H1'   | 24:BA:1188:U:O4     | 1.82                     | 0.80              |
| 24:BA:1394:U:H5'' | 24:BA:1604:C:P      | 2.22                     | 0.80              |
| 24:BA:1526:G:H21  | 24:BA:1545(A):A:H62 | 1.27                     | 0.80              |
| 27:BD:258:LYS:HA  | 27:BD:261:LYS:CE    | 2.11                     | 0.80              |
| 30:BG:110:ALA:HB1 | 30:BG:139:LEU:CG    | 2.12                     | 0.80              |
| 30:BG:148:MET:CG  | 30:BG:151:ALA:HA    | 2.07                     | 0.80              |
| 36:BO:113:LYS:HA  | 36:BO:129:ALA:CB    | 2.12                     | 0.80              |
| 36:BO:128:HIS:ND1 | 36:BO:129:ALA:N     | 2.30                     | 0.80              |
| 37:BP:34:LEU:HD12 | 37:BP:67:ARG:NH2    | 1.97                     | 0.80              |
| 38:BQ:44:LEU:CD1  | 38:BQ:48:VAL:HG21   | 2.12                     | 0.80              |
| 38:BQ:45:ARG:O    | 38:BQ:49:ASP:HB3    | 1.82                     | 0.80              |
| 40:BS:95:ARG:HB3  | 40:BS:95:ARG:HH21   | 1.46                     | 0.80              |
| 41:BT:8:VAL:HG23  | 41:BT:9:VAL:N       | 1.97                     | 0.80              |
| 45:BX:45:VAL:HG12 | 45:BX:57:GLN:OE1    | 1.81                     | 0.80              |
| 47:BZ:37:LEU:HD12 | 47:BZ:59:LEU:HB3    | 1.63                     | 0.80              |
| 52:B5:30:THR:HB   | 52:B5:31:PRO:CD     | 2.12                     | 0.80              |
| 54:B7:61:LEU:O    | 54:B7:62:LEU:HB2    | 1.82                     | 0.80              |
| 1:AA:37:U:O4      | 1:AA:38:G:C4        | 2.34                     | 0.79              |
| 1:AA:55:A:O2'     | 1:AA:56:U:H5'       | 1.81                     | 0.79              |
| 1:AA:819:A:C6     | 1:AA:1529:G:N7      | 2.51                     | 0.79              |
| 1:AA:1005:A:H3'   | 1:AA:1006:C:C6      | 2.14                     | 0.79              |
| 1:AA:1347:G:H4'   | 1:AA:1348:U:O5'     | 1.82                     | 0.79              |
| 4:AE:196:LEU:HD12 | 4:AE:197:VAL:N      | 1.97                     | 0.79              |
| 7:AH:121:LYS:HZ2  | 7:AH:122:GLU:H      | 0.82                     | 0.79              |
| 10:AK:86:ILE:HB   | 10:AK:133:LEU:O     | 1.82                     | 0.79              |
| 13:AN:91:ARG:O    | 13:AN:95:ILE:HG13   | 1.82                     | 0.79              |
| 15:AP:48:LEU:HD13 | 15:AP:53:VAL:HG22   | 1.64                     | 0.79              |
| 17:AR:65:ARG:O    | 17:AR:68:ARG:HB3    | 1.80                     | 0.79              |
| 18:AS:6:LEU:HD13  | 18:AS:6:LEU:N       | 1.96                     | 0.79              |
| 24:BA:76:C:C2'    | 24:BA:77:C:H5'      | 2.12                     | 0.79              |
| 24:BA:531:C:C6    | 24:BA:532:A:N3      | 2.50                     | 0.79              |
| 24:BA:662:G:H5''  | 36:BO:19:VAL:HG13   | 1.62                     | 0.79              |
| 24:BA:763:G:C2'   | 24:BA:764:A:H5''    | 2.11                     | 0.79              |
| 24:BA:1184:G:C2'  | 24:BA:1185:C:H5'    | 2.12                     | 0.79              |
| 24:BA:1312:U:C2'  | 24:BA:1313:U:C6     | 2.65                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1352:U:H1'   | 24:BA:1570:A:H2    | 1.46                     | 0.79              |
| 24:BA:1472:A:H1'   | 24:BA:1473:G:N7    | 1.96                     | 0.79              |
| 24:BA:1609:A:C8    | 24:BA:1616:A:H1'   | 2.16                     | 0.79              |
| 24:BA:2254:C:H2'   | 24:BA:2255:G:C5'   | 2.11                     | 0.79              |
| 24:BA:2333:A:H2'   | 24:BA:2333:A:N3    | 1.94                     | 0.79              |
| 24:BA:2349:G:C3'   | 24:BA:2350:C:H5''  | 2.12                     | 0.79              |
| 24:BA:2467:C:O2'   | 37:BP:120:ILE:HG23 | 1.83                     | 0.79              |
| 24:BA:2733:A:H2'   | 24:BA:2734:A:O5'   | 1.81                     | 0.79              |
| 26:BC:19:ILE:HD12  | 26:BC:223:ARG:CB   | 2.11                     | 0.79              |
| 26:BC:39:GLU:OE2   | 26:BC:216:THR:HB   | 1.82                     | 0.79              |
| 26:BC:148:ASN:HD21 | 26:BC:152:ILE:HG13 | 1.48                     | 0.79              |
| 26:BC:150:GLY:O    | 26:BC:154:ARG:HB2  | 1.80                     | 0.79              |
| 28:BE:58:ARG:HB2   | 28:BE:58:ARG:HH21  | 1.47                     | 0.79              |
| 28:BE:137:HIS:HB2  | 28:BE:138:PRO:HD2  | 1.64                     | 0.79              |
| 28:BE:169:ASN:ND2  | 28:BE:170:LEU:H    | 1.80                     | 0.79              |
| 28:BE:174:ASP:O    | 28:BE:182:LEU:HG   | 1.82                     | 0.79              |
| 29:BF:154:VAL:HG12 | 29:BF:191:ARG:HB3  | 1.64                     | 0.79              |
| 30:BG:163:ALA:HB1  | 30:BG:169:ALA:CA   | 2.11                     | 0.79              |
| 32:BK:75:LEU:HD13  | 32:BK:76:THR:H     | 1.47                     | 0.79              |
| 32:BK:108:THR:C    | 32:BK:109:ILE:HD12 | 2.06                     | 0.79              |
| 32:BK:125:GLU:CB   | 32:BK:143:SER:HB3  | 2.02                     | 0.79              |
| 34:BM:99:LEU:HD21  | 34:BM:122:VAL:HG21 | 1.63                     | 0.79              |
| 39:BR:74:ALA:HB2   | 39:BR:104:GLY:O    | 1.82                     | 0.79              |
| 41:BT:15:LYS:HA    | 41:BT:18:LEU:CD2   | 2.09                     | 0.79              |
| 42:BU:40:LEU:HD11  | 42:BU:55:ALA:HA    | 1.62                     | 0.79              |
| 42:BU:64:HIS:ND1   | 42:BU:96:ILE:HG22  | 1.96                     | 0.79              |
| 45:BX:46:LYS:HZ2   | 45:BX:52:SER:HB2   | 1.44                     | 0.79              |
| 45:BX:84:ARG:C     | 45:BX:84:ARG:HD2   | 2.08                     | 0.79              |
| 48:B1:14:VAL:HA    | 48:B1:17:GLU:CD    | 2.07                     | 0.79              |
| 49:B2:23:LEU:O     | 49:B2:28:LEU:HG    | 1.81                     | 0.79              |
| 51:B4:55:ARG:O     | 51:B4:57:VAL:HG22  | 1.82                     | 0.79              |
| 53:B6:42:LEU:O     | 53:B6:45:ALA:HB3   | 1.82                     | 0.79              |
| 55:B8:7:VAL:HG22   | 55:B8:34:GLN:OE1   | 1.82                     | 0.79              |
| 55:B8:7:VAL:HG21   | 55:B8:36:GLN:NE2   | 1.96                     | 0.79              |
| 1:AA:82:U:H2'      | 1:AA:85:U:C5       | 2.13                     | 0.79              |
| 1:AA:225:C:H2'     | 1:AA:226:G:C5'     | 2.13                     | 0.79              |
| 1:AA:932:C:C3'     | 9:AJ:3:ARG:HG3     | 2.10                     | 0.79              |
| 1:AA:953:G:N7      | 15:AP:104:ARG:NH2  | 2.30                     | 0.79              |
| 6:AG:170:VAL:HG23  | 6:AG:176:LEU:HD22  | 1.64                     | 0.79              |
| 10:AK:65:TYR:C     | 10:AK:67:PRO:HD3   | 2.06                     | 0.79              |
| 11:AL:16:ARG:NE    | 11:AL:18:PHE:HZ    | 1.80                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 15:AP:78:ILE:CA   | 15:AP:81:LEU:HD13  | 2.12                     | 0.79              |
| 17:AR:42:HIS:CG   | 17:AR:43:LEU:N     | 2.48                     | 0.79              |
| 19:AT:25:ARG:NH2  | 19:AT:40:LYS:HD3   | 1.92                     | 0.79              |
| 23:AX:6:ARG:HB3   | 23:AX:15:ARG:HH21  | 1.46                     | 0.79              |
| 24:BA:343:C:H2'   | 24:BA:344:G:H5'    | 1.63                     | 0.79              |
| 24:BA:360:G:H2'   | 24:BA:361:G:O4'    | 1.83                     | 0.79              |
| 24:BA:850:C:O2'   | 24:BA:851:U:H5'    | 1.82                     | 0.79              |
| 24:BA:1527:G:H3'  | 24:BA:1527:G:C8    | 2.17                     | 0.79              |
| 24:BA:2135:A:H4'  | 24:BA:2136:C:H5    | 1.43                     | 0.79              |
| 24:BA:2286:A:H62  | 52:B5:32:ASN:H     | 1.30                     | 0.79              |
| 26:BC:64:LEU:HD12 | 26:BC:161:ILE:HG21 | 1.64                     | 0.79              |
| 26:BC:71:GLN:CD   | 26:BC:72:VAL:HG23  | 2.07                     | 0.79              |
| 28:BE:84:PHE:C    | 28:BE:85:ASN:HD22  | 1.90                     | 0.79              |
| 29:BF:12:LEU:O    | 29:BF:14:PRO:HD3   | 1.81                     | 0.79              |
| 29:BF:122:LYS:NZ  | 29:BF:192:LEU:HB3  | 1.97                     | 0.79              |
| 30:BG:59:GLU:OE2  | 30:BG:152:LEU:HD13 | 1.80                     | 0.79              |
| 30:BG:91:ARG:HB2  | 30:BG:91:ARG:NH2   | 1.91                     | 0.79              |
| 32:BK:2:LYS:HD2   | 32:BK:39:ALA:CB    | 2.11                     | 0.79              |
| 34:BM:33:LEU:O    | 34:BM:35:ARG:N     | 2.13                     | 0.79              |
| 42:BU:62:LEU:HD22 | 42:BU:99:ILE:N     | 1.96                     | 0.79              |
| 45:BX:37:VAL:O    | 45:BX:39:VAL:HG23  | 1.82                     | 0.79              |
| 47:BZ:21:LEU:HG   | 47:BZ:39:ARG:O     | 1.81                     | 0.79              |
| 47:BZ:33:ALA:HA   | 47:BZ:61:ALA:O     | 1.82                     | 0.79              |
| 1:AA:541:G:H4'    | 6:AG:42:GLN:HB2    | 1.63                     | 0.79              |
| 1:AA:708:C:O2'    | 1:AA:709:G:H5'     | 1.83                     | 0.79              |
| 1:AA:1255:G:H21   | 1:AA:1276:G:N2     | 1.79                     | 0.79              |
| 1:AA:1510:U:H2'   | 1:AA:1511:G:H8     | 1.46                     | 0.79              |
| 3:AD:18:G:H2'     | 3:AD:19:G:O5'      | 1.81                     | 0.79              |
| 11:AL:9:ARG:O     | 11:AL:104:ARG:HG2  | 1.81                     | 0.79              |
| 16:AQ:39:LEU:HD13 | 16:AQ:44:LEU:HA    | 1.62                     | 0.79              |
| 17:AR:6:GLU:CG    | 17:AR:7:GLU:H      | 1.94                     | 0.79              |
| 24:BA:176:G:H2'   | 24:BA:177:G:H8     | 1.46                     | 0.79              |
| 24:BA:336:C:H2'   | 24:BA:337:C:H5'    | 1.63                     | 0.79              |
| 24:BA:616:A:H4'   | 24:BA:617:G:OP1    | 1.82                     | 0.79              |
| 24:BA:846:C:O2'   | 24:BA:847:U:OP2    | 1.98                     | 0.79              |
| 24:BA:1203:G:N1   | 24:BA:1241:A:H1'   | 1.97                     | 0.79              |
| 24:BA:1788:C:C2   | 27:BD:222:ARG:NH2  | 2.51                     | 0.79              |
| 24:BA:1803:A:C4'  | 27:BD:257:LEU:HD13 | 2.12                     | 0.79              |
| 24:BA:1846:G:N2   | 24:BA:1895:C:C2    | 2.50                     | 0.79              |
| 24:BA:1941:C:H2'  | 24:BA:1941:C:O2    | 1.83                     | 0.79              |
| 24:BA:1958:C:O2'  | 24:BA:1959:G:H5'   | 1.81                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2233:U:H2'  | 24:BA:2234:G:H8    | 1.46                     | 0.79              |
| 24:BA:2305:A:C8   | 24:BA:2306:C:H5''  | 2.17                     | 0.79              |
| 24:BA:2393:A:H5'' | 36:BO:56:SER:CA    | 2.12                     | 0.79              |
| 24:BA:2447:G:C3'  | 24:BA:2499:C:P     | 2.71                     | 0.79              |
| 24:BA:2776:A:H4'  | 24:BA:2777:G:C5'   | 2.12                     | 0.79              |
| 24:BA:2848:G:C8   | 40:BS:99:LEU:CD1   | 2.66                     | 0.79              |
| 27:BD:34:VAL:HG23 | 27:BD:36:PRO:HD2   | 1.65                     | 0.79              |
| 28:BE:199:ARG:HD2 | 28:BE:199:ARG:N    | 1.98                     | 0.79              |
| 31:BH:6:ARG:HA    | 31:BH:6:ARG:HH11   | 1.46                     | 0.79              |
| 31:BH:40:GLU:HB2  | 31:BH:55:PRO:HG3   | 1.64                     | 0.79              |
| 31:BH:103:LEU:CG  | 31:BH:105:LEU:HD11 | 2.12                     | 0.79              |
| 32:BK:69:LYS:HG2  | 32:BK:70:LYS:H     | 1.44                     | 0.79              |
| 37:BP:25:ASP:HB3  | 37:BP:102:VAL:N    | 1.97                     | 0.79              |
| 41:BT:98:LEU:CD1  | 41:BT:105:VAL:HG21 | 2.12                     | 0.79              |
| 45:BX:75:ILE:H    | 45:BX:100:ALA:HB1  | 1.47                     | 0.79              |
| 47:BZ:50:ASN:O    | 47:BZ:62:LEU:HB3   | 1.82                     | 0.79              |
| 52:B5:26:ASN:O    | 52:B5:27:LYS:CB    | 2.30                     | 0.79              |
| 1:AA:225:C:H2'    | 1:AA:226:G:H5'     | 1.65                     | 0.79              |
| 1:AA:520:A:H62    | 1:AA:529:G:N2      | 1.79                     | 0.79              |
| 1:AA:657:G:C2'    | 1:AA:658:G:H5'     | 2.13                     | 0.79              |
| 1:AA:727:G:H3'    | 1:AA:727:G:C8      | 2.17                     | 0.79              |
| 1:AA:1244:C:H2'   | 1:AA:1245:A:H8     | 1.46                     | 0.79              |
| 1:AA:1406:U:H2'   | 1:AA:1406:U:O2     | 1.80                     | 0.79              |
| 4:AE:167:PRO:HG2  | 4:AE:168:THR:H     | 1.46                     | 0.79              |
| 9:AJ:5:ARG:NH1    | 9:AJ:5:ARG:HB3     | 1.97                     | 0.79              |
| 9:AJ:75:VAL:HG13  | 9:AJ:87:VAL:O      | 1.82                     | 0.79              |
| 14:AO:126:LYS:NZ  | 14:AO:128:ALA:H    | 1.80                     | 0.79              |
| 15:AP:16:ASP:HA   | 15:AP:19:LEU:CG    | 2.13                     | 0.79              |
| 17:AR:31:LEU:HA   | 17:AR:34:LEU:HD23  | 1.65                     | 0.79              |
| 22:AW:62:LEU:CA   | 22:AW:65:LYS:HG2   | 2.12                     | 0.79              |
| 24:BA:192:C:H2'   | 24:BA:192:C:O2     | 1.80                     | 0.79              |
| 24:BA:292:C:H2'   | 24:BA:293:U:C2     | 2.16                     | 0.79              |
| 24:BA:603:A:H2'   | 24:BA:604:G:C8     | 2.17                     | 0.79              |
| 24:BA:609:A:C6    | 24:BA:609(A):G:O6  | 2.35                     | 0.79              |
| 24:BA:935:C:H2'   | 24:BA:936:C:C6     | 2.17                     | 0.79              |
| 24:BA:1259:G:H2'  | 24:BA:1260:G:C8    | 2.16                     | 0.79              |
| 24:BA:1290:C:H2'  | 24:BA:1291:C:C6    | 2.18                     | 0.79              |
| 24:BA:1937:A:N6   | 24:BA:1939:U:C5    | 2.50                     | 0.79              |
| 24:BA:1992:G:H1'  | 24:BA:1993:U:H5    | 1.46                     | 0.79              |
| 24:BA:2063:C:C3'  | 24:BA:2064:C:H5''  | 2.10                     | 0.79              |
| 24:BA:2581:G:C6   | 24:BA:2610:C:H2'   | 2.18                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2746:U:N3    | 24:BA:2756:U:O4    | 2.15                     | 0.79              |
| 25:BB:68:C:H3'     | 25:BB:69:G:H8      | 1.48                     | 0.79              |
| 25:BB:73:A:H2'     | 25:BB:74:U:H6      | 1.48                     | 0.79              |
| 27:BD:77:ALA:HB1   | 27:BD:95:LEU:CD2   | 2.12                     | 0.79              |
| 27:BD:121:PRO:C    | 27:BD:135:PHE:HE2  | 1.89                     | 0.79              |
| 28:BE:104:VAL:HG22 | 28:BE:198:VAL:CG1  | 2.10                     | 0.79              |
| 28:BE:104:VAL:CG1  | 28:BE:197:ILE:O    | 2.30                     | 0.79              |
| 29:BF:36:VAL:HG11  | 29:BF:183:VAL:HB   | 1.65                     | 0.79              |
| 31:BH:105:LEU:N    | 31:BH:105:LEU:HD23 | 1.96                     | 0.79              |
| 31:BH:169:VAL:O    | 31:BH:171:LEU:HG   | 1.82                     | 0.79              |
| 35:BN:85:VAL:O     | 35:BN:93:PRO:CD    | 2.31                     | 0.79              |
| 36:BO:7:ARG:CD     | 36:BO:8:PRO:HD3    | 2.12                     | 0.79              |
| 37:BP:134:ARG:HH11 | 37:BP:134:ARG:C    | 1.89                     | 0.79              |
| 42:BU:35:LEU:H     | 42:BU:61:VAL:HG13  | 1.45                     | 0.79              |
| 47:BZ:25:ARG:CG    | 47:BZ:37:LEU:HA    | 2.13                     | 0.79              |
| 53:B6:42:LEU:C     | 53:B6:44:PRO:HD2   | 2.07                     | 0.79              |
| 54:B7:30:ARG:NE    | 54:B7:44:LYS:HB2   | 1.96                     | 0.79              |
| 1:AA:161:A:H2'     | 1:AA:162:A:O4'     | 1.83                     | 0.79              |
| 1:AA:280:C:H5''    | 1:AA:281:G:OP2     | 1.81                     | 0.79              |
| 1:AA:303:A:H2'     | 1:AA:304:U:O4'     | 1.83                     | 0.79              |
| 1:AA:313:A:H2'     | 1:AA:314:C:C5      | 2.17                     | 0.79              |
| 1:AA:692:U:H1'     | 1:AA:694:A:C8      | 2.17                     | 0.79              |
| 1:AA:1296:C:H1'    | 1:AA:1302:U:O4     | 1.82                     | 0.79              |
| 3:AD:18:G:H21      | 3:AD:58:A:C5'      | 1.95                     | 0.79              |
| 6:AG:173:TRP:CD1   | 6:AG:189:PRO:HB3   | 2.18                     | 0.79              |
| 10:AK:46:LYS:HZ1   | 10:AK:65:TYR:H     | 1.29                     | 0.79              |
| 12:AM:30:SER:CB    | 12:AM:80:LYS:HG3   | 2.12                     | 0.79              |
| 14:AO:41:ARG:HB3   | 14:AO:41:ARG:NH1   | 1.97                     | 0.79              |
| 18:AS:39:TYR:HB2   | 18:AS:49:LEU:CD1   | 2.08                     | 0.79              |
| 24:BA:618:G:OP1    | 29:BF:106:ARG:HD2  | 1.83                     | 0.79              |
| 24:BA:819:A:H2'    | 24:BA:820:A:C8     | 2.17                     | 0.79              |
| 24:BA:930:U:O5'    | 24:BA:930:U:C6     | 2.35                     | 0.79              |
| 24:BA:935:C:H2'    | 24:BA:936:C:H6     | 1.46                     | 0.79              |
| 24:BA:1214:A:H2'   | 24:BA:1215:G:C8    | 2.17                     | 0.79              |
| 24:BA:1263:U:O3'   | 51:B4:10:LYS:HD3   | 1.81                     | 0.79              |
| 24:BA:2519:U:H5''  | 24:BA:2520:C:OP1   | 1.81                     | 0.79              |
| 24:BA:2538:C:O2    | 24:BA:2539:C:C5    | 2.34                     | 0.79              |
| 24:BA:2610:C:H4'   | 24:BA:2611:U:O5'   | 1.81                     | 0.79              |
| 24:BA:2747:G:O2'   | 31:BH:67:LEU:HD13  | 1.82                     | 0.79              |
| 26:BC:97:GLU:CA    | 26:BC:100:ILE:HD12 | 2.09                     | 0.79              |
| 27:BD:90:ALA:HA    | 27:BD:91:ARG:NH1   | 1.97                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 27:BD:232:PRO:CG  | 27:BD:247:ALA:HA   | 2.12                     | 0.79              |
| 28:BE:105:THR:OG1 | 28:BE:165:VAL:O    | 2.00                     | 0.79              |
| 28:BE:196:VAL:CG1 | 28:BE:197:ILE:N    | 2.44                     | 0.79              |
| 30:BG:79:ASN:CG   | 30:BG:82:LEU:HG    | 2.07                     | 0.79              |
| 33:BL:130:SER:O   | 33:BL:133:SER:HB3  | 1.82                     | 0.79              |
| 34:BM:100:GLU:O   | 34:BM:103:VAL:HG13 | 1.82                     | 0.79              |
| 42:BU:35:LEU:C    | 42:BU:61:VAL:HG22  | 2.07                     | 0.79              |
| 44:BW:5:TYR:HB3   | 48:B1:24:LYS:HD3   | 1.65                     | 0.79              |
| 46:BY:18:LEU:HB3  | 46:BY:23:LYS:O     | 1.83                     | 0.79              |
| 46:BY:153:SER:HB3 | 46:BY:168:GLU:HB2  | 1.65                     | 0.79              |
| 50:B3:5:ILE:CD1   | 50:B3:10:VAL:HG23  | 2.12                     | 0.79              |
| 51:B4:51:TYR:HB3  | 51:B4:55:ARG:CA    | 2.12                     | 0.79              |
| 53:B6:41:ARG:O    | 53:B6:42:LEU:HG    | 1.83                     | 0.79              |
| 55:B8:10:ILE:HD11 | 55:B8:34:GLN:NE2   | 1.98                     | 0.79              |
| 1:AA:124:G:H2'    | 1:AA:125:U:C6      | 2.18                     | 0.79              |
| 1:AA:858:G:N2     | 1:AA:869:G:H3'     | 1.98                     | 0.79              |
| 1:AA:1178:G:H2'   | 1:AA:1180:A:OP2    | 1.82                     | 0.79              |
| 1:AA:1226:C:N4    | 15:AP:104:ARG:HG3  | 1.98                     | 0.79              |
| 1:AA:1242:C:H5''  | 23:AX:10:ARG:NH1   | 1.95                     | 0.79              |
| 2:A1:25:G:H2'     | 2:A1:26:G:O4'      | 1.81                     | 0.79              |
| 2:A1:52:U:H4'     | 6:AG:50:ARG:CA     | 2.12                     | 0.79              |
| 4:AE:164:VAL:HG12 | 4:AE:186:ALA:HB2   | 1.64                     | 0.79              |
| 5:AF:181:ASN:ND2  | 5:AF:206:GLU:HG2   | 1.96                     | 0.79              |
| 7:AH:13:ILE:HD12  | 7:AH:13:ILE:N      | 1.96                     | 0.79              |
| 10:AK:9:MET:HG2   | 10:AK:13:ILE:HD11  | 1.64                     | 0.79              |
| 10:AK:91:ARG:HG2  | 19:AT:34:LYS:CB    | 2.12                     | 0.79              |
| 13:AN:18:ARG:HA   | 13:AN:80:VAL:HG23  | 1.63                     | 0.79              |
| 18:AS:67:THR:O    | 18:AS:70:ALA:HB3   | 1.82                     | 0.79              |
| 19:AT:80:GLY:O    | 19:AT:82:MET:HG2   | 1.81                     | 0.79              |
| 24:BA:49:A:H1'    | 24:BA:118:A:N6     | 1.96                     | 0.79              |
| 24:BA:193:U:H4'   | 24:BA:803:U:C4'    | 2.11                     | 0.79              |
| 24:BA:448:U:O4    | 24:BA:583:G:H1'    | 1.82                     | 0.79              |
| 24:BA:568:U:H2'   | 24:BA:570:G:C8     | 2.18                     | 0.79              |
| 24:BA:685:A:O4'   | 24:BA:688:U:O4     | 1.99                     | 0.79              |
| 24:BA:1033:U:H5'  | 55:B8:16:VAL:HG21  | 1.64                     | 0.79              |
| 24:BA:1312:U:C2'  | 24:BA:1313:U:H6    | 1.96                     | 0.79              |
| 24:BA:1453:A:H61  | 38:BQ:63:ARG:NH2   | 1.80                     | 0.79              |
| 24:BA:1772:G:C2'  | 24:BA:1773:A:H4'   | 2.11                     | 0.79              |
| 24:BA:1782:C:N4   | 24:BA:2587:A:N6    | 2.30                     | 0.79              |
| 24:BA:1799:G:H5'' | 27:BD:264:LYS:CE   | 2.12                     | 0.79              |
| 24:BA:1933:G:O6   | 24:BA:1968:G:N2    | 2.15                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2046:G:H5'' | 51:B4:19:ARG:HA    | 1.63                     | 0.79              |
| 24:BA:2072:G:C4   | 24:BA:2073:C:C5    | 2.70                     | 0.79              |
| 24:BA:2265:U:C2   | 24:BA:2266:A:N7    | 2.51                     | 0.79              |
| 24:BA:2383:G:OP2  | 54:B7:39:LYS:HD3   | 1.82                     | 0.79              |
| 25:BB:35:U:H2'    | 25:BB:35:U:O2      | 1.80                     | 0.79              |
| 27:BD:181:GLU:CB  | 27:BD:268:ARG:HH21 | 1.94                     | 0.79              |
| 28:BE:45:THR:OG1  | 28:BE:80:GLU:O     | 2.01                     | 0.79              |
| 29:BF:154:VAL:HB  | 29:BF:193:VAL:HG23 | 1.63                     | 0.79              |
| 30:BG:1:MET:HB3   | 30:BG:2:PRO:CD     | 2.12                     | 0.79              |
| 30:BG:15:VAL:O    | 30:BG:18:GLU:HB3   | 1.83                     | 0.79              |
| 30:BG:41:GLN:NE2  | 30:BG:155:MET:HA   | 1.97                     | 0.79              |
| 39:BR:67:ARG:O    | 39:BR:71:ARG:HG3   | 1.82                     | 0.79              |
| 49:B2:55:ARG:CZ   | 49:B2:55:ARG:HA    | 2.13                     | 0.79              |
| 50:B3:5:ILE:HD12  | 50:B3:8:LYS:C      | 2.08                     | 0.79              |
| 51:B4:37:LYS:O    | 51:B4:38:ALA:O     | 2.00                     | 0.79              |
| 51:B4:39:MET:CE   | 51:B4:41:PRO:HD3   | 2.13                     | 0.79              |
| 53:B6:41:ARG:HB2  | 53:B6:41:ARG:NH1   | 1.95                     | 0.79              |
| 1:AA:279:A:H1'    | 1:AA:281:G:C4      | 2.17                     | 0.79              |
| 1:AA:600:C:O2'    | 1:AA:601:C:H5'     | 1.83                     | 0.79              |
| 1:AA:607:A:C2     | 1:AA:608:A:H1'     | 2.17                     | 0.79              |
| 1:AA:1408:A:H2    | 1:AA:1494:G:HO2'   | 1.29                     | 0.79              |
| 4:AE:18:GLY:O     | 4:AE:19:HIS:ND1    | 2.15                     | 0.79              |
| 5:AF:152:ILE:HG22 | 5:AF:167:TRP:CB    | 2.13                     | 0.79              |
| 6:AG:74:GLN:CA    | 6:AG:77:ASN:HD22   | 1.96                     | 0.79              |
| 10:AK:9:MET:HG3   | 10:AK:26:VAL:HG11  | 1.65                     | 0.79              |
| 19:AT:7:THR:HG23  | 19:AT:57:VAL:O     | 1.81                     | 0.79              |
| 20:AU:74:ARG:HA   | 20:AU:79:LEU:HD11  | 1.65                     | 0.79              |
| 21:AV:62:ILE:HG12 | 21:AV:67:VAL:HG22  | 1.64                     | 0.79              |
| 24:BA:396:G:OP1   | 50:B3:10:VAL:HG22  | 1.83                     | 0.79              |
| 24:BA:641:C:C2'   | 24:BA:642:G:H5'    | 2.12                     | 0.79              |
| 24:BA:704:G:H21   | 24:BA:725:G:H21    | 1.29                     | 0.79              |
| 24:BA:997:G:C8    | 24:BA:997:G:OP2    | 2.35                     | 0.79              |
| 24:BA:1001:A:H2'  | 24:BA:1002:G:O4'   | 1.81                     | 0.79              |
| 24:BA:1062:G:N2   | 33:BL:91:PRO:HG3   | 1.98                     | 0.79              |
| 24:BA:1439:A:H2'  | 24:BA:1440:G:H5'   | 1.64                     | 0.79              |
| 24:BA:1691:C:O2'  | 24:BA:1692:U:H5'   | 1.82                     | 0.79              |
| 24:BA:1935:G:C2'  | 24:BA:1962:C:H42   | 1.95                     | 0.79              |
| 24:BA:1967:C:H42  | 24:BA:1968:G:H21   | 1.29                     | 0.79              |
| 24:BA:2123:G:H4'  | 26:BC:172:HIS:CD2  | 2.17                     | 0.79              |
| 24:BA:2394:C:OP1  | 36:BO:57:THR:HA    | 1.81                     | 0.79              |
| 24:BA:2734:A:N6   | 24:BA:2770:G:H1'   | 1.96                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:112:GLN:N    | 27:BD:115:GLN:NE2  | 2.31                     | 0.79              |
| 28:BE:116:VAL:O    | 28:BE:120:TRP:CD1  | 2.36                     | 0.79              |
| 29:BF:134:GLY:O    | 29:BF:166:ALA:HB2  | 1.83                     | 0.79              |
| 31:BH:101:ARG:HD3  | 31:BH:117:PRO:HG3  | 1.64                     | 0.79              |
| 34:BM:16:ILE:HD11  | 34:BM:52:VAL:CG2   | 2.09                     | 0.79              |
| 34:BM:42:TRP:NE1   | 41:BT:64:ARG:HG2   | 1.98                     | 0.79              |
| 34:BM:127:ASP:C    | 34:BM:129:PRO:HD2  | 2.06                     | 0.79              |
| 35:BN:39:ILE:HD13  | 35:BN:39:ILE:N     | 1.98                     | 0.79              |
| 38:BQ:33:ARG:HA    | 38:BQ:115:GLU:HB3  | 1.64                     | 0.79              |
| 38:BQ:97:VAL:HG22  | 38:BQ:114:VAL:HG11 | 1.65                     | 0.79              |
| 44:BW:18:TYR:HA    | 44:BW:21:PHE:CD1   | 2.18                     | 0.79              |
| 46:BY:161:VAL:O    | 46:BY:162:GLU:HB2  | 1.83                     | 0.79              |
| 54:B7:4:MET:CE     | 54:B7:62:LEU:HG    | 2.13                     | 0.79              |
| 54:B7:42:ARG:HB3   | 54:B7:43:GLN:HE22  | 1.47                     | 0.79              |
| 1:AA:132:C:C2      | 1:AA:231:G:N2      | 2.51                     | 0.79              |
| 1:AA:154:C:O2'     | 1:AA:155:C:H5'     | 1.83                     | 0.79              |
| 1:AA:375:U:H4'     | 18:AS:17:TYR:CE2   | 2.17                     | 0.79              |
| 1:AA:397:A:H2      | 1:AA:548:G:O6      | 1.66                     | 0.79              |
| 1:AA:1234:C:H4'    | 1:AA:1364:U:H1'    | 1.65                     | 0.79              |
| 1:AA:1519:A:H2'    | 1:AA:1520:G:H5'    | 1.65                     | 0.79              |
| 3:AB:70:G:H2'      | 3:AB:71:G:C8       | 2.18                     | 0.79              |
| 7:AH:79:GLU:CD     | 7:AH:79:GLU:H      | 1.88                     | 0.79              |
| 12:AM:49:VAL:HG12  | 16:AQ:45:ARG:HD2   | 1.64                     | 0.79              |
| 21:AV:3:ARG:NH2    | 21:AV:69:HIS:ND1   | 2.29                     | 0.79              |
| 24:BA:281:G:N2     | 24:BA:283:A:H5''   | 1.96                     | 0.79              |
| 24:BA:470:A:H2'    | 24:BA:471:A:O4'    | 1.82                     | 0.79              |
| 24:BA:776:G:H1'    | 24:BA:793:A:N1     | 1.97                     | 0.79              |
| 24:BA:804:A:H5''   | 24:BA:805:G:OP1    | 1.82                     | 0.79              |
| 24:BA:1009:A:O2'   | 41:BT:62:ILE:HD13  | 1.83                     | 0.79              |
| 24:BA:1078:U:H5''  | 24:BA:1079:C:OP1   | 1.81                     | 0.79              |
| 24:BA:1119:C:H2'   | 24:BA:1120:G:H8    | 1.47                     | 0.79              |
| 24:BA:1242:A:H2    | 36:BO:6:LEU:HD21   | 1.48                     | 0.79              |
| 24:BA:1797:C:H2'   | 24:BA:1798:U:C6    | 2.18                     | 0.79              |
| 24:BA:2007:C:H4'   | 24:BA:2824:C:O2'   | 1.83                     | 0.79              |
| 24:BA:2606:C:H6    | 24:BA:2606:C:H5'   | 1.47                     | 0.79              |
| 24:BA:2832:U:H1'   | 24:BA:2834:G:C2    | 2.18                     | 0.79              |
| 25:BB:83:G:O2'     | 25:BB:84:C:H5'     | 1.82                     | 0.79              |
| 27:BD:87:ASN:HD22  | 27:BD:87:ASN:H     | 1.31                     | 0.79              |
| 28:BE:197:ILE:HD12 | 28:BE:197:ILE:H    | 1.47                     | 0.79              |
| 34:BM:42:TRP:O     | 34:BM:43:THR:HG23  | 1.81                     | 0.79              |
| 34:BM:93:THR:HG22  | 34:BM:94:HIS:CD2   | 2.18                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 36:BO:121:LYS:N    | 36:BO:122:PRO:HD3 | 1.98                     | 0.79              |
| 37:BP:74:TYR:N     | 37:BP:74:TYR:CD2  | 2.49                     | 0.79              |
| 38:BQ:36:THR:HB    | 38:BQ:40:LYS:CD   | 2.12                     | 0.79              |
| 44:BW:27:THR:HG22  | 44:BW:80:ILE:HG23 | 1.65                     | 0.79              |
| 47:BZ:19:LYS:NZ    | 47:BZ:41:ARG:HE   | 1.81                     | 0.79              |
| 47:BZ:28:GLY:N     | 47:BZ:67:VAL:HB   | 1.98                     | 0.79              |
| 1:AA:179:A:H3'     | 1:AA:180:U:H5     | 1.48                     | 0.79              |
| 1:AA:243:A:H61     | 1:AA:283:C:H41    | 1.30                     | 0.79              |
| 1:AA:654:G:N2      | 1:AA:753:A:H1'    | 1.98                     | 0.79              |
| 1:AA:731:G:H2'     | 1:AA:732:C:C6     | 2.18                     | 0.79              |
| 1:AA:1053:G:C6     | 1:AA:1199:U:H2'   | 2.18                     | 0.79              |
| 3:AD:58:A:O2'      | 3:AD:59:U:OP1     | 2.00                     | 0.79              |
| 4:AE:208:ILE:HG21  | 4:AE:239:VAL:HG11 | 1.65                     | 0.79              |
| 5:AF:12:LEU:HD21   | 16:AQ:58:LYS:H    | 1.48                     | 0.79              |
| 6:AG:59:ARG:HH22   | 6:AG:66:ARG:HH12  | 1.31                     | 0.79              |
| 6:AG:127:THR:O     | 6:AG:146:ILE:HA   | 1.81                     | 0.79              |
| 10:AK:109:ILE:HD11 | 10:AK:137:VAL:HB  | 1.64                     | 0.79              |
| 14:AO:33:ARG:O     | 14:AO:84:LEU:HG   | 1.82                     | 0.79              |
| 15:AP:13:LYS:HB3   | 15:AP:17:VAL:CG1  | 2.13                     | 0.79              |
| 19:AT:43:LEU:HD22  | 19:AT:44:ALA:H    | 1.48                     | 0.79              |
| 22:AW:21:LYS:HA    | 22:AW:24:LEU:HD12 | 1.63                     | 0.79              |
| 23:AX:24:ARG:O     | 23:AX:25:LYS:HB2  | 1.83                     | 0.79              |
| 24:BA:312:G:N3     | 24:BA:312:G:H2'   | 1.95                     | 0.79              |
| 24:BA:568:U:N3     | 24:BA:571:A:OP2   | 2.14                     | 0.79              |
| 24:BA:1066:U:HO2'  | 24:BA:1068:G:H8   | 1.29                     | 0.79              |
| 24:BA:1268:A:C6    | 24:BA:2013:A:N7   | 2.51                     | 0.79              |
| 24:BA:1494:A:H2'   | 24:BA:1494:A:N3   | 1.97                     | 0.79              |
| 24:BA:1568:G:H5''  | 27:BD:60:ARG:C    | 2.07                     | 0.79              |
| 24:BA:2034:U:C3'   | 24:BA:2035:G:H5'' | 2.08                     | 0.79              |
| 24:BA:2093:G:H5'   | 32:BK:25:TYR:CD1  | 2.18                     | 0.79              |
| 24:BA:2129:C:OP1   | 26:BC:6:ARG:HG3   | 1.83                     | 0.79              |
| 24:BA:2481:G:O2'   | 24:BA:2482:G:H5'  | 1.82                     | 0.79              |
| 24:BA:2835:A:H1'   | 24:BA:2836:U:H5   | 1.46                     | 0.79              |
| 25:BB:27:C:N4      | 25:BB:56:G:H1     | 1.79                     | 0.79              |
| 26:BC:77:ILE:HD12  | 26:BC:123:VAL:CG1 | 2.12                     | 0.79              |
| 28:BE:110:GLY:HA2  | 28:BE:161:GLY:C   | 2.07                     | 0.79              |
| 29:BF:139:PHE:HE2  | 29:BF:167:ALA:HA  | 1.48                     | 0.79              |
| 30:BG:57:ALA:N     | 30:BG:68:PRO:HB2  | 1.98                     | 0.79              |
| 30:BG:68:PRO:CB    | 30:BG:72:ARG:HH22 | 1.90                     | 0.79              |
| 31:BH:164:TYR:HE2  | 31:BH:167:GLU:N   | 1.80                     | 0.79              |
| 33:BL:11:GLN:NE2   | 33:BL:73:PRO:HG2  | 1.98                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 34:BM:58:ASP:CG    | 34:BM:59:LYS:HG3   | 2.08                     | 0.79              |
| 35:BN:97:ARG:HH21  | 35:BN:97:ARG:CB    | 1.94                     | 0.79              |
| 36:BO:122:PRO:HB2  | 36:BO:138:LEU:HB2  | 1.65                     | 0.79              |
| 37:BP:34:LEU:O     | 37:BP:103:MET:CB   | 2.29                     | 0.79              |
| 38:BQ:74:LYS:HZ2   | 38:BQ:74:LYS:HB2   | 1.48                     | 0.79              |
| 39:BR:92:TYR:CZ    | 39:BR:93:LYS:HB3   | 2.18                     | 0.79              |
| 40:BS:19:LEU:O     | 40:BS:20:PRO:C     | 2.26                     | 0.79              |
| 45:BX:75:ILE:HG22  | 45:BX:100:ALA:CB   | 2.12                     | 0.79              |
| 45:BX:82:PRO:HG3   | 45:BX:97:ARG:N     | 1.98                     | 0.79              |
| 49:B2:19:GLN:O     | 49:B2:23:LEU:HD13  | 1.82                     | 0.79              |
| 50:B3:64:GLY:HA2   | 50:B3:67:TYR:CD1   | 2.18                     | 0.79              |
| 52:B5:7:ILE:C      | 52:B5:9:LEU:N      | 2.41                     | 0.79              |
| 54:B7:53:PRO:HA    | 54:B7:56:GLU:CD    | 2.07                     | 0.79              |
| 1:AA:261:U:H2'     | 1:AA:263:A:OP2     | 1.83                     | 0.79              |
| 1:AA:619:U:O2      | 6:AG:135:LEU:HD11  | 1.82                     | 0.79              |
| 1:AA:718:G:H4'     | 13:AN:117:ASN:HD21 | 1.48                     | 0.79              |
| 1:AA:1154:G:H2'    | 1:AA:1155:G:H8     | 1.48                     | 0.79              |
| 1:AA:1227:A:C8     | 15:AP:117:VAL:HG21 | 2.18                     | 0.79              |
| 1:AA:1376:U:H2'    | 1:AA:1377:A:C8     | 2.18                     | 0.79              |
| 1:AA:1465:C:H2'    | 1:AA:1465:C:O2     | 1.82                     | 0.79              |
| 1:AA:1480:G:O2'    | 1:AA:1481:U:H5'    | 1.81                     | 0.79              |
| 4:AE:101:MET:CB    | 4:AE:108:ILE:HG13  | 2.13                     | 0.79              |
| 8:AI:53:ALA:HB1    | 8:AI:86:ARG:NH1    | 1.98                     | 0.79              |
| 11:AL:117:HIS:O    | 11:AL:119:ALA:N    | 2.12                     | 0.79              |
| 14:AO:87:GLY:HA2   | 14:AO:98:TYR:HB3   | 1.64                     | 0.79              |
| 24:BA:120:U:O2     | 24:BA:120:U:H2'    | 1.82                     | 0.79              |
| 24:BA:205:G:O2'    | 24:BA:206:U:P      | 2.40                     | 0.79              |
| 24:BA:657:U:H2'    | 24:BA:658:C:H6     | 1.48                     | 0.79              |
| 24:BA:781:A:H2     | 24:BA:1776:G:N3    | 1.81                     | 0.79              |
| 24:BA:906:G:H2'    | 24:BA:906:G:N3     | 1.98                     | 0.79              |
| 24:BA:1128:A:H62   | 24:BA:2518:A:H61   | 0.79                     | 0.79              |
| 24:BA:1142:U:C6    | 24:BA:1142(A):A:H8 | 2.01                     | 0.79              |
| 24:BA:1533:C:C2    | 24:BA:1539:G:N2    | 2.51                     | 0.79              |
| 24:BA:1935:G:H3'   | 24:BA:1962:C:H42   | 1.48                     | 0.79              |
| 24:BA:2520:C:O2'   | 24:BA:2521:C:H5'   | 1.83                     | 0.79              |
| 26:BC:155:GLU:HG3  | 26:BC:159:GLY:O    | 1.83                     | 0.79              |
| 27:BD:64:ILE:O     | 27:BD:65:ILE:HD13  | 1.82                     | 0.79              |
| 27:BD:117:VAL:HG13 | 27:BD:129:ASN:CG   | 2.08                     | 0.79              |
| 27:BD:134:ARG:HG2  | 27:BD:187:GLY:C    | 2.08                     | 0.79              |
| 27:BD:177:LEU:HD23 | 27:BD:177:LEU:H    | 1.46                     | 0.79              |
| 29:BF:9:ILE:HG21   | 29:BF:124:LEU:CB   | 2.12                     | 0.79              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 30:BG:75:LYS:HB3   | 30:BG:84:LYS:N     | 1.98                     | 0.79              |
| 30:BG:139:LEU:HD13 | 30:BG:142:PRO:HA   | 1.65                     | 0.79              |
| 31:BH:77:LYS:O     | 31:BH:80:SER:OG    | 2.00                     | 0.79              |
| 32:BK:5:LEU:HD12   | 32:BK:8:PRO:O      | 1.83                     | 0.79              |
| 35:BN:18:LYS:CE    | 35:BN:44:LYS:HD3   | 2.12                     | 0.79              |
| 38:BQ:61:HIS:CA    | 38:BQ:64:ARG:HD3   | 2.13                     | 0.79              |
| 43:BV:17:VAL:CG2   | 43:BV:76:VAL:HG11  | 2.12                     | 0.79              |
| 45:BX:35:TYR:O     | 45:BX:64:GLU:CB    | 2.30                     | 0.79              |
| 45:BX:38:ILE:HG23  | 45:BX:60:PHE:CZ    | 2.18                     | 0.79              |
| 46:BY:57:ILE:HG22  | 46:BY:58:VAL:N     | 1.96                     | 0.79              |
| 51:B4:17:ASP:O     | 51:B4:18:ALA:C     | 2.25                     | 0.79              |
| 53:B6:8:ASN:HB3    | 53:B6:11:LYS:HB3   | 1.65                     | 0.79              |
| 1:AA:674:G:H2'     | 1:AA:675:A:C8      | 2.17                     | 0.78              |
| 1:AA:781:A:N6      | 1:AA:802:A:C4      | 2.51                     | 0.78              |
| 1:AA:1216:G:H5''   | 16:AQ:5:ALA:HB1    | 1.64                     | 0.78              |
| 1:AA:1308:U:H5'    | 15:AP:110:ARG:HH12 | 1.45                     | 0.78              |
| 4:AE:47:THR:HG23   | 4:AE:202:PRO:HD2   | 1.63                     | 0.78              |
| 4:AE:78:GLN:NE2    | 4:AE:96:ARG:HH22   | 1.79                     | 0.78              |
| 5:AF:15:THR:O      | 5:AF:16:ARG:HB3    | 1.79                     | 0.78              |
| 8:AI:14:LEU:HD13   | 8:AI:18:GLN:HB3    | 1.63                     | 0.78              |
| 9:AJ:126:ASP:HB3   | 9:AJ:131:LYS:O     | 1.83                     | 0.78              |
| 11:AL:37:PHE:HE1   | 11:AL:74:ILE:HG23  | 1.47                     | 0.78              |
| 11:AL:79:LEU:CD1   | 11:AL:101:PHE:HB3  | 2.14                     | 0.78              |
| 14:AO:6:THR:O      | 14:AO:10:LEU:HB2   | 1.83                     | 0.78              |
| 24:BA:1059:G:N2    | 33:BL:130:SER:HB3  | 1.97                     | 0.78              |
| 24:BA:1613:G:C3'   | 24:BA:1614:A:H5'   | 2.13                     | 0.78              |
| 24:BA:1657:C:O5'   | 24:BA:1657:C:H6    | 1.66                     | 0.78              |
| 24:BA:1685:C:O2'   | 24:BA:1686:C:H5'   | 1.83                     | 0.78              |
| 24:BA:2006:C:O2'   | 24:BA:2823:A:N3    | 2.16                     | 0.78              |
| 27:BD:131:LEU:HG   | 27:BD:135:PHE:CD2  | 2.18                     | 0.78              |
| 27:BD:206:LEU:O    | 27:BD:206:LEU:HD22 | 1.83                     | 0.78              |
| 29:BF:105:VAL:HA   | 29:BF:108:LYS:HB2  | 1.64                     | 0.78              |
| 29:BF:130:ALA:O    | 29:BF:139:PHE:HA   | 1.83                     | 0.78              |
| 30:BG:57:ALA:HA    | 30:BG:67:LYS:C     | 2.08                     | 0.78              |
| 35:BN:122:LEU:N    | 40:BS:70:VAL:O     | 2.15                     | 0.78              |
| 36:BO:113:LYS:HB2  | 36:BO:129:ALA:HB1  | 1.65                     | 0.78              |
| 37:BP:42:ILE:CD1   | 37:BP:46:GLN:HB3   | 2.13                     | 0.78              |
| 37:BP:122:GLY:HA2  | 37:BP:125:LEU:HG   | 1.65                     | 0.78              |
| 41:BT:88:ILE:HG22  | 42:BU:55:ALA:HB3   | 1.64                     | 0.78              |
| 42:BU:62:LEU:CD1   | 42:BU:96:ILE:HB    | 2.02                     | 0.78              |
| 46:BY:104:PHE:HA   | 46:BY:139:VAL:O    | 1.82                     | 0.78              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 48:B1:25:ARG:HH21  | 48:B1:25:ARG:HG3  | 1.48                     | 0.78              |
| 50:B3:10:VAL:N     | 50:B3:11:PRO:HD3  | 1.96                     | 0.78              |
| 1:AA:10:A:OP2      | 7:AH:126:ARG:HD2  | 1.83                     | 0.78              |
| 1:AA:52:G:H2'      | 1:AA:53:A:C8      | 2.18                     | 0.78              |
| 1:AA:120:A:H2'     | 1:AA:122:G:N7     | 1.98                     | 0.78              |
| 1:AA:277:C:H5''    | 19:AT:68:ARG:HH12 | 1.49                     | 0.78              |
| 1:AA:280:C:H1'     | 19:AT:38:ARG:NE   | 1.98                     | 0.78              |
| 1:AA:332:G:H2'     | 1:AA:333:G:H8     | 1.48                     | 0.78              |
| 1:AA:834:C:O2'     | 1:AA:835:U:H5'    | 1.83                     | 0.78              |
| 1:AA:1316:G:H2'    | 1:AA:1318:A:OP2   | 1.82                     | 0.78              |
| 5:AF:116:VAL:HG11  | 5:AF:141:VAL:HG21 | 1.64                     | 0.78              |
| 5:AF:205:GLY:O     | 5:AF:206:GLU:HB2  | 1.82                     | 0.78              |
| 6:AG:141:ARG:CD    | 6:AG:142:PRO:HD2  | 2.12                     | 0.78              |
| 7:AH:43:LEU:N      | 7:AH:65:ASN:HD22  | 1.81                     | 0.78              |
| 7:AH:153:LYS:HG2   | 7:AH:154:GLY:H    | 1.48                     | 0.78              |
| 10:AK:18:ARG:HH11  | 10:AK:18:ARG:CG   | 1.95                     | 0.78              |
| 10:AK:39:LEU:HB3   | 10:AK:45:ILE:HG21 | 1.65                     | 0.78              |
| 11:AL:40:LEU:C     | 11:AL:42:ARG:H    | 1.90                     | 0.78              |
| 15:AP:24:GLY:O     | 15:AP:29:ARG:HD2  | 1.84                     | 0.78              |
| 18:AS:73:LEU:C     | 18:AS:73:LEU:HD13 | 2.07                     | 0.78              |
| 22:AW:13:LEU:HB2   | 22:AW:17:ARG:NH2  | 1.97                     | 0.78              |
| 24:BA:307:G:N2     | 24:BA:309:G:H3'   | 1.98                     | 0.78              |
| 24:BA:898:C:H5'    | 24:BA:899:A:OP2   | 1.83                     | 0.78              |
| 24:BA:975:G:N1     | 24:BA:976:C:C6    | 2.50                     | 0.78              |
| 24:BA:981:A:N3     | 24:BA:2037:G:H1'  | 1.98                     | 0.78              |
| 24:BA:1446:C:H2'   | 24:BA:1447:G:H8   | 1.48                     | 0.78              |
| 24:BA:1493:C:H2'   | 24:BA:1493:C:O2   | 1.82                     | 0.78              |
| 24:BA:1495:A:H2'   | 24:BA:1496:A:N7   | 1.98                     | 0.78              |
| 24:BA:1780:A:H4'   | 24:BA:1780:A:OP1  | 1.83                     | 0.78              |
| 24:BA:1788:C:N4    | 24:BA:1789:A:N7   | 2.32                     | 0.78              |
| 24:BA:1790:C:O2'   | 27:BD:209:ALA:HB3 | 1.83                     | 0.78              |
| 24:BA:2031:A:H62   | 24:BA:2498:C:H1'  | 1.48                     | 0.78              |
| 24:BA:2097:C:C2'   | 24:BA:2098:U:H5'  | 2.13                     | 0.78              |
| 24:BA:2308:G:OP1   | 24:BA:2308:G:H4'  | 1.82                     | 0.78              |
| 24:BA:2828:C:C2    | 24:BA:2829:C:C5   | 2.71                     | 0.78              |
| 28:BE:136:ARG:O    | 28:BE:137:HIS:ND1 | 2.09                     | 0.78              |
| 28:BE:176:ILE:HG22 | 28:BE:181:LEU:O   | 1.83                     | 0.78              |
| 29:BF:6:VAL:HB     | 29:BF:18:ARG:HD2  | 1.63                     | 0.78              |
| 30:BG:8:LYS:HZ3    | 30:BG:103:LEU:HG  | 1.45                     | 0.78              |
| 30:BG:26:GLN:NE2   | 30:BG:31:VAL:HG21 | 1.96                     | 0.78              |
| 32:BK:19:VAL:HG12  | 32:BK:20:ASP:H    | 1.45                     | 0.78              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 32:BK:38:LEU:HD22  | 32:BK:39:ALA:N    | 1.98                     | 0.78              |
| 32:BK:66:GLU:CA    | 32:BK:69:LYS:HD3  | 2.13                     | 0.78              |
| 35:BN:59:LYS:HE2   | 35:BN:59:LYS:H    | 1.47                     | 0.78              |
| 37:BP:67:ARG:CZ    | 37:BP:103:MET:CB  | 2.55                     | 0.78              |
| 37:BP:130:LYS:HE3  | 37:BP:131:ILE:N   | 1.98                     | 0.78              |
| 40:BS:7:ILE:HG13   | 40:BS:8:LYS:N     | 1.95                     | 0.78              |
| 40:BS:21:GLU:HG3   | 40:BS:88:ILE:HD13 | 1.64                     | 0.78              |
| 42:BU:6:LYS:HD3    | 42:BU:10:LYS:CG   | 2.13                     | 0.78              |
| 45:BX:88:LYS:HB3   | 45:BX:91:GLU:CD   | 2.08                     | 0.78              |
| 46:BY:171:ILE:HD12 | 46:BY:171:ILE:O   | 1.83                     | 0.78              |
| 1:AA:251:G:H22     | 1:AA:272:C:N4     | 1.80                     | 0.78              |
| 1:AA:520:A:H3'     | 1:AA:521:G:H5''   | 1.64                     | 0.78              |
| 1:AA:594:G:N7      | 1:AA:595:G:N2     | 2.32                     | 0.78              |
| 1:AA:704:A:H2'     | 1:AA:705:U:C6     | 2.18                     | 0.78              |
| 1:AA:944:G:H3'     | 1:AA:945:G:H5''   | 1.63                     | 0.78              |
| 1:AA:973:G:H1'     | 12:AM:55:LYS:H    | 1.47                     | 0.78              |
| 1:AA:1074:G:H4'    | 4:AE:103:THR:O    | 1.82                     | 0.78              |
| 1:AA:1389:C:C2'    | 1:AA:1390:U:H5'   | 2.13                     | 0.78              |
| 1:AA:1418:A:N3     | 24:BA:1959:G:H1'  | 1.98                     | 0.78              |
| 6:AG:15:GLU:HG2    | 6:AG:63:LYS:HB3   | 1.64                     | 0.78              |
| 9:AJ:35:LYS:HZ3    | 9:AJ:38:LEU:HD22  | 1.46                     | 0.78              |
| 14:AO:47:LYS:N     | 14:AO:48:PRO:HD3  | 1.98                     | 0.78              |
| 20:AU:46:GLU:H     | 20:AU:49:LYS:HZ1  | 1.29                     | 0.78              |
| 22:AW:21:LYS:O     | 22:AW:24:LEU:HB2  | 1.83                     | 0.78              |
| 24:BA:71:A:C4'     | 24:BA:72:U:H5''   | 2.11                     | 0.78              |
| 24:BA:125:G:H22    | 53:B6:10:ARG:HA   | 1.45                     | 0.78              |
| 24:BA:244:A:O2'    | 36:BO:66:GLY:HA2  | 1.83                     | 0.78              |
| 24:BA:270(B):A:H5' | 24:BA:366:C:O4'   | 1.82                     | 0.78              |
| 24:BA:274:G:H3'    | 24:BA:274:G:N3    | 1.98                     | 0.78              |
| 24:BA:574:C:N4     | 24:BA:2054:A:H5'' | 1.99                     | 0.78              |
| 24:BA:623:G:H8     | 36:BO:105:LEU:HB2 | 1.48                     | 0.78              |
| 24:BA:653:A:H5'    | 24:BA:654:A:O2'   | 1.83                     | 0.78              |
| 24:BA:673:C:H5'    | 29:BF:82:ILE:HG23 | 1.65                     | 0.78              |
| 24:BA:975:G:N2     | 24:BA:976:C:O4'   | 2.17                     | 0.78              |
| 24:BA:1270:C:H1'   | 24:BA:1325:G:C5   | 2.18                     | 0.78              |
| 24:BA:1672:C:C3'   | 24:BA:1673:U:H5'' | 2.14                     | 0.78              |
| 24:BA:1953:A:N3    | 24:BA:2560:C:H1'  | 1.97                     | 0.78              |
| 24:BA:1993:U:C6    | 24:BA:1994:C:H5   | 2.01                     | 0.78              |
| 24:BA:2135:A:H4'   | 24:BA:2136:C:C6   | 2.17                     | 0.78              |
| 24:BA:2233:U:H2'   | 24:BA:2234:G:C8   | 2.19                     | 0.78              |
| 24:BA:2307:G:C4    | 24:BA:2308:G:H1'  | 2.18                     | 0.78              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2335:A:H2'  | 24:BA:2337:G:N7    | 1.98                     | 0.78              |
| 24:BA:2450:A:O2'  | 24:BA:2451:A:H5'   | 1.83                     | 0.78              |
| 24:BA:2457:U:H2'  | 24:BA:2458:G:O4'   | 1.82                     | 0.78              |
| 24:BA:2493:U:H3'  | 24:BA:2493:U:H6    | 1.46                     | 0.78              |
| 24:BA:2880:C:H4'  | 38:BQ:90:ARG:HD2   | 1.62                     | 0.78              |
| 26:BC:73:ARG:HG2  | 26:BC:92:ASP:OD2   | 1.82                     | 0.78              |
| 28:BE:7:VAL:HG22  | 28:BE:192:ASN:HA   | 1.66                     | 0.78              |
| 28:BE:154:LYS:HZ2 | 28:BE:156:MET:HB2  | 1.48                     | 0.78              |
| 34:BM:22:THR:HG22 | 34:BM:61:ARG:NH2   | 1.98                     | 0.78              |
| 38:BQ:61:HIS:ND1  | 38:BQ:64:ARG:CZ    | 2.46                     | 0.78              |
| 39:BR:39:ILE:C    | 39:BR:40:ILE:HD12  | 2.09                     | 0.78              |
| 40:BS:103:ARG:O   | 40:BS:104:ASN:C    | 2.24                     | 0.78              |
| 44:BW:36:LYS:CD   | 44:BW:54:VAL:HG12  | 2.13                     | 0.78              |
| 44:BW:47:PHE:CE2  | 44:BW:89:ILE:HA    | 2.14                     | 0.78              |
| 45:BX:5:MET:SD    | 45:BX:33:LYS:HE2   | 2.22                     | 0.78              |
| 46:BY:37:VAL:O    | 46:BY:38:TYR:HD2   | 1.64                     | 0.78              |
| 46:BY:103:ARG:HE  | 46:BY:103:ARG:HA   | 1.48                     | 0.78              |
| 47:BZ:44:ARG:HE   | 47:BZ:77:ARG:HD2   | 1.48                     | 0.78              |
| 50:B3:52:THR:HG22 | 50:B3:53:GLU:H     | 1.48                     | 0.78              |
| 1:AA:67:C:H5'     | 1:AA:172:A:O2'     | 1.84                     | 0.78              |
| 1:AA:589:C:OP1    | 10:AK:5:PRO:HG2    | 1.82                     | 0.78              |
| 1:AA:633:G:H2'    | 1:AA:634:C:C6      | 2.18                     | 0.78              |
| 1:AA:872:A:H2'    | 1:AA:873:A:H5''    | 1.65                     | 0.78              |
| 1:AA:1378:C:H2'   | 1:AA:1378:C:O2     | 1.82                     | 0.78              |
| 1:AA:1521:G:H2'   | 1:AA:1522:U:C6     | 2.18                     | 0.78              |
| 4:AE:44:LEU:O     | 4:AE:48:MET:SD     | 2.41                     | 0.78              |
| 4:AE:162:ILE:HD13 | 4:AE:183:PRO:O     | 1.84                     | 0.78              |
| 5:AF:31:HIS:ND1   | 5:AF:34:LEU:HD13   | 1.99                     | 0.78              |
| 5:AF:84:ILE:HG13  | 5:AF:101:LEU:HD13  | 1.66                     | 0.78              |
| 5:AF:159:GLY:N    | 5:AF:193:TYR:HE1   | 1.81                     | 0.78              |
| 7:AH:16:THR:HG23  | 7:AH:28:PHE:HA     | 1.65                     | 0.78              |
| 8:AI:76:ALA:HB3   | 8:AI:80:ARG:NH2    | 1.98                     | 0.78              |
| 9:AJ:104:LEU:HD23 | 9:AJ:134:ALA:CB    | 2.13                     | 0.78              |
| 10:AK:65:TYR:O    | 10:AK:67:PRO:HD3   | 1.81                     | 0.78              |
| 10:AK:82:HIS:NE2  | 10:AK:84:ARG:HG3   | 1.99                     | 0.78              |
| 13:AN:73:MET:HG2  | 13:AN:103:LEU:HD13 | 1.65                     | 0.78              |
| 18:AS:8:ARG:HH12  | 18:AS:11:SER:H     | 1.30                     | 0.78              |
| 19:AT:36:ILE:N    | 19:AT:36:ILE:HD13  | 1.99                     | 0.78              |
| 24:BA:182:A:H2'   | 24:BA:183:C:H6     | 1.46                     | 0.78              |
| 24:BA:209:C:H2'   | 24:BA:210:C:H5'    | 1.65                     | 0.78              |
| 24:BA:536:A:H2'   | 24:BA:537:C:O4'    | 1.83                     | 0.78              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:781:A:C1'    | 27:BD:222:ARG:HH12 | 1.91                     | 0.78              |
| 24:BA:811:U:O4     | 36:BO:22:GLY:CA    | 2.25                     | 0.78              |
| 24:BA:1325:G:N2    | 43:BV:86:LEU:HD13  | 1.96                     | 0.78              |
| 24:BA:1509:C:OP1   | 24:BA:1510:A:H8    | 1.66                     | 0.78              |
| 24:BA:1639:U:H2'   | 24:BA:1640:C:H5''  | 1.64                     | 0.78              |
| 24:BA:1725:G:C6    | 24:BA:1741:C:N4    | 2.52                     | 0.78              |
| 24:BA:1996:C:H2'   | 24:BA:1997:G:C4'   | 2.13                     | 0.78              |
| 24:BA:2165:G:H2'   | 24:BA:2166:G:O4'   | 1.83                     | 0.78              |
| 24:BA:2523:G:H1'   | 24:BA:2765:A:H62   | 1.47                     | 0.78              |
| 25:BB:17:C:H2'     | 25:BB:18:G:O4'     | 1.83                     | 0.78              |
| 25:BB:21:G:H2'     | 25:BB:22:U:O4'     | 1.84                     | 0.78              |
| 25:BB:31:C:C2      | 25:BB:32:C:H5      | 2.01                     | 0.78              |
| 26:BC:59:ARG:HG3   | 26:BC:60:GLY:H     | 1.48                     | 0.78              |
| 26:BC:214:VAL:CG2  | 26:BC:224:ILE:HD13 | 2.13                     | 0.78              |
| 27:BD:5:LYS:HZ3    | 27:BD:31:LYS:HZ1   | 0.79                     | 0.78              |
| 27:BD:244:ARG:N    | 27:BD:245:PRO:CD   | 2.46                     | 0.78              |
| 28:BE:169:ASN:HD22 | 28:BE:170:LEU:H    | 1.32                     | 0.78              |
| 29:BF:42:ALA:O     | 29:BF:45:ARG:HB2   | 1.82                     | 0.78              |
| 29:BF:156:LEU:HD12 | 29:BF:167:ALA:HB2  | 1.65                     | 0.78              |
| 30:BG:125:PHE:HB2  | 30:BG:131:TYR:O    | 1.82                     | 0.78              |
| 32:BK:111:PRO:HG2  | 32:BK:112:LYS:HD2  | 1.64                     | 0.78              |
| 33:BL:39:LYS:HA    | 33:BL:42:ASN:ND2   | 1.98                     | 0.78              |
| 35:BN:16:ALA:HB3   | 35:BN:45:GLU:HB2   | 1.64                     | 0.78              |
| 38:BQ:11:ASN:CG    | 38:BQ:12:ARG:N     | 2.41                     | 0.78              |
| 39:BR:60:GLY:O     | 39:BR:62:LYS:N     | 2.13                     | 0.78              |
| 40:BS:53:ARG:NE    | 40:BS:53:ARG:CA    | 2.45                     | 0.78              |
| 40:BS:64:ARG:O     | 40:BS:66:VAL:HG22  | 1.83                     | 0.78              |
| 45:BX:108:THR:O    | 45:BX:109:GLU:HG3  | 1.83                     | 0.78              |
| 1:AA:174:C:C2      | 1:AA:175:C:C5      | 2.71                     | 0.78              |
| 1:AA:1320:C:H42    | 21:AV:36:ARG:HH11  | 1.29                     | 0.78              |
| 1:AA:1461:G:H2'    | 1:AA:1462:G:H8     | 1.48                     | 0.78              |
| 3:AC:47:U:O4       | 3:AC:49:C:H4'      | 1.83                     | 0.78              |
| 4:AE:24:TRP:CH2    | 4:AE:26:PRO:HA     | 2.18                     | 0.78              |
| 4:AE:95:GLN:CG     | 4:AE:148:TYR:HB3   | 2.13                     | 0.78              |
| 4:AE:147:LYS:HE2   | 4:AE:147:LYS:HA    | 1.65                     | 0.78              |
| 8:AI:78:GLU:O      | 8:AI:81:ILE:HB     | 1.83                     | 0.78              |
| 15:AP:7:VAL:CG1    | 30:BG:140:ILE:HG21 | 2.13                     | 0.78              |
| 24:BA:293:U:H6     | 24:BA:293:U:H3'    | 1.48                     | 0.78              |
| 24:BA:832:G:P      | 36:BO:35:HIS:HB2   | 2.23                     | 0.78              |
| 24:BA:1222:C:N4    | 24:BA:1227:A:H61   | 1.78                     | 0.78              |
| 24:BA:1706:U:H3    | 24:BA:1757:U:H5''  | 1.46                     | 0.78              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1759:A:H5'   | 24:BA:2715:C:H1'  | 1.64                     | 0.78              |
| 24:BA:1785:A:O5'   | 24:BA:1982:C:H4'  | 1.83                     | 0.78              |
| 24:BA:1805:U:H1'   | 27:BD:51:VAL:HG11 | 1.65                     | 0.78              |
| 24:BA:1872:A:C2'   | 24:BA:1878:G:H5'  | 2.12                     | 0.78              |
| 24:BA:1882:C:N3    | 24:BA:1883:G:H1'  | 1.98                     | 0.78              |
| 24:BA:2185:C:H2'   | 24:BA:2186:G:C8   | 2.18                     | 0.78              |
| 24:BA:2238:G:H1'   | 24:BA:2240:C:H5   | 1.48                     | 0.78              |
| 24:BA:2291:U:OP1   | 24:BA:2381:C:H5'  | 1.83                     | 0.78              |
| 24:BA:2587:A:H2'   | 24:BA:2588:G:H5'  | 1.65                     | 0.78              |
| 25:BB:31:C:C2      | 25:BB:32:C:C5     | 2.71                     | 0.78              |
| 26:BC:90:GLY:HA3   | 26:BC:157:LYS:HB2 | 1.66                     | 0.78              |
| 26:BC:113:VAL:HG12 | 26:BC:138:PRO:HG3 | 1.65                     | 0.78              |
| 27:BD:232:PRO:HD2  | 27:BD:247:ALA:HA  | 1.65                     | 0.78              |
| 30:BG:57:ALA:O     | 30:BG:67:LYS:HB2  | 1.84                     | 0.78              |
| 30:BG:61:ALA:HB2   | 30:BG:67:LYS:HE2  | 1.64                     | 0.78              |
| 31:BH:33:LEU:HD13  | 31:BH:75:ALA:HA   | 1.66                     | 0.78              |
| 32:BK:2:LYS:CD     | 32:BK:39:ALA:HB2  | 2.14                     | 0.78              |
| 34:BM:12:ARG:HD2   | 34:BM:12:ARG:O    | 1.84                     | 0.78              |
| 34:BM:88:GLU:HB2   | 34:BM:89:LYS:CE   | 2.14                     | 0.78              |
| 34:BM:109:LYS:HG2  | 34:BM:112:LEU:HB2 | 1.64                     | 0.78              |
| 37:BP:99:PRO:HG2   | 37:BP:101:ARG:HE  | 1.49                     | 0.78              |
| 37:BP:134:ARG:NH2  | 37:BP:137:TYR:CD1 | 2.51                     | 0.78              |
| 38:BQ:52:ILE:HD13  | 38:BQ:52:ILE:O    | 1.83                     | 0.78              |
| 40:BS:58:ASN:N     | 40:BS:61:PHE:CD2  | 2.51                     | 0.78              |
| 43:BV:64:MET:CG    | 43:BV:109:GLU:HG3 | 2.13                     | 0.78              |
| 46:BY:24:LEU:HD13  | 46:BY:83:PRO:CD   | 2.14                     | 0.78              |
| 48:B1:25:ARG:O     | 48:B1:28:MET:HB2  | 1.84                     | 0.78              |
| 52:B5:30:THR:HG22  | 52:B5:31:PRO:HD3  | 1.64                     | 0.78              |
| 53:B6:21:ARG:CB    | 53:B6:31:LEU:HD11 | 2.13                     | 0.78              |
| 1:AA:1057:G:H4'    | 5:AF:197:GLY:H    | 1.49                     | 0.78              |
| 1:AA:1318:A:H4'    | 21:AV:10:PHE:CD2  | 2.19                     | 0.78              |
| 1:AA:1375:A:C2     | 1:AA:1376:U:C2    | 2.71                     | 0.78              |
| 4:AE:16:HIS:CE1    | 4:AE:210:SER:HA   | 2.19                     | 0.78              |
| 5:AF:11:ARG:HH22   | 5:AF:179:ARG:H    | 1.30                     | 0.78              |
| 6:AG:38:TYR:HB2    | 6:AG:39:PRO:HD2   | 1.63                     | 0.78              |
| 7:AH:78:HIS:CB     | 10:AK:104:ARG:HD3 | 2.14                     | 0.78              |
| 11:AL:50:LEU:HD13  | 11:AL:56:LEU:HG   | 1.64                     | 0.78              |
| 12:AM:24:VAL:HG22  | 12:AM:34:VAL:HG11 | 1.65                     | 0.78              |
| 13:AN:46:GLY:CA    | 13:AN:55:LYS:HD2  | 2.13                     | 0.78              |
| 22:AW:29:LYS:O     | 22:AW:32:ALA:HB3  | 1.84                     | 0.78              |
| 22:AW:66:ALA:HB3   | 22:AW:72:LEU:HD12 | 1.64                     | 0.78              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:270(P):C:H2' | 24:BA:270(Q):C:H6  | 1.49                     | 0.78              |
| 24:BA:623:G:P      | 36:BO:105:LEU:HD21 | 2.23                     | 0.78              |
| 24:BA:1203:G:N1    | 24:BA:1241:A:C8    | 2.52                     | 0.78              |
| 24:BA:1491:G:C3'   | 24:BA:1492:G:H4'   | 2.14                     | 0.78              |
| 24:BA:2014:A:N3    | 24:BA:2015:A:N1    | 2.31                     | 0.78              |
| 24:BA:2051:A:O4'   | 24:BA:2051:A:OP2   | 2.01                     | 0.78              |
| 24:BA:2649:U:H2'   | 24:BA:2650:U:H6    | 1.47                     | 0.78              |
| 25:BB:31:C:O2      | 25:BB:53:A:N6      | 2.17                     | 0.78              |
| 26:BC:134:ARG:HD3  | 26:BC:136:LEU:HD12 | 1.66                     | 0.78              |
| 27:BD:5:LYS:NZ     | 27:BD:31:LYS:NZ    | 2.27                     | 0.78              |
| 27:BD:147:LEU:HB3  | 27:BD:185:VAL:CG2  | 2.11                     | 0.78              |
| 34:BM:38:HIS:HB3   | 34:BM:48:MET:CE    | 2.14                     | 0.78              |
| 34:BM:100:GLU:HA   | 34:BM:100:GLU:OE2  | 1.82                     | 0.78              |
| 35:BN:63:VAL:HA    | 35:BN:78:ARG:HD3   | 1.63                     | 0.78              |
| 36:BO:49:ARG:HG2   | 36:BO:49:ARG:HH21  | 1.48                     | 0.78              |
| 37:BP:38:GLU:N     | 37:BP:39:PRO:HD3   | 1.99                     | 0.78              |
| 37:BP:102:VAL:HG13 | 37:BP:102:VAL:O    | 1.83                     | 0.78              |
| 38:BQ:50:HIS:O     | 38:BQ:53:HIS:HB3   | 1.84                     | 0.78              |
| 42:BU:67:GLY:O     | 42:BU:93:GLU:O     | 2.02                     | 0.78              |
| 45:BX:14:LEU:HD22  | 45:BX:19:LYS:HB2   | 1.65                     | 0.78              |
| 46:BY:122:ARG:HG2  | 46:BY:170:THR:O    | 1.83                     | 0.78              |
| 48:B1:27:LEU:HD21  | 48:B1:48:LEU:HB3   | 1.64                     | 0.78              |
| 50:B3:68:ARG:N     | 50:B3:68:ARG:NH1   | 2.25                     | 0.78              |
| 51:B4:11:THR:HG23  | 51:B4:15:ARG:CB    | 2.13                     | 0.78              |
| 54:B7:21:LYS:HB2   | 54:B7:21:LYS:NZ    | 1.98                     | 0.78              |
| 54:B7:49:VAL:O     | 54:B7:53:PRO:HG3   | 1.82                     | 0.78              |
| 1:AA:262:A:H2'     | 1:AA:263:A:N7      | 1.97                     | 0.78              |
| 1:AA:748:C:C6      | 1:AA:748:C:O5'     | 2.36                     | 0.78              |
| 7:AH:11:ILE:HG22   | 7:AH:12:LEU:N      | 1.97                     | 0.78              |
| 9:AJ:36:LYS:NZ     | 9:AJ:36:LYS:HA     | 1.98                     | 0.78              |
| 10:AK:88:LYS:H     | 10:AK:88:LYS:NZ    | 1.81                     | 0.78              |
| 15:AP:55:ARG:HH21  | 15:AP:56:LEU:HD21  | 1.45                     | 0.78              |
| 17:AR:32:LEU:O     | 17:AR:36:ILE:HB    | 1.83                     | 0.78              |
| 19:AT:5:VAL:HG12   | 19:AT:6:LEU:N      | 1.98                     | 0.78              |
| 20:AU:67:ALA:HA    | 20:AU:70:ILE:HD12  | 1.64                     | 0.78              |
| 24:BA:8:A:H5''     | 34:BM:51:PHE:CE2   | 2.18                     | 0.78              |
| 24:BA:516:C:O2'    | 24:BA:517:C:H5'    | 1.84                     | 0.78              |
| 24:BA:630:G:C5'    | 54:B7:46:ARG:HH12  | 1.97                     | 0.78              |
| 24:BA:673:C:H2'    | 24:BA:674:G:C5'    | 2.13                     | 0.78              |
| 24:BA:865:C:H42    | 24:BA:909:A:H62    | 1.28                     | 0.78              |
| 24:BA:878:A:H2'    | 24:BA:879:G:H5''   | 1.66                     | 0.78              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:996:A:H2'   | 24:BA:997:G:C8     | 2.17                     | 0.78              |
| 24:BA:1179:C:HO2' | 24:BA:1180:C:H6    | 0.78                     | 0.78              |
| 24:BA:1324:G:C1'  | 24:BA:1616:A:N6    | 2.45                     | 0.78              |
| 24:BA:1419:A:H3'  | 24:BA:1420:U:C2    | 2.18                     | 0.78              |
| 24:BA:1615:C:C2   | 43:BV:87:PRO:HG3   | 2.19                     | 0.78              |
| 24:BA:1799:G:O6   | 27:BD:177:LEU:HD12 | 1.84                     | 0.78              |
| 24:BA:2043:C:OP1  | 24:BA:2043:C:H6    | 1.67                     | 0.78              |
| 24:BA:2698:U:H2'  | 24:BA:2699:C:C5    | 2.18                     | 0.78              |
| 26:BC:22:ILE:HD13 | 26:BC:190:ARG:NH1  | 1.99                     | 0.78              |
| 26:BC:180:PHE:CE2 | 26:BC:184:LYS:HD3  | 2.19                     | 0.78              |
| 31:BH:153:LYS:HB2 | 31:BH:162:ILE:CG2  | 2.14                     | 0.78              |
| 34:BM:6:PRO:HA    | 34:BM:41:ASP:CB    | 2.13                     | 0.78              |
| 35:BN:96:THR:CA   | 35:BN:117:LEU:HD11 | 2.12                     | 0.78              |
| 36:BO:59:LEU:HD12 | 36:BO:60:MET:SD    | 2.24                     | 0.78              |
| 37:BP:8:LYS:CE    | 37:BP:93:TYR:HB3   | 2.14                     | 0.78              |
| 40:BS:53:ARG:CB   | 40:BS:65:LYS:O     | 2.29                     | 0.78              |
| 44:BW:12:VAL:HG23 | 44:BW:28:PHE:CA    | 2.12                     | 0.78              |
| 46:BY:53:ILE:O    | 46:BY:54:HIS:ND1   | 2.16                     | 0.78              |
| 51:B4:4:HIS:CD2   | 51:B4:4:HIS:C      | 2.62                     | 0.78              |
| 53:B6:21:ARG:HB3  | 53:B6:31:LEU:CD1   | 2.13                     | 0.78              |
| 1:AA:279:A:H1'    | 1:AA:281:G:N3      | 1.98                     | 0.78              |
| 1:AA:331:G:OP1    | 1:AA:332:G:H8      | 1.67                     | 0.78              |
| 1:AA:486:U:H2'    | 1:AA:487:A:O5'     | 1.84                     | 0.78              |
| 1:AA:501:C:H1'    | 1:AA:549:C:H1'     | 1.66                     | 0.78              |
| 1:AA:751:U:H4'    | 17:AR:24:SER:OG    | 1.83                     | 0.78              |
| 3:AD:76:A:H3'     | 24:BA:2432:A:H4'   | 1.66                     | 0.78              |
| 6:AG:12:CYS:CA    | 6:AG:19:LEU:HB2    | 2.13                     | 0.78              |
| 6:AG:12:CYS:HB3   | 6:AG:33:MET:HE3    | 1.66                     | 0.78              |
| 6:AG:198:VAL:HG23 | 6:AG:199:ASN:H     | 1.48                     | 0.78              |
| 6:AG:205:GLU:OE2  | 7:AH:100:VAL:HB    | 1.82                     | 0.78              |
| 7:AH:48:ALA:HB1   | 7:AH:53:LEU:HD12   | 1.66                     | 0.78              |
| 9:AJ:143:ARG:HD2  | 9:AJ:144:MET:H     | 1.49                     | 0.78              |
| 12:AM:25:GLU:O    | 12:AM:28:ARG:HB2   | 1.84                     | 0.78              |
| 19:AT:5:VAL:CG1   | 19:AT:59:ILE:O     | 2.31                     | 0.78              |
| 24:BA:141:A:C2    | 24:BA:141(A):C:O4' | 2.37                     | 0.78              |
| 24:BA:397:G:P     | 50:B3:41:PRO:HG3   | 2.23                     | 0.78              |
| 24:BA:535:C:O2'   | 24:BA:536:A:H5'    | 1.83                     | 0.78              |
| 24:BA:602:G:O5'   | 24:BA:602:G:H8     | 1.66                     | 0.78              |
| 24:BA:776:G:O2'   | 24:BA:777:A:OP2    | 2.02                     | 0.78              |
| 24:BA:1312:U:H5'  | 44:BW:63:LYS:HE3   | 1.65                     | 0.78              |
| 24:BA:1864:U:C2'  | 24:BA:1869:G:H5'   | 2.14                     | 0.78              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:2073:C:C2'  | 24:BA:2074:U:H5'  | 2.14                     | 0.78              |
| 24:BA:2114:A:H2'  | 24:BA:2115:G:H5'  | 1.64                     | 0.78              |
| 24:BA:2484:G:H1'  | 37:BP:124:LYS:NZ  | 1.98                     | 0.78              |
| 24:BA:2718:G:H2'  | 24:BA:2719:G:H8   | 1.49                     | 0.78              |
| 26:BC:22:ILE:O    | 26:BC:25:ALA:HB3  | 1.83                     | 0.78              |
| 28:BE:49:LEU:HD21 | 28:BE:75:VAL:C    | 2.09                     | 0.78              |
| 28:BE:60:ASN:HA   | 28:BE:63:LEU:HD12 | 1.64                     | 0.78              |
| 28:BE:147:PRO:HB2 | 28:BE:149:ARG:HD2 | 1.66                     | 0.78              |
| 30:BG:12:TYR:HA   | 30:BG:15:VAL:CG2  | 2.14                     | 0.78              |
| 31:BH:26:VAL:HG21 | 31:BH:75:ALA:HB1  | 1.66                     | 0.78              |
| 31:BH:89:ILE:HD12 | 31:BH:90:LYS:N    | 1.99                     | 0.78              |
| 33:BL:95:LYS:HD3  | 33:BL:98:ARG:HH21 | 1.48                     | 0.78              |
| 33:BL:98:ARG:HD3  | 33:BL:139:VAL:CB  | 2.14                     | 0.78              |
| 34:BM:54:VAL:HG12 | 34:BM:122:VAL:CB  | 2.14                     | 0.78              |
| 35:BN:37:ASP:N    | 35:BN:61:VAL:HB   | 1.99                     | 0.78              |
| 36:BO:15:ARG:CZ   | 36:BO:16:ARG:H    | 1.97                     | 0.78              |
| 38:BQ:17:ARG:HG3  | 38:BQ:18:LEU:N    | 1.96                     | 0.78              |
| 39:BR:3:ARG:CG    | 39:BR:4:LEU:HG    | 2.12                     | 0.78              |
| 39:BR:26:LEU:HD22 | 39:BR:27:SER:N    | 1.98                     | 0.78              |
| 43:BV:98:LYS:HB3  | 43:BV:98:LYS:HZ2  | 1.48                     | 0.78              |
| 44:BW:49:VAL:HG12 | 44:BW:88:LYS:HG3  | 1.65                     | 0.78              |
| 50:B3:38:LYS:HG2  | 50:B3:39:CYS:H    | 1.47                     | 0.78              |
| 51:B4:17:ASP:O    | 51:B4:19:ARG:N    | 2.16                     | 0.78              |
| 1:AA:192:U:H1'    | 22:AW:103:GLY:HA2 | 1.66                     | 0.78              |
| 1:AA:404:U:C4'    | 6:AG:122:ARG:HH11 | 1.96                     | 0.78              |
| 1:AA:759:A:H4'    | 1:AA:881:G:OP1    | 1.84                     | 0.78              |
| 1:AA:872:A:O2'    | 1:AA:873:A:OP1    | 2.01                     | 0.78              |
| 1:AA:947:G:O2'    | 1:AA:948:C:H5'    | 1.82                     | 0.78              |
| 1:AA:1313:U:H5    | 21:AV:4:SER:HB2   | 1.46                     | 0.78              |
| 1:AA:1329:A:H5'   | 15:AP:29:ARG:NE   | 1.98                     | 0.78              |
| 3:AC:44:G:C2      | 3:AC:45:U:H1'     | 2.18                     | 0.78              |
| 4:AE:88:ALA:HA    | 4:AE:219:VAL:HG13 | 1.66                     | 0.78              |
| 7:AH:81:GLU:CD    | 7:AH:81:GLU:N     | 2.41                     | 0.78              |
| 7:AH:152:ARG:NH2  | 10:AK:43:GLY:HA3  | 1.97                     | 0.78              |
| 9:AJ:78:ARG:HB2   | 9:AJ:156:TRP:CH2  | 2.19                     | 0.78              |
| 9:AJ:106:GLN:HE21 | 9:AJ:106:GLN:CA   | 1.95                     | 0.78              |
| 12:AM:22:LYS:HZ2  | 12:AM:90:LEU:HD12 | 1.48                     | 0.78              |
| 14:AO:84:LEU:HG   | 14:AO:85:ILE:H    | 1.48                     | 0.78              |
| 15:AP:14:ARG:HG2  | 15:AP:44:ARG:NH1  | 1.99                     | 0.78              |
| 17:AR:39:LEU:HD22 | 17:AR:56:LEU:HD22 | 1.66                     | 0.78              |
| 18:AS:31:LYS:HB3  | 18:AS:31:LYS:NZ   | 1.98                     | 0.78              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 19:AT:19:VAL:CG2   | 19:AT:46:ASP:HB2   | 2.13                     | 0.78              |
| 22:AW:40:ALA:HA    | 22:AW:55:ILE:HD12  | 1.66                     | 0.78              |
| 24:BA:72:U:O4      | 24:BA:112:U:H1'    | 1.82                     | 0.78              |
| 24:BA:190:A:H2'    | 24:BA:191:A:H8     | 1.48                     | 0.78              |
| 24:BA:494:G:H5'    | 43:BV:7:ALA:HA     | 1.66                     | 0.78              |
| 24:BA:668:G:H2'    | 24:BA:670:A:H62    | 1.49                     | 0.78              |
| 24:BA:774:A:H1'    | 24:BA:775:G:C8     | 2.18                     | 0.78              |
| 24:BA:851:U:H4'    | 49:B2:46:ASN:HA    | 1.65                     | 0.78              |
| 24:BA:1225:C:O4'   | 42:BU:87:HIS:HE1   | 1.67                     | 0.78              |
| 24:BA:1264:G:C3'   | 24:BA:1265:A:H5''  | 2.14                     | 0.78              |
| 24:BA:1710:C:H2'   | 24:BA:1711:C:C6    | 2.16                     | 0.78              |
| 24:BA:1842:G:O2'   | 24:BA:1843:C:H5'   | 1.83                     | 0.78              |
| 24:BA:2488:A:O2'   | 24:BA:2489:G:H5'   | 1.84                     | 0.78              |
| 24:BA:2591:C:C2'   | 24:BA:2592:G:H8    | 1.92                     | 0.78              |
| 24:BA:2825:C:H6    | 24:BA:2825:C:O5'   | 1.65                     | 0.78              |
| 25:BB:77:U:H2'     | 25:BB:78:A:C8      | 2.19                     | 0.78              |
| 26:BC:77:ILE:HG22  | 26:BC:119:VAL:HG21 | 1.64                     | 0.78              |
| 26:BC:123:VAL:HG11 | 26:BC:138:PRO:HG2  | 1.66                     | 0.78              |
| 27:BD:146:GLU:HB2  | 27:BD:154:LYS:N    | 1.97                     | 0.78              |
| 28:BE:113:PHE:HA   | 28:BE:158:GLY:C    | 2.08                     | 0.78              |
| 30:BG:119:GLY:C    | 30:BG:120:LEU:HD23 | 2.08                     | 0.78              |
| 31:BH:74:ASN:HB2   | 31:BH:138:LYS:NZ   | 1.99                     | 0.78              |
| 32:BK:15:VAL:HG12  | 32:BK:16:GLY:N     | 1.99                     | 0.78              |
| 37:BP:134:ARG:NE   | 37:BP:137:TYR:HA   | 1.98                     | 0.78              |
| 39:BR:75:GLU:HA    | 39:BR:78:LEU:HB3   | 1.66                     | 0.78              |
| 40:BS:7:ILE:O      | 40:BS:11:GLU:CD    | 2.27                     | 0.78              |
| 40:BS:26:ASP:HA    | 40:BS:100:TYR:OH   | 1.84                     | 0.78              |
| 47:BZ:37:LEU:HD23  | 47:BZ:37:LEU:N     | 1.99                     | 0.78              |
| 52:B5:16:CYS:HB3   | 52:B5:49:HIS:CG    | 2.18                     | 0.78              |
| 52:B5:25:LYS:HE2   | 54:B7:35:GLN:HB3   | 1.65                     | 0.78              |
| 1:AA:225:C:C2'     | 1:AA:226:G:H5'     | 2.14                     | 0.78              |
| 1:AA:339:C:H2'     | 1:AA:340:U:H6      | 1.48                     | 0.78              |
| 1:AA:520:A:N6      | 1:AA:529:G:N2      | 2.32                     | 0.78              |
| 1:AA:751:U:H2'     | 1:AA:752:G:O4'     | 1.82                     | 0.78              |
| 1:AA:1432:G:OP1    | 40:BS:111:ARG:HB2  | 1.83                     | 0.78              |
| 3:AC:24:G:H2'      | 3:AC:25:C:H6       | 1.49                     | 0.78              |
| 4:AE:53:ARG:HH12   | 4:AE:200:ILE:HD12  | 1.47                     | 0.78              |
| 4:AE:102:LEU:HD22  | 4:AE:176:GLU:CB    | 2.13                     | 0.78              |
| 5:AF:3:ASN:CG      | 5:AF:4:LYS:H       | 1.89                     | 0.78              |
| 5:AF:17:ASP:HB3    | 5:AF:18:TRP:HE3    | 1.49                     | 0.78              |
| 5:AF:36:ASP:HA     | 5:AF:39:ILE:HD12   | 1.66                     | 0.78              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 14:AO:5:PRO:HB3    | 14:AO:10:LEU:HD11  | 1.66                     | 0.78              |
| 14:AO:35:GLY:O     | 14:AO:82:VAL:HG13  | 1.82                     | 0.78              |
| 20:AU:69:THR:HA    | 20:AU:72:ARG:HG3   | 1.66                     | 0.78              |
| 24:BA:861:A:OP2    | 24:BA:862:G:OP2    | 2.02                     | 0.78              |
| 24:BA:1050:A:O2'   | 24:BA:1051:G:H5'   | 1.83                     | 0.78              |
| 24:BA:1779:U:C2'   | 24:BA:1783:A:H62   | 1.95                     | 0.78              |
| 24:BA:2378:A:C2    | 24:BA:2379:G:H1'   | 2.18                     | 0.78              |
| 24:BA:2447:G:C3'   | 24:BA:2499:C:OP2   | 2.32                     | 0.78              |
| 24:BA:2519:U:C6    | 24:BA:2542:A:C6    | 2.72                     | 0.78              |
| 24:BA:2572:A:C4'   | 24:BA:2573:C:H5''  | 2.07                     | 0.78              |
| 27:BD:55:GLY:HA2   | 27:BD:217:ARG:NE   | 1.98                     | 0.78              |
| 28:BE:9:VAL:HG12   | 28:BE:192:ASN:HD22 | 1.49                     | 0.78              |
| 28:BE:200:GLU:HB3  | 28:BE:202:LYS:NZ   | 1.98                     | 0.78              |
| 30:BG:146:TYR:CE1  | 30:BG:149:VAL:HA   | 2.19                     | 0.78              |
| 33:BL:18:THR:CA    | 33:BL:38:VAL:HG21  | 2.13                     | 0.78              |
| 34:BM:36:GLY:O     | 34:BM:47:ALA:HB3   | 1.84                     | 0.78              |
| 35:BN:39:ILE:C     | 35:BN:59:LYS:HZ1   | 1.92                     | 0.78              |
| 37:BP:6:ARG:HH21   | 37:BP:8:LYS:HG3    | 1.49                     | 0.78              |
| 37:BP:43:THR:HG23  | 37:BP:46:GLN:CB    | 2.14                     | 0.78              |
| 37:BP:134:ARG:HE   | 37:BP:137:TYR:CA   | 1.96                     | 0.78              |
| 41:BT:79:PHE:CZ    | 41:BT:83:LEU:HD11  | 2.19                     | 0.78              |
| 41:BT:97:ASP:HA    | 41:BT:101:ARG:HH21 | 1.49                     | 0.78              |
| 45:BX:46:LYS:HG3   | 45:BX:58:GLY:H     | 1.49                     | 0.78              |
| 1:AA:67:C:H4'      | 1:AA:172:A:O4'     | 1.84                     | 0.77              |
| 1:AA:130:A:C5      | 1:AA:264:U:H1'     | 2.18                     | 0.77              |
| 1:AA:836:G:P       | 20:AU:61:LYS:HZ1   | 2.07                     | 0.77              |
| 1:AA:1493:A:N6     | 3:AB:37:A:H5'      | 1.98                     | 0.77              |
| 3:AC:31:A:H5'      | 3:AC:32:U:OP2      | 1.83                     | 0.77              |
| 7:AH:59:GLY:O      | 7:AH:62:ALA:HB3    | 1.85                     | 0.77              |
| 7:AH:100:VAL:CG1   | 7:AH:107:ARG:HG3   | 2.14                     | 0.77              |
| 13:AN:61:ALA:CB    | 13:AN:94:ALA:HB2   | 2.07                     | 0.77              |
| 13:AN:104:GLN:HE22 | 13:AN:106:LYS:H    | 1.31                     | 0.77              |
| 17:AR:6:GLU:OE2    | 17:AR:6:GLU:N      | 2.16                     | 0.77              |
| 20:AU:37:VAL:HG12  | 20:AU:41:LYS:CE    | 2.14                     | 0.77              |
| 24:BA:203:C:H3'    | 24:BA:204:A:H8     | 1.47                     | 0.77              |
| 24:BA:261:G:C4'    | 24:BA:608:A:C2     | 2.65                     | 0.77              |
| 24:BA:359:A:O2'    | 24:BA:360:G:N7     | 2.14                     | 0.77              |
| 24:BA:747:U:O2'    | 24:BA:748:G:OP1    | 2.01                     | 0.77              |
| 24:BA:1634:A:O2'   | 24:BA:1635:G:OP1   | 2.02                     | 0.77              |
| 24:BA:1935:G:HO2'  | 24:BA:1937:A:H2    | 0.78                     | 0.77              |
| 24:BA:2570:G:N2    | 24:BA:2571:C:C2    | 2.52                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:78:LYS:HG2   | 27:BD:114:GLY:O    | 1.84                     | 0.77              |
| 27:BD:176:ARG:HH22 | 27:BD:270:ILE:CD1  | 1.98                     | 0.77              |
| 28:BE:108:SER:OG   | 28:BE:164:ARG:CA   | 2.31                     | 0.77              |
| 30:BG:131:TYR:HB2  | 30:BG:159:VAL:H    | 1.49                     | 0.77              |
| 33:BL:12:LEU:CD2   | 33:BL:22:PRO:HB2   | 2.14                     | 0.77              |
| 35:BN:122:LEU:CB   | 40:BS:71:GLY:HA3   | 2.14                     | 0.77              |
| 36:BO:46:LYS:HD2   | 36:BO:46:LYS:O     | 1.83                     | 0.77              |
| 38:BQ:12:ARG:NH1   | 38:BQ:16:HIS:HB3   | 1.99                     | 0.77              |
| 38:BQ:37:THR:HG23  | 38:BQ:40:LYS:HD2   | 1.66                     | 0.77              |
| 40:BS:1:MET:CG     | 40:BS:2:ASN:H      | 1.95                     | 0.77              |
| 40:BS:46:GLU:OE1   | 40:BS:47:GLY:N     | 2.16                     | 0.77              |
| 41:BT:108:GLU:O    | 41:BT:109:LEU:C    | 2.26                     | 0.77              |
| 42:BU:18:LEU:CD1   | 42:BU:66:ARG:HH12  | 1.97                     | 0.77              |
| 42:BU:35:LEU:HG    | 42:BU:36:PRO:HD2   | 1.66                     | 0.77              |
| 46:BY:94:GLU:N     | 46:BY:95:PRO:CD    | 2.46                     | 0.77              |
| 46:BY:161:VAL:HG12 | 46:BY:162:GLU:H    | 1.48                     | 0.77              |
| 48:B1:52:ILE:CA    | 48:B1:55:LEU:HD22  | 2.14                     | 0.77              |
| 50:B3:53:GLU:CG    | 50:B3:54:GLY:H     | 1.96                     | 0.77              |
| 1:AA:22:G:H5'      | 1:AA:885:G:O4'     | 1.83                     | 0.77              |
| 1:AA:1144:G:H22    | 1:AA:1146:A:H62    | 1.29                     | 0.77              |
| 4:AE:145:LEU:O     | 4:AE:149:LEU:CB    | 2.32                     | 0.77              |
| 8:AI:98:LEU:HG     | 20:AU:28:GLU:CG    | 2.14                     | 0.77              |
| 20:AU:67:ALA:HA    | 20:AU:70:ILE:CD1   | 2.13                     | 0.77              |
| 22:AW:54:LYS:O     | 22:AW:57:ARG:HB2   | 1.84                     | 0.77              |
| 23:AX:14:TRP:CZ3   | 23:AX:15:ARG:CZ    | 2.67                     | 0.77              |
| 24:BA:270:A:H2'    | 24:BA:270(A):A:O4' | 1.84                     | 0.77              |
| 24:BA:281:G:H2'    | 24:BA:281:G:N3     | 1.98                     | 0.77              |
| 24:BA:640:C:C2'    | 24:BA:641:C:C5'    | 2.60                     | 0.77              |
| 24:BA:759:G:H2'    | 24:BA:760:G:C8     | 2.16                     | 0.77              |
| 24:BA:865:C:N4     | 24:BA:909:A:H62    | 1.81                     | 0.77              |
| 24:BA:874:G:N3     | 24:BA:874:G:H2'    | 1.99                     | 0.77              |
| 24:BA:1183:G:H4'   | 24:BA:1184:G:O5'   | 1.82                     | 0.77              |
| 24:BA:1327:C:H3'   | 24:BA:1328:G:H8    | 1.49                     | 0.77              |
| 24:BA:1418:G:H1'   | 24:BA:1579:A:H61   | 1.50                     | 0.77              |
| 24:BA:1520:U:H2'   | 24:BA:1521:G:C5'   | 2.07                     | 0.77              |
| 24:BA:1603:A:OP2   | 24:BA:1603:A:H3'   | 1.84                     | 0.77              |
| 24:BA:2208:U:O2'   | 27:BD:151:LYS:HD3  | 1.85                     | 0.77              |
| 24:BA:2447:G:C5'   | 24:BA:2500:U:OP2   | 2.28                     | 0.77              |
| 24:BA:2515:C:O2'   | 24:BA:2516:G:H5'   | 1.84                     | 0.77              |
| 24:BA:2524:G:H2'   | 24:BA:2525:G:O4'   | 1.83                     | 0.77              |
| 27:BD:105:ILE:HD12 | 27:BD:106:ILE:N    | 1.97                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:199:ALA:O    | 27:BD:202:LYS:HB2  | 1.84                     | 0.77              |
| 28:BE:8:LYS:CG     | 40:BS:6:LEU:HD11   | 2.13                     | 0.77              |
| 28:BE:125:GLY:H    | 28:BE:136:ARG:HA   | 1.49                     | 0.77              |
| 28:BE:203:LYS:HD3  | 28:BE:203:LYS:O    | 1.83                     | 0.77              |
| 29:BF:70:THR:C     | 29:BF:72:ARG:N     | 2.41                     | 0.77              |
| 30:BG:39:ILE:HD12  | 30:BG:39:ILE:N     | 1.99                     | 0.77              |
| 31:BH:107:VAL:HG22 | 31:BH:107:VAL:O    | 1.82                     | 0.77              |
| 32:BK:82:ARG:O     | 32:BK:88:ILE:HG23  | 1.84                     | 0.77              |
| 32:BK:97:ILE:O     | 32:BK:101:LEU:HD23 | 1.84                     | 0.77              |
| 33:BL:75:SER:HA    | 33:BL:78:ILE:HD12  | 1.64                     | 0.77              |
| 35:BN:122:LEU:HG   | 40:BS:71:GLY:CA    | 2.13                     | 0.77              |
| 37:BP:55:VAL:CG2   | 37:BP:64:ILE:HD11  | 2.14                     | 0.77              |
| 37:BP:77:LYS:HE2   | 37:BP:87:LYS:HG3   | 1.66                     | 0.77              |
| 37:BP:131:ILE:O    | 37:BP:132:VAL:HG13 | 1.84                     | 0.77              |
| 43:BV:59:VAL:HA    | 43:BV:63:ASP:CA    | 2.13                     | 0.77              |
| 45:BX:12:THR:C     | 45:BX:73:ARG:CZ    | 2.56                     | 0.77              |
| 46:BY:43:GLU:O     | 46:BY:47:VAL:HG23  | 1.84                     | 0.77              |
| 55:B8:7:VAL:HG13   | 55:B8:34:GLN:OE1   | 1.84                     | 0.77              |
| 1:AA:113:G:H2'     | 1:AA:114:U:C6      | 2.18                     | 0.77              |
| 1:AA:663:A:H5'     | 1:AA:836:G:OP1     | 1.83                     | 0.77              |
| 1:AA:714:G:H1'     | 1:AA:777:A:N7      | 2.00                     | 0.77              |
| 1:AA:923:A:P       | 7:AH:21:ALA:HB2    | 2.25                     | 0.77              |
| 1:AA:1181:G:N7     | 1:AA:1182:G:N3     | 2.32                     | 0.77              |
| 1:AA:1393:U:H4'    | 1:AA:1501:C:O2'    | 1.84                     | 0.77              |
| 3:AB:76:A:H4'      | 24:BA:2507:C:H4'   | 1.66                     | 0.77              |
| 4:AE:17:PHE:HD1    | 4:AE:18:GLY:H      | 1.29                     | 0.77              |
| 4:AE:213:LEU:O     | 4:AE:217:ARG:HD3   | 1.85                     | 0.77              |
| 5:AF:34:LEU:HD23   | 5:AF:35:GLU:N      | 1.99                     | 0.77              |
| 6:AG:78:LEU:HD13   | 6:AG:96:LEU:HB3    | 1.65                     | 0.77              |
| 10:AK:32:LYS:HG2   | 10:AK:33:GLU:N     | 1.97                     | 0.77              |
| 11:AL:34:ASN:OD1   | 11:AL:43:ALA:HB2   | 1.84                     | 0.77              |
| 12:AM:8:LEU:CD1    | 12:AM:16:LEU:HD13  | 2.15                     | 0.77              |
| 15:AP:23:TYR:O     | 15:AP:67:GLU:N     | 2.17                     | 0.77              |
| 20:AU:66:LEU:HD12  | 20:AU:67:ALA:H     | 1.49                     | 0.77              |
| 24:BA:13:A:N6      | 24:BA:525:U:C6     | 2.53                     | 0.77              |
| 24:BA:243:U:H2'    | 24:BA:243:U:O2     | 1.84                     | 0.77              |
| 24:BA:248:G:C2     | 24:BA:2431:U:H5'   | 2.19                     | 0.77              |
| 24:BA:261:G:O2'    | 24:BA:262:A:H5'    | 1.83                     | 0.77              |
| 24:BA:518:G:H4'    | 43:BV:18:ARG:NH1   | 1.98                     | 0.77              |
| 24:BA:740:U:O2'    | 24:BA:741:G:OP1    | 2.02                     | 0.77              |
| 24:BA:1024:G:H22   | 24:BA:1139:G:H1    | 1.32                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1205:U:C2'   | 24:BA:1206:G:N7    | 2.47                     | 0.77              |
| 24:BA:1263:U:H4'   | 51:B4:10:LYS:HG3   | 1.63                     | 0.77              |
| 24:BA:1566:A:H2'   | 24:BA:1567:A:H5'   | 1.64                     | 0.77              |
| 24:BA:1567:A:H4'   | 24:BA:1568:G:N2    | 1.99                     | 0.77              |
| 24:BA:1693:U:H5''  | 24:BA:1694:C:OP2   | 1.84                     | 0.77              |
| 24:BA:1804:C:C4'   | 27:BD:250:TRP:HH2  | 1.95                     | 0.77              |
| 24:BA:2259:G:H5'   | 24:BA:2427:C:H3'   | 1.65                     | 0.77              |
| 24:BA:2265:U:N3    | 24:BA:2266:A:N7    | 2.32                     | 0.77              |
| 24:BA:2553:G:N2    | 24:BA:2554:U:O2'   | 2.17                     | 0.77              |
| 24:BA:2653:U:C4    | 24:BA:2654:A:C6    | 2.72                     | 0.77              |
| 24:BA:2749:A:H4'   | 31:BH:62:LYS:CG    | 2.14                     | 0.77              |
| 27:BD:175:LEU:C    | 27:BD:182:LEU:HD23 | 2.10                     | 0.77              |
| 28:BE:43:GLY:O     | 28:BE:45:THR:HG22  | 1.82                     | 0.77              |
| 30:BG:107:LEU:HD12 | 30:BG:111:LEU:HD13 | 1.64                     | 0.77              |
| 32:BK:134:PRO:HB2  | 32:BK:135:GLU:OE2  | 1.85                     | 0.77              |
| 34:BM:103:VAL:CG2  | 34:BM:104:LYS:N    | 2.47                     | 0.77              |
| 35:BN:7:TYR:HB3    | 35:BN:18:LYS:HZ1   | 1.45                     | 0.77              |
| 45:BX:12:THR:HG21  | 45:BX:71:LYS:CA    | 2.14                     | 0.77              |
| 50:B3:5:ILE:HG23   | 50:B3:57:GLU:CB    | 2.15                     | 0.77              |
| 50:B3:23:GLU:C     | 50:B3:25:TYR:H     | 1.91                     | 0.77              |
| 51:B4:51:TYR:CD1   | 51:B4:55:ARG:HD3   | 2.18                     | 0.77              |
| 1:AA:290:C:O5'     | 1:AA:290:C:H6      | 1.66                     | 0.77              |
| 1:AA:1005:A:H5''   | 1:AA:1006:C:H5     | 1.48                     | 0.77              |
| 1:AA:1210:C:H4'    | 1:AA:1214:C:N3     | 1.98                     | 0.77              |
| 1:AA:1431:C:O3'    | 40:BS:110:ILE:HG23 | 1.83                     | 0.77              |
| 4:AE:173:ALA:HA    | 4:AE:176:GLU:HB2   | 1.66                     | 0.77              |
| 5:AF:91:LEU:HD11   | 5:AF:99:VAL:N      | 1.99                     | 0.77              |
| 6:AG:74:GLN:O      | 6:AG:77:ASN:HB2    | 1.84                     | 0.77              |
| 7:AH:125:SER:C     | 7:AH:127:ASN:H     | 1.92                     | 0.77              |
| 8:AI:65:VAL:HG23   | 8:AI:66:GLU:O      | 1.84                     | 0.77              |
| 15:AP:3:ARG:NH2    | 30:BG:141:PHE:H    | 1.81                     | 0.77              |
| 18:AS:8:ARG:HD3    | 18:AS:15:PRO:HA    | 1.66                     | 0.77              |
| 21:AV:36:ARG:O     | 21:AV:71:LEU:HB2   | 1.83                     | 0.77              |
| 22:AW:63:ILE:O     | 22:AW:72:LEU:HD12  | 1.84                     | 0.77              |
| 24:BA:401:A:N6     | 24:BA:423:A:N1     | 2.31                     | 0.77              |
| 24:BA:740:U:C1'    | 24:BA:1784:A:N7    | 2.47                     | 0.77              |
| 24:BA:1063:G:N2    | 24:BA:1076:C:C5    | 2.52                     | 0.77              |
| 24:BA:1798:U:H5'   | 27:BD:257:LEU:CD1  | 2.14                     | 0.77              |
| 24:BA:2415:G:H5''  | 36:BO:61:ARG:HB2   | 1.65                     | 0.77              |
| 24:BA:2419:U:H5'   | 52:B5:23:THR:HG21  | 1.65                     | 0.77              |
| 24:BA:2459:A:H2'   | 24:BA:2460:U:C4'   | 2.14                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2503:A:H4'   | 24:BA:2504:U:OP1   | 1.84                     | 0.77              |
| 24:BA:2764:A:N7    | 24:BA:2766:G:C6    | 2.52                     | 0.77              |
| 27:BD:147:LEU:HA   | 27:BD:185:VAL:CG1  | 2.14                     | 0.77              |
| 29:BF:34:TRP:HD1   | 29:BF:38:ARG:HH11  | 1.32                     | 0.77              |
| 32:BK:127:VAL:HG22 | 32:BK:141:LYS:CA   | 2.13                     | 0.77              |
| 36:BO:52:GLU:CA    | 36:BO:55:ARG:HG3   | 2.14                     | 0.77              |
| 36:BO:72:PRO:HG3   | 36:BO:110:TYR:CE2  | 2.18                     | 0.77              |
| 36:BO:114:ILE:HG22 | 36:BO:114:ILE:O    | 1.84                     | 0.77              |
| 37:BP:37:LEU:HD11  | 37:BP:130:LYS:HB2  | 1.65                     | 0.77              |
| 37:BP:118:LEU:CD1  | 37:BP:131:ILE:HG21 | 2.15                     | 0.77              |
| 38:BQ:72:ASP:O     | 38:BQ:76:VAL:HG23  | 1.83                     | 0.77              |
| 38:BQ:105:ARG:HG3  | 38:BQ:106:GLY:H    | 1.49                     | 0.77              |
| 39:BR:42:ASP:C     | 39:BR:44:LYS:H     | 1.92                     | 0.77              |
| 40:BS:92:GLY:C     | 40:BS:93:ARG:HE    | 1.92                     | 0.77              |
| 42:BU:35:LEU:O     | 42:BU:61:VAL:HA    | 1.84                     | 0.77              |
| 44:BW:70:LEU:HD23  | 44:BW:71:GLY:N     | 1.98                     | 0.77              |
| 46:BY:31:ARG:N     | 46:BY:89:PHE:HE2   | 1.82                     | 0.77              |
| 47:BZ:31:VAL:HG23  | 47:BZ:65:GLY:O     | 1.82                     | 0.77              |
| 55:B8:15:LYS:HB2   | 55:B8:26:ILE:O     | 1.84                     | 0.77              |
| 1:AA:979:C:H2'     | 1:AA:980:C:H5'     | 1.65                     | 0.77              |
| 1:AA:1089:G:H2'    | 1:AA:1090:U:H5'    | 1.65                     | 0.77              |
| 1:AA:1372:U:OP2    | 11:AL:11:LYS:HE2   | 1.85                     | 0.77              |
| 1:AA:1453:G:H2'    | 1:AA:1454:G:O4'    | 1.85                     | 0.77              |
| 1:AA:1488:G:C2     | 1:AA:1489:G:C8     | 2.73                     | 0.77              |
| 10:AK:46:LYS:HZ2   | 10:AK:64:LYS:HA    | 1.47                     | 0.77              |
| 11:AL:10:ARG:HA    | 11:AL:104:ARG:NE   | 1.98                     | 0.77              |
| 13:AN:122:LYS:C    | 13:AN:126:ARG:HG3  | 2.10                     | 0.77              |
| 18:AS:56:ALA:CB    | 18:AS:79:VAL:HG11  | 2.13                     | 0.77              |
| 19:AT:28:PRO:HA    | 19:AT:35:VAL:HA    | 1.65                     | 0.77              |
| 19:AT:31:LEU:O     | 19:AT:31:LEU:HG    | 1.84                     | 0.77              |
| 24:BA:41:C:O2'     | 24:BA:43:G:H5'     | 1.84                     | 0.77              |
| 24:BA:245:G:OP1    | 36:BO:65:ARG:HD3   | 1.83                     | 0.77              |
| 24:BA:452:G:H3'    | 24:BA:453:C:C5'    | 2.13                     | 0.77              |
| 24:BA:662:G:H5'    | 36:BO:17:LYS:H     | 1.50                     | 0.77              |
| 24:BA:861:A:H62    | 24:BA:916:G:H21    | 0.80                     | 0.77              |
| 24:BA:866:A:N3     | 24:BA:866:A:H2'    | 1.98                     | 0.77              |
| 24:BA:962:G:N2     | 24:BA:963:U:C2     | 2.52                     | 0.77              |
| 24:BA:1224:G:H2'   | 42:BU:87:HIS:CE1   | 2.18                     | 0.77              |
| 24:BA:1817:G:O2'   | 24:BA:1818:U:H5'   | 1.84                     | 0.77              |
| 24:BA:2072:G:C6    | 24:BA:2073:C:N4    | 2.53                     | 0.77              |
| 24:BA:2320:A:N6    | 39:BR:4:LEU:HD13   | 1.99                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2865:U:C4    | 24:BA:2866:U:H5    | 2.02                     | 0.77              |
| 30:BG:165:THR:HB   | 30:BG:168:GLU:OE1  | 1.84                     | 0.77              |
| 31:BH:35:VAL:CG2   | 31:BH:72:ILE:HG23  | 2.14                     | 0.77              |
| 31:BH:85:LYS:CE    | 31:BH:142:GLY:HA2  | 2.15                     | 0.77              |
| 31:BH:103:LEU:HD22 | 31:BH:115:VAL:HG21 | 1.66                     | 0.77              |
| 32:BK:81:VAL:HB    | 32:BK:88:ILE:CG1   | 2.12                     | 0.77              |
| 33:BL:7:VAL:HG11   | 33:BL:67:PHE:CZ    | 2.20                     | 0.77              |
| 35:BN:6:THR:HA     | 35:BN:7:TYR:CD1    | 2.19                     | 0.77              |
| 37:BP:23:GLY:N     | 37:BP:99:PRO:HG3   | 1.99                     | 0.77              |
| 40:BS:11:GLU:CD    | 40:BS:11:GLU:N     | 2.38                     | 0.77              |
| 40:BS:27:THR:O     | 40:BS:52:ILE:HB    | 1.84                     | 0.77              |
| 41:BT:47:TYR:OH    | 42:BU:77:ALA:N     | 2.17                     | 0.77              |
| 45:BX:1:MET:CG     | 45:BX:67:LEU:HD22  | 2.14                     | 0.77              |
| 46:BY:65:GLN:O     | 46:BY:67:LEU:HG    | 1.84                     | 0.77              |
| 47:BZ:32:ARG:O     | 47:BZ:35:ASN:HB2   | 1.84                     | 0.77              |
| 1:AA:194:C:C2'     | 1:AA:195:A:H5'     | 2.14                     | 0.77              |
| 1:AA:225:C:O2'     | 1:AA:226:G:H5'     | 1.85                     | 0.77              |
| 1:AA:735:C:O2'     | 1:AA:736:C:H5'     | 1.84                     | 0.77              |
| 1:AA:761:G:C5'     | 19:AT:103:GLY:H    | 1.96                     | 0.77              |
| 1:AA:1464:G:C2'    | 1:AA:1465:C:H5     | 1.97                     | 0.77              |
| 3:AD:76:A:C4       | 24:BA:2432:A:O4'   | 2.38                     | 0.77              |
| 4:AE:132:LYS:H     | 4:AE:132:LYS:HE2   | 1.48                     | 0.77              |
| 5:AF:19:GLU:HB2    | 16:AQ:52:GLN:HG2   | 1.65                     | 0.77              |
| 5:AF:150:LYS:HB2   | 5:AF:173:VAL:CG2   | 2.14                     | 0.77              |
| 5:AF:156:ARG:HD2   | 5:AF:163:ALA:HB2   | 1.63                     | 0.77              |
| 9:AJ:88:PRO:HG2    | 9:AJ:152:ALA:HB2   | 1.67                     | 0.77              |
| 9:AJ:126:ASP:HA    | 9:AJ:131:LYS:CE    | 2.10                     | 0.77              |
| 11:AL:3:GLN:HA     | 11:AL:20:ARG:HG2   | 1.65                     | 0.77              |
| 11:AL:4:TYR:HE1    | 11:AL:59:PHE:CE2   | 2.02                     | 0.77              |
| 13:AN:42:TRP:HE3   | 13:AN:43:SER:HA    | 1.48                     | 0.77              |
| 15:AP:37:THR:HB    | 15:AP:59:TYR:CD2   | 2.20                     | 0.77              |
| 17:AR:39:LEU:HD13  | 17:AR:56:LEU:HD13  | 1.65                     | 0.77              |
| 17:AR:77:ARG:NH2   | 17:AR:78:TYR:HA    | 1.98                     | 0.77              |
| 21:AV:38:SER:HB3   | 21:AV:71:LEU:CD1   | 2.15                     | 0.77              |
| 24:BA:30:G:OP1     | 41:BT:11:ARG:NH2   | 2.18                     | 0.77              |
| 24:BA:319:C:H2'    | 24:BA:320:A:O4'    | 1.85                     | 0.77              |
| 24:BA:388:G:H1'    | 24:BA:390:A:N6     | 2.00                     | 0.77              |
| 24:BA:578:A:H2     | 41:BT:34:LYS:HZ1   | 1.30                     | 0.77              |
| 24:BA:635:C:O2'    | 24:BA:636:G:H5'    | 1.85                     | 0.77              |
| 24:BA:948:G:H1'    | 24:BA:984:A:N3     | 1.99                     | 0.77              |
| 24:BA:973:A:C1'    | 24:BA:1188:U:O4    | 2.32                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1275:A:N6   | 24:BA:1296:G:O4'  | 2.17                     | 0.77              |
| 24:BA:1312:U:C5   | 44:BW:62:LYS:HG3  | 2.20                     | 0.77              |
| 24:BA:1543:A:C3'  | 24:BA:1544:C:H4'  | 2.09                     | 0.77              |
| 24:BA:1670:C:C2'  | 24:BA:1671:U:H5'  | 2.15                     | 0.77              |
| 24:BA:2053:G:O2'  | 24:BA:2054:A:H5'  | 1.85                     | 0.77              |
| 24:BA:2064:C:C1'  | 24:BA:2450:A:N6   | 2.47                     | 0.77              |
| 24:BA:2134:A:H2'  | 24:BA:2135:A:O5'  | 1.85                     | 0.77              |
| 24:BA:2282:G:N2   | 24:BA:2425:A:C8   | 2.52                     | 0.77              |
| 24:BA:2370:G:O2'  | 52:B5:45:LYS:HD3  | 1.84                     | 0.77              |
| 24:BA:2506:U:O2'  | 24:BA:2507:C:H5'  | 1.84                     | 0.77              |
| 24:BA:2749:A:H5'  | 31:BH:62:LYS:O    | 1.85                     | 0.77              |
| 27:BD:9:TYR:CE2   | 27:BD:25:THR:HG21 | 2.18                     | 0.77              |
| 34:BM:57:ALA:O    | 34:BM:60:ILE:HG13 | 1.83                     | 0.77              |
| 35:BN:23:ARG:HH11 | 35:BN:23:ARG:CB   | 1.95                     | 0.77              |
| 39:BR:89:ARG:NH1  | 39:BR:91:PRO:HA   | 2.00                     | 0.77              |
| 53:B6:17:GLY:N    | 53:B6:21:ARG:HH22 | 1.81                     | 0.77              |
| 1:AA:65:U:H4'     | 1:AA:66:G:H5''    | 1.65                     | 0.77              |
| 1:AA:599:C:H4'    | 10:AK:130:GLY:CA  | 2.08                     | 0.77              |
| 1:AA:687:A:N6     | 1:AA:703:G:H1'    | 2.00                     | 0.77              |
| 1:AA:768:A:H8     | 1:AA:768:A:O5'    | 1.67                     | 0.77              |
| 1:AA:789:U:C2     | 1:AA:791:G:OP2    | 2.38                     | 0.77              |
| 1:AA:842:C:H4'    | 1:AA:848:C:C2     | 2.20                     | 0.77              |
| 1:AA:1259:C:O2    | 1:AA:1283:G:H1'   | 1.85                     | 0.77              |
| 1:AA:1407:C:C2'   | 1:AA:1408:A:H5'   | 2.14                     | 0.77              |
| 1:AA:1431:C:H2'   | 1:AA:1432:G:O4'   | 1.85                     | 0.77              |
| 6:AG:134:ASP:O    | 6:AG:136:PRO:HD3  | 1.85                     | 0.77              |
| 8:AI:96:PRO:O     | 8:AI:97:PHE:HB2   | 1.84                     | 0.77              |
| 9:AJ:106:GLN:HA   | 9:AJ:109:ASN:HD22 | 1.46                     | 0.77              |
| 10:AK:45:ILE:HD12 | 10:AK:48:TYR:HB3  | 1.67                     | 0.77              |
| 11:AL:49:PRO:HB3  | 11:AL:82:ALA:HB2  | 1.65                     | 0.77              |
| 11:AL:53:VAL:HG21 | 11:AL:92:TYR:CE1  | 2.20                     | 0.77              |
| 12:AM:7:LYS:HG3   | 12:AM:71:LEU:CD1  | 2.15                     | 0.77              |
| 12:AM:34:VAL:HG12 | 12:AM:35:SER:N    | 1.99                     | 0.77              |
| 13:AN:22:HIS:HB2  | 13:AN:85:ARG:HB2  | 1.66                     | 0.77              |
| 16:AQ:60:SER:O    | 16:AQ:61:TRP:HB3  | 1.83                     | 0.77              |
| 18:AS:6:LEU:HA    | 18:AS:18:ARG:O    | 1.84                     | 0.77              |
| 19:AT:6:LEU:HD13  | 19:AT:23:VAL:HG21 | 1.67                     | 0.77              |
| 19:AT:50:LYS:HD2  | 19:AT:51:TYR:CE1  | 2.19                     | 0.77              |
| 20:AU:61:LYS:O    | 20:AU:65:ILE:HG12 | 1.85                     | 0.77              |
| 21:AV:41:VAL:CB   | 21:AV:42:PRO:HD2  | 2.11                     | 0.77              |
| 24:BA:311:A:N6    | 24:BA:329:G:H5'   | 2.00                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:499:U:C5     | 24:BA:500:G:N3    | 2.53                     | 0.77              |
| 24:BA:911:A:O4'    | 24:BA:2264:C:H4'  | 1.85                     | 0.77              |
| 24:BA:1000:A:H61   | 24:BA:1155:A:H5'  | 1.49                     | 0.77              |
| 24:BA:1700:A:C2'   | 24:BA:1701:A:H5'  | 2.15                     | 0.77              |
| 24:BA:1742:C:H2'   | 24:BA:1743:G:C4'  | 2.15                     | 0.77              |
| 24:BA:2238:G:O2'   | 24:BA:2239:G:H5'' | 1.85                     | 0.77              |
| 24:BA:2574:G:H1'   | 28:BE:143:ASN:ND2 | 1.99                     | 0.77              |
| 24:BA:2638:G:N7    | 24:BA:2775:A:C6   | 2.53                     | 0.77              |
| 24:BA:2665:A:C8    | 24:BA:2665:A:C3'  | 2.66                     | 0.77              |
| 24:BA:2776:A:H4'   | 24:BA:2777:G:H5'' | 1.66                     | 0.77              |
| 26:BC:97:GLU:CG    | 26:BC:119:VAL:HB  | 2.14                     | 0.77              |
| 29:BF:182:ASN:HD21 | 29:BF:185:ASP:CG  | 1.93                     | 0.77              |
| 30:BG:26:GLN:NE2   | 30:BG:31:VAL:CG2  | 2.47                     | 0.77              |
| 31:BH:26:VAL:HG11  | 31:BH:75:ALA:C    | 2.10                     | 0.77              |
| 35:BN:24:VAL:CG2   | 35:BN:30:ALA:HA   | 2.14                     | 0.77              |
| 35:BN:99:PHE:O     | 35:BN:118:ALA:HB1 | 1.85                     | 0.77              |
| 35:BN:122:LEU:HG   | 40:BS:71:GLY:HA3  | 1.64                     | 0.77              |
| 37:BP:65:PHE:O     | 37:BP:66:ILE:HG13 | 1.83                     | 0.77              |
| 40:BS:50:ILE:HD13  | 40:BS:76:PHE:HB3  | 1.66                     | 0.77              |
| 41:BT:93:LYS:HB2   | 42:BU:10:LYS:HD2  | 1.66                     | 0.77              |
| 42:BU:70:ILE:HG23  | 42:BU:90:PRO:HA   | 1.65                     | 0.77              |
| 46:BY:105:VAL:HB   | 46:BY:140:ASP:OD2 | 1.84                     | 0.77              |
| 52:B5:24:GLU:HG2   | 54:B7:37:SER:CB   | 2.15                     | 0.77              |
| 1:AA:49:U:N3       | 1:AA:364:A:N7     | 2.33                     | 0.77              |
| 1:AA:1196:U:H5'    | 1:AA:1197:G:C5'   | 2.15                     | 0.77              |
| 1:AA:1521:G:O2'    | 1:AA:1522:U:H5'   | 1.84                     | 0.77              |
| 4:AE:25:ASN:HB3    | 4:AE:191:ASP:HA   | 1.67                     | 0.77              |
| 4:AE:136:VAL:O     | 4:AE:139:LYS:HG2  | 1.85                     | 0.77              |
| 4:AE:184:VAL:H     | 4:AE:198:ASP:CG   | 1.92                     | 0.77              |
| 5:AF:38:ARG:CB     | 5:AF:94:LEU:HD11  | 2.15                     | 0.77              |
| 5:AF:150:LYS:HA    | 5:AF:169:ALA:CB   | 2.15                     | 0.77              |
| 8:AI:76:ALA:HA     | 8:AI:79:LEU:CD1   | 2.15                     | 0.77              |
| 12:AM:87:THR:O     | 12:AM:88:LEU:HD23 | 1.84                     | 0.77              |
| 17:AR:10:LYS:O     | 17:AR:13:GLN:HB2  | 1.85                     | 0.77              |
| 21:AV:16:LEU:O     | 21:AV:19:VAL:HG12 | 1.84                     | 0.77              |
| 21:AV:62:ILE:HD11  | 21:AV:67:VAL:CA   | 2.14                     | 0.77              |
| 24:BA:292:C:H3'    | 24:BA:293:U:C4    | 2.20                     | 0.77              |
| 24:BA:312:G:O4'    | 24:BA:312:G:OP1   | 2.02                     | 0.77              |
| 24:BA:663:G:C4'    | 36:BO:18:ARG:HE   | 1.98                     | 0.77              |
| 24:BA:686:G:H8     | 53:B6:7:PRO:HA    | 1.49                     | 0.77              |
| 24:BA:946:G:H1     | 24:BA:972:G:H21   | 1.33                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1803:A:H4'  | 27:BD:257:LEU:CD1 | 2.15                     | 0.77              |
| 24:BA:1913:A:C1'  | 24:BA:1918:A:N6   | 2.48                     | 0.77              |
| 24:BA:2268:A:H5'  | 24:BA:2269:A:OP2  | 1.85                     | 0.77              |
| 24:BA:2551:C:H2'  | 24:BA:2552:U:C6   | 2.20                     | 0.77              |
| 27:BD:34:VAL:HG22 | 27:BD:104:TYR:OH  | 1.85                     | 0.77              |
| 27:BD:145:VAL:O   | 27:BD:155:LEU:HB3 | 1.84                     | 0.77              |
| 27:BD:243:GLY:O   | 27:BD:244:ARG:HB2 | 1.85                     | 0.77              |
| 28:BE:44:TYR:C    | 28:BE:45:THR:HG22 | 2.10                     | 0.77              |
| 28:BE:58:ARG:HG2  | 28:BE:63:LEU:HD23 | 1.66                     | 0.77              |
| 29:BF:31:HIS:CB   | 36:BO:14:LYS:HZ2  | 1.98                     | 0.77              |
| 31:BH:149:ARG:HG2 | 31:BH:153:LYS:HD2 | 1.65                     | 0.77              |
| 32:BK:32:PRO:HG2  | 32:BK:33:ARG:N    | 1.99                     | 0.77              |
| 34:BM:55:VAL:HG21 | 34:BM:127:ASP:N   | 1.99                     | 0.77              |
| 35:BN:10:VAL:CG1  | 35:BN:11:ALA:H    | 1.88                     | 0.77              |
| 35:BN:62:VAL:O    | 35:BN:82:ASN:O    | 2.03                     | 0.77              |
| 35:BN:68:GLU:OE1  | 35:BN:70:LYS:HE3  | 1.85                     | 0.77              |
| 41:BT:25:TRP:HE3  | 41:BT:26:GLY:N    | 1.83                     | 0.77              |
| 41:BT:77:SER:O    | 41:BT:81:HIS:HB2  | 1.85                     | 0.77              |
| 46:BY:110:GLY:CA  | 46:BY:144:LEU:HB2 | 2.14                     | 0.77              |
| 52:B5:15:GLU:OE2  | 52:B5:21:TYR:HB3  | 1.84                     | 0.77              |
| 54:B7:36:LYS:HG3  | 54:B7:40:GLU:CD   | 2.10                     | 0.77              |
| 1:AA:110:C:H2'    | 1:AA:111:G:O4'    | 1.85                     | 0.77              |
| 1:AA:665:A:C2'    | 1:AA:725:G:N2     | 2.46                     | 0.77              |
| 1:AA:737:A:OP1    | 8:AI:91:VAL:HA    | 1.84                     | 0.77              |
| 1:AA:1075:C:H4'   | 1:AA:1101:A:H62   | 1.50                     | 0.77              |
| 1:AA:1237:C:O2'   | 1:AA:1300:G:N2    | 2.17                     | 0.77              |
| 1:AA:1289:A:N6    | 1:AA:1371:G:O2'   | 2.18                     | 0.77              |
| 1:AA:1516:G:N3    | 1:AA:1518:A:OP2   | 2.18                     | 0.77              |
| 3:AB:52:G:HO2'    | 24:BA:2470:G:C3'  | 1.97                     | 0.77              |
| 4:AE:184:VAL:C    | 4:AE:198:ASP:HB2  | 2.09                     | 0.77              |
| 6:AG:203:VAL:O    | 6:AG:206:PHE:HB3  | 1.85                     | 0.77              |
| 11:AL:48:GLU:OE1  | 11:AL:48:GLU:HA   | 1.85                     | 0.77              |
| 15:AP:10:PRO:CB   | 15:AP:18:ALA:HA   | 2.14                     | 0.77              |
| 18:AS:19:ILE:HG13 | 18:AS:38:TYR:HA   | 1.66                     | 0.77              |
| 19:AT:40:LYS:HB3  | 19:AT:40:LYS:HZ3  | 1.48                     | 0.77              |
| 19:AT:66:SER:HB2  | 19:AT:69:LYS:HZ3  | 1.48                     | 0.77              |
| 19:AT:91:ARG:HA   | 19:AT:94:ASN:ND2  | 1.99                     | 0.77              |
| 24:BA:144:C:H2'   | 24:BA:145:G:O4'   | 1.85                     | 0.77              |
| 24:BA:426:C:H2'   | 24:BA:427:U:C6    | 2.20                     | 0.77              |
| 24:BA:755:C:H2'   | 24:BA:756:C:H6    | 1.50                     | 0.77              |
| 24:BA:1203:G:H1   | 24:BA:1241:A:H1'  | 1.50                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1258:C:C5'   | 29:BF:84:VAL:HG21 | 2.14                     | 0.77              |
| 24:BA:1368:G:O2'   | 24:BA:1369:G:H5'  | 1.83                     | 0.77              |
| 24:BA:1483:G:H1'   | 24:BA:1507:A:C2   | 2.20                     | 0.77              |
| 24:BA:1517:G:N2    | 24:BA:1518:C:C2   | 2.53                     | 0.77              |
| 24:BA:1687:G:C6    | 24:BA:1688:U:C5   | 2.73                     | 0.77              |
| 24:BA:1954:G:H8    | 24:BA:1954:G:OP2  | 1.65                     | 0.77              |
| 24:BA:2011:U:H2'   | 24:BA:2012:G:C8   | 2.20                     | 0.77              |
| 24:BA:2023:G:H5''  | 24:BA:2617:C:O2'  | 1.84                     | 0.77              |
| 24:BA:2046:G:OP1   | 51:B4:18:ALA:HB1  | 1.85                     | 0.77              |
| 24:BA:2888:C:H2'   | 24:BA:2889:C:H6   | 1.50                     | 0.77              |
| 26:BC:87:GLU:HG3   | 26:BC:94:VAL:CG2  | 2.15                     | 0.77              |
| 30:BG:17:PRO:O     | 30:BG:20:ILE:HB   | 1.85                     | 0.77              |
| 30:BG:49:ASP:O     | 30:BG:53:LEU:CB   | 2.33                     | 0.77              |
| 30:BG:144:ILE:HG23 | 30:BG:147:ASP:OD2 | 1.85                     | 0.77              |
| 31:BH:29:PRO:HD3   | 31:BH:79:VAL:C    | 2.09                     | 0.77              |
| 31:BH:85:LYS:NZ    | 31:BH:142:GLY:HA2 | 2.00                     | 0.77              |
| 32:BK:5:LEU:HD11   | 32:BK:17:GLN:CB   | 2.14                     | 0.77              |
| 32:BK:113:ARG:CZ   | 32:BK:132:PRO:HB3 | 2.14                     | 0.77              |
| 35:BN:121:VAL:HG13 | 40:BS:68:TYR:OH   | 1.82                     | 0.77              |
| 36:BO:28:GLY:O     | 36:BO:29:LYS:HG3  | 1.85                     | 0.77              |
| 37:BP:75:THR:HG23  | 37:BP:91:GLU:CD   | 2.09                     | 0.77              |
| 38:BQ:38:VAL:CB    | 38:BQ:39:PRO:HD3  | 2.14                     | 0.77              |
| 38:BQ:86:ARG:HH11  | 38:BQ:86:ARG:CB   | 1.94                     | 0.77              |
| 39:BR:23:ARG:HH11  | 39:BR:42:ASP:HB3  | 1.48                     | 0.77              |
| 39:BR:40:ILE:HG13  | 39:BR:47:THR:HG23 | 1.66                     | 0.77              |
| 40:BS:26:ASP:HA    | 40:BS:100:TYR:CZ  | 2.20                     | 0.77              |
| 41:BT:57:PHE:CD2   | 41:BT:60:LEU:HD12 | 2.19                     | 0.77              |
| 42:BU:25:LEU:HD23  | 42:BU:29:PRO:HD3  | 1.66                     | 0.77              |
| 42:BU:36:PRO:N     | 42:BU:61:VAL:HG22 | 2.00                     | 0.77              |
| 43:BV:24:ILE:HD13  | 43:BV:36:LEU:HD13 | 1.67                     | 0.77              |
| 43:BV:36:LEU:HD11  | 43:BV:47:VAL:CG2  | 2.15                     | 0.77              |
| 43:BV:76:VAL:HG22  | 43:BV:77:ASP:N    | 1.99                     | 0.77              |
| 44:BW:8:ILE:C      | 44:BW:9:LEU:HG    | 2.09                     | 0.77              |
| 45:BX:13:VAL:HG13  | 45:BX:70:SER:HB3  | 1.65                     | 0.77              |
| 51:B4:36:CYS:HB2   | 51:B4:37:LYS:HD2  | 1.65                     | 0.77              |
| 1:AA:570:G:C2      | 1:AA:873:A:N1     | 2.53                     | 0.77              |
| 1:AA:1250:A:H4'    | 11:AL:67:GLY:C    | 2.10                     | 0.77              |
| 1:AA:1267:C:O2     | 1:AA:1267:C:H2'   | 1.84                     | 0.77              |
| 3:AB:60:U:H5''     | 3:AB:61:C:OP2     | 1.85                     | 0.77              |
| 4:AE:144:ARG:HA    | 4:AE:147:LYS:CB   | 2.15                     | 0.77              |
| 5:AF:122:GLU:CA    | 5:AF:125:GLU:HG2  | 2.15                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:AG:135:LEU:HD12 | 6:AG:138:TYR:HB2   | 1.65                     | 0.77              |
| 7:AH:79:GLU:HG3   | 7:AH:93:PRO:HD2    | 1.66                     | 0.77              |
| 11:AL:16:ARG:HE   | 11:AL:18:PHE:HZ    | 1.33                     | 0.77              |
| 15:AP:3:ARG:CZ    | 30:BG:140:ILE:HB   | 2.15                     | 0.77              |
| 17:AR:26:GLU:O    | 17:AR:29:VAL:HB    | 1.84                     | 0.77              |
| 22:AW:33:ILE:HD13 | 22:AW:63:ILE:CA    | 2.13                     | 0.77              |
| 24:BA:49:A:H1'    | 24:BA:118:A:H61    | 1.50                     | 0.77              |
| 24:BA:64:A:C5'    | 44:BW:73:ARG:HA    | 2.15                     | 0.77              |
| 24:BA:109:G:N2    | 24:BA:110:G:H1'    | 2.00                     | 0.77              |
| 24:BA:242:G:H2'   | 24:BA:254:G:O6     | 1.85                     | 0.77              |
| 24:BA:360:G:H2'   | 24:BA:361:G:C5'    | 2.14                     | 0.77              |
| 24:BA:623:G:OP2   | 36:BO:105:LEU:HD21 | 1.85                     | 0.77              |
| 24:BA:800:A:O2'   | 24:BA:801:G:H5''   | 1.85                     | 0.77              |
| 24:BA:847:U:N3    | 24:BA:933:A:H2     | 1.82                     | 0.77              |
| 24:BA:861:A:H2'   | 24:BA:862:G:H5'    | 1.67                     | 0.77              |
| 24:BA:917:A:C3'   | 24:BA:917:A:C8     | 2.63                     | 0.77              |
| 24:BA:1123:C:H2'  | 24:BA:1124:C:C6    | 2.20                     | 0.77              |
| 24:BA:1188:U:O2'  | 24:BA:1189:A:H5'   | 1.84                     | 0.77              |
| 24:BA:1242:A:C2   | 36:BO:6:LEU:HD21   | 2.20                     | 0.77              |
| 24:BA:1356:G:O2'  | 24:BA:1357:U:H5'   | 1.85                     | 0.77              |
| 24:BA:1427:A:H1'  | 24:BA:1428:C:C5    | 2.20                     | 0.77              |
| 24:BA:1451:C:H2'  | 24:BA:1457:A:N6    | 1.99                     | 0.77              |
| 24:BA:1602:U:N3   | 24:BA:1602:U:OP2   | 2.18                     | 0.77              |
| 24:BA:1638:C:H1'  | 24:BA:2698:U:O2'   | 1.85                     | 0.77              |
| 24:BA:1657:C:OP1  | 28:BE:136:ARG:NH2  | 2.18                     | 0.77              |
| 24:BA:2096:U:H2'  | 24:BA:2097:C:C5    | 2.19                     | 0.77              |
| 24:BA:2455:G:H2'  | 24:BA:2456:C:H6    | 1.49                     | 0.77              |
| 24:BA:2569:G:C2   | 24:BA:2570:G:C8    | 2.73                     | 0.77              |
| 24:BA:2603:G:OP2  | 47:BZ:1:MET:HB2    | 1.84                     | 0.77              |
| 24:BA:2700:C:C2'  | 24:BA:2701:C:H5''  | 2.14                     | 0.77              |
| 24:BA:2777:G:H4'  | 24:BA:2778:A:H5'   | 1.66                     | 0.77              |
| 24:BA:2815:C:H4'  | 51:B4:42:PRO:HG3   | 1.65                     | 0.77              |
| 28:BE:52:LEU:HA   | 28:BE:74:PRO:CA    | 2.12                     | 0.77              |
| 28:BE:136:ARG:O   | 28:BE:136:ARG:HD3  | 1.84                     | 0.77              |
| 34:BM:97:ARG:O    | 34:BM:100:GLU:N    | 2.16                     | 0.77              |
| 34:BM:115:ARG:HA  | 34:BM:118:LYS:CD   | 2.15                     | 0.77              |
| 35:BN:16:ALA:C    | 35:BN:18:LYS:H     | 1.91                     | 0.77              |
| 35:BN:122:LEU:CG  | 40:BS:71:GLY:HA3   | 2.15                     | 0.77              |
| 36:BO:16:ARG:HG2  | 36:BO:19:VAL:HG13  | 1.67                     | 0.77              |
| 37:BP:48:GLU:C    | 37:BP:51:ARG:HG3   | 2.09                     | 0.77              |
| 39:BR:62:LYS:O    | 39:BR:65:VAL:N     | 2.17                     | 0.77              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 41:BT:65:ILE:O     | 41:BT:66:ASN:C     | 2.28                     | 0.77              |
| 49:B2:26:LEU:HB3   | 49:B2:35:ARG:HH11  | 1.50                     | 0.77              |
| 53:B6:43:THR:O     | 53:B6:46:VAL:HB    | 1.85                     | 0.77              |
| 1:AA:20:U:H2'      | 1:AA:21:G:O4'      | 1.84                     | 0.76              |
| 1:AA:392:G:H5'     | 18:AS:12:LYS:NZ    | 1.99                     | 0.76              |
| 1:AA:1320:C:C4     | 21:AV:72:GLY:HA3   | 2.19                     | 0.76              |
| 4:AE:15:VAL:HG11   | 4:AE:209:ARG:HB3   | 1.65                     | 0.76              |
| 4:AE:19:HIS:HA     | 4:AE:39:ILE:HD11   | 1.67                     | 0.76              |
| 4:AE:67:THR:HB     | 4:AE:155:LEU:HD21  | 1.65                     | 0.76              |
| 5:AF:50:ALA:O      | 5:AF:72:LYS:HD2    | 1.84                     | 0.76              |
| 6:AG:83:SER:HA     | 6:AG:89:THR:OG1    | 1.85                     | 0.76              |
| 6:AG:154:ASN:ND2   | 6:AG:155:LEU:HD22  | 2.00                     | 0.76              |
| 9:AJ:65:ALA:O      | 9:AJ:69:VAL:HG23   | 1.85                     | 0.76              |
| 9:AJ:76:ARG:NH1    | 9:AJ:89:MET:HG3    | 1.99                     | 0.76              |
| 11:AL:16:ARG:HG2   | 11:AL:18:PHE:CZ    | 2.20                     | 0.76              |
| 11:AL:45:ALA:O     | 11:AL:78:LYS:HB2   | 1.85                     | 0.76              |
| 14:AO:85:ILE:HD11  | 14:AO:98:TYR:HB2   | 1.63                     | 0.76              |
| 15:AP:40:ASN:OD1   | 15:AP:42:ALA:HB3   | 1.84                     | 0.76              |
| 17:AR:49:ASP:OD2   | 17:AR:52:SER:HB2   | 1.85                     | 0.76              |
| 24:BA:563:G:H21    | 41:BT:34:LYS:HE2   | 1.50                     | 0.76              |
| 24:BA:666:G:O4'    | 54:B7:3:LYS:HE3    | 1.85                     | 0.76              |
| 24:BA:902:C:H2'    | 24:BA:903:C:H6     | 1.49                     | 0.76              |
| 24:BA:1058:G:H21   | 33:BL:116:ASN:HD21 | 1.31                     | 0.76              |
| 24:BA:1178:C:C2    | 24:BA:1179:C:C5    | 2.73                     | 0.76              |
| 24:BA:1252:G:H8    | 24:BA:1253:A:C1'   | 1.93                     | 0.76              |
| 24:BA:1420:U:H1'   | 24:BA:1421:G:N7    | 2.00                     | 0.76              |
| 24:BA:1556:C:H2'   | 24:BA:1557:C:C6    | 2.21                     | 0.76              |
| 24:BA:1658:C:OP1   | 28:BE:134:ILE:HD12 | 1.85                     | 0.76              |
| 24:BA:1935:G:H2'   | 24:BA:1962:C:N4    | 2.00                     | 0.76              |
| 24:BA:2543:G:N3    | 24:BA:2765:A:C2    | 2.52                     | 0.76              |
| 24:BA:2748:A:O2'   | 31:BH:66:GLY:HA3   | 1.85                     | 0.76              |
| 25:BB:73:A:N6      | 25:BB:104:A:H1'    | 2.00                     | 0.76              |
| 25:BB:87:G:OP2     | 25:BB:87:G:H8      | 1.68                     | 0.76              |
| 26:BC:19:ILE:HG23  | 26:BC:223:ARG:HG2  | 1.66                     | 0.76              |
| 27:BD:105:ILE:HG13 | 27:BD:106:ILE:CG1  | 2.12                     | 0.76              |
| 27:BD:234:GLY:H    | 27:BD:241:PRO:CG   | 1.98                     | 0.76              |
| 30:BG:92:VAL:CG1   | 30:BG:94:LEU:HD22  | 2.15                     | 0.76              |
| 31:BH:8:PRO:HA     | 31:BH:51:ARG:NH1   | 2.01                     | 0.76              |
| 33:BL:98:ARG:CZ    | 33:BL:139:VAL:HG21 | 2.14                     | 0.76              |
| 33:BL:111:LYS:C    | 33:BL:113:PRO:HD2  | 2.10                     | 0.76              |
| 34:BM:37:LYS:HD2   | 34:BM:42:TRP:C     | 2.09                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 35:BN:70:LYS:HE2  | 35:BN:104:ARG:HG3  | 1.67                     | 0.76              |
| 36:BO:45:LEU:CD2  | 36:BO:46:LYS:HG3   | 2.13                     | 0.76              |
| 37:BP:42:ILE:HD13 | 37:BP:42:ILE:C     | 2.09                     | 0.76              |
| 37:BP:122:GLY:HA2 | 37:BP:125:LEU:CG   | 2.15                     | 0.76              |
| 42:BU:28:GLU:C    | 42:BU:30:GLY:H     | 1.92                     | 0.76              |
| 46:BY:157:LEU:CD2 | 46:BY:161:VAL:HA   | 2.15                     | 0.76              |
| 54:B7:12:LYS:HG2  | 54:B7:13:ARG:HH12  | 1.50                     | 0.76              |
| 54:B7:30:ARG:HD2  | 54:B7:44:LYS:HD2   | 1.65                     | 0.76              |
| 4:AE:32:ILE:HD11  | 4:AE:40:HIS:HD2    | 1.50                     | 0.76              |
| 4:AE:82:ARG:HA    | 4:AE:92:TYR:HE1    | 1.47                     | 0.76              |
| 4:AE:139:LYS:HG3  | 4:AE:140:HIS:H     | 1.50                     | 0.76              |
| 6:AG:63:LYS:HA    | 6:AG:66:ARG:HD2    | 1.67                     | 0.76              |
| 9:AJ:40:ALA:O     | 9:AJ:43:PHE:HB3    | 1.86                     | 0.76              |
| 9:AJ:51:GLN:HE22  | 9:AJ:58:PRO:HG3    | 1.48                     | 0.76              |
| 10:AK:24:THR:O    | 10:AK:60:ARG:HA    | 1.84                     | 0.76              |
| 13:AN:87:THR:HG22 | 13:AN:91:ARG:HH22  | 1.51                     | 0.76              |
| 17:AR:7:GLU:HB3   | 17:AR:10:LYS:HE3   | 1.66                     | 0.76              |
| 24:BA:527:C:H4'   | 24:BA:527:C:OP1    | 1.85                     | 0.76              |
| 24:BA:548:A:N6    | 24:BA:549:G:H21    | 1.83                     | 0.76              |
| 24:BA:918:A:C8    | 25:BB:80:U:H4'     | 2.21                     | 0.76              |
| 24:BA:942:G:C3'   | 36:BO:32:THR:HG22  | 2.15                     | 0.76              |
| 24:BA:1007:C:H2'  | 24:BA:1008:C:C5    | 2.21                     | 0.76              |
| 24:BA:1021:A:H2'  | 24:BA:1022:G:OP1   | 1.85                     | 0.76              |
| 24:BA:1313:U:H2'  | 24:BA:1314:C:C6    | 2.20                     | 0.76              |
| 24:BA:1853:A:H2'  | 24:BA:1854:A:H8    | 1.49                     | 0.76              |
| 24:BA:2449:U:C6   | 24:BA:2449:U:OP1   | 2.37                     | 0.76              |
| 24:BA:2791:C:H2'  | 24:BA:2792:G:C8    | 2.20                     | 0.76              |
| 25:BB:16:G:H2'    | 25:BB:17:C:H6      | 1.50                     | 0.76              |
| 25:BB:75:G:H4'    | 46:BY:36:LYS:CE    | 2.15                     | 0.76              |
| 28:BE:45:THR:HB   | 28:BE:81:ILE:CA    | 2.05                     | 0.76              |
| 30:BG:12:TYR:HA   | 30:BG:15:VAL:HG22  | 1.65                     | 0.76              |
| 30:BG:39:ILE:HD13 | 30:BG:92:VAL:HG12  | 1.67                     | 0.76              |
| 31:BH:28:GLY:CA   | 31:BH:79:VAL:HB    | 2.16                     | 0.76              |
| 31:BH:128:PRO:O   | 31:BH:131:VAL:HB   | 1.85                     | 0.76              |
| 34:BM:66:LYS:HA   | 34:BM:87:LEU:CD1   | 2.13                     | 0.76              |
| 39:BR:70:GLY:HA2  | 39:BR:73:LEU:HD22  | 1.67                     | 0.76              |
| 40:BS:50:ILE:CD1  | 40:BS:76:PHE:HB3   | 2.15                     | 0.76              |
| 41:BT:88:ILE:HG12 | 42:BU:52:VAL:HG13  | 1.67                     | 0.76              |
| 43:BV:75:TYR:O    | 43:BV:104:THR:HG23 | 1.85                     | 0.76              |
| 46:BY:78:LYS:HG3  | 46:BY:79:ARG:H     | 1.48                     | 0.76              |
| 52:B5:27:LYS:HG2  | 52:B5:29:ASN:HD21  | 1.50                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 52:B5:35:GLU:OE2  | 52:B5:52:VAL:HG13 | 1.84                     | 0.76              |
| 1:AA:342:C:H2'    | 1:AA:343:U:C6     | 2.21                     | 0.76              |
| 1:AA:540:G:H21    | 6:AG:42:GLN:NE2   | 1.81                     | 0.76              |
| 1:AA:1202:G:H2'   | 1:AA:1203:C:H6    | 1.50                     | 0.76              |
| 3:AD:37:A:H2'     | 3:AD:38:A:O4'     | 1.85                     | 0.76              |
| 3:AD:37:A:N6      | 9:AJ:79:ARG:HH22  | 1.84                     | 0.76              |
| 4:AE:71:VAL:O     | 4:AE:164:VAL:HG23 | 1.85                     | 0.76              |
| 5:AF:88:ARG:HB2   | 5:AF:101:LEU:HB2  | 1.67                     | 0.76              |
| 5:AF:142:MET:HB3  | 5:AF:170:GLN:NE2  | 2.00                     | 0.76              |
| 5:AF:172:ARG:HH22 | 5:AF:174:PRO:HG3  | 1.49                     | 0.76              |
| 6:AG:145:GLU:O    | 6:AG:146:ILE:HG23 | 1.85                     | 0.76              |
| 7:AH:17:ALA:HA    | 7:AH:26:PHE:HB3   | 1.67                     | 0.76              |
| 8:AI:11:ASN:HD22  | 8:AI:86:ARG:NH2   | 1.83                     | 0.76              |
| 9:AJ:69:VAL:CG2   | 9:AJ:135:VAL:HG22 | 2.15                     | 0.76              |
| 11:AL:108:VAL:O   | 11:AL:110:GLU:N   | 2.17                     | 0.76              |
| 12:AM:23:ILE:HG22 | 12:AM:72:VAL:HG11 | 1.67                     | 0.76              |
| 13:AN:48:ILE:HG23 | 13:AN:63:LEU:HD13 | 1.66                     | 0.76              |
| 17:AR:36:ILE:HD11 | 17:AR:60:VAL:HG22 | 1.66                     | 0.76              |
| 18:AS:35:LYS:HD2  | 18:AS:36:ILE:N    | 2.00                     | 0.76              |
| 19:AT:21:VAL:HG23 | 19:AT:42:TYR:O    | 1.85                     | 0.76              |
| 24:BA:221:A:O2'   | 24:BA:222:A:OP2   | 2.02                     | 0.76              |
| 24:BA:247:G:H4'   | 24:BA:386:G:N3    | 2.00                     | 0.76              |
| 24:BA:530:G:H22   | 24:BA:2021:C:C3'  | 1.96                     | 0.76              |
| 24:BA:531:C:H5'   | 24:BA:532:A:C2    | 2.20                     | 0.76              |
| 24:BA:574:C:N1    | 24:BA:2055:C:H5   | 1.82                     | 0.76              |
| 24:BA:730:C:H2'   | 24:BA:731:C:C6    | 2.20                     | 0.76              |
| 24:BA:752:A:H62   | 24:BA:1781:C:C1'  | 1.98                     | 0.76              |
| 24:BA:973:A:O4'   | 24:BA:1188:U:C4   | 2.38                     | 0.76              |
| 24:BA:997:G:O2'   | 24:BA:998:C:H5'   | 1.85                     | 0.76              |
| 24:BA:1066:U:O2'  | 24:BA:1068:G:H3'  | 1.84                     | 0.76              |
| 24:BA:1083:U:H1'  | 24:BA:1085:A:C5   | 2.21                     | 0.76              |
| 24:BA:1388:G:H2'  | 24:BA:1389:G:H8   | 1.48                     | 0.76              |
| 24:BA:1935:G:C3'  | 24:BA:1962:C:H42  | 1.98                     | 0.76              |
| 24:BA:1944:U:C1'  | 24:BA:1955:U:H6   | 1.98                     | 0.76              |
| 24:BA:2286:A:C4'  | 24:BA:2287:A:H1'  | 2.14                     | 0.76              |
| 24:BA:2312:U:H5'  | 30:BG:43:LEU:HD21 | 1.65                     | 0.76              |
| 24:BA:2334:G:O2'  | 39:BR:15:ARG:HG3  | 1.84                     | 0.76              |
| 24:BA:2586:C:H2'  | 24:BA:2587:A:H8   | 1.50                     | 0.76              |
| 24:BA:2756:U:C4   | 24:BA:2758:A:N6   | 2.54                     | 0.76              |
| 24:BA:2784:C:H4'  | 28:BE:41:LYS:HE2  | 1.65                     | 0.76              |
| 26:BC:183:GLU:O   | 26:BC:186:ALA:HB3 | 1.85                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:136:ILE:HD12 | 27:BD:173:VAL:HG21 | 1.67                     | 0.76              |
| 28:BE:114:ALA:CB   | 28:BE:118:LYS:HB2  | 2.14                     | 0.76              |
| 30:BG:55:LYS:HG3   | 30:BG:148:MET:HB2  | 1.68                     | 0.76              |
| 30:BG:78:SER:HB2   | 30:BG:82:LEU:HB2   | 1.65                     | 0.76              |
| 30:BG:141:PHE:CE2  | 30:BG:145:THR:HA   | 2.19                     | 0.76              |
| 31:BH:45:VAL:HG13  | 31:BH:50:VAL:HG22  | 1.67                     | 0.76              |
| 32:BK:40:THR:O     | 32:BK:44:LEU:HG    | 1.85                     | 0.76              |
| 32:BK:71:ILE:O     | 32:BK:74:ASN:HB3   | 1.85                     | 0.76              |
| 34:BM:117:PHE:HA   | 34:BM:120:LEU:HB3  | 1.68                     | 0.76              |
| 37:BP:35:VAL:HG23  | 37:BP:101:ARG:C    | 2.10                     | 0.76              |
| 39:BR:49:VAL:CG1   | 39:BR:80:LEU:HG    | 2.14                     | 0.76              |
| 41:BT:44:ASN:C     | 41:BT:47:TYR:HB2   | 2.10                     | 0.76              |
| 42:BU:40:LEU:CD1   | 42:BU:55:ALA:HA    | 2.15                     | 0.76              |
| 45:BX:14:LEU:CD2   | 45:BX:19:LYS:HB2   | 2.15                     | 0.76              |
| 49:B2:13:ILE:HG23  | 49:B2:14:GLY:N     | 1.93                     | 0.76              |
| 1:AA:186(B):C:O2'  | 1:AA:186(C):G:H5'  | 1.85                     | 0.76              |
| 1:AA:236:G:H5'     | 19:AT:42:TYR:OH    | 1.86                     | 0.76              |
| 1:AA:397:A:O2'     | 1:AA:398:C:H3'     | 1.84                     | 0.76              |
| 1:AA:961:U:H1'     | 1:AA:1201:A:H61    | 1.49                     | 0.76              |
| 1:AA:1262:C:H2'    | 1:AA:1263:C:C6     | 2.19                     | 0.76              |
| 3:AC:2:C:H5'       | 47:BZ:7:LEU:O      | 1.85                     | 0.76              |
| 3:AC:67:C:H2'      | 3:AC:68:C:H6       | 1.51                     | 0.76              |
| 4:AE:71:VAL:CG2    | 4:AE:93:VAL:HB     | 2.14                     | 0.76              |
| 5:AF:22:TRP:CB     | 5:AF:59:ARG:HB3    | 2.16                     | 0.76              |
| 6:AG:25:ARG:C      | 6:AG:27:TYR:H      | 1.89                     | 0.76              |
| 6:AG:143:GLY:HA2   | 6:AG:185:PHE:CB    | 2.14                     | 0.76              |
| 9:AJ:45:ASP:O      | 9:AJ:48:LYS:HB2    | 1.85                     | 0.76              |
| 14:AO:32:PHE:CB    | 14:AO:84:LEU:HD21  | 2.16                     | 0.76              |
| 14:AO:113:ARG:NH2  | 14:AO:115:LYS:O    | 2.18                     | 0.76              |
| 19:AT:59:ILE:HD12  | 19:AT:60:ILE:N     | 1.98                     | 0.76              |
| 20:AU:37:VAL:HG12  | 20:AU:41:LYS:NZ    | 2.00                     | 0.76              |
| 24:BA:270(X):G:N1  | 24:BA:270(Y):G:H1' | 2.00                     | 0.76              |
| 24:BA:500:G:H2'    | 24:BA:501:A:H5''   | 1.67                     | 0.76              |
| 24:BA:514:A:C2     | 24:BA:515:A:C4     | 2.73                     | 0.76              |
| 24:BA:950:G:H2'    | 24:BA:951:C:C6     | 2.21                     | 0.76              |
| 24:BA:1023:U:H2'   | 24:BA:1024:G:C5'   | 2.16                     | 0.76              |
| 24:BA:1033:U:C5'   | 55:B8:16:VAL:HG21  | 2.16                     | 0.76              |
| 24:BA:1315:C:H2'   | 24:BA:1316:U:H6    | 1.50                     | 0.76              |
| 24:BA:1342:A:H2'   | 24:BA:1345:C:N4    | 1.99                     | 0.76              |
| 24:BA:1511:A:H2'   | 24:BA:1512:G:H5''  | 1.68                     | 0.76              |
| 24:BA:1695:G:C2    | 24:BA:1696:G:O4'   | 2.38                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1835:G:H2'  | 24:BA:1836:C:H5'   | 1.67                     | 0.76              |
| 24:BA:1854:A:C2   | 24:BA:1855:G:H1'   | 2.21                     | 0.76              |
| 24:BA:2187:G:H2'  | 24:BA:2188:C:H6    | 1.47                     | 0.76              |
| 24:BA:2199:A:C8   | 24:BA:2199:A:O5'   | 2.38                     | 0.76              |
| 24:BA:2516:G:C4   | 24:BA:2569:G:N2    | 2.52                     | 0.76              |
| 24:BA:2658:C:H2'  | 24:BA:2659:G:H5'   | 0.86                     | 0.76              |
| 26:BC:81:GLU:O    | 26:BC:84:LYS:HB2   | 1.84                     | 0.76              |
| 26:BC:122:ALA:CB  | 26:BC:126:LYS:HD3  | 2.14                     | 0.76              |
| 26:BC:162:GLU:HG2 | 26:BC:163:PHE:N    | 1.98                     | 0.76              |
| 27:BD:63:ARG:HG3  | 27:BD:64:ILE:N     | 2.00                     | 0.76              |
| 27:BD:76:PRO:HA   | 27:BD:118:VAL:HG22 | 1.65                     | 0.76              |
| 27:BD:81:ALA:HA   | 27:BD:113:VAL:HG22 | 1.68                     | 0.76              |
| 28:BE:32:PRO:CB   | 28:BE:35:GLN:HE22  | 1.98                     | 0.76              |
| 28:BE:171:GLU:OE1 | 28:BE:172:VAL:N    | 2.18                     | 0.76              |
| 29:BF:104:LYS:O   | 29:BF:108:LYS:HE3  | 1.85                     | 0.76              |
| 30:BG:59:GLU:CD   | 30:BG:152:LEU:HD22 | 2.09                     | 0.76              |
| 32:BK:79:ILE:HD12 | 32:BK:79:ILE:N     | 2.00                     | 0.76              |
| 34:BM:22:THR:HG23 | 34:BM:25:ARG:NH1   | 2.01                     | 0.76              |
| 37:BP:137:TYR:CE2 | 46:BY:124:ILE:CD1  | 2.68                     | 0.76              |
| 41:BT:13:LYS:HA   | 41:BT:16:LYS:NZ    | 2.01                     | 0.76              |
| 41:BT:108:GLU:O   | 41:BT:111:GLU:HG2  | 1.86                     | 0.76              |
| 43:BV:82:LEU:O    | 43:BV:97:LYS:HA    | 1.85                     | 0.76              |
| 46:BY:20:ARG:CZ   | 46:BY:20:ARG:HB2   | 2.15                     | 0.76              |
| 54:B7:8:LYS:HA    | 54:B7:11:LYS:HD2   | 1.67                     | 0.76              |
| 1:AA:274:A:HO2'   | 1:AA:275:G:C1'     | 1.99                     | 0.76              |
| 1:AA:544:G:H2'    | 1:AA:545:C:C6      | 2.20                     | 0.76              |
| 1:AA:960:U:N3     | 1:AA:1225:A:N7     | 2.33                     | 0.76              |
| 1:AA:1239:A:H2'   | 1:AA:1239:A:N3     | 1.99                     | 0.76              |
| 1:AA:1403:C:H1'   | 1:AA:1500:A:C6     | 2.20                     | 0.76              |
| 4:AE:187:LEU:HD13 | 4:AE:187:LEU:C     | 2.10                     | 0.76              |
| 7:AH:79:GLU:HG3   | 7:AH:93:PRO:CD     | 2.16                     | 0.76              |
| 11:AL:49:PRO:HG3  | 11:AL:78:LYS:O     | 1.86                     | 0.76              |
| 11:AL:66:ARG:HG2  | 11:AL:67:GLY:H     | 1.49                     | 0.76              |
| 11:AL:112:LYS:HG3 | 11:AL:117:HIS:HA   | 1.68                     | 0.76              |
| 14:AO:36:VAL:C    | 14:AO:58:VAL:HG13  | 2.09                     | 0.76              |
| 15:AP:90:LEU:HA   | 15:AP:93:ARG:HB2   | 1.67                     | 0.76              |
| 24:BA:311:A:H1'   | 24:BA:332:A:C5     | 2.21                     | 0.76              |
| 24:BA:446:G:N7    | 41:BT:3:ARG:NH2    | 2.33                     | 0.76              |
| 24:BA:558:G:C2    | 24:BA:559:G:N7     | 2.54                     | 0.76              |
| 24:BA:567:A:C2    | 24:BA:568:U:H1'    | 2.21                     | 0.76              |
| 24:BA:1742:C:H3'  | 24:BA:1743:G:C5'   | 2.14                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1815:A:H1'   | 24:BA:1817:G:C4    | 2.20                     | 0.76              |
| 24:BA:1819:A:H5''  | 27:BD:178:PRO:CB   | 2.15                     | 0.76              |
| 24:BA:1863:G:H2'   | 24:BA:1864:U:H6    | 1.48                     | 0.76              |
| 24:BA:2059:A:N1    | 24:BA:2503:A:N6    | 2.34                     | 0.76              |
| 24:BA:2247:A:O2'   | 24:BA:2248:C:H5'   | 1.84                     | 0.76              |
| 24:BA:2525:G:H5'   | 24:BA:2526:G:OP2   | 1.84                     | 0.76              |
| 24:BA:2541:A:H2    | 24:BA:2765:A:H61   | 1.33                     | 0.76              |
| 24:BA:2756:U:C2    | 24:BA:2758:A:N6    | 2.54                     | 0.76              |
| 26:BC:86:ALA:HB2   | 26:BC:149:ILE:HG23 | 1.67                     | 0.76              |
| 26:BC:171:ILE:HD13 | 26:BC:192:PHE:CZ   | 2.21                     | 0.76              |
| 27:BD:229:VAL:HG22 | 27:BD:230:ASP:OD1  | 1.85                     | 0.76              |
| 28:BE:98:PRO:HD3   | 28:BE:175:VAL:HG11 | 1.65                     | 0.76              |
| 28:BE:102:VAL:HA   | 28:BE:202:LYS:NZ   | 2.01                     | 0.76              |
| 29:BF:93:LYS:HE2   | 29:BF:95:ARG:HG2   | 1.65                     | 0.76              |
| 29:BF:132:VAL:C    | 29:BF:134:GLY:H    | 1.91                     | 0.76              |
| 32:BK:87:LYS:CE    | 32:BK:121:LYS:HG3  | 2.13                     | 0.76              |
| 33:BL:23:VAL:CG1   | 33:BL:34:ILE:HA    | 2.15                     | 0.76              |
| 33:BL:78:ILE:CG2   | 33:BL:136:VAL:HG11 | 2.16                     | 0.76              |
| 34:BM:51:PHE:CG    | 34:BM:119:ARG:HB2  | 2.21                     | 0.76              |
| 34:BM:109:LYS:CG   | 34:BM:112:LEU:HB2  | 2.16                     | 0.76              |
| 35:BN:11:ALA:N     | 35:BN:17:ARG:HG3   | 2.01                     | 0.76              |
| 35:BN:18:LYS:HB3   | 35:BN:45:GLU:CG    | 2.14                     | 0.76              |
| 35:BN:77:ILE:O     | 40:BS:75:ILE:HG13  | 1.85                     | 0.76              |
| 36:BO:29:LYS:O     | 36:BO:30:THR:HG23  | 1.83                     | 0.76              |
| 39:BR:7:TYR:HB3    | 39:BR:11:LYS:NZ    | 2.01                     | 0.76              |
| 40:BS:7:ILE:O      | 40:BS:11:GLU:OE1   | 2.02                     | 0.76              |
| 40:BS:54:ARG:C     | 40:BS:55:ASN:CG    | 2.54                     | 0.76              |
| 40:BS:103:ARG:O    | 40:BS:105:LEU:N    | 2.19                     | 0.76              |
| 42:BU:5:VAL:HG11   | 42:BU:37:VAL:CG1   | 2.15                     | 0.76              |
| 42:BU:7:THR:HG23   | 42:BU:11:GLN:CD    | 2.11                     | 0.76              |
| 42:BU:52:VAL:HG12  | 42:BU:53:GLU:N     | 2.00                     | 0.76              |
| 43:BV:27:LYS:HB3   | 43:BV:31:GLU:CD    | 2.10                     | 0.76              |
| 47:BZ:41:ARG:HB3   | 47:BZ:41:ARG:NH1   | 2.01                     | 0.76              |
| 54:B7:22:VAL:O     | 54:B7:48:PHE:CG    | 2.39                     | 0.76              |
| 1:AA:43:C:H2'      | 1:AA:44:G:H8       | 1.50                     | 0.76              |
| 1:AA:84:U:H2'      | 1:AA:85:U:O4'      | 1.85                     | 0.76              |
| 1:AA:124:G:H2'     | 1:AA:125:U:O4'     | 1.85                     | 0.76              |
| 1:AA:153:C:H2'     | 1:AA:154:C:H6      | 1.50                     | 0.76              |
| 1:AA:435:C:O2'     | 1:AA:436:C:H5'     | 1.86                     | 0.76              |
| 1:AA:778:G:H2'     | 1:AA:779:C:H6      | 1.49                     | 0.76              |
| 1:AA:865:A:H5'     | 1:AA:1078:U:O4     | 1.86                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1405:G:H21   | 1:AA:1517:G:H22    | 0.77                     | 0.76              |
| 1:AA:1408:A:N1    | 1:AA:1494:G:H1'    | 2.01                     | 0.76              |
| 1:AA:1416:G:H2'   | 1:AA:1417:G:C8     | 2.21                     | 0.76              |
| 4:AE:73:THR:HG21  | 4:AE:95:GLN:O      | 1.84                     | 0.76              |
| 4:AE:212:GLN:O    | 4:AE:216:SER:HB2   | 1.85                     | 0.76              |
| 5:AF:11:ARG:HG3   | 5:AF:16:ARG:HE     | 1.50                     | 0.76              |
| 5:AF:108:ASN:HD22 | 5:AF:111:LEU:CD1   | 1.99                     | 0.76              |
| 5:AF:190:ARG:HE   | 5:AF:190:ARG:CA    | 1.99                     | 0.76              |
| 6:AG:18:LYS:CG    | 6:AG:33:MET:HB3    | 2.16                     | 0.76              |
| 6:AG:31:CYS:O     | 6:AG:33:MET:HE3    | 1.85                     | 0.76              |
| 6:AG:93:PHE:O     | 6:AG:94:LEU:C      | 2.29                     | 0.76              |
| 8:AI:68:PRO:HB2   | 8:AI:71:ARG:CG     | 2.15                     | 0.76              |
| 13:AN:19:ALA:HB2  | 13:AN:80:VAL:HG21  | 1.68                     | 0.76              |
| 14:AO:85:ILE:O    | 14:AO:85:ILE:HG23  | 1.84                     | 0.76              |
| 19:AT:10:VAL:CG1  | 19:AT:54:GLY:H     | 1.99                     | 0.76              |
| 24:BA:39:C:H2'    | 24:BA:40:C:H6      | 1.50                     | 0.76              |
| 24:BA:860:U:H2'   | 24:BA:861:A:H5'    | 1.66                     | 0.76              |
| 24:BA:1204:A:OP2  | 24:BA:1204:A:C4'   | 2.34                     | 0.76              |
| 24:BA:1345:C:O2'  | 24:BA:1346:G:H5'   | 1.86                     | 0.76              |
| 24:BA:1731:G:N2   | 24:BA:1733:G:N2    | 2.34                     | 0.76              |
| 24:BA:2135:A:N7   | 24:BA:2160:G:H1'   | 1.99                     | 0.76              |
| 24:BA:2318:G:O5'  | 24:BA:2318:G:H8    | 1.67                     | 0.76              |
| 24:BA:2415:G:OP1  | 36:BO:61:ARG:NH2   | 2.17                     | 0.76              |
| 24:BA:2434:A:C2'  | 24:BA:2435:A:H5''  | 2.16                     | 0.76              |
| 24:BA:2513:G:H2'  | 24:BA:2514:U:C6    | 2.20                     | 0.76              |
| 24:BA:2582:G:C8   | 24:BA:2582:G:H5'   | 2.20                     | 0.76              |
| 24:BA:2602:A:O2'  | 47:BZ:1:MET:O      | 2.03                     | 0.76              |
| 24:BA:2653:U:H2'  | 24:BA:2654:A:C8    | 2.20                     | 0.76              |
| 24:BA:2845:G:H5'' | 40:BS:57:PHE:O     | 1.86                     | 0.76              |
| 26:BC:22:ILE:HG23 | 26:BC:189:ILE:HD12 | 1.67                     | 0.76              |
| 27:BD:24:ILE:HG21 | 27:BD:26:LYS:HE2   | 1.67                     | 0.76              |
| 28:BE:25:VAL:HG23 | 28:BE:182:LEU:O    | 1.85                     | 0.76              |
| 29:BF:201:VAL:HA  | 29:BF:204:ASN:ND2  | 2.00                     | 0.76              |
| 30:BG:167:GLU:O   | 30:BG:170:ARG:HB3  | 1.85                     | 0.76              |
| 32:BK:122:GLU:HB2 | 32:BK:126:TYR:OH   | 1.85                     | 0.76              |
| 34:BM:97:ARG:O    | 34:BM:100:GLU:HB2  | 1.85                     | 0.76              |
| 35:BN:75:SER:OG   | 40:BS:77:PRO:O     | 2.04                     | 0.76              |
| 38:BQ:54:LEU:HD12 | 38:BQ:54:LEU:N     | 2.01                     | 0.76              |
| 40:BS:53:ARG:HA   | 40:BS:53:ARG:HE    | 1.51                     | 0.76              |
| 44:BW:92:LEU:H    | 44:BW:92:LEU:CD1   | 1.99                     | 0.76              |
| 47:BZ:19:LYS:HZ1  | 47:BZ:41:ARG:HE    | 1.32                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 48:B1:36:ILE:HG23  | 48:B1:37:GLY:H     | 1.49                     | 0.76              |
| 51:B4:13:LYS:HD3   | 51:B4:13:LYS:N     | 1.96                     | 0.76              |
| 54:B7:16:ILE:HG23  | 54:B7:22:VAL:CG2   | 2.15                     | 0.76              |
| 1:AA:601:C:H2'     | 1:AA:602:A:H8      | 1.51                     | 0.76              |
| 1:AA:962:C:H1'     | 1:AA:1201:A:N1     | 1.99                     | 0.76              |
| 1:AA:1192:C:C5     | 1:AA:1193:G:C8     | 2.74                     | 0.76              |
| 1:AA:1247:U:H2'    | 1:AA:1248:A:C8     | 2.21                     | 0.76              |
| 1:AA:1528:U:O2'    | 1:AA:1529:G:H3'    | 1.86                     | 0.76              |
| 4:AE:10:LEU:HD23   | 4:AE:11:LEU:HD23   | 1.68                     | 0.76              |
| 4:AE:78:GLN:HE22   | 4:AE:96:ARG:NH1    | 1.83                     | 0.76              |
| 4:AE:130:ARG:HD3   | 4:AE:131:PRO:HD3   | 1.66                     | 0.76              |
| 4:AE:130:ARG:NE    | 4:AE:130:ARG:HA    | 1.99                     | 0.76              |
| 4:AE:149:LEU:CD2   | 4:AE:153:ARG:HG2   | 2.16                     | 0.76              |
| 9:AJ:15:ASP:OD1    | 9:AJ:18:TYR:HB2    | 1.85                     | 0.76              |
| 12:AM:6:ILE:HG22   | 12:AM:98:ILE:HG13  | 1.66                     | 0.76              |
| 12:AM:12:ASP:OD1   | 12:AM:14:LYS:N     | 2.19                     | 0.76              |
| 12:AM:45:ARG:HB3   | 12:AM:45:ARG:NH1   | 1.98                     | 0.76              |
| 13:AN:78:GLN:HB2   | 13:AN:103:LEU:O    | 1.85                     | 0.76              |
| 15:AP:10:PRO:HG3   | 15:AP:18:ALA:HB1   | 1.68                     | 0.76              |
| 17:AR:7:GLU:HA     | 17:AR:10:LYS:CD    | 2.15                     | 0.76              |
| 17:AR:42:HIS:NE2   | 17:AR:43:LEU:HD23  | 1.99                     | 0.76              |
| 18:AS:49:LEU:HD22  | 18:AS:73:LEU:HD21  | 1.67                     | 0.76              |
| 24:BA:219:G:O5'    | 24:BA:219:G:H8     | 1.68                     | 0.76              |
| 24:BA:323:G:H2'    | 29:BF:170:LEU:CB   | 2.13                     | 0.76              |
| 24:BA:326:G:N2     | 24:BA:337:C:H1'    | 2.01                     | 0.76              |
| 24:BA:355:G:H2'    | 24:BA:356:G:H8     | 1.46                     | 0.76              |
| 24:BA:557:U:O3'    | 34:BM:112:LEU:HG   | 1.86                     | 0.76              |
| 24:BA:580:C:H2'    | 24:BA:581:C:H6     | 1.50                     | 0.76              |
| 24:BA:621:A:N6     | 24:BA:622:G:C2     | 2.53                     | 0.76              |
| 24:BA:673:C:C2'    | 24:BA:674:G:H5'    | 2.15                     | 0.76              |
| 24:BA:1000:A:H2'   | 24:BA:1001:A:O4'   | 1.85                     | 0.76              |
| 24:BA:1530:G:C2'   | 24:BA:1531:C:C6    | 2.69                     | 0.76              |
| 24:BA:1541:U:H5''  | 24:BA:1542:G:OP2   | 1.86                     | 0.76              |
| 24:BA:1559:G:C2    | 24:BA:1560:G:H4'   | 2.20                     | 0.76              |
| 24:BA:1658:C:P     | 28:BE:134:ILE:HB   | 2.25                     | 0.76              |
| 24:BA:2057:A:H2'   | 24:BA:2058:A:H8    | 1.50                     | 0.76              |
| 24:BA:2749:A:C4'   | 31:BH:62:LYS:HG3   | 2.15                     | 0.76              |
| 24:BA:2822:G:OP2   | 38:BQ:4:LEU:HD11   | 1.85                     | 0.76              |
| 25:BB:28:C:O5'     | 25:BB:28:C:H6      | 1.67                     | 0.76              |
| 26:BC:214:VAL:HG23 | 26:BC:224:ILE:HD13 | 1.67                     | 0.76              |
| 27:BD:58:HIS:O     | 27:BD:59:LYS:CG    | 2.34                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:226:MET:HE1  | 27:BD:237:GLU:O    | 1.86                     | 0.76              |
| 29:BF:158:THR:CG2  | 29:BF:195:ASP:HB2  | 2.16                     | 0.76              |
| 31:BH:153:LYS:H    | 31:BH:154:PRO:HD2  | 1.48                     | 0.76              |
| 32:BK:32:PRO:HD2   | 32:BK:33:ARG:HG2   | 1.67                     | 0.76              |
| 36:BO:88:LEU:CD1   | 36:BO:124:LYS:HZ1  | 1.97                     | 0.76              |
| 38:BQ:102:GLU:CG   | 38:BQ:103:ARG:H    | 1.98                     | 0.76              |
| 40:BS:29:ARG:HA    | 40:BS:51:ARG:HA    | 1.68                     | 0.76              |
| 42:BU:12:TYR:CG    | 42:BU:13:ARG:N     | 2.54                     | 0.76              |
| 46:BY:114:GLY:HA3  | 46:BY:180:VAL:HG11 | 1.68                     | 0.76              |
| 47:BZ:47:PRO:HG3   | 47:BZ:53:MET:SD    | 2.26                     | 0.76              |
| 1:AA:66:G:H5'      | 1:AA:173:U:O4      | 1.86                     | 0.76              |
| 1:AA:307:C:N4      | 1:AA:308:C:H41     | 1.84                     | 0.76              |
| 1:AA:337:C:H2'     | 1:AA:338:A:C8      | 2.20                     | 0.76              |
| 1:AA:511:C:HO2'    | 1:AA:512:U:H6      | 1.30                     | 0.76              |
| 1:AA:828:A:O4'     | 1:AA:859:A:C2      | 2.39                     | 0.76              |
| 1:AA:1057:G:H4'    | 5:AF:197:GLY:N     | 2.01                     | 0.76              |
| 1:AA:1156:G:C1'    | 1:AA:1179:A:H61    | 1.96                     | 0.76              |
| 4:AE:77:ALA:HB2    | 4:AE:211:ILE:HD13  | 1.67                     | 0.76              |
| 4:AE:178:ARG:HA    | 4:AE:184:VAL:HG21  | 1.67                     | 0.76              |
| 6:AG:108:LEU:HD23  | 6:AG:174:LEU:HD13  | 1.66                     | 0.76              |
| 6:AG:147:ALA:HB1   | 6:AG:181:MET:O     | 1.85                     | 0.76              |
| 6:AG:170:VAL:HG23  | 6:AG:176:LEU:HB3   | 1.68                     | 0.76              |
| 8:AI:33:TYR:HE2    | 8:AI:74:ASP:HB2    | 1.50                     | 0.76              |
| 9:AJ:86:GLN:O      | 9:AJ:148:ASN:HB3   | 1.84                     | 0.76              |
| 10:AK:110:ALA:HA   | 10:AK:136:GLU:HB2  | 1.66                     | 0.76              |
| 11:AL:11:LYS:N     | 11:AL:104:ARG:HH21 | 1.83                     | 0.76              |
| 11:AL:51:ARG:HH11  | 11:AL:51:ARG:HA    | 1.50                     | 0.76              |
| 14:AO:117:ARG:HH22 | 14:AO:124:LYS:HG3  | 1.51                     | 0.76              |
| 18:AS:6:LEU:HB2    | 18:AS:17:TYR:HB3   | 1.67                     | 0.76              |
| 19:AT:10:VAL:HG12  | 19:AT:54:GLY:H     | 1.51                     | 0.76              |
| 22:AW:56:MET:O     | 22:AW:59:ALA:HB3   | 1.86                     | 0.76              |
| 24:BA:59:U:O4'     | 24:BA:73:A:C2      | 2.39                     | 0.76              |
| 24:BA:60:G:H21     | 24:BA:74:A:C4'     | 1.99                     | 0.76              |
| 24:BA:460:A:H2'    | 24:BA:461:C:H6     | 1.50                     | 0.76              |
| 24:BA:574:C:C2     | 24:BA:2055:C:C5    | 2.74                     | 0.76              |
| 24:BA:723:G:O2'    | 24:BA:724:U:H5'    | 1.85                     | 0.76              |
| 24:BA:775:G:H21    | 24:BA:787:U:H2'    | 1.49                     | 0.76              |
| 24:BA:1201:C:N4    | 24:BA:1241:A:N6    | 2.33                     | 0.76              |
| 24:BA:1451:C:C4    | 24:BA:1454:U:OP1   | 2.39                     | 0.76              |
| 24:BA:1890:A:H3'   | 24:BA:1891:G:H8    | 1.51                     | 0.76              |
| 24:BA:2420:C:H5''  | 54:B7:35:GLN:HE22  | 1.50                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2538:C:H2'   | 24:BA:2539:C:C6    | 2.21                     | 0.76              |
| 26:BC:47:LEU:HG    | 26:BC:49:ILE:HG23  | 1.68                     | 0.76              |
| 27:BD:112:GLN:O    | 27:BD:115:GLN:HB3  | 1.86                     | 0.76              |
| 27:BD:147:LEU:H    | 27:BD:147:LEU:HD23 | 1.51                     | 0.76              |
| 29:BF:119:ARG:HH21 | 29:BF:119:ARG:CB   | 1.97                     | 0.76              |
| 30:BG:67:LYS:HG3   | 30:BG:67:LYS:O     | 1.84                     | 0.76              |
| 33:BL:12:LEU:HB3   | 33:BL:13:PRO:HD2   | 1.66                     | 0.76              |
| 37:BP:6:ARG:HH21   | 37:BP:8:LYS:C      | 1.93                     | 0.76              |
| 38:BQ:79:LEU:CD2   | 38:BQ:80:PHE:N     | 2.47                     | 0.76              |
| 40:BS:102:ILE:O    | 40:BS:104:ASN:N    | 2.19                     | 0.76              |
| 42:BU:16:PRO:HD3   | 42:BU:100:ARG:NH1  | 2.00                     | 0.76              |
| 42:BU:35:LEU:N     | 42:BU:61:VAL:HG13  | 2.01                     | 0.76              |
| 42:BU:64:HIS:HA    | 42:BU:97:LYS:CD    | 2.14                     | 0.76              |
| 49:B2:54:VAL:CG2   | 49:B2:55:ARG:H     | 1.97                     | 0.76              |
| 55:B8:4:ARG:O      | 55:B8:5:ALA:HB2    | 1.83                     | 0.76              |
| 1:AA:129(A):G:H4'  | 1:AA:130:A:O5'     | 1.85                     | 0.76              |
| 1:AA:228:A:C2'     | 1:AA:229:U:H5'     | 2.16                     | 0.76              |
| 1:AA:301:G:H21     | 1:AA:302:G:H1'     | 1.49                     | 0.76              |
| 1:AA:404:U:H4'     | 6:AG:122:ARG:HH11  | 1.49                     | 0.76              |
| 1:AA:522:C:N4      | 1:AA:523:A:N6      | 2.33                     | 0.76              |
| 1:AA:529:G:H3'     | 1:AA:529:G:H8      | 1.48                     | 0.76              |
| 1:AA:1202:G:C1'    | 16:AQ:29:ARG:HE    | 1.99                     | 0.76              |
| 1:AA:1363:A:H5''   | 1:AA:1364:U:OP1    | 1.86                     | 0.76              |
| 3:AC:19:G:H3'      | 3:AC:20:U:C5       | 2.21                     | 0.76              |
| 3:AC:58:A:H2'      | 3:AC:61:C:N4       | 2.01                     | 0.76              |
| 4:AE:222:ILE:HD13  | 4:AE:226:ARG:HH21  | 1.51                     | 0.76              |
| 5:AF:35:GLU:HA     | 5:AF:38:ARG:CG     | 2.16                     | 0.76              |
| 5:AF:50:ALA:C      | 5:AF:72:LYS:HD2    | 2.10                     | 0.76              |
| 6:AG:144:ASP:HA    | 6:AG:184:LYS:NZ    | 2.00                     | 0.76              |
| 9:AJ:122:HIS:N     | 9:AJ:125:MET:HE3   | 2.00                     | 0.76              |
| 10:AK:70:GLN:HE21  | 10:AK:71:GLY:N     | 1.84                     | 0.76              |
| 22:AW:72:LEU:HD13  | 22:AW:77:ALA:CB    | 2.15                     | 0.76              |
| 24:BA:151:C:H2'    | 24:BA:152:G:C8     | 2.20                     | 0.76              |
| 24:BA:519:U:H5'    | 24:BA:519:U:C6     | 2.15                     | 0.76              |
| 24:BA:559:G:H5'    | 24:BA:559:G:C8     | 2.18                     | 0.76              |
| 24:BA:686:G:C8     | 53:B6:7:PRO:HA     | 2.21                     | 0.76              |
| 24:BA:704:G:H22    | 24:BA:726:G:H1'    | 1.48                     | 0.76              |
| 24:BA:839:U:H2'    | 24:BA:840:C:C5     | 2.21                     | 0.76              |
| 24:BA:1023:U:P     | 24:BA:1025:G:N1    | 2.59                     | 0.76              |
| 24:BA:1532:C:H2'   | 24:BA:1533:C:C6    | 2.21                     | 0.76              |
| 24:BA:1935:G:N1    | 24:BA:1962:C:H2'   | 2.00                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:2071:A:C2   | 24:BA:2441:C:N3   | 2.54                     | 0.76              |
| 24:BA:2431:U:O2   | 24:BA:2433:A:OP2  | 2.04                     | 0.76              |
| 24:BA:2595:G:H1'  | 24:BA:2599:G:N2   | 2.00                     | 0.76              |
| 24:BA:2711:A:H5'  | 24:BA:2712:U:C5'  | 2.15                     | 0.76              |
| 26:BC:64:LEU:CD2  | 26:BC:191:ALA:HB3 | 2.15                     | 0.76              |
| 27:BD:56:GLY:H    | 27:BD:217:ARG:CD  | 1.96                     | 0.76              |
| 28:BE:58:ARG:HG2  | 28:BE:63:LEU:CD2  | 2.16                     | 0.76              |
| 30:BG:162:THR:C   | 30:BG:164:GLU:H   | 1.93                     | 0.76              |
| 32:BK:28:ASN:O    | 32:BK:32:PRO:HG3  | 1.86                     | 0.76              |
| 34:BM:112:LEU:O   | 34:BM:113:GLY:C   | 2.29                     | 0.76              |
| 35:BN:4:PRO:CG    | 35:BN:5:GLN:H     | 1.88                     | 0.76              |
| 37:BP:41:TRP:HB3  | 37:BP:74:TYR:OH   | 1.86                     | 0.76              |
| 37:BP:46:GLN:OE1  | 37:BP:125:LEU:C   | 2.28                     | 0.76              |
| 38:BQ:55:ALA:CB   | 38:BQ:79:LEU:HD21 | 2.15                     | 0.76              |
| 39:BR:89:ARG:CG   | 39:BR:90:GLY:H    | 1.94                     | 0.76              |
| 40:BS:18:ASP:CG   | 40:BS:81:PRO:HG3  | 2.10                     | 0.76              |
| 41:BT:15:LYS:O    | 41:BT:18:LEU:HB2  | 1.85                     | 0.76              |
| 44:BW:12:VAL:O    | 44:BW:12:VAL:HG12 | 1.86                     | 0.76              |
| 45:BX:47:LYS:HZ3  | 45:BX:51:VAL:HG21 | 1.49                     | 0.76              |
| 46:BY:55:HIS:HB3  | 46:BY:101:PRO:CG  | 2.14                     | 0.76              |
| 48:B1:45:ILE:HG13 | 48:B1:46:ARG:N    | 1.99                     | 0.76              |
| 48:B1:58:VAL:HG22 | 48:B1:59:LEU:N    | 2.00                     | 0.76              |
| 52:B5:40:CYS:SG   | 52:B5:46:HIS:HA   | 2.25                     | 0.76              |
| 54:B7:30:ARG:HG2  | 54:B7:31:HIS:H    | 1.51                     | 0.76              |
| 1:AA:448:A:H2'    | 1:AA:449:C:C6     | 2.21                     | 0.76              |
| 1:AA:482:A:H2     | 1:AA:483:C:O4'    | 1.67                     | 0.76              |
| 1:AA:562:C:H5''   | 1:AA:563:A:OP1    | 1.85                     | 0.76              |
| 1:AA:766:A:H2'    | 1:AA:767:A:C8     | 2.20                     | 0.76              |
| 1:AA:918:A:H2'    | 1:AA:919:A:C8     | 2.21                     | 0.76              |
| 1:AA:1265:G:H2'   | 1:AA:1266:G:H5'   | 1.68                     | 0.76              |
| 1:AA:1492:A:N6    | 14:AO:50:SER:HB2  | 2.00                     | 0.76              |
| 3:AC:8:U:O4'      | 3:AC:48:C:O2'     | 2.03                     | 0.76              |
| 3:AD:55:U:C2'     | 3:AD:57:G:N7      | 2.49                     | 0.76              |
| 5:AF:67:THR:CG2   | 5:AF:104:GLN:HG2  | 2.16                     | 0.76              |
| 5:AF:137:ALA:O    | 5:AF:141:VAL:HG23 | 1.86                     | 0.76              |
| 6:AG:110:PHE:HE1  | 6:AG:148:VAL:HG23 | 1.49                     | 0.76              |
| 12:AM:30:SER:HB2  | 12:AM:81:THR:N    | 2.00                     | 0.76              |
| 15:AP:14:ARG:H    | 15:AP:44:ARG:CD   | 1.99                     | 0.76              |
| 18:AS:8:ARG:C     | 18:AS:9:PHE:HD2   | 1.93                     | 0.76              |
| 23:AX:7:ARG:HG3   | 23:AX:8:THR:H     | 1.51                     | 0.76              |
| 24:BA:84:A:C5'    | 45:BX:8:LYS:HG3   | 2.16                     | 0.76              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:270(E):G:O2' | 24:BA:270(F):U:H5' | 1.86                     | 0.76              |
| 24:BA:640:C:O2'    | 24:BA:641:C:H5''   | 1.86                     | 0.76              |
| 24:BA:643:A:H4'    | 24:BA:644:A:O5'    | 1.85                     | 0.76              |
| 24:BA:661:C:H5''   | 36:BO:15:ARG:HH11  | 1.51                     | 0.76              |
| 24:BA:1309:G:H2'   | 24:BA:1310:G:H5'   | 1.65                     | 0.76              |
| 24:BA:1403:C:O3'   | 24:BA:1471:A:H4'   | 1.86                     | 0.76              |
| 24:BA:1406:U:O2'   | 24:BA:1407:C:O5'   | 2.02                     | 0.76              |
| 24:BA:1708:C:O2'   | 24:BA:1709:U:H5''  | 1.84                     | 0.76              |
| 24:BA:1805:U:H2'   | 24:BA:1806:C:C6    | 2.21                     | 0.76              |
| 24:BA:2128:C:P     | 26:BC:36:LYS:HB2   | 2.26                     | 0.76              |
| 24:BA:2369:A:H2'   | 24:BA:2370:G:C8    | 2.21                     | 0.76              |
| 24:BA:2576:G:OP1   | 24:BA:2577:A:OP1   | 2.04                     | 0.76              |
| 28:BE:179:GLU:HB2  | 28:BE:181:LEU:CD1  | 2.15                     | 0.76              |
| 29:BF:81:PRO:HG2   | 29:BF:82:ILE:HD12  | 1.67                     | 0.76              |
| 29:BF:125:LEU:HD22 | 29:BF:127:GLU:O    | 1.85                     | 0.76              |
| 31:BH:115:VAL:CG1  | 31:BH:116:GLU:N    | 2.49                     | 0.76              |
| 34:BM:74:ARG:HG3   | 34:BM:82:LEU:CD2   | 2.11                     | 0.76              |
| 35:BN:105:GLU:O    | 35:BN:111:PHE:CZ   | 2.31                     | 0.76              |
| 38:BQ:55:ALA:HA    | 38:BQ:79:LEU:HD21  | 1.68                     | 0.76              |
| 38:BQ:74:LYS:HB2   | 38:BQ:74:LYS:NZ    | 2.01                     | 0.76              |
| 39:BR:106:ARG:CZ   | 39:BR:110:LEU:HD22 | 2.16                     | 0.76              |
| 41:BT:30:LYS:HD2   | 41:BT:30:LYS:N     | 2.01                     | 0.76              |
| 41:BT:97:ASP:CA    | 41:BT:101:ARG:HH21 | 1.99                     | 0.76              |
| 42:BU:78:LYS:HB2   | 42:BU:84:LYS:HB3   | 1.68                     | 0.76              |
| 45:BX:12:THR:HA    | 45:BX:73:ARG:CD    | 2.16                     | 0.76              |
| 46:BY:94:GLU:HA    | 46:BY:130:PRO:HB3  | 1.68                     | 0.76              |
| 53:B6:19:ARG:HB3   | 53:B6:23:ARG:CZ    | 2.15                     | 0.76              |
| 54:B7:5:LYS:HG3    | 54:B7:10:ALA:HB2   | 1.67                     | 0.76              |
| 55:B8:15:LYS:O     | 55:B8:25:VAL:HG13  | 1.86                     | 0.76              |
| 1:AA:498:A:H4'     | 1:AA:500:G:OP1     | 1.85                     | 0.75              |
| 1:AA:578:C:N4      | 1:AA:579:G:O6      | 2.19                     | 0.75              |
| 1:AA:601:C:C2      | 1:AA:602:A:C8      | 2.74                     | 0.75              |
| 1:AA:888:G:N2      | 1:AA:909:A:N6      | 2.24                     | 0.75              |
| 1:AA:1314:C:H3'    | 21:AV:6:LYS:CD     | 2.16                     | 0.75              |
| 1:AA:1347:G:O2'    | 1:AA:1348:U:OP2    | 2.04                     | 0.75              |
| 3:AC:34:G:O2'      | 3:AC:35:A:H5'      | 1.86                     | 0.75              |
| 4:AE:48:MET:HA     | 4:AE:51:LEU:HD12   | 1.68                     | 0.75              |
| 4:AE:69:LEU:O      | 4:AE:162:ILE:CA    | 2.34                     | 0.75              |
| 4:AE:95:GLN:HE21   | 4:AE:148:TYR:CB    | 1.98                     | 0.75              |
| 4:AE:119:GLU:HA    | 4:AE:142:LEU:HD13  | 1.67                     | 0.75              |
| 5:AF:40:ARG:O      | 5:AF:43:LEU:HB3    | 1.86                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 9:AJ:121:ALA:C     | 9:AJ:125:MET:HE3   | 2.12                     | 0.75              |
| 12:AM:60:ARG:HD3   | 12:AM:60:ARG:H     | 1.51                     | 0.75              |
| 15:AP:90:LEU:HD23  | 15:AP:93:ARG:CD    | 2.16                     | 0.75              |
| 22:AW:57:ARG:NH2   | 22:AW:100:ILE:HB   | 2.01                     | 0.75              |
| 24:BA:247:G:H4'    | 24:BA:386:G:C2     | 2.21                     | 0.75              |
| 24:BA:270(Z):U:H2' | 24:BA:270(Z):U:O2  | 1.85                     | 0.75              |
| 24:BA:324:A:N6     | 24:BA:339:U:H1'    | 2.00                     | 0.75              |
| 24:BA:1131:G:N2    | 34:BM:72:TYR:CE1   | 2.53                     | 0.75              |
| 24:BA:1225:C:O4'   | 42:BU:87:HIS:CE1   | 2.39                     | 0.75              |
| 24:BA:1312:U:C3'   | 24:BA:1313:U:H6    | 1.97                     | 0.75              |
| 24:BA:1349:A:C2    | 24:BA:1598:C:N3    | 2.54                     | 0.75              |
| 24:BA:1728:G:H3'   | 24:BA:1728:G:OP1   | 1.86                     | 0.75              |
| 24:BA:1759:A:HO2'  | 24:BA:2714:G:HO2'  | 1.33                     | 0.75              |
| 24:BA:1773:A:C4    | 24:BA:1774:C:O2    | 2.39                     | 0.75              |
| 24:BA:2305:A:C2'   | 30:BG:154:GLY:HA2  | 2.15                     | 0.75              |
| 24:BA:2562:U:H1'   | 35:BN:23:ARG:HH21  | 1.51                     | 0.75              |
| 25:BB:48:A:H2'     | 25:BB:49:C:H6      | 1.51                     | 0.75              |
| 28:BE:60:ASN:CG    | 28:BE:61:ARG:N     | 2.44                     | 0.75              |
| 28:BE:112:GLY:C    | 28:BE:113:PHE:CD1  | 2.65                     | 0.75              |
| 29:BF:41:LEU:O     | 29:BF:44:ARG:CZ    | 2.34                     | 0.75              |
| 29:BF:131:GLY:CA   | 29:BF:138:GLU:HG3  | 2.15                     | 0.75              |
| 31:BH:85:LYS:HD2   | 31:BH:145:ALA:CB   | 2.16                     | 0.75              |
| 33:BL:112:MET:SD   | 33:BL:115:LEU:HD12 | 2.26                     | 0.75              |
| 39:BR:11:LYS:H     | 39:BR:11:LYS:CD    | 1.99                     | 0.75              |
| 39:BR:60:GLY:C     | 39:BR:62:LYS:H     | 1.93                     | 0.75              |
| 40:BS:4:GLY:O      | 40:BS:8:LYS:HG3    | 1.85                     | 0.75              |
| 40:BS:61:PHE:HD1   | 40:BS:81:PRO:HD3   | 1.51                     | 0.75              |
| 40:BS:80:SER:HB3   | 40:BS:81:PRO:HD3   | 1.67                     | 0.75              |
| 43:BV:88:ARG:HB2   | 43:BV:94:ASP:CG    | 2.11                     | 0.75              |
| 43:BV:98:LYS:O     | 43:BV:98:LYS:NZ    | 2.19                     | 0.75              |
| 44:BW:7:VAL:CG1    | 48:B1:31:ARG:HH22  | 1.97                     | 0.75              |
| 48:B1:48:LEU:HA    | 48:B1:51:GLN:NE2   | 2.01                     | 0.75              |
| 1:AA:49:U:C2       | 1:AA:364:A:N6      | 2.48                     | 0.75              |
| 1:AA:115:G:O2'     | 1:AA:116:A:OP2     | 2.04                     | 0.75              |
| 1:AA:482:A:C2      | 1:AA:483:C:O4'     | 2.38                     | 0.75              |
| 1:AA:539:A:OP2     | 14:AO:115:LYS:HE3  | 1.87                     | 0.75              |
| 1:AA:889:A:H4'     | 1:AA:890:G:O5'     | 1.85                     | 0.75              |
| 1:AA:1104:G:O2'    | 1:AA:1105:A:H5'    | 1.86                     | 0.75              |
| 1:AA:1287:A:H2'    | 1:AA:1288:A:C8     | 2.20                     | 0.75              |
| 1:AA:1314:C:H2'    | 1:AA:1315:U:C5     | 2.20                     | 0.75              |
| 1:AA:1318:A:O2'    | 21:AV:37:ARG:HB3   | 1.86                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 5:AF:130:VAL:O     | 5:AF:133:ALA:HB3   | 1.86                     | 0.75              |
| 5:AF:177:THR:HG23  | 5:AF:180:ALA:HB2   | 1.68                     | 0.75              |
| 6:AG:79:PHE:HB2    | 6:AG:93:PHE:CE1    | 2.21                     | 0.75              |
| 8:AI:1:MET:HE2     | 8:AI:68:PRO:HG3    | 1.66                     | 0.75              |
| 9:AJ:113:GLU:OE2   | 9:AJ:119:ARG:HG3   | 1.86                     | 0.75              |
| 11:AL:116:LYS:HB3  | 11:AL:122:ALA:CA   | 2.16                     | 0.75              |
| 14:AO:82:VAL:HG12  | 14:AO:83:VAL:H     | 1.50                     | 0.75              |
| 15:AP:7:VAL:HG11   | 30:BG:140:ILE:HD12 | 1.68                     | 0.75              |
| 18:AS:8:ARG:NH1    | 18:AS:11:SER:H     | 1.82                     | 0.75              |
| 19:AT:59:ILE:HD11  | 19:AT:71:PHE:CB    | 2.15                     | 0.75              |
| 24:BA:149:A:H2'    | 24:BA:150:C:H5'    | 1.66                     | 0.75              |
| 24:BA:209:C:H5'    | 24:BA:681:G:H4'    | 1.66                     | 0.75              |
| 24:BA:242:G:C8     | 54:B7:4:MET:HG3    | 2.21                     | 0.75              |
| 24:BA:487:C:O2'    | 43:BV:52:GLU:HB3   | 1.86                     | 0.75              |
| 24:BA:727:A:N3     | 24:BA:728:G:H5'    | 2.00                     | 0.75              |
| 24:BA:861:A:C5     | 24:BA:917:A:H2     | 2.03                     | 0.75              |
| 24:BA:980:A:C6     | 24:BA:1135:C:H4'   | 2.21                     | 0.75              |
| 24:BA:1317:A:H2'   | 24:BA:1318:C:C6    | 2.21                     | 0.75              |
| 24:BA:1450:C:HO2'  | 24:BA:1451:C:H4'   | 1.49                     | 0.75              |
| 24:BA:1664:A:H3'   | 24:BA:1664:A:C8    | 2.21                     | 0.75              |
| 24:BA:1789:A:H4'   | 27:BD:222:ARG:CZ   | 2.16                     | 0.75              |
| 24:BA:2058:A:C2'   | 24:BA:2059:A:H8    | 1.98                     | 0.75              |
| 24:BA:2282:G:H1    | 24:BA:2427:C:N4    | 1.82                     | 0.75              |
| 24:BA:2295:C:H1'   | 24:BA:2338:G:N2    | 2.01                     | 0.75              |
| 24:BA:2447:G:C8    | 24:BA:2500:U:C6    | 2.74                     | 0.75              |
| 24:BA:2595:G:H1'   | 24:BA:2599:G:H22   | 1.50                     | 0.75              |
| 24:BA:2841:C:C2'   | 24:BA:2842:G:H8    | 1.98                     | 0.75              |
| 24:BA:2848:G:H8    | 40:BS:99:LEU:HD11  | 1.51                     | 0.75              |
| 26:BC:22:ILE:HD11  | 26:BC:226:PRO:HA   | 1.67                     | 0.75              |
| 27:BD:37:LEU:HD11  | 27:BD:63:ARG:CA    | 2.15                     | 0.75              |
| 28:BE:59:VAL:O     | 28:BE:63:LEU:HG    | 1.85                     | 0.75              |
| 28:BE:121:ASN:HB3  | 28:BE:122:PHE:CD1  | 2.22                     | 0.75              |
| 29:BF:110:LEU:CD1  | 29:BF:181:LEU:HD23 | 2.16                     | 0.75              |
| 30:BG:131:TYR:CD1  | 30:BG:132:ASN:N    | 2.53                     | 0.75              |
| 31:BH:83:TYR:O     | 31:BH:135:GLY:N    | 2.16                     | 0.75              |
| 32:BK:109:ILE:HG21 | 32:BK:113:ARG:NH2  | 2.01                     | 0.75              |
| 32:BK:123:LEU:HD11 | 32:BK:145:VAL:CA   | 2.14                     | 0.75              |
| 35:BN:8:LEU:HD22   | 35:BN:9:GLU:N      | 2.00                     | 0.75              |
| 35:BN:90:GLN:O     | 35:BN:91:LEU:C     | 2.29                     | 0.75              |
| 37:BP:36:ALA:C     | 37:BP:100:GLY:HA2  | 2.11                     | 0.75              |
| 37:BP:43:THR:HG23  | 37:BP:46:GLN:HB2   | 1.68                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 48:B1:36:ILE:HG12  | 48:B1:37:GLY:N     | 2.01                     | 0.75              |
| 49:B2:54:VAL:CG2   | 49:B2:55:ARG:N     | 2.49                     | 0.75              |
| 50:B3:4:GLY:HA2    | 50:B3:11:PRO:CB    | 2.15                     | 0.75              |
| 1:AA:8:A:N6        | 6:AG:209:ARG:HH12  | 1.84                     | 0.75              |
| 1:AA:22:G:H2'      | 1:AA:23:C:O4'      | 1.87                     | 0.75              |
| 1:AA:243:A:N6      | 1:AA:283:C:H41     | 1.83                     | 0.75              |
| 1:AA:489:C:H2'     | 1:AA:490:G:H8      | 1.51                     | 0.75              |
| 1:AA:745:C:OP1     | 1:AA:851:G:O2'     | 2.04                     | 0.75              |
| 1:AA:1239:A:H1'    | 1:AA:1241:G:C4     | 2.21                     | 0.75              |
| 3:AC:66:U:H3'      | 3:AC:67:C:C6       | 2.20                     | 0.75              |
| 4:AE:53:ARG:HE     | 4:AE:199:TYR:HE2   | 1.34                     | 0.75              |
| 6:AG:135:LEU:C     | 6:AG:137:SER:H     | 1.92                     | 0.75              |
| 8:AI:35:ALA:O      | 8:AI:36:ARG:HG3    | 1.86                     | 0.75              |
| 13:AN:18:ARG:HD3   | 13:AN:34:ASP:O     | 1.87                     | 0.75              |
| 13:AN:20:TYR:CE2   | 13:AN:83:ILE:HG12  | 2.19                     | 0.75              |
| 24:BA:326:G:H22    | 24:BA:337:C:H1'    | 1.49                     | 0.75              |
| 24:BA:826:U:OP1    | 24:BA:2429:G:OP1   | 2.05                     | 0.75              |
| 24:BA:847:U:O2     | 24:BA:934:G:N3     | 2.19                     | 0.75              |
| 24:BA:1065:U:H1'   | 24:BA:1074:G:H22   | 1.51                     | 0.75              |
| 24:BA:1166:C:C2    | 24:BA:1184:G:N2    | 2.54                     | 0.75              |
| 24:BA:1275:A:H2    | 38:BQ:16:HIS:CA    | 1.96                     | 0.75              |
| 24:BA:1327:C:H3'   | 24:BA:1328:G:C8    | 2.21                     | 0.75              |
| 24:BA:1682:G:OP2   | 24:BA:1699:G:N2    | 2.18                     | 0.75              |
| 24:BA:1683:C:C2    | 24:BA:1684:C:C5    | 2.74                     | 0.75              |
| 24:BA:1886:C:H2'   | 24:BA:1887:C:H6    | 1.50                     | 0.75              |
| 24:BA:2517:C:C4    | 24:BA:2542:A:N7    | 2.53                     | 0.75              |
| 24:BA:2597:G:O4'   | 27:BD:242:ARG:NH2  | 2.19                     | 0.75              |
| 24:BA:2640:G:H4'   | 34:BM:75:TYR:OH    | 1.85                     | 0.75              |
| 24:BA:2794:C:H2'   | 24:BA:2795:G:OP1   | 1.87                     | 0.75              |
| 24:BA:2840:C:H5''  | 38:BQ:53:HIS:HD2   | 1.51                     | 0.75              |
| 26:BC:116:THR:CG2  | 26:BC:149:ILE:HB   | 2.16                     | 0.75              |
| 27:BD:42:GLY:HA2   | 27:BD:60:ARG:HH22  | 1.51                     | 0.75              |
| 28:BE:124:GLY:HA3  | 28:BE:136:ARG:HB2  | 1.67                     | 0.75              |
| 29:BF:56:GLU:O     | 29:BF:57:VAL:C     | 2.28                     | 0.75              |
| 29:BF:122:LYS:CE   | 29:BF:192:LEU:HD12 | 2.16                     | 0.75              |
| 29:BF:188:ARG:HH21 | 29:BF:188:ARG:HG2  | 1.52                     | 0.75              |
| 30:BG:96:ARG:HD3   | 30:BG:97:ASP:OD1   | 1.87                     | 0.75              |
| 30:BG:124:SER:O    | 30:BG:132:ASN:HB3  | 1.87                     | 0.75              |
| 31:BH:16:SER:HB3   | 31:BH:27:LYS:HB2   | 1.65                     | 0.75              |
| 31:BH:103:LEU:HD13 | 31:BH:115:VAL:CG1  | 2.15                     | 0.75              |
| 33:BL:7:VAL:CG1    | 33:BL:58:THR:HG21  | 2.05                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 35:BN:7:TYR:HB3    | 35:BN:18:LYS:CE    | 2.15                     | 0.75              |
| 35:BN:94:ARG:HG3   | 35:BN:96:THR:H     | 1.52                     | 0.75              |
| 40:BS:7:ILE:O      | 40:BS:8:LYS:C      | 2.30                     | 0.75              |
| 40:BS:82:LEU:O     | 40:BS:84:GLN:N     | 2.19                     | 0.75              |
| 42:BU:3:ALA:HB2    | 42:BU:44:LYS:HD2   | 1.68                     | 0.75              |
| 45:BX:46:LYS:NZ    | 45:BX:46:LYS:HB3   | 2.02                     | 0.75              |
| 49:B2:10:LYS:HE2   | 49:B2:31:LEU:CD2   | 2.15                     | 0.75              |
| 50:B3:57:GLU:HA    | 50:B3:61:ARG:CZ    | 2.17                     | 0.75              |
| 54:B7:15:LYS:O     | 54:B7:22:VAL:HA    | 1.86                     | 0.75              |
| 1:AA:9:G:OP2       | 7:AH:121:LYS:HD2   | 1.86                     | 0.75              |
| 1:AA:50:A:O2'      | 1:AA:52:G:N7       | 2.20                     | 0.75              |
| 1:AA:90:C:O2'      | 1:AA:91:C:H5'      | 1.85                     | 0.75              |
| 1:AA:520:A:N7      | 1:AA:521:G:C8      | 2.54                     | 0.75              |
| 1:AA:586:C:OP1     | 19:AT:34:LYS:NZ    | 2.18                     | 0.75              |
| 1:AA:640:A:H2'     | 1:AA:641:U:O4'     | 1.85                     | 0.75              |
| 1:AA:673:G:H2'     | 1:AA:674:G:C8      | 2.21                     | 0.75              |
| 1:AA:761:G:C4'     | 19:AT:103:GLY:H    | 2.00                     | 0.75              |
| 1:AA:1180:A:OP1    | 11:AL:102:LEU:HB2  | 1.86                     | 0.75              |
| 1:AA:1292:U:H2'    | 1:AA:1293:G:C8     | 2.20                     | 0.75              |
| 1:AA:1506:U:H5''   | 1:AA:1507:A:OP2    | 1.86                     | 0.75              |
| 3:AC:62:C:O2'      | 3:AC:63:G:H5'      | 1.86                     | 0.75              |
| 4:AE:178:ARG:HA    | 4:AE:178:ARG:HH11  | 1.51                     | 0.75              |
| 8:AI:22:GLU:OE2    | 8:AI:82:ARG:HD2    | 1.85                     | 0.75              |
| 10:AK:22:GLU:CA    | 10:AK:63:LEU:HD22  | 2.14                     | 0.75              |
| 10:AK:46:LYS:CE    | 10:AK:64:LYS:HA    | 2.16                     | 0.75              |
| 10:AK:114:THR:HG23 | 10:AK:119:LEU:HD23 | 1.66                     | 0.75              |
| 11:AL:9:ARG:HD2    | 11:AL:14:VAL:CG2   | 2.15                     | 0.75              |
| 14:AO:41:ARG:HG2   | 14:AO:42:THR:N     | 1.99                     | 0.75              |
| 14:AO:56:ALA:HB2   | 14:AO:70:ILE:CG1   | 2.16                     | 0.75              |
| 16:AQ:41:ARG:O     | 16:AQ:45:ARG:HG2   | 1.86                     | 0.75              |
| 19:AT:63:ARG:HG2   | 19:AT:64:PRO:HD2   | 1.67                     | 0.75              |
| 24:BA:141(A):C:H2' | 24:BA:142:G:O4'    | 1.87                     | 0.75              |
| 24:BA:248:G:OP1    | 50:B3:28:LYS:HE2   | 1.86                     | 0.75              |
| 24:BA:349:G:C8     | 24:BA:349:G:OP2    | 2.40                     | 0.75              |
| 24:BA:388:G:C2'    | 24:BA:390:A:N7     | 2.48                     | 0.75              |
| 24:BA:397:G:O2'    | 24:BA:2231:C:H1'   | 1.86                     | 0.75              |
| 24:BA:445:C:H3'    | 41:BT:3:ARG:NE     | 2.01                     | 0.75              |
| 24:BA:514:A:H2     | 24:BA:515:A:C4     | 2.05                     | 0.75              |
| 24:BA:574:C:H1'    | 24:BA:2055:C:C5    | 2.22                     | 0.75              |
| 24:BA:746:A:N7     | 24:BA:2611:U:O3'   | 2.20                     | 0.75              |
| 24:BA:900:A:O2'    | 24:BA:901:A:H5'    | 1.86                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1107:G:C2'  | 24:BA:1108:U:H5'  | 2.15                     | 0.75              |
| 24:BA:1255:U:C4   | 29:BF:72:ARG:O    | 2.39                     | 0.75              |
| 24:BA:1475:G:H22  | 24:BA:1477:A:H62  | 1.32                     | 0.75              |
| 24:BA:1537:C:H2'  | 24:BA:1538:G:H5'  | 1.67                     | 0.75              |
| 24:BA:1650:G:H21  | 24:BA:1651:G:H1'  | 1.51                     | 0.75              |
| 24:BA:1681:G:C2   | 24:BA:1762:A:N7   | 2.54                     | 0.75              |
| 24:BA:1791:A:H3'  | 24:BA:1792:G:C8   | 2.20                     | 0.75              |
| 25:BB:9:G:H2'     | 25:BB:9:G:N3      | 2.01                     | 0.75              |
| 26:BC:32:LEU:CB   | 26:BC:220:PRO:HG2 | 2.14                     | 0.75              |
| 29:BF:103:LYS:HA  | 29:BF:106:ARG:CG  | 2.15                     | 0.75              |
| 31:BH:69:ARG:HG3  | 31:BH:70:THR:N    | 1.99                     | 0.75              |
| 34:BM:13:TRP:O    | 34:BM:138:LEU:HB2 | 1.85                     | 0.75              |
| 34:BM:58:ASP:O    | 34:BM:60:ILE:HG13 | 1.86                     | 0.75              |
| 36:BO:38:GLN:O    | 36:BO:40:SER:N    | 2.18                     | 0.75              |
| 36:BO:97:PRO:HA   | 36:BO:102:ARG:NE  | 2.01                     | 0.75              |
| 36:BO:114:ILE:CD1 | 36:BO:123:LEU:HG  | 2.16                     | 0.75              |
| 37:BP:16:ARG:HG2  | 37:BP:73:PRO:HD2  | 1.66                     | 0.75              |
| 45:BX:2:ARG:HH21  | 45:BX:4:LYS:CB    | 1.99                     | 0.75              |
| 1:AA:283:C:H2'    | 1:AA:283:C:O2     | 1.85                     | 0.75              |
| 1:AA:568:G:H21    | 1:AA:574:A:H2     | 1.31                     | 0.75              |
| 1:AA:792:A:H2'    | 1:AA:794:A:N6     | 2.00                     | 0.75              |
| 1:AA:889:A:H5'    | 1:AA:891:U:O4'    | 1.86                     | 0.75              |
| 1:AA:1065:U:H2'   | 1:AA:1065:U:O2    | 1.85                     | 0.75              |
| 1:AA:1095:U:OP2   | 1:AA:1108:G:N1    | 2.19                     | 0.75              |
| 1:AA:1124:G:H21   | 1:AA:1126:U:H3    | 0.81                     | 0.75              |
| 1:AA:1363:A:N3    | 1:AA:1365:G:C6    | 2.55                     | 0.75              |
| 4:AE:17:PHE:CD1   | 4:AE:18:GLY:N     | 2.54                     | 0.75              |
| 6:AG:132:ARG:HG2  | 6:AG:132:ARG:NH1  | 1.92                     | 0.75              |
| 9:AJ:74:GLU:HG2   | 9:AJ:75:VAL:N     | 2.02                     | 0.75              |
| 10:AK:101:PRO:O   | 10:AK:102:ARG:HB2 | 1.87                     | 0.75              |
| 14:AO:85:ILE:CD1  | 14:AO:99:HIS:N    | 2.50                     | 0.75              |
| 21:AV:32:LYS:CA   | 21:AV:50:ALA:HB3  | 2.17                     | 0.75              |
| 22:AW:72:LEU:HD23 | 22:AW:76:ALA:HB1  | 1.68                     | 0.75              |
| 24:BA:49:A:N6     | 24:BA:176:G:C6    | 2.55                     | 0.75              |
| 24:BA:661:C:H5''  | 36:BO:15:ARG:NH1  | 2.01                     | 0.75              |
| 24:BA:668:G:N3    | 24:BA:670:A:N6    | 2.35                     | 0.75              |
| 24:BA:740:U:C2'   | 24:BA:741:G:O5'   | 2.35                     | 0.75              |
| 24:BA:748:G:H5'   | 24:BA:749:C:OP2   | 1.86                     | 0.75              |
| 24:BA:989:G:O2'   | 24:BA:990:A:O5'   | 2.05                     | 0.75              |
| 24:BA:1471:A:C2'  | 24:BA:1472:A:H5'  | 2.16                     | 0.75              |
| 24:BA:1496:A:C2   | 24:BA:1577:C:H1'  | 2.21                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1602:U:H2'  | 24:BA:1603:A:O5'   | 1.85                     | 0.75              |
| 24:BA:1788:C:H2'  | 27:BD:222:ARG:NE   | 2.00                     | 0.75              |
| 24:BA:2051:A:C4   | 24:BA:2614:A:N6    | 2.55                     | 0.75              |
| 24:BA:2253:G:H2'  | 24:BA:2254:C:H6    | 1.51                     | 0.75              |
| 24:BA:2508:G:O2'  | 24:BA:2509:G:H5'   | 1.86                     | 0.75              |
| 24:BA:2553:G:N2   | 24:BA:2554:U:HO2'  | 1.84                     | 0.75              |
| 24:BA:2820:A:O3'  | 38:BQ:4:LEU:HD22   | 1.87                     | 0.75              |
| 24:BA:2886:G:O2'  | 51:B4:32:PRO:HD2   | 1.87                     | 0.75              |
| 26:BC:26:ALA:HB1  | 26:BC:182:PRO:HA   | 1.68                     | 0.75              |
| 26:BC:62:VAL:HB   | 26:BC:195:ALA:HB2  | 1.67                     | 0.75              |
| 27:BD:46:GLN:C    | 27:BD:48:ARG:N     | 2.41                     | 0.75              |
| 27:BD:59:LYS:HD2  | 27:BD:59:LYS:C     | 2.11                     | 0.75              |
| 27:BD:159:ALA:O   | 27:BD:196:VAL:HG11 | 1.87                     | 0.75              |
| 30:BG:75:LYS:HD3  | 30:BG:85:GLY:H     | 1.52                     | 0.75              |
| 30:BG:102:PHE:CE2 | 30:BG:106:LEU:HD12 | 2.22                     | 0.75              |
| 31:BH:87:LEU:HD23 | 31:BH:88:LEU:N     | 2.00                     | 0.75              |
| 32:BK:34:GLY:O    | 32:BK:35:LEU:HD13  | 1.87                     | 0.75              |
| 34:BM:10:GLU:CD   | 34:BM:39:ARG:HD2   | 2.11                     | 0.75              |
| 34:BM:39:ARG:N    | 34:BM:48:MET:HE2   | 2.01                     | 0.75              |
| 35:BN:92:GLU:OE1  | 35:BN:113:LYS:HB3  | 1.86                     | 0.75              |
| 36:BO:77:ARG:NH1  | 36:BO:79:ARG:HG2   | 2.02                     | 0.75              |
| 37:BP:85:LYS:HG3  | 37:BP:87:LYS:N     | 2.02                     | 0.75              |
| 38:BQ:14:SER:O    | 38:BQ:18:LEU:HD23  | 1.86                     | 0.75              |
| 39:BR:92:TYR:CG   | 39:BR:93:LYS:N     | 2.53                     | 0.75              |
| 40:BS:18:ASP:HB3  | 40:BS:81:PRO:CA    | 2.14                     | 0.75              |
| 43:BV:21:VAL:HA   | 43:BV:24:ILE:HG13  | 1.68                     | 0.75              |
| 44:BW:49:VAL:HG12 | 44:BW:88:LYS:CG    | 2.16                     | 0.75              |
| 47:BZ:21:LEU:HD13 | 47:BZ:41:ARG:HG2   | 1.67                     | 0.75              |
| 49:B2:26:LEU:CB   | 49:B2:28:LEU:HD21  | 2.15                     | 0.75              |
| 1:AA:148:G:H1     | 1:AA:174:C:H42     | 1.32                     | 0.75              |
| 1:AA:440:A:N6     | 1:AA:494:U:C5      | 2.55                     | 0.75              |
| 1:AA:620:C:N1     | 6:AG:135:LEU:HD13  | 2.00                     | 0.75              |
| 1:AA:973:G:C2     | 1:AA:974:A:C6      | 2.75                     | 0.75              |
| 1:AA:994:A:N1     | 1:AA:1047:G:H4'    | 2.02                     | 0.75              |
| 1:AA:1035:A:C2'   | 1:AA:1036:G:H5'    | 2.17                     | 0.75              |
| 1:AA:1148:U:O2    | 1:AA:1149:C:C6     | 2.40                     | 0.75              |
| 3:AB:13:C:H2'     | 3:AB:14:A:H5''     | 1.67                     | 0.75              |
| 6:AG:50:ARG:NH1   | 6:AG:52:SER:HA     | 2.01                     | 0.75              |
| 6:AG:58:LEU:HD13  | 6:AG:58:LEU:C      | 2.12                     | 0.75              |
| 9:AJ:113:GLU:CG   | 9:AJ:118:VAL:HB    | 2.17                     | 0.75              |
| 10:AK:4:ASP:HB2   | 10:AK:6:ILE:HG22   | 1.67                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 19:AT:7:THR:CG2   | 19:AT:8:GLY:N      | 2.50                     | 0.75              |
| 19:AT:40:LYS:HB3  | 19:AT:40:LYS:NZ    | 2.01                     | 0.75              |
| 20:AU:70:ILE:O    | 20:AU:73:ALA:HB3   | 1.86                     | 0.75              |
| 22:AW:23:ARG:O    | 22:AW:26:ASN:ND2   | 2.20                     | 0.75              |
| 24:BA:14:A:N7     | 24:BA:15:G:N9      | 2.34                     | 0.75              |
| 24:BA:201:C:H2'   | 24:BA:202:U:H5'    | 1.68                     | 0.75              |
| 24:BA:242:G:H3'   | 54:B7:4:MET:SD     | 2.24                     | 0.75              |
| 24:BA:600:G:O2'   | 29:BF:105:VAL:HG22 | 1.87                     | 0.75              |
| 24:BA:643:A:H1'   | 24:BA:644:A:N7     | 2.02                     | 0.75              |
| 24:BA:781:A:C1'   | 27:BD:222:ARG:NH1  | 2.49                     | 0.75              |
| 24:BA:1698:A:H1'  | 24:BA:1700:A:O5'   | 1.86                     | 0.75              |
| 24:BA:1742:C:N4   | 24:BA:1743:G:C8    | 2.55                     | 0.75              |
| 24:BA:1800:C:C6   | 24:BA:1800:C:C3'   | 2.68                     | 0.75              |
| 24:BA:1808:U:N3   | 24:BA:1810:A:C2    | 2.54                     | 0.75              |
| 24:BA:1815:A:OP1  | 24:BA:1822:G:H4'   | 1.86                     | 0.75              |
| 24:BA:2017:U:O2   | 51:B4:9:LYS:HA     | 1.85                     | 0.75              |
| 24:BA:2021:C:C2'  | 24:BA:2022:U:OP1   | 2.34                     | 0.75              |
| 24:BA:2045:C:O2   | 51:B4:22:HIS:CE1   | 2.39                     | 0.75              |
| 24:BA:2055:C:H4'  | 24:BA:2056:G:C5'   | 2.15                     | 0.75              |
| 24:BA:2633:G:H4'  | 24:BA:2812:G:OP1   | 1.86                     | 0.75              |
| 25:BB:104:A:H2'   | 25:BB:105:G:O4'    | 1.86                     | 0.75              |
| 30:BG:77:ILE:O    | 30:BG:83:ARG:NE    | 2.20                     | 0.75              |
| 34:BM:17:ASP:HB3  | 34:BM:21:LYS:NZ    | 2.00                     | 0.75              |
| 35:BN:7:TYR:HA    | 35:BN:18:LYS:HE3   | 1.67                     | 0.75              |
| 35:BN:16:ALA:CB   | 35:BN:45:GLU:HB2   | 2.17                     | 0.75              |
| 35:BN:18:LYS:HZ1  | 35:BN:44:LYS:NZ    | 1.84                     | 0.75              |
| 36:BO:75:ILE:HG22 | 36:BO:115:LEU:CD1  | 2.14                     | 0.75              |
| 37:BP:112:GLU:C   | 37:BP:115:MET:HB2  | 2.10                     | 0.75              |
| 38:BQ:54:LEU:HD22 | 38:BQ:66:VAL:HG23  | 1.68                     | 0.75              |
| 40:BS:30:VAL:HG22 | 40:BS:32:TYR:OH    | 1.87                     | 0.75              |
| 41:BT:65:ILE:HD13 | 41:BT:65:ILE:N     | 2.02                     | 0.75              |
| 44:BW:50:LYS:HG3  | 44:BW:84:ALA:HB3   | 1.69                     | 0.75              |
| 46:BY:4:ARG:HH22  | 46:BY:88:PHE:HE1   | 1.33                     | 0.75              |
| 47:BZ:47:PRO:HG2  | 47:BZ:53:MET:HB2   | 1.69                     | 0.75              |
| 47:BZ:51:VAL:HG21 | 47:BZ:79:VAL:O     | 1.86                     | 0.75              |
| 48:B1:20:VAL:CA   | 48:B1:55:LEU:HD23  | 2.17                     | 0.75              |
| 1:AA:274:A:O2'    | 1:AA:275:G:C1'     | 2.35                     | 0.75              |
| 1:AA:284:G:O2'    | 1:AA:285:G:H5'     | 1.86                     | 0.75              |
| 1:AA:754:C:H2'    | 1:AA:755:G:OP1     | 1.87                     | 0.75              |
| 1:AA:932:C:OP1    | 9:AJ:3:ARG:HB3     | 1.87                     | 0.75              |
| 4:AE:178:ARG:HA   | 4:AE:178:ARG:NH1   | 2.01                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:AG:43:HIS:HB3   | 6:AG:46:LYS:CG     | 2.15                     | 0.75              |
| 6:AG:108:LEU:HD21 | 6:AG:174:LEU:HB3   | 1.67                     | 0.75              |
| 9:AJ:72:ARG:CZ    | 9:AJ:142:GLU:OE1   | 2.35                     | 0.75              |
| 10:AK:119:LEU:N   | 10:AK:119:LEU:HD22 | 2.01                     | 0.75              |
| 11:AL:47:LEU:HD13 | 11:AL:47:LEU:O     | 1.86                     | 0.75              |
| 12:AM:24:VAL:HG21 | 12:AM:37:PRO:HD3   | 1.67                     | 0.75              |
| 13:AN:101:SER:O   | 13:AN:103:LEU:HG   | 1.86                     | 0.75              |
| 14:AO:5:PRO:O     | 14:AO:6:THR:HG23   | 1.87                     | 0.75              |
| 24:BA:80:G:C1'    | 24:BA:347:A:N6     | 2.50                     | 0.75              |
| 24:BA:108:U:H4'   | 24:BA:348:G:N2     | 2.02                     | 0.75              |
| 24:BA:399:G:C6    | 24:BA:400:G:H1'    | 2.21                     | 0.75              |
| 24:BA:1340:U:HO2' | 24:BA:1394:U:HO2'  | 1.33                     | 0.75              |
| 24:BA:1451:C:H3'  | 24:BA:1453:A:H4'   | 1.68                     | 0.75              |
| 24:BA:1583:A:H5'  | 24:BA:1585:C:H5'   | 1.66                     | 0.75              |
| 24:BA:1631:A:N6   | 24:BA:1683:C:H5'   | 2.01                     | 0.75              |
| 24:BA:1766:U:O2'  | 24:BA:1767:C:H5'   | 1.86                     | 0.75              |
| 24:BA:1861:G:H4'  | 26:BC:205:LYS:NZ   | 2.02                     | 0.75              |
| 24:BA:2043:C:N4   | 24:BA:2777:G:C4    | 2.54                     | 0.75              |
| 24:BA:2110:G:H2'  | 24:BA:2120:G:O5'   | 1.86                     | 0.75              |
| 24:BA:2404:C:H2'  | 24:BA:2405:G:C8    | 2.21                     | 0.75              |
| 24:BA:2496:C:H3'  | 24:BA:2497:A:C2    | 2.21                     | 0.75              |
| 27:BD:69:ARG:NH2  | 27:BD:130:ALA:HB2  | 2.02                     | 0.75              |
| 27:BD:154:LYS:O   | 27:BD:154:LYS:HG3  | 1.86                     | 0.75              |
| 28:BE:60:ASN:CG   | 28:BE:61:ARG:H     | 1.95                     | 0.75              |
| 30:BG:116:ASP:HB3 | 30:BG:118:ARG:NH2  | 2.01                     | 0.75              |
| 31:BH:69:ARG:HB2  | 31:BH:69:ARG:CZ    | 2.16                     | 0.75              |
| 32:BK:66:GLU:HG3  | 32:BK:69:LYS:HZ2   | 1.51                     | 0.75              |
| 33:BL:61:ALA:C    | 33:BL:63:ARG:H     | 1.95                     | 0.75              |
| 34:BM:46:VAL:CG1  | 34:BM:47:ALA:N     | 2.40                     | 0.75              |
| 35:BN:16:ALA:O    | 35:BN:18:LYS:N     | 2.19                     | 0.75              |
| 36:BO:89:ALA:C    | 36:BO:125:VAL:HG22 | 2.11                     | 0.75              |
| 37:BP:25:ASP:CB   | 37:BP:102:VAL:HG12 | 2.16                     | 0.75              |
| 38:BQ:45:ARG:CB   | 38:BQ:95:THR:HG21  | 2.17                     | 0.75              |
| 40:BS:7:ILE:O     | 40:BS:11:GLU:OE2   | 2.03                     | 0.75              |
| 41:BT:19:LYS:HB2  | 41:BT:19:LYS:HZ3   | 1.50                     | 0.75              |
| 41:BT:48:ALA:O    | 41:BT:51:LYS:HB2   | 1.86                     | 0.75              |
| 41:BT:98:LEU:HB3  | 41:BT:105:VAL:HG11 | 1.68                     | 0.75              |
| 42:BU:3:ALA:HB1   | 42:BU:44:LYS:HZ2   | 1.51                     | 0.75              |
| 42:BU:57:VAL:HG12 | 42:BU:58:VAL:N     | 1.96                     | 0.75              |
| 46:BY:17:ALA:HA   | 46:BY:20:ARG:NH2   | 2.01                     | 0.75              |
| 46:BY:71:VAL:HA   | 46:BY:87:ASP:O     | 1.86                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 48:B1:56:LEU:HD13 | 48:B1:56:LEU:N     | 2.01                     | 0.75              |
| 54:B7:39:LYS:O    | 54:B7:42:ARG:HB2   | 1.87                     | 0.75              |
| 1:AA:66:G:H4'     | 1:AA:173:U:C4      | 2.21                     | 0.75              |
| 1:AA:342:C:H2'    | 1:AA:343:U:H6      | 1.52                     | 0.75              |
| 1:AA:748:C:C6     | 1:AA:748:C:H3'     | 2.22                     | 0.75              |
| 1:AA:888:G:H21    | 1:AA:909:A:H62     | 0.75                     | 0.75              |
| 1:AA:894:G:O2'    | 1:AA:895:G:H5'     | 1.86                     | 0.75              |
| 1:AA:1320:C:N4    | 21:AV:36:ARG:NH1   | 2.33                     | 0.75              |
| 1:AA:1517:G:H1'   | 24:BA:1919:A:O3'   | 1.85                     | 0.75              |
| 5:AF:71:ALA:HA    | 5:AF:105:GLU:HG3   | 1.69                     | 0.75              |
| 6:AG:147:ALA:CB   | 6:AG:182:LYS:HA    | 2.16                     | 0.75              |
| 10:AK:126:LYS:HD2 | 10:AK:127:LEU:N    | 2.02                     | 0.75              |
| 24:BA:200:U:C4    | 24:BA:248:G:N7     | 2.54                     | 0.75              |
| 24:BA:459:U:OP2   | 53:B6:40:TRP:HA    | 1.87                     | 0.75              |
| 24:BA:600:G:N2    | 24:BA:604:G:H4'    | 2.01                     | 0.75              |
| 24:BA:690:G:O2'   | 24:BA:780:G:OP1    | 2.03                     | 0.75              |
| 24:BA:755:C:H2'   | 24:BA:756:C:C6     | 2.21                     | 0.75              |
| 24:BA:961:C:O2'   | 24:BA:962:G:OP1    | 2.01                     | 0.75              |
| 24:BA:1503:U:H2'  | 24:BA:1504:C:C5    | 2.21                     | 0.75              |
| 24:BA:1518:C:H3'  | 24:BA:1519:G:C5'   | 2.17                     | 0.75              |
| 24:BA:1707:G:H2'  | 24:BA:1708:C:C6    | 2.22                     | 0.75              |
| 24:BA:1746:G:OP2  | 24:BA:1746:G:H3'   | 1.85                     | 0.75              |
| 24:BA:1772:G:H21  | 24:BA:1774:C:H5'   | 1.52                     | 0.75              |
| 24:BA:2027:G:H2'  | 24:BA:2028:U:C6    | 2.21                     | 0.75              |
| 24:BA:2063:C:OP2  | 24:BA:2064:C:OP2   | 2.04                     | 0.75              |
| 24:BA:2278:A:H62  | 47:BZ:14:ARG:HB3   | 1.51                     | 0.75              |
| 24:BA:2305:A:C5   | 30:BG:42:GLY:HA2   | 2.22                     | 0.75              |
| 27:BD:37:LEU:HD21 | 27:BD:64:ILE:H     | 1.49                     | 0.75              |
| 27:BD:181:GLU:HB2 | 27:BD:268:ARG:NH2  | 2.01                     | 0.75              |
| 28:BE:129:HIS:H   | 28:BE:129:HIS:CD2  | 2.05                     | 0.75              |
| 28:BE:149:ARG:HE  | 28:BE:150:VAL:C    | 1.95                     | 0.75              |
| 28:BE:202:LYS:C   | 28:BE:204:ALA:H    | 1.94                     | 0.75              |
| 30:BG:71:THR:HG22 | 30:BG:71:THR:O     | 1.86                     | 0.75              |
| 34:BM:4:TYR:CD2   | 41:BT:100:VAL:HG11 | 2.22                     | 0.75              |
| 34:BM:16:ILE:HD12 | 34:BM:16:ILE:N     | 2.02                     | 0.75              |
| 34:BM:26:LEU:O    | 34:BM:30:ILE:HG13  | 1.86                     | 0.75              |
| 35:BN:10:VAL:N    | 35:BN:17:ARG:HG2   | 2.01                     | 0.75              |
| 35:BN:79:PHE:HB2  | 40:BS:73:GLU:CD    | 2.12                     | 0.75              |
| 37:BP:39:PRO:CG   | 37:BP:127:ILE:HG12 | 2.17                     | 0.75              |
| 38:BQ:36:THR:HB   | 38:BQ:40:LYS:HD3   | 1.66                     | 0.75              |
| 39:BR:62:LYS:CB   | 39:BR:65:VAL:HG13  | 2.17                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 40:BS:53:ARG:HH22 | 40:BS:102:ILE:H   | 1.31                     | 0.75              |
| 40:BS:54:ARG:O    | 40:BS:64:ARG:HB2  | 1.86                     | 0.75              |
| 43:BV:24:ILE:HG22 | 43:BV:32:ALA:HB1  | 1.68                     | 0.75              |
| 49:B2:31:LEU:HB3  | 49:B2:32:GLN:NE2  | 2.02                     | 0.75              |
| 52:B5:33:LYS:O    | 52:B5:34:LEU:C    | 2.28                     | 0.75              |
| 1:AA:55:A:H2'     | 1:AA:56:U:O4'     | 1.87                     | 0.75              |
| 1:AA:186(A):C:H2' | 1:AA:186(B):C:O4' | 1.87                     | 0.75              |
| 1:AA:973:G:C2     | 1:AA:974:A:C5     | 2.74                     | 0.75              |
| 1:AA:986:A:H4'    | 21:AV:55:LYS:HG3  | 1.68                     | 0.75              |
| 5:AF:83:ARG:O     | 5:AF:87:LEU:HG    | 1.87                     | 0.75              |
| 5:AF:85:ARG:NH2   | 5:AF:89:GLU:HB2   | 2.01                     | 0.75              |
| 5:AF:157:ILE:HG13 | 5:AF:164:ARG:CG   | 2.16                     | 0.75              |
| 6:AG:13:ARG:HG2   | 6:AG:32:ALA:HB2   | 1.68                     | 0.75              |
| 6:AG:18:LYS:HE3   | 6:AG:33:MET:HB2   | 1.69                     | 0.75              |
| 8:AI:76:ALA:CB    | 8:AI:80:ARG:HH22  | 1.99                     | 0.75              |
| 9:AJ:62:PHE:O     | 9:AJ:66:VAL:HG23  | 1.86                     | 0.75              |
| 9:AJ:76:ARG:HD3   | 9:AJ:89:MET:HE2   | 1.67                     | 0.75              |
| 10:AK:123:GLU:O   | 10:AK:126:LYS:HG3 | 1.86                     | 0.75              |
| 12:AM:82:ILE:O    | 12:AM:86:MET:HB3  | 1.87                     | 0.75              |
| 13:AN:44:SER:O    | 13:AN:48:ILE:HG12 | 1.87                     | 0.75              |
| 13:AN:48:ILE:HD11 | 13:AN:64:ALA:HB2  | 1.67                     | 0.75              |
| 14:AO:37:CYS:HA   | 14:AO:58:VAL:CG2  | 2.10                     | 0.75              |
| 15:AP:13:LYS:HD3  | 15:AP:21:TYR:OH   | 1.86                     | 0.75              |
| 17:AR:31:LEU:O    | 17:AR:34:LEU:HG   | 1.86                     | 0.75              |
| 22:AW:51:GLU:HA   | 22:AW:54:LYS:CE   | 2.17                     | 0.75              |
| 24:BA:300:A:H2'   | 24:BA:334:C:O2'   | 1.86                     | 0.75              |
| 24:BA:328:U:H3    | 24:BA:332:A:H62   | 1.32                     | 0.75              |
| 24:BA:452:G:C3'   | 24:BA:453:C:H5''  | 2.13                     | 0.75              |
| 24:BA:456:C:H5    | 44:BW:68:ARG:HH12 | 1.33                     | 0.75              |
| 24:BA:594:U:H5''  | 54:B7:61:LEU:CD1  | 2.16                     | 0.75              |
| 24:BA:735:A:H8    | 24:BA:735:A:O5'   | 1.67                     | 0.75              |
| 24:BA:1530:G:C3'  | 24:BA:1531:C:C6   | 2.68                     | 0.75              |
| 24:BA:1670:C:P    | 24:BA:1671:U:H5   | 2.10                     | 0.75              |
| 24:BA:2016:U:O4'  | 51:B4:6:VAL:HG11  | 1.87                     | 0.75              |
| 24:BA:2306:C:OP1  | 30:BG:136:ARG:HD3 | 1.86                     | 0.75              |
| 24:BA:2311:A:H3'  | 24:BA:2312:U:C6   | 2.22                     | 0.75              |
| 24:BA:2394:C:P    | 36:BO:57:THR:HA   | 2.27                     | 0.75              |
| 24:BA:2789:C:O2'  | 24:BA:2893:G:N2   | 2.15                     | 0.75              |
| 27:BD:66:ASP:OD2  | 27:BD:103:ARG:HD3 | 1.86                     | 0.75              |
| 27:BD:174:ILE:CD1 | 27:BD:184:LYS:HE3 | 2.16                     | 0.75              |
| 27:BD:183:ARG:HG2 | 27:BD:268:ARG:CG  | 2.16                     | 0.75              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 28:BE:4:ILE:HG21   | 28:BE:30:PRO:HG3   | 1.69                     | 0.75              |
| 28:BE:105:THR:HG23 | 28:BE:197:ILE:HD13 | 1.68                     | 0.75              |
| 29:BF:37:VAL:HG12  | 29:BF:41:LEU:HD23  | 1.68                     | 0.75              |
| 30:BG:41:GLN:HG3   | 30:BG:42:GLY:N     | 2.02                     | 0.75              |
| 30:BG:125:PHE:O    | 30:BG:126:ASP:HB3  | 1.87                     | 0.75              |
| 31:BH:106:THR:HG23 | 31:BH:111:HIS:HB3  | 1.68                     | 0.75              |
| 32:BK:128:LEU:CD2  | 32:BK:129:THR:H    | 2.00                     | 0.75              |
| 35:BN:2:ILE:HD13   | 35:BN:31:LYS:O     | 1.86                     | 0.75              |
| 35:BN:12:ASP:CB    | 35:BN:93:PRO:HG2   | 2.17                     | 0.75              |
| 36:BO:72:PRO:HB3   | 36:BO:110:TYR:C    | 2.12                     | 0.75              |
| 38:BQ:98:LEU:HD23  | 38:BQ:99:LYS:NZ    | 2.01                     | 0.75              |
| 39:BR:78:LEU:HD13  | 39:BR:79:ALA:H     | 1.52                     | 0.75              |
| 40:BS:18:ASP:CB    | 40:BS:81:PRO:HA    | 2.14                     | 0.75              |
| 40:BS:95:ARG:NH2   | 40:BS:96:ARG:NH2   | 2.35                     | 0.75              |
| 42:BU:6:LYS:HB3    | 42:BU:10:LYS:CA    | 2.11                     | 0.75              |
| 42:BU:17:GLY:HA3   | 42:BU:19:LYS:HZ3   | 1.50                     | 0.75              |
| 43:BV:20:VAL:HG13  | 43:BV:21:VAL:N     | 2.01                     | 0.75              |
| 45:BX:8:LYS:CA     | 45:BX:28:LYS:HD2   | 2.17                     | 0.75              |
| 46:BY:27:VAL:CG2   | 46:BY:85:HIS:HE1   | 1.99                     | 0.75              |
| 49:B2:30:ARG:HD2   | 49:B2:30:ARG:N     | 2.01                     | 0.75              |
| 50:B3:56:VAL:O     | 50:B3:61:ARG:NH2   | 2.20                     | 0.75              |
| 1:AA:408:A:H5'     | 6:AG:116:GLN:HG2   | 1.66                     | 0.74              |
| 1:AA:687:A:O2'     | 1:AA:688:G:O4'     | 2.04                     | 0.74              |
| 1:AA:1288:A:H2'    | 1:AA:1289:A:C8     | 2.18                     | 0.74              |
| 1:AA:1462:G:O2'    | 1:AA:1463:C:H5'    | 1.87                     | 0.74              |
| 3:AD:40:C:C2'      | 3:AD:41:C:H5''     | 2.17                     | 0.74              |
| 4:AE:16:HIS:CE1    | 4:AE:213:LEU:HD13  | 2.21                     | 0.74              |
| 9:AJ:38:LEU:O      | 9:AJ:41:ARG:HB2    | 1.87                     | 0.74              |
| 11:AL:37:PHE:CE1   | 11:AL:74:ILE:HG23  | 2.22                     | 0.74              |
| 11:AL:58:HIS:CD2   | 11:AL:59:PHE:CD1   | 2.75                     | 0.74              |
| 13:AN:63:LEU:HD23  | 13:AN:63:LEU:C     | 2.11                     | 0.74              |
| 13:AN:102:GLY:C    | 13:AN:104:GLN:H    | 1.95                     | 0.74              |
| 18:AS:8:ARG:NH1    | 18:AS:11:SER:N     | 2.35                     | 0.74              |
| 24:BA:36:G:H4'     | 24:BA:451:C:C2     | 2.21                     | 0.74              |
| 24:BA:257:A:H2'    | 24:BA:258:G:O4'    | 1.87                     | 0.74              |
| 24:BA:270(H):C:H2' | 24:BA:270(I):G:H8  | 1.51                     | 0.74              |
| 24:BA:270(Z):U:H4' | 24:BA:270(Z):U:OP1 | 1.87                     | 0.74              |
| 24:BA:632:A:H2'    | 24:BA:633:A:C8     | 2.22                     | 0.74              |
| 24:BA:656:G:H2'    | 24:BA:657:U:C6     | 2.22                     | 0.74              |
| 24:BA:673:C:N4     | 24:BA:808:G:H1     | 1.85                     | 0.74              |
| 24:BA:686:G:H4'    | 24:BA:687:C:OP2    | 1.85                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:727:A:H2'   | 24:BA:728:G:H5'    | 1.69                     | 0.74              |
| 24:BA:728:G:O2'   | 24:BA:729:G:H5''   | 1.87                     | 0.74              |
| 24:BA:1063:G:N7   | 24:BA:1064:C:N4    | 2.34                     | 0.74              |
| 24:BA:1315:C:O2'  | 24:BA:1392:A:H1'   | 1.86                     | 0.74              |
| 24:BA:1524:G:H2'  | 24:BA:1525:G:C8    | 2.20                     | 0.74              |
| 24:BA:1746:G:H2'  | 24:BA:1747:G:C8    | 2.22                     | 0.74              |
| 24:BA:2231:C:H2'  | 24:BA:2232:U:H6    | 1.53                     | 0.74              |
| 24:BA:2246:G:N2   | 24:BA:2247:A:C4    | 2.55                     | 0.74              |
| 24:BA:2594:C:O2'  | 24:BA:2595:G:H5'   | 1.87                     | 0.74              |
| 24:BA:2690:C:H3'  | 24:BA:2690:C:C6    | 2.22                     | 0.74              |
| 27:BD:85:ASP:HB2  | 27:BD:87:ASN:HD21  | 1.50                     | 0.74              |
| 27:BD:87:ASN:N    | 27:BD:87:ASN:ND2   | 2.27                     | 0.74              |
| 28:BE:8:LYS:HE3   | 40:BS:2:ASN:OD1    | 1.85                     | 0.74              |
| 28:BE:109:LYS:N   | 28:BE:191:PRO:HD3  | 2.02                     | 0.74              |
| 28:BE:190:GLY:O   | 28:BE:191:PRO:O    | 2.05                     | 0.74              |
| 29:BF:19:GLU:C    | 29:BF:20:LEU:CD2   | 2.50                     | 0.74              |
| 29:BF:31:HIS:ND1  | 36:BO:11:GLY:HA3   | 2.02                     | 0.74              |
| 30:BG:94:LEU:HG   | 30:BG:98:ARG:NH1   | 2.02                     | 0.74              |
| 30:BG:104:GLU:HG3 | 30:BG:105:LYS:N    | 2.02                     | 0.74              |
| 34:BM:70:LYS:HA   | 34:BM:85:ILE:O     | 1.87                     | 0.74              |
| 37:BP:41:TRP:CA   | 37:BP:95:ALA:O     | 2.35                     | 0.74              |
| 37:BP:42:ILE:HG23 | 37:BP:47:ILE:HD11  | 1.69                     | 0.74              |
| 38:BQ:96:ARG:CG   | 38:BQ:98:LEU:HD11  | 2.15                     | 0.74              |
| 39:BR:64:GLU:OE2  | 39:BR:67:ARG:HB3   | 1.85                     | 0.74              |
| 40:BS:109:GLU:O   | 40:BS:110:ILE:HB   | 1.87                     | 0.74              |
| 42:BU:67:GLY:CA   | 42:BU:93:GLU:O     | 2.35                     | 0.74              |
| 42:BU:73:SER:HG   | 42:BU:89:GLN:HB2   | 1.49                     | 0.74              |
| 46:BY:96:VAL:HG13 | 46:BY:128:VAL:HG22 | 1.68                     | 0.74              |
| 51:B4:45:VAL:HB   | 51:B4:50:GLY:CA    | 2.14                     | 0.74              |
| 52:B5:17:LYS:NZ   | 52:B5:50:ARG:HB2   | 2.02                     | 0.74              |
| 53:B6:43:THR:HG23 | 53:B6:46:VAL:CG2   | 2.17                     | 0.74              |
| 54:B7:13:ARG:O    | 54:B7:14:VAL:HB    | 1.86                     | 0.74              |
| 1:AA:440:A:H3'    | 1:AA:442:C:C6      | 2.21                     | 0.74              |
| 1:AA:714:G:H1'    | 1:AA:777:A:C8      | 2.22                     | 0.74              |
| 1:AA:898:G:H2'    | 1:AA:900:A:OP2     | 1.86                     | 0.74              |
| 1:AA:978:A:H61    | 1:AA:1361:G:H22    | 1.28                     | 0.74              |
| 1:AA:1063:C:C4    | 1:AA:1064:G:N7     | 2.55                     | 0.74              |
| 1:AA:1208:C:H2'   | 1:AA:1209:C:H6     | 1.51                     | 0.74              |
| 1:AA:1517:G:N2    | 1:AA:1518:A:H1'    | 2.02                     | 0.74              |
| 4:AE:25:ASN:O     | 4:AE:25:ASN:CG     | 2.27                     | 0.74              |
| 7:AH:59:GLY:C     | 7:AH:63:ARG:HH21   | 1.95                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 7:AH:143:ARG:O     | 7:AH:147:ASP:HB2   | 1.87                     | 0.74              |
| 8:AI:14:LEU:HD12   | 8:AI:15:ASP:H      | 1.50                     | 0.74              |
| 8:AI:47:ARG:CD     | 8:AI:57:GLN:HB3    | 2.17                     | 0.74              |
| 8:AI:64:GLN:O      | 8:AI:65:VAL:HG12   | 1.85                     | 0.74              |
| 9:AJ:62:PHE:HA     | 9:AJ:124:LEU:HD21  | 1.68                     | 0.74              |
| 12:AM:22:LYS:NZ    | 12:AM:90:LEU:HD12  | 2.01                     | 0.74              |
| 15:AP:25:ILE:HA    | 15:AP:29:ARG:HG3   | 1.66                     | 0.74              |
| 15:AP:104:ARG:CG   | 15:AP:105:THR:HG23 | 2.17                     | 0.74              |
| 17:AR:33:THR:HG23  | 17:AR:87:ILE:CD1   | 2.17                     | 0.74              |
| 18:AS:67:THR:HB    | 18:AS:70:ALA:HB2   | 1.68                     | 0.74              |
| 19:AT:33:GLY:O     | 19:AT:34:LYS:O     | 2.05                     | 0.74              |
| 19:AT:57:VAL:HB    | 19:AT:75:ARG:O     | 1.87                     | 0.74              |
| 22:AW:27:LYS:HD3   | 22:AW:27:LYS:C     | 2.12                     | 0.74              |
| 22:AW:90:GLN:HA    | 22:AW:93:GLU:OE1   | 1.86                     | 0.74              |
| 24:BA:465:G:H21    | 24:BA:683:C:H2'    | 1.53                     | 0.74              |
| 24:BA:624:C:H5'    | 24:BA:625:G:OP2    | 1.86                     | 0.74              |
| 24:BA:1022:G:N7    | 34:BM:65:LYS:HE3   | 2.01                     | 0.74              |
| 24:BA:1055:G:O5'   | 24:BA:1055:G:H8    | 1.70                     | 0.74              |
| 24:BA:1467:C:N4    | 24:BA:1524:G:O6    | 2.20                     | 0.74              |
| 24:BA:1655:A:H2'   | 24:BA:1656:C:C6    | 2.20                     | 0.74              |
| 24:BA:1793:C:H42   | 24:BA:1825:A:H61   | 1.33                     | 0.74              |
| 24:BA:1944:U:H1'   | 24:BA:1955:U:O4'   | 1.86                     | 0.74              |
| 24:BA:1969:A:H5'   | 24:BA:1970:A:OP1   | 1.85                     | 0.74              |
| 24:BA:2027:G:O2'   | 24:BA:2028:U:H5'   | 1.87                     | 0.74              |
| 24:BA:2052:G:H1'   | 28:BE:150:VAL:N    | 2.02                     | 0.74              |
| 24:BA:2178:C:H5''  | 26:BC:46:LYS:NZ    | 2.02                     | 0.74              |
| 24:BA:2563:U:N3    | 24:BA:2566:A:OP2   | 2.20                     | 0.74              |
| 24:BA:2864:G:H2'   | 24:BA:2865:U:C5    | 2.20                     | 0.74              |
| 26:BC:6:ARG:HD2    | 26:BC:6:ARG:O      | 1.87                     | 0.74              |
| 26:BC:97:GLU:HA    | 26:BC:100:ILE:CD1  | 2.13                     | 0.74              |
| 27:BD:225:ALA:HB3  | 27:BD:231:HIS:CE1  | 2.22                     | 0.74              |
| 29:BF:176:LEU:HD21 | 29:BF:180:GLY:O    | 1.87                     | 0.74              |
| 31:BH:76:VAL:HG23  | 31:BH:77:LYS:N     | 2.01                     | 0.74              |
| 34:BM:7:LYS:NZ     | 34:BM:10:GLU:H     | 1.84                     | 0.74              |
| 35:BN:24:VAL:HG22  | 35:BN:30:ALA:HA    | 1.69                     | 0.74              |
| 38:BQ:26:LYS:HG2   | 38:BQ:70:LEU:HD13  | 1.69                     | 0.74              |
| 38:BQ:75:LEU:HA    | 38:BQ:78:LYS:HB3   | 1.68                     | 0.74              |
| 40:BS:17:THR:CB    | 40:BS:20:PRO:HD3   | 2.17                     | 0.74              |
| 40:BS:67:SER:OG    | 40:BS:75:ILE:HG23  | 1.87                     | 0.74              |
| 42:BU:91:TYR:O     | 42:BU:92:THR:HB    | 1.87                     | 0.74              |
| 43:BV:33:ARG:HH11  | 43:BV:36:LEU:HB3   | 1.52                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 43:BV:33:ARG:HD3   | 43:BV:37:ARG:HD3   | 1.69                     | 0.74              |
| 1:AA:735:C:H5'     | 20:AU:71:LYS:HD3   | 1.69                     | 0.74              |
| 1:AA:965:A:C8      | 1:AA:969:A:C4      | 2.75                     | 0.74              |
| 1:AA:1056:U:O2     | 5:AF:195:VAL:HG23  | 1.87                     | 0.74              |
| 1:AA:1302:U:C2'    | 1:AA:1303:C:H5'    | 2.17                     | 0.74              |
| 1:AA:1312:G:N7     | 21:AV:2:PRO:O      | 2.19                     | 0.74              |
| 1:AA:1494:G:HO2'   | 1:AA:1495:U:H5     | 1.32                     | 0.74              |
| 1:AA:1500:A:H5''   | 1:AA:1508:G:H5''   | 1.70                     | 0.74              |
| 3:AC:14:A:H2'      | 3:AC:15:G:H8       | 1.52                     | 0.74              |
| 4:AE:222:ILE:CD1   | 4:AE:226:ARG:HH21  | 1.99                     | 0.74              |
| 5:AF:20:SER:CB     | 5:AF:40:ARG:HH22   | 1.97                     | 0.74              |
| 5:AF:140:ARG:HB3   | 5:AF:140:ARG:NH1   | 2.02                     | 0.74              |
| 6:AG:159:ARG:O     | 6:AG:160:GLN:C     | 2.30                     | 0.74              |
| 7:AH:81:GLU:HA     | 7:AH:90:VAL:HG22   | 1.67                     | 0.74              |
| 9:AJ:73:MET:HE1    | 9:AJ:149:ARG:NH2   | 2.00                     | 0.74              |
| 10:AK:92:ARG:HG2   | 10:AK:92:ARG:HH11  | 1.51                     | 0.74              |
| 19:AT:11:VAL:HB    | 19:AT:20:THR:OG1   | 1.86                     | 0.74              |
| 24:BA:81:G:H4'     | 24:BA:294:A:C2     | 2.23                     | 0.74              |
| 24:BA:140:A:H61    | 24:BA:1596:A:H4'   | 1.52                     | 0.74              |
| 24:BA:221:A:N7     | 24:BA:266:G:O6     | 2.20                     | 0.74              |
| 24:BA:640:C:N4     | 24:BA:647:G:H1     | 1.84                     | 0.74              |
| 24:BA:805:G:H2'    | 24:BA:806:C:OP1    | 1.86                     | 0.74              |
| 24:BA:849:A:N3     | 49:B2:21:ALA:HB1   | 2.02                     | 0.74              |
| 24:BA:1081:U:H2'   | 24:BA:1082:U:O4'   | 1.86                     | 0.74              |
| 24:BA:1184:G:H2'   | 24:BA:1185:C:H5'   | 1.69                     | 0.74              |
| 24:BA:1190:G:OP1   | 36:BO:31:ALA:N     | 2.20                     | 0.74              |
| 24:BA:1706:U:H2'   | 24:BA:1706:U:O2    | 1.86                     | 0.74              |
| 24:BA:1799:G:H5''  | 27:BD:264:LYS:HE2  | 1.69                     | 0.74              |
| 24:BA:2016:U:H5''  | 24:BA:2058:A:OP1   | 1.87                     | 0.74              |
| 24:BA:2333:A:H4'   | 24:BA:2335:A:O4'   | 1.85                     | 0.74              |
| 24:BA:2512:C:H5''  | 28:BE:120:TRP:CZ2  | 2.22                     | 0.74              |
| 24:BA:2685:G:O5'   | 35:BN:67:LYS:HD2   | 1.86                     | 0.74              |
| 26:BC:10:LEU:CD1   | 26:BC:13:LYS:HD2   | 2.16                     | 0.74              |
| 27:BD:77:ALA:CB    | 27:BD:95:LEU:HD21  | 2.14                     | 0.74              |
| 27:BD:182:LEU:CD1  | 27:BD:270:ILE:HD11 | 2.17                     | 0.74              |
| 28:BE:102:VAL:HG23 | 28:BE:200:GLU:OE1  | 1.87                     | 0.74              |
| 28:BE:111:ARG:H    | 28:BE:161:GLY:CA   | 2.00                     | 0.74              |
| 29:BF:118:ALA:CB   | 29:BF:122:LYS:HE2  | 2.17                     | 0.74              |
| 30:BG:135:LEU:HD22 | 30:BG:136:ARG:H    | 1.52                     | 0.74              |
| 31:BH:6:ARG:C      | 31:BH:69:ARG:HE    | 1.95                     | 0.74              |
| 31:BH:85:LYS:NZ    | 31:BH:141:VAL:HG12 | 2.02                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 31:BH:121:ILE:HA   | 31:BH:134:SER:O   | 1.86                     | 0.74              |
| 34:BM:22:THR:HG23  | 34:BM:25:ARG:CZ   | 2.18                     | 0.74              |
| 34:BM:34:LEU:HD21  | 34:BM:52:VAL:HG12 | 1.67                     | 0.74              |
| 34:BM:42:TRP:CZ3   | 41:BT:67:ALA:HB1  | 2.23                     | 0.74              |
| 35:BN:68:GLU:CD    | 35:BN:76:ALA:HB3  | 2.13                     | 0.74              |
| 38:BQ:45:ARG:HG2   | 38:BQ:46:GLY:N    | 2.02                     | 0.74              |
| 38:BQ:113:LEU:HD13 | 38:BQ:114:VAL:N   | 2.02                     | 0.74              |
| 40:BS:53:ARG:NH2   | 40:BS:102:ILE:H   | 1.84                     | 0.74              |
| 44:BW:36:LYS:HD3   | 44:BW:39:ILE:HD12 | 1.69                     | 0.74              |
| 46:BY:57:ILE:CG2   | 46:BY:58:VAL:H    | 2.00                     | 0.74              |
| 46:BY:103:ARG:HB2  | 46:BY:138:GLU:HG2 | 1.66                     | 0.74              |
| 47:BZ:51:VAL:HG11  | 47:BZ:79:VAL:HG23 | 1.69                     | 0.74              |
| 49:B2:41:PRO:HA    | 49:B2:44:ARG:NH1  | 2.01                     | 0.74              |
| 50:B3:41:PRO:HB2   | 50:B3:57:GLU:CD   | 2.11                     | 0.74              |
| 1:AA:10:A:O2'      | 1:AA:11:G:H5'     | 1.86                     | 0.74              |
| 1:AA:198:G:OP2     | 1:AA:198:G:C8     | 2.38                     | 0.74              |
| 1:AA:355:C:N4      | 1:AA:356:A:H62    | 1.84                     | 0.74              |
| 1:AA:475:G:C2'     | 1:AA:476:G:H8     | 2.00                     | 0.74              |
| 1:AA:508:C:O2'     | 1:AA:509:A:H8     | 1.69                     | 0.74              |
| 1:AA:519:C:H2'     | 1:AA:520:A:H5'    | 1.67                     | 0.74              |
| 1:AA:675:A:H2'     | 1:AA:676:A:C8     | 2.23                     | 0.74              |
| 1:AA:915:A:H2'     | 1:AA:916:G:C5'    | 2.17                     | 0.74              |
| 2:A1:48:U:H2'      | 2:A1:49:U:C5      | 2.21                     | 0.74              |
| 7:AH:108:ALA:O     | 7:AH:112:LEU:HB2  | 1.87                     | 0.74              |
| 8:AI:14:LEU:HD13   | 8:AI:15:ASP:H     | 1.52                     | 0.74              |
| 9:AJ:46:ALA:CA     | 9:AJ:49:ILE:HD13  | 2.16                     | 0.74              |
| 12:AM:49:VAL:CG1   | 16:AQ:45:ARG:HD2  | 2.16                     | 0.74              |
| 24:BA:187:G:H2'    | 24:BA:1365:A:C2   | 2.22                     | 0.74              |
| 24:BA:243:U:O2     | 24:BA:244:A:H5'   | 1.87                     | 0.74              |
| 24:BA:270(G):C:H2' | 24:BA:270(H):C:C6 | 2.22                     | 0.74              |
| 24:BA:365:C:O5'    | 24:BA:365:C:H6    | 1.68                     | 0.74              |
| 24:BA:1102:C:H3'   | 24:BA:1104:C:H5   | 1.52                     | 0.74              |
| 24:BA:1368:G:H2'   | 24:BA:1369:G:H8   | 1.52                     | 0.74              |
| 24:BA:1429:G:H3'   | 24:BA:1430:C:H6   | 1.51                     | 0.74              |
| 24:BA:1435:G:N1    | 24:BA:1558:A:N6   | 2.36                     | 0.74              |
| 24:BA:1513:C:N3    | 24:BA:1514:U:O4   | 2.20                     | 0.74              |
| 24:BA:1520:U:H6    | 24:BA:1520:U:H3'  | 1.52                     | 0.74              |
| 24:BA:1574:C:H2'   | 24:BA:1575:C:O4'  | 1.87                     | 0.74              |
| 24:BA:1825:A:N6    | 24:BA:1826:G:O6   | 2.20                     | 0.74              |
| 24:BA:2585:U:O2    | 24:BA:2585:U:H2'  | 1.87                     | 0.74              |
| 24:BA:2623:G:H22   | 51:B4:22:HIS:HE1  | 1.33                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 27:BD:231:HIS:O   | 27:BD:232:PRO:C    | 2.29                     | 0.74              |
| 28:BE:8:LYS:HD3   | 28:BE:9:VAL:CG2    | 2.15                     | 0.74              |
| 28:BE:36:ARG:HB3  | 28:BE:41:LYS:HB2   | 1.69                     | 0.74              |
| 29:BF:30:PRO:HA   | 29:BF:33:LEU:HD21  | 1.67                     | 0.74              |
| 29:BF:115:ALA:O   | 29:BF:119:ARG:HG3  | 1.87                     | 0.74              |
| 30:BG:28:VAL:O    | 30:BG:28:VAL:HG12  | 1.87                     | 0.74              |
| 32:BK:2:LYS:HZ2   | 32:BK:39:ALA:HB1   | 1.52                     | 0.74              |
| 32:BK:124:GLY:O   | 32:BK:143:SER:HA   | 1.87                     | 0.74              |
| 36:BO:93:GLY:HA2  | 36:BO:112:LEU:HD12 | 1.70                     | 0.74              |
| 37:BP:37:LEU:HA   | 37:BP:100:GLY:CA   | 2.17                     | 0.74              |
| 40:BS:34:VAL:HG11 | 40:BS:78:LEU:CD1   | 2.16                     | 0.74              |
| 46:BY:49:ARG:O    | 46:BY:51:ALA:N     | 2.21                     | 0.74              |
| 50:B3:1:MET:O     | 50:B3:2:LYS:HG3    | 1.88                     | 0.74              |
| 51:B4:9:LYS:HD2   | 51:B4:9:LYS:N      | 2.02                     | 0.74              |
| 1:AA:371:G:C2'    | 1:AA:372:C:C5'     | 2.63                     | 0.74              |
| 1:AA:738:C:H2'    | 1:AA:739:C:H6      | 1.52                     | 0.74              |
| 1:AA:784:C:H5''   | 24:BA:1837:C:OP1   | 1.87                     | 0.74              |
| 1:AA:1026:G:H2'   | 1:AA:1027:C:H5'    | 1.69                     | 0.74              |
| 1:AA:1064:G:OP1   | 1:AA:1386:G:H4'    | 1.86                     | 0.74              |
| 1:AA:1144:G:N2    | 1:AA:1146:A:H62    | 1.84                     | 0.74              |
| 1:AA:1236:A:H5''  | 1:AA:1304:G:H5''   | 1.70                     | 0.74              |
| 1:AA:1240:U:C2'   | 9:AJ:32:ARG:HH21   | 2.00                     | 0.74              |
| 1:AA:1316:G:H4'   | 16:AQ:17:LYS:HD2   | 1.69                     | 0.74              |
| 1:AA:1360:A:H2'   | 1:AA:1360:A:N3     | 2.01                     | 0.74              |
| 4:AE:84:GLU:OE2   | 4:AE:219:VAL:HG21  | 1.87                     | 0.74              |
| 4:AE:103:THR:OG1  | 4:AE:180:LEU:HD21  | 1.86                     | 0.74              |
| 5:AF:91:LEU:HD23  | 5:AF:91:LEU:C      | 2.13                     | 0.74              |
| 5:AF:131:ARG:HG3  | 5:AF:166:GLU:OE2   | 1.85                     | 0.74              |
| 7:AH:80:ILE:O     | 7:AH:90:VAL:HA     | 1.87                     | 0.74              |
| 8:AI:28:ARG:HG2   | 8:AI:28:ARG:HH11   | 1.52                     | 0.74              |
| 9:AJ:75:VAL:HG22  | 9:AJ:88:PRO:CA     | 2.17                     | 0.74              |
| 12:AM:5:ARG:HB2   | 12:AM:5:ARG:CZ     | 2.17                     | 0.74              |
| 12:AM:51:ARG:HB2  | 12:AM:59:SER:O     | 1.87                     | 0.74              |
| 13:AN:69:ALA:HB1  | 13:AN:103:LEU:HD12 | 1.68                     | 0.74              |
| 13:AN:87:THR:HG22 | 13:AN:91:ARG:HH12  | 1.50                     | 0.74              |
| 14:AO:8:ASN:H     | 14:AO:8:ASN:HD22   | 1.35                     | 0.74              |
| 14:AO:41:ARG:NH1  | 14:AO:55:VAL:HG11  | 2.02                     | 0.74              |
| 16:AQ:27:CYS:O    | 16:AQ:29:ARG:HG3   | 1.86                     | 0.74              |
| 18:AS:3:LYS:CE    | 18:AS:24:ALA:HB2   | 2.17                     | 0.74              |
| 18:AS:44:THR:HG23 | 18:AS:45:THR:HG23  | 1.70                     | 0.74              |
| 24:BA:322:A:C5'   | 24:BA:341:G:H5'    | 2.18                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:349:G:H2'    | 24:BA:350:U:H6     | 1.48                     | 0.74              |
| 24:BA:363(C):G:O2' | 24:BA:363(D):G:H5' | 1.88                     | 0.74              |
| 24:BA:587:C:C2     | 24:BA:671:C:O4'    | 2.39                     | 0.74              |
| 24:BA:684:G:C2'    | 24:BA:687:C:H41    | 1.98                     | 0.74              |
| 24:BA:1028:A:H2    | 24:BA:2486:G:O2'   | 1.70                     | 0.74              |
| 24:BA:1106:G:C6    | 24:BA:1107:G:C6    | 2.75                     | 0.74              |
| 24:BA:1245:G:O2'   | 24:BA:1246:A:H5'   | 1.88                     | 0.74              |
| 24:BA:1382:G:H2'   | 24:BA:1383:C:H6    | 1.51                     | 0.74              |
| 24:BA:1416:G:N2    | 24:BA:1582:C:O2    | 2.20                     | 0.74              |
| 24:BA:1669:A:H2'   | 24:BA:1670:C:H5'   | 1.68                     | 0.74              |
| 24:BA:1820:U:N1    | 27:BD:202:LYS:HG2  | 2.03                     | 0.74              |
| 24:BA:1944:U:H1'   | 24:BA:1955:U:C6    | 2.22                     | 0.74              |
| 24:BA:2019:A:H3'   | 24:BA:2020:A:C5'   | 2.18                     | 0.74              |
| 24:BA:2746:U:O4    | 24:BA:2756:U:C4    | 2.40                     | 0.74              |
| 24:BA:2780:G:N2    | 34:BM:97:ARG:NH1   | 2.23                     | 0.74              |
| 24:BA:2877:G:H3'   | 24:BA:2878:U:C5    | 2.23                     | 0.74              |
| 28:BE:197:ILE:HD13 | 28:BE:199:ARG:HH21 | 1.52                     | 0.74              |
| 30:BG:120:LEU:HD22 | 30:BG:181:ARG:HG2  | 1.67                     | 0.74              |
| 31:BH:97:ARG:HA    | 31:BH:125:VAL:HG11 | 1.69                     | 0.74              |
| 32:BK:93:THR:CG2   | 32:BK:95:LYS:HB3   | 2.17                     | 0.74              |
| 35:BN:68:GLU:HG2   | 35:BN:76:ALA:C     | 2.13                     | 0.74              |
| 37:BP:54:MET:SD    | 37:BP:121:ALA:HB2  | 2.27                     | 0.74              |
| 39:BR:9:ARG:HA     | 39:BR:12:PHE:CE2   | 2.22                     | 0.74              |
| 42:BU:23:GLU:HB2   | 42:BU:92:THR:O     | 1.87                     | 0.74              |
| 45:BX:1:MET:H1     | 45:BX:33:LYS:HE3   | 1.51                     | 0.74              |
| 46:BY:127:LYS:HA   | 46:BY:164:ALA:H    | 1.50                     | 0.74              |
| 51:B4:35:GLU:HB3   | 51:B4:49:CYS:CB    | 2.16                     | 0.74              |
| 54:B7:25:MET:HB3   | 54:B7:44:LYS:HE2   | 1.67                     | 0.74              |
| 55:B8:11:CYS:HB3   | 55:B8:32:HIS:CD2   | 2.22                     | 0.74              |
| 1:AA:17:U:H2'      | 1:AA:18:C:H6       | 1.53                     | 0.74              |
| 1:AA:101:A:H2'     | 1:AA:102:G:C8      | 2.19                     | 0.74              |
| 1:AA:301:G:N2      | 1:AA:302:G:H1'     | 2.02                     | 0.74              |
| 1:AA:1150:U:H5'    | 1:AA:1280:A:C2     | 2.22                     | 0.74              |
| 1:AA:1319:A:H4'    | 21:AV:70:LYS:NZ    | 2.01                     | 0.74              |
| 1:AA:1435:G:H2'    | 1:AA:1436:U:C5     | 2.23                     | 0.74              |
| 4:AE:74:LYS:NZ     | 4:AE:76:GLN:HB2    | 2.03                     | 0.74              |
| 6:AG:118:ARG:NH2   | 6:AG:136:PRO:HB2   | 2.02                     | 0.74              |
| 7:AH:72:GLN:HE22   | 7:AH:145:LYS:H     | 1.33                     | 0.74              |
| 10:AK:11:THR:HA    | 10:AK:14:ARG:NH1   | 2.03                     | 0.74              |
| 15:AP:60:VAL:CA    | 15:AP:63:THR:HG22  | 2.15                     | 0.74              |
| 16:AQ:51:GLY:C     | 16:AQ:53:LEU:H     | 1.92                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 20:AU:29:PHE:CE2  | 20:AU:39:VAL:HG11  | 2.23                     | 0.74              |
| 24:BA:237:C:H2'   | 24:BA:238:C:H6     | 1.51                     | 0.74              |
| 24:BA:387:U:H4'   | 24:BA:388:G:O4'    | 1.88                     | 0.74              |
| 24:BA:697:C:C2'   | 24:BA:698:C:H5''   | 2.17                     | 0.74              |
| 24:BA:750:A:O2'   | 24:BA:751:A:H5''   | 1.87                     | 0.74              |
| 24:BA:915:C:H2'   | 24:BA:916:G:O4'    | 1.87                     | 0.74              |
| 24:BA:1020:A:C2   | 24:BA:1140:C:H2'   | 2.22                     | 0.74              |
| 24:BA:1116:C:H2'  | 24:BA:1117:G:H8    | 1.50                     | 0.74              |
| 24:BA:1128:A:N6   | 24:BA:2518:A:N6    | 2.14                     | 0.74              |
| 24:BA:1142:U:H6   | 24:BA:1142(A):A:C8 | 2.05                     | 0.74              |
| 24:BA:1222:C:C4   | 24:BA:1223:C:C5    | 2.75                     | 0.74              |
| 24:BA:1321:A:C2   | 24:BA:1322:A:O4'   | 2.40                     | 0.74              |
| 24:BA:1407:C:H2'  | 24:BA:1408:C:H6    | 1.53                     | 0.74              |
| 24:BA:1625:C:H2'  | 24:BA:1626:G:C4'   | 2.03                     | 0.74              |
| 24:BA:1667:G:C2   | 24:BA:1991:U:C4    | 2.75                     | 0.74              |
| 24:BA:1799:G:H3'  | 27:BD:183:ARG:HH21 | 1.52                     | 0.74              |
| 24:BA:2135:A:C4'  | 24:BA:2136:C:H5    | 2.01                     | 0.74              |
| 24:BA:2865:U:O5'  | 24:BA:2865:U:H6    | 1.71                     | 0.74              |
| 27:BD:79:VAL:HG21 | 27:BD:112:GLN:O    | 1.87                     | 0.74              |
| 27:BD:221:VAL:C   | 27:BD:222:ARG:HG3  | 2.13                     | 0.74              |
| 29:BF:93:LYS:HG2  | 29:BF:94:PRO:O     | 1.88                     | 0.74              |
| 29:BF:194:MET:CE  | 29:BF:200:GLU:HG2  | 2.18                     | 0.74              |
| 30:BG:32:PRO:HG2  | 30:BG:172:LEU:HB2  | 1.70                     | 0.74              |
| 30:BG:118:ARG:HB3 | 30:BG:118:ARG:NH1  | 2.01                     | 0.74              |
| 31:BH:11:VAL:O    | 31:BH:11:VAL:CG1   | 2.34                     | 0.74              |
| 36:BO:23:PRO:HB2  | 36:BO:28:GLY:CA    | 2.15                     | 0.74              |
| 39:BR:13:ARG:HD3  | 39:BR:89:ARG:HE    | 1.51                     | 0.74              |
| 41:BT:27:LEU:C    | 41:BT:29:SER:H     | 1.96                     | 0.74              |
| 45:BX:46:LYS:CE   | 45:BX:52:SER:HB2   | 2.18                     | 0.74              |
| 46:BY:77:ASP:OD2  | 46:BY:80:ARG:HD3   | 1.88                     | 0.74              |
| 48:B1:20:VAL:CB   | 48:B1:55:LEU:HD23  | 2.17                     | 0.74              |
| 54:B7:16:ILE:HG23 | 54:B7:22:VAL:HG23  | 1.69                     | 0.74              |
| 1:AA:137:C:H2'    | 1:AA:138:G:O5'     | 1.86                     | 0.74              |
| 1:AA:590:C:OP1    | 10:AK:29:SER:HB3   | 1.88                     | 0.74              |
| 1:AA:728:A:C8     | 17:AR:54:ARG:CZ    | 2.71                     | 0.74              |
| 1:AA:1239:A:H1'   | 1:AA:1241:G:C8     | 2.22                     | 0.74              |
| 4:AE:20:GLU:O     | 4:AE:39:ILE:HG13   | 1.86                     | 0.74              |
| 4:AE:178:ARG:NH2  | 4:AE:196:LEU:HB2   | 2.01                     | 0.74              |
| 5:AF:83:ARG:O     | 5:AF:85:ARG:N      | 2.19                     | 0.74              |
| 9:AJ:121:ALA:O    | 9:AJ:125:MET:HG2   | 1.87                     | 0.74              |
| 10:AK:104:ARG:O   | 10:AK:106:GLY:N    | 2.20                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 10:AK:107:LEU:H    | 10:AK:107:LEU:HD23 | 1.50                     | 0.74              |
| 13:AN:102:GLY:C    | 13:AN:104:GLN:N    | 2.40                     | 0.74              |
| 15:AP:19:LEU:HD11  | 15:AP:30:ALA:HB2   | 1.69                     | 0.74              |
| 17:AR:53:HIS:C     | 17:AR:57:LEU:HD13  | 2.11                     | 0.74              |
| 18:AS:20:VAL:CG1   | 18:AS:21:VAL:N     | 2.51                     | 0.74              |
| 24:BA:15:G:O2'     | 24:BA:16:G:H5'     | 1.88                     | 0.74              |
| 24:BA:210:C:H5''   | 53:B6:29:LYS:NZ    | 2.01                     | 0.74              |
| 24:BA:386:G:H4'    | 24:BA:387:U:C5     | 2.23                     | 0.74              |
| 24:BA:542:C:O2'    | 24:BA:543:C:H5'    | 1.88                     | 0.74              |
| 24:BA:814:C:H4'    | 24:BA:1224:G:N2    | 2.02                     | 0.74              |
| 24:BA:980:A:H2     | 24:BA:2038:G:O4'   | 1.69                     | 0.74              |
| 24:BA:1316:U:O2'   | 24:BA:1317:A:H5'   | 1.88                     | 0.74              |
| 24:BA:2017:U:H2'   | 24:BA:2018:G:OP1   | 1.86                     | 0.74              |
| 24:BA:2631:G:N2    | 28:BE:61:ARG:HH12  | 1.86                     | 0.74              |
| 24:BA:2808:U:C3'   | 24:BA:2809:A:H5''  | 2.18                     | 0.74              |
| 25:BB:100:G:H2'    | 25:BB:101:A:H8     | 1.49                     | 0.74              |
| 27:BD:17:THR:C     | 27:BD:19:ALA:H     | 1.96                     | 0.74              |
| 27:BD:176:ARG:NH2  | 27:BD:182:LEU:HD11 | 2.03                     | 0.74              |
| 28:BE:2:LYS:HD3    | 28:BE:83:ASP:HB3   | 1.70                     | 0.74              |
| 28:BE:51:PHE:CD1   | 28:BE:76:ARG:HG2   | 2.22                     | 0.74              |
| 28:BE:119:ARG:HG3  | 28:BE:156:MET:O    | 1.87                     | 0.74              |
| 30:BG:40:ASN:HD22  | 30:BG:41:GLN:H     | 1.36                     | 0.74              |
| 30:BG:75:LYS:CD    | 30:BG:85:GLY:H     | 2.00                     | 0.74              |
| 36:BO:120:ALA:HB1  | 36:BO:137:LYS:HB3  | 1.68                     | 0.74              |
| 37:BP:58:PHE:O     | 37:BP:60:ARG:N     | 2.21                     | 0.74              |
| 37:BP:109:VAL:HG22 | 37:BP:113:GLN:HB2  | 1.68                     | 0.74              |
| 40:BS:17:THR:HB    | 40:BS:20:PRO:CD    | 2.18                     | 0.74              |
| 41:BT:50:ARG:HE    | 42:BU:75:PHE:HE2   | 1.30                     | 0.74              |
| 43:BV:25:ARG:HA    | 43:BV:71:VAL:HG11  | 1.67                     | 0.74              |
| 46:BY:48:PHE:HB3   | 46:BY:54:HIS:CE1   | 2.23                     | 0.74              |
| 46:BY:68:PRO:HG3   | 46:BY:131:ARG:HH22 | 1.51                     | 0.74              |
| 49:B2:17:LYS:HA    | 49:B2:20:LYS:NZ    | 2.02                     | 0.74              |
| 1:AA:1004:A:C8     | 1:AA:1036:G:O6     | 2.32                     | 0.74              |
| 1:AA:1057:G:H2'    | 1:AA:1058:G:H8     | 1.51                     | 0.74              |
| 1:AA:1408:A:H2     | 1:AA:1494:G:O2'    | 1.70                     | 0.74              |
| 3:AD:56:C:H5''     | 26:BC:133:PRO:CG   | 2.17                     | 0.74              |
| 6:AG:64:LEU:HD13   | 6:AG:65:ARG:N      | 2.03                     | 0.74              |
| 8:AI:73:ASN:O      | 8:AI:76:ALA:HB3    | 1.88                     | 0.74              |
| 8:AI:77:ARG:HA     | 8:AI:80:ARG:NE     | 2.03                     | 0.74              |
| 10:AK:5:PRO:HA     | 10:AK:8:ASP:HB3    | 1.69                     | 0.74              |
| 10:AK:7:ALA:HA     | 10:AK:10:LEU:CD1   | 2.17                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 10:AK:55:GLY:O    | 10:AK:57:PRO:HD3   | 1.88                     | 0.74              |
| 10:AK:86:ILE:HG21 | 10:AK:133:LEU:CB   | 2.15                     | 0.74              |
| 10:AK:112:LEU:HA  | 10:AK:134:ILE:HG13 | 1.69                     | 0.74              |
| 11:AL:74:ILE:O    | 11:AL:77:ILE:HB    | 1.88                     | 0.74              |
| 13:AN:121:PRO:O   | 13:AN:126:ARG:HD2  | 1.88                     | 0.74              |
| 15:AP:22:ILE:O    | 15:AP:25:ILE:HG13  | 1.86                     | 0.74              |
| 15:AP:29:ARG:HD3  | 15:AP:64:TRP:CZ2   | 2.23                     | 0.74              |
| 15:AP:87:TYR:CB   | 21:AV:73:GLU:HB2   | 2.17                     | 0.74              |
| 17:AR:5:LYS:HB2   | 17:AR:5:LYS:NZ     | 2.03                     | 0.74              |
| 24:BA:239:U:H2'   | 24:BA:240:G:O4'    | 1.88                     | 0.74              |
| 24:BA:530:G:O2'   | 24:BA:531:C:OP1    | 2.04                     | 0.74              |
| 24:BA:623:G:OP2   | 36:BO:105:LEU:HD11 | 1.87                     | 0.74              |
| 24:BA:856:C:H1'   | 47:BZ:69:PHE:CE1   | 2.23                     | 0.74              |
| 24:BA:932:G:OP1   | 24:BA:932:G:H4'    | 1.88                     | 0.74              |
| 24:BA:1025:G:N3   | 24:BA:1025:G:H2'   | 2.02                     | 0.74              |
| 24:BA:1203:G:C4   | 24:BA:1241:A:H8    | 2.05                     | 0.74              |
| 24:BA:1270:C:C4'  | 24:BA:1271:G:H5''  | 2.18                     | 0.74              |
| 24:BA:2210:G:O6   | 27:BD:150:LYS:HA   | 1.87                     | 0.74              |
| 24:BA:2227:A:H2'  | 24:BA:2228:G:O4'   | 1.86                     | 0.74              |
| 24:BA:2619:C:C5'  | 28:BE:152:LYS:HA   | 2.18                     | 0.74              |
| 24:BA:2655:G:N3   | 24:BA:2655:G:H2'   | 2.03                     | 0.74              |
| 24:BA:2661:G:H2'  | 24:BA:2662:A:C8    | 2.19                     | 0.74              |
| 24:BA:2718:G:H2'  | 24:BA:2719:G:C8    | 2.22                     | 0.74              |
| 24:BA:2833:G:N3   | 24:BA:2833:G:H2'   | 2.03                     | 0.74              |
| 29:BF:41:LEU:HB2  | 29:BF:44:ARG:NH1   | 2.02                     | 0.74              |
| 29:BF:176:LEU:CG  | 29:BF:178:PRO:HD2  | 2.17                     | 0.74              |
| 29:BF:184:TYR:HD2 | 29:BF:184:TYR:H    | 1.33                     | 0.74              |
| 30:BG:88:ILE:HG22 | 30:BG:88:ILE:O     | 1.88                     | 0.74              |
| 30:BG:174:GLU:O   | 30:BG:179:PRO:HD3  | 1.88                     | 0.74              |
| 32:BK:9:LEU:HD23  | 32:BK:17:GLN:HE22  | 1.49                     | 0.74              |
| 36:BO:74:GLU:CA   | 36:BO:107:LYS:HD3  | 2.18                     | 0.74              |
| 37:BP:75:THR:HG22 | 37:BP:77:LYS:N     | 2.02                     | 0.74              |
| 38:BQ:55:ALA:HA   | 38:BQ:80:PHE:CD1   | 2.23                     | 0.74              |
| 38:BQ:94:TYR:C    | 38:BQ:117:VAL:HG12 | 2.13                     | 0.74              |
| 39:BR:95:HIS:CA   | 39:BR:99:LYS:HB2   | 2.17                     | 0.74              |
| 43:BV:69:LEU:HD23 | 43:BV:107:LEU:CD2  | 2.15                     | 0.74              |
| 43:BV:82:LEU:CD1  | 43:BV:84:ARG:HG3   | 2.18                     | 0.74              |
| 50:B3:42:PHE:O    | 50:B3:61:ARG:NH1   | 2.21                     | 0.74              |
| 53:B6:43:THR:HG23 | 53:B6:46:VAL:HG21  | 1.67                     | 0.74              |
| 1:AA:236:G:H3'    | 1:AA:237:C:H6      | 1.52                     | 0.74              |
| 1:AA:474:G:P      | 18:AS:81:ARG:HA    | 2.27                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:894:G:C4     | 1:AA:895:G:C8      | 2.76                     | 0.74              |
| 1:AA:1206:G:H4'   | 5:AF:192:THR:O     | 1.87                     | 0.74              |
| 1:AA:1273:G:H3'   | 1:AA:1274:G:C8     | 2.23                     | 0.74              |
| 1:AA:1284:C:H2'   | 1:AA:1285:A:N7     | 2.02                     | 0.74              |
| 1:AA:1290:G:H4'   | 9:AJ:37:ASN:ND2    | 2.03                     | 0.74              |
| 1:AA:1323:G:H4'   | 1:AA:1362(A):C:C4  | 2.23                     | 0.74              |
| 3:AC:16:U:H4'     | 3:AC:18:G:H5''     | 1.68                     | 0.74              |
| 4:AE:174:VAL:C    | 4:AE:178:ARG:HG2   | 2.13                     | 0.74              |
| 7:AH:81:GLU:HB3   | 7:AH:90:VAL:HG22   | 1.70                     | 0.74              |
| 8:AI:99:ALA:HB2   | 20:AU:31:LEU:HD11  | 1.68                     | 0.74              |
| 9:AJ:107:ALA:O    | 9:AJ:110:GLN:HB2   | 1.88                     | 0.74              |
| 9:AJ:155:ARG:HA   | 9:AJ:155:ARG:NE    | 2.02                     | 0.74              |
| 13:AN:57:THR:CG2  | 13:AN:60:ALA:H     | 1.97                     | 0.74              |
| 14:AO:83:VAL:HG22 | 14:AO:84:LEU:N     | 2.02                     | 0.74              |
| 15:AP:29:ARG:HH12 | 15:AP:66:LEU:HB3   | 1.53                     | 0.74              |
| 16:AQ:42:ILE:O    | 16:AQ:43:CYS:C     | 2.30                     | 0.74              |
| 18:AS:23:ASP:O    | 18:AS:25:ARG:N     | 2.21                     | 0.74              |
| 21:AV:11:VAL:HG11 | 21:AV:41:VAL:HG22  | 1.70                     | 0.74              |
| 21:AV:22:LEU:CG   | 21:AV:25:LYS:HZ1   | 1.99                     | 0.74              |
| 22:AW:40:ALA:HB2  | 22:AW:55:ILE:CG2   | 2.18                     | 0.74              |
| 24:BA:126:A:N7    | 24:BA:127:A:C4     | 2.56                     | 0.74              |
| 24:BA:197:A:H61   | 24:BA:248:G:H22    | 1.30                     | 0.74              |
| 24:BA:783:A:H3'   | 27:BD:227:ASN:HD21 | 1.53                     | 0.74              |
| 24:BA:953:A:H2'   | 24:BA:954:G:C5'    | 2.09                     | 0.74              |
| 24:BA:1156:A:OP1  | 41:BT:55:ARG:NE    | 2.20                     | 0.74              |
| 24:BA:1160:G:H2'  | 24:BA:1161:C:H5    | 1.53                     | 0.74              |
| 24:BA:1269:A:H61  | 24:BA:2011:U:H3    | 1.32                     | 0.74              |
| 24:BA:1359:A:H62  | 24:BA:1371:G:N2    | 1.81                     | 0.74              |
| 24:BA:1476:C:C5   | 24:BA:1477:A:N6    | 2.56                     | 0.74              |
| 24:BA:1566:A:C4   | 27:BD:215:LEU:HD22 | 2.22                     | 0.74              |
| 24:BA:1602:U:C6   | 24:BA:1602:U:C3'   | 2.69                     | 0.74              |
| 24:BA:1602:U:O5'  | 24:BA:1602:U:C2    | 2.41                     | 0.74              |
| 24:BA:1782:C:N4   | 24:BA:2587:A:C6    | 2.56                     | 0.74              |
| 24:BA:1913:A:C6   | 24:BA:1918:A:N7    | 2.56                     | 0.74              |
| 24:BA:2092:U:H5   | 24:BA:2227:A:N6    | 1.86                     | 0.74              |
| 24:BA:2491:U:C6   | 24:BA:2492:U:C5'   | 2.70                     | 0.74              |
| 25:BB:78:A:C2'    | 25:BB:79:C:H5'     | 2.18                     | 0.74              |
| 27:BD:85:ASP:C    | 27:BD:87:ASN:H     | 1.93                     | 0.74              |
| 27:BD:87:ASN:O    | 27:BD:88:ARG:HB2   | 1.87                     | 0.74              |
| 27:BD:95:LEU:O    | 27:BD:102:LYS:HB3  | 1.88                     | 0.74              |
| 28:BE:102:VAL:HA  | 28:BE:200:GLU:OE1  | 1.88                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 30:BG:111:LEU:HB3 | 30:BG:112:PRO:HD3 | 1.68                     | 0.74              |
| 35:BN:63:VAL:HG23 | 35:BN:81:ASP:HA   | 1.69                     | 0.74              |
| 36:BO:121:LYS:H   | 36:BO:137:LYS:CB  | 2.01                     | 0.74              |
| 37:BP:59:ARG:NH2  | 46:BY:177:PRO:HB3 | 2.02                     | 0.74              |
| 37:BP:96:VAL:HG12 | 37:BP:98:LYS:HZ1  | 1.52                     | 0.74              |
| 43:BV:77:ASP:O    | 43:BV:102:HIS:O   | 2.05                     | 0.74              |
| 45:BX:9:LYS:HB2   | 45:BX:110:GLU:CD  | 2.12                     | 0.74              |
| 45:BX:47:LYS:HB2  | 45:BX:49:VAL:CG2  | 2.18                     | 0.74              |
| 45:BX:98:VAL:O    | 45:BX:99:CYS:SG   | 2.45                     | 0.74              |
| 46:BY:122:ARG:CG  | 46:BY:171:ILE:HA  | 2.17                     | 0.74              |
| 47:BZ:37:LEU:HD21 | 47:BZ:60:PHE:CA   | 2.18                     | 0.74              |
| 47:BZ:72:ARG:HB2  | 47:BZ:78:TYR:CD1  | 2.22                     | 0.74              |
| 53:B6:41:ARG:CB   | 53:B6:41:ARG:NH1  | 2.51                     | 0.74              |
| 1:AA:52:G:H2'     | 1:AA:53:A:O4'     | 1.87                     | 0.74              |
| 1:AA:110:C:O2'    | 1:AA:111:G:H5'    | 1.88                     | 0.74              |
| 1:AA:438:G:N2     | 1:AA:495:A:H8     | 1.86                     | 0.74              |
| 1:AA:517:G:O2'    | 1:AA:530:G:H4'    | 1.87                     | 0.74              |
| 1:AA:949:A:H1'    | 1:AA:1364:U:H3    | 1.51                     | 0.74              |
| 1:AA:1151:A:OP1   | 12:AM:41:PRO:HA   | 1.87                     | 0.74              |
| 1:AA:1479:C:O2'   | 1:AA:1480:G:H5'   | 1.87                     | 0.74              |
| 2:A1:34:U:H2'     | 2:A1:35:U:C6      | 2.22                     | 0.74              |
| 3:AC:57:G:H1'     | 30:BG:82:LEU:HD11 | 1.70                     | 0.74              |
| 4:AE:82:ARG:H     | 4:AE:94:ASN:HD21  | 1.35                     | 0.74              |
| 4:AE:91:PRO:HD3   | 4:AE:154:LEU:HD13 | 1.70                     | 0.74              |
| 5:AF:186:PHE:HA   | 5:AF:198:VAL:O    | 1.88                     | 0.74              |
| 6:AG:8:VAL:O      | 6:AG:11:LEU:N     | 2.21                     | 0.74              |
| 6:AG:194:LEU:HB3  | 6:AG:196:LEU:HD11 | 1.70                     | 0.74              |
| 6:AG:200:GLU:HG3  | 6:AG:201:GLN:N    | 2.01                     | 0.74              |
| 8:AI:6:VAL:HG12   | 8:AI:63:TYR:O     | 1.87                     | 0.74              |
| 9:AJ:51:GLN:OE1   | 9:AJ:58:PRO:HD3   | 1.88                     | 0.74              |
| 12:AM:23:ILE:CG1  | 12:AM:85:LEU:HB3  | 2.18                     | 0.74              |
| 16:AQ:55:GLY:O    | 16:AQ:56:VAL:C    | 2.31                     | 0.74              |
| 18:AS:35:LYS:NZ   | 18:AS:37:GLY:N    | 2.36                     | 0.74              |
| 20:AU:56:THR:HB   | 20:AU:58:LEU:HD12 | 1.69                     | 0.74              |
| 24:BA:2:G:H2'     | 24:BA:3:U:C6      | 2.22                     | 0.74              |
| 24:BA:26:G:H22    | 24:BA:27:G:H21    | 1.36                     | 0.74              |
| 24:BA:84:A:O2'    | 24:BA:103:A:N1    | 2.20                     | 0.74              |
| 24:BA:456:C:C5    | 44:BW:68:ARG:NH1  | 2.55                     | 0.74              |
| 24:BA:623:G:H2'   | 24:BA:624:C:H5''  | 1.68                     | 0.74              |
| 24:BA:675:A:H5''  | 29:BF:67:GLN:CD   | 2.12                     | 0.74              |
| 24:BA:1053:C:H2'  | 24:BA:1054:A:C8   | 2.23                     | 0.74              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1252:G:H22   | 41:BT:37:GLU:CG    | 2.00                     | 0.74              |
| 24:BA:1258:C:H2'   | 24:BA:1259:G:H8    | 1.51                     | 0.74              |
| 24:BA:1475:G:H1    | 24:BA:1477:A:H61   | 1.33                     | 0.74              |
| 24:BA:2323:G:C2    | 24:BA:2324:C:C4    | 2.75                     | 0.74              |
| 24:BA:2387:U:C1'   | 47:BZ:41:ARG:NH2   | 2.50                     | 0.74              |
| 24:BA:2408:U:O2'   | 24:BA:2409:G:H5'   | 1.88                     | 0.74              |
| 24:BA:2619:C:O2'   | 24:BA:2620:C:H5'   | 1.86                     | 0.74              |
| 24:BA:2805:G:C3'   | 24:BA:2807:G:H5''  | 2.14                     | 0.74              |
| 25:BB:25:A:H2'     | 25:BB:26:A:C8      | 2.23                     | 0.74              |
| 25:BB:58:A:H8      | 25:BB:58:A:O5'     | 1.69                     | 0.74              |
| 26:BC:19:ILE:HG23  | 26:BC:223:ARG:CG   | 2.18                     | 0.74              |
| 27:BD:133:LEU:HB2  | 27:BD:187:GLY:HA2  | 1.69                     | 0.74              |
| 28:BE:51:PHE:CZ    | 28:BE:75:VAL:HG22  | 2.23                     | 0.74              |
| 30:BG:74:LYS:HG2   | 30:BG:75:LYS:CD    | 2.18                     | 0.74              |
| 30:BG:113:ARG:HD3  | 30:BG:139:LEU:HD21 | 1.70                     | 0.74              |
| 30:BG:125:PHE:HA   | 30:BG:132:ASN:HB3  | 1.70                     | 0.74              |
| 31:BH:26:VAL:HG21  | 31:BH:75:ALA:CB    | 2.18                     | 0.74              |
| 34:BM:55:VAL:HB    | 34:BM:130:HIS:CE1  | 2.21                     | 0.74              |
| 34:BM:107:LEU:HD22 | 34:BM:117:PHE:CE1  | 2.22                     | 0.74              |
| 36:BO:116:GLY:HA3  | 36:BO:121:LYS:O    | 1.88                     | 0.74              |
| 36:BO:129:ALA:C    | 36:BO:130:PHE:HD2  | 1.94                     | 0.74              |
| 43:BV:70:TYR:CZ    | 43:BV:72:LYS:HB2   | 2.22                     | 0.74              |
| 45:BX:12:THR:HG22  | 45:BX:13:VAL:N     | 2.01                     | 0.74              |
| 46:BY:168:GLU:OE1  | 46:BY:169:GLU:HA   | 1.88                     | 0.74              |
| 52:B5:25:LYS:CE    | 54:B7:35:GLN:HB3   | 2.18                     | 0.74              |
| 1:AA:88:C:O2'      | 1:AA:89:U:C6       | 2.41                     | 0.73              |
| 1:AA:92:G:H2'      | 1:AA:93:U:O4'      | 1.87                     | 0.73              |
| 1:AA:93:U:H2'      | 1:AA:95:G:C8       | 2.22                     | 0.73              |
| 1:AA:479:C:O5'     | 1:AA:479:C:H6      | 1.71                     | 0.73              |
| 1:AA:1346:A:N6     | 1:AA:1374:A:H3'    | 2.03                     | 0.73              |
| 1:AA:1382:C:H2'    | 1:AA:1383:C:C6     | 2.23                     | 0.73              |
| 3:AC:21:A:N6       | 3:AC:46:G:H22      | 1.85                     | 0.73              |
| 3:AB:62:C:H2'      | 3:AB:63:G:H8       | 1.51                     | 0.73              |
| 4:AE:15:VAL:HG23   | 4:AE:16:HIS:ND1    | 2.03                     | 0.73              |
| 6:AG:152:SER:O     | 6:AG:154:ASN:N     | 2.20                     | 0.73              |
| 7:AH:11:ILE:CG2    | 7:AH:12:LEU:H      | 2.01                     | 0.73              |
| 11:AL:19:LEU:HD22  | 11:AL:59:PHE:HD2   | 1.51                     | 0.73              |
| 11:AL:85:LEU:HD23  | 11:AL:96:LEU:CD1   | 2.15                     | 0.73              |
| 12:AM:50:ILE:HA    | 12:AM:60:ARG:CG    | 2.11                     | 0.73              |
| 13:AN:110:ASP:OD1  | 20:AU:85:LEU:HB3   | 1.87                     | 0.73              |
| 14:AO:41:ARG:HB3   | 14:AO:41:ARG:HH11  | 1.53                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 16:AQ:15:LYS:O    | 16:AQ:16:PHE:HB2   | 1.87                     | 0.73              |
| 21:AV:15:LEU:HG   | 21:AV:16:LEU:H     | 1.51                     | 0.73              |
| 21:AV:45:VAL:HA   | 21:AV:67:VAL:HG21  | 1.70                     | 0.73              |
| 22:AW:44:ALA:HB1  | 22:AW:91:LEU:HB2   | 1.70                     | 0.73              |
| 22:AW:72:LEU:CD2  | 22:AW:76:ALA:HB1   | 2.18                     | 0.73              |
| 24:BA:244:A:N6    | 24:BA:245:G:N3     | 2.36                     | 0.73              |
| 24:BA:545:G:C1'   | 24:BA:549:G:H22    | 1.97                     | 0.73              |
| 24:BA:580:C:H2'   | 24:BA:581:C:C6     | 2.23                     | 0.73              |
| 24:BA:624:C:C6    | 24:BA:624:C:C3'    | 2.71                     | 0.73              |
| 24:BA:691:C:C1'   | 27:BD:45:ASN:HD21  | 2.01                     | 0.73              |
| 24:BA:824:A:H2'   | 24:BA:825:C:C5     | 2.23                     | 0.73              |
| 24:BA:861:A:C6    | 24:BA:917:A:N3     | 2.56                     | 0.73              |
| 24:BA:1664:A:H2'  | 24:BA:1665:A:H8    | 1.51                     | 0.73              |
| 25:BB:44:G:H21    | 25:BB:48:A:H1'     | 1.51                     | 0.73              |
| 27:BD:154:LYS:O   | 27:BD:155:LEU:HB3  | 1.88                     | 0.73              |
| 27:BD:158:ALA:C   | 27:BD:160:GLY:H    | 1.94                     | 0.73              |
| 28:BE:4:ILE:CG2   | 28:BE:30:PRO:HG3   | 2.18                     | 0.73              |
| 28:BE:49:LEU:HD12 | 28:BE:51:PHE:H     | 1.53                     | 0.73              |
| 29:BF:110:LEU:O   | 29:BF:114:VAL:HG23 | 1.88                     | 0.73              |
| 30:BG:39:ILE:HG23 | 30:BG:157:ILE:CG1  | 2.17                     | 0.73              |
| 32:BK:101:LEU:HG  | 32:BK:102:SER:N    | 2.03                     | 0.73              |
| 33:BL:21:PRO:HG2  | 33:BL:22:PRO:HD3   | 1.69                     | 0.73              |
| 34:BM:13:TRP:O    | 34:BM:138:LEU:HD12 | 1.87                     | 0.73              |
| 40:BS:32:TYR:O    | 40:BS:47:GLY:CA    | 2.32                     | 0.73              |
| 41:BT:94:ASN:HD22 | 42:BU:6:LYS:HE3    | 1.51                     | 0.73              |
| 42:BU:21:ARG:HG3  | 42:BU:21:ARG:HH11  | 1.52                     | 0.73              |
| 42:BU:68:LYS:HZ3  | 42:BU:95:LEU:CD1   | 2.00                     | 0.73              |
| 45:BX:1:MET:CA    | 45:BX:33:LYS:HE3   | 2.17                     | 0.73              |
| 50:B3:43:TYR:HA   | 50:B3:61:ARG:CZ    | 2.16                     | 0.73              |
| 52:B5:44:ARG:HB2  | 52:B5:47:THR:HG21  | 1.70                     | 0.73              |
| 53:B6:42:LEU:HB3  | 53:B6:44:PRO:CG    | 2.17                     | 0.73              |
| 1:AA:49:U:C5      | 1:AA:361:G:N2      | 2.56                     | 0.73              |
| 1:AA:50:A:N6      | 1:AA:361:G:C4'     | 2.50                     | 0.73              |
| 1:AA:1064:G:N3    | 1:AA:1066:C:N3     | 2.36                     | 0.73              |
| 1:AA:1364:U:O2'   | 1:AA:1365:G:OP1    | 2.06                     | 0.73              |
| 3:AD:15:G:C6      | 3:AD:48:C:N4       | 2.55                     | 0.73              |
| 4:AE:171:ALA:HA   | 4:AE:174:VAL:HB    | 1.70                     | 0.73              |
| 9:AJ:105:VAL:O    | 9:AJ:108:ALA:HB3   | 1.88                     | 0.73              |
| 11:AL:58:HIS:CD2  | 11:AL:59:PHE:HD1   | 2.06                     | 0.73              |
| 12:AM:3:LYS:HE3   | 12:AM:77:PRO:HD3   | 1.69                     | 0.73              |
| 15:AP:13:LYS:HB3  | 15:AP:17:VAL:HG11  | 1.69                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 16:AQ:29:ARG:HB3  | 16:AQ:29:ARG:NH1   | 2.02                     | 0.73              |
| 17:AR:36:ILE:HA   | 17:AR:59:MET:HE1   | 1.70                     | 0.73              |
| 19:AT:34:LYS:HE2  | 19:AT:35:VAL:O     | 1.89                     | 0.73              |
| 21:AV:22:LEU:O    | 21:AV:22:LEU:HD23  | 1.87                     | 0.73              |
| 22:AW:87:LYS:HA   | 22:AW:87:LYS:CE    | 2.18                     | 0.73              |
| 24:BA:75:G:H4'    | 48:B1:50:ARG:HH11  | 1.51                     | 0.73              |
| 24:BA:81:G:H4'    | 24:BA:294:A:H2     | 1.52                     | 0.73              |
| 24:BA:154:G:H2'   | 24:BA:155:C:C6     | 2.23                     | 0.73              |
| 24:BA:531:C:H3'   | 24:BA:532:A:O4'    | 1.88                     | 0.73              |
| 24:BA:571:A:C8    | 24:BA:575:A:N6     | 2.55                     | 0.73              |
| 24:BA:637:A:H2    | 24:BA:651:G:H5''   | 1.53                     | 0.73              |
| 24:BA:752:A:N6    | 24:BA:1781:C:C1'   | 2.51                     | 0.73              |
| 24:BA:805:G:O6    | 24:BA:2068:U:P     | 2.45                     | 0.73              |
| 24:BA:861:A:C5    | 24:BA:917:A:C2     | 2.75                     | 0.73              |
| 24:BA:1517:G:H21  | 24:BA:1518:C:H1'   | 1.53                     | 0.73              |
| 24:BA:1864:U:H2'  | 24:BA:1869:G:C5'   | 2.18                     | 0.73              |
| 24:BA:1943:U:H4'  | 24:BA:1944:U:C5'   | 2.18                     | 0.73              |
| 24:BA:1967:C:O2   | 24:BA:1967:C:H2'   | 1.86                     | 0.73              |
| 24:BA:1987:G:C2   | 24:BA:1988:C:C5    | 2.76                     | 0.73              |
| 24:BA:2052:G:N9   | 28:BE:150:VAL:HG23 | 2.03                     | 0.73              |
| 24:BA:2121:G:H2'  | 24:BA:2122:U:C6    | 2.23                     | 0.73              |
| 24:BA:2209:C:H2'  | 24:BA:2210:G:H3'   | 1.69                     | 0.73              |
| 24:BA:2285:C:O4'  | 24:BA:2288:A:N6    | 2.20                     | 0.73              |
| 24:BA:2447:G:O6   | 24:BA:2452:C:N4    | 2.20                     | 0.73              |
| 24:BA:2469:A:C2   | 24:BA:2470:G:H1'   | 2.23                     | 0.73              |
| 24:BA:2670:A:H5'' | 28:BE:206:LYS:NZ   | 2.03                     | 0.73              |
| 24:BA:2723:C:H4'  | 38:BQ:2:ARG:O      | 1.88                     | 0.73              |
| 24:BA:2725:A:C2'  | 24:BA:2726:U:H3'   | 2.16                     | 0.73              |
| 24:BA:2889:C:H2'  | 24:BA:2891:G:H8    | 1.46                     | 0.73              |
| 26:BC:34:THR:HG22 | 26:BC:34:THR:O     | 1.88                     | 0.73              |
| 26:BC:59:ARG:HH11 | 26:BC:164:ARG:HG2  | 1.52                     | 0.73              |
| 29:BF:41:LEU:HB3  | 29:BF:184:TYR:HE1  | 1.53                     | 0.73              |
| 30:BG:45:GLU:C    | 30:BG:47:LYS:H     | 1.94                     | 0.73              |
| 31:BH:154:PRO:O   | 31:BH:155:SER:HB3  | 1.85                     | 0.73              |
| 32:BK:77:LEU:HD12 | 32:BK:142:VAL:CG1  | 2.17                     | 0.73              |
| 33:BL:71:THR:OG1  | 33:BL:114:ASP:HB3  | 1.87                     | 0.73              |
| 35:BN:23:ARG:O    | 35:BN:39:ILE:HB    | 1.88                     | 0.73              |
| 35:BN:63:VAL:O    | 35:BN:64:ARG:HB3   | 1.88                     | 0.73              |
| 35:BN:76:ALA:HA   | 40:BS:77:PRO:CG    | 2.18                     | 0.73              |
| 36:BO:13:ASN:ND2  | 36:BO:14:LYS:N     | 2.35                     | 0.73              |
| 39:BR:76:LYS:HE3  | 39:BR:77:ALA:HB2   | 1.70                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 41:BT:59:ARG:NH1  | 41:BT:59:ARG:HB3   | 2.04                     | 0.73              |
| 41:BT:63:VAL:O    | 41:BT:64:ARG:C     | 2.30                     | 0.73              |
| 44:BW:9:LEU:HD12  | 44:BW:9:LEU:N      | 2.03                     | 0.73              |
| 44:BW:60:ARG:HD3  | 44:BW:62:LYS:HZ3   | 1.52                     | 0.73              |
| 48:B1:14:VAL:O    | 48:B1:17:GLU:HB2   | 1.88                     | 0.73              |
| 50:B3:10:VAL:H    | 50:B3:11:PRO:HD3   | 1.52                     | 0.73              |
| 1:AA:122:G:N2     | 1:AA:123:C:H1'     | 2.04                     | 0.73              |
| 1:AA:362:G:H8     | 14:AO:34:ARG:NH2   | 1.80                     | 0.73              |
| 1:AA:510:A:N3     | 1:AA:543:C:H1'     | 2.03                     | 0.73              |
| 1:AA:553:A:H2'    | 1:AA:554:C:H6      | 1.51                     | 0.73              |
| 1:AA:582:U:H5''   | 17:AR:68:ARG:HH12  | 1.52                     | 0.73              |
| 1:AA:652:U:H4'    | 1:AA:653:A:OP1     | 1.87                     | 0.73              |
| 1:AA:1011:G:H2'   | 1:AA:1012:U:H5'    | 1.69                     | 0.73              |
| 1:AA:1048:G:O4'   | 1:AA:1215:G:H4'    | 1.87                     | 0.73              |
| 1:AA:1049:U:H1'   | 1:AA:1201:A:O4'    | 1.87                     | 0.73              |
| 1:AA:1142:G:H2'   | 1:AA:1143:G:H8     | 1.53                     | 0.73              |
| 1:AA:1468:A:H2'   | 1:AA:1469:G:C5'    | 2.18                     | 0.73              |
| 3:AD:9:A:C2       | 3:AD:46:G:H1'      | 2.23                     | 0.73              |
| 4:AE:14:GLY:O     | 4:AE:15:VAL:HG13   | 1.88                     | 0.73              |
| 4:AE:80:ILE:HD11  | 4:AE:208:ILE:HG23  | 1.68                     | 0.73              |
| 4:AE:102:LEU:HD12 | 4:AE:102:LEU:N     | 2.01                     | 0.73              |
| 5:AF:76:VAL:O     | 5:AF:83:ARG:HG2    | 1.88                     | 0.73              |
| 5:AF:152:ILE:HG22 | 5:AF:167:TRP:HB2   | 1.70                     | 0.73              |
| 8:AI:41:GLU:HB3   | 8:AI:62:TRP:HE3    | 1.50                     | 0.73              |
| 9:AJ:87:VAL:HG22  | 9:AJ:151:TYR:HB3   | 1.68                     | 0.73              |
| 10:AK:93:VAL:O    | 10:AK:133:LEU:HG   | 1.89                     | 0.73              |
| 11:AL:73:GLN:O    | 11:AL:77:ILE:HG13  | 1.88                     | 0.73              |
| 12:AM:8:LEU:CD1   | 12:AM:94:VAL:HG11  | 2.18                     | 0.73              |
| 13:AN:67:ASP:O    | 13:AN:71:LYS:HG2   | 1.86                     | 0.73              |
| 17:AR:71:GLN:HB2  | 17:AR:78:TYR:CE1   | 2.24                     | 0.73              |
| 19:AT:28:PRO:HB2  | 19:AT:33:GLY:O     | 1.88                     | 0.73              |
| 20:AU:18:ARG:NH2  | 20:AU:21:LYS:HB2   | 2.02                     | 0.73              |
| 24:BA:173:G:H21   | 24:BA:174:C:H1'    | 1.52                     | 0.73              |
| 24:BA:290:G:OP2   | 24:BA:351:G:N2     | 2.21                     | 0.73              |
| 24:BA:782:A:H5''  | 24:BA:783:A:OP1    | 1.87                     | 0.73              |
| 24:BA:983:A:H2'   | 24:BA:984:A:C8     | 2.22                     | 0.73              |
| 24:BA:1534:G:N2   | 24:BA:1537:C:H5    | 1.85                     | 0.73              |
| 24:BA:1566:A:N1   | 27:BD:215:LEU:HD13 | 2.03                     | 0.73              |
| 24:BA:1797:C:C2   | 24:BA:1798:U:C5    | 2.76                     | 0.73              |
| 26:BC:114:VAL:HA  | 26:BC:144:THR:O    | 1.87                     | 0.73              |
| 27:BD:72:LYS:HD3  | 27:BD:75:ILE:HD12  | 1.68                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 27:BD:138:VAL:HA  | 27:BD:165:ILE:CG2  | 2.18                     | 0.73              |
| 28:BE:66:HIS:O    | 28:BE:67:PHE:C     | 2.32                     | 0.73              |
| 28:BE:182:LEU:CD2 | 28:BE:184:VAL:HG13 | 2.18                     | 0.73              |
| 30:BG:6:ALA:O     | 30:BG:9:ARG:HB3    | 1.89                     | 0.73              |
| 30:BG:138:GLN:OE1 | 30:BG:152:LEU:HD12 | 1.88                     | 0.73              |
| 31:BH:6:ARG:HD2   | 31:BH:66:GLY:HA2   | 1.69                     | 0.73              |
| 33:BL:102:GLU:O   | 33:BL:106:GLU:HG3  | 1.88                     | 0.73              |
| 35:BN:38:VAL:HA   | 35:BN:59:LYS:O     | 1.88                     | 0.73              |
| 40:BS:33:LYS:HD3  | 40:BS:47:GLY:HA3   | 1.70                     | 0.73              |
| 40:BS:35:LYS:O    | 40:BS:36:GLU:C     | 2.30                     | 0.73              |
| 40:BS:103:ARG:C   | 40:BS:105:LEU:N    | 2.42                     | 0.73              |
| 41:BT:81:HIS:C    | 41:BT:117:GLN:NE2  | 2.46                     | 0.73              |
| 41:BT:94:ASN:HD22 | 42:BU:6:LYS:CE     | 2.00                     | 0.73              |
| 46:BY:4:ARG:CG    | 46:BY:5:LEU:H      | 1.98                     | 0.73              |
| 49:B2:20:LYS:O    | 49:B2:23:LEU:HB2   | 1.87                     | 0.73              |
| 52:B5:19:ARG:CZ   | 52:B5:41:PRO:HG3   | 2.17                     | 0.73              |
| 1:AA:174:C:O2'    | 1:AA:175:C:H5'     | 1.88                     | 0.73              |
| 1:AA:410:G:H1'    | 1:AA:432:A:N6      | 2.02                     | 0.73              |
| 1:AA:610:G:C2'    | 1:AA:611:A:H5'     | 2.18                     | 0.73              |
| 1:AA:967:C:H2'    | 1:AA:968:A:N7      | 2.03                     | 0.73              |
| 3:AC:17:C:H5'     | 3:AC:18:G:O5'      | 1.87                     | 0.73              |
| 5:AF:125:GLU:OE1  | 5:AF:190:ARG:HB2   | 1.87                     | 0.73              |
| 8:AI:98:LEU:CD2   | 8:AI:101:ALA:HB2   | 2.17                     | 0.73              |
| 15:AP:59:TYR:CE2  | 15:AP:60:VAL:HG23  | 2.24                     | 0.73              |
| 24:BA:282:A:C5    | 24:BA:283:A:H4'    | 2.24                     | 0.73              |
| 24:BA:292:C:C6    | 24:BA:293:U:N3     | 2.56                     | 0.73              |
| 24:BA:531:C:N3    | 41:BT:38:THR:HG22  | 2.03                     | 0.73              |
| 24:BA:558:G:OP1   | 34:BM:112:LEU:HG   | 1.88                     | 0.73              |
| 24:BA:563:G:N2    | 41:BT:34:LYS:HE2   | 2.04                     | 0.73              |
| 24:BA:618:G:H2'   | 24:BA:618(A):C:C6  | 2.23                     | 0.73              |
| 24:BA:817:C:H2'   | 24:BA:818:G:O4'    | 1.87                     | 0.73              |
| 24:BA:917:A:C8    | 24:BA:918:A:H5''   | 2.23                     | 0.73              |
| 24:BA:983:A:C2    | 24:BA:984:A:C2     | 2.77                     | 0.73              |
| 24:BA:1163:G:C2   | 24:BA:1164:G:C8    | 2.76                     | 0.73              |
| 24:BA:1222:C:O2'  | 24:BA:1223:C:H5'   | 1.89                     | 0.73              |
| 24:BA:1270:C:H4'  | 24:BA:1271:G:H5''  | 1.68                     | 0.73              |
| 24:BA:1275:A:N7   | 24:BA:1296:G:H1'   | 2.03                     | 0.73              |
| 24:BA:1302:A:H5'  | 24:BA:1608:A:OP1   | 1.88                     | 0.73              |
| 24:BA:1556:C:H2'  | 24:BA:1557:C:H6    | 1.53                     | 0.73              |
| 24:BA:2652:C:H2'  | 24:BA:2653:U:O4'   | 1.89                     | 0.73              |
| 24:BA:2720:U:H2'  | 24:BA:2720:U:O2    | 1.88                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:2781:A:C8   | 24:BA:2781:A:C3'  | 2.71                     | 0.73              |
| 24:BA:2888:C:H2'  | 24:BA:2889:C:C6   | 2.22                     | 0.73              |
| 27:BD:5:LYS:C     | 27:BD:82:ILE:HD12 | 2.13                     | 0.73              |
| 28:BE:13:ARG:NH2  | 28:BE:20:ALA:CB   | 2.49                     | 0.73              |
| 35:BN:64:ARG:HG3  | 35:BN:65:THR:N    | 2.01                     | 0.73              |
| 35:BN:75:SER:C    | 40:BS:77:PRO:HG2  | 2.13                     | 0.73              |
| 37:BP:75:THR:HG21 | 37:BP:88:GLY:O    | 1.86                     | 0.73              |
| 40:BS:48:ILE:HG12 | 40:BS:49:VAL:O    | 1.88                     | 0.73              |
| 41:BT:61:TRP:O    | 41:BT:62:ILE:C    | 2.30                     | 0.73              |
| 43:BV:18:ARG:HB2  | 43:BV:18:ARG:HH21 | 1.53                     | 0.73              |
| 44:BW:63:LYS:NZ   | 44:BW:63:LYS:HA   | 2.02                     | 0.73              |
| 51:B4:18:ALA:O    | 51:B4:21:SER:OG   | 2.04                     | 0.73              |
| 1:AA:195:A:H4'    | 22:AW:68:LYS:HZ3  | 1.52                     | 0.73              |
| 1:AA:526:C:H42    | 1:AA:535:A:H2     | 1.35                     | 0.73              |
| 1:AA:749:C:O2     | 1:AA:749:C:H2'    | 1.86                     | 0.73              |
| 1:AA:1148:U:O2    | 1:AA:1148:U:H2'   | 1.87                     | 0.73              |
| 3:AD:41:C:H6      | 3:AD:41:C:H5'     | 1.54                     | 0.73              |
| 3:AB:74:C:N4      | 24:BA:2556:C:O4'  | 2.21                     | 0.73              |
| 4:AE:42:ILE:HD11  | 4:AE:202:PRO:CB   | 2.17                     | 0.73              |
| 4:AE:75:LYS:HA    | 4:AE:75:LYS:NZ    | 2.03                     | 0.73              |
| 4:AE:77:ALA:HB2   | 4:AE:211:ILE:CD1  | 2.19                     | 0.73              |
| 7:AH:63:ARG:HA    | 7:AH:66:MET:HG2   | 1.68                     | 0.73              |
| 9:AJ:27:ILE:HG12  | 9:AJ:43:PHE:CD1   | 2.23                     | 0.73              |
| 9:AJ:47:CYS:HA    | 9:AJ:50:ILE:CD1   | 2.18                     | 0.73              |
| 13:AN:32:ILE:HD11 | 13:AN:68:ALA:O    | 1.88                     | 0.73              |
| 14:AO:24:VAL:CG2  | 14:AO:97:ARG:HG2  | 2.17                     | 0.73              |
| 14:AO:84:LEU:HD23 | 14:AO:84:LEU:C    | 2.14                     | 0.73              |
| 15:AP:27:LYS:HD2  | 15:AP:31:LYS:HZ3  | 1.52                     | 0.73              |
| 21:AV:33:THR:HG21 | 21:AV:49:ILE:HD12 | 1.69                     | 0.73              |
| 22:AW:64:ASP:O    | 22:AW:67:ALA:HB3  | 1.88                     | 0.73              |
| 24:BA:140:A:C2    | 24:BA:1408:C:H1'  | 2.24                     | 0.73              |
| 24:BA:220:G:N2    | 24:BA:265:A:H61   | 1.85                     | 0.73              |
| 24:BA:245:G:C5    | 24:BA:246:C:H5    | 2.06                     | 0.73              |
| 24:BA:546:C:H2'   | 24:BA:547:A:N9    | 2.03                     | 0.73              |
| 24:BA:627:A:H1'   | 24:BA:637:A:C6    | 2.23                     | 0.73              |
| 24:BA:691:C:O2'   | 27:BD:45:ASN:ND2  | 2.22                     | 0.73              |
| 24:BA:947:G:O5'   | 24:BA:947:G:H8    | 1.70                     | 0.73              |
| 24:BA:1081:U:H4'  | 33:BL:122:ALA:HB1 | 1.70                     | 0.73              |
| 24:BA:1649:G:H21  | 38:BQ:107:ASP:CB  | 1.89                     | 0.73              |
| 24:BA:1668:A:N3   | 24:BA:1669:A:N1   | 2.37                     | 0.73              |
| 24:BA:1949:G:O2'  | 24:BA:1950:G:H5'  | 1.89                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1999:C:H2'   | 24:BA:2000:G:O5'   | 1.87                     | 0.73              |
| 24:BA:2017:U:O2'   | 51:B4:8:LYS:O      | 2.03                     | 0.73              |
| 24:BA:2027:G:H1'   | 24:BA:2037:G:H22   | 1.52                     | 0.73              |
| 24:BA:2791:C:H5    | 24:BA:2893:G:N7    | 1.84                     | 0.73              |
| 25:BB:51:G:C2'     | 25:BB:52:A:O5'     | 2.35                     | 0.73              |
| 27:BD:60:ARG:HA    | 27:BD:62:TYR:CZ    | 2.23                     | 0.73              |
| 29:BF:31:HIS:ND1   | 36:BO:14:LYS:HE3   | 2.03                     | 0.73              |
| 29:BF:153:SER:OG   | 29:BF:190:GLU:HG2  | 1.87                     | 0.73              |
| 30:BG:9:ARG:HD2    | 30:BG:10:LYS:NZ    | 2.03                     | 0.73              |
| 30:BG:55:LYS:HG3   | 30:BG:148:MET:CB   | 2.19                     | 0.73              |
| 34:BM:95:PRO:HA    | 34:BM:98:VAL:HG23  | 1.70                     | 0.73              |
| 36:BO:122:PRO:CB   | 36:BO:138:LEU:N    | 2.51                     | 0.73              |
| 37:BP:137:TYR:CE2  | 46:BY:124:ILE:HD11 | 2.23                     | 0.73              |
| 38:BQ:65:LEU:HD23  | 38:BQ:65:LEU:C     | 2.13                     | 0.73              |
| 39:BR:6:ALA:HA     | 39:BR:9:ARG:NH1    | 2.04                     | 0.73              |
| 40:BS:79:HIS:HB2   | 40:BS:82:LEU:HB2   | 1.70                     | 0.73              |
| 41:BT:62:ILE:HG22  | 41:BT:63:VAL:N     | 2.01                     | 0.73              |
| 42:BU:62:LEU:CD1   | 42:BU:98:GLU:HG2   | 2.18                     | 0.73              |
| 45:BX:47:LYS:HZ2   | 45:BX:51:VAL:HG21  | 1.53                     | 0.73              |
| 48:B1:23:LYS:HE3   | 48:B1:52:ILE:HG12  | 1.71                     | 0.73              |
| 1:AA:266:G:H2'     | 19:AT:67:LYS:HZ2   | 1.50                     | 0.73              |
| 1:AA:598:U:O2'     | 10:AK:94:TYR:HB3   | 1.87                     | 0.73              |
| 1:AA:730:G:N7      | 1:AA:731:G:H1'     | 2.03                     | 0.73              |
| 1:AA:923:A:OP1     | 7:AH:21:ALA:HB2    | 1.88                     | 0.73              |
| 1:AA:1005:A:H2'    | 1:AA:1006:C:H5'    | 1.70                     | 0.73              |
| 1:AA:1047:G:H5''   | 16:AQ:4:LYS:HD3    | 1.70                     | 0.73              |
| 3:AC:75:C:OP1      | 24:BA:2602:A:OP1   | 2.06                     | 0.73              |
| 4:AE:31:TYR:HE2    | 4:AE:200:ILE:HG21  | 1.54                     | 0.73              |
| 4:AE:56:ARG:HH11   | 4:AE:56:ARG:CB     | 2.01                     | 0.73              |
| 4:AE:84:GLU:HG2    | 4:AE:234:PRO:CD    | 2.16                     | 0.73              |
| 5:AF:84:ILE:CG1    | 5:AF:101:LEU:HD22  | 2.18                     | 0.73              |
| 5:AF:85:ARG:HH21   | 5:AF:89:GLU:CB     | 2.01                     | 0.73              |
| 5:AF:88:ARG:O      | 5:AF:91:LEU:HB3    | 1.89                     | 0.73              |
| 6:AG:82:ALA:HB3    | 6:AG:89:THR:CG2    | 2.17                     | 0.73              |
| 6:AG:173:TRP:HA    | 6:AG:186:LEU:HD12  | 1.70                     | 0.73              |
| 8:AI:14:LEU:CD1    | 8:AI:18:GLN:HB3    | 2.18                     | 0.73              |
| 10:AK:8:ASP:O      | 10:AK:12:ARG:HG3   | 1.89                     | 0.73              |
| 10:AK:11:THR:O     | 10:AK:12:ARG:C     | 2.32                     | 0.73              |
| 12:AM:45:ARG:HH11  | 12:AM:45:ARG:CB    | 1.98                     | 0.73              |
| 12:AM:65:LEU:HD12  | 16:AQ:56:VAL:CG2   | 2.15                     | 0.73              |
| 14:AO:104:VAL:HG12 | 14:AO:105:TYR:CD1  | 2.24                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 17:AR:15:PHE:O     | 17:AR:17:ARG:N     | 2.21                     | 0.73              |
| 17:AR:36:ILE:HG13  | 17:AR:59:MET:HE1   | 1.69                     | 0.73              |
| 24:BA:373:U:O2     | 24:BA:400:G:N2     | 2.22                     | 0.73              |
| 24:BA:449:A:O2'    | 24:BA:450:G:H5'    | 1.89                     | 0.73              |
| 24:BA:556:G:H2'    | 24:BA:557:U:C6     | 2.23                     | 0.73              |
| 24:BA:808:G:H2'    | 24:BA:809:G:C8     | 2.24                     | 0.73              |
| 24:BA:881:G:N2     | 24:BA:896:A:H61    | 1.85                     | 0.73              |
| 24:BA:942:G:N1     | 24:BA:943:U:O4     | 2.22                     | 0.73              |
| 24:BA:1075:C:H2'   | 24:BA:1075:C:O2    | 1.88                     | 0.73              |
| 24:BA:1101:U:H6    | 24:BA:1101:U:OP1   | 1.70                     | 0.73              |
| 24:BA:1709:U:H1'   | 24:BA:2860:A:H1'   | 1.71                     | 0.73              |
| 24:BA:1814:G:C2    | 24:BA:1815:A:N6    | 2.56                     | 0.73              |
| 24:BA:2132:U:H5''  | 24:BA:2133:G:H5'   | 1.69                     | 0.73              |
| 24:BA:2419:U:O4    | 54:B7:31:HIS:HE1   | 1.69                     | 0.73              |
| 24:BA:2808:U:C2    | 24:BA:2892:A:N6    | 2.56                     | 0.73              |
| 24:BA:2839:G:O2'   | 24:BA:2840:C:H5'   | 1.88                     | 0.73              |
| 27:BD:5:LYS:CB     | 27:BD:29:PRO:HD3   | 2.19                     | 0.73              |
| 27:BD:263:ARG:O    | 27:BD:266:SER:HB3  | 1.88                     | 0.73              |
| 28:BE:7:VAL:HG13   | 28:BE:194:GLY:O    | 1.88                     | 0.73              |
| 28:BE:44:TYR:HD2   | 28:BE:45:THR:H     | 1.37                     | 0.73              |
| 28:BE:49:LEU:HD13  | 28:BE:76:ARG:O     | 1.87                     | 0.73              |
| 30:BG:32:PRO:O     | 30:BG:172:LEU:HD22 | 1.87                     | 0.73              |
| 30:BG:128:ARG:HH12 | 30:BG:162:THR:HA   | 1.54                     | 0.73              |
| 31:BH:7:LEU:HD22   | 31:BH:65:HIS:NE2   | 2.04                     | 0.73              |
| 31:BH:127:GLU:HG3  | 31:BH:130:ARG:HB2  | 1.69                     | 0.73              |
| 31:BH:140:LYS:HA   | 31:BH:143:GLN:NE2  | 2.03                     | 0.73              |
| 32:BK:81:VAL:HG13  | 32:BK:144:VAL:CG2  | 2.15                     | 0.73              |
| 32:BK:81:VAL:HG22  | 32:BK:144:VAL:HG22 | 1.71                     | 0.73              |
| 33:BL:10:LEU:CD1   | 33:BL:12:LEU:HD11  | 2.16                     | 0.73              |
| 34:BM:4:TYR:HD2    | 41:BT:100:VAL:HG11 | 1.50                     | 0.73              |
| 34:BM:55:VAL:HG21  | 34:BM:127:ASP:CA   | 2.18                     | 0.73              |
| 35:BN:105:GLU:C    | 35:BN:111:PHE:HZ   | 1.96                     | 0.73              |
| 35:BN:112:MET:HA   | 35:BN:115:VAL:CG2  | 2.18                     | 0.73              |
| 37:BP:26:TYR:CD1   | 37:BP:27:VAL:N     | 2.49                     | 0.73              |
| 38:BQ:97:VAL:C     | 38:BQ:98:LEU:HG    | 2.14                     | 0.73              |
| 39:BR:52:SER:HB3   | 39:BR:69:VAL:HG13  | 1.70                     | 0.73              |
| 40:BS:56:GLY:O     | 40:BS:61:PHE:HB3   | 1.89                     | 0.73              |
| 40:BS:85:LYS:HZ2   | 40:BS:85:LYS:HB3   | 1.53                     | 0.73              |
| 43:BV:5:ALA:HB1    | 43:BV:50:VAL:HG12  | 1.68                     | 0.73              |
| 43:BV:14:PRO:C     | 43:BV:16:LYS:NZ    | 2.46                     | 0.73              |
| 44:BW:57:LEU:HD23  | 44:BW:58:HIS:N     | 2.04                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 45:BX:42:VAL:CG2  | 45:BX:61:ILE:HG21 | 2.18                     | 0.73              |
| 46:BY:28:MET:SD   | 46:BY:29:TYR:N    | 2.62                     | 0.73              |
| 54:B7:3:LYS:HE2   | 54:B7:59:LYS:CE   | 2.19                     | 0.73              |
| 54:B7:5:LYS:O     | 54:B7:7:HIS:N     | 2.22                     | 0.73              |
| 1:AA:8:A:H4'      | 1:AA:9:G:OP1      | 1.88                     | 0.73              |
| 1:AA:38:G:N3      | 1:AA:397:A:N6     | 2.35                     | 0.73              |
| 1:AA:116:A:OP2    | 1:AA:289:G:H5''   | 1.88                     | 0.73              |
| 1:AA:873:A:H5'    | 1:AA:874:G:OP2    | 1.89                     | 0.73              |
| 1:AA:886:G:C2'    | 1:AA:887:G:H5'    | 2.18                     | 0.73              |
| 1:AA:950:U:H5''   | 15:AP:102:ARG:NH2 | 2.01                     | 0.73              |
| 1:AA:953:G:H2'    | 1:AA:954:G:H8     | 1.53                     | 0.73              |
| 1:AA:959:A:H1'    | 1:AA:985:C:H1'    | 1.70                     | 0.73              |
| 2:A1:20:G:C2'     | 2:A1:21:G:H5'     | 2.19                     | 0.73              |
| 3:AD:39:U:H2'     | 3:AD:40:C:C6      | 2.23                     | 0.73              |
| 3:AB:63:G:C1'     | 24:BA:2482:G:H4'  | 2.19                     | 0.73              |
| 4:AE:72:GLY:HA3   | 4:AE:81:VAL:HG21  | 1.71                     | 0.73              |
| 8:AI:53:ALA:HB1   | 8:AI:86:ARG:HH11  | 1.52                     | 0.73              |
| 8:AI:95:GLU:OE2   | 8:AI:96:PRO:HD3   | 1.88                     | 0.73              |
| 10:AK:104:ARG:NE  | 10:AK:138:TRP:CZ3 | 2.57                     | 0.73              |
| 11:AL:115:GLY:O   | 11:AL:117:HIS:N   | 2.21                     | 0.73              |
| 19:AT:58:GLU:O    | 19:AT:58:GLU:OE1  | 2.07                     | 0.73              |
| 21:AV:62:ILE:HD11 | 21:AV:67:VAL:HG13 | 1.70                     | 0.73              |
| 24:BA:192:C:O2    | 24:BA:802:A:H1'   | 1.89                     | 0.73              |
| 24:BA:247:G:C5    | 24:BA:249:C:O2    | 2.41                     | 0.73              |
| 24:BA:351:G:C1'   | 24:BA:352:G:N7    | 2.52                     | 0.73              |
| 24:BA:360:G:O2'   | 24:BA:361:G:H5'   | 1.89                     | 0.73              |
| 24:BA:532:A:C8    | 24:BA:561:G:N2    | 2.57                     | 0.73              |
| 24:BA:630:G:H2'   | 24:BA:632:A:OP2   | 1.88                     | 0.73              |
| 24:BA:713:G:H2'   | 24:BA:713:G:N3    | 2.03                     | 0.73              |
| 24:BA:826:U:OP1   | 24:BA:2428:G:H3'  | 1.88                     | 0.73              |
| 24:BA:848:G:H21   | 24:BA:933:A:H1'   | 1.51                     | 0.73              |
| 24:BA:1203:G:O6   | 24:BA:1240:U:H2'  | 1.86                     | 0.73              |
| 24:BA:1238:G:C2'  | 24:BA:1239:G:H5'  | 2.18                     | 0.73              |
| 24:BA:1363:C:O2'  | 24:BA:1809:A:C8   | 2.41                     | 0.73              |
| 24:BA:1394:U:H4'  | 24:BA:1603:A:C5'  | 2.18                     | 0.73              |
| 24:BA:1583:A:C5'  | 24:BA:1585:C:H5'  | 2.18                     | 0.73              |
| 24:BA:1609:A:H62  | 24:BA:1616:A:H2   | 1.34                     | 0.73              |
| 24:BA:1665:A:H5'' | 35:BN:65:THR:O    | 1.88                     | 0.73              |
| 24:BA:1716:U:O2   | 24:BA:1716:U:C2'  | 2.36                     | 0.73              |
| 24:BA:1799:G:C8   | 27:BD:268:ARG:NH1 | 2.57                     | 0.73              |
| 24:BA:1908:C:N4   | 24:BA:1923:U:N3   | 2.37                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1955:U:H2'   | 24:BA:1956:U:OP1   | 1.88                     | 0.73              |
| 24:BA:2010:G:C2'   | 24:BA:2011:U:H5'   | 2.19                     | 0.73              |
| 24:BA:2225:A:H5'   | 24:BA:2226:C:H6    | 1.54                     | 0.73              |
| 24:BA:2586:C:H2'   | 24:BA:2587:A:C8    | 2.23                     | 0.73              |
| 26:BC:53:ARG:O     | 26:BC:55:ASP:N     | 2.21                     | 0.73              |
| 26:BC:63:SER:O     | 26:BC:65:PRO:HD3   | 1.88                     | 0.73              |
| 27:BD:42:GLY:CA    | 27:BD:60:ARG:HH22  | 2.01                     | 0.73              |
| 30:BG:51:ARG:HD2   | 30:BG:51:ARG:H     | 1.53                     | 0.73              |
| 30:BG:135:LEU:HD11 | 30:BG:137:GLU:C    | 2.14                     | 0.73              |
| 30:BG:146:TYR:HE1  | 30:BG:149:VAL:HA   | 1.52                     | 0.73              |
| 32:BK:31:LEU:HD13  | 32:BK:36:ALA:C     | 2.14                     | 0.73              |
| 32:BK:94:ALA:HB1   | 32:BK:114:LEU:CD1  | 2.19                     | 0.73              |
| 34:BM:103:VAL:HG22 | 34:BM:104:LYS:H    | 1.52                     | 0.73              |
| 34:BM:122:VAL:HG23 | 34:BM:123:TYR:N    | 2.03                     | 0.73              |
| 35:BN:24:VAL:HG21  | 35:BN:26:LYS:CE    | 2.17                     | 0.73              |
| 35:BN:64:ARG:NH1   | 35:BN:67:LYS:N     | 2.25                     | 0.73              |
| 36:BO:74:GLU:CB    | 36:BO:107:LYS:HZ2  | 2.01                     | 0.73              |
| 37:BP:50:ALA:HB2   | 37:BP:125:LEU:HD11 | 1.70                     | 0.73              |
| 39:BR:14:VAL:C     | 39:BR:18:ILE:HD13  | 2.13                     | 0.73              |
| 41:BT:58:ARG:O     | 41:BT:62:ILE:HG13  | 1.89                     | 0.73              |
| 41:BT:108:GLU:HB2  | 41:BT:111:GLU:OE1  | 1.88                     | 0.73              |
| 47:BZ:56:ASP:OD1   | 47:BZ:58:THR:HB    | 1.88                     | 0.73              |
| 50:B3:59:PHE:N     | 50:B3:62:ARG:CZ    | 2.52                     | 0.73              |
| 51:B4:17:ASP:O     | 51:B4:21:SER:OG    | 2.06                     | 0.73              |
| 1:AA:109:A:N7      | 1:AA:326:G:N3      | 2.37                     | 0.73              |
| 1:AA:270:A:H2'     | 1:AA:271:C:C6      | 2.23                     | 0.73              |
| 1:AA:541:G:C4'     | 6:AG:42:GLN:HB2    | 2.18                     | 0.73              |
| 1:AA:936:C:O2'     | 1:AA:937:A:H5'     | 1.87                     | 0.73              |
| 1:AA:1055:A:N3     | 1:AA:1055:A:H2'    | 2.03                     | 0.73              |
| 1:AA:1317:C:O5'    | 1:AA:1317:C:H6     | 1.72                     | 0.73              |
| 6:AG:12:CYS:HB3    | 6:AG:33:MET:CE     | 2.18                     | 0.73              |
| 6:AG:90:GLY:HA3    | 6:AG:200:GLU:CD    | 2.14                     | 0.73              |
| 7:AH:86:ALA:HB3    | 7:AH:130:ASN:ND2   | 2.03                     | 0.73              |
| 7:AH:145:LYS:HA    | 7:AH:148:VAL:CG2   | 2.19                     | 0.73              |
| 10:AK:95:VAL:HB    | 10:AK:99:GLU:OE1   | 1.87                     | 0.73              |
| 10:AK:126:LYS:HD2  | 10:AK:126:LYS:C    | 2.13                     | 0.73              |
| 22:AW:49:ALA:HB3   | 22:AW:99:LEU:CD1   | 2.19                     | 0.73              |
| 24:BA:28:A:H2'     | 24:BA:29:U:H5'     | 1.69                     | 0.73              |
| 24:BA:146:G:C3'    | 24:BA:147:U:H5''   | 2.19                     | 0.73              |
| 24:BA:231:C:H42    | 24:BA:232:G:N2     | 1.87                     | 0.73              |
| 24:BA:467:G:OP1    | 53:B6:33:ARG:NH1   | 2.21                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:648:G:H2'    | 24:BA:649:G:C8     | 2.24                     | 0.73              |
| 24:BA:771:G:C6     | 24:BA:772:C:N4     | 2.57                     | 0.73              |
| 24:BA:792:G:H21    | 24:BA:2072:G:H1'   | 1.53                     | 0.73              |
| 24:BA:997:G:H5''   | 41:BT:92:ARG:HD2   | 1.69                     | 0.73              |
| 24:BA:1197:G:C5    | 24:BA:1198:U:C5    | 2.76                     | 0.73              |
| 24:BA:1530:G:H2'   | 24:BA:1531:C:N1    | 2.03                     | 0.73              |
| 24:BA:1702:G:C6    | 24:BA:1703:G:N7    | 2.57                     | 0.73              |
| 24:BA:1902:C:H2'   | 24:BA:1903:G:H5'   | 1.71                     | 0.73              |
| 24:BA:1919:A:OP2   | 24:BA:1920:C:H5    | 1.72                     | 0.73              |
| 24:BA:2284:C:O2'   | 24:BA:2325:G:N2    | 2.22                     | 0.73              |
| 24:BA:2497:A:O2'   | 24:BA:2498:C:O5'   | 2.06                     | 0.73              |
| 24:BA:2520:C:C5    | 24:BA:2567:G:C4    | 2.76                     | 0.73              |
| 24:BA:2745:C:H1'   | 31:BH:143:GLN:HG2  | 1.71                     | 0.73              |
| 24:BA:2848:G:OP2   | 40:BS:99:LEU:HD12  | 1.88                     | 0.73              |
| 25:BB:54:G:O2'     | 25:BB:55:U:H5'     | 1.89                     | 0.73              |
| 27:BD:46:GLN:CD    | 27:BD:51:VAL:HG23  | 2.13                     | 0.73              |
| 27:BD:146:GLU:O    | 27:BD:189:CYS:HB3  | 1.88                     | 0.73              |
| 29:BF:36:VAL:HG11  | 29:BF:183:VAL:CG1  | 2.19                     | 0.73              |
| 30:BG:26:GLN:HG2   | 30:BG:29:TRP:CZ3   | 2.24                     | 0.73              |
| 30:BG:166:ASP:O    | 30:BG:167:GLU:C    | 2.32                     | 0.73              |
| 32:BK:112:LYS:HD2  | 32:BK:112:LYS:N    | 2.01                     | 0.73              |
| 33:BL:9:LYS:CA     | 33:BL:56:GLU:HG2   | 2.18                     | 0.73              |
| 33:BL:11:GLN:HE22  | 33:BL:73:PRO:HG2   | 1.53                     | 0.73              |
| 34:BM:86:PRO:HD2   | 34:BM:89:LYS:HD2   | 1.71                     | 0.73              |
| 35:BN:10:VAL:HG22  | 35:BN:12:ASP:OD1   | 1.89                     | 0.73              |
| 36:BO:92:GLU:H     | 36:BO:125:VAL:HG11 | 1.54                     | 0.73              |
| 37:BP:124:LYS:HZ2  | 37:BP:124:LYS:CB   | 1.86                     | 0.73              |
| 38:BQ:8:ARG:HE     | 38:BQ:10:LEU:HD11  | 1.49                     | 0.73              |
| 39:BR:26:LEU:HD11  | 39:BR:37:ALA:HB1   | 1.70                     | 0.73              |
| 41:BT:89:GLU:CB    | 42:BU:52:VAL:N     | 2.44                     | 0.73              |
| 41:BT:108:GLU:C    | 41:BT:110:VAL:N    | 2.42                     | 0.73              |
| 41:BT:110:VAL:HG12 | 41:BT:111:GLU:N    | 2.03                     | 0.73              |
| 45:BX:19:LYS:NZ    | 45:BX:39:VAL:O     | 2.21                     | 0.73              |
| 46:BY:6:LYS:HG2    | 46:BY:7:ALA:H      | 1.54                     | 0.73              |
| 50:B3:59:PHE:HD1   | 50:B3:60:GLN:H     | 1.35                     | 0.73              |
| 54:B7:7:HIS:O      | 54:B7:11:LYS:HG3   | 1.87                     | 0.73              |
| 1:AA:440:A:H3'     | 1:AA:442:C:H6      | 1.53                     | 0.73              |
| 1:AA:716:A:C1'     | 13:AN:118:GLY:HA2  | 2.15                     | 0.73              |
| 1:AA:1269:A:H2'    | 1:AA:1270:C:H4'    | 1.70                     | 0.73              |
| 1:AA:1310:G:C8     | 21:AV:2:PRO:HD3    | 2.24                     | 0.73              |
| 1:AA:1413:A:O2'    | 1:AA:1414:U:C5'    | 2.36                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 3:AD:47:U:C2'      | 3:AD:48:C:H5''      | 2.15                     | 0.73              |
| 3:AD:62:C:C5'      | 26:BC:52:ARG:HD3    | 2.19                     | 0.73              |
| 3:AD:74:C:P        | 50:B3:22:ILE:HG12   | 2.27                     | 0.73              |
| 4:AE:71:VAL:CG1    | 4:AE:73:THR:HG23    | 2.19                     | 0.73              |
| 4:AE:213:LEU:HD23  | 4:AE:213:LEU:C      | 2.14                     | 0.73              |
| 5:AF:120:VAL:HG21  | 5:AF:137:ALA:CB     | 2.18                     | 0.73              |
| 5:AF:156:ARG:HB3   | 5:AF:193:TYR:CD1    | 2.24                     | 0.73              |
| 6:AG:109:GLY:O     | 6:AG:110:PHE:C      | 2.31                     | 0.73              |
| 11:AL:79:LEU:HD13  | 11:AL:101:PHE:CB    | 2.18                     | 0.73              |
| 13:AN:85:ARG:HG3   | 13:AN:85:ARG:HH11   | 1.53                     | 0.73              |
| 14:AO:68:ALA:HB1   | 14:AO:98:TYR:C      | 2.13                     | 0.73              |
| 15:AP:120:LYS:O    | 15:AP:121:LYS:HB2   | 1.88                     | 0.73              |
| 22:AW:17:ARG:O     | 22:AW:20:LEU:HB2    | 1.89                     | 0.73              |
| 24:BA:179:G:H5'    | 53:B6:32:LYS:HZ3    | 1.54                     | 0.73              |
| 24:BA:298:G:N1     | 24:BA:338:G:O2'     | 2.22                     | 0.73              |
| 24:BA:572:A:H2     | 24:BA:2033:A:N1     | 1.86                     | 0.73              |
| 24:BA:962:G:C2'    | 24:BA:963:U:C6      | 2.69                     | 0.73              |
| 24:BA:995:C:H42    | 34:BM:3:THR:HA      | 1.54                     | 0.73              |
| 24:BA:1071:G:C2'   | 24:BA:1072:C:H5'    | 2.19                     | 0.73              |
| 24:BA:1158:C:C4'   | 49:B2:32:GLN:HE21   | 2.01                     | 0.73              |
| 24:BA:1655:A:H2'   | 24:BA:1656:C:O4'    | 1.89                     | 0.73              |
| 24:BA:1655:A:N6    | 24:BA:2005:A:H1'    | 2.04                     | 0.73              |
| 24:BA:1707:G:H2'   | 24:BA:1708:C:H6     | 1.54                     | 0.73              |
| 24:BA:1775:U:C2    | 27:BD:208:LYS:HD2   | 2.23                     | 0.73              |
| 24:BA:1788:C:H2'   | 27:BD:222:ARG:HE    | 1.54                     | 0.73              |
| 24:BA:1851:U:H2'   | 24:BA:1852:C:C5     | 2.24                     | 0.73              |
| 24:BA:2073:C:H2'   | 24:BA:2074:U:O4'    | 1.88                     | 0.73              |
| 24:BA:2389:G:H5''  | 24:BA:2390:U:O5'    | 1.89                     | 0.73              |
| 24:BA:2670:A:H5''  | 28:BE:206:LYS:HZ3   | 1.53                     | 0.73              |
| 24:BA:2684:U:O2'   | 35:BN:67:LYS:HG3    | 1.88                     | 0.73              |
| 24:BA:2711:A:OP1   | 24:BA:2712(A):A:OP1 | 2.07                     | 0.73              |
| 24:BA:2733:A:H2'   | 24:BA:2734:A:O4'    | 1.88                     | 0.73              |
| 24:BA:2745:C:O2'   | 31:BH:143:GLN:HG3   | 1.88                     | 0.73              |
| 25:BB:73:A:H2'     | 25:BB:74:U:C6       | 2.23                     | 0.73              |
| 28:BE:13:ARG:CZ    | 28:BE:20:ALA:HB3    | 2.19                     | 0.73              |
| 31:BH:8:PRO:CD     | 31:BH:69:ARG:HH11   | 2.02                     | 0.73              |
| 32:BK:127:VAL:HG13 | 32:BK:141:LYS:N     | 2.03                     | 0.73              |
| 35:BN:63:VAL:CG2   | 35:BN:81:ASP:HA     | 2.17                     | 0.73              |
| 37:BP:34:LEU:HA    | 37:BP:131:ILE:CG1   | 2.11                     | 0.73              |
| 38:BQ:61:HIS:C     | 38:BQ:64:ARG:HD3    | 2.14                     | 0.73              |
| 41:BT:99:ALA:HA    | 41:BT:106:PHE:HB2   | 1.69                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 42:BU:40:LEU:HG    | 42:BU:54:GLY:C    | 2.14                     | 0.73              |
| 46:BY:141:VAL:HG13 | 46:BY:142:SER:H   | 1.54                     | 0.73              |
| 49:B2:40:THR:HG22  | 49:B2:42:ALA:N    | 2.04                     | 0.73              |
| 50:B3:40:HIS:HB3   | 50:B3:41:PRO:CD   | 2.19                     | 0.73              |
| 52:B5:16:CYS:SG    | 52:B5:19:ARG:NH1  | 2.61                     | 0.73              |
| 52:B5:20:ASN:HD22  | 52:B5:41:PRO:CB   | 1.98                     | 0.73              |
| 53:B6:34:ARG:HB3   | 53:B6:34:ARG:NH1  | 2.01                     | 0.73              |
| 1:AA:191(C):G:H2'  | 1:AA:191(D):U:H6  | 1.54                     | 0.73              |
| 1:AA:254:G:O2'     | 1:AA:255:G:H5'    | 1.89                     | 0.73              |
| 1:AA:1068:G:N7     | 1:AA:1094:G:N7    | 2.36                     | 0.73              |
| 1:AA:1126:U:H2'    | 1:AA:1127:G:H8    | 1.54                     | 0.73              |
| 1:AA:1493:A:N1     | 3:AB:36:A:O2'     | 2.22                     | 0.73              |
| 3:AC:11:C:H2'      | 3:AC:12:U:C6      | 2.24                     | 0.73              |
| 4:AE:115:LEU:HD13  | 4:AE:145:LEU:CB   | 2.19                     | 0.73              |
| 5:AF:31:HIS:O      | 5:AF:34:LEU:HB3   | 1.89                     | 0.73              |
| 5:AF:120:VAL:CG1   | 5:AF:133:ALA:HB1  | 2.19                     | 0.73              |
| 6:AG:24:GLU:C      | 6:AG:27:TYR:HB3   | 2.14                     | 0.73              |
| 6:AG:59:ARG:HA     | 6:AG:59:ARG:CZ    | 2.18                     | 0.73              |
| 6:AG:152:SER:O     | 6:AG:155:LEU:HD22 | 1.89                     | 0.73              |
| 6:AG:200:GLU:CG    | 6:AG:201:GLN:HE21 | 2.02                     | 0.73              |
| 7:AH:7:GLU:HG2     | 7:AH:112:LEU:HD21 | 1.71                     | 0.73              |
| 7:AH:28:PHE:O      | 7:AH:47:LYS:HA    | 1.89                     | 0.73              |
| 7:AH:82:VAL:HG21   | 7:AH:137:GLU:HB3  | 1.70                     | 0.73              |
| 7:AH:109:ILE:HG23  | 7:AH:110:LEU:HD23 | 1.71                     | 0.73              |
| 8:AI:26:ILE:HG22   | 8:AI:30:LEU:HD11  | 1.70                     | 0.73              |
| 8:AI:37:VAL:HA     | 8:AI:65:VAL:CG1   | 2.19                     | 0.73              |
| 9:AJ:50:ILE:HG21   | 9:AJ:58:PRO:HA    | 1.71                     | 0.73              |
| 12:AM:11:PHE:CE1   | 16:AQ:55:GLY:HA3  | 2.24                     | 0.73              |
| 13:AN:21:ILE:HA    | 13:AN:30:VAL:HG22 | 1.71                     | 0.73              |
| 15:AP:14:ARG:CG    | 15:AP:17:VAL:HG23 | 2.19                     | 0.73              |
| 15:AP:19:LEU:HD12  | 15:AP:20:THR:N    | 2.03                     | 0.73              |
| 16:AQ:26:ARG:CB    | 16:AQ:43:CYS:HB2  | 2.18                     | 0.73              |
| 21:AV:15:LEU:HG    | 21:AV:16:LEU:HD13 | 1.71                     | 0.73              |
| 24:BA:125:G:O3'    | 53:B6:47:ARG:NH1  | 2.22                     | 0.73              |
| 24:BA:245:G:C4     | 24:BA:246:C:H5    | 2.07                     | 0.73              |
| 24:BA:688:U:OP2    | 53:B6:2:LYS:HE2   | 1.88                     | 0.73              |
| 24:BA:754:C:C2'    | 24:BA:755:C:H5'   | 2.19                     | 0.73              |
| 24:BA:882:G:H1'    | 24:BA:896:A:N6    | 2.04                     | 0.73              |
| 24:BA:1055:G:N3    | 24:BA:1084:A:H2   | 1.86                     | 0.73              |
| 24:BA:1203:G:C6    | 24:BA:1240:U:O2   | 2.35                     | 0.73              |
| 24:BA:1471:A:H2'   | 24:BA:1472:A:H5'  | 1.69                     | 0.73              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1729:A:N7    | 24:BA:1731:G:O6    | 2.21                     | 0.73              |
| 24:BA:1798:U:C5'   | 27:BD:257:LEU:HB2  | 2.18                     | 0.73              |
| 24:BA:2097:C:O2'   | 24:BA:2098:U:H5'   | 1.88                     | 0.73              |
| 24:BA:2396:G:H4'   | 50:B3:27:THR:HA    | 1.69                     | 0.73              |
| 24:BA:2450:A:OP1   | 24:BA:2497:A:N7    | 2.22                     | 0.73              |
| 24:BA:2459:A:C2    | 24:BA:2460:U:H1'   | 2.23                     | 0.73              |
| 24:BA:2619:C:H5''  | 28:BE:152:LYS:HB2  | 1.69                     | 0.73              |
| 24:BA:2626:C:H2'   | 24:BA:2627:G:H8    | 1.51                     | 0.73              |
| 24:BA:2787:C:C5'   | 28:BE:64:LYS:HD2   | 2.18                     | 0.73              |
| 28:BE:45:THR:OG1   | 28:BE:46:ALA:N     | 2.21                     | 0.73              |
| 28:BE:81:ILE:HG22  | 28:BE:82:ARG:HG2   | 1.70                     | 0.73              |
| 28:BE:109:LYS:HG3  | 28:BE:191:PRO:CG   | 2.18                     | 0.73              |
| 28:BE:119:ARG:HE   | 28:BE:120:TRP:N    | 1.87                     | 0.73              |
| 28:BE:133:LYS:HZ1  | 28:BE:137:HIS:HB3  | 1.52                     | 0.73              |
| 29:BF:12:LEU:HB3   | 29:BF:127:GLU:HB3  | 1.71                     | 0.73              |
| 34:BM:102:ALA:O    | 34:BM:105:GLY:CA   | 2.36                     | 0.73              |
| 35:BN:70:LYS:HD3   | 35:BN:107:ARG:NH1  | 2.04                     | 0.73              |
| 36:BO:99:LEU:HD13  | 36:BO:101:VAL:HG22 | 1.69                     | 0.73              |
| 37:BP:42:ILE:O     | 37:BP:94:VAL:HB    | 1.87                     | 0.73              |
| 37:BP:134:ARG:HH21 | 37:BP:137:TYR:HD1  | 1.36                     | 0.73              |
| 41:BT:22:LYS:H     | 41:BT:24:TYR:HE1   | 1.37                     | 0.73              |
| 41:BT:40:PHE:HB3   | 42:BU:78:LYS:CD    | 2.19                     | 0.73              |
| 43:BV:81:ALA:HB1   | 43:BV:98:LYS:O     | 1.89                     | 0.73              |
| 46:BY:28:MET:HA    | 46:BY:28:MET:CE    | 2.12                     | 0.73              |
| 46:BY:78:LYS:HB3   | 46:BY:78:LYS:NZ    | 2.04                     | 0.73              |
| 52:B5:48:VAL:HG13  | 52:B5:49:HIS:N     | 2.00                     | 0.73              |
| 53:B6:17:GLY:C     | 53:B6:21:ARG:HH12  | 1.97                     | 0.73              |
| 1:AA:449:C:C2      | 1:AA:450:G:C1'     | 2.65                     | 0.72              |
| 1:AA:777:A:H2'     | 1:AA:778:G:C8      | 2.23                     | 0.72              |
| 1:AA:986:A:H1'     | 21:AV:54:GLY:O     | 1.89                     | 0.72              |
| 1:AA:1431:C:N4     | 1:AA:1469:G:H1     | 1.86                     | 0.72              |
| 3:AD:76:A:H2'      | 24:BA:2432:A:O2'   | 1.89                     | 0.72              |
| 3:AB:74:C:C5       | 24:BA:2556:C:O4'   | 2.42                     | 0.72              |
| 5:AF:38:ARG:CB     | 5:AF:94:LEU:HD21   | 2.19                     | 0.72              |
| 7:AH:89:ILE:CG1    | 7:AH:131:ILE:HD12  | 2.17                     | 0.72              |
| 8:AI:23:LYS:O      | 8:AI:26:ILE:CB     | 2.36                     | 0.72              |
| 13:AN:95:ILE:HG23  | 13:AN:98:LEU:HD12  | 1.70                     | 0.72              |
| 24:BA:52:A:H2'     | 24:BA:53:A:C8      | 2.14                     | 0.72              |
| 24:BA:270(C):C:O2' | 24:BA:270(D):C:H5' | 1.88                     | 0.72              |
| 24:BA:672:C:H2'    | 24:BA:673:C:H6     | 1.53                     | 0.72              |
| 24:BA:718:A:H3'    | 24:BA:719:C:C6     | 2.24                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:725:G:C6     | 24:BA:726:G:N2     | 2.54                     | 0.72              |
| 24:BA:775:G:H5'    | 24:BA:777:A:C1'    | 2.18                     | 0.72              |
| 24:BA:1025:G:H1'   | 24:BA:1134:G:C4'   | 2.19                     | 0.72              |
| 24:BA:1152:C:O2'   | 41:BT:80:ILE:HD12  | 1.87                     | 0.72              |
| 24:BA:1299:G:H1    | 24:BA:1639:U:H3'   | 1.54                     | 0.72              |
| 24:BA:1308:A:H2'   | 24:BA:1309:G:O4'   | 1.89                     | 0.72              |
| 24:BA:1341:U:N3    | 24:BA:1398:C:H5'   | 2.02                     | 0.72              |
| 24:BA:1513:C:N4    | 24:BA:1514:U:O4    | 2.22                     | 0.72              |
| 24:BA:1530:G:H3'   | 24:BA:1531:C:C6    | 2.24                     | 0.72              |
| 24:BA:1557:C:C2    | 24:BA:1558:A:N7    | 2.57                     | 0.72              |
| 24:BA:1804:C:H4'   | 27:BD:250:TRP:CZ2  | 2.24                     | 0.72              |
| 24:BA:2056:G:N3    | 24:BA:2056:G:H2'   | 2.02                     | 0.72              |
| 24:BA:2447:G:N7    | 24:BA:2500:U:H2'   | 2.04                     | 0.72              |
| 24:BA:2569:G:C2    | 24:BA:2570:G:N7    | 2.57                     | 0.72              |
| 24:BA:2597:G:C1'   | 27:BD:242:ARG:NH2  | 2.52                     | 0.72              |
| 24:BA:2597:G:O4'   | 27:BD:242:ARG:NE   | 2.21                     | 0.72              |
| 24:BA:2662:A:H2'   | 24:BA:2663:G:H5'   | 1.71                     | 0.72              |
| 24:BA:2876:G:C4'   | 40:BS:1:MET:H2     | 2.00                     | 0.72              |
| 26:BC:118:ASP:OD1  | 26:BC:119:VAL:HG13 | 1.86                     | 0.72              |
| 27:BD:10:THR:O     | 27:BD:11:PRO:C     | 2.31                     | 0.72              |
| 27:BD:84:TYR:HB3   | 27:BD:91:ARG:HG3   | 1.71                     | 0.72              |
| 28:BE:93:VAL:HG12  | 28:BE:177:PRO:O    | 1.88                     | 0.72              |
| 28:BE:115:GLY:HA2  | 28:BE:157:ALA:HA   | 1.71                     | 0.72              |
| 30:BG:17:PRO:C     | 30:BG:20:ILE:HB    | 2.14                     | 0.72              |
| 31:BH:11:VAL:HG13  | 31:BH:15:VAL:CG1   | 2.18                     | 0.72              |
| 34:BM:116:LEU:HD23 | 34:BM:116:LEU:C    | 2.14                     | 0.72              |
| 36:BO:45:LEU:HD13  | 54:B7:59:LYS:HZ1   | 1.54                     | 0.72              |
| 38:BQ:56:LYS:O     | 38:BQ:57:ARG:C     | 2.32                     | 0.72              |
| 39:BR:69:VAL:O     | 39:BR:72:ALA:HB3   | 1.88                     | 0.72              |
| 40:BS:54:ARG:HG2   | 40:BS:100:TYR:CB   | 2.14                     | 0.72              |
| 41:BT:32:PHE:N     | 41:BT:32:PHE:CD1   | 2.55                     | 0.72              |
| 41:BT:88:ILE:HD13  | 41:BT:88:ILE:H     | 1.50                     | 0.72              |
| 43:BV:36:LEU:HD11  | 43:BV:47:VAL:HG21  | 1.71                     | 0.72              |
| 44:BW:32:PRO:HA    | 44:BW:77:LYS:CD    | 2.17                     | 0.72              |
| 45:BX:97:ARG:HA    | 45:BX:101:LYS:CG   | 2.17                     | 0.72              |
| 46:BY:73:GLN:O     | 46:BY:74:VAL:HG23  | 1.89                     | 0.72              |
| 46:BY:151:HIS:CB   | 46:BY:168:GLU:HG2  | 2.18                     | 0.72              |
| 50:B3:41:PRO:C     | 50:B3:58:ARG:NH1   | 2.47                     | 0.72              |
| 1:AA:842:C:H4'     | 1:AA:848:C:N3      | 2.05                     | 0.72              |
| 1:AA:959:A:H3'     | 1:AA:960:U:C5'     | 2.19                     | 0.72              |
| 3:AC:74:C:N4       | 47:BZ:4:LYS:NZ     | 2.38                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 3:AD:52:G:N2       | 3:AD:53:G:H1'      | 2.04                     | 0.72              |
| 4:AE:101:MET:CA    | 4:AE:108:ILE:HG13  | 2.18                     | 0.72              |
| 4:AE:144:ARG:O     | 4:AE:147:LYS:HB3   | 1.89                     | 0.72              |
| 5:AF:15:THR:CG2    | 5:AF:181:ASN:HA    | 2.16                     | 0.72              |
| 8:AI:24:GLU:O      | 8:AI:27:GLN:HB2    | 1.88                     | 0.72              |
| 9:AJ:132:GLY:O     | 9:AJ:136:LYS:CB    | 2.38                     | 0.72              |
| 10:AK:29:SER:N     | 10:AK:32:LYS:HD2   | 2.03                     | 0.72              |
| 10:AK:114:THR:HA   | 10:AK:131:GLY:HA3  | 1.72                     | 0.72              |
| 14:AO:93:LEU:O     | 14:AO:96:VAL:HG23  | 1.88                     | 0.72              |
| 18:AS:6:LEU:CD2    | 18:AS:17:TYR:HD2   | 2.03                     | 0.72              |
| 20:AU:53:ARG:HG2   | 20:AU:63:GLN:HE21  | 1.53                     | 0.72              |
| 22:AW:51:GLU:HB3   | 22:AW:54:LYS:HZ2   | 1.52                     | 0.72              |
| 22:AW:87:LYS:HE3   | 22:AW:87:LYS:CA    | 2.19                     | 0.72              |
| 24:BA:71:A:N3      | 24:BA:73:A:C6      | 2.57                     | 0.72              |
| 24:BA:361:G:H2'    | 24:BA:362:U:O4'    | 1.89                     | 0.72              |
| 24:BA:453:C:H4'    | 24:BA:457:A:N6     | 2.04                     | 0.72              |
| 24:BA:455:C:C4'    | 24:BA:456:C:OP1    | 2.36                     | 0.72              |
| 24:BA:1080:C:O2'   | 33:BL:126:MET:HG2  | 1.89                     | 0.72              |
| 24:BA:1203:G:H1    | 24:BA:1206:G:H1    | 1.35                     | 0.72              |
| 24:BA:1445:C:O2    | 24:BA:1466:G:N2    | 2.22                     | 0.72              |
| 24:BA:1453:A:C6    | 24:BA:1454:U:H1'   | 2.23                     | 0.72              |
| 24:BA:1539:G:N7    | 24:BA:1540:G:N7    | 2.37                     | 0.72              |
| 24:BA:1817:G:C2'   | 24:BA:1818:U:H5'   | 2.19                     | 0.72              |
| 24:BA:2054:A:H62   | 24:BA:2577:A:H61   | 1.36                     | 0.72              |
| 24:BA:2110:G:H2'   | 24:BA:2120:G:C5'   | 2.19                     | 0.72              |
| 24:BA:2115:G:H5''  | 24:BA:2116:G:OP2   | 1.89                     | 0.72              |
| 24:BA:2208:U:H1'   | 24:BA:2217:G:N1    | 2.03                     | 0.72              |
| 24:BA:2307:G:H3'   | 24:BA:2308:G:C4'   | 2.20                     | 0.72              |
| 24:BA:2433:A:OP2   | 24:BA:2433:A:H3'   | 1.88                     | 0.72              |
| 24:BA:2433:A:H2'   | 24:BA:2433:A:N3    | 2.03                     | 0.72              |
| 24:BA:2687:U:O2    | 24:BA:2688:U:H6    | 1.71                     | 0.72              |
| 24:BA:2853:C:H2'   | 24:BA:2854:G:H8    | 1.53                     | 0.72              |
| 25:BB:84:C:H2'     | 25:BB:85:G:H5''    | 1.70                     | 0.72              |
| 26:BC:22:ILE:HD13  | 26:BC:190:ARG:HH12 | 1.54                     | 0.72              |
| 26:BC:171:ILE:HD13 | 26:BC:192:PHE:HZ   | 1.53                     | 0.72              |
| 28:BE:36:ARG:HD2   | 28:BE:41:LYS:HZ2   | 1.51                     | 0.72              |
| 30:BG:125:PHE:HA   | 30:BG:132:ASN:CB   | 2.19                     | 0.72              |
| 31:BH:29:PRO:HD3   | 31:BH:79:VAL:HA    | 1.71                     | 0.72              |
| 32:BK:114:LEU:HD22 | 32:BK:130:TYR:CB   | 2.19                     | 0.72              |
| 33:BL:10:LEU:HD13  | 33:BL:27:LEU:CD2   | 2.19                     | 0.72              |
| 33:BL:58:THR:HG23  | 33:BL:60:TYR:HB2   | 1.71                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 34:BM:74:ARG:O    | 34:BM:75:TYR:C    | 2.31                     | 0.72              |
| 34:BM:115:ARG:HA  | 34:BM:118:LYS:HD2 | 1.71                     | 0.72              |
| 35:BN:64:ARG:HH11 | 35:BN:67:LYS:H    | 0.77                     | 0.72              |
| 36:BO:23:PRO:HG2  | 36:BO:29:LYS:N    | 2.05                     | 0.72              |
| 36:BO:88:LEU:CG   | 36:BO:124:LYS:HZ1 | 2.01                     | 0.72              |
| 37:BP:26:TYR:H    | 37:BP:102:VAL:HB  | 1.51                     | 0.72              |
| 39:BR:17:ARG:NH2  | 39:BR:89:ARG:HB2  | 2.04                     | 0.72              |
| 42:BU:19:LYS:O    | 42:BU:96:ILE:HD11 | 1.88                     | 0.72              |
| 45:BX:86:ARG:HG2  | 45:BX:91:GLU:CB   | 2.18                     | 0.72              |
| 46:BY:6:LYS:HD2   | 46:BY:35:ARG:HD3  | 1.70                     | 0.72              |
| 46:BY:98:MET:O    | 46:BY:126:VAL:HA  | 1.89                     | 0.72              |
| 48:B1:51:GLN:O    | 48:B1:55:LEU:HD13 | 1.88                     | 0.72              |
| 1:AA:283:C:N3     | 1:AA:284:G:C8     | 2.57                     | 0.72              |
| 1:AA:507:C:H2'    | 1:AA:508:C:H5     | 1.54                     | 0.72              |
| 1:AA:760:G:H1     | 19:AT:105:ALA:C   | 1.97                     | 0.72              |
| 1:AA:819:A:C2     | 1:AA:1529:G:O6    | 2.42                     | 0.72              |
| 1:AA:964:A:H1'    | 12:AM:55:LYS:NZ   | 2.04                     | 0.72              |
| 1:AA:1113:C:O5'   | 1:AA:1113:C:H6    | 1.72                     | 0.72              |
| 1:AA:1253:G:H21   | 1:AA:1254:C:H1'   | 1.55                     | 0.72              |
| 1:AA:1441:G:H1'   | 1:AA:1461:G:H22   | 1.54                     | 0.72              |
| 1:AA:1512:U:H2'   | 1:AA:1513:A:C8    | 2.23                     | 0.72              |
| 3:AD:17:C:H3'     | 3:AD:18:G:C8      | 2.24                     | 0.72              |
| 4:AE:171:ALA:O    | 4:AE:174:VAL:HB   | 1.88                     | 0.72              |
| 4:AE:220:ASP:O    | 4:AE:224:GLN:HG3  | 1.89                     | 0.72              |
| 5:AF:140:ARG:HA   | 5:AF:143:GLU:HB2  | 1.71                     | 0.72              |
| 6:AG:58:LEU:HD13  | 6:AG:59:ARG:NH1   | 2.04                     | 0.72              |
| 7:AH:63:ARG:O     | 7:AH:66:MET:HG2   | 1.88                     | 0.72              |
| 10:AK:36:LEU:HD12 | 10:AK:48:TYR:CB   | 2.19                     | 0.72              |
| 10:AK:61:VAL:HG12 | 10:AK:62:TYR:N    | 2.02                     | 0.72              |
| 11:AL:96:LEU:O    | 11:AL:100:GLY:HA3 | 1.88                     | 0.72              |
| 18:AS:41:PRO:O    | 18:AS:43:LYS:HD2  | 1.88                     | 0.72              |
| 20:AU:53:ARG:HA   | 20:AU:63:GLN:HE21 | 1.53                     | 0.72              |
| 21:AV:5:LEU:HD13  | 21:AV:9:VAL:HG13  | 1.71                     | 0.72              |
| 22:AW:43:LEU:CD1  | 22:AW:55:ILE:HD11 | 2.19                     | 0.72              |
| 24:BA:448:U:C4    | 24:BA:583:G:H1'   | 2.23                     | 0.72              |
| 24:BA:465:G:N3    | 24:BA:683:C:O2'   | 2.19                     | 0.72              |
| 24:BA:477:A:H62   | 24:BA:502:A:H61   | 0.80                     | 0.72              |
| 24:BA:534:U:O2'   | 41:BT:49:HIS:NE2  | 2.21                     | 0.72              |
| 24:BA:792:G:N2    | 24:BA:2072:G:O2'  | 2.21                     | 0.72              |
| 24:BA:836:G:C6    | 24:BA:837:C:N4    | 2.57                     | 0.72              |
| 24:BA:1270:C:C4'  | 24:BA:1271:G:C5'  | 2.67                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1299:G:H5'   | 24:BA:1301:A:H1'   | 1.69                     | 0.72              |
| 24:BA:1475:G:N2    | 24:BA:1476:C:H5''  | 2.03                     | 0.72              |
| 24:BA:1568:G:H5''  | 27:BD:60:ARG:O     | 1.88                     | 0.72              |
| 24:BA:1596:A:N6    | 24:BA:1597:A:C6    | 2.57                     | 0.72              |
| 24:BA:1665:A:H5'   | 35:BN:66:LYS:HD3   | 1.71                     | 0.72              |
| 24:BA:1774:C:C4    | 27:BD:18:VAL:HG11  | 2.23                     | 0.72              |
| 24:BA:2001:A:H2'   | 24:BA:2002:G:C8    | 2.24                     | 0.72              |
| 24:BA:2284:C:H5''  | 52:B5:9:LEU:CD2    | 2.18                     | 0.72              |
| 24:BA:2357:U:H2'   | 24:BA:2358:G:C5'   | 2.18                     | 0.72              |
| 24:BA:2746:U:C4    | 24:BA:2756:U:O4    | 2.42                     | 0.72              |
| 24:BA:2776:A:H4'   | 24:BA:2777:G:O5'   | 1.88                     | 0.72              |
| 24:BA:2820:A:H2'   | 24:BA:2821:A:OP1   | 1.89                     | 0.72              |
| 27:BD:60:ARG:HA    | 27:BD:62:TYR:OH    | 1.89                     | 0.72              |
| 27:BD:92:ILE:HA    | 27:BD:106:ILE:O    | 1.90                     | 0.72              |
| 27:BD:129:ASN:O    | 27:BD:193:VAL:CB   | 2.37                     | 0.72              |
| 29:BF:123:LEU:HD12 | 29:BF:193:VAL:CG2  | 2.18                     | 0.72              |
| 29:BF:155:LEU:HA   | 29:BF:174:VAL:HG23 | 1.70                     | 0.72              |
| 30:BG:18:GLU:CD    | 30:BG:22:ARG:HH11  | 1.97                     | 0.72              |
| 30:BG:36:LYS:HZ3   | 30:BG:38:VAL:N     | 1.87                     | 0.72              |
| 32:BK:9:LEU:O      | 32:BK:10:GLU:HB2   | 1.88                     | 0.72              |
| 34:BM:103:VAL:HG22 | 34:BM:104:LYS:N    | 2.04                     | 0.72              |
| 34:BM:127:ASP:OD1  | 34:BM:128:HIS:N    | 2.22                     | 0.72              |
| 35:BN:94:ARG:CG    | 35:BN:96:THR:H     | 2.01                     | 0.72              |
| 37:BP:6:ARG:NH2    | 37:BP:8:LYS:HG3    | 2.04                     | 0.72              |
| 37:BP:29:PHE:HD1   | 37:BP:29:PHE:O     | 1.72                     | 0.72              |
| 39:BR:30:ARG:HG2   | 39:BR:91:PRO:HG3   | 1.71                     | 0.72              |
| 40:BS:55:ASN:HA    | 40:BS:62:THR:O     | 1.88                     | 0.72              |
| 41:BT:8:VAL:CG2    | 41:BT:9:VAL:H      | 2.01                     | 0.72              |
| 42:BU:35:LEU:O     | 42:BU:61:VAL:HG13  | 1.90                     | 0.72              |
| 42:BU:69:LYS:HG2   | 42:BU:70:ILE:H     | 1.55                     | 0.72              |
| 45:BX:72:VAL:CG2   | 45:BX:81:LYS:HE2   | 2.19                     | 0.72              |
| 49:B2:50:VAL:CG1   | 49:B2:53:LEU:HD12  | 2.16                     | 0.72              |
| 52:B5:31:PRO:C     | 52:B5:32:ASN:HD22  | 1.97                     | 0.72              |
| 55:B8:16:VAL:O     | 55:B8:16:VAL:HG13  | 1.87                     | 0.72              |
| 1:AA:37:U:H6       | 1:AA:37:U:C3'      | 1.94                     | 0.72              |
| 1:AA:921:U:O2'     | 7:AH:19:MET:O      | 2.07                     | 0.72              |
| 1:AA:936:C:C2'     | 1:AA:937:A:H5'     | 2.19                     | 0.72              |
| 1:AA:1066:C:C6     | 1:AA:1067:A:N7     | 2.58                     | 0.72              |
| 1:AA:1227:A:H8     | 1:AA:1228:C:O4'    | 1.72                     | 0.72              |
| 1:AA:1321:C:O5'    | 1:AA:1321:C:H6     | 1.71                     | 0.72              |
| 2:A1:30:U:H5'      | 2:A1:30:U:C6       | 2.18                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 2:A1:43:U:H2'       | 2:A1:44:U:H5      | 1.49                     | 0.72              |
| 4:AE:82:ARG:CA      | 4:AE:94:ASN:HD21  | 2.03                     | 0.72              |
| 5:AF:11:ARG:CG      | 5:AF:16:ARG:HH21  | 2.02                     | 0.72              |
| 8:AI:68:PRO:HB2     | 8:AI:71:ARG:HG3   | 1.71                     | 0.72              |
| 9:AJ:141:VAL:O      | 9:AJ:144:MET:HE2  | 1.89                     | 0.72              |
| 10:AK:29:SER:CB     | 10:AK:32:LYS:HZ3  | 2.01                     | 0.72              |
| 10:AK:113:SER:HA    | 10:AK:117:GLY:O   | 1.90                     | 0.72              |
| 10:AK:122:ARG:HA    | 10:AK:125:ARG:NH1 | 2.03                     | 0.72              |
| 20:AU:43:PHE:C      | 20:AU:51:LEU:HD22 | 2.13                     | 0.72              |
| 21:AV:5:LEU:HD12    | 21:AV:9:VAL:HG13  | 1.70                     | 0.72              |
| 24:BA:85:G:OP1      | 45:BX:8:LYS:HB3   | 1.90                     | 0.72              |
| 24:BA:270(B):A:HO2' | 24:BA:270(C):C:H6 | 1.36                     | 0.72              |
| 24:BA:289:A:C4      | 24:BA:351:G:O6    | 2.43                     | 0.72              |
| 24:BA:336:C:O2'     | 24:BA:337:C:H5'   | 1.89                     | 0.72              |
| 24:BA:628:G:O5'     | 24:BA:628:G:C8    | 2.42                     | 0.72              |
| 24:BA:685:A:C1'     | 24:BA:688:U:O4    | 2.37                     | 0.72              |
| 24:BA:716:A:C2'     | 24:BA:717:G:H5'   | 2.19                     | 0.72              |
| 24:BA:997:G:H8      | 24:BA:997:G:OP2   | 1.69                     | 0.72              |
| 24:BA:1180:C:H2'    | 24:BA:1181:C:H6   | 1.51                     | 0.72              |
| 24:BA:1198:U:H2'    | 24:BA:1199:U:C6   | 2.24                     | 0.72              |
| 24:BA:1206:G:C2'    | 24:BA:1207:C:O4'  | 2.29                     | 0.72              |
| 24:BA:1342:A:C1'    | 24:BA:1345:C:H41  | 2.02                     | 0.72              |
| 24:BA:1364:G:H5''   | 24:BA:1809:A:C4   | 2.24                     | 0.72              |
| 24:BA:1438:U:H2'    | 24:BA:1439:A:C5'  | 2.18                     | 0.72              |
| 24:BA:1471:A:C5     | 24:BA:1521:G:N2   | 2.57                     | 0.72              |
| 24:BA:1504:C:O5'    | 24:BA:1504:C:H6   | 1.73                     | 0.72              |
| 24:BA:1655:A:H5''   | 28:BE:114:ALA:N   | 2.03                     | 0.72              |
| 24:BA:1670:C:H3'    | 24:BA:1671:U:H6   | 1.53                     | 0.72              |
| 24:BA:1702:G:C2'    | 24:BA:1703:G:H5'' | 2.01                     | 0.72              |
| 24:BA:1937:A:N6     | 24:BA:1939:U:C4   | 2.52                     | 0.72              |
| 24:BA:2497:A:O2'    | 24:BA:2498:C:C6   | 2.42                     | 0.72              |
| 24:BA:2611:U:H5'    | 24:BA:2611:U:H6   | 1.54                     | 0.72              |
| 25:BB:117:G:C2      | 25:BB:118:G:C8    | 2.77                     | 0.72              |
| 26:BC:86:ALA:CA     | 26:BC:150:GLY:HA2 | 2.18                     | 0.72              |
| 26:BC:213:TYR:CB    | 26:BC:223:ARG:HA  | 2.16                     | 0.72              |
| 28:BE:151:TYR:CG    | 28:BE:152:LYS:N   | 2.57                     | 0.72              |
| 29:BF:74:ARG:CZ     | 29:BF:75:HIS:H    | 2.03                     | 0.72              |
| 31:BH:8:PRO:CB      | 31:BH:51:ARG:HH12 | 2.01                     | 0.72              |
| 32:BK:93:THR:HG22   | 32:BK:96:ASP:OD1  | 1.89                     | 0.72              |
| 34:BM:87:LEU:O      | 34:BM:91:LEU:HG   | 1.89                     | 0.72              |
| 37:BP:127:ILE:HD13  | 37:BP:129:THR:CG2 | 2.19                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 38:BQ:86:ARG:NH1    | 38:BQ:118:GLU:OE1  | 2.21                     | 0.72              |
| 40:BS:45:PHE:CZ     | 40:BS:87:ASP:HB2   | 2.25                     | 0.72              |
| 42:BU:28:GLU:CB     | 42:BU:94:LEU:HD12  | 2.16                     | 0.72              |
| 46:BY:2:GLU:OE2     | 46:BY:58:VAL:CB    | 2.37                     | 0.72              |
| 53:B6:24:THR:HG23   | 53:B6:27:GLY:HA3   | 1.71                     | 0.72              |
| 1:AA:81:G:O6        | 1:AA:87:A:N6       | 2.23                     | 0.72              |
| 1:AA:528:C:N4       | 14:AO:49:ASN:ND2   | 2.35                     | 0.72              |
| 1:AA:595:G:C8       | 1:AA:641:U:N3      | 2.57                     | 0.72              |
| 1:AA:1464:G:OP1     | 40:BS:112:ARG:NH1  | 2.23                     | 0.72              |
| 1:AA:1512:U:H2'     | 1:AA:1513:A:H8     | 1.54                     | 0.72              |
| 3:AC:51:U:H2'       | 3:AC:52:G:H8       | 1.55                     | 0.72              |
| 3:AB:55:U:C2        | 3:AB:57:G:H5''     | 2.25                     | 0.72              |
| 4:AE:162:ILE:HD13   | 4:AE:162:ILE:H     | 1.55                     | 0.72              |
| 6:AG:61:LYS:HG3     | 6:AG:207:TYR:CE1   | 2.23                     | 0.72              |
| 6:AG:82:ALA:HB1     | 6:AG:92:VAL:HB     | 1.70                     | 0.72              |
| 6:AG:148:VAL:HG21   | 6:AG:162:LEU:CD1   | 2.20                     | 0.72              |
| 7:AH:114:GLY:O      | 7:AH:115:VAL:HG13  | 1.89                     | 0.72              |
| 8:AI:46:ARG:HH22    | 20:AU:37:VAL:CG1   | 2.03                     | 0.72              |
| 9:AJ:71:PRO:HG2     | 9:AJ:96:GLN:HG3    | 1.72                     | 0.72              |
| 13:AN:16:SER:O      | 13:AN:35:PRO:HG3   | 1.90                     | 0.72              |
| 13:AN:71:LYS:O      | 13:AN:74:ALA:HB3   | 1.90                     | 0.72              |
| 13:AN:97:ALA:O      | 13:AN:100:ALA:HB3  | 1.89                     | 0.72              |
| 15:AP:98:VAL:H      | 15:AP:110:ARG:NH2  | 1.86                     | 0.72              |
| 17:AR:63:ARG:HH22   | 17:AR:87:ILE:HG21  | 1.53                     | 0.72              |
| 18:AS:18:ARG:HH12   | 18:AS:35:LYS:HB2   | 0.74                     | 0.72              |
| 18:AS:21:VAL:HG13   | 18:AS:36:ILE:HD11  | 1.70                     | 0.72              |
| 19:AT:61:GLU:HA     | 19:AT:71:PHE:CE2   | 2.25                     | 0.72              |
| 20:AU:86:VAL:O      | 20:AU:87:ARG:HB2   | 1.88                     | 0.72              |
| 24:BA:83:G:H1       | 24:BA:102:G:C2'    | 2.03                     | 0.72              |
| 24:BA:271(B):G:H5'' | 24:BA:271(C):U:C5' | 2.19                     | 0.72              |
| 24:BA:411:G:O4'     | 24:BA:2407:G:OP1   | 2.07                     | 0.72              |
| 24:BA:533:G:H2'     | 24:BA:534:U:O4'    | 1.89                     | 0.72              |
| 24:BA:662:G:C4'     | 36:BO:18:ARG:H     | 1.98                     | 0.72              |
| 24:BA:729:G:C3'     | 24:BA:730:C:H4'    | 2.19                     | 0.72              |
| 24:BA:893:C:H2'     | 24:BA:894:C:C6     | 2.23                     | 0.72              |
| 24:BA:923:C:O4'     | 47:BZ:26:TYR:HB2   | 1.89                     | 0.72              |
| 24:BA:1155:A:C2     | 24:BA:1157:G:H1'   | 2.25                     | 0.72              |
| 24:BA:1537:C:C6     | 24:BA:1537:C:H3'   | 2.24                     | 0.72              |
| 24:BA:2227:A:H1'    | 27:BD:262:ARG:HD2  | 1.70                     | 0.72              |
| 24:BA:2227:A:H1'    | 27:BD:262:ARG:NH1  | 2.04                     | 0.72              |
| 24:BA:2296:U:H3'    | 24:BA:2296:U:C6    | 2.23                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2296:U:C1'   | 24:BA:2335:A:H61   | 1.97                     | 0.72              |
| 24:BA:2305:A:C2'   | 24:BA:2306:C:H5''  | 2.18                     | 0.72              |
| 24:BA:2309:A:N7    | 30:BG:80:PHE:CE2   | 2.57                     | 0.72              |
| 25:BB:12:C:C5      | 47:BZ:74:ARG:HB2   | 2.24                     | 0.72              |
| 26:BC:46:LYS:HD3   | 26:BC:210:ARG:HB2  | 1.72                     | 0.72              |
| 26:BC:104:LEU:HD13 | 26:BC:130:ILE:HD11 | 1.69                     | 0.72              |
| 27:BD:142:VAL:O    | 27:BD:163:ALA:CB   | 2.29                     | 0.72              |
| 28:BE:121:ASN:HB3  | 28:BE:122:PHE:HD1  | 1.55                     | 0.72              |
| 28:BE:128:SER:C    | 28:BE:130:GLY:N    | 2.46                     | 0.72              |
| 29:BF:132:VAL:HG13 | 29:BF:138:GLU:OE1  | 1.90                     | 0.72              |
| 30:BG:6:ALA:HA     | 30:BG:9:ARG:CZ     | 2.19                     | 0.72              |
| 31:BH:89:ILE:HD12  | 31:BH:90:LYS:H     | 1.51                     | 0.72              |
| 32:BK:113:ARG:O    | 32:BK:113:ARG:HD2  | 1.89                     | 0.72              |
| 39:BR:89:ARG:HG3   | 39:BR:90:GLY:N     | 2.02                     | 0.72              |
| 40:BS:29:ARG:C     | 40:BS:30:VAL:HG12  | 2.14                     | 0.72              |
| 41:BT:61:TRP:CA    | 41:BT:65:ILE:HD11  | 2.20                     | 0.72              |
| 42:BU:62:LEU:HD13  | 42:BU:98:GLU:N     | 2.05                     | 0.72              |
| 42:BU:69:LYS:HE2   | 42:BU:70:ILE:CD1   | 2.19                     | 0.72              |
| 46:BY:55:HIS:HB2   | 46:BY:101:PRO:HG3  | 1.67                     | 0.72              |
| 50:B3:14:ILE:HG13  | 50:B3:39:CYS:HB2   | 1.70                     | 0.72              |
| 50:B3:53:GLU:HG2   | 50:B3:54:GLY:H     | 1.52                     | 0.72              |
| 1:AA:281:G:H4'     | 1:AA:282:A:H5'     | 1.70                     | 0.72              |
| 1:AA:410:G:C1'     | 1:AA:432:A:H61     | 2.03                     | 0.72              |
| 1:AA:671:G:N3      | 1:AA:672:U:H1'     | 2.04                     | 0.72              |
| 1:AA:697:U:H6      | 1:AA:697:U:O5'     | 1.72                     | 0.72              |
| 1:AA:854:G:C5'     | 1:AA:871:U:H3      | 2.01                     | 0.72              |
| 1:AA:1417:G:N2     | 1:AA:1482:G:H2'    | 2.05                     | 0.72              |
| 3:AD:56:C:H3'      | 3:AD:57:G:C8       | 2.25                     | 0.72              |
| 4:AE:115:LEU:O     | 4:AE:118:LEU:HB3   | 1.88                     | 0.72              |
| 6:AG:180:GLY:O     | 6:AG:182:LYS:HG2   | 1.89                     | 0.72              |
| 7:AH:37:ARG:HA     | 7:AH:112:LEU:O     | 1.89                     | 0.72              |
| 7:AH:106:PRO:O     | 7:AH:109:ILE:HG22  | 1.89                     | 0.72              |
| 9:AJ:149:ARG:HB3   | 13:AN:59:TYR:CZ    | 2.22                     | 0.72              |
| 10:AK:85:ARG:HG2   | 10:AK:85:ARG:NH1   | 2.04                     | 0.72              |
| 11:AL:40:LEU:C     | 11:AL:42:ARG:N     | 2.45                     | 0.72              |
| 11:AL:71:SER:HA    | 11:AL:74:ILE:HD12  | 1.72                     | 0.72              |
| 13:AN:42:TRP:HE3   | 13:AN:43:SER:CA    | 2.03                     | 0.72              |
| 15:AP:37:THR:OG1   | 15:AP:56:LEU:HA    | 1.89                     | 0.72              |
| 15:AP:92:HIS:CG    | 15:AP:98:VAL:HG21  | 2.23                     | 0.72              |
| 24:BA:51:G:H1'     | 24:BA:118:A:H62    | 1.53                     | 0.72              |
| 24:BA:443:A:H61    | 29:BF:41:LEU:CD1   | 2.02                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:586:A:N6    | 24:BA:1254:A:C2   | 2.58                     | 0.72              |
| 24:BA:601:C:C1'   | 29:BF:104:LYS:HZ3 | 2.01                     | 0.72              |
| 24:BA:742:G:H4'   | 24:BA:1675:C:O2'  | 1.89                     | 0.72              |
| 24:BA:811:U:C6    | 24:BA:811:U:O5'   | 2.43                     | 0.72              |
| 24:BA:1077:A:H5'  | 24:BA:1078:U:OP2  | 1.89                     | 0.72              |
| 24:BA:1165:U:H2'  | 24:BA:1166:C:C6   | 2.24                     | 0.72              |
| 24:BA:1280:G:O2'  | 24:BA:1281:G:H5'  | 1.89                     | 0.72              |
| 24:BA:1341:U:O4   | 24:BA:1395:A:H2   | 1.72                     | 0.72              |
| 24:BA:1430:C:H2'  | 24:BA:1431:U:H6   | 1.50                     | 0.72              |
| 24:BA:1470:G:N3   | 24:BA:1522:G:N2   | 2.37                     | 0.72              |
| 24:BA:1657:C:H2'  | 24:BA:1658:C:O4'  | 1.90                     | 0.72              |
| 24:BA:1712:C:H2'  | 24:BA:1716:U:H6   | 1.53                     | 0.72              |
| 24:BA:1718:G:C8   | 24:BA:1725:G:N7   | 2.58                     | 0.72              |
| 24:BA:1851:U:H2'  | 24:BA:1852:C:C6   | 2.24                     | 0.72              |
| 24:BA:1912:A:C8   | 24:BA:1913:A:H1'  | 2.24                     | 0.72              |
| 24:BA:2213:U:C5'  | 24:BA:2215:G:N7   | 2.53                     | 0.72              |
| 24:BA:2463:C:C2'  | 24:BA:2464:C:H5'  | 2.20                     | 0.72              |
| 24:BA:2489:G:H2'  | 24:BA:2490:G:H8   | 1.45                     | 0.72              |
| 24:BA:2623:G:C5'  | 24:BA:2826:A:H1'  | 2.19                     | 0.72              |
| 24:BA:2695:C:H2'  | 24:BA:2696:U:C5   | 2.24                     | 0.72              |
| 24:BA:2815:C:C4'  | 51:B4:42:PRO:HG3  | 2.19                     | 0.72              |
| 25:BB:49:C:OP1    | 39:BR:97:ARG:N    | 2.22                     | 0.72              |
| 27:BD:201:HIS:CD2 | 27:BD:202:LYS:HE2 | 2.24                     | 0.72              |
| 30:BG:65:GLY:O    | 30:BG:66:GLN:HB2  | 1.89                     | 0.72              |
| 31:BH:87:LEU:H    | 31:BH:132:ARG:HB3 | 1.52                     | 0.72              |
| 32:BK:8:PRO:HD3   | 32:BK:35:LEU:O    | 1.90                     | 0.72              |
| 32:BK:69:LYS:CG   | 32:BK:70:LYS:N    | 2.51                     | 0.72              |
| 35:BN:24:VAL:HG23 | 35:BN:26:LYS:HG2  | 1.71                     | 0.72              |
| 36:BO:51:PHE:O    | 36:BO:55:ARG:HG3  | 1.89                     | 0.72              |
| 36:BO:79:ARG:O    | 36:BO:83:VAL:HG13 | 1.88                     | 0.72              |
| 36:BO:91:PHE:H    | 36:BO:125:VAL:CG1 | 2.01                     | 0.72              |
| 37:BP:16:ARG:HG3  | 37:BP:72:LYS:HB3  | 1.72                     | 0.72              |
| 38:BQ:83:ILE:HG23 | 38:BQ:86:ARG:NE   | 2.05                     | 0.72              |
| 39:BR:33:LYS:HG2  | 39:BR:54:LEU:HD21 | 1.72                     | 0.72              |
| 39:BR:75:GLU:O    | 39:BR:78:LEU:HB3  | 1.89                     | 0.72              |
| 41:BT:74:LEU:HD22 | 41:BT:78:THR:CG2  | 2.19                     | 0.72              |
| 44:BW:44:GLU:CG   | 44:BW:51:VAL:HG23 | 2.14                     | 0.72              |
| 46:BY:15:PRO:HB3  | 46:BY:25:PRO:HB3  | 1.70                     | 0.72              |
| 49:B2:51:ALA:O    | 49:B2:53:LEU:N    | 2.22                     | 0.72              |
| 51:B4:50:GLY:HA3  | 51:B4:57:VAL:CG2  | 2.20                     | 0.72              |
| 52:B5:48:VAL:O    | 52:B5:49:HIS:CB   | 2.37                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 53:B6:25:PRO:HA    | 53:B6:28:ARG:NE   | 2.04                     | 0.72              |
| 53:B6:43:THR:C     | 53:B6:45:ALA:N    | 2.47                     | 0.72              |
| 1:AA:272:C:H2'     | 1:AA:273:A:C8     | 2.23                     | 0.72              |
| 1:AA:890:G:H2'     | 1:AA:906:G:O6     | 1.90                     | 0.72              |
| 1:AA:973:G:N2      | 1:AA:974:A:C6     | 2.58                     | 0.72              |
| 1:AA:1125:U:H5     | 12:AM:5:ARG:HH22  | 1.35                     | 0.72              |
| 5:AF:47:LEU:CD1    | 5:AF:83:ARG:HH21  | 2.01                     | 0.72              |
| 6:AG:20:TYR:HA     | 6:AG:33:MET:SD    | 2.30                     | 0.72              |
| 9:AJ:132:GLY:O     | 9:AJ:136:LYS:HB3  | 1.90                     | 0.72              |
| 9:AJ:153:HIS:HE1   | 13:AN:58:PRO:HD2  | 1.53                     | 0.72              |
| 11:AL:111:ARG:O    | 11:AL:119:ALA:HB2 | 1.90                     | 0.72              |
| 15:AP:29:ARG:NH1   | 15:AP:66:LEU:HB3  | 2.05                     | 0.72              |
| 18:AS:33:ILE:O     | 18:AS:34:GLU:HB2  | 1.89                     | 0.72              |
| 20:AU:63:GLN:OE1   | 20:AU:66:LEU:HD21 | 1.90                     | 0.72              |
| 24:BA:126:A:H5'    | 53:B6:47:ARG:HH12 | 1.54                     | 0.72              |
| 24:BA:293:U:H3'    | 24:BA:293:U:C6    | 2.25                     | 0.72              |
| 24:BA:443:A:N3     | 24:BA:1201:C:H1'  | 2.05                     | 0.72              |
| 24:BA:663:G:H4'    | 36:BO:18:ARG:HE   | 1.55                     | 0.72              |
| 24:BA:739:G:H2'    | 24:BA:1784:A:H61  | 1.55                     | 0.72              |
| 24:BA:815:C:H2'    | 24:BA:816:C:H5'   | 1.70                     | 0.72              |
| 24:BA:823:G:N3     | 24:BA:823:G:H2'   | 2.04                     | 0.72              |
| 24:BA:974:G:O4'    | 24:BA:1187:G:H1'  | 1.90                     | 0.72              |
| 24:BA:1028:A:C2    | 24:BA:2486:G:O2'  | 2.43                     | 0.72              |
| 24:BA:1083:U:H2'   | 24:BA:1083:U:O2   | 1.90                     | 0.72              |
| 24:BA:1803:A:H2'   | 24:BA:1804:C:C6   | 2.24                     | 0.72              |
| 24:BA:2031:A:N6    | 24:BA:2498:C:N1   | 2.37                     | 0.72              |
| 24:BA:2033:A:C6    | 24:BA:2036:C:C4   | 2.77                     | 0.72              |
| 24:BA:2306:C:C2    | 30:BG:46:ALA:HB2  | 2.24                     | 0.72              |
| 24:BA:2415:G:H5''  | 36:BO:61:ARG:CD   | 2.19                     | 0.72              |
| 24:BA:2619:C:H4'   | 28:BE:152:LYS:CA  | 2.06                     | 0.72              |
| 24:BA:2742:C:H5''  | 55:B8:35:ARG:CZ   | 2.19                     | 0.72              |
| 24:BA:2780:G:H22   | 34:BM:97:ARG:HH12 | 0.75                     | 0.72              |
| 24:BA:2811:G:C6    | 24:BA:2891:G:N2   | 2.57                     | 0.72              |
| 24:BA:2841:C:C2    | 24:BA:2842:G:N7   | 2.57                     | 0.72              |
| 27:BD:63:ARG:HH11  | 27:BD:87:ASN:HD21 | 1.35                     | 0.72              |
| 27:BD:91:ARG:NH1   | 27:BD:198:ASN:HB2 | 2.03                     | 0.72              |
| 27:BD:214:TRP:CZ2  | 27:BD:219:PRO:HB3 | 2.25                     | 0.72              |
| 27:BD:270:ILE:HG22 | 27:BD:271:ILE:O   | 1.90                     | 0.72              |
| 29:BF:45:ARG:HG2   | 29:BF:97:TYR:CD1  | 2.25                     | 0.72              |
| 29:BF:74:ARG:NH1   | 29:BF:76:GLY:N    | 2.38                     | 0.72              |
| 31:BH:118:PRO:HD2  | 31:BH:121:ILE:CD1 | 2.17                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 32:BK:31:LEU:CD1  | 32:BK:36:ALA:HB3   | 2.19                     | 0.72              |
| 34:BM:67:LEU:H    | 34:BM:87:LEU:HD22  | 1.55                     | 0.72              |
| 34:BM:85:ILE:HD12 | 34:BM:85:ILE:N     | 2.03                     | 0.72              |
| 35:BN:3:GLN:HG2   | 35:BN:6:THR:CB     | 2.16                     | 0.72              |
| 35:BN:39:ILE:O    | 35:BN:59:LYS:NZ    | 2.21                     | 0.72              |
| 38:BQ:20:LEU:HD11 | 38:BQ:24:GLN:OE1   | 1.89                     | 0.72              |
| 38:BQ:47:PHE:C    | 38:BQ:49:ASP:N     | 2.43                     | 0.72              |
| 38:BQ:64:ARG:HG2  | 38:BQ:65:LEU:N     | 2.02                     | 0.72              |
| 38:BQ:97:VAL:CA   | 38:BQ:114:VAL:HG13 | 2.20                     | 0.72              |
| 40:BS:2:ASN:OD1   | 40:BS:3:ARG:HG3    | 1.88                     | 0.72              |
| 40:BS:64:ARG:NE   | 40:BS:77:PRO:HB2   | 2.03                     | 0.72              |
| 41:BT:74:LEU:CD1  | 41:BT:78:THR:HG21  | 2.19                     | 0.72              |
| 42:BU:16:PRO:HA   | 42:BU:98:GLU:HB2   | 1.71                     | 0.72              |
| 42:BU:40:LEU:CD2  | 42:BU:51:VAL:HG12  | 2.18                     | 0.72              |
| 43:BV:58:ALA:O    | 43:BV:63:ASP:N     | 2.18                     | 0.72              |
| 44:BW:15:GLU:HB3  | 44:BW:16:LYS:HE2   | 1.71                     | 0.72              |
| 46:BY:24:LEU:CD1  | 46:BY:83:PRO:HD2   | 2.19                     | 0.72              |
| 46:BY:141:VAL:CG1 | 46:BY:142:SER:N    | 2.53                     | 0.72              |
| 1:AA:411:A:C4     | 1:AA:413:G:H1'     | 2.25                     | 0.72              |
| 1:AA:474:G:H5'    | 18:AS:81:ARG:NE    | 2.04                     | 0.72              |
| 1:AA:576:G:N7     | 1:AA:881:G:C1'     | 2.52                     | 0.72              |
| 1:AA:674:G:H2'    | 1:AA:675:A:H8      | 1.54                     | 0.72              |
| 1:AA:989:C:C2'    | 1:AA:990:C:H5'     | 2.20                     | 0.72              |
| 1:AA:1416:G:H2'   | 1:AA:1417:G:H8     | 1.55                     | 0.72              |
| 6:AG:61:LYS:CG    | 6:AG:203:VAL:HG13  | 2.19                     | 0.72              |
| 6:AG:101:LEU:HB2  | 6:AG:138:TYR:O     | 1.89                     | 0.72              |
| 6:AG:106:TYR:HD2  | 6:AG:114:ARG:HG2   | 1.54                     | 0.72              |
| 6:AG:156:GLU:O    | 6:AG:159:ARG:HB3   | 1.90                     | 0.72              |
| 6:AG:169:LYS:HG2  | 6:AG:176:LEU:HD21  | 1.72                     | 0.72              |
| 10:AK:11:THR:HA   | 10:AK:14:ARG:CZ    | 2.20                     | 0.72              |
| 10:AK:40:ALA:O    | 10:AK:43:GLY:N     | 2.22                     | 0.72              |
| 13:AN:25:TYR:HD1  | 13:AN:89:ALA:HB2   | 1.54                     | 0.72              |
| 15:AP:16:ASP:CA   | 15:AP:19:LEU:HG    | 2.20                     | 0.72              |
| 19:AT:7:THR:O     | 19:AT:23:VAL:HG23  | 1.90                     | 0.72              |
| 21:AV:80:TYR:CZ   | 21:AV:81:ARG:HG3   | 2.25                     | 0.72              |
| 22:AW:44:ALA:HA   | 22:AW:92:LEU:HD21  | 1.72                     | 0.72              |
| 24:BA:196:A:H3'   | 24:BA:197:A:H5''   | 1.72                     | 0.72              |
| 24:BA:464:U:O2'   | 53:B6:12:ARG:NH2   | 2.23                     | 0.72              |
| 24:BA:718:A:H5''  | 24:BA:719:C:C6     | 2.25                     | 0.72              |
| 24:BA:760:G:C2'   | 24:BA:761:A:H5'    | 2.20                     | 0.72              |
| 24:BA:945:A:N3    | 24:BA:945:A:H2'    | 2.05                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:997:G:OP1    | 41:BT:92:ARG:HD2   | 1.90                     | 0.72              |
| 24:BA:1071:G:C2'   | 24:BA:1072:C:C5'   | 2.67                     | 0.72              |
| 24:BA:1265:A:C8    | 24:BA:1267:U:O4    | 2.43                     | 0.72              |
| 24:BA:1266:G:N2    | 24:BA:2012:G:H2'   | 2.04                     | 0.72              |
| 24:BA:1273:U:H4'   | 24:BA:1275:A:P     | 2.30                     | 0.72              |
| 24:BA:1301:A:N6    | 24:BA:1303:G:N3    | 2.38                     | 0.72              |
| 24:BA:1313:U:O2'   | 24:BA:1314:C:H5'   | 1.89                     | 0.72              |
| 24:BA:1565:C:N3    | 24:BA:1567:A:C1'   | 2.53                     | 0.72              |
| 24:BA:1918:A:C8    | 24:BA:1919:A:N6    | 2.58                     | 0.72              |
| 24:BA:1992:G:C1'   | 24:BA:1993:U:O4    | 2.38                     | 0.72              |
| 24:BA:2176:A:H4'   | 26:BC:221:SER:HB2  | 1.71                     | 0.72              |
| 24:BA:2323:G:O2'   | 24:BA:2324:C:H5'   | 1.90                     | 0.72              |
| 24:BA:2423:U:H2'   | 24:BA:2423:U:O2    | 1.88                     | 0.72              |
| 24:BA:2476:A:C8    | 24:BA:2477:C:C5    | 2.78                     | 0.72              |
| 24:BA:2547:U:H2'   | 24:BA:2548:G:H5''  | 1.71                     | 0.72              |
| 24:BA:2732:G:H3'   | 24:BA:2733:A:C5'   | 2.19                     | 0.72              |
| 24:BA:2839:G:H2'   | 24:BA:2840:C:H6    | 1.54                     | 0.72              |
| 26:BC:26:ALA:HB2   | 26:BC:185:LEU:HB2  | 1.72                     | 0.72              |
| 26:BC:100:ILE:HG23 | 26:BC:127:LEU:CG   | 2.15                     | 0.72              |
| 27:BD:5:LYS:HD2    | 27:BD:113:VAL:HG21 | 1.70                     | 0.72              |
| 27:BD:63:ARG:NH1   | 27:BD:63:ARG:HB2   | 2.04                     | 0.72              |
| 27:BD:206:LEU:HD13 | 27:BD:206:LEU:H    | 1.54                     | 0.72              |
| 28:BE:4:ILE:O      | 28:BE:4:ILE:HG13   | 1.90                     | 0.72              |
| 28:BE:154:LYS:NZ   | 28:BE:155:LYS:O    | 2.20                     | 0.72              |
| 29:BF:157:VAL:HG22 | 29:BF:194:MET:CB   | 2.19                     | 0.72              |
| 31:BH:126:PRO:CG   | 31:BH:132:ARG:HH22 | 2.03                     | 0.72              |
| 32:BK:146:ALA:C    | 32:BK:148:GLU:N    | 2.42                     | 0.72              |
| 33:BL:104:VAL:HG13 | 33:BL:127:ILE:HB   | 1.69                     | 0.72              |
| 34:BM:16:ILE:HB    | 34:BM:54:VAL:CG2   | 2.19                     | 0.72              |
| 34:BM:26:LEU:O     | 34:BM:26:LEU:HD12  | 1.90                     | 0.72              |
| 34:BM:27:ALA:CA    | 34:BM:30:ILE:HD12  | 2.16                     | 0.72              |
| 34:BM:36:GLY:HA2   | 34:BM:47:ALA:O     | 1.89                     | 0.72              |
| 34:BM:123:TYR:CD2  | 34:BM:129:PRO:HB2  | 2.24                     | 0.72              |
| 35:BN:43:VAL:HG11  | 35:BN:54:GLU:OE1   | 1.89                     | 0.72              |
| 37:BP:74:TYR:O     | 37:BP:91:GLU:HG2   | 1.90                     | 0.72              |
| 38:BQ:5:LYS:HE2    | 38:BQ:5:LYS:HA     | 1.69                     | 0.72              |
| 38:BQ:26:LYS:HA    | 38:BQ:29:LEU:HD12  | 1.72                     | 0.72              |
| 39:BR:62:LYS:HB2   | 39:BR:65:VAL:HG13  | 1.69                     | 0.72              |
| 39:BR:74:ALA:HB1   | 39:BR:108:GLY:H    | 1.51                     | 0.72              |
| 46:BY:9:TYR:HB3    | 46:BY:14:LYS:NZ    | 2.04                     | 0.72              |
| 46:BY:109:ALA:C    | 46:BY:113:ALA:HB2  | 2.15                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:309:G:O2'     | 1:AA:310:G:C5'    | 2.37                     | 0.72              |
| 1:AA:468:A:C4'     | 18:AS:82:GLN:HB3  | 2.18                     | 0.72              |
| 1:AA:708:C:H4'     | 13:AN:37:GLY:HA3  | 1.71                     | 0.72              |
| 1:AA:927:G:O5'     | 1:AA:1503:A:N6    | 2.23                     | 0.72              |
| 1:AA:1036:G:C8     | 1:AA:1037:C:C5    | 2.78                     | 0.72              |
| 1:AA:1172:C:O2'    | 1:AA:1173:G:H5'   | 1.89                     | 0.72              |
| 1:AA:1345:U:C2     | 1:AA:1377:A:N6    | 2.57                     | 0.72              |
| 1:AA:1358:U:OP2    | 1:AA:1359:C:H5    | 1.73                     | 0.72              |
| 3:AB:53:G:C4'      | 24:BA:2470:G:H5'' | 2.20                     | 0.72              |
| 4:AE:189:ASP:HB2   | 4:AE:205:ASP:HB3  | 1.69                     | 0.72              |
| 6:AG:15:GLU:HG2    | 6:AG:63:LYS:CB    | 2.20                     | 0.72              |
| 6:AG:70:ILE:HD12   | 6:AG:100:ARG:NH2  | 2.04                     | 0.72              |
| 7:AH:102:ALA:HB1   | 7:AH:106:PRO:HB2  | 1.69                     | 0.72              |
| 8:AI:49:ALA:HB1    | 20:AU:80:PRO:HD3  | 1.71                     | 0.72              |
| 9:AJ:54:THR:OG1    | 9:AJ:56:GLN:HG2   | 1.90                     | 0.72              |
| 13:AN:51:LYS:HD3   | 13:AN:52:GLY:H    | 1.55                     | 0.72              |
| 14:AO:84:LEU:HG    | 14:AO:85:ILE:N    | 2.04                     | 0.72              |
| 24:BA:270(J):G:H3' | 24:BA:270(K):C:C6 | 2.24                     | 0.72              |
| 24:BA:598:G:O4'    | 36:BO:13:ASN:ND2  | 2.22                     | 0.72              |
| 24:BA:662:G:O2'    | 36:BO:18:ARG:HB2  | 1.90                     | 0.72              |
| 24:BA:703:U:H3'    | 24:BA:704:G:H8    | 1.55                     | 0.72              |
| 24:BA:724:U:C2'    | 24:BA:725:G:H5'   | 2.20                     | 0.72              |
| 24:BA:834:C:H1'    | 24:BA:2358:G:C2   | 2.25                     | 0.72              |
| 24:BA:852:G:O2'    | 24:BA:853:G:H5'   | 1.90                     | 0.72              |
| 24:BA:957:A:N7     | 24:BA:959:A:N7    | 2.38                     | 0.72              |
| 24:BA:1060:U:H5''  | 24:BA:1061:U:C4   | 2.24                     | 0.72              |
| 24:BA:1107:G:H2'   | 24:BA:1108:U:H5'  | 1.72                     | 0.72              |
| 24:BA:1359:A:C2'   | 24:BA:1360:A:H5'  | 2.18                     | 0.72              |
| 24:BA:1365:A:N7    | 24:BA:1366:A:N7   | 2.37                     | 0.72              |
| 24:BA:1372:U:H2'   | 24:BA:1373:A:H5'  | 1.70                     | 0.72              |
| 24:BA:2283:C:C2    | 24:BA:2389:G:N2   | 2.57                     | 0.72              |
| 24:BA:2284:C:O5'   | 52:B5:9:LEU:HG    | 1.90                     | 0.72              |
| 24:BA:2467:C:N3    | 24:BA:2483:C:N4   | 2.37                     | 0.72              |
| 24:BA:2875:C:H4'   | 40:BS:3:ARG:HB2   | 1.71                     | 0.72              |
| 24:BA:2882:A:H2'   | 24:BA:2883:A:O5'  | 1.89                     | 0.72              |
| 25:BB:29:A:H2'     | 25:BB:30:C:H6     | 1.52                     | 0.72              |
| 26:BC:68:LEU:HD22  | 26:BC:157:LYS:HA  | 1.71                     | 0.72              |
| 27:BD:186:HIS:HB2  | 27:BD:188:GLU:OE2 | 1.90                     | 0.72              |
| 28:BE:77:ILE:O     | 28:BE:78:LEU:HD13 | 1.88                     | 0.72              |
| 29:BF:11:VAL:HG23  | 29:BF:17:ARG:HH22 | 1.52                     | 0.72              |
| 31:BH:103:LEU:C    | 31:BH:105:LEU:HG  | 2.14                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 32:BK:100:ALA:O    | 32:BK:104:GLN:HB2  | 1.89                     | 0.72              |
| 32:BK:138:ILE:HG13 | 32:BK:140:LEU:HD11 | 1.70                     | 0.72              |
| 35:BN:59:LYS:HA    | 35:BN:86:ILE:CD1   | 2.15                     | 0.72              |
| 36:BO:46:LYS:CB    | 36:BO:49:ARG:CZ    | 2.68                     | 0.72              |
| 38:BQ:44:LEU:HD11  | 38:BQ:48:VAL:HG21  | 1.72                     | 0.72              |
| 39:BR:53:SER:O     | 39:BR:55:ALA:N     | 2.23                     | 0.72              |
| 40:BS:11:GLU:N     | 40:BS:11:GLU:OE2   | 2.22                     | 0.72              |
| 40:BS:64:ARG:CZ    | 40:BS:77:PRO:HB2   | 2.19                     | 0.72              |
| 42:BU:15:GLU:CD    | 42:BU:16:PRO:HD2   | 2.15                     | 0.72              |
| 44:BW:63:LYS:H     | 44:BW:72:LYS:CG    | 2.03                     | 0.72              |
| 46:BY:42:VAL:HB    | 46:BY:43:GLU:CD    | 2.14                     | 0.72              |
| 51:B4:10:LYS:O     | 51:B4:12:SER:N     | 2.23                     | 0.72              |
| 51:B4:51:TYR:CD2   | 51:B4:51:TYR:C     | 2.67                     | 0.72              |
| 1:AA:299:G:H2'     | 1:AA:300:A:C8      | 2.24                     | 0.72              |
| 1:AA:310:G:H2'     | 1:AA:311:C:H6      | 1.54                     | 0.72              |
| 1:AA:524:G:O2'     | 1:AA:525:C:H5'     | 1.90                     | 0.72              |
| 1:AA:1293:G:H2'    | 1:AA:1294:G:C8     | 2.22                     | 0.72              |
| 3:AC:74:C:O3'      | 24:BA:2602:A:OP1   | 2.08                     | 0.72              |
| 3:AD:14:A:H2'      | 3:AD:14:A:N3       | 2.05                     | 0.72              |
| 4:AE:111:ARG:HH11  | 4:AE:111:ARG:CA    | 2.01                     | 0.72              |
| 4:AE:175:ARG:O     | 4:AE:176:GLU:C     | 2.33                     | 0.72              |
| 6:AG:127:THR:O     | 6:AG:146:ILE:HG22  | 1.90                     | 0.72              |
| 8:AI:33:TYR:HE2    | 8:AI:74:ASP:CB     | 2.03                     | 0.72              |
| 9:AJ:106:GLN:O     | 9:AJ:109:ASN:HB2   | 1.89                     | 0.72              |
| 14:AO:36:VAL:HG23  | 14:AO:81:SER:C     | 2.15                     | 0.72              |
| 15:AP:3:ARG:HG3    | 15:AP:7:VAL:HG12   | 1.70                     | 0.72              |
| 21:AV:42:PRO:O     | 21:AV:45:VAL:HG23  | 1.89                     | 0.72              |
| 22:AW:100:ILE:O    | 22:AW:102:GLY:N    | 2.20                     | 0.72              |
| 24:BA:83:G:O6      | 24:BA:102:G:N3     | 2.22                     | 0.72              |
| 24:BA:273(C):C:H2' | 24:BA:273(D):C:C6  | 2.24                     | 0.72              |
| 24:BA:558:G:H5'    | 34:BM:112:LEU:HD12 | 1.71                     | 0.72              |
| 24:BA:567:A:N1     | 24:BA:568:U:O2     | 2.23                     | 0.72              |
| 24:BA:660:G:H5''   | 29:BF:99:TYR:CZ    | 2.25                     | 0.72              |
| 24:BA:675:A:H1'    | 24:BA:2443:C:O2'   | 1.90                     | 0.72              |
| 24:BA:696:G:O2'    | 24:BA:697:C:H5'    | 1.90                     | 0.72              |
| 24:BA:807:U:C2'    | 24:BA:808:G:H5'    | 2.20                     | 0.72              |
| 24:BA:1014:U:C2'   | 24:BA:1015:G:H5'   | 2.20                     | 0.72              |
| 24:BA:1372:U:H2'   | 24:BA:1373:A:C5'   | 2.19                     | 0.72              |
| 24:BA:1703:G:H21   | 24:BA:1704:G:H1'   | 1.55                     | 0.72              |
| 24:BA:1915:U:OP2   | 24:BA:1915:U:H3'   | 1.90                     | 0.72              |
| 24:BA:2395:C:C4    | 24:BA:2396:G:N7    | 2.57                     | 0.72              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 24:BA:2423:U:H1'  | 24:BA:2425:A:C4     | 2.25                     | 0.72              |
| 24:BA:2711:A:OP2  | 24:BA:2712(A):A:OP2 | 2.07                     | 0.72              |
| 26:BC:78:ALA:O    | 26:BC:119:VAL:HG11  | 1.89                     | 0.72              |
| 26:BC:197:GLU:O   | 26:BC:200:LYS:HB3   | 1.90                     | 0.72              |
| 27:BD:37:LEU:HD11 | 27:BD:64:ILE:N      | 2.03                     | 0.72              |
| 29:BF:200:GLU:OE1 | 29:BF:201:VAL:N     | 2.22                     | 0.72              |
| 30:BG:41:GLN:OE1  | 30:BG:155:MET:HE3   | 1.90                     | 0.72              |
| 35:BN:34:THR:C    | 35:BN:61:VAL:HG11   | 2.15                     | 0.72              |
| 36:BO:36:LYS:NZ   | 36:BO:42:SER:OG     | 2.21                     | 0.72              |
| 37:BP:77:LYS:CB   | 37:BP:78:PRO:CD     | 2.68                     | 0.72              |
| 39:BR:24:LEU:H    | 39:BR:86:ALA:CB     | 2.03                     | 0.72              |
| 42:BU:83:ARG:C    | 42:BU:83:ARG:CD     | 2.63                     | 0.72              |
| 46:BY:100:VAL:O   | 46:BY:124:ILE:HG23  | 1.90                     | 0.72              |
| 46:BY:103:ARG:HA  | 46:BY:103:ARG:NE    | 2.05                     | 0.72              |
| 46:BY:157:LEU:CD1 | 46:BY:161:VAL:HG13  | 2.20                     | 0.72              |
| 50:B3:5:ILE:O     | 50:B3:6:HIS:HB2     | 1.90                     | 0.72              |
| 1:AA:95:G:C2      | 1:AA:96:G:H1'       | 2.25                     | 0.71              |
| 1:AA:192:U:C1'    | 22:AW:103:GLY:HA2   | 2.20                     | 0.71              |
| 1:AA:359:U:H2'    | 1:AA:360:A:H8       | 1.54                     | 0.71              |
| 1:AA:657:G:N2     | 17:AR:22:THR:O      | 2.21                     | 0.71              |
| 1:AA:713:G:N2     | 1:AA:777:A:C1'      | 2.51                     | 0.71              |
| 1:AA:961:U:H1'    | 1:AA:1201:A:N6      | 2.04                     | 0.71              |
| 1:AA:1116:C:H2'   | 1:AA:1117:G:H8      | 1.54                     | 0.71              |
| 1:AA:1349:A:H2'   | 1:AA:1350:A:H8      | 1.55                     | 0.71              |
| 1:AA:1422:G:H2'   | 1:AA:1423:G:H8      | 1.55                     | 0.71              |
| 1:AA:1484:C:O2'   | 1:AA:1485:U:H5'     | 1.90                     | 0.71              |
| 2:A1:38:U:OP2     | 2:A1:38:U:H6        | 1.73                     | 0.71              |
| 3:AC:24:G:H2'     | 3:AC:25:C:C6        | 2.25                     | 0.71              |
| 3:AC:74:C:H5'     | 24:BA:2602:A:H3'    | 1.70                     | 0.71              |
| 3:AD:37:A:H61     | 9:AJ:79:ARG:HH22    | 1.37                     | 0.71              |
| 4:AE:9:GLU:HG2    | 4:AE:10:LEU:H       | 1.55                     | 0.71              |
| 4:AE:134:GLU:HA   | 4:AE:134:GLU:OE1    | 1.89                     | 0.71              |
| 4:AE:223:ILE:HG22 | 4:AE:229:VAL:HA     | 1.70                     | 0.71              |
| 5:AF:22:TRP:CZ3   | 5:AF:32:LEU:HB3     | 2.25                     | 0.71              |
| 10:AK:27:PRO:O    | 10:AK:32:LYS:HD3    | 1.90                     | 0.71              |
| 10:AK:40:ALA:HB2  | 10:AK:45:ILE:HG12   | 1.72                     | 0.71              |
| 10:AK:78:GLN:HG3  | 10:AK:80:ILE:O      | 1.89                     | 0.71              |
| 15:AP:29:ARG:CZ   | 15:AP:64:TRP:HE1    | 2.03                     | 0.71              |
| 15:AP:74:VAL:O    | 15:AP:78:ILE:HG13   | 1.90                     | 0.71              |
| 17:AR:54:ARG:HA   | 17:AR:57:LEU:CD2    | 2.17                     | 0.71              |
| 18:AS:6:LEU:O     | 18:AS:6:LEU:HD22    | 1.90                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 20:AU:18:ARG:NH2  | 20:AU:21:LYS:HD3   | 2.05                     | 0.71              |
| 24:BA:261:G:O2'   | 24:BA:609:A:H4'    | 1.89                     | 0.71              |
| 24:BA:299:A:N1    | 24:BA:322:A:H2'    | 2.04                     | 0.71              |
| 24:BA:603:A:H2'   | 24:BA:604:G:H8     | 1.54                     | 0.71              |
| 24:BA:623:G:C8    | 36:BO:105:LEU:HB2  | 2.24                     | 0.71              |
| 24:BA:825:C:O2'   | 24:BA:826:U:H5'    | 1.89                     | 0.71              |
| 24:BA:1087:G:H21  | 24:BA:1103:A:H2'   | 1.54                     | 0.71              |
| 24:BA:1314:C:C2   | 24:BA:1315:C:C5    | 2.78                     | 0.71              |
| 24:BA:1670:C:OP2  | 24:BA:1671:U:C5    | 2.43                     | 0.71              |
| 24:BA:1807:G:H21  | 24:BA:1809:A:H5'   | 1.55                     | 0.71              |
| 24:BA:1934:C:C4'  | 24:BA:1974:C:H4'   | 2.19                     | 0.71              |
| 24:BA:2168:G:H2'  | 24:BA:2170:A:OP2   | 1.89                     | 0.71              |
| 24:BA:2498:C:C2'  | 24:BA:2499:C:H5''  | 2.20                     | 0.71              |
| 24:BA:2636:U:OP1  | 28:BE:79:ARG:N     | 2.20                     | 0.71              |
| 25:BB:43:C:O2     | 30:BG:95:ARG:NE    | 2.23                     | 0.71              |
| 26:BC:116:THR:O   | 26:BC:120:MET:HG2  | 1.89                     | 0.71              |
| 27:BD:250:TRP:CE3 | 27:BD:250:TRP:HA   | 2.25                     | 0.71              |
| 28:BE:8:LYS:HG2   | 40:BS:6:LEU:HD11   | 1.70                     | 0.71              |
| 28:BE:11:MET:O    | 28:BE:22:PRO:CD    | 2.38                     | 0.71              |
| 28:BE:172:VAL:HA  | 28:BE:184:VAL:HG12 | 1.72                     | 0.71              |
| 29:BF:36:VAL:HG11 | 29:BF:183:VAL:HG11 | 1.72                     | 0.71              |
| 29:BF:37:VAL:HA   | 29:BF:184:TYR:CZ   | 2.25                     | 0.71              |
| 29:BF:150:GLY:O   | 29:BF:152:GLU:N    | 2.22                     | 0.71              |
| 31:BH:94:TYR:HE2  | 31:BH:96:ALA:HB2   | 1.55                     | 0.71              |
| 31:BH:98:LEU:H    | 31:BH:125:VAL:HG21 | 1.53                     | 0.71              |
| 33:BL:37:PHE:CB   | 33:BL:57:ILE:HD12  | 2.18                     | 0.71              |
| 35:BN:8:LEU:HD11  | 35:BN:82:ASN:HA    | 1.70                     | 0.71              |
| 36:BO:77:ARG:O    | 36:BO:81:GLN:HG3   | 1.90                     | 0.71              |
| 37:BP:77:LYS:CB   | 37:BP:78:PRO:HD3   | 2.20                     | 0.71              |
| 39:BR:64:GLU:CD   | 39:BR:67:ARG:HB3   | 2.15                     | 0.71              |
| 40:BS:11:GLU:O    | 40:BS:12:SER:C     | 2.33                     | 0.71              |
| 40:BS:26:ASP:HA   | 40:BS:100:TYR:CE2  | 2.24                     | 0.71              |
| 40:BS:79:HIS:ND1  | 40:BS:79:HIS:N     | 2.33                     | 0.71              |
| 43:BV:72:LYS:HB3  | 43:BV:108:GLY:HA3  | 1.72                     | 0.71              |
| 45:BX:72:VAL:HG11 | 45:BX:96:ILE:HG21  | 1.71                     | 0.71              |
| 46:BY:144:LEU:HB3 | 46:BY:174:VAL:CG1  | 2.14                     | 0.71              |
| 49:B2:5:LYS:HZ2   | 49:B2:59:VAL:HG22  | 1.53                     | 0.71              |
| 50:B3:23:GLU:HA   | 50:B3:27:THR:O     | 1.90                     | 0.71              |
| 52:B5:54:ILE:HD13 | 52:B5:54:ILE:O     | 1.89                     | 0.71              |
| 1:AA:160:A:H2'    | 1:AA:161:A:O4'     | 1.90                     | 0.71              |
| 1:AA:968:A:H4'    | 1:AA:969:A:OP2     | 1.89                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1142:G:O2'    | 1:AA:1143:G:H5'    | 1.90                     | 0.71              |
| 1:AA:1200:C:H3'    | 1:AA:1201:A:C5'    | 2.19                     | 0.71              |
| 1:AA:1200:C:H5''   | 1:AA:1201:A:O3'    | 1.90                     | 0.71              |
| 1:AA:1277:C:C4'    | 1:AA:1282:C:H1'    | 2.17                     | 0.71              |
| 1:AA:1528:U:HO2'   | 1:AA:1529:G:H3'    | 1.53                     | 0.71              |
| 3:AD:76:A:N3       | 24:BA:2432:A:O4'   | 2.23                     | 0.71              |
| 4:AE:16:HIS:HA     | 4:AE:204:ASN:CB    | 2.21                     | 0.71              |
| 4:AE:132:LYS:O     | 4:AE:135:GLN:HB2   | 1.90                     | 0.71              |
| 5:AF:29:TYR:O      | 5:AF:32:LEU:HB2    | 1.89                     | 0.71              |
| 5:AF:159:GLY:H     | 5:AF:193:TYR:HE1   | 1.35                     | 0.71              |
| 6:AG:19:LEU:H      | 6:AG:33:MET:CE     | 2.01                     | 0.71              |
| 9:AJ:150:ALA:HA    | 13:AN:59:TYR:CG    | 2.25                     | 0.71              |
| 10:AK:64:LYS:CG    | 10:AK:79:VAL:HG21  | 2.19                     | 0.71              |
| 13:AN:58:PRO:CB    | 13:AN:90:GLY:HA3   | 2.20                     | 0.71              |
| 13:AN:95:ILE:O     | 13:AN:98:LEU:HB2   | 1.89                     | 0.71              |
| 14:AO:27:LEU:HB2   | 14:AO:64:TYR:OH    | 1.90                     | 0.71              |
| 14:AO:46:LYS:HE3   | 14:AO:47:LYS:NZ    | 2.04                     | 0.71              |
| 14:AO:100:ILE:C    | 14:AO:101:VAL:HG22 | 2.14                     | 0.71              |
| 14:AO:101:VAL:HG23 | 14:AO:104:VAL:HG21 | 1.72                     | 0.71              |
| 16:AQ:26:ARG:HE    | 16:AQ:43:CYS:CA    | 2.02                     | 0.71              |
| 21:AV:30:LEU:HG    | 21:AV:50:ALA:N     | 2.04                     | 0.71              |
| 24:BA:17:G:H4'     | 41:BT:25:TRP:CH2   | 2.25                     | 0.71              |
| 24:BA:1543:A:H5''  | 24:BA:1544:C:OP2   | 1.90                     | 0.71              |
| 24:BA:1815:A:H1'   | 24:BA:1817:G:C5    | 2.26                     | 0.71              |
| 24:BA:1839:G:C8    | 24:BA:1927:A:O4'   | 2.43                     | 0.71              |
| 24:BA:2017:U:C2'   | 24:BA:2018:G:OP1   | 2.37                     | 0.71              |
| 24:BA:2019:A:C3'   | 24:BA:2020:A:H5''  | 2.18                     | 0.71              |
| 24:BA:2160:G:H2'   | 24:BA:2161:C:C6    | 2.25                     | 0.71              |
| 24:BA:2208:U:H2'   | 24:BA:2209:C:H5'   | 1.72                     | 0.71              |
| 24:BA:2360:A:H2'   | 24:BA:2361:A:O4'   | 1.89                     | 0.71              |
| 24:BA:2559:C:O2'   | 24:BA:2560:C:H5'   | 1.89                     | 0.71              |
| 24:BA:2740:A:H2'   | 24:BA:2741:A:H8    | 1.53                     | 0.71              |
| 24:BA:2784:C:C1'   | 28:BE:41:LYS:HZ3   | 2.03                     | 0.71              |
| 26:BC:100:ILE:HD11 | 26:BC:123:VAL:CG2  | 2.20                     | 0.71              |
| 27:BD:39:LYS:HA    | 27:BD:62:TYR:CB    | 2.20                     | 0.71              |
| 28:BE:91:VAL:HG22  | 28:BE:93:VAL:N     | 2.06                     | 0.71              |
| 29:BF:109:GLY:O    | 29:BF:110:LEU:C    | 2.31                     | 0.71              |
| 30:BG:5:VAL:CG1    | 30:BG:9:ARG:HH22   | 2.02                     | 0.71              |
| 31:BH:7:LEU:HD22   | 31:BH:65:HIS:CD2   | 2.25                     | 0.71              |
| 31:BH:103:LEU:O    | 31:BH:105:LEU:HG   | 1.90                     | 0.71              |
| 31:BH:107:VAL:HG13 | 31:BH:152:ARG:HE   | 1.54                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 31:BH:149:ARG:HA   | 31:BH:162:ILE:HD13 | 1.72                     | 0.71              |
| 33:BL:108:ALA:HB1  | 33:BL:123:ALA:CB   | 2.20                     | 0.71              |
| 34:BM:38:HIS:C     | 34:BM:42:TRP:HE3   | 1.97                     | 0.71              |
| 35:BN:8:LEU:CD1    | 35:BN:82:ASN:HA    | 2.20                     | 0.71              |
| 36:BO:84:ASN:O     | 36:BO:85:LEU:HG    | 1.90                     | 0.71              |
| 36:BO:99:LEU:HD22  | 36:BO:101:VAL:HG22 | 1.72                     | 0.71              |
| 37:BP:89:ASN:N     | 37:BP:89:ASN:HD22  | 1.86                     | 0.71              |
| 39:BR:58:LEU:O     | 39:BR:65:VAL:HG12  | 1.90                     | 0.71              |
| 40:BS:29:ARG:CG    | 40:BS:51:ARG:HG2   | 2.18                     | 0.71              |
| 40:BS:51:ARG:NH1   | 40:BS:114:LEU:HD13 | 2.05                     | 0.71              |
| 45:BX:46:LYS:CG    | 45:BX:58:GLY:H     | 2.03                     | 0.71              |
| 45:BX:84:ARG:HG2   | 45:BX:86:ARG:H     | 1.55                     | 0.71              |
| 46:BY:57:ILE:HG23  | 46:BY:58:VAL:H     | 1.55                     | 0.71              |
| 46:BY:105:VAL:N    | 46:BY:140:ASP:OD1  | 2.22                     | 0.71              |
| 46:BY:161:VAL:HG12 | 46:BY:162:GLU:N    | 2.03                     | 0.71              |
| 54:B7:25:MET:HE3   | 54:B7:44:LYS:CE    | 2.20                     | 0.71              |
| 1:AA:34:C:H2'      | 1:AA:35:G:H8       | 1.55                     | 0.71              |
| 1:AA:112:G:C5'     | 1:AA:389:A:H4'     | 2.16                     | 0.71              |
| 1:AA:266:G:C3'     | 19:AT:67:LYS:HD2   | 2.13                     | 0.71              |
| 1:AA:323:U:H5      | 1:AA:324:G:C4      | 2.09                     | 0.71              |
| 1:AA:517:G:HO2'    | 1:AA:530:G:H4'     | 1.54                     | 0.71              |
| 1:AA:578:C:O2'     | 1:AA:728:A:N3      | 2.22                     | 0.71              |
| 1:AA:769:G:H5'     | 1:AA:1513:A:H4'    | 1.71                     | 0.71              |
| 1:AA:1063:C:H5''   | 1:AA:1064:G:OP2    | 1.91                     | 0.71              |
| 1:AA:1192:C:C6     | 1:AA:1192:C:C3'    | 2.69                     | 0.71              |
| 1:AA:1318:A:H4'    | 21:AV:10:PHE:HD2   | 1.55                     | 0.71              |
| 1:AA:1333:A:O2'    | 1:AA:1334:G:H5'    | 1.91                     | 0.71              |
| 4:AE:23:ARG:NH1    | 4:AE:24:TRP:N      | 2.37                     | 0.71              |
| 4:AE:208:ILE:CG1   | 4:AE:211:ILE:HD12  | 2.19                     | 0.71              |
| 5:AF:28:GLN:HA     | 5:AF:30:ARG:CZ     | 2.21                     | 0.71              |
| 5:AF:146:ALA:O     | 5:AF:147:LYS:HD2   | 1.91                     | 0.71              |
| 5:AF:201:TYR:N     | 5:AF:201:TYR:CD1   | 2.55                     | 0.71              |
| 6:AG:13:ARG:HH11   | 6:AG:36:ARG:HB2    | 1.56                     | 0.71              |
| 10:AK:129:VAL:HG22 | 10:AK:130:GLY:N    | 2.04                     | 0.71              |
| 14:AO:61:THR:O     | 14:AO:62:SER:OG    | 2.09                     | 0.71              |
| 14:AO:68:ALA:HB1   | 14:AO:98:TYR:O     | 1.90                     | 0.71              |
| 15:AP:81:LEU:HD22  | 15:AP:82:MET:N     | 2.05                     | 0.71              |
| 15:AP:108:ARG:NH2  | 15:AP:111:LYS:HD3  | 2.05                     | 0.71              |
| 17:AR:75:PRO:HA    | 17:AR:78:TYR:CB    | 2.18                     | 0.71              |
| 20:AU:36:ASN:HB3   | 20:AU:40:LEU:CG    | 2.20                     | 0.71              |
| 20:AU:40:LEU:O     | 20:AU:43:PHE:HD1   | 1.73                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 21:AV:15:LEU:HD21  | 21:AV:38:SER:HB2   | 1.71                     | 0.71              |
| 21:AV:58:VAL:HG23  | 21:AV:60:VAL:HG23  | 1.72                     | 0.71              |
| 24:BA:265:A:H2'    | 24:BA:266:G:O4'    | 1.89                     | 0.71              |
| 24:BA:287:C:H2'    | 24:BA:288:C:H5     | 1.51                     | 0.71              |
| 24:BA:510:C:O5'    | 24:BA:512:G:N1     | 2.24                     | 0.71              |
| 24:BA:559:G:C2'    | 24:BA:560:C:C6     | 2.66                     | 0.71              |
| 24:BA:617:G:C8     | 24:BA:618:G:N7     | 2.58                     | 0.71              |
| 24:BA:774:A:O2'    | 24:BA:775:G:C8     | 2.43                     | 0.71              |
| 24:BA:1242:A:N1    | 36:BO:6:LEU:HD11   | 2.04                     | 0.71              |
| 24:BA:1263:U:N3    | 24:BA:1264:G:N2    | 2.39                     | 0.71              |
| 24:BA:1353:A:H2'   | 24:BA:1354:A:H8    | 1.52                     | 0.71              |
| 24:BA:1438:U:H3    | 24:BA:1553:A:N6    | 1.88                     | 0.71              |
| 24:BA:1788:C:O2    | 27:BD:222:ARG:NH2  | 2.23                     | 0.71              |
| 24:BA:1839:G:H2'   | 24:BA:1839:G:N3    | 2.03                     | 0.71              |
| 24:BA:2162:G:C2'   | 24:BA:2163:C:H5'   | 2.19                     | 0.71              |
| 24:BA:2250:G:N7    | 37:BP:83:MET:O     | 2.23                     | 0.71              |
| 24:BA:2299:G:O2'   | 24:BA:2300:G:H5'   | 1.90                     | 0.71              |
| 24:BA:2371:G:C5'   | 52:B5:45:LYS:HB3   | 2.19                     | 0.71              |
| 24:BA:2721:A:H2'   | 24:BA:2722:G:H8    | 1.55                     | 0.71              |
| 24:BA:2847:U:C5    | 24:BA:2848:G:N7    | 2.58                     | 0.71              |
| 24:BA:2900:A:H2'   | 24:BA:2901:C:H6    | 1.53                     | 0.71              |
| 25:BB:30:C:H1'     | 25:BB:58:A:C2      | 2.26                     | 0.71              |
| 28:BE:119:ARG:NH2  | 28:BE:155:LYS:HD2  | 2.06                     | 0.71              |
| 29:BF:181:LEU:HD13 | 29:BF:181:LEU:N    | 2.05                     | 0.71              |
| 35:BN:101:PRO:HD3  | 35:BN:119:PRO:O    | 1.90                     | 0.71              |
| 36:BO:7:ARG:HD2    | 36:BO:8:PRO:HD3    | 1.70                     | 0.71              |
| 37:BP:34:LEU:HB2   | 37:BP:67:ARG:NH2   | 2.03                     | 0.71              |
| 37:BP:78:PRO:HB3   | 37:BP:81:VAL:CG2   | 2.18                     | 0.71              |
| 38:BQ:97:VAL:HA    | 38:BQ:114:VAL:CG1  | 2.20                     | 0.71              |
| 40:BS:27:THR:HG22  | 40:BS:28:VAL:H     | 1.55                     | 0.71              |
| 45:BX:81:LYS:HD3   | 45:BX:96:ILE:HG13  | 1.70                     | 0.71              |
| 45:BX:86:ARG:O     | 45:BX:91:GLU:HG2   | 1.90                     | 0.71              |
| 1:AA:193:C:H2'     | 1:AA:194:C:C6      | 2.24                     | 0.71              |
| 1:AA:367:U:H4'     | 1:AA:368:U:OP1     | 1.85                     | 0.71              |
| 1:AA:519:C:OP2     | 14:AO:50:SER:O     | 2.08                     | 0.71              |
| 1:AA:1015:A:H2'    | 1:AA:1016:A:C8     | 2.24                     | 0.71              |
| 1:AA:1084:G:H2'    | 1:AA:1085:U:C6     | 2.25                     | 0.71              |
| 1:AA:1224:G:H1     | 1:AA:1362(A):C:H42 | 1.38                     | 0.71              |
| 1:AA:1412:C:H2'    | 1:AA:1413:A:C8     | 2.25                     | 0.71              |
| 1:AA:1488:G:O2'    | 1:AA:1489:G:H5'    | 1.89                     | 0.71              |
| 3:AC:75:C:H42      | 24:BA:2451:A:H4'   | 1.52                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:AD:18:G:H21     | 3:AD:58:A:H5''    | 1.55                     | 0.71              |
| 3:AB:75:C:H1'     | 24:BA:2555:U:O2   | 1.91                     | 0.71              |
| 5:AF:42:LEU:HD12  | 5:AF:94:LEU:HD12  | 1.72                     | 0.71              |
| 5:AF:182:ILE:HG23 | 5:AF:203:PHE:HA   | 1.71                     | 0.71              |
| 6:AG:14:ARG:CD    | 6:AG:14:ARG:C     | 2.62                     | 0.71              |
| 6:AG:52:SER:C     | 6:AG:54:TYR:N     | 2.40                     | 0.71              |
| 9:AJ:15:ASP:H     | 9:AJ:20:ASP:H     | 1.37                     | 0.71              |
| 10:AK:14:ARG:HD2  | 10:AK:15:ASN:N    | 2.05                     | 0.71              |
| 10:AK:36:LEU:HD12 | 10:AK:48:TYR:CG   | 2.24                     | 0.71              |
| 10:AK:112:LEU:HB2 | 10:AK:133:LEU:HA  | 1.72                     | 0.71              |
| 11:AL:19:LEU:HD23 | 11:AL:20:ARG:H    | 1.55                     | 0.71              |
| 13:AN:13:GLN:HB3  | 13:AN:76:GLY:HA3  | 1.71                     | 0.71              |
| 17:AR:36:ILE:CD1  | 17:AR:60:VAL:HG13 | 2.20                     | 0.71              |
| 19:AT:17:LYS:HE3  | 19:AT:48:GLU:HA   | 1.71                     | 0.71              |
| 20:AU:76:LEU:HD22 | 20:AU:76:LEU:N    | 2.05                     | 0.71              |
| 21:AV:11:VAL:O    | 21:AV:11:VAL:HG12 | 1.89                     | 0.71              |
| 21:AV:19:VAL:HG22 | 21:AV:43:GLU:OE1  | 1.89                     | 0.71              |
| 21:AV:40:ILE:O    | 21:AV:68:GLY:HA2  | 1.90                     | 0.71              |
| 22:AW:50:GLU:H    | 22:AW:99:LEU:CD1  | 1.92                     | 0.71              |
| 24:BA:5:A:O2'     | 24:BA:6:A:H5'     | 1.90                     | 0.71              |
| 24:BA:172:C:H2'   | 24:BA:173:G:H8    | 1.54                     | 0.71              |
| 24:BA:442:G:C4'   | 29:BF:46:ARG:HG3  | 2.20                     | 0.71              |
| 24:BA:592:G:H1'   | 54:B7:1:MET:O     | 1.89                     | 0.71              |
| 24:BA:647:G:H4'   | 24:BA:2352:A:OP1  | 1.89                     | 0.71              |
| 24:BA:861:A:C2'   | 24:BA:862:G:H5'   | 2.20                     | 0.71              |
| 24:BA:1158:C:H4'  | 49:B2:32:GLN:NE2  | 2.02                     | 0.71              |
| 24:BA:1270:C:O2   | 24:BA:1325:G:N7   | 2.24                     | 0.71              |
| 24:BA:1355:G:H22  | 24:BA:1377:G:H1'  | 1.53                     | 0.71              |
| 24:BA:1398:C:H2'  | 24:BA:1399:C:H6   | 1.56                     | 0.71              |
| 24:BA:1554:A:O2'  | 24:BA:1555:G:OP1  | 2.09                     | 0.71              |
| 24:BA:1955:U:O5'  | 24:BA:1956:U:O4   | 2.08                     | 0.71              |
| 24:BA:2114:A:H2'  | 24:BA:2115:G:C5'  | 2.19                     | 0.71              |
| 24:BA:2688:U:H1'  | 24:BA:2721:A:H61  | 1.56                     | 0.71              |
| 24:BA:2779:U:H5'  | 24:BA:2781:A:OP2  | 1.91                     | 0.71              |
| 24:BA:2780:G:C2'  | 24:BA:2781:A:H5'' | 2.21                     | 0.71              |
| 25:BB:75:G:H22    | 46:BY:87:ASP:CG   | 1.98                     | 0.71              |
| 26:BC:64:LEU:HD23 | 26:BC:191:ALA:CB  | 2.21                     | 0.71              |
| 26:BC:162:GLU:CG  | 26:BC:163:PHE:H   | 2.02                     | 0.71              |
| 27:BD:8:PRO:HD2   | 27:BD:26:LYS:CA   | 2.19                     | 0.71              |
| 27:BD:63:ARG:HG3  | 27:BD:64:ILE:H    | 1.53                     | 0.71              |
| 29:BF:24:LEU:H    | 29:BF:25:PRO:HD2  | 1.55                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 29:BF:34:TRP:CE3   | 29:BF:37:VAL:HG21  | 2.26                     | 0.71              |
| 29:BF:156:LEU:HD12 | 29:BF:167:ALA:HB1  | 1.71                     | 0.71              |
| 30:BG:37:VAL:HB    | 30:BG:99:MET:SD    | 2.30                     | 0.71              |
| 30:BG:75:LYS:HD3   | 30:BG:85:GLY:N     | 2.05                     | 0.71              |
| 31:BH:33:LEU:HD21  | 31:BH:35:VAL:HG13  | 1.71                     | 0.71              |
| 31:BH:55:PRO:HG2   | 31:BH:61:HIS:CE1   | 2.26                     | 0.71              |
| 33:BL:39:LYS:HA    | 33:BL:42:ASN:HD22  | 1.53                     | 0.71              |
| 33:BL:52:ILE:HD12  | 33:BL:76:TYR:CD2   | 2.25                     | 0.71              |
| 33:BL:112:MET:SD   | 33:BL:118:THR:HG22 | 2.30                     | 0.71              |
| 35:BN:10:VAL:HG23  | 35:BN:83:ALA:O     | 1.90                     | 0.71              |
| 37:BP:93:TYR:O     | 37:BP:94:VAL:HG12  | 1.91                     | 0.71              |
| 37:BP:99:PRO:CG    | 37:BP:101:ARG:HE   | 2.02                     | 0.71              |
| 42:BU:5:VAL:CG1    | 42:BU:37:VAL:HG22  | 2.20                     | 0.71              |
| 42:BU:11:GLN:HB3   | 42:BU:21:ARG:HD2   | 1.70                     | 0.71              |
| 46:BY:42:VAL:HB    | 46:BY:43:GLU:OE1   | 1.90                     | 0.71              |
| 54:B7:39:LYS:HG2   | 54:B7:40:GLU:N     | 2.05                     | 0.71              |
| 1:AA:66:G:C4'      | 1:AA:173:U:C4      | 2.73                     | 0.71              |
| 1:AA:266:G:H8      | 19:AT:67:LYS:NZ    | 1.80                     | 0.71              |
| 1:AA:1246:C:O2'    | 1:AA:1247:U:H5'    | 1.90                     | 0.71              |
| 1:AA:1268:A:C2     | 1:AA:1311:G:N2     | 2.58                     | 0.71              |
| 2:A1:50:U:OP2      | 7:AH:15:ARG:HG3    | 1.89                     | 0.71              |
| 3:AD:21:A:N6       | 3:AD:48:C:C6       | 2.59                     | 0.71              |
| 4:AE:12:GLU:O      | 4:AE:14:GLY:N      | 2.22                     | 0.71              |
| 4:AE:136:VAL:HA    | 4:AE:139:LYS:HZ3   | 1.54                     | 0.71              |
| 4:AE:141:GLU:CD    | 4:AE:142:LEU:N     | 2.47                     | 0.71              |
| 4:AE:175:ARG:HA    | 4:AE:178:ARG:CG    | 2.21                     | 0.71              |
| 7:AH:145:LYS:HA    | 7:AH:148:VAL:HG23  | 1.73                     | 0.71              |
| 8:AI:8:ILE:HG22    | 8:AI:88:VAL:HA     | 1.70                     | 0.71              |
| 9:AJ:72:ARG:HG3    | 9:AJ:73:MET:H      | 1.56                     | 0.71              |
| 11:AL:103:THR:HG22 | 11:AL:104:ARG:N    | 2.00                     | 0.71              |
| 12:AM:31:GLY:HA3   | 12:AM:74:ILE:HG21  | 1.72                     | 0.71              |
| 12:AM:39:PRO:O     | 12:AM:40:LEU:HB2   | 1.90                     | 0.71              |
| 12:AM:68:HIS:HB3   | 12:AM:70:ARG:NH2   | 2.05                     | 0.71              |
| 18:AS:57:ARG:O     | 18:AS:60:LEU:HB2   | 1.91                     | 0.71              |
| 18:AS:72:ARG:NH2   | 18:AS:73:LEU:HB2   | 2.04                     | 0.71              |
| 19:AT:104:LYS:HD3  | 19:AT:105:ALA:N    | 2.06                     | 0.71              |
| 24:BA:64:A:H2'     | 24:BA:65:C:H5'     | 1.72                     | 0.71              |
| 24:BA:352:G:N2     | 24:BA:353:G:H1'    | 2.05                     | 0.71              |
| 24:BA:460:A:C2'    | 24:BA:461:C:H6     | 2.02                     | 0.71              |
| 24:BA:514:A:C2     | 24:BA:515:A:N9     | 2.57                     | 0.71              |
| 24:BA:871:U:H2'    | 24:BA:872:A:H8     | 1.56                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1223:C:C2   | 24:BA:1227:A:N1    | 2.59                     | 0.71              |
| 24:BA:1238:G:H2'  | 24:BA:1239:G:O4'   | 1.91                     | 0.71              |
| 24:BA:1317:A:H2'  | 24:BA:1318:C:H6    | 1.54                     | 0.71              |
| 24:BA:1382:G:H2'  | 24:BA:1383:C:C6    | 2.25                     | 0.71              |
| 24:BA:1807:G:H21  | 24:BA:1809:A:C5'   | 2.02                     | 0.71              |
| 24:BA:1819:A:P    | 27:BD:157:ARG:HA   | 2.31                     | 0.71              |
| 24:BA:2092:U:C5   | 24:BA:2227:A:N6    | 2.58                     | 0.71              |
| 24:BA:2238:G:C2'  | 24:BA:2239:G:H5''  | 2.20                     | 0.71              |
| 24:BA:2278:A:OP1  | 37:BP:14:ARG:CG    | 2.33                     | 0.71              |
| 24:BA:2286:A:H1'  | 52:B5:37:ARG:HH21  | 1.55                     | 0.71              |
| 24:BA:2522:U:H5'  | 24:BA:2523:G:OP2   | 1.91                     | 0.71              |
| 24:BA:2679:A:O2'  | 24:BA:2680:C:H5'   | 1.91                     | 0.71              |
| 25:BB:112:G:H5'   | 25:BB:113:C:OP2    | 1.89                     | 0.71              |
| 27:BD:161:THR:OG1 | 27:BD:196:VAL:HB   | 1.90                     | 0.71              |
| 30:BG:37:VAL:HG22 | 30:BG:159:VAL:HG12 | 1.72                     | 0.71              |
| 31:BH:7:LEU:HB3   | 31:BH:65:HIS:NE2   | 2.05                     | 0.71              |
| 31:BH:94:TYR:OH   | 31:BH:128:PRO:HG2  | 1.91                     | 0.71              |
| 34:BM:7:LYS:HD3   | 34:BM:39:ARG:CZ    | 2.21                     | 0.71              |
| 34:BM:107:LEU:HB3 | 34:BM:117:PHE:CZ   | 2.25                     | 0.71              |
| 37:BP:6:ARG:HG2   | 37:BP:70:PRO:HB3   | 1.72                     | 0.71              |
| 39:BR:26:LEU:HD22 | 39:BR:27:SER:H     | 1.55                     | 0.71              |
| 40:BS:31:SER:OG   | 40:BS:49:VAL:HG22  | 1.91                     | 0.71              |
| 41:BT:30:LYS:HD2  | 41:BT:30:LYS:H     | 1.54                     | 0.71              |
| 42:BU:36:PRO:CA   | 42:BU:61:VAL:HG22  | 2.20                     | 0.71              |
| 42:BU:50:PRO:HB2  | 42:BU:53:GLU:OE1   | 1.90                     | 0.71              |
| 46:BY:95:PRO:HD2  | 46:BY:131:ARG:HG2  | 1.71                     | 0.71              |
| 49:B2:16:PRO:HG2  | 49:B2:19:GLN:HB3   | 1.73                     | 0.71              |
| 50:B3:29:PRO:HG2  | 50:B3:31:ILE:CG2   | 2.20                     | 0.71              |
| 52:B5:32:ASN:CG   | 52:B5:33:LYS:N     | 2.39                     | 0.71              |
| 1:AA:122:G:O2'    | 1:AA:123:C:H5'     | 1.89                     | 0.71              |
| 1:AA:192:U:H2'    | 1:AA:193:C:C6      | 2.25                     | 0.71              |
| 1:AA:397:A:C2     | 1:AA:548:G:O6      | 2.43                     | 0.71              |
| 1:AA:484:G:C8     | 1:AA:486:U:N3      | 2.59                     | 0.71              |
| 1:AA:517:G:H22    | 1:AA:533:A:P       | 2.13                     | 0.71              |
| 1:AA:575:G:N1     | 1:AA:821:G:C8      | 2.59                     | 0.71              |
| 1:AA:646:U:O2'    | 1:AA:647:C:H5'     | 1.90                     | 0.71              |
| 1:AA:692:U:H2'    | 1:AA:694:A:OP2     | 1.91                     | 0.71              |
| 1:AA:1016:A:H2'   | 1:AA:1017:G:O4'    | 1.89                     | 0.71              |
| 1:AA:1216:G:H2'   | 1:AA:1217:C:H6     | 1.55                     | 0.71              |
| 1:AA:1260:C:H4'   | 1:AA:1284:C:H5''   | 1.72                     | 0.71              |
| 1:AA:1405:G:O4'   | 1:AA:1519:A:H4'    | 1.89                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1516:G:N2     | 1:AA:1518:A:O5'    | 2.23                     | 0.71              |
| 2:A1:29:G:C3'      | 2:A1:30:U:H5''     | 2.19                     | 0.71              |
| 4:AE:21:ARG:O      | 4:AE:23:ARG:N      | 2.24                     | 0.71              |
| 5:AF:47:LEU:O      | 5:AF:52:LEU:HD22   | 1.90                     | 0.71              |
| 8:AI:98:LEU:HG     | 20:AU:28:GLU:HG3   | 1.73                     | 0.71              |
| 9:AJ:66:VAL:HG12   | 9:AJ:70:LYS:HE2    | 1.71                     | 0.71              |
| 9:AJ:69:VAL:HG11   | 9:AJ:104:LEU:CG    | 2.20                     | 0.71              |
| 10:AK:43:GLY:O     | 10:AK:44:PHE:HB2   | 1.88                     | 0.71              |
| 10:AK:80:ILE:HD12  | 10:AK:80:ILE:N     | 2.03                     | 0.71              |
| 12:AM:11:PHE:CD1   | 16:AQ:55:GLY:HA3   | 2.25                     | 0.71              |
| 13:AN:86:GLY:HA2   | 13:AN:112:THR:HG23 | 1.72                     | 0.71              |
| 15:AP:91:ARG:HH12  | 15:AP:103:THR:HG21 | 1.55                     | 0.71              |
| 16:AQ:52:GLN:C     | 16:AQ:53:LEU:HD23  | 2.16                     | 0.71              |
| 19:AT:63:ARG:HG2   | 19:AT:64:PRO:CD    | 2.20                     | 0.71              |
| 21:AV:40:ILE:C     | 21:AV:68:GLY:HA2   | 2.16                     | 0.71              |
| 24:BA:197:A:H3'    | 24:BA:198:C:C6     | 2.24                     | 0.71              |
| 24:BA:332:A:O2'    | 24:BA:334:C:OP2    | 2.05                     | 0.71              |
| 24:BA:389:G:H1     | 36:BO:64:LYS:HG2   | 1.54                     | 0.71              |
| 24:BA:452:G:N1     | 24:BA:458:G:C2     | 2.59                     | 0.71              |
| 24:BA:624:C:N4     | 36:BO:104:GLY:HA2  | 2.05                     | 0.71              |
| 24:BA:686:G:N3     | 24:BA:686:G:H5''   | 2.05                     | 0.71              |
| 24:BA:966:G:O2'    | 24:BA:2267:A:N6    | 2.23                     | 0.71              |
| 24:BA:1024:G:C2    | 24:BA:1025:G:N7    | 2.59                     | 0.71              |
| 24:BA:1044:G:N2    | 24:BA:1111:A:C4'   | 2.53                     | 0.71              |
| 24:BA:1342:A:OP1   | 44:BW:55:ASN:HB3   | 1.91                     | 0.71              |
| 24:BA:1620:G:O4'   | 53:B6:1:MET:N      | 2.22                     | 0.71              |
| 24:BA:1695:G:C2'   | 24:BA:1696:G:H5'   | 2.21                     | 0.71              |
| 24:BA:1886:C:H2'   | 24:BA:1887:C:C6    | 2.24                     | 0.71              |
| 24:BA:2014:A:H8    | 24:BA:2014:A:O5'   | 1.74                     | 0.71              |
| 24:BA:2031:A:N6    | 24:BA:2498:C:C2    | 2.59                     | 0.71              |
| 24:BA:2046:G:OP1   | 51:B4:18:ALA:CB    | 2.39                     | 0.71              |
| 24:BA:2517:C:O2'   | 24:BA:2518:A:O5'   | 2.08                     | 0.71              |
| 26:BC:22:ILE:HD12  | 26:BC:190:ARG:NH2  | 2.05                     | 0.71              |
| 27:BD:54:ARG:HA    | 27:BD:219:PRO:CG   | 2.20                     | 0.71              |
| 27:BD:177:LEU:HD21 | 27:BD:181:GLU:HB3  | 1.70                     | 0.71              |
| 27:BD:230:ASP:O    | 27:BD:231:HIS:C    | 2.33                     | 0.71              |
| 27:BD:251:GLY:CA   | 27:BD:255:LYS:HZ2  | 2.03                     | 0.71              |
| 27:BD:261:LYS:O    | 27:BD:263:ARG:N    | 2.24                     | 0.71              |
| 28:BE:49:LEU:CA    | 28:BE:76:ARG:O     | 2.38                     | 0.71              |
| 29:BF:197:ASP:O    | 29:BF:200:GLU:OE1  | 2.08                     | 0.71              |
| 30:BG:40:ASN:ND2   | 30:BG:41:GLN:H     | 1.89                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 30:BG:44:GLY:H    | 30:BG:88:ILE:CG2   | 2.03                     | 0.71              |
| 30:BG:80:PHE:O    | 30:BG:83:ARG:NH2   | 2.23                     | 0.71              |
| 34:BM:6:PRO:HA    | 34:BM:41:ASP:HB3   | 1.70                     | 0.71              |
| 35:BN:63:VAL:HG21 | 35:BN:82:ASN:OD1   | 1.89                     | 0.71              |
| 35:BN:108:GLU:O   | 35:BN:109:LYS:HB2  | 1.88                     | 0.71              |
| 36:BO:75:ILE:CG2  | 36:BO:115:LEU:HD11 | 2.17                     | 0.71              |
| 36:BO:99:LEU:HD22 | 36:BO:101:VAL:HG13 | 1.72                     | 0.71              |
| 37:BP:77:LYS:HB3  | 37:BP:78:PRO:HD3   | 1.71                     | 0.71              |
| 37:BP:81:VAL:CG1  | 37:BP:82:ARG:H     | 1.87                     | 0.71              |
| 38:BQ:20:LEU:O    | 38:BQ:21:TYR:C     | 2.33                     | 0.71              |
| 38:BQ:105:ARG:HA  | 38:BQ:105:ARG:NE   | 2.05                     | 0.71              |
| 41:BT:89:GLU:HG2  | 42:BU:52:VAL:CG2   | 2.06                     | 0.71              |
| 41:BT:94:ASN:HA   | 41:BT:97:ASP:OD1   | 1.91                     | 0.71              |
| 44:BW:16:LYS:HE2  | 44:BW:16:LYS:N     | 2.05                     | 0.71              |
| 49:B2:11:SER:H    | 49:B2:12:PRO:HD3   | 1.53                     | 0.71              |
| 51:B4:58:LEU:CD2  | 51:B4:59:GLU:H     | 1.94                     | 0.71              |
| 1:AA:51:A:C6      | 1:AA:353:A:C2      | 2.79                     | 0.71              |
| 1:AA:427:U:O5'    | 1:AA:427:U:H6      | 1.74                     | 0.71              |
| 1:AA:453:A:N6     | 1:AA:480:U:H3      | 1.88                     | 0.71              |
| 1:AA:563:A:H1'    | 1:AA:566:G:O2'     | 1.89                     | 0.71              |
| 1:AA:687:A:H61    | 1:AA:703:G:H1'     | 1.54                     | 0.71              |
| 1:AA:878:G:H5''   | 10:AK:89:PRO:HG2   | 1.73                     | 0.71              |
| 1:AA:1043:C:H2'   | 1:AA:1044:A:O4'    | 1.91                     | 0.71              |
| 1:AA:1443:G:O2'   | 1:AA:1446:A:H4'    | 1.91                     | 0.71              |
| 3:AB:74:C:N4      | 24:BA:2555:U:C6    | 2.59                     | 0.71              |
| 4:AE:31:TYR:CE2   | 4:AE:200:ILE:CG2   | 2.74                     | 0.71              |
| 4:AE:47:THR:HG22  | 4:AE:51:LEU:HD11   | 1.73                     | 0.71              |
| 5:AF:87:LEU:HB2   | 5:AF:101:LEU:CD1   | 2.20                     | 0.71              |
| 6:AG:107:ARG:HA   | 6:AG:107:ARG:NH1   | 2.00                     | 0.71              |
| 7:AH:16:THR:O     | 7:AH:26:PHE:HB2    | 1.90                     | 0.71              |
| 7:AH:94:ALA:HB3   | 7:AH:117:ASP:C     | 2.15                     | 0.71              |
| 8:AI:52:ILE:HG22  | 8:AI:53:ALA:N      | 2.05                     | 0.71              |
| 9:AJ:76:ARG:CB    | 9:AJ:156:TRP:HE1   | 1.93                     | 0.71              |
| 13:AN:22:HIS:ND1  | 13:AN:29:ILE:HD11  | 2.05                     | 0.71              |
| 13:AN:84:VAL:HG23 | 13:AN:111:ASP:H    | 1.54                     | 0.71              |
| 13:AN:111:ASP:CG  | 13:AN:113:PRO:HD3  | 2.16                     | 0.71              |
| 15:AP:24:GLY:O    | 15:AP:66:LEU:HD13  | 1.91                     | 0.71              |
| 15:AP:67:GLU:CG   | 15:AP:68:GLY:N     | 2.53                     | 0.71              |
| 17:AR:63:ARG:HH22 | 17:AR:87:ILE:HD13  | 1.56                     | 0.71              |
| 18:AS:27:LYS:HZ2  | 18:AS:27:LYS:H     | 1.39                     | 0.71              |
| 19:AT:75:ARG:HH12 | 19:AT:77:VAL:HG22  | 1.55                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 22:AW:57:ARG:HH21  | 22:AW:100:ILE:HB   | 1.53                     | 0.71              |
| 24:BA:226:G:C2     | 24:BA:227:A:N3     | 2.59                     | 0.71              |
| 24:BA:371:A:H62    | 24:BA:424:G:C4'    | 2.04                     | 0.71              |
| 24:BA:459:U:C5     | 24:BA:469:G:N2     | 2.58                     | 0.71              |
| 24:BA:786:C:C2'    | 24:BA:787:U:H5'    | 2.20                     | 0.71              |
| 24:BA:791:C:C4     | 24:BA:794:G:H1'    | 2.26                     | 0.71              |
| 24:BA:1044:G:N1    | 24:BA:1112:G:O2'   | 2.22                     | 0.71              |
| 24:BA:1059:G:O2'   | 33:BL:74:ALA:HB2   | 1.89                     | 0.71              |
| 24:BA:1059:G:O6    | 24:BA:1060:U:H1'   | 1.90                     | 0.71              |
| 24:BA:1083:U:H2'   | 24:BA:1084:A:H5''  | 1.72                     | 0.71              |
| 24:BA:1609:A:N7    | 24:BA:1616:A:N3    | 2.38                     | 0.71              |
| 24:BA:1660:C:H42   | 24:BA:2001:A:N6    | 1.87                     | 0.71              |
| 24:BA:1665:A:C8    | 24:BA:2726:U:N3    | 2.58                     | 0.71              |
| 24:BA:1918:A:H3'   | 24:BA:1919:A:N7    | 2.05                     | 0.71              |
| 24:BA:2090:G:C6    | 24:BA:2230:G:O6    | 2.44                     | 0.71              |
| 24:BA:2262:U:H4'   | 24:BA:2328:A:H2    | 1.56                     | 0.71              |
| 24:BA:2331:G:H2'   | 24:BA:2332:U:O4'   | 1.90                     | 0.71              |
| 24:BA:2415:G:H5''  | 36:BO:61:ARG:CG    | 2.21                     | 0.71              |
| 24:BA:2507:C:H5''  | 24:BA:2573:C:N4    | 2.01                     | 0.71              |
| 24:BA:2647:U:H2'   | 24:BA:2648:C:H6    | 1.55                     | 0.71              |
| 25:BB:33:G:H2'     | 25:BB:34:U:H6      | 1.53                     | 0.71              |
| 25:BB:114:G:O4'    | 39:BR:47:THR:HB    | 1.91                     | 0.71              |
| 26:BC:131:LEU:HD13 | 26:BC:137:LEU:HA   | 1.71                     | 0.71              |
| 26:BC:148:ASN:ND2  | 26:BC:152:ILE:HG13 | 2.04                     | 0.71              |
| 28:BE:104:VAL:HG13 | 28:BE:198:VAL:HA   | 1.72                     | 0.71              |
| 29:BF:89:VAL:CG1   | 29:BF:90:PHE:N     | 2.45                     | 0.71              |
| 30:BG:9:ARG:HG2    | 30:BG:13:GLU:OE2   | 1.90                     | 0.71              |
| 30:BG:34:LEU:HD13  | 30:BG:100:TRP:HE1  | 1.56                     | 0.71              |
| 30:BG:148:MET:HG2  | 30:BG:151:ALA:N    | 2.06                     | 0.71              |
| 30:BG:148:MET:HB3  | 30:BG:151:ALA:HB2  | 1.72                     | 0.71              |
| 31:BH:76:VAL:HA    | 31:BH:79:VAL:HG22  | 1.73                     | 0.71              |
| 33:BL:10:LEU:CD1   | 33:BL:23:VAL:HG22  | 2.21                     | 0.71              |
| 35:BN:67:LYS:HE2   | 35:BN:67:LYS:CA    | 2.21                     | 0.71              |
| 36:BO:65:ARG:NH1   | 36:BO:67:MET:N     | 2.36                     | 0.71              |
| 39:BR:6:ALA:HA     | 39:BR:9:ARG:HH12   | 1.53                     | 0.71              |
| 39:BR:23:ARG:O     | 39:BR:24:LEU:HD12  | 1.91                     | 0.71              |
| 40:BS:30:VAL:HG13  | 40:BS:32:TYR:OH    | 1.90                     | 0.71              |
| 41:BT:102:GLU:CB   | 41:BT:105:VAL:HB   | 2.20                     | 0.71              |
| 42:BU:63:GLY:O     | 42:BU:97:LYS:HB2   | 1.91                     | 0.71              |
| 48:B1:5:LEU:O      | 48:B1:9:ARG:HG2    | 1.90                     | 0.71              |
| 54:B7:26:LYS:HB2   | 54:B7:44:LYS:HZ1   | 1.54                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:452:A:H2'    | 1:AA:453:A:C8     | 2.26                     | 0.71              |
| 1:AA:577:G:H21    | 1:AA:578:C:H1'    | 1.55                     | 0.71              |
| 1:AA:762:C:H2'    | 1:AA:763:G:H8     | 1.53                     | 0.71              |
| 1:AA:959:A:C3'    | 1:AA:960:U:H5''   | 2.18                     | 0.71              |
| 1:AA:1261:A:N6    | 1:AA:1274:G:C1'   | 2.50                     | 0.71              |
| 1:AA:1276:G:H2'   | 1:AA:1277:C:O4'   | 1.90                     | 0.71              |
| 1:AA:1327:C:H5''  | 23:AX:20:LYS:CE   | 2.19                     | 0.71              |
| 1:AA:1394:A:N7    | 1:AA:1501:C:C1'   | 2.54                     | 0.71              |
| 4:AE:61:LEU:HD11  | 4:AE:68:ILE:HD11  | 1.73                     | 0.71              |
| 6:AG:106:TYR:HB3  | 6:AG:114:ARG:HE   | 1.53                     | 0.71              |
| 7:AH:35:GLY:HA3   | 7:AH:41:VAL:CG1   | 2.20                     | 0.71              |
| 8:AI:1:MET:CE     | 8:AI:68:PRO:HG3   | 2.20                     | 0.71              |
| 8:AI:68:PRO:O     | 8:AI:71:ARG:HG2   | 1.90                     | 0.71              |
| 10:AK:104:ARG:HG2 | 10:AK:104:ARG:NH1 | 2.04                     | 0.71              |
| 11:AL:6:GLY:HA2   | 11:AL:83:ARG:HB3  | 1.71                     | 0.71              |
| 12:AM:79:ARG:HH22 | 12:AM:82:ILE:CD1  | 2.02                     | 0.71              |
| 17:AR:36:ILE:HG22 | 17:AR:37:ASN:ND2  | 2.06                     | 0.71              |
| 18:AS:56:ALA:O    | 18:AS:60:LEU:HG   | 1.90                     | 0.71              |
| 18:AS:58:TYR:CD1  | 18:AS:58:TYR:C    | 2.68                     | 0.71              |
| 19:AT:8:GLY:O     | 19:AT:56:VAL:HA   | 1.91                     | 0.71              |
| 19:AT:94:ASN:OD1  | 19:AT:104:LYS:HD2 | 1.91                     | 0.71              |
| 24:BA:28:A:C1'    | 24:BA:513:A:N1    | 2.48                     | 0.71              |
| 24:BA:374:A:H3'   | 24:BA:375:C:C6    | 2.26                     | 0.71              |
| 24:BA:411:G:N2    | 24:BA:2407:G:C6   | 2.59                     | 0.71              |
| 24:BA:578:A:C2    | 24:BA:2018:G:O4'  | 2.44                     | 0.71              |
| 24:BA:801:G:N7    | 29:BF:54:ARG:HG2  | 2.06                     | 0.71              |
| 24:BA:1274:A:C2   | 24:BA:1302:A:H2   | 2.08                     | 0.71              |
| 24:BA:1332:G:C5   | 24:BA:1609:A:N6   | 2.58                     | 0.71              |
| 24:BA:1453:A:N1   | 24:BA:1454:U:H1'  | 2.06                     | 0.71              |
| 24:BA:1567:A:H2'  | 24:BA:1567:A:N3   | 2.05                     | 0.71              |
| 24:BA:1827:C:H1'  | 24:BA:1970:A:H2   | 1.56                     | 0.71              |
| 24:BA:1996:C:HO2' | 28:BE:123:ALA:HB3 | 1.56                     | 0.71              |
| 24:BA:2068:U:O2   | 24:BA:2430:A:N1   | 2.24                     | 0.71              |
| 24:BA:2072:G:H2'  | 24:BA:2073:C:C6   | 2.26                     | 0.71              |
| 24:BA:2282:G:H4'  | 24:BA:2283:C:OP2  | 1.88                     | 0.71              |
| 26:BC:165:ASN:HA  | 26:BC:170:ALA:O   | 1.91                     | 0.71              |
| 27:BD:37:LEU:CD1  | 27:BD:63:ARG:HA   | 2.21                     | 0.71              |
| 28:BE:5:LEU:O     | 28:BE:5:LEU:HD22  | 1.90                     | 0.71              |
| 28:BE:51:PHE:CG   | 28:BE:52:LEU:N    | 2.58                     | 0.71              |
| 28:BE:54:GLN:HB3  | 28:BE:57:LYS:HE2  | 1.71                     | 0.71              |
| 29:BF:34:TRP:CE3  | 29:BF:34:TRP:HA   | 2.25                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 30:BG:62:LEU:HD23 | 30:BG:143:GLU:HB2  | 1.71                     | 0.71              |
| 31:BH:35:VAL:HG12 | 31:BH:71:LEU:HD23  | 1.72                     | 0.71              |
| 31:BH:126:PRO:HG2 | 31:BH:132:ARG:NH2  | 2.06                     | 0.71              |
| 34:BM:73:THR:HB   | 34:BM:75:TYR:CE1   | 2.22                     | 0.71              |
| 35:BN:25:LEU:H    | 35:BN:39:ILE:HG22  | 1.55                     | 0.71              |
| 37:BP:32:TYR:CE1  | 37:BP:106:VAL:HG23 | 2.25                     | 0.71              |
| 37:BP:34:LEU:HD22 | 37:BP:118:LEU:HB3  | 1.72                     | 0.71              |
| 39:BR:33:LYS:HG2  | 39:BR:54:LEU:HD11  | 1.72                     | 0.71              |
| 42:BU:25:LEU:HA   | 42:BU:28:GLU:CD    | 2.16                     | 0.71              |
| 46:BY:102:LEU:HB2 | 46:BY:124:ILE:HA   | 1.71                     | 0.71              |
| 50:B3:58:ARG:O    | 50:B3:61:ARG:CB    | 2.25                     | 0.71              |
| 51:B4:12:SER:O    | 51:B4:13:LYS:C     | 2.31                     | 0.71              |
| 52:B5:30:THR:CG2  | 52:B5:31:PRO:HD3   | 2.21                     | 0.71              |
| 54:B7:26:LYS:HD2  | 54:B7:44:LYS:N     | 2.05                     | 0.71              |
| 55:B8:17:ILE:HG13 | 55:B8:26:ILE:HB    | 1.72                     | 0.71              |
| 1:AA:14:U:H2'     | 1:AA:16:A:OP2      | 1.89                     | 0.71              |
| 1:AA:120:A:N7     | 1:AA:122:G:C6      | 2.58                     | 0.71              |
| 1:AA:267:C:C4     | 1:AA:268:C:N4      | 2.59                     | 0.71              |
| 1:AA:447:G:H8     | 1:AA:447:G:O5'     | 1.74                     | 0.71              |
| 1:AA:484:G:H5'    | 1:AA:486:U:H1'     | 1.70                     | 0.71              |
| 1:AA:582:U:C5'    | 17:AR:64:ARG:HH21  | 2.02                     | 0.71              |
| 1:AA:716:A:O2'    | 1:AA:717:C:H5'     | 1.91                     | 0.71              |
| 1:AA:760:G:O2'    | 19:AT:103:GLY:HA3  | 1.91                     | 0.71              |
| 1:AA:1037:C:N4    | 1:AA:1038:C:N4     | 2.39                     | 0.71              |
| 1:AA:1283:G:O2'   | 1:AA:1284:C:H5'    | 1.91                     | 0.71              |
| 1:AA:1465:C:O2    | 1:AA:1466:C:O4'    | 2.08                     | 0.71              |
| 3:AC:19:G:N2      | 30:BG:82:LEU:CD1   | 2.54                     | 0.71              |
| 6:AG:191:ARG:HH11 | 6:AG:192:GLU:HA    | 1.54                     | 0.71              |
| 8:AI:30:LEU:HB3   | 8:AI:35:ALA:HB3    | 1.72                     | 0.71              |
| 10:AK:14:ARG:O    | 10:AK:18:ARG:NE    | 2.24                     | 0.71              |
| 10:AK:70:GLN:NE2  | 10:AK:71:GLY:H     | 1.87                     | 0.71              |
| 14:AO:62:SER:O    | 14:AO:63:GLY:C     | 2.34                     | 0.71              |
| 14:AO:72:GLY:HA3  | 14:AO:102:ARG:HD2  | 1.72                     | 0.71              |
| 18:AS:20:VAL:HA   | 18:AS:36:ILE:HG12  | 1.72                     | 0.71              |
| 19:AT:22:LEU:HD21 | 19:AT:39:SER:OG    | 1.91                     | 0.71              |
| 24:BA:37:C:H4'    | 24:BA:451:C:OP1    | 1.91                     | 0.71              |
| 24:BA:323:G:N2    | 24:BA:333:G:H1'    | 2.06                     | 0.71              |
| 24:BA:556:G:H2'   | 24:BA:557:U:H6     | 1.54                     | 0.71              |
| 24:BA:595:C:H2'   | 24:BA:596:G:H8     | 1.56                     | 0.71              |
| 24:BA:688:U:O2'   | 24:BA:689:A:H5'    | 1.90                     | 0.71              |
| 24:BA:1044:G:H4'  | 24:BA:1047:G:C1'   | 2.19                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1350:C:O2'  | 24:BA:1351:C:H5'   | 1.91                     | 0.71              |
| 24:BA:1483:G:N3   | 24:BA:1483:G:H2'   | 2.06                     | 0.71              |
| 24:BA:1534:G:N2   | 24:BA:1537:C:H41   | 1.88                     | 0.71              |
| 24:BA:1535:U:H2'  | 24:BA:1536:A:C1'   | 2.20                     | 0.71              |
| 24:BA:1546:C:H4'  | 24:BA:1547:C:H5    | 1.55                     | 0.71              |
| 24:BA:1617:C:H5'  | 24:BA:1618:A:OP2   | 1.91                     | 0.71              |
| 24:BA:1799:G:H22  | 27:BD:157:ARG:HH22 | 1.39                     | 0.71              |
| 24:BA:1809:A:H61  | 50:B3:3:GLU:CG     | 2.03                     | 0.71              |
| 24:BA:1899:G:N2   | 24:BA:1902:C:H41   | 1.88                     | 0.71              |
| 24:BA:2283:C:C5   | 24:BA:2389:G:N3    | 2.59                     | 0.71              |
| 24:BA:2756:U:H5'  | 55:B8:18:ARG:O     | 1.90                     | 0.71              |
| 26:BC:100:ILE:HA  | 26:BC:103:ILE:HD12 | 1.73                     | 0.71              |
| 28:BE:47:VAL:HG13 | 28:BE:79:ARG:HB2   | 1.73                     | 0.71              |
| 28:BE:93:VAL:HG13 | 28:BE:180:ASN:HD21 | 1.53                     | 0.71              |
| 28:BE:119:ARG:CD  | 28:BE:155:LYS:HB3  | 2.21                     | 0.71              |
| 28:BE:119:ARG:HD2 | 28:BE:156:MET:H    | 1.55                     | 0.71              |
| 30:BG:86:MET:H    | 30:BG:87:PRO:CD    | 2.04                     | 0.71              |
| 33:BL:24:GLY:HA2  | 33:BL:34:ILE:CG1   | 2.20                     | 0.71              |
| 33:BL:79:ARG:HH11 | 33:BL:87:GLY:HA2   | 1.55                     | 0.71              |
| 34:BM:17:ASP:HB3  | 34:BM:21:LYS:CE    | 2.21                     | 0.71              |
| 34:BM:37:LYS:HE2  | 34:BM:43:THR:HG22  | 1.73                     | 0.71              |
| 34:BM:71:ILE:O    | 34:BM:85:ILE:HD12  | 1.91                     | 0.71              |
| 35:BN:73:ASP:O    | 40:BS:79:HIS:CE1   | 2.43                     | 0.71              |
| 37:BP:35:VAL:HG12 | 37:BP:130:LYS:O    | 1.90                     | 0.71              |
| 37:BP:46:GLN:OE1  | 37:BP:126:PRO:HB3  | 1.90                     | 0.71              |
| 38:BQ:105:ARG:CZ  | 38:BQ:105:ARG:CA   | 2.65                     | 0.71              |
| 39:BR:57:LYS:HG3  | 39:BR:68:GLN:OE1   | 1.90                     | 0.71              |
| 40:BS:7:ILE:C     | 40:BS:11:GLU:OE1   | 2.34                     | 0.71              |
| 43:BV:28:SER:HB2  | 43:BV:69:LEU:O     | 1.91                     | 0.71              |
| 43:BV:66:GLU:HA   | 43:BV:69:LEU:HD13  | 1.71                     | 0.71              |
| 43:BV:72:LYS:O    | 43:BV:73:ALA:O     | 2.09                     | 0.71              |
| 50:B3:58:ARG:N    | 50:B3:61:ARG:NH1   | 2.39                     | 0.71              |
| 1:AA:129(A):G:O2' | 1:AA:130:A:OP2     | 2.07                     | 0.71              |
| 1:AA:498:A:H4'    | 1:AA:500:G:H5'     | 1.72                     | 0.71              |
| 1:AA:703:G:O2'    | 1:AA:704:A:OP2     | 2.07                     | 0.71              |
| 1:AA:922:G:N2     | 1:AA:923:A:H1'     | 2.06                     | 0.71              |
| 1:AA:949:A:H2'    | 1:AA:950:U:C6      | 2.26                     | 0.71              |
| 1:AA:1054:C:N4    | 3:AB:34:G:O2'      | 2.24                     | 0.71              |
| 1:AA:1126:U:O2'   | 1:AA:1127:G:H5'    | 1.91                     | 0.71              |
| 1:AA:1492:A:N6    | 14:AO:50:SER:CB    | 2.54                     | 0.71              |
| 4:AE:35:GLU:CD    | 4:AE:35:GLU:C      | 2.59                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:AE:185:ILE:HG22 | 4:AE:199:TYR:HB2  | 1.73                     | 0.71              |
| 6:AG:61:LYS:N     | 6:AG:203:VAL:HG22 | 2.06                     | 0.71              |
| 7:AH:133:TYR:HD2  | 7:AH:136:MET:HG3  | 1.56                     | 0.71              |
| 9:AJ:5:ARG:CD     | 9:AJ:7:ALA:H      | 2.03                     | 0.71              |
| 10:AK:120:THR:N   | 10:AK:123:GLU:OE1 | 2.23                     | 0.71              |
| 11:AL:48:GLU:N    | 11:AL:49:PRO:HD2  | 2.05                     | 0.71              |
| 12:AM:61:GLU:HG2  | 12:AM:62:HIS:N    | 2.04                     | 0.71              |
| 17:AR:15:PHE:CD1  | 17:AR:30:ALA:HB2  | 2.25                     | 0.71              |
| 20:AU:37:VAL:HG12 | 20:AU:41:LYS:HE3  | 1.72                     | 0.71              |
| 24:BA:85:G:N3     | 24:BA:103:A:H2    | 1.88                     | 0.71              |
| 24:BA:131:G:H2'   | 24:BA:132:G:C8    | 2.26                     | 0.71              |
| 24:BA:131:G:H2'   | 24:BA:132:G:H8    | 1.55                     | 0.71              |
| 24:BA:202:U:H2'   | 24:BA:203:C:C6    | 2.26                     | 0.71              |
| 24:BA:586:A:C6    | 24:BA:1254:A:C2   | 2.78                     | 0.71              |
| 24:BA:989:G:OP1   | 49:B2:31:LEU:HD23 | 1.90                     | 0.71              |
| 24:BA:993:G:H1'   | 42:BU:91:TYR:HE2  | 1.54                     | 0.71              |
| 24:BA:996:A:H4'   | 41:BT:93:LYS:CG   | 2.20                     | 0.71              |
| 24:BA:1029:A:O5'  | 24:BA:1029:A:H8   | 1.72                     | 0.71              |
| 24:BA:1081:U:O4   | 24:BA:1086:A:C2   | 2.43                     | 0.71              |
| 24:BA:1182:A:C3'  | 24:BA:1183:G:H3'  | 2.19                     | 0.71              |
| 24:BA:1286:A:N3   | 24:BA:1329:U:C4   | 2.58                     | 0.71              |
| 24:BA:1312:U:H3'  | 24:BA:1313:U:H5   | 1.51                     | 0.71              |
| 24:BA:1340:U:H5   | 44:BW:57:LEU:HG   | 1.54                     | 0.71              |
| 24:BA:1464:C:H4'  | 24:BA:1528:A:H1'  | 1.70                     | 0.71              |
| 24:BA:1598:C:C5'  | 44:BW:36:LYS:HB3  | 2.16                     | 0.71              |
| 24:BA:1617:C:OP2  | 24:BA:1617:C:C4'  | 2.38                     | 0.71              |
| 24:BA:1637:A:H4'  | 24:BA:2711:A:HO2' | 1.56                     | 0.71              |
| 24:BA:1697:G:C3'  | 24:BA:1698:A:C5'  | 2.62                     | 0.71              |
| 24:BA:1937:A:C2'  | 24:BA:1938:A:OP1  | 2.38                     | 0.71              |
| 24:BA:2111:C:OP2  | 24:BA:2111:C:C6   | 2.44                     | 0.71              |
| 24:BA:2143:C:N4   | 24:BA:2144:U:O4   | 2.24                     | 0.71              |
| 24:BA:2311:A:C3'  | 24:BA:2312:U:H5   | 2.03                     | 0.71              |
| 24:BA:2329:G:H1   | 24:BA:2386:C:H42  | 1.34                     | 0.71              |
| 24:BA:2352:A:N7   | 24:BA:2366:A:C6   | 2.59                     | 0.71              |
| 24:BA:2721:A:H2'  | 24:BA:2722:G:C8   | 2.26                     | 0.71              |
| 28:BE:147:PRO:HG2 | 28:BE:149:ARG:HD2 | 1.72                     | 0.71              |
| 31:BH:7:LEU:CG    | 31:BH:51:ARG:HH21 | 2.04                     | 0.71              |
| 31:BH:132:ARG:HD3 | 31:BH:132:ARG:N   | 2.06                     | 0.71              |
| 33:BL:95:LYS:HD3  | 33:BL:98:ARG:NH2  | 2.06                     | 0.71              |
| 37:BP:37:LEU:HA   | 37:BP:100:GLY:HA2 | 1.72                     | 0.71              |
| 38:BQ:100:LEU:O   | 51:B4:44:THR:HG22 | 1.90                     | 0.71              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 41:BT:92:ARG:HA    | 41:BT:95:LEU:HG    | 1.73                     | 0.71              |
| 41:BT:98:LEU:HA    | 41:BT:101:ARG:HG2  | 1.71                     | 0.71              |
| 46:BY:28:MET:HE1   | 46:BY:88:PHE:HB2   | 1.72                     | 0.71              |
| 46:BY:29:TYR:HD1   | 46:BY:34:ASN:HD22  | 1.39                     | 0.71              |
| 46:BY:56:VAL:O     | 46:BY:57:ILE:O     | 2.09                     | 0.71              |
| 48:B1:3:LYS:HA     | 48:B1:6:GLU:HG2    | 1.72                     | 0.71              |
| 50:B3:41:PRO:C     | 50:B3:58:ARG:HH11  | 1.99                     | 0.71              |
| 51:B4:41:PRO:O     | 51:B4:42:PRO:O     | 2.09                     | 0.71              |
| 1:AA:330:C:O2'     | 1:AA:331:G:H5'     | 1.90                     | 0.70              |
| 1:AA:624:C:H2'     | 1:AA:625:G:H8      | 1.56                     | 0.70              |
| 1:AA:695:A:H2'     | 1:AA:696:A:O4'     | 1.91                     | 0.70              |
| 1:AA:795:C:H4'     | 1:AA:1506:U:C2     | 2.27                     | 0.70              |
| 1:AA:970:C:N3      | 15:AP:126:LYS:NZ   | 2.39                     | 0.70              |
| 1:AA:1324:A:O4'    | 1:AA:1362:C:H4'    | 1.91                     | 0.70              |
| 5:AF:29:TYR:O      | 5:AF:29:TYR:HD2    | 1.72                     | 0.70              |
| 5:AF:70:VAL:O      | 5:AF:105:GLU:HA    | 1.91                     | 0.70              |
| 6:AG:63:LYS:HG2    | 6:AG:64:LEU:N      | 2.06                     | 0.70              |
| 6:AG:141:ARG:O     | 6:AG:143:GLY:N     | 2.23                     | 0.70              |
| 7:AH:81:GLU:CB     | 7:AH:90:VAL:HG22   | 2.21                     | 0.70              |
| 9:AJ:111:ARG:NH1   | 9:AJ:111:ARG:HB3   | 2.05                     | 0.70              |
| 18:AS:51:VAL:HG21  | 18:AS:73:LEU:HD11  | 1.72                     | 0.70              |
| 20:AU:74:ARG:HG3   | 20:AU:79:LEU:CD2   | 2.19                     | 0.70              |
| 22:AW:66:ALA:O     | 22:AW:67:ALA:C     | 2.33                     | 0.70              |
| 24:BA:200:U:H5'    | 24:BA:201:C:OP2    | 1.91                     | 0.70              |
| 24:BA:282:A:H2'    | 24:BA:284:U:OP1    | 1.91                     | 0.70              |
| 24:BA:498:G:H8     | 24:BA:498:G:O5'    | 1.74                     | 0.70              |
| 24:BA:603:A:H61    | 24:BA:624:C:N4     | 1.86                     | 0.70              |
| 24:BA:619:G:N7     | 24:BA:620:G:C2     | 2.59                     | 0.70              |
| 24:BA:648:G:N3     | 24:BA:649:G:C8     | 2.59                     | 0.70              |
| 24:BA:668:G:C2     | 24:BA:670:A:C6     | 2.79                     | 0.70              |
| 24:BA:1142(A):A:C6 | 24:BA:1143:A:C8    | 2.79                     | 0.70              |
| 24:BA:1174:A:H2'   | 24:BA:1174:A:N3    | 2.06                     | 0.70              |
| 24:BA:1205:U:O2'   | 24:BA:1206:G:N7    | 2.24                     | 0.70              |
| 24:BA:1284:A:N1    | 24:BA:1285:G:N2    | 2.39                     | 0.70              |
| 24:BA:1661:G:H2'   | 24:BA:1662:C:H6    | 1.55                     | 0.70              |
| 24:BA:1775:U:C5    | 27:BD:208:LYS:HD2  | 2.25                     | 0.70              |
| 24:BA:1813:G:HO2'  | 27:BD:46:GLN:HG2   | 1.55                     | 0.70              |
| 24:BA:1952:A:H2    | 35:BN:22:ILE:HG12  | 1.53                     | 0.70              |
| 24:BA:2227:A:H1'   | 27:BD:262:ARG:HH11 | 1.55                     | 0.70              |
| 24:BA:2241:A:H2'   | 24:BA:2242:G:C8    | 2.25                     | 0.70              |
| 24:BA:2344:U:H3'   | 24:BA:2344:U:O2    | 1.91                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2469:A:H5'   | 24:BA:2469:A:C8    | 2.23                     | 0.70              |
| 24:BA:2519:U:N1    | 24:BA:2542:A:N1    | 2.39                     | 0.70              |
| 24:BA:2685:G:H4'   | 35:BN:66:LYS:HE3   | 1.71                     | 0.70              |
| 24:BA:2810:A:O2'   | 28:BE:61:ARG:NH2   | 2.24                     | 0.70              |
| 26:BC:42:GLU:OE2   | 26:BC:174:PRO:HB3  | 1.91                     | 0.70              |
| 27:BD:59:LYS:HE3   | 27:BD:59:LYS:O     | 1.91                     | 0.70              |
| 27:BD:209:ALA:O    | 27:BD:210:GLY:C    | 2.34                     | 0.70              |
| 29:BF:80:ALA:N     | 29:BF:83:PHE:HE2   | 1.86                     | 0.70              |
| 29:BF:110:LEU:CD2  | 29:BF:186:ILE:HD11 | 2.21                     | 0.70              |
| 30:BG:29:TRP:C     | 30:BG:31:VAL:H     | 1.98                     | 0.70              |
| 33:BL:23:VAL:HA    | 33:BL:27:LEU:HG    | 1.72                     | 0.70              |
| 33:BL:105:LEU:O    | 33:BL:109:LYS:HG3  | 1.91                     | 0.70              |
| 35:BN:106:LEU:O    | 35:BN:109:LYS:HA   | 1.90                     | 0.70              |
| 39:BR:19:LYS:O     | 39:BR:20:ARG:C     | 2.34                     | 0.70              |
| 41:BT:50:ARG:HD3   | 41:BT:50:ARG:H     | 1.55                     | 0.70              |
| 43:BV:13:SER:OG    | 43:BV:14:PRO:CD    | 2.36                     | 0.70              |
| 53:B6:28:ARG:CA    | 53:B6:31:LEU:HD12  | 2.04                     | 0.70              |
| 54:B7:12:LYS:O     | 54:B7:13:ARG:C     | 2.34                     | 0.70              |
| 1:AA:1032:A:C5     | 1:AA:1032(A):G:H1' | 2.26                     | 0.70              |
| 1:AA:1115:C:H2'    | 1:AA:1116:C:C6     | 2.26                     | 0.70              |
| 1:AA:1128:C:H1'    | 1:AA:1146:A:N6     | 2.02                     | 0.70              |
| 1:AA:1157:A:N3     | 1:AA:1157:A:H2'    | 2.05                     | 0.70              |
| 1:AA:1306:A:N6     | 1:AA:1331:G:H1'    | 2.07                     | 0.70              |
| 1:AA:1347:G:H3'    | 11:AL:107:ARG:C    | 2.16                     | 0.70              |
| 1:AA:1382:C:H2'    | 1:AA:1383:C:H6     | 1.56                     | 0.70              |
| 1:AA:1513:A:H2'    | 1:AA:1514:C:C6     | 2.26                     | 0.70              |
| 6:AG:76:ARG:O      | 6:AG:79:PHE:HB3    | 1.91                     | 0.70              |
| 8:AI:10:LEU:HD21   | 8:AI:61:LEU:HG     | 1.72                     | 0.70              |
| 8:AI:62:TRP:CZ2    | 8:AI:64:GLN:HB2    | 2.26                     | 0.70              |
| 9:AJ:42:ILE:HG22   | 9:AJ:120:ILE:HD11  | 1.73                     | 0.70              |
| 9:AJ:104:LEU:HD23  | 9:AJ:134:ALA:HB1   | 1.73                     | 0.70              |
| 10:AK:70:GLN:HE22  | 10:AK:72:PRO:HD2   | 1.54                     | 0.70              |
| 11:AL:15:ALA:HB1   | 11:AL:77:ILE:HG13  | 1.73                     | 0.70              |
| 12:AM:15:THR:HG23  | 12:AM:16:LEU:CD2   | 2.21                     | 0.70              |
| 13:AN:54:ARG:O     | 13:AN:57:THR:HG22  | 1.90                     | 0.70              |
| 14:AO:58:VAL:CG1   | 14:AO:59:ARG:N     | 2.54                     | 0.70              |
| 20:AU:70:ILE:CG2   | 20:AU:74:ARG:HE    | 2.01                     | 0.70              |
| 21:AV:16:LEU:HD12  | 21:AV:44:MET:HE1   | 1.72                     | 0.70              |
| 24:BA:10:G:H2'     | 24:BA:11:G:H8      | 1.55                     | 0.70              |
| 24:BA:29:U:OP1     | 24:BA:583:G:H4'    | 1.91                     | 0.70              |
| 24:BA:270(Q):C:O2' | 24:BA:270(R):G:H5' | 1.91                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:280:C:H5''  | 24:BA:282:A:OP1    | 1.91                     | 0.70              |
| 24:BA:296:C:O2'   | 24:BA:297:C:O4'    | 2.09                     | 0.70              |
| 24:BA:324:A:N7    | 24:BA:340:A:H1'    | 2.05                     | 0.70              |
| 24:BA:534:U:H2'   | 24:BA:535:C:C5     | 2.26                     | 0.70              |
| 24:BA:535:C:C5'   | 41:BT:49:HIS:HB3   | 2.20                     | 0.70              |
| 24:BA:572:A:N7    | 24:BA:573:G:C6     | 2.59                     | 0.70              |
| 24:BA:609:A:H61   | 24:BA:619:G:N2     | 1.89                     | 0.70              |
| 24:BA:663:G:H4'   | 36:BO:18:ARG:NE    | 2.06                     | 0.70              |
| 24:BA:750:A:OP1   | 43:BV:88:ARG:NH1   | 2.24                     | 0.70              |
| 24:BA:779:U:O4    | 24:BA:780:G:C2     | 2.44                     | 0.70              |
| 24:BA:1116:C:H2'  | 24:BA:1117:G:C8    | 2.26                     | 0.70              |
| 24:BA:1263:U:H5   | 24:BA:1265:A:N6    | 1.88                     | 0.70              |
| 24:BA:1306:C:O2'  | 24:BA:1307:A:H5'   | 1.91                     | 0.70              |
| 24:BA:1335:U:OP1  | 44:BW:65:ARG:HG3   | 1.91                     | 0.70              |
| 24:BA:1672:C:C5   | 24:BA:1673:U:C6    | 2.79                     | 0.70              |
| 24:BA:1773:A:H2   | 24:BA:1977:A:H61   | 1.37                     | 0.70              |
| 24:BA:1935:G:H2'  | 24:BA:1962:C:H42   | 1.53                     | 0.70              |
| 24:BA:2226:C:O2   | 24:BA:2227:A:Cl'   | 2.39                     | 0.70              |
| 26:BC:86:ALA:HB1  | 26:BC:153:ILE:HD12 | 1.73                     | 0.70              |
| 27:BD:5:LYS:CD    | 27:BD:29:PRO:HB3   | 2.18                     | 0.70              |
| 27:BD:5:LYS:CA    | 27:BD:29:PRO:HD3   | 2.21                     | 0.70              |
| 27:BD:54:ARG:HB3  | 27:BD:218:ARG:HB3  | 1.72                     | 0.70              |
| 27:BD:91:ARG:CZ   | 27:BD:198:ASN:ND2  | 2.54                     | 0.70              |
| 28:BE:14:ILE:HD11 | 40:BS:14:TYR:HB3   | 1.73                     | 0.70              |
| 28:BE:91:VAL:HG23 | 28:BE:180:ASN:OD1  | 1.91                     | 0.70              |
| 31:BH:15:VAL:HG13 | 31:BH:17:VAL:HB    | 1.74                     | 0.70              |
| 31:BH:60:ARG:HG2  | 31:BH:64:LEU:HD12  | 1.72                     | 0.70              |
| 31:BH:113:VAL:O   | 31:BH:113:VAL:HG12 | 1.91                     | 0.70              |
| 31:BH:119:GLU:O   | 31:BH:121:ILE:N    | 2.24                     | 0.70              |
| 34:BM:54:VAL:CG1  | 34:BM:122:VAL:HB   | 2.21                     | 0.70              |
| 34:BM:74:ARG:HE   | 34:BM:82:LEU:HD11  | 1.54                     | 0.70              |
| 36:BO:124:LYS:HA  | 36:BO:143:GLY:HA3  | 1.72                     | 0.70              |
| 38:BQ:97:VAL:HA   | 38:BQ:114:VAL:CG2  | 2.20                     | 0.70              |
| 41:BT:50:ARG:NH2  | 42:BU:75:PHE:CD2   | 2.59                     | 0.70              |
| 45:BX:77:PRO:HG2  | 45:BX:78:ALA:H     | 1.55                     | 0.70              |
| 45:BX:97:ARG:CZ   | 45:BX:101:LYS:HG2  | 2.21                     | 0.70              |
| 46:BY:96:VAL:O    | 46:BY:128:VAL:HA   | 1.92                     | 0.70              |
| 48:B1:6:GLU:C     | 48:B1:10:LYS:HE2   | 2.16                     | 0.70              |
| 48:B1:36:ILE:HG23 | 48:B1:37:GLY:N     | 2.06                     | 0.70              |
| 52:B5:38:LYS:O    | 52:B5:49:HIS:HB3   | 1.91                     | 0.70              |
| 54:B7:60:LEU:HD21 | 54:B7:64:TYR:O     | 1.91                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:26:A:H61      | 1:AA:558:G:C2'     | 2.03                     | 0.70              |
| 1:AA:192:U:H5'     | 22:AW:102:GLY:CA   | 2.21                     | 0.70              |
| 1:AA:335:C:O2'     | 1:AA:1433:A:N3     | 2.21                     | 0.70              |
| 1:AA:517:G:N2      | 1:AA:533:A:P       | 2.64                     | 0.70              |
| 1:AA:858:G:H22     | 1:AA:870:U:P       | 2.15                     | 0.70              |
| 1:AA:878:G:H2'     | 1:AA:879:C:H6      | 1.54                     | 0.70              |
| 1:AA:970:C:H5''    | 1:AA:971:G:OP1     | 1.90                     | 0.70              |
| 1:AA:1128:C:C5     | 1:AA:1139:G:O6     | 2.44                     | 0.70              |
| 1:AA:1200:C:O5'    | 1:AA:1202:G:OP1    | 2.08                     | 0.70              |
| 1:AA:1320:C:H42    | 21:AV:36:ARG:NH1   | 1.86                     | 0.70              |
| 3:AC:67:C:H2'      | 3:AC:68:C:C6       | 2.26                     | 0.70              |
| 4:AE:16:HIS:CA     | 4:AE:204:ASN:HB2   | 2.20                     | 0.70              |
| 6:AG:144:ASP:C     | 6:AG:184:LYS:HD3   | 2.16                     | 0.70              |
| 7:AH:86:ALA:O      | 7:AH:125:SER:HB3   | 1.91                     | 0.70              |
| 10:AK:85:ARG:HD2   | 10:AK:134:ILE:O    | 1.90                     | 0.70              |
| 14:AO:48:PRO:HG2   | 14:AO:49:ASN:H     | 1.56                     | 0.70              |
| 15:AP:98:VAL:CG2   | 15:AP:110:ARG:HH21 | 2.03                     | 0.70              |
| 17:AR:11:VAL:HA    | 17:AR:14:GLU:OE2   | 1.91                     | 0.70              |
| 17:AR:15:PHE:HD1   | 17:AR:30:ALA:HB2   | 1.55                     | 0.70              |
| 24:BA:18:C:OP1     | 41:BT:26:GLY:HA2   | 1.90                     | 0.70              |
| 24:BA:270(E):G:H2' | 24:BA:270(F):U:H6  | 1.56                     | 0.70              |
| 24:BA:280:C:H41    | 24:BA:283:A:H62    | 1.38                     | 0.70              |
| 24:BA:307:G:N2     | 24:BA:310:A:C8     | 2.60                     | 0.70              |
| 24:BA:336:C:H4'    | 45:BX:67:LEU:CD2   | 2.21                     | 0.70              |
| 24:BA:569:U:H1'    | 24:BA:947:G:H1'    | 1.73                     | 0.70              |
| 24:BA:709:U:H2'    | 24:BA:710:G:C8     | 2.26                     | 0.70              |
| 24:BA:957:A:C2     | 24:BA:2459:A:H5''  | 2.27                     | 0.70              |
| 24:BA:991:C:OP2    | 24:BA:1186:G:OP2   | 2.09                     | 0.70              |
| 24:BA:1012:U:C4    | 34:BM:25:ARG:HB3   | 2.27                     | 0.70              |
| 24:BA:1079:C:HO2'  | 24:BA:1080:C:H5'   | 1.56                     | 0.70              |
| 24:BA:1322:A:P     | 43:BV:11:ARG:HH11  | 2.14                     | 0.70              |
| 24:BA:1579:A:N7    | 24:BA:1580:A:N3    | 2.38                     | 0.70              |
| 24:BA:1606:G:H4'   | 24:BA:1608:A:N3    | 2.06                     | 0.70              |
| 24:BA:1730:U:O2'   | 24:BA:1731:G:C5    | 2.44                     | 0.70              |
| 24:BA:1798:U:C5'   | 27:BD:257:LEU:HD12 | 2.20                     | 0.70              |
| 24:BA:1813:G:O2'   | 27:BD:46:GLN:HG2   | 1.91                     | 0.70              |
| 24:BA:1933:G:N2    | 24:BA:1974:C:H5'   | 2.01                     | 0.70              |
| 24:BA:2417:C:H2'   | 24:BA:2418:A:H8    | 1.54                     | 0.70              |
| 24:BA:2597:G:C5'   | 27:BD:242:ARG:HG2  | 2.20                     | 0.70              |
| 24:BA:2850:A:H2'   | 24:BA:2851:A:H8    | 1.56                     | 0.70              |
| 26:BC:6:ARG:NH1    | 26:BC:7:TYR:HA     | 2.06                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:226:MET:CE   | 27:BD:237:GLU:O    | 2.39                     | 0.70              |
| 28:BE:22:PRO:HA    | 28:BE:185:LYS:CA   | 2.21                     | 0.70              |
| 28:BE:128:SER:C    | 28:BE:130:GLY:H    | 1.98                     | 0.70              |
| 29:BF:142:TRP:O    | 29:BF:145:GLU:HB2  | 1.91                     | 0.70              |
| 30:BG:17:PRO:HA    | 30:BG:20:ILE:HB    | 1.73                     | 0.70              |
| 30:BG:68:PRO:HB3   | 30:BG:72:ARG:CZ    | 2.21                     | 0.70              |
| 31:BH:7:LEU:C      | 31:BH:51:ARG:NH2   | 2.48                     | 0.70              |
| 32:BK:135:GLU:N    | 32:BK:135:GLU:OE1  | 2.24                     | 0.70              |
| 33:BL:116:ASN:HD21 | 33:BL:126:MET:HE1  | 1.54                     | 0.70              |
| 34:BM:55:VAL:C     | 34:BM:57:ALA:N     | 2.40                     | 0.70              |
| 35:BN:64:ARG:HE    | 35:BN:67:LYS:N     | 1.90                     | 0.70              |
| 35:BN:88:ASN:O     | 35:BN:90:GLN:N     | 2.24                     | 0.70              |
| 36:BO:96:THR:HG22  | 36:BO:99:LEU:HD12  | 1.71                     | 0.70              |
| 37:BP:56:ARG:HD2   | 37:BP:57:HIS:N     | 2.07                     | 0.70              |
| 37:BP:97:VAL:C     | 37:BP:98:LYS:HE2   | 2.15                     | 0.70              |
| 39:BR:9:ARG:HH11   | 39:BR:9:ARG:N      | 1.88                     | 0.70              |
| 45:BX:28:LYS:O     | 45:BX:28:LYS:HG2   | 1.92                     | 0.70              |
| 47:BZ:19:LYS:CG    | 47:BZ:20:ARG:H     | 2.03                     | 0.70              |
| 49:B2:7:LYS:HB3    | 49:B2:55:ARG:HB3   | 1.74                     | 0.70              |
| 54:B7:30:ARG:O     | 54:B7:32:LEU:HG    | 1.91                     | 0.70              |
| 55:B8:10:ILE:H     | 55:B8:14:CYS:HB2   | 1.56                     | 0.70              |
| 1:AA:47:C:C4'      | 1:AA:48:C:H5''     | 2.17                     | 0.70              |
| 1:AA:893:C:O2'     | 1:AA:894:G:H5'     | 1.92                     | 0.70              |
| 1:AA:1062:U:C2'    | 1:AA:1063:C:C5     | 2.67                     | 0.70              |
| 4:AE:48:MET:HA     | 4:AE:51:LEU:CD1    | 2.20                     | 0.70              |
| 5:AF:77:ILE:HD11   | 5:AF:103:VAL:HG21  | 1.72                     | 0.70              |
| 6:AG:20:TYR:CA     | 6:AG:26:CYS:O      | 2.39                     | 0.70              |
| 10:AK:29:SER:HB2   | 10:AK:32:LYS:NZ    | 2.05                     | 0.70              |
| 10:AK:92:ARG:HD2   | 10:AK:92:ARG:N     | 2.04                     | 0.70              |
| 13:AN:30:VAL:O     | 13:AN:42:TRP:HB2   | 1.91                     | 0.70              |
| 14:AO:27:LEU:HD23  | 14:AO:33:ARG:HD3   | 1.74                     | 0.70              |
| 21:AV:40:ILE:HB    | 21:AV:67:VAL:O     | 1.91                     | 0.70              |
| 24:BA:248:G:N3     | 24:BA:2431:U:C5'   | 2.51                     | 0.70              |
| 24:BA:312:G:H3'    | 24:BA:313:C:H5     | 1.55                     | 0.70              |
| 24:BA:373:U:H4'    | 24:BA:374:A:C8     | 2.26                     | 0.70              |
| 24:BA:469:G:N2     | 53:B6:40:TRP:CZ2   | 2.52                     | 0.70              |
| 24:BA:557:U:H4'    | 34:BM:112:LEU:HD21 | 1.72                     | 0.70              |
| 24:BA:558:G:OP1    | 34:BM:111:PRO:HG2  | 1.91                     | 0.70              |
| 24:BA:562:U:O2     | 24:BA:572:A:C1'    | 2.39                     | 0.70              |
| 24:BA:783:A:H3'    | 27:BD:227:ASN:CG   | 2.17                     | 0.70              |
| 24:BA:1005:C:C5    | 24:BA:1143:A:OP1   | 2.41                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1264:G:N7    | 24:BA:1265:A:C4    | 2.59                     | 0.70              |
| 24:BA:1332:G:C4    | 24:BA:1609:A:N1    | 2.59                     | 0.70              |
| 24:BA:1479:G:N2    | 24:BA:1515:C:C2    | 2.59                     | 0.70              |
| 24:BA:2051:A:C6    | 24:BA:2614:A:C5    | 2.79                     | 0.70              |
| 24:BA:2075:U:H5    | 24:BA:2435:A:C2    | 2.09                     | 0.70              |
| 24:BA:2077:A:H1'   | 24:BA:2434:A:O2'   | 1.91                     | 0.70              |
| 24:BA:2178:C:H5''  | 26:BC:46:LYS:HG2   | 1.73                     | 0.70              |
| 24:BA:2225:A:H4'   | 24:BA:2226:C:O5'   | 1.90                     | 0.70              |
| 24:BA:2278:A:N7    | 47:BZ:14:ARG:HB3   | 2.06                     | 0.70              |
| 24:BA:2286:A:O3'   | 24:BA:2287:A:O4'   | 2.09                     | 0.70              |
| 24:BA:2373:G:O2'   | 24:BA:2374:C:O5'   | 2.09                     | 0.70              |
| 24:BA:2408:U:O5'   | 24:BA:2408:U:C6    | 2.43                     | 0.70              |
| 24:BA:2468:G:H4'   | 37:BP:120:ILE:HD13 | 1.73                     | 0.70              |
| 24:BA:2578:G:HO2'  | 24:BA:2579:C:H6    | 1.38                     | 0.70              |
| 24:BA:2652:C:H2'   | 24:BA:2653:U:C6    | 2.26                     | 0.70              |
| 24:BA:2787:C:C1'   | 28:BE:61:ARG:HD2   | 2.21                     | 0.70              |
| 25:BB:114:G:H2'    | 25:BB:115:G:O4'    | 1.91                     | 0.70              |
| 27:BD:54:ARG:CA    | 27:BD:219:PRO:HG2  | 2.18                     | 0.70              |
| 27:BD:132:PRO:O    | 27:BD:133:LEU:C    | 2.34                     | 0.70              |
| 28:BE:5:LEU:HD22   | 28:BE:5:LEU:C      | 2.15                     | 0.70              |
| 28:BE:152:LYS:HD2  | 28:BE:152:LYS:O    | 1.91                     | 0.70              |
| 31:BH:35:VAL:HG11  | 31:BH:72:ILE:CA    | 2.12                     | 0.70              |
| 32:BK:66:GLU:HG3   | 32:BK:69:LYS:NZ    | 2.06                     | 0.70              |
| 32:BK:79:ILE:C     | 32:BK:144:VAL:HG23 | 2.16                     | 0.70              |
| 32:BK:87:LYS:HB3   | 32:BK:121:LYS:HE2  | 1.74                     | 0.70              |
| 33:BL:52:ILE:HD12  | 33:BL:76:TYR:HD2   | 1.56                     | 0.70              |
| 34:BM:37:LYS:HD2   | 34:BM:43:THR:CA    | 2.21                     | 0.70              |
| 35:BN:8:LEU:HD13   | 35:BN:9:GLU:O      | 1.92                     | 0.70              |
| 36:BO:76:LYS:HA    | 36:BO:101:VAL:CG1  | 2.21                     | 0.70              |
| 36:BO:111:ARG:NH2  | 36:BO:113:LYS:HB2  | 2.07                     | 0.70              |
| 36:BO:126:VAL:HG23 | 36:BO:146:VAL:O    | 1.92                     | 0.70              |
| 37:BP:99:PRO:O     | 37:BP:100:GLY:C    | 2.33                     | 0.70              |
| 39:BR:33:LYS:HG2   | 39:BR:54:LEU:CD1   | 2.21                     | 0.70              |
| 41:BT:66:ASN:C     | 41:BT:70:ARG:HE    | 2.00                     | 0.70              |
| 41:BT:81:HIS:HB3   | 41:BT:117:GLN:CD   | 2.16                     | 0.70              |
| 46:BY:57:ILE:C     | 46:BY:58:VAL:HG22  | 2.15                     | 0.70              |
| 46:BY:129:SER:HB3  | 46:BY:133:ILE:CG2  | 2.21                     | 0.70              |
| 48:B1:19:LEU:HD13  | 48:B1:20:VAL:N     | 2.05                     | 0.70              |
| 49:B2:29:ARG:O     | 49:B2:30:ARG:C     | 2.33                     | 0.70              |
| 50:B3:64:GLY:O     | 50:B3:68:ARG:CZ    | 2.40                     | 0.70              |
| 51:B4:50:GLY:O     | 51:B4:55:ARG:HA    | 1.92                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 52:B5:44:ARG:HB2   | 52:B5:47:THR:CG2   | 2.22                     | 0.70              |
| 1:AA:197:A:O4'     | 1:AA:197:A:P       | 2.50                     | 0.70              |
| 1:AA:719:C:H3'     | 1:AA:720:C:C6      | 2.26                     | 0.70              |
| 1:AA:1306:A:H2'    | 1:AA:1307:U:O4'    | 1.91                     | 0.70              |
| 1:AA:1312:G:N7     | 21:AV:3:ARG:O      | 2.24                     | 0.70              |
| 1:AA:1326:C:H5''   | 23:AX:12:LYS:NZ    | 2.07                     | 0.70              |
| 1:AA:1494:G:N2     | 1:AA:1495:U:C4     | 2.58                     | 0.70              |
| 3:AC:44:G:H2'      | 3:AC:45:U:O4'      | 1.91                     | 0.70              |
| 4:AE:54:THR:CG2    | 4:AE:201:ILE:HD11  | 2.19                     | 0.70              |
| 5:AF:187:ALA:H     | 5:AF:198:VAL:HG22  | 1.56                     | 0.70              |
| 6:AG:13:ARG:C      | 6:AG:40:PRO:HD3    | 2.17                     | 0.70              |
| 7:AH:43:LEU:HD23   | 7:AH:43:LEU:C      | 2.16                     | 0.70              |
| 8:AI:14:LEU:HD12   | 8:AI:15:ASP:O      | 1.91                     | 0.70              |
| 10:AK:47:GLY:O     | 10:AK:61:VAL:HG13  | 1.91                     | 0.70              |
| 12:AM:82:ILE:HG23  | 12:AM:86:MET:SD    | 2.31                     | 0.70              |
| 15:AP:13:LYS:O     | 15:AP:14:ARG:O     | 2.09                     | 0.70              |
| 24:BA:58:G:H1'     | 24:BA:70:G:N2      | 2.07                     | 0.70              |
| 24:BA:126:A:N7     | 24:BA:127:A:C5     | 2.60                     | 0.70              |
| 24:BA:299:A:O2'    | 24:BA:319:C:H4'    | 1.91                     | 0.70              |
| 24:BA:464:U:H2'    | 24:BA:465:G:C8     | 2.26                     | 0.70              |
| 24:BA:652:C:O5'    | 24:BA:652:C:H6     | 1.73                     | 0.70              |
| 24:BA:760:G:H2'    | 24:BA:761:A:H5'    | 1.72                     | 0.70              |
| 24:BA:783:A:O2'    | 24:BA:784:A:OP1    | 2.08                     | 0.70              |
| 24:BA:1057:A:H2'   | 24:BA:1058:G:H8    | 1.55                     | 0.70              |
| 24:BA:1324:G:H5''  | 24:BA:1325:G:O2'   | 1.91                     | 0.70              |
| 24:BA:1918:A:N7    | 24:BA:1919:A:N6    | 2.40                     | 0.70              |
| 24:BA:2024:G:H2'   | 24:BA:2025:C:O4'   | 1.89                     | 0.70              |
| 24:BA:2127:G:O2'   | 24:BA:2128:C:H5'   | 1.91                     | 0.70              |
| 25:BB:27:C:H3'     | 25:BB:28:C:C6      | 2.26                     | 0.70              |
| 27:BD:75:ILE:HD13  | 27:BD:99:ASP:HB3   | 1.72                     | 0.70              |
| 27:BD:164:GLN:HB3  | 27:BD:176:ARG:HB3  | 1.72                     | 0.70              |
| 27:BD:177:LEU:HD11 | 27:BD:268:ARG:CZ   | 2.20                     | 0.70              |
| 28:BE:176:ILE:HG21 | 28:BE:181:LEU:HB2  | 1.73                     | 0.70              |
| 31:BH:11:VAL:HB    | 31:BH:50:VAL:CG2   | 2.21                     | 0.70              |
| 31:BH:43:VAL:CG1   | 31:BH:44:VAL:N     | 2.54                     | 0.70              |
| 32:BK:21:VAL:HG11  | 32:BK:30:LEU:HG    | 1.71                     | 0.70              |
| 34:BM:78:TYR:CB    | 34:BM:79:PRO:HD2   | 2.21                     | 0.70              |
| 35:BN:7:TYR:CB     | 35:BN:18:LYS:HE3   | 2.22                     | 0.70              |
| 35:BN:9:GLU:CB     | 35:BN:82:ASN:HB3   | 2.17                     | 0.70              |
| 38:BQ:90:ARG:NH2   | 38:BQ:117:VAL:HG13 | 2.06                     | 0.70              |
| 40:BS:3:ARG:O      | 40:BS:4:GLY:C      | 2.34                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 40:BS:57:PHE:C    | 40:BS:58:ASN:HD22  | 1.98                     | 0.70              |
| 40:BS:65:LYS:HA   | 40:BS:76:PHE:O     | 1.90                     | 0.70              |
| 40:BS:108:ARG:H   | 40:BS:108:ARG:HH11 | 1.39                     | 0.70              |
| 41:BT:50:ARG:HH11 | 41:BT:50:ARG:CB    | 2.04                     | 0.70              |
| 41:BT:94:ASN:HD22 | 42:BU:6:LYS:NZ     | 1.89                     | 0.70              |
| 41:BT:94:ASN:O    | 41:BT:95:LEU:C     | 2.34                     | 0.70              |
| 42:BU:20:LEU:HB3  | 42:BU:95:LEU:HD13  | 1.74                     | 0.70              |
| 44:BW:7:VAL:HG21  | 48:B1:28:MET:HG2   | 1.73                     | 0.70              |
| 44:BW:73:ARG:CG   | 44:BW:74:PRO:HD2   | 2.22                     | 0.70              |
| 46:BY:15:PRO:O    | 46:BY:18:LEU:HB2   | 1.90                     | 0.70              |
| 50:B3:20:ASN:CB   | 50:B3:30:GLU:CD    | 2.64                     | 0.70              |
| 52:B5:50:ARG:NH2  | 52:B5:52:VAL:HG21  | 2.05                     | 0.70              |
| 53:B6:2:LYS:C     | 53:B6:4:THR:H      | 1.99                     | 0.70              |
| 54:B7:38:GLY:O    | 54:B7:41:ILE:HG12  | 1.91                     | 0.70              |
| 1:AA:168:G:N1     | 1:AA:169:C:N4      | 2.40                     | 0.70              |
| 1:AA:540:G:C6     | 1:AA:541:G:C5      | 2.80                     | 0.70              |
| 1:AA:624:C:H4'    | 18:AS:10:GLY:O     | 1.90                     | 0.70              |
| 1:AA:787:A:H2'    | 1:AA:788:U:C5'     | 2.21                     | 0.70              |
| 1:AA:959:A:H2'    | 1:AA:960:U:C4'     | 2.21                     | 0.70              |
| 1:AA:1196:U:H6    | 1:AA:1196:U:H3'    | 1.54                     | 0.70              |
| 1:AA:1407:C:O2'   | 1:AA:1408:A:H5'    | 1.92                     | 0.70              |
| 3:AB:10:G:H2'     | 3:AB:11:C:H6       | 1.56                     | 0.70              |
| 3:AB:69:G:H2'     | 3:AB:70:G:O4'      | 1.92                     | 0.70              |
| 4:AE:24:TRP:CZ3   | 4:AE:26:PRO:HA     | 2.27                     | 0.70              |
| 4:AE:101:MET:C    | 4:AE:103:THR:H     | 1.99                     | 0.70              |
| 4:AE:115:LEU:HB2  | 4:AE:145:LEU:HG    | 1.74                     | 0.70              |
| 7:AH:9:LYS:HG3    | 7:AH:112:LEU:HG    | 1.73                     | 0.70              |
| 8:AI:48:LEU:CB    | 20:AU:78:LEU:HD23  | 2.20                     | 0.70              |
| 9:AJ:38:LEU:HA    | 9:AJ:41:ARG:CG     | 2.22                     | 0.70              |
| 10:AK:9:MET:HG2   | 10:AK:13:ILE:CD1   | 2.21                     | 0.70              |
| 19:AT:82:MET:HA   | 19:AT:85:VAL:CG2   | 2.20                     | 0.70              |
| 20:AU:46:GLU:H    | 20:AU:49:LYS:NZ    | 1.89                     | 0.70              |
| 24:BA:270(Q):C:C2 | 24:BA:270(R):G:C8  | 2.79                     | 0.70              |
| 24:BA:297:C:N4    | 24:BA:298:G:C2     | 2.59                     | 0.70              |
| 24:BA:308:G:H22   | 24:BA:329:G:H2'    | 1.55                     | 0.70              |
| 24:BA:526:A:H5''  | 24:BA:527:C:OP2    | 1.91                     | 0.70              |
| 24:BA:532:A:OP1   | 24:BA:532:A:H4'    | 1.92                     | 0.70              |
| 24:BA:720:C:H2'   | 24:BA:721:C:H6     | 1.56                     | 0.70              |
| 24:BA:979:G:N7    | 24:BA:981:A:OP1    | 2.25                     | 0.70              |
| 24:BA:1160:G:H2'  | 24:BA:1161:C:C5    | 2.26                     | 0.70              |
| 24:BA:1213:A:H61  | 24:BA:1236:G:H1'   | 1.55                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1266:G:O2'  | 24:BA:2012:G:N1   | 2.22                     | 0.70              |
| 24:BA:1313:U:H2'  | 24:BA:1314:C:H6   | 1.55                     | 0.70              |
| 24:BA:1418:G:N3   | 24:BA:1581:G:N2   | 2.40                     | 0.70              |
| 24:BA:1473:G:H2'  | 24:BA:1474:C:C6   | 2.26                     | 0.70              |
| 24:BA:1735:C:N4   | 24:BA:1741:C:N4   | 2.39                     | 0.70              |
| 24:BA:1856:G:H2'  | 24:BA:1857:G:C5'  | 2.20                     | 0.70              |
| 24:BA:1906:G:C8   | 24:BA:1929:G:H2'  | 2.26                     | 0.70              |
| 24:BA:1995:U:C5   | 24:BA:1996:C:C5   | 2.80                     | 0.70              |
| 24:BA:2083:G:C2   | 24:BA:2084:C:C2   | 2.80                     | 0.70              |
| 24:BA:2378:A:N1   | 24:BA:2379:G:H1'  | 2.05                     | 0.70              |
| 24:BA:2484:G:C2'  | 24:BA:2485:G:H5'  | 2.22                     | 0.70              |
| 24:BA:2485:G:O2'  | 24:BA:2486:G:H5'  | 1.92                     | 0.70              |
| 24:BA:2503:A:O2'  | 24:BA:2504:U:OP1  | 2.09                     | 0.70              |
| 24:BA:2616:C:H2'  | 24:BA:2617:C:C6   | 2.27                     | 0.70              |
| 27:BD:92:ILE:HA   | 27:BD:107:ALA:HB2 | 1.72                     | 0.70              |
| 31:BH:71:LEU:O    | 31:BH:74:ASN:HB3  | 1.91                     | 0.70              |
| 31:BH:99:VAL:HG23 | 31:BH:104:GLU:HG2 | 1.74                     | 0.70              |
| 33:BL:17:ALA:CB   | 33:BL:38:VAL:HG13 | 2.18                     | 0.70              |
| 36:BO:45:LEU:HB3  | 36:BO:46:LYS:CE   | 2.21                     | 0.70              |
| 36:BO:126:VAL:HB  | 36:BO:146:VAL:N   | 2.06                     | 0.70              |
| 37:BP:45:GLN:O    | 37:BP:48:GLU:N    | 2.24                     | 0.70              |
| 37:BP:55:VAL:HG22 | 37:BP:64:ILE:HD11 | 1.73                     | 0.70              |
| 38:BQ:61:HIS:O    | 38:BQ:64:ARG:HD3  | 1.91                     | 0.70              |
| 38:BQ:96:ARG:HB2  | 38:BQ:117:VAL:HB  | 1.73                     | 0.70              |
| 41:BT:70:ARG:HB2  | 41:BT:70:ARG:CZ   | 2.22                     | 0.70              |
| 42:BU:62:LEU:HB2  | 42:BU:64:HIS:ND1  | 2.05                     | 0.70              |
| 46:BY:95:PRO:CG   | 46:BY:131:ARG:H   | 2.03                     | 0.70              |
| 54:B7:22:VAL:N    | 54:B7:48:PHE:CE1  | 2.59                     | 0.70              |
| 1:AA:403:C:O2'    | 6:AG:122:ARG:CZ   | 2.39                     | 0.70              |
| 1:AA:659:U:H2'    | 1:AA:660:G:C8     | 2.26                     | 0.70              |
| 1:AA:711:G:O2'    | 1:AA:712:A:H5'    | 1.92                     | 0.70              |
| 1:AA:745:C:H5''   | 1:AA:851:G:H1'    | 1.72                     | 0.70              |
| 1:AA:800:G:O5'    | 1:AA:800:G:C8     | 2.44                     | 0.70              |
| 1:AA:891:U:H5     | 1:AA:906:G:N1     | 1.89                     | 0.70              |
| 1:AA:1068:G:H2'   | 1:AA:1069:C:H6    | 1.56                     | 0.70              |
| 1:AA:1274:G:H22   | 1:AA:1275:A:H62   | 1.38                     | 0.70              |
| 5:AF:38:ARG:HB2   | 5:AF:94:LEU:CD1   | 2.22                     | 0.70              |
| 6:AG:187:ARG:HE   | 6:AG:188:LEU:HG   | 1.57                     | 0.70              |
| 7:AH:98:THR:HG21  | 7:AH:119:LEU:HD21 | 1.72                     | 0.70              |
| 10:AK:10:LEU:HA   | 10:AK:13:ILE:HD12 | 1.74                     | 0.70              |
| 10:AK:50:ARG:HG2  | 10:AK:50:ARG:NH1  | 2.03                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 10:AK:119:LEU:HB3  | 10:AK:123:GLU:OE1  | 1.91                     | 0.70              |
| 14:AO:68:ALA:HB1   | 14:AO:99:HIS:HA    | 1.73                     | 0.70              |
| 14:AO:100:ILE:HD13 | 14:AO:100:ILE:N    | 2.06                     | 0.70              |
| 18:AS:51:VAL:CG2   | 18:AS:73:LEU:HD11  | 2.22                     | 0.70              |
| 20:AU:33:ASP:OD2   | 20:AU:36:ASN:HB2   | 1.91                     | 0.70              |
| 24:BA:126:A:H2'    | 24:BA:127:A:H5'    | 1.73                     | 0.70              |
| 24:BA:270(X):G:C6  | 24:BA:270(Y):G:H1' | 2.25                     | 0.70              |
| 24:BA:569:U:H1'    | 24:BA:947:G:C1'    | 2.21                     | 0.70              |
| 24:BA:781:A:H5'    | 24:BA:782:A:OP1    | 1.91                     | 0.70              |
| 24:BA:930:U:O2'    | 24:BA:931:G:O5'    | 2.10                     | 0.70              |
| 24:BA:1048:A:OP2   | 24:BA:1109:C:N4    | 2.24                     | 0.70              |
| 24:BA:1055:G:N3    | 24:BA:1084:A:C2    | 2.59                     | 0.70              |
| 24:BA:1580:A:H2'   | 24:BA:1581:G:C8    | 2.27                     | 0.70              |
| 24:BA:1735:C:C4    | 24:BA:1741:C:N4    | 2.60                     | 0.70              |
| 24:BA:1750:G:O2'   | 24:BA:1751:C:H5'   | 1.91                     | 0.70              |
| 24:BA:1829:A:N1    | 24:BA:1830:C:H1'   | 2.07                     | 0.70              |
| 24:BA:1832:C:H2'   | 24:BA:1833:U:H5'   | 1.71                     | 0.70              |
| 24:BA:1916:A:N3    | 24:BA:1917:U:O4    | 2.24                     | 0.70              |
| 24:BA:1939:U:H1'   | 24:BA:2592:G:H1'   | 1.72                     | 0.70              |
| 24:BA:1992:G:H4'   | 24:BA:1993:U:C4    | 2.26                     | 0.70              |
| 24:BA:2219:G:H2'   | 24:BA:2224:G:H5'   | 1.74                     | 0.70              |
| 24:BA:2393:A:O2'   | 24:BA:2394:C:H5'   | 1.90                     | 0.70              |
| 24:BA:2582:G:C2'   | 24:BA:2583:G:H5'   | 2.21                     | 0.70              |
| 24:BA:2675:A:H4'   | 35:BN:29:ASN:OD1   | 1.92                     | 0.70              |
| 24:BA:2848:G:N2    | 24:BA:2867:G:N3    | 2.40                     | 0.70              |
| 24:BA:2849:U:H3'   | 24:BA:2849:U:C6    | 2.27                     | 0.70              |
| 26:BC:182:PRO:HG2  | 26:BC:183:GLU:CD   | 2.16                     | 0.70              |
| 27:BD:5:LYS:HB2    | 27:BD:82:ILE:HD12  | 1.73                     | 0.70              |
| 28:BE:15:PHE:CD2   | 28:BE:16:ARG:HG3   | 2.27                     | 0.70              |
| 28:BE:41:LYS:O     | 28:BE:43:GLY:N     | 2.24                     | 0.70              |
| 28:BE:164:ARG:C    | 28:BE:165:VAL:CG2  | 2.65                     | 0.70              |
| 31:BH:164:TYR:CE2  | 31:BH:167:GLU:HG2  | 2.26                     | 0.70              |
| 35:BN:68:GLU:HA    | 35:BN:104:ARG:CZ   | 2.21                     | 0.70              |
| 37:BP:22:LYS:CD    | 37:BP:23:GLY:H     | 2.04                     | 0.70              |
| 37:BP:58:PHE:C     | 37:BP:60:ARG:H     | 1.98                     | 0.70              |
| 37:BP:110:THR:O    | 37:BP:111:GLU:CB   | 2.39                     | 0.70              |
| 38:BQ:64:ARG:NH1   | 38:BQ:65:LEU:HB2   | 2.06                     | 0.70              |
| 39:BR:31:SER:HB3   | 39:BR:34:HIS:CD2   | 2.27                     | 0.70              |
| 40:BS:6:LEU:CD2    | 40:BS:7:ILE:HG23   | 2.21                     | 0.70              |
| 40:BS:53:ARG:NH2   | 40:BS:102:ILE:CD1  | 2.55                     | 0.70              |
| 40:BS:85:LYS:H     | 40:BS:85:LYS:NZ    | 1.90                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 42:BU:4:ILE:HD12  | 42:BU:4:ILE:N     | 2.06                     | 0.70              |
| 42:BU:62:LEU:HD13 | 42:BU:98:GLU:HA   | 1.74                     | 0.70              |
| 45:BX:11:ASP:O    | 45:BX:73:ARG:HD2  | 1.90                     | 0.70              |
| 46:BY:39:VAL:HG21 | 46:BY:86:VAL:CG2  | 2.20                     | 0.70              |
| 46:BY:41:LEU:O    | 46:BY:44:PHE:HB2  | 1.91                     | 0.70              |
| 47:BZ:53:MET:HE1  | 47:BZ:59:LEU:HG   | 1.73                     | 0.70              |
| 49:B2:31:LEU:CD1  | 49:B2:32:GLN:HE22 | 2.04                     | 0.70              |
| 52:B5:20:ASN:ND2  | 52:B5:43:CYS:SG   | 2.65                     | 0.70              |
| 54:B7:8:LYS:H     | 54:B7:8:LYS:CE    | 2.02                     | 0.70              |
| 54:B7:22:VAL:CG1  | 54:B7:23:VAL:H    | 2.04                     | 0.70              |
| 1:AA:19:C:O2      | 1:AA:572:A:H2     | 1.75                     | 0.70              |
| 1:AA:517:G:N2     | 1:AA:533:A:OP2    | 2.25                     | 0.70              |
| 1:AA:519:C:C2'    | 1:AA:520:A:H5'    | 2.21                     | 0.70              |
| 1:AA:789:U:H6     | 1:AA:789:U:H3'    | 1.57                     | 0.70              |
| 1:AA:1064:G:N3    | 1:AA:1066:C:N4    | 2.40                     | 0.70              |
| 1:AA:1244:C:H2'   | 1:AA:1245:A:C8    | 2.26                     | 0.70              |
| 4:AE:59:GLU:HB3   | 4:AE:221:LEU:CD2  | 2.17                     | 0.70              |
| 4:AE:116:GLU:HG2  | 4:AE:117:GLU:N    | 2.04                     | 0.70              |
| 4:AE:118:LEU:CD2  | 4:AE:142:LEU:HB2  | 2.20                     | 0.70              |
| 4:AE:187:LEU:HD13 | 4:AE:188:ALA:N    | 2.06                     | 0.70              |
| 5:AF:11:ARG:HG3   | 5:AF:16:ARG:NH2   | 2.06                     | 0.70              |
| 5:AF:91:LEU:HD11  | 5:AF:99:VAL:H     | 1.55                     | 0.70              |
| 5:AF:113:ALA:HB2  | 5:AF:202:ILE:HG13 | 1.74                     | 0.70              |
| 7:AH:20:GLN:HE22  | 7:AH:21:ALA:HB3   | 1.57                     | 0.70              |
| 7:AH:81:GLU:HA    | 7:AH:89:ILE:O     | 1.92                     | 0.70              |
| 7:AH:147:ASP:HA   | 7:AH:150:ARG:CB   | 2.20                     | 0.70              |
| 13:AN:65:ALA:HB1  | 13:AN:98:LEU:CD2  | 2.22                     | 0.70              |
| 24:BA:33:U:O2'    | 24:BA:34:C:H5     | 1.73                     | 0.70              |
| 24:BA:114:U:H2'   | 24:BA:115:C:C6    | 2.27                     | 0.70              |
| 24:BA:175:G:O2'   | 24:BA:176:G:H5'   | 1.90                     | 0.70              |
| 24:BA:253:C:H2'   | 24:BA:254:G:C5'   | 2.22                     | 0.70              |
| 24:BA:388:G:N3    | 24:BA:390:A:C6    | 2.60                     | 0.70              |
| 24:BA:513:A:C6    | 24:BA:514:A:N7    | 2.59                     | 0.70              |
| 24:BA:959:A:H2'   | 24:BA:960:A:C8    | 2.27                     | 0.70              |
| 24:BA:960:A:O2'   | 24:BA:961:C:H5'   | 1.91                     | 0.70              |
| 24:BA:1079:C:O2'  | 24:BA:1080:C:H5'  | 1.92                     | 0.70              |
| 24:BA:1521:G:O5'  | 24:BA:1522:G:OP2  | 2.10                     | 0.70              |
| 24:BA:1914:C:OP2  | 24:BA:1916:A:N6   | 2.25                     | 0.70              |
| 24:BA:1935:G:N2   | 24:BA:1962:C:O2'  | 2.21                     | 0.70              |
| 24:BA:2009:G:H1'  | 38:BQ:107:ASP:HA  | 1.74                     | 0.70              |
| 24:BA:2033:A:N1   | 24:BA:2036:C:C4   | 2.60                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2104:G:N2   | 24:BA:2105:C:C2    | 2.59                     | 0.70              |
| 24:BA:2114:A:C2'  | 24:BA:2115:G:H5'   | 2.22                     | 0.70              |
| 24:BA:2537:U:C4   | 24:BA:2538:C:N4    | 2.60                     | 0.70              |
| 24:BA:2618:G:C2   | 24:BA:2619:C:C6    | 2.80                     | 0.70              |
| 24:BA:2697:G:O2'  | 24:BA:2698:U:H5'   | 1.91                     | 0.70              |
| 25:BB:112:G:H2'   | 25:BB:112:G:N3     | 2.05                     | 0.70              |
| 26:BC:14:VAL:HG12 | 26:BC:16:PRO:HD3   | 1.73                     | 0.70              |
| 27:BD:178:PRO:O   | 27:BD:180:GLY:N    | 2.25                     | 0.70              |
| 28:BE:13:ARG:HE   | 28:BE:21:VAL:C     | 1.99                     | 0.70              |
| 29:BF:122:LYS:HD3 | 29:BF:123:LEU:N    | 2.06                     | 0.70              |
| 29:BF:171:PRO:O   | 29:BF:173:VAL:N    | 2.25                     | 0.70              |
| 30:BG:4:ASP:HA    | 30:BG:7:LEU:HD12   | 1.73                     | 0.70              |
| 30:BG:39:ILE:HD13 | 30:BG:92:VAL:CG1   | 2.21                     | 0.70              |
| 31:BH:94:TYR:H    | 31:BH:95:ARG:HH21  | 1.36                     | 0.70              |
| 32:BK:87:LYS:HE3  | 32:BK:122:GLU:CD   | 2.17                     | 0.70              |
| 34:BM:55:VAL:N    | 34:BM:130:HIS:CE1  | 2.60                     | 0.70              |
| 35:BN:63:VAL:HG22 | 35:BN:82:ASN:H     | 1.56                     | 0.70              |
| 36:BO:74:GLU:HB2  | 36:BO:107:LYS:NZ   | 2.07                     | 0.70              |
| 36:BO:96:THR:C    | 36:BO:102:ARG:HD3  | 2.17                     | 0.70              |
| 36:BO:113:LYS:HA  | 36:BO:129:ALA:O    | 1.92                     | 0.70              |
| 37:BP:42:ILE:HG23 | 37:BP:42:ILE:O     | 1.92                     | 0.70              |
| 38:BQ:34:ILE:C    | 38:BQ:113:LEU:HD22 | 2.16                     | 0.70              |
| 38:BQ:56:LYS:O    | 38:BQ:58:GLY:N     | 2.25                     | 0.70              |
| 45:BX:38:ILE:HG23 | 45:BX:60:PHE:HZ    | 1.54                     | 0.70              |
| 46:BY:49:ARG:O    | 46:BY:50:GLN:C     | 2.34                     | 0.70              |
| 48:B1:8:ALA:O     | 48:B1:9:ARG:C      | 2.35                     | 0.70              |
| 50:B3:41:PRO:HB2  | 50:B3:57:GLU:OE2   | 1.91                     | 0.70              |
| 52:B5:22:ALA:HB1  | 52:B5:39:TYR:CE2   | 2.26                     | 0.70              |
| 52:B5:29:ASN:O    | 52:B5:30:THR:O     | 2.10                     | 0.70              |
| 52:B5:48:VAL:O    | 52:B5:49:HIS:HB2   | 1.91                     | 0.70              |
| 54:B7:15:LYS:HZ3  | 54:B7:64:TYR:HB3   | 1.56                     | 0.70              |
| 55:B8:25:VAL:HG11 | 55:B8:34:GLN:NE2   | 2.05                     | 0.70              |
| 1:AA:130:A:N7     | 19:AT:64:PRO:HD2   | 2.07                     | 0.70              |
| 1:AA:421:U:H5''   | 1:AA:422:C:OP2     | 1.91                     | 0.70              |
| 1:AA:519:C:H2'    | 1:AA:520:A:C5'     | 2.21                     | 0.70              |
| 1:AA:535:A:H4'    | 1:AA:536:C:OP2     | 1.92                     | 0.70              |
| 1:AA:858:G:N1     | 1:AA:869:G:H3'     | 2.07                     | 0.70              |
| 1:AA:865:A:C4     | 1:AA:866:C:O2      | 2.45                     | 0.70              |
| 1:AA:944:G:H3'    | 1:AA:945:G:C5'     | 2.21                     | 0.70              |
| 1:AA:1201:A:N3    | 1:AA:1201:A:H2'    | 2.07                     | 0.70              |
| 1:AA:1203:C:O2'   | 1:AA:1204:A:H5'    | 1.91                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1206:G:C5'   | 5:AF:194:GLY:HA2  | 2.21                     | 0.70              |
| 1:AA:1315:U:O2'   | 1:AA:1360:A:N3    | 2.23                     | 0.70              |
| 1:AA:1414:U:H2'   | 1:AA:1415:G:C8    | 2.25                     | 0.70              |
| 2:A1:14:U:H2'     | 2:A1:15:U:C6      | 2.26                     | 0.70              |
| 4:AE:132:LYS:H    | 4:AE:132:LYS:CE   | 2.03                     | 0.70              |
| 6:AG:78:LEU:CD1   | 6:AG:96:LEU:HB3   | 2.22                     | 0.70              |
| 6:AG:145:GLU:HG2  | 6:AG:184:LYS:HE2  | 1.72                     | 0.70              |
| 7:AH:28:PHE:N     | 7:AH:28:PHE:CD1   | 2.58                     | 0.70              |
| 8:AI:8:ILE:HG23   | 8:AI:88:VAL:HA    | 1.73                     | 0.70              |
| 9:AJ:143:ARG:CD   | 9:AJ:144:MET:N    | 2.55                     | 0.70              |
| 10:AK:54:ASP:O    | 10:AK:56:LYS:HD2  | 1.92                     | 0.70              |
| 11:AL:10:ARG:HA   | 11:AL:104:ARG:HE  | 1.57                     | 0.70              |
| 13:AN:95:ILE:CA   | 13:AN:98:LEU:HG   | 2.20                     | 0.70              |
| 14:AO:25:PRO:C    | 14:AO:27:LEU:N    | 2.42                     | 0.70              |
| 14:AO:82:VAL:N    | 14:AO:106:ASP:OD1 | 2.24                     | 0.70              |
| 15:AP:10:PRO:HB2  | 15:AP:18:ALA:HA   | 1.73                     | 0.70              |
| 17:AR:36:ILE:HD11 | 17:AR:60:VAL:CG1  | 2.22                     | 0.70              |
| 24:BA:197:A:O4'   | 24:BA:2068:U:N3   | 2.25                     | 0.70              |
| 24:BA:343:C:H2'   | 24:BA:344:G:C5'   | 2.21                     | 0.70              |
| 24:BA:566:U:O4    | 24:BA:575:A:N1    | 2.24                     | 0.70              |
| 24:BA:668:G:C2    | 24:BA:670:A:N6    | 2.60                     | 0.70              |
| 24:BA:693:C:OP1   | 27:BD:60:ARG:CZ   | 2.40                     | 0.70              |
| 24:BA:720:C:O2'   | 24:BA:721:C:H5'   | 1.91                     | 0.70              |
| 24:BA:1039:G:H22  | 24:BA:1115:G:H22  | 1.40                     | 0.70              |
| 24:BA:1388:G:O2'  | 24:BA:1525:G:H5'  | 1.91                     | 0.70              |
| 24:BA:1484:G:H2'  | 24:BA:1485:G:C5'  | 2.21                     | 0.70              |
| 24:BA:1527:G:H2'  | 24:BA:1528:A:O4'  | 1.92                     | 0.70              |
| 24:BA:1624:G:H2'  | 24:BA:1625:C:C5   | 2.26                     | 0.70              |
| 24:BA:1743:G:C6   | 24:BA:1746:G:C5   | 2.80                     | 0.70              |
| 24:BA:2056:G:OP2  | 24:BA:2057:A:OP2  | 2.10                     | 0.70              |
| 24:BA:2227:A:H5'' | 27:BD:260:ARG:HD2 | 1.72                     | 0.70              |
| 24:BA:2307:G:C5   | 24:BA:2308:G:H1'  | 2.26                     | 0.70              |
| 24:BA:2376:A:OP1  | 24:BA:2376:A:H8   | 1.74                     | 0.70              |
| 24:BA:2468:G:P    | 24:BA:2476:A:H61  | 2.15                     | 0.70              |
| 24:BA:2807:G:H2'  | 24:BA:2808:U:H5   | 1.56                     | 0.70              |
| 25:BB:45:A:H1'    | 30:BG:95:ARG:CZ   | 2.22                     | 0.70              |
| 27:BD:27:THR:C    | 27:BD:29:PRO:HD2  | 2.17                     | 0.70              |
| 28:BE:5:LEU:CD2   | 28:BE:196:VAL:HB  | 2.21                     | 0.70              |
| 28:BE:147:PRO:CB  | 28:BE:149:ARG:HD2 | 2.22                     | 0.70              |
| 31:BH:7:LEU:H     | 31:BH:8:PRO:HD2   | 1.57                     | 0.70              |
| 31:BH:8:PRO:N     | 31:BH:69:ARG:HH11 | 1.90                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 31:BH:25:LYS:HD3   | 31:BH:27:LYS:NZ   | 2.07                     | 0.70              |
| 33:BL:91:PRO:HB3   | 33:BL:134:MET:C   | 2.16                     | 0.70              |
| 35:BN:106:LEU:HD12 | 35:BN:107:ARG:N   | 2.06                     | 0.70              |
| 41:BT:108:GLU:OE1  | 41:BT:109:LEU:N   | 2.24                     | 0.70              |
| 46:BY:136:PHE:HB3  | 46:BY:138:GLU:OE2 | 1.91                     | 0.70              |
| 50:B3:10:VAL:O     | 50:B3:10:VAL:HG12 | 1.91                     | 0.70              |
| 50:B3:20:ASN:HB2   | 50:B3:30:GLU:HB2  | 1.73                     | 0.70              |
| 50:B3:56:VAL:HG12  | 50:B3:57:GLU:N    | 2.06                     | 0.70              |
| 52:B5:25:LYS:CE    | 54:B7:35:GLN:O    | 2.40                     | 0.70              |
| 1:AA:529:G:C8      | 1:AA:529:G:C3'    | 2.75                     | 0.70              |
| 1:AA:572:A:OP1     | 1:AA:573:A:OP1    | 2.10                     | 0.70              |
| 1:AA:595:G:O6      | 1:AA:641:U:H3'    | 1.92                     | 0.70              |
| 1:AA:843:U:H3'     | 1:AA:848:C:H5'    | 1.74                     | 0.70              |
| 1:AA:959:A:H2      | 1:AA:1221:G:N3    | 1.90                     | 0.70              |
| 1:AA:973:G:H22     | 1:AA:974:A:N6     | 1.89                     | 0.70              |
| 1:AA:1073:U:O2'    | 1:AA:1074:G:H5'   | 1.91                     | 0.70              |
| 1:AA:1120:G:O5'    | 1:AA:1120:G:H8    | 1.75                     | 0.70              |
| 1:AA:1319:A:OP2    | 21:AV:5:LEU:HD22  | 1.92                     | 0.70              |
| 1:AA:1391:U:H2'    | 1:AA:1392:G:C8    | 2.27                     | 0.70              |
| 4:AE:97:TRP:CZ2    | 4:AE:102:LEU:HD13 | 2.24                     | 0.70              |
| 7:AH:52:PRO:O      | 7:AH:55:VAL:CB    | 2.37                     | 0.70              |
| 7:AH:78:HIS:NE2    | 7:AH:142:LEU:HB3  | 2.06                     | 0.70              |
| 9:AJ:113:GLU:OE1   | 9:AJ:118:VAL:HG12 | 1.91                     | 0.70              |
| 15:AP:59:TYR:CE1   | 15:AP:63:THR:HG21 | 2.27                     | 0.70              |
| 17:AR:49:ASP:CG    | 17:AR:52:SER:HB2  | 2.17                     | 0.70              |
| 21:AV:18:LYS:HE2   | 21:AV:22:LEU:HB2  | 1.74                     | 0.70              |
| 21:AV:38:SER:O     | 21:AV:70:LYS:HA   | 1.90                     | 0.70              |
| 24:BA:200:U:C4     | 24:BA:201:C:H1'   | 2.27                     | 0.70              |
| 24:BA:211:A:H2'    | 24:BA:212:G:O4'   | 1.92                     | 0.70              |
| 24:BA:455:C:O2'    | 24:BA:456:C:H5'   | 1.92                     | 0.70              |
| 24:BA:512:G:OP2    | 24:BA:1235:G:H5'  | 1.92                     | 0.70              |
| 24:BA:781:A:O2'    | 27:BD:222:ARG:NH2 | 2.25                     | 0.70              |
| 24:BA:935:C:C2     | 24:BA:936:C:C5    | 2.80                     | 0.70              |
| 24:BA:1215:G:H2'   | 24:BA:1216:G:O4'  | 1.92                     | 0.70              |
| 24:BA:1508:A:H3'   | 24:BA:1510:A:C8   | 2.27                     | 0.70              |
| 24:BA:1698:A:HO2'  | 24:BA:1699:G:C3'  | 2.05                     | 0.70              |
| 24:BA:1955:U:C3'   | 24:BA:1956:U:H5   | 2.05                     | 0.70              |
| 24:BA:1966:A:C4    | 24:BA:2593:U:H5'  | 2.27                     | 0.70              |
| 24:BA:2305:A:H1'   | 30:BG:154:GLY:C   | 2.17                     | 0.70              |
| 24:BA:2681:C:O2'   | 24:BA:2682:U:C5'  | 2.38                     | 0.70              |
| 24:BA:2748:A:C2    | 24:BA:2757:A:N6   | 2.60                     | 0.70              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2757:A:H2'  | 24:BA:2758:A:C5'   | 2.20                     | 0.70              |
| 25:BB:42:C:N3     | 30:BG:93:THR:HB    | 2.07                     | 0.70              |
| 29:BF:133:ASN:HB3 | 29:BF:165:ARG:HH22 | 1.57                     | 0.70              |
| 29:BF:195:ASP:O   | 29:BF:197:ASP:N    | 2.22                     | 0.70              |
| 31:BH:156:ALA:HA  | 31:BH:171:LEU:CD2  | 2.22                     | 0.70              |
| 35:BN:43:VAL:CG1  | 35:BN:54:GLU:HA    | 2.21                     | 0.70              |
| 36:BO:137:LYS:HA  | 36:BO:137:LYS:CE   | 2.21                     | 0.70              |
| 37:BP:6:ARG:NH2   | 37:BP:8:LYS:H      | 1.90                     | 0.70              |
| 40:BS:86:ILE:HG22 | 40:BS:87:ASP:N     | 2.05                     | 0.70              |
| 41:BT:74:LEU:HB3  | 41:BT:78:THR:OG1   | 1.92                     | 0.70              |
| 41:BT:115:ALA:O   | 41:BT:118:GLY:N    | 2.25                     | 0.70              |
| 42:BU:61:VAL:HG12 | 42:BU:62:LEU:N     | 2.07                     | 0.70              |
| 45:BX:42:VAL:HG23 | 45:BX:61:ILE:HG12  | 1.74                     | 0.70              |
| 50:B3:42:PHE:N    | 50:B3:57:GLU:OE2   | 2.25                     | 0.70              |
| 51:B4:9:LYS:O     | 51:B4:10:LYS:HB2   | 1.91                     | 0.70              |
| 54:B7:25:MET:O    | 54:B7:26:LYS:C     | 2.35                     | 0.70              |
| 1:AA:153:C:H2'    | 1:AA:154:C:C6      | 2.27                     | 0.69              |
| 1:AA:219:C:H2'    | 1:AA:220:G:O4'     | 1.91                     | 0.69              |
| 1:AA:287:U:H2'    | 1:AA:288:A:H5'     | 1.74                     | 0.69              |
| 1:AA:453:A:N6     | 1:AA:480:U:N3      | 2.40                     | 0.69              |
| 1:AA:1144:G:N2    | 1:AA:1146:A:N6     | 2.39                     | 0.69              |
| 1:AA:1502:A:H5''  | 1:AA:1503:A:OP2    | 1.92                     | 0.69              |
| 4:AE:115:LEU:HD13 | 4:AE:145:LEU:CG    | 2.21                     | 0.69              |
| 6:AG:67:ILE:HD12  | 6:AG:67:ILE:C      | 2.17                     | 0.69              |
| 6:AG:177:ASP:OD1  | 6:AG:179:GLU:HB3   | 1.91                     | 0.69              |
| 10:AK:18:ARG:NH1  | 10:AK:18:ARG:HG3   | 2.02                     | 0.69              |
| 10:AK:51:VAL:HG11 | 10:AK:60:ARG:NH2   | 2.07                     | 0.69              |
| 11:AL:38:GLN:HA   | 11:AL:38:GLN:OE1   | 1.92                     | 0.69              |
| 12:AM:76:ASN:C    | 12:AM:78:ASN:H     | 1.98                     | 0.69              |
| 14:AO:56:ALA:HB2  | 14:AO:70:ILE:HG12  | 1.73                     | 0.69              |
| 18:AS:31:LYS:HB3  | 18:AS:31:LYS:HZ3   | 1.54                     | 0.69              |
| 21:AV:63:THR:O    | 21:AV:66:MET:HG2   | 1.92                     | 0.69              |
| 24:BA:38:A:H2'    | 24:BA:39:C:C6      | 2.27                     | 0.69              |
| 24:BA:164:U:H2'   | 24:BA:164:U:O2     | 1.91                     | 0.69              |
| 24:BA:221:A:N7    | 24:BA:266:G:C6     | 2.60                     | 0.69              |
| 24:BA:573:G:H5'   | 24:BA:576:U:O4     | 1.91                     | 0.69              |
| 24:BA:613:U:O5'   | 24:BA:615:G:H1'    | 1.92                     | 0.69              |
| 24:BA:619:G:C8    | 24:BA:619:G:H3'    | 2.27                     | 0.69              |
| 24:BA:792:G:C5    | 24:BA:2440:C:C2    | 2.79                     | 0.69              |
| 24:BA:823:G:H3'   | 24:BA:824:A:H8     | 1.57                     | 0.69              |
| 24:BA:1044:G:H1   | 24:BA:1112:G:HO2'  | 1.36                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1128:A:H2'   | 24:BA:1128:A:N3    | 2.07                     | 0.69              |
| 24:BA:1292:U:O2'   | 24:BA:1293:C:H5'   | 1.91                     | 0.69              |
| 24:BA:1473:G:N1    | 24:BA:1519:G:H1'   | 2.04                     | 0.69              |
| 24:BA:1504:C:C6    | 24:BA:1504:C:O5'   | 2.45                     | 0.69              |
| 24:BA:1817:G:H2'   | 24:BA:1818:U:O4'   | 1.92                     | 0.69              |
| 24:BA:1887:C:O2'   | 24:BA:2190:G:O2'   | 2.10                     | 0.69              |
| 24:BA:1966:A:N3    | 24:BA:2593:U:C5'   | 2.53                     | 0.69              |
| 24:BA:2021:C:H5'   | 24:BA:2022:U:H5    | 1.55                     | 0.69              |
| 24:BA:2059:A:N1    | 24:BA:2503:A:C6    | 2.60                     | 0.69              |
| 24:BA:2423:U:O2'   | 24:BA:2425:A:H3'   | 1.91                     | 0.69              |
| 24:BA:2680:C:OP1   | 28:BE:190:GLY:HA2  | 1.91                     | 0.69              |
| 26:BC:104:LEU:HD22 | 26:BC:127:LEU:HD23 | 1.74                     | 0.69              |
| 30:BG:37:VAL:O     | 30:BG:99:MET:SD    | 2.49                     | 0.69              |
| 30:BG:141:PHE:HE2  | 30:BG:145:THR:HA   | 1.54                     | 0.69              |
| 31:BH:70:THR:O     | 31:BH:73:ALA:HB3   | 1.92                     | 0.69              |
| 31:BH:88:LEU:HD23  | 31:BH:88:LEU:C     | 2.16                     | 0.69              |
| 33:BL:56:GLU:HB3   | 33:BL:67:PHE:HD2   | 1.57                     | 0.69              |
| 34:BM:91:LEU:CD2   | 34:BM:98:VAL:HG21  | 2.21                     | 0.69              |
| 37:BP:56:ARG:NH2   | 37:BP:57:HIS:HB2   | 2.05                     | 0.69              |
| 37:BP:62:GLY:HA2   | 46:BY:177:PRO:HA   | 1.74                     | 0.69              |
| 37:BP:134:ARG:NH2  | 37:BP:137:TYR:N    | 2.40                     | 0.69              |
| 41:BT:74:LEU:HD13  | 41:BT:78:THR:CG2   | 2.20                     | 0.69              |
| 41:BT:105:VAL:O    | 41:BT:108:GLU:OE1  | 2.09                     | 0.69              |
| 42:BU:62:LEU:HD22  | 42:BU:98:GLU:CA    | 2.21                     | 0.69              |
| 43:BV:60:ASN:HD21  | 43:BV:61:ASN:ND2   | 1.89                     | 0.69              |
| 44:BW:54:VAL:C     | 44:BW:55:ASN:HD22  | 1.99                     | 0.69              |
| 1:AA:489:C:H2'     | 1:AA:490:G:C8      | 2.26                     | 0.69              |
| 1:AA:1067:A:H2     | 1:AA:1068:G:N3     | 1.90                     | 0.69              |
| 1:AA:1231:G:H5'    | 15:AP:126:LYS:HZ3  | 1.57                     | 0.69              |
| 1:AA:1321:C:C5     | 1:AA:1322:C:H2'    | 2.27                     | 0.69              |
| 1:AA:1430:C:C2     | 1:AA:1431:C:H5     | 2.09                     | 0.69              |
| 2:A1:36:U:C4'      | 2:A1:37:U:OP2      | 2.40                     | 0.69              |
| 3:AD:20:U:H2'      | 3:AD:20:U:O2       | 1.90                     | 0.69              |
| 4:AE:164:VAL:HG12  | 4:AE:186:ALA:CB    | 2.21                     | 0.69              |
| 4:AE:192:SER:O     | 4:AE:194:PRO:HD3   | 1.92                     | 0.69              |
| 6:AG:74:GLN:HA     | 6:AG:77:ASN:ND2    | 1.99                     | 0.69              |
| 9:AJ:103:TRP:HH2   | 9:AJ:138:LYS:HA    | 1.49                     | 0.69              |
| 9:AJ:122:HIS:O     | 9:AJ:125:MET:CG    | 2.38                     | 0.69              |
| 10:AK:19:VAL:HB    | 10:AK:21:LYS:HG2   | 1.74                     | 0.69              |
| 10:AK:36:LEU:HA    | 10:AK:39:LEU:HB2   | 1.73                     | 0.69              |
| 10:AK:48:TYR:CB    | 10:AK:61:VAL:HG22  | 2.22                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 10:AK:68:ARG:CZ   | 10:AK:74:PRO:HB3   | 2.21                     | 0.69              |
| 10:AK:94:TYR:HE1  | 10:AK:132:GLU:OE1  | 1.74                     | 0.69              |
| 11:AL:8:GLY:HA3   | 11:AL:76:ALA:O     | 1.92                     | 0.69              |
| 12:AM:84:GLN:HA   | 12:AM:88:LEU:HD12  | 1.73                     | 0.69              |
| 17:AR:34:LEU:HG   | 17:AR:35:ARG:N     | 2.06                     | 0.69              |
| 22:AW:56:MET:CG   | 22:AW:88:VAL:HG21  | 2.21                     | 0.69              |
| 24:BA:586:A:H2    | 24:BA:809:G:N2     | 1.90                     | 0.69              |
| 24:BA:672:C:OP2   | 36:BO:38:GLN:HG2   | 1.92                     | 0.69              |
| 24:BA:695:G:C6    | 24:BA:768:G:O6     | 2.46                     | 0.69              |
| 24:BA:731:C:O2'   | 24:BA:732:C:H5'    | 1.92                     | 0.69              |
| 24:BA:835:A:H4'   | 24:BA:2358:G:H1'   | 1.73                     | 0.69              |
| 24:BA:877:U:O5'   | 24:BA:877:U:H6     | 1.75                     | 0.69              |
| 24:BA:911:A:H8    | 24:BA:2264:C:Cl'   | 1.95                     | 0.69              |
| 24:BA:1012:U:O4   | 34:BM:25:ARG:CB    | 2.33                     | 0.69              |
| 24:BA:1312:U:H5   | 44:BW:62:LYS:HG3   | 1.56                     | 0.69              |
| 24:BA:1375:C:C2   | 24:BA:1376:C:C5    | 2.80                     | 0.69              |
| 24:BA:1487:G:N2   | 24:BA:1503:U:C2    | 2.60                     | 0.69              |
| 24:BA:1488:G:C3'  | 24:BA:1489:U:H5'   | 2.21                     | 0.69              |
| 24:BA:1632:A:C2   | 24:BA:1633:G:N2    | 2.60                     | 0.69              |
| 24:BA:1690:A:C2   | 24:BA:1691:C:Cl'   | 2.75                     | 0.69              |
| 24:BA:1779:U:H6   | 24:BA:1779:U:O5'   | 1.75                     | 0.69              |
| 24:BA:1878:G:H2'  | 24:BA:1879:C:H6    | 1.56                     | 0.69              |
| 24:BA:2126:A:H1'  | 24:BA:2162:G:N2    | 2.07                     | 0.69              |
| 24:BA:2194:G:C2   | 24:BA:2195:C:N4    | 2.60                     | 0.69              |
| 24:BA:2246:G:N2   | 24:BA:2247:A:C5    | 2.60                     | 0.69              |
| 24:BA:2305:A:C8   | 24:BA:2306:C:C5'   | 2.73                     | 0.69              |
| 24:BA:2459:A:C4   | 24:BA:2460:U:H1'   | 2.27                     | 0.69              |
| 24:BA:2815:C:O2'  | 51:B4:42:PRO:CB    | 2.40                     | 0.69              |
| 27:BD:119:ALA:HA  | 27:BD:123:ALA:HB2  | 1.73                     | 0.69              |
| 27:BD:234:GLY:HA3 | 27:BD:241:PRO:HG3  | 1.74                     | 0.69              |
| 28:BE:30:PRO:CA   | 28:BE:49:LEU:O     | 2.39                     | 0.69              |
| 29:BF:178:PRO:C   | 29:BF:180:GLY:N    | 2.50                     | 0.69              |
| 29:BF:185:ASP:O   | 29:BF:189:THR:HG23 | 1.91                     | 0.69              |
| 30:BG:39:ILE:CD1  | 30:BG:92:VAL:HG12  | 2.22                     | 0.69              |
| 32:BK:5:LEU:CD1   | 32:BK:17:GLN:HB2   | 2.21                     | 0.69              |
| 35:BN:6:THR:O     | 35:BN:20:MET:CA    | 2.25                     | 0.69              |
| 35:BN:103:ALA:HB1 | 35:BN:107:ARG:NE   | 2.07                     | 0.69              |
| 38:BQ:17:ARG:HG3  | 38:BQ:18:LEU:H     | 1.57                     | 0.69              |
| 39:BR:54:LEU:HG   | 39:BR:56:LEU:HD22  | 1.74                     | 0.69              |
| 41:BT:114:LYS:CG  | 41:BT:115:ALA:N    | 2.54                     | 0.69              |
| 42:BU:15:GLU:HA   | 42:BU:100:ARG:NH1  | 2.07                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 45:BX:33:LYS:HB3   | 45:BX:35:TYR:CE2   | 2.27                     | 0.69              |
| 50:B3:31:ILE:H     | 50:B3:31:ILE:CD1   | 2.05                     | 0.69              |
| 53:B6:27:GLY:O     | 53:B6:31:LEU:HG    | 1.91                     | 0.69              |
| 1:AA:16:A:C1'      | 7:AH:17:ALA:HB3    | 2.22                     | 0.69              |
| 1:AA:129(A):G:H4'  | 1:AA:130:A:C5'     | 2.22                     | 0.69              |
| 1:AA:336:C:H2'     | 1:AA:337:C:H6      | 1.57                     | 0.69              |
| 1:AA:623:C:O2'     | 1:AA:624:C:H5'     | 1.91                     | 0.69              |
| 1:AA:865:A:H5'     | 1:AA:1078:U:C4     | 2.27                     | 0.69              |
| 1:AA:1186:G:N2     | 16:AQ:61:TRP:O     | 2.25                     | 0.69              |
| 3:AC:46:G:H5'      | 3:AC:47:U:OP2      | 1.92                     | 0.69              |
| 3:AC:74:C:N4       | 47:BZ:4:LYS:HZ2    | 1.90                     | 0.69              |
| 3:AD:75:C:H5''     | 3:AD:76:A:O2'      | 1.91                     | 0.69              |
| 4:AE:102:LEU:HB3   | 4:AE:180:LEU:CD1   | 2.22                     | 0.69              |
| 4:AE:168:THR:CG2   | 4:AE:192:SER:HA    | 2.22                     | 0.69              |
| 4:AE:196:LEU:HD12  | 4:AE:196:LEU:C     | 2.17                     | 0.69              |
| 5:AF:138:VAL:HG22  | 5:AF:151:VAL:CG2   | 2.22                     | 0.69              |
| 6:AG:47:ARG:HB2    | 6:AG:47:ARG:CZ     | 2.22                     | 0.69              |
| 6:AG:78:LEU:HD21   | 6:AG:96:LEU:HD22   | 1.73                     | 0.69              |
| 6:AG:121:VAL:O     | 6:AG:134:ASP:HB2   | 1.93                     | 0.69              |
| 9:AJ:63:LYS:HE2    | 9:AJ:63:LYS:CA     | 2.21                     | 0.69              |
| 10:AK:112:LEU:HD21 | 10:AK:114:THR:CG2  | 2.22                     | 0.69              |
| 13:AN:32:ILE:HD12  | 13:AN:41:THR:OG1   | 1.91                     | 0.69              |
| 15:AP:8:GLU:CG     | 15:AP:22:ILE:HG12  | 2.21                     | 0.69              |
| 17:AR:34:LEU:CG    | 17:AR:35:ARG:N     | 2.55                     | 0.69              |
| 19:AT:5:VAL:CG2    | 19:AT:60:ILE:HA    | 2.11                     | 0.69              |
| 19:AT:7:THR:HG21   | 19:AT:56:VAL:HG12  | 1.73                     | 0.69              |
| 22:AW:48:LYS:HB3   | 22:AW:51:GLU:CG    | 2.22                     | 0.69              |
| 24:BA:145:G:H2'    | 24:BA:146:G:C8     | 2.27                     | 0.69              |
| 24:BA:194:G:H2'    | 24:BA:195:A:C8     | 2.27                     | 0.69              |
| 24:BA:213:A:H2'    | 24:BA:214:G:H5'    | 1.73                     | 0.69              |
| 24:BA:281:G:N2     | 24:BA:283:A:C5'    | 2.54                     | 0.69              |
| 24:BA:363(A):A:N3  | 24:BA:363(A):A:H2' | 2.06                     | 0.69              |
| 24:BA:728:G:O3'    | 27:BD:13:ARG:NH2   | 2.25                     | 0.69              |
| 24:BA:1059:G:H1'   | 33:BL:126:MET:HE2  | 1.74                     | 0.69              |
| 24:BA:1139:G:P     | 34:BM:63:THR:HG21  | 2.32                     | 0.69              |
| 24:BA:1166:C:H2'   | 24:BA:1167:U:H6    | 1.56                     | 0.69              |
| 24:BA:1568:G:OP1   | 27:BD:61:LEU:CB    | 2.34                     | 0.69              |
| 24:BA:1770:G:H2'   | 24:BA:1771:C:H6    | 1.57                     | 0.69              |
| 24:BA:1789:A:C4'   | 27:BD:222:ARG:CZ   | 2.71                     | 0.69              |
| 24:BA:1839:G:O6    | 24:BA:1927:A:C2    | 2.45                     | 0.69              |
| 24:BA:1948:G:O2'   | 24:BA:1949:G:H5'   | 1.93                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2228:G:N7    | 24:BA:2229:C:C5    | 2.61                     | 0.69              |
| 24:BA:2291:U:H2'   | 24:BA:2292:C:C6    | 2.28                     | 0.69              |
| 24:BA:2384:G:H3'   | 24:BA:2385:C:O3'   | 1.93                     | 0.69              |
| 24:BA:2416:C:O5'   | 24:BA:2416:C:H6    | 1.75                     | 0.69              |
| 24:BA:2572:A:C2    | 28:BE:144:ARG:NH1  | 2.61                     | 0.69              |
| 25:BB:43:C:N3      | 25:BB:45:A:C8      | 2.60                     | 0.69              |
| 26:BC:86:ALA:HB2   | 26:BC:149:ILE:C    | 2.16                     | 0.69              |
| 27:BD:182:LEU:HD12 | 27:BD:270:ILE:HD11 | 1.72                     | 0.69              |
| 27:BD:246:PRO:O    | 27:BD:250:TRP:HB2  | 1.92                     | 0.69              |
| 28:BE:102:VAL:HG23 | 28:BE:200:GLU:CD   | 2.18                     | 0.69              |
| 29:BF:9:ILE:CG1    | 29:BF:122:LYS:HG3  | 2.22                     | 0.69              |
| 30:BG:20:ILE:HG21  | 30:BG:28:VAL:HG13  | 1.72                     | 0.69              |
| 31:BH:139:GLN:HG3  | 31:BH:140:LYS:N    | 2.07                     | 0.69              |
| 32:BK:132:PRO:HG3  | 32:BK:138:ILE:HB   | 1.74                     | 0.69              |
| 35:BN:68:GLU:HG2   | 35:BN:76:ALA:O     | 1.92                     | 0.69              |
| 37:BP:66:ILE:N     | 37:BP:105:GLU:OE2  | 2.25                     | 0.69              |
| 37:BP:130:LYS:HZ1  | 37:BP:132:VAL:HG13 | 1.56                     | 0.69              |
| 40:BS:55:ASN:ND2   | 40:BS:57:PHE:CZ    | 2.60                     | 0.69              |
| 41:BT:97:ASP:CB    | 41:BT:101:ARG:HH21 | 2.05                     | 0.69              |
| 43:BV:16:LYS:N     | 43:BV:16:LYS:NZ    | 2.37                     | 0.69              |
| 43:BV:90:ARG:HH21  | 43:BV:90:ARG:N     | 1.89                     | 0.69              |
| 45:BX:107:ASP:O    | 45:BX:109:GLU:N    | 2.25                     | 0.69              |
| 50:B3:10:VAL:N     | 50:B3:11:PRO:CD    | 2.55                     | 0.69              |
| 50:B3:31:ILE:O     | 50:B3:32:TYR:HB3   | 1.93                     | 0.69              |
| 1:AA:109:A:C2      | 1:AA:327:A:N1      | 2.60                     | 0.69              |
| 1:AA:317:G:OP1     | 1:AA:353:A:N6      | 2.25                     | 0.69              |
| 1:AA:684:A:H2      | 1:AA:706:A:H61     | 1.40                     | 0.69              |
| 1:AA:1428:A:H2'    | 1:AA:1429:C:H6     | 1.53                     | 0.69              |
| 4:AE:15:VAL:HG21   | 4:AE:209:ARG:HB3   | 1.75                     | 0.69              |
| 6:AG:31:CYS:O      | 6:AG:33:MET:N      | 2.24                     | 0.69              |
| 6:AG:128:VAL:HG21  | 6:AG:133:VAL:HB    | 1.75                     | 0.69              |
| 6:AG:166:LYS:NZ    | 6:AG:178:VAL:O     | 2.21                     | 0.69              |
| 7:AH:94:ALA:HB2    | 7:AH:119:LEU:HD21  | 1.73                     | 0.69              |
| 10:AK:9:MET:O      | 10:AK:13:ILE:HG13  | 1.93                     | 0.69              |
| 10:AK:91:ARG:HG3   | 14:AO:7:ILE:HD12   | 1.74                     | 0.69              |
| 21:AV:48:THR:HA    | 21:AV:60:VAL:O     | 1.92                     | 0.69              |
| 24:BA:300:A:O2'    | 24:BA:318:C:H1'    | 1.92                     | 0.69              |
| 24:BA:585:G:C6     | 24:BA:1251:C:C5    | 2.81                     | 0.69              |
| 24:BA:665:C:OP2    | 24:BA:665:C:H6     | 1.76                     | 0.69              |
| 24:BA:727:A:C6     | 24:BA:729:G:O6     | 2.45                     | 0.69              |
| 24:BA:1000:A:N7    | 24:BA:1001:A:C6    | 2.60                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1007:C:O2'   | 34:BM:108:PRO:HB3  | 1.92                     | 0.69              |
| 24:BA:1068:G:H4'   | 24:BA:1096:A:O2'   | 1.93                     | 0.69              |
| 24:BA:1618:A:H8    | 24:BA:1618:A:OP1   | 1.76                     | 0.69              |
| 24:BA:1955:U:C2'   | 24:BA:1956:U:OP1   | 2.40                     | 0.69              |
| 24:BA:1995:U:H5''  | 24:BA:1996:C:H5''  | 1.75                     | 0.69              |
| 24:BA:1996:C:C2'   | 28:BE:123:ALA:HB3  | 2.22                     | 0.69              |
| 24:BA:2126:A:H1'   | 24:BA:2162:G:H21   | 1.56                     | 0.69              |
| 24:BA:2172:U:O2'   | 24:BA:2173:A:OP1   | 2.10                     | 0.69              |
| 24:BA:2262:U:O2'   | 24:BA:2328:A:N3    | 2.24                     | 0.69              |
| 24:BA:2355:C:H1'   | 47:BZ:39:ARG:HH21  | 1.56                     | 0.69              |
| 24:BA:2448:A:P     | 24:BA:2499:C:OP2   | 2.50                     | 0.69              |
| 24:BA:2647:U:O2'   | 24:BA:2648:C:H5'   | 1.92                     | 0.69              |
| 25:BB:23:G:H2'     | 25:BB:24:G:C8      | 2.27                     | 0.69              |
| 25:BB:77:U:H2'     | 25:BB:78:A:H8      | 1.56                     | 0.69              |
| 26:BC:47:LEU:HD12  | 26:BC:208:PHE:CZ   | 2.26                     | 0.69              |
| 27:BD:45:ASN:C     | 27:BD:46:GLN:HG3   | 2.18                     | 0.69              |
| 27:BD:132:PRO:HD3  | 27:BD:190:TYR:OH   | 1.93                     | 0.69              |
| 27:BD:150:LYS:C    | 27:BD:152:GLY:H    | 2.00                     | 0.69              |
| 28:BE:14:ILE:HA    | 28:BE:19:ARG:HA    | 1.73                     | 0.69              |
| 28:BE:32:PRO:HB2   | 28:BE:35:GLN:HE22  | 1.56                     | 0.69              |
| 30:BG:44:GLY:C     | 30:BG:72:ARG:HB3   | 2.17                     | 0.69              |
| 30:BG:68:PRO:HG3   | 30:BG:72:ARG:HH12  | 1.55                     | 0.69              |
| 30:BG:124:SER:OG   | 30:BG:133:LEU:HD23 | 1.93                     | 0.69              |
| 31:BH:45:VAL:HG22  | 31:BH:50:VAL:CG1   | 2.21                     | 0.69              |
| 33:BL:39:LYS:HG2   | 33:BL:42:ASN:HD22  | 1.57                     | 0.69              |
| 33:BL:40:ALA:HB2   | 33:BL:65:PHE:CE1   | 2.28                     | 0.69              |
| 33:BL:68:VAL:HB    | 33:BL:70:LYS:HE3   | 1.75                     | 0.69              |
| 35:BN:76:ALA:CA    | 40:BS:77:PRO:HD2   | 2.18                     | 0.69              |
| 36:BO:108:LYS:CD   | 36:BO:109:GLY:H    | 2.05                     | 0.69              |
| 39:BR:26:LEU:HD21  | 39:BR:37:ALA:CB    | 2.22                     | 0.69              |
| 39:BR:28:VAL:HG22  | 39:BR:29:PHE:N     | 2.01                     | 0.69              |
| 40:BS:24:PRO:O     | 40:BS:25:GLY:O     | 2.10                     | 0.69              |
| 41:BT:27:LEU:O     | 41:BT:31:SER:CB    | 2.39                     | 0.69              |
| 43:BV:13:SER:O     | 43:BV:16:LYS:NZ    | 2.23                     | 0.69              |
| 45:BX:9:LYS:HB2    | 45:BX:110:GLU:OE2  | 1.92                     | 0.69              |
| 46:BY:7:ALA:HB2    | 46:BY:38:TYR:CG    | 2.27                     | 0.69              |
| 46:BY:102:LEU:HD22 | 46:BY:137:ILE:HB   | 1.72                     | 0.69              |
| 47:BZ:59:LEU:HD13  | 47:BZ:79:VAL:HG11  | 1.74                     | 0.69              |
| 50:B3:63:TYR:O     | 50:B3:66:SER:HB2   | 1.92                     | 0.69              |
| 51:B4:11:THR:HG23  | 51:B4:15:ARG:HB3   | 1.73                     | 0.69              |
| 54:B7:6:THR:HG23   | 54:B7:6:THR:O      | 1.92                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:344:A:H5''    | 1:AA:345:C:C5     | 2.26                     | 0.69              |
| 1:AA:414:A:H2'     | 1:AA:415:A:C8     | 2.24                     | 0.69              |
| 1:AA:465:A:N7      | 1:AA:467:G:C2     | 2.60                     | 0.69              |
| 1:AA:663:A:N6      | 1:AA:742:G:O6     | 2.18                     | 0.69              |
| 1:AA:803:G:O2'     | 1:AA:804:U:H5'    | 1.91                     | 0.69              |
| 2:A1:36:U:H1'      | 9:AJ:82:GLY:HA2   | 1.73                     | 0.69              |
| 4:AE:187:LEU:HD22  | 4:AE:201:ILE:O    | 1.92                     | 0.69              |
| 4:AE:222:ILE:HD12  | 4:AE:223:ILE:HG13 | 1.74                     | 0.69              |
| 4:AE:223:ILE:HG21  | 4:AE:229:VAL:HA   | 1.73                     | 0.69              |
| 6:AG:152:SER:O     | 6:AG:158:ILE:HG13 | 1.91                     | 0.69              |
| 8:AI:76:ALA:CB     | 8:AI:80:ARG:NH2   | 2.55                     | 0.69              |
| 10:AK:70:GLN:HE21  | 10:AK:70:GLN:CA   | 2.04                     | 0.69              |
| 10:AK:107:LEU:HD23 | 10:AK:107:LEU:N   | 2.08                     | 0.69              |
| 11:AL:37:PHE:HD2   | 11:AL:37:PHE:N    | 1.90                     | 0.69              |
| 12:AM:10:GLY:HA3   | 12:AM:16:LEU:HD21 | 1.75                     | 0.69              |
| 14:AO:82:VAL:O     | 14:AO:106:ASP:HB2 | 1.91                     | 0.69              |
| 15:AP:2:ALA:HB3    | 15:AP:4:ILE:HD11  | 1.74                     | 0.69              |
| 15:AP:91:ARG:HB2   | 15:AP:98:VAL:HG13 | 1.74                     | 0.69              |
| 18:AS:74:LEU:HD22  | 18:AS:79:VAL:HG21 | 1.73                     | 0.69              |
| 19:AT:24:GLU:N     | 19:AT:24:GLU:CD   | 2.51                     | 0.69              |
| 20:AU:26:LEU:HG    | 20:AU:27:GLY:O    | 1.92                     | 0.69              |
| 22:AW:23:ARG:CA    | 22:AW:26:ASN:OD1  | 2.40                     | 0.69              |
| 22:AW:42:GLN:O     | 22:AW:45:GLN:HB2  | 1.92                     | 0.69              |
| 24:BA:149:A:N7     | 24:BA:150:C:C2    | 2.60                     | 0.69              |
| 24:BA:418:G:O2'    | 24:BA:419:C:H5'   | 1.91                     | 0.69              |
| 24:BA:530:G:O2'    | 24:BA:531:C:P     | 2.50                     | 0.69              |
| 24:BA:621:A:N7     | 24:BA:622:G:O4'   | 2.25                     | 0.69              |
| 24:BA:663:G:C5'    | 36:BO:18:ARG:HB3  | 2.17                     | 0.69              |
| 24:BA:988:A:H3'    | 49:B2:10:LYS:NZ   | 2.06                     | 0.69              |
| 24:BA:1212:G:O2'   | 24:BA:1213:A:H8   | 1.74                     | 0.69              |
| 24:BA:1263:U:H4'   | 51:B4:10:LYS:CG   | 2.21                     | 0.69              |
| 24:BA:1345:C:OP1   | 24:BA:1385:G:H5'' | 1.92                     | 0.69              |
| 24:BA:1748:G:H2'   | 24:BA:1749:A:C8   | 2.27                     | 0.69              |
| 24:BA:1788:C:N4    | 24:BA:1789:A:C8   | 2.59                     | 0.69              |
| 24:BA:1853:A:H2'   | 24:BA:1854:A:C8   | 2.27                     | 0.69              |
| 24:BA:1903:G:H2'   | 24:BA:1904:G:C8   | 2.24                     | 0.69              |
| 24:BA:1935:G:H2'   | 24:BA:1962:C:N3   | 2.07                     | 0.69              |
| 24:BA:2096:U:H2'   | 24:BA:2097:C:H5   | 1.57                     | 0.69              |
| 24:BA:2466:C:H2'   | 24:BA:2467:C:H6   | 1.56                     | 0.69              |
| 24:BA:2584:U:H6    | 24:BA:2584:U:H3'  | 1.57                     | 0.69              |
| 25:BB:14:U:H1'     | 25:BB:107:U:C1'   | 2.22                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 26:BC:59:ARG:NH1   | 26:BC:164:ARG:HG2  | 2.07                     | 0.69              |
| 27:BD:46:GLN:C     | 27:BD:48:ARG:H     | 1.98                     | 0.69              |
| 27:BD:65:ILE:HD12  | 27:BD:104:TYR:HB3  | 1.74                     | 0.69              |
| 27:BD:176:ARG:HB2  | 27:BD:182:LEU:HD21 | 1.75                     | 0.69              |
| 28:BE:40:GLU:C     | 28:BE:41:LYS:HE3   | 2.18                     | 0.69              |
| 28:BE:176:ILE:HG23 | 28:BE:176:ILE:O    | 1.92                     | 0.69              |
| 30:BG:139:LEU:HD13 | 30:BG:142:PRO:CA   | 2.23                     | 0.69              |
| 32:BK:87:LYS:HD3   | 32:BK:121:LYS:HE2  | 1.75                     | 0.69              |
| 32:BK:108:THR:O    | 32:BK:109:ILE:HD12 | 1.92                     | 0.69              |
| 35:BN:10:VAL:HG12  | 35:BN:17:ARG:CA    | 2.22                     | 0.69              |
| 35:BN:89:ASN:HD22  | 35:BN:91:LEU:HB2   | 1.58                     | 0.69              |
| 36:BO:78:PRO:HG2   | 36:BO:117:GLU:OE2  | 1.93                     | 0.69              |
| 38:BQ:11:ASN:ND2   | 38:BQ:12:ARG:H     | 1.90                     | 0.69              |
| 38:BQ:46:GLY:O     | 38:BQ:49:ASP:CB    | 2.40                     | 0.69              |
| 38:BQ:58:GLY:HA2   | 38:BQ:80:PHE:CZ    | 2.27                     | 0.69              |
| 39:BR:12:PHE:O     | 39:BR:13:ARG:C     | 2.32                     | 0.69              |
| 40:BS:109:GLU:O    | 40:BS:113:LYS:HB2  | 1.92                     | 0.69              |
| 43:BV:11:ARG:HH21  | 43:BV:11:ARG:HB3   | 1.57                     | 0.69              |
| 46:BY:9:TYR:CB     | 46:BY:14:LYS:HG2   | 2.22                     | 0.69              |
| 46:BY:18:LEU:HD11  | 46:BY:38:TYR:CD1   | 2.27                     | 0.69              |
| 46:BY:53:ILE:HG12  | 46:BY:58:VAL:CG2   | 2.22                     | 0.69              |
| 46:BY:78:LYS:HB3   | 46:BY:78:LYS:HZ2   | 1.55                     | 0.69              |
| 46:BY:158:PRO:HB2  | 46:BY:159:PRO:CD   | 2.23                     | 0.69              |
| 48:B1:63:ARG:O     | 48:B1:66:ASN:HB3   | 1.93                     | 0.69              |
| 51:B4:21:SER:O     | 51:B4:22:HIS:C     | 2.34                     | 0.69              |
| 53:B6:22:MET:O     | 53:B6:28:ARG:HG2   | 1.93                     | 0.69              |
| 1:AA:61:G:C5       | 1:AA:62:U:C4       | 2.80                     | 0.69              |
| 1:AA:129(A):G:H3'  | 1:AA:129(A):G:C8   | 2.27                     | 0.69              |
| 1:AA:580:U:H4'     | 17:AR:58:MET:HG2   | 1.73                     | 0.69              |
| 1:AA:953:G:O2'     | 15:AP:125:ARG:CA   | 2.34                     | 0.69              |
| 1:AA:1229:A:OP1    | 15:AP:116:THR:HG22 | 1.93                     | 0.69              |
| 1:AA:1289:A:O2'    | 1:AA:1290:G:H5'    | 1.92                     | 0.69              |
| 1:AA:1322:C:H5''   | 1:AA:1323:G:OP1    | 1.93                     | 0.69              |
| 1:AA:1464:G:C2'    | 1:AA:1465:C:C5     | 2.72                     | 0.69              |
| 3:AC:75:C:C6       | 3:AC:76:A:H4'      | 2.26                     | 0.69              |
| 4:AE:19:HIS:CE1    | 4:AE:204:ASN:HD21  | 2.11                     | 0.69              |
| 4:AE:212:GLN:O     | 4:AE:216:SER:CB    | 2.41                     | 0.69              |
| 9:AJ:38:LEU:HD12   | 9:AJ:41:ARG:HD3    | 1.75                     | 0.69              |
| 9:AJ:74:GLU:HA     | 9:AJ:145:ALA:CB    | 2.21                     | 0.69              |
| 10:AK:10:LEU:HD22  | 10:AK:135:CYS:SG   | 2.33                     | 0.69              |
| 15:AP:14:ARG:H     | 15:AP:44:ARG:NE    | 1.90                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 17:AR:53:HIS:O     | 17:AR:56:LEU:HB3   | 1.92                     | 0.69              |
| 18:AS:6:LEU:HD22   | 18:AS:6:LEU:C      | 2.18                     | 0.69              |
| 18:AS:39:TYR:CD1   | 18:AS:40:ASP:N     | 2.61                     | 0.69              |
| 19:AT:6:LEU:HD12   | 19:AT:6:LEU:C      | 2.17                     | 0.69              |
| 24:BA:332:A:H4'    | 24:BA:333:G:OP1    | 1.90                     | 0.69              |
| 24:BA:457:A:H1'    | 24:BA:459:U:H3     | 1.55                     | 0.69              |
| 24:BA:594:U:C4     | 24:BA:595:C:N4     | 2.60                     | 0.69              |
| 24:BA:751:A:N7     | 24:BA:789:A:C6     | 2.61                     | 0.69              |
| 24:BA:810:U:OP1    | 24:BA:1253:A:N7    | 2.26                     | 0.69              |
| 24:BA:950:G:H2'    | 24:BA:951:C:H6     | 1.56                     | 0.69              |
| 24:BA:1936:A:C1'   | 24:BA:1940:U:C4    | 2.75                     | 0.69              |
| 24:BA:2097:C:N4    | 24:BA:2193:G:O6    | 2.26                     | 0.69              |
| 24:BA:2191:G:N2    | 24:BA:2192:G:N3    | 2.40                     | 0.69              |
| 24:BA:2226:C:O2    | 24:BA:2227:A:O4'   | 2.10                     | 0.69              |
| 24:BA:2287:A:C8    | 24:BA:2289:G:N7    | 2.60                     | 0.69              |
| 24:BA:2521:C:C2    | 24:BA:2522:U:C6    | 2.81                     | 0.69              |
| 24:BA:2550:G:H2'   | 24:BA:2551:C:C6    | 2.26                     | 0.69              |
| 25:BB:83:G:N2      | 25:BB:84:C:C2      | 2.60                     | 0.69              |
| 26:BC:82:LYS:CD    | 26:BC:116:THR:HG21 | 2.19                     | 0.69              |
| 26:BC:163:PHE:HA   | 26:BC:171:ILE:HD11 | 1.73                     | 0.69              |
| 28:BE:80:GLU:N     | 28:BE:80:GLU:OE1   | 2.26                     | 0.69              |
| 28:BE:178:GLU:OE1  | 28:BE:178:GLU:N    | 2.22                     | 0.69              |
| 29:BF:192:LEU:HD13 | 29:BF:192:LEU:C    | 2.18                     | 0.69              |
| 30:BG:75:LYS:NZ    | 30:BG:85:GLY:HA3   | 2.08                     | 0.69              |
| 30:BG:174:GLU:OE2  | 30:BG:175:LEU:HG   | 1.93                     | 0.69              |
| 31:BH:13:LYS:HG3   | 31:BH:15:VAL:H     | 1.57                     | 0.69              |
| 32:BK:5:LEU:HA     | 32:BK:36:ALA:CB    | 2.22                     | 0.69              |
| 33:BL:89:HIS:O     | 33:BL:90:LYS:HG3   | 1.92                     | 0.69              |
| 36:BO:122:PRO:HA   | 36:BO:134:ALA:HA   | 1.74                     | 0.69              |
| 39:BR:9:ARG:NH1    | 39:BR:9:ARG:H      | 1.89                     | 0.69              |
| 39:BR:17:ARG:NE    | 39:BR:89:ARG:HB2   | 2.07                     | 0.69              |
| 39:BR:73:LEU:HA    | 39:BR:76:LYS:HD2   | 1.75                     | 0.69              |
| 42:BU:78:LYS:CB    | 42:BU:84:LYS:HB3   | 2.23                     | 0.69              |
| 43:BV:13:SER:HB3   | 43:BV:16:LYS:HE2   | 1.75                     | 0.69              |
| 46:BY:48:PHE:CE2   | 46:BY:86:VAL:HG11  | 2.27                     | 0.69              |
| 49:B2:7:LYS:HA     | 49:B2:33:GLN:O     | 1.93                     | 0.69              |
| 50:B3:32:TYR:O     | 50:B3:33:VAL:HG23  | 1.93                     | 0.69              |
| 52:B5:30:THR:O     | 52:B5:32:ASN:N     | 2.24                     | 0.69              |
| 55:B8:20:HIS:HB2   | 55:B8:22:ARG:CG    | 2.16                     | 0.69              |
| 1:AA:277:C:C5'     | 19:AT:68:ARG:HH12  | 2.06                     | 0.69              |
| 1:AA:306:G:O2'     | 1:AA:307:C:H5'     | 1.92                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:654:G:C2      | 1:AA:753:A:H1'    | 2.27                     | 0.69              |
| 1:AA:679:C:H2'     | 1:AA:680:C:H6     | 1.56                     | 0.69              |
| 1:AA:716:A:H1'     | 13:AN:118:GLY:CA  | 2.18                     | 0.69              |
| 1:AA:720:C:O5'     | 1:AA:720:C:H6     | 1.76                     | 0.69              |
| 1:AA:750:G:O4'     | 17:AR:22:THR:OG1  | 2.11                     | 0.69              |
| 4:AE:35:GLU:O      | 4:AE:36:ARG:CZ    | 2.40                     | 0.69              |
| 4:AE:49:GLU:O      | 4:AE:52:GLU:CD    | 2.36                     | 0.69              |
| 4:AE:60:ASP:HB3    | 4:AE:64:ARG:NH1   | 2.07                     | 0.69              |
| 5:AF:59:ARG:NH2    | 5:AF:64:VAL:HG13  | 2.07                     | 0.69              |
| 6:AG:118:ARG:HG3   | 6:AG:118:ARG:HH21 | 1.57                     | 0.69              |
| 7:AH:11:ILE:HD12   | 7:AH:104:ALA:HB1  | 1.75                     | 0.69              |
| 7:AH:26:PHE:N      | 7:AH:26:PHE:CD1   | 2.60                     | 0.69              |
| 7:AH:105:VAL:CG2   | 7:AH:132:ALA:HB2  | 2.22                     | 0.69              |
| 10:AK:17:THR:CG2   | 10:AK:18:ARG:NH2  | 2.55                     | 0.69              |
| 10:AK:29:SER:C     | 10:AK:32:LYS:HZ2  | 2.01                     | 0.69              |
| 13:AN:85:ARG:HE    | 13:AN:111:ASP:HB3 | 1.55                     | 0.69              |
| 18:AS:39:TYR:OH    | 18:AS:41:PRO:HG3  | 1.93                     | 0.69              |
| 19:AT:5:VAL:CG1    | 19:AT:6:LEU:N     | 2.56                     | 0.69              |
| 24:BA:241:A:C2'    | 24:BA:242:G:H4'   | 2.22                     | 0.69              |
| 24:BA:284:U:OP2    | 24:BA:284:U:H6    | 1.76                     | 0.69              |
| 24:BA:411:G:O4'    | 24:BA:2407:G:P    | 2.50                     | 0.69              |
| 24:BA:532:A:H8     | 24:BA:533:G:H1'   | 1.57                     | 0.69              |
| 24:BA:590:A:H2'    | 24:BA:591:C:O4'   | 1.93                     | 0.69              |
| 24:BA:740:U:O4     | 24:BA:757:U:O2    | 2.10                     | 0.69              |
| 24:BA:1076:C:O2'   | 33:BL:90:LYS:HB3  | 1.93                     | 0.69              |
| 24:BA:1158:C:H5'   | 49:B2:31:LEU:CB   | 2.23                     | 0.69              |
| 24:BA:1529:A:H8    | 24:BA:1530:G:C8   | 2.11                     | 0.69              |
| 24:BA:1613:G:N2    | 24:BA:1619:G:C4   | 2.60                     | 0.69              |
| 24:BA:2011:U:H2'   | 24:BA:2012:G:O4'  | 1.92                     | 0.69              |
| 24:BA:2556:C:O2'   | 24:BA:2557:G:H5'  | 1.92                     | 0.69              |
| 24:BA:2674:G:H2'   | 24:BA:2675:A:H8   | 1.57                     | 0.69              |
| 24:BA:2704:C:H2'   | 24:BA:2705:A:C8   | 2.28                     | 0.69              |
| 27:BD:12:SER:HA    | 27:BD:22:SER:O    | 1.91                     | 0.69              |
| 27:BD:178:PRO:HG2  | 27:BD:179:SER:H   | 1.58                     | 0.69              |
| 27:BD:252:TRP:N    | 27:BD:255:LYS:NZ  | 2.41                     | 0.69              |
| 28:BE:105:THR:HG23 | 28:BE:197:ILE:CD1 | 2.23                     | 0.69              |
| 29:BF:41:LEU:O     | 29:BF:44:ARG:CG   | 2.40                     | 0.69              |
| 29:BF:205:ARG:O    | 29:BF:208:GLY:N   | 2.26                     | 0.69              |
| 33:BL:19:PRO:HB2   | 33:BL:22:PRO:CG   | 2.23                     | 0.69              |
| 34:BM:29:LYS:O     | 34:BM:31:ALA:N    | 2.26                     | 0.69              |
| 35:BN:47:ILE:HD12  | 35:BN:52:VAL:CG2  | 2.21                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 35:BN:77:ILE:HD13 | 40:BS:65:LYS:NZ    | 2.08                     | 0.69              |
| 35:BN:107:ARG:O   | 35:BN:109:LYS:HG3  | 1.93                     | 0.69              |
| 36:BO:122:PRO:HG3 | 36:BO:137:LYS:O    | 1.91                     | 0.69              |
| 38:BQ:96:ARG:HG2  | 38:BQ:98:LEU:CD1   | 2.23                     | 0.69              |
| 41:BT:48:ALA:HA   | 41:BT:51:LYS:HD2   | 1.75                     | 0.69              |
| 42:BU:18:LEU:H    | 42:BU:18:LEU:CD2   | 2.05                     | 0.69              |
| 45:BX:35:TYR:HE1  | 45:BX:65:ALA:O     | 1.76                     | 0.69              |
| 46:BY:10:ARG:HB3  | 46:BY:36:LYS:CD    | 2.19                     | 0.69              |
| 46:BY:104:PHE:CZ  | 46:BY:171:ILE:HD11 | 2.27                     | 0.69              |
| 48:B1:33:GLN:HB3  | 48:B1:41:GLN:OE1   | 1.92                     | 0.69              |
| 50:B3:66:SER:HA   | 50:B3:69:LYS:CD    | 2.15                     | 0.69              |
| 51:B4:13:LYS:HB3  | 51:B4:16:ARG:NH1   | 2.08                     | 0.69              |
| 1:AA:60:A:C2      | 1:AA:107:G:N3      | 2.60                     | 0.69              |
| 1:AA:264:U:O2     | 1:AA:264:U:C2'     | 2.40                     | 0.69              |
| 1:AA:370:C:C2     | 1:AA:371:G:C8      | 2.81                     | 0.69              |
| 1:AA:517:G:H5'    | 1:AA:519:C:N4      | 2.06                     | 0.69              |
| 1:AA:564:C:OP1    | 14:AO:15:ARG:CZ    | 2.41                     | 0.69              |
| 1:AA:627:G:O2'    | 1:AA:628:G:H5'     | 1.93                     | 0.69              |
| 1:AA:1102:A:C6    | 1:AA:1103:C:N4     | 2.60                     | 0.69              |
| 1:AA:1129:C:H1'   | 1:AA:1130:A:N7     | 2.06                     | 0.69              |
| 1:AA:1200:C:H5''  | 1:AA:1201:A:C3'    | 2.22                     | 0.69              |
| 1:AA:1298:C:H41   | 9:AJ:114:ARG:HB3   | 1.56                     | 0.69              |
| 1:AA:1308:U:H5''  | 15:AP:110:ARG:HH22 | 1.57                     | 0.69              |
| 1:AA:1399:C:H42   | 1:AA:1504:G:H1     | 1.41                     | 0.69              |
| 1:AA:1435:G:C2    | 1:AA:1436:U:C4     | 2.80                     | 0.69              |
| 1:AA:1520:G:H2'   | 1:AA:1521:G:H8     | 1.57                     | 0.69              |
| 3:AB:37:A:OP2     | 3:AB:38:A:N7       | 2.26                     | 0.69              |
| 4:AE:12:GLU:C     | 4:AE:14:GLY:H      | 2.01                     | 0.69              |
| 4:AE:15:VAL:HG23  | 4:AE:16:HIS:CE1    | 2.28                     | 0.69              |
| 4:AE:60:ASP:O     | 4:AE:63:MET:HB3    | 1.93                     | 0.69              |
| 4:AE:80:ILE:HD12  | 4:AE:208:ILE:HG23  | 1.75                     | 0.69              |
| 4:AE:173:ALA:O    | 4:AE:176:GLU:HB2   | 1.93                     | 0.69              |
| 4:AE:212:GLN:OE1  | 4:AE:215:LEU:HB3   | 1.92                     | 0.69              |
| 5:AF:110:ASN:HD21 | 5:AF:140:ARG:HG2   | 1.56                     | 0.69              |
| 5:AF:118:GLN:O    | 5:AF:122:GLU:HG3   | 1.93                     | 0.69              |
| 7:AH:43:LEU:HB3   | 7:AH:136:MET:HE2   | 1.75                     | 0.69              |
| 7:AH:45:PHE:CE1   | 7:AH:47:LYS:HD2    | 2.27                     | 0.69              |
| 7:AH:102:ALA:HB3  | 7:AH:106:PRO:HB2   | 1.75                     | 0.69              |
| 7:AH:103:GLY:O    | 7:AH:106:PRO:HD2   | 1.92                     | 0.69              |
| 7:AH:150:ARG:O    | 7:AH:150:ARG:HD3   | 1.92                     | 0.69              |
| 8:AI:99:ALA:CB    | 20:AU:31:LEU:HD11  | 2.22                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 9:AJ:78:ARG:HE     | 9:AJ:80:VAL:HG23  | 1.57                     | 0.69              |
| 10:AK:26:VAL:HG13  | 10:AK:27:PRO:N    | 2.07                     | 0.69              |
| 10:AK:32:LYS:O     | 10:AK:36:LEU:HD23 | 1.92                     | 0.69              |
| 11:AL:16:ARG:NE    | 11:AL:18:PHE:CZ   | 2.61                     | 0.69              |
| 11:AL:45:ALA:HB3   | 11:AL:74:ILE:CG2  | 2.21                     | 0.69              |
| 14:AO:88:GLY:HA3   | 14:AO:99:HIS:CE1  | 2.27                     | 0.69              |
| 16:AQ:40:CYS:N     | 16:AQ:43:CYS:SG   | 2.59                     | 0.69              |
| 17:AR:75:PRO:O     | 17:AR:78:TYR:HB3  | 1.93                     | 0.69              |
| 18:AS:28:ARG:HG3   | 18:AS:29:ASP:OD2  | 1.92                     | 0.69              |
| 18:AS:51:VAL:HG21  | 18:AS:73:LEU:CD1  | 2.22                     | 0.69              |
| 19:AT:4:LYS:O      | 19:AT:5:VAL:HG23  | 1.93                     | 0.69              |
| 19:AT:29:HIS:CE1   | 19:AT:30:PRO:HG2  | 2.27                     | 0.69              |
| 19:AT:43:LEU:HD11  | 19:AT:69:LYS:HG3  | 1.72                     | 0.69              |
| 19:AT:88:TYR:HA    | 19:AT:91:ARG:NE   | 2.08                     | 0.69              |
| 20:AU:36:ASN:HB3   | 20:AU:40:LEU:CD2  | 2.23                     | 0.69              |
| 20:AU:73:ALA:C     | 20:AU:79:LEU:HD11 | 2.16                     | 0.69              |
| 21:AV:12:ASP:O     | 21:AV:16:LEU:HD13 | 1.93                     | 0.69              |
| 22:AW:23:ARG:HD3   | 22:AW:24:LEU:N    | 2.07                     | 0.69              |
| 22:AW:63:ILE:O     | 22:AW:66:ALA:HB3  | 1.92                     | 0.69              |
| 24:BA:64:A:H2'     | 24:BA:65:C:C5'    | 2.23                     | 0.69              |
| 24:BA:95:G:O2'     | 48:B1:42:ASN:HB2  | 1.91                     | 0.69              |
| 24:BA:142:G:H2'    | 24:BA:143:C:C6    | 2.28                     | 0.69              |
| 24:BA:197:A:H61    | 24:BA:248:G:N2    | 1.88                     | 0.69              |
| 24:BA:270(K):C:H3' | 24:BA:270(L):U:H6 | 1.57                     | 0.69              |
| 24:BA:284:U:OP2    | 24:BA:284:U:C6    | 2.45                     | 0.69              |
| 24:BA:297:C:H2'    | 24:BA:298:G:O4'   | 1.93                     | 0.69              |
| 24:BA:503:A:H4'    | 24:BA:504:U:H5''  | 1.75                     | 0.69              |
| 24:BA:527:C:O4'    | 24:BA:2779:U:C4   | 2.46                     | 0.69              |
| 24:BA:666:G:H2'    | 24:BA:667:U:C6    | 2.27                     | 0.69              |
| 24:BA:748:G:H3'    | 24:BA:750:A:OP2   | 1.93                     | 0.69              |
| 24:BA:864:G:H2'    | 24:BA:865:C:H1'   | 1.73                     | 0.69              |
| 24:BA:877:U:O2'    | 24:BA:878:A:H5'   | 1.93                     | 0.69              |
| 24:BA:1309:G:H2'   | 24:BA:1310:G:C5'  | 2.23                     | 0.69              |
| 24:BA:1417:C:N3    | 24:BA:1581:G:N2   | 2.40                     | 0.69              |
| 24:BA:1470:G:H3'   | 24:BA:1470:G:H8   | 1.58                     | 0.69              |
| 24:BA:1498:C:H1'   | 24:BA:1576:U:C4'  | 2.23                     | 0.69              |
| 24:BA:1557:C:H5''  | 24:BA:1558:A:OP2  | 1.92                     | 0.69              |
| 24:BA:1613:G:H3'   | 24:BA:1614:A:C5'  | 2.17                     | 0.69              |
| 24:BA:1731:G:H22   | 24:BA:1733:G:N2   | 1.91                     | 0.69              |
| 24:BA:1858:G:H22   | 24:BA:1884:A:H1'  | 1.57                     | 0.69              |
| 24:BA:2067:G:N2    | 24:BA:2069:G:H1'  | 2.08                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2123:G:O2'   | 26:BC:172:HIS:HB2  | 1.93                     | 0.69              |
| 24:BA:2266:A:H5''  | 24:BA:2267:A:O5'   | 1.93                     | 0.69              |
| 24:BA:2472:G:O5'   | 24:BA:2472:G:H8    | 1.75                     | 0.69              |
| 24:BA:2615:U:H2'   | 24:BA:2616:C:H6    | 1.58                     | 0.69              |
| 25:BB:4:C:N3       | 25:BB:117:G:N2     | 2.41                     | 0.69              |
| 25:BB:101:A:C2'    | 25:BB:102:G:H8     | 1.99                     | 0.69              |
| 26:BC:43:VAL:CG2   | 26:BC:214:VAL:HG22 | 2.23                     | 0.69              |
| 26:BC:76:ALA:HB2   | 26:BC:153:ILE:HD12 | 1.74                     | 0.69              |
| 26:BC:211:SER:CB   | 26:BC:223:ARG:HH21 | 2.05                     | 0.69              |
| 27:BD:106:ILE:O    | 27:BD:107:ALA:HB2  | 1.93                     | 0.69              |
| 27:BD:119:ALA:CB   | 27:BD:130:ALA:H    | 2.05                     | 0.69              |
| 27:BD:239:ARG:HD2  | 27:BD:239:ARG:N    | 2.07                     | 0.69              |
| 28:BE:38:THR:HB    | 28:BE:39:PRO:HD3   | 1.75                     | 0.69              |
| 28:BE:46:ALA:HB2   | 28:BE:85:ASN:HD21  | 1.57                     | 0.69              |
| 28:BE:60:ASN:HA    | 28:BE:63:LEU:CD1   | 2.22                     | 0.69              |
| 29:BF:186:ILE:HG22 | 29:BF:187:VAL:N    | 2.06                     | 0.69              |
| 30:BG:4:ASP:HA     | 30:BG:7:LEU:HB2    | 1.75                     | 0.69              |
| 30:BG:8:LYS:HZ1    | 30:BG:176:LEU:CD1  | 2.06                     | 0.69              |
| 30:BG:39:ILE:HG13  | 30:BG:157:ILE:CD1  | 2.21                     | 0.69              |
| 30:BG:103:LEU:HD21 | 30:BG:176:LEU:CD1  | 2.23                     | 0.69              |
| 30:BG:125:PHE:CD2  | 30:BG:130:ASN:N    | 2.60                     | 0.69              |
| 32:BK:70:LYS:NZ    | 32:BK:70:LYS:HA    | 2.08                     | 0.69              |
| 32:BK:98:ALA:HA    | 32:BK:101:LEU:HD21 | 1.73                     | 0.69              |
| 34:BM:10:GLU:HB3   | 34:BM:39:ARG:NH1   | 2.08                     | 0.69              |
| 34:BM:18:ALA:HB2   | 34:BM:54:VAL:CG2   | 2.22                     | 0.69              |
| 34:BM:18:ALA:HB2   | 34:BM:54:VAL:HG22  | 1.75                     | 0.69              |
| 34:BM:86:PRO:HB2   | 34:BM:89:LYS:HZ1   | 1.56                     | 0.69              |
| 34:BM:87:LEU:HA    | 34:BM:90:MET:HG2   | 1.75                     | 0.69              |
| 34:BM:139:GLU:O    | 34:BM:140:VAL:CG2  | 2.41                     | 0.69              |
| 35:BN:24:VAL:HG21  | 35:BN:26:LYS:HG2   | 1.75                     | 0.69              |
| 35:BN:37:ASP:H     | 35:BN:61:VAL:CB    | 2.06                     | 0.69              |
| 35:BN:69:VAL:H     | 35:BN:104:ARG:NH2  | 1.90                     | 0.69              |
| 35:BN:70:LYS:HE2   | 35:BN:104:ARG:CG   | 2.22                     | 0.69              |
| 35:BN:85:VAL:HG12  | 35:BN:93:PRO:HB3   | 1.74                     | 0.69              |
| 37:BP:6:ARG:HG2    | 37:BP:7:MET:N      | 2.08                     | 0.69              |
| 38:BQ:5:LYS:HZ3    | 38:BQ:5:LYS:C      | 2.01                     | 0.69              |
| 38:BQ:50:HIS:NE2   | 38:BQ:54:LEU:HD11  | 2.08                     | 0.69              |
| 39:BR:57:LYS:HZ3   | 39:BR:62:LYS:HG3   | 1.58                     | 0.69              |
| 40:BS:29:ARG:HG2   | 40:BS:51:ARG:CG    | 2.20                     | 0.69              |
| 40:BS:34:VAL:HG21  | 40:BS:36:GLU:OE2   | 1.93                     | 0.69              |
| 40:BS:64:ARG:O     | 40:BS:65:LYS:C     | 2.35                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 41:BT:25:TRP:CE3   | 41:BT:26:GLY:N     | 2.61                     | 0.69              |
| 41:BT:50:ARG:NE    | 42:BU:75:PHE:CE2   | 2.56                     | 0.69              |
| 41:BT:74:LEU:CD2   | 41:BT:78:THR:HG21  | 2.21                     | 0.69              |
| 42:BU:4:ILE:HA     | 42:BU:12:TYR:CD2   | 2.26                     | 0.69              |
| 42:BU:18:LEU:HD12  | 42:BU:66:ARG:NH1   | 2.06                     | 0.69              |
| 42:BU:62:LEU:HD11  | 42:BU:96:ILE:HD13  | 1.75                     | 0.69              |
| 42:BU:62:LEU:CD2   | 42:BU:98:GLU:HA    | 2.21                     | 0.69              |
| 43:BV:73:ALA:O     | 43:BV:106:ILE:HG22 | 1.92                     | 0.69              |
| 44:BW:7:VAL:O      | 44:BW:8:ILE:HG23   | 1.92                     | 0.69              |
| 44:BW:12:VAL:HG23  | 44:BW:28:PHE:C     | 2.17                     | 0.69              |
| 44:BW:47:PHE:HZ    | 44:BW:92:LEU:HD11  | 1.57                     | 0.69              |
| 44:BW:66:LEU:HD12  | 44:BW:66:LEU:O     | 1.93                     | 0.69              |
| 46:BY:31:ARG:N     | 46:BY:89:PHE:CE2   | 2.59                     | 0.69              |
| 46:BY:157:LEU:HD13 | 46:BY:161:VAL:CG1  | 2.21                     | 0.69              |
| 47:BZ:40:GLN:HB3   | 47:BZ:45:PHE:CE1   | 2.27                     | 0.69              |
| 48:B1:42:ASN:O     | 48:B1:45:ILE:HG13  | 1.93                     | 0.69              |
| 49:B2:15:TYR:N     | 49:B2:15:TYR:CD1   | 2.60                     | 0.69              |
| 50:B3:17:GLY:HA3   | 50:B3:33:VAL:O     | 1.93                     | 0.69              |
| 53:B6:24:THR:O     | 53:B6:28:ARG:HG3   | 1.93                     | 0.69              |
| 54:B7:1:MET:N      | 54:B7:2:PRO:HD2    | 2.08                     | 0.69              |
| 54:B7:30:ARG:NH1   | 54:B7:41:ILE:HG22  | 2.07                     | 0.69              |
| 1:AA:79:G:H2'      | 1:AA:80:G:O4'      | 1.93                     | 0.69              |
| 1:AA:191(C):G:H2'  | 1:AA:191(D):U:O4'  | 1.93                     | 0.69              |
| 1:AA:529:G:N1      | 14:AO:49:ASN:ND2   | 2.40                     | 0.69              |
| 1:AA:640:A:C2'     | 1:AA:641:U:H5'     | 2.23                     | 0.69              |
| 1:AA:684:A:O3'     | 13:AN:12:ARG:NH2   | 2.25                     | 0.69              |
| 1:AA:735:C:H2'     | 1:AA:736:C:C6      | 2.26                     | 0.69              |
| 1:AA:1013:G:H2'    | 1:AA:1015:A:OP2    | 1.91                     | 0.69              |
| 1:AA:1328:C:OP1    | 15:AP:28:ALA:HB2   | 1.93                     | 0.69              |
| 1:AA:1367:C:P      | 11:AL:115:GLY:HA2  | 2.32                     | 0.69              |
| 1:AA:1407:C:H2'    | 1:AA:1408:A:H5'    | 1.73                     | 0.69              |
| 3:AC:59:U:H2'      | 3:AC:59:U:O2       | 1.92                     | 0.69              |
| 5:AF:6:HIS:HB3     | 16:AQ:49:HIS:CE1   | 2.28                     | 0.69              |
| 5:AF:30:ARG:HG2    | 5:AF:31:HIS:N      | 2.05                     | 0.69              |
| 5:AF:116:VAL:HG11  | 5:AF:141:VAL:CG2   | 2.22                     | 0.69              |
| 6:AG:60:GLU:HA     | 6:AG:63:LYS:HD3    | 1.74                     | 0.69              |
| 6:AG:205:GLU:CD    | 7:AH:100:VAL:HB    | 2.17                     | 0.69              |
| 7:AH:122:GLU:CG    | 7:AH:126:ARG:HG3   | 2.23                     | 0.69              |
| 8:AI:28:ARG:HG2    | 8:AI:28:ARG:NH1    | 2.08                     | 0.69              |
| 9:AJ:64:GLN:HB3    | 9:AJ:128:ALA:HB1   | 1.74                     | 0.69              |
| 11:AL:97:LYS:HZ2   | 11:AL:102:LEU:HD22 | 1.57                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 18:AS:60:LEU:HA    | 18:AS:64:ALA:CB    | 2.20                     | 0.69              |
| 22:AW:13:LEU:O     | 22:AW:14:LYS:C     | 2.36                     | 0.69              |
| 24:BA:28:A:C2'     | 24:BA:29:U:H5'     | 2.23                     | 0.69              |
| 24:BA:143:C:C2     | 24:BA:144:C:C5     | 2.80                     | 0.69              |
| 24:BA:247:G:H22    | 54:B7:8:LYS:CD     | 2.04                     | 0.69              |
| 24:BA:532:A:H3'    | 24:BA:533:G:O4'    | 1.92                     | 0.69              |
| 24:BA:695:G:C6     | 24:BA:768:G:C6     | 2.81                     | 0.69              |
| 24:BA:774:A:O2'    | 24:BA:775:G:O5'    | 2.10                     | 0.69              |
| 24:BA:1019:U:C2    | 24:BA:1144:G:N2    | 2.61                     | 0.69              |
| 24:BA:1175:U:H5'   | 24:BA:1176:G:OP2   | 1.91                     | 0.69              |
| 24:BA:1742:C:C4    | 24:BA:1743:G:H8    | 2.11                     | 0.69              |
| 24:BA:1754:C:C2    | 24:BA:1755:A:H1'   | 2.28                     | 0.69              |
| 24:BA:1970:A:O2'   | 24:BA:1971:A:P     | 2.50                     | 0.69              |
| 24:BA:2019:A:N1    | 24:BA:2020:A:N3    | 2.41                     | 0.69              |
| 24:BA:2022:U:H2'   | 24:BA:2022:U:O2    | 1.92                     | 0.69              |
| 24:BA:2150:U:C2    | 24:BA:2151:G:N7    | 2.61                     | 0.69              |
| 24:BA:2205:C:O2'   | 24:BA:2206:C:H5'   | 1.92                     | 0.69              |
| 24:BA:2392:A:C2    | 24:BA:2429:G:C2    | 2.81                     | 0.69              |
| 24:BA:2460:U:H5'   | 24:BA:2461:C:OP2   | 1.92                     | 0.69              |
| 24:BA:2549:G:O2'   | 24:BA:2550:G:H5'   | 1.92                     | 0.69              |
| 24:BA:2597:G:C4'   | 27:BD:242:ARG:NE   | 2.56                     | 0.69              |
| 24:BA:2801:A:H2    | 24:BA:2895:U:H1'   | 1.56                     | 0.69              |
| 25:BB:24:G:H5''    | 25:BB:25:A:H5'     | 1.75                     | 0.69              |
| 26:BC:103:ILE:HD12 | 26:BC:127:LEU:HD11 | 1.74                     | 0.69              |
| 27:BD:61:LEU:HD13  | 27:BD:86:PRO:CD    | 2.22                     | 0.69              |
| 28:BE:48:GLN:N     | 28:BE:48:GLN:CD    | 2.51                     | 0.69              |
| 30:BG:120:LEU:HA   | 30:BG:181:ARG:HB2  | 1.74                     | 0.69              |
| 34:BM:42:TRP:CD1   | 41:BT:64:ARG:HG2   | 2.27                     | 0.69              |
| 34:BM:107:LEU:HD11 | 34:BM:113:GLY:O    | 1.92                     | 0.69              |
| 35:BN:79:PHE:HB2   | 40:BS:73:GLU:HG3   | 1.72                     | 0.69              |
| 37:BP:42:ILE:HD11  | 37:BP:46:GLN:CB    | 2.20                     | 0.69              |
| 37:BP:134:ARG:HG3  | 37:BP:134:ARG:NH1  | 2.07                     | 0.69              |
| 39:BR:28:VAL:O     | 39:BR:29:PHE:HB2   | 1.90                     | 0.69              |
| 40:BS:28:VAL:N     | 40:BS:93:ARG:O     | 2.26                     | 0.69              |
| 41:BT:61:TRP:O     | 41:BT:65:ILE:HG12  | 1.92                     | 0.69              |
| 42:BU:6:LYS:CB     | 42:BU:10:LYS:HA    | 2.12                     | 0.69              |
| 42:BU:40:LEU:C     | 42:BU:51:VAL:HG13  | 2.18                     | 0.69              |
| 45:BX:56:PRO:O     | 45:BX:57:GLN:HG3   | 1.93                     | 0.69              |
| 48:B1:27:LEU:CD2   | 48:B1:48:LEU:HB3   | 2.23                     | 0.69              |
| 1:AA:20:U:O2'      | 1:AA:21:G:H5'      | 1.93                     | 0.69              |
| 1:AA:745:C:H5'     | 1:AA:851:G:N3      | 2.08                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1               | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|----------------------|--------------------|--------------------------|-------------------|
| 1:AA:953:G:H2'       | 1:AA:954:G:C8      | 2.27                     | 0.69              |
| 1:AA:1104:G:H2'      | 1:AA:1105:A:H8     | 1.57                     | 0.69              |
| 1:AA:1128:C:C1'      | 1:AA:1146:A:H61    | 2.05                     | 0.69              |
| 1:AA:1147:C:N3       | 1:AA:1148:U:C4     | 2.61                     | 0.69              |
| 1:AA:1148:U:O4'      | 11:AL:16:ARG:HD2   | 1.93                     | 0.69              |
| 1:AA:1423:G:H2'      | 1:AA:1424:C:C6     | 2.28                     | 0.69              |
| 1:AA:1461:G:O2'      | 1:AA:1462:G:H5'    | 1.93                     | 0.69              |
| 3:AD:76:A:P          | 24:BA:2421:G:H21   | 2.15                     | 0.69              |
| 5:AF:7:PRO:O         | 5:AF:11:ARG:HG2    | 1.93                     | 0.69              |
| 6:AG:34:GLU:O        | 6:AG:35:ARG:HB2    | 1.92                     | 0.69              |
| 6:AG:90:GLY:HA3      | 6:AG:200:GLU:OE2   | 1.93                     | 0.69              |
| 7:AH:118:ILE:O       | 7:AH:119:LEU:HD23  | 1.92                     | 0.69              |
| 8:AI:4:TYR:CE1       | 8:AI:72:VAL:HG11   | 2.28                     | 0.69              |
| 8:AI:10:LEU:N        | 8:AI:10:LEU:CD2    | 2.55                     | 0.69              |
| 11:AL:78:LYS:HA      | 11:AL:81:ILE:HD12  | 1.74                     | 0.69              |
| 17:AR:81:LEU:CD2     | 17:AR:85:LEU:HD13  | 2.23                     | 0.69              |
| 18:AS:20:VAL:CG2     | 18:AS:35:LYS:HA    | 2.21                     | 0.69              |
| 24:BA:221:A:O2'      | 24:BA:271(B):G:C6  | 2.46                     | 0.69              |
| 24:BA:272:G:O2'      | 24:BA:273:G:H5'    | 1.93                     | 0.69              |
| 24:BA:309:G:H5'      | 24:BA:310:A:OP2    | 1.93                     | 0.69              |
| 24:BA:392:C:H5''     | 24:BA:409:C:H5''   | 1.75                     | 0.69              |
| 24:BA:533:G:OP1      | 41:BT:24:TYR:HB3   | 1.92                     | 0.69              |
| 24:BA:956:G:P        | 37:BP:87:LYS:HZ2   | 2.16                     | 0.69              |
| 24:BA:1007:C:H4'     | 34:BM:108:PRO:HD3  | 1.75                     | 0.69              |
| 24:BA:1050:A:C2'     | 24:BA:1051:G:H5'   | 2.23                     | 0.69              |
| 24:BA:1142(A):A:H5'' | 24:BA:1143:A:OP2   | 1.91                     | 0.69              |
| 24:BA:1473:G:H2'     | 24:BA:1474:C:H6    | 1.56                     | 0.69              |
| 24:BA:1567:A:H5''    | 27:BD:59:LYS:HG2   | 1.75                     | 0.69              |
| 24:BA:1774:C:C6      | 24:BA:1775:U:C5    | 2.71                     | 0.69              |
| 24:BA:1779:U:C6      | 24:BA:1779:U:O5'   | 2.46                     | 0.69              |
| 24:BA:1785:A:C5'     | 24:BA:1982:C:H4'   | 2.22                     | 0.69              |
| 24:BA:1944:U:H1'     | 24:BA:1955:U:H6    | 1.53                     | 0.69              |
| 24:BA:2228:G:N7      | 24:BA:2229:C:C6    | 2.60                     | 0.69              |
| 24:BA:2482:G:C5      | 24:BA:2483:C:C6    | 2.81                     | 0.69              |
| 24:BA:2811:G:H5''    | 28:BE:59:VAL:HG13  | 1.75                     | 0.69              |
| 28:BE:64:LYS:CA      | 28:BE:67:PHE:HB2   | 2.23                     | 0.69              |
| 30:BG:16:ARG:O       | 30:BG:17:PRO:C     | 2.34                     | 0.69              |
| 30:BG:37:VAL:CG2     | 30:BG:159:VAL:HG12 | 2.23                     | 0.69              |
| 30:BG:163:ALA:CB     | 30:BG:172:LEU:HD23 | 2.20                     | 0.69              |
| 31:BH:69:ARG:HG3     | 31:BH:70:THR:H     | 1.57                     | 0.69              |
| 31:BH:157:TYR:HD1    | 31:BH:158:HIS:N    | 1.90                     | 0.69              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 34:BM:3:THR:HG22   | 34:BM:4:TYR:N      | 2.07                     | 0.69              |
| 35:BN:97:ARG:NH1   | 35:BN:98:VAL:C     | 2.48                     | 0.69              |
| 35:BN:106:LEU:HD13 | 40:BS:39:ARG:NH2   | 2.08                     | 0.69              |
| 36:BO:6:LEU:O      | 36:BO:6:LEU:HD23   | 1.92                     | 0.69              |
| 36:BO:77:ARG:HG2   | 36:BO:79:ARG:HB3   | 1.73                     | 0.69              |
| 37:BP:75:THR:HA    | 37:BP:91:GLU:CD    | 2.18                     | 0.69              |
| 37:BP:127:ILE:HD13 | 37:BP:129:THR:HG21 | 1.72                     | 0.69              |
| 38:BQ:44:LEU:HD13  | 38:BQ:48:VAL:CG2   | 2.23                     | 0.69              |
| 41:BT:89:GLU:HB3   | 42:BU:52:VAL:H     | 1.55                     | 0.69              |
| 43:BV:11:ARG:H     | 43:BV:11:ARG:NH2   | 1.87                     | 0.69              |
| 45:BX:19:LYS:HG2   | 45:BX:39:VAL:HG12  | 1.75                     | 0.69              |
| 46:BY:28:MET:CE    | 46:BY:88:PHE:HB2   | 2.22                     | 0.69              |
| 48:B1:54:ARG:HG2   | 48:B1:54:ARG:HH21  | 1.57                     | 0.69              |
| 49:B2:23:LEU:HD11  | 49:B2:53:LEU:HD13  | 1.74                     | 0.69              |
| 52:B5:14:THR:HG22  | 52:B5:51:GLU:CG    | 2.21                     | 0.69              |
| 1:AA:264:U:H2'     | 19:AT:64:PRO:HB2   | 1.73                     | 0.68              |
| 1:AA:790:A:H2'     | 1:AA:791:G:O5'     | 1.92                     | 0.68              |
| 1:AA:856:C:N3      | 1:AA:857:C:C5      | 2.61                     | 0.68              |
| 1:AA:948:C:H2'     | 1:AA:949:A:H8      | 1.57                     | 0.68              |
| 1:AA:1082:G:C2'    | 1:AA:1083:U:H5'    | 2.23                     | 0.68              |
| 1:AA:1201:A:O2'    | 1:AA:1202:G:H5''   | 1.92                     | 0.68              |
| 1:AA:1465:C:N3     | 1:AA:1466:C:C6     | 2.60                     | 0.68              |
| 3:AB:1:G:N3        | 3:AB:1:G:H2'       | 2.08                     | 0.68              |
| 3:AB:12:U:N3       | 3:AB:24:G:N2       | 2.41                     | 0.68              |
| 4:AE:187:LEU:CD2   | 4:AE:201:ILE:O     | 2.42                     | 0.68              |
| 6:AG:20:TYR:C      | 6:AG:26:CYS:SG     | 2.75                     | 0.68              |
| 6:AG:112:VAL:CG2   | 6:AG:161:ASN:HD21  | 2.06                     | 0.68              |
| 7:AH:76:ILE:HG21   | 7:AH:142:LEU:CB    | 2.23                     | 0.68              |
| 8:AI:7:ASN:ND2     | 8:AI:62:TRP:CD1    | 2.58                     | 0.68              |
| 8:AI:7:ASN:CG      | 8:AI:62:TRP:HD1    | 2.01                     | 0.68              |
| 10:AK:21:LYS:C     | 10:AK:63:LEU:HD13  | 2.18                     | 0.68              |
| 13:AN:48:ILE:O     | 13:AN:49:GLY:C     | 2.36                     | 0.68              |
| 17:AR:43:LEU:HD11  | 17:AR:56:LEU:HD23  | 1.74                     | 0.68              |
| 17:AR:53:HIS:CD2   | 24:BA:715:G:H22    | 2.11                     | 0.68              |
| 18:AS:32:TYR:N     | 18:AS:32:TYR:CD1   | 2.62                     | 0.68              |
| 20:AU:36:ASN:HB3   | 20:AU:40:LEU:HG    | 1.74                     | 0.68              |
| 20:AU:47:THR:O     | 20:AU:82:THR:HA    | 1.92                     | 0.68              |
| 21:AV:36:ARG:HG3   | 21:AV:72:GLY:HA2   | 1.75                     | 0.68              |
| 22:AW:55:ILE:O     | 22:AW:56:MET:C     | 2.37                     | 0.68              |
| 22:AW:56:MET:HG2   | 22:AW:88:VAL:CG2   | 2.22                     | 0.68              |
| 24:BA:391:G:H2'    | 24:BA:392:C:H6     | 1.55                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:408:G:H8    | 24:BA:408:G:O5'    | 1.76                     | 0.68              |
| 24:BA:499:U:H5    | 24:BA:500:G:N3     | 1.90                     | 0.68              |
| 24:BA:783:A:H2'   | 24:BA:784:A:C5'    | 2.23                     | 0.68              |
| 24:BA:955:C:H2'   | 24:BA:956:G:O5'    | 1.93                     | 0.68              |
| 24:BA:1248:G:H8   | 41:BT:2:PRO:HA     | 1.55                     | 0.68              |
| 24:BA:1264:G:C5'  | 24:BA:1265:A:H5''  | 2.23                     | 0.68              |
| 24:BA:1283:G:N2   | 24:BA:1286:A:O4'   | 2.26                     | 0.68              |
| 24:BA:1339:G:C5'  | 44:BW:16:LYS:HD3   | 2.23                     | 0.68              |
| 24:BA:1352:U:O2'  | 24:BA:1353:A:H5'   | 1.93                     | 0.68              |
| 24:BA:1567:A:O2'  | 24:BA:1568:G:C6    | 2.45                     | 0.68              |
| 24:BA:1638:C:H2'  | 24:BA:1639:U:O4'   | 1.93                     | 0.68              |
| 24:BA:1954:G:HO2' | 24:BA:1955:U:H5'   | 1.54                     | 0.68              |
| 24:BA:2277:G:H5'' | 47:BZ:12:ASN:ND2   | 2.08                     | 0.68              |
| 24:BA:2282:G:C2   | 24:BA:2425:A:C8    | 2.81                     | 0.68              |
| 24:BA:2371:G:H4'  | 52:B5:46:HIS:CB    | 2.19                     | 0.68              |
| 24:BA:2468:G:C8   | 24:BA:2476:A:N1    | 2.61                     | 0.68              |
| 24:BA:2498:C:H2'  | 24:BA:2498:C:O2    | 1.92                     | 0.68              |
| 24:BA:2581:G:N2   | 24:BA:2610:C:C6    | 2.62                     | 0.68              |
| 24:BA:2697:G:N2   | 24:BA:2698:U:H1'   | 2.08                     | 0.68              |
| 24:BA:2848:G:N2   | 24:BA:2849:U:H3    | 1.91                     | 0.68              |
| 26:BC:41:VAL:HG22 | 26:BC:216:THR:CG2  | 2.20                     | 0.68              |
| 27:BD:8:PRO:HG2   | 27:BD:26:LYS:HG3   | 1.73                     | 0.68              |
| 27:BD:134:ARG:C   | 27:BD:136:ILE:H    | 2.01                     | 0.68              |
| 27:BD:246:PRO:HD2 | 27:BD:250:TRP:C    | 2.18                     | 0.68              |
| 28:BE:98:PRO:HA   | 28:BE:172:VAL:CG2  | 2.22                     | 0.68              |
| 29:BF:9:ILE:HG13  | 29:BF:122:LYS:HG3  | 1.75                     | 0.68              |
| 29:BF:41:LEU:HA   | 29:BF:44:ARG:HE    | 1.58                     | 0.68              |
| 30:BG:96:ARG:O    | 30:BG:100:TRP:CE3  | 2.46                     | 0.68              |
| 32:BK:86:THR:HG22 | 32:BK:87:LYS:N     | 2.09                     | 0.68              |
| 33:BL:9:LYS:HG2   | 33:BL:56:GLU:HG3   | 1.75                     | 0.68              |
| 33:BL:10:LEU:CD1  | 33:BL:27:LEU:HD21  | 2.22                     | 0.68              |
| 33:BL:99:ILE:CG2  | 33:BL:100:THR:N    | 2.56                     | 0.68              |
| 33:BL:105:LEU:O   | 33:BL:108:ALA:HB3  | 1.93                     | 0.68              |
| 34:BM:11:PRO:HB2  | 34:BM:13:TRP:CZ3   | 2.25                     | 0.68              |
| 34:BM:34:LEU:HB3  | 34:BM:116:LEU:HD21 | 1.74                     | 0.68              |
| 34:BM:45:ASN:N    | 34:BM:45:ASN:OD1   | 2.26                     | 0.68              |
| 34:BM:54:VAL:O    | 34:BM:122:VAL:HB   | 1.93                     | 0.68              |
| 36:BO:112:LEU:O   | 36:BO:128:HIS:CE1  | 2.46                     | 0.68              |
| 40:BS:95:ARG:NH2  | 40:BS:96:ARG:HH21  | 1.90                     | 0.68              |
| 41:BT:45:TYR:HB3  | 41:BT:49:HIS:HE1   | 1.57                     | 0.68              |
| 41:BT:88:ILE:H    | 42:BU:52:VAL:HG22  | 1.57                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 42:BU:61:VAL:O    | 42:BU:99:ILE:CB    | 2.39                     | 0.68              |
| 42:BU:62:LEU:HD13 | 42:BU:97:LYS:C     | 2.18                     | 0.68              |
| 44:BW:15:GLU:HB3  | 44:BW:16:LYS:CE    | 2.23                     | 0.68              |
| 45:BX:50:ARG:HB2  | 45:BX:54:LYS:HD3   | 1.75                     | 0.68              |
| 45:BX:88:LYS:HB3  | 45:BX:91:GLU:OE2   | 1.93                     | 0.68              |
| 46:BY:4:ARG:HD3   | 46:BY:38:TYR:C     | 2.18                     | 0.68              |
| 49:B2:35:ARG:HH12 | 49:B2:47:VAL:CG2   | 2.04                     | 0.68              |
| 51:B4:43:HIS:O    | 51:B4:44:THR:HG23  | 1.93                     | 0.68              |
| 51:B4:58:LEU:HD13 | 51:B4:59:GLU:HB2   | 1.76                     | 0.68              |
| 55:B8:9:ARG:HD3   | 55:B8:14:CYS:O     | 1.93                     | 0.68              |
| 55:B8:20:HIS:C    | 55:B8:22:ARG:N     | 2.45                     | 0.68              |
| 1:AA:38:G:N2      | 1:AA:397:A:C5'     | 2.37                     | 0.68              |
| 1:AA:432:A:N7     | 1:AA:433:C:C5      | 2.61                     | 0.68              |
| 1:AA:474:G:H5'    | 18:AS:81:ARG:CG    | 2.22                     | 0.68              |
| 1:AA:887:G:H2'    | 1:AA:888:G:C8      | 2.29                     | 0.68              |
| 1:AA:1514:C:H2'   | 1:AA:1515:C:H6     | 1.58                     | 0.68              |
| 5:AF:41:GLY:O     | 5:AF:45:LYS:HB2    | 1.93                     | 0.68              |
| 6:AG:19:LEU:C     | 6:AG:21:LEU:N      | 2.45                     | 0.68              |
| 6:AG:88:VAL:HG22  | 7:AH:97:GLY:H      | 1.58                     | 0.68              |
| 7:AH:68:GLU:O     | 7:AH:70:PRO:HD3    | 1.93                     | 0.68              |
| 7:AH:76:ILE:HG21  | 7:AH:142:LEU:HB3   | 1.73                     | 0.68              |
| 13:AN:69:ALA:O    | 13:AN:72:ALA:HB3   | 1.92                     | 0.68              |
| 13:AN:82:VAL:HG12 | 13:AN:108:ILE:HG23 | 1.74                     | 0.68              |
| 20:AU:36:ASN:HB3  | 20:AU:40:LEU:HD21  | 1.75                     | 0.68              |
| 22:AW:55:ILE:O    | 22:AW:57:ARG:N     | 2.26                     | 0.68              |
| 22:AW:56:MET:SD   | 22:AW:84:LEU:HD12  | 2.33                     | 0.68              |
| 24:BA:20:C:O2'    | 24:BA:21:A:C5'     | 2.42                     | 0.68              |
| 24:BA:199:A:C6    | 24:BA:2433:A:C2    | 2.82                     | 0.68              |
| 24:BA:331:A:H61   | 24:BA:1209:G:H2'   | 1.58                     | 0.68              |
| 24:BA:412:A:C2    | 24:BA:413:C:H1'    | 2.27                     | 0.68              |
| 24:BA:552:G:O2'   | 24:BA:553:U:H5'    | 1.94                     | 0.68              |
| 24:BA:727:A:C6    | 24:BA:729:G:C6     | 2.81                     | 0.68              |
| 24:BA:1009:A:O4'  | 41:BT:59:ARG:NH1   | 2.26                     | 0.68              |
| 24:BA:1252:G:N2   | 41:BT:37:GLU:HG3   | 2.04                     | 0.68              |
| 24:BA:1287:A:O4'  | 38:BQ:104:ARG:HD2  | 1.93                     | 0.68              |
| 24:BA:1418:G:H1'  | 24:BA:1581:G:N2    | 2.08                     | 0.68              |
| 24:BA:1472:A:H1'  | 24:BA:1473:G:C8    | 2.28                     | 0.68              |
| 24:BA:1501:C:O4'  | 27:BD:100:GLY:HA2  | 1.93                     | 0.68              |
| 24:BA:1516:U:H2'  | 24:BA:1517:G:H8    | 1.58                     | 0.68              |
| 24:BA:1559:G:C6   | 24:BA:1560:G:H4'   | 2.28                     | 0.68              |
| 24:BA:1708:C:H2'  | 24:BA:1709:U:C5'   | 2.23                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1773:A:C2   | 24:BA:1977:A:N6   | 2.60                     | 0.68              |
| 24:BA:2061:G:N2   | 24:BA:2063:C:O4'  | 2.26                     | 0.68              |
| 24:BA:2112:G:H2'  | 24:BA:2112:G:N3   | 2.07                     | 0.68              |
| 24:BA:2219:G:H2'  | 24:BA:2224:G:C5'  | 2.22                     | 0.68              |
| 24:BA:2256:G:N2   | 24:BA:2275:C:H41  | 1.92                     | 0.68              |
| 24:BA:2588:G:N7   | 24:BA:2589:A:N7   | 2.41                     | 0.68              |
| 24:BA:2654:A:H1'  | 24:BA:2656:U:C4   | 2.28                     | 0.68              |
| 26:BC:97:GLU:HB3  | 26:BC:126:LYS:NZ  | 2.08                     | 0.68              |
| 26:BC:153:ILE:O   | 26:BC:156:ILE:HB  | 1.92                     | 0.68              |
| 26:BC:162:GLU:C   | 26:BC:163:PHE:CD2 | 2.66                     | 0.68              |
| 26:BC:212:VAL:O   | 26:BC:223:ARG:HG3 | 1.93                     | 0.68              |
| 27:BD:47:GLY:O    | 27:BD:49:ILE:HD12 | 1.93                     | 0.68              |
| 27:BD:232:PRO:HG2 | 27:BD:246:PRO:C   | 2.18                     | 0.68              |
| 27:BD:261:LYS:O   | 27:BD:262:ARG:C   | 2.36                     | 0.68              |
| 28:BE:200:GLU:CB  | 28:BE:202:LYS:HZ3 | 2.06                     | 0.68              |
| 31:BH:119:GLU:C   | 31:BH:121:ILE:H   | 1.99                     | 0.68              |
| 31:BH:159:GLU:OE2 | 31:BH:161:GLY:N   | 2.20                     | 0.68              |
| 32:BK:135:GLU:N   | 32:BK:135:GLU:CD  | 2.51                     | 0.68              |
| 33:BL:17:ALA:O    | 33:BL:18:THR:HG23 | 1.93                     | 0.68              |
| 34:BM:55:VAL:HG22 | 34:BM:56:ASN:H    | 1.59                     | 0.68              |
| 35:BN:35:VAL:HA   | 35:BN:61:VAL:CG1  | 2.23                     | 0.68              |
| 37:BP:37:LEU:HD23 | 37:BP:100:GLY:HA3 | 1.74                     | 0.68              |
| 38:BQ:74:LYS:HA   | 38:BQ:77:ARG:HH22 | 1.59                     | 0.68              |
| 39:BR:33:LYS:HG2  | 39:BR:54:LEU:CD2  | 2.23                     | 0.68              |
| 40:BS:87:ASP:OD2  | 40:BS:89:VAL:HG23 | 1.94                     | 0.68              |
| 40:BS:93:ARG:HE   | 40:BS:93:ARG:N    | 1.91                     | 0.68              |
| 44:BW:49:VAL:C    | 44:BW:50:LYS:HD3  | 2.19                     | 0.68              |
| 48:B1:27:LEU:HG   | 48:B1:48:LEU:HD23 | 1.75                     | 0.68              |
| 48:B1:41:GLN:O    | 48:B1:43:HIS:N    | 2.26                     | 0.68              |
| 51:B4:9:LYS:O     | 51:B4:10:LYS:CB   | 2.40                     | 0.68              |
| 51:B4:18:ALA:C    | 51:B4:21:SER:OG   | 2.36                     | 0.68              |
| 52:B5:16:CYS:SG   | 52:B5:19:ARG:O    | 2.51                     | 0.68              |
| 52:B5:20:ASN:HD21 | 52:B5:43:CYS:CA   | 2.06                     | 0.68              |
| 54:B7:6:THR:O     | 54:B7:7:HIS:C     | 2.36                     | 0.68              |
| 55:B8:29:ASN:HB3  | 55:B8:32:HIS:ND1  | 2.08                     | 0.68              |
| 1:AA:236:G:C3'    | 1:AA:237:C:H6     | 2.06                     | 0.68              |
| 1:AA:474:G:H5'    | 18:AS:81:ARG:HE   | 1.58                     | 0.68              |
| 1:AA:964:A:H1'    | 12:AM:55:LYS:HZ2  | 1.57                     | 0.68              |
| 1:AA:1063:C:C5    | 1:AA:1064:G:N7    | 2.62                     | 0.68              |
| 1:AA:1213:A:C6    | 1:AA:1215:G:C2    | 2.81                     | 0.68              |
| 2:A1:48:U:H2'     | 2:A1:49:U:C6      | 2.28                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:AC:41:C:C4      | 3:AC:42:C:C5      | 2.82                     | 0.68              |
| 3:AC:56:C:O2'     | 30:BG:82:LEU:HA   | 1.92                     | 0.68              |
| 3:AB:53:G:H4'     | 24:BA:2470:G:OP1  | 1.94                     | 0.68              |
| 4:AE:95:GLN:O     | 4:AE:97:TRP:N     | 2.27                     | 0.68              |
| 9:AJ:12:LEU:HD12  | 9:AJ:12:LEU:O     | 1.94                     | 0.68              |
| 9:AJ:70:LYS:HB3   | 9:AJ:96:GLN:HG2   | 1.75                     | 0.68              |
| 10:AK:88:LYS:HZ2  | 10:AK:88:LYS:N    | 1.91                     | 0.68              |
| 13:AN:81:ASP:OD1  | 13:AN:106:LYS:HD2 | 1.94                     | 0.68              |
| 15:AP:67:GLU:CD   | 15:AP:68:GLY:N    | 2.49                     | 0.68              |
| 17:AR:77:ARG:O    | 17:AR:80:ALA:HB3  | 1.92                     | 0.68              |
| 22:AW:14:LYS:N    | 22:AW:17:ARG:NH2  | 2.41                     | 0.68              |
| 24:BA:91:A:H3'    | 24:BA:92:G:C8     | 2.27                     | 0.68              |
| 24:BA:534:U:O2'   | 41:BT:49:HIS:CD2  | 2.46                     | 0.68              |
| 24:BA:636:G:H4'   | 24:BA:638:G:O2'   | 1.92                     | 0.68              |
| 24:BA:657:U:H2'   | 24:BA:658:C:C6    | 2.28                     | 0.68              |
| 24:BA:781:A:C2    | 24:BA:1776:G:N3   | 2.61                     | 0.68              |
| 24:BA:920:G:C2'   | 24:BA:921:G:H5'   | 2.23                     | 0.68              |
| 24:BA:1166:C:H2'  | 24:BA:1167:U:C6   | 2.28                     | 0.68              |
| 24:BA:1404:C:O2'  | 24:BA:1405:U:H5'  | 1.93                     | 0.68              |
| 24:BA:1464:C:H2'  | 24:BA:1465:G:H8   | 1.58                     | 0.68              |
| 24:BA:1657:C:C5'  | 28:BE:133:LYS:HD3 | 2.17                     | 0.68              |
| 24:BA:1743:G:OP1  | 24:BA:1743:G:O3'  | 2.12                     | 0.68              |
| 24:BA:1970:A:O2'  | 24:BA:1971:A:O5'  | 2.12                     | 0.68              |
| 24:BA:2271:G:OP1  | 47:BZ:19:LYS:O    | 2.12                     | 0.68              |
| 24:BA:2492:U:O2   | 24:BA:2492:U:C2'  | 2.40                     | 0.68              |
| 26:BC:51:PRO:HB3  | 26:BC:165:ASN:ND2 | 2.08                     | 0.68              |
| 27:BD:29:PRO:CB   | 27:BD:82:ILE:O    | 2.42                     | 0.68              |
| 30:BG:126:ASP:HA  | 30:BG:166:ASP:CG  | 2.18                     | 0.68              |
| 34:BM:72:TYR:CD2  | 34:BM:72:TYR:C    | 2.71                     | 0.68              |
| 37:BP:66:ILE:C    | 37:BP:67:ARG:HG2  | 2.19                     | 0.68              |
| 37:BP:137:TYR:O   | 37:BP:138:ASP:OD1 | 2.10                     | 0.68              |
| 38:BQ:52:ILE:HD12 | 38:BQ:94:TYR:CD1  | 2.28                     | 0.68              |
| 38:BQ:73:VAL:HG23 | 38:BQ:74:LYS:N    | 2.08                     | 0.68              |
| 39:BR:49:VAL:HG22 | 39:BR:76:LYS:NZ   | 2.07                     | 0.68              |
| 39:BR:64:GLU:O    | 39:BR:65:VAL:C    | 2.36                     | 0.68              |
| 41:BT:74:LEU:HB3  | 41:BT:78:THR:CB   | 2.24                     | 0.68              |
| 42:BU:33:VAL:HG12 | 42:BU:34:GLU:N    | 2.07                     | 0.68              |
| 43:BV:11:ARG:O    | 43:BV:11:ARG:HG2  | 1.92                     | 0.68              |
| 43:BV:13:SER:C    | 43:BV:16:LYS:HZ3  | 2.01                     | 0.68              |
| 44:BW:15:GLU:HB3  | 44:BW:16:LYS:NZ   | 2.09                     | 0.68              |
| 46:BY:9:TYR:HB2   | 46:BY:14:LYS:HG2  | 1.74                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:195:A:H4'     | 22:AW:68:LYS:NZ    | 2.08                     | 0.68              |
| 1:AA:259:G:H2'     | 1:AA:260:G:H8      | 1.52                     | 0.68              |
| 1:AA:359:U:H2'     | 1:AA:360:A:C8      | 2.28                     | 0.68              |
| 1:AA:442:C:H2'     | 1:AA:442:C:O2      | 1.93                     | 0.68              |
| 1:AA:573:A:C2      | 1:AA:574:A:C6      | 2.80                     | 0.68              |
| 1:AA:831:U:H2'     | 1:AA:832:C:C6      | 2.29                     | 0.68              |
| 1:AA:899:C:N4      | 1:AA:900:A:N1      | 2.40                     | 0.68              |
| 1:AA:953:G:HO2'    | 15:AP:125:ARG:HA   | 1.57                     | 0.68              |
| 1:AA:992:U:O2'     | 1:AA:993:G:OP2     | 2.11                     | 0.68              |
| 1:AA:1008:C:H2'    | 1:AA:1009:G:O4'    | 1.93                     | 0.68              |
| 1:AA:1206:G:H4'    | 5:AF:192:THR:C     | 2.19                     | 0.68              |
| 1:AA:1250:A:N3     | 1:AA:1370:G:O2'    | 2.26                     | 0.68              |
| 3:AC:25:C:N4       | 3:AC:26:A:N6       | 2.41                     | 0.68              |
| 3:AC:75:C:P        | 24:BA:2602:A:OP1   | 2.51                     | 0.68              |
| 4:AE:43:ASP:OD1    | 4:AE:44:LEU:HG     | 1.93                     | 0.68              |
| 6:AG:199:ASN:CG    | 6:AG:200:GLU:H     | 1.99                     | 0.68              |
| 7:AH:88:LYS:HB3    | 7:AH:123:LEU:O     | 1.94                     | 0.68              |
| 10:AK:53:VAL:O     | 10:AK:56:LYS:HB2   | 1.93                     | 0.68              |
| 13:AN:91:ARG:O     | 13:AN:94:ALA:HB3   | 1.92                     | 0.68              |
| 14:AO:82:VAL:HG12  | 14:AO:83:VAL:N     | 2.08                     | 0.68              |
| 15:AP:19:LEU:C     | 15:AP:25:ILE:HG21  | 2.18                     | 0.68              |
| 17:AR:36:ILE:HD12  | 17:AR:63:ARG:CD    | 2.22                     | 0.68              |
| 19:AT:44:ALA:HB1   | 19:AT:72:ARG:CA    | 2.22                     | 0.68              |
| 24:BA:139:G:H2'    | 24:BA:140:A:O5'    | 1.94                     | 0.68              |
| 24:BA:270(X):G:H2' | 24:BA:270(Y):G:C5' | 2.17                     | 0.68              |
| 24:BA:292:C:C3'    | 24:BA:293:U:N3     | 2.55                     | 0.68              |
| 24:BA:312:G:H3'    | 24:BA:313:C:C5     | 2.28                     | 0.68              |
| 24:BA:455:C:P      | 24:BA:472:A:N1     | 2.67                     | 0.68              |
| 24:BA:491:G:H2'    | 24:BA:492:A:C8     | 2.28                     | 0.68              |
| 24:BA:571:A:H1'    | 24:BA:573:G:N7     | 2.07                     | 0.68              |
| 24:BA:660:G:H2'    | 24:BA:661:C:C6     | 2.29                     | 0.68              |
| 24:BA:669:G:N7     | 29:BF:54:ARG:NH1   | 2.40                     | 0.68              |
| 24:BA:778:G:N2     | 24:BA:787:U:C2     | 2.61                     | 0.68              |
| 24:BA:995:C:H42    | 34:BM:3:THR:CA     | 2.06                     | 0.68              |
| 24:BA:1009:A:H4'   | 41:BT:62:ILE:HG21  | 1.73                     | 0.68              |
| 24:BA:1241:A:N3    | 24:BA:1241:A:C4'   | 2.55                     | 0.68              |
| 24:BA:1314:C:C2'   | 24:BA:1315:C:H5'   | 2.23                     | 0.68              |
| 24:BA:1332:G:C5    | 24:BA:1609:A:C6    | 2.82                     | 0.68              |
| 24:BA:1495:A:C2    | 24:BA:1496:A:N6    | 2.62                     | 0.68              |
| 24:BA:1859:A:H2'   | 24:BA:1860:G:O4'   | 1.92                     | 0.68              |
| 24:BA:1943:U:H1'   | 24:BA:1945:G:H5''  | 1.75                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:2073:C:O2'   | 24:BA:2074:U:H5'  | 1.94                     | 0.68              |
| 24:BA:2114:A:N3    | 24:BA:2167:U:O2'  | 2.25                     | 0.68              |
| 24:BA:2121:G:H1'   | 26:BC:167:LYS:CE  | 2.24                     | 0.68              |
| 24:BA:2284:C:H3'   | 52:B5:27:LYS:HZ2  | 1.59                     | 0.68              |
| 24:BA:2376:A:H2'   | 24:BA:2377:A:O4'  | 1.92                     | 0.68              |
| 24:BA:2708:G:OP1   | 38:BQ:68:ARG:HG2  | 1.92                     | 0.68              |
| 24:BA:2784:C:C4'   | 28:BE:41:LYS:HE2  | 2.23                     | 0.68              |
| 25:BB:24:G:H8      | 25:BB:24:G:O5'    | 1.77                     | 0.68              |
| 27:BD:57:GLY:C     | 27:BD:58:HIS:ND1  | 2.51                     | 0.68              |
| 27:BD:176:ARG:HH11 | 27:BD:176:ARG:CG  | 2.04                     | 0.68              |
| 28:BE:44:TYR:CD2   | 28:BE:45:THR:N    | 2.61                     | 0.68              |
| 28:BE:147:PRO:CG   | 28:BE:149:ARG:HD2 | 2.23                     | 0.68              |
| 30:BG:120:LEU:HD22 | 30:BG:181:ARG:CG  | 2.24                     | 0.68              |
| 30:BG:126:ASP:HA   | 30:BG:166:ASP:OD2 | 1.92                     | 0.68              |
| 33:BL:12:LEU:HD22  | 33:BL:19:PRO:CG   | 2.23                     | 0.68              |
| 34:BM:34:LEU:HD22  | 34:BM:120:LEU:HB2 | 1.75                     | 0.68              |
| 34:BM:75:TYR:HD1   | 34:BM:75:TYR:H    | 1.39                     | 0.68              |
| 34:BM:85:ILE:HB    | 34:BM:90:MET:SD   | 2.34                     | 0.68              |
| 35:BN:121:VAL:C    | 40:BS:70:VAL:O    | 2.36                     | 0.68              |
| 37:BP:27:VAL:HG13  | 37:BP:104:PHE:HE2 | 1.57                     | 0.68              |
| 38:BQ:20:LEU:HD13  | 38:BQ:21:TYR:N    | 2.07                     | 0.68              |
| 38:BQ:21:TYR:HB3   | 38:BQ:47:PHE:CD2  | 2.29                     | 0.68              |
| 38:BQ:107:ASP:OD1  | 38:BQ:109:ALA:HB2 | 1.94                     | 0.68              |
| 39:BR:23:ARG:NH1   | 39:BR:42:ASP:CB   | 2.54                     | 0.68              |
| 40:BS:28:VAL:O     | 40:BS:52:ILE:CG1  | 2.42                     | 0.68              |
| 40:BS:49:VAL:C     | 40:BS:50:ILE:HG12 | 2.17                     | 0.68              |
| 40:BS:65:LYS:HD3   | 40:BS:75:ILE:CD1  | 2.23                     | 0.68              |
| 45:BX:44:ILE:HG22  | 45:BX:44:ILE:O    | 1.93                     | 0.68              |
| 47:BZ:28:GLY:CA    | 47:BZ:67:VAL:HB   | 2.23                     | 0.68              |
| 47:BZ:31:VAL:HG11  | 47:BZ:67:VAL:HG22 | 1.76                     | 0.68              |
| 49:B2:6:VAL:HG23   | 49:B2:35:ARG:CG   | 2.14                     | 0.68              |
| 51:B4:6:VAL:O      | 51:B4:6:VAL:HG13  | 1.94                     | 0.68              |
| 52:B5:19:ARG:HG2   | 52:B5:43:CYS:SG   | 2.34                     | 0.68              |
| 1:AA:59:A:H4'      | 1:AA:388:G:C5'    | 2.24                     | 0.68              |
| 1:AA:97:U:O2'      | 1:AA:99:C:H5'     | 1.94                     | 0.68              |
| 1:AA:130:A:C4      | 1:AA:264:U:H1'    | 2.28                     | 0.68              |
| 1:AA:193:C:C2      | 1:AA:194:C:C5     | 2.82                     | 0.68              |
| 1:AA:194:C:H5''    | 22:AW:65:LYS:NZ   | 2.09                     | 0.68              |
| 1:AA:262:A:C2'     | 1:AA:263:A:C8     | 2.74                     | 0.68              |
| 1:AA:314:C:H5''    | 1:AA:315:A:OP2    | 1.94                     | 0.68              |
| 1:AA:394:G:C4      | 1:AA:395:C:C5     | 2.82                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 1:AA:608:A:C2     | 1:AA:609:A:C8       | 2.81                     | 0.68              |
| 1:AA:644:G:O2'    | 1:AA:645:C:H5'      | 1.94                     | 0.68              |
| 1:AA:821:G:H2'    | 1:AA:822:C:H6       | 1.58                     | 0.68              |
| 1:AA:945:G:C2     | 1:AA:946:A:C8       | 2.81                     | 0.68              |
| 1:AA:1045:C:H2'   | 1:AA:1046:A:C8      | 2.27                     | 0.68              |
| 1:AA:1189:C:O2'   | 5:AF:176:HIS:NE2    | 2.27                     | 0.68              |
| 1:AA:1240:U:H1'   | 9:AJ:42:ILE:HD11    | 1.76                     | 0.68              |
| 1:AA:1292:U:H2'   | 1:AA:1293:G:H8      | 1.58                     | 0.68              |
| 1:AA:1402:C:H2'   | 1:AA:1403:C:H6      | 1.57                     | 0.68              |
| 1:AA:1465:C:H2'   | 1:AA:1466:C:O5'     | 1.94                     | 0.68              |
| 3:AD:9:A:N3       | 3:AD:46:G:H1'       | 2.09                     | 0.68              |
| 4:AE:23:ARG:NH1   | 4:AE:23:ARG:HB2     | 2.09                     | 0.68              |
| 6:AG:139:ARG:HG2  | 6:AG:140:VAL:N      | 2.06                     | 0.68              |
| 6:AG:146:ILE:HD12 | 6:AG:183:GLY:O      | 1.93                     | 0.68              |
| 7:AH:9:LYS:HE2    | 7:AH:9:LYS:HA       | 1.75                     | 0.68              |
| 8:AI:79:LEU:HB2   | 8:AI:88:VAL:HG11    | 1.74                     | 0.68              |
| 9:AJ:2:ALA:HB1    | 9:AJ:5:ARG:O        | 1.94                     | 0.68              |
| 9:AJ:143:ARG:O    | 9:AJ:146:GLU:OE1    | 2.11                     | 0.68              |
| 11:AL:6:GLY:CA    | 11:AL:83:ARG:HB3    | 2.23                     | 0.68              |
| 13:AN:41:THR:CB   | 13:AN:71:LYS:HD3    | 2.22                     | 0.68              |
| 13:AN:45:GLY:HA3  | 13:AN:55:LYS:HB3    | 1.76                     | 0.68              |
| 14:AO:37:CYS:CB   | 14:AO:58:VAL:HG22   | 2.24                     | 0.68              |
| 19:AT:88:TYR:CA   | 19:AT:91:ARG:HH21   | 2.06                     | 0.68              |
| 20:AU:53:ARG:CG   | 20:AU:63:GLN:HE21   | 2.05                     | 0.68              |
| 20:AU:63:GLN:O    | 20:AU:67:ALA:HB2    | 1.93                     | 0.68              |
| 22:AW:43:LEU:HD23 | 22:AW:46:GLU:OE2    | 1.94                     | 0.68              |
| 24:BA:126:A:C5'   | 53:B6:47:ARG:HH12   | 2.07                     | 0.68              |
| 24:BA:353:G:C6    | 24:BA:354:G:C6      | 2.80                     | 0.68              |
| 24:BA:764:A:N6    | 24:BA:1789:A:H2     | 1.90                     | 0.68              |
| 24:BA:919:G:C4    | 24:BA:920:G:C8      | 2.82                     | 0.68              |
| 24:BA:970:C:O2'   | 24:BA:984:A:O2'     | 2.12                     | 0.68              |
| 24:BA:1177:A:C2   | 24:BA:1178:C:N3     | 2.61                     | 0.68              |
| 24:BA:1203:G:O2'  | 24:BA:1204:A:OP1    | 2.11                     | 0.68              |
| 24:BA:1270:C:C1'  | 24:BA:1325:G:N7     | 2.48                     | 0.68              |
| 24:BA:1321:A:O3'  | 43:BV:11:ARG:NH1    | 2.27                     | 0.68              |
| 24:BA:1366:A:H5'  | 50:B3:1:MET:H1      | 1.57                     | 0.68              |
| 24:BA:1449:A:C2   | 24:BA:1449(A):G:H1' | 2.29                     | 0.68              |
| 24:BA:1455:G:N2   | 24:BA:1456:G:H1'    | 2.09                     | 0.68              |
| 24:BA:1491:G:C5   | 24:BA:1492:G:H1'    | 2.28                     | 0.68              |
| 24:BA:1780:A:OP2  | 24:BA:1782:C:P      | 2.51                     | 0.68              |
| 24:BA:1858:G:C5   | 24:BA:1883:G:N1     | 2.60                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:2081:C:O2'   | 24:BA:2082:A:H5'  | 1.94                     | 0.68              |
| 24:BA:2231:C:H2'   | 24:BA:2232:U:C6   | 2.27                     | 0.68              |
| 24:BA:2346:A:C4'   | 24:BA:2383:G:O4'  | 2.41                     | 0.68              |
| 24:BA:2428:G:H4'   | 24:BA:2429:G:O5'  | 1.94                     | 0.68              |
| 24:BA:2493:U:C6    | 24:BA:2493:U:C3'  | 2.75                     | 0.68              |
| 24:BA:2584:U:C2'   | 24:BA:2585:U:C5   | 2.73                     | 0.68              |
| 24:BA:2731:G:N2    | 24:BA:2732:G:C2   | 2.62                     | 0.68              |
| 24:BA:2805:G:N7    | 24:BA:2807:G:H8   | 1.92                     | 0.68              |
| 27:BD:50:THR:C     | 27:BD:51:VAL:HG22 | 2.19                     | 0.68              |
| 27:BD:89:SER:HB2   | 27:BD:202:LYS:HZ1 | 1.57                     | 0.68              |
| 27:BD:146:GLU:HG2  | 27:BD:147:LEU:O   | 1.92                     | 0.68              |
| 28:BE:17:ASP:OD2   | 28:BE:17:ASP:N    | 2.23                     | 0.68              |
| 29:BF:30:PRO:O     | 29:BF:33:LEU:CG   | 2.35                     | 0.68              |
| 31:BH:7:LEU:N      | 31:BH:69:ARG:HE   | 1.91                     | 0.68              |
| 32:BK:9:LEU:HA     | 32:BK:17:GLN:CD   | 2.19                     | 0.68              |
| 36:BO:97:PRO:N     | 36:BO:102:ARG:CZ  | 2.57                     | 0.68              |
| 37:BP:127:ILE:HD12 | 37:BP:127:ILE:N   | 2.08                     | 0.68              |
| 40:BS:50:ILE:HD12  | 40:BS:66:VAL:HG23 | 1.75                     | 0.68              |
| 41:BT:93:LYS:H     | 42:BU:10:LYS:NZ   | 1.83                     | 0.68              |
| 43:BV:25:ARG:CD    | 43:BV:74:ALA:HB3  | 2.24                     | 0.68              |
| 44:BW:49:VAL:HG12  | 44:BW:88:LYS:CB   | 2.24                     | 0.68              |
| 53:B6:42:LEU:O     | 53:B6:45:ALA:N    | 2.25                     | 0.68              |
| 53:B6:47:ARG:HG2   | 53:B6:48:LYS:N    | 2.08                     | 0.68              |
| 54:B7:6:THR:O      | 54:B7:9:GLY:N     | 2.26                     | 0.68              |
| 1:AA:112:G:OP1     | 1:AA:389:A:O2'    | 2.12                     | 0.68              |
| 1:AA:518:C:O2'     | 14:AO:50:SER:HB3  | 1.92                     | 0.68              |
| 1:AA:831:U:H2'     | 1:AA:832:C:H6     | 1.59                     | 0.68              |
| 3:AC:18:G:C2       | 3:AC:58:A:C4      | 2.81                     | 0.68              |
| 4:AE:136:VAL:HA    | 4:AE:139:LYS:NZ   | 2.09                     | 0.68              |
| 5:AF:22:TRP:HB3    | 5:AF:59:ARG:HB3   | 1.74                     | 0.68              |
| 6:AG:14:ARG:C      | 6:AG:14:ARG:HD3   | 2.18                     | 0.68              |
| 6:AG:35:ARG:O      | 6:AG:37:PRO:N     | 2.27                     | 0.68              |
| 6:AG:192:GLU:N     | 6:AG:192:GLU:OE1  | 2.27                     | 0.68              |
| 7:AH:43:LEU:HB3    | 7:AH:136:MET:CE   | 2.23                     | 0.68              |
| 7:AH:74:GLY:O      | 7:AH:115:VAL:HG12 | 1.92                     | 0.68              |
| 7:AH:79:GLU:HB3    | 7:AH:91:LEU:O     | 1.93                     | 0.68              |
| 8:AI:16:GLN:HG3    | 8:AI:17:SER:N     | 2.09                     | 0.68              |
| 9:AJ:46:ALA:HB2    | 9:AJ:120:ILE:HD12 | 1.76                     | 0.68              |
| 11:AL:49:PRO:HD3   | 11:AL:78:LYS:HZ3  | 1.58                     | 0.68              |
| 12:AM:76:ASN:O     | 12:AM:78:ASN:N    | 2.26                     | 0.68              |
| 15:AP:73:GLU:C     | 15:AP:73:GLU:CD   | 2.62                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 16:AQ:27:CYS:H     | 16:AQ:43:CYS:HB3  | 1.58                     | 0.68              |
| 16:AQ:46:GLU:O     | 16:AQ:49:HIS:HB2  | 1.93                     | 0.68              |
| 17:AR:81:LEU:HD23  | 17:AR:85:LEU:HD13 | 1.74                     | 0.68              |
| 22:AW:40:ALA:HA    | 22:AW:55:ILE:HD13 | 1.74                     | 0.68              |
| 24:BA:138:G:N2     | 24:BA:140:A:H62   | 1.91                     | 0.68              |
| 24:BA:223:A:C2     | 24:BA:422:A:N7    | 2.62                     | 0.68              |
| 24:BA:242:G:N7     | 54:B7:2:PRO:HG2   | 2.09                     | 0.68              |
| 24:BA:470:A:N3     | 24:BA:471:A:H1'   | 2.08                     | 0.68              |
| 24:BA:585:G:H1     | 24:BA:1253:A:P    | 2.17                     | 0.68              |
| 24:BA:687:C:H1'    | 24:BA:788:A:C5'   | 2.21                     | 0.68              |
| 24:BA:704:G:N2     | 24:BA:726:G:H1'   | 2.07                     | 0.68              |
| 24:BA:814:C:OP1    | 42:BU:85:LYS:HB2  | 1.94                     | 0.68              |
| 24:BA:1153:C:H2'   | 24:BA:1154:G:C8   | 2.27                     | 0.68              |
| 24:BA:1188:U:C2'   | 24:BA:1189:A:H5'  | 2.24                     | 0.68              |
| 24:BA:1196:C:N3    | 24:BA:1250:G:O6   | 2.27                     | 0.68              |
| 24:BA:1472:A:O2'   | 24:BA:1473:G:H8   | 1.76                     | 0.68              |
| 24:BA:1608:A:H4'   | 24:BA:1609:A:OP1  | 1.93                     | 0.68              |
| 24:BA:1698:A:O2'   | 24:BA:1699:G:O5'  | 2.10                     | 0.68              |
| 24:BA:1735:C:N3    | 24:BA:1741:C:N4   | 2.40                     | 0.68              |
| 24:BA:1936:A:H5'   | 24:BA:1937:A:C2   | 2.28                     | 0.68              |
| 24:BA:2226:C:O2'   | 27:BD:262:ARG:HG2 | 1.93                     | 0.68              |
| 24:BA:2265:U:H2'   | 24:BA:2266:A:OP1  | 1.92                     | 0.68              |
| 24:BA:2331:G:C2    | 24:BA:2385:C:N4   | 2.61                     | 0.68              |
| 24:BA:2436:G:H2'   | 24:BA:2437:U:C6   | 2.28                     | 0.68              |
| 24:BA:2712:U:OP1   | 24:BA:2714:G:H4'  | 1.94                     | 0.68              |
| 25:BB:117:G:N2     | 25:BB:118:G:C8    | 2.62                     | 0.68              |
| 26:BC:11:LEU:O     | 26:BC:14:VAL:HB   | 1.94                     | 0.68              |
| 26:BC:167:LYS:HG3  | 26:BC:168:THR:H   | 1.56                     | 0.68              |
| 26:BC:171:ILE:HG12 | 26:BC:172:HIS:N   | 2.09                     | 0.68              |
| 28:BE:8:LYS:HZ2    | 28:BE:9:VAL:CG1   | 2.01                     | 0.68              |
| 29:BF:7:TYR:H      | 29:BF:20:LEU:HD22 | 1.59                     | 0.68              |
| 29:BF:51:THR:O     | 29:BF:52:LYS:HG3  | 1.94                     | 0.68              |
| 30:BG:9:ARG:HG2    | 30:BG:13:GLU:CD   | 2.19                     | 0.68              |
| 30:BG:44:GLY:CA    | 30:BG:72:ARG:HB3  | 2.24                     | 0.68              |
| 30:BG:144:ILE:HD12 | 30:BG:147:ASP:OD2 | 1.93                     | 0.68              |
| 30:BG:151:ALA:C    | 30:BG:152:LEU:HG  | 2.17                     | 0.68              |
| 32:BK:62:LYS:O     | 32:BK:65:ALA:HB3  | 1.94                     | 0.68              |
| 34:BM:23:LEU:HD11  | 34:BM:62:VAL:HA   | 1.75                     | 0.68              |
| 35:BN:103:ALA:HB1  | 35:BN:107:ARG:CZ  | 2.24                     | 0.68              |
| 36:BO:99:LEU:HD13  | 36:BO:101:VAL:CG2 | 2.23                     | 0.68              |
| 38:BQ:39:PRO:O     | 38:BQ:40:LYS:C    | 2.36                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 38:BQ:83:ILE:HD12 | 38:BQ:86:ARG:NE   | 2.08                     | 0.68              |
| 40:BS:29:ARG:HA   | 40:BS:50:ILE:O    | 1.94                     | 0.68              |
| 40:BS:59:THR:N    | 40:BS:61:PHE:CZ   | 2.61                     | 0.68              |
| 42:BU:68:LYS:HG2  | 42:BU:95:LEU:HD11 | 1.74                     | 0.68              |
| 46:BY:70:LEU:O    | 46:BY:88:PHE:HA   | 1.94                     | 0.68              |
| 46:BY:127:LYS:HA  | 46:BY:164:ALA:HB3 | 1.76                     | 0.68              |
| 49:B2:52:HIS:O    | 49:B2:54:VAL:N    | 2.27                     | 0.68              |
| 52:B5:19:ARG:HB2  | 52:B5:43:CYS:SG   | 2.33                     | 0.68              |
| 54:B7:38:GLY:O    | 54:B7:41:ILE:N    | 2.25                     | 0.68              |
| 1:AA:346:G:O2'    | 1:AA:347:G:H5'    | 1.94                     | 0.68              |
| 1:AA:379:C:H2'    | 1:AA:380:G:H5'    | 1.75                     | 0.68              |
| 1:AA:427:U:C2     | 1:AA:428:G:N7     | 2.62                     | 0.68              |
| 1:AA:516:U:C4     | 1:AA:517:G:N1     | 2.62                     | 0.68              |
| 1:AA:915:A:H8     | 1:AA:915:A:O5'    | 1.77                     | 0.68              |
| 1:AA:963:G:O2'    | 1:AA:964:A:H5'    | 1.94                     | 0.68              |
| 1:AA:1209:C:O2'   | 1:AA:1210:C:H5'   | 1.93                     | 0.68              |
| 1:AA:1221:G:OP1   | 1:AA:1320:C:N4    | 2.27                     | 0.68              |
| 1:AA:1316:G:O6    | 21:AV:6:LYS:HE2   | 1.94                     | 0.68              |
| 3:AC:15:G:C8      | 3:AC:15:G:OP2     | 2.46                     | 0.68              |
| 3:AB:51:U:O2'     | 24:BA:2471:C:H4'  | 1.93                     | 0.68              |
| 4:AE:82:ARG:O     | 4:AE:86:GLU:HG3   | 1.93                     | 0.68              |
| 4:AE:184:VAL:O    | 4:AE:198:ASP:CB   | 2.36                     | 0.68              |
| 5:AF:38:ARG:HB2   | 5:AF:94:LEU:CD2   | 2.24                     | 0.68              |
| 12:AM:27:ALA:HB2  | 12:AM:85:LEU:HG   | 1.75                     | 0.68              |
| 24:BA:112:U:C4    | 24:BA:113:G:H1'   | 2.28                     | 0.68              |
| 24:BA:193:U:H4'   | 24:BA:803:U:H4'   | 1.74                     | 0.68              |
| 24:BA:216:A:H2'   | 24:BA:217:G:H8    | 1.59                     | 0.68              |
| 24:BA:242:G:H5''  | 54:B7:4:MET:CE    | 2.23                     | 0.68              |
| 24:BA:447:A:N6    | 24:BA:473:G:H1'   | 2.08                     | 0.68              |
| 24:BA:673:C:N4    | 24:BA:808:G:N1    | 2.41                     | 0.68              |
| 24:BA:885:C:H42   | 24:BA:889:C:C1'   | 2.06                     | 0.68              |
| 24:BA:947:G:O2'   | 24:BA:948:G:H5'   | 1.94                     | 0.68              |
| 24:BA:962:G:H2'   | 24:BA:963:U:H6    | 1.51                     | 0.68              |
| 24:BA:988:A:H4'   | 24:BA:1155:A:C2   | 2.25                     | 0.68              |
| 24:BA:1092:C:N4   | 24:BA:1093:G:N3   | 2.41                     | 0.68              |
| 24:BA:1213:A:O2'  | 24:BA:1239:G:O4'  | 2.12                     | 0.68              |
| 24:BA:1376:C:C2   | 24:BA:1377:G:C8   | 2.82                     | 0.68              |
| 24:BA:1531:C:O2   | 24:BA:1532:C:H5   | 1.76                     | 0.68              |
| 24:BA:1566:A:O2'  | 24:BA:1567:A:OP1  | 2.07                     | 0.68              |
| 24:BA:1697:G:H5'' | 24:BA:1698:A:C5'  | 2.21                     | 0.68              |
| 24:BA:1819:A:C3'  | 27:BD:178:PRO:HB2 | 2.22                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1835:G:C2'   | 24:BA:1836:C:H5'   | 2.23                     | 0.68              |
| 24:BA:1906:G:H8    | 24:BA:1929:G:H2'   | 1.58                     | 0.68              |
| 24:BA:1988:C:O2'   | 24:BA:1989:G:H5'   | 1.93                     | 0.68              |
| 24:BA:1992:G:O4'   | 24:BA:1993:U:O4    | 2.12                     | 0.68              |
| 24:BA:2019:A:N1    | 24:BA:2020:A:C4    | 2.62                     | 0.68              |
| 24:BA:2134:A:H2'   | 24:BA:2135:A:C5'   | 2.22                     | 0.68              |
| 24:BA:2195:C:C2    | 24:BA:2196:C:C6    | 2.82                     | 0.68              |
| 24:BA:2575:C:H5''  | 24:BA:2576:G:OP2   | 1.94                     | 0.68              |
| 24:BA:2675:A:N1    | 24:BA:2732:G:N2    | 2.42                     | 0.68              |
| 24:BA:2764:A:H5'   | 24:BA:2765:A:OP2   | 1.92                     | 0.68              |
| 26:BC:10:LEU:HD11  | 26:BC:32:LEU:CB    | 2.22                     | 0.68              |
| 27:BD:132:PRO:HB3  | 27:BD:190:TYR:CE1  | 2.29                     | 0.68              |
| 28:BE:2:LYS:HD3    | 28:BE:83:ASP:CB    | 2.24                     | 0.68              |
| 28:BE:137:HIS:CB   | 28:BE:138:PRO:HD2  | 2.23                     | 0.68              |
| 29:BF:4:VAL:C      | 29:BF:20:LEU:HD12  | 2.14                     | 0.68              |
| 29:BF:176:LEU:C    | 29:BF:178:PRO:HD2  | 2.19                     | 0.68              |
| 31:BH:42:ARG:NE    | 31:BH:42:ARG:HA    | 2.09                     | 0.68              |
| 31:BH:76:VAL:HG23  | 31:BH:77:LYS:H     | 1.57                     | 0.68              |
| 31:BH:107:VAL:CG1  | 31:BH:152:ARG:HD2  | 2.23                     | 0.68              |
| 32:BK:69:LYS:HA    | 32:BK:138:ILE:HD13 | 1.74                     | 0.68              |
| 35:BN:10:VAL:H     | 35:BN:17:ARG:CG    | 2.05                     | 0.68              |
| 35:BN:97:ARG:HH11  | 35:BN:98:VAL:CA    | 2.05                     | 0.68              |
| 36:BO:54:GLY:HA2   | 54:B7:12:LYS:HD3   | 1.76                     | 0.68              |
| 37:BP:122:GLY:O    | 37:BP:123:HIS:C    | 2.37                     | 0.68              |
| 39:BR:31:SER:O     | 39:BR:35:ILE:HB    | 1.93                     | 0.68              |
| 46:BY:7:ALA:HB2    | 46:BY:38:TYR:CD1   | 2.28                     | 0.68              |
| 46:BY:128:VAL:HG23 | 46:BY:164:ALA:HB2  | 1.75                     | 0.68              |
| 48:B1:33:GLN:N     | 48:B1:33:GLN:NE2   | 2.42                     | 0.68              |
| 50:B3:14:ILE:O     | 50:B3:14:ILE:HG22  | 1.93                     | 0.68              |
| 54:B7:60:LEU:HD23  | 54:B7:61:LEU:N     | 2.09                     | 0.68              |
| 1:AA:80:G:C2'      | 1:AA:81:G:O4'      | 2.35                     | 0.68              |
| 1:AA:345:C:H5''    | 1:AA:346:G:OP1     | 1.93                     | 0.68              |
| 1:AA:366:C:H4'     | 1:AA:367:U:OP1     | 1.94                     | 0.68              |
| 1:AA:742:G:H2'     | 1:AA:743:U:O4'     | 1.94                     | 0.68              |
| 1:AA:992:U:O4      | 1:AA:1043:C:OP2    | 2.11                     | 0.68              |
| 1:AA:1230:C:O2     | 15:AP:126:LYS:HD3  | 1.94                     | 0.68              |
| 3:AD:2:C:H2'       | 3:AD:3:C:C6        | 2.29                     | 0.68              |
| 3:AB:76:A:H4'      | 24:BA:2507:C:C4'   | 2.24                     | 0.68              |
| 4:AE:69:LEU:HB2    | 4:AE:159:PRO:HB2   | 1.76                     | 0.68              |
| 4:AE:96:ARG:O      | 4:AE:98:LEU:HD22   | 1.94                     | 0.68              |
| 4:AE:118:LEU:HD11  | 4:AE:141:GLU:OE2   | 1.93                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:AF:52:LEU:O     | 5:AF:53:ALA:HB2    | 1.93                     | 0.68              |
| 5:AF:143:GLU:O    | 5:AF:145:GLY:N     | 2.27                     | 0.68              |
| 5:AF:151:VAL:HG12 | 5:AF:152:ILE:N     | 2.09                     | 0.68              |
| 7:AH:12:LEU:HD13  | 7:AH:30:ALA:HA     | 1.75                     | 0.68              |
| 7:AH:56:GLN:NE2   | 7:AH:56:GLN:H      | 1.92                     | 0.68              |
| 7:AH:135:THR:O    | 7:AH:139:LEU:HD12  | 1.94                     | 0.68              |
| 8:AI:11:ASN:HD22  | 8:AI:86:ARG:HH22   | 1.41                     | 0.68              |
| 12:AM:27:ALA:HB2  | 12:AM:85:LEU:HD11  | 1.76                     | 0.68              |
| 14:AO:52:LEU:N    | 14:AO:52:LEU:HD23  | 2.09                     | 0.68              |
| 14:AO:84:LEU:CG   | 14:AO:85:ILE:N     | 2.56                     | 0.68              |
| 14:AO:85:ILE:HD11 | 14:AO:98:TYR:HB3   | 1.75                     | 0.68              |
| 15:AP:67:GLU:HG3  | 15:AP:68:GLY:H     | 1.59                     | 0.68              |
| 17:AR:42:HIS:ND1  | 17:AR:42:HIS:C     | 2.52                     | 0.68              |
| 18:AS:82:GLN:O    | 18:AS:82:GLN:HG3   | 1.94                     | 0.68              |
| 20:AU:74:ARG:CA   | 20:AU:79:LEU:HD11  | 2.23                     | 0.68              |
| 22:AW:59:ALA:O    | 22:AW:60:GLU:C     | 2.36                     | 0.68              |
| 24:BA:128:C:C2    | 24:BA:129:C:C5     | 2.82                     | 0.68              |
| 24:BA:230:U:H2'   | 24:BA:231:C:H6     | 1.59                     | 0.68              |
| 24:BA:645:C:H5'   | 24:BA:646:A:OP1    | 1.94                     | 0.68              |
| 24:BA:764:A:OP1   | 27:BD:211:ARG:HA   | 1.94                     | 0.68              |
| 24:BA:969:U:C2'   | 24:BA:970:C:H5'    | 2.23                     | 0.68              |
| 24:BA:972:G:OP1   | 24:BA:974(A):C:H3' | 1.94                     | 0.68              |
| 24:BA:974:G:O2'   | 24:BA:1186:G:C4    | 2.45                     | 0.68              |
| 24:BA:974(A):C:O2 | 24:BA:1186:G:N1    | 2.21                     | 0.68              |
| 24:BA:997:G:C5'   | 41:BT:92:ARG:HD2   | 2.24                     | 0.68              |
| 24:BA:1051:G:H4'  | 24:BA:2752:C:O4'   | 1.94                     | 0.68              |
| 24:BA:1174:A:N6   | 24:BA:1177:A:C2    | 2.61                     | 0.68              |
| 24:BA:1206:G:C8   | 24:BA:1206:G:C3'   | 2.70                     | 0.68              |
| 24:BA:1263:U:H5   | 24:BA:1265:A:H61   | 1.40                     | 0.68              |
| 24:BA:1291:C:H4'  | 24:BA:1535:U:O3'   | 1.93                     | 0.68              |
| 24:BA:1451:C:OP2  | 24:BA:1451:C:O4'   | 2.11                     | 0.68              |
| 24:BA:1497:U:O4   | 24:BA:1577:C:C4'   | 2.42                     | 0.68              |
| 24:BA:1670:C:P    | 24:BA:1671:U:OP2   | 2.51                     | 0.68              |
| 24:BA:1700:A:OP1  | 24:BA:1700:A:O3'   | 2.11                     | 0.68              |
| 24:BA:1711:C:H2'  | 24:BA:1712:C:C6    | 2.29                     | 0.68              |
| 24:BA:2067:G:H5'' | 24:BA:2068:U:OP2   | 1.93                     | 0.68              |
| 24:BA:2246:G:C2   | 24:BA:2247:A:C6    | 2.82                     | 0.68              |
| 24:BA:2436:G:C6   | 24:BA:2437:U:C4    | 2.82                     | 0.68              |
| 27:BD:7:LYS:HD3   | 27:BD:9:TYR:HH     | 1.58                     | 0.68              |
| 27:BD:107:ALA:N   | 27:BD:108:PRO:HD3  | 2.08                     | 0.68              |
| 27:BD:140:THR:C   | 27:BD:165:ILE:HD13 | 2.18                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:159:ALA:CA   | 27:BD:196:VAL:HG11 | 2.23                     | 0.68              |
| 27:BD:180:GLY:O    | 27:BD:270:ILE:HG21 | 1.93                     | 0.68              |
| 27:BD:201:HIS:HD2  | 27:BD:202:LYS:HE2  | 1.57                     | 0.68              |
| 28:BE:105:THR:OG1  | 28:BE:106:GLY:N    | 2.25                     | 0.68              |
| 31:BH:118:PRO:N    | 31:BH:121:ILE:HG21 | 2.08                     | 0.68              |
| 33:BL:108:ALA:HB1  | 33:BL:123:ALA:HB3  | 1.76                     | 0.68              |
| 34:BM:7:LYS:HZ2    | 34:BM:10:GLU:N     | 1.91                     | 0.68              |
| 34:BM:29:LYS:O     | 34:BM:30:ILE:C     | 2.36                     | 0.68              |
| 35:BN:10:VAL:O     | 35:BN:11:ALA:CB    | 2.42                     | 0.68              |
| 39:BR:92:TYR:OH    | 39:BR:93:LYS:HD3   | 1.94                     | 0.68              |
| 41:BT:94:ASN:HA    | 41:BT:97:ASP:CG    | 2.17                     | 0.68              |
| 45:BX:35:TYR:CE1   | 45:BX:65:ALA:O     | 2.47                     | 0.68              |
| 46:BY:63:ASP:CG    | 46:BY:64:GLY:N     | 2.51                     | 0.68              |
| 46:BY:116:VAL:HG21 | 46:BY:145:GLU:HG2  | 1.76                     | 0.68              |
| 47:BZ:51:VAL:HG11  | 47:BZ:79:VAL:HG21  | 1.74                     | 0.68              |
| 49:B2:55:ARG:HA    | 49:B2:55:ARG:NH2   | 2.09                     | 0.68              |
| 50:B3:68:ARG:N     | 50:B3:68:ARG:CD    | 2.55                     | 0.68              |
| 50:B3:68:ARG:HD3   | 50:B3:68:ARG:H     | 1.56                     | 0.68              |
| 53:B6:31:LEU:C     | 53:B6:35:ARG:HD3   | 2.18                     | 0.68              |
| 55:B8:22:ARG:HB3   | 55:B8:24:TYR:CD1   | 2.28                     | 0.68              |
| 1:AA:137:C:C2      | 1:AA:227:G:N2      | 2.62                     | 0.68              |
| 1:AA:834:C:O2'     | 1:AA:835:U:C5'     | 2.42                     | 0.68              |
| 1:AA:900:A:C8      | 1:AA:901:A:N7      | 2.62                     | 0.68              |
| 1:AA:1211:U:O2'    | 1:AA:1213:A:H1'    | 1.92                     | 0.68              |
| 1:AA:1285:A:H4'    | 1:AA:1286:A:C8     | 2.29                     | 0.68              |
| 1:AA:1307:U:H5''   | 15:AP:101:GLN:HE21 | 1.59                     | 0.68              |
| 1:AA:1317:C:C2'    | 1:AA:1318:A:H5'    | 2.24                     | 0.68              |
| 1:AA:1333:A:H2'    | 1:AA:1334:G:O4'    | 1.94                     | 0.68              |
| 3:AD:16:U:H4'      | 3:AD:18:G:C5'      | 2.24                     | 0.68              |
| 3:AD:19:G:C2       | 3:AD:57:G:H1'      | 2.28                     | 0.68              |
| 4:AE:144:ARG:HD3   | 4:AE:148:TYR:CZ    | 2.29                     | 0.68              |
| 8:AI:6:VAL:O       | 8:AI:6:VAL:CG1     | 2.42                     | 0.68              |
| 10:AK:115:SER:O    | 10:AK:116:LYS:HD2  | 1.94                     | 0.68              |
| 11:AL:15:ALA:HB1   | 11:AL:77:ILE:CG1   | 2.24                     | 0.68              |
| 15:AP:15:VAL:HG11  | 15:AP:39:ILE:CD1   | 2.24                     | 0.68              |
| 15:AP:91:ARG:CB    | 15:AP:98:VAL:HG13  | 2.24                     | 0.68              |
| 18:AS:20:VAL:HG13  | 18:AS:21:VAL:H     | 1.59                     | 0.68              |
| 19:AT:75:ARG:NH1   | 19:AT:77:VAL:HG22  | 2.09                     | 0.68              |
| 20:AU:38:GLU:O     | 20:AU:41:LYS:HB2   | 1.94                     | 0.68              |
| 24:BA:126:A:C2'    | 24:BA:127:A:H5'    | 2.24                     | 0.68              |
| 24:BA:371:A:O2'    | 24:BA:372:G:P      | 2.51                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:551:G:O5'   | 24:BA:1220:A:H2    | 1.77                     | 0.68              |
| 24:BA:630:G:H1    | 24:BA:634:C:N4     | 1.91                     | 0.68              |
| 24:BA:667:U:H2'   | 24:BA:668:G:O4'    | 1.93                     | 0.68              |
| 24:BA:685:A:O2'   | 24:BA:686:G:OP2    | 2.10                     | 0.68              |
| 24:BA:1321:A:N3   | 24:BA:1321:A:H2'   | 2.08                     | 0.68              |
| 24:BA:2197:U:H2'  | 24:BA:2224:G:N2    | 2.08                     | 0.68              |
| 24:BA:2360:A:C8   | 24:BA:2360:A:OP2   | 2.47                     | 0.68              |
| 24:BA:2394:C:OP1  | 36:BO:57:THR:HG23  | 1.94                     | 0.68              |
| 24:BA:2524:G:C5'  | 24:BA:2764:A:O2'   | 2.41                     | 0.68              |
| 24:BA:2546:U:H4'  | 24:BA:2565:A:C2    | 2.28                     | 0.68              |
| 24:BA:2589:A:H2'  | 24:BA:2590:A:H8    | 1.58                     | 0.68              |
| 24:BA:2630:G:H5'  | 24:BA:2631:G:OP2   | 1.93                     | 0.68              |
| 24:BA:2636:U:H4'  | 28:BE:79:ARG:NH2   | 2.07                     | 0.68              |
| 24:BA:2767:C:C2   | 24:BA:2768:C:H5    | 2.12                     | 0.68              |
| 25:BB:14:U:C2'    | 25:BB:107:U:H1'    | 2.24                     | 0.68              |
| 25:BB:76:G:H1'    | 46:BY:75:ASN:HD21  | 1.59                     | 0.68              |
| 26:BC:123:VAL:O   | 26:BC:127:LEU:HB2  | 1.94                     | 0.68              |
| 27:BD:180:GLY:O   | 27:BD:181:GLU:OE1  | 2.12                     | 0.68              |
| 29:BF:18:ARG:HG2  | 29:BF:18:ARG:NH1   | 2.08                     | 0.68              |
| 29:BF:81:PRO:HG2  | 29:BF:82:ILE:CD1   | 2.24                     | 0.68              |
| 29:BF:201:VAL:CG1 | 29:BF:205:ARG:HH21 | 2.07                     | 0.68              |
| 32:BK:83:ALA:CB   | 32:BK:88:ILE:HA    | 2.22                     | 0.68              |
| 34:BM:104:LYS:HD3 | 34:BM:117:PHE:CE2  | 2.29                     | 0.68              |
| 35:BN:105:GLU:C   | 35:BN:111:PHE:CZ   | 2.71                     | 0.68              |
| 36:BO:121:LYS:H   | 36:BO:122:PRO:HD3  | 1.56                     | 0.68              |
| 37:BP:16:ARG:HG3  | 37:BP:72:LYS:CD    | 2.22                     | 0.68              |
| 37:BP:116:GLU:OE1 | 37:BP:119:ARG:HD3  | 1.93                     | 0.68              |
| 39:BR:49:VAL:HG13 | 39:BR:76:LYS:HZ1   | 1.57                     | 0.68              |
| 42:BU:11:GLN:OE1  | 42:BU:22:VAL:HB    | 1.93                     | 0.68              |
| 43:BV:28:SER:H    | 43:BV:31:GLU:CD    | 2.01                     | 0.68              |
| 44:BW:7:VAL:HG21  | 48:B1:31:ARG:HH22  | 1.59                     | 0.68              |
| 47:BZ:26:TYR:O    | 47:BZ:67:VAL:HG21  | 1.94                     | 0.68              |
| 47:BZ:70:GLN:HB3  | 47:BZ:78:TYR:O     | 1.94                     | 0.68              |
| 48:B1:45:ILE:CG1  | 48:B1:46:ARG:N     | 2.56                     | 0.68              |
| 49:B2:29:ARG:HB2  | 49:B2:30:ARG:CZ    | 2.23                     | 0.68              |
| 52:B5:52:VAL:HG12 | 52:B5:53:LYS:H     | 1.57                     | 0.68              |
| 54:B7:55:ALA:O    | 54:B7:58:ILE:HD12  | 1.93                     | 0.68              |
| 1:AA:191(D):U:H2' | 1:AA:191(E):G:H8   | 1.59                     | 0.68              |
| 1:AA:292:G:C5     | 1:AA:293:G:H1'     | 2.29                     | 0.68              |
| 1:AA:425:G:N2     | 1:AA:426:G:H1'     | 2.08                     | 0.68              |
| 1:AA:511:C:O2'    | 1:AA:512:U:H6      | 1.75                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:558:G:H2'    | 1:AA:559:A:C2     | 2.28                     | 0.68              |
| 1:AA:570:G:H5'    | 1:AA:820:U:C1'    | 2.19                     | 0.68              |
| 1:AA:792:A:N3     | 1:AA:794:A:C6     | 2.62                     | 0.68              |
| 1:AA:819:A:N6     | 1:AA:1529:G:N7    | 2.42                     | 0.68              |
| 1:AA:968:A:H5''   | 1:AA:969:A:O5'    | 1.94                     | 0.68              |
| 1:AA:999:U:H2'    | 1:AA:1000:A:O4'   | 1.93                     | 0.68              |
| 1:AA:1326:C:H5''  | 23:AX:12:LYS:HZ1  | 1.59                     | 0.68              |
| 1:AA:1390:U:H2'   | 1:AA:1391:U:C5    | 2.29                     | 0.68              |
| 1:AA:1520:G:H2'   | 1:AA:1521:G:C8    | 2.29                     | 0.68              |
| 4:AE:21:ARG:N     | 4:AE:21:ARG:HE    | 1.90                     | 0.68              |
| 6:AG:120:LEU:HB2  | 6:AG:125:HIS:CD2  | 2.29                     | 0.68              |
| 6:AG:204:ILE:HD12 | 6:AG:204:ILE:H    | 1.58                     | 0.68              |
| 7:AH:86:ALA:HB3   | 7:AH:130:ASN:HD21 | 1.58                     | 0.68              |
| 8:AI:49:ALA:CB    | 20:AU:80:PRO:HD3  | 2.23                     | 0.68              |
| 10:AK:126:LYS:HZ1 | 10:AK:127:LEU:HB2 | 1.58                     | 0.68              |
| 13:AN:19:ALA:CB   | 13:AN:80:VAL:HG21 | 2.24                     | 0.68              |
| 13:AN:106:LYS:HG2 | 13:AN:107:SER:H   | 1.59                     | 0.68              |
| 19:AT:58:GLU:CD   | 19:AT:74:LEU:HB3  | 2.19                     | 0.68              |
| 19:AT:88:TYR:O    | 19:AT:92:ARG:CB   | 2.41                     | 0.68              |
| 19:AT:91:ARG:O    | 19:AT:94:ASN:HB2  | 1.94                     | 0.68              |
| 19:AT:104:LYS:HD3 | 19:AT:105:ALA:H   | 1.58                     | 0.68              |
| 22:AW:31:SER:OG   | 22:AW:32:ALA:N    | 2.26                     | 0.68              |
| 23:AX:6:ARG:HB3   | 23:AX:15:ARG:NH2  | 2.09                     | 0.68              |
| 24:BA:298:G:O2'   | 24:BA:322:A:N1    | 2.24                     | 0.68              |
| 24:BA:307:G:C2    | 24:BA:309:G:H5''  | 2.29                     | 0.68              |
| 24:BA:375:C:H2'   | 24:BA:376:C:C6    | 2.28                     | 0.68              |
| 24:BA:450:G:H5'   | 29:BF:52:LYS:CD   | 2.23                     | 0.68              |
| 24:BA:668:G:C5    | 24:BA:670:A:N7    | 2.61                     | 0.68              |
| 24:BA:746:A:C6    | 24:BA:2611:U:H4'  | 2.28                     | 0.68              |
| 24:BA:846:C:H1'   | 24:BA:847:U:C5    | 2.29                     | 0.68              |
| 24:BA:865:C:N4    | 24:BA:909:A:N6    | 2.37                     | 0.68              |
| 24:BA:915:C:H2'   | 24:BA:916:G:H8    | 1.57                     | 0.68              |
| 24:BA:972:G:C8    | 24:BA:973:A:H3'   | 2.29                     | 0.68              |
| 24:BA:1102:C:H2'  | 24:BA:1102:C:O2   | 1.93                     | 0.68              |
| 24:BA:1271:G:O5'  | 24:BA:1272:A:OP1  | 2.10                     | 0.68              |
| 24:BA:1341:U:OP2  | 24:BA:1397:U:C4   | 2.47                     | 0.68              |
| 24:BA:1398:C:O2'  | 24:BA:1399:C:H5'  | 1.94                     | 0.68              |
| 24:BA:1591:G:C6   | 24:BA:1592:C:N4   | 2.62                     | 0.68              |
| 24:BA:1815:A:O2'  | 24:BA:1816:G:H4'  | 1.94                     | 0.68              |
| 24:BA:1916:A:OP1  | 24:BA:1916:A:H3'  | 1.94                     | 0.68              |
| 24:BA:1949:G:H2'  | 24:BA:1950:G:O4'  | 1.94                     | 0.68              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2025:C:H2'   | 24:BA:2026:C:H6    | 1.58                     | 0.68              |
| 24:BA:2125:G:H22   | 24:BA:2172:U:H5'   | 1.60                     | 0.68              |
| 24:BA:2314:C:H2'   | 24:BA:2315:G:C8    | 2.26                     | 0.68              |
| 24:BA:2516:G:H2'   | 24:BA:2517:C:C6    | 2.29                     | 0.68              |
| 24:BA:2524:G:H5'   | 24:BA:2764:A:HO2'  | 1.58                     | 0.68              |
| 24:BA:2615:U:C2    | 51:B4:7:PRO:HA     | 2.29                     | 0.68              |
| 24:BA:2792:G:C2    | 24:BA:2793:G:C5    | 2.81                     | 0.68              |
| 25:BB:4:C:C2       | 25:BB:117:G:N2     | 2.61                     | 0.68              |
| 26:BC:104:LEU:CD1  | 26:BC:130:ILE:HD11 | 2.23                     | 0.68              |
| 26:BC:211:SER:HB2  | 26:BC:213:TYR:CZ   | 2.29                     | 0.68              |
| 27:BD:243:GLY:O    | 27:BD:244:ARG:CB   | 2.42                     | 0.68              |
| 28:BE:41:LYS:C     | 28:BE:43:GLY:N     | 2.52                     | 0.68              |
| 28:BE:176:ILE:CG2  | 28:BE:181:LEU:HB2  | 2.23                     | 0.68              |
| 29:BF:110:LEU:HD23 | 29:BF:186:ILE:HD11 | 1.76                     | 0.68              |
| 30:BG:36:LYS:CB    | 30:BG:95:ARG:HD3   | 2.22                     | 0.68              |
| 30:BG:96:ARG:HA    | 30:BG:100:TRP:HZ3  | 1.59                     | 0.68              |
| 32:BK:77:LEU:HD11  | 32:BK:140:LEU:CB   | 2.24                     | 0.68              |
| 33:BL:14:ALA:CB    | 33:BL:45:THR:HB    | 2.24                     | 0.68              |
| 35:BN:6:THR:HA     | 35:BN:7:TYR:HD1    | 1.55                     | 0.68              |
| 40:BS:50:ILE:HB    | 40:BS:66:VAL:HB    | 0.84                     | 0.68              |
| 42:BU:61:VAL:O     | 42:BU:62:LEU:HD23  | 1.94                     | 0.68              |
| 45:BX:99:CYS:O     | 45:BX:101:LYS:HD2  | 1.94                     | 0.68              |
| 46:BY:118:GLN:NE2  | 46:BY:120:ILE:HG23 | 2.09                     | 0.68              |
| 48:B1:36:ILE:HG12  | 48:B1:37:GLY:H     | 1.59                     | 0.68              |
| 49:B2:3:ARG:HB3    | 49:B2:3:ARG:CZ     | 2.24                     | 0.68              |
| 49:B2:6:VAL:CG1    | 49:B2:56:VAL:HA    | 2.23                     | 0.68              |
| 50:B3:44:THR:HG22  | 50:B3:45:GLY:N     | 2.09                     | 0.68              |
| 51:B4:15:ARG:CG    | 51:B4:16:ARG:N     | 2.56                     | 0.68              |
| 52:B5:22:ALA:HB1   | 52:B5:39:TYR:HE2   | 1.59                     | 0.68              |
| 54:B7:4:MET:HE1    | 54:B7:62:LEU:CG    | 2.22                     | 0.68              |
| 55:B8:25:VAL:CB    | 55:B8:34:GLN:HB2   | 2.22                     | 0.68              |
| 1:AA:208:U:H4'     | 1:AA:209:U:OP1     | 1.92                     | 0.67              |
| 1:AA:323:U:H5'     | 22:AW:23:ARG:HB2   | 1.77                     | 0.67              |
| 1:AA:518:C:O2'     | 1:AA:519:C:P       | 2.51                     | 0.67              |
| 1:AA:617:G:H4'     | 18:AS:44:THR:OG1   | 1.94                     | 0.67              |
| 1:AA:692:U:H1'     | 1:AA:694:A:N7      | 2.09                     | 0.67              |
| 1:AA:735:C:O2'     | 20:AU:75:ILE:HD13  | 1.94                     | 0.67              |
| 1:AA:775:G:C2      | 1:AA:776:G:N7      | 2.62                     | 0.67              |
| 1:AA:858:G:N2      | 1:AA:869:G:C3'     | 2.55                     | 0.67              |
| 1:AA:863:U:O2      | 1:AA:863:U:C2'     | 2.40                     | 0.67              |
| 1:AA:873:A:OP1     | 1:AA:873:A:H8      | 1.76                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 1:AA:900:A:H2'     | 1:AA:901:A:C8       | 2.29                     | 0.67              |
| 1:AA:1202:G:H1'    | 16:AQ:29:ARG:HD2    | 1.75                     | 0.67              |
| 1:AA:1287:A:N6     | 1:AA:1371:G:O4'     | 2.27                     | 0.67              |
| 3:AC:44:G:N2       | 3:AC:45:U:H1'       | 2.09                     | 0.67              |
| 3:AC:51:U:H2'      | 3:AC:52:G:C8        | 2.29                     | 0.67              |
| 4:AE:82:ARG:CA     | 4:AE:92:TYR:HE1     | 2.07                     | 0.67              |
| 4:AE:173:ALA:HA    | 4:AE:176:GLU:HG3    | 1.76                     | 0.67              |
| 5:AF:22:TRP:HB3    | 5:AF:59:ARG:CB      | 2.24                     | 0.67              |
| 5:AF:35:GLU:HA     | 5:AF:38:ARG:HG3     | 1.76                     | 0.67              |
| 6:AG:2:GLY:O       | 6:AG:4:TYR:N        | 2.25                     | 0.67              |
| 6:AG:26:CYS:HA     | 6:AG:31:CYS:CB      | 2.23                     | 0.67              |
| 6:AG:58:LEU:CD1    | 6:AG:59:ARG:HH11    | 2.07                     | 0.67              |
| 6:AG:104:VAL:HA    | 6:AG:107:ARG:HB2    | 1.74                     | 0.67              |
| 7:AH:55:VAL:HG12   | 7:AH:56:GLN:N       | 2.08                     | 0.67              |
| 9:AJ:74:GLU:HA     | 9:AJ:145:ALA:HB1    | 1.75                     | 0.67              |
| 10:AK:6:ILE:HG13   | 10:AK:85:ARG:CZ     | 2.24                     | 0.67              |
| 10:AK:87:SER:CB    | 10:AK:93:VAL:H      | 2.08                     | 0.67              |
| 10:AK:109:ILE:CD1  | 10:AK:137:VAL:HB    | 2.23                     | 0.67              |
| 12:AM:50:ILE:HB    | 16:AQ:41:ARG:HE     | 1.58                     | 0.67              |
| 13:AN:42:TRP:CE3   | 13:AN:43:SER:HA     | 2.28                     | 0.67              |
| 14:AO:32:PHE:HB3   | 14:AO:84:LEU:HD21   | 1.74                     | 0.67              |
| 15:AP:23:TYR:CD2   | 15:AP:70:LEU:HD13   | 2.29                     | 0.67              |
| 17:AR:34:LEU:HD12  | 17:AR:35:ARG:N      | 2.09                     | 0.67              |
| 22:AW:40:ALA:HB2   | 22:AW:55:ILE:HG21   | 1.75                     | 0.67              |
| 24:BA:5:A:O2'      | 34:BM:134:ARG:NH1   | 2.26                     | 0.67              |
| 24:BA:558:G:H5''   | 34:BM:109:LYS:HD3   | 1.76                     | 0.67              |
| 24:BA:721:C:C2     | 24:BA:722:A:C8      | 2.82                     | 0.67              |
| 24:BA:728:G:H1'    | 24:BA:729:G:C8      | 2.29                     | 0.67              |
| 24:BA:848:G:H21    | 24:BA:933:A:C1'     | 2.07                     | 0.67              |
| 24:BA:974:G:N3     | 24:BA:1186:G:N7     | 2.42                     | 0.67              |
| 24:BA:1137:G:H4'   | 34:BM:105:GLY:HA2   | 1.75                     | 0.67              |
| 24:BA:1225:C:O5'   | 42:BU:87:HIS:HE1    | 1.77                     | 0.67              |
| 24:BA:1270:C:H5''  | 24:BA:1271:G:H5''   | 1.74                     | 0.67              |
| 24:BA:1335:U:O2'   | 24:BA:1336:A:H5'    | 1.93                     | 0.67              |
| 24:BA:1545(A):A:H8 | 24:BA:1545(A):A:O5' | 1.75                     | 0.67              |
| 24:BA:1669:A:C2    | 24:BA:1994:C:H1'    | 2.29                     | 0.67              |
| 24:BA:1793:C:H42   | 24:BA:1825:A:N6     | 1.91                     | 0.67              |
| 24:BA:1832:C:C4    | 24:BA:1833:U:C5     | 2.82                     | 0.67              |
| 24:BA:1886:C:C2    | 24:BA:1887:C:C5     | 2.82                     | 0.67              |
| 24:BA:2227:A:O4'   | 27:BD:262:ARG:HD2   | 1.94                     | 0.67              |
| 24:BA:2329:G:H2'   | 24:BA:2330:G:H8     | 1.58                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:2532:G:N2    | 24:BA:2662:A:N1   | 2.41                     | 0.67              |
| 24:BA:2872:G:N2    | 24:BA:2873:A:N1   | 2.42                     | 0.67              |
| 25:BB:89:G:H2'     | 25:BB:89(A):A:N7  | 2.09                     | 0.67              |
| 26:BC:193:ILE:O    | 26:BC:197:GLU:HG3 | 1.94                     | 0.67              |
| 27:BD:44:ASN:HB2   | 27:BD:217:ARG:NH2 | 2.00                     | 0.67              |
| 27:BD:59:LYS:HD2   | 27:BD:60:ARG:N    | 2.09                     | 0.67              |
| 27:BD:210:GLY:N    | 27:BD:213:ARG:HE  | 1.92                     | 0.67              |
| 27:BD:246:PRO:HG2  | 27:BD:250:TRP:CD1 | 2.29                     | 0.67              |
| 30:BG:37:VAL:HG13  | 30:BG:159:VAL:HA  | 1.77                     | 0.67              |
| 30:BG:153:ARG:HD2  | 30:BG:154:GLY:N   | 2.09                     | 0.67              |
| 31:BH:69:ARG:HG3   | 31:BH:69:ARG:HH21 | 1.59                     | 0.67              |
| 32:BK:57:ARG:HG2   | 32:BK:61:ARG:HH21 | 1.59                     | 0.67              |
| 32:BK:87:LYS:HG2   | 32:BK:121:LYS:C   | 2.19                     | 0.67              |
| 34:BM:13:TRP:O     | 34:BM:14:VAL:HG22 | 1.93                     | 0.67              |
| 34:BM:17:ASP:HB3   | 34:BM:21:LYS:HE3  | 1.76                     | 0.67              |
| 34:BM:37:LYS:CE    | 34:BM:43:THR:HA   | 2.24                     | 0.67              |
| 36:BO:51:PHE:C     | 36:BO:55:ARG:HG3  | 2.18                     | 0.67              |
| 36:BO:114:ILE:HG21 | 36:BO:134:ALA:CB  | 2.24                     | 0.67              |
| 37:BP:132:VAL:HG12 | 37:BP:133:ARG:NH2 | 2.09                     | 0.67              |
| 38:BQ:3:HIS:ND1    | 38:BQ:4:LEU:N     | 2.42                     | 0.67              |
| 38:BQ:37:THR:H     | 38:BQ:40:LYS:HD2  | 1.58                     | 0.67              |
| 38:BQ:113:LEU:HD13 | 38:BQ:114:VAL:H   | 1.58                     | 0.67              |
| 39:BR:11:LYS:HB3   | 39:BR:15:ARG:HH22 | 1.58                     | 0.67              |
| 41:BT:19:LYS:O     | 41:BT:20:LEU:C    | 2.38                     | 0.67              |
| 41:BT:54:LYS:N     | 41:BT:54:LYS:HE2  | 2.09                     | 0.67              |
| 43:BV:33:ARG:HE    | 43:BV:33:ARG:CA   | 2.04                     | 0.67              |
| 44:BW:7:VAL:HG22   | 48:B1:31:ARG:NH1  | 2.09                     | 0.67              |
| 44:BW:43:VAL:HG11  | 44:BW:51:VAL:HG22 | 1.75                     | 0.67              |
| 45:BX:14:LEU:O     | 45:BX:20:TYR:HA   | 1.95                     | 0.67              |
| 50:B3:59:PHE:HD1   | 50:B3:60:GLN:HG2  | 1.60                     | 0.67              |
| 52:B5:25:LYS:O     | 52:B5:26:ASN:ND2  | 2.27                     | 0.67              |
| 1:AA:197:A:H62     | 1:AA:221:C:H5'    | 1.59                     | 0.67              |
| 1:AA:403:C:O3'     | 6:AG:122:ARG:HD2  | 1.93                     | 0.67              |
| 1:AA:608:A:N3      | 1:AA:608:A:H2'    | 2.08                     | 0.67              |
| 1:AA:668:G:HO2'    | 17:AR:46:HIS:CE1  | 2.10                     | 0.67              |
| 1:AA:1053:G:C5'    | 1:AA:1054:C:H5'   | 2.20                     | 0.67              |
| 1:AA:1231:G:P      | 11:AL:127:LYS:HE2 | 2.34                     | 0.67              |
| 1:AA:1407:C:H2'    | 1:AA:1408:A:C5'   | 2.24                     | 0.67              |
| 3:AC:44:G:N1       | 3:AC:45:U:O2      | 2.27                     | 0.67              |
| 3:AB:74:C:C5       | 24:BA:2556:C:C1'  | 2.78                     | 0.67              |
| 5:AF:70:VAL:HG12   | 5:AF:71:ALA:H     | 1.59                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 5:AF:118:GLN:O     | 5:AF:121:ALA:HB3  | 1.94                     | 0.67              |
| 7:AH:79:GLU:CB     | 7:AH:91:LEU:O     | 2.42                     | 0.67              |
| 8:AI:17:SER:O      | 8:AI:20:ALA:HB3   | 1.95                     | 0.67              |
| 9:AJ:69:VAL:CB     | 9:AJ:104:LEU:HD11 | 2.25                     | 0.67              |
| 10:AK:45:ILE:HB    | 10:AK:61:VAL:HG11 | 1.75                     | 0.67              |
| 10:AK:48:TYR:CD1   | 10:AK:48:TYR:C    | 2.73                     | 0.67              |
| 12:AM:42:THR:HG23  | 12:AM:68:HIS:HA   | 1.76                     | 0.67              |
| 12:AM:65:LEU:HD13  | 16:AQ:36:PHE:CE2  | 2.29                     | 0.67              |
| 13:AN:104:GLN:NE2  | 13:AN:106:LYS:H   | 1.91                     | 0.67              |
| 14:AO:53:ARG:HB3   | 14:AO:69:TYR:HE1  | 1.58                     | 0.67              |
| 19:AT:35:VAL:CG1   | 19:AT:36:ILE:N    | 2.58                     | 0.67              |
| 22:AW:88:VAL:HG12  | 22:AW:92:LEU:HD11 | 1.76                     | 0.67              |
| 24:BA:257:A:O5'    | 24:BA:257:A:H8    | 1.77                     | 0.67              |
| 24:BA:270(P):C:H5' | 32:BK:45:LYS:CG   | 2.21                     | 0.67              |
| 24:BA:270(Q):C:H2' | 24:BA:270(R):G:H8 | 1.59                     | 0.67              |
| 24:BA:275:G:O5'    | 24:BA:275:G:H8    | 1.77                     | 0.67              |
| 24:BA:404:C:H4'    | 24:BA:406:G:C8    | 2.29                     | 0.67              |
| 24:BA:417:C:H2'    | 24:BA:418:G:O4'   | 1.95                     | 0.67              |
| 24:BA:572:A:H2     | 24:BA:2033:A:C2   | 2.13                     | 0.67              |
| 24:BA:618:G:C8     | 24:BA:618(A):C:C5 | 2.81                     | 0.67              |
| 24:BA:638:G:H2'    | 24:BA:639:U:C5'   | 2.24                     | 0.67              |
| 24:BA:740:U:H1'    | 24:BA:1784:A:C8   | 2.29                     | 0.67              |
| 24:BA:914:C:C6     | 24:BA:914:C:C3'   | 2.72                     | 0.67              |
| 24:BA:988:A:O2'    | 24:BA:1157:G:H5'  | 1.94                     | 0.67              |
| 24:BA:1023:U:C4    | 24:BA:1024:G:H1'  | 2.29                     | 0.67              |
| 24:BA:1033:U:H5'   | 55:B8:16:VAL:CG2  | 2.23                     | 0.67              |
| 24:BA:1131:G:C1'   | 34:BM:82:LEU:HD11 | 2.24                     | 0.67              |
| 24:BA:1208:C:N4    | 24:BA:1209:G:O6   | 2.28                     | 0.67              |
| 24:BA:1225:C:O5'   | 42:BU:87:HIS:CE1  | 2.47                     | 0.67              |
| 24:BA:1332:G:N7    | 24:BA:1609:A:N6   | 2.42                     | 0.67              |
| 24:BA:1357:U:H2'   | 24:BA:1358:G:O4'  | 1.95                     | 0.67              |
| 24:BA:1473:G:H2'   | 24:BA:1474:C:O4'  | 1.94                     | 0.67              |
| 24:BA:1800:C:O2'   | 24:BA:1802:A:O4'  | 2.12                     | 0.67              |
| 24:BA:1818:U:H2'   | 24:BA:1818:U:O2   | 1.94                     | 0.67              |
| 24:BA:2089:U:H2'   | 24:BA:2090:G:C8   | 2.26                     | 0.67              |
| 24:BA:2210:G:N7    | 27:BD:150:LYS:HA  | 2.10                     | 0.67              |
| 24:BA:2218:G:H4'   | 27:BD:186:HIS:NE2 | 2.09                     | 0.67              |
| 24:BA:2411:A:H2'   | 24:BA:2412:A:C8   | 2.30                     | 0.67              |
| 24:BA:2687:U:C2    | 24:BA:2688:U:C6   | 2.82                     | 0.67              |
| 24:BA:2740:A:N6    | 24:BA:2764:A:C1'  | 2.57                     | 0.67              |
| 24:BA:2749:A:H5'   | 31:BH:62:LYS:C    | 2.18                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 26:BC:22:ILE:CD1   | 26:BC:226:PRO:HA   | 2.24                     | 0.67              |
| 27:BD:23:GLU:HB3   | 27:BD:204:ILE:HG13 | 1.76                     | 0.67              |
| 27:BD:224:ALA:H    | 27:BD:233:HIS:CE1  | 2.12                     | 0.67              |
| 28:BE:102:VAL:O    | 28:BE:169:ASN:ND2  | 2.27                     | 0.67              |
| 30:BG:20:ILE:HD12  | 30:BG:28:VAL:HG13  | 1.74                     | 0.67              |
| 30:BG:135:LEU:HD21 | 30:BG:137:GLU:O    | 1.93                     | 0.67              |
| 30:BG:139:LEU:CD1  | 30:BG:142:PRO:HB3  | 2.25                     | 0.67              |
| 30:BG:181:ARG:H    | 30:BG:181:ARG:NH2  | 1.92                     | 0.67              |
| 35:BN:26:LYS:HG3   | 35:BN:27:GLY:N     | 2.08                     | 0.67              |
| 35:BN:62:VAL:HB    | 35:BN:82:ASN:O     | 1.94                     | 0.67              |
| 37:BP:6:ARG:HD3    | 37:BP:6:ARG:C      | 2.19                     | 0.67              |
| 37:BP:126:PRO:C    | 37:BP:127:ILE:HG13 | 2.19                     | 0.67              |
| 39:BR:23:ARG:C     | 39:BR:24:LEU:HD12  | 2.20                     | 0.67              |
| 39:BR:24:LEU:HG    | 39:BR:40:ILE:O     | 1.94                     | 0.67              |
| 41:BT:98:LEU:HD12  | 41:BT:105:VAL:CG2  | 2.19                     | 0.67              |
| 41:BT:104:GLN:O    | 41:BT:108:GLU:OE2  | 2.12                     | 0.67              |
| 42:BU:61:VAL:CG1   | 42:BU:62:LEU:N     | 2.56                     | 0.67              |
| 46:BY:152:ALA:CB   | 46:BY:168:GLU:HA   | 2.22                     | 0.67              |
| 46:BY:177:PRO:CG   | 46:BY:178:GLU:H    | 2.07                     | 0.67              |
| 1:AA:286:G:C5      | 1:AA:287:U:C5      | 2.83                     | 0.67              |
| 1:AA:331:G:OP1     | 1:AA:332:G:C8      | 2.48                     | 0.67              |
| 1:AA:339:C:H2'     | 1:AA:340:U:C6      | 2.28                     | 0.67              |
| 1:AA:454:C:H3'     | 1:AA:455:C:C5      | 2.29                     | 0.67              |
| 1:AA:515:G:O6      | 1:AA:533:A:N7      | 2.27                     | 0.67              |
| 1:AA:609:A:C4      | 1:AA:610:G:C8      | 2.82                     | 0.67              |
| 1:AA:826:C:H5'     | 10:AK:12:ARG:HE    | 1.59                     | 0.67              |
| 1:AA:829:G:O2'     | 4:AE:26:PRO:CG     | 2.43                     | 0.67              |
| 1:AA:1308:U:H3'    | 15:AP:99:ARG:NH2   | 2.08                     | 0.67              |
| 1:AA:1452:C:O4'    | 1:AA:1453:G:N2     | 2.27                     | 0.67              |
| 1:AA:1470:G:O2'    | 1:AA:1471:G:H5'    | 1.95                     | 0.67              |
| 2:A1:43:U:H2'      | 2:A1:44:U:C6       | 2.29                     | 0.67              |
| 4:AE:47:THR:HG23   | 4:AE:51:LEU:HD21   | 1.76                     | 0.67              |
| 6:AG:50:ARG:HG2    | 6:AG:51:PRO:CD     | 2.17                     | 0.67              |
| 7:AH:140:ARG:HB3   | 7:AH:140:ARG:NH1   | 2.10                     | 0.67              |
| 8:AI:7:ASN:C       | 8:AI:8:ILE:HG12    | 2.18                     | 0.67              |
| 9:AJ:38:LEU:HA     | 9:AJ:41:ARG:HG3    | 1.76                     | 0.67              |
| 10:AK:13:ILE:CG2   | 10:AK:14:ARG:N     | 2.54                     | 0.67              |
| 10:AK:89:PRO:HB3   | 10:AK:92:ARG:NH2   | 2.09                     | 0.67              |
| 11:AL:62:TYR:C     | 11:AL:63:ILE:HD12  | 2.18                     | 0.67              |
| 15:AP:3:ARG:CG     | 15:AP:7:VAL:HA     | 2.24                     | 0.67              |
| 15:AP:3:ARG:NH1    | 30:BG:113:ARG:HG2  | 2.09                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 15:AP:14:ARG:HA   | 15:AP:45:VAL:H    | 1.60                     | 0.67              |
| 17:AR:25:THR:O    | 17:AR:29:VAL:HG23 | 1.94                     | 0.67              |
| 19:AT:29:HIS:CE1  | 19:AT:31:LEU:H    | 2.12                     | 0.67              |
| 21:AV:36:ARG:HA   | 21:AV:71:LEU:CD1  | 2.23                     | 0.67              |
| 22:AW:37:SER:O    | 22:AW:40:ALA:HB3  | 1.95                     | 0.67              |
| 24:BA:469:G:H1    | 53:B6:40:TRP:NE1  | 1.93                     | 0.67              |
| 24:BA:775:G:H2'   | 24:BA:794:G:C8    | 2.28                     | 0.67              |
| 24:BA:824:A:H3'   | 24:BA:825:C:C5    | 2.29                     | 0.67              |
| 24:BA:832:G:OP1   | 36:BO:36:LYS:NZ   | 2.28                     | 0.67              |
| 24:BA:851:U:O2'   | 49:B2:46:ASN:N    | 2.27                     | 0.67              |
| 24:BA:917:A:C8    | 24:BA:918:A:C5'   | 2.78                     | 0.67              |
| 24:BA:988:A:C3'   | 49:B2:10:LYS:NZ   | 2.57                     | 0.67              |
| 24:BA:1250:G:O2'  | 24:BA:1251:C:P    | 2.52                     | 0.67              |
| 24:BA:1279:G:H2'  | 24:BA:1280:G:C8   | 2.29                     | 0.67              |
| 24:BA:1354:A:H2'  | 24:BA:1355:G:H5'  | 1.75                     | 0.67              |
| 24:BA:1700:A:H8   | 24:BA:1701:A:C8   | 2.12                     | 0.67              |
| 24:BA:1858:G:N7   | 24:BA:1883:G:N1   | 2.42                     | 0.67              |
| 24:BA:2031:A:H62  | 24:BA:2498:C:C1'  | 2.08                     | 0.67              |
| 24:BA:2041:U:C2   | 24:BA:2042:A:C8   | 2.82                     | 0.67              |
| 24:BA:2416:C:O2'  | 24:BA:2417:C:H5'' | 1.94                     | 0.67              |
| 24:BA:2495:G:O3'  | 37:BP:83:MET:SD   | 2.52                     | 0.67              |
| 24:BA:2533:A:H2'  | 24:BA:2534:A:H8   | 1.59                     | 0.67              |
| 24:BA:2578:G:N2   | 24:BA:2579:C:C2   | 2.62                     | 0.67              |
| 24:BA:2776:A:C2   | 24:BA:2778:A:H2'  | 2.29                     | 0.67              |
| 25:BB:78:A:O2'    | 25:BB:79:C:H5'    | 1.94                     | 0.67              |
| 29:BF:103:LYS:O   | 29:BF:106:ARG:HG2 | 1.94                     | 0.67              |
| 30:BG:9:ARG:HG2   | 30:BG:13:GLU:OE1  | 1.95                     | 0.67              |
| 30:BG:116:ASP:O   | 30:BG:118:ARG:N   | 2.27                     | 0.67              |
| 33:BL:14:ALA:O    | 33:BL:49:GLY:HA3  | 1.94                     | 0.67              |
| 34:BM:33:LEU:C    | 34:BM:33:LEU:HD22 | 2.19                     | 0.67              |
| 34:BM:95:PRO:O    | 34:BM:98:VAL:HG23 | 1.94                     | 0.67              |
| 36:BO:45:LEU:HD22 | 54:B7:59:LYS:HD2  | 1.74                     | 0.67              |
| 36:BO:64:LYS:C    | 36:BO:64:LYS:HD2  | 2.19                     | 0.67              |
| 37:BP:66:ILE:CG2  | 37:BP:67:ARG:N    | 2.40                     | 0.67              |
| 40:BS:72:VAL:HB   | 40:BS:74:ARG:CZ   | 2.23                     | 0.67              |
| 41:BT:111:GLU:HA  | 41:BT:114:LYS:HE3 | 1.74                     | 0.67              |
| 43:BV:63:ASP:O    | 43:BV:64:MET:O    | 2.13                     | 0.67              |
| 46:BY:27:VAL:HG21 | 46:BY:85:HIS:CE1  | 2.27                     | 0.67              |
| 47:BZ:27:GLU:HB2  | 47:BZ:69:PHE:CE1  | 2.29                     | 0.67              |
| 48:B1:58:VAL:O    | 48:B1:59:LEU:C    | 2.36                     | 0.67              |
| 51:B4:29:THR:C    | 51:B4:30:LEU:HG   | 2.19                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 53:B6:31:LEU:O    | 53:B6:35:ARG:HG3   | 1.95                     | 0.67              |
| 1:AA:112:G:H21    | 1:AA:354:G:H5'     | 1.60                     | 0.67              |
| 1:AA:125:U:H2'    | 1:AA:126:G:C8      | 2.28                     | 0.67              |
| 1:AA:251:G:H22    | 1:AA:272:C:H42     | 1.43                     | 0.67              |
| 1:AA:1239:A:H1'   | 1:AA:1241:G:N9     | 2.08                     | 0.67              |
| 1:AA:1283:G:C2'   | 1:AA:1284:C:H5'    | 2.25                     | 0.67              |
| 1:AA:1305:G:H2'   | 1:AA:1331:G:H22    | 1.58                     | 0.67              |
| 1:AA:1360:A:N7    | 16:AQ:17:LYS:HD3   | 2.09                     | 0.67              |
| 4:AE:136:VAL:N    | 4:AE:139:LYS:HZ2   | 1.92                     | 0.67              |
| 5:AF:146:ALA:C    | 5:AF:147:LYS:HD2   | 2.19                     | 0.67              |
| 5:AF:182:ILE:CA   | 5:AF:204:LEU:HG    | 2.21                     | 0.67              |
| 6:AG:61:LYS:CG    | 6:AG:207:TYR:HE1   | 2.06                     | 0.67              |
| 7:AH:35:GLY:HA3   | 7:AH:41:VAL:HG13   | 1.75                     | 0.67              |
| 7:AH:105:VAL:HG12 | 7:AH:106:PRO:N     | 2.09                     | 0.67              |
| 7:AH:141:GLN:C    | 7:AH:142:LEU:HG    | 2.20                     | 0.67              |
| 8:AI:76:ALA:O     | 8:AI:79:LEU:HG     | 1.95                     | 0.67              |
| 8:AI:81:ILE:O     | 8:AI:83:ASP:N      | 2.27                     | 0.67              |
| 9:AJ:72:ARG:HH11  | 9:AJ:72:ARG:CB     | 2.07                     | 0.67              |
| 10:AK:29:SER:C    | 10:AK:32:LYS:NZ    | 2.52                     | 0.67              |
| 10:AK:61:VAL:CG1  | 10:AK:62:TYR:N     | 2.56                     | 0.67              |
| 11:AL:50:LEU:HD22 | 11:AL:51:ARG:NH1   | 2.10                     | 0.67              |
| 11:AL:82:ALA:O    | 11:AL:85:LEU:HB3   | 1.94                     | 0.67              |
| 14:AO:50:SER:O    | 14:AO:51:ALA:HB2   | 1.95                     | 0.67              |
| 14:AO:84:LEU:N    | 14:AO:104:VAL:HG11 | 2.10                     | 0.67              |
| 14:AO:85:ILE:HD11 | 14:AO:98:TYR:C     | 2.19                     | 0.67              |
| 15:AP:59:TYR:CD2  | 15:AP:60:VAL:HG23  | 2.29                     | 0.67              |
| 15:AP:82:MET:CE   | 15:AP:93:ARG:HA    | 2.16                     | 0.67              |
| 16:AQ:35:ARG:O    | 16:AQ:37:PHE:N     | 2.28                     | 0.67              |
| 20:AU:55:ARG:HH11 | 20:AU:55:ARG:CB    | 2.06                     | 0.67              |
| 20:AU:87:ARG:O    | 20:AU:88:LYS:C     | 2.37                     | 0.67              |
| 24:BA:72:U:C2'    | 24:BA:73:A:OP1     | 2.42                     | 0.67              |
| 24:BA:241:A:O2'   | 24:BA:242:G:H4'    | 1.95                     | 0.67              |
| 24:BA:311:A:H62   | 24:BA:329:G:H5'    | 1.58                     | 0.67              |
| 24:BA:482:A:N7    | 24:BA:506:G:N1     | 2.42                     | 0.67              |
| 24:BA:543:C:H2'   | 24:BA:544:C:C5     | 2.30                     | 0.67              |
| 24:BA:653:A:H3'   | 24:BA:654:A:O3'    | 1.94                     | 0.67              |
| 24:BA:659:C:O2'   | 24:BA:660:G:H5'    | 1.93                     | 0.67              |
| 24:BA:675:A:C4'   | 29:BF:67:GLN:HE22  | 1.97                     | 0.67              |
| 24:BA:792:G:N7    | 24:BA:2440:C:H1'   | 2.10                     | 0.67              |
| 24:BA:945:A:H2'   | 24:BA:946:G:O5'    | 1.94                     | 0.67              |
| 24:BA:1023:U:H5'  | 24:BA:1123:C:OP1   | 1.94                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1024:G:C6    | 24:BA:1025:G:C8    | 2.82                     | 0.67              |
| 24:BA:1081:U:O4    | 24:BA:1086:A:H2    | 1.77                     | 0.67              |
| 24:BA:1257:C:O2'   | 29:BF:83:PHE:HB2   | 1.95                     | 0.67              |
| 24:BA:1935:G:H2'   | 24:BA:1962:C:C4    | 2.28                     | 0.67              |
| 24:BA:1951:U:H2'   | 24:BA:1953:A:O5'   | 1.95                     | 0.67              |
| 24:BA:2015:A:H8    | 24:BA:2016:U:C6    | 2.12                     | 0.67              |
| 24:BA:2018:G:H2'   | 24:BA:2019:A:O4'   | 1.94                     | 0.67              |
| 24:BA:2020:A:OP2   | 41:BT:27:LEU:CD1   | 2.42                     | 0.67              |
| 24:BA:2227:A:H5''  | 27:BD:260:ARG:CD   | 2.24                     | 0.67              |
| 24:BA:2314:C:H5'   | 30:BG:38:VAL:HG21  | 1.76                     | 0.67              |
| 24:BA:2484:G:H2'   | 24:BA:2485:G:H5'   | 1.74                     | 0.67              |
| 24:BA:2561:A:H2'   | 24:BA:2562:U:O4'   | 1.93                     | 0.67              |
| 24:BA:2581:G:C2    | 24:BA:2610:C:C6    | 2.82                     | 0.67              |
| 24:BA:2746:U:C5'   | 31:BH:139:GLN:HA   | 2.24                     | 0.67              |
| 24:BA:2748:A:N7    | 24:BA:2749:A:C6    | 2.63                     | 0.67              |
| 26:BC:43:VAL:HG13  | 26:BC:213:TYR:O    | 1.95                     | 0.67              |
| 26:BC:68:LEU:HB3   | 26:BC:157:LYS:O    | 1.94                     | 0.67              |
| 27:BD:181:GLU:HA   | 27:BD:270:ILE:CD1  | 2.25                     | 0.67              |
| 30:BG:135:LEU:CD1  | 30:BG:137:GLU:H    | 2.08                     | 0.67              |
| 31:BH:25:LYS:HD3   | 31:BH:27:LYS:HD2   | 1.77                     | 0.67              |
| 31:BH:87:LEU:HD21  | 31:BH:162:ILE:HG13 | 1.76                     | 0.67              |
| 32:BK:25:TYR:O     | 32:BK:29:TYR:HB2   | 1.95                     | 0.67              |
| 33:BL:10:LEU:HD11  | 33:BL:41:PHE:CZ    | 2.28                     | 0.67              |
| 33:BL:109:LYS:O    | 33:BL:112:MET:HB2  | 1.94                     | 0.67              |
| 34:BM:67:LEU:N     | 34:BM:87:LEU:HD21  | 2.09                     | 0.67              |
| 35:BN:11:ALA:CB    | 35:BN:97:ARG:NH1   | 2.55                     | 0.67              |
| 36:BO:19:VAL:HG23  | 36:BO:19:VAL:O     | 1.94                     | 0.67              |
| 36:BO:114:ILE:HG21 | 36:BO:122:PRO:HA   | 1.75                     | 0.67              |
| 41:BT:16:LYS:HG2   | 41:BT:20:LEU:HD21  | 1.75                     | 0.67              |
| 45:BX:5:MET:SD     | 45:BX:33:LYS:HG2   | 2.34                     | 0.67              |
| 45:BX:74:PRO:HB2   | 45:BX:101:LYS:N    | 2.10                     | 0.67              |
| 45:BX:82:PRO:HD2   | 45:BX:96:ILE:HA    | 1.76                     | 0.67              |
| 49:B2:6:VAL:CG2    | 49:B2:35:ARG:HG3   | 2.13                     | 0.67              |
| 49:B2:6:VAL:HG13   | 49:B2:56:VAL:HA    | 1.77                     | 0.67              |
| 52:B5:25:LYS:C     | 52:B5:26:ASN:CG    | 2.57                     | 0.67              |
| 1:AA:315:A:N1      | 1:AA:330:C:C6      | 2.62                     | 0.67              |
| 1:AA:563:A:H3'     | 14:AO:15:ARG:NH1   | 2.09                     | 0.67              |
| 1:AA:572:A:O5'     | 1:AA:573:A:OP2     | 2.11                     | 0.67              |
| 1:AA:791:G:H2'     | 1:AA:792:A:C8      | 2.30                     | 0.67              |
| 1:AA:834:C:N4      | 1:AA:853:G:C6      | 2.63                     | 0.67              |
| 1:AA:959:A:C2'     | 1:AA:960:U:H4'     | 2.25                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:989:C:H2'     | 1:AA:990:C:H5'     | 1.77                     | 0.67              |
| 1:AA:1047:G:H5''   | 16:AQ:4:LYS:CD     | 2.24                     | 0.67              |
| 1:AA:1349:A:H2'    | 1:AA:1350:A:C8     | 2.29                     | 0.67              |
| 1:AA:1429:C:C2     | 1:AA:1430:C:C5     | 2.82                     | 0.67              |
| 1:AA:1476:G:H2'    | 1:AA:1477:C:C6     | 2.29                     | 0.67              |
| 3:AB:52:G:OP1      | 24:BA:2471:C:O3'   | 2.12                     | 0.67              |
| 6:AG:113:SER:HB3   | 6:AG:116:GLN:HG3   | 1.75                     | 0.67              |
| 7:AH:109:ILE:HG23  | 7:AH:110:LEU:N     | 2.10                     | 0.67              |
| 8:AI:60:PHE:CE2    | 20:AU:78:LEU:HD21  | 2.29                     | 0.67              |
| 10:AK:36:LEU:O     | 10:AK:39:LEU:HB3   | 1.94                     | 0.67              |
| 10:AK:77:GLU:OE2   | 10:AK:78:GLN:N     | 2.28                     | 0.67              |
| 10:AK:103:VAL:CB   | 10:AK:108:GLY:HA3  | 2.24                     | 0.67              |
| 10:AK:109:ILE:HG13 | 10:AK:111:ILE:HD11 | 1.77                     | 0.67              |
| 11:AL:77:ILE:O     | 11:AL:81:ILE:HG13  | 1.95                     | 0.67              |
| 17:AR:16:ALA:CB    | 17:AR:21:ASP:HB3   | 2.17                     | 0.67              |
| 19:AT:57:VAL:HG23  | 19:AT:58:GLU:N     | 2.10                     | 0.67              |
| 19:AT:59:ILE:HD11  | 19:AT:72:ARG:N     | 2.09                     | 0.67              |
| 24:BA:7:G:O2'      | 24:BA:8:A:H5'      | 1.93                     | 0.67              |
| 24:BA:38:A:H1'     | 29:BF:48:THR:HB    | 1.76                     | 0.67              |
| 24:BA:64:A:H5'     | 44:BW:73:ARG:HA    | 1.75                     | 0.67              |
| 24:BA:115:C:O2'    | 24:BA:116:C:H5'    | 1.95                     | 0.67              |
| 24:BA:118:A:O2'    | 24:BA:178:G:H5'    | 1.94                     | 0.67              |
| 24:BA:171:G:H2'    | 24:BA:172:C:C5     | 2.29                     | 0.67              |
| 24:BA:455:C:OP1    | 24:BA:472:A:N1     | 2.27                     | 0.67              |
| 24:BA:894:C:H2'    | 24:BA:895:U:C6     | 2.29                     | 0.67              |
| 24:BA:1373:A:H2'   | 24:BA:1374:G:C8    | 2.30                     | 0.67              |
| 24:BA:1431:U:O2'   | 24:BA:1432:C:H5'   | 1.94                     | 0.67              |
| 24:BA:1456:G:H1    | 24:BA:2703:C:N4    | 1.91                     | 0.67              |
| 24:BA:1710:C:H1'   | 24:BA:2858:C:H42   | 1.60                     | 0.67              |
| 24:BA:2226:C:C2    | 27:BD:262:ARG:CZ   | 2.76                     | 0.67              |
| 24:BA:2667:C:C5    | 24:BA:2668:G:C8    | 2.82                     | 0.67              |
| 24:BA:2789:C:C2'   | 24:BA:2893:G:H22   | 2.07                     | 0.67              |
| 24:BA:2809:A:C4'   | 24:BA:2811:G:N7    | 2.58                     | 0.67              |
| 27:BD:23:GLU:CD    | 27:BD:23:GLU:C     | 2.62                     | 0.67              |
| 28:BE:8:LYS:HB3    | 28:BE:24:THR:CB    | 2.23                     | 0.67              |
| 29:BF:64:ILE:CG2   | 29:BF:78:ILE:HB    | 2.24                     | 0.67              |
| 29:BF:121:GLY:O    | 29:BF:191:ARG:HG3  | 1.93                     | 0.67              |
| 30:BG:68:PRO:HG3   | 30:BG:90:LEU:HD21  | 1.76                     | 0.67              |
| 30:BG:77:ILE:HG13  | 30:BG:78:SER:N     | 2.10                     | 0.67              |
| 30:BG:151:ALA:O    | 30:BG:152:LEU:HD23 | 1.94                     | 0.67              |
| 31:BH:8:PRO:CA     | 31:BH:51:ARG:NH1   | 2.57                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 31:BH:65:HIS:O     | 31:BH:69:ARG:HG2  | 1.95                     | 0.67              |
| 31:BH:97:ARG:H     | 31:BH:104:GLU:HB2 | 1.57                     | 0.67              |
| 33:BL:77:LEU:HD13  | 33:BL:77:LEU:O    | 1.94                     | 0.67              |
| 34:BM:7:LYS:HE3    | 34:BM:8:GLN:H     | 1.57                     | 0.67              |
| 34:BM:87:LEU:HD23  | 34:BM:88:GLU:OE2  | 1.94                     | 0.67              |
| 34:BM:103:VAL:HG22 | 34:BM:104:LYS:HD3 | 1.75                     | 0.67              |
| 35:BN:59:LYS:CA    | 35:BN:86:ILE:HD12 | 2.20                     | 0.67              |
| 35:BN:97:ARG:NH1   | 35:BN:98:VAL:N    | 2.42                     | 0.67              |
| 37:BP:85:LYS:C     | 37:BP:87:LYS:N    | 2.46                     | 0.67              |
| 38:BQ:6:SER:OG     | 38:BQ:9:LYS:NZ    | 2.27                     | 0.67              |
| 38:BQ:26:LYS:HE2   | 38:BQ:70:LEU:HA   | 1.77                     | 0.67              |
| 38:BQ:44:LEU:O     | 38:BQ:48:VAL:HG23 | 1.93                     | 0.67              |
| 40:BS:70:VAL:HG21  | 40:BS:74:ARG:HD3  | 1.76                     | 0.67              |
| 41:BT:79:PHE:O     | 41:BT:83:LEU:HD12 | 1.94                     | 0.67              |
| 41:BT:84:LYS:CA    | 41:BT:84:LYS:HE2  | 2.25                     | 0.67              |
| 43:BV:16:LYS:N     | 43:BV:16:LYS:HD3  | 2.05                     | 0.67              |
| 43:BV:28:SER:CA    | 43:BV:70:TYR:HA   | 2.23                     | 0.67              |
| 43:BV:82:LEU:H     | 43:BV:98:LYS:NZ   | 1.92                     | 0.67              |
| 44:BW:30:VAL:O     | 44:BW:77:LYS:HB3  | 1.94                     | 0.67              |
| 45:BX:6:HIS:HD2    | 45:BX:67:LEU:HD11 | 1.60                     | 0.67              |
| 45:BX:29:GLU:OE1   | 45:BX:34:LYS:HD2  | 1.95                     | 0.67              |
| 45:BX:39:VAL:O     | 45:BX:40:GLU:CB   | 2.42                     | 0.67              |
| 46:BY:4:ARG:NH2    | 46:BY:88:PHE:HE1  | 1.93                     | 0.67              |
| 48:B1:7:GLU:CA     | 48:B1:10:LYS:HG2  | 2.25                     | 0.67              |
| 52:B5:17:LYS:HE3   | 52:B5:48:VAL:HG11 | 1.76                     | 0.67              |
| 53:B6:8:ASN:O      | 53:B6:9:ARG:C     | 2.37                     | 0.67              |
| 53:B6:9:ARG:O      | 53:B6:13:ALA:CB   | 2.43                     | 0.67              |
| 54:B7:30:ARG:NH2   | 54:B7:41:ILE:O    | 2.27                     | 0.67              |
| 55:B8:10:ILE:CD1   | 55:B8:32:HIS:HD2  | 2.07                     | 0.67              |
| 1:AA:9:G:OP2       | 7:AH:121:LYS:HA   | 1.94                     | 0.67              |
| 1:AA:300:A:H2'     | 1:AA:301:G:H5'    | 1.77                     | 0.67              |
| 1:AA:318:G:O2'     | 1:AA:1468:A:O2'   | 2.12                     | 0.67              |
| 1:AA:373:A:N7      | 1:AA:482:A:N7     | 2.42                     | 0.67              |
| 1:AA:748:C:O5'     | 1:AA:748:C:H6     | 1.76                     | 0.67              |
| 1:AA:870:U:H5'     | 1:AA:871:U:OP1    | 1.94                     | 0.67              |
| 1:AA:1002:G:O4'    | 1:AA:1002:G:OP2   | 2.12                     | 0.67              |
| 1:AA:1307:U:H5''   | 15:AP:101:GLN:NE2 | 2.09                     | 0.67              |
| 1:AA:1367:C:OP1    | 11:AL:115:GLY:N   | 2.28                     | 0.67              |
| 1:AA:1404:C:H1'    | 1:AA:1499:A:N1    | 2.09                     | 0.67              |
| 1:AA:1412:C:H2'    | 1:AA:1413:A:H8    | 1.56                     | 0.67              |
| 1:AA:1518:A:O5'    | 1:AA:1518:A:H8    | 1.78                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 3:AC:33:U:C2       | 3:AC:35:A:OP2      | 2.47                     | 0.67              |
| 3:AC:75:C:O2       | 24:BA:2252:G:N2    | 2.28                     | 0.67              |
| 4:AE:92:TYR:O      | 4:AE:152:PHE:HB2   | 1.94                     | 0.67              |
| 5:AF:55:VAL:HG13   | 5:AF:68:VAL:HG22   | 1.77                     | 0.67              |
| 6:AG:10:ARG:NH1    | 6:AG:14:ARG:HB2    | 2.10                     | 0.67              |
| 6:AG:102:ASP:HB2   | 6:AG:136:PRO:C     | 2.19                     | 0.67              |
| 6:AG:148:VAL:CG2   | 6:AG:162:LEU:HD21  | 2.24                     | 0.67              |
| 6:AG:190:ASP:O     | 6:AG:193:ASP:OD1   | 2.12                     | 0.67              |
| 9:AJ:42:ILE:HG22   | 9:AJ:120:ILE:CD1   | 2.25                     | 0.67              |
| 9:AJ:70:LYS:HA     | 9:AJ:100:ALA:CB    | 2.25                     | 0.67              |
| 10:AK:51:VAL:HG21  | 10:AK:60:ARG:NH2   | 2.09                     | 0.67              |
| 10:AK:88:LYS:NZ    | 10:AK:88:LYS:N     | 2.42                     | 0.67              |
| 11:AL:83:ARG:O     | 11:AL:86:VAL:HB    | 1.94                     | 0.67              |
| 11:AL:93:ARG:NH2   | 11:AL:97:LYS:HG2   | 2.10                     | 0.67              |
| 12:AM:7:LYS:O      | 12:AM:97:GLU:CB    | 2.40                     | 0.67              |
| 13:AN:54:ARG:HG3   | 13:AN:54:ARG:NH1   | 2.09                     | 0.67              |
| 13:AN:126:ARG:C    | 13:AN:128:ALA:H    | 2.02                     | 0.67              |
| 14:AO:117:ARG:HH21 | 14:AO:124:LYS:CA   | 1.97                     | 0.67              |
| 15:AP:34:LEU:CD2   | 15:AP:39:ILE:HG13  | 2.25                     | 0.67              |
| 16:AQ:12:ARG:O     | 16:AQ:14:PRO:N     | 2.27                     | 0.67              |
| 19:AT:76:LEU:HD23  | 19:AT:76:LEU:C     | 2.19                     | 0.67              |
| 24:BA:26:G:H22     | 24:BA:27:G:N2      | 1.91                     | 0.67              |
| 24:BA:66:C:H2'     | 24:BA:67:U:O5'     | 1.93                     | 0.67              |
| 24:BA:84:A:H1'     | 24:BA:103:A:N6     | 2.10                     | 0.67              |
| 24:BA:320:A:H2'    | 29:BF:136:THR:HG21 | 1.77                     | 0.67              |
| 24:BA:586:A:C4'    | 29:BF:89:VAL:HG21  | 2.25                     | 0.67              |
| 24:BA:586:A:N1     | 24:BA:810:U:H5'    | 2.10                     | 0.67              |
| 24:BA:665:C:C2     | 24:BA:666:G:N7     | 2.62                     | 0.67              |
| 24:BA:866:A:N6     | 24:BA:913:U:O2'    | 2.21                     | 0.67              |
| 24:BA:1019:U:H6    | 24:BA:1019:U:H5''  | 1.60                     | 0.67              |
| 24:BA:1066:U:H1'   | 24:BA:1069:A:OP2   | 1.95                     | 0.67              |
| 24:BA:1080:C:C1'   | 33:BL:126:MET:HA   | 2.24                     | 0.67              |
| 24:BA:1341:U:O2'   | 44:BW:56:THR:N     | 2.28                     | 0.67              |
| 24:BA:1352:U:H1'   | 24:BA:1570:A:C2    | 2.28                     | 0.67              |
| 24:BA:1391:U:O2    | 24:BA:1391:U:H2'   | 1.95                     | 0.67              |
| 24:BA:1421:G:C2    | 24:BA:1422:G:N7    | 2.63                     | 0.67              |
| 24:BA:1439:A:C2'   | 24:BA:1440:G:H5'   | 2.24                     | 0.67              |
| 24:BA:1647:G:C4'   | 24:BA:1648:C:OP1   | 2.40                     | 0.67              |
| 24:BA:1687:G:N1    | 24:BA:1688:U:C5    | 2.62                     | 0.67              |
| 24:BA:1688:U:N3    | 24:BA:1700:A:H5''  | 2.10                     | 0.67              |
| 24:BA:1750:G:O2'   | 24:BA:2860:A:N1    | 2.27                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1872:A:H2'   | 24:BA:1878:G:C5'  | 2.13                     | 0.67              |
| 24:BA:2046:G:OP1   | 51:B4:18:ALA:C    | 2.38                     | 0.67              |
| 24:BA:2114:A:H8    | 24:BA:2114:A:O5'  | 1.78                     | 0.67              |
| 24:BA:2320:A:OP1   | 24:BA:2320:A:C8   | 2.47                     | 0.67              |
| 24:BA:2405:G:O2'   | 24:BA:2406:U:H5'' | 1.95                     | 0.67              |
| 24:BA:2858:C:H5'   | 24:BA:2859:G:OP2  | 1.94                     | 0.67              |
| 24:BA:2876:G:P     | 40:BS:2:ASN:HB3   | 2.35                     | 0.67              |
| 26:BC:209:LEU:HD21 | 26:BC:212:VAL:HB  | 1.77                     | 0.67              |
| 27:BD:174:ILE:HD12 | 27:BD:174:ILE:N   | 2.09                     | 0.67              |
| 27:BD:226:MET:HE1  | 27:BD:237:GLU:N   | 2.05                     | 0.67              |
| 28:BE:36:ARG:O     | 28:BE:44:TYR:CD2  | 2.48                     | 0.67              |
| 29:BF:156:LEU:O    | 29:BF:176:LEU:HB3 | 1.94                     | 0.67              |
| 30:BG:16:ARG:HB3   | 30:BG:17:PRO:CD   | 2.25                     | 0.67              |
| 30:BG:40:ASN:ND2   | 30:BG:41:GLN:N    | 2.42                     | 0.67              |
| 30:BG:43:LEU:HD11  | 30:BG:88:ILE:O    | 1.93                     | 0.67              |
| 30:BG:131:TYR:HE1  | 30:BG:133:LEU:O   | 1.77                     | 0.67              |
| 32:BK:9:LEU:HB2    | 32:BK:13:GLY:C    | 2.19                     | 0.67              |
| 32:BK:31:LEU:HD11  | 32:BK:36:ALA:CB   | 2.21                     | 0.67              |
| 33:BL:12:LEU:HD13  | 33:BL:23:VAL:HG21 | 1.76                     | 0.67              |
| 33:BL:91:PRO:HB3   | 33:BL:134:MET:O   | 1.95                     | 0.67              |
| 35:BN:98:VAL:HG23  | 35:BN:98:VAL:O    | 1.93                     | 0.67              |
| 36:BO:16:ARG:CG    | 36:BO:19:VAL:HG22 | 2.24                     | 0.67              |
| 36:BO:52:GLU:HG3   | 54:B7:52:LYS:HD3  | 1.76                     | 0.67              |
| 38:BQ:93:GLY:C     | 38:BQ:95:THR:H    | 2.03                     | 0.67              |
| 40:BS:32:TYR:HB3   | 40:BS:87:ASP:O    | 1.95                     | 0.67              |
| 40:BS:70:VAL:CB    | 40:BS:74:ARG:HD3  | 2.25                     | 0.67              |
| 42:BU:30:GLY:O     | 42:BU:31:ALA:O    | 2.13                     | 0.67              |
| 42:BU:34:GLU:O     | 42:BU:35:LEU:HD12 | 1.94                     | 0.67              |
| 43:BV:34:ASN:HA    | 43:BV:37:ARG:NE   | 2.05                     | 0.67              |
| 45:BX:40:GLU:C     | 45:BX:62:GLU:OE2  | 2.37                     | 0.67              |
| 47:BZ:59:LEU:CD2   | 47:BZ:79:VAL:HG21 | 2.23                     | 0.67              |
| 1:AA:22:G:C2'      | 1:AA:23:C:H6      | 2.05                     | 0.67              |
| 1:AA:55:A:H2'      | 1:AA:56:U:C5'     | 2.24                     | 0.67              |
| 1:AA:642:A:N7      | 10:AK:115:SER:HA  | 2.08                     | 0.67              |
| 1:AA:645:C:H2'     | 1:AA:646:U:H6     | 1.58                     | 0.67              |
| 1:AA:665:A:C8      | 1:AA:733:A:C2     | 2.83                     | 0.67              |
| 1:AA:894:G:C5      | 1:AA:895:G:N7     | 2.62                     | 0.67              |
| 1:AA:1077:G:N2     | 1:AA:1080:A:OP2   | 2.27                     | 0.67              |
| 1:AA:1113:C:O5'    | 1:AA:1113:C:C6    | 2.47                     | 0.67              |
| 1:AA:1305:G:N2     | 1:AA:1331:G:H2'   | 2.09                     | 0.67              |
| 2:A1:20:G:O2'      | 2:A1:21:G:H5'     | 1.94                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:AD:58:A:C2'     | 3:AD:61:C:C5      | 2.77                     | 0.67              |
| 3:AB:12:U:H5'     | 24:BA:1915:U:H5'  | 1.75                     | 0.67              |
| 4:AE:112:VAL:HG22 | 4:AE:149:LEU:HD11 | 1.76                     | 0.67              |
| 7:AH:12:LEU:HG    | 7:AH:129:ILE:HG12 | 1.77                     | 0.67              |
| 9:AJ:15:ASP:H     | 9:AJ:20:ASP:N     | 1.92                     | 0.67              |
| 9:AJ:94:ARG:HG3   | 9:AJ:94:ARG:HH11  | 1.59                     | 0.67              |
| 9:AJ:94:ARG:HG3   | 9:AJ:94:ARG:NH1   | 2.09                     | 0.67              |
| 11:AL:47:LEU:CD1  | 11:AL:51:ARG:HH22 | 2.05                     | 0.67              |
| 13:AN:21:ILE:HG22 | 13:AN:30:VAL:HG22 | 1.76                     | 0.67              |
| 16:AQ:24:CYS:SG   | 16:AQ:27:CYS:N    | 2.68                     | 0.67              |
| 17:AR:16:ALA:HB1  | 17:AR:21:ASP:CB   | 2.17                     | 0.67              |
| 24:BA:371:A:C5'   | 24:BA:423:A:N7    | 2.54                     | 0.67              |
| 24:BA:374:A:C3'   | 24:BA:375:C:H6    | 2.07                     | 0.67              |
| 24:BA:388:G:N2    | 24:BA:390:A:C2    | 2.63                     | 0.67              |
| 24:BA:523:C:O2'   | 24:BA:524:U:H5'   | 1.95                     | 0.67              |
| 24:BA:609:A:N1    | 24:BA:619:G:N3    | 2.42                     | 0.67              |
| 24:BA:673:C:C4'   | 29:BF:82:ILE:HD12 | 2.22                     | 0.67              |
| 24:BA:717:G:C2    | 24:BA:718:A:H1'   | 2.29                     | 0.67              |
| 24:BA:1076:C:O2'  | 33:BL:90:LYS:HD3  | 1.95                     | 0.67              |
| 24:BA:1224:G:H2'  | 42:BU:87:HIS:CD2  | 2.30                     | 0.67              |
| 24:BA:1532:C:N4   | 24:BA:1540:G:N1   | 2.42                     | 0.67              |
| 24:BA:1608:A:O2'  | 24:BA:1609:A:H5'  | 1.95                     | 0.67              |
| 24:BA:1782:C:N4   | 24:BA:2587:A:H61  | 1.92                     | 0.67              |
| 24:BA:1793:C:N4   | 24:BA:1825:A:N6   | 2.42                     | 0.67              |
| 24:BA:1938:A:N3   | 24:BA:2590:A:H1'  | 2.09                     | 0.67              |
| 24:BA:1942:C:H3'  | 24:BA:1942:C:P    | 2.35                     | 0.67              |
| 24:BA:2168:G:N2   | 24:BA:2170:A:H3'  | 2.08                     | 0.67              |
| 24:BA:2207:C:H2'  | 24:BA:2208:U:C4'  | 2.23                     | 0.67              |
| 24:BA:2305:A:O3'  | 30:BG:136:ARG:HG2 | 1.95                     | 0.67              |
| 24:BA:2437:U:H2'  | 24:BA:2438:U:C6   | 2.30                     | 0.67              |
| 24:BA:2482:G:C2'  | 24:BA:2483:C:H5'  | 2.24                     | 0.67              |
| 24:BA:2592:G:C6   | 24:BA:2593:U:C4   | 2.83                     | 0.67              |
| 24:BA:2711:A:OP1  | 24:BA:2712(A):A:P | 2.53                     | 0.67              |
| 26:BC:60:GLY:O    | 26:BC:162:GLU:HG3 | 1.95                     | 0.67              |
| 27:BD:177:LEU:O   | 27:BD:178:PRO:C   | 2.38                     | 0.67              |
| 27:BD:181:GLU:HG2 | 27:BD:268:ARG:NE  | 2.10                     | 0.67              |
| 28:BE:33:VAL:CG1  | 28:BE:48:GLN:HA   | 2.24                     | 0.67              |
| 28:BE:49:LEU:HD13 | 28:BE:76:ARG:HG2  | 1.75                     | 0.67              |
| 28:BE:114:ALA:HB3 | 28:BE:118:LYS:CB  | 2.23                     | 0.67              |
| 28:BE:151:TYR:CZ  | 28:BE:152:LYS:HG3 | 2.30                     | 0.67              |
| 31:BH:43:VAL:HG12 | 31:BH:44:VAL:N    | 2.08                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 31:BH:171:LEU:HA  | 31:BH:172:LYS:HZ2  | 1.60                     | 0.67              |
| 32:BK:94:ALA:CB   | 32:BK:114:LEU:HD12 | 2.24                     | 0.67              |
| 34:BM:103:VAL:CG2 | 34:BM:104:LYS:HD3  | 2.25                     | 0.67              |
| 37:BP:16:ARG:CZ   | 37:BP:72:LYS:HA    | 2.24                     | 0.67              |
| 37:BP:86:GLY:O    | 37:BP:87:LYS:HB3   | 1.94                     | 0.67              |
| 37:BP:124:LYS:O   | 37:BP:125:LEU:O    | 2.11                     | 0.67              |
| 40:BS:15:VAL:CG1  | 40:BS:81:PRO:HB3   | 2.24                     | 0.67              |
| 41:BT:45:TYR:C    | 41:BT:49:HIS:ND1   | 2.53                     | 0.67              |
| 41:BT:94:ASN:HD22 | 42:BU:6:LYS:HZ1    | 1.42                     | 0.67              |
| 42:BU:11:GLN:HE22 | 42:BU:24:LYS:CE    | 2.07                     | 0.67              |
| 48:B1:38:GLN:H    | 48:B1:41:GLN:CD    | 2.02                     | 0.67              |
| 1:AA:255:G:O4'    | 19:AT:16:GLN:HB2   | 1.95                     | 0.67              |
| 1:AA:394:G:H2'    | 1:AA:395:C:H6      | 1.58                     | 0.67              |
| 1:AA:581:G:H4'    | 17:AR:64:ARG:HH12  | 1.60                     | 0.67              |
| 1:AA:791:G:N2     | 1:AA:1498:U:P      | 2.64                     | 0.67              |
| 1:AA:892:A:HO2'   | 1:AA:1415:G:HO2'   | 1.42                     | 0.67              |
| 1:AA:961:U:H2'    | 1:AA:962:C:O4'     | 1.95                     | 0.67              |
| 1:AA:1326:C:H2'   | 1:AA:1327:C:H6     | 1.60                     | 0.67              |
| 1:AA:1347:G:C8    | 11:AL:107:ARG:HB3  | 2.28                     | 0.67              |
| 1:AA:1528:U:H1'   | 1:AA:1529:G:H21    | 1.59                     | 0.67              |
| 3:AD:35:A:H2'     | 3:AD:36:A:O4'      | 1.94                     | 0.67              |
| 4:AE:91:PRO:HB3   | 4:AE:152:PHE:CE1   | 2.30                     | 0.67              |
| 4:AE:101:MET:HA   | 4:AE:108:ILE:CG1   | 2.25                     | 0.67              |
| 13:AN:84:VAL:HB   | 20:AU:88:LYS:HZ3   | 1.60                     | 0.67              |
| 14:AO:88:GLY:N    | 14:AO:98:TYR:HA    | 2.04                     | 0.67              |
| 21:AV:30:LEU:HD12 | 21:AV:59:PRO:HA    | 1.75                     | 0.67              |
| 21:AV:45:VAL:HG13 | 21:AV:64:GLU:HA    | 1.76                     | 0.67              |
| 24:BA:195:A:H2'   | 24:BA:198:C:H42    | 1.60                     | 0.67              |
| 24:BA:330:A:C2    | 24:BA:1210:A:H2'   | 2.30                     | 0.67              |
| 24:BA:519:U:H6    | 24:BA:519:U:C5'    | 2.06                     | 0.67              |
| 24:BA:531:C:H5'   | 24:BA:532:A:N3     | 2.10                     | 0.67              |
| 24:BA:559:G:H2'   | 24:BA:560:C:O4'    | 1.95                     | 0.67              |
| 24:BA:565:C:H2'   | 24:BA:565:C:O2     | 1.95                     | 0.67              |
| 24:BA:774:A:O2'   | 24:BA:775:G:H8     | 1.77                     | 0.67              |
| 24:BA:881:G:H22   | 24:BA:896:A:N6     | 1.91                     | 0.67              |
| 24:BA:976:C:O2    | 24:BA:977:G:C8     | 2.48                     | 0.67              |
| 24:BA:988:A:OP1   | 49:B2:10:LYS:NZ    | 2.24                     | 0.67              |
| 24:BA:1399:C:H2'  | 24:BA:1400:G:C8    | 2.29                     | 0.67              |
| 24:BA:1568:G:O2'  | 24:BA:1569:A:OP2   | 2.11                     | 0.67              |
| 24:BA:1647:G:H3'  | 24:BA:1647:G:OP2   | 1.95                     | 0.67              |
| 24:BA:2415:G:H5'' | 36:BO:61:ARG:CB    | 2.23                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2440:C:C5'   | 24:BA:2587:A:H4'   | 2.23                     | 0.67              |
| 24:BA:2532:G:H2'   | 24:BA:2533:A:O4'   | 1.94                     | 0.67              |
| 26:BC:213:TYR:N    | 26:BC:213:TYR:CD1  | 2.63                     | 0.67              |
| 27:BD:196:VAL:HG12 | 27:BD:198:ASN:H    | 1.59                     | 0.67              |
| 28:BE:27:LEU:HD11  | 28:BE:30:PRO:CD    | 2.23                     | 0.67              |
| 30:BG:11:TYR:O     | 30:BG:15:VAL:HG22  | 1.95                     | 0.67              |
| 30:BG:39:ILE:HG13  | 30:BG:157:ILE:HG13 | 1.77                     | 0.67              |
| 30:BG:118:ARG:HG3  | 30:BG:119:GLY:N    | 2.10                     | 0.67              |
| 31:BH:83:TYR:H     | 31:BH:136:ILE:HA   | 1.58                     | 0.67              |
| 32:BK:5:LEU:HA     | 32:BK:36:ALA:HB2   | 1.76                     | 0.67              |
| 34:BM:16:ILE:O     | 34:BM:54:VAL:HG23  | 1.94                     | 0.67              |
| 36:BO:47:ASP:OD1   | 36:BO:48:PRO:HD3   | 1.94                     | 0.67              |
| 36:BO:72:PRO:O     | 36:BO:111:ARG:NE   | 2.27                     | 0.67              |
| 39:BR:94:TYR:C     | 39:BR:99:LYS:HB2   | 2.18                     | 0.67              |
| 40:BS:17:THR:C     | 40:BS:19:LEU:H     | 2.00                     | 0.67              |
| 46:BY:9:TYR:HB3    | 46:BY:14:LYS:HZ3   | 1.58                     | 0.67              |
| 50:B3:57:GLU:HA    | 50:B3:61:ARG:NH1   | 2.10                     | 0.67              |
| 50:B3:68:ARG:HH11  | 50:B3:68:ARG:CB    | 2.07                     | 0.67              |
| 54:B7:26:LYS:CA    | 54:B7:47:LYS:HG2   | 2.24                     | 0.67              |
| 1:AA:192:U:H2'     | 1:AA:193:C:H6      | 1.59                     | 0.67              |
| 1:AA:295:C:N4      | 1:AA:303:A:N1      | 2.43                     | 0.67              |
| 1:AA:329:A:O2'     | 1:AA:330:C:H5'     | 1.95                     | 0.67              |
| 1:AA:698:G:H2'     | 1:AA:699:C:H6      | 1.58                     | 0.67              |
| 1:AA:900:A:H2'     | 1:AA:901:A:H8      | 1.59                     | 0.67              |
| 1:AA:1097:C:H2'    | 1:AA:1098:C:H6     | 1.60                     | 0.67              |
| 1:AA:1129:C:N4     | 1:AA:1139:G:C5     | 2.62                     | 0.67              |
| 1:AA:1231:G:OP1    | 11:AL:126:SER:OG   | 2.13                     | 0.67              |
| 1:AA:1396:A:O4'    | 1:AA:1398:A:H1'    | 1.95                     | 0.67              |
| 3:AC:57:G:H1'      | 30:BG:82:LEU:CD1   | 2.24                     | 0.67              |
| 3:AC:76:A:OP1      | 3:AC:76:A:H3'      | 1.95                     | 0.67              |
| 3:AB:50:U:H2'      | 3:AB:51:U:C6       | 2.30                     | 0.67              |
| 4:AE:49:GLU:OE2    | 4:AE:49:GLU:N      | 2.28                     | 0.67              |
| 5:AF:57:ILE:HG22   | 5:AF:59:ARG:NH2    | 2.10                     | 0.67              |
| 6:AG:26:CYS:O      | 6:AG:33:MET:CG     | 2.43                     | 0.67              |
| 6:AG:47:ARG:HB2    | 6:AG:47:ARG:HH11   | 1.60                     | 0.67              |
| 6:AG:129:ASN:ND2   | 6:AG:144:ASP:CG    | 2.53                     | 0.67              |
| 6:AG:141:ARG:HH11  | 6:AG:142:PRO:HD2   | 1.60                     | 0.67              |
| 8:AI:53:ALA:HB2    | 8:AI:86:ARG:HD2    | 1.77                     | 0.67              |
| 10:AK:54:ASP:HB2   | 10:AK:56:LYS:HD3   | 1.77                     | 0.67              |
| 13:AN:110:ASP:HB2  | 20:AU:88:LYS:HD2   | 1.75                     | 0.67              |
| 14:AO:114:LYS:O    | 14:AO:117:ARG:NH1  | 2.27                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 20:AU:61:LYS:HD2   | 20:AU:64:ARG:NH2   | 2.06                     | 0.67              |
| 22:AW:90:GLN:O     | 22:AW:93:GLU:HB2   | 1.94                     | 0.67              |
| 24:BA:171:G:H2'    | 24:BA:172:C:C6     | 2.30                     | 0.67              |
| 24:BA:229:A:H5'    | 24:BA:230:U:OP1    | 1.95                     | 0.67              |
| 24:BA:295:G:H3'    | 24:BA:338:G:H1     | 1.59                     | 0.67              |
| 24:BA:370:G:N3     | 24:BA:424:G:N7     | 2.43                     | 0.67              |
| 24:BA:378:C:O2'    | 24:BA:379:G:H5'    | 1.95                     | 0.67              |
| 24:BA:491:G:C2     | 24:BA:492:A:C4     | 2.83                     | 0.67              |
| 24:BA:530:G:H1     | 24:BA:2022:U:P     | 2.17                     | 0.67              |
| 24:BA:541:C:H2'    | 24:BA:542:C:H6     | 1.57                     | 0.67              |
| 24:BA:729:G:N9     | 24:BA:730:C:H1'    | 2.10                     | 0.67              |
| 24:BA:810:U:OP1    | 24:BA:1253:A:C5    | 2.46                     | 0.67              |
| 24:BA:959:A:C6     | 24:BA:960:A:N6     | 2.63                     | 0.67              |
| 24:BA:1025:G:H1'   | 24:BA:1134:G:O4'   | 1.95                     | 0.67              |
| 24:BA:1785:A:OP2   | 24:BA:1785:A:H8    | 1.75                     | 0.67              |
| 24:BA:2362:G:O2'   | 24:BA:2363:C:H5'   | 1.94                     | 0.67              |
| 24:BA:2369:A:H61   | 24:BA:2382:G:N2    | 1.93                     | 0.67              |
| 24:BA:2394:C:N4    | 24:BA:2422:A:N6    | 2.43                     | 0.67              |
| 24:BA:2787:C:H5'   | 28:BE:64:LYS:HB2   | 1.75                     | 0.67              |
| 26:BC:108:MET:HE1  | 26:BC:131:LEU:HA   | 1.77                     | 0.67              |
| 27:BD:29:PRO:HB2   | 27:BD:82:ILE:O     | 1.94                     | 0.67              |
| 27:BD:61:LEU:HD22  | 27:BD:63:ARG:HH22  | 1.60                     | 0.67              |
| 27:BD:252:TRP:CE3  | 27:BD:252:TRP:HA   | 2.29                     | 0.67              |
| 28:BE:12:THR:HA    | 28:BE:22:PRO:HD2   | 1.76                     | 0.67              |
| 29:BF:78:ILE:HD13  | 29:BF:79:GLY:H     | 1.60                     | 0.67              |
| 29:BF:192:LEU:HD22 | 29:BF:193:VAL:N    | 2.10                     | 0.67              |
| 30:BG:55:LYS:HG3   | 30:BG:148:MET:SD   | 2.35                     | 0.67              |
| 30:BG:93:THR:HG22  | 30:BG:93:THR:O     | 1.95                     | 0.67              |
| 32:BK:132:PRO:HD2  | 32:BK:137:PRO:CA   | 2.22                     | 0.67              |
| 34:BM:55:VAL:HG22  | 34:BM:125:GLY:O    | 1.93                     | 0.67              |
| 35:BN:31:LYS:O     | 35:BN:32:TYR:CD1   | 2.47                     | 0.67              |
| 36:BO:7:ARG:HD2    | 36:BO:7:ARG:N      | 2.10                     | 0.67              |
| 36:BO:113:LYS:CB   | 36:BO:129:ALA:HB1  | 2.25                     | 0.67              |
| 36:BO:117:GLU:HG2  | 36:BO:118:GLY:N    | 2.10                     | 0.67              |
| 37:BP:6:ARG:HG2    | 37:BP:70:PRO:CB    | 2.25                     | 0.67              |
| 37:BP:130:LYS:NZ   | 37:BP:132:VAL:HG13 | 2.10                     | 0.67              |
| 39:BR:9:ARG:CD     | 39:BR:12:PHE:HE2   | 2.07                     | 0.67              |
| 40:BS:20:PRO:HB3   | 40:BS:22:PHE:CE1   | 2.30                     | 0.67              |
| 40:BS:93:ARG:N     | 40:BS:93:ARG:NE    | 2.43                     | 0.67              |
| 41:BT:84:LYS:HE2   | 41:BT:84:LYS:HA    | 1.77                     | 0.67              |
| 42:BU:13:ARG:O     | 42:BU:14:VAL:HG22  | 1.93                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 43:BV:17:VAL:O    | 43:BV:20:VAL:CG1   | 2.38                     | 0.67              |
| 46:BY:165:VAL:CG1 | 46:BY:166:SER:N    | 2.50                     | 0.67              |
| 54:B7:16:ILE:HD11 | 54:B7:60:LEU:HD22  | 1.76                     | 0.67              |
| 1:AA:13:U:H5'     | 1:AA:14:U:OP2      | 1.95                     | 0.67              |
| 1:AA:259:G:C2     | 1:AA:260:G:C4      | 2.83                     | 0.67              |
| 1:AA:592:G:H2'    | 1:AA:593:G:H5'     | 1.76                     | 0.67              |
| 1:AA:1138:G:C6    | 1:AA:1140:C:C6     | 2.83                     | 0.67              |
| 2:A1:38:U:O2'     | 2:A1:39:U:O4'      | 2.13                     | 0.67              |
| 3:AD:20:U:C5      | 24:BA:2112:G:H1'   | 2.30                     | 0.67              |
| 3:AB:52:G:C4'     | 24:BA:2471:C:C5'   | 2.72                     | 0.67              |
| 4:AE:80:ILE:CD1   | 4:AE:212:GLN:HG2   | 2.25                     | 0.67              |
| 4:AE:80:ILE:HD13  | 4:AE:211:ILE:CG2   | 2.25                     | 0.67              |
| 5:AF:124:ILE:HG12 | 5:AF:130:VAL:HG22  | 1.75                     | 0.67              |
| 5:AF:187:ALA:HB3  | 5:AF:198:VAL:HG22  | 1.76                     | 0.67              |
| 6:AG:20:TYR:O     | 6:AG:26:CYS:SG     | 2.53                     | 0.67              |
| 6:AG:112:VAL:HG23 | 6:AG:161:ASN:HD21  | 1.60                     | 0.67              |
| 9:AJ:5:ARG:HD2    | 9:AJ:5:ARG:C       | 2.20                     | 0.67              |
| 9:AJ:70:LYS:O     | 9:AJ:138:LYS:HE3   | 1.95                     | 0.67              |
| 13:AN:63:LEU:HA   | 13:AN:66:LEU:HG    | 1.77                     | 0.67              |
| 15:AP:62:ASN:C    | 15:AP:64:TRP:H     | 2.02                     | 0.67              |
| 19:AT:21:VAL:HG22 | 19:AT:43:LEU:HA    | 1.76                     | 0.67              |
| 19:AT:44:ALA:HA   | 19:AT:71:PHE:O     | 1.95                     | 0.67              |
| 24:BA:27:G:N1     | 24:BA:512:G:C2'    | 2.56                     | 0.67              |
| 24:BA:270:A:H2'   | 24:BA:270(A):A:C4' | 2.25                     | 0.67              |
| 24:BA:401:A:N6    | 24:BA:423:A:C2     | 2.63                     | 0.67              |
| 24:BA:563:G:N2    | 41:BT:34:LYS:NZ    | 2.42                     | 0.67              |
| 24:BA:751:A:O4'   | 43:BV:90:ARG:HD3   | 1.95                     | 0.67              |
| 24:BA:864:G:H2'   | 24:BA:865:C:O4'    | 1.95                     | 0.67              |
| 24:BA:1203:G:C5   | 24:BA:1240:U:N3    | 2.63                     | 0.67              |
| 24:BA:1518:C:N4   | 24:BA:1519:G:C8    | 2.62                     | 0.67              |
| 24:BA:1754:C:O2   | 24:BA:1755:A:C1'   | 2.38                     | 0.67              |
| 24:BA:1859:A:H61  | 24:BA:1883:G:H2'   | 1.58                     | 0.67              |
| 24:BA:2051:A:C1'  | 28:BE:141:ILE:HD11 | 2.25                     | 0.67              |
| 24:BA:2320:A:H8   | 24:BA:2320:A:OP2   | 1.77                     | 0.67              |
| 24:BA:2550:G:C2   | 24:BA:2559:C:C2    | 2.83                     | 0.67              |
| 24:BA:2623:G:N2   | 51:B4:22:HIS:CE1   | 2.52                     | 0.67              |
| 24:BA:2742:C:H5'' | 55:B8:35:ARG:NH1   | 2.09                     | 0.67              |
| 25:BB:3:C:H2'     | 25:BB:4:C:H6       | 1.60                     | 0.67              |
| 25:BB:13:A:H61    | 25:BB:69:G:C2'     | 2.07                     | 0.67              |
| 25:BB:32:C:H5''   | 25:BB:33:G:OP2     | 1.95                     | 0.67              |
| 25:BB:63:G:H2'    | 25:BB:64:C:C6      | 2.30                     | 0.67              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 26:BC:49:ILE:HG13 | 26:BC:51:PRO:HD3  | 1.77                     | 0.67              |
| 26:BC:183:GLU:CD  | 26:BC:183:GLU:N   | 2.53                     | 0.67              |
| 27:BD:7:LYS:HG3   | 27:BD:27:THR:N    | 2.10                     | 0.67              |
| 27:BD:32:SER:O    | 27:BD:33:LEU:O    | 2.13                     | 0.67              |
| 27:BD:45:ASN:OD1  | 27:BD:50:THR:HG23 | 1.94                     | 0.67              |
| 27:BD:154:LYS:O   | 27:BD:155:LEU:CB  | 2.42                     | 0.67              |
| 28:BE:147:PRO:CD  | 28:BE:148:GLY:H   | 2.04                     | 0.67              |
| 29:BF:74:ARG:NH1  | 29:BF:75:HIS:CA   | 2.57                     | 0.67              |
| 31:BH:9:ILE:HD11  | 31:BH:69:ARG:HH22 | 1.60                     | 0.67              |
| 31:BH:26:VAL:HG12 | 31:BH:79:VAL:CG1  | 2.24                     | 0.67              |
| 31:BH:87:LEU:H    | 31:BH:132:ARG:CB  | 2.08                     | 0.67              |
| 31:BH:137:ASP:HB3 | 31:BH:140:LYS:HG2 | 1.76                     | 0.67              |
| 32:BK:7:GLU:C     | 32:BK:14:ASP:HA   | 2.20                     | 0.67              |
| 35:BN:41:ALA:O    | 35:BN:56:ASP:HA   | 1.95                     | 0.67              |
| 36:BO:96:THR:OG1  | 36:BO:102:ARG:HD3 | 1.95                     | 0.67              |
| 38:BQ:5:LYS:NZ    | 38:BQ:6:SER:N     | 2.43                     | 0.67              |
| 38:BQ:99:LYS:HG2  | 51:B4:43:HIS:CE1  | 2.29                     | 0.67              |
| 41:BT:40:PHE:HD2  | 42:BU:78:LYS:HE2  | 1.60                     | 0.67              |
| 41:BT:81:HIS:HB3  | 41:BT:117:GLN:NE2 | 2.09                     | 0.67              |
| 42:BU:31:ALA:O    | 42:BU:33:VAL:N    | 2.28                     | 0.67              |
| 43:BV:36:LEU:HD11 | 43:BV:47:VAL:CB   | 2.25                     | 0.67              |
| 45:BX:36:ALA:HA   | 45:BX:64:GLU:HB2  | 1.77                     | 0.67              |
| 45:BX:47:LYS:HD3  | 45:BX:49:VAL:CG2  | 2.19                     | 0.67              |
| 47:BZ:37:LEU:HD21 | 47:BZ:60:PHE:HA   | 1.77                     | 0.67              |
| 47:BZ:40:GLN:HB3  | 47:BZ:45:PHE:CD1  | 2.30                     | 0.67              |
| 48:B1:2:ARG:CA    | 48:B1:5:LEU:HD13  | 2.23                     | 0.67              |
| 53:B6:26:GLY:O    | 53:B6:30:VAL:HG23 | 1.95                     | 0.67              |
| 1:AA:129(A):G:N2  | 1:AA:191(A):G:C8  | 2.63                     | 0.66              |
| 1:AA:178:C:C2     | 1:AA:179:A:C8     | 2.84                     | 0.66              |
| 1:AA:990:C:H2'    | 1:AA:991:U:C6     | 2.30                     | 0.66              |
| 1:AA:1054:C:N4    | 3:AB:34:G:HO2'    | 1.93                     | 0.66              |
| 1:AA:1181:G:H2'   | 1:AA:1182:G:O4'   | 1.94                     | 0.66              |
| 1:AA:1228:C:H4'   | 15:AP:116:THR:CA  | 2.22                     | 0.66              |
| 1:AA:1307:U:O5'   | 1:AA:1307:U:H6    | 1.77                     | 0.66              |
| 4:AE:83:MET:HB2   | 4:AE:234:PRO:HG3  | 1.75                     | 0.66              |
| 5:AF:66:VAL:C     | 5:AF:102:ASN:HD22 | 2.02                     | 0.66              |
| 5:AF:142:MET:HE3  | 5:AF:143:GLU:CA   | 2.21                     | 0.66              |
| 8:AI:84:ASN:O     | 8:AI:86:ARG:N     | 2.28                     | 0.66              |
| 15:AP:48:LEU:HD11 | 15:AP:56:LEU:CD1  | 2.23                     | 0.66              |
| 16:AQ:22:THR:O    | 16:AQ:23:ARG:HG2  | 1.94                     | 0.66              |
| 17:AR:62:GLN:HA   | 17:AR:65:ARG:NH1  | 2.09                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:61:G:H5'     | 48:B1:45:ILE:CD1  | 2.24                     | 0.66              |
| 24:BA:195:A:N6     | 24:BA:198:C:OP2   | 2.28                     | 0.66              |
| 24:BA:321:G:OP2    | 29:BF:135:LYS:HE3 | 1.94                     | 0.66              |
| 24:BA:663:G:H5'    | 36:BO:18:ARG:CB   | 2.20                     | 0.66              |
| 24:BA:740:U:P      | 24:BA:1784:A:N1   | 2.68                     | 0.66              |
| 24:BA:839:U:H2'    | 24:BA:840:C:H6    | 1.56                     | 0.66              |
| 24:BA:1205:U:H2'   | 24:BA:1206:G:N7   | 2.09                     | 0.66              |
| 24:BA:1477:A:C3'   | 24:BA:1478:G:O4'  | 2.43                     | 0.66              |
| 24:BA:1657:C:H2'   | 24:BA:1658:C:C6   | 2.26                     | 0.66              |
| 24:BA:1794:U:C2    | 24:BA:1795:C:C5   | 2.83                     | 0.66              |
| 24:BA:1832:C:C2'   | 24:BA:1833:U:H5'  | 2.25                     | 0.66              |
| 24:BA:1931:U:H5    | 24:BA:1969:A:H62  | 1.41                     | 0.66              |
| 24:BA:2056:G:H21   | 51:B4:4:HIS:HD2   | 1.42                     | 0.66              |
| 24:BA:2124:G:H21   | 26:BC:217:THR:C   | 2.03                     | 0.66              |
| 24:BA:2849:U:H3'   | 24:BA:2849:U:H6   | 1.58                     | 0.66              |
| 24:BA:2868:A:O2'   | 24:BA:2869:G:H5'  | 1.94                     | 0.66              |
| 24:BA:2893:G:H8    | 24:BA:2893:G:OP2  | 1.78                     | 0.66              |
| 26:BC:62:VAL:HG21  | 26:BC:191:ALA:O   | 1.95                     | 0.66              |
| 27:BD:133:LEU:O    | 27:BD:136:ILE:N   | 2.28                     | 0.66              |
| 27:BD:208:LYS:NZ   | 27:BD:211:ARG:NH2 | 2.43                     | 0.66              |
| 28:BE:49:LEU:HD22  | 28:BE:76:ARG:O    | 1.95                     | 0.66              |
| 28:BE:85:ASN:C     | 28:BE:87:GLU:H    | 2.03                     | 0.66              |
| 28:BE:149:ARG:C    | 28:BE:149:ARG:HD3 | 2.19                     | 0.66              |
| 29:BF:122:LYS:HZ3  | 29:BF:122:LYS:CA  | 2.07                     | 0.66              |
| 29:BF:184:TYR:HD2  | 29:BF:184:TYR:N   | 1.93                     | 0.66              |
| 30:BG:56:ALA:O     | 30:BG:59:GLU:HG3  | 1.96                     | 0.66              |
| 30:BG:60:LEU:CB    | 30:BG:66:GLN:O    | 2.41                     | 0.66              |
| 31:BH:148:ILE:HG23 | 31:BH:162:ILE:CD1 | 2.26                     | 0.66              |
| 32:BK:94:ALA:HA    | 32:BK:97:ILE:CG1  | 2.24                     | 0.66              |
| 33:BL:12:LEU:CD2   | 33:BL:23:VAL:HG23 | 2.25                     | 0.66              |
| 33:BL:66:THR:O     | 33:BL:67:PHE:CB   | 2.43                     | 0.66              |
| 33:BL:105:LEU:HD22 | 33:BL:124:ALA:CB  | 2.25                     | 0.66              |
| 34:BM:23:LEU:HD23  | 34:BM:60:ILE:CG2  | 2.25                     | 0.66              |
| 34:BM:55:VAL:HG21  | 34:BM:127:ASP:HA  | 1.76                     | 0.66              |
| 35:BN:10:VAL:HG12  | 35:BN:17:ARG:C    | 2.20                     | 0.66              |
| 36:BO:73:GLY:HA2   | 36:BO:111:ARG:CZ  | 2.24                     | 0.66              |
| 36:BO:73:GLY:CA    | 36:BO:111:ARG:NH1 | 2.48                     | 0.66              |
| 37:BP:94:VAL:CG2   | 37:BP:95:ALA:N    | 2.52                     | 0.66              |
| 38:BQ:37:THR:O     | 38:BQ:40:LYS:HB2  | 1.95                     | 0.66              |
| 39:BR:28:VAL:HA    | 39:BR:37:ALA:HB2  | 1.77                     | 0.66              |
| 39:BR:29:PHE:CD1   | 39:BR:29:PHE:O    | 2.48                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 40:BS:71:GLY:N     | 40:BS:74:ARG:NH1  | 2.43                     | 0.66              |
| 40:BS:113:LYS:O    | 40:BS:116:ALA:HB3 | 1.95                     | 0.66              |
| 42:BU:60:GLU:HG3   | 42:BU:100:ARG:O   | 1.95                     | 0.66              |
| 43:BV:42:ARG:HG3   | 43:BV:43:GLY:N    | 2.09                     | 0.66              |
| 45:BX:37:VAL:HG22  | 45:BX:39:VAL:HG23 | 1.77                     | 0.66              |
| 46:BY:10:ARG:CD    | 46:BY:36:LYS:HB2  | 2.25                     | 0.66              |
| 46:BY:92:SER:O     | 46:BY:93:ASP:HB2  | 1.94                     | 0.66              |
| 46:BY:127:LYS:HZ3  | 46:BY:165:VAL:HB  | 1.59                     | 0.66              |
| 54:B7:6:THR:HG23   | 54:B7:9:GLY:HA3   | 1.75                     | 0.66              |
| 1:AA:51:A:O2'      | 1:AA:52:G:OP2     | 2.12                     | 0.66              |
| 1:AA:173:U:H5''    | 1:AA:197:A:O2'    | 1.96                     | 0.66              |
| 1:AA:592:G:C2'     | 1:AA:593:G:H5'    | 2.25                     | 0.66              |
| 1:AA:1233:G:O2'    | 1:AA:1365:G:OP1   | 2.12                     | 0.66              |
| 1:AA:1256:A:O3'    | 1:AA:1257:U:C4'   | 2.41                     | 0.66              |
| 2:A1:51:U:H4'      | 2:A1:52:U:OP1     | 1.95                     | 0.66              |
| 4:AE:61:LEU:HA     | 4:AE:64:ARG:CD    | 2.25                     | 0.66              |
| 4:AE:219:VAL:CG1   | 4:AE:223:ILE:HD11 | 2.14                     | 0.66              |
| 5:AF:94:LEU:O      | 5:AF:94:LEU:HD23  | 1.95                     | 0.66              |
| 6:AG:61:LYS:CB     | 6:AG:203:VAL:HG13 | 2.24                     | 0.66              |
| 6:AG:147:ALA:CB    | 6:AG:181:MET:O    | 2.42                     | 0.66              |
| 7:AH:84:PHE:CZ     | 7:AH:133:TYR:CB   | 2.76                     | 0.66              |
| 8:AI:98:LEU:HG     | 20:AU:28:GLU:HG2  | 1.78                     | 0.66              |
| 9:AJ:79:ARG:CD     | 9:AJ:84:ASN:HB3   | 2.25                     | 0.66              |
| 10:AK:36:LEU:O     | 10:AK:39:LEU:CB   | 2.42                     | 0.66              |
| 12:AM:90:LEU:H     | 12:AM:91:PRO:HD2  | 1.58                     | 0.66              |
| 13:AN:78:GLN:OE1   | 13:AN:79:SER:N    | 2.27                     | 0.66              |
| 14:AO:101:VAL:HG23 | 14:AO:104:VAL:CG2 | 2.25                     | 0.66              |
| 22:AW:12:ALA:O     | 22:AW:15:ARG:HG2  | 1.94                     | 0.66              |
| 24:BA:38:A:N3      | 29:BF:48:THR:HG21 | 2.10                     | 0.66              |
| 24:BA:106:C:H1'    | 24:BA:294:A:H4'   | 1.76                     | 0.66              |
| 24:BA:439:G:H2'    | 24:BA:440:G:C8    | 2.30                     | 0.66              |
| 24:BA:566:U:C6     | 24:BA:567:A:N7    | 2.63                     | 0.66              |
| 24:BA:1198:U:H2'   | 24:BA:1199:U:H5   | 1.60                     | 0.66              |
| 24:BA:1363:C:H2'   | 24:BA:1363:C:O2   | 1.95                     | 0.66              |
| 24:BA:1363:C:O3'   | 24:BA:1809:A:C6   | 2.48                     | 0.66              |
| 24:BA:1500:G:H2'   | 24:BA:1501:C:C6   | 2.31                     | 0.66              |
| 24:BA:1668:A:N7    | 24:BA:1674:G:C4   | 2.63                     | 0.66              |
| 24:BA:1709:U:H6    | 24:BA:1709:U:H5'  | 1.61                     | 0.66              |
| 24:BA:1901:A:O2'   | 27:BD:244:ARG:NH1 | 2.27                     | 0.66              |
| 24:BA:1919:A:C8    | 24:BA:1919:A:O5'  | 2.47                     | 0.66              |
| 24:BA:1941:C:C2'   | 24:BA:1942:C:O5'  | 2.43                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2225:A:C5'   | 24:BA:2226:C:H6    | 2.08                     | 0.66              |
| 24:BA:2280:G:C2    | 24:BA:2281:C:C5    | 2.84                     | 0.66              |
| 24:BA:2286:A:C8    | 24:BA:2286:A:H3'   | 2.31                     | 0.66              |
| 24:BA:2356:C:O2'   | 47:BZ:20:ARG:NE    | 2.27                     | 0.66              |
| 24:BA:2602:A:C8    | 47:BZ:2:ALA:HB2    | 2.30                     | 0.66              |
| 24:BA:2748:A:N7    | 24:BA:2749:A:N6    | 2.43                     | 0.66              |
| 24:BA:2777:G:H3'   | 24:BA:2777:G:H8    | 1.59                     | 0.66              |
| 26:BC:89:ALA:HB1   | 26:BC:154:ARG:N    | 2.09                     | 0.66              |
| 26:BC:120:MET:HG3  | 26:BC:145:VAL:HG13 | 1.77                     | 0.66              |
| 28:BE:92:THR:HG22  | 28:BE:92:THR:O     | 1.94                     | 0.66              |
| 28:BE:132:HIS:O    | 28:BE:133:LYS:HB2  | 1.95                     | 0.66              |
| 30:BG:32:PRO:CB    | 30:BG:163:ALA:HA   | 2.24                     | 0.66              |
| 30:BG:118:ARG:CG   | 30:BG:119:GLY:N    | 2.54                     | 0.66              |
| 31:BH:97:ARG:HB3   | 31:BH:97:ARG:NH2   | 2.11                     | 0.66              |
| 33:BL:10:LEU:HD21  | 33:BL:57:ILE:CG1   | 2.23                     | 0.66              |
| 33:BL:21:PRO:HA    | 33:BL:25:PRO:HD2   | 1.76                     | 0.66              |
| 34:BM:128:HIS:O    | 34:BM:131:GLN:HB2  | 1.95                     | 0.66              |
| 35:BN:106:LEU:HD12 | 35:BN:106:LEU:C    | 2.19                     | 0.66              |
| 37:BP:42:ILE:CD1   | 37:BP:46:GLN:HE21  | 2.08                     | 0.66              |
| 37:BP:85:LYS:HG3   | 37:BP:87:LYS:H     | 1.60                     | 0.66              |
| 37:BP:111:GLU:C    | 37:BP:113:GLN:H    | 2.01                     | 0.66              |
| 43:BV:35:ILE:HG13  | 51:B4:28:PRO:CG    | 2.25                     | 0.66              |
| 45:BX:72:VAL:C     | 45:BX:73:ARG:HG3   | 2.20                     | 0.66              |
| 46:BY:116:VAL:CG2  | 46:BY:145:GLU:HG2  | 2.25                     | 0.66              |
| 47:BZ:68:GLU:HB3   | 47:BZ:80:HIS:C     | 2.19                     | 0.66              |
| 48:B1:38:GLN:N     | 48:B1:41:GLN:NE2   | 2.39                     | 0.66              |
| 50:B3:1:MET:HE1    | 50:B3:9:LEU:CD2    | 2.23                     | 0.66              |
| 51:B4:48:GLU:N     | 51:B4:58:LEU:HG    | 2.10                     | 0.66              |
| 1:AA:47:C:O2'      | 1:AA:48:C:P        | 2.52                     | 0.66              |
| 1:AA:390:C:H2'     | 1:AA:391:G:H8      | 1.60                     | 0.66              |
| 1:AA:571:U:H6      | 1:AA:571:U:H5''    | 1.58                     | 0.66              |
| 1:AA:795:C:O5'     | 1:AA:795:C:H6      | 1.77                     | 0.66              |
| 1:AA:946:A:C2'     | 1:AA:947:G:C8      | 2.75                     | 0.66              |
| 1:AA:1200:C:H5''   | 1:AA:1201:A:H3'    | 1.77                     | 0.66              |
| 1:AA:1206:G:H5'    | 5:AF:194:GLY:CA    | 2.23                     | 0.66              |
| 1:AA:1333:A:O5'    | 1:AA:1333:A:H8     | 1.79                     | 0.66              |
| 1:AA:1389:C:O2'    | 1:AA:1390:U:H5'    | 1.95                     | 0.66              |
| 1:AA:1404:C:C1'    | 1:AA:1499:A:C2     | 2.78                     | 0.66              |
| 3:AC:34:G:C4       | 3:AC:35:A:C8       | 2.83                     | 0.66              |
| 3:AC:55:U:H2'      | 3:AC:57:G:N7       | 2.10                     | 0.66              |
| 3:AB:4:C:H2'       | 3:AB:5:G:C8        | 2.29                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:AF:24:ALA:HB2   | 5:AF:32:LEU:HD12   | 1.76                     | 0.66              |
| 6:AG:39:PRO:O     | 6:AG:44:GLY:HA3    | 1.95                     | 0.66              |
| 6:AG:54:TYR:O     | 6:AG:55:ALA:C      | 2.39                     | 0.66              |
| 7:AH:96:PRO:C     | 7:AH:98:THR:N      | 2.49                     | 0.66              |
| 8:AI:50:TYR:OH    | 20:AU:77:GLY:CA    | 2.43                     | 0.66              |
| 9:AJ:87:VAL:HG13  | 9:AJ:152:ALA:CA    | 2.21                     | 0.66              |
| 10:AK:40:ALA:HB2  | 10:AK:45:ILE:CG1   | 2.24                     | 0.66              |
| 10:AK:82:HIS:O    | 10:AK:137:VAL:CA   | 2.41                     | 0.66              |
| 11:AL:9:ARG:CD    | 11:AL:14:VAL:HG22  | 2.22                     | 0.66              |
| 12:AM:11:PHE:CZ   | 12:AM:65:LEU:HG    | 2.31                     | 0.66              |
| 12:AM:23:ILE:HG23 | 12:AM:85:LEU:CD2   | 2.21                     | 0.66              |
| 16:AQ:10:ALA:C    | 16:AQ:12:ARG:H     | 2.02                     | 0.66              |
| 18:AS:4:ILE:CG2   | 18:AS:21:VAL:CG1   | 2.72                     | 0.66              |
| 24:BA:14:A:N7     | 24:BA:15:G:C4      | 2.63                     | 0.66              |
| 24:BA:35:G:N2     | 24:BA:450:G:H21    | 1.92                     | 0.66              |
| 24:BA:181:A:H5'   | 24:BA:181:A:C8     | 2.30                     | 0.66              |
| 24:BA:253:C:H2'   | 24:BA:254:G:H5'    | 1.76                     | 0.66              |
| 24:BA:310:A:H2'   | 24:BA:312:G:C8     | 2.29                     | 0.66              |
| 24:BA:465:G:O6    | 24:BA:466:A:N6     | 2.29                     | 0.66              |
| 24:BA:574:C:H1'   | 24:BA:2055:C:H5    | 1.59                     | 0.66              |
| 24:BA:627:A:N6    | 24:BA:638:G:H1'    | 2.08                     | 0.66              |
| 24:BA:750:A:H2'   | 43:BV:90:ARG:HH12  | 1.60                     | 0.66              |
| 24:BA:752:A:H62   | 24:BA:1781:C:H1'   | 1.56                     | 0.66              |
| 24:BA:779:U:H2'   | 24:BA:780:G:O4'    | 1.95                     | 0.66              |
| 24:BA:961:C:C5    | 24:BA:2031:A:C2    | 2.84                     | 0.66              |
| 24:BA:1024:G:C5   | 24:BA:1025:G:H8    | 2.12                     | 0.66              |
| 24:BA:1058:G:N2   | 33:BL:116:ASN:ND2  | 2.42                     | 0.66              |
| 24:BA:1222:C:C2'  | 24:BA:1223:C:H5'   | 2.25                     | 0.66              |
| 24:BA:1378:A:H2'  | 24:BA:1380:G:N7    | 2.11                     | 0.66              |
| 24:BA:1491:G:O4'  | 27:BD:99:ASP:HB2   | 1.96                     | 0.66              |
| 24:BA:1996:C:O2   | 24:BA:1997:G:H4'   | 1.94                     | 0.66              |
| 24:BA:2209:C:O2'  | 24:BA:2210:G:H3'   | 1.95                     | 0.66              |
| 24:BA:2439:A:H4'  | 24:BA:2440:C:C5'   | 2.26                     | 0.66              |
| 24:BA:2507:C:C2   | 24:BA:2583:G:N3    | 2.62                     | 0.66              |
| 24:BA:2593:U:H6   | 24:BA:2593:U:OP2   | 1.77                     | 0.66              |
| 24:BA:2747:G:N2   | 24:BA:2754:U:N3    | 2.43                     | 0.66              |
| 25:BB:55:U:H2'    | 25:BB:56:G:O4'     | 1.96                     | 0.66              |
| 27:BD:61:LEU:HD22 | 27:BD:63:ARG:HH21  | 1.59                     | 0.66              |
| 27:BD:242:ARG:O   | 27:BD:243:GLY:C    | 2.38                     | 0.66              |
| 28:BE:58:ARG:HH11 | 28:BE:75:VAL:CG1   | 2.08                     | 0.66              |
| 28:BE:171:GLU:O   | 28:BE:184:VAL:HG12 | 1.95                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 29:BF:81:PRO:O    | 29:BF:83:PHE:N     | 2.26                     | 0.66              |
| 29:BF:125:LEU:O   | 29:BF:126:VAL:HG12 | 1.96                     | 0.66              |
| 30:BG:181:ARG:H   | 30:BG:181:ARG:CD   | 2.08                     | 0.66              |
| 32:BK:5:LEU:N     | 32:BK:5:LEU:HD23   | 2.10                     | 0.66              |
| 32:BK:6:LEU:HD22  | 32:BK:7:GLU:OE2    | 1.95                     | 0.66              |
| 33:BL:10:LEU:HD11 | 33:BL:57:ILE:CD1   | 2.25                     | 0.66              |
| 33:BL:72:PRO:O    | 33:BL:111:LYS:NZ   | 2.23                     | 0.66              |
| 34:BM:37:LYS:HD2  | 34:BM:42:TRP:O     | 1.95                     | 0.66              |
| 34:BM:93:THR:C    | 34:BM:94:HIS:HD2   | 2.03                     | 0.66              |
| 35:BN:11:ALA:HB1  | 35:BN:97:ARG:HH12  | 1.57                     | 0.66              |
| 37:BP:16:ARG:NH1  | 37:BP:72:LYS:HA    | 2.11                     | 0.66              |
| 37:BP:45:GLN:O    | 37:BP:46:GLN:C     | 2.38                     | 0.66              |
| 37:BP:137:TYR:CE2 | 46:BY:124:ILE:HD12 | 2.30                     | 0.66              |
| 38:BQ:5:LYS:HE2   | 38:BQ:5:LYS:CA     | 2.24                     | 0.66              |
| 38:BQ:79:LEU:HD23 | 38:BQ:80:PHE:HA    | 1.77                     | 0.66              |
| 39:BR:56:LEU:HD12 | 39:BR:59:LYS:HD2   | 1.77                     | 0.66              |
| 40:BS:70:VAL:HB   | 40:BS:74:ARG:HD3   | 1.77                     | 0.66              |
| 41:BT:99:ALA:HA   | 41:BT:106:PHE:CB   | 2.26                     | 0.66              |
| 42:BU:6:LYS:NZ    | 42:BU:10:LYS:HD2   | 2.10                     | 0.66              |
| 43:BV:25:ARG:HA   | 43:BV:71:VAL:CG1   | 2.24                     | 0.66              |
| 44:BW:7:VAL:HG22  | 48:B1:31:ARG:HH12  | 1.59                     | 0.66              |
| 45:BX:37:VAL:HG22 | 45:BX:39:VAL:CG2   | 2.25                     | 0.66              |
| 45:BX:95:LYS:HE3  | 45:BX:103:GLY:N    | 2.11                     | 0.66              |
| 48:B1:7:GLU:HA    | 48:B1:10:LYS:HG2   | 1.77                     | 0.66              |
| 50:B3:5:ILE:HD11  | 50:B3:10:VAL:N     | 2.11                     | 0.66              |
| 54:B7:26:LYS:NZ   | 54:B7:43:GLN:HA    | 2.10                     | 0.66              |
| 54:B7:60:LEU:HD23 | 54:B7:60:LEU:C     | 2.20                     | 0.66              |
| 1:AA:185:A:H2'    | 1:AA:186:C:C6      | 2.30                     | 0.66              |
| 1:AA:428:G:C2     | 1:AA:430:A:N6      | 2.64                     | 0.66              |
| 1:AA:576:G:C8     | 1:AA:881:G:H1'     | 2.30                     | 0.66              |
| 1:AA:647:C:C2     | 1:AA:648:A:C8      | 2.83                     | 0.66              |
| 1:AA:686:U:O2'    | 1:AA:687:A:OP1     | 2.14                     | 0.66              |
| 1:AA:794:A:H4'    | 1:AA:1521:G:O2'    | 1.94                     | 0.66              |
| 1:AA:832:C:H2'    | 1:AA:833:U:C6      | 2.29                     | 0.66              |
| 1:AA:1049:U:H1'   | 1:AA:1201:A:C8     | 2.30                     | 0.66              |
| 1:AA:1181:G:C2'   | 1:AA:1182:G:H5'    | 2.26                     | 0.66              |
| 1:AA:1191:A:N3    | 1:AA:1191:A:H2'    | 2.08                     | 0.66              |
| 1:AA:1405:G:H2'   | 1:AA:1406:U:H6     | 1.61                     | 0.66              |
| 1:AA:1443:G:H4'   | 1:AA:1446:A:H5'    | 0.79                     | 0.66              |
| 3:AC:21:A:H2'     | 3:AC:22:G:O5'      | 1.95                     | 0.66              |
| 3:AC:37:A:H2'     | 3:AC:38:A:C8       | 2.29                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 3:AB:58:A:H4'      | 3:AB:59:U:OP1      | 1.95                     | 0.66              |
| 5:AF:94:LEU:O      | 5:AF:95:THR:HG23   | 1.96                     | 0.66              |
| 6:AG:119:GLN:HG3   | 6:AG:123:HIS:CE1   | 2.31                     | 0.66              |
| 7:AH:11:ILE:HB     | 7:AH:31:LEU:CD2    | 2.24                     | 0.66              |
| 7:AH:24:ARG:C      | 7:AH:25:ARG:HD3    | 2.20                     | 0.66              |
| 10:AK:70:GLN:HB2   | 10:AK:73:ASP:O     | 1.95                     | 0.66              |
| 10:AK:109:ILE:O    | 10:AK:136:GLU:HB2  | 1.95                     | 0.66              |
| 13:AN:23:ALA:HB2   | 13:AN:28:THR:HG23  | 1.78                     | 0.66              |
| 14:AO:27:LEU:HB2   | 14:AO:64:TYR:CZ    | 2.30                     | 0.66              |
| 16:AQ:23:ARG:N     | 16:AQ:33:VAL:HG21  | 2.10                     | 0.66              |
| 17:AR:35:ARG:CZ    | 17:AR:59:MET:HE2   | 2.25                     | 0.66              |
| 17:AR:71:GLN:HG3   | 17:AR:75:PRO:CB    | 2.20                     | 0.66              |
| 19:AT:16:GLN:O     | 19:AT:17:LYS:HB2   | 1.95                     | 0.66              |
| 22:AW:87:LYS:O     | 22:AW:88:VAL:C     | 2.36                     | 0.66              |
| 24:BA:76:C:H4'     | 48:B1:54:ARG:HH21  | 1.60                     | 0.66              |
| 24:BA:80:G:O4'     | 24:BA:347:A:N6     | 2.28                     | 0.66              |
| 24:BA:124:G:OP1    | 24:BA:1376:C:H1'   | 1.95                     | 0.66              |
| 24:BA:270(B):A:H1' | 24:BA:270(C):C:C6  | 2.30                     | 0.66              |
| 24:BA:292:C:C6     | 24:BA:293:U:O4     | 2.49                     | 0.66              |
| 24:BA:336:C:H2'    | 24:BA:337:C:C5'    | 2.25                     | 0.66              |
| 24:BA:459:U:H5     | 24:BA:469:G:N2     | 1.94                     | 0.66              |
| 24:BA:470:A:C6     | 24:BA:471:A:N3     | 2.63                     | 0.66              |
| 24:BA:778:G:C2     | 24:BA:787:U:C2     | 2.83                     | 0.66              |
| 24:BA:835:A:C4'    | 24:BA:2358:G:H1'   | 2.25                     | 0.66              |
| 24:BA:1024:G:H3'   | 24:BA:1025:G:C5'   | 2.26                     | 0.66              |
| 24:BA:1257:C:HO2'  | 29:BF:84:VAL:HG23  | 1.59                     | 0.66              |
| 24:BA:1394:U:H4'   | 24:BA:1603:A:C4'   | 2.25                     | 0.66              |
| 24:BA:1528:A:N1    | 24:BA:1545:A:N1    | 2.43                     | 0.66              |
| 24:BA:1538:G:H1    | 24:BA:1539:G:N2    | 1.92                     | 0.66              |
| 24:BA:1674:G:O2'   | 24:BA:1676:A:N6    | 2.28                     | 0.66              |
| 24:BA:1675:C:N4    | 28:BE:128:SER:OG   | 2.28                     | 0.66              |
| 24:BA:1675:C:H5    | 28:BE:129:HIS:CD2  | 2.13                     | 0.66              |
| 24:BA:1944:U:C1'   | 24:BA:1955:U:C6    | 2.78                     | 0.66              |
| 24:BA:2049:G:N2    | 24:BA:2620:C:C2    | 2.63                     | 0.66              |
| 24:BA:2419:U:O4    | 54:B7:31:HIS:CE1   | 2.47                     | 0.66              |
| 24:BA:2529:G:H5''  | 24:BA:2530:A:H5''  | 1.77                     | 0.66              |
| 24:BA:2711:A:C5'   | 24:BA:2712:U:H5'   | 2.25                     | 0.66              |
| 25:BB:57:A:H8      | 25:BB:57:A:H3'     | 1.60                     | 0.66              |
| 26:BC:22:ILE:HD11  | 26:BC:193:ILE:HD11 | 1.76                     | 0.66              |
| 26:BC:27:HIS:CD2   | 26:BC:182:PRO:HB3  | 2.31                     | 0.66              |
| 26:BC:56:GLN:O     | 26:BC:201:PRO:HG3  | 1.95                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 28:BE:156:MET:SD  | 28:BE:157:ALA:N    | 2.67                     | 0.66              |
| 29:BF:57:VAL:O    | 29:BF:58:ALA:O     | 2.12                     | 0.66              |
| 29:BF:117:ARG:NE  | 29:BF:190:GLU:O    | 2.29                     | 0.66              |
| 29:BF:132:VAL:H   | 29:BF:138:GLU:CD   | 2.03                     | 0.66              |
| 29:BF:184:TYR:O   | 29:BF:185:ASP:C    | 2.39                     | 0.66              |
| 30:BG:59:GLU:CD   | 30:BG:152:LEU:HD13 | 2.20                     | 0.66              |
| 31:BH:29:PRO:CD   | 31:BH:79:VAL:O     | 2.43                     | 0.66              |
| 33:BL:51:ALA:O    | 33:BL:80:LYS:HG2   | 1.95                     | 0.66              |
| 33:BL:101:TRP:HZ3 | 33:BL:105:LEU:HD11 | 1.60                     | 0.66              |
| 34:BM:33:LEU:HD11 | 34:BM:52:VAL:HG21  | 1.77                     | 0.66              |
| 35:BN:112:MET:O   | 35:BN:115:VAL:CB   | 2.41                     | 0.66              |
| 36:BO:28:GLY:C    | 36:BO:29:LYS:HG3   | 2.19                     | 0.66              |
| 37:BP:20:ALA:O    | 37:BP:21:THR:HB    | 1.94                     | 0.66              |
| 38:BQ:20:LEU:C    | 38:BQ:20:LEU:CD1   | 2.67                     | 0.66              |
| 39:BR:9:ARG:HD3   | 39:BR:12:PHE:CE2   | 2.24                     | 0.66              |
| 40:BS:39:ARG:O    | 40:BS:42:ILE:HG13  | 1.96                     | 0.66              |
| 41:BT:97:ASP:HB3  | 41:BT:101:ARG:NH2  | 2.10                     | 0.66              |
| 43:BV:20:VAL:HG22 | 43:BV:24:ILE:CD1   | 2.21                     | 0.66              |
| 45:BX:31:LEU:HB3  | 45:BX:32:PRO:HD2   | 1.76                     | 0.66              |
| 45:BX:65:ALA:HB3  | 45:BX:66:PRO:CD    | 2.25                     | 0.66              |
| 47:BZ:13:GLY:C    | 47:BZ:14:ARG:HD3   | 2.20                     | 0.66              |
| 47:BZ:51:VAL:HG21 | 47:BZ:79:VAL:C     | 2.20                     | 0.66              |
| 47:BZ:62:LEU:O    | 47:BZ:62:LEU:HD23  | 1.95                     | 0.66              |
| 47:BZ:68:GLU:HB2  | 47:BZ:80:HIS:O     | 1.93                     | 0.66              |
| 49:B2:23:LEU:CA   | 49:B2:28:LEU:HD12  | 2.25                     | 0.66              |
| 52:B5:51:GLU:OE1  | 52:B5:52:VAL:HA    | 1.95                     | 0.66              |
| 54:B7:15:LYS:NZ   | 54:B7:64:TYR:HB3   | 2.10                     | 0.66              |
| 55:B8:25:VAL:HB   | 55:B8:34:GLN:CB    | 2.22                     | 0.66              |
| 1:AA:67:C:O4'     | 1:AA:172:A:H1'     | 1.95                     | 0.66              |
| 1:AA:168:G:C6     | 1:AA:169:C:N4      | 2.63                     | 0.66              |
| 1:AA:192:U:C2     | 1:AA:193:C:C5      | 2.83                     | 0.66              |
| 1:AA:263:A:C8     | 1:AA:263:A:O5'     | 2.49                     | 0.66              |
| 1:AA:363:A:C2'    | 1:AA:364:A:H5'     | 2.26                     | 0.66              |
| 1:AA:671:G:H2'    | 1:AA:672:U:C1'     | 2.25                     | 0.66              |
| 1:AA:705:U:C5     | 1:AA:706:A:N7      | 2.64                     | 0.66              |
| 1:AA:760:G:H2'    | 19:AT:103:GLY:O    | 1.95                     | 0.66              |
| 1:AA:821:G:O2'    | 1:AA:822:C:H5'     | 1.94                     | 0.66              |
| 1:AA:1054:C:C2'   | 1:AA:1055:A:H5''   | 2.25                     | 0.66              |
| 1:AA:1157:A:N1    | 1:AA:1180:A:C4     | 2.63                     | 0.66              |
| 1:AA:1373:G:H5''  | 9:AJ:36:LYS:HD2    | 1.76                     | 0.66              |
| 3:AD:55:U:H1'     | 3:AD:58:A:N7       | 2.10                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 3:AB:29:G:H2'     | 3:AB:30:G:H8       | 1.60                     | 0.66              |
| 4:AE:78:GLN:NE2   | 4:AE:96:ARG:NH2    | 2.43                     | 0.66              |
| 8:AI:23:LYS:CA    | 8:AI:26:ILE:HD12   | 2.26                     | 0.66              |
| 11:AL:23:ASN:ND2  | 11:AL:57:GLY:O     | 2.29                     | 0.66              |
| 11:AL:26:VAL:HG13 | 11:AL:63:ILE:CD1   | 2.26                     | 0.66              |
| 12:AM:23:ILE:CG2  | 12:AM:85:LEU:HD23  | 2.21                     | 0.66              |
| 12:AM:52:GLY:H    | 12:AM:59:SER:HB2   | 1.59                     | 0.66              |
| 13:AN:100:ALA:C   | 13:AN:102:GLY:H    | 2.02                     | 0.66              |
| 13:AN:102:GLY:HA2 | 13:AN:105:VAL:CG2  | 2.24                     | 0.66              |
| 13:AN:122:LYS:O   | 13:AN:126:ARG:HG3  | 1.96                     | 0.66              |
| 16:AQ:13:THR:O    | 16:AQ:14:PRO:C     | 2.37                     | 0.66              |
| 18:AS:73:LEU:HD13 | 18:AS:73:LEU:O     | 1.94                     | 0.66              |
| 21:AV:40:ILE:HG13 | 21:AV:69:HIS:O     | 1.93                     | 0.66              |
| 24:BA:10:G:H2'    | 24:BA:11:G:C8      | 2.29                     | 0.66              |
| 24:BA:99:U:H5'    | 24:BA:101:G:H5''   | 1.76                     | 0.66              |
| 24:BA:152:G:N2    | 24:BA:175:G:H1'    | 2.10                     | 0.66              |
| 24:BA:476:G:N2    | 24:BA:478:A:H3'    | 2.10                     | 0.66              |
| 24:BA:479:A:O2'   | 24:BA:480:A:H3'    | 1.96                     | 0.66              |
| 24:BA:613:U:H5'   | 24:BA:614:U:C6     | 2.30                     | 0.66              |
| 24:BA:623:G:C3'   | 36:BO:105:LEU:HD22 | 2.24                     | 0.66              |
| 24:BA:627:A:OP2   | 24:BA:627:A:C4'    | 2.43                     | 0.66              |
| 24:BA:848:G:H2'   | 24:BA:849:A:H8     | 1.57                     | 0.66              |
| 24:BA:894:C:H2'   | 24:BA:895:U:H6     | 1.60                     | 0.66              |
| 24:BA:1071:G:N3   | 24:BA:1089:G:H2'   | 2.11                     | 0.66              |
| 24:BA:1092:C:H6   | 24:BA:1092:C:H3'   | 1.59                     | 0.66              |
| 24:BA:1124:C:H3'  | 24:BA:1125:G:H8    | 1.60                     | 0.66              |
| 24:BA:1604:C:O2'  | 24:BA:1605:C:H5'   | 1.95                     | 0.66              |
| 24:BA:1679:U:H3   | 24:BA:1764:G:H5''  | 1.60                     | 0.66              |
| 24:BA:1824:G:N3   | 24:BA:1825:A:H1'   | 2.09                     | 0.66              |
| 24:BA:2238:G:H1'  | 24:BA:2240:C:C5    | 2.31                     | 0.66              |
| 24:BA:2312:U:P    | 30:BG:86:MET:HG2   | 2.36                     | 0.66              |
| 24:BA:2331:G:H2'  | 24:BA:2332:U:C1'   | 2.26                     | 0.66              |
| 24:BA:2564:A:C2'  | 24:BA:2565:A:C8    | 2.72                     | 0.66              |
| 24:BA:2844:G:H2'  | 24:BA:2844:G:N3    | 2.09                     | 0.66              |
| 24:BA:2876:G:H2'  | 24:BA:2877:G:H8    | 1.59                     | 0.66              |
| 25:BB:14:U:H6     | 25:BB:14:U:H3'     | 1.60                     | 0.66              |
| 25:BB:110:G:C2    | 25:BB:111:U:H1'    | 2.31                     | 0.66              |
| 26:BC:103:ILE:CD1 | 26:BC:127:LEU:HD11 | 2.24                     | 0.66              |
| 26:BC:120:MET:SD  | 26:BC:145:VAL:HG22 | 2.36                     | 0.66              |
| 27:BD:261:LYS:C   | 27:BD:263:ARG:N    | 2.46                     | 0.66              |
| 28:BE:102:VAL:CG2 | 28:BE:103:ASP:N    | 2.59                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 28:BE:172:VAL:O    | 28:BE:182:LEU:HD21 | 1.95                     | 0.66              |
| 29:BF:158:THR:HG23 | 29:BF:159:GLY:N    | 2.09                     | 0.66              |
| 31:BH:40:GLU:HG3   | 31:BH:61:HIS:NE2   | 2.11                     | 0.66              |
| 31:BH:149:ARG:HA   | 31:BH:162:ILE:HG21 | 1.77                     | 0.66              |
| 32:BK:14:ASP:O     | 32:BK:15:VAL:O     | 2.13                     | 0.66              |
| 32:BK:35:LEU:N     | 32:BK:35:LEU:HD22  | 2.11                     | 0.66              |
| 34:BM:7:LYS:HE2    | 34:BM:39:ARG:HH22  | 1.61                     | 0.66              |
| 34:BM:89:LYS:O     | 34:BM:90:MET:C     | 2.38                     | 0.66              |
| 34:BM:104:LYS:HA   | 34:BM:117:PHE:HZ   | 1.59                     | 0.66              |
| 37:BP:93:TYR:C     | 37:BP:94:VAL:CG1   | 2.69                     | 0.66              |
| 37:BP:101:ARG:HH11 | 37:BP:101:ARG:CG   | 2.08                     | 0.66              |
| 38:BQ:41:ALA:CB    | 38:BQ:114:VAL:HG21 | 2.22                     | 0.66              |
| 39:BR:49:VAL:CB    | 39:BR:80:LEU:HG    | 2.25                     | 0.66              |
| 40:BS:6:LEU:HD21   | 40:BS:7:ILE:HG23   | 1.78                     | 0.66              |
| 41:BT:84:LYS:O     | 41:BT:85:LYS:C     | 2.38                     | 0.66              |
| 43:BV:47:VAL:C     | 43:BV:51:LEU:HD13  | 2.21                     | 0.66              |
| 44:BW:43:VAL:HG12  | 44:BW:51:VAL:HG22  | 1.76                     | 0.66              |
| 46:BY:49:ARG:C     | 46:BY:51:ALA:N     | 2.52                     | 0.66              |
| 47:BZ:41:ARG:HB3   | 47:BZ:41:ARG:HH11  | 1.56                     | 0.66              |
| 48:B1:23:LYS:HE3   | 48:B1:55:LEU:HD21  | 1.78                     | 0.66              |
| 49:B2:5:LYS:HZ2    | 49:B2:59:VAL:CG2   | 2.08                     | 0.66              |
| 49:B2:11:SER:H     | 49:B2:12:PRO:CD    | 2.09                     | 0.66              |
| 50:B3:41:PRO:CB    | 50:B3:58:ARG:HD2   | 2.26                     | 0.66              |
| 50:B3:59:PHE:O     | 50:B3:60:GLN:C     | 2.38                     | 0.66              |
| 1:AA:236:G:H3'     | 1:AA:237:C:C6      | 2.30                     | 0.66              |
| 1:AA:434:U:H2'     | 1:AA:435:C:H6      | 1.60                     | 0.66              |
| 1:AA:829:G:O2'     | 4:AE:26:PRO:HG2    | 1.95                     | 0.66              |
| 1:AA:872:A:H2'     | 1:AA:873:A:C5'     | 2.24                     | 0.66              |
| 1:AA:908:A:C2      | 1:AA:909:A:N7      | 2.64                     | 0.66              |
| 1:AA:937:A:H1'     | 1:AA:1379:G:N2     | 2.10                     | 0.66              |
| 4:AE:84:GLU:N      | 4:AE:234:PRO:HG3   | 2.10                     | 0.66              |
| 4:AE:96:ARG:N      | 4:AE:96:ARG:HD2    | 2.11                     | 0.66              |
| 4:AE:164:VAL:HG22  | 4:AE:165:VAL:N     | 2.11                     | 0.66              |
| 4:AE:185:ILE:CG2   | 4:AE:199:TYR:HB2   | 2.26                     | 0.66              |
| 4:AE:194:PRO:O     | 4:AE:196:LEU:N     | 2.29                     | 0.66              |
| 5:AF:187:ALA:HB3   | 5:AF:198:VAL:CG2   | 2.26                     | 0.66              |
| 6:AG:16:GLY:O      | 6:AG:18:LYS:N      | 2.28                     | 0.66              |
| 6:AG:117:ALA:O     | 6:AG:121:VAL:HG23  | 1.95                     | 0.66              |
| 7:AH:61:TYR:HA     | 7:AH:64:ARG:CG     | 2.25                     | 0.66              |
| 10:AK:10:LEU:CD1   | 10:AK:85:ARG:HD3   | 2.21                     | 0.66              |
| 10:AK:101:PRO:O    | 10:AK:102:ARG:CB   | 2.43                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 11:AL:51:ARG:HH11 | 11:AL:51:ARG:CA    | 2.07                     | 0.66              |
| 12:AM:8:LEU:HD22  | 12:AM:94:VAL:CG1   | 2.25                     | 0.66              |
| 14:AO:22:SER:C    | 14:AO:24:VAL:H     | 2.04                     | 0.66              |
| 16:AQ:22:THR:CG2  | 16:AQ:33:VAL:HG23  | 2.26                     | 0.66              |
| 20:AU:66:LEU:HD12 | 20:AU:67:ALA:CA    | 2.25                     | 0.66              |
| 22:AW:25:ARG:HG3  | 22:AW:25:ARG:HH11  | 1.61                     | 0.66              |
| 24:BA:226:G:O2'   | 24:BA:228:A:N1     | 2.29                     | 0.66              |
| 24:BA:301:G:H4'   | 24:BA:301:G:OP1    | 1.94                     | 0.66              |
| 24:BA:459:U:H3'   | 53:B6:40:TRP:HH2   | 1.61                     | 0.66              |
| 24:BA:528:A:N1    | 24:BA:2043:C:OP2   | 2.29                     | 0.66              |
| 24:BA:573:G:O2'   | 24:BA:574:C:O5'    | 2.13                     | 0.66              |
| 24:BA:733:G:C8    | 24:BA:761:A:N6     | 2.64                     | 0.66              |
| 24:BA:1023:U:OP2  | 24:BA:1025:G:C6    | 2.49                     | 0.66              |
| 24:BA:1027:A:H61  | 24:BA:1126:A:H1'   | 1.60                     | 0.66              |
| 24:BA:1069:A:H8   | 24:BA:1074:G:O6    | 1.79                     | 0.66              |
| 24:BA:1158:C:H5'  | 49:B2:31:LEU:HB3   | 1.78                     | 0.66              |
| 24:BA:1264:G:H5'' | 24:BA:1265:A:C5'   | 2.25                     | 0.66              |
| 24:BA:1352:U:O2   | 24:BA:1352:U:H2'   | 1.94                     | 0.66              |
| 24:BA:1386:C:H2'  | 24:BA:1387:C:C6    | 2.30                     | 0.66              |
| 24:BA:1428:C:O2'  | 24:BA:1429:G:OP1   | 2.12                     | 0.66              |
| 24:BA:1497:U:O4   | 24:BA:1577:C:O5'   | 2.14                     | 0.66              |
| 24:BA:1779:U:H6   | 24:BA:1779:U:H3'   | 1.61                     | 0.66              |
| 24:BA:1803:A:H8   | 24:BA:1803:A:OP2   | 1.79                     | 0.66              |
| 24:BA:1952:A:C5   | 24:BA:1953:A:C2    | 2.84                     | 0.66              |
| 24:BA:2113:U:H3   | 24:BA:2169:A:N6    | 1.94                     | 0.66              |
| 24:BA:2115:G:N3   | 24:BA:2117:A:N7    | 2.43                     | 0.66              |
| 24:BA:2282:G:N2   | 24:BA:2427:C:N3    | 2.40                     | 0.66              |
| 24:BA:2387:U:H1'  | 47:BZ:41:ARG:HH21  | 1.56                     | 0.66              |
| 24:BA:2392:A:H2'  | 24:BA:2393:A:O5'   | 1.95                     | 0.66              |
| 24:BA:2674:G:H5'' | 35:BN:26:LYS:HD2   | 1.78                     | 0.66              |
| 24:BA:2742:C:OP1  | 55:B8:35:ARG:HD3   | 1.95                     | 0.66              |
| 24:BA:2832:U:H1'  | 24:BA:2834:G:N3    | 2.10                     | 0.66              |
| 24:BA:2875:C:H2'  | 24:BA:2876:G:O4'   | 1.95                     | 0.66              |
| 25:BB:75:G:H4'    | 46:BY:36:LYS:NZ    | 2.10                     | 0.66              |
| 27:BD:147:LEU:CB  | 27:BD:185:VAL:HG22 | 2.16                     | 0.66              |
| 27:BD:222:ARG:O   | 27:BD:225:ALA:HB2  | 1.96                     | 0.66              |
| 28:BE:31:CYS:HB3  | 28:BE:32:PRO:HD2   | 1.78                     | 0.66              |
| 28:BE:103:ASP:O   | 28:BE:104:VAL:CG2  | 2.43                     | 0.66              |
| 29:BF:38:ARG:NH1  | 36:BO:10:PRO:CA    | 2.57                     | 0.66              |
| 29:BF:45:ARG:HG3  | 29:BF:46:ARG:H     | 1.60                     | 0.66              |
| 30:BG:18:GLU:OE1  | 30:BG:19:LEU:HD12  | 1.95                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 30:BG:74:LYS:HB3   | 30:BG:87:PRO:HG2   | 1.76                     | 0.66              |
| 31:BH:11:VAL:HB    | 31:BH:50:VAL:HG21  | 1.75                     | 0.66              |
| 31:BH:13:LYS:HE3   | 31:BH:80:SER:HA    | 1.78                     | 0.66              |
| 31:BH:105:LEU:CB   | 31:BH:113:VAL:HG11 | 2.23                     | 0.66              |
| 32:BK:2:LYS:NZ     | 32:BK:39:ALA:HB1   | 2.10                     | 0.66              |
| 34:BM:14:VAL:HG13  | 34:BM:138:LEU:CB   | 2.21                     | 0.66              |
| 34:BM:100:GLU:CA   | 34:BM:103:VAL:HG13 | 2.26                     | 0.66              |
| 34:BM:103:VAL:HG22 | 34:BM:104:LYS:CD   | 2.26                     | 0.66              |
| 35:BN:60:ALA:C     | 35:BN:83:ALA:HB1   | 2.20                     | 0.66              |
| 37:BP:54:MET:HB3   | 37:BP:58:PHE:HE2   | 1.60                     | 0.66              |
| 38:BQ:17:ARG:CG    | 38:BQ:18:LEU:H     | 2.09                     | 0.66              |
| 39:BR:30:ARG:CG    | 39:BR:91:PRO:HG3   | 2.26                     | 0.66              |
| 39:BR:65:VAL:CG2   | 39:BR:66:ALA:N     | 2.58                     | 0.66              |
| 44:BW:65:ARG:HA    | 44:BW:70:LEU:HD12  | 1.78                     | 0.66              |
| 52:B5:20:ASN:ND2   | 52:B5:43:CYS:H     | 1.91                     | 0.66              |
| 54:B7:54:GLU:C     | 54:B7:56:GLU:OE2   | 2.39                     | 0.66              |
| 1:AA:198:G:O2'     | 1:AA:199:G:H5'     | 1.95                     | 0.66              |
| 1:AA:250:A:O2'     | 1:AA:251:G:OP2     | 2.14                     | 0.66              |
| 1:AA:380:G:N2      | 1:AA:382:A:H3'     | 2.11                     | 0.66              |
| 1:AA:435:C:H2'     | 1:AA:436:C:O4'     | 1.94                     | 0.66              |
| 1:AA:562:C:O2'     | 14:AO:15:ARG:HB3   | 1.96                     | 0.66              |
| 1:AA:701:C:O2'     | 1:AA:702:A:OP2     | 2.12                     | 0.66              |
| 1:AA:715:A:O2'     | 1:AA:716:A:H5'     | 1.96                     | 0.66              |
| 1:AA:943:U:H2'     | 1:AA:944:G:C8      | 2.31                     | 0.66              |
| 1:AA:1182:G:H4'    | 1:AA:1183:A:O5'    | 1.96                     | 0.66              |
| 1:AA:1234:C:C5'    | 1:AA:1364:U:O2'    | 2.41                     | 0.66              |
| 3:AB:75:C:C5       | 3:AB:76:A:H2       | 2.13                     | 0.66              |
| 4:AE:17:PHE:CA     | 4:AE:42:ILE:HG22   | 2.25                     | 0.66              |
| 4:AE:60:ASP:CG     | 4:AE:64:ARG:NH2    | 2.53                     | 0.66              |
| 6:AG:4:TYR:O       | 6:AG:5:ILE:HG23    | 1.96                     | 0.66              |
| 6:AG:101:LEU:HD23  | 6:AG:135:LEU:O     | 1.96                     | 0.66              |
| 7:AH:17:ALA:HA     | 7:AH:26:PHE:CD2    | 2.31                     | 0.66              |
| 9:AJ:95:ARG:O      | 9:AJ:96:GLN:C      | 2.39                     | 0.66              |
| 9:AJ:115:ARG:HG3   | 9:AJ:118:VAL:HG21  | 1.78                     | 0.66              |
| 10:AK:31:PHE:O     | 10:AK:35:ILE:HG12  | 1.96                     | 0.66              |
| 14:AO:34:ARG:HD3   | 14:AO:105:TYR:OH   | 1.95                     | 0.66              |
| 14:AO:53:ARG:NE    | 14:AO:92:ASP:OD2   | 2.29                     | 0.66              |
| 15:AP:18:ALA:HB2   | 15:AP:45:VAL:CG2   | 2.25                     | 0.66              |
| 15:AP:82:MET:HE1   | 15:AP:93:ARG:CA    | 2.17                     | 0.66              |
| 16:AQ:45:ARG:HH11  | 16:AQ:45:ARG:CG    | 2.08                     | 0.66              |
| 24:BA:46:C:N4      | 24:BA:214:G:H8     | 1.94                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:195:A:N7     | 24:BA:197:A:OP1    | 2.29                     | 0.66              |
| 24:BA:503:A:N1     | 24:BA:505:A:N6     | 2.44                     | 0.66              |
| 24:BA:526:A:H4'    | 24:BA:527:C:OP1    | 1.94                     | 0.66              |
| 24:BA:566:U:H6     | 24:BA:567:A:N7     | 1.94                     | 0.66              |
| 24:BA:811:U:OP2    | 36:BO:28:GLY:HA3   | 1.95                     | 0.66              |
| 24:BA:821:A:C8     | 24:BA:946:G:C5     | 2.83                     | 0.66              |
| 24:BA:824:A:H3'    | 24:BA:825:C:H5     | 1.59                     | 0.66              |
| 24:BA:988:A:C4'    | 24:BA:1155:A:H2    | 2.07                     | 0.66              |
| 24:BA:988:A:P      | 49:B2:10:LYS:HZ2   | 2.18                     | 0.66              |
| 24:BA:1066:U:O2'   | 24:BA:1068:G:H8    | 1.78                     | 0.66              |
| 24:BA:1116:C:OP2   | 24:BA:1116:C:H6    | 1.78                     | 0.66              |
| 24:BA:1174:A:C2'   | 24:BA:1175:U:H5''  | 2.17                     | 0.66              |
| 24:BA:1347:G:O2'   | 24:BA:1348:G:H5'   | 1.95                     | 0.66              |
| 24:BA:1359:A:N6    | 24:BA:1360:A:N7    | 2.44                     | 0.66              |
| 24:BA:1568:G:HO2'  | 24:BA:1569:A:P     | 2.19                     | 0.66              |
| 24:BA:1591:G:C4    | 24:BA:1592:C:C5    | 2.83                     | 0.66              |
| 24:BA:1667:G:O3'   | 35:BN:7:TYR:OH     | 2.13                     | 0.66              |
| 24:BA:1971:A:C8    | 24:BA:1971:A:C3'   | 2.72                     | 0.66              |
| 24:BA:2507:C:C4'   | 24:BA:2573:C:H41   | 2.09                     | 0.66              |
| 24:BA:2568:C:H2'   | 24:BA:2569:G:C5'   | 2.24                     | 0.66              |
| 24:BA:2692:C:C2'   | 24:BA:2847:U:HO2'  | 2.09                     | 0.66              |
| 24:BA:2834:G:O6    | 24:BA:2835:A:C2    | 2.47                     | 0.66              |
| 24:BA:2848:G:H22   | 24:BA:2867:G:C1'   | 2.00                     | 0.66              |
| 25:BB:61:G:N2      | 25:BB:62:C:C2      | 2.64                     | 0.66              |
| 26:BC:52:ARG:HG3   | 26:BC:53:ARG:HG3   | 1.78                     | 0.66              |
| 28:BE:92:THR:HG23  | 28:BE:96:PHE:HB2   | 1.76                     | 0.66              |
| 28:BE:169:ASN:ND2  | 28:BE:170:LEU:N    | 2.44                     | 0.66              |
| 28:BE:173:VAL:HG11 | 28:BE:184:VAL:HA   | 1.77                     | 0.66              |
| 29:BF:39:TRP:CB    | 29:BF:101:LEU:HG   | 2.26                     | 0.66              |
| 29:BF:44:ARG:HG3   | 29:BF:45:ARG:N     | 2.10                     | 0.66              |
| 29:BF:200:GLU:OE1  | 29:BF:201:VAL:CG2  | 2.36                     | 0.66              |
| 31:BH:28:GLY:HA3   | 31:BH:79:VAL:O     | 1.95                     | 0.66              |
| 31:BH:103:LEU:HB3  | 31:BH:105:LEU:CD1  | 2.26                     | 0.66              |
| 32:BK:72:LEU:O     | 32:BK:140:LEU:HD21 | 1.96                     | 0.66              |
| 32:BK:128:LEU:HD23 | 32:BK:129:THR:H    | 1.61                     | 0.66              |
| 32:BK:139:GLN:C    | 32:BK:140:LEU:HD12 | 2.20                     | 0.66              |
| 33:BL:8:VAL:HG22   | 33:BL:30:HIS:CG    | 2.30                     | 0.66              |
| 34:BM:88:GLU:HB2   | 34:BM:89:LYS:HE2   | 1.78                     | 0.66              |
| 35:BN:106:LEU:HD22 | 40:BS:39:ARG:CZ    | 2.25                     | 0.66              |
| 43:BV:30:GLU:O     | 43:BV:33:ARG:HB3   | 1.95                     | 0.66              |
| 45:BX:74:PRO:CB    | 45:BX:101:LYS:N    | 2.59                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 46:BY:123:ASP:H   | 46:BY:171:ILE:CD1 | 2.09                     | 0.66              |
| 49:B2:40:THR:CG2  | 49:B2:42:ALA:HB3  | 2.26                     | 0.66              |
| 50:B3:28:LYS:HB3  | 50:B3:29:PRO:HD2  | 1.78                     | 0.66              |
| 50:B3:58:ARG:HD3  | 50:B3:59:PHE:CE2  | 2.30                     | 0.66              |
| 53:B6:2:LYS:O     | 53:B6:4:THR:N     | 2.27                     | 0.66              |
| 53:B6:30:VAL:HG13 | 53:B6:33:ARG:NH2  | 2.10                     | 0.66              |
| 53:B6:33:ARG:O    | 53:B6:37:LYS:CB   | 2.43                     | 0.66              |
| 53:B6:42:LEU:O    | 53:B6:45:ALA:CB   | 2.44                     | 0.66              |
| 55:B8:32:HIS:O    | 55:B8:34:GLN:N    | 2.29                     | 0.66              |
| 1:AA:397:A:O2'    | 1:AA:399:G:OP2    | 2.14                     | 0.66              |
| 1:AA:437:U:H2'    | 1:AA:438:G:O4'    | 1.96                     | 0.66              |
| 1:AA:483:C:OP2    | 1:AA:484:G:H3'    | 1.95                     | 0.66              |
| 1:AA:564:C:OP1    | 14:AO:15:ARG:NH2  | 2.29                     | 0.66              |
| 1:AA:582:U:OP1    | 17:AR:68:ARG:NH1  | 2.28                     | 0.66              |
| 1:AA:967:C:H6     | 1:AA:967:C:O5'    | 1.78                     | 0.66              |
| 1:AA:1263:C:C2    | 1:AA:1264:C:C5    | 2.84                     | 0.66              |
| 3:AC:75:C:H6      | 3:AC:76:A:H4'     | 1.61                     | 0.66              |
| 3:AB:23:A:H2'     | 3:AB:24:G:O4'     | 1.96                     | 0.66              |
| 6:AG:11:LEU:CA    | 6:AG:14:ARG:HB3   | 2.26                     | 0.66              |
| 6:AG:123:HIS:HB2  | 6:AG:125:HIS:CE1  | 2.31                     | 0.66              |
| 7:AH:127:ASN:O    | 7:AH:128:PRO:C    | 2.38                     | 0.66              |
| 7:AH:152:ARG:HH21 | 10:AK:44:PHE:H    | 1.41                     | 0.66              |
| 10:AK:37:ARG:HD3  | 10:AK:41:ARG:CG   | 2.16                     | 0.66              |
| 11:AL:37:PHE:N    | 11:AL:37:PHE:CD2  | 2.62                     | 0.66              |
| 11:AL:53:VAL:HG11 | 11:AL:92:TYR:OH   | 1.96                     | 0.66              |
| 11:AL:101:PHE:N   | 11:AL:101:PHE:CD1 | 2.64                     | 0.66              |
| 12:AM:27:ALA:HB2  | 12:AM:85:LEU:CD1  | 2.26                     | 0.66              |
| 13:AN:68:ALA:O    | 13:AN:71:LYS:HG3  | 1.94                     | 0.66              |
| 13:AN:110:ASP:CB  | 20:AU:88:LYS:HD2  | 2.26                     | 0.66              |
| 14:AO:60:LEU:CD1  | 14:AO:64:TYR:HB3  | 2.26                     | 0.66              |
| 15:AP:22:ILE:HB   | 15:AP:25:ILE:HD12 | 1.77                     | 0.66              |
| 21:AV:62:ILE:CD1  | 21:AV:67:VAL:HG13 | 2.26                     | 0.66              |
| 22:AW:53:LEU:HD21 | 22:AW:92:LEU:HD13 | 1.78                     | 0.66              |
| 22:AW:73:HIS:O    | 22:AW:76:ALA:N    | 2.19                     | 0.66              |
| 24:BA:226:G:C2    | 24:BA:227:A:C2    | 2.84                     | 0.66              |
| 24:BA:347:A:N3    | 24:BA:347:A:H2'   | 2.11                     | 0.66              |
| 24:BA:623:G:C8    | 36:BO:105:LEU:CD1 | 2.79                     | 0.66              |
| 24:BA:728:G:C6    | 24:BA:762:U:C2'   | 2.78                     | 0.66              |
| 24:BA:772:C:O2'   | 24:BA:773:U:H5'   | 1.96                     | 0.66              |
| 24:BA:1164:G:C6   | 24:BA:1165:U:C4   | 2.83                     | 0.66              |
| 24:BA:1636:C:H1'  | 24:BA:1761:C:H1'  | 1.76                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1665:A:H4'  | 35:BN:66:LYS:HB2   | 1.77                     | 0.66              |
| 24:BA:1728:G:H2'  | 24:BA:1728:G:N3    | 2.08                     | 0.66              |
| 24:BA:1803:A:O3'  | 27:BD:257:LEU:HD22 | 1.96                     | 0.66              |
| 24:BA:1858:G:N2   | 24:BA:1884:A:H1'   | 2.11                     | 0.66              |
| 24:BA:1889:A:O4'  | 24:BA:2087:G:O4'   | 2.13                     | 0.66              |
| 24:BA:2018:G:H2'  | 24:BA:2019:A:C8    | 2.30                     | 0.66              |
| 24:BA:2023:G:O2'  | 24:BA:2024:G:H5'   | 1.95                     | 0.66              |
| 24:BA:2536:G:C6   | 24:BA:2537:U:C4    | 2.84                     | 0.66              |
| 24:BA:2542:A:C4'  | 24:BA:2543:G:OP1   | 2.41                     | 0.66              |
| 24:BA:2619:C:H2'  | 24:BA:2620:C:O5'   | 1.94                     | 0.66              |
| 24:BA:2631:G:H4'  | 24:BA:2892:A:O5'   | 1.96                     | 0.66              |
| 24:BA:2747:G:C4   | 24:BA:2756:U:O4    | 2.49                     | 0.66              |
| 25:BB:0:A:H5''    | 25:BB:0:A:N3       | 2.11                     | 0.66              |
| 26:BC:122:ALA:O   | 26:BC:126:LYS:HB2  | 1.94                     | 0.66              |
| 27:BD:7:LYS:HE2   | 27:BD:25:THR:CB    | 2.24                     | 0.66              |
| 27:BD:136:ILE:HB  | 27:BD:168:ARG:HH21 | 1.54                     | 0.66              |
| 27:BD:136:ILE:CD1 | 27:BD:173:VAL:HG21 | 2.26                     | 0.66              |
| 27:BD:159:ALA:C   | 27:BD:196:VAL:HG11 | 2.20                     | 0.66              |
| 27:BD:172:TYR:HB3 | 27:BD:184:LYS:CG   | 2.26                     | 0.66              |
| 27:BD:260:ARG:CG  | 27:BD:260:ARG:HH11 | 2.08                     | 0.66              |
| 29:BF:82:ILE:CD1  | 29:BF:82:ILE:N     | 2.56                     | 0.66              |
| 29:BF:137:LYS:O   | 29:BF:140:LEU:HB3  | 1.95                     | 0.66              |
| 29:BF:188:ARG:HG2 | 29:BF:188:ARG:NH2  | 2.08                     | 0.66              |
| 31:BH:164:TYR:CE2 | 31:BH:167:GLU:N    | 2.58                     | 0.66              |
| 32:BK:4:ILE:HD11  | 32:BK:39:ALA:N     | 2.09                     | 0.66              |
| 32:BK:77:LEU:CD2  | 32:BK:140:LEU:HD23 | 2.25                     | 0.66              |
| 33:BL:14:ALA:HB2  | 33:BL:53:VAL:CB    | 2.25                     | 0.66              |
| 33:BL:23:VAL:O    | 33:BL:27:LEU:HB2   | 1.95                     | 0.66              |
| 33:BL:78:ILE:HD13 | 33:BL:131:ALA:CB   | 2.21                     | 0.66              |
| 33:BL:101:TRP:CZ3 | 33:BL:105:LEU:HD11 | 2.30                     | 0.66              |
| 33:BL:131:ALA:HB1 | 33:BL:136:VAL:CG1  | 2.26                     | 0.66              |
| 35:BN:86:ILE:HG23 | 35:BN:90:GLN:O     | 1.95                     | 0.66              |
| 36:BO:88:LEU:HD11 | 36:BO:124:LYS:NZ   | 2.11                     | 0.66              |
| 36:BO:122:PRO:HB2 | 36:BO:138:LEU:CB   | 2.25                     | 0.66              |
| 38:BQ:33:ARG:HA   | 38:BQ:115:GLU:CB   | 2.25                     | 0.66              |
| 40:BS:61:PHE:O    | 40:BS:62:THR:HG23  | 1.95                     | 0.66              |
| 43:BV:33:ARG:NH1  | 43:BV:36:LEU:HB3   | 2.10                     | 0.66              |
| 44:BW:7:VAL:CG2   | 48:B1:28:MET:HG2   | 2.25                     | 0.66              |
| 45:BX:41:GLY:O    | 45:BX:42:VAL:HG13  | 1.95                     | 0.66              |
| 46:BY:4:ARG:CG    | 46:BY:38:TYR:O     | 2.44                     | 0.66              |
| 46:BY:94:GLU:O    | 46:BY:94:GLU:HG2   | 1.96                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 47:BZ:25:ARG:HG3 | 47:BZ:37:LEU:HA    | 1.76                     | 0.66              |
| 47:BZ:68:GLU:CD  | 47:BZ:82:ARG:HB2   | 2.21                     | 0.66              |
| 48:B1:35:SER:HA  | 48:B1:38:GLN:OE1   | 1.95                     | 0.66              |
| 55:B8:2:LYS:HE2  | 55:B8:35:ARG:HD3   | 1.78                     | 0.66              |
| 1:AA:479:C:H2'   | 1:AA:480:U:C2      | 2.31                     | 0.66              |
| 1:AA:579:G:O2'   | 1:AA:580:U:H5'     | 1.95                     | 0.66              |
| 1:AA:597:G:C6    | 1:AA:644:G:C6      | 2.84                     | 0.66              |
| 1:AA:688:G:O2'   | 1:AA:689:C:H5'     | 1.96                     | 0.66              |
| 1:AA:696:A:N3    | 1:AA:697:U:O4'     | 2.29                     | 0.66              |
| 1:AA:714:G:H2'   | 1:AA:715:A:C8      | 2.31                     | 0.66              |
| 1:AA:1049:U:O5'  | 1:AA:1049:U:H6     | 1.78                     | 0.66              |
| 1:AA:1100:C:OP2  | 4:AE:98:LEU:HD21   | 1.95                     | 0.66              |
| 1:AA:1190:G:OP2  | 5:AF:5:ILE:HG13    | 1.95                     | 0.66              |
| 1:AA:1298:C:N4   | 9:AJ:114:ARG:HB3   | 2.10                     | 0.66              |
| 3:AC:74:C:H2'    | 3:AC:75:C:H5''     | 1.77                     | 0.66              |
| 3:AC:74:C:H42    | 24:BA:2253:G:N2    | 1.94                     | 0.66              |
| 3:AD:34:G:OP1    | 3:AD:35:A:H8       | 1.79                     | 0.66              |
| 3:AD:62:C:C4'    | 26:BC:52:ARG:HD3   | 2.25                     | 0.66              |
| 4:AE:102:LEU:HB3 | 4:AE:180:LEU:HD13  | 1.78                     | 0.66              |
| 5:AF:24:ALA:HB1  | 5:AF:28:GLN:CD     | 2.19                     | 0.66              |
| 6:AG:30:LYS:HG2  | 6:AG:35:ARG:HD2    | 1.78                     | 0.66              |
| 6:AG:149:ALA:O   | 6:AG:152:SER:HB3   | 1.95                     | 0.66              |
| 6:AG:195:ALA:O   | 6:AG:196:LEU:HD12  | 1.95                     | 0.66              |
| 7:AH:149:GLU:HA  | 7:AH:152:ARG:HB3   | 1.77                     | 0.66              |
| 10:AK:38:ILE:C   | 10:AK:41:ARG:HB2   | 2.21                     | 0.66              |
| 10:AK:51:VAL:CG2 | 10:AK:60:ARG:HH21  | 2.06                     | 0.66              |
| 14:AO:34:ARG:HB2 | 14:AO:105:TYR:OH   | 1.95                     | 0.66              |
| 14:AO:69:TYR:O   | 14:AO:71:PRO:HD3   | 1.96                     | 0.66              |
| 17:AR:6:GLU:O    | 17:AR:7:GLU:C      | 2.39                     | 0.66              |
| 19:AT:40:LYS:HZ3 | 19:AT:40:LYS:CB    | 2.09                     | 0.66              |
| 20:AU:69:THR:O   | 20:AU:70:ILE:C     | 2.39                     | 0.66              |
| 24:BA:154:G:H2'  | 24:BA:155:C:H6     | 1.61                     | 0.66              |
| 24:BA:154:G:N1   | 24:BA:173:G:N1     | 2.43                     | 0.66              |
| 24:BA:251:A:C4   | 24:BA:252:G:H1'    | 2.30                     | 0.66              |
| 24:BA:629:G:H1'  | 24:BA:639:U:O2'    | 1.95                     | 0.66              |
| 24:BA:783:A:C5'  | 24:BA:2589:A:OP1   | 2.35                     | 0.66              |
| 24:BA:1080:C:O2' | 33:BL:126:MET:CG   | 2.43                     | 0.66              |
| 24:BA:1181:C:H2' | 24:BA:1182:A:Cl'   | 2.25                     | 0.66              |
| 24:BA:1289:C:H4' | 24:BA:1330:C:H4'   | 1.77                     | 0.66              |
| 24:BA:1515:C:O2' | 24:BA:1516:U:OP1   | 2.10                     | 0.66              |
| 24:BA:1799:G:H8  | 27:BD:268:ARG:HH12 | 1.39                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1913:A:H2'   | 24:BA:1916:A:C2    | 2.31                     | 0.66              |
| 24:BA:2004:G:N7    | 24:BA:2005:A:N7    | 2.43                     | 0.66              |
| 24:BA:2132:U:H2'   | 24:BA:2134:A:C8    | 2.31                     | 0.66              |
| 24:BA:2323:G:H2'   | 24:BA:2324:C:C5    | 2.31                     | 0.66              |
| 24:BA:2433:A:N6    | 50:B3:32:TYR:CE2   | 2.55                     | 0.66              |
| 24:BA:2447:G:H8    | 24:BA:2500:U:H3'   | 0.87                     | 0.66              |
| 24:BA:2781:A:O3'   | 24:BA:2782:G:H4'   | 1.96                     | 0.66              |
| 27:BD:69:ARG:NH2   | 27:BD:130:ALA:CB   | 2.59                     | 0.66              |
| 27:BD:131:LEU:CG   | 27:BD:132:PRO:HD2  | 2.22                     | 0.66              |
| 28:BE:98:PRO:HD3   | 28:BE:175:VAL:CG1  | 2.25                     | 0.66              |
| 28:BE:182:LEU:HD22 | 28:BE:184:VAL:HG13 | 1.77                     | 0.66              |
| 29:BF:155:LEU:CG   | 29:BF:189:THR:HG21 | 2.24                     | 0.66              |
| 30:BG:3:LEU:HD22   | 30:BG:4:ASP:CG     | 2.21                     | 0.66              |
| 31:BH:72:ILE:O     | 31:BH:75:ALA:HB3   | 1.96                     | 0.66              |
| 31:BH:119:GLU:N    | 31:BH:121:ILE:HG22 | 2.10                     | 0.66              |
| 31:BH:167:GLU:O    | 31:BH:169:VAL:N    | 2.29                     | 0.66              |
| 32:BK:87:LYS:HB3   | 32:BK:121:LYS:CE   | 2.25                     | 0.66              |
| 33:BL:14:ALA:HB1   | 33:BL:48:MET:O     | 1.96                     | 0.66              |
| 34:BM:103:VAL:O    | 34:BM:104:LYS:C    | 2.38                     | 0.66              |
| 35:BN:24:VAL:CA    | 35:BN:39:ILE:HG22  | 2.23                     | 0.66              |
| 35:BN:97:ARG:NH2   | 35:BN:97:ARG:CB    | 2.39                     | 0.66              |
| 36:BO:117:GLU:HG2  | 36:BO:118:GLY:H    | 1.60                     | 0.66              |
| 37:BP:22:LYS:HD2   | 37:BP:99:PRO:CB    | 2.26                     | 0.66              |
| 37:BP:56:ARG:CD    | 37:BP:57:HIS:N     | 2.58                     | 0.66              |
| 38:BQ:67:LEU:HD13  | 38:BQ:67:LEU:C     | 2.21                     | 0.66              |
| 38:BQ:70:LEU:N     | 38:BQ:70:LEU:HD23  | 2.11                     | 0.66              |
| 38:BQ:75:LEU:O     | 38:BQ:76:VAL:C     | 2.39                     | 0.66              |
| 38:BQ:86:ARG:NH1   | 38:BQ:86:ARG:CB    | 2.55                     | 0.66              |
| 40:BS:45:PHE:CE1   | 40:BS:87:ASP:HB2   | 2.31                     | 0.66              |
| 40:BS:76:PHE:CZ    | 40:BS:78:LEU:HD12  | 2.31                     | 0.66              |
| 43:BV:51:LEU:O     | 43:BV:54:ALA:HB3   | 1.95                     | 0.66              |
| 44:BW:16:LYS:H     | 44:BW:16:LYS:CE    | 2.09                     | 0.66              |
| 45:BX:1:MET:HE2    | 45:BX:67:LEU:HD23  | 1.76                     | 0.66              |
| 45:BX:14:LEU:HD22  | 45:BX:20:TYR:N     | 2.11                     | 0.66              |
| 46:BY:45:ASP:N     | 46:BY:45:ASP:OD1   | 2.25                     | 0.66              |
| 46:BY:95:PRO:HG2   | 46:BY:131:ARG:H    | 1.60                     | 0.66              |
| 49:B2:10:LYS:NZ    | 49:B2:12:PRO:CG    | 2.58                     | 0.66              |
| 50:B3:24:THR:C     | 50:B3:25:TYR:CD2   | 2.74                     | 0.66              |
| 50:B3:50:VAL:O     | 50:B3:51:ASP:CG    | 2.38                     | 0.66              |
| 51:B4:37:LYS:HD2   | 51:B4:37:LYS:H     | 1.61                     | 0.66              |
| 52:B5:46:HIS:CG    | 52:B5:47:THR:N     | 2.63                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 54:B7:23:VAL:HG23 | 54:B7:48:PHE:HB2   | 1.78                     | 0.66              |
| 1:AA:87:A:H2'     | 1:AA:88:C:O4'      | 1.96                     | 0.66              |
| 1:AA:267:C:N4     | 1:AA:268:C:N4      | 2.44                     | 0.66              |
| 1:AA:560:U:O2'    | 1:AA:561:U:OP2     | 2.13                     | 0.66              |
| 1:AA:566:G:H4'    | 1:AA:567:G:OP1     | 1.96                     | 0.66              |
| 1:AA:647:C:N3     | 1:AA:648:A:N7      | 2.44                     | 0.66              |
| 1:AA:776:G:O6     | 27:BD:276:LYS:C    | 2.39                     | 0.66              |
| 1:AA:942:G:N2     | 11:AL:124:GLN:HE22 | 1.90                     | 0.66              |
| 1:AA:953:G:C6     | 1:AA:1229:A:N6     | 2.64                     | 0.66              |
| 1:AA:994:A:C8     | 1:AA:1216:G:H4'    | 2.31                     | 0.66              |
| 1:AA:1003:G:C6    | 1:AA:1004:A:H1'    | 2.30                     | 0.66              |
| 1:AA:1040:U:H2'   | 1:AA:1041:A:C8     | 2.31                     | 0.66              |
| 1:AA:1158:C:N3    | 1:AA:1160:G:C8     | 2.64                     | 0.66              |
| 1:AA:1227:A:OP1   | 21:AV:80:TYR:CE2   | 2.49                     | 0.66              |
| 1:AA:1240:U:OP2   | 9:AJ:116:ALA:N     | 2.29                     | 0.66              |
| 1:AA:1339:A:H2'   | 1:AA:1340:A:C5'    | 2.22                     | 0.66              |
| 1:AA:1378:C:O2    | 1:AA:1378:C:C2'    | 2.44                     | 0.66              |
| 1:AA:1388:C:H2'   | 1:AA:1389:C:C6     | 2.28                     | 0.66              |
| 1:AA:1526:G:H2'   | 1:AA:1527:C:C5     | 2.31                     | 0.66              |
| 3:AD:15:G:H2'     | 3:AD:60:U:O2       | 1.96                     | 0.66              |
| 5:AF:5:ILE:HG23   | 12:AM:51:ARG:HH12  | 1.61                     | 0.66              |
| 5:AF:24:ALA:HB1   | 5:AF:28:GLN:NE2    | 2.11                     | 0.66              |
| 6:AG:57:ARG:HH22  | 7:AH:107:ARG:HD3   | 1.61                     | 0.66              |
| 7:AH:41:VAL:HG11  | 7:AH:112:LEU:HB3   | 1.77                     | 0.66              |
| 7:AH:81:GLU:CA    | 7:AH:90:VAL:HG22   | 2.25                     | 0.66              |
| 9:AJ:140:ASP:O    | 9:AJ:144:MET:CB    | 2.43                     | 0.66              |
| 12:AM:24:VAL:CG2  | 12:AM:72:VAL:HG13  | 2.25                     | 0.66              |
| 13:AN:39:PRO:C    | 13:AN:40:ILE:HD13  | 2.21                     | 0.66              |
| 19:AT:65:ILE:HG23 | 19:AT:69:LYS:O     | 1.96                     | 0.66              |
| 24:BA:59:U:H2'    | 24:BA:60:G:O4'     | 1.95                     | 0.66              |
| 24:BA:107:C:H4'   | 24:BA:293:U:C1'    | 2.23                     | 0.66              |
| 24:BA:605:C:OP1   | 29:BF:104:LYS:HB2  | 1.96                     | 0.66              |
| 24:BA:627:A:C2'   | 24:BA:628:G:O4'    | 2.41                     | 0.66              |
| 24:BA:777:A:O2'   | 24:BA:778:G:H5'    | 1.95                     | 0.66              |
| 24:BA:917:A:N6    | 24:BA:918:A:C6     | 2.64                     | 0.66              |
| 24:BA:970:C:C2    | 24:BA:971:C:C5     | 2.85                     | 0.66              |
| 24:BA:1249:U:O4   | 36:BO:21:ARG:CZ    | 2.44                     | 0.66              |
| 24:BA:1417:C:N4   | 24:BA:1581:G:H1    | 1.85                     | 0.66              |
| 24:BA:1797:C:H2'  | 24:BA:1798:U:C5    | 2.31                     | 0.66              |
| 24:BA:2009:G:O2'  | 24:BA:2010:G:H5'   | 1.95                     | 0.66              |
| 24:BA:2016:U:H2'  | 24:BA:2017:U:O4'   | 1.96                     | 0.66              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:2212:A:N3   | 24:BA:2212:A:C2'  | 2.56                     | 0.66              |
| 24:BA:2285:C:H5   | 52:B5:27:LYS:NZ   | 1.94                     | 0.66              |
| 24:BA:2303:G:O2'  | 30:BG:132:ASN:CG  | 2.39                     | 0.66              |
| 24:BA:2597:G:H5'  | 27:BD:242:ARG:HE  | 1.59                     | 0.66              |
| 25:BB:78:A:H2'    | 25:BB:79:C:H5'    | 1.76                     | 0.66              |
| 27:BD:260:ARG:O   | 27:BD:261:LYS:C   | 2.38                     | 0.66              |
| 28:BE:15:PHE:CE2  | 28:BE:16:ARG:HG3  | 2.31                     | 0.66              |
| 29:BF:98:SER:O    | 29:BF:99:TYR:HB2  | 1.94                     | 0.66              |
| 30:BG:78:SER:HB2  | 30:BG:82:LEU:HB3  | 1.78                     | 0.66              |
| 31:BH:66:GLY:O    | 31:BH:70:THR:HG23 | 1.96                     | 0.66              |
| 32:BK:77:LEU:N    | 32:BK:77:LEU:CD2  | 2.54                     | 0.66              |
| 33:BL:45:THR:HG22 | 33:BL:53:VAL:HG11 | 1.76                     | 0.66              |
| 34:BM:23:LEU:HD21 | 34:BM:61:ARG:O    | 1.95                     | 0.66              |
| 34:BM:48:MET:C    | 34:BM:50:ASP:H    | 2.02                     | 0.66              |
| 34:BM:85:ILE:CB   | 34:BM:90:MET:HE1  | 2.25                     | 0.66              |
| 36:BO:74:GLU:CB   | 36:BO:111:ARG:O   | 2.31                     | 0.66              |
| 37:BP:76:LYS:C    | 37:BP:76:LYS:HD2  | 2.21                     | 0.66              |
| 38:BQ:83:ILE:CG2  | 38:BQ:86:ARG:CZ   | 2.74                     | 0.66              |
| 40:BS:53:ARG:HH21 | 40:BS:102:ILE:CD1 | 2.09                     | 0.66              |
| 40:BS:82:LEU:O    | 40:BS:85:LYS:NZ   | 2.28                     | 0.66              |
| 41:BT:47:TYR:OH   | 42:BU:76:LYS:C    | 2.38                     | 0.66              |
| 44:BW:50:LYS:HZ2  | 44:BW:85:PRO:HD2  | 1.60                     | 0.66              |
| 46:BY:39:VAL:HA   | 46:BY:44:PHE:CZ   | 2.30                     | 0.66              |
| 47:BZ:46:LYS:HE2  | 47:BZ:77:ARG:N    | 2.11                     | 0.66              |
| 52:B5:46:HIS:ND1  | 52:B5:47:THR:N    | 2.44                     | 0.66              |
| 54:B7:60:LEU:HD11 | 54:B7:64:TYR:HB2  | 1.78                     | 0.66              |
| 1:AA:277:C:H5''   | 19:AT:68:ARG:NH1  | 2.11                     | 0.65              |
| 1:AA:454:C:H3'    | 1:AA:455:C:C6     | 2.32                     | 0.65              |
| 1:AA:520:A:OP2    | 14:AO:51:ALA:HB1  | 1.96                     | 0.65              |
| 1:AA:877:C:O2'    | 10:AK:3:THR:HG21  | 1.96                     | 0.65              |
| 1:AA:1085:U:H5'   | 1:AA:1094:G:H21   | 1.58                     | 0.65              |
| 1:AA:1285:A:O2'   | 1:AA:1286:A:OP2   | 2.14                     | 0.65              |
| 1:AA:1376:U:O2    | 1:AA:1377:A:N7    | 2.29                     | 0.65              |
| 1:AA:1405:G:H1'   | 1:AA:1519:A:O4'   | 1.96                     | 0.65              |
| 1:AA:1517:G:C1'   | 24:BA:1920:C:OP1  | 2.44                     | 0.65              |
| 3:AC:34:G:C5      | 3:AC:35:A:N7      | 2.65                     | 0.65              |
| 4:AE:68:ILE:O     | 4:AE:90:MET:HB3   | 1.96                     | 0.65              |
| 4:AE:69:LEU:HB2   | 4:AE:159:PRO:CB   | 2.27                     | 0.65              |
| 4:AE:80:ILE:HG21  | 4:AE:211:ILE:HG21 | 1.78                     | 0.65              |
| 4:AE:163:PHE:CD2  | 4:AE:164:VAL:N    | 2.64                     | 0.65              |
| 4:AE:217:ARG:HG3  | 4:AE:217:ARG:HH11 | 1.61                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:AF:52:LEU:HA    | 5:AF:70:VAL:CG2    | 2.23                     | 0.65              |
| 6:AG:18:LYS:HE3   | 6:AG:33:MET:CB     | 2.27                     | 0.65              |
| 7:AH:18:ARG:N     | 7:AH:26:PHE:HB3    | 2.11                     | 0.65              |
| 7:AH:102:ALA:HB1  | 7:AH:106:PRO:CB    | 2.25                     | 0.65              |
| 7:AH:142:LEU:N    | 7:AH:143:ARG:HE    | 1.94                     | 0.65              |
| 9:AJ:43:PHE:HD2   | 9:AJ:44:TYR:CE2    | 2.14                     | 0.65              |
| 11:AL:26:VAL:HG13 | 11:AL:63:ILE:HD11  | 1.78                     | 0.65              |
| 15:AP:96:LEU:H    | 15:AP:96:LEU:HD23  | 1.60                     | 0.65              |
| 17:AR:34:LEU:HD12 | 17:AR:38:ARG:HE    | 1.61                     | 0.65              |
| 19:AT:41:LYS:O    | 19:AT:42:TYR:CD1   | 2.49                     | 0.65              |
| 21:AV:22:LEU:O    | 21:AV:25:LYS:NZ    | 2.29                     | 0.65              |
| 22:AW:73:HIS:O    | 22:AW:74:LYS:C     | 2.39                     | 0.65              |
| 24:BA:397:G:OP2   | 50:B3:59:PHE:HZ    | 1.79                     | 0.65              |
| 24:BA:407:G:H2'   | 24:BA:408:G:C8     | 2.31                     | 0.65              |
| 24:BA:663:G:H4'   | 36:BO:18:ARG:CZ    | 2.25                     | 0.65              |
| 24:BA:703:U:H2'   | 24:BA:704:G:H1'    | 1.77                     | 0.65              |
| 24:BA:728:G:C6    | 24:BA:762:U:H3'    | 2.30                     | 0.65              |
| 24:BA:800:A:O2'   | 24:BA:801:G:C5'    | 2.44                     | 0.65              |
| 24:BA:855:G:H21   | 47:BZ:27:GLU:HB3   | 1.61                     | 0.65              |
| 24:BA:871:U:H2'   | 24:BA:872:A:C8     | 2.31                     | 0.65              |
| 24:BA:973:A:O2'   | 24:BA:974:G:O5'    | 2.14                     | 0.65              |
| 24:BA:977:G:H2'   | 24:BA:978:G:C4'    | 2.26                     | 0.65              |
| 24:BA:997:G:OP1   | 41:BT:92:ARG:CD    | 2.43                     | 0.65              |
| 24:BA:1183:G:OP2  | 24:BA:1183:G:O3'   | 2.13                     | 0.65              |
| 24:BA:1244:G:H5'  | 36:BO:9:ASN:HB2    | 1.78                     | 0.65              |
| 24:BA:1257:C:H4'  | 29:BF:83:PHE:HD1   | 1.58                     | 0.65              |
| 24:BA:1567:A:N1   | 27:BD:85:ASP:CA    | 2.60                     | 0.65              |
| 24:BA:1634:A:O2'  | 24:BA:1635:G:P     | 2.55                     | 0.65              |
| 24:BA:1669:A:H2'  | 24:BA:1669:A:N3    | 2.11                     | 0.65              |
| 24:BA:1703:G:O2'  | 24:BA:1704:G:H5'   | 1.95                     | 0.65              |
| 24:BA:1782:C:H42  | 24:BA:2587:A:H61   | 1.43                     | 0.65              |
| 24:BA:1799:G:N2   | 27:BD:157:ARG:HH22 | 1.93                     | 0.65              |
| 24:BA:1851:U:N3   | 24:BA:1852:C:N4    | 2.43                     | 0.65              |
| 24:BA:2356:C:H3'  | 24:BA:2357:U:H5    | 1.61                     | 0.65              |
| 24:BA:2371:G:N2   | 24:BA:2372:G:C6    | 2.64                     | 0.65              |
| 24:BA:2546:U:C4'  | 24:BA:2565:A:C2    | 2.79                     | 0.65              |
| 24:BA:2709:G:H2'  | 24:BA:2710:C:C5'   | 2.26                     | 0.65              |
| 24:BA:2770:G:O5'  | 24:BA:2770:G:H8    | 1.79                     | 0.65              |
| 25:BB:16:G:H2'    | 25:BB:17:C:C6      | 2.30                     | 0.65              |
| 27:BD:17:THR:HG23 | 27:BD:18:VAL:HG23  | 1.78                     | 0.65              |
| 27:BD:51:VAL:HB   | 27:BD:52:ARG:NH2   | 2.09                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:55:GLY:HA2   | 27:BD:217:ARG:CZ   | 2.26                     | 0.65              |
| 28:BE:13:ARG:HG3   | 28:BE:22:PRO:CG    | 2.25                     | 0.65              |
| 28:BE:48:GLN:N     | 28:BE:48:GLN:NE2   | 2.44                     | 0.65              |
| 28:BE:116:VAL:HG21 | 28:BE:138:PRO:CA   | 2.11                     | 0.65              |
| 30:BG:17:PRO:CA    | 30:BG:20:ILE:HB    | 2.27                     | 0.65              |
| 31:BH:52:VAL:HG11  | 31:BH:69:ARG:HB3   | 1.77                     | 0.65              |
| 31:BH:126:PRO:HG3  | 31:BH:132:ARG:HH12 | 1.58                     | 0.65              |
| 34:BM:39:ARG:HD3   | 34:BM:48:MET:HG2   | 1.78                     | 0.65              |
| 34:BM:87:LEU:HD23  | 34:BM:88:GLU:H     | 1.60                     | 0.65              |
| 34:BM:100:GLU:C    | 34:BM:103:VAL:HG13 | 2.21                     | 0.65              |
| 35:BN:4:PRO:O      | 35:BN:6:THR:HG22   | 1.96                     | 0.65              |
| 35:BN:94:ARG:CG    | 35:BN:95:GLY:N     | 2.53                     | 0.65              |
| 36:BO:64:LYS:HD2   | 36:BO:64:LYS:O     | 1.97                     | 0.65              |
| 36:BO:121:LYS:H    | 36:BO:137:LYS:HB2  | 1.59                     | 0.65              |
| 37:BP:85:LYS:HD2   | 37:BP:86:GLY:H     | 1.60                     | 0.65              |
| 37:BP:122:GLY:C    | 37:BP:124:LYS:N    | 2.47                     | 0.65              |
| 39:BR:62:LYS:HB2   | 39:BR:65:VAL:CG1   | 2.26                     | 0.65              |
| 40:BS:95:ARG:HB3   | 40:BS:95:ARG:NH2   | 2.10                     | 0.65              |
| 42:BU:43:GLU:O     | 42:BU:43:GLU:OE1   | 2.13                     | 0.65              |
| 42:BU:69:LYS:CG    | 42:BU:70:ILE:H     | 2.07                     | 0.65              |
| 43:BV:8:ARG:CZ     | 43:BV:102:HIS:CE1  | 2.78                     | 0.65              |
| 43:BV:11:ARG:HH21  | 43:BV:11:ARG:N     | 1.89                     | 0.65              |
| 43:BV:36:LEU:HD11  | 43:BV:47:VAL:HB    | 1.77                     | 0.65              |
| 45:BX:16:ALA:CB    | 45:BX:68:HIS:ND1   | 2.59                     | 0.65              |
| 46:BY:9:TYR:HB2    | 46:BY:14:LYS:CG    | 2.26                     | 0.65              |
| 49:B2:4:LEU:HD23   | 49:B2:5:LYS:N      | 2.10                     | 0.65              |
| 49:B2:50:VAL:O     | 49:B2:52:HIS:ND1   | 2.29                     | 0.65              |
| 50:B3:58:ARG:H     | 50:B3:61:ARG:NH1   | 1.94                     | 0.65              |
| 52:B5:48:VAL:CG1   | 52:B5:49:HIS:H     | 2.03                     | 0.65              |
| 1:AA:9:G:C5'       | 7:AH:126:ARG:HD3   | 2.17                     | 0.65              |
| 1:AA:68:G:H2'      | 1:AA:69:G:O4'      | 1.97                     | 0.65              |
| 1:AA:160:A:C1'     | 1:AA:344:A:N7      | 2.59                     | 0.65              |
| 1:AA:405:U:H3'     | 1:AA:406:G:H5'     | 1.77                     | 0.65              |
| 1:AA:809:G:C2'     | 1:AA:810:C:H5'     | 2.27                     | 0.65              |
| 1:AA:963:G:H2'     | 1:AA:964:A:H8      | 1.61                     | 0.65              |
| 1:AA:1069:C:H1'    | 1:AA:1191:A:H2     | 1.60                     | 0.65              |
| 1:AA:1266:G:H2'    | 1:AA:1268:A:OP2    | 1.96                     | 0.65              |
| 1:AA:1308:U:H3'    | 15:AP:99:ARG:CZ    | 2.26                     | 0.65              |
| 1:AA:1320:C:H5''   | 21:AV:70:LYS:HD2   | 1.77                     | 0.65              |
| 1:AA:1430:C:O2'    | 1:AA:1431:C:O5'    | 2.14                     | 0.65              |
| 3:AD:66:U:C2       | 3:AD:67:C:C5       | 2.85                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 4:AE:72:GLY:HA2  | 4:AE:165:VAL:CG2   | 2.25                     | 0.65              |
| 5:AF:15:THR:HB   | 5:AF:181:ASN:OD1   | 1.97                     | 0.65              |
| 5:AF:76:VAL:HG12 | 5:AF:77:ILE:N      | 2.11                     | 0.65              |
| 6:AG:12:CYS:HB3  | 6:AG:31:CYS:O      | 1.95                     | 0.65              |
| 6:AG:52:SER:O    | 6:AG:54:TYR:N      | 2.29                     | 0.65              |
| 6:AG:143:GLY:HA2 | 6:AG:185:PHE:CG    | 2.32                     | 0.65              |
| 9:AJ:5:ARG:HD2   | 9:AJ:7:ALA:N       | 2.09                     | 0.65              |
| 10:AK:29:SER:O   | 10:AK:32:LYS:HG2   | 1.96                     | 0.65              |
| 14:AO:35:GLY:O   | 14:AO:82:VAL:HA    | 1.96                     | 0.65              |
| 14:AO:42:THR:OG1 | 14:AO:52:LEU:HD12  | 1.96                     | 0.65              |
| 17:AR:3:ILE:HD12 | 17:AR:3:ILE:H      | 1.62                     | 0.65              |
| 20:AU:52:PRO:HG2 | 20:AU:54:ARG:HB3   | 1.79                     | 0.65              |
| 21:AV:51:VAL:HB  | 21:AV:58:VAL:CG2   | 2.25                     | 0.65              |
| 23:AX:9:ARG:HD2  | 23:AX:9:ARG:H      | 1.61                     | 0.65              |
| 24:BA:71:A:H5''  | 24:BA:73:A:C8      | 2.30                     | 0.65              |
| 24:BA:91:A:C2    | 24:BA:92:G:H5'     | 2.30                     | 0.65              |
| 24:BA:93:C:H2'   | 24:BA:94:G:C8      | 2.32                     | 0.65              |
| 24:BA:204:A:OP1  | 24:BA:206:U:O2     | 2.13                     | 0.65              |
| 24:BA:446:G:C8   | 24:BA:446:G:OP2    | 2.50                     | 0.65              |
| 24:BA:692:C:O2'  | 24:BA:693:C:H5'    | 1.94                     | 0.65              |
| 24:BA:746:A:O2'  | 24:BA:747:U:OP2    | 2.12                     | 0.65              |
| 24:BA:830:G:O2'  | 24:BA:831:G:OP1    | 2.11                     | 0.65              |
| 24:BA:1032:A:OP2 | 55:B8:8:LYS:HG3    | 1.96                     | 0.65              |
| 24:BA:1422:G:H2' | 24:BA:1423:G:H8    | 1.62                     | 0.65              |
| 24:BA:1485:G:H2' | 24:BA:1486:A:C8    | 2.31                     | 0.65              |
| 24:BA:1805:U:H2' | 24:BA:1806:C:H6    | 1.60                     | 0.65              |
| 24:BA:1806:C:C4  | 24:BA:1807:G:N7    | 2.64                     | 0.65              |
| 24:BA:1882:C:H2' | 24:BA:1883:G:H5'   | 1.78                     | 0.65              |
| 24:BA:1935:G:H22 | 24:BA:1962:C:C2'   | 2.10                     | 0.65              |
| 24:BA:2049:G:C2  | 24:BA:2620:C:C2    | 2.84                     | 0.65              |
| 24:BA:2142:C:H2' | 24:BA:2143:C:H6    | 1.56                     | 0.65              |
| 24:BA:2305:A:N7  | 24:BA:2306:C:C6    | 2.64                     | 0.65              |
| 25:BB:110:G:H2'  | 25:BB:111:U:O4'    | 1.95                     | 0.65              |
| 26:BC:20:TYR:HE1 | 26:BC:222:VAL:HG22 | 1.60                     | 0.65              |
| 28:BE:59:VAL:HB  | 28:BE:62:PRO:HD2   | 1.78                     | 0.65              |
| 29:BF:74:ARG:NH1 | 29:BF:76:GLY:H     | 1.94                     | 0.65              |
| 29:BF:140:LEU:O  | 29:BF:143:ALA:HB3  | 1.96                     | 0.65              |
| 30:BG:19:LEU:O   | 30:BG:22:ARG:HG2   | 1.96                     | 0.65              |
| 31:BH:25:LYS:NZ  | 31:BH:32:GLU:HB2   | 2.11                     | 0.65              |
| 33:BL:14:ALA:HB3 | 33:BL:49:GLY:CA    | 2.24                     | 0.65              |
| 34:BM:4:TYR:O    | 41:BT:64:ARG:NH2   | 2.29                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 35:BN:10:VAL:O     | 35:BN:11:ALA:HB3   | 1.95                     | 0.65              |
| 35:BN:18:LYS:NZ    | 35:BN:44:LYS:NZ    | 2.44                     | 0.65              |
| 35:BN:65:THR:O     | 35:BN:66:LYS:HB2   | 1.96                     | 0.65              |
| 37:BP:22:LYS:HD2   | 37:BP:23:GLY:H     | 1.58                     | 0.65              |
| 37:BP:109:VAL:HG11 | 37:BP:114:ALA:H    | 1.61                     | 0.65              |
| 39:BR:87:PHE:CG    | 39:BR:88:ASP:N     | 2.62                     | 0.65              |
| 40:BS:64:ARG:NE    | 40:BS:77:PRO:CB    | 2.59                     | 0.65              |
| 42:BU:12:TYR:CE1   | 42:BU:14:VAL:N     | 2.65                     | 0.65              |
| 42:BU:20:LEU:O     | 42:BU:21:ARG:HG2   | 1.96                     | 0.65              |
| 42:BU:78:LYS:HE2   | 42:BU:84:LYS:HG2   | 1.78                     | 0.65              |
| 43:BV:75:TYR:O     | 43:BV:104:THR:O    | 2.14                     | 0.65              |
| 44:BW:29:TRP:CG    | 44:BW:76:ARG:HH21  | 2.14                     | 0.65              |
| 44:BW:50:LYS:HG3   | 44:BW:85:PRO:CD    | 2.26                     | 0.65              |
| 45:BX:6:HIS:HB3    | 45:BX:71:LYS:HG2   | 1.79                     | 0.65              |
| 46:BY:137:ILE:C    | 46:BY:138:GLU:HG3  | 2.21                     | 0.65              |
| 50:B3:42:PHE:CG    | 50:B3:43:TYR:N     | 2.65                     | 0.65              |
| 54:B7:26:LYS:HZ3   | 54:B7:43:GLN:HA    | 1.59                     | 0.65              |
| 1:AA:286:G:C4      | 1:AA:287:U:C6      | 2.84                     | 0.65              |
| 1:AA:380:G:H21     | 1:AA:382:A:H3'     | 1.60                     | 0.65              |
| 1:AA:486:U:C2'     | 1:AA:487:A:O5'     | 2.44                     | 0.65              |
| 1:AA:767:A:N6      | 1:AA:768:A:C6      | 2.64                     | 0.65              |
| 1:AA:867:G:H2'     | 1:AA:868:C:C5      | 2.31                     | 0.65              |
| 1:AA:978:A:O2'     | 1:AA:979:C:H5'     | 1.96                     | 0.65              |
| 1:AA:1060:C:H4'    | 12:AM:52:GLY:CA    | 2.26                     | 0.65              |
| 1:AA:1239:A:H62    | 1:AA:1299:A:H61    | 1.43                     | 0.65              |
| 3:AB:22:G:OP2      | 3:AB:22:G:H8       | 1.79                     | 0.65              |
| 4:AE:91:PRO:HG2    | 4:AE:155:LEU:HD23  | 1.78                     | 0.65              |
| 4:AE:126:GLU:O     | 4:AE:129:GLU:HB2   | 1.96                     | 0.65              |
| 5:AF:136:GLN:O     | 5:AF:139:GLN:HB2   | 1.96                     | 0.65              |
| 6:AG:93:PHE:CA     | 6:AG:96:LEU:HD12   | 2.21                     | 0.65              |
| 6:AG:121:VAL:HG11  | 6:AG:136:PRO:HA    | 1.79                     | 0.65              |
| 8:AI:64:GLN:C      | 8:AI:65:VAL:CG1    | 2.70                     | 0.65              |
| 9:AJ:143:ARG:HD3   | 9:AJ:144:MET:N     | 2.10                     | 0.65              |
| 12:AM:11:PHE:HZ    | 12:AM:65:LEU:HG    | 1.62                     | 0.65              |
| 13:AN:126:ARG:HB3  | 13:AN:126:ARG:HH11 | 1.60                     | 0.65              |
| 18:AS:49:LEU:HD11  | 18:AS:51:VAL:CG2   | 2.20                     | 0.65              |
| 19:AT:29:HIS:CE1   | 19:AT:31:LEU:N     | 2.64                     | 0.65              |
| 21:AV:45:VAL:HA    | 21:AV:67:VAL:CG2   | 2.26                     | 0.65              |
| 24:BA:60:G:O6      | 24:BA:88:G:O6      | 2.15                     | 0.65              |
| 24:BA:150:C:O2'    | 24:BA:151:C:H5'    | 1.95                     | 0.65              |
| 24:BA:200:U:H3'    | 24:BA:201:C:C5'    | 2.27                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:266:G:N2    | 24:BA:427:U:H3     | 1.94                     | 0.65              |
| 24:BA:296:C:C6    | 24:BA:338:G:N2     | 2.64                     | 0.65              |
| 24:BA:389:G:N1    | 36:BO:64:LYS:HG2   | 2.11                     | 0.65              |
| 24:BA:501:A:C6    | 24:BA:502:A:N1     | 2.63                     | 0.65              |
| 24:BA:654:A:H2'   | 24:BA:654:A:N3     | 2.10                     | 0.65              |
| 24:BA:735:A:H2'   | 24:BA:736:C:H5'    | 1.78                     | 0.65              |
| 24:BA:826:U:C5'   | 24:BA:2428:G:O3'   | 2.43                     | 0.65              |
| 24:BA:931:G:H21   | 49:B2:25:ALA:N     | 1.94                     | 0.65              |
| 24:BA:1033:U:H5'  | 55:B8:16:VAL:HG11  | 1.78                     | 0.65              |
| 24:BA:1033:U:C5'  | 55:B8:16:VAL:HG11  | 2.26                     | 0.65              |
| 24:BA:1212:G:C6   | 24:BA:1236:G:O6    | 2.49                     | 0.65              |
| 24:BA:1308:A:N3   | 24:BA:1309:G:H1'   | 2.11                     | 0.65              |
| 24:BA:1406:U:C2   | 24:BA:1407:C:C5    | 2.84                     | 0.65              |
| 24:BA:1579:A:C8   | 24:BA:1580:A:N3    | 2.64                     | 0.65              |
| 24:BA:1789:A:H2'  | 27:BD:213:ARG:HH22 | 1.61                     | 0.65              |
| 24:BA:1814:G:H5'' | 24:BA:1815:A:OP2   | 1.96                     | 0.65              |
| 24:BA:1934:C:N3   | 24:BA:1967:C:N4    | 2.44                     | 0.65              |
| 24:BA:1992:G:C1'  | 24:BA:1993:U:C5    | 2.80                     | 0.65              |
| 24:BA:2075:U:C5   | 24:BA:2435:A:C2    | 2.84                     | 0.65              |
| 24:BA:2210:G:H4'  | 24:BA:2211:G:H5'   | 1.78                     | 0.65              |
| 24:BA:2246:G:N3   | 24:BA:2247:A:N7    | 2.44                     | 0.65              |
| 24:BA:2329:G:N1   | 24:BA:2386:C:N4    | 2.39                     | 0.65              |
| 24:BA:2349:G:H3'  | 24:BA:2350:C:C5'   | 2.24                     | 0.65              |
| 24:BA:2396:G:C6   | 24:BA:2421:G:O6    | 2.50                     | 0.65              |
| 24:BA:2690:C:C6   | 24:BA:2690:C:C3'   | 2.78                     | 0.65              |
| 24:BA:2780:G:N2   | 34:BM:97:ARG:HH22  | 1.94                     | 0.65              |
| 25:BB:39:A:H2     | 25:BB:44:G:OP2     | 1.79                     | 0.65              |
| 28:BE:49:LEU:CD1  | 28:BE:74:PRO:HB2   | 2.22                     | 0.65              |
| 28:BE:198:VAL:CG1 | 28:BE:200:GLU:OE2  | 2.42                     | 0.65              |
| 29:BF:131:GLY:O   | 29:BF:133:ASN:N    | 2.29                     | 0.65              |
| 30:BG:177:GLY:O   | 30:BG:178:PHE:HB3  | 1.96                     | 0.65              |
| 31:BH:4:ILE:HD12  | 31:BH:4:ILE:N      | 2.12                     | 0.65              |
| 31:BH:85:LYS:HE2  | 31:BH:142:GLY:HA2  | 1.77                     | 0.65              |
| 32:BK:32:PRO:CD   | 32:BK:33:ARG:H     | 2.07                     | 0.65              |
| 32:BK:57:ARG:O    | 32:BK:61:ARG:HG2   | 1.96                     | 0.65              |
| 32:BK:93:THR:O    | 32:BK:96:ASP:N     | 2.29                     | 0.65              |
| 32:BK:132:PRO:CD  | 32:BK:138:ILE:H    | 2.09                     | 0.65              |
| 33:BL:71:THR:CG2  | 33:BL:114:ASP:HB3  | 2.26                     | 0.65              |
| 33:BL:134:MET:HE2 | 33:BL:136:VAL:HG23 | 1.78                     | 0.65              |
| 36:BO:49:ARG:C    | 36:BO:52:GLU:HG2   | 2.21                     | 0.65              |
| 36:BO:56:SER:CB   | 54:B7:13:ARG:CZ    | 2.72                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 37:BP:59:ARG:HA   | 37:BP:60:ARG:CZ   | 2.27                     | 0.65              |
| 39:BR:33:LYS:CE   | 39:BR:54:LEU:HD21 | 2.27                     | 0.65              |
| 41:BT:89:GLU:CD   | 42:BU:52:VAL:HB   | 2.21                     | 0.65              |
| 41:BT:111:GLU:CA  | 41:BT:114:LYS:HZ1 | 2.04                     | 0.65              |
| 42:BU:14:VAL:HG11 | 42:BU:19:LYS:CG   | 2.15                     | 0.65              |
| 42:BU:78:LYS:HA   | 42:BU:83:ARG:O    | 1.96                     | 0.65              |
| 43:BV:6:ILE:CD1   | 43:BV:104:THR:HA  | 2.27                     | 0.65              |
| 43:BV:10:VAL:HB   | 43:BV:12:ILE:HD11 | 1.78                     | 0.65              |
| 45:BX:46:LYS:HG3  | 45:BX:58:GLY:N    | 2.10                     | 0.65              |
| 46:BY:71:VAL:HG22 | 46:BY:88:PHE:CE2  | 2.31                     | 0.65              |
| 46:BY:96:VAL:HG13 | 46:BY:128:VAL:CG2 | 2.25                     | 0.65              |
| 54:B7:55:ALA:N    | 54:B7:56:GLU:OE2  | 2.29                     | 0.65              |
| 1:AA:127:G:H2'    | 1:AA:128:G:H5'    | 1.79                     | 0.65              |
| 1:AA:556:C:O2'    | 1:AA:557:G:H5'    | 1.96                     | 0.65              |
| 1:AA:719:C:OP2    | 1:AA:720:C:N4     | 2.30                     | 0.65              |
| 1:AA:781:A:O2'    | 1:AA:782:A:H5'    | 1.95                     | 0.65              |
| 1:AA:940:C:H2'    | 1:AA:941:G:H8     | 1.60                     | 0.65              |
| 1:AA:945:G:H1'    | 1:AA:1337:G:O2'   | 1.96                     | 0.65              |
| 1:AA:1085:U:OP2   | 1:AA:1086:U:O4    | 2.15                     | 0.65              |
| 1:AA:1108:G:H4'   | 1:AA:1191:A:H1'   | 1.79                     | 0.65              |
| 1:AA:1185:G:O2'   | 1:AA:1186:G:H5'   | 1.95                     | 0.65              |
| 1:AA:1219:U:P     | 16:AQ:19:ARG:HH22 | 2.19                     | 0.65              |
| 1:AA:1299:A:N7    | 1:AA:1301:U:C6    | 2.64                     | 0.65              |
| 3:AC:76:A:H3'     | 3:AC:76:A:H8      | 1.61                     | 0.65              |
| 3:AD:15:G:N1      | 3:AD:48:C:N4      | 2.45                     | 0.65              |
| 3:AD:18:G:C2'     | 3:AD:19:G:O5'     | 2.44                     | 0.65              |
| 4:AE:40:HIS:C     | 4:AE:41:ILE:HD12  | 2.21                     | 0.65              |
| 4:AE:87:ARG:C     | 4:AE:89:GLY:H     | 2.05                     | 0.65              |
| 5:AF:44:GLU:HA    | 5:AF:52:LEU:HD11  | 1.78                     | 0.65              |
| 7:AH:17:ALA:HA    | 7:AH:26:PHE:CB    | 2.27                     | 0.65              |
| 8:AI:30:LEU:HD23  | 8:AI:75:LEU:HD13  | 1.78                     | 0.65              |
| 12:AM:89:ASP:O    | 12:AM:90:LEU:HG   | 1.95                     | 0.65              |
| 13:AN:62:GLN:OE1  | 13:AN:63:LEU:HB2  | 1.95                     | 0.65              |
| 13:AN:92:GLU:O    | 13:AN:93:GLN:C    | 2.39                     | 0.65              |
| 14:AO:33:ARG:O    | 14:AO:85:ILE:HG22 | 1.96                     | 0.65              |
| 18:AS:26:ARG:O    | 18:AS:27:LYS:O    | 2.13                     | 0.65              |
| 18:AS:42:ARG:O    | 18:AS:43:LYS:HB2  | 1.96                     | 0.65              |
| 19:AT:60:ILE:HD13 | 19:AT:62:SER:OG   | 1.95                     | 0.65              |
| 21:AV:24:ALA:C    | 21:AV:26:GLY:H    | 2.04                     | 0.65              |
| 22:AW:61:SER:OG   | 22:AW:62:LEU:N    | 2.28                     | 0.65              |
| 22:AW:88:VAL:HG12 | 22:AW:92:LEU:CD1  | 2.26                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 24:BA:25:U:C2       | 24:BA:26:G:C8      | 2.85                     | 0.65              |
| 24:BA:58:G:H2'      | 24:BA:73:A:H2      | 1.59                     | 0.65              |
| 24:BA:71:A:H62      | 24:BA:114:U:H1'    | 1.60                     | 0.65              |
| 24:BA:74:A:N1       | 48:B1:46:ARG:HD2   | 2.12                     | 0.65              |
| 24:BA:271(B):G:H5'' | 24:BA:271(C):U:C4' | 2.26                     | 0.65              |
| 24:BA:412:A:N6      | 24:BA:2411:A:H1'   | 2.12                     | 0.65              |
| 24:BA:763:G:C2      | 24:BA:765:G:C4     | 2.85                     | 0.65              |
| 24:BA:827:U:C6      | 24:BA:2430:A:C2    | 2.85                     | 0.65              |
| 24:BA:865:C:O2      | 24:BA:865:C:H2'    | 1.95                     | 0.65              |
| 24:BA:976:C:O2      | 24:BA:977:G:H8     | 1.79                     | 0.65              |
| 24:BA:1086:A:H3'    | 24:BA:1087:G:C5'   | 2.24                     | 0.65              |
| 24:BA:1277:G:O2'    | 24:BA:1278:A:H5'   | 1.95                     | 0.65              |
| 24:BA:1472:A:C1'    | 24:BA:1473:G:N7    | 2.58                     | 0.65              |
| 24:BA:1500:G:H2'    | 24:BA:1501:C:H6    | 1.60                     | 0.65              |
| 24:BA:1633:G:C8     | 24:BA:1635:G:O6    | 2.49                     | 0.65              |
| 24:BA:1954:G:N3     | 24:BA:2551:C:H5''  | 2.11                     | 0.65              |
| 24:BA:1993:U:H6     | 24:BA:1993:U:H3'   | 1.61                     | 0.65              |
| 24:BA:2324:C:O2     | 24:BA:2385:C:H5    | 1.78                     | 0.65              |
| 24:BA:2453:A:O2'    | 24:BA:2454:G:C5'   | 2.42                     | 0.65              |
| 24:BA:2654:A:C4     | 24:BA:2665:A:N6    | 2.64                     | 0.65              |
| 24:BA:2678:C:C2     | 24:BA:2679:A:C8    | 2.83                     | 0.65              |
| 25:BB:69:G:H5''     | 25:BB:70:C:OP2     | 1.95                     | 0.65              |
| 26:BC:89:ALA:HB1    | 26:BC:154:ARG:CB   | 2.27                     | 0.65              |
| 27:BD:202:LYS:H     | 27:BD:202:LYS:CD   | 2.05                     | 0.65              |
| 28:BE:59:VAL:CB     | 28:BE:62:PRO:HD2   | 2.26                     | 0.65              |
| 30:BG:72:ARG:C      | 30:BG:88:ILE:HD11  | 2.21                     | 0.65              |
| 30:BG:94:LEU:HB2    | 30:BG:99:MET:CE    | 2.25                     | 0.65              |
| 31:BH:7:LEU:N       | 31:BH:8:PRO:CD     | 2.57                     | 0.65              |
| 31:BH:18:GLU:OE1    | 31:BH:25:LYS:HG2   | 1.97                     | 0.65              |
| 31:BH:52:VAL:HG22   | 31:BH:65:HIS:CE1   | 2.32                     | 0.65              |
| 32:BK:19:VAL:CG1    | 32:BK:20:ASP:H     | 2.10                     | 0.65              |
| 32:BK:34:GLY:C      | 32:BK:35:LEU:HD22  | 2.22                     | 0.65              |
| 34:BM:16:ILE:C      | 34:BM:54:VAL:HG23  | 2.22                     | 0.65              |
| 36:BO:45:LEU:HD22   | 54:B7:59:LYS:CG    | 2.26                     | 0.65              |
| 36:BO:81:GLN:HG2    | 36:BO:86:LYS:CE    | 2.27                     | 0.65              |
| 40:BS:53:ARG:HH21   | 40:BS:102:ILE:HD13 | 1.61                     | 0.65              |
| 41:BT:80:ILE:O      | 41:BT:84:LYS:HG2   | 1.95                     | 0.65              |
| 42:BU:4:ILE:HG13    | 42:BU:13:ARG:HG2   | 1.76                     | 0.65              |
| 42:BU:68:LYS:O      | 42:BU:69:LYS:CB    | 2.42                     | 0.65              |
| 45:BX:49:VAL:HB     | 45:BX:51:VAL:H     | 1.61                     | 0.65              |
| 46:BY:57:ILE:HD11   | 46:BY:70:LEU:HG    | 1.78                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 47:BZ:22:GLY:O    | 47:BZ:38:VAL:HG13 | 1.95                     | 0.65              |
| 51:B4:44:THR:C    | 51:B4:52:TYR:HH   | 2.05                     | 0.65              |
| 54:B7:14:VAL:O    | 54:B7:14:VAL:HG12 | 1.96                     | 0.65              |
| 1:AA:191:G:O2'    | 22:AW:102:GLY:HA2 | 1.97                     | 0.65              |
| 1:AA:344:A:O2'    | 1:AA:345:C:P      | 2.54                     | 0.65              |
| 1:AA:543:C:P      | 6:AG:10:ARG:HH22  | 2.19                     | 0.65              |
| 1:AA:551:U:H2'    | 1:AA:552:U:H6     | 1.53                     | 0.65              |
| 1:AA:597:G:N2     | 10:AK:94:TYR:CE2  | 2.57                     | 0.65              |
| 1:AA:611:A:N1     | 1:AA:629:G:N2     | 2.37                     | 0.65              |
| 1:AA:827:U:H5'    | 10:AK:16:ALA:HA   | 1.78                     | 0.65              |
| 1:AA:878:G:H2'    | 1:AA:879:C:C6     | 2.31                     | 0.65              |
| 1:AA:931:C:H2'    | 1:AA:932:C:C5     | 2.31                     | 0.65              |
| 1:AA:981:U:H6     | 1:AA:981:U:O5'    | 1.79                     | 0.65              |
| 1:AA:1097:C:O2'   | 1:AA:1098:C:H5'   | 1.97                     | 0.65              |
| 1:AA:1113:C:O2'   | 1:AA:1114:C:H5'   | 1.95                     | 0.65              |
| 1:AA:1226:C:O2'   | 1:AA:1227:A:OP1   | 2.13                     | 0.65              |
| 1:AA:1239:A:C2    | 1:AA:1298:C:C5    | 2.83                     | 0.65              |
| 1:AA:1370:G:H5''  | 11:AL:12:GLU:CD   | 2.22                     | 0.65              |
| 1:AA:1409:C:C2    | 1:AA:1410:G:C8    | 2.85                     | 0.65              |
| 3:AD:17:C:H5'     | 3:AD:18:G:O5'     | 1.95                     | 0.65              |
| 3:AB:6:G:O2'      | 3:AB:7:A:H5'      | 1.97                     | 0.65              |
| 4:AE:74:LYS:HZ3   | 4:AE:76:GLN:HB2   | 1.59                     | 0.65              |
| 4:AE:130:ARG:CB   | 4:AE:131:PRO:HD2  | 2.23                     | 0.65              |
| 8:AI:33:TYR:CE2   | 8:AI:74:ASP:HB2   | 2.32                     | 0.65              |
| 8:AI:75:LEU:O     | 8:AI:79:LEU:HG    | 1.97                     | 0.65              |
| 13:AN:31:THR:HG23 | 13:AN:41:THR:O    | 1.97                     | 0.65              |
| 15:AP:15:VAL:HG11 | 15:AP:39:ILE:HD12 | 1.76                     | 0.65              |
| 15:AP:34:LEU:HD23 | 15:AP:39:ILE:CG1  | 2.26                     | 0.65              |
| 17:AR:6:GLU:HG2   | 17:AR:7:GLU:HG3   | 1.78                     | 0.65              |
| 18:AS:20:VAL:C    | 18:AS:36:ILE:HD11 | 2.21                     | 0.65              |
| 21:AV:22:LEU:HD23 | 21:AV:22:LEU:C    | 2.21                     | 0.65              |
| 21:AV:39:THR:O    | 21:AV:40:ILE:O    | 2.14                     | 0.65              |
| 24:BA:270(J):G:C6 | 24:BA:270(K):C:N3 | 2.64                     | 0.65              |
| 24:BA:286:C:H2'   | 24:BA:287:C:C6    | 2.32                     | 0.65              |
| 24:BA:292:C:H6    | 24:BA:293:U:O4    | 1.80                     | 0.65              |
| 24:BA:330:A:O2'   | 24:BA:1210:A:N6   | 2.30                     | 0.65              |
| 24:BA:388:G:H1'   | 24:BA:390:A:H62   | 1.62                     | 0.65              |
| 24:BA:472:A:H2'   | 24:BA:473:G:H5'   | 1.78                     | 0.65              |
| 24:BA:783:A:N1    | 24:BA:785:G:O4'   | 2.30                     | 0.65              |
| 24:BA:878:A:N3    | 24:BA:878:A:H2'   | 2.11                     | 0.65              |
| 24:BA:1407:C:O2'  | 24:BA:1408:C:H5'  | 1.97                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1779:U:C6    | 24:BA:1779:U:H3'   | 2.31                     | 0.65              |
| 24:BA:1789:A:O4'   | 27:BD:222:ARG:NH2  | 2.29                     | 0.65              |
| 24:BA:1813:G:H21   | 27:BD:52:ARG:NH1   | 1.94                     | 0.65              |
| 24:BA:1955:U:P     | 24:BA:1956:U:O4    | 2.55                     | 0.65              |
| 24:BA:2416:C:C2'   | 24:BA:2417:C:C5'   | 2.66                     | 0.65              |
| 24:BA:2491:U:N1    | 24:BA:2492:U:H5'   | 2.10                     | 0.65              |
| 24:BA:2550:G:H2'   | 24:BA:2551:C:H6    | 1.62                     | 0.65              |
| 24:BA:2808:U:H3'   | 24:BA:2809:A:H5''  | 1.78                     | 0.65              |
| 25:BB:82:G:N3      | 25:BB:83:G:C8      | 2.63                     | 0.65              |
| 26:BC:60:GLY:O     | 26:BC:61:THR:HB    | 1.95                     | 0.65              |
| 27:BD:54:ARG:CB    | 27:BD:218:ARG:HD2  | 2.27                     | 0.65              |
| 27:BD:84:TYR:CG    | 27:BD:91:ARG:HG3   | 2.31                     | 0.65              |
| 27:BD:159:ALA:O    | 27:BD:196:VAL:HG21 | 1.95                     | 0.65              |
| 28:BE:36:ARG:HD2   | 28:BE:41:LYS:HZ1   | 1.59                     | 0.65              |
| 28:BE:51:PHE:CZ    | 28:BE:53:PRO:HD3   | 2.32                     | 0.65              |
| 28:BE:104:VAL:CG2  | 28:BE:198:VAL:HG22 | 2.27                     | 0.65              |
| 29:BF:11:VAL:CG1   | 29:BF:127:GLU:HB2  | 2.24                     | 0.65              |
| 29:BF:118:ALA:HB1  | 29:BF:122:LYS:HB2  | 1.79                     | 0.65              |
| 29:BF:131:GLY:CA   | 29:BF:138:GLU:HB2  | 2.26                     | 0.65              |
| 29:BF:132:VAL:CG2  | 29:BF:135:LYS:HB2  | 2.27                     | 0.65              |
| 30:BG:131:TYR:CD1  | 30:BG:158:ALA:HA   | 2.32                     | 0.65              |
| 30:BG:144:ILE:HD12 | 30:BG:147:ASP:CG   | 2.21                     | 0.65              |
| 34:BM:16:ILE:HD12  | 34:BM:53:VAL:O     | 1.96                     | 0.65              |
| 35:BN:3:GLN:CD     | 35:BN:33:ALA:HB3   | 2.20                     | 0.65              |
| 35:BN:84:ALA:CB    | 35:BN:114:ILE:HD11 | 2.26                     | 0.65              |
| 35:BN:103:ALA:HB1  | 35:BN:107:ARG:CD   | 2.26                     | 0.65              |
| 36:BO:126:VAL:HA   | 36:BO:145:PRO:HA   | 1.78                     | 0.65              |
| 38:BQ:49:ASP:O     | 38:BQ:52:ILE:HG22  | 1.96                     | 0.65              |
| 38:BQ:79:LEU:HD23  | 38:BQ:80:PHE:H     | 1.60                     | 0.65              |
| 39:BR:10:ARG:HH11  | 39:BR:89:ARG:HH12  | 1.44                     | 0.65              |
| 39:BR:24:LEU:O     | 39:BR:86:ALA:HB1   | 1.96                     | 0.65              |
| 40:BS:20:PRO:HA    | 40:BS:22:PHE:CZ    | 2.31                     | 0.65              |
| 40:BS:34:VAL:HG23  | 40:BS:36:GLU:HB2   | 1.78                     | 0.65              |
| 41:BT:47:TYR:CZ    | 42:BU:76:LYS:C     | 2.74                     | 0.65              |
| 50:B3:41:PRO:HD2   | 50:B3:57:GLU:OE1   | 1.96                     | 0.65              |
| 53:B6:32:LYS:N     | 53:B6:35:ARG:HD3   | 2.11                     | 0.65              |
| 1:AA:236:G:H2'     | 1:AA:237:C:C6      | 2.31                     | 0.65              |
| 1:AA:451:A:H61     | 1:AA:480:U:H2'     | 1.60                     | 0.65              |
| 1:AA:772:U:H2'     | 1:AA:773:G:H8      | 1.61                     | 0.65              |
| 1:AA:976:G:C6      | 1:AA:1362:C:C4     | 2.84                     | 0.65              |
| 1:AA:1021:G:H2'    | 1:AA:1022:G:C1'    | 2.27                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1148:U:O2'   | 1:AA:1149:C:H5'   | 1.96                     | 0.65              |
| 1:AA:1230:C:O2'   | 15:AP:126:LYS:HE2 | 1.96                     | 0.65              |
| 1:AA:1409:C:O2    | 1:AA:1410:G:C8    | 2.49                     | 0.65              |
| 4:AE:55:PHE:HE2   | 4:AE:218:ALA:HA   | 1.60                     | 0.65              |
| 4:AE:102:LEU:H    | 4:AE:102:LEU:HD13 | 1.58                     | 0.65              |
| 5:AF:39:ILE:HG22  | 5:AF:40:ARG:N     | 2.11                     | 0.65              |
| 6:AG:12:CYS:HA    | 6:AG:19:LEU:CB    | 2.21                     | 0.65              |
| 6:AG:116:GLN:O    | 6:AG:119:GLN:HB3  | 1.97                     | 0.65              |
| 7:AH:31:LEU:HD12  | 7:AH:129:ILE:HA   | 1.77                     | 0.65              |
| 7:AH:78:HIS:H     | 7:AH:78:HIS:HD2   | 1.40                     | 0.65              |
| 7:AH:133:TYR:CD2  | 7:AH:136:MET:HG3  | 2.32                     | 0.65              |
| 10:AK:97:VAL:HG13 | 10:AK:98:LYS:NZ   | 2.11                     | 0.65              |
| 12:AM:9:ARG:C     | 12:AM:94:VAL:HG13 | 2.21                     | 0.65              |
| 13:AN:14:VAL:O    | 13:AN:16:SER:N    | 2.30                     | 0.65              |
| 13:AN:66:LEU:O    | 13:AN:69:ALA:HB3  | 1.97                     | 0.65              |
| 15:AP:15:VAL:O    | 15:AP:18:ALA:HB3  | 1.97                     | 0.65              |
| 24:BA:76:C:O2'    | 48:B1:54:ARG:HA   | 1.96                     | 0.65              |
| 24:BA:221:A:H3'   | 24:BA:221:A:H8    | 1.61                     | 0.65              |
| 24:BA:247:G:N2    | 24:BA:249:C:HO2'  | 1.94                     | 0.65              |
| 24:BA:257:A:C2    | 24:BA:258:G:H1'   | 2.32                     | 0.65              |
| 24:BA:411:G:N3    | 24:BA:2408:U:O4   | 2.28                     | 0.65              |
| 24:BA:445:C:H5''  | 41:BT:3:ARG:CG    | 2.27                     | 0.65              |
| 24:BA:603:A:N6    | 36:BO:104:GLY:HA2 | 2.11                     | 0.65              |
| 24:BA:673:C:H5''  | 29:BF:81:PRO:CG   | 2.27                     | 0.65              |
| 24:BA:780:G:H2'   | 24:BA:782:A:C8    | 2.31                     | 0.65              |
| 24:BA:815:C:C2'   | 24:BA:816:C:H5'   | 2.27                     | 0.65              |
| 24:BA:838:C:H2'   | 24:BA:839:U:C6    | 2.31                     | 0.65              |
| 24:BA:975:G:C8    | 24:BA:990:A:N6    | 2.65                     | 0.65              |
| 24:BA:1044:G:O2'  | 24:BA:1047:G:N3   | 2.30                     | 0.65              |
| 24:BA:1045:A:O2'  | 24:BA:1047:G:O4'  | 2.14                     | 0.65              |
| 24:BA:1076:C:H4'  | 33:BL:93:ARG:CZ   | 2.26                     | 0.65              |
| 24:BA:1108:U:C5   | 24:BA:1109:C:C4   | 2.84                     | 0.65              |
| 24:BA:1312:U:H3   | 24:BA:1604:C:H41  | 1.44                     | 0.65              |
| 24:BA:1414:G:C6   | 24:BA:1415:U:C4   | 2.85                     | 0.65              |
| 24:BA:1482:U:O2'  | 24:BA:1512:G:N2   | 2.30                     | 0.65              |
| 24:BA:1650:G:H5'  | 38:BQ:104:ARG:NH2 | 2.12                     | 0.65              |
| 24:BA:1949:G:N2   | 24:BA:1958:C:C2   | 2.65                     | 0.65              |
| 24:BA:2230:G:H1'  | 50:B3:58:ARG:NH2  | 2.12                     | 0.65              |
| 24:BA:2585:U:H6   | 24:BA:2585:U:OP1  | 1.80                     | 0.65              |
| 24:BA:2653:U:N3   | 24:BA:2654:A:N6   | 2.44                     | 0.65              |
| 24:BA:2807:G:O6   | 24:BA:2893:G:N7   | 2.30                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:2820:A:C2'  | 24:BA:2821:A:OP1  | 2.44                     | 0.65              |
| 26:BC:200:LYS:NZ  | 26:BC:204:ALA:HB3 | 2.10                     | 0.65              |
| 27:BD:121:PRO:O   | 27:BD:122:ASP:HB3 | 1.97                     | 0.65              |
| 27:BD:134:ARG:HA  | 27:BD:168:ARG:CZ  | 2.27                     | 0.65              |
| 29:BF:34:TRP:C    | 29:BF:38:ARG:HD2  | 2.22                     | 0.65              |
| 30:BG:75:LYS:HB3  | 30:BG:84:LYS:CB   | 2.27                     | 0.65              |
| 30:BG:75:LYS:CG   | 30:BG:85:GLY:H    | 2.10                     | 0.65              |
| 32:BK:113:ARG:HD3 | 32:BK:131:LYS:O   | 1.96                     | 0.65              |
| 33:BL:55:VAL:HG22 | 33:BL:69:THR:HG22 | 1.79                     | 0.65              |
| 34:BM:6:PRO:HA    | 34:BM:41:ASP:CG   | 2.21                     | 0.65              |
| 35:BN:25:LEU:HD13 | 35:BN:38:VAL:HB   | 1.79                     | 0.65              |
| 35:BN:96:THR:O    | 35:BN:97:ARG:CB   | 2.45                     | 0.65              |
| 36:BO:29:LYS:N    | 36:BO:29:LYS:HD2  | 2.11                     | 0.65              |
| 38:BQ:5:LYS:HZ1   | 38:BQ:6:SER:C     | 2.03                     | 0.65              |
| 38:BQ:28:LEU:O    | 38:BQ:29:LEU:C    | 2.37                     | 0.65              |
| 38:BQ:103:ARG:HD2 | 43:BV:40:ASN:HB2  | 1.78                     | 0.65              |
| 40:BS:53:ARG:NH2  | 40:BS:101:PHE:N   | 2.43                     | 0.65              |
| 43:BV:1:MET:H2    | 43:BV:4:LYS:HD3   | 1.61                     | 0.65              |
| 43:BV:19:LEU:O    | 43:BV:22:ASP:HB2  | 1.97                     | 0.65              |
| 43:BV:25:ARG:HD3  | 43:BV:74:ALA:CB   | 2.26                     | 0.65              |
| 43:BV:74:ALA:O    | 43:BV:75:TYR:CG   | 2.50                     | 0.65              |
| 45:BX:1:MET:HA    | 45:BX:33:LYS:HE3  | 1.78                     | 0.65              |
| 45:BX:47:LYS:HB2  | 45:BX:49:VAL:HG13 | 1.79                     | 0.65              |
| 53:B6:8:ASN:HD21  | 53:B6:10:ARG:HB2  | 1.62                     | 0.65              |
| 54:B7:10:ALA:HB1  | 54:B7:64:TYR:CD2  | 2.32                     | 0.65              |
| 1:AA:328:C:O2'    | 1:AA:329:A:P      | 2.55                     | 0.65              |
| 1:AA:865:A:H2'    | 1:AA:866:C:O4'    | 1.97                     | 0.65              |
| 1:AA:1054:C:H6    | 1:AA:1054:C:H3'   | 1.62                     | 0.65              |
| 1:AA:1251:A:H61   | 1:AA:1285:A:H2    | 1.43                     | 0.65              |
| 1:AA:1357:A:C5    | 1:AA:1358:U:C4    | 2.84                     | 0.65              |
| 1:AA:1405:G:H2'   | 1:AA:1406:U:C6    | 2.31                     | 0.65              |
| 3:AC:7:A:O2'      | 3:AC:8:U:P        | 2.54                     | 0.65              |
| 4:AE:103:THR:O    | 4:AE:104:ASN:HB3  | 1.95                     | 0.65              |
| 5:AF:8:ILE:HD13   | 16:AQ:50:LYS:O    | 1.97                     | 0.65              |
| 5:AF:28:GLN:N     | 5:AF:30:ARG:NE    | 2.44                     | 0.65              |
| 6:AG:59:ARG:C     | 6:AG:63:LYS:NZ    | 2.53                     | 0.65              |
| 6:AG:146:ILE:HD12 | 6:AG:146:ILE:N    | 2.10                     | 0.65              |
| 7:AH:12:LEU:O     | 7:AH:30:ALA:HA    | 1.97                     | 0.65              |
| 7:AH:17:ALA:HA    | 7:AH:26:PHE:HD2   | 1.61                     | 0.65              |
| 8:AI:1:MET:HG2    | 8:AI:68:PRO:HA    | 1.78                     | 0.65              |
| 9:AJ:6:ARG:CZ     | 9:AJ:6:ARG:N      | 2.60                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 10:AK:32:LYS:HZ1   | 10:AK:32:LYS:H     | 1.45                     | 0.65              |
| 10:AK:100:ILE:HD13 | 10:AK:125:ARG:HE   | 1.60                     | 0.65              |
| 12:AM:34:VAL:CG1   | 12:AM:35:SER:H     | 2.06                     | 0.65              |
| 15:AP:99:ARG:HG3   | 15:AP:99:ARG:HH11  | 1.60                     | 0.65              |
| 17:AR:42:HIS:CE1   | 17:AR:43:LEU:HA    | 2.32                     | 0.65              |
| 20:AU:29:PHE:CD2   | 20:AU:39:VAL:HG11  | 2.32                     | 0.65              |
| 21:AV:74:PHE:N     | 21:AV:74:PHE:CD1   | 2.64                     | 0.65              |
| 24:BA:72:U:H2'     | 24:BA:73:A:OP1     | 1.97                     | 0.65              |
| 24:BA:270(A):A:H3' | 24:BA:366:C:O2'    | 1.97                     | 0.65              |
| 24:BA:270(P):C:OP2 | 32:BK:45:LYS:HD3   | 1.97                     | 0.65              |
| 24:BA:280:C:OP2    | 24:BA:280:C:C6     | 2.41                     | 0.65              |
| 24:BA:308:G:N2     | 24:BA:329:G:H2'    | 2.12                     | 0.65              |
| 24:BA:586:A:C6     | 24:BA:1254:A:H2    | 2.15                     | 0.65              |
| 24:BA:671:C:OP1    | 36:BO:38:GLN:O     | 2.14                     | 0.65              |
| 24:BA:756:C:H2'    | 24:BA:757:U:C5'    | 2.27                     | 0.65              |
| 24:BA:807:U:O4'    | 24:BA:2445:G:H4'   | 1.97                     | 0.65              |
| 24:BA:1078:U:O2    | 24:BA:1088:A:H1'   | 1.96                     | 0.65              |
| 24:BA:1092:C:H3'   | 24:BA:1092:C:C6    | 2.31                     | 0.65              |
| 24:BA:1203:G:C4    | 24:BA:1241:A:C8    | 2.81                     | 0.65              |
| 24:BA:1307:A:O3'   | 24:BA:1379:A:N6    | 2.29                     | 0.65              |
| 24:BA:1341:U:H2'   | 44:BW:55:ASN:HB3   | 1.79                     | 0.65              |
| 24:BA:1433:U:O2    | 24:BA:1561:G:C2    | 2.50                     | 0.65              |
| 24:BA:1630:G:H2'   | 24:BA:1630(A):C:H6 | 1.61                     | 0.65              |
| 24:BA:1692:U:C1'   | 24:BA:1696:G:N2    | 2.60                     | 0.65              |
| 24:BA:1771:C:H2'   | 24:BA:1772:G:H8    | 1.61                     | 0.65              |
| 24:BA:1838:C:H2'   | 24:BA:1838:C:O2    | 1.95                     | 0.65              |
| 24:BA:2052:G:N3    | 28:BE:150:VAL:HB   | 2.12                     | 0.65              |
| 24:BA:2075:U:O4    | 24:BA:2077:A:N7    | 2.29                     | 0.65              |
| 24:BA:2114:A:N3    | 24:BA:2168:G:H5'   | 2.12                     | 0.65              |
| 24:BA:2531:A:H2'   | 24:BA:2532:G:O5'   | 1.96                     | 0.65              |
| 24:BA:2543:G:N2    | 24:BA:2765:A:C4    | 2.65                     | 0.65              |
| 24:BA:2587:A:O2'   | 24:BA:2588:G:H5'   | 1.96                     | 0.65              |
| 24:BA:2661:G:C5    | 24:BA:2662:A:N7    | 2.65                     | 0.65              |
| 24:BA:2668:G:O2'   | 24:BA:2669:G:H5'   | 1.96                     | 0.65              |
| 24:BA:2681:C:H5    | 24:BA:2727:G:C2    | 2.14                     | 0.65              |
| 27:BD:54:ARG:HB3   | 27:BD:218:ARG:HD2  | 1.79                     | 0.65              |
| 27:BD:63:ARG:HD2   | 27:BD:85:ASP:HB3   | 1.79                     | 0.65              |
| 30:BG:18:GLU:OE1   | 30:BG:22:ARG:NH1   | 2.30                     | 0.65              |
| 31:BH:122:THR:O    | 31:BH:133:VAL:HG23 | 1.97                     | 0.65              |
| 32:BK:4:ILE:HG12   | 32:BK:37:VAL:O     | 1.96                     | 0.65              |
| 32:BK:15:VAL:CG1   | 32:BK:16:GLY:H     | 2.10                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 34:BM:34:LEU:CD2 | 34:BM:116:LEU:HD21 | 2.27                     | 0.65              |
| 34:BM:104:LYS:HA | 34:BM:117:PHE:CE2  | 2.31                     | 0.65              |
| 35:BN:15:GLY:CA  | 35:BN:47:ILE:HB    | 2.26                     | 0.65              |
| 35:BN:85:VAL:HB  | 35:BN:93:PRO:HG3   | 1.79                     | 0.65              |
| 35:BN:97:ARG:HD3 | 35:BN:118:ALA:HB2  | 1.78                     | 0.65              |
| 36:BO:56:SER:HB3 | 54:B7:13:ARG:NE    | 2.10                     | 0.65              |
| 36:BO:76:LYS:HZ2 | 36:BO:99:LEU:CD1   | 2.10                     | 0.65              |
| 36:BO:113:LYS:HA | 36:BO:129:ALA:HB3  | 1.79                     | 0.65              |
| 38:BQ:75:LEU:O   | 38:BQ:78:LYS:N     | 2.30                     | 0.65              |
| 40:BS:56:GLY:O   | 40:BS:61:PHE:HA    | 1.97                     | 0.65              |
| 42:BU:15:GLU:HB3 | 42:BU:16:PRO:HD2   | 1.78                     | 0.65              |
| 42:BU:43:GLU:H   | 42:BU:44:LYS:CE    | 2.10                     | 0.65              |
| 43:BV:6:ILE:HG12 | 43:BV:103:ILE:O    | 1.96                     | 0.65              |
| 43:BV:13:SER:C   | 43:BV:16:LYS:NZ    | 2.55                     | 0.65              |
| 43:BV:68:ARG:HG3 | 43:BV:109:GLU:OE2  | 1.97                     | 0.65              |
| 45:BX:74:PRO:HG2 | 45:BX:100:ALA:HB3  | 1.79                     | 0.65              |
| 45:BX:98:VAL:N   | 45:BX:101:LYS:HE3  | 2.12                     | 0.65              |
| 49:B2:4:LEU:O    | 49:B2:37:LEU:CB    | 2.43                     | 0.65              |
| 52:B5:49:HIS:O   | 52:B5:50:ARG:HB2   | 1.94                     | 0.65              |
| 1:AA:391:G:OP1   | 18:AS:28:ARG:NH2   | 2.30                     | 0.65              |
| 1:AA:409:G:H5'   | 6:AG:24:GLU:HB3    | 1.79                     | 0.65              |
| 1:AA:522:C:N4    | 1:AA:523:A:C6      | 2.65                     | 0.65              |
| 1:AA:656:C:C2'   | 1:AA:657:G:H5'     | 2.27                     | 0.65              |
| 1:AA:953:G:H1'   | 15:AP:125:ARG:C    | 2.21                     | 0.65              |
| 1:AA:969:A:O2'   | 12:AM:55:LYS:NZ    | 2.25                     | 0.65              |
| 1:AA:1115:C:H2'  | 1:AA:1116:C:H6     | 1.61                     | 0.65              |
| 1:AA:1227:A:C8   | 15:AP:117:VAL:CG2  | 2.79                     | 0.65              |
| 1:AA:1320:C:C5   | 21:AV:37:ARG:CZ    | 2.80                     | 0.65              |
| 1:AA:1329:A:H5'  | 15:AP:29:ARG:CZ    | 2.27                     | 0.65              |
| 1:AA:1366:C:O2'  | 1:AA:1367:C:H5'    | 1.96                     | 0.65              |
| 1:AA:1399:C:O2'  | 1:AA:1400:C:OP2    | 2.15                     | 0.65              |
| 3:AC:8:U:H3      | 3:AC:14:A:H62      | 1.44                     | 0.65              |
| 3:AD:40:C:H2'    | 3:AD:41:C:H5''     | 1.78                     | 0.65              |
| 3:AD:60:U:O5'    | 3:AD:60:U:H6       | 1.79                     | 0.65              |
| 3:AB:63:G:O2'    | 24:BA:2482:G:C4'   | 2.41                     | 0.65              |
| 3:AB:76:A:C4'    | 24:BA:2507:C:H4'   | 2.27                     | 0.65              |
| 4:AE:97:TRP:HH2  | 4:AE:176:GLU:CG    | 2.09                     | 0.65              |
| 4:AE:171:ALA:O   | 4:AE:174:VAL:N     | 2.30                     | 0.65              |
| 6:AG:124:GLY:O   | 6:AG:126:ILE:HG12  | 1.96                     | 0.65              |
| 10:AK:33:GLU:HG2 | 10:AK:59:LEU:CD1   | 2.24                     | 0.65              |
| 10:AK:40:ALA:N   | 10:AK:45:ILE:HG23  | 2.11                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 10:AK:44:PHE:HE2   | 10:AK:109:ILE:HD13 | 1.62                     | 0.65              |
| 13:AN:48:ILE:CG2   | 13:AN:63:LEU:HD13  | 2.25                     | 0.65              |
| 16:AQ:42:ILE:HA    | 16:AQ:45:ARG:HG2   | 1.79                     | 0.65              |
| 16:AQ:52:GLN:O     | 16:AQ:53:LEU:HD23  | 1.96                     | 0.65              |
| 18:AS:35:LYS:HZ1   | 18:AS:37:GLY:N     | 1.92                     | 0.65              |
| 23:AX:23:PRO:C     | 23:AX:25:LYS:H     | 2.04                     | 0.65              |
| 24:BA:176:G:C2'    | 24:BA:177:G:O4'    | 2.42                     | 0.65              |
| 24:BA:532:A:H4'    | 41:BT:28:ARG:NH1   | 2.12                     | 0.65              |
| 24:BA:784:A:OP1    | 24:BA:2588:G:C5'   | 2.44                     | 0.65              |
| 24:BA:800:A:O2'    | 24:BA:801:G:P      | 2.55                     | 0.65              |
| 24:BA:974:G:N2     | 24:BA:1187:G:C6    | 2.65                     | 0.65              |
| 24:BA:1059:G:C6    | 24:BA:1060:U:H1'   | 2.32                     | 0.65              |
| 24:BA:1166:C:O2    | 24:BA:1184:G:N2    | 2.29                     | 0.65              |
| 24:BA:1238:G:C2    | 24:BA:1239:G:C4    | 2.85                     | 0.65              |
| 24:BA:1398:C:H2'   | 24:BA:1399:C:C6    | 2.32                     | 0.65              |
| 24:BA:1519:G:C3'   | 24:BA:1520:U:O4'   | 2.45                     | 0.65              |
| 24:BA:1519:G:H3'   | 24:BA:1520:U:C2    | 2.31                     | 0.65              |
| 24:BA:1520:U:C3'   | 24:BA:1521:G:H5''  | 2.26                     | 0.65              |
| 24:BA:1543:A:O5'   | 24:BA:1544:C:H5''  | 1.97                     | 0.65              |
| 24:BA:1623:G:C2    | 24:BA:1624:G:C8    | 2.85                     | 0.65              |
| 24:BA:1670:C:OP1   | 24:BA:1671:U:OP2   | 2.13                     | 0.65              |
| 24:BA:1703:G:N2    | 24:BA:1704:G:H1'   | 2.11                     | 0.65              |
| 24:BA:1914:C:H2'   | 24:BA:1914:C:O2    | 1.97                     | 0.65              |
| 24:BA:1947:C:C2    | 24:BA:1948:G:C8    | 2.85                     | 0.65              |
| 24:BA:2075:U:O4'   | 24:BA:2597:G:N2    | 2.29                     | 0.65              |
| 24:BA:2157:G:OP2   | 24:BA:2157:G:N2    | 2.30                     | 0.65              |
| 24:BA:2567:G:C6    | 24:BA:2568:C:N4    | 2.64                     | 0.65              |
| 24:BA:2569:G:N1    | 24:BA:2570:G:N7    | 2.45                     | 0.65              |
| 24:BA:2619:C:C2'   | 24:BA:2620:C:O5'   | 2.43                     | 0.65              |
| 24:BA:2635:C:O3'   | 28:BE:78:LEU:HD12  | 1.96                     | 0.65              |
| 24:BA:2636:U:H4'   | 28:BE:79:ARG:CD    | 2.27                     | 0.65              |
| 24:BA:2779:U:C5'   | 24:BA:2780:G:H3'   | 2.27                     | 0.65              |
| 25:BB:105:G:H4'    | 46:BY:32:HIS:CE1   | 2.31                     | 0.65              |
| 26:BC:62:VAL:HG22  | 26:BC:63:SER:N     | 2.11                     | 0.65              |
| 27:BD:55:GLY:H     | 27:BD:218:ARG:CD   | 2.09                     | 0.65              |
| 30:BG:75:LYS:HB3   | 30:BG:84:LYS:CA    | 2.27                     | 0.65              |
| 30:BG:103:LEU:HD21 | 30:BG:176:LEU:HD11 | 1.78                     | 0.65              |
| 33:BL:19:PRO:CB    | 33:BL:22:PRO:HG2   | 2.26                     | 0.65              |
| 34:BM:14:VAL:HG22  | 34:BM:138:LEU:HD13 | 1.78                     | 0.65              |
| 34:BM:27:ALA:O     | 34:BM:28:THR:C     | 2.40                     | 0.65              |
| 35:BN:52:VAL:O     | 35:BN:53:LYS:HG2   | 1.97                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 35:BN:103:ALA:O   | 35:BN:104:ARG:C   | 2.39                     | 0.65              |
| 35:BN:108:GLU:HB3 | 35:BN:111:PHE:HE2 | 1.61                     | 0.65              |
| 36:BO:46:LYS:HB3  | 36:BO:49:ARG:NH1  | 2.11                     | 0.65              |
| 36:BO:114:ILE:CG1 | 36:BO:130:PHE:HA  | 2.26                     | 0.65              |
| 38:BQ:51:LEU:CD2  | 38:BQ:70:LEU:HD11 | 2.26                     | 0.65              |
| 39:BR:49:VAL:CG1  | 39:BR:76:LYS:HE3  | 2.25                     | 0.65              |
| 40:BS:32:TYR:HD2  | 40:BS:88:ILE:HA   | 1.62                     | 0.65              |
| 40:BS:50:ILE:HD12 | 40:BS:66:VAL:CG2  | 2.27                     | 0.65              |
| 41:BT:92:ARG:O    | 41:BT:95:LEU:HG   | 1.97                     | 0.65              |
| 45:BX:14:LEU:HD12 | 45:BX:14:LEU:N    | 2.11                     | 0.65              |
| 46:BY:53:ILE:O    | 46:BY:54:HIS:CG   | 2.50                     | 0.65              |
| 48:B1:20:VAL:HG23 | 48:B1:55:LEU:HD23 | 1.79                     | 0.65              |
| 48:B1:38:GLN:O    | 48:B1:41:GLN:HB2  | 1.97                     | 0.65              |
| 48:B1:41:GLN:O    | 48:B1:42:ASN:C    | 2.40                     | 0.65              |
| 49:B2:4:LEU:HD21  | 49:B2:56:VAL:CG2  | 2.24                     | 0.65              |
| 54:B7:56:GLU:CD   | 54:B7:56:GLU:N    | 2.39                     | 0.65              |
| 1:AA:51:A:H4'     | 1:AA:52:G:C5'     | 2.27                     | 0.65              |
| 1:AA:61:G:H2'     | 1:AA:62:U:H6      | 1.56                     | 0.65              |
| 1:AA:181:G:O2'    | 1:AA:182:U:H5'    | 1.96                     | 0.65              |
| 1:AA:187:C:O2     | 1:AA:191(A):G:C6  | 2.50                     | 0.65              |
| 1:AA:520:A:H8     | 1:AA:521:G:H5''   | 1.61                     | 0.65              |
| 1:AA:533:A:C5     | 1:AA:536:C:N4     | 2.65                     | 0.65              |
| 1:AA:568:G:N2     | 1:AA:574:A:C2     | 2.63                     | 0.65              |
| 1:AA:679:C:O2'    | 1:AA:680:C:H5'    | 1.97                     | 0.65              |
| 1:AA:983:A:H1'    | 1:AA:1201:A:C8    | 2.31                     | 0.65              |
| 1:AA:1202:G:N2    | 1:AA:1203:C:H1'   | 2.11                     | 0.65              |
| 1:AA:1287:A:H61   | 1:AA:1371:G:C4'   | 2.10                     | 0.65              |
| 1:AA:1346:A:H62   | 1:AA:1374:A:H3'   | 1.61                     | 0.65              |
| 1:AA:1528:U:C1'   | 1:AA:1529:G:H21   | 2.10                     | 0.65              |
| 3:AD:18:G:H2'     | 3:AD:19:G:C4'     | 2.26                     | 0.65              |
| 3:AD:55:U:H2'     | 3:AD:57:G:N7      | 2.12                     | 0.65              |
| 6:AG:173:TRP:CE2  | 6:AG:189:PRO:HB3  | 2.32                     | 0.65              |
| 7:AH:103:GLY:C    | 7:AH:107:ARG:HH12 | 2.05                     | 0.65              |
| 9:AJ:36:LYS:HA    | 9:AJ:36:LYS:HZ1   | 1.62                     | 0.65              |
| 11:AL:113:LYS:HZ2 | 11:AL:119:ALA:CB  | 2.09                     | 0.65              |
| 14:AO:25:PRO:O    | 14:AO:27:LEU:N    | 2.30                     | 0.65              |
| 15:AP:10:PRO:O    | 15:AP:45:VAL:HG21 | 1.97                     | 0.65              |
| 17:AR:53:HIS:CD2  | 17:AR:57:LEU:HD11 | 2.32                     | 0.65              |
| 24:BA:30:G:P      | 41:BT:11:ARG:HH22 | 2.20                     | 0.65              |
| 24:BA:91:A:N3     | 24:BA:91:A:C2'    | 2.60                     | 0.65              |
| 24:BA:331:A:C5    | 24:BA:1209:G:C2   | 2.85                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:597:U:O2     | 24:BA:598:G:N7     | 2.30                     | 0.65              |
| 24:BA:1287:A:H5'   | 38:BQ:104:ARG:HG3  | 1.77                     | 0.65              |
| 24:BA:1307:A:O2'   | 24:BA:1308:A:H5'   | 1.97                     | 0.65              |
| 24:BA:1386:C:H2'   | 24:BA:1387:C:H6    | 1.60                     | 0.65              |
| 24:BA:1400:G:H2'   | 24:BA:1401:G:C8    | 2.32                     | 0.65              |
| 24:BA:1492:G:N3    | 24:BA:1493:C:N4    | 2.44                     | 0.65              |
| 24:BA:1492:G:N3    | 24:BA:1493:C:N3    | 2.45                     | 0.65              |
| 24:BA:1519:G:H4'   | 24:BA:1519:G:OP1   | 1.95                     | 0.65              |
| 24:BA:1681:G:N1    | 24:BA:1762:A:N7    | 2.45                     | 0.65              |
| 24:BA:1834:U:H4'   | 24:BA:1834:U:OP1   | 1.96                     | 0.65              |
| 24:BA:1980:G:C5    | 24:BA:1982:C:C5    | 2.85                     | 0.65              |
| 24:BA:2021:C:H5'   | 24:BA:2022:U:C5    | 2.31                     | 0.65              |
| 24:BA:2051:A:C2    | 24:BA:2052:G:N7    | 2.65                     | 0.65              |
| 24:BA:2286:A:N6    | 52:B5:32:ASN:H     | 1.88                     | 0.65              |
| 24:BA:2439:A:H8    | 24:BA:2586:C:H4'   | 1.61                     | 0.65              |
| 24:BA:2445:G:C2'   | 24:BA:2446:G:H8    | 2.07                     | 0.65              |
| 24:BA:2611:U:H2'   | 24:BA:2612:C:O4'   | 1.97                     | 0.65              |
| 24:BA:2777:G:H3'   | 24:BA:2777:G:C8    | 2.32                     | 0.65              |
| 25:BB:30:C:C2'     | 25:BB:31:C:H5'     | 2.26                     | 0.65              |
| 25:BB:115:G:H4'    | 39:BR:50:SER:CB    | 2.27                     | 0.65              |
| 26:BC:103:ILE:CB   | 26:BC:127:LEU:HD21 | 2.23                     | 0.65              |
| 27:BD:118:VAL:H    | 27:BD:129:ASN:CG   | 2.05                     | 0.65              |
| 29:BF:4:VAL:O      | 29:BF:20:LEU:HD11  | 1.92                     | 0.65              |
| 30:BG:39:ILE:HD12  | 30:BG:92:VAL:O     | 1.97                     | 0.65              |
| 31:BH:29:PRO:HD3   | 31:BH:79:VAL:CA    | 2.27                     | 0.65              |
| 34:BM:108:PRO:O    | 34:BM:113:GLY:HA3  | 1.97                     | 0.65              |
| 34:BM:139:GLU:O    | 34:BM:140:VAL:HG23 | 1.97                     | 0.65              |
| 35:BN:13:ASN:OD1   | 35:BN:52:VAL:HG12  | 1.96                     | 0.65              |
| 35:BN:63:VAL:HB    | 35:BN:78:ARG:CG    | 2.26                     | 0.65              |
| 36:BO:76:LYS:HD2   | 36:BO:101:VAL:HG21 | 1.77                     | 0.65              |
| 36:BO:114:ILE:HG13 | 36:BO:123:LEU:HB2  | 1.78                     | 0.65              |
| 37:BP:27:VAL:CG2   | 37:BP:28:ALA:N     | 2.53                     | 0.65              |
| 37:BP:75:THR:HG22  | 37:BP:77:LYS:CD    | 2.25                     | 0.65              |
| 39:BR:69:VAL:HG12  | 39:BR:73:LEU:HD21  | 1.78                     | 0.65              |
| 39:BR:74:ALA:CB    | 39:BR:108:GLY:CA   | 2.67                     | 0.65              |
| 42:BU:28:GLU:HG2   | 42:BU:94:LEU:HB2   | 1.79                     | 0.65              |
| 42:BU:31:ALA:O     | 42:BU:33:VAL:HG23  | 1.95                     | 0.65              |
| 50:B3:53:GLU:HG2   | 50:B3:54:GLY:N     | 2.12                     | 0.65              |
| 52:B5:54:ILE:HD13  | 52:B5:54:ILE:C     | 2.21                     | 0.65              |
| 53:B6:39:ARG:O     | 53:B6:40:TRP:HB2   | 1.97                     | 0.65              |
| 1:AA:103:C:H1'     | 1:AA:151:A:C2      | 2.32                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:129(A):G:H3'  | 1:AA:129(A):G:H8   | 1.61                     | 0.65              |
| 1:AA:361:G:N7      | 1:AA:362:G:C6      | 2.65                     | 0.65              |
| 1:AA:529:G:C6      | 14:AO:49:ASN:CG    | 2.74                     | 0.65              |
| 1:AA:568:G:N2      | 1:AA:574:A:H2      | 1.95                     | 0.65              |
| 1:AA:758:G:O5'     | 1:AA:758:G:H8      | 1.79                     | 0.65              |
| 1:AA:820:U:O2'     | 1:AA:821:G:OP2     | 2.14                     | 0.65              |
| 1:AA:824:C:O4'     | 10:AK:1:MET:N      | 2.26                     | 0.65              |
| 1:AA:1171:G:H2'    | 1:AA:1172:C:C6     | 2.32                     | 0.65              |
| 1:AA:1338:G:H21    | 3:AC:41:C:C1'      | 2.10                     | 0.65              |
| 1:AA:1378:C:N3     | 1:AA:1379:G:C1'    | 2.60                     | 0.65              |
| 1:AA:1440:C:H2'    | 1:AA:1441:G:O4'    | 1.97                     | 0.65              |
| 3:AC:36:A:N6       | 3:AC:37:A:N6       | 2.46                     | 0.65              |
| 4:AE:39:ILE:O      | 4:AE:41:ILE:CD1    | 2.45                     | 0.65              |
| 5:AF:38:ARG:CG     | 5:AF:94:LEU:HD21   | 2.27                     | 0.65              |
| 5:AF:193:TYR:HB2   | 5:AF:196:LEU:HD22  | 1.78                     | 0.65              |
| 6:AG:56:VAL:HG12   | 6:AG:57:ARG:N      | 2.10                     | 0.65              |
| 6:AG:118:ARG:HG3   | 6:AG:136:PRO:CB    | 2.26                     | 0.65              |
| 7:AH:137:GLU:HA    | 7:AH:137:GLU:OE2   | 1.97                     | 0.65              |
| 12:AM:5:ARG:HB2    | 12:AM:5:ARG:NH1    | 2.11                     | 0.65              |
| 13:AN:44:SER:H     | 13:AN:47:VAL:HB    | 1.62                     | 0.65              |
| 14:AO:85:ILE:CD1   | 14:AO:98:TYR:CB    | 2.74                     | 0.65              |
| 14:AO:85:ILE:CD1   | 14:AO:98:TYR:HB2   | 2.26                     | 0.65              |
| 15:AP:16:ASP:O     | 15:AP:19:LEU:HG    | 1.97                     | 0.65              |
| 19:AT:51:TYR:H     | 19:AT:51:TYR:HD1   | 1.41                     | 0.65              |
| 24:BA:13:A:N6      | 24:BA:525:U:C2     | 2.65                     | 0.65              |
| 24:BA:13:A:N6      | 24:BA:525:U:N1     | 2.44                     | 0.65              |
| 24:BA:27:G:C2      | 24:BA:512:G:O2'    | 2.50                     | 0.65              |
| 24:BA:66:C:H2'     | 24:BA:67:U:C5'     | 2.27                     | 0.65              |
| 24:BA:97:C:H2'     | 24:BA:98:G:O4'     | 1.97                     | 0.65              |
| 24:BA:137:C:O2'    | 24:BA:137(A):G:H5' | 1.97                     | 0.65              |
| 24:BA:412:A:H62    | 24:BA:2411:A:H1'   | 1.61                     | 0.65              |
| 24:BA:464:U:H1'    | 24:BA:788:A:N6     | 2.09                     | 0.65              |
| 24:BA:533:G:P      | 41:BT:25:TRP:HB2   | 2.37                     | 0.65              |
| 24:BA:537:C:H2'    | 24:BA:539:G:C8     | 2.31                     | 0.65              |
| 24:BA:612:G:C4'    | 24:BA:616:A:H61    | 2.03                     | 0.65              |
| 24:BA:624:C:OP2    | 36:BO:105:LEU:HB3  | 1.97                     | 0.65              |
| 24:BA:650:C:N3     | 24:BA:651:G:C2     | 2.65                     | 0.65              |
| 24:BA:1033:U:H5''  | 55:B8:9:ARG:NH2    | 2.12                     | 0.65              |
| 24:BA:1142(A):A:C6 | 24:BA:1143:A:H8    | 2.15                     | 0.65              |
| 24:BA:1275:A:H2'   | 24:BA:1276:A:O4'   | 1.97                     | 0.65              |
| 24:BA:1416:G:H1'   | 24:BA:1583:A:N1    | 2.12                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1627:G:N2    | 24:BA:1628:G:H1'   | 2.11                     | 0.65              |
| 24:BA:1773:A:H2    | 24:BA:1977:A:N6    | 1.94                     | 0.65              |
| 24:BA:1775:U:N1    | 27:BD:208:LYS:HD2  | 2.12                     | 0.65              |
| 24:BA:1784:A:H4'   | 24:BA:1785:A:N9    | 2.13                     | 0.65              |
| 24:BA:1792:G:H2'   | 24:BA:1792:G:N3    | 2.12                     | 0.65              |
| 24:BA:1834:U:C1'   | 24:BA:1969:A:C2    | 2.80                     | 0.65              |
| 24:BA:1924:C:H2'   | 24:BA:1925:C:H6    | 1.62                     | 0.65              |
| 24:BA:1935:G:C2'   | 24:BA:1962:C:N4    | 2.57                     | 0.65              |
| 24:BA:2059:A:C2    | 24:BA:2503:A:N7    | 2.65                     | 0.65              |
| 24:BA:2134:A:C2'   | 24:BA:2135:A:O5'   | 2.45                     | 0.65              |
| 24:BA:2335:A:C6    | 24:BA:2337:G:C2    | 2.85                     | 0.65              |
| 24:BA:2385:C:C2    | 24:BA:2386:C:C6    | 2.85                     | 0.65              |
| 24:BA:2659:G:H1'   | 24:BA:2663:G:H1    | 1.62                     | 0.65              |
| 24:BA:2882:A:C5'   | 38:BQ:98:LEU:HD21  | 2.27                     | 0.65              |
| 25:BB:84:C:C2      | 25:BB:85:G:C8      | 2.84                     | 0.65              |
| 26:BC:10:LEU:HD21  | 26:BC:220:PRO:CD   | 2.25                     | 0.65              |
| 26:BC:128:GLY:HA2  | 26:BC:137:LEU:CD1  | 2.27                     | 0.65              |
| 27:BD:91:ARG:HH11  | 27:BD:91:ARG:N     | 1.94                     | 0.65              |
| 30:BG:74:LYS:O     | 30:BG:75:LYS:HB2   | 1.97                     | 0.65              |
| 30:BG:104:GLU:HA   | 30:BG:108:ASN:HD22 | 1.61                     | 0.65              |
| 30:BG:113:ARG:O    | 30:BG:114:ILE:HG22 | 1.97                     | 0.65              |
| 31:BH:8:PRO:HD2    | 31:BH:69:ARG:HH11  | 1.62                     | 0.65              |
| 31:BH:136:ILE:HG23 | 31:BH:137:ASP:N    | 2.10                     | 0.65              |
| 37:BP:58:PHE:C     | 37:BP:60:ARG:N     | 2.55                     | 0.65              |
| 37:BP:85:LYS:NZ    | 47:BZ:10:THR:HG21  | 2.12                     | 0.65              |
| 37:BP:87:LYS:HG2   | 37:BP:87:LYS:O     | 1.95                     | 0.65              |
| 38:BQ:33:ARG:HH22  | 51:B4:56:LYS:HB2   | 1.62                     | 0.65              |
| 39:BR:7:TYR:HB3    | 39:BR:11:LYS:HZ1   | 1.59                     | 0.65              |
| 39:BR:94:TYR:N     | 39:BR:94:TYR:CD1   | 2.64                     | 0.65              |
| 42:BU:83:ARG:HD3   | 42:BU:84:LYS:N     | 2.12                     | 0.65              |
| 43:BV:13:SER:O     | 43:BV:17:VAL:HG22  | 1.97                     | 0.65              |
| 44:BW:27:THR:HG22  | 44:BW:80:ILE:CG2   | 2.26                     | 0.65              |
| 44:BW:31:HIS:O     | 44:BW:33:LYS:N     | 2.30                     | 0.65              |
| 45:BX:12:THR:HG21  | 45:BX:70:SER:O     | 1.97                     | 0.65              |
| 45:BX:42:VAL:O     | 45:BX:61:ILE:HD13  | 1.97                     | 0.65              |
| 46:BY:74:VAL:HG22  | 46:BY:86:VAL:HA    | 1.78                     | 0.65              |
| 47:BZ:28:GLY:O     | 47:BZ:29:GLN:O     | 2.15                     | 0.65              |
| 47:BZ:46:LYS:HD3   | 47:BZ:46:LYS:N     | 2.12                     | 0.65              |
| 47:BZ:72:ARG:O     | 47:BZ:73:GLY:C     | 2.39                     | 0.65              |
| 48:B1:27:LEU:HD21  | 48:B1:48:LEU:C     | 2.21                     | 0.65              |
| 48:B1:66:ASN:CG    | 48:B1:67:ALA:N     | 2.55                     | 0.65              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 49:B2:50:VAL:HG22 | 49:B2:53:LEU:HD12  | 1.79                     | 0.65              |
| 50:B3:43:TYR:CA   | 50:B3:61:ARG:NH2   | 2.41                     | 0.65              |
| 51:B4:20:ARG:HA   | 51:B4:23:HIS:CD2   | 2.31                     | 0.65              |
| 53:B6:28:ARG:O    | 53:B6:31:LEU:CB    | 2.41                     | 0.65              |
| 1:AA:6:G:N1       | 7:AH:96:PRO:HG2    | 2.12                     | 0.64              |
| 1:AA:59:A:H1'     | 1:AA:354:G:N2      | 2.12                     | 0.64              |
| 1:AA:124:G:H2'    | 1:AA:125:U:H6      | 1.61                     | 0.64              |
| 1:AA:138:G:N2     | 1:AA:226:G:H1'     | 2.12                     | 0.64              |
| 1:AA:291:C:C3'    | 1:AA:305:G:H22     | 1.99                     | 0.64              |
| 1:AA:307:C:N4     | 1:AA:308:C:H5      | 1.94                     | 0.64              |
| 1:AA:687:A:H61    | 1:AA:703:G:C1'     | 2.09                     | 0.64              |
| 1:AA:737:A:O2'    | 1:AA:738:C:H5'     | 1.97                     | 0.64              |
| 1:AA:759:A:N6     | 1:AA:760:G:N3      | 2.44                     | 0.64              |
| 1:AA:888:G:C2     | 1:AA:889:A:N6      | 2.63                     | 0.64              |
| 1:AA:1256:A:O2'   | 1:AA:1257:U:H1'    | 1.97                     | 0.64              |
| 1:AA:1305:G:H5''  | 23:AX:4:GLY:C      | 2.22                     | 0.64              |
| 1:AA:1345:U:H5'   | 1:AA:1346:A:OP1    | 1.96                     | 0.64              |
| 1:AA:1419:G:O2'   | 1:AA:1420:C:H6     | 1.80                     | 0.64              |
| 1:AA:1490:C:H2'   | 1:AA:1491:G:H5'    | 1.75                     | 0.64              |
| 1:AA:1508:G:O2'   | 1:AA:1509:C:H5'    | 1.96                     | 0.64              |
| 2:A1:48:U:OP2     | 2:A1:48:U:H6       | 1.78                     | 0.64              |
| 3:AC:29:G:H5'     | 15:AP:118:ALA:O    | 1.97                     | 0.64              |
| 3:AD:18:G:N2      | 3:AD:57:G:H2'      | 2.12                     | 0.64              |
| 3:AB:37:A:H2'     | 3:AB:38:A:O4'      | 1.97                     | 0.64              |
| 3:AB:52:G:C4'     | 24:BA:2471:C:H5''  | 2.26                     | 0.64              |
| 4:AE:20:GLU:HA    | 4:AE:21:ARG:NH2    | 2.08                     | 0.64              |
| 4:AE:69:LEU:HD13  | 4:AE:70:PHE:N      | 2.12                     | 0.64              |
| 4:AE:118:LEU:CD1  | 4:AE:142:LEU:HD12  | 2.25                     | 0.64              |
| 4:AE:208:ILE:HA   | 4:AE:211:ILE:CB    | 2.27                     | 0.64              |
| 5:AF:51:GLY:O     | 5:AF:70:VAL:HG13   | 1.97                     | 0.64              |
| 5:AF:124:ILE:CD1  | 5:AF:130:VAL:HG13  | 2.27                     | 0.64              |
| 7:AH:31:LEU:CD1   | 7:AH:129:ILE:HA    | 2.27                     | 0.64              |
| 11:AL:121:ARG:HG2 | 11:AL:121:ARG:HH11 | 1.60                     | 0.64              |
| 14:AO:54:LYS:CB   | 14:AO:70:ILE:HB    | 2.26                     | 0.64              |
| 14:AO:58:VAL:HG12 | 14:AO:59:ARG:N     | 2.10                     | 0.64              |
| 16:AQ:40:CYS:O    | 16:AQ:44:LEU:CB    | 2.45                     | 0.64              |
| 17:AR:33:THR:HG23 | 17:AR:87:ILE:HD11  | 1.79                     | 0.64              |
| 19:AT:62:SER:CB   | 19:AT:72:ARG:HG2   | 2.26                     | 0.64              |
| 19:AT:82:MET:HA   | 19:AT:85:VAL:HG21  | 1.78                     | 0.64              |
| 21:AV:62:ILE:CD1  | 21:AV:67:VAL:HA    | 2.26                     | 0.64              |
| 22:AW:57:ARG:O    | 22:AW:59:ALA:N     | 2.29                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 23:AX:5:ASP:O      | 23:AX:7:ARG:HG2   | 1.97                     | 0.64              |
| 24:BA:99:U:H5'     | 24:BA:101:G:C5'   | 2.27                     | 0.64              |
| 24:BA:227:A:N6     | 24:BA:2407:G:C8   | 2.65                     | 0.64              |
| 24:BA:270(S):G:C2  | 24:BA:270(T):G:N7 | 2.65                     | 0.64              |
| 24:BA:445:C:H5''   | 41:BT:3:ARG:HG3   | 1.78                     | 0.64              |
| 24:BA:515:A:O5'    | 24:BA:515:A:H8    | 1.78                     | 0.64              |
| 24:BA:558:G:H2'    | 24:BA:559:G:H5'   | 1.78                     | 0.64              |
| 24:BA:583:G:O2'    | 24:BA:584:C:H5'   | 1.96                     | 0.64              |
| 24:BA:638:G:H3'    | 24:BA:638:G:H8    | 1.61                     | 0.64              |
| 24:BA:641:C:N4     | 24:BA:646:A:H61   | 1.94                     | 0.64              |
| 24:BA:702:G:N2     | 24:BA:731:C:C2    | 2.66                     | 0.64              |
| 24:BA:703:U:H2'    | 24:BA:704:G:C1'   | 2.26                     | 0.64              |
| 24:BA:979:G:N7     | 24:BA:981:A:P     | 2.70                     | 0.64              |
| 24:BA:1069:A:N6    | 24:BA:1096:A:OP1  | 2.30                     | 0.64              |
| 24:BA:1195:G:C2'   | 24:BA:1226:G:H22  | 2.10                     | 0.64              |
| 24:BA:1226:G:H3'   | 24:BA:1226:G:H8   | 1.61                     | 0.64              |
| 24:BA:1227:A:H2'   | 24:BA:1228:G:H5'' | 1.80                     | 0.64              |
| 24:BA:1271:G:P     | 24:BA:1272:A:OP1  | 2.56                     | 0.64              |
| 24:BA:1296:G:H5''  | 24:BA:2709:G:O2'  | 1.98                     | 0.64              |
| 24:BA:1470:G:H3'   | 24:BA:1470:G:C8   | 2.32                     | 0.64              |
| 24:BA:1472:A:C1'   | 24:BA:1473:G:C8   | 2.80                     | 0.64              |
| 24:BA:1579:A:H2'   | 24:BA:1580:A:C4'  | 2.27                     | 0.64              |
| 24:BA:1654:A:C2    | 24:BA:1655:A:C8   | 2.84                     | 0.64              |
| 24:BA:1687:G:C5    | 24:BA:1688:U:H5   | 2.14                     | 0.64              |
| 24:BA:1785:A:OP1   | 24:BA:1981:A:H3'  | 1.97                     | 0.64              |
| 24:BA:1917:U:C6    | 24:BA:1918:A:C8   | 2.85                     | 0.64              |
| 24:BA:2010:G:H2'   | 24:BA:2011:U:C5'  | 2.26                     | 0.64              |
| 24:BA:2098:U:H2'   | 24:BA:2099:U:H6   | 1.61                     | 0.64              |
| 24:BA:2187:G:H2'   | 24:BA:2188:C:C6   | 2.30                     | 0.64              |
| 24:BA:2521:C:H2'   | 24:BA:2522:U:O4'  | 1.97                     | 0.64              |
| 24:BA:2569:G:N3    | 24:BA:2570:G:C8   | 2.65                     | 0.64              |
| 26:BC:7:TYR:CD1    | 26:BC:10:LEU:HB3  | 2.32                     | 0.64              |
| 26:BC:23:ASP:OD1   | 26:BC:183:GLU:HA  | 1.96                     | 0.64              |
| 26:BC:104:LEU:HD11 | 26:BC:126:LYS:O   | 1.97                     | 0.64              |
| 27:BD:52:ARG:O     | 27:BD:53:PHE:O    | 2.15                     | 0.64              |
| 27:BD:53:PHE:O     | 27:BD:54:ARG:O    | 2.16                     | 0.64              |
| 27:BD:72:LYS:HZ1   | 27:BD:99:ASP:CG   | 2.05                     | 0.64              |
| 27:BD:97:TYR:HB2   | 27:BD:101:GLU:O   | 1.97                     | 0.64              |
| 28:BE:128:SER:O    | 28:BE:130:GLY:N   | 2.31                     | 0.64              |
| 29:BF:171:PRO:HB2  | 29:BF:172:TRP:CE3 | 2.32                     | 0.64              |
| 29:BF:184:TYR:N    | 29:BF:184:TYR:CD2 | 2.64                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 30:BG:57:ALA:O     | 30:BG:58:GLN:C     | 2.40                     | 0.64              |
| 31:BH:40:GLU:CB    | 31:BH:55:PRO:HG3   | 2.27                     | 0.64              |
| 34:BM:6:PRO:CA     | 34:BM:41:ASP:HB3   | 2.27                     | 0.64              |
| 34:BM:123:TYR:C    | 34:BM:125:GLY:H    | 2.02                     | 0.64              |
| 35:BN:7:TYR:HA     | 35:BN:18:LYS:CE    | 2.28                     | 0.64              |
| 36:BO:23:PRO:CB    | 36:BO:29:LYS:N     | 2.60                     | 0.64              |
| 36:BO:97:PRO:HB3   | 36:BO:102:ARG:NH1  | 2.12                     | 0.64              |
| 36:BO:113:LYS:HZ2  | 36:BO:115:LEU:CD1  | 2.07                     | 0.64              |
| 36:BO:113:LYS:HA   | 36:BO:129:ALA:HB1  | 1.78                     | 0.64              |
| 36:BO:128:HIS:CG   | 36:BO:129:ALA:H    | 2.05                     | 0.64              |
| 37:BP:6:ARG:CB     | 37:BP:44:ALA:HB1   | 2.21                     | 0.64              |
| 37:BP:75:THR:HB    | 37:BP:77:LYS:HE3   | 1.79                     | 0.64              |
| 38:BQ:97:VAL:O     | 38:BQ:98:LEU:HD23  | 1.98                     | 0.64              |
| 41:BT:50:ARG:HB2   | 41:BT:50:ARG:CZ    | 2.27                     | 0.64              |
| 41:BT:70:ARG:HG2   | 41:BT:75:ASN:CA    | 2.18                     | 0.64              |
| 41:BT:105:VAL:CG1  | 41:BT:106:PHE:N    | 2.60                     | 0.64              |
| 43:BV:103:ILE:HD13 | 43:BV:103:ILE:H    | 1.62                     | 0.64              |
| 45:BX:2:ARG:CD     | 45:BX:3:VAL:N      | 2.57                     | 0.64              |
| 46:BY:159:PRO:O    | 46:BY:161:VAL:HG23 | 1.98                     | 0.64              |
| 47:BZ:12:ASN:HA    | 47:BZ:14:ARG:NE    | 2.12                     | 0.64              |
| 48:B1:27:LEU:HD13  | 48:B1:52:ILE:CD1   | 2.26                     | 0.64              |
| 49:B2:22:ALA:O     | 49:B2:25:ALA:HB3   | 1.97                     | 0.64              |
| 50:B3:5:ILE:HD11   | 50:B3:10:VAL:CG2   | 2.21                     | 0.64              |
| 51:B4:19:ARG:O     | 51:B4:21:SER:N     | 2.30                     | 0.64              |
| 51:B4:35:GLU:CD    | 51:B4:51:TYR:CE2   | 2.75                     | 0.64              |
| 53:B6:43:THR:C     | 53:B6:46:VAL:H     | 2.06                     | 0.64              |
| 54:B7:26:LYS:HD2   | 54:B7:43:GLN:C     | 2.21                     | 0.64              |
| 54:B7:30:ARG:NH2   | 54:B7:43:GLN:N     | 2.45                     | 0.64              |
| 1:AA:189:U:C4      | 19:AT:72:ARG:NH2   | 2.63                     | 0.64              |
| 1:AA:314:C:H2'     | 1:AA:315:A:H1'     | 1.78                     | 0.64              |
| 1:AA:579:G:H8      | 1:AA:579:G:O5'     | 1.80                     | 0.64              |
| 1:AA:603:U:H2'     | 1:AA:604:G:H8      | 1.62                     | 0.64              |
| 1:AA:675:A:H1'     | 13:AN:116:HIS:CG   | 2.33                     | 0.64              |
| 1:AA:754:C:O2      | 1:AA:754:C:C3'     | 2.46                     | 0.64              |
| 1:AA:772:U:O2'     | 1:AA:773:G:H5'     | 1.97                     | 0.64              |
| 1:AA:955:U:C1'     | 1:AA:1227:A:H61    | 2.03                     | 0.64              |
| 1:AA:1057:G:H2'    | 1:AA:1058:G:C8     | 2.32                     | 0.64              |
| 1:AA:1243:C:OP2    | 23:AX:10:ARG:CZ    | 2.45                     | 0.64              |
| 1:AA:1298:C:H2'    | 1:AA:1298:C:O2     | 1.97                     | 0.64              |
| 1:AA:1321:C:C4     | 1:AA:1322:C:H2'    | 2.32                     | 0.64              |
| 1:AA:1358:U:OP2    | 1:AA:1359:C:C5     | 2.49                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1371:G:P     | 11:AL:11:LYS:HE3   | 2.37                     | 0.64              |
| 1:AA:1423:G:H5'   | 35:BN:49:ARG:NH2   | 2.12                     | 0.64              |
| 4:AE:15:VAL:HG21  | 4:AE:210:SER:N     | 2.11                     | 0.64              |
| 5:AF:84:ILE:O     | 5:AF:101:LEU:HD13  | 1.97                     | 0.64              |
| 6:AG:101:LEU:CB   | 6:AG:138:TYR:O     | 2.46                     | 0.64              |
| 9:AJ:17:VAL:HG11  | 9:AJ:44:TYR:CE2    | 2.32                     | 0.64              |
| 11:AL:15:ALA:CB   | 11:AL:77:ILE:HG13  | 2.27                     | 0.64              |
| 12:AM:7:LYS:HG3   | 12:AM:71:LEU:HD11  | 1.78                     | 0.64              |
| 15:AP:66:LEU:C    | 15:AP:70:LEU:HB2   | 2.22                     | 0.64              |
| 15:AP:97:PRO:CB   | 15:AP:101:GLN:HB2  | 2.25                     | 0.64              |
| 16:AQ:26:ARG:HB2  | 16:AQ:43:CYS:CB    | 2.27                     | 0.64              |
| 17:AR:39:LEU:HD23 | 17:AR:39:LEU:C     | 2.22                     | 0.64              |
| 17:AR:41:GLU:CD   | 17:AR:41:GLU:C     | 2.65                     | 0.64              |
| 19:AT:4:LYS:CE    | 19:AT:5:VAL:O      | 2.44                     | 0.64              |
| 19:AT:88:TYR:CA   | 19:AT:91:ARG:NH2   | 2.60                     | 0.64              |
| 20:AU:63:GLN:HA   | 20:AU:66:LEU:HD11  | 1.79                     | 0.64              |
| 21:AV:40:ILE:HG12 | 21:AV:71:LEU:HD23  | 1.77                     | 0.64              |
| 24:BA:126:A:P     | 53:B6:17:GLY:HA3   | 2.37                     | 0.64              |
| 24:BA:230:U:H2'   | 24:BA:231:C:C6     | 2.32                     | 0.64              |
| 24:BA:400:G:H3'   | 24:BA:400:G:C8     | 2.32                     | 0.64              |
| 24:BA:465:G:C5    | 24:BA:466:A:N7     | 2.65                     | 0.64              |
| 24:BA:475:U:C6    | 24:BA:509:C:N4     | 2.65                     | 0.64              |
| 24:BA:663:G:O2'   | 24:BA:940:G:C4'    | 2.40                     | 0.64              |
| 24:BA:714:U:O2    | 24:BA:717:G:C8     | 2.50                     | 0.64              |
| 24:BA:930:U:O2    | 24:BA:932:G:C2     | 2.50                     | 0.64              |
| 24:BA:1061:U:H4'  | 24:BA:1070:A:C2'   | 2.27                     | 0.64              |
| 24:BA:1229:G:C6   | 24:BA:1230:C:C2    | 2.84                     | 0.64              |
| 24:BA:1608:A:C5   | 24:BA:1611:C:C4    | 2.85                     | 0.64              |
| 24:BA:1931:U:H6   | 24:BA:1932:A:C8    | 2.15                     | 0.64              |
| 24:BA:2161:C:C2   | 24:BA:2162:G:N7    | 2.66                     | 0.64              |
| 24:BA:2612:C:O2   | 51:B4:4:HIS:CG     | 2.50                     | 0.64              |
| 24:BA:2863:C:O2'  | 24:BA:2864:G:H5'   | 1.95                     | 0.64              |
| 25:BB:9:G:H4'     | 39:BR:43:GLU:CD    | 2.21                     | 0.64              |
| 25:BB:24:G:N2     | 25:BB:27:C:H42     | 1.95                     | 0.64              |
| 25:BB:110:G:H2'   | 25:BB:111:U:O5'    | 1.97                     | 0.64              |
| 26:BC:49:ILE:HD11 | 26:BC:165:ASN:HD22 | 1.62                     | 0.64              |
| 27:BD:181:GLU:CB  | 27:BD:268:ARG:NH2  | 2.59                     | 0.64              |
| 27:BD:247:ALA:O   | 27:BD:248:SER:C    | 2.40                     | 0.64              |
| 28:BE:27:LEU:CD1  | 28:BE:76:ARG:NH1   | 2.61                     | 0.64              |
| 28:BE:49:LEU:HD21 | 28:BE:76:ARG:N     | 2.12                     | 0.64              |
| 28:BE:164:ARG:O   | 28:BE:165:VAL:CG2  | 2.44                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 29:BF:82:ILE:CD1   | 29:BF:82:ILE:H     | 2.11                     | 0.64              |
| 30:BG:16:ARG:HG3   | 30:BG:16:ARG:NH2   | 2.09                     | 0.64              |
| 31:BH:105:LEU:HD12 | 31:BH:113:VAL:HG11 | 1.79                     | 0.64              |
| 31:BH:157:TYR:CD1  | 31:BH:158:HIS:N    | 2.65                     | 0.64              |
| 32:BK:22:LYS:HB3   | 32:BK:23:PRO:CD    | 2.28                     | 0.64              |
| 33:BL:10:LEU:HD22  | 33:BL:27:LEU:HD21  | 1.78                     | 0.64              |
| 33:BL:117:THR:O    | 33:BL:118:THR:HG23 | 1.97                     | 0.64              |
| 34:BM:15:LEU:N     | 34:BM:15:LEU:HD23  | 2.12                     | 0.64              |
| 35:BN:28:SER:O     | 35:BN:29:ASN:HB2   | 1.96                     | 0.64              |
| 35:BN:94:ARG:HG3   | 35:BN:95:GLY:H     | 1.56                     | 0.64              |
| 36:BO:35:HIS:O     | 36:BO:36:LYS:HD3   | 1.97                     | 0.64              |
| 36:BO:81:GLN:CA    | 36:BO:86:LYS:HE3   | 2.26                     | 0.64              |
| 37:BP:45:GLN:HA    | 37:BP:48:GLU:HG2   | 1.79                     | 0.64              |
| 38:BQ:63:ARG:O     | 38:BQ:64:ARG:C     | 2.39                     | 0.64              |
| 40:BS:53:ARG:NH2   | 40:BS:102:ILE:HD13 | 2.12                     | 0.64              |
| 41:BT:79:PHE:CE1   | 41:BT:83:LEU:HD11  | 2.32                     | 0.64              |
| 42:BU:22:VAL:CG1   | 42:BU:23:GLU:N     | 2.61                     | 0.64              |
| 42:BU:72:VAL:HG12  | 42:BU:73:SER:H     | 1.61                     | 0.64              |
| 43:BV:27:LYS:HB3   | 43:BV:31:GLU:OE2   | 1.97                     | 0.64              |
| 43:BV:59:VAL:HG21  | 43:BV:66:GLU:HB2   | 1.77                     | 0.64              |
| 43:BV:66:GLU:O     | 43:BV:69:LEU:HD13  | 1.98                     | 0.64              |
| 44:BW:11:PRO:HA    | 44:BW:28:PHE:HB3   | 1.79                     | 0.64              |
| 46:BY:11:GLU:HG3   | 46:BY:36:LYS:NZ    | 2.11                     | 0.64              |
| 49:B2:35:ARG:HH22  | 49:B2:47:VAL:CG1   | 2.10                     | 0.64              |
| 55:B8:29:ASN:HB3   | 55:B8:32:HIS:CE1   | 2.32                     | 0.64              |
| 1:AA:350:G:N2      | 1:AA:351:G:C2      | 2.66                     | 0.64              |
| 1:AA:665:A:H2'     | 1:AA:725:G:H21     | 1.57                     | 0.64              |
| 1:AA:755:G:H2'     | 1:AA:756:C:C6      | 2.33                     | 0.64              |
| 1:AA:1125:U:H4'    | 1:AA:1126:U:C5     | 2.32                     | 0.64              |
| 1:AA:1196:U:H4'    | 1:AA:1197:G:O5'    | 1.98                     | 0.64              |
| 1:AA:1295:G:N2     | 1:AA:1302:U:H3     | 1.95                     | 0.64              |
| 1:AA:1373:G:C5'    | 9:AJ:36:LYS:HB2    | 2.27                     | 0.64              |
| 1:AA:1389:C:H2'    | 1:AA:1390:U:H5'    | 1.80                     | 0.64              |
| 1:AA:1431:C:H42    | 1:AA:1469:G:H1     | 1.45                     | 0.64              |
| 3:AC:20:U:O2       | 3:AC:20:U:C2'      | 2.46                     | 0.64              |
| 3:AC:21:A:N1       | 3:AC:48:C:C4       | 2.65                     | 0.64              |
| 4:AE:61:LEU:HD11   | 4:AE:68:ILE:HD13   | 1.78                     | 0.64              |
| 4:AE:179:LYS:C     | 4:AE:181:PHE:N     | 2.53                     | 0.64              |
| 4:AE:224:GLN:HG2   | 4:AE:229:VAL:CG2   | 2.27                     | 0.64              |
| 5:AF:11:ARG:HD3    | 5:AF:15:THR:CG2    | 2.26                     | 0.64              |
| 5:AF:112:SER:O     | 5:AF:116:VAL:HG23  | 1.96                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 8:AI:2:ARG:CZ     | 8:AI:69:GLU:HG2    | 2.28                     | 0.64              |
| 10:AK:26:VAL:CG2  | 10:AK:27:PRO:HD2   | 2.23                     | 0.64              |
| 10:AK:38:ILE:HD11 | 10:AK:118:VAL:HB   | 1.79                     | 0.64              |
| 11:AL:9:ARG:HD2   | 11:AL:14:VAL:HG13  | 1.80                     | 0.64              |
| 14:AO:48:PRO:CG   | 14:AO:49:ASN:H     | 2.10                     | 0.64              |
| 17:AR:36:ILE:CA   | 17:AR:59:MET:HE1   | 2.28                     | 0.64              |
| 19:AT:59:ILE:CG1  | 19:AT:71:PHE:HB3   | 2.27                     | 0.64              |
| 21:AV:38:SER:HB3  | 21:AV:71:LEU:HG    | 1.78                     | 0.64              |
| 22:AW:26:ASN:ND2  | 22:AW:27:LYS:N     | 2.44                     | 0.64              |
| 24:BA:176:G:C2'   | 24:BA:177:G:H8     | 2.09                     | 0.64              |
| 24:BA:199:A:C5    | 24:BA:2433:A:C2    | 2.84                     | 0.64              |
| 24:BA:206:U:C6    | 24:BA:206:U:OP2    | 2.49                     | 0.64              |
| 24:BA:303:U:O2'   | 24:BA:304:G:H5'    | 1.98                     | 0.64              |
| 24:BA:464:U:C2    | 24:BA:788:A:N7     | 2.65                     | 0.64              |
| 24:BA:502:A:H3'   | 24:BA:502:A:C8     | 2.32                     | 0.64              |
| 24:BA:544:C:H2'   | 24:BA:545:G:O4'    | 1.97                     | 0.64              |
| 24:BA:558:G:C5'   | 34:BM:109:LYS:HD3  | 2.27                     | 0.64              |
| 24:BA:566:U:H2'   | 24:BA:567:A:C8     | 2.33                     | 0.64              |
| 24:BA:669:G:C4    | 24:BA:801:G:C2     | 2.85                     | 0.64              |
| 24:BA:1025:G:H1'  | 24:BA:1134:G:H4'   | 1.79                     | 0.64              |
| 24:BA:1153:C:C4   | 24:BA:1154:G:O6    | 2.51                     | 0.64              |
| 24:BA:1197:G:C5   | 24:BA:1198:U:C6    | 2.85                     | 0.64              |
| 24:BA:1409:C:O2'  | 24:BA:1410:G:H5'   | 1.98                     | 0.64              |
| 24:BA:1480:G:H2'  | 24:BA:1480:G:N3    | 2.11                     | 0.64              |
| 24:BA:1534:G:H21  | 24:BA:1537:C:H41   | 1.46                     | 0.64              |
| 24:BA:1558:A:H2   | 24:BA:1560:G:N9    | 1.96                     | 0.64              |
| 24:BA:1592:C:O2'  | 24:BA:1593:G:H5'   | 1.97                     | 0.64              |
| 24:BA:1791:A:O3'  | 27:BD:206:LEU:HD21 | 1.97                     | 0.64              |
| 24:BA:1798:U:H5'' | 27:BD:257:LEU:HB2  | 1.78                     | 0.64              |
| 24:BA:2018:G:C1'  | 41:BT:34:LYS:NZ    | 2.59                     | 0.64              |
| 24:BA:2208:U:H1'  | 24:BA:2217:G:C2    | 2.32                     | 0.64              |
| 24:BA:2749:A:H8   | 24:BA:2749:A:OP2   | 1.80                     | 0.64              |
| 24:BA:2815:C:C2   | 24:BA:2816:C:C6    | 2.86                     | 0.64              |
| 24:BA:2839:G:H2'  | 24:BA:2840:C:C6    | 2.31                     | 0.64              |
| 27:BD:74:GLY:O    | 27:BD:118:VAL:HG11 | 1.98                     | 0.64              |
| 27:BD:77:ALA:HB1  | 27:BD:95:LEU:HD11  | 1.79                     | 0.64              |
| 27:BD:143:HIS:C   | 27:BD:145:VAL:N    | 2.54                     | 0.64              |
| 27:BD:234:GLY:N   | 27:BD:241:PRO:CG   | 2.60                     | 0.64              |
| 28:BE:101:ARG:HD2 | 28:BE:169:ASN:ND2  | 2.09                     | 0.64              |
| 32:BK:111:PRO:HD2 | 32:BK:112:LYS:NZ   | 2.13                     | 0.64              |
| 33:BL:12:LEU:HD22 | 33:BL:19:PRO:HG3   | 1.78                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 33:BL:56:GLU:HB3  | 33:BL:67:PHE:CD2   | 2.32                     | 0.64              |
| 34:BM:15:LEU:HD21 | 34:BM:137:LYS:CB   | 2.26                     | 0.64              |
| 34:BM:89:LYS:HA   | 34:BM:92:ALA:CB    | 2.26                     | 0.64              |
| 36:BO:49:ARG:HA   | 36:BO:52:GLU:HG2   | 1.80                     | 0.64              |
| 36:BO:114:ILE:CD1 | 36:BO:114:ILE:N    | 2.59                     | 0.64              |
| 36:BO:126:VAL:HA  | 36:BO:146:VAL:H    | 1.59                     | 0.64              |
| 39:BR:103:GLU:HA  | 39:BR:106:ARG:CB   | 2.28                     | 0.64              |
| 40:BS:63:VAL:O    | 40:BS:63:VAL:CG1   | 2.44                     | 0.64              |
| 41:BT:83:LEU:C    | 41:BT:86:ALA:HB3   | 2.22                     | 0.64              |
| 42:BU:14:VAL:HG21 | 42:BU:21:ARG:HH22  | 1.62                     | 0.64              |
| 42:BU:62:LEU:CD2  | 42:BU:99:ILE:H     | 2.04                     | 0.64              |
| 43:BV:66:GLU:HA   | 43:BV:69:LEU:CD1   | 2.28                     | 0.64              |
| 43:BV:69:LEU:HB3  | 43:BV:107:LEU:HD11 | 1.79                     | 0.64              |
| 45:BX:23:ARG:CD   | 45:BX:39:VAL:HG22  | 2.28                     | 0.64              |
| 46:BY:10:ARG:NE   | 46:BY:36:LYS:HB2   | 2.12                     | 0.64              |
| 46:BY:51:ALA:C    | 46:BY:53:ILE:H     | 1.94                     | 0.64              |
| 46:BY:128:VAL:HB  | 46:BY:162:GLU:HB3  | 1.79                     | 0.64              |
| 49:B2:6:VAL:HG21  | 49:B2:35:ARG:NH2   | 2.11                     | 0.64              |
| 1:AA:132:C:N3     | 1:AA:231:G:C2      | 2.66                     | 0.64              |
| 1:AA:518:C:C5     | 1:AA:530:G:C5      | 2.85                     | 0.64              |
| 1:AA:921:U:O2'    | 1:AA:922:G:H5'     | 1.98                     | 0.64              |
| 1:AA:1007:C:H2'   | 1:AA:1008:C:C6     | 2.33                     | 0.64              |
| 1:AA:1278:U:H5'   | 1:AA:1279:A:H5'    | 1.78                     | 0.64              |
| 1:AA:1382:C:O5'   | 1:AA:1382:C:H6     | 1.80                     | 0.64              |
| 1:AA:1434:A:N6    | 1:AA:1435:G:C2     | 2.66                     | 0.64              |
| 4:AE:170:GLU:O    | 4:AE:171:ALA:C     | 2.40                     | 0.64              |
| 4:AE:208:ILE:CD1  | 4:AE:239:VAL:HG11  | 2.27                     | 0.64              |
| 4:AE:219:VAL:O    | 4:AE:223:ILE:CG1   | 2.46                     | 0.64              |
| 5:AF:122:GLU:HA   | 5:AF:125:GLU:CG    | 2.19                     | 0.64              |
| 5:AF:132:ARG:HB3  | 5:AF:136:GLN:NE2   | 2.13                     | 0.64              |
| 7:AH:140:ARG:NH1  | 7:AH:140:ARG:CB    | 2.61                     | 0.64              |
| 8:AI:12:PRO:HB2   | 8:AI:57:GLN:HE21   | 1.61                     | 0.64              |
| 8:AI:46:ARG:NH2   | 20:AU:37:VAL:CG1   | 2.59                     | 0.64              |
| 9:AJ:65:ALA:N     | 9:AJ:128:ALA:HA    | 2.12                     | 0.64              |
| 9:AJ:155:ARG:NH1  | 9:AJ:156:TRP:N     | 2.40                     | 0.64              |
| 10:AK:64:LYS:O    | 10:AK:79:VAL:HB    | 1.98                     | 0.64              |
| 13:AN:53:SER:OG   | 13:AN:54:ARG:N     | 2.28                     | 0.64              |
| 14:AO:85:ILE:HA   | 14:AO:99:HIS:O     | 1.97                     | 0.64              |
| 15:AP:10:PRO:HG3  | 15:AP:18:ALA:CB    | 2.27                     | 0.64              |
| 16:AQ:34:TYR:OH   | 16:AQ:44:LEU:HD22  | 1.97                     | 0.64              |
| 22:AW:14:LYS:O    | 22:AW:15:ARG:C     | 2.39                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:60:G:C8      | 24:BA:63:U:C4     | 2.86                     | 0.64              |
| 24:BA:138:G:N2     | 24:BA:139:G:N7    | 2.46                     | 0.64              |
| 24:BA:150:C:O2     | 24:BA:151:C:C6    | 2.50                     | 0.64              |
| 24:BA:212:G:H2'    | 24:BA:213:A:H8    | 1.63                     | 0.64              |
| 24:BA:297:C:H3'    | 24:BA:298:G:C8    | 2.31                     | 0.64              |
| 24:BA:312:G:H5''   | 24:BA:313:C:OP2   | 1.97                     | 0.64              |
| 24:BA:501:A:O5'    | 24:BA:501:A:C8    | 2.45                     | 0.64              |
| 24:BA:527:C:O4'    | 24:BA:2779:U:O4   | 2.16                     | 0.64              |
| 24:BA:581:C:H4'    | 41:BT:32:PHE:CZ   | 2.33                     | 0.64              |
| 24:BA:582:G:H2'    | 24:BA:583:G:C8    | 2.32                     | 0.64              |
| 24:BA:604:G:H21    | 24:BA:658:C:H5'   | 1.62                     | 0.64              |
| 24:BA:611:C:H2'    | 24:BA:612:G:O4'   | 1.97                     | 0.64              |
| 24:BA:637:A:N7     | 36:BO:115:LEU:HG  | 2.11                     | 0.64              |
| 24:BA:641:C:H2'    | 24:BA:642:G:O4'   | 1.97                     | 0.64              |
| 24:BA:843:G:N2     | 24:BA:936:C:C2    | 2.65                     | 0.64              |
| 24:BA:954:G:H1'    | 24:BA:2274:A:C2   | 2.33                     | 0.64              |
| 24:BA:960:A:C2     | 24:BA:962:G:C1'   | 2.81                     | 0.64              |
| 24:BA:975:G:C6     | 24:BA:976:C:C5    | 2.85                     | 0.64              |
| 24:BA:1338:G:O2'   | 24:BA:1339:G:H5'  | 1.97                     | 0.64              |
| 24:BA:1394:U:O3'   | 24:BA:1603:A:H5'' | 1.97                     | 0.64              |
| 24:BA:1407:C:C6    | 24:BA:1407:C:OP2  | 2.51                     | 0.64              |
| 24:BA:1418:G:OP1   | 24:BA:1588:C:C4'  | 2.45                     | 0.64              |
| 24:BA:1549:C:H2'   | 24:BA:1550:C:H6   | 1.63                     | 0.64              |
| 24:BA:1639:U:H2'   | 24:BA:1640:C:C5'  | 2.28                     | 0.64              |
| 24:BA:1703:G:C2    | 24:BA:1704:G:C4   | 2.85                     | 0.64              |
| 24:BA:1803:A:H2'   | 24:BA:1804:C:H6   | 1.61                     | 0.64              |
| 24:BA:1917:U:H2'   | 24:BA:1918:A:C1'  | 2.27                     | 0.64              |
| 24:BA:2459:A:H2    | 24:BA:2492:U:C4   | 2.16                     | 0.64              |
| 24:BA:2538:C:C2    | 24:BA:2539:C:C5   | 2.86                     | 0.64              |
| 24:BA:2563:U:H4'   | 35:BN:28:SER:HG   | 1.60                     | 0.64              |
| 25:BB:50:G:H2'     | 25:BB:50:G:N3     | 2.11                     | 0.64              |
| 27:BD:71:ASP:O     | 27:BD:72:LYS:HB2  | 1.95                     | 0.64              |
| 27:BD:80:ALA:HB2   | 27:BD:96:HIS:ND1  | 2.11                     | 0.64              |
| 27:BD:146:GLU:CB   | 27:BD:154:LYS:H   | 2.03                     | 0.64              |
| 28:BE:119:ARG:HH11 | 28:BE:120:TRP:HA  | 1.62                     | 0.64              |
| 29:BF:139:PHE:CE2  | 29:BF:167:ALA:HA  | 2.32                     | 0.64              |
| 30:BG:4:ASP:O      | 30:BG:7:LEU:HB2   | 1.97                     | 0.64              |
| 32:BK:21:VAL:HG11  | 32:BK:30:LEU:CD2  | 2.27                     | 0.64              |
| 34:BM:37:LYS:HE2   | 34:BM:43:THR:CG2  | 2.26                     | 0.64              |
| 34:BM:87:LEU:O     | 34:BM:91:LEU:CD2  | 2.45                     | 0.64              |
| 35:BN:94:ARG:HG2   | 35:BN:96:THR:O    | 1.97                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 36:BO:78:PRO:HG2  | 36:BO:117:GLU:CD  | 2.23                     | 0.64              |
| 38:BQ:14:SER:C    | 38:BQ:17:ARG:HG2  | 2.22                     | 0.64              |
| 38:BQ:108:GLY:O   | 38:BQ:110:PRO:HD3 | 1.97                     | 0.64              |
| 41:BT:5:LYS:C     | 41:BT:7:GLY:H     | 2.04                     | 0.64              |
| 44:BW:92:LEU:HD12 | 44:BW:92:LEU:N    | 2.10                     | 0.64              |
| 46:BY:1:MET:HE3   | 46:BY:3:TYR:CD2   | 2.32                     | 0.64              |
| 51:B4:55:ARG:H    | 51:B4:55:ARG:CD   | 2.10                     | 0.64              |
| 1:AA:109:A:H4'    | 1:AA:110:C:OP2    | 1.95                     | 0.64              |
| 1:AA:449:C:C2'    | 1:AA:450:G:O4'    | 2.44                     | 0.64              |
| 1:AA:817:C:C2'    | 1:AA:817:C:O2     | 2.45                     | 0.64              |
| 1:AA:858:G:N2     | 1:AA:870:U:OP2    | 2.30                     | 0.64              |
| 1:AA:1203:C:H2'   | 1:AA:1204:A:O4'   | 1.97                     | 0.64              |
| 1:AA:1378:C:OP1   | 9:AJ:6:ARG:HD3    | 1.97                     | 0.64              |
| 2:A1:38:U:O2'     | 2:A1:39:U:H5'     | 1.98                     | 0.64              |
| 3:AC:74:C:H3'     | 3:AC:75:C:H5''    | 1.78                     | 0.64              |
| 4:AE:58:ILE:O     | 4:AE:61:LEU:HD22  | 1.98                     | 0.64              |
| 4:AE:130:ARG:HD3  | 4:AE:131:PRO:CD   | 2.27                     | 0.64              |
| 5:AF:14:ILE:HG22  | 5:AF:15:THR:N     | 2.12                     | 0.64              |
| 6:AG:141:ARG:HH11 | 6:AG:142:PRO:CD   | 2.10                     | 0.64              |
| 7:AH:84:PHE:CG    | 7:AH:134:ALA:HA   | 2.33                     | 0.64              |
| 7:AH:135:THR:C    | 7:AH:139:LEU:HD12 | 2.22                     | 0.64              |
| 7:AH:147:ASP:O    | 7:AH:148:VAL:C    | 2.41                     | 0.64              |
| 9:AJ:29:LYS:NZ    | 9:AJ:102:ARG:HB2  | 2.12                     | 0.64              |
| 9:AJ:125:MET:HG3  | 9:AJ:126:ASP:N    | 2.10                     | 0.64              |
| 10:AK:32:LYS:CG   | 10:AK:33:GLU:N    | 2.61                     | 0.64              |
| 13:AN:63:LEU:O    | 13:AN:66:LEU:HB2  | 1.97                     | 0.64              |
| 13:AN:125:PHE:N   | 13:AN:125:PHE:CD1 | 2.66                     | 0.64              |
| 19:AT:35:VAL:HG12 | 19:AT:36:ILE:N    | 2.13                     | 0.64              |
| 24:BA:13:A:N7     | 24:BA:15:G:O6     | 2.31                     | 0.64              |
| 24:BA:89:G:OP2    | 24:BA:91:A:OP1    | 2.15                     | 0.64              |
| 24:BA:197:A:N1    | 24:BA:198:C:H1'   | 2.12                     | 0.64              |
| 24:BA:293:U:C6    | 24:BA:293:U:C3'   | 2.80                     | 0.64              |
| 24:BA:460:A:H3'   | 24:BA:461:C:C6    | 2.31                     | 0.64              |
| 24:BA:596:G:C2    | 24:BA:597:U:C2    | 2.85                     | 0.64              |
| 24:BA:784:A:P     | 24:BA:2588:G:H5'' | 2.37                     | 0.64              |
| 24:BA:1221:C:C2   | 24:BA:1229:G:N2   | 2.65                     | 0.64              |
| 24:BA:1392:A:C6   | 24:BA:1393:A:N6   | 2.66                     | 0.64              |
| 24:BA:1420:U:O2'  | 24:BA:1421:G:H5'' | 1.97                     | 0.64              |
| 24:BA:1532:C:O2'  | 24:BA:1533:C:O4'  | 2.07                     | 0.64              |
| 24:BA:1603:A:C2   | 24:BA:1604:C:C4   | 2.86                     | 0.64              |
| 24:BA:1759:A:O2'  | 24:BA:1760:A:H5'  | 1.96                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1786:A:C4'  | 24:BA:1938:A:H61  | 2.05                     | 0.64              |
| 24:BA:1860:G:H5'' | 26:BC:206:GLY:CA  | 2.26                     | 0.64              |
| 24:BA:1953:A:H62  | 24:BA:2550:G:C4'  | 2.10                     | 0.64              |
| 24:BA:2039:C:H2'  | 24:BA:2040:C:C5   | 2.33                     | 0.64              |
| 24:BA:2209:C:H4'  | 27:BD:150:LYS:CB  | 2.24                     | 0.64              |
| 24:BA:2246:G:H2'  | 24:BA:2247:A:H8   | 1.62                     | 0.64              |
| 24:BA:2418:A:C2'  | 24:BA:2419:U:O4'  | 2.44                     | 0.64              |
| 24:BA:2467:C:O2   | 37:BP:124:LYS:HD3 | 1.98                     | 0.64              |
| 24:BA:2478:A:N7   | 24:BA:2479:G:N7   | 2.45                     | 0.64              |
| 24:BA:2531:A:C2'  | 24:BA:2532:G:O5'  | 2.46                     | 0.64              |
| 24:BA:2572:A:H5'' | 24:BA:2574:G:H5'' | 1.79                     | 0.64              |
| 27:BD:53:PHE:O    | 27:BD:54:ARG:C    | 2.40                     | 0.64              |
| 28:BE:199:ARG:C   | 28:BE:200:GLU:CD  | 2.66                     | 0.64              |
| 29:BF:18:ARG:HG3  | 29:BF:19:GLU:H    | 1.63                     | 0.64              |
| 29:BF:196:LEU:HB3 | 29:BF:199:TRP:CD1 | 2.33                     | 0.64              |
| 30:BG:41:GLN:HG3  | 30:BG:42:GLY:H    | 1.60                     | 0.64              |
| 32:BK:93:THR:HG23 | 32:BK:96:ASP:N    | 2.11                     | 0.64              |
| 32:BK:113:ARG:HD2 | 32:BK:113:ARG:C   | 2.21                     | 0.64              |
| 33:BL:99:ILE:HG23 | 33:BL:103:GLN:OE1 | 1.98                     | 0.64              |
| 34:BM:128:HIS:O   | 34:BM:131:GLN:CB  | 2.45                     | 0.64              |
| 35:BN:103:ALA:HB1 | 35:BN:107:ARG:HD2 | 1.79                     | 0.64              |
| 36:BO:131:SER:O   | 36:BO:134:ALA:CB  | 2.43                     | 0.64              |
| 37:BP:99:PRO:HG2  | 37:BP:101:ARG:NE  | 2.12                     | 0.64              |
| 40:BS:21:GLU:O    | 40:BS:23:ARG:N    | 2.30                     | 0.64              |
| 40:BS:28:VAL:CG2  | 40:BS:93:ARG:C    | 2.71                     | 0.64              |
| 40:BS:57:PHE:N    | 40:BS:57:PHE:CD2  | 2.63                     | 0.64              |
| 41:BT:35:ALA:O    | 41:BT:38:THR:OG1  | 2.14                     | 0.64              |
| 41:BT:82:GLY:CA   | 41:BT:117:GLN:HG2 | 2.21                     | 0.64              |
| 42:BU:68:LYS:CG   | 42:BU:95:LEU:HD21 | 2.26                     | 0.64              |
| 45:BX:32:PRO:HB2  | 45:BX:34:LYS:HE3  | 1.79                     | 0.64              |
| 45:BX:72:VAL:HG21 | 45:BX:81:LYS:HE2  | 1.79                     | 0.64              |
| 46:BY:110:GLY:HA2 | 46:BY:144:LEU:HB2 | 1.78                     | 0.64              |
| 52:B5:7:ILE:CG2   | 52:B5:8:LYS:N     | 2.61                     | 0.64              |
| 1:AA:111:G:H5''   | 1:AA:112:G:OP2    | 1.98                     | 0.64              |
| 1:AA:394:G:C6     | 1:AA:395:C:N4     | 2.66                     | 0.64              |
| 1:AA:452:A:N6     | 1:AA:480:U:C2     | 2.66                     | 0.64              |
| 1:AA:667:G:H4'    | 17:AR:51:HIS:ND1  | 2.12                     | 0.64              |
| 1:AA:684:A:C4'    | 13:AN:12:ARG:NH2  | 2.55                     | 0.64              |
| 1:AA:748:C:C6     | 1:AA:748:C:C3'    | 2.81                     | 0.64              |
| 1:AA:765:G:H21    | 1:AA:816:A:H2     | 1.45                     | 0.64              |
| 1:AA:809:G:H2'    | 1:AA:810:C:H5'    | 1.79                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:841:U:H2'    | 1:AA:841:U:O2     | 1.97                     | 0.64              |
| 1:AA:1208:C:H2'   | 1:AA:1209:C:C6    | 2.33                     | 0.64              |
| 1:AA:1226:C:O3'   | 15:AP:111:LYS:NZ  | 2.28                     | 0.64              |
| 1:AA:1273:G:H3'   | 1:AA:1274:G:H8    | 1.63                     | 0.64              |
| 1:AA:1317:C:H2'   | 1:AA:1318:A:O4'   | 1.97                     | 0.64              |
| 1:AA:1367:C:OP1   | 11:AL:115:GLY:HA2 | 1.97                     | 0.64              |
| 3:AC:47:U:H3'     | 3:AC:47:U:C6      | 2.33                     | 0.64              |
| 5:AF:35:GLU:O     | 5:AF:38:ARG:HG2   | 1.97                     | 0.64              |
| 8:AI:30:LEU:CA    | 8:AI:75:LEU:HD11  | 2.23                     | 0.64              |
| 8:AI:78:GLU:O     | 8:AI:81:ILE:HD12  | 1.96                     | 0.64              |
| 9:AJ:38:LEU:HA    | 9:AJ:41:ARG:HB2   | 1.80                     | 0.64              |
| 13:AN:18:ARG:HB2  | 13:AN:20:TYR:HE1  | 1.62                     | 0.64              |
| 14:AO:76:ASN:ND2  | 14:AO:77:LEU:HD23 | 2.13                     | 0.64              |
| 15:AP:3:ARG:HH21  | 30:BG:141:PHE:H   | 1.43                     | 0.64              |
| 15:AP:29:ARG:CZ   | 15:AP:64:TRP:NE1  | 2.61                     | 0.64              |
| 18:AS:14:ASN:HB2  | 18:AS:42:ARG:HH12 | 1.63                     | 0.64              |
| 22:AW:26:ASN:HD22 | 22:AW:27:LYS:N    | 1.95                     | 0.64              |
| 24:BA:197:A:O4'   | 24:BA:2068:U:C2   | 2.50                     | 0.64              |
| 24:BA:270(W):G:C5 | 24:BA:270(X):G:C8 | 2.86                     | 0.64              |
| 24:BA:642:G:H3'   | 24:BA:642:G:C8    | 2.33                     | 0.64              |
| 24:BA:746:A:C8    | 24:BA:2612:C:O5'  | 2.50                     | 0.64              |
| 24:BA:1083:U:O2'  | 24:BA:1084:A:H8   | 1.80                     | 0.64              |
| 24:BA:1083:U:O2'  | 24:BA:1084:A:C8   | 2.50                     | 0.64              |
| 24:BA:1142(A):A:P | 24:BA:1143:A:H5'  | 2.37                     | 0.64              |
| 24:BA:1298:C:H4'  | 24:BA:1302:A:N6   | 2.13                     | 0.64              |
| 24:BA:1363:C:H41  | 50:B3:2:LYS:HE2   | 1.60                     | 0.64              |
| 24:BA:1471:A:OP2  | 24:BA:1472:A:H2   | 1.79                     | 0.64              |
| 24:BA:1681:G:C2'  | 24:BA:1682:G:OP1  | 2.44                     | 0.64              |
| 24:BA:1787:A:H2'  | 24:BA:1788:C:O4'  | 1.98                     | 0.64              |
| 24:BA:1935:G:O2'  | 24:BA:1937:A:C2   | 2.40                     | 0.64              |
| 24:BA:1977:A:C2   | 24:BA:1978:A:C4   | 2.86                     | 0.64              |
| 24:BA:2213:U:O2   | 24:BA:2213:U:C3'  | 2.43                     | 0.64              |
| 24:BA:2346:A:C1'  | 24:BA:2383:G:C8   | 2.74                     | 0.64              |
| 24:BA:2481:G:O2'  | 24:BA:2482:G:C5'  | 2.46                     | 0.64              |
| 24:BA:2592:G:O6   | 24:BA:2593:U:C4   | 2.51                     | 0.64              |
| 24:BA:2625:G:H2'  | 24:BA:2626:C:C6   | 2.33                     | 0.64              |
| 24:BA:2625:G:H3'  | 24:BA:2626:C:C5   | 2.33                     | 0.64              |
| 24:BA:2663:G:H2'  | 24:BA:2664:G:C8   | 2.33                     | 0.64              |
| 24:BA:2807:G:H2'  | 24:BA:2808:U:C5   | 2.32                     | 0.64              |
| 24:BA:2850:A:N3   | 24:BA:2869:G:H4'  | 2.11                     | 0.64              |
| 25:BB:80:U:H2'    | 25:BB:81:G:C8     | 2.31                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 26:BC:77:ILE:CD1  | 26:BC:123:VAL:HG13 | 2.27                     | 0.64              |
| 27:BD:148:GLU:CB  | 27:BD:154:LYS:HZ2  | 2.05                     | 0.64              |
| 27:BD:247:ALA:O   | 27:BD:248:SER:O    | 2.15                     | 0.64              |
| 28:BE:112:GLY:O   | 28:BE:159:HIS:HA   | 1.96                     | 0.64              |
| 29:BF:56:GLU:O    | 29:BF:58:ALA:C     | 2.41                     | 0.64              |
| 29:BF:153:SER:H   | 29:BF:190:GLU:HG3  | 1.62                     | 0.64              |
| 30:BG:60:LEU:CD2  | 30:BG:90:LEU:HD11  | 2.22                     | 0.64              |
| 30:BG:74:LYS:HE2  | 30:BG:75:LYS:HE3   | 1.80                     | 0.64              |
| 31:BH:20:ALA:CB   | 31:BH:21:PRO:CD    | 2.76                     | 0.64              |
| 31:BH:87:LEU:O    | 31:BH:131:VAL:O    | 2.13                     | 0.64              |
| 34:BM:127:ASP:N   | 34:BM:129:PRO:HD2  | 2.09                     | 0.64              |
| 35:BN:77:ILE:HA   | 35:BN:78:ARG:NH1   | 2.13                     | 0.64              |
| 38:BQ:86:ARG:HH12 | 38:BQ:87:TYR:HE2   | 1.43                     | 0.64              |
| 39:BR:11:LYS:CD   | 39:BR:11:LYS:N     | 2.59                     | 0.64              |
| 39:BR:75:GLU:CA   | 39:BR:78:LEU:HB3   | 2.27                     | 0.64              |
| 40:BS:81:PRO:O    | 40:BS:82:LEU:C     | 2.40                     | 0.64              |
| 42:BU:15:GLU:CA   | 42:BU:100:ARG:HH12 | 2.09                     | 0.64              |
| 43:BV:34:ASN:ND2  | 43:BV:37:ARG:HH11  | 1.95                     | 0.64              |
| 47:BZ:31:VAL:CG1  | 47:BZ:67:VAL:HG22  | 2.28                     | 0.64              |
| 47:BZ:50:ASN:HA   | 47:BZ:62:LEU:HD13  | 1.78                     | 0.64              |
| 48:B1:48:LEU:HD12 | 48:B1:51:GLN:NE2   | 2.12                     | 0.64              |
| 50:B3:28:LYS:HB3  | 50:B3:29:PRO:CD    | 2.28                     | 0.64              |
| 1:AA:55:A:H2'     | 1:AA:56:U:H5'      | 1.77                     | 0.64              |
| 1:AA:528:C:H42    | 14:AO:49:ASN:HD21  | 1.43                     | 0.64              |
| 1:AA:659:U:OP1    | 17:AR:9:GLN:NE2    | 2.31                     | 0.64              |
| 1:AA:689:C:C2     | 1:AA:690:G:C8      | 2.86                     | 0.64              |
| 1:AA:959:A:H1'    | 1:AA:985:C:C1'     | 2.27                     | 0.64              |
| 1:AA:982:U:H1'    | 1:AA:983:A:N6      | 2.12                     | 0.64              |
| 1:AA:983:A:C1'    | 1:AA:1201:A:N7     | 2.59                     | 0.64              |
| 1:AA:1072:G:C6    | 1:AA:1073:U:C4     | 2.86                     | 0.64              |
| 1:AA:1100:C:C2'   | 4:AE:98:LEU:HD11   | 2.28                     | 0.64              |
| 1:AA:1404:C:C1'   | 1:AA:1499:A:N1     | 2.61                     | 0.64              |
| 1:AA:1436:U:H6    | 1:AA:1436:U:O5'    | 1.80                     | 0.64              |
| 1:AA:1471:G:H2'   | 1:AA:1472:U:C6     | 2.33                     | 0.64              |
| 4:AE:78:GLN:HE22  | 4:AE:96:ARG:NH2    | 1.96                     | 0.64              |
| 5:AF:51:GLY:O     | 5:AF:52:LEU:O      | 2.16                     | 0.64              |
| 6:AG:110:PHE:O    | 6:AG:161:ASN:ND2   | 2.31                     | 0.64              |
| 7:AH:76:ILE:HG22  | 7:AH:78:HIS:CD2    | 2.33                     | 0.64              |
| 8:AI:76:ALA:O     | 8:AI:80:ARG:HG3    | 1.98                     | 0.64              |
| 10:AK:29:SER:HB2  | 10:AK:32:LYS:HZ3   | 1.63                     | 0.64              |
| 10:AK:126:LYS:CD  | 10:AK:127:LEU:N    | 2.61                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 11:AL:28:VAL:O    | 11:AL:30:GLY:N     | 2.30                     | 0.64              |
| 11:AL:38:GLN:O    | 11:AL:40:LEU:N     | 2.30                     | 0.64              |
| 11:AL:117:HIS:HD2 | 11:AL:121:ARG:HD3  | 1.63                     | 0.64              |
| 16:AQ:40:CYS:HB2  | 16:AQ:42:ILE:HG13  | 1.80                     | 0.64              |
| 17:AR:34:LEU:CG   | 17:AR:35:ARG:H     | 2.09                     | 0.64              |
| 21:AV:30:LEU:HA   | 21:AV:49:ILE:CA    | 2.26                     | 0.64              |
| 24:BA:76:C:O5'    | 24:BA:76:C:H6      | 1.81                     | 0.64              |
| 24:BA:348:G:H2'   | 24:BA:349:G:H8     | 1.63                     | 0.64              |
| 24:BA:354:G:O2'   | 24:BA:355:G:H5'    | 1.98                     | 0.64              |
| 24:BA:558:G:H5'   | 34:BM:112:LEU:CG   | 2.27                     | 0.64              |
| 24:BA:565:C:O3'   | 24:BA:1253:A:H2    | 1.80                     | 0.64              |
| 24:BA:876:C:O5'   | 24:BA:876:C:H6     | 1.81                     | 0.64              |
| 24:BA:950:G:C6    | 24:BA:951:C:C4     | 2.85                     | 0.64              |
| 24:BA:964:C:O2'   | 24:BA:2273:A:C8    | 2.49                     | 0.64              |
| 24:BA:969:U:C4    | 24:BA:970:C:C5     | 2.85                     | 0.64              |
| 24:BA:987:G:OP2   | 49:B2:13:ILE:HD13  | 1.97                     | 0.64              |
| 24:BA:1264:G:P    | 51:B4:15:ARG:HH11  | 2.21                     | 0.64              |
| 24:BA:1288:U:C5'  | 24:BA:1289:C:OP2   | 2.40                     | 0.64              |
| 24:BA:1372:U:C2'  | 24:BA:1373:A:H5'   | 2.27                     | 0.64              |
| 24:BA:1498:C:H1'  | 24:BA:1576:U:H4'   | 1.80                     | 0.64              |
| 24:BA:1759:A:H2'  | 24:BA:1760:A:O5'   | 1.97                     | 0.64              |
| 24:BA:2261:C:OP1  | 47:BZ:17:GLN:HB2   | 1.98                     | 0.64              |
| 24:BA:2283:C:C4   | 24:BA:2284:C:H1'   | 2.33                     | 0.64              |
| 24:BA:2296:U:C6   | 24:BA:2296:U:C3'   | 2.79                     | 0.64              |
| 24:BA:2469:A:H61  | 24:BA:2481:G:H1'   | 1.62                     | 0.64              |
| 24:BA:2645:G:C8   | 24:BA:2645:G:OP2   | 2.50                     | 0.64              |
| 24:BA:2720:U:H3'  | 24:BA:2721:A:C8    | 2.33                     | 0.64              |
| 25:BB:47:C:H2'    | 25:BB:48:A:H5'     | 1.78                     | 0.64              |
| 25:BB:76:G:H5'    | 46:BY:85:HIS:CE1   | 2.33                     | 0.64              |
| 25:BB:95:U:H2'    | 25:BB:96:G:H8      | 1.63                     | 0.64              |
| 27:BD:14:ARG:HB3  | 27:BD:15:PHE:CE1   | 2.33                     | 0.64              |
| 27:BD:143:HIS:C   | 27:BD:145:VAL:HG23 | 2.22                     | 0.64              |
| 27:BD:155:LEU:HG  | 27:BD:157:ARG:HE   | 1.57                     | 0.64              |
| 27:BD:214:TRP:CH2 | 27:BD:219:PRO:HB3  | 2.32                     | 0.64              |
| 28:BE:33:VAL:HG21 | 28:BE:77:ILE:HD11  | 1.79                     | 0.64              |
| 30:BG:19:LEU:HD12 | 30:BG:19:LEU:N     | 2.13                     | 0.64              |
| 30:BG:49:ASP:N    | 30:BG:53:LEU:HD13  | 2.13                     | 0.64              |
| 32:BK:21:VAL:O    | 32:BK:22:LYS:O     | 2.16                     | 0.64              |
| 32:BK:76:THR:CA   | 32:BK:141:LYS:HE2  | 2.27                     | 0.64              |
| 32:BK:76:THR:HG22 | 32:BK:141:LYS:HD2  | 1.80                     | 0.64              |
| 33:BL:37:PHE:CE2  | 33:BL:65:PHE:HB2   | 2.33                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 34:BM:99:LEU:CD1  | 34:BM:100:GLU:N   | 2.60                     | 0.64              |
| 34:BM:123:TYR:C   | 34:BM:125:GLY:N   | 2.55                     | 0.64              |
| 34:BM:127:ASP:C   | 34:BM:129:PRO:CD  | 2.70                     | 0.64              |
| 35:BN:97:ARG:NE   | 35:BN:98:VAL:N    | 2.45                     | 0.64              |
| 39:BR:49:VAL:HG22 | 39:BR:76:LYS:HZ1  | 1.60                     | 0.64              |
| 40:BS:54:ARG:H    | 40:BS:64:ARG:HB3  | 1.62                     | 0.64              |
| 42:BU:5:VAL:HG12  | 42:BU:37:VAL:HG22 | 1.80                     | 0.64              |
| 43:BV:34:ASN:N    | 43:BV:34:ASN:HD22 | 1.94                     | 0.64              |
| 44:BW:43:VAL:HG12 | 44:BW:44:GLU:N    | 2.11                     | 0.64              |
| 45:BX:47:LYS:HE2  | 45:BX:49:VAL:HG11 | 1.80                     | 0.64              |
| 46:BY:30:ASN:O    | 46:BY:31:ARG:C    | 2.40                     | 0.64              |
| 47:BZ:65:GLY:HA2  | 47:BZ:82:ARG:O    | 1.97                     | 0.64              |
| 49:B2:52:HIS:CE1  | 49:B2:53:LEU:HG   | 2.33                     | 0.64              |
| 55:B8:23:VAL:O    | 55:B8:36:GLN:HG2  | 1.96                     | 0.64              |
| 1:AA:130:A:H4'    | 1:AA:190:G:N3     | 2.12                     | 0.64              |
| 1:AA:287:U:O2     | 1:AA:287:U:C2'    | 2.46                     | 0.64              |
| 1:AA:707:C:H4'    | 13:AN:20:TYR:CD2  | 2.32                     | 0.64              |
| 1:AA:723:U:H5     | 2:A1:30:U:O2'     | 1.77                     | 0.64              |
| 1:AA:731:G:O2'    | 1:AA:732:C:H5'    | 1.97                     | 0.64              |
| 1:AA:740:U:H2'    | 1:AA:741:G:H8     | 1.63                     | 0.64              |
| 1:AA:791:G:H21    | 1:AA:1497:G:H4'   | 1.63                     | 0.64              |
| 1:AA:1154:G:H2'   | 1:AA:1155:G:C8    | 2.31                     | 0.64              |
| 1:AA:1506:U:N3    | 1:AA:1522:U:OP1   | 2.25                     | 0.64              |
| 3:AC:21:A:N7      | 3:AC:46:G:O6      | 2.30                     | 0.64              |
| 3:AD:8:U:OP1      | 3:AD:49:C:H5'     | 1.98                     | 0.64              |
| 4:AE:163:PHE:CE1  | 4:AE:186:ALA:HA   | 2.32                     | 0.64              |
| 5:AF:53:ALA:CB    | 5:AF:115:LEU:HD21 | 2.27                     | 0.64              |
| 5:AF:134:ILE:HD11 | 5:AF:153:VAL:HG11 | 1.79                     | 0.64              |
| 6:AG:108:LEU:O    | 6:AG:110:PHE:N    | 2.30                     | 0.64              |
| 6:AG:170:VAL:CG2  | 6:AG:176:LEU:HB3  | 2.28                     | 0.64              |
| 8:AI:4:TYR:CZ     | 8:AI:72:VAL:HG11  | 2.33                     | 0.64              |
| 8:AI:79:LEU:O     | 8:AI:80:ARG:C     | 2.40                     | 0.64              |
| 9:AJ:69:VAL:HB    | 9:AJ:104:LEU:HD11 | 1.80                     | 0.64              |
| 9:AJ:111:ARG:HB3  | 9:AJ:111:ARG:HH11 | 1.62                     | 0.64              |
| 10:AK:126:LYS:HE3 | 10:AK:127:LEU:HB2 | 1.80                     | 0.64              |
| 13:AN:79:SER:HA   | 13:AN:104:GLN:CG  | 2.28                     | 0.64              |
| 20:AU:74:ARG:HA   | 20:AU:79:LEU:HD13 | 1.76                     | 0.64              |
| 20:AU:74:ARG:HD2  | 20:AU:74:ARG:H    | 1.62                     | 0.64              |
| 21:AV:11:VAL:O    | 21:AV:12:ASP:O    | 2.16                     | 0.64              |
| 21:AV:40:ILE:HG12 | 21:AV:71:LEU:CD2  | 2.28                     | 0.64              |
| 22:AW:13:LEU:C    | 22:AW:17:ARG:HH21 | 2.06                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:77:C:H2'    | 24:BA:78:A:C8      | 2.32                     | 0.64              |
| 24:BA:221:A:H3'   | 24:BA:221:A:C8     | 2.33                     | 0.64              |
| 24:BA:371:A:N7    | 24:BA:424:G:O5'    | 2.30                     | 0.64              |
| 24:BA:469:G:H1    | 53:B6:40:TRP:HE1   | 1.43                     | 0.64              |
| 24:BA:686:G:OP1   | 53:B6:11:LYS:HE2   | 1.98                     | 0.64              |
| 24:BA:821:A:N6    | 24:BA:972:G:O2'    | 2.31                     | 0.64              |
| 24:BA:941:A:C2    | 24:BA:942:G:C4     | 2.85                     | 0.64              |
| 24:BA:955:C:C2'   | 24:BA:956:G:O5'    | 2.46                     | 0.64              |
| 24:BA:973:A:C1'   | 24:BA:1188:U:C4    | 2.81                     | 0.64              |
| 24:BA:1067:A:C6   | 24:BA:1068:G:O6    | 2.51                     | 0.64              |
| 24:BA:1068:G:OP1  | 33:BL:21:PRO:HB2   | 1.97                     | 0.64              |
| 24:BA:1081:U:C5'  | 33:BL:122:ALA:HA   | 2.27                     | 0.64              |
| 24:BA:1184:G:OP1  | 49:B2:30:ARG:NH1   | 2.30                     | 0.64              |
| 24:BA:1204:A:OP2  | 24:BA:1204:A:C1'   | 2.46                     | 0.64              |
| 24:BA:1252:G:O2'  | 41:BT:33:ARG:NE    | 2.25                     | 0.64              |
| 24:BA:1464:C:C4'  | 24:BA:1528:A:H1'   | 2.27                     | 0.64              |
| 24:BA:1684:C:H2'  | 24:BA:1685:C:C6    | 2.33                     | 0.64              |
| 24:BA:1710:C:H4'  | 24:BA:2858:C:N3    | 2.12                     | 0.64              |
| 24:BA:2020:A:N7   | 24:BA:2022:U:C4    | 2.66                     | 0.64              |
| 24:BA:2094:G:C2   | 24:BA:2196:C:C2    | 2.86                     | 0.64              |
| 24:BA:2231:C:C2   | 24:BA:2232:U:C5    | 2.86                     | 0.64              |
| 24:BA:2398:U:H2'  | 24:BA:2399:G:H8    | 1.62                     | 0.64              |
| 24:BA:2400:G:H2'  | 24:BA:2401:U:O4'   | 1.98                     | 0.64              |
| 24:BA:2526:G:H2'  | 24:BA:2527:C:O5'   | 1.97                     | 0.64              |
| 24:BA:2599:G:O2'  | 24:BA:2600:A:H5'   | 1.96                     | 0.64              |
| 24:BA:2709:G:O2'  | 24:BA:2710:C:H5'   | 1.98                     | 0.64              |
| 24:BA:2793:G:C6   | 24:BA:2794:C:N4    | 2.66                     | 0.64              |
| 24:BA:2851:A:H1'  | 38:BQ:61:HIS:CD2   | 2.33                     | 0.64              |
| 24:BA:2882:A:OP1  | 38:BQ:96:ARG:NE    | 2.31                     | 0.64              |
| 25:BB:81:G:C6     | 25:BB:96:G:C6      | 2.86                     | 0.64              |
| 25:BB:95:U:H2'    | 25:BB:96:G:C8      | 2.32                     | 0.64              |
| 26:BC:41:VAL:HG13 | 26:BC:216:THR:HG22 | 1.80                     | 0.64              |
| 27:BD:8:PRO:CD    | 27:BD:26:LYS:O     | 2.44                     | 0.64              |
| 27:BD:10:THR:N    | 27:BD:23:GLU:OE2   | 2.27                     | 0.64              |
| 27:BD:14:ARG:HB3  | 27:BD:15:PHE:CD1   | 2.33                     | 0.64              |
| 27:BD:90:ALA:HB2  | 27:BD:159:ALA:CB   | 2.27                     | 0.64              |
| 27:BD:134:ARG:O   | 27:BD:168:ARG:NH2  | 2.30                     | 0.64              |
| 27:BD:233:HIS:ND1 | 27:BD:233:HIS:N    | 2.45                     | 0.64              |
| 28:BE:94:GLU:O    | 28:BE:95:ILE:C     | 2.40                     | 0.64              |
| 31:BH:26:VAL:CG2  | 31:BH:75:ALA:HB1   | 2.27                     | 0.64              |
| 31:BH:66:GLY:O    | 31:BH:69:ARG:CG    | 2.46                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 31:BH:153:LYS:N   | 31:BH:154:PRO:CD   | 2.57                     | 0.64              |
| 32:BK:15:VAL:HG12 | 32:BK:16:GLY:H     | 1.60                     | 0.64              |
| 32:BK:38:LEU:C    | 32:BK:38:LEU:HD13  | 2.23                     | 0.64              |
| 32:BK:69:LYS:O    | 32:BK:73:GLU:HG3   | 1.98                     | 0.64              |
| 34:BM:91:LEU:O    | 34:BM:93:THR:N     | 2.31                     | 0.64              |
| 36:BO:52:GLU:O    | 36:BO:55:ARG:HB2   | 1.98                     | 0.64              |
| 39:BR:97:ARG:HG3  | 39:BR:97:ARG:HH21  | 1.63                     | 0.64              |
| 40:BS:82:LEU:C    | 40:BS:84:GLN:N     | 2.55                     | 0.64              |
| 41:BT:40:PHE:CD2  | 42:BU:84:LYS:HG2   | 2.33                     | 0.64              |
| 41:BT:102:GLU:O   | 41:BT:105:VAL:N    | 2.30                     | 0.64              |
| 42:BU:21:ARG:O    | 42:BU:22:VAL:O     | 2.15                     | 0.64              |
| 42:BU:66:ARG:NE   | 42:BU:95:LEU:HD12  | 2.11                     | 0.64              |
| 46:BY:98:MET:HE2  | 46:BY:133:ILE:HG12 | 1.80                     | 0.64              |
| 46:BY:152:ALA:O   | 46:BY:155:LEU:HB2  | 1.97                     | 0.64              |
| 47:BZ:56:ASP:C    | 47:BZ:57:PHE:HD1   | 2.06                     | 0.64              |
| 48:B1:27:LEU:CG   | 48:B1:48:LEU:HB3   | 2.28                     | 0.64              |
| 50:B3:52:THR:CG2  | 50:B3:53:GLU:H     | 2.06                     | 0.64              |
| 1:AA:254:G:H2'    | 1:AA:255:G:H8      | 1.63                     | 0.64              |
| 1:AA:362:G:O3'    | 14:AO:33:ARG:NH2   | 2.31                     | 0.64              |
| 1:AA:529:G:N1     | 14:AO:49:ASN:HB3   | 2.10                     | 0.64              |
| 1:AA:560:U:O4'    | 1:AA:566:G:N2      | 2.31                     | 0.64              |
| 1:AA:1064:G:OP1   | 1:AA:1386:G:C4'    | 2.46                     | 0.64              |
| 1:AA:1376:U:H3    | 1:AA:1377:A:H62    | 1.45                     | 0.64              |
| 1:AA:1392:G:H8    | 1:AA:1392:G:O5'    | 1.81                     | 0.64              |
| 4:AE:115:LEU:HA   | 4:AE:118:LEU:HD12  | 1.80                     | 0.64              |
| 6:AG:191:ARG:NH1  | 6:AG:192:GLU:HA    | 2.13                     | 0.64              |
| 7:AH:37:ARG:HH11  | 7:AH:111:GLU:C     | 2.06                     | 0.64              |
| 7:AH:62:ALA:O     | 7:AH:66:MET:SD     | 2.55                     | 0.64              |
| 9:AJ:74:GLU:CG    | 9:AJ:75:VAL:N      | 2.61                     | 0.64              |
| 10:AK:67:PRO:HD2  | 10:AK:77:GLU:H     | 1.62                     | 0.64              |
| 10:AK:89:PRO:HB3  | 10:AK:92:ARG:HH21  | 1.63                     | 0.64              |
| 11:AL:38:GLN:C    | 11:AL:40:LEU:N     | 2.53                     | 0.64              |
| 15:AP:87:TYR:HB2  | 21:AV:73:GLU:O     | 1.98                     | 0.64              |
| 19:AT:41:LYS:HG2  | 19:AT:42:TYR:N     | 2.11                     | 0.64              |
| 19:AT:43:LEU:HD22 | 19:AT:44:ALA:O     | 1.97                     | 0.64              |
| 20:AU:56:THR:O    | 20:AU:58:LEU:HG    | 1.97                     | 0.64              |
| 24:BA:18:C:O5'    | 24:BA:18:C:H6      | 1.80                     | 0.64              |
| 24:BA:149:A:C6    | 24:BA:150:C:C4     | 2.86                     | 0.64              |
| 24:BA:270:A:N1    | 24:BA:370:G:C1'    | 2.56                     | 0.64              |
| 24:BA:421:U:OP2   | 24:BA:421:U:H6     | 1.80                     | 0.64              |
| 24:BA:535:C:C4'   | 41:BT:53:ARG:HD2   | 2.27                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:558:G:H5''   | 34:BM:109:LYS:HG2  | 1.79                     | 0.64              |
| 24:BA:722:A:H2'    | 24:BA:723:G:C8     | 2.27                     | 0.64              |
| 24:BA:881:G:C4     | 24:BA:882:G:C8     | 2.85                     | 0.64              |
| 24:BA:1044:G:N7    | 24:BA:1112:G:N2    | 2.45                     | 0.64              |
| 24:BA:1195:G:C2'   | 24:BA:1226:G:N2    | 2.61                     | 0.64              |
| 24:BA:1264:G:C3'   | 24:BA:1265:A:C5'   | 2.75                     | 0.64              |
| 24:BA:1326:U:H2'   | 24:BA:1327:C:C5'   | 2.25                     | 0.64              |
| 24:BA:1511:A:C2'   | 24:BA:1512:G:H5''  | 2.28                     | 0.64              |
| 24:BA:1975:G:O2'   | 24:BA:1976:U:H5'   | 1.97                     | 0.64              |
| 24:BA:2020:A:P     | 41:BT:27:LEU:HD13  | 2.38                     | 0.64              |
| 24:BA:2371:G:C2    | 24:BA:2372:G:C5    | 2.86                     | 0.64              |
| 24:BA:2419:U:H5'   | 52:B5:23:THR:CG2   | 2.27                     | 0.64              |
| 24:BA:2682:U:H2'   | 24:BA:2683:C:O5'   | 1.98                     | 0.64              |
| 24:BA:2701:C:C3'   | 24:BA:2702:U:H5''  | 2.10                     | 0.64              |
| 24:BA:2714:G:C6    | 24:BA:2715:C:C5    | 2.85                     | 0.64              |
| 25:BB:74:U:H5''    | 25:BB:75:G:OP2     | 1.98                     | 0.64              |
| 26:BC:47:LEU:H     | 26:BC:47:LEU:HD23  | 1.62                     | 0.64              |
| 26:BC:59:ARG:HD3   | 26:BC:164:ARG:CG   | 2.28                     | 0.64              |
| 27:BD:63:ARG:HD2   | 27:BD:85:ASP:CB    | 2.28                     | 0.64              |
| 27:BD:148:GLU:O    | 27:BD:149:PRO:O    | 2.16                     | 0.64              |
| 27:BD:229:VAL:HG13 | 27:BD:230:ASP:CG   | 2.21                     | 0.64              |
| 28:BE:103:ASP:C    | 28:BE:104:VAL:HG23 | 2.23                     | 0.64              |
| 30:BG:68:PRO:HG3   | 30:BG:72:ARG:NH1   | 2.11                     | 0.64              |
| 30:BG:94:LEU:HG    | 30:BG:98:ARG:CZ    | 2.27                     | 0.64              |
| 31:BH:149:ARG:HA   | 31:BH:162:ILE:CG2  | 2.28                     | 0.64              |
| 32:BK:9:LEU:CD2    | 32:BK:17:GLN:HE22  | 2.10                     | 0.64              |
| 32:BK:125:GLU:O    | 32:BK:126:TYR:CD1  | 2.51                     | 0.64              |
| 33:BL:14:ALA:HB1   | 33:BL:45:THR:HB    | 1.80                     | 0.64              |
| 33:BL:37:PHE:HE2   | 33:BL:65:PHE:HB2   | 1.63                     | 0.64              |
| 34:BM:38:HIS:C     | 34:BM:42:TRP:CE3   | 2.76                     | 0.64              |
| 34:BM:87:LEU:CA    | 34:BM:90:MET:HB2   | 2.28                     | 0.64              |
| 34:BM:107:LEU:HD13 | 34:BM:117:PHE:CZ   | 2.33                     | 0.64              |
| 36:BO:76:LYS:HZ2   | 36:BO:99:LEU:HD12  | 1.62                     | 0.64              |
| 37:BP:27:VAL:CG1   | 37:BP:104:PHE:HE2  | 2.11                     | 0.64              |
| 37:BP:42:ILE:HG12  | 37:BP:126:PRO:HG3  | 1.80                     | 0.64              |
| 37:BP:90:VAL:C     | 37:BP:91:GLU:CD    | 2.66                     | 0.64              |
| 42:BU:61:VAL:C     | 42:BU:99:ILE:HB    | 2.23                     | 0.64              |
| 44:BW:7:VAL:HG11   | 48:B1:31:ARG:NH2   | 2.11                     | 0.64              |
| 45:BX:57:GLN:O     | 45:BX:58:GLY:O     | 2.16                     | 0.64              |
| 46:BY:153:SER:CB   | 46:BY:168:GLU:HB2  | 2.27                     | 0.64              |
| 47:BZ:23:VAL:CA    | 47:BZ:38:VAL:HG13  | 2.27                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 51:B4:10:LYS:CD   | 51:B4:15:ARG:NH1   | 2.61                     | 0.64              |
| 52:B5:11:LEU:HD22 | 54:B7:35:GLN:CD    | 2.22                     | 0.64              |
| 53:B6:1:MET:O     | 53:B6:3:ARG:N      | 2.31                     | 0.64              |
| 53:B6:34:ARG:HH22 | 53:B6:42:LEU:CG    | 2.11                     | 0.64              |
| 54:B7:30:ARG:NH2  | 54:B7:43:GLN:C     | 2.51                     | 0.64              |
| 1:AA:50:A:C2      | 1:AA:360:A:N3      | 2.65                     | 0.64              |
| 1:AA:80:G:N3      | 1:AA:81:G:H1'      | 2.13                     | 0.64              |
| 1:AA:127:G:C2'    | 1:AA:128:G:H5'     | 2.28                     | 0.64              |
| 1:AA:687:A:O2'    | 1:AA:688:G:P       | 2.56                     | 0.64              |
| 1:AA:967:C:O5'    | 1:AA:967:C:C6      | 2.50                     | 0.64              |
| 1:AA:981:U:O5'    | 1:AA:981:U:C6      | 2.51                     | 0.64              |
| 1:AA:1005:A:H1'   | 1:AA:1036:G:N2     | 2.12                     | 0.64              |
| 1:AA:1084:G:C4    | 1:AA:1085:U:C5     | 2.80                     | 0.64              |
| 1:AA:1274:G:N2    | 1:AA:1275:A:N6     | 2.46                     | 0.64              |
| 1:AA:1310:G:H3'   | 21:AV:2:PRO:CD     | 2.21                     | 0.64              |
| 1:AA:1519:A:C2'   | 1:AA:1520:G:H5'    | 2.27                     | 0.64              |
| 2:A1:35:U:O3'     | 2:A1:36:U:O4'      | 2.16                     | 0.64              |
| 3:AB:72:C:N4      | 3:AB:73:A:H62      | 1.95                     | 0.64              |
| 4:AE:76:GLN:O     | 4:AE:77:ALA:HB2    | 1.98                     | 0.64              |
| 4:AE:169:LYS:HE2  | 4:AE:170:GLU:N     | 2.13                     | 0.64              |
| 4:AE:175:ARG:HA   | 4:AE:178:ARG:HB2   | 1.80                     | 0.64              |
| 5:AF:8:ILE:CG1    | 5:AF:16:ARG:HD2    | 2.28                     | 0.64              |
| 5:AF:29:TYR:HB3   | 16:AQ:36:PHE:HE1   | 1.63                     | 0.64              |
| 5:AF:157:ILE:HG13 | 5:AF:164:ARG:HG2   | 1.80                     | 0.64              |
| 11:AL:113:LYS:HD2 | 11:AL:113:LYS:N    | 2.13                     | 0.64              |
| 11:AL:113:LYS:NZ  | 11:AL:119:ALA:HB1  | 2.13                     | 0.64              |
| 14:AO:117:ARG:NH2 | 14:AO:124:LYS:HG3  | 2.13                     | 0.64              |
| 15:AP:14:ARG:HB3  | 15:AP:44:ARG:HD2   | 1.79                     | 0.64              |
| 17:AR:65:ARG:O    | 17:AR:68:ARG:CB    | 2.45                     | 0.64              |
| 24:BA:283:A:O2'   | 24:BA:284:U:H5'    | 1.98                     | 0.64              |
| 24:BA:391:G:H2'   | 24:BA:392:C:C5     | 2.32                     | 0.64              |
| 24:BA:516:C:O5'   | 24:BA:516:C:H6     | 1.80                     | 0.64              |
| 24:BA:638:G:H3'   | 24:BA:638:G:C8     | 2.33                     | 0.64              |
| 24:BA:684:G:C6    | 24:BA:775:G:N7     | 2.66                     | 0.64              |
| 24:BA:1056:G:H21  | 24:BA:1104:C:N4    | 1.96                     | 0.64              |
| 24:BA:1131:G:C4   | 34:BM:74:ARG:NE    | 2.66                     | 0.64              |
| 24:BA:1165:U:H2'  | 24:BA:1166:C:C5    | 2.33                     | 0.64              |
| 24:BA:1306:C:C2   | 24:BA:1307:A:C8    | 2.86                     | 0.64              |
| 24:BA:1491:G:N1   | 24:BA:1493:C:N4    | 2.43                     | 0.64              |
| 24:BA:1538:G:O2'  | 24:BA:1539:G:H5'   | 1.98                     | 0.64              |
| 24:BA:1650:G:H5'  | 38:BQ:104:ARG:HH21 | 1.63                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1820:U:C5    | 27:BD:159:ALA:HB3  | 2.32                     | 0.64              |
| 24:BA:1878:G:H2'   | 24:BA:1879:C:C6    | 2.33                     | 0.64              |
| 24:BA:2022:U:O2'   | 24:BA:2034:U:C2    | 2.51                     | 0.64              |
| 24:BA:2025:C:C2'   | 24:BA:2026:C:C6    | 2.76                     | 0.64              |
| 24:BA:2033:A:O2'   | 24:BA:2034:U:OP1   | 2.16                     | 0.64              |
| 24:BA:2329:G:H2'   | 24:BA:2330:G:C8    | 2.33                     | 0.64              |
| 24:BA:2532:G:O2'   | 24:BA:2533:A:H5'   | 1.98                     | 0.64              |
| 24:BA:2733:A:C2'   | 24:BA:2734:A:O5'   | 2.44                     | 0.64              |
| 25:BB:30:C:O4'     | 25:BB:58:A:H2      | 1.81                     | 0.64              |
| 26:BC:26:ALA:O     | 26:BC:30:LYS:HG3   | 1.98                     | 0.64              |
| 26:BC:131:LEU:HD22 | 26:BC:136:LEU:O    | 1.98                     | 0.64              |
| 27:BD:41:GLY:C     | 27:BD:60:ARG:HH12  | 2.06                     | 0.64              |
| 27:BD:214:TRP:O    | 27:BD:217:ARG:N    | 2.31                     | 0.64              |
| 28:BE:13:ARG:HD2   | 28:BE:13:ARG:C     | 2.23                     | 0.64              |
| 28:BE:186:GLY:C    | 28:BE:188:VAL:H    | 2.04                     | 0.64              |
| 30:BG:16:ARG:HD2   | 30:BG:20:ILE:CG1   | 2.25                     | 0.64              |
| 30:BG:53:LEU:CD2   | 30:BG:71:THR:N     | 2.61                     | 0.64              |
| 30:BG:75:LYS:HZ3   | 30:BG:85:GLY:HA3   | 1.63                     | 0.64              |
| 31:BH:85:LYS:HZ1   | 31:BH:141:VAL:HG12 | 1.61                     | 0.64              |
| 32:BK:76:THR:HA    | 32:BK:141:LYS:HE2  | 1.80                     | 0.64              |
| 32:BK:111:PRO:HD2  | 32:BK:112:LYS:HZ3  | 1.62                     | 0.64              |
| 32:BK:133:HIS:ND1  | 32:BK:134:PRO:HD2  | 2.13                     | 0.64              |
| 33:BL:10:LEU:HD12  | 33:BL:23:VAL:CG2   | 2.28                     | 0.64              |
| 34:BM:2:LYS:N      | 41:BT:61:TRP:CZ2   | 2.66                     | 0.64              |
| 34:BM:4:TYR:CB     | 41:BT:64:ARG:NH1   | 2.60                     | 0.64              |
| 34:BM:87:LEU:O     | 34:BM:91:LEU:HD21  | 1.97                     | 0.64              |
| 36:BO:29:LYS:C     | 36:BO:30:THR:CG2   | 2.70                     | 0.64              |
| 37:BP:8:LYS:HZ3    | 37:BP:11:LYS:CE    | 2.10                     | 0.64              |
| 37:BP:32:TYR:HE2   | 37:BP:108:GLY:H    | 1.45                     | 0.64              |
| 37:BP:34:LEU:CD1   | 37:BP:105:GLU:HB2  | 2.27                     | 0.64              |
| 38:BQ:17:ARG:CG    | 38:BQ:18:LEU:N     | 2.60                     | 0.64              |
| 38:BQ:44:LEU:HD13  | 38:BQ:48:VAL:HG21  | 1.80                     | 0.64              |
| 38:BQ:75:LEU:CD2   | 38:BQ:78:LYS:HG2   | 2.28                     | 0.64              |
| 42:BU:1:MET:SD     | 42:BU:15:GLU:CD    | 2.81                     | 0.64              |
| 45:BX:47:LYS:CB    | 45:BX:49:VAL:HG13  | 2.28                     | 0.64              |
| 46:BY:18:LEU:HD22  | 46:BY:23:LYS:CG    | 2.28                     | 0.64              |
| 46:BY:76:LEU:HD23  | 46:BY:83:PRO:HB3   | 1.80                     | 0.64              |
| 47:BZ:21:LEU:O     | 47:BZ:24:LYS:HE3   | 1.98                     | 0.64              |
| 47:BZ:31:VAL:CG2   | 47:BZ:65:GLY:O     | 2.45                     | 0.64              |
| 49:B2:23:LEU:HA    | 49:B2:28:LEU:CD1   | 2.27                     | 0.64              |
| 52:B5:25:LYS:O     | 52:B5:26:ASN:CB    | 2.44                     | 0.64              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 52:B5:35:GLU:CD   | 52:B5:52:VAL:HG13 | 2.22                     | 0.64              |
| 1:AA:184:G:C4'    | 1:AA:224:C:H4'    | 2.28                     | 0.63              |
| 1:AA:236:G:C4     | 1:AA:237:C:C5     | 2.86                     | 0.63              |
| 1:AA:378:G:H2'    | 1:AA:379:C:C6     | 2.33                     | 0.63              |
| 1:AA:922:G:O2'    | 1:AA:1398:A:N1    | 2.27                     | 0.63              |
| 1:AA:936:C:H2'    | 1:AA:937:A:O4'    | 1.97                     | 0.63              |
| 1:AA:966:G:H2'    | 1:AA:967:C:C6     | 2.33                     | 0.63              |
| 1:AA:981:U:H6     | 1:AA:981:U:H3'    | 1.61                     | 0.63              |
| 1:AA:1243:C:OP1   | 23:AX:10:ARG:HD2  | 1.98                     | 0.63              |
| 1:AA:1346:A:H8    | 1:AA:1348:U:C2    | 2.16                     | 0.63              |
| 3:AC:74:C:H2'     | 3:AC:75:C:C5'     | 2.28                     | 0.63              |
| 4:AE:64:ARG:HD2   | 4:AE:64:ARG:H     | 1.63                     | 0.63              |
| 4:AE:155:LEU:HB3  | 4:AE:159:PRO:HG3  | 1.79                     | 0.63              |
| 4:AE:175:ARG:HA   | 4:AE:178:ARG:HG3  | 1.80                     | 0.63              |
| 5:AF:131:ARG:HH12 | 7:AH:51:VAL:HG23  | 1.62                     | 0.63              |
| 5:AF:191:THR:O    | 5:AF:193:TYR:N    | 2.31                     | 0.63              |
| 6:AG:24:GLU:C     | 6:AG:24:GLU:CD    | 2.66                     | 0.63              |
| 8:AI:60:PHE:N     | 8:AI:60:PHE:CD1   | 2.66                     | 0.63              |
| 9:AJ:67:GLU:HA    | 9:AJ:67:GLU:OE2   | 1.97                     | 0.63              |
| 9:AJ:69:VAL:HG11  | 9:AJ:104:LEU:CD2  | 2.27                     | 0.63              |
| 9:AJ:143:ARG:CD   | 9:AJ:144:MET:H    | 2.11                     | 0.63              |
| 10:AK:102:ARG:CZ  | 10:AK:102:ARG:CB  | 2.69                     | 0.63              |
| 12:AM:49:VAL:O    | 12:AM:60:ARG:HB3  | 1.98                     | 0.63              |
| 14:AO:83:VAL:HA   | 14:AO:104:VAL:O   | 1.98                     | 0.63              |
| 15:AP:49:THR:HB   | 15:AP:52:GLU:OE1  | 1.97                     | 0.63              |
| 20:AU:27:GLY:O    | 20:AU:28:GLU:C    | 2.40                     | 0.63              |
| 22:AW:85:MET:HA   | 22:AW:88:VAL:CG2  | 2.28                     | 0.63              |
| 24:BA:105:C:C2    | 24:BA:106:C:H5    | 2.16                     | 0.63              |
| 24:BA:231:C:C4    | 24:BA:232:G:N2    | 2.66                     | 0.63              |
| 24:BA:241:A:H2'   | 24:BA:242:G:H4'   | 1.79                     | 0.63              |
| 24:BA:324:A:C8    | 24:BA:340:A:H1'   | 2.33                     | 0.63              |
| 24:BA:556:G:H8    | 24:BA:556:G:O5'   | 1.82                     | 0.63              |
| 24:BA:563:G:N2    | 41:BT:34:LYS:CE   | 2.60                     | 0.63              |
| 24:BA:826:U:H5''  | 24:BA:2429:G:P    | 2.37                     | 0.63              |
| 24:BA:885:C:C5    | 24:BA:887:A:H1'   | 2.34                     | 0.63              |
| 24:BA:931:G:N3    | 49:B2:24:LYS:HE3  | 2.12                     | 0.63              |
| 24:BA:942:G:O2'   | 24:BA:1189:A:N3   | 2.29                     | 0.63              |
| 24:BA:1005:C:C1'  | 24:BA:1012:U:O2   | 2.46                     | 0.63              |
| 24:BA:1022:G:H3'  | 24:BA:1025:G:O6   | 1.97                     | 0.63              |
| 24:BA:1023:U:P    | 24:BA:1025:G:H1   | 2.19                     | 0.63              |
| 24:BA:1202:C:C6   | 24:BA:1203:G:C1'  | 2.71                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1273:U:H5''  | 24:BA:1646:C:N4    | 2.13                     | 0.63              |
| 24:BA:1717:G:C2    | 24:BA:1718:G:N3    | 2.66                     | 0.63              |
| 24:BA:1858:G:O6    | 24:BA:1883:G:C6    | 2.51                     | 0.63              |
| 24:BA:2018:G:N3    | 41:BT:34:LYS:NZ    | 2.47                     | 0.63              |
| 24:BA:2160:G:H2'   | 24:BA:2161:C:H6    | 1.60                     | 0.63              |
| 24:BA:2226:C:O2    | 24:BA:2226:C:C2'   | 2.47                     | 0.63              |
| 24:BA:2250:G:O2'   | 24:BA:2496:C:H5'   | 1.98                     | 0.63              |
| 24:BA:2273:A:N7    | 24:BA:2274:A:N9    | 2.46                     | 0.63              |
| 24:BA:2282:G:H5''  | 24:BA:2283:C:O5'   | 1.98                     | 0.63              |
| 24:BA:2491:U:C6    | 24:BA:2492:U:P     | 2.90                     | 0.63              |
| 24:BA:2531:A:N3    | 24:BA:2658:C:O2'   | 2.22                     | 0.63              |
| 24:BA:2700:C:C3'   | 24:BA:2701:C:H5''  | 2.28                     | 0.63              |
| 24:BA:2746:U:O4    | 24:BA:2756:U:H5    | 1.77                     | 0.63              |
| 25:BB:8:U:C2       | 25:BB:9:G:C8       | 2.86                     | 0.63              |
| 25:BB:14:U:H1'     | 25:BB:107:U:H1'    | 1.78                     | 0.63              |
| 25:BB:90:C:O2'     | 25:BB:91:C:H5'     | 1.97                     | 0.63              |
| 26:BC:41:VAL:CG2   | 26:BC:216:THR:HG22 | 2.26                     | 0.63              |
| 26:BC:130:ILE:N    | 26:BC:130:ILE:CD1  | 2.61                     | 0.63              |
| 27:BD:135:PHE:O    | 27:BD:137:PRO:HD3  | 1.98                     | 0.63              |
| 27:BD:159:ALA:HB3  | 27:BD:202:LYS:NZ   | 2.12                     | 0.63              |
| 28:BE:41:LYS:HE3   | 28:BE:41:LYS:N     | 2.12                     | 0.63              |
| 28:BE:102:VAL:HG22 | 28:BE:103:ASP:N    | 2.12                     | 0.63              |
| 29:BF:197:ASP:HB2  | 29:BF:200:GLU:CD   | 2.23                     | 0.63              |
| 30:BG:38:VAL:HG12  | 30:BG:93:THR:HA    | 1.79                     | 0.63              |
| 30:BG:49:ASP:C     | 30:BG:53:LEU:HD22  | 2.22                     | 0.63              |
| 30:BG:130:ASN:O    | 30:BG:159:VAL:O    | 2.16                     | 0.63              |
| 30:BG:181:ARG:H    | 30:BG:181:ARG:HH21 | 1.44                     | 0.63              |
| 31:BH:89:ILE:O     | 31:BH:129:THR:O    | 2.16                     | 0.63              |
| 33:BL:98:ARG:HB3   | 33:BL:139:VAL:HB   | 1.80                     | 0.63              |
| 34:BM:12:ARG:CZ    | 34:BM:12:ARG:HB3   | 2.26                     | 0.63              |
| 34:BM:29:LYS:C     | 34:BM:31:ALA:N     | 2.52                     | 0.63              |
| 34:BM:91:LEU:O     | 34:BM:92:ALA:C     | 2.39                     | 0.63              |
| 35:BN:70:LYS:HB3   | 35:BN:72:PRO:HD2   | 1.78                     | 0.63              |
| 36:BO:114:ILE:HD13 | 36:BO:114:ILE:N    | 2.13                     | 0.63              |
| 37:BP:36:ALA:O     | 37:BP:37:LEU:CG    | 2.47                     | 0.63              |
| 40:BS:113:LYS:O    | 40:BS:114:LEU:C    | 2.40                     | 0.63              |
| 41:BT:39:LEU:O     | 41:BT:40:PHE:C     | 2.41                     | 0.63              |
| 41:BT:44:ASN:O     | 41:BT:47:TYR:CB    | 2.27                     | 0.63              |
| 42:BU:83:ARG:C     | 42:BU:83:ARG:HD3   | 2.24                     | 0.63              |
| 43:BV:6:ILE:HA     | 43:BV:103:ILE:O    | 1.98                     | 0.63              |
| 44:BW:39:ILE:HB    | 44:BW:54:VAL:HG11  | 1.78                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 46:BY:46:LYS:O    | 46:BY:49:ARG:HB3   | 1.97                     | 0.63              |
| 46:BY:48:PHE:HD2  | 46:BY:54:HIS:NE2   | 1.92                     | 0.63              |
| 46:BY:100:VAL:CG2 | 46:BY:137:ILE:HD12 | 2.20                     | 0.63              |
| 46:BY:141:VAL:CG1 | 46:BY:142:SER:H    | 2.10                     | 0.63              |
| 50:B3:47:GLN:HA   | 50:B3:52:THR:OG1   | 1.99                     | 0.63              |
| 1:AA:301:G:N2     | 1:AA:302:G:C1'     | 2.61                     | 0.63              |
| 1:AA:307:C:N4     | 1:AA:308:C:C5      | 2.66                     | 0.63              |
| 1:AA:493:G:H2'    | 1:AA:494:U:H5      | 1.63                     | 0.63              |
| 1:AA:581:G:H4'    | 17:AR:64:ARG:NH1   | 2.13                     | 0.63              |
| 1:AA:585:G:N3     | 1:AA:879:C:H4'     | 2.13                     | 0.63              |
| 1:AA:611:A:N6     | 1:AA:629:G:N1      | 2.25                     | 0.63              |
| 1:AA:620:C:O2'    | 1:AA:621:A:H5'     | 1.98                     | 0.63              |
| 1:AA:627:G:H2'    | 1:AA:628:G:H8      | 1.63                     | 0.63              |
| 1:AA:640:A:O2'    | 1:AA:641:U:H5'     | 1.98                     | 0.63              |
| 1:AA:701:C:H5''   | 1:AA:702:A:H3'     | 1.79                     | 0.63              |
| 1:AA:907:A:H4'    | 1:AA:907:A:OP1     | 1.98                     | 0.63              |
| 1:AA:978:A:H8     | 1:AA:980:C:H41     | 1.45                     | 0.63              |
| 1:AA:1003:G:C4    | 1:AA:1004:A:H1'    | 2.32                     | 0.63              |
| 1:AA:1079:G:C2    | 1:AA:1080:A:N1     | 2.65                     | 0.63              |
| 3:AD:19:G:H21     | 3:AD:57:G:C1'      | 2.08                     | 0.63              |
| 3:AD:59:U:H2'     | 3:AD:59:U:O2       | 1.97                     | 0.63              |
| 4:AE:97:TRP:HE1   | 4:AE:101:MET:HE1   | 1.63                     | 0.63              |
| 4:AE:97:TRP:NE1   | 4:AE:101:MET:SD    | 2.72                     | 0.63              |
| 5:AF:12:LEU:HD21  | 16:AQ:58:LYS:N     | 2.13                     | 0.63              |
| 5:AF:157:ILE:O    | 5:AF:158:GLY:C     | 2.41                     | 0.63              |
| 8:AI:14:LEU:HD13  | 8:AI:15:ASP:N      | 2.13                     | 0.63              |
| 8:AI:45:LEU:HG    | 8:AI:59:TYR:CD1    | 2.34                     | 0.63              |
| 11:AL:19:LEU:HD23 | 11:AL:20:ARG:N     | 2.12                     | 0.63              |
| 13:AN:23:ALA:HB1  | 13:AN:28:THR:OG1   | 1.99                     | 0.63              |
| 14:AO:32:PHE:HB2  | 14:AO:84:LEU:HD21  | 1.80                     | 0.63              |
| 14:AO:53:ARG:CZ   | 14:AO:93:LEU:HD22  | 2.28                     | 0.63              |
| 14:AO:93:LEU:HD23 | 14:AO:93:LEU:N     | 2.11                     | 0.63              |
| 18:AS:14:ASN:HA   | 18:AS:42:ARG:NH1   | 2.13                     | 0.63              |
| 18:AS:27:LYS:H    | 18:AS:27:LYS:NZ    | 1.96                     | 0.63              |
| 21:AV:18:LYS:HE3  | 21:AV:18:LYS:CA    | 2.20                     | 0.63              |
| 24:BA:10:G:C2     | 24:BA:2629:A:C2    | 2.86                     | 0.63              |
| 24:BA:64:A:H8     | 24:BA:64:A:O5'     | 1.82                     | 0.63              |
| 24:BA:223:A:C5    | 24:BA:408:G:H1'    | 2.33                     | 0.63              |
| 24:BA:247:G:N2    | 24:BA:249:C:O2'    | 2.31                     | 0.63              |
| 24:BA:651:G:H2'   | 24:BA:652:C:O4'    | 1.98                     | 0.63              |
| 24:BA:720:C:H2'   | 24:BA:721:C:C6     | 2.33                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:792:G:H21   | 24:BA:2072:G:C1'   | 2.10                     | 0.63              |
| 24:BA:910:A:N6    | 24:BA:911:A:N6     | 2.45                     | 0.63              |
| 24:BA:1323:U:O2'  | 24:BA:1324:G:OP1   | 2.15                     | 0.63              |
| 24:BA:1335:U:OP2  | 44:BW:65:ARG:NE    | 2.31                     | 0.63              |
| 24:BA:1336:A:H2'  | 24:BA:1337:G:C8    | 2.33                     | 0.63              |
| 24:BA:1359:A:N1   | 24:BA:1360:A:C4    | 2.67                     | 0.63              |
| 24:BA:1459:G:O6   | 24:BA:1461:G:C2    | 2.51                     | 0.63              |
| 24:BA:1518:C:H2'  | 24:BA:1519:G:H4'   | 1.79                     | 0.63              |
| 24:BA:1529:A:H3'  | 24:BA:1530:G:H8    | 1.62                     | 0.63              |
| 24:BA:1655:A:H4'  | 28:BE:113:PHE:C    | 2.24                     | 0.63              |
| 24:BA:1665:A:O2'  | 35:BN:1:MET:HG3    | 1.98                     | 0.63              |
| 24:BA:1670:C:O5'  | 24:BA:1671:U:H5    | 1.81                     | 0.63              |
| 24:BA:1790:C:O2'  | 27:BD:213:ARG:NH2  | 2.32                     | 0.63              |
| 24:BA:1859:A:C8   | 24:BA:1860:G:C8    | 2.85                     | 0.63              |
| 24:BA:1904:G:H2'  | 24:BA:1905:C:O5'   | 1.98                     | 0.63              |
| 24:BA:2150:U:H2'  | 24:BA:2151:G:H8    | 1.63                     | 0.63              |
| 24:BA:2376:A:N3   | 24:BA:2377:A:H1'   | 2.13                     | 0.63              |
| 24:BA:2542:A:O2'  | 24:BA:2543:G:H5'   | 1.99                     | 0.63              |
| 24:BA:2644:G:O5'  | 24:BA:2644:G:C8    | 2.48                     | 0.63              |
| 24:BA:2772:C:C2   | 24:BA:2773:C:C5    | 2.86                     | 0.63              |
| 26:BC:41:VAL:HA   | 26:BC:216:THR:HA   | 1.80                     | 0.63              |
| 26:BC:102:LYS:NZ  | 26:BC:107:TRP:HB2  | 2.14                     | 0.63              |
| 26:BC:111:ASP:O   | 26:BC:136:LEU:HD23 | 1.99                     | 0.63              |
| 27:BD:57:GLY:H    | 27:BD:217:ARG:CD   | 2.08                     | 0.63              |
| 27:BD:62:TYR:N    | 27:BD:62:TYR:CD1   | 2.63                     | 0.63              |
| 27:BD:107:ALA:H   | 27:BD:108:PRO:CD   | 2.10                     | 0.63              |
| 27:BD:206:LEU:N   | 27:BD:206:LEU:CD1  | 2.59                     | 0.63              |
| 28:BE:92:THR:C    | 28:BE:94:GLU:N     | 2.49                     | 0.63              |
| 28:BE:179:GLU:O   | 28:BE:181:LEU:N    | 2.31                     | 0.63              |
| 29:BF:7:TYR:CD2   | 29:BF:119:ARG:HB3  | 2.33                     | 0.63              |
| 29:BF:65:TRP:CD2  | 29:BF:66:PRO:HD2   | 2.33                     | 0.63              |
| 30:BG:51:ARG:HH21 | 30:BG:51:ARG:N     | 1.96                     | 0.63              |
| 30:BG:53:LEU:CD2  | 30:BG:71:THR:H     | 2.08                     | 0.63              |
| 30:BG:60:LEU:HD21 | 30:BG:90:LEU:CD1   | 2.24                     | 0.63              |
| 31:BH:169:VAL:O   | 31:BH:169:VAL:HG23 | 1.97                     | 0.63              |
| 33:BL:40:ALA:O    | 33:BL:43:ALA:HB3   | 1.98                     | 0.63              |
| 33:BL:112:MET:O   | 33:BL:115:LEU:HB3  | 1.99                     | 0.63              |
| 35:BN:90:GLN:NE2  | 35:BN:110:GLY:O    | 2.31                     | 0.63              |
| 38:BQ:63:ARG:NH1  | 38:BQ:80:PHE:CD2   | 2.67                     | 0.63              |
| 39:BR:11:LYS:HB3  | 39:BR:15:ARG:NH2   | 2.12                     | 0.63              |
| 40:BS:53:ARG:HH22 | 40:BS:102:ILE:N    | 1.95                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 41:BT:19:LYS:HB2   | 41:BT:19:LYS:HZ2  | 1.63                     | 0.63              |
| 41:BT:102:GLU:O    | 41:BT:105:VAL:CG1 | 2.44                     | 0.63              |
| 41:BT:108:GLU:CD   | 41:BT:109:LEU:N   | 2.55                     | 0.63              |
| 42:BU:5:VAL:CG1    | 42:BU:38:LEU:O    | 2.46                     | 0.63              |
| 43:BV:5:ALA:HB2    | 43:BV:54:ALA:CB   | 2.22                     | 0.63              |
| 43:BV:48:ALA:HA    | 43:BV:51:LEU:CD2  | 2.26                     | 0.63              |
| 43:BV:74:ALA:HB1   | 43:BV:105:VAL:CG2 | 2.28                     | 0.63              |
| 45:BX:108:THR:HG22 | 45:BX:109:GLU:OE1 | 1.97                     | 0.63              |
| 46:BY:29:TYR:O     | 46:BY:89:PHE:HA   | 1.99                     | 0.63              |
| 46:BY:59:LEU:HD23  | 46:BY:59:LEU:C    | 2.22                     | 0.63              |
| 51:B4:44:THR:C     | 51:B4:52:TYR:OH   | 2.41                     | 0.63              |
| 53:B6:22:MET:HA    | 53:B6:28:ARG:HG2  | 1.80                     | 0.63              |
| 53:B6:43:THR:HG23  | 53:B6:46:VAL:CB   | 2.28                     | 0.63              |
| 54:B7:52:LYS:O     | 54:B7:54:GLU:N    | 2.28                     | 0.63              |
| 1:AA:54:C:N4       | 1:AA:352:C:H2'    | 2.14                     | 0.63              |
| 1:AA:236:G:H2'     | 1:AA:236:G:N3     | 2.12                     | 0.63              |
| 1:AA:363:A:C8      | 14:AO:31:PRO:HD2  | 2.33                     | 0.63              |
| 1:AA:489:C:O2'     | 1:AA:490:G:H5'    | 1.98                     | 0.63              |
| 1:AA:494:U:H2'     | 1:AA:494:U:O2     | 1.97                     | 0.63              |
| 1:AA:569:C:H1'     | 1:AA:574:A:C2     | 2.33                     | 0.63              |
| 1:AA:817:C:O2'     | 1:AA:818:G:O5'    | 2.15                     | 0.63              |
| 1:AA:927:G:H4'     | 1:AA:1503:A:N7    | 2.13                     | 0.63              |
| 1:AA:961:U:C5      | 1:AA:983:A:N6     | 2.66                     | 0.63              |
| 1:AA:1004:A:O2'    | 1:AA:1005:A:O5'   | 2.16                     | 0.63              |
| 1:AA:1252:A:C6     | 1:AA:1253:G:N7    | 2.65                     | 0.63              |
| 3:AB:31:A:H2'      | 3:AB:32:U:H5'     | 1.81                     | 0.63              |
| 4:AE:132:LYS:HZ2   | 4:AE:132:LYS:HB3  | 1.63                     | 0.63              |
| 5:AF:57:ILE:HG22   | 5:AF:59:ARG:HH21  | 1.63                     | 0.63              |
| 5:AF:152:ILE:HG22  | 5:AF:167:TRP:HB3  | 1.81                     | 0.63              |
| 7:AH:9:LYS:CG      | 7:AH:112:LEU:HG   | 2.27                     | 0.63              |
| 9:AJ:29:LYS:CD     | 9:AJ:101:LEU:HD22 | 2.28                     | 0.63              |
| 9:AJ:44:TYR:O      | 9:AJ:47:CYS:N     | 2.32                     | 0.63              |
| 9:AJ:113:GLU:CB    | 9:AJ:118:VAL:HG11 | 2.29                     | 0.63              |
| 10:AK:6:ILE:HD13   | 10:AK:6:ILE:C     | 2.24                     | 0.63              |
| 10:AK:40:ALA:HA    | 10:AK:45:ILE:HG23 | 1.81                     | 0.63              |
| 10:AK:98:LYS:H     | 10:AK:98:LYS:NZ   | 1.90                     | 0.63              |
| 12:AM:8:LEU:HD22   | 12:AM:94:VAL:HG12 | 1.80                     | 0.63              |
| 13:AN:62:GLN:O     | 13:AN:65:ALA:HB3  | 1.98                     | 0.63              |
| 13:AN:75:TYR:O     | 13:AN:77:MET:N    | 2.30                     | 0.63              |
| 19:AT:78:GLU:HG2   | 19:AT:81:ARG:HB2  | 1.80                     | 0.63              |
| 20:AU:66:LEU:CD1   | 20:AU:67:ALA:N    | 2.52                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 21:AV:5:LEU:HB2    | 21:AV:9:VAL:CG2    | 2.11                     | 0.63              |
| 21:AV:36:ARG:HA    | 21:AV:71:LEU:HD12  | 1.80                     | 0.63              |
| 22:AW:27:LYS:O     | 22:AW:28:ALA:C     | 2.39                     | 0.63              |
| 24:BA:49:A:H2      | 24:BA:120:U:H3     | 1.43                     | 0.63              |
| 24:BA:85:G:N3      | 24:BA:103:A:C2     | 2.65                     | 0.63              |
| 24:BA:119:A:H4'    | 24:BA:120:U:H5'    | 1.80                     | 0.63              |
| 24:BA:461:C:O2     | 24:BA:461:C:H2'    | 1.99                     | 0.63              |
| 24:BA:638:G:H2'    | 24:BA:639:U:H5'    | 1.81                     | 0.63              |
| 24:BA:703:U:H3'    | 24:BA:704:G:C8     | 2.32                     | 0.63              |
| 24:BA:806:C:O5'    | 24:BA:806:C:H6     | 1.81                     | 0.63              |
| 24:BA:997:G:H2'    | 24:BA:998:C:C5     | 2.32                     | 0.63              |
| 24:BA:1001:A:N7    | 24:BA:1002:G:C4    | 2.66                     | 0.63              |
| 24:BA:1059:G:O4'   | 33:BL:116:ASN:ND2  | 2.31                     | 0.63              |
| 24:BA:1069:A:H2'   | 24:BA:1074:G:O6    | 1.98                     | 0.63              |
| 24:BA:1155:A:C2'   | 24:BA:1156:A:C5'   | 2.75                     | 0.63              |
| 24:BA:1296:G:H2'   | 24:BA:1297:C:H6    | 1.62                     | 0.63              |
| 24:BA:1475:G:N3    | 24:BA:1475:G:H2'   | 2.11                     | 0.63              |
| 24:BA:1546:C:H4'   | 24:BA:1547:C:C5    | 2.33                     | 0.63              |
| 24:BA:1695:G:H1'   | 27:BD:15:PHE:HB3   | 1.80                     | 0.63              |
| 24:BA:1801:G:N7    | 24:BA:2207:C:O2'   | 2.31                     | 0.63              |
| 24:BA:1820:U:H5    | 27:BD:159:ALA:C    | 2.06                     | 0.63              |
| 24:BA:2115:G:O2'   | 24:BA:2117:A:N6    | 2.27                     | 0.63              |
| 24:BA:2286:A:OP2   | 52:B5:27:LYS:HE2   | 1.97                     | 0.63              |
| 24:BA:2404:C:C2    | 24:BA:2414:G:N2    | 2.65                     | 0.63              |
| 24:BA:2459:A:OP2   | 24:BA:2460:U:C5    | 2.51                     | 0.63              |
| 24:BA:2553:G:N2    | 24:BA:2554:U:C2'   | 2.61                     | 0.63              |
| 25:BB:75:G:H21     | 46:BY:27:VAL:CG2   | 2.10                     | 0.63              |
| 26:BC:30:LYS:HZ1   | 26:BC:182:PRO:HD3  | 1.58                     | 0.63              |
| 26:BC:45:ALA:HB1   | 26:BC:211:SER:O    | 1.98                     | 0.63              |
| 26:BC:189:ILE:HD13 | 26:BC:224:ILE:CD1  | 2.28                     | 0.63              |
| 27:BD:175:LEU:O    | 27:BD:175:LEU:HD13 | 1.98                     | 0.63              |
| 27:BD:246:PRO:HG2  | 27:BD:251:GLY:O    | 1.98                     | 0.63              |
| 28:BE:38:THR:HG1   | 28:BE:44:TYR:HB2   | 1.64                     | 0.63              |
| 28:BE:58:ARG:NH2   | 28:BE:73:GLU:OE2   | 2.32                     | 0.63              |
| 29:BF:106:ARG:HH21 | 29:BF:106:ARG:HB2  | 1.63                     | 0.63              |
| 30:BG:19:LEU:HG    | 30:BG:22:ARG:NH2   | 2.13                     | 0.63              |
| 30:BG:114:ILE:HD12 | 30:BG:115:ARG:N    | 2.13                     | 0.63              |
| 30:BG:131:TYR:CG   | 30:BG:158:ALA:HA   | 2.32                     | 0.63              |
| 31:BH:60:ARG:HG2   | 31:BH:64:LEU:CD1   | 2.27                     | 0.63              |
| 32:BK:15:VAL:CG1   | 32:BK:16:GLY:N     | 2.61                     | 0.63              |
| 32:BK:26:ALA:HA    | 32:BK:30:LEU:HD23  | 1.81                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 33:BL:35:MET:SD    | 33:BL:39:LYS:HG3  | 2.38                     | 0.63              |
| 34:BM:54:VAL:C     | 34:BM:130:HIS:CE1 | 2.77                     | 0.63              |
| 34:BM:89:LYS:HA    | 34:BM:92:ALA:HB3  | 1.79                     | 0.63              |
| 34:BM:93:THR:O     | 34:BM:94:HIS:HD2  | 1.81                     | 0.63              |
| 36:BO:80:TYR:CZ    | 36:BO:85:LEU:HD22 | 2.34                     | 0.63              |
| 36:BO:91:PHE:CE2   | 36:BO:96:THR:HG22 | 2.32                     | 0.63              |
| 37:BP:43:THR:CG2   | 37:BP:46:GLN:HB2  | 2.27                     | 0.63              |
| 37:BP:130:LYS:HZ1  | 37:BP:132:VAL:CG1 | 2.10                     | 0.63              |
| 37:BP:134:ARG:HH11 | 37:BP:134:ARG:HG3 | 1.63                     | 0.63              |
| 38:BQ:22:ARG:HG2   | 38:BQ:70:LEU:HD22 | 1.78                     | 0.63              |
| 38:BQ:53:HIS:HA    | 38:BQ:56:LYS:HD3  | 1.80                     | 0.63              |
| 39:BR:23:ARG:HH11  | 39:BR:42:ASP:H    | 1.46                     | 0.63              |
| 40:BS:28:VAL:HG12  | 40:BS:30:VAL:HG12 | 1.81                     | 0.63              |
| 42:BU:3:ALA:HB2    | 42:BU:44:LYS:CD   | 2.28                     | 0.63              |
| 42:BU:38:LEU:H     | 42:BU:38:LEU:HD23 | 1.63                     | 0.63              |
| 47:BZ:59:LEU:HD22  | 47:BZ:79:VAL:HG21 | 1.81                     | 0.63              |
| 47:BZ:65:GLY:CA    | 47:BZ:81:VAL:HG12 | 2.25                     | 0.63              |
| 48:B1:50:ARG:O     | 48:B1:53:ALA:HB3  | 1.98                     | 0.63              |
| 49:B2:31:LEU:O     | 49:B2:31:LEU:HD13 | 1.99                     | 0.63              |
| 50:B3:42:PHE:N     | 50:B3:58:ARG:HH11 | 1.95                     | 0.63              |
| 54:B7:39:LYS:HA    | 54:B7:42:ARG:HD3  | 1.80                     | 0.63              |
| 1:AA:50:A:C6       | 1:AA:361:G:H4'    | 2.33                     | 0.63              |
| 1:AA:185:A:H2'     | 1:AA:186:C:H6     | 1.61                     | 0.63              |
| 1:AA:218:C:H5'     | 1:AA:466:C:H41    | 1.64                     | 0.63              |
| 1:AA:243:A:O2'     | 1:AA:244:U:OP2    | 2.16                     | 0.63              |
| 1:AA:372:C:N4      | 1:AA:389:A:H62    | 1.95                     | 0.63              |
| 1:AA:481:G:H5'     | 1:AA:482:A:OP1    | 1.97                     | 0.63              |
| 1:AA:581:G:H2'     | 1:AA:582:U:OP2    | 1.98                     | 0.63              |
| 1:AA:736:C:H4'     | 8:AI:89:MET:SD    | 2.38                     | 0.63              |
| 1:AA:784:C:H4'     | 24:BA:1837:C:OP1  | 1.98                     | 0.63              |
| 1:AA:1520:G:C2'    | 1:AA:1521:G:H8    | 2.11                     | 0.63              |
| 3:AC:74:C:C3'      | 3:AC:75:C:H5''    | 2.29                     | 0.63              |
| 4:AE:25:ASN:O      | 4:AE:27:LYS:N     | 2.31                     | 0.63              |
| 4:AE:87:ARG:O      | 4:AE:89:GLY:N     | 2.32                     | 0.63              |
| 4:AE:118:LEU:HD11  | 4:AE:141:GLU:CD   | 2.23                     | 0.63              |
| 5:AF:172:ARG:CZ    | 5:AF:172:ARG:HB3  | 2.27                     | 0.63              |
| 6:AG:130:GLY:O     | 6:AG:131:ARG:C    | 2.40                     | 0.63              |
| 6:AG:154:ASN:HD22  | 6:AG:155:LEU:HD22 | 1.62                     | 0.63              |
| 9:AJ:42:ILE:CG2    | 9:AJ:120:ILE:HD11 | 2.29                     | 0.63              |
| 9:AJ:54:THR:O      | 9:AJ:55:GLY:C     | 2.42                     | 0.63              |
| 11:AL:117:HIS:C    | 11:AL:119:ALA:H   | 2.04                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 13:AN:91:ARG:CG   | 13:AN:95:ILE:HD11  | 2.29                     | 0.63              |
| 16:AQ:16:PHE:O    | 16:AQ:18:VAL:N     | 2.32                     | 0.63              |
| 18:AS:35:LYS:O    | 18:AS:36:ILE:HG23  | 1.98                     | 0.63              |
| 19:AT:3:LYS:HD3   | 19:AT:61:GLU:O     | 1.97                     | 0.63              |
| 22:AW:8:ARG:HB3   | 22:AW:8:ARG:HH11   | 1.63                     | 0.63              |
| 24:BA:9:U:H2'     | 24:BA:9:U:O2       | 1.97                     | 0.63              |
| 24:BA:35:G:C4     | 24:BA:454:A:C2     | 2.86                     | 0.63              |
| 24:BA:242:G:H2'   | 24:BA:254:G:N1     | 2.13                     | 0.63              |
| 24:BA:364:C:C2    | 24:BA:365:C:C4     | 2.86                     | 0.63              |
| 24:BA:399:G:C5    | 24:BA:400:G:H1'    | 2.33                     | 0.63              |
| 24:BA:442:G:H4'   | 29:BF:46:ARG:CG    | 2.26                     | 0.63              |
| 24:BA:531:C:C5'   | 24:BA:532:A:C2     | 2.82                     | 0.63              |
| 24:BA:811:U:C4    | 36:BO:23:PRO:HD3   | 2.33                     | 0.63              |
| 24:BA:852:G:C5'   | 49:B2:45:GLY:HA3   | 2.27                     | 0.63              |
| 24:BA:930:U:O2'   | 24:BA:931:G:P      | 2.55                     | 0.63              |
| 24:BA:996:A:O3'   | 41:BT:93:LYS:HG2   | 1.98                     | 0.63              |
| 24:BA:997:G:C5'   | 41:BT:92:ARG:NH1   | 2.54                     | 0.63              |
| 24:BA:1131:G:O4'  | 34:BM:82:LEU:HD11  | 1.99                     | 0.63              |
| 24:BA:1214:A:H62  | 24:BA:1236:G:N2    | 1.96                     | 0.63              |
| 24:BA:1242:A:O4'  | 24:BA:1242:A:OP1   | 2.16                     | 0.63              |
| 24:BA:1290:C:H2'  | 24:BA:1291:C:H6    | 1.62                     | 0.63              |
| 24:BA:1310:G:N7   | 24:BA:1311:G:N2    | 2.46                     | 0.63              |
| 24:BA:1572:A:O4'  | 24:BA:1572:A:OP1   | 2.16                     | 0.63              |
| 24:BA:1826:G:O5'  | 24:BA:1826:G:H8    | 1.81                     | 0.63              |
| 24:BA:2098:U:H2'  | 24:BA:2099:U:C6    | 2.34                     | 0.63              |
| 24:BA:2132:U:C3'  | 24:BA:2133:G:H5'   | 2.27                     | 0.63              |
| 24:BA:2320:A:H1'  | 24:BA:2333:A:C6    | 2.33                     | 0.63              |
| 24:BA:2439:A:H4'  | 24:BA:2440:C:O5'   | 1.99                     | 0.63              |
| 24:BA:2456:C:HO2' | 24:BA:2457:U:H5'   | 1.63                     | 0.63              |
| 24:BA:2460:U:H2'  | 24:BA:2461:C:C6    | 2.33                     | 0.63              |
| 24:BA:2516:G:O6   | 24:BA:2567:G:O6    | 2.15                     | 0.63              |
| 24:BA:2709:G:H2'  | 24:BA:2710:C:H5'   | 1.80                     | 0.63              |
| 25:BB:6:C:H4'     | 25:BB:28:C:H5'     | 1.81                     | 0.63              |
| 25:BB:71:C:H2'    | 25:BB:72:G:C4'     | 2.28                     | 0.63              |
| 26:BC:10:LEU:HD12 | 26:BC:13:LYS:HD2   | 1.79                     | 0.63              |
| 26:BC:29:VAL:HG21 | 26:BC:41:VAL:HG11  | 1.80                     | 0.63              |
| 26:BC:64:LEU:HD13 | 26:BC:188:ASN:ND2  | 2.13                     | 0.63              |
| 26:BC:90:GLY:HA3  | 26:BC:157:LYS:CB   | 2.29                     | 0.63              |
| 27:BD:39:LYS:HD2  | 27:BD:39:LYS:N     | 2.13                     | 0.63              |
| 28:BE:59:VAL:HB   | 28:BE:62:PRO:CD    | 2.28                     | 0.63              |
| 28:BE:98:PRO:HA   | 28:BE:172:VAL:HG23 | 1.79                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 31:BH:107:VAL:HG13 | 31:BH:152:ARG:NE  | 2.12                     | 0.63              |
| 33:BL:12:LEU:CB    | 33:BL:13:PRO:HD2  | 2.29                     | 0.63              |
| 35:BN:108:GLU:HB3  | 35:BN:111:PHE:CE2 | 2.33                     | 0.63              |
| 36:BO:111:ARG:HH22 | 36:BO:113:LYS:HB2 | 1.63                     | 0.63              |
| 37:BP:44:ALA:HB2   | 37:BP:93:TYR:O    | 1.98                     | 0.63              |
| 37:BP:67:ARG:NH2   | 37:BP:103:MET:HB3 | 2.10                     | 0.63              |
| 38:BQ:40:LYS:O     | 38:BQ:44:LEU:HB2  | 1.99                     | 0.63              |
| 39:BR:26:LEU:HD13  | 39:BR:26:LEU:C    | 2.24                     | 0.63              |
| 39:BR:78:LEU:HG    | 39:BR:111:GLU:OE2 | 1.97                     | 0.63              |
| 40:BS:65:LYS:CD    | 40:BS:75:ILE:HD13 | 2.28                     | 0.63              |
| 41:BT:89:GLU:CD    | 42:BU:52:VAL:H    | 2.07                     | 0.63              |
| 41:BT:92:ARG:HA    | 41:BT:95:LEU:CG   | 2.28                     | 0.63              |
| 41:BT:111:GLU:CA   | 41:BT:114:LYS:HE3 | 2.28                     | 0.63              |
| 42:BU:35:LEU:HG    | 42:BU:36:PRO:CD   | 2.29                     | 0.63              |
| 44:BW:50:LYS:HG3   | 44:BW:85:PRO:HD3  | 1.81                     | 0.63              |
| 45:BX:39:VAL:O     | 45:BX:40:GLU:HB2  | 1.98                     | 0.63              |
| 45:BX:74:PRO:C     | 45:BX:76:CYS:N    | 2.54                     | 0.63              |
| 45:BX:76:CYS:CB    | 45:BX:100:ALA:HB3 | 2.29                     | 0.63              |
| 50:B3:5:ILE:HD13   | 50:B3:60:GLN:CD   | 2.23                     | 0.63              |
| 51:B4:48:GLU:CA    | 51:B4:58:LEU:HG   | 2.29                     | 0.63              |
| 1:AA:570:G:C5'     | 1:AA:820:U:H1'    | 2.19                     | 0.63              |
| 1:AA:588:G:H1'     | 1:AA:753:A:N1     | 2.12                     | 0.63              |
| 1:AA:597:G:H2'     | 1:AA:598:U:H5'    | 1.79                     | 0.63              |
| 1:AA:601:C:H2'     | 1:AA:602:A:C8     | 2.31                     | 0.63              |
| 1:AA:698:G:H2'     | 1:AA:699:C:C6     | 2.32                     | 0.63              |
| 1:AA:706:A:C2      | 1:AA:707:C:C6     | 2.86                     | 0.63              |
| 1:AA:722:A:O3'     | 1:AA:723:U:N3     | 2.31                     | 0.63              |
| 1:AA:811:C:H6      | 1:AA:811:C:H3'    | 1.63                     | 0.63              |
| 1:AA:826:C:H5'     | 10:AK:12:ARG:HH21 | 1.63                     | 0.63              |
| 1:AA:827:U:H4'     | 10:AK:19:VAL:CG2  | 2.26                     | 0.63              |
| 1:AA:983:A:N3      | 1:AA:983:A:C3'    | 2.61                     | 0.63              |
| 1:AA:1003:G:H8     | 1:AA:1003:G:O5'   | 1.81                     | 0.63              |
| 1:AA:1039:C:N4     | 1:AA:1040:U:O4    | 2.31                     | 0.63              |
| 1:AA:1161:C:C2     | 1:AA:1162:C:C5    | 2.87                     | 0.63              |
| 1:AA:1191:A:OP1    | 5:AF:4:LYS:CG     | 2.47                     | 0.63              |
| 1:AA:1260:C:H4'    | 1:AA:1284:C:C5'   | 2.28                     | 0.63              |
| 1:AA:1423:G:H2'    | 1:AA:1424:C:H6    | 1.62                     | 0.63              |
| 4:AE:39:ILE:O      | 4:AE:41:ILE:HD12  | 1.98                     | 0.63              |
| 4:AE:185:ILE:CB    | 4:AE:199:TYR:HB2  | 2.29                     | 0.63              |
| 5:AF:83:ARG:C      | 5:AF:85:ARG:H     | 2.05                     | 0.63              |
| 6:AG:52:SER:C      | 6:AG:54:TYR:H     | 2.06                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:AG:120:LEU:HA   | 6:AG:125:HIS:NE2   | 2.14                     | 0.63              |
| 9:AJ:135:VAL:HG12 | 9:AJ:139:GLU:OE2   | 1.98                     | 0.63              |
| 10:AK:68:ARG:NH2  | 10:AK:74:PRO:HB3   | 2.13                     | 0.63              |
| 11:AL:19:LEU:CD2  | 11:AL:20:ARG:N     | 2.62                     | 0.63              |
| 14:AO:28:LYS:HZ2  | 14:AO:33:ARG:NH2   | 1.89                     | 0.63              |
| 15:AP:19:LEU:O    | 15:AP:25:ILE:HD12  | 1.98                     | 0.63              |
| 21:AV:20:LEU:HG   | 21:AV:21:GLU:H     | 1.63                     | 0.63              |
| 21:AV:38:SER:HB3  | 21:AV:71:LEU:HD12  | 1.80                     | 0.63              |
| 24:BA:84:A:H1'    | 24:BA:103:A:H61    | 1.64                     | 0.63              |
| 24:BA:189:G:H2'   | 24:BA:205:G:N2     | 2.11                     | 0.63              |
| 24:BA:476:G:C4    | 24:BA:478:A:OP2    | 2.51                     | 0.63              |
| 24:BA:627:A:H5''  | 36:BO:75:ILE:CB    | 2.28                     | 0.63              |
| 24:BA:685:A:C5'   | 24:BA:686:G:H21    | 2.07                     | 0.63              |
| 24:BA:728:G:C5    | 24:BA:762:U:H2'    | 2.33                     | 0.63              |
| 24:BA:972:G:C5    | 24:BA:973:A:N7     | 2.67                     | 0.63              |
| 24:BA:1006:C:H4'  | 34:BM:32:THR:OG1   | 1.99                     | 0.63              |
| 24:BA:1062:G:O6   | 24:BA:1077:A:C5    | 2.52                     | 0.63              |
| 24:BA:1454:U:O2   | 24:BA:1454:U:C2'   | 2.47                     | 0.63              |
| 24:BA:1535:U:C2'  | 24:BA:1536:A:O4'   | 2.36                     | 0.63              |
| 24:BA:1656:C:H2'  | 24:BA:1657:C:H5    | 1.62                     | 0.63              |
| 24:BA:2142:C:C4   | 24:BA:2143:C:N4    | 2.67                     | 0.63              |
| 24:BA:2225:A:H5'  | 24:BA:2226:C:C6    | 2.33                     | 0.63              |
| 24:BA:2261:C:O2'  | 24:BA:2262:U:H5'   | 1.99                     | 0.63              |
| 24:BA:2329:G:H8   | 24:BA:2329:G:O5'   | 1.82                     | 0.63              |
| 24:BA:2360:A:N7   | 24:BA:2361:A:C8    | 2.67                     | 0.63              |
| 24:BA:2523:G:H1'  | 24:BA:2765:A:N7    | 2.14                     | 0.63              |
| 24:BA:2720:U:C2'  | 24:BA:2721:A:H8    | 2.10                     | 0.63              |
| 27:BD:24:ILE:HG22 | 27:BD:25:THR:N     | 2.12                     | 0.63              |
| 27:BD:56:GLY:N    | 27:BD:217:ARG:HD2  | 2.08                     | 0.63              |
| 27:BD:232:PRO:HG2 | 27:BD:246:PRO:O    | 1.98                     | 0.63              |
| 29:BF:66:PRO:C    | 29:BF:68:LYS:N     | 2.38                     | 0.63              |
| 30:BG:6:ALA:HA    | 30:BG:9:ARG:HH21   | 1.63                     | 0.63              |
| 30:BG:55:LYS:NZ   | 30:BG:152:LEU:HD11 | 2.14                     | 0.63              |
| 30:BG:68:PRO:CB   | 30:BG:72:ARG:HH12  | 2.12                     | 0.63              |
| 31:BH:28:GLY:N    | 31:BH:79:VAL:HB    | 2.14                     | 0.63              |
| 31:BH:51:ARG:HD3  | 31:BH:52:VAL:N     | 2.13                     | 0.63              |
| 33:BL:39:LYS:HG2  | 33:BL:42:ASN:ND2   | 2.12                     | 0.63              |
| 33:BL:95:LYS:NZ   | 46:BY:112:ARG:HD2  | 2.13                     | 0.63              |
| 33:BL:112:MET:HE1 | 33:BL:118:THR:CA   | 2.28                     | 0.63              |
| 34:BM:87:LEU:O    | 34:BM:90:MET:CB    | 2.44                     | 0.63              |
| 36:BO:15:ARG:O    | 36:BO:17:LYS:NZ    | 2.32                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 37:BP:6:ARG:CG     | 37:BP:7:MET:N      | 2.62                     | 0.63              |
| 37:BP:93:TYR:C     | 37:BP:94:VAL:HG12  | 2.23                     | 0.63              |
| 37:BP:137:TYR:O    | 37:BP:138:ASP:CB   | 2.46                     | 0.63              |
| 40:BS:109:GLU:HB2  | 40:BS:114:LEU:HD21 | 1.79                     | 0.63              |
| 41:BT:88:ILE:CA    | 42:BU:52:VAL:HG22  | 2.27                     | 0.63              |
| 42:BU:61:VAL:C     | 42:BU:62:LEU:HD23  | 2.24                     | 0.63              |
| 42:BU:76:LYS:HE3   | 42:BU:86:GLY:N     | 2.13                     | 0.63              |
| 45:BX:44:ILE:O     | 45:BX:46:LYS:N     | 2.32                     | 0.63              |
| 45:BX:81:LYS:HG2   | 45:BX:96:ILE:CG2   | 2.28                     | 0.63              |
| 50:B3:6:HIS:CE1    | 50:B3:55:ARG:HD3   | 2.34                     | 0.63              |
| 55:B8:4:ARG:O      | 55:B8:5:ALA:CB     | 2.46                     | 0.63              |
| 1:AA:224:C:C2      | 1:AA:225:C:C5      | 2.87                     | 0.63              |
| 1:AA:375:U:O2'     | 1:AA:376:G:H5'     | 1.99                     | 0.63              |
| 1:AA:519:C:C5'     | 14:AO:51:ALA:HB2   | 2.29                     | 0.63              |
| 1:AA:676:A:H2'     | 1:AA:677:U:C6      | 2.34                     | 0.63              |
| 1:AA:947:G:N2      | 1:AA:948:C:C2      | 2.67                     | 0.63              |
| 1:AA:1128:C:O2     | 1:AA:1146:A:N6     | 2.31                     | 0.63              |
| 1:AA:1255:G:N2     | 1:AA:1276:G:N2     | 2.45                     | 0.63              |
| 1:AA:1261:A:H3'    | 1:AA:1262:C:C5     | 2.33                     | 0.63              |
| 1:AA:1399:C:C4     | 1:AA:1502:A:N7     | 2.66                     | 0.63              |
| 3:AD:75:C:C3'      | 3:AD:76:A:H4'      | 2.21                     | 0.63              |
| 3:AB:53:G:O4'      | 24:BA:2470:G:H5''  | 1.99                     | 0.63              |
| 4:AE:100:GLY:C     | 4:AE:104:ASN:HD21  | 2.07                     | 0.63              |
| 4:AE:109:SER:O     | 4:AE:110:GLN:C     | 2.42                     | 0.63              |
| 5:AF:182:ILE:CG2   | 5:AF:202:ILE:O     | 2.47                     | 0.63              |
| 6:AG:15:GLU:CB     | 6:AG:19:LEU:HD11   | 2.28                     | 0.63              |
| 6:AG:61:LYS:O      | 6:AG:64:LEU:HB3    | 1.98                     | 0.63              |
| 6:AG:128:VAL:CG2   | 6:AG:133:VAL:HB    | 2.29                     | 0.63              |
| 7:AH:51:VAL:HB     | 7:AH:52:PRO:CD     | 2.21                     | 0.63              |
| 8:AI:1:MET:SD      | 8:AI:68:PRO:HG3    | 2.39                     | 0.63              |
| 8:AI:53:ALA:CB     | 8:AI:86:ARG:HD2    | 2.28                     | 0.63              |
| 9:AJ:129:GLU:CB    | 9:AJ:131:LYS:HE2   | 2.29                     | 0.63              |
| 9:AJ:153:HIS:HE1   | 13:AN:58:PRO:CD    | 2.11                     | 0.63              |
| 10:AK:6:ILE:HG13   | 10:AK:85:ARG:NH2   | 2.14                     | 0.63              |
| 10:AK:126:LYS:HZ1  | 10:AK:127:LEU:HD23 | 1.63                     | 0.63              |
| 10:AK:137:VAL:HG12 | 10:AK:138:TRP:N    | 2.14                     | 0.63              |
| 11:AL:23:ASN:C     | 11:AL:23:ASN:HD22  | 2.05                     | 0.63              |
| 12:AM:5:ARG:HD3    | 12:AM:6:ILE:N      | 2.14                     | 0.63              |
| 12:AM:85:LEU:HD12  | 12:AM:85:LEU:N     | 2.13                     | 0.63              |
| 13:AN:101:SER:O    | 13:AN:103:LEU:N    | 2.32                     | 0.63              |
| 14:AO:97:ARG:HB3   | 14:AO:98:TYR:CE1   | 2.33                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 15:AP:13:LYS:HA    | 15:AP:44:ARG:NE    | 2.14                     | 0.63              |
| 15:AP:23:TYR:CE2   | 15:AP:70:LEU:HD13  | 2.33                     | 0.63              |
| 17:AR:33:THR:HG23  | 17:AR:87:ILE:HD12  | 1.80                     | 0.63              |
| 18:AS:43:LYS:HG3   | 18:AS:48:TRP:CZ3   | 2.34                     | 0.63              |
| 18:AS:43:LYS:HG3   | 18:AS:48:TRP:CE3   | 2.33                     | 0.63              |
| 24:BA:49:A:C6      | 24:BA:177:G:C2     | 2.86                     | 0.63              |
| 24:BA:108:U:H2'    | 24:BA:109:G:C8     | 2.33                     | 0.63              |
| 24:BA:192:C:O2     | 24:BA:192:C:C2'    | 2.46                     | 0.63              |
| 24:BA:242:G:C2'    | 24:BA:254:G:C6     | 2.81                     | 0.63              |
| 24:BA:355:G:C6     | 24:BA:356:G:C6     | 2.87                     | 0.63              |
| 24:BA:363(A):A:H2' | 24:BA:363(B):G:O5' | 1.98                     | 0.63              |
| 24:BA:515:A:C5'    | 41:BT:32:PHE:HZ    | 2.11                     | 0.63              |
| 24:BA:641:C:H2'    | 24:BA:642:G:H5'    | 1.79                     | 0.63              |
| 24:BA:801:G:O2'    | 24:BA:802:A:OP1    | 2.13                     | 0.63              |
| 24:BA:1241:A:N6    | 24:BA:1244:G:O6    | 2.31                     | 0.63              |
| 24:BA:1315:C:O2    | 24:BA:1392:A:H2    | 1.81                     | 0.63              |
| 24:BA:1527:G:C8    | 24:BA:1527:G:C3'   | 2.77                     | 0.63              |
| 24:BA:1604:C:O2    | 24:BA:1604:C:H2'   | 1.99                     | 0.63              |
| 24:BA:1890:A:H2'   | 24:BA:1891:G:O4'   | 1.98                     | 0.63              |
| 24:BA:1914:C:OP1   | 24:BA:1916:A:C6    | 2.52                     | 0.63              |
| 24:BA:2227:A:C6    | 24:BA:2228:G:C5    | 2.87                     | 0.63              |
| 24:BA:2620:C:H4'   | 28:BE:156:MET:HB2  | 1.80                     | 0.63              |
| 24:BA:2690:C:H2'   | 24:BA:2691:C:OP2   | 1.98                     | 0.63              |
| 24:BA:2720:U:O4    | 24:BA:2872:G:C6    | 2.52                     | 0.63              |
| 25:BB:102:G:C2     | 25:BB:103:U:O4     | 2.52                     | 0.63              |
| 26:BC:82:LYS:HE3   | 26:BC:147:PHE:CD1  | 2.23                     | 0.63              |
| 26:BC:194:ARG:HG3  | 26:BC:194:ARG:HH11 | 1.63                     | 0.63              |
| 27:BD:223:GLY:C    | 27:BD:225:ALA:N    | 2.55                     | 0.63              |
| 27:BD:246:PRO:HG3  | 27:BD:252:TRP:HA   | 1.79                     | 0.63              |
| 28:BE:33:VAL:HG21  | 28:BE:77:ILE:HD12  | 1.79                     | 0.63              |
| 28:BE:60:ASN:O     | 28:BE:61:ARG:C     | 2.42                     | 0.63              |
| 29:BF:6:VAL:HA     | 29:BF:20:LEU:HD22  | 1.78                     | 0.63              |
| 29:BF:30:PRO:HA    | 29:BF:33:LEU:CD2   | 2.27                     | 0.63              |
| 29:BF:121:GLY:HA3  | 29:BF:191:ARG:NE   | 2.11                     | 0.63              |
| 29:BF:125:LEU:C    | 29:BF:127:GLU:N    | 2.53                     | 0.63              |
| 29:BF:152:GLU:HA   | 29:BF:152:GLU:OE2  | 1.97                     | 0.63              |
| 32:BK:7:GLU:N      | 32:BK:8:PRO:CD     | 2.60                     | 0.63              |
| 33:BL:106:GLU:HA   | 33:BL:109:LYS:HE3  | 1.79                     | 0.63              |
| 34:BM:33:LEU:C     | 34:BM:35:ARG:N     | 2.57                     | 0.63              |
| 35:BN:16:ALA:C     | 35:BN:18:LYS:N     | 2.57                     | 0.63              |
| 36:BO:132:LYS:HA   | 36:BO:135:LEU:HD13 | 1.79                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 37:BP:7:MET:O     | 37:BP:70:PRO:HD2  | 1.98                     | 0.63              |
| 37:BP:37:LEU:HD11 | 37:BP:130:LYS:CB  | 2.27                     | 0.63              |
| 38:BQ:55:ALA:CA   | 38:BQ:79:LEU:HD21 | 2.28                     | 0.63              |
| 39:BR:40:ILE:HG22 | 39:BR:41:ASP:N    | 2.12                     | 0.63              |
| 40:BS:4:GLY:O     | 40:BS:8:LYS:CG    | 2.46                     | 0.63              |
| 40:BS:54:ARG:C    | 40:BS:55:ASN:OD1  | 2.41                     | 0.63              |
| 43:BV:19:LEU:HB3  | 51:B4:25:LEU:CD1  | 2.13                     | 0.63              |
| 43:BV:43:GLY:O    | 43:BV:47:VAL:HG23 | 1.99                     | 0.63              |
| 45:BX:24:VAL:HG23 | 45:BX:24:VAL:O    | 1.97                     | 0.63              |
| 46:BY:44:PHE:HD2  | 46:BY:48:PHE:CE1  | 2.17                     | 0.63              |
| 49:B2:24:LYS:HA   | 49:B2:27:GLY:O    | 1.99                     | 0.63              |
| 51:B4:46:CYS:CB   | 51:B4:47:PRO:HD2  | 2.26                     | 0.63              |
| 52:B5:41:PRO:HD2  | 52:B5:46:HIS:O    | 1.98                     | 0.63              |
| 53:B6:43:THR:N    | 53:B6:44:PRO:CD   | 2.61                     | 0.63              |
| 1:AA:775:G:H2'    | 1:AA:776:G:C8     | 2.34                     | 0.63              |
| 1:AA:791:G:N2     | 1:AA:1497:G:O3'   | 2.32                     | 0.63              |
| 1:AA:815:A:N1     | 1:AA:1529:G:C2    | 2.67                     | 0.63              |
| 1:AA:1192:C:N4    | 1:AA:1193:G:C5    | 2.67                     | 0.63              |
| 1:AA:1202:G:H21   | 1:AA:1203:C:C1'   | 2.11                     | 0.63              |
| 1:AA:1254:C:OP1   | 12:AM:45:ARG:CZ   | 2.47                     | 0.63              |
| 1:AA:1321:C:O5'   | 1:AA:1321:C:C6    | 2.51                     | 0.63              |
| 1:AA:1441:G:H1'   | 1:AA:1461:G:N2    | 2.14                     | 0.63              |
| 3:AD:56:C:H5''    | 26:BC:133:PRO:HB2 | 1.80                     | 0.63              |
| 4:AE:56:ARG:HB3   | 4:AE:56:ARG:CZ    | 2.29                     | 0.63              |
| 4:AE:82:ARG:HD2   | 4:AE:92:TYR:HH    | 1.62                     | 0.63              |
| 5:AF:82:GLU:O     | 5:AF:85:ARG:HB3   | 1.97                     | 0.63              |
| 5:AF:87:LEU:HB2   | 5:AF:101:LEU:HD11 | 1.81                     | 0.63              |
| 8:AI:68:PRO:HB2   | 8:AI:71:ARG:HG2   | 1.80                     | 0.63              |
| 10:AK:38:ILE:O    | 10:AK:41:ARG:HB2  | 1.99                     | 0.63              |
| 12:AM:3:LYS:HE3   | 12:AM:77:PRO:CD   | 2.29                     | 0.63              |
| 12:AM:39:PRO:HA   | 12:AM:70:ARG:HH11 | 1.63                     | 0.63              |
| 12:AM:79:ARG:CZ   | 12:AM:82:ILE:HB   | 2.28                     | 0.63              |
| 13:AN:21:ILE:HG22 | 13:AN:30:VAL:CG2  | 2.27                     | 0.63              |
| 13:AN:69:ALA:HB1  | 13:AN:103:LEU:CD1 | 2.28                     | 0.63              |
| 13:AN:106:LYS:CG  | 13:AN:107:SER:H   | 2.09                     | 0.63              |
| 14:AO:27:LEU:HD23 | 14:AO:33:ARG:CD   | 2.28                     | 0.63              |
| 14:AO:38:THR:HG23 | 14:AO:39:VAL:H    | 1.63                     | 0.63              |
| 14:AO:110:VAL:CG2 | 14:AO:113:ARG:HG3 | 2.29                     | 0.63              |
| 17:AR:35:ARG:HH12 | 17:AR:59:MET:HE2  | 1.62                     | 0.63              |
| 17:AR:63:ARG:HH12 | 17:AR:87:ILE:CD1  | 2.11                     | 0.63              |
| 18:AS:75:ARG:HA   | 18:AS:80:PHE:HB2  | 1.79                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 19:AT:63:ARG:HG2  | 19:AT:64:PRO:N      | 2.12                     | 0.63              |
| 24:BA:60:G:C8     | 24:BA:63:U:O4       | 2.51                     | 0.63              |
| 24:BA:144:C:C2'   | 24:BA:145:G:H5'     | 2.29                     | 0.63              |
| 24:BA:274:G:C2'   | 24:BA:275:G:H5'     | 2.27                     | 0.63              |
| 24:BA:304:G:H2'   | 24:BA:305:U:C6      | 2.34                     | 0.63              |
| 24:BA:351:G:O2'   | 24:BA:352:G:P       | 2.57                     | 0.63              |
| 24:BA:503:A:C4    | 24:BA:505:A:N7      | 2.66                     | 0.63              |
| 24:BA:558:G:H5'   | 34:BM:112:LEU:HG    | 1.80                     | 0.63              |
| 24:BA:675:A:H2'   | 24:BA:676:A:N3      | 2.14                     | 0.63              |
| 24:BA:693:C:O2'   | 24:BA:694:U:H5'     | 1.99                     | 0.63              |
| 24:BA:747:U:O2'   | 43:BV:88:ARG:HG3    | 1.99                     | 0.63              |
| 24:BA:815:C:O2'   | 24:BA:816:C:H5''    | 1.99                     | 0.63              |
| 24:BA:904:C:O4'   | 46:BY:169:GLU:CD    | 2.41                     | 0.63              |
| 24:BA:974:G:C3'   | 24:BA:974(A):C:H5'' | 2.16                     | 0.63              |
| 24:BA:1135:C:O2'  | 24:BA:1136:G:H5'    | 1.99                     | 0.63              |
| 24:BA:1161:C:H1'  | 42:BU:22:VAL:CG1    | 2.28                     | 0.63              |
| 24:BA:1434:A:H61  | 24:BA:1558:A:H61    | 1.45                     | 0.63              |
| 24:BA:1498:C:O2   | 24:BA:1499:C:C5     | 2.52                     | 0.63              |
| 24:BA:1697:G:C4'  | 24:BA:1698:A:H5'    | 2.28                     | 0.63              |
| 24:BA:1735:C:C2   | 24:BA:1741:C:H5     | 2.17                     | 0.63              |
| 24:BA:1801:G:C4   | 27:BD:263:ARG:NH2   | 2.66                     | 0.63              |
| 24:BA:1901:A:O2'  | 27:BD:244:ARG:CZ    | 2.47                     | 0.63              |
| 24:BA:1953:A:N6   | 24:BA:2549:G:O2'    | 2.32                     | 0.63              |
| 24:BA:1966:A:O2'  | 24:BA:1967:C:P      | 2.56                     | 0.63              |
| 24:BA:2077:A:C4   | 24:BA:2435:A:C8     | 2.87                     | 0.63              |
| 24:BA:2132:U:H2'  | 24:BA:2132:U:O2     | 1.99                     | 0.63              |
| 24:BA:2141:G:C6   | 24:BA:2151:G:C6     | 2.86                     | 0.63              |
| 24:BA:2378:A:H5'' | 24:BA:2379:G:OP2    | 1.99                     | 0.63              |
| 24:BA:2392:A:P    | 54:B7:33:ASN:HD21   | 2.22                     | 0.63              |
| 24:BA:2392:A:C2'  | 24:BA:2393:A:O5'    | 2.47                     | 0.63              |
| 24:BA:2755:C:H4'  | 24:BA:2756:U:C6     | 2.33                     | 0.63              |
| 24:BA:2784:C:H4'  | 28:BE:40:GLU:OE2    | 1.98                     | 0.63              |
| 24:BA:2849:U:C6   | 24:BA:2849:U:C3'    | 2.82                     | 0.63              |
| 25:BB:31:C:H1'    | 25:BB:53:A:H61      | 1.63                     | 0.63              |
| 26:BC:100:ILE:O   | 26:BC:104:LEU:HD23  | 1.99                     | 0.63              |
| 27:BD:37:LEU:HD12 | 27:BD:62:TYR:O      | 1.98                     | 0.63              |
| 27:BD:127:VAL:CG1 | 27:BD:194:GLY:HA3   | 2.14                     | 0.63              |
| 27:BD:200:ASP:O   | 27:BD:203:ASN:N     | 2.29                     | 0.63              |
| 28:BE:104:VAL:CG1 | 28:BE:105:THR:N     | 2.61                     | 0.63              |
| 29:BF:64:ILE:HG23 | 29:BF:78:ILE:HB     | 1.80                     | 0.63              |
| 29:BF:65:TRP:HB3  | 29:BF:75:HIS:O      | 1.99                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 31:BH:37:VAL:O     | 31:BH:37:VAL:CG2   | 2.47                     | 0.63              |
| 31:BH:126:PRO:CG   | 31:BH:132:ARG:NH2  | 2.61                     | 0.63              |
| 32:BK:131:LYS:HA   | 32:BK:137:PRO:HA   | 1.81                     | 0.63              |
| 33:BL:55:VAL:CG2   | 33:BL:69:THR:HG22  | 2.29                     | 0.63              |
| 33:BL:104:VAL:HG12 | 33:BL:124:ALA:HA   | 1.81                     | 0.63              |
| 34:BM:7:LYS:HD3    | 34:BM:39:ARG:NH1   | 2.13                     | 0.63              |
| 34:BM:14:VAL:HG22  | 34:BM:138:LEU:CD1  | 2.29                     | 0.63              |
| 34:BM:31:ALA:O     | 34:BM:33:LEU:N     | 2.32                     | 0.63              |
| 34:BM:60:ILE:HG22  | 34:BM:61:ARG:N     | 2.13                     | 0.63              |
| 34:BM:99:LEU:HD12  | 34:BM:99:LEU:C     | 2.23                     | 0.63              |
| 35:BN:21:CYS:HA    | 35:BN:41:ALA:CB    | 2.28                     | 0.63              |
| 35:BN:62:VAL:O     | 35:BN:63:VAL:CG2   | 2.39                     | 0.63              |
| 35:BN:70:LYS:CE    | 35:BN:103:ALA:HB3  | 2.29                     | 0.63              |
| 36:BO:113:LYS:CA   | 36:BO:129:ALA:HB1  | 2.29                     | 0.63              |
| 37:BP:27:VAL:HG13  | 37:BP:104:PHE:CE2  | 2.34                     | 0.63              |
| 38:BQ:28:LEU:HD11  | 38:BQ:116:LEU:HD23 | 1.80                     | 0.63              |
| 39:BR:9:ARG:HA     | 39:BR:12:PHE:CD2   | 2.34                     | 0.63              |
| 39:BR:10:ARG:NH1   | 39:BR:89:ARG:HH12  | 1.97                     | 0.63              |
| 39:BR:14:VAL:O     | 39:BR:18:ILE:HD13  | 1.99                     | 0.63              |
| 39:BR:42:ASP:O     | 39:BR:44:LYS:N     | 2.27                     | 0.63              |
| 39:BR:49:VAL:HG13  | 39:BR:76:LYS:NZ    | 2.13                     | 0.63              |
| 45:BX:65:ALA:CB    | 45:BX:66:PRO:HD3   | 2.28                     | 0.63              |
| 45:BX:97:ARG:HB3   | 45:BX:101:LYS:HE2  | 1.80                     | 0.63              |
| 46:BY:24:LEU:HD13  | 46:BY:83:PRO:HG2   | 1.78                     | 0.63              |
| 49:B2:10:LYS:NZ    | 49:B2:12:PRO:HG3   | 2.09                     | 0.63              |
| 49:B2:52:HIS:C     | 49:B2:54:VAL:H     | 2.07                     | 0.63              |
| 51:B4:34:PRO:HD3   | 51:B4:40:LYS:CE    | 2.28                     | 0.63              |
| 1:AA:21:G:N2       | 1:AA:915:A:N6      | 2.46                     | 0.63              |
| 1:AA:50:A:C6       | 1:AA:361:G:C4'     | 2.82                     | 0.63              |
| 1:AA:52:G:O2'      | 1:AA:53:A:H5'      | 1.99                     | 0.63              |
| 1:AA:237:C:OP1     | 19:AT:40:LYS:NZ    | 2.32                     | 0.63              |
| 1:AA:439:A:H3'     | 1:AA:440:A:H8      | 1.64                     | 0.63              |
| 1:AA:518:C:H3'     | 1:AA:530:G:N2      | 2.14                     | 0.63              |
| 1:AA:553:A:H2'     | 1:AA:554:C:O4'     | 1.99                     | 0.63              |
| 1:AA:830:G:C6      | 1:AA:831:U:C4      | 2.87                     | 0.63              |
| 1:AA:972:C:O2      | 12:AM:55:LYS:HE3   | 1.98                     | 0.63              |
| 1:AA:1077:G:O6     | 7:AH:47:LYS:NZ     | 2.32                     | 0.63              |
| 1:AA:1202:G:H1'    | 16:AQ:29:ARG:HE    | 1.63                     | 0.63              |
| 1:AA:1242:C:C5'    | 23:AX:10:ARG:HH12  | 2.02                     | 0.63              |
| 2:A1:28:G:H2'      | 2:A1:29:G:H8       | 1.63                     | 0.63              |
| 2:A1:33:U:H2'      | 2:A1:34:U:C4       | 2.33                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 3:AD:48:C:N4       | 3:AD:59:U:O2      | 2.32                     | 0.63              |
| 3:AD:58:A:H2'      | 3:AD:61:C:N4      | 2.13                     | 0.63              |
| 4:AE:52:GLU:CG     | 4:AE:53:ARG:N     | 2.62                     | 0.63              |
| 4:AE:67:THR:CB     | 4:AE:155:LEU:HD21 | 2.28                     | 0.63              |
| 4:AE:70:PHE:O      | 4:AE:92:TYR:HB2   | 1.98                     | 0.63              |
| 4:AE:71:VAL:HG22   | 4:AE:93:VAL:CB    | 2.28                     | 0.63              |
| 4:AE:118:LEU:HD22  | 4:AE:142:LEU:CD1  | 2.29                     | 0.63              |
| 4:AE:162:ILE:HD13  | 4:AE:162:ILE:N    | 2.14                     | 0.63              |
| 9:AJ:17:VAL:HB     | 9:AJ:44:TYR:OH    | 1.99                     | 0.63              |
| 9:AJ:37:ASN:CG     | 9:AJ:38:LEU:H     | 2.07                     | 0.63              |
| 9:AJ:70:LYS:HA     | 9:AJ:100:ALA:HB2  | 1.81                     | 0.63              |
| 9:AJ:155:ARG:HH11  | 9:AJ:156:TRP:H    | 1.44                     | 0.63              |
| 13:AN:62:GLN:O     | 13:AN:66:LEU:HG   | 1.99                     | 0.63              |
| 14:AO:9:GLN:HA     | 14:AO:12:ARG:NH1  | 2.12                     | 0.63              |
| 14:AO:56:ALA:HB2   | 14:AO:70:ILE:HG13 | 1.80                     | 0.63              |
| 15:AP:25:ILE:HG12  | 15:AP:66:LEU:HD13 | 1.80                     | 0.63              |
| 16:AQ:12:ARG:O     | 16:AQ:13:THR:C    | 2.41                     | 0.63              |
| 19:AT:88:TYR:HA    | 19:AT:91:ARG:CZ   | 2.28                     | 0.63              |
| 22:AW:23:ARG:HD3   | 22:AW:24:LEU:H    | 1.64                     | 0.63              |
| 22:AW:63:ILE:HD11  | 22:AW:80:ARG:HB3  | 1.78                     | 0.63              |
| 24:BA:61:G:H5'     | 48:B1:45:ILE:HG12 | 1.80                     | 0.63              |
| 24:BA:141:A:C2     | 24:BA:1597:A:H5'  | 2.34                     | 0.63              |
| 24:BA:152:G:O2'    | 24:BA:153:C:H5'   | 1.99                     | 0.63              |
| 24:BA:226:G:N2     | 24:BA:227:A:N3    | 2.47                     | 0.63              |
| 24:BA:245:G:H1     | 24:BA:253:C:H42   | 1.44                     | 0.63              |
| 24:BA:270(L):U:H2' | 24:BA:270(L):U:O2 | 1.98                     | 0.63              |
| 24:BA:290:G:H3'    | 24:BA:290:G:H8    | 1.64                     | 0.63              |
| 24:BA:363(D):G:N1  | 24:BA:363(E):U:C2 | 2.67                     | 0.63              |
| 24:BA:373:U:O2'    | 24:BA:375:C:N4    | 2.26                     | 0.63              |
| 24:BA:574:C:H41    | 24:BA:2054:A:H5'' | 1.62                     | 0.63              |
| 24:BA:639:U:O4     | 24:BA:648:G:O6    | 2.17                     | 0.63              |
| 24:BA:872:A:O2'    | 37:BP:66:ILE:CG1  | 2.47                     | 0.63              |
| 24:BA:919:G:N2     | 24:BA:2268:A:H5'' | 2.14                     | 0.63              |
| 24:BA:975:G:C2     | 24:BA:976:C:H6    | 2.16                     | 0.63              |
| 24:BA:1407:C:H2'   | 24:BA:1408:C:C6   | 2.33                     | 0.63              |
| 24:BA:1491:G:H2'   | 24:BA:1492:G:O3'  | 1.99                     | 0.63              |
| 24:BA:1626:G:N2    | 24:BA:1634:A:O2'  | 2.32                     | 0.63              |
| 24:BA:1670:C:OP2   | 24:BA:1671:U:H5   | 1.82                     | 0.63              |
| 24:BA:1772:G:N2    | 24:BA:1774:C:H5'  | 2.14                     | 0.63              |
| 24:BA:1817:G:OP1   | 27:BD:88:ARG:NH1  | 2.30                     | 0.63              |
| 24:BA:1824:G:O2'   | 27:BD:246:PRO:CB  | 2.43                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1902:C:C2'  | 24:BA:1903:G:H5'   | 2.27                     | 0.63              |
| 24:BA:2125:G:OP1  | 26:BC:40:THR:HG21  | 1.99                     | 0.63              |
| 24:BA:2230:G:O2'  | 50:B3:40:HIS:O     | 2.13                     | 0.63              |
| 24:BA:2346:A:N3   | 24:BA:2383:G:C4    | 2.66                     | 0.63              |
| 24:BA:2466:C:OP1  | 55:B8:5:ALA:HB3    | 1.98                     | 0.63              |
| 24:BA:2547:U:C2'  | 24:BA:2548:G:H5''  | 2.29                     | 0.63              |
| 24:BA:2571:C:H1'  | 28:BE:146:THR:CG2  | 2.27                     | 0.63              |
| 24:BA:2574:G:H2'  | 24:BA:2575:C:O4'   | 1.99                     | 0.63              |
| 24:BA:2754:U:C2'  | 24:BA:2756:U:OP1   | 2.46                     | 0.63              |
| 24:BA:2798:C:C5   | 24:BA:2801:A:N6    | 2.66                     | 0.63              |
| 25:BB:62:C:C2     | 25:BB:63:G:N7      | 2.67                     | 0.63              |
| 26:BC:74:VAL:HA   | 26:BC:112:ALA:O    | 1.98                     | 0.63              |
| 26:BC:83:ILE:HG23 | 26:BC:87:GLU:OE2   | 1.98                     | 0.63              |
| 27:BD:118:VAL:O   | 27:BD:119:ALA:HB2  | 1.98                     | 0.63              |
| 27:BD:157:ARG:O   | 27:BD:158:ALA:O    | 2.17                     | 0.63              |
| 28:BE:5:LEU:HG    | 28:BE:25:VAL:HG13  | 1.80                     | 0.63              |
| 28:BE:198:VAL:C   | 28:BE:199:ARG:HD2  | 2.24                     | 0.63              |
| 29:BF:77:ASP:OD1  | 29:BF:80:ALA:HB2   | 1.98                     | 0.63              |
| 29:BF:201:VAL:O   | 29:BF:205:ARG:HG3  | 1.98                     | 0.63              |
| 31:BH:9:ILE:CD1   | 31:BH:73:ALA:HB2   | 2.29                     | 0.63              |
| 32:BK:2:LYS:HZ2   | 32:BK:44:LEU:HD21  | 1.63                     | 0.63              |
| 33:BL:7:VAL:HB    | 33:BL:56:GLU:OE1   | 1.98                     | 0.63              |
| 33:BL:134:MET:CE  | 33:BL:136:VAL:HG23 | 2.29                     | 0.63              |
| 34:BM:16:ILE:HD12 | 34:BM:16:ILE:H     | 1.63                     | 0.63              |
| 34:BM:25:ARG:HA   | 34:BM:28:THR:HG23  | 1.80                     | 0.63              |
| 34:BM:128:HIS:N   | 34:BM:129:PRO:CD   | 2.60                     | 0.63              |
| 35:BN:11:ALA:HB2  | 35:BN:17:ARG:NE    | 2.13                     | 0.63              |
| 36:BO:79:ARG:HA   | 36:BO:79:ARG:CZ    | 2.29                     | 0.63              |
| 37:BP:56:ARG:CZ   | 37:BP:57:HIS:CB    | 2.77                     | 0.63              |
| 37:BP:75:THR:CG2  | 37:BP:89:ASN:O     | 2.47                     | 0.63              |
| 38:BQ:11:ASN:CG   | 38:BQ:12:ARG:H     | 2.07                     | 0.63              |
| 38:BQ:73:VAL:HA   | 38:BQ:76:VAL:HB    | 1.81                     | 0.63              |
| 38:BQ:75:LEU:HA   | 38:BQ:78:LYS:CB    | 2.28                     | 0.63              |
| 40:BS:28:VAL:HG12 | 40:BS:29:ARG:O     | 1.98                     | 0.63              |
| 40:BS:35:LYS:O    | 40:BS:36:GLU:O     | 2.17                     | 0.63              |
| 41:BT:93:LYS:HB2  | 42:BU:10:LYS:CD    | 2.29                     | 0.63              |
| 43:BV:12:ILE:O    | 43:BV:13:SER:HB2   | 1.98                     | 0.63              |
| 46:BY:102:LEU:HG  | 46:BY:125:LEU:HG   | 1.80                     | 0.63              |
| 47:BZ:46:LYS:CG   | 47:BZ:78:TYR:CE2   | 2.78                     | 0.63              |
| 48:B1:50:ARG:O    | 48:B1:54:ARG:HG3   | 1.98                     | 0.63              |
| 49:B2:13:ILE:CG2  | 49:B2:14:GLY:H     | 1.99                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 54:B7:5:LYS:HD2    | 54:B7:63:PRO:HG2   | 1.79                     | 0.63              |
| 1:AA:36:C:N3       | 1:AA:37:U:O2       | 2.32                     | 0.63              |
| 1:AA:43:C:H2'      | 1:AA:44:G:C8       | 2.33                     | 0.63              |
| 1:AA:193:C:H2'     | 1:AA:194:C:C5      | 2.34                     | 0.63              |
| 1:AA:308:C:C2      | 1:AA:309:G:C8      | 2.86                     | 0.63              |
| 1:AA:579:G:C2'     | 1:AA:580:U:H5'     | 2.29                     | 0.63              |
| 1:AA:720:C:H2'     | 1:AA:721:G:C8      | 2.34                     | 0.63              |
| 1:AA:781:A:N6      | 1:AA:802:A:N3      | 2.47                     | 0.63              |
| 1:AA:922:G:O2'     | 1:AA:923:A:H5'     | 1.99                     | 0.63              |
| 1:AA:947:G:N3      | 1:AA:948:C:C6      | 2.67                     | 0.63              |
| 1:AA:992:U:H4'     | 1:AA:993:G:O5'     | 1.98                     | 0.63              |
| 1:AA:1028:C:H2'    | 1:AA:1028(A):C:H6  | 1.58                     | 0.63              |
| 1:AA:1202:G:N2     | 1:AA:1203:C:C1'    | 2.61                     | 0.63              |
| 1:AA:1216:G:H5''   | 16:AQ:5:ALA:CB     | 2.29                     | 0.63              |
| 1:AA:1419:G:O2'    | 1:AA:1420:C:O4'    | 2.17                     | 0.63              |
| 3:AD:16:U:O2'      | 3:AD:17:C:H4'      | 1.99                     | 0.63              |
| 3:AD:41:C:H5'      | 3:AD:41:C:C6       | 2.33                     | 0.63              |
| 4:AE:105:PHE:C     | 4:AE:107:THR:H     | 2.06                     | 0.63              |
| 4:AE:163:PHE:HE1   | 4:AE:201:ILE:HD13  | 1.64                     | 0.63              |
| 4:AE:169:LYS:C     | 4:AE:171:ALA:H     | 2.05                     | 0.63              |
| 5:AF:47:LEU:HD11   | 5:AF:83:ARG:NH2    | 2.14                     | 0.63              |
| 6:AG:57:ARG:NH2    | 7:AH:107:ARG:HD3   | 2.14                     | 0.63              |
| 6:AG:150:GLU:O     | 6:AG:152:SER:N     | 2.32                     | 0.63              |
| 7:AH:31:LEU:CD1    | 7:AH:129:ILE:HG23  | 2.18                     | 0.63              |
| 7:AH:56:GLN:NE2    | 7:AH:56:GLN:N      | 2.47                     | 0.63              |
| 10:AK:45:ILE:HG13  | 10:AK:47:GLY:H     | 1.62                     | 0.63              |
| 12:AM:12:ASP:O     | 12:AM:15:THR:HG22  | 1.98                     | 0.63              |
| 14:AO:91:LYS:O     | 14:AO:92:ASP:CB    | 2.47                     | 0.63              |
| 18:AS:12:LYS:HZ1   | 18:AS:13:HIS:CE1   | 2.16                     | 0.63              |
| 21:AV:36:ARG:HG3   | 21:AV:72:GLY:CA    | 2.27                     | 0.63              |
| 24:BA:270(U):C:H2' | 24:BA:270(V):G:C1' | 2.29                     | 0.63              |
| 24:BA:280:C:N4     | 24:BA:283:A:N6     | 2.44                     | 0.63              |
| 24:BA:351:G:O2'    | 24:BA:352:G:OP2    | 2.16                     | 0.63              |
| 24:BA:411:G:N2     | 24:BA:2408:U:H3    | 1.92                     | 0.63              |
| 24:BA:481:G:H1     | 24:BA:509:C:N4     | 1.95                     | 0.63              |
| 24:BA:576:U:C2     | 24:BA:577:G:N7     | 2.67                     | 0.63              |
| 24:BA:748:G:C5'    | 43:BV:88:ARG:NH1   | 2.59                     | 0.63              |
| 24:BA:861:A:N3     | 25:BB:79:C:O2'     | 2.31                     | 0.63              |
| 24:BA:861:A:N7     | 24:BA:917:A:H2     | 1.97                     | 0.63              |
| 24:BA:1063:G:N2    | 24:BA:1076:C:C6    | 2.62                     | 0.63              |
| 24:BA:1084:A:O2'   | 24:BA:1105:U:H1'   | 1.99                     | 0.63              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2130:U:H5''  | 24:BA:2131:G:OP1   | 1.98                     | 0.63              |
| 24:BA:2325:G:H2'   | 24:BA:2326:C:O4'   | 1.99                     | 0.63              |
| 24:BA:2741:A:H2'   | 24:BA:2742:C:O4'   | 1.98                     | 0.63              |
| 24:BA:2758:A:N6    | 24:BA:2759:G:O6    | 2.30                     | 0.63              |
| 24:BA:2789:C:HO2'  | 24:BA:2893:G:H22   | 1.45                     | 0.63              |
| 25:BB:83:G:N2      | 25:BB:84:C:N1      | 2.47                     | 0.63              |
| 27:BD:80:ALA:CB    | 27:BD:94:LEU:O     | 2.47                     | 0.63              |
| 29:BF:103:LYS:C    | 29:BF:106:ARG:HG2  | 2.24                     | 0.63              |
| 30:BG:128:ARG:NH1  | 30:BG:130:ASN:HD21 | 1.97                     | 0.63              |
| 31:BH:149:ARG:CG   | 31:BH:153:LYS:HD2  | 2.28                     | 0.63              |
| 32:BK:5:LEU:CB     | 32:BK:8:PRO:HD2    | 2.22                     | 0.63              |
| 32:BK:136:VAL:HG23 | 32:BK:136:VAL:O    | 1.97                     | 0.63              |
| 34:BM:17:ASP:OD1   | 34:BM:18:ALA:C     | 2.42                     | 0.63              |
| 34:BM:62:VAL:C     | 34:BM:64:GLY:H     | 2.07                     | 0.63              |
| 34:BM:97:ARG:O     | 34:BM:98:VAL:C     | 2.41                     | 0.63              |
| 35:BN:4:PRO:CG     | 35:BN:5:GLN:N      | 2.51                     | 0.63              |
| 35:BN:12:ASP:H     | 35:BN:14:THR:HG22  | 1.63                     | 0.63              |
| 37:BP:16:ARG:CG    | 37:BP:72:LYS:HD2   | 2.26                     | 0.63              |
| 37:BP:25:ASP:CB    | 37:BP:101:ARG:HD2  | 2.23                     | 0.63              |
| 37:BP:75:THR:OG1   | 37:BP:91:GLU:OE2   | 2.13                     | 0.63              |
| 37:BP:111:GLU:C    | 37:BP:113:GLN:N    | 2.55                     | 0.63              |
| 38:BQ:10:LEU:HB2   | 38:BQ:17:ARG:NH1   | 2.14                     | 0.63              |
| 38:BQ:54:LEU:HD12  | 38:BQ:54:LEU:H     | 1.64                     | 0.63              |
| 40:BS:6:LEU:HA     | 40:BS:9:LEU:HD12   | 1.80                     | 0.63              |
| 40:BS:68:TYR:CZ    | 40:BS:70:VAL:HG22  | 2.34                     | 0.63              |
| 42:BU:1:MET:O      | 42:BU:2:PHE:C      | 2.42                     | 0.63              |
| 42:BU:28:GLU:O     | 42:BU:30:GLY:N     | 2.32                     | 0.63              |
| 42:BU:40:LEU:CG    | 42:BU:55:ALA:N     | 2.52                     | 0.63              |
| 43:BV:25:ARG:HG2   | 43:BV:71:VAL:HG21  | 1.81                     | 0.63              |
| 45:BX:109:GLU:O    | 45:BX:110:GLU:C    | 2.42                     | 0.63              |
| 46:BY:177:PRO:HG2  | 46:BY:178:GLU:N    | 2.12                     | 0.63              |
| 48:B1:46:ARG:HE    | 48:B1:50:ARG:NH2   | 1.96                     | 0.63              |
| 52:B5:16:CYS:SG    | 52:B5:19:ARG:NE    | 2.72                     | 0.63              |
| 52:B5:28:ARG:O     | 52:B5:29:ASN:O     | 2.17                     | 0.63              |
| 1:AA:235:C:H2'     | 1:AA:236:G:H8      | 1.64                     | 0.62              |
| 1:AA:355:C:C1'     | 1:AA:388:G:H2'     | 2.24                     | 0.62              |
| 1:AA:453:A:H62     | 1:AA:480:U:H3      | 1.45                     | 0.62              |
| 1:AA:671:G:H2'     | 1:AA:672:U:O4'     | 1.99                     | 0.62              |
| 1:AA:689:C:H5''    | 1:AA:690:G:OP2     | 1.99                     | 0.62              |
| 1:AA:762:C:C2      | 1:AA:763:G:N7      | 2.67                     | 0.62              |
| 1:AA:778:G:H2'     | 1:AA:779:C:C6      | 2.34                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:795:C:H4'    | 1:AA:1506:U:O2    | 1.99                     | 0.62              |
| 1:AA:817:C:O2'    | 1:AA:818:G:P      | 2.57                     | 0.62              |
| 1:AA:962:C:H2'    | 1:AA:963:G:O4'    | 1.98                     | 0.62              |
| 1:AA:1016:A:H8    | 1:AA:1016:A:O5'   | 1.82                     | 0.62              |
| 1:AA:1132:C:C4    | 1:AA:1133:G:N7    | 2.67                     | 0.62              |
| 1:AA:1272:G:H2'   | 1:AA:1273:G:H8    | 1.65                     | 0.62              |
| 1:AA:1276:G:O2'   | 1:AA:1282:C:H4'   | 1.98                     | 0.62              |
| 1:AA:1339:A:O4'   | 3:AC:41:C:H5''    | 1.98                     | 0.62              |
| 3:AC:18:G:C6      | 3:AC:57:G:N1      | 2.67                     | 0.62              |
| 3:AC:53:G:O2'     | 3:AC:54:U:H5'     | 1.98                     | 0.62              |
| 3:AC:75:C:C3'     | 3:AC:76:A:O3'     | 2.47                     | 0.62              |
| 4:AE:169:LYS:HE2  | 4:AE:170:GLU:CA   | 2.28                     | 0.62              |
| 5:AF:59:ARG:HB2   | 5:AF:59:ARG:CZ    | 2.26                     | 0.62              |
| 5:AF:63:ASN:O     | 5:AF:99:VAL:HG12  | 1.99                     | 0.62              |
| 6:AG:24:GLU:CD    | 6:AG:25:ARG:N     | 2.56                     | 0.62              |
| 6:AG:94:LEU:O     | 6:AG:97:LEU:HB2   | 1.99                     | 0.62              |
| 7:AH:81:GLU:HB3   | 7:AH:90:VAL:CG2   | 2.28                     | 0.62              |
| 7:AH:105:VAL:HG22 | 7:AH:132:ALA:HB2  | 1.80                     | 0.62              |
| 8:AI:60:PHE:CE2   | 20:AU:78:LEU:HD11 | 2.34                     | 0.62              |
| 8:AI:89:MET:HE3   | 20:AU:76:LEU:HD21 | 1.81                     | 0.62              |
| 9:AJ:99:LEU:HD21  | 9:AJ:102:ARG:HD2  | 1.81                     | 0.62              |
| 10:AK:13:ILE:HG22 | 10:AK:14:ARG:H    | 1.58                     | 0.62              |
| 12:AM:48:THR:HG23 | 12:AM:61:GLU:O    | 1.98                     | 0.62              |
| 12:AM:79:ARG:NH2  | 12:AM:82:ILE:HD12 | 2.13                     | 0.62              |
| 13:AN:19:ALA:N    | 13:AN:80:VAL:HG21 | 2.14                     | 0.62              |
| 15:AP:14:ARG:CA   | 15:AP:44:ARG:HA   | 2.29                     | 0.62              |
| 15:AP:55:ARG:HH21 | 15:AP:56:LEU:HD11 | 1.64                     | 0.62              |
| 15:AP:121:LYS:HE3 | 15:AP:121:LYS:CA  | 2.29                     | 0.62              |
| 15:AP:121:LYS:HE3 | 15:AP:121:LYS:HA  | 1.80                     | 0.62              |
| 16:AQ:14:PRO:O    | 16:AQ:15:LYS:C    | 2.41                     | 0.62              |
| 16:AQ:24:CYS:HB3  | 16:AQ:28:GLY:O    | 1.98                     | 0.62              |
| 21:AV:22:LEU:HG   | 21:AV:25:LYS:NZ   | 2.11                     | 0.62              |
| 22:AW:51:GLU:O    | 22:AW:55:ILE:HG13 | 1.98                     | 0.62              |
| 23:AX:11:GLY:O    | 23:AX:15:ARG:HG2  | 1.99                     | 0.62              |
| 24:BA:6:A:O2'     | 24:BA:7:G:H5'     | 1.99                     | 0.62              |
| 24:BA:18:C:OP1    | 41:BT:26:GLY:CA   | 2.46                     | 0.62              |
| 24:BA:35:G:O4'    | 24:BA:454:A:H1'   | 1.99                     | 0.62              |
| 24:BA:95:G:H4'    | 48:B1:39:LEU:C    | 2.24                     | 0.62              |
| 24:BA:120:U:H1'   | 24:BA:149:A:N3    | 2.14                     | 0.62              |
| 24:BA:201:C:H2'   | 24:BA:202:U:C5'   | 2.28                     | 0.62              |
| 24:BA:252:G:N3    | 24:BA:253:C:C6    | 2.67                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:445:C:O3'    | 41:BT:3:ARG:HG2    | 1.99                     | 0.62              |
| 24:BA:515:A:C8     | 24:BA:515:A:H3'    | 2.33                     | 0.62              |
| 24:BA:602:G:H2'    | 24:BA:655:A:C2     | 2.34                     | 0.62              |
| 24:BA:642:G:H3'    | 24:BA:642:G:H8     | 1.64                     | 0.62              |
| 24:BA:742:G:C5'    | 24:BA:1675:C:O2'   | 2.47                     | 0.62              |
| 24:BA:772:C:C2     | 24:BA:773:U:C5     | 2.87                     | 0.62              |
| 24:BA:775:G:H21    | 24:BA:787:U:C2'    | 2.08                     | 0.62              |
| 24:BA:820:A:C2     | 24:BA:821:A:O4'    | 2.52                     | 0.62              |
| 24:BA:852:G:O4'    | 49:B2:42:ALA:HA    | 1.99                     | 0.62              |
| 24:BA:883:G:C2     | 24:BA:894:C:C2     | 2.87                     | 0.62              |
| 24:BA:1363:C:N4    | 50:B3:2:LYS:CE     | 2.58                     | 0.62              |
| 24:BA:1612:C:O3'   | 53:B6:5:TRP:CD1    | 2.52                     | 0.62              |
| 24:BA:1675:C:O2    | 24:BA:1676:A:O4'   | 2.17                     | 0.62              |
| 24:BA:1700:A:H3'   | 24:BA:1701:A:C8    | 2.29                     | 0.62              |
| 24:BA:1912:A:N7    | 24:BA:1918:A:N6    | 2.46                     | 0.62              |
| 24:BA:1933:G:N2    | 24:BA:1973:G:O2'   | 2.31                     | 0.62              |
| 24:BA:1966:A:C1'   | 24:BA:2593:U:H5'   | 2.25                     | 0.62              |
| 24:BA:2039:C:H2'   | 24:BA:2040:C:C6    | 2.34                     | 0.62              |
| 24:BA:2373:G:C2    | 24:BA:2374:C:C4    | 2.87                     | 0.62              |
| 24:BA:2458:G:H2'   | 24:BA:2460:U:C4    | 2.34                     | 0.62              |
| 25:BB:62:C:C2      | 25:BB:63:G:C8      | 2.87                     | 0.62              |
| 25:BB:90:C:H2'     | 25:BB:91:C:H6      | 1.64                     | 0.62              |
| 26:BC:30:LYS:HZ2   | 26:BC:182:PRO:HD3  | 1.63                     | 0.62              |
| 26:BC:64:LEU:HD12  | 26:BC:161:ILE:HG12 | 1.79                     | 0.62              |
| 26:BC:75:LEU:HB2   | 26:BC:110:PHE:CG   | 2.33                     | 0.62              |
| 27:BD:5:LYS:CD     | 27:BD:81:ALA:HB1   | 2.28                     | 0.62              |
| 27:BD:79:VAL:HB    | 27:BD:114:GLY:N    | 2.14                     | 0.62              |
| 27:BD:85:ASP:O     | 27:BD:87:ASN:N     | 2.31                     | 0.62              |
| 27:BD:119:ALA:HB2  | 27:BD:130:ALA:N    | 2.09                     | 0.62              |
| 27:BD:129:ASN:O    | 27:BD:193:VAL:CG2  | 2.47                     | 0.62              |
| 27:BD:208:LYS:HZ1  | 27:BD:211:ARG:HH21 | 1.47                     | 0.62              |
| 28:BE:131:ALA:HB1  | 28:BE:134:ILE:CG1  | 2.28                     | 0.62              |
| 29:BF:122:LYS:HE3  | 29:BF:192:LEU:CD1  | 2.24                     | 0.62              |
| 30:BG:53:LEU:O     | 30:BG:68:PRO:HB2   | 1.99                     | 0.62              |
| 30:BG:157:ILE:HG12 | 30:BG:158:ALA:H    | 1.63                     | 0.62              |
| 32:BK:31:LEU:HD22  | 32:BK:36:ALA:H     | 1.63                     | 0.62              |
| 33:BL:12:LEU:HD22  | 33:BL:23:VAL:HG23  | 1.81                     | 0.62              |
| 34:BM:4:TYR:HB2    | 41:BT:64:ARG:NH1   | 2.03                     | 0.62              |
| 34:BM:15:LEU:HD11  | 34:BM:137:LYS:HB3  | 1.81                     | 0.62              |
| 34:BM:34:LEU:HD23  | 34:BM:116:LEU:HD21 | 1.80                     | 0.62              |
| 34:BM:42:TRP:HE1   | 41:BT:64:ARG:HG2   | 1.64                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 36:BO:121:LYS:N   | 36:BO:122:PRO:CD   | 2.62                     | 0.62              |
| 37:BP:9:TYR:HD1   | 37:BP:10:ARG:HD3   | 1.63                     | 0.62              |
| 37:BP:77:LYS:HG2  | 37:BP:87:LYS:HA    | 1.81                     | 0.62              |
| 38:BQ:17:ARG:HB2  | 38:BQ:17:ARG:HH11  | 1.63                     | 0.62              |
| 39:BR:52:SER:HB3  | 39:BR:73:LEU:HD11  | 1.81                     | 0.62              |
| 41:BT:99:ALA:HB2  | 41:BT:106:PHE:CE1  | 2.34                     | 0.62              |
| 42:BU:68:LYS:NZ   | 42:BU:95:LEU:CD1   | 2.61                     | 0.62              |
| 46:BY:1:MET:SD    | 46:BY:59:LEU:O     | 2.57                     | 0.62              |
| 46:BY:175:VAL:CG2 | 46:BY:176:PRO:HD2  | 2.28                     | 0.62              |
| 49:B2:35:ARG:NH1  | 49:B2:47:VAL:HG22  | 2.13                     | 0.62              |
| 53:B6:10:ARG:C    | 53:B6:14:LYS:HG3   | 2.24                     | 0.62              |
| 1:AA:130:A:N6     | 19:AT:64:PRO:HG2   | 2.14                     | 0.62              |
| 1:AA:520:A:C8     | 1:AA:521:G:O4'     | 2.52                     | 0.62              |
| 1:AA:750:G:N3     | 17:AR:23:GLY:O     | 2.32                     | 0.62              |
| 1:AA:755:G:H2'    | 1:AA:756:C:C5      | 2.34                     | 0.62              |
| 1:AA:765:G:O2'    | 1:AA:766:A:C5'     | 2.42                     | 0.62              |
| 1:AA:818:G:O2'    | 1:AA:819:A:OP1     | 2.17                     | 0.62              |
| 1:AA:828:A:O4'    | 1:AA:859:A:H2      | 1.82                     | 0.62              |
| 1:AA:895:G:H2'    | 1:AA:896:C:C6      | 2.35                     | 0.62              |
| 1:AA:900:A:C5     | 1:AA:901:A:N7      | 2.68                     | 0.62              |
| 1:AA:1344:C:H5'   | 11:AL:120:ARG:O    | 1.98                     | 0.62              |
| 1:AA:1373:G:H5''  | 9:AJ:36:LYS:HB2    | 1.81                     | 0.62              |
| 1:AA:1505:G:H5''  | 1:AA:1506:U:O5'    | 1.99                     | 0.62              |
| 3:AC:2:C:H2'      | 3:AC:3:C:H6        | 1.62                     | 0.62              |
| 4:AE:9:GLU:HG2    | 4:AE:10:LEU:N      | 2.15                     | 0.62              |
| 4:AE:60:ASP:C     | 4:AE:64:ARG:NH1    | 2.57                     | 0.62              |
| 4:AE:70:PHE:CB    | 4:AE:163:PHE:O     | 2.47                     | 0.62              |
| 5:AF:108:ASN:ND2  | 5:AF:111:LEU:HD13  | 2.09                     | 0.62              |
| 5:AF:138:VAL:HG22 | 5:AF:151:VAL:HG21  | 1.81                     | 0.62              |
| 6:AG:78:LEU:O     | 6:AG:79:PHE:C      | 2.43                     | 0.62              |
| 8:AI:2:ARG:O      | 8:AI:67:MET:SD     | 2.57                     | 0.62              |
| 8:AI:22:GLU:O     | 8:AI:26:ILE:HG13   | 1.99                     | 0.62              |
| 8:AI:36:ARG:HB3   | 8:AI:36:ARG:CZ     | 2.28                     | 0.62              |
| 10:AK:5:PRO:C     | 10:AK:8:ASP:HB3    | 2.24                     | 0.62              |
| 11:AL:66:ARG:HG2  | 11:AL:67:GLY:N     | 2.15                     | 0.62              |
| 11:AL:109:VAL:O   | 11:AL:109:VAL:HG12 | 1.98                     | 0.62              |
| 11:AL:110:GLU:O   | 11:AL:111:ARG:HB2  | 1.98                     | 0.62              |
| 12:AM:7:LYS:HG3   | 12:AM:71:LEU:HD13  | 1.80                     | 0.62              |
| 14:AO:30:ALA:HB1  | 14:AO:31:PRO:HD2   | 1.80                     | 0.62              |
| 14:AO:65:GLU:O    | 14:AO:66:VAL:HG13  | 1.99                     | 0.62              |
| 15:AP:81:LEU:O    | 15:AP:86:CYS:SG    | 2.57                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 16:AQ:29:ARG:HH11  | 16:AQ:29:ARG:CB    | 2.06                     | 0.62              |
| 18:AS:6:LEU:CD2    | 18:AS:6:LEU:C      | 2.71                     | 0.62              |
| 19:AT:75:ARG:CZ    | 19:AT:77:VAL:HG22  | 2.29                     | 0.62              |
| 20:AU:47:THR:N     | 20:AU:49:LYS:HZ3   | 1.95                     | 0.62              |
| 22:AW:64:ASP:O     | 22:AW:65:LYS:C     | 2.41                     | 0.62              |
| 24:BA:116:C:H1'    | 24:BA:127:A:H1'    | 1.80                     | 0.62              |
| 24:BA:292:C:C6     | 24:BA:293:U:C4     | 2.86                     | 0.62              |
| 24:BA:464:U:O5'    | 24:BA:464:U:C6     | 2.50                     | 0.62              |
| 24:BA:469:G:OP2    | 29:BF:59:TYR:CE2   | 2.51                     | 0.62              |
| 24:BA:668:G:H2'    | 24:BA:670:A:N6     | 2.13                     | 0.62              |
| 24:BA:729:G:H5''   | 27:BD:211:ARG:HH12 | 1.63                     | 0.62              |
| 24:BA:748:G:N7     | 24:BA:750:A:C5     | 2.67                     | 0.62              |
| 24:BA:828:U:C6     | 24:BA:829:A:N7     | 2.68                     | 0.62              |
| 24:BA:959:A:H2'    | 24:BA:960:A:H8     | 1.62                     | 0.62              |
| 24:BA:987:G:O6     | 24:BA:988:A:C5     | 2.52                     | 0.62              |
| 24:BA:1069:A:H5'   | 24:BA:1070:A:H3'   | 1.80                     | 0.62              |
| 24:BA:1135:C:O2    | 24:BA:2038:G:H4'   | 2.00                     | 0.62              |
| 24:BA:1245:G:OP1   | 36:BO:15:ARG:HD2   | 1.99                     | 0.62              |
| 24:BA:1693:U:O2    | 24:BA:1693:U:H2'   | 1.99                     | 0.62              |
| 24:BA:1743:G:O6    | 24:BA:1746:G:C6    | 2.52                     | 0.62              |
| 24:BA:1894:C:O2'   | 24:BA:1895:C:H5'   | 1.99                     | 0.62              |
| 24:BA:1977:A:C2    | 24:BA:1978:A:N9    | 2.67                     | 0.62              |
| 24:BA:1997:G:N1    | 24:BA:1998:G:C6    | 2.67                     | 0.62              |
| 24:BA:2063:C:H2'   | 24:BA:2064:C:C4'   | 2.28                     | 0.62              |
| 24:BA:2122:U:C4'   | 26:BC:166:ASP:HB2  | 2.27                     | 0.62              |
| 24:BA:2219:G:H2'   | 24:BA:2224:G:O5'   | 2.00                     | 0.62              |
| 24:BA:2393:A:H5''  | 36:BO:56:SER:N     | 2.14                     | 0.62              |
| 24:BA:2637:U:OP2   | 24:BA:2637:U:C6    | 2.52                     | 0.62              |
| 24:BA:2720:U:O4    | 24:BA:2873:A:N6    | 2.33                     | 0.62              |
| 25:BB:30:C:C1'     | 25:BB:58:A:C2      | 2.82                     | 0.62              |
| 27:BD:5:LYS:HD3    | 27:BD:29:PRO:CB    | 2.24                     | 0.62              |
| 27:BD:5:LYS:HA     | 27:BD:28:GLU:HB2   | 1.80                     | 0.62              |
| 27:BD:55:GLY:H     | 27:BD:218:ARG:HD3  | 1.64                     | 0.62              |
| 27:BD:65:ILE:HG22  | 27:BD:66:ASP:N     | 2.13                     | 0.62              |
| 27:BD:76:PRO:HA    | 27:BD:118:VAL:HG21 | 1.81                     | 0.62              |
| 28:BE:179:GLU:C    | 28:BE:181:LEU:HG   | 2.24                     | 0.62              |
| 29:BF:12:LEU:O     | 29:BF:14:PRO:CD    | 2.46                     | 0.62              |
| 29:BF:152:GLU:O    | 29:BF:172:TRP:HA   | 1.98                     | 0.62              |
| 29:BF:162:LEU:HD22 | 29:BF:165:ARG:HH21 | 1.63                     | 0.62              |
| 30:BG:138:GLN:C    | 30:BG:140:ILE:H    | 2.05                     | 0.62              |
| 30:BG:139:LEU:HD13 | 30:BG:142:PRO:HB3  | 1.82                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 31:BH:74:ASN:O    | 31:BH:75:ALA:C    | 2.40                     | 0.62              |
| 34:BM:42:TRP:CD1  | 34:BM:42:TRP:H    | 2.17                     | 0.62              |
| 34:BM:87:LEU:O    | 34:BM:91:LEU:CG   | 2.47                     | 0.62              |
| 34:BM:104:LYS:O   | 34:BM:107:LEU:N   | 2.33                     | 0.62              |
| 37:BP:55:VAL:HG23 | 37:BP:64:ILE:HD11 | 1.81                     | 0.62              |
| 37:BP:75:THR:HA   | 37:BP:91:GLU:CG   | 2.29                     | 0.62              |
| 38:BQ:6:SER:OG    | 38:BQ:9:LYS:HE2   | 1.99                     | 0.62              |
| 38:BQ:8:ARG:NH2   | 38:BQ:17:ARG:HD2  | 2.14                     | 0.62              |
| 39:BR:64:GLU:C    | 39:BR:66:ALA:N    | 2.49                     | 0.62              |
| 42:BU:3:ALA:HA    | 42:BU:44:LYS:HZ3  | 1.64                     | 0.62              |
| 42:BU:69:LYS:HG2  | 42:BU:70:ILE:N    | 2.14                     | 0.62              |
| 44:BW:27:THR:HB   | 44:BW:80:ILE:CD1  | 2.26                     | 0.62              |
| 45:BX:13:VAL:HG13 | 45:BX:70:SER:CB   | 2.29                     | 0.62              |
| 46:BY:8:TYR:N     | 46:BY:8:TYR:CD1   | 2.64                     | 0.62              |
| 47:BZ:50:ASN:HB2  | 47:BZ:81:VAL:CG2  | 2.29                     | 0.62              |
| 50:B3:68:ARG:NH1  | 50:B3:68:ARG:CB   | 2.62                     | 0.62              |
| 51:B4:35:GLU:CB   | 51:B4:49:CYS:HB3  | 2.28                     | 0.62              |
| 1:AA:404:U:C4'    | 6:AG:122:ARG:NH1  | 2.62                     | 0.62              |
| 1:AA:527:G:C2     | 1:AA:528:C:C2     | 2.88                     | 0.62              |
| 1:AA:727:G:C8     | 1:AA:727:G:C3'    | 2.82                     | 0.62              |
| 1:AA:1187:G:H2'   | 1:AA:1188:A:H8    | 1.65                     | 0.62              |
| 1:AA:1210:C:O3'   | 1:AA:1214:C:N4    | 2.32                     | 0.62              |
| 1:AA:1394:A:HO2'  | 1:AA:1395:C:P     | 2.22                     | 0.62              |
| 1:AA:1425:U:O2'   | 1:AA:1426:C:H5'   | 1.97                     | 0.62              |
| 2:A1:8:U:H1'      | 4:AE:15:VAL:HG12  | 1.81                     | 0.62              |
| 4:AE:158:LEU:HB2  | 4:AE:160:ASP:OD2  | 1.99                     | 0.62              |
| 4:AE:200:ILE:O    | 4:AE:202:PRO:CD   | 2.47                     | 0.62              |
| 4:AE:224:GLN:HA   | 4:AE:229:VAL:HG22 | 1.81                     | 0.62              |
| 5:AF:17:ASP:HB3   | 5:AF:18:TRP:CE3   | 2.32                     | 0.62              |
| 5:AF:67:THR:HG22  | 5:AF:104:GLN:CG   | 2.24                     | 0.62              |
| 5:AF:178:LEU:O    | 5:AF:179:ARG:HB2  | 1.99                     | 0.62              |
| 5:AF:196:LEU:N    | 5:AF:196:LEU:HD23 | 2.14                     | 0.62              |
| 6:AG:162:LEU:CD1  | 6:AG:181:MET:HG2  | 2.25                     | 0.62              |
| 7:AH:86:ALA:O     | 7:AH:125:SER:CB   | 2.47                     | 0.62              |
| 8:AI:72:VAL:HG23  | 8:AI:73:ASN:N     | 2.11                     | 0.62              |
| 9:AJ:99:LEU:HD23  | 9:AJ:102:ARG:HB3  | 1.80                     | 0.62              |
| 10:AK:11:THR:O    | 10:AK:13:ILE:N    | 2.33                     | 0.62              |
| 12:AM:6:ILE:HG22  | 12:AM:98:ILE:HA   | 1.81                     | 0.62              |
| 13:AN:54:ARG:C    | 13:AN:56:GLY:H    | 2.07                     | 0.62              |
| 13:AN:73:MET:O    | 13:AN:75:TYR:N    | 2.32                     | 0.62              |
| 13:AN:78:GLN:O    | 13:AN:103:LEU:O   | 2.16                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 13:AN:79:SER:HA    | 13:AN:104:GLN:HG3  | 1.82                     | 0.62              |
| 15:AP:3:ARG:NH1    | 30:BG:113:ARG:O    | 2.33                     | 0.62              |
| 15:AP:10:PRO:CG    | 15:AP:18:ALA:HB1   | 2.28                     | 0.62              |
| 17:AR:5:LYS:HB2    | 17:AR:5:LYS:HZ2    | 1.62                     | 0.62              |
| 19:AT:21:VAL:CG2   | 19:AT:43:LEU:HA    | 2.29                     | 0.62              |
| 19:AT:104:LYS:HD3  | 19:AT:105:ALA:HB3  | 1.82                     | 0.62              |
| 20:AU:21:LYS:CE    | 20:AU:23:LYS:HB3   | 2.28                     | 0.62              |
| 21:AV:18:LYS:HA    | 21:AV:18:LYS:CE    | 2.22                     | 0.62              |
| 22:AW:48:LYS:HB3   | 22:AW:51:GLU:HG3   | 1.81                     | 0.62              |
| 24:BA:220:G:H21    | 24:BA:265:A:N6     | 1.97                     | 0.62              |
| 24:BA:233:A:H2'    | 24:BA:234:C:C5'    | 2.29                     | 0.62              |
| 24:BA:270(C):C:OP2 | 24:BA:365:C:O2'    | 2.16                     | 0.62              |
| 24:BA:270(I):G:H2' | 24:BA:270(J):G:O4' | 1.99                     | 0.62              |
| 24:BA:295:G:C1'    | 24:BA:345:A:H2     | 2.12                     | 0.62              |
| 24:BA:321:G:H4'    | 29:BF:165:ARG:O    | 1.98                     | 0.62              |
| 24:BA:458:G:H2'    | 53:B6:40:TRP:NE1   | 2.15                     | 0.62              |
| 24:BA:498:G:H2'    | 24:BA:499:U:H5'    | 1.81                     | 0.62              |
| 24:BA:514:A:H2     | 24:BA:515:A:C1'    | 2.11                     | 0.62              |
| 24:BA:520:G:O2'    | 24:BA:521:G:H5'    | 2.00                     | 0.62              |
| 24:BA:592:G:H3'    | 24:BA:593:G:O4'    | 1.98                     | 0.62              |
| 24:BA:619:G:O6     | 29:BF:103:LYS:NZ   | 2.23                     | 0.62              |
| 24:BA:702:G:C2     | 24:BA:731:C:N3     | 2.67                     | 0.62              |
| 24:BA:989:G:H2'    | 24:BA:990:A:OP2    | 1.99                     | 0.62              |
| 24:BA:1000:A:H61   | 24:BA:1155:A:C5'   | 2.12                     | 0.62              |
| 24:BA:1241:A:H5''  | 24:BA:1241:A:C4    | 2.28                     | 0.62              |
| 24:BA:1249:U:N3    | 36:BO:21:ARG:NH1   | 2.47                     | 0.62              |
| 24:BA:1299:G:N1    | 24:BA:1639:U:H3'   | 2.13                     | 0.62              |
| 24:BA:1342:A:C2'   | 24:BA:1345:C:N4    | 2.52                     | 0.62              |
| 24:BA:1797:C:H2'   | 24:BA:1798:U:H6    | 1.63                     | 0.62              |
| 24:BA:1799:G:O2'   | 24:BA:1800:C:O5'   | 2.17                     | 0.62              |
| 24:BA:2009:G:C6    | 24:BA:2010:G:N7    | 2.66                     | 0.62              |
| 24:BA:2063:C:H3'   | 24:BA:2064:C:C5'   | 2.21                     | 0.62              |
| 24:BA:2530:A:C2'   | 24:BA:2531:A:H5''  | 2.30                     | 0.62              |
| 24:BA:2537:U:H2'   | 24:BA:2538:C:C5    | 2.34                     | 0.62              |
| 24:BA:2571:C:C1'   | 28:BE:146:THR:HG23 | 2.28                     | 0.62              |
| 24:BA:2620:C:OP1   | 28:BE:153:GLY:HA2  | 1.98                     | 0.62              |
| 24:BA:2644:G:N1    | 24:BA:2645:G:N2    | 2.47                     | 0.62              |
| 25:BB:12:C:H5''    | 47:BZ:74:ARG:CG    | 2.27                     | 0.62              |
| 25:BB:57:A:H3'     | 25:BB:57:A:C8      | 2.34                     | 0.62              |
| 25:BB:77:U:OP1     | 46:BY:19:ARG:NH1   | 2.32                     | 0.62              |
| 26:BC:54:SER:HA    | 26:BC:57:ASN:HD22  | 1.64                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 26:BC:71:GLN:HG3   | 26:BC:72:VAL:N     | 2.13                     | 0.62              |
| 26:BC:86:ALA:CB    | 26:BC:149:ILE:HG12 | 2.29                     | 0.62              |
| 26:BC:175:VAL:HA   | 26:BC:188:ASN:HD22 | 1.62                     | 0.62              |
| 28:BE:151:TYR:CE1  | 28:BE:153:GLY:N    | 2.67                     | 0.62              |
| 29:BF:34:TRP:O     | 29:BF:37:VAL:HB    | 1.99                     | 0.62              |
| 30:BG:120:LEU:CD2  | 30:BG:181:ARG:HG2  | 2.29                     | 0.62              |
| 31:BH:84:SER:CA    | 31:BH:134:SER:HA   | 2.25                     | 0.62              |
| 31:BH:127:GLU:HG3  | 31:BH:130:ARG:CB   | 2.28                     | 0.62              |
| 31:BH:127:GLU:CB   | 31:BH:130:ARG:H    | 2.13                     | 0.62              |
| 32:BK:21:VAL:O     | 32:BK:26:ALA:N     | 2.31                     | 0.62              |
| 32:BK:101:LEU:HD23 | 32:BK:101:LEU:H    | 1.64                     | 0.62              |
| 33:BL:98:ARG:NH1   | 33:BL:139:VAL:HG21 | 2.14                     | 0.62              |
| 33:BL:111:LYS:O    | 33:BL:113:PRO:HD2  | 1.99                     | 0.62              |
| 33:BL:115:LEU:CD1  | 33:BL:118:THR:HA   | 2.30                     | 0.62              |
| 34:BM:22:THR:HG22  | 34:BM:61:ARG:CZ    | 2.29                     | 0.62              |
| 34:BM:95:PRO:HA    | 34:BM:98:VAL:CG2   | 2.29                     | 0.62              |
| 36:BO:116:GLY:C    | 36:BO:121:LYS:HB3  | 2.24                     | 0.62              |
| 36:BO:134:ALA:O    | 36:BO:135:LEU:C    | 2.39                     | 0.62              |
| 37:BP:116:GLU:O    | 37:BP:119:ARG:HB2  | 2.00                     | 0.62              |
| 39:BR:68:GLN:O     | 39:BR:69:VAL:C     | 2.42                     | 0.62              |
| 40:BS:28:VAL:HG22  | 40:BS:93:ARG:C     | 2.25                     | 0.62              |
| 45:BX:7:VAL:HG22   | 45:BX:71:LYS:CG    | 2.28                     | 0.62              |
| 45:BX:96:ILE:HD12  | 45:BX:96:ILE:N     | 2.14                     | 0.62              |
| 46:BY:41:LEU:O     | 46:BY:42:VAL:C     | 2.42                     | 0.62              |
| 46:BY:73:GLN:O     | 46:BY:87:ASP:CB    | 2.48                     | 0.62              |
| 49:B2:6:VAL:HB     | 49:B2:54:VAL:HG21  | 1.81                     | 0.62              |
| 50:B3:48:ARG:N     | 50:B3:52:THR:OG1   | 2.31                     | 0.62              |
| 51:B4:12:SER:HB3   | 51:B4:14:ALA:HB3   | 1.82                     | 0.62              |
| 51:B4:51:TYR:HD1   | 51:B4:55:ARG:N     | 1.97                     | 0.62              |
| 53:B6:36:GLN:NE2   | 53:B6:36:GLN:HA    | 2.14                     | 0.62              |
| 1:AA:86:U:H2'      | 1:AA:87:A:H5'      | 1.82                     | 0.62              |
| 1:AA:177:C:N3      | 1:AA:178:C:C5      | 2.68                     | 0.62              |
| 1:AA:375:U:O2'     | 18:AS:6:LEU:CD2    | 2.48                     | 0.62              |
| 1:AA:438:G:H2'     | 1:AA:494:U:O4      | 1.98                     | 0.62              |
| 1:AA:520:A:N6      | 1:AA:529:G:C2      | 2.67                     | 0.62              |
| 1:AA:710:G:O2'     | 1:AA:711:G:H5'     | 1.99                     | 0.62              |
| 1:AA:826:C:H5'     | 10:AK:12:ARG:NE    | 2.15                     | 0.62              |
| 1:AA:851:G:C2      | 1:AA:852:G:H1'     | 2.35                     | 0.62              |
| 1:AA:1021:G:H2'    | 1:AA:1022:G:O4'    | 2.00                     | 0.62              |
| 1:AA:1329:A:C5'    | 15:AP:29:ARG:NE    | 2.63                     | 0.62              |
| 3:AC:30:G:H2'      | 3:AC:31:A:O4'      | 1.99                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 4:AE:91:PRO:CG     | 4:AE:154:LEU:HB3   | 2.22                     | 0.62              |
| 4:AE:115:LEU:HB2   | 4:AE:145:LEU:CD2   | 2.30                     | 0.62              |
| 6:AG:8:VAL:CG1     | 6:AG:11:LEU:HD12   | 2.29                     | 0.62              |
| 6:AG:18:LYS:C      | 6:AG:20:TYR:H      | 2.06                     | 0.62              |
| 6:AG:61:LYS:CA     | 6:AG:203:VAL:HG22  | 2.29                     | 0.62              |
| 6:AG:146:ILE:HD12  | 6:AG:146:ILE:H     | 1.64                     | 0.62              |
| 6:AG:181:MET:O     | 6:AG:181:MET:HE2   | 1.99                     | 0.62              |
| 7:AH:28:PHE:HE1    | 7:AH:49:PRO:C      | 2.06                     | 0.62              |
| 8:AI:46:ARG:HH22   | 20:AU:37:VAL:HG22  | 1.64                     | 0.62              |
| 8:AI:52:ILE:HG21   | 8:AI:87:ARG:CZ     | 2.30                     | 0.62              |
| 10:AK:5:PRO:O      | 10:AK:6:ILE:C      | 2.42                     | 0.62              |
| 10:AK:79:VAL:HB    | 10:AK:80:ILE:HD12  | 1.80                     | 0.62              |
| 10:AK:87:SER:HB3   | 10:AK:93:VAL:HG23  | 1.81                     | 0.62              |
| 10:AK:112:LEU:HD12 | 10:AK:131:GLY:C    | 2.24                     | 0.62              |
| 11:AL:26:VAL:HG22  | 11:AL:61:ALA:HB3   | 1.81                     | 0.62              |
| 11:AL:97:LYS:HZ2   | 11:AL:102:LEU:HB3  | 1.64                     | 0.62              |
| 11:AL:98:PRO:C     | 11:AL:100:GLY:N    | 2.49                     | 0.62              |
| 12:AM:31:GLY:HA3   | 12:AM:74:ILE:CG2   | 2.29                     | 0.62              |
| 12:AM:60:ARG:HB2   | 12:AM:60:ARG:CZ    | 2.29                     | 0.62              |
| 12:AM:79:ARG:NH1   | 12:AM:82:ILE:HB    | 2.14                     | 0.62              |
| 13:AN:92:GLU:O     | 13:AN:94:ALA:N     | 2.32                     | 0.62              |
| 14:AO:33:ARG:CG    | 14:AO:60:LEU:HD23  | 2.29                     | 0.62              |
| 15:AP:60:VAL:HG13  | 15:AP:64:TRP:HB2   | 1.80                     | 0.62              |
| 16:AQ:48:ALA:CA    | 16:AQ:53:LEU:HD12  | 2.29                     | 0.62              |
| 18:AS:19:ILE:HB    | 18:AS:37:GLY:C     | 2.23                     | 0.62              |
| 18:AS:53:VAL:HG23  | 18:AS:54:GLU:N     | 2.14                     | 0.62              |
| 24:BA:5:A:H2'      | 24:BA:6:A:H8       | 1.63                     | 0.62              |
| 24:BA:182:A:C2     | 24:BA:183:C:C2     | 2.87                     | 0.62              |
| 24:BA:213:A:C2'    | 24:BA:214:G:H5'    | 2.29                     | 0.62              |
| 24:BA:244:A:O3'    | 36:BO:65:ARG:NH2   | 2.32                     | 0.62              |
| 24:BA:270(E):G:H2' | 24:BA:270(F):U:C6  | 2.34                     | 0.62              |
| 24:BA:270(X):G:H4' | 24:BA:272:G:O3'    | 1.99                     | 0.62              |
| 24:BA:363(D):G:O2' | 24:BA:363(E):U:H5' | 2.00                     | 0.62              |
| 24:BA:593:G:C6     | 24:BA:594:U:C4     | 2.87                     | 0.62              |
| 24:BA:637:A:H2     | 24:BA:651:G:C5'    | 2.13                     | 0.62              |
| 24:BA:669:G:N3     | 24:BA:669:G:C2'    | 2.59                     | 0.62              |
| 24:BA:685:A:O4'    | 24:BA:774:A:N6     | 2.32                     | 0.62              |
| 24:BA:729:G:OP1    | 27:BD:13:ARG:NH1   | 2.30                     | 0.62              |
| 24:BA:915:C:H2'    | 24:BA:916:G:C8     | 2.33                     | 0.62              |
| 24:BA:942:G:H5'    | 36:BO:32:THR:CG2   | 2.29                     | 0.62              |
| 24:BA:1075:C:O2'   | 33:BL:90:LYS:NZ    | 2.31                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1223:C:C2   | 24:BA:1227:A:C2    | 2.87                     | 0.62              |
| 24:BA:1449:A:C8   | 24:BA:1529:A:N1    | 2.67                     | 0.62              |
| 24:BA:1528:A:C8   | 24:BA:1529:A:C2    | 2.87                     | 0.62              |
| 24:BA:1798:U:H5'  | 24:BA:1803:A:H4'   | 1.81                     | 0.62              |
| 24:BA:1824:G:C2   | 24:BA:1825:A:H1'   | 2.32                     | 0.62              |
| 24:BA:1916:A:C2   | 24:BA:1917:U:O4    | 2.52                     | 0.62              |
| 24:BA:1925:C:O2'  | 24:BA:1926:U:H5'   | 1.99                     | 0.62              |
| 24:BA:1971:A:C2   | 27:BD:239:ARG:HA   | 2.34                     | 0.62              |
| 24:BA:2392:A:H2'  | 24:BA:2393:A:C5'   | 2.29                     | 0.62              |
| 24:BA:2413:G:C2   | 24:BA:2414:G:H1'   | 2.34                     | 0.62              |
| 24:BA:2482:G:H2'  | 24:BA:2483:C:H5'   | 1.81                     | 0.62              |
| 24:BA:2519:U:C5'  | 24:BA:2520:C:OP1   | 2.46                     | 0.62              |
| 24:BA:2533:A:H2'  | 24:BA:2534:A:C8    | 2.33                     | 0.62              |
| 24:BA:2654:A:H4'  | 24:BA:2656:U:H5    | 1.64                     | 0.62              |
| 24:BA:2720:U:C2   | 24:BA:2721:A:C8    | 2.87                     | 0.62              |
| 25:BB:25:A:H2'    | 25:BB:26:A:O4'     | 1.98                     | 0.62              |
| 25:BB:76:G:P      | 46:BY:11:GLU:HA    | 2.39                     | 0.62              |
| 25:BB:100:G:C4    | 25:BB:101:A:N7     | 2.68                     | 0.62              |
| 26:BC:10:LEU:HD13 | 26:BC:32:LEU:O     | 1.98                     | 0.62              |
| 26:BC:62:VAL:CB   | 26:BC:195:ALA:HB2  | 2.29                     | 0.62              |
| 26:BC:161:ILE:CG2 | 26:BC:174:PRO:HG2  | 2.29                     | 0.62              |
| 27:BD:5:LYS:CB    | 27:BD:82:ILE:HD12  | 2.29                     | 0.62              |
| 27:BD:7:LYS:HZ2   | 27:BD:91:ARG:HD2   | 1.64                     | 0.62              |
| 27:BD:8:PRO:O     | 27:BD:25:THR:HG23  | 2.00                     | 0.62              |
| 27:BD:267:SER:O   | 27:BD:268:ARG:O    | 2.18                     | 0.62              |
| 28:BE:119:ARG:NH2 | 28:BE:155:LYS:HB3  | 2.13                     | 0.62              |
| 30:BG:107:LEU:CD2 | 30:BG:173:LEU:HD21 | 2.29                     | 0.62              |
| 30:BG:173:LEU:HG  | 30:BG:173:LEU:O    | 1.98                     | 0.62              |
| 31:BH:119:GLU:C   | 31:BH:121:ILE:N    | 2.55                     | 0.62              |
| 32:BK:38:LEU:HD22 | 32:BK:39:ALA:H     | 1.63                     | 0.62              |
| 38:BQ:102:GLU:CG  | 38:BQ:103:ARG:N    | 2.62                     | 0.62              |
| 39:BR:39:ILE:O    | 39:BR:47:THR:HG23  | 2.00                     | 0.62              |
| 40:BS:28:VAL:HG13 | 40:BS:92:GLY:CA    | 2.29                     | 0.62              |
| 41:BT:87:GLY:C    | 41:BT:89:GLU:H     | 2.06                     | 0.62              |
| 41:BT:108:GLU:CD  | 41:BT:109:LEU:H    | 2.06                     | 0.62              |
| 42:BU:36:PRO:CA   | 42:BU:60:GLU:O     | 2.43                     | 0.62              |
| 43:BV:74:ALA:HB1  | 43:BV:105:VAL:HA   | 1.80                     | 0.62              |
| 45:BX:1:MET:HG3   | 45:BX:67:LEU:HD22  | 1.80                     | 0.62              |
| 45:BX:19:LYS:HB3  | 45:BX:21:LYS:HG2   | 1.81                     | 0.62              |
| 45:BX:33:LYS:O    | 45:BX:34:LYS:C     | 2.42                     | 0.62              |
| 45:BX:95:LYS:HG3  | 45:BX:103:GLY:HA2  | 1.81                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 46:BY:39:VAL:HG13  | 46:BY:44:PHE:CE2  | 2.34                     | 0.62              |
| 46:BY:94:GLU:N     | 46:BY:95:PRO:HD3  | 1.97                     | 0.62              |
| 50:B3:33:VAL:HG12  | 50:B3:35:VAL:HG23 | 1.82                     | 0.62              |
| 52:B5:45:LYS:O     | 52:B5:46:HIS:HB3  | 1.98                     | 0.62              |
| 54:B7:9:GLY:O      | 54:B7:14:VAL:HB   | 1.98                     | 0.62              |
| 54:B7:49:VAL:O     | 54:B7:53:PRO:CG   | 2.47                     | 0.62              |
| 1:AA:56:U:H2'      | 1:AA:57:G:H8      | 1.64                     | 0.62              |
| 1:AA:68:G:O4'      | 1:AA:171:A:H1'    | 1.99                     | 0.62              |
| 1:AA:228:A:H2'     | 1:AA:229:U:C5'    | 2.28                     | 0.62              |
| 1:AA:257:G:O2'     | 1:AA:258:G:H5'    | 1.99                     | 0.62              |
| 1:AA:373:A:O2'     | 1:AA:374:A:H5'    | 1.99                     | 0.62              |
| 1:AA:376:G:H2'     | 1:AA:377:G:C8     | 2.26                     | 0.62              |
| 1:AA:376:G:H5''    | 18:AS:5:ARG:HD2   | 1.80                     | 0.62              |
| 1:AA:523:A:O5'     | 1:AA:523:A:H8     | 1.81                     | 0.62              |
| 1:AA:873:A:OP1     | 1:AA:873:A:C8     | 2.52                     | 0.62              |
| 1:AA:933:G:N7      | 9:AJ:3:ARG:NH2    | 2.46                     | 0.62              |
| 1:AA:1194:U:H2'    | 1:AA:1195:C:O4'   | 1.99                     | 0.62              |
| 1:AA:1271:G:OP1    | 1:AA:1314:C:C5'   | 2.45                     | 0.62              |
| 3:AD:3:C:H2'       | 3:AD:4:C:H6       | 1.62                     | 0.62              |
| 3:AB:10:G:H2'      | 3:AB:11:C:C6      | 2.33                     | 0.62              |
| 4:AE:101:MET:HB3   | 4:AE:108:ILE:HG13 | 1.80                     | 0.62              |
| 4:AE:118:LEU:HD22  | 4:AE:142:LEU:HD12 | 1.82                     | 0.62              |
| 5:AF:10:PHE:HB3    | 5:AF:11:ARG:HE    | 1.64                     | 0.62              |
| 6:AG:26:CYS:O      | 6:AG:31:CYS:SG    | 2.57                     | 0.62              |
| 6:AG:170:VAL:N     | 6:AG:176:LEU:HD22 | 2.10                     | 0.62              |
| 6:AG:196:LEU:HD12  | 6:AG:196:LEU:O    | 2.00                     | 0.62              |
| 8:AI:44:GLY:HA2    | 8:AI:59:TYR:CZ    | 2.34                     | 0.62              |
| 8:AI:94:GLN:HB3    | 20:AU:32:ARG:NH2  | 2.14                     | 0.62              |
| 9:AJ:113:GLU:OE1   | 9:AJ:118:VAL:C    | 2.42                     | 0.62              |
| 10:AK:11:THR:C     | 10:AK:13:ILE:N    | 2.56                     | 0.62              |
| 12:AM:75:ILE:HG22  | 12:AM:76:ASN:H    | 1.64                     | 0.62              |
| 16:AQ:27:CYS:H     | 16:AQ:43:CYS:CB   | 2.11                     | 0.62              |
| 17:AR:45:VAL:O     | 17:AR:45:VAL:HG12 | 1.99                     | 0.62              |
| 19:AT:31:LEU:C     | 19:AT:32:TYR:HD2  | 2.05                     | 0.62              |
| 19:AT:80:GLY:O     | 19:AT:82:MET:N    | 2.32                     | 0.62              |
| 19:AT:99:SER:C     | 19:AT:100:LYS:HG2 | 2.24                     | 0.62              |
| 23:AX:9:ARG:NH1    | 23:AX:21:TYR:HD2  | 1.96                     | 0.62              |
| 24:BA:13:A:H61     | 24:BA:525:U:H2'   | 1.63                     | 0.62              |
| 24:BA:197:A:C2     | 24:BA:198:C:C1'   | 2.82                     | 0.62              |
| 24:BA:247:G:HO2'   | 24:BA:386:G:H1    | 1.43                     | 0.62              |
| 24:BA:270(C):C:OP1 | 24:BA:365:C:H1'   | 1.99                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:404:C:H5'   | 24:BA:406:G:C1'    | 2.28                     | 0.62              |
| 24:BA:460:A:H2'   | 24:BA:461:C:C6     | 2.33                     | 0.62              |
| 24:BA:541:C:C2    | 24:BA:542:C:C5     | 2.86                     | 0.62              |
| 24:BA:565:C:O2'   | 24:BA:1252:G:N7    | 2.33                     | 0.62              |
| 24:BA:570:G:H22   | 24:BA:2498:C:C1'   | 2.12                     | 0.62              |
| 24:BA:666:G:H5'   | 54:B7:59:LYS:HZ1   | 1.63                     | 0.62              |
| 24:BA:744:G:N2    | 24:BA:754:C:C2     | 2.67                     | 0.62              |
| 24:BA:798:G:OP1   | 29:BF:58:ALA:O     | 2.18                     | 0.62              |
| 24:BA:808:G:H2'   | 24:BA:809:G:O4'    | 1.99                     | 0.62              |
| 24:BA:942:G:C2    | 24:BA:943:U:N3     | 2.67                     | 0.62              |
| 24:BA:949:C:C2    | 24:BA:950:G:C8     | 2.88                     | 0.62              |
| 24:BA:987:G:OP2   | 49:B2:13:ILE:CD1   | 2.47                     | 0.62              |
| 24:BA:1020:A:H5'' | 24:BA:1021:A:OP1   | 1.99                     | 0.62              |
| 24:BA:1130:U:O2'  | 24:BA:1131:G:OP1   | 2.18                     | 0.62              |
| 24:BA:1131:G:N2   | 34:BM:72:TYR:HE1   | 1.97                     | 0.62              |
| 24:BA:1195:G:H2'  | 24:BA:1226:G:N2    | 2.14                     | 0.62              |
| 24:BA:1213:A:H1'  | 24:BA:1238:G:H1'   | 1.80                     | 0.62              |
| 24:BA:1263:U:H5'' | 51:B4:10:LYS:HZ2   | 1.63                     | 0.62              |
| 24:BA:1418:G:H5'  | 24:BA:1587:A:O2'   | 2.00                     | 0.62              |
| 24:BA:1429:G:H3'  | 24:BA:1430:C:C6    | 2.32                     | 0.62              |
| 24:BA:1471:A:H2'  | 24:BA:1472:A:C5'   | 2.29                     | 0.62              |
| 24:BA:1602:U:H2'  | 24:BA:1603:A:C5'   | 2.28                     | 0.62              |
| 24:BA:1689:A:N7   | 24:BA:1700:A:C5    | 2.67                     | 0.62              |
| 24:BA:1848:A:H2'  | 24:BA:1849:G:O4'   | 1.99                     | 0.62              |
| 24:BA:2043:C:C4   | 24:BA:2777:G:N3    | 2.67                     | 0.62              |
| 24:BA:2284:C:H5'' | 52:B5:9:LEU:HD21   | 1.81                     | 0.62              |
| 24:BA:2499:C:H2'  | 24:BA:2499:C:O2    | 1.98                     | 0.62              |
| 24:BA:2653:U:H3'  | 24:BA:2654:A:C8    | 2.34                     | 0.62              |
| 24:BA:2720:U:H2'  | 24:BA:2721:A:H8    | 1.65                     | 0.62              |
| 25:BB:14:U:H1'    | 25:BB:107:U:O4'    | 2.00                     | 0.62              |
| 25:BB:117:G:N3    | 25:BB:117:G:H2'    | 2.13                     | 0.62              |
| 27:BD:158:ALA:C   | 27:BD:160:GLY:N    | 2.57                     | 0.62              |
| 27:BD:259:THR:CG2 | 27:BD:260:ARG:HH12 | 2.13                     | 0.62              |
| 28:BE:13:ARG:HD2  | 28:BE:20:ALA:O     | 2.00                     | 0.62              |
| 28:BE:53:PRO:HG3  | 28:BE:75:VAL:HG21  | 1.81                     | 0.62              |
| 29:BF:74:ARG:CD   | 29:BF:75:HIS:H     | 2.12                     | 0.62              |
| 29:BF:104:LYS:CG  | 29:BF:108:LYS:HZ1  | 2.04                     | 0.62              |
| 29:BF:183:VAL:CA  | 29:BF:186:ILE:HD12 | 2.25                     | 0.62              |
| 30:BG:47:LYS:HD3  | 30:BG:72:ARG:O     | 1.99                     | 0.62              |
| 30:BG:68:PRO:HG3  | 30:BG:90:LEU:CD2   | 2.29                     | 0.62              |
| 30:BG:134:GLY:O   | 30:BG:155:MET:O    | 2.17                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 31:BH:7:LEU:N     | 31:BH:7:LEU:HD23  | 2.14                     | 0.62              |
| 31:BH:13:LYS:HG3  | 31:BH:15:VAL:N    | 2.14                     | 0.62              |
| 31:BH:44:VAL:O    | 31:BH:50:VAL:HA   | 2.00                     | 0.62              |
| 31:BH:84:SER:HA   | 31:BH:134:SER:CA  | 2.25                     | 0.62              |
| 31:BH:127:GLU:CG  | 31:BH:130:ARG:HB2 | 2.29                     | 0.62              |
| 34:BM:12:ARG:HD2  | 34:BM:50:ASP:HA   | 1.81                     | 0.62              |
| 34:BM:55:VAL:C    | 34:BM:57:ALA:H    | 2.07                     | 0.62              |
| 35:BN:35:VAL:CA   | 35:BN:61:VAL:HG11 | 2.29                     | 0.62              |
| 36:BO:122:PRO:HB3 | 36:BO:134:ALA:O   | 2.00                     | 0.62              |
| 38:BQ:77:ARG:O    | 38:BQ:78:LYS:C    | 2.42                     | 0.62              |
| 41:BT:47:TYR:O    | 41:BT:51:LYS:HG3  | 1.99                     | 0.62              |
| 41:BT:83:LEU:O    | 41:BT:90:VAL:HG22 | 1.98                     | 0.62              |
| 41:BT:97:ASP:HB3  | 41:BT:101:ARG:CZ  | 2.28                     | 0.62              |
| 42:BU:67:GLY:N    | 42:BU:94:LEU:HA   | 2.15                     | 0.62              |
| 42:BU:69:LYS:HE2  | 42:BU:70:ILE:HD11 | 1.79                     | 0.62              |
| 45:BX:26:LYS:O    | 45:BX:27:VAL:HG23 | 1.97                     | 0.62              |
| 45:BX:83:THR:O    | 45:BX:94:LYS:HA   | 2.00                     | 0.62              |
| 46:BY:48:PHE:CB   | 46:BY:54:HIS:HE1  | 2.13                     | 0.62              |
| 48:B1:20:VAL:HG22 | 48:B1:24:LYS:HE3  | 1.81                     | 0.62              |
| 50:B3:35:VAL:HG12 | 50:B3:36:CYS:N    | 2.14                     | 0.62              |
| 53:B6:8:ASN:ND2   | 53:B6:10:ARG:HB2  | 2.14                     | 0.62              |
| 55:B8:20:HIS:O    | 55:B8:22:ARG:HG2  | 1.99                     | 0.62              |
| 1:AA:116:A:H8     | 1:AA:116:A:O5'    | 1.83                     | 0.62              |
| 1:AA:255:G:C4'    | 19:AT:16:GLN:O    | 2.44                     | 0.62              |
| 1:AA:273:A:H1'    | 19:AT:16:GLN:OE1  | 2.00                     | 0.62              |
| 1:AA:301:G:N2     | 1:AA:302:G:C4     | 2.67                     | 0.62              |
| 1:AA:362:G:H4'    | 14:AO:28:LYS:HZ2  | 1.65                     | 0.62              |
| 1:AA:607:A:O2'    | 1:AA:608:A:H5'    | 1.99                     | 0.62              |
| 1:AA:706:A:H4'    | 13:AN:29:ILE:CD1  | 2.30                     | 0.62              |
| 1:AA:937:A:N7     | 1:AA:938:A:N7     | 2.48                     | 0.62              |
| 1:AA:971:G:P      | 1:AA:1231:G:H21   | 2.23                     | 0.62              |
| 1:AA:1193:G:H2'   | 1:AA:1194:U:O5'   | 1.99                     | 0.62              |
| 1:AA:1228:C:OP1   | 15:AP:115:LYS:N   | 2.32                     | 0.62              |
| 1:AA:1278:U:OP1   | 1:AA:1279:A:H4'   | 1.99                     | 0.62              |
| 1:AA:1305:G:H21   | 1:AA:1331:G:H2'   | 1.64                     | 0.62              |
| 1:AA:1357:A:O5'   | 1:AA:1357:A:H8    | 1.83                     | 0.62              |
| 1:AA:1381:U:H2'   | 1:AA:1382:C:H5'   | 1.81                     | 0.62              |
| 3:AC:36:A:H61     | 3:AC:37:A:N6      | 1.98                     | 0.62              |
| 3:AD:18:G:N3      | 3:AD:19:G:H1'     | 2.15                     | 0.62              |
| 3:AB:34:G:N2      | 3:AB:35:A:H1'     | 2.15                     | 0.62              |
| 4:AE:10:LEU:HD23  | 4:AE:11:LEU:HD21  | 1.81                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 4:AE:53:ARG:HH12  | 4:AE:200:ILE:CD1   | 2.12                     | 0.62              |
| 4:AE:78:GLN:HE22  | 4:AE:96:ARG:HH22   | 1.43                     | 0.62              |
| 4:AE:96:ARG:HD2   | 4:AE:96:ARG:H      | 1.64                     | 0.62              |
| 4:AE:196:LEU:HA   | 10:AK:74:PRO:HG3   | 1.82                     | 0.62              |
| 5:AF:23:TYR:CD2   | 5:AF:24:ALA:N      | 2.64                     | 0.62              |
| 6:AG:92:VAL:HG12  | 6:AG:96:LEU:HD11   | 1.81                     | 0.62              |
| 6:AG:100:ARG:HB2  | 6:AG:103:ASN:HB2   | 1.82                     | 0.62              |
| 7:AH:87:SER:HB3   | 7:AH:131:ILE:HG12  | 1.81                     | 0.62              |
| 10:AK:112:LEU:HB2 | 10:AK:132:GLU:O    | 1.99                     | 0.62              |
| 11:AL:111:ARG:HD2 | 16:AQ:61:TRP:HE1   | 1.65                     | 0.62              |
| 13:AN:48:ILE:HD11 | 13:AN:64:ALA:CB    | 2.29                     | 0.62              |
| 14:AO:24:VAL:HG23 | 14:AO:97:ARG:CG    | 2.24                     | 0.62              |
| 15:AP:20:THR:HA   | 15:AP:25:ILE:CG2   | 2.30                     | 0.62              |
| 19:AT:97:SER:O    | 19:AT:98:LEU:HD13  | 1.98                     | 0.62              |
| 20:AU:51:LEU:N    | 20:AU:51:LEU:CD1   | 2.63                     | 0.62              |
| 21:AV:33:THR:CG2  | 21:AV:49:ILE:HD12  | 2.30                     | 0.62              |
| 24:BA:80:G:H1'    | 24:BA:347:A:H61    | 1.64                     | 0.62              |
| 24:BA:200:U:H3'   | 24:BA:201:C:H5'    | 1.82                     | 0.62              |
| 24:BA:220:G:N2    | 24:BA:265:A:N6     | 2.47                     | 0.62              |
| 24:BA:262:A:O2'   | 24:BA:263:C:H5'    | 1.99                     | 0.62              |
| 24:BA:269:U:H3'   | 24:BA:270(Y):G:O2' | 1.99                     | 0.62              |
| 24:BA:290:G:H3'   | 24:BA:290:G:C8     | 2.34                     | 0.62              |
| 24:BA:338:G:OP1   | 45:BX:2:ARG:CZ     | 2.48                     | 0.62              |
| 24:BA:341:G:H2'   | 24:BA:342:G:C8     | 2.34                     | 0.62              |
| 24:BA:493:G:N2    | 24:BA:494:G:H1'    | 2.14                     | 0.62              |
| 24:BA:607:U:C2    | 24:BA:608:A:C8     | 2.87                     | 0.62              |
| 24:BA:1025:G:N3   | 24:BA:1025:G:C2'   | 2.63                     | 0.62              |
| 24:BA:1072:C:H2'  | 24:BA:1093:G:C5    | 2.35                     | 0.62              |
| 24:BA:1131:G:O2'  | 24:BA:1132:A:O5'   | 2.10                     | 0.62              |
| 24:BA:1351:C:H4'  | 24:BA:1571:A:O2'   | 1.98                     | 0.62              |
| 24:BA:1363:C:O3'  | 24:BA:1809:A:N6    | 2.32                     | 0.62              |
| 24:BA:1669:A:N1   | 24:BA:1994:C:H1'   | 2.14                     | 0.62              |
| 24:BA:2044:C:C6   | 24:BA:2625:G:N2    | 2.67                     | 0.62              |
| 24:BA:2245:U:O2   | 24:BA:2435:A:C8    | 2.53                     | 0.62              |
| 24:BA:2484:G:N2   | 37:BP:124:LYS:HD2  | 2.15                     | 0.62              |
| 24:BA:2484:G:N3   | 37:BP:124:LYS:HE2  | 2.14                     | 0.62              |
| 24:BA:2732:G:H3'  | 24:BA:2733:A:H5'   | 1.81                     | 0.62              |
| 24:BA:2733:A:C8   | 24:BA:2734:A:C8    | 2.88                     | 0.62              |
| 24:BA:2781:A:H2'  | 24:BA:2782:G:C2'   | 2.29                     | 0.62              |
| 24:BA:2876:G:OP1  | 40:BS:2:ASN:CB     | 2.48                     | 0.62              |
| 25:BB:74:U:H2'    | 25:BB:75:G:H1'     | 1.80                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 25:BB:77:U:H6     | 25:BB:77:U:H3'     | 1.64                     | 0.62              |
| 27:BD:137:PRO:HG2 | 27:BD:140:THR:OG1  | 1.98                     | 0.62              |
| 27:BD:159:ALA:HB3 | 27:BD:202:LYS:HZ1  | 1.63                     | 0.62              |
| 28:BE:101:ARG:NH2 | 28:BE:171:GLU:HG2  | 2.11                     | 0.62              |
| 28:BE:102:VAL:CA  | 28:BE:200:GLU:OE1  | 2.47                     | 0.62              |
| 29:BF:43:LYS:HG3  | 29:BF:98:SER:HA    | 1.80                     | 0.62              |
| 30:BG:90:LEU:HD13 | 30:BG:90:LEU:O     | 1.99                     | 0.62              |
| 31:BH:66:GLY:C    | 31:BH:69:ARG:HG2   | 2.24                     | 0.62              |
| 32:BK:77:LEU:CD1  | 32:BK:142:VAL:HG13 | 2.22                     | 0.62              |
| 33:BL:112:MET:HE1 | 33:BL:119:ASP:N    | 2.14                     | 0.62              |
| 34:BM:17:ASP:HB3  | 34:BM:21:LYS:HZ1   | 1.65                     | 0.62              |
| 34:BM:37:LYS:HA   | 34:BM:42:TRP:CB    | 2.28                     | 0.62              |
| 35:BN:11:ALA:HB3  | 35:BN:97:ARG:HH22  | 1.64                     | 0.62              |
| 35:BN:13:ASN:OD1  | 35:BN:13:ASN:O     | 2.16                     | 0.62              |
| 35:BN:64:ARG:CZ   | 35:BN:66:LYS:H     | 2.13                     | 0.62              |
| 37:BP:99:PRO:HD2  | 37:BP:101:ARG:NE   | 2.15                     | 0.62              |
| 38:BQ:61:HIS:CE1  | 38:BQ:64:ARG:NE    | 2.68                     | 0.62              |
| 38:BQ:73:VAL:O    | 38:BQ:74:LYS:C     | 2.42                     | 0.62              |
| 40:BS:63:VAL:O    | 40:BS:64:ARG:NH1   | 2.32                     | 0.62              |
| 41:BT:8:VAL:HG23  | 41:BT:9:VAL:HG23   | 1.82                     | 0.62              |
| 41:BT:112:ARG:NH1 | 42:BU:50:PRO:CG    | 2.54                     | 0.62              |
| 42:BU:7:THR:HG23  | 42:BU:11:GLN:NE2   | 2.15                     | 0.62              |
| 42:BU:40:LEU:HG   | 42:BU:55:ALA:CA    | 2.29                     | 0.62              |
| 43:BV:29:LEU:O    | 43:BV:33:ARG:CB    | 2.44                     | 0.62              |
| 43:BV:33:ARG:HD3  | 43:BV:37:ARG:CD    | 2.30                     | 0.62              |
| 45:BX:47:LYS:O    | 45:BX:48:ALA:CB    | 2.48                     | 0.62              |
| 45:BX:83:THR:HG22 | 45:BX:84:ARG:N     | 2.13                     | 0.62              |
| 50:B3:14:ILE:HB   | 50:B3:37:SER:O     | 1.99                     | 0.62              |
| 1:AA:59:A:H4'     | 1:AA:388:G:H5''    | 1.80                     | 0.62              |
| 1:AA:96:G:H2'     | 1:AA:97:U:H6       | 1.63                     | 0.62              |
| 1:AA:237:C:H5''   | 19:AT:25:ARG:NH1   | 2.14                     | 0.62              |
| 1:AA:279:A:N3     | 1:AA:281:G:N2      | 2.48                     | 0.62              |
| 1:AA:511:C:C2     | 1:AA:512:U:C5      | 2.88                     | 0.62              |
| 1:AA:523:A:N6     | 14:AO:53:ARG:HH22  | 1.96                     | 0.62              |
| 1:AA:541:G:H4'    | 6:AG:42:GLN:CB     | 2.30                     | 0.62              |
| 1:AA:645:C:H2'    | 1:AA:646:U:C6      | 2.34                     | 0.62              |
| 1:AA:851:G:O2'    | 1:AA:852:G:H5'     | 1.99                     | 0.62              |
| 1:AA:859:A:H2'    | 1:AA:860:A:O5'     | 2.00                     | 0.62              |
| 1:AA:1107:C:P     | 5:AF:172:ARG:HG2   | 2.39                     | 0.62              |
| 1:AA:1296:C:C1'   | 1:AA:1302:U:O4     | 2.47                     | 0.62              |
| 1:AA:1299:A:C5    | 1:AA:1301:U:H1'    | 2.34                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1315:U:H2'   | 1:AA:1316:G:O4'   | 2.00                     | 0.62              |
| 1:AA:1520:G:HO2'  | 1:AA:1521:G:H8    | 1.47                     | 0.62              |
| 3:AC:6:G:C2'      | 3:AC:7:A:C8       | 2.77                     | 0.62              |
| 3:AC:66:U:H3'     | 3:AC:67:C:H6      | 1.63                     | 0.62              |
| 4:AE:17:PHE:HA    | 4:AE:42:ILE:HG22  | 1.80                     | 0.62              |
| 4:AE:47:THR:O     | 4:AE:51:LEU:CG    | 2.45                     | 0.62              |
| 4:AE:97:TRP:CH2   | 4:AE:176:GLU:CG   | 2.83                     | 0.62              |
| 5:AF:29:TYR:CD2   | 5:AF:29:TYR:C     | 2.76                     | 0.62              |
| 8:AI:52:ILE:HG22  | 8:AI:53:ALA:H     | 1.63                     | 0.62              |
| 10:AK:113:SER:O   | 10:AK:131:GLY:HA3 | 2.00                     | 0.62              |
| 12:AM:10:GLY:CA   | 12:AM:94:VAL:HG22 | 2.29                     | 0.62              |
| 12:AM:32:ALA:HB2  | 12:AM:75:ILE:C    | 2.24                     | 0.62              |
| 13:AN:27:ASN:HA   | 13:AN:55:LYS:O    | 2.00                     | 0.62              |
| 13:AN:53:SER:O    | 13:AN:55:LYS:N    | 2.32                     | 0.62              |
| 13:AN:57:THR:CG2  | 13:AN:59:TYR:HB3  | 2.29                     | 0.62              |
| 16:AQ:23:ARG:HH11 | 16:AQ:28:GLY:C    | 2.07                     | 0.62              |
| 18:AS:3:LYS:HE2   | 18:AS:24:ALA:CB   | 2.28                     | 0.62              |
| 19:AT:75:ARG:HG2  | 19:AT:76:LEU:N    | 2.14                     | 0.62              |
| 20:AU:21:LYS:HD2  | 20:AU:23:LYS:H    | 1.65                     | 0.62              |
| 21:AV:11:VAL:HG11 | 21:AV:41:VAL:CG2  | 2.29                     | 0.62              |
| 21:AV:19:VAL:HG21 | 21:AV:44:MET:HG2  | 1.82                     | 0.62              |
| 21:AV:38:SER:HB3  | 21:AV:71:LEU:CG   | 2.29                     | 0.62              |
| 22:AW:8:ARG:HB3   | 22:AW:8:ARG:NH1   | 2.14                     | 0.62              |
| 24:BA:82:G:N2     | 24:BA:83:G:N2     | 2.48                     | 0.62              |
| 24:BA:263:C:O2    | 24:BA:263:C:C2'   | 2.48                     | 0.62              |
| 24:BA:492:A:C8    | 24:BA:492:A:OP2   | 2.53                     | 0.62              |
| 24:BA:572:A:C5    | 24:BA:573:G:C2    | 2.87                     | 0.62              |
| 24:BA:811:U:O2'   | 24:BA:1251:C:C1'  | 2.41                     | 0.62              |
| 24:BA:919:G:H4'   | 25:BB:81:G:O2'    | 2.00                     | 0.62              |
| 24:BA:966:G:C1'   | 24:BA:2267:A:H61  | 2.13                     | 0.62              |
| 24:BA:1027:A:H2'  | 24:BA:1028:A:H8   | 1.64                     | 0.62              |
| 24:BA:1036:G:C2   | 24:BA:1120:G:C6   | 2.88                     | 0.62              |
| 24:BA:1355:G:C2   | 24:BA:1377:G:N3   | 2.68                     | 0.62              |
| 24:BA:1424:G:C8   | 24:BA:1424:G:OP2  | 2.52                     | 0.62              |
| 24:BA:1457:A:C2'  | 24:BA:1458:C:H5'  | 2.30                     | 0.62              |
| 24:BA:1463:C:C2'  | 24:BA:1464:C:O5'  | 2.47                     | 0.62              |
| 24:BA:1559:G:H1   | 24:BA:1560:G:C4'  | 2.09                     | 0.62              |
| 24:BA:1563:G:H2'  | 24:BA:1564:C:H6   | 1.64                     | 0.62              |
| 24:BA:1619:G:C2   | 53:B6:3:ARG:NH1   | 2.68                     | 0.62              |
| 24:BA:1943:U:H4'  | 24:BA:1944:U:H5'  | 1.82                     | 0.62              |
| 24:BA:2093:G:H2'  | 24:BA:2094:G:O5'  | 1.99                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2244:U:C2'  | 24:BA:2245:U:O5'   | 2.47                     | 0.62              |
| 24:BA:2332:U:O2'  | 24:BA:2336:A:N7    | 2.31                     | 0.62              |
| 24:BA:2415:G:C6   | 24:BA:2416:C:N4    | 2.67                     | 0.62              |
| 24:BA:2538:C:H2'  | 24:BA:2539:C:H6    | 1.61                     | 0.62              |
| 24:BA:2569:G:C6   | 24:BA:2570:G:N7    | 2.67                     | 0.62              |
| 24:BA:2747:G:O6   | 24:BA:2755:C:C5'   | 2.46                     | 0.62              |
| 25:BB:0:A:N3      | 25:BB:0:A:C5'      | 2.63                     | 0.62              |
| 25:BB:35:U:O2     | 25:BB:35:U:C2'     | 2.48                     | 0.62              |
| 25:BB:44:G:O2'    | 25:BB:47:C:N4      | 2.33                     | 0.62              |
| 25:BB:45:A:H1'    | 30:BG:95:ARG:NH1   | 2.15                     | 0.62              |
| 25:BB:115:G:H8    | 25:BB:115:G:OP2    | 1.82                     | 0.62              |
| 26:BC:29:VAL:HG13 | 26:BC:30:LYS:N     | 2.13                     | 0.62              |
| 26:BC:59:ARG:NH1  | 26:BC:164:ARG:HH11 | 1.97                     | 0.62              |
| 26:BC:75:LEU:HD11 | 26:BC:99:ILE:CG2   | 2.26                     | 0.62              |
| 27:BD:7:LYS:HD2   | 27:BD:91:ARG:HE    | 1.64                     | 0.62              |
| 27:BD:76:PRO:HG2  | 27:BD:98:VAL:CG2   | 2.23                     | 0.62              |
| 27:BD:89:SER:OG   | 27:BD:159:ALA:N    | 2.33                     | 0.62              |
| 27:BD:94:LEU:HD22 | 27:BD:104:TYR:CE1  | 2.33                     | 0.62              |
| 27:BD:127:VAL:HA  | 27:BD:193:VAL:CG1  | 2.16                     | 0.62              |
| 30:BG:55:LYS:CG   | 30:BG:148:MET:HB2  | 2.30                     | 0.62              |
| 30:BG:75:LYS:HZ3  | 30:BG:87:PRO:HD3   | 1.64                     | 0.62              |
| 31:BH:25:LYS:HD3  | 31:BH:27:LYS:CD    | 2.30                     | 0.62              |
| 32:BK:77:LEU:HB2  | 32:BK:142:VAL:HG13 | 1.80                     | 0.62              |
| 32:BK:77:LEU:HD21 | 32:BK:140:LEU:HD23 | 1.82                     | 0.62              |
| 32:BK:113:ARG:O   | 32:BK:114:LEU:HD23 | 1.99                     | 0.62              |
| 33:BL:17:ALA:O    | 33:BL:38:VAL:HG11  | 2.00                     | 0.62              |
| 34:BM:23:LEU:HD12 | 34:BM:63:THR:H     | 1.60                     | 0.62              |
| 34:BM:55:VAL:HG13 | 34:BM:56:ASN:N     | 2.13                     | 0.62              |
| 35:BN:18:LYS:NZ   | 35:BN:44:LYS:HD3   | 2.14                     | 0.62              |
| 39:BR:54:LEU:HG   | 39:BR:56:LEU:CD2   | 2.27                     | 0.62              |
| 39:BR:67:ARG:HG2  | 39:BR:67:ARG:NH2   | 2.09                     | 0.62              |
| 40:BS:93:ARG:HG2  | 40:BS:95:ARG:NH1   | 2.14                     | 0.62              |
| 40:BS:104:ASN:CA  | 40:BS:107:ASP:OD2  | 2.47                     | 0.62              |
| 41:BT:8:VAL:N     | 41:BT:11:ARG:HH21  | 1.98                     | 0.62              |
| 41:BT:105:VAL:O   | 41:BT:109:LEU:CG   | 2.40                     | 0.62              |
| 45:BX:42:VAL:HG23 | 45:BX:61:ILE:HG21  | 1.79                     | 0.62              |
| 48:B1:48:LEU:HA   | 48:B1:51:GLN:CD    | 2.25                     | 0.62              |
| 52:B5:19:ARG:H    | 52:B5:19:ARG:CD    | 2.11                     | 0.62              |
| 1:AA:37:U:P       | 14:AO:123:LYS:HD2  | 2.40                     | 0.62              |
| 1:AA:363:A:C5     | 14:AO:31:PRO:HD2   | 2.35                     | 0.62              |
| 1:AA:566:G:H4'    | 1:AA:567:G:H5'     | 1.81                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:580:U:H3'     | 1:AA:581:G:C8      | 2.34                     | 0.62              |
| 1:AA:649:G:H2'     | 1:AA:650:G:H8      | 1.63                     | 0.62              |
| 1:AA:771:G:C6      | 1:AA:809:G:C6      | 2.88                     | 0.62              |
| 1:AA:836:G:P       | 20:AU:61:LYS:NZ    | 2.73                     | 0.62              |
| 1:AA:965:A:N1      | 15:AP:124:PRO:HB3  | 2.14                     | 0.62              |
| 1:AA:1105:A:H2'    | 1:AA:1106:G:H8     | 1.64                     | 0.62              |
| 1:AA:1252:A:C5     | 1:AA:1253:G:N7     | 2.67                     | 0.62              |
| 3:AC:25:C:H2'      | 3:AC:26:A:C8       | 2.34                     | 0.62              |
| 3:AC:31:A:H3'      | 3:AC:32:U:C6       | 2.34                     | 0.62              |
| 5:AF:11:ARG:HG3    | 5:AF:16:ARG:NE     | 2.15                     | 0.62              |
| 5:AF:151:VAL:HG22  | 5:AF:200:ALA:HB1   | 1.82                     | 0.62              |
| 9:AJ:140:ASP:O     | 9:AJ:144:MET:HB3   | 1.99                     | 0.62              |
| 10:AK:112:LEU:HD21 | 10:AK:114:THR:HG23 | 1.81                     | 0.62              |
| 10:AK:114:THR:HA   | 10:AK:131:GLY:CA   | 2.29                     | 0.62              |
| 10:AK:129:VAL:CG2  | 10:AK:130:GLY:H    | 2.09                     | 0.62              |
| 11:AL:37:PHE:CD1   | 11:AL:43:ALA:HA    | 2.35                     | 0.62              |
| 13:AN:33:THR:HG22  | 13:AN:39:PRO:HB3   | 1.82                     | 0.62              |
| 15:AP:13:LYS:HB3   | 15:AP:17:VAL:CB    | 2.29                     | 0.62              |
| 15:AP:121:LYS:HE3  | 15:AP:121:LYS:C    | 2.24                     | 0.62              |
| 22:AW:12:ALA:H     | 22:AW:13:LEU:CD1   | 2.01                     | 0.62              |
| 22:AW:14:LYS:N     | 22:AW:17:ARG:HH21  | 1.98                     | 0.62              |
| 22:AW:73:HIS:N     | 22:AW:76:ALA:HB3   | 2.09                     | 0.62              |
| 23:AX:2:GLY:N      | 23:AX:5:ASP:HB2    | 2.14                     | 0.62              |
| 24:BA:200:U:O4     | 24:BA:248:G:N7     | 2.33                     | 0.62              |
| 24:BA:515:A:H5'    | 41:BT:32:PHE:CZ    | 2.34                     | 0.62              |
| 24:BA:533:G:C6     | 24:BA:534:U:N3     | 2.68                     | 0.62              |
| 24:BA:548:A:H62    | 24:BA:549:G:N2     | 1.98                     | 0.62              |
| 24:BA:594:U:C2'    | 24:BA:595:C:C6     | 2.80                     | 0.62              |
| 24:BA:931:G:N2     | 49:B2:25:ALA:N     | 2.48                     | 0.62              |
| 24:BA:1000:A:C2    | 24:BA:1155:A:C2    | 2.88                     | 0.62              |
| 24:BA:1023:U:OP1   | 24:BA:1025:G:N2    | 2.33                     | 0.62              |
| 24:BA:1268:A:C4    | 24:BA:2013:A:N6    | 2.68                     | 0.62              |
| 24:BA:1527:G:N2    | 24:BA:1545:A:N7    | 2.46                     | 0.62              |
| 24:BA:1570:A:N6    | 24:BA:1571:A:N6    | 2.41                     | 0.62              |
| 24:BA:1657:C:C2    | 24:BA:1658:C:C6    | 2.87                     | 0.62              |
| 24:BA:1672:C:C5    | 24:BA:1673:U:H6    | 2.17                     | 0.62              |
| 24:BA:1862:G:H2'   | 24:BA:1863:G:C8    | 2.35                     | 0.62              |
| 24:BA:1878:G:O2'   | 24:BA:1879:C:H5'   | 1.98                     | 0.62              |
| 24:BA:1935:G:C4    | 24:BA:1962:C:C4    | 2.88                     | 0.62              |
| 24:BA:2009:G:H1'   | 38:BQ:107:ASP:O    | 1.99                     | 0.62              |
| 24:BA:2080:G:O2'   | 24:BA:2081:C:H5'   | 2.00                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2207:C:C2   | 24:BA:2208:U:O4'   | 2.52                     | 0.62              |
| 24:BA:2603:G:C5   | 24:BA:2604:U:C5    | 2.87                     | 0.62              |
| 24:BA:2626:C:H2'  | 24:BA:2627:G:C8    | 2.33                     | 0.62              |
| 25:BB:69:G:H2'    | 25:BB:69:G:N3      | 2.14                     | 0.62              |
| 26:BC:75:LEU:CD1  | 26:BC:99:ILE:HD13  | 2.29                     | 0.62              |
| 27:BD:29:PRO:HG3  | 27:BD:82:ILE:C     | 2.24                     | 0.62              |
| 27:BD:69:ARG:HH22 | 27:BD:130:ALA:HB2  | 1.64                     | 0.62              |
| 28:BE:100:GLU:H   | 28:BE:172:VAL:HG22 | 1.65                     | 0.62              |
| 29:BF:125:LEU:O   | 29:BF:127:GLU:N    | 2.32                     | 0.62              |
| 30:BG:9:ARG:HG3   | 30:BG:9:ARG:HH11   | 1.65                     | 0.62              |
| 30:BG:12:TYR:CD1  | 30:BG:13:GLU:N     | 2.68                     | 0.62              |
| 30:BG:27:ASN:HB3  | 30:BG:29:TRP:CE2   | 2.35                     | 0.62              |
| 30:BG:118:ARG:HB3 | 30:BG:118:ARG:CZ   | 2.29                     | 0.62              |
| 31:BH:120:GLY:HA3 | 31:BH:136:ILE:CG2  | 2.27                     | 0.62              |
| 32:BK:6:LEU:O     | 32:BK:15:VAL:N     | 2.27                     | 0.62              |
| 32:BK:8:PRO:HG3   | 32:BK:35:LEU:HB3   | 1.81                     | 0.62              |
| 33:BL:67:PHE:O    | 33:BL:68:VAL:HG13  | 1.99                     | 0.62              |
| 33:BL:95:LYS:HG2  | 33:BL:137:GLU:OE2  | 1.99                     | 0.62              |
| 33:BL:115:LEU:CD2 | 33:BL:126:MET:SD   | 2.87                     | 0.62              |
| 33:BL:128:ALA:HB1 | 33:BL:138:VAL:CG1  | 2.30                     | 0.62              |
| 37:BP:6:ARG:HG2   | 37:BP:7:MET:H      | 1.64                     | 0.62              |
| 39:BR:26:LEU:CD2  | 39:BR:37:ALA:HB1   | 2.29                     | 0.62              |
| 39:BR:100:ALA:HA  | 39:BR:103:GLU:OE2  | 2.00                     | 0.62              |
| 40:BS:32:TYR:HB3  | 40:BS:88:ILE:HA    | 1.82                     | 0.62              |
| 40:BS:63:VAL:O    | 40:BS:63:VAL:HG13  | 2.00                     | 0.62              |
| 44:BW:12:VAL:HG13 | 44:BW:14:SER:HB3   | 1.80                     | 0.62              |
| 45:BX:31:LEU:O    | 45:BX:33:LYS:N     | 2.33                     | 0.62              |
| 53:B6:21:ARG:HB2  | 53:B6:21:ARG:CZ    | 2.30                     | 0.62              |
| 55:B8:9:ARG:C     | 55:B8:10:ILE:HG13  | 2.24                     | 0.62              |
| 1:AA:50:A:O2'     | 1:AA:360:A:H2      | 1.82                     | 0.62              |
| 1:AA:135:C:H3'    | 1:AA:135:C:C6      | 2.35                     | 0.62              |
| 1:AA:434:U:H2'    | 1:AA:435:C:C6      | 2.35                     | 0.62              |
| 1:AA:490:G:H2'    | 1:AA:491:G:C8      | 2.34                     | 0.62              |
| 1:AA:538:G:OP1    | 14:AO:114:LYS:N    | 2.33                     | 0.62              |
| 1:AA:591:U:H6     | 1:AA:591:U:O5'     | 1.82                     | 0.62              |
| 1:AA:714:G:O2'    | 1:AA:715:A:H5'     | 2.00                     | 0.62              |
| 1:AA:796:C:H2'    | 1:AA:797:C:C6      | 2.35                     | 0.62              |
| 1:AA:826:C:C5'    | 10:AK:12:ARG:HH21  | 2.12                     | 0.62              |
| 1:AA:848:C:O2'    | 1:AA:849:C:H5'     | 1.99                     | 0.62              |
| 1:AA:922:G:C4'    | 7:AH:20:GLN:HA     | 2.23                     | 0.62              |
| 1:AA:1363:A:H1'   | 1:AA:1365:G:C6     | 2.35                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1461:G:H2'   | 1:AA:1462:G:C8    | 2.31                     | 0.62              |
| 1:AA:1495:U:H1'   | 24:BA:1912:A:N3   | 2.14                     | 0.62              |
| 3:AD:56:C:H5''    | 26:BC:133:PRO:CB  | 2.30                     | 0.62              |
| 4:AE:69:LEU:O     | 4:AE:162:ILE:CB   | 2.47                     | 0.62              |
| 4:AE:92:TYR:HE2   | 4:AE:151:GLY:O    | 1.82                     | 0.62              |
| 5:AF:24:ALA:HB3   | 5:AF:29:TYR:HB2   | 1.81                     | 0.62              |
| 6:AG:15:GLU:OE2   | 6:AG:63:LYS:HB3   | 2.00                     | 0.62              |
| 6:AG:57:ARG:HH22  | 7:AH:107:ARG:CD   | 2.13                     | 0.62              |
| 9:AJ:93:PRO:O     | 9:AJ:94:ARG:C     | 2.43                     | 0.62              |
| 9:AJ:140:ASP:HA   | 9:AJ:143:ARG:NE   | 2.13                     | 0.62              |
| 13:AN:82:VAL:HB   | 13:AN:108:ILE:CG1 | 2.27                     | 0.62              |
| 14:AO:57:LYS:HE2  | 14:AO:67:THR:HG21 | 1.82                     | 0.62              |
| 15:AP:10:PRO:CG   | 15:AP:18:ALA:HA   | 2.28                     | 0.62              |
| 15:AP:91:ARG:HH11 | 15:AP:96:LEU:HD12 | 1.65                     | 0.62              |
| 18:AS:4:ILE:HG23  | 18:AS:21:VAL:HG13 | 1.82                     | 0.62              |
| 19:AT:50:LYS:HD2  | 19:AT:51:TYR:CZ   | 2.35                     | 0.62              |
| 22:AW:26:ASN:ND2  | 22:AW:27:LYS:H    | 1.98                     | 0.62              |
| 22:AW:64:ASP:O    | 22:AW:67:ALA:CB   | 2.47                     | 0.62              |
| 23:AX:5:ASP:O     | 23:AX:7:ARG:N     | 2.32                     | 0.62              |
| 24:BA:274:G:H2'   | 24:BA:275:G:H5'   | 1.82                     | 0.62              |
| 24:BA:563:G:N2    | 24:BA:578:A:N1    | 2.45                     | 0.62              |
| 24:BA:643:A:H1'   | 24:BA:644:A:C8    | 2.35                     | 0.62              |
| 24:BA:656:G:H2'   | 24:BA:657:U:H6    | 1.64                     | 0.62              |
| 24:BA:942:G:O3'   | 36:BO:32:THR:HA   | 1.99                     | 0.62              |
| 24:BA:1024:G:O6   | 24:BA:1138:G:O6   | 2.18                     | 0.62              |
| 24:BA:1044:G:H8   | 24:BA:1044:G:H5'  | 1.64                     | 0.62              |
| 24:BA:1072:C:H2'  | 24:BA:1093:G:N7   | 2.15                     | 0.62              |
| 24:BA:1210:A:H1'  | 24:BA:1212:G:N2   | 2.15                     | 0.62              |
| 24:BA:1341:U:H5'' | 24:BA:1342:A:N7   | 2.15                     | 0.62              |
| 24:BA:1372:U:O5'  | 24:BA:1372:U:H6   | 1.82                     | 0.62              |
| 24:BA:1472:A:C6   | 24:BA:1518:C:N4   | 2.68                     | 0.62              |
| 24:BA:1587:A:H2'  | 24:BA:1588:C:C6   | 2.34                     | 0.62              |
| 24:BA:1647:G:H2'  | 24:BA:1647:G:N3   | 2.15                     | 0.62              |
| 24:BA:1683:C:H2'  | 24:BA:1684:C:H6   | 1.65                     | 0.62              |
| 24:BA:2210:G:N7   | 27:BD:150:LYS:O   | 2.33                     | 0.62              |
| 24:BA:2466:C:H2'  | 24:BA:2467:C:C6   | 2.35                     | 0.62              |
| 24:BA:2512:C:H2'  | 24:BA:2513:G:H4'  | 1.82                     | 0.62              |
| 24:BA:2603:G:O2'  | 24:BA:2604:U:H5'  | 2.00                     | 0.62              |
| 24:BA:2630:G:H1'  | 24:BA:2894:G:C4   | 2.34                     | 0.62              |
| 24:BA:2636:U:O5'  | 28:BE:79:ARG:HB3  | 1.98                     | 0.62              |
| 27:BD:7:LYS:HD3   | 27:BD:9:TYR:OH    | 2.00                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:59:LYS:C     | 27:BD:59:LYS:CD    | 2.72                     | 0.62              |
| 27:BD:118:VAL:O    | 27:BD:129:ASN:CA   | 2.47                     | 0.62              |
| 27:BD:155:LEU:HA   | 27:BD:157:ARG:HH21 | 1.65                     | 0.62              |
| 28:BE:49:LEU:CD1   | 28:BE:76:ARG:HG2   | 2.30                     | 0.62              |
| 28:BE:50:GLY:C     | 28:BE:76:ARG:NE    | 2.46                     | 0.62              |
| 28:BE:152:LYS:HE3  | 28:BE:153:GLY:HA3  | 1.80                     | 0.62              |
| 30:BG:135:LEU:HD12 | 30:BG:155:MET:HB2  | 1.82                     | 0.62              |
| 30:BG:165:THR:HB   | 30:BG:168:GLU:CD   | 2.25                     | 0.62              |
| 31:BH:9:ILE:HD13   | 31:BH:73:ALA:CB    | 2.30                     | 0.62              |
| 31:BH:31:GLY:C     | 31:BH:33:LEU:H     | 2.07                     | 0.62              |
| 31:BH:88:LEU:CD2   | 31:BH:90:LYS:HB3   | 2.30                     | 0.62              |
| 31:BH:124:GLU:OE1  | 31:BH:124:GLU:N    | 2.33                     | 0.62              |
| 32:BK:5:LEU:HD13   | 32:BK:8:PRO:HB2    | 1.81                     | 0.62              |
| 32:BK:70:LYS:HA    | 32:BK:70:LYS:HZ3   | 1.63                     | 0.62              |
| 33:BL:78:ILE:HG21  | 33:BL:131:ALA:CB   | 2.29                     | 0.62              |
| 34:BM:63:THR:O     | 34:BM:65:LYS:HD2   | 1.99                     | 0.62              |
| 34:BM:110:GLY:O    | 34:BM:114:ARG:CB   | 2.44                     | 0.62              |
| 35:BN:13:ASN:HB2   | 35:BN:94:ARG:HB2   | 1.82                     | 0.62              |
| 35:BN:24:VAL:CG1   | 35:BN:32:TYR:H     | 2.13                     | 0.62              |
| 35:BN:57:VAL:HG23  | 35:BN:58:VAL:N     | 2.14                     | 0.62              |
| 36:BO:13:ASN:ND2   | 36:BO:14:LYS:H     | 1.87                     | 0.62              |
| 36:BO:16:ARG:HD2   | 36:BO:16:ARG:C     | 2.24                     | 0.62              |
| 36:BO:88:LEU:HG    | 36:BO:124:LYS:HE3  | 1.81                     | 0.62              |
| 37:BP:46:GLN:O     | 37:BP:49:ALA:CB    | 2.46                     | 0.62              |
| 37:BP:116:GLU:HA   | 37:BP:119:ARG:HG3  | 1.81                     | 0.62              |
| 37:BP:120:ILE:O    | 37:BP:121:ALA:C    | 2.43                     | 0.62              |
| 40:BS:68:TYR:CD2   | 40:BS:70:VAL:HG22  | 2.34                     | 0.62              |
| 41:BT:70:ARG:CG    | 41:BT:75:ASN:HA    | 2.20                     | 0.62              |
| 43:BV:98:LYS:HB3   | 43:BV:98:LYS:NZ    | 2.15                     | 0.62              |
| 45:BX:12:THR:HG22  | 45:BX:13:VAL:HG12  | 1.81                     | 0.62              |
| 46:BY:4:ARG:NH2    | 46:BY:88:PHE:CE1   | 2.68                     | 0.62              |
| 46:BY:19:ARG:N     | 46:BY:23:LYS:O     | 2.33                     | 0.62              |
| 46:BY:104:PHE:CD2  | 46:BY:104:PHE:N    | 2.68                     | 0.62              |
| 46:BY:127:LYS:HZ2  | 46:BY:165:VAL:HB   | 1.61                     | 0.62              |
| 46:BY:151:HIS:ND1  | 46:BY:151:HIS:N    | 2.47                     | 0.62              |
| 50:B3:23:GLU:C     | 50:B3:25:TYR:N     | 2.54                     | 0.62              |
| 1:AA:169:C:H2'     | 1:AA:170:U:C5      | 2.35                     | 0.62              |
| 1:AA:377:G:OP1     | 18:AS:5:ARG:HD3    | 2.00                     | 0.62              |
| 1:AA:438:G:H21     | 1:AA:495:A:H8      | 1.46                     | 0.62              |
| 1:AA:518:C:C2      | 1:AA:529:G:O6      | 2.53                     | 0.62              |
| 1:AA:537:G:O3'     | 14:AO:113:ARG:NH1  | 2.31                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:843:U:H3'    | 1:AA:848:C:C5'    | 2.29                     | 0.62              |
| 1:AA:989:C:O2'    | 1:AA:990:C:H5'    | 2.00                     | 0.62              |
| 1:AA:1061:G:C2    | 1:AA:1197:G:C2    | 2.88                     | 0.62              |
| 1:AA:1363:A:H1'   | 1:AA:1365:G:C5    | 2.34                     | 0.62              |
| 1:AA:1464:G:C2    | 1:AA:1465:C:N4    | 2.68                     | 0.62              |
| 2:A1:8:U:O2'      | 4:AE:15:VAL:HA    | 2.00                     | 0.62              |
| 3:AC:27:G:C2      | 3:AC:28:G:C5      | 2.88                     | 0.62              |
| 3:AD:48:C:HO2'    | 3:AD:49:C:P       | 2.23                     | 0.62              |
| 3:AB:33:U:O2      | 3:AB:35:A:H5''    | 2.00                     | 0.62              |
| 4:AE:146:GLN:O    | 4:AE:147:LYS:C    | 2.42                     | 0.62              |
| 4:AE:208:ILE:HG12 | 4:AE:211:ILE:HD12 | 1.82                     | 0.62              |
| 5:AF:191:THR:C    | 5:AF:193:TYR:H    | 2.08                     | 0.62              |
| 8:AI:85:VAL:CG1   | 8:AI:88:VAL:HG13  | 2.28                     | 0.62              |
| 9:AJ:35:LYS:HE2   | 9:AJ:38:LEU:HB2   | 1.82                     | 0.62              |
| 9:AJ:142:GLU:O    | 9:AJ:145:ALA:O    | 2.17                     | 0.62              |
| 9:AJ:143:ARG:HH11 | 9:AJ:144:MET:CB   | 2.06                     | 0.62              |
| 10:AK:34:GLU:O    | 10:AK:38:ILE:HG12 | 1.99                     | 0.62              |
| 10:AK:53:VAL:HG12 | 10:AK:54:ASP:OD1  | 2.00                     | 0.62              |
| 12:AM:79:ARG:NH2  | 12:AM:82:ILE:HG21 | 2.15                     | 0.62              |
| 14:AO:39:VAL:HB   | 14:AO:57:LYS:CB   | 2.26                     | 0.62              |
| 14:AO:77:LEU:HD22 | 14:AO:81:SER:HB3  | 1.81                     | 0.62              |
| 15:AP:11:ARG:HG3  | 15:AP:11:ARG:NH1  | 2.12                     | 0.62              |
| 18:AS:8:ARG:NH2   | 18:AS:11:SER:O    | 2.32                     | 0.62              |
| 18:AS:22:THR:HA   | 18:AS:33:ILE:HG13 | 1.81                     | 0.62              |
| 18:AS:27:LYS:O    | 18:AS:29:ASP:N    | 2.33                     | 0.62              |
| 22:AW:44:ALA:HB3  | 22:AW:91:LEU:CD1  | 2.13                     | 0.62              |
| 24:BA:30:G:OP1    | 41:BT:8:VAL:HG12  | 2.00                     | 0.62              |
| 24:BA:244:A:C5    | 24:BA:245:G:H1'   | 2.35                     | 0.62              |
| 24:BA:298:G:H1    | 24:BA:338:G:HO2'  | 1.44                     | 0.62              |
| 24:BA:439:G:H2'   | 24:BA:440:G:H8    | 1.64                     | 0.62              |
| 24:BA:531:C:C6    | 24:BA:532:A:C2    | 2.88                     | 0.62              |
| 24:BA:649:G:O3'   | 54:B7:17:THR:HG21 | 2.00                     | 0.62              |
| 24:BA:873:G:H5'   | 37:BP:66:ILE:HD11 | 1.82                     | 0.62              |
| 24:BA:885:C:H42   | 24:BA:889:C:H1'   | 1.64                     | 0.62              |
| 24:BA:917:A:H3'   | 24:BA:918:A:C5'   | 2.30                     | 0.62              |
| 24:BA:954:G:OP1   | 37:BP:17:LEU:HB3  | 2.00                     | 0.62              |
| 24:BA:996:A:C6    | 24:BA:1160:G:N1   | 2.67                     | 0.62              |
| 24:BA:997:G:O2'   | 24:BA:998:C:C5'   | 2.48                     | 0.62              |
| 24:BA:1049:C:N3   | 24:BA:1050:A:N6   | 2.48                     | 0.62              |
| 24:BA:1135:C:H2'  | 24:BA:1136:G:C8   | 2.32                     | 0.62              |
| 24:BA:1265:A:O2'  | 24:BA:1266:G:H4'  | 2.00                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1416:G:N2    | 24:BA:1417:C:N4    | 2.48                     | 0.62              |
| 24:BA:1662:C:C4    | 24:BA:1663:C:N4    | 2.68                     | 0.62              |
| 24:BA:1665:A:H4'   | 35:BN:1:MET:H1     | 1.65                     | 0.62              |
| 24:BA:1775:U:OP2   | 24:BA:1776:G:OP2   | 2.18                     | 0.62              |
| 24:BA:1819:A:OP2   | 27:BD:157:ARG:CZ   | 2.47                     | 0.62              |
| 24:BA:1900:A:C2    | 24:BA:1970:A:C6    | 2.87                     | 0.62              |
| 24:BA:1937:A:N6    | 24:BA:1939:U:O4    | 2.25                     | 0.62              |
| 24:BA:2083:G:N2    | 24:BA:2084:C:C2    | 2.68                     | 0.62              |
| 24:BA:2103:C:C2    | 24:BA:2104:G:N7    | 2.68                     | 0.62              |
| 24:BA:2178:C:OP1   | 26:BC:46:LYS:HG2   | 2.00                     | 0.62              |
| 24:BA:2331:G:H4'   | 47:BZ:43:THR:N     | 2.14                     | 0.62              |
| 24:BA:2362:G:N2    | 24:BA:2363:C:H1'   | 2.14                     | 0.62              |
| 24:BA:2394:C:O2    | 24:BA:2394:C:H2'   | 1.99                     | 0.62              |
| 24:BA:2641:G:H5'   | 34:BM:75:TYR:CG    | 2.35                     | 0.62              |
| 24:BA:2714:G:C6    | 24:BA:2715:C:C4    | 2.88                     | 0.62              |
| 24:BA:2734:A:H61   | 24:BA:2770:G:H1'   | 1.64                     | 0.62              |
| 24:BA:2747:G:C5    | 24:BA:2756:U:O4    | 2.53                     | 0.62              |
| 24:BA:2850:A:H2    | 38:BQ:61:HIS:CE1   | 2.18                     | 0.62              |
| 24:BA:2880:C:C2    | 24:BA:2881:C:C5    | 2.87                     | 0.62              |
| 25:BB:75:G:N3      | 25:BB:75:G:H2'     | 2.15                     | 0.62              |
| 25:BB:82:G:H2'     | 25:BB:83:G:C8      | 2.32                     | 0.62              |
| 25:BB:104:A:N6     | 25:BB:105:G:H21    | 1.98                     | 0.62              |
| 27:BD:9:TYR:OH     | 27:BD:198:ASN:ND2  | 2.32                     | 0.62              |
| 27:BD:125:ILE:CG2  | 27:BD:137:PRO:HG3  | 2.22                     | 0.62              |
| 27:BD:181:GLU:C    | 27:BD:270:ILE:HD12 | 2.24                     | 0.62              |
| 28:BE:36:ARG:CG    | 28:BE:79:ARG:HH11  | 1.97                     | 0.62              |
| 28:BE:116:VAL:O    | 28:BE:120:TRP:NE1  | 2.33                     | 0.62              |
| 29:BF:74:ARG:O     | 29:BF:75:HIS:HB2   | 1.98                     | 0.62              |
| 29:BF:95:ARG:NE    | 29:BF:96:ASP:H     | 1.97                     | 0.62              |
| 29:BF:99:TYR:O     | 29:BF:101:LEU:N    | 2.33                     | 0.62              |
| 29:BF:121:GLY:CA   | 29:BF:191:ARG:HE   | 2.11                     | 0.62              |
| 30:BG:2:PRO:HA     | 30:BG:5:VAL:CG2    | 2.30                     | 0.62              |
| 32:BK:94:ALA:O     | 32:BK:97:ILE:HB    | 1.98                     | 0.62              |
| 32:BK:138:ILE:HG13 | 32:BK:140:LEU:CD1  | 2.29                     | 0.62              |
| 33:BL:52:ILE:HG13  | 33:BL:80:LYS:HZ2   | 1.65                     | 0.62              |
| 33:BL:121:GLU:HB3  | 33:BL:125:ARG:NH1  | 2.15                     | 0.62              |
| 34:BM:107:LEU:HD13 | 34:BM:117:PHE:CE2  | 2.35                     | 0.62              |
| 35:BN:39:ILE:C     | 35:BN:59:LYS:HZ3   | 2.03                     | 0.62              |
| 37:BP:65:PHE:C     | 37:BP:66:ILE:HD12  | 2.25                     | 0.62              |
| 38:BQ:83:ILE:CA    | 38:BQ:86:ARG:HG3   | 2.21                     | 0.62              |
| 39:BR:3:ARG:HG3    | 39:BR:3:ARG:HH11   | 1.64                     | 0.62              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 39:BR:49:VAL:HB   | 39:BR:80:LEU:CD1   | 2.30                     | 0.62              |
| 40:BS:53:ARG:NH2  | 40:BS:102:ILE:HG12 | 2.14                     | 0.62              |
| 41:BT:65:ILE:CD1  | 41:BT:65:ILE:H     | 2.12                     | 0.62              |
| 41:BT:98:LEU:HB3  | 41:BT:105:VAL:HG13 | 1.80                     | 0.62              |
| 42:BU:18:LEU:HD23 | 42:BU:18:LEU:N     | 2.12                     | 0.62              |
| 43:BV:13:SER:O    | 43:BV:17:VAL:CG1   | 2.47                     | 0.62              |
| 43:BV:14:PRO:O    | 43:BV:15:ARG:C     | 2.43                     | 0.62              |
| 43:BV:21:VAL:HG22 | 43:BV:25:ARG:HG3   | 1.80                     | 0.62              |
| 43:BV:95:ILE:H    | 43:BV:95:ILE:CD1   | 2.06                     | 0.62              |
| 45:BX:14:LEU:HB2  | 45:BX:20:TYR:N     | 2.13                     | 0.62              |
| 45:BX:84:ARG:HD2  | 45:BX:84:ARG:O     | 2.00                     | 0.62              |
| 46:BY:180:VAL:O   | 46:BY:180:VAL:HG12 | 1.99                     | 0.62              |
| 47:BZ:50:ASN:HB3  | 47:BZ:63:VAL:HG13  | 1.82                     | 0.62              |
| 50:B3:52:THR:O    | 50:B3:53:GLU:HB2   | 1.98                     | 0.62              |
| 51:B4:55:ARG:C    | 51:B4:57:VAL:N     | 2.56                     | 0.62              |
| 1:AA:594:G:N7     | 1:AA:595:G:C2      | 2.68                     | 0.61              |
| 1:AA:672:U:O2     | 1:AA:672:U:H2'     | 1.97                     | 0.61              |
| 1:AA:692:U:O4     | 13:AN:52:GLY:C     | 2.43                     | 0.61              |
| 1:AA:738:C:H2'    | 1:AA:739:C:C6      | 2.33                     | 0.61              |
| 1:AA:1189:C:C2'   | 1:AA:1190:G:H5'    | 2.29                     | 0.61              |
| 1:AA:1306:A:H61   | 1:AA:1331:G:H1'    | 1.65                     | 0.61              |
| 1:AA:1441:G:C2'   | 1:AA:1460:A:H61    | 2.13                     | 0.61              |
| 2:A1:32:U:O2'     | 2:A1:33:U:H5'      | 2.00                     | 0.61              |
| 4:AE:208:ILE:HA   | 4:AE:211:ILE:CG1   | 2.29                     | 0.61              |
| 4:AE:212:GLN:OE1  | 4:AE:212:GLN:HA    | 1.92                     | 0.61              |
| 5:AF:35:GLU:HA    | 5:AF:38:ARG:HG2    | 1.83                     | 0.61              |
| 10:AK:9:MET:CE    | 10:AK:13:ILE:HD11  | 2.30                     | 0.61              |
| 12:AM:47:PHE:CE1  | 12:AM:64:GLU:HA    | 2.34                     | 0.61              |
| 14:AO:47:LYS:N    | 14:AO:48:PRO:CD    | 2.63                     | 0.61              |
| 16:AQ:27:CYS:SG   | 16:AQ:43:CYS:N     | 2.63                     | 0.61              |
| 18:AS:23:ASP:CG   | 18:AS:33:ILE:HD11  | 2.23                     | 0.61              |
| 19:AT:104:LYS:HD3 | 19:AT:105:ALA:CB   | 2.29                     | 0.61              |
| 24:BA:182:A:C8    | 24:BA:182:A:OP2    | 2.53                     | 0.61              |
| 24:BA:534:U:HO2'  | 41:BT:49:HIS:CD2   | 2.17                     | 0.61              |
| 24:BA:535:C:C2'   | 24:BA:536:A:H5'    | 2.29                     | 0.61              |
| 24:BA:574:C:H4'   | 24:BA:575:A:O5'    | 1.98                     | 0.61              |
| 24:BA:728:G:O2'   | 24:BA:729:G:H8     | 1.76                     | 0.61              |
| 24:BA:876:C:N3    | 24:BA:901:A:N6     | 2.47                     | 0.61              |
| 24:BA:974(A):C:O2 | 24:BA:989:G:C2     | 2.53                     | 0.61              |
| 24:BA:1278:A:OP1  | 38:BQ:36:THR:HG22  | 1.99                     | 0.61              |
| 24:BA:1309:G:C2   | 24:BA:1310:G:C8    | 2.87                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1434:A:C2    | 24:BA:1435:G:N9    | 2.68                     | 0.61              |
| 24:BA:1612:C:O3'   | 53:B6:5:TRP:HD1    | 1.82                     | 0.61              |
| 24:BA:1613:G:H2'   | 24:BA:1617:C:H42   | 1.63                     | 0.61              |
| 24:BA:1650:G:O2'   | 24:BA:1651:G:P     | 2.58                     | 0.61              |
| 24:BA:1725:G:N3    | 24:BA:1725:G:H2'   | 2.15                     | 0.61              |
| 24:BA:1726:G:C6    | 24:BA:1727:U:O4    | 2.53                     | 0.61              |
| 24:BA:1742:C:C4    | 24:BA:1743:G:C8    | 2.88                     | 0.61              |
| 24:BA:1797:C:HO2'  | 27:BD:257:LEU:HD12 | 1.65                     | 0.61              |
| 24:BA:1943:U:O2'   | 24:BA:1944:U:OP2   | 2.16                     | 0.61              |
| 24:BA:2009:G:H5''  | 43:BV:41:LYS:HG2   | 1.81                     | 0.61              |
| 24:BA:2263:C:O2'   | 24:BA:2264:C:H5'   | 2.00                     | 0.61              |
| 24:BA:2308:G:N3    | 24:BA:2308:G:H2'   | 2.15                     | 0.61              |
| 24:BA:2597:G:H5'   | 27:BD:242:ARG:CG   | 2.29                     | 0.61              |
| 24:BA:2730:C:O2'   | 24:BA:2731:G:H5'   | 1.99                     | 0.61              |
| 24:BA:2787:C:H1'   | 28:BE:61:ARG:NH2   | 2.15                     | 0.61              |
| 24:BA:2787:C:H1'   | 28:BE:61:ARG:CD    | 2.30                     | 0.61              |
| 26:BC:77:ILE:HB    | 26:BC:115:ALA:HB2  | 1.82                     | 0.61              |
| 26:BC:122:ALA:CA   | 26:BC:126:LYS:HD3  | 2.30                     | 0.61              |
| 26:BC:190:ARG:O    | 26:BC:193:ILE:N    | 2.33                     | 0.61              |
| 27:BD:8:PRO:CD     | 27:BD:26:LYS:H     | 2.12                     | 0.61              |
| 27:BD:84:TYR:CD1   | 27:BD:91:ARG:HG3   | 2.35                     | 0.61              |
| 28:BE:8:LYS:HZ2    | 40:BS:3:ARG:HG2    | 1.65                     | 0.61              |
| 28:BE:49:LEU:HD13  | 28:BE:76:ARG:HG3   | 1.82                     | 0.61              |
| 28:BE:53:PRO:CG    | 28:BE:75:VAL:HG13  | 2.29                     | 0.61              |
| 30:BG:157:ILE:HG12 | 30:BG:158:ALA:N    | 2.15                     | 0.61              |
| 34:BM:31:ALA:O     | 34:BM:32:THR:C     | 2.43                     | 0.61              |
| 35:BN:24:VAL:HG22  | 35:BN:30:ALA:CA    | 2.30                     | 0.61              |
| 36:BO:78:PRO:HG2   | 36:BO:117:GLU:OE1  | 2.00                     | 0.61              |
| 38:BQ:13:HIS:CE1   | 38:BQ:15:SER:H     | 2.18                     | 0.61              |
| 38:BQ:51:LEU:HG    | 38:BQ:66:VAL:CG1   | 2.30                     | 0.61              |
| 40:BS:27:THR:HG22  | 40:BS:28:VAL:N     | 2.15                     | 0.61              |
| 40:BS:76:PHE:CE2   | 40:BS:78:LEU:HB2   | 2.35                     | 0.61              |
| 41:BT:70:ARG:O     | 41:BT:71:GLN:C     | 2.43                     | 0.61              |
| 41:BT:76:TYR:O     | 41:BT:80:ILE:HB    | 2.00                     | 0.61              |
| 41:BT:85:LYS:NZ    | 41:BT:117:GLN:O    | 2.22                     | 0.61              |
| 41:BT:88:ILE:HG12  | 42:BU:52:VAL:HG22  | 1.80                     | 0.61              |
| 42:BU:3:ALA:O      | 42:BU:12:TYR:CE2   | 2.53                     | 0.61              |
| 42:BU:52:VAL:O     | 42:BU:55:ALA:HB3   | 2.00                     | 0.61              |
| 43:BV:24:ILE:HG23  | 43:BV:35:ILE:HG23  | 1.82                     | 0.61              |
| 43:BV:39:THR:OG1   | 51:B4:28:PRO:CG    | 2.45                     | 0.61              |
| 44:BW:12:VAL:C     | 44:BW:14:SER:H     | 2.08                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 44:BW:33:LYS:HB2  | 44:BW:33:LYS:NZ   | 2.14                     | 0.61              |
| 46:BY:19:ARG:NH2  | 46:BY:84:GLU:O    | 2.33                     | 0.61              |
| 50:B3:6:HIS:HB2   | 50:B3:7:PRO:HD3   | 1.81                     | 0.61              |
| 50:B3:65:ASP:N    | 50:B3:68:ARG:NH2  | 2.48                     | 0.61              |
| 52:B5:22:ALA:CB   | 52:B5:39:TYR:CE2  | 2.83                     | 0.61              |
| 1:AA:151:A:N7     | 1:AA:152:A:C2     | 2.69                     | 0.61              |
| 1:AA:274:A:O2'    | 1:AA:275:G:H1'    | 2.00                     | 0.61              |
| 1:AA:292:G:N7     | 1:AA:293:G:H1'    | 2.15                     | 0.61              |
| 1:AA:323:U:H6     | 1:AA:323:U:H3'    | 1.65                     | 0.61              |
| 1:AA:389:A:C6     | 1:AA:390:C:C1'    | 2.83                     | 0.61              |
| 1:AA:572:A:C4'    | 1:AA:917:G:H5'    | 2.25                     | 0.61              |
| 1:AA:730:G:H2'    | 1:AA:731:G:H5'    | 1.81                     | 0.61              |
| 1:AA:791:G:N1     | 1:AA:1498:U:OP1   | 2.33                     | 0.61              |
| 1:AA:990:C:H2'    | 1:AA:991:U:C1'    | 2.30                     | 0.61              |
| 1:AA:1005:A:H4'   | 1:AA:1037:C:O2    | 1.99                     | 0.61              |
| 1:AA:1166:G:H2'   | 1:AA:1169:A:OP2   | 2.00                     | 0.61              |
| 1:AA:1305:G:N3    | 1:AA:1331:G:N2    | 2.48                     | 0.61              |
| 2:A1:52:U:H5''    | 6:AG:50:ARG:HB2   | 1.81                     | 0.61              |
| 4:AE:29:ALA:O     | 4:AE:32:ILE:HB    | 1.99                     | 0.61              |
| 4:AE:64:ARG:HG2   | 4:AE:66:GLY:H     | 1.65                     | 0.61              |
| 4:AE:149:LEU:C    | 4:AE:151:GLY:N    | 2.56                     | 0.61              |
| 4:AE:189:ASP:OD1  | 4:AE:205:ASP:N    | 2.33                     | 0.61              |
| 5:AF:24:ALA:HB1   | 5:AF:28:GLN:HE22  | 1.63                     | 0.61              |
| 5:AF:35:GLU:C     | 5:AF:38:ARG:HG2   | 2.25                     | 0.61              |
| 5:AF:64:VAL:O     | 5:AF:99:VAL:HG11  | 1.99                     | 0.61              |
| 5:AF:67:THR:HA    | 5:AF:102:ASN:O    | 2.00                     | 0.61              |
| 5:AF:142:MET:HG2  | 5:AF:170:GLN:HG3  | 1.80                     | 0.61              |
| 6:AG:146:ILE:HD12 | 6:AG:146:ILE:O    | 1.99                     | 0.61              |
| 7:AH:79:GLU:CB    | 7:AH:92:LYS:HA    | 2.22                     | 0.61              |
| 8:AI:36:ARG:O     | 8:AI:66:GLU:HG2   | 1.99                     | 0.61              |
| 10:AK:12:ARG:HH11 | 10:AK:27:PRO:CD   | 2.05                     | 0.61              |
| 10:AK:20:TYR:HE1  | 10:AK:78:GLN:HE22 | 1.46                     | 0.61              |
| 12:AM:4:ILE:HG12  | 12:AM:99:LYS:O    | 2.00                     | 0.61              |
| 13:AN:34:ASP:OD1  | 13:AN:37:GLY:N    | 2.31                     | 0.61              |
| 13:AN:104:GLN:NE2 | 13:AN:106:LYS:HB2 | 2.15                     | 0.61              |
| 14:AO:33:ARG:HG2  | 14:AO:60:LEU:HD23 | 1.83                     | 0.61              |
| 15:AP:10:PRO:CG   | 15:AP:18:ALA:CB   | 2.77                     | 0.61              |
| 15:AP:46:LYS:HG3  | 15:AP:47:ASP:OD1  | 2.00                     | 0.61              |
| 15:AP:48:LEU:HD23 | 15:AP:49:THR:N    | 2.15                     | 0.61              |
| 15:AP:102:ARG:C   | 15:AP:104:ARG:H   | 2.08                     | 0.61              |
| 18:AS:27:LYS:O    | 18:AS:28:ARG:C    | 2.41                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 20:AU:80:PRO:HB2  | 20:AU:82:THR:O     | 2.00                     | 0.61              |
| 22:AW:53:LEU:O    | 22:AW:56:MET:N     | 2.34                     | 0.61              |
| 22:AW:73:HIS:H    | 22:AW:76:ALA:HB2   | 1.65                     | 0.61              |
| 23:AX:9:ARG:O     | 23:AX:10:ARG:C     | 2.43                     | 0.61              |
| 24:BA:81:G:O2'    | 24:BA:294:A:H2'    | 2.01                     | 0.61              |
| 24:BA:221:A:C5    | 24:BA:266:G:N7     | 2.68                     | 0.61              |
| 24:BA:522:G:O2'   | 24:BA:523:C:H5'    | 1.99                     | 0.61              |
| 24:BA:551:G:H5'   | 24:BA:552:G:OP2    | 2.00                     | 0.61              |
| 24:BA:594:U:OP1   | 54:B7:61:LEU:HD13  | 2.01                     | 0.61              |
| 24:BA:672:C:OP2   | 36:BO:38:GLN:CG    | 2.47                     | 0.61              |
| 24:BA:684:G:C2'   | 24:BA:687:C:N4     | 2.55                     | 0.61              |
| 24:BA:1142:U:H6   | 24:BA:1142(A):A:H8 | 1.38                     | 0.61              |
| 24:BA:1189:A:H5'' | 24:BA:1190:G:OP2   | 2.00                     | 0.61              |
| 24:BA:1203:G:C2   | 24:BA:1241:A:H8    | 2.18                     | 0.61              |
| 24:BA:1204:A:O4'  | 24:BA:1204:A:P     | 2.58                     | 0.61              |
| 24:BA:1446:C:H2'  | 24:BA:1447:G:C8    | 2.31                     | 0.61              |
| 24:BA:1508:A:N3   | 24:BA:1508:A:OP2   | 2.32                     | 0.61              |
| 24:BA:1661:G:H2'  | 24:BA:1662:C:C6    | 2.34                     | 0.61              |
| 24:BA:1798:U:H5'  | 27:BD:257:LEU:CB   | 2.30                     | 0.61              |
| 24:BA:1935:G:H1'  | 24:BA:1964:G:N2    | 2.15                     | 0.61              |
| 24:BA:2093:G:H4'  | 32:BK:25:TYR:CA    | 2.21                     | 0.61              |
| 24:BA:2273:A:N7   | 24:BA:2274:A:C4    | 2.68                     | 0.61              |
| 24:BA:2436:G:H2'  | 24:BA:2437:U:H6    | 1.64                     | 0.61              |
| 24:BA:2495:G:C5'  | 37:BP:82:ARG:HA    | 2.31                     | 0.61              |
| 24:BA:2583:G:N3   | 24:BA:2584:U:O2    | 2.32                     | 0.61              |
| 24:BA:2584:U:H3'  | 24:BA:2584:U:C6    | 2.34                     | 0.61              |
| 24:BA:2790:A:O4'  | 24:BA:2893:G:N2    | 2.32                     | 0.61              |
| 24:BA:2876:G:C5'  | 40:BS:1:MET:H2     | 2.13                     | 0.61              |
| 26:BC:10:LEU:HG   | 26:BC:220:PRO:HG3  | 1.80                     | 0.61              |
| 28:BE:104:VAL:CG1 | 28:BE:198:VAL:HG22 | 2.30                     | 0.61              |
| 30:BG:4:ASP:HB3   | 30:BG:104:GLU:CD   | 2.24                     | 0.61              |
| 31:BH:31:GLY:O    | 31:BH:79:VAL:HG12  | 2.00                     | 0.61              |
| 31:BH:85:LYS:HD2  | 31:BH:145:ALA:HB1  | 1.81                     | 0.61              |
| 31:BH:103:LEU:HB3 | 31:BH:105:LEU:HD11 | 1.82                     | 0.61              |
| 32:BK:123:LEU:CD1 | 32:BK:145:VAL:HA   | 2.24                     | 0.61              |
| 34:BM:33:LEU:O    | 34:BM:35:ARG:HG3   | 2.00                     | 0.61              |
| 34:BM:54:VAL:HG12 | 34:BM:122:VAL:CG1  | 2.30                     | 0.61              |
| 36:BO:81:GLN:CB   | 36:BO:86:LYS:HG3   | 2.30                     | 0.61              |
| 36:BO:90:ARG:HA   | 36:BO:125:VAL:HG13 | 1.81                     | 0.61              |
| 37:BP:59:ARG:C    | 37:BP:60:ARG:HD2   | 2.24                     | 0.61              |
| 39:BR:96:GLY:O    | 39:BR:97:ARG:C     | 2.43                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 40:BS:110:ILE:HD12 | 40:BS:113:LYS:HE3  | 1.82                     | 0.61              |
| 41:BT:60:LEU:HB2   | 41:BT:61:TRP:HD1   | 1.64                     | 0.61              |
| 41:BT:89:GLU:OE1   | 42:BU:50:PRO:CB    | 2.47                     | 0.61              |
| 43:BV:91:GLY:O     | 43:BV:92:ARG:O     | 2.17                     | 0.61              |
| 45:BX:1:MET:HG2    | 45:BX:33:LYS:HD2   | 1.81                     | 0.61              |
| 46:BY:1:MET:HE1    | 46:BY:59:LEU:CD2   | 2.30                     | 0.61              |
| 46:BY:43:GLU:O     | 46:BY:44:PHE:C     | 2.43                     | 0.61              |
| 46:BY:56:VAL:HG13  | 46:BY:133:ILE:HD11 | 1.82                     | 0.61              |
| 46:BY:71:VAL:CG1   | 46:BY:74:VAL:HG23  | 2.30                     | 0.61              |
| 47:BZ:67:VAL:O     | 47:BZ:67:VAL:HG12  | 2.00                     | 0.61              |
| 48:B1:11:LEU:HD12  | 48:B1:11:LEU:N     | 2.15                     | 0.61              |
| 49:B2:26:LEU:HG    | 49:B2:35:ARG:HH11  | 1.64                     | 0.61              |
| 50:B3:20:ASN:HB2   | 50:B3:30:GLU:CB    | 2.30                     | 0.61              |
| 52:B5:30:THR:CB    | 52:B5:31:PRO:CD    | 2.77                     | 0.61              |
| 54:B7:4:MET:HE1    | 54:B7:62:LEU:CD1   | 2.30                     | 0.61              |
| 54:B7:5:LYS:HE3    | 54:B7:10:ALA:CB    | 2.30                     | 0.61              |
| 54:B7:58:ILE:HG22  | 54:B7:61:LEU:HD12  | 1.80                     | 0.61              |
| 55:B8:32:HIS:O     | 55:B8:34:GLN:HG3   | 2.01                     | 0.61              |
| 1:AA:51:A:O2'      | 1:AA:52:G:P        | 2.58                     | 0.61              |
| 1:AA:54:C:H41      | 1:AA:352:C:H2'     | 1.65                     | 0.61              |
| 1:AA:375:U:H4'     | 18:AS:17:TYR:HE2   | 1.62                     | 0.61              |
| 1:AA:407:G:N2      | 1:AA:436:C:H1'     | 2.15                     | 0.61              |
| 1:AA:652:U:O2'     | 1:AA:653:A:C2      | 2.51                     | 0.61              |
| 1:AA:817:C:HO2'    | 1:AA:818:G:H5''    | 1.64                     | 0.61              |
| 1:AA:826:C:H5'     | 10:AK:12:ARG:NH2   | 2.15                     | 0.61              |
| 1:AA:986:A:H4'     | 21:AV:55:LYS:CG    | 2.29                     | 0.61              |
| 1:AA:1054:C:OP2    | 1:AA:1197:G:P      | 2.59                     | 0.61              |
| 1:AA:1321:C:H2'    | 1:AA:1322:C:C6     | 2.34                     | 0.61              |
| 1:AA:1466:C:H2'    | 1:AA:1467:G:C8     | 2.36                     | 0.61              |
| 3:AD:20:U:H5       | 24:BA:2112:G:H1'   | 1.64                     | 0.61              |
| 3:AB:21:A:N6       | 3:AB:46:G:H2'      | 2.15                     | 0.61              |
| 4:AE:181:PHE:HE1   | 10:AK:70:GLN:HE22  | 1.49                     | 0.61              |
| 4:AE:211:ILE:HG22  | 4:AE:212:GLN:N     | 2.14                     | 0.61              |
| 4:AE:214:ILE:O     | 4:AE:217:ARG:HB2   | 1.99                     | 0.61              |
| 5:AF:48:TYR:CA     | 5:AF:52:LEU:HD22   | 2.30                     | 0.61              |
| 6:AG:144:ASP:O     | 6:AG:184:LYS:HD3   | 2.00                     | 0.61              |
| 7:AH:96:PRO:HD2    | 7:AH:98:THR:OG1    | 1.99                     | 0.61              |
| 9:AJ:50:ILE:HG21   | 9:AJ:58:PRO:CA     | 2.30                     | 0.61              |
| 9:AJ:115:ARG:O     | 9:AJ:118:VAL:HB    | 2.00                     | 0.61              |
| 10:AK:100:ILE:CD1  | 10:AK:125:ARG:HE   | 2.13                     | 0.61              |
| 12:AM:40:LEU:HB2   | 12:AM:69:ASN:HB2   | 1.82                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 13:AN:58:PRO:CB    | 13:AN:93:GLN:HB2   | 2.19                     | 0.61              |
| 15:AP:98:VAL:HG12  | 15:AP:98:VAL:O     | 2.00                     | 0.61              |
| 16:AQ:19:ARG:O     | 16:AQ:20:ALA:C     | 2.44                     | 0.61              |
| 19:AT:27:PHE:O     | 19:AT:35:VAL:HG13  | 2.00                     | 0.61              |
| 20:AU:46:GLU:HB3   | 20:AU:85:LEU:CD1   | 2.24                     | 0.61              |
| 21:AV:15:LEU:CD2   | 21:AV:38:SER:HB2   | 2.29                     | 0.61              |
| 24:BA:80:G:H1'     | 24:BA:347:A:N6     | 2.14                     | 0.61              |
| 24:BA:279:C:H2'    | 24:BA:280:C:C6     | 2.36                     | 0.61              |
| 24:BA:443:A:O4'    | 24:BA:1201:C:C4'   | 2.48                     | 0.61              |
| 24:BA:482:A:N7     | 24:BA:506:G:C2     | 2.68                     | 0.61              |
| 24:BA:582:G:N1     | 24:BA:1259:G:C6    | 2.69                     | 0.61              |
| 24:BA:648:G:C4     | 24:BA:649:G:N7     | 2.69                     | 0.61              |
| 24:BA:723:G:O2'    | 24:BA:724:U:C5'    | 2.47                     | 0.61              |
| 24:BA:880:G:C2     | 24:BA:881:G:H1'    | 2.35                     | 0.61              |
| 24:BA:996:A:C2     | 24:BA:997:G:C5     | 2.88                     | 0.61              |
| 24:BA:1023:U:H2'   | 24:BA:1024:G:H5'   | 1.80                     | 0.61              |
| 24:BA:1089:G:H8    | 24:BA:1089:G:O5'   | 1.83                     | 0.61              |
| 24:BA:1313:U:O4    | 44:BW:62:LYS:HB2   | 2.01                     | 0.61              |
| 24:BA:1451:C:H2'   | 24:BA:1457:A:H61   | 1.64                     | 0.61              |
| 24:BA:1758:G:O2'   | 24:BA:1759:A:OP1   | 2.11                     | 0.61              |
| 24:BA:1788:C:N3    | 24:BA:1789:A:C8    | 2.69                     | 0.61              |
| 24:BA:1808:U:C4    | 24:BA:1810:A:N1    | 2.68                     | 0.61              |
| 24:BA:1992:G:C5    | 24:BA:1997:G:C4    | 2.88                     | 0.61              |
| 24:BA:2004:G:C8    | 24:BA:2005:A:N7    | 2.69                     | 0.61              |
| 24:BA:2199:A:C5    | 24:BA:2225:A:N1    | 2.67                     | 0.61              |
| 24:BA:2519:U:O2    | 24:BA:2522:U:O4    | 2.18                     | 0.61              |
| 24:BA:2580:U:OP2   | 24:BA:2580:U:C6    | 2.54                     | 0.61              |
| 24:BA:2636:U:O4'   | 28:BE:79:ARG:HD3   | 2.00                     | 0.61              |
| 24:BA:2682:U:N3    | 28:BE:21:VAL:HG11  | 2.16                     | 0.61              |
| 24:BA:2709:G:C2'   | 24:BA:2710:C:H5'   | 2.30                     | 0.61              |
| 24:BA:2805:G:C5    | 24:BA:2807:G:H8    | 2.18                     | 0.61              |
| 25:BB:13:A:N3      | 25:BB:13:A:H2'     | 2.15                     | 0.61              |
| 25:BB:32:C:C2      | 25:BB:33:G:N7      | 2.67                     | 0.61              |
| 25:BB:75:G:C2      | 46:BY:27:VAL:HG21  | 2.35                     | 0.61              |
| 25:BB:114:G:H1'    | 39:BR:38:GLN:HE22  | 1.63                     | 0.61              |
| 27:BD:7:LYS:HA     | 27:BD:26:LYS:O     | 1.99                     | 0.61              |
| 27:BD:151:LYS:HB2  | 27:BD:154:LYS:HE3  | 1.81                     | 0.61              |
| 27:BD:181:GLU:HB3  | 27:BD:268:ARG:NE   | 2.12                     | 0.61              |
| 28:BE:105:THR:O    | 28:BE:197:ILE:HD12 | 2.00                     | 0.61              |
| 28:BE:106:GLY:HA3  | 28:BE:196:VAL:HG22 | 1.82                     | 0.61              |
| 28:BE:182:LEU:HD23 | 28:BE:183:LEU:N    | 2.14                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 29:BF:34:TRP:HD1   | 29:BF:38:ARG:NH1   | 1.98                     | 0.61              |
| 30:BG:8:LYS:HE2    | 30:BG:100:TRP:HD1  | 1.65                     | 0.61              |
| 30:BG:35:GLU:O     | 30:BG:36:LYS:O     | 2.18                     | 0.61              |
| 31:BH:45:VAL:HG13  | 31:BH:50:VAL:HG13  | 1.82                     | 0.61              |
| 31:BH:68:THR:HG22  | 31:BH:72:ILE:CD1   | 2.30                     | 0.61              |
| 32:BK:31:LEU:HD13  | 32:BK:36:ALA:O     | 2.00                     | 0.61              |
| 34:BM:140:VAL:OXT  | 34:BM:140:VAL:HG12 | 2.00                     | 0.61              |
| 35:BN:113:LYS:HZ1  | 35:BN:117:LEU:HB2  | 1.66                     | 0.61              |
| 35:BN:122:LEU:C    | 40:BS:74:ARG:NH2   | 2.58                     | 0.61              |
| 36:BO:46:LYS:HB2   | 36:BO:49:ARG:CB    | 2.20                     | 0.61              |
| 37:BP:43:THR:HG23  | 37:BP:46:GLN:HB3   | 1.83                     | 0.61              |
| 37:BP:119:ARG:O    | 37:BP:123:HIS:CB   | 2.48                     | 0.61              |
| 38:BQ:44:LEU:CD1   | 38:BQ:48:VAL:CG2   | 2.78                     | 0.61              |
| 40:BS:103:ARG:HB3  | 40:BS:107:ASP:OD1  | 2.00                     | 0.61              |
| 42:BU:68:LYS:HZ3   | 42:BU:95:LEU:HD11  | 1.65                     | 0.61              |
| 43:BV:20:VAL:HG13  | 43:BV:21:VAL:H     | 1.63                     | 0.61              |
| 46:BY:91:LEU:HD12  | 46:BY:95:PRO:HG3   | 1.81                     | 0.61              |
| 46:BY:95:PRO:HB2   | 46:BY:130:PRO:HA   | 1.83                     | 0.61              |
| 46:BY:102:LEU:HD11 | 46:BY:137:ILE:HG22 | 1.82                     | 0.61              |
| 47:BZ:19:LYS:O     | 47:BZ:20:ARG:NH1   | 2.33                     | 0.61              |
| 47:BZ:37:LEU:CG    | 47:BZ:59:LEU:O     | 2.47                     | 0.61              |
| 47:BZ:50:ASN:HB3   | 47:BZ:63:VAL:HG22  | 1.82                     | 0.61              |
| 48:B1:65:GLN:HE21  | 48:B1:65:GLN:CA    | 2.11                     | 0.61              |
| 50:B3:5:ILE:HD11   | 50:B3:9:LEU:C      | 2.24                     | 0.61              |
| 51:B4:12:SER:C     | 51:B4:14:ALA:N     | 2.51                     | 0.61              |
| 52:B5:49:HIS:O     | 52:B5:50:ARG:CB    | 2.47                     | 0.61              |
| 52:B5:50:ARG:O     | 52:B5:51:GLU:CB    | 2.47                     | 0.61              |
| 53:B6:8:ASN:C      | 53:B6:8:ASN:HD22   | 2.07                     | 0.61              |
| 1:AA:191(C):G:O5'  | 1:AA:191(C):G:H8   | 1.84                     | 0.61              |
| 1:AA:191(D):U:H2'  | 1:AA:191(E):G:C8   | 2.35                     | 0.61              |
| 1:AA:265:G:C2'     | 1:AA:266:G:H5'     | 2.29                     | 0.61              |
| 1:AA:280:C:N3      | 19:AT:39:SER:HB2   | 2.14                     | 0.61              |
| 1:AA:522:C:H41     | 1:AA:523:A:N6      | 1.94                     | 0.61              |
| 1:AA:730:G:H2'     | 1:AA:731:G:C5'     | 2.30                     | 0.61              |
| 1:AA:914:A:O2'     | 1:AA:915:A:O5'     | 2.17                     | 0.61              |
| 1:AA:1011:G:N2     | 1:AA:1019:C:H1'    | 2.15                     | 0.61              |
| 1:AA:1137:C:H4'    | 1:AA:1138:G:N1     | 2.15                     | 0.61              |
| 1:AA:1295:G:H21    | 1:AA:1302:U:H3     | 1.47                     | 0.61              |
| 1:AA:1429:C:H2'    | 1:AA:1430:C:C6     | 2.35                     | 0.61              |
| 2:A1:52:U:C4'      | 6:AG:50:ARG:HA     | 2.28                     | 0.61              |
| 4:AE:18:GLY:CA     | 4:AE:41:ILE:HG23   | 2.31                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 6:AG:36:ARG:HB3    | 6:AG:38:TYR:CE2    | 2.35                     | 0.61              |
| 7:AH:79:GLU:CG     | 7:AH:93:PRO:HD2    | 2.30                     | 0.61              |
| 7:AH:141:GLN:O     | 7:AH:142:LEU:HG    | 2.00                     | 0.61              |
| 10:AK:28:ALA:O     | 10:AK:29:SER:CB    | 2.48                     | 0.61              |
| 11:AL:26:VAL:HA    | 11:AL:61:ALA:O     | 2.01                     | 0.61              |
| 13:AN:114:VAL:HG22 | 13:AN:115:PRO:N    | 2.14                     | 0.61              |
| 17:AR:36:ILE:HG13  | 17:AR:59:MET:CE    | 2.30                     | 0.61              |
| 19:AT:9:VAL:HB     | 19:AT:84:LEU:HD13  | 1.81                     | 0.61              |
| 21:AV:40:ILE:HD12  | 21:AV:74:PHE:CE2   | 2.36                     | 0.61              |
| 24:BA:161:U:N3     | 24:BA:171:G:N2     | 2.48                     | 0.61              |
| 24:BA:270(B):A:H1' | 24:BA:270(C):C:H5  | 1.62                     | 0.61              |
| 24:BA:324:A:N1     | 24:BA:325:G:N3     | 2.49                     | 0.61              |
| 24:BA:402:A:H2'    | 24:BA:402:A:N3     | 2.15                     | 0.61              |
| 24:BA:489:G:H2'    | 24:BA:491:G:O4'    | 2.00                     | 0.61              |
| 24:BA:603:A:N6     | 24:BA:625:G:N7     | 2.48                     | 0.61              |
| 24:BA:624:C:OP2    | 36:BO:105:LEU:CD2  | 2.48                     | 0.61              |
| 24:BA:801:G:OP1    | 29:BF:57:VAL:N     | 2.33                     | 0.61              |
| 24:BA:860:U:H5     | 24:BA:2267:A:H4'   | 1.65                     | 0.61              |
| 24:BA:995:C:H1'    | 41:BT:57:PHE:CZ    | 2.35                     | 0.61              |
| 24:BA:1023:U:OP2   | 24:BA:1025:G:N1    | 2.33                     | 0.61              |
| 24:BA:1024:G:H3'   | 24:BA:1025:G:H5''  | 1.83                     | 0.61              |
| 24:BA:1061:U:H4'   | 24:BA:1070:A:H1'   | 1.82                     | 0.61              |
| 24:BA:1703:G:N2    | 24:BA:1704:G:C4    | 2.67                     | 0.61              |
| 24:BA:1853:A:N1    | 24:BA:2087:G:H1'   | 2.15                     | 0.61              |
| 24:BA:1992:G:H1'   | 24:BA:1993:U:C4    | 2.34                     | 0.61              |
| 24:BA:2306:C:H4'   | 30:BG:153:ARG:HH21 | 1.66                     | 0.61              |
| 24:BA:2330:G:H2'   | 24:BA:2331:G:O4'   | 2.00                     | 0.61              |
| 25:BB:14:U:OP2     | 25:BB:70:C:O2'     | 2.16                     | 0.61              |
| 25:BB:51:G:OP1     | 39:BR:60:GLY:C     | 2.43                     | 0.61              |
| 27:BD:209:ALA:O    | 27:BD:213:ARG:HG2  | 2.01                     | 0.61              |
| 27:BD:232:PRO:HG2  | 27:BD:247:ALA:C    | 2.26                     | 0.61              |
| 28:BE:47:VAL:HG22  | 28:BE:79:ARG:CB    | 2.29                     | 0.61              |
| 28:BE:92:THR:O     | 28:BE:94:GLU:N     | 2.32                     | 0.61              |
| 28:BE:196:VAL:CG1  | 28:BE:197:ILE:H    | 2.13                     | 0.61              |
| 30:BG:68:PRO:CG    | 30:BG:72:ARG:HH12  | 2.12                     | 0.61              |
| 30:BG:125:PHE:HD2  | 30:BG:129:GLY:N    | 1.98                     | 0.61              |
| 31:BH:5:GLY:O      | 31:BH:6:ARG:HB2    | 2.00                     | 0.61              |
| 31:BH:98:LEU:O     | 31:BH:98:LEU:HD23  | 2.00                     | 0.61              |
| 31:BH:133:VAL:HG22 | 31:BH:134:SER:N    | 2.15                     | 0.61              |
| 31:BH:167:GLU:C    | 31:BH:169:VAL:H    | 2.08                     | 0.61              |
| 32:BK:9:LEU:HA     | 32:BK:17:GLN:NE2   | 2.15                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 33:BL:32:ALA:HB1  | 33:BL:37:PHE:HD1   | 1.66                     | 0.61              |
| 33:BL:79:ARG:NH1  | 33:BL:87:GLY:HA2   | 2.15                     | 0.61              |
| 34:BM:17:ASP:O    | 34:BM:18:ALA:HB3   | 2.00                     | 0.61              |
| 34:BM:93:THR:HG22 | 34:BM:94:HIS:HD2   | 1.63                     | 0.61              |
| 34:BM:100:GLU:HA  | 34:BM:103:VAL:HG13 | 1.81                     | 0.61              |
| 35:BN:24:VAL:HA   | 35:BN:39:ILE:HG21  | 1.81                     | 0.61              |
| 35:BN:96:THR:HA   | 35:BN:117:LEU:CD1  | 2.17                     | 0.61              |
| 36:BO:23:PRO:CG   | 36:BO:29:LYS:N     | 2.63                     | 0.61              |
| 36:BO:96:THR:O    | 36:BO:102:ARG:HD3  | 2.00                     | 0.61              |
| 38:BQ:36:THR:HB   | 38:BQ:40:LYS:HD2   | 1.80                     | 0.61              |
| 38:BQ:97:VAL:HG22 | 38:BQ:114:VAL:CG1  | 2.31                     | 0.61              |
| 38:BQ:110:PRO:C   | 38:BQ:111:LEU:HD23 | 2.26                     | 0.61              |
| 40:BS:27:THR:O    | 40:BS:52:ILE:HD12  | 2.00                     | 0.61              |
| 41:BT:95:LEU:N    | 41:BT:95:LEU:HD23  | 2.13                     | 0.61              |
| 42:BU:65:GLY:N    | 42:BU:97:LYS:HZ1   | 1.99                     | 0.61              |
| 48:B1:20:VAL:HA   | 48:B1:55:LEU:CD2   | 2.29                     | 0.61              |
| 52:B5:20:ASN:ND2  | 52:B5:43:CYS:CB    | 2.63                     | 0.61              |
| 52:B5:41:PRO:CG   | 52:B5:43:CYS:HB2   | 2.30                     | 0.61              |
| 54:B7:2:PRO:HB2   | 54:B7:4:MET:HE3    | 1.82                     | 0.61              |
| 1:AA:5:U:C4       | 6:AG:86:LYS:HD3    | 2.35                     | 0.61              |
| 1:AA:134:A:C6     | 1:AA:135:C:C4      | 2.88                     | 0.61              |
| 1:AA:137:C:C2'    | 1:AA:138:G:O5'     | 2.48                     | 0.61              |
| 1:AA:449:C:H2'    | 1:AA:450:G:C4'     | 2.29                     | 0.61              |
| 1:AA:574:A:H5''   | 1:AA:575:G:OP2     | 2.00                     | 0.61              |
| 1:AA:687:A:H2'    | 1:AA:701:C:H41     | 1.66                     | 0.61              |
| 1:AA:812:C:O2     | 1:AA:813:U:H5      | 1.82                     | 0.61              |
| 1:AA:866:C:C6     | 1:AA:867:G:H1'     | 2.35                     | 0.61              |
| 1:AA:979:C:H42    | 16:AQ:18:VAL:CB    | 2.13                     | 0.61              |
| 1:AA:1001:G:H8    | 1:AA:1001:G:H5'    | 1.65                     | 0.61              |
| 1:AA:1026:G:C8    | 1:AA:1027:C:C6     | 2.89                     | 0.61              |
| 1:AA:1058:G:O2'   | 1:AA:1059:C:H5'    | 1.98                     | 0.61              |
| 1:AA:1148:U:O2    | 1:AA:1149:C:N1     | 2.33                     | 0.61              |
| 1:AA:1513:A:H2'   | 1:AA:1514:C:H6     | 1.64                     | 0.61              |
| 4:AE:21:ARG:O     | 4:AE:23:ARG:HD3    | 1.99                     | 0.61              |
| 4:AE:97:TRP:CZ3   | 4:AE:176:GLU:HG3   | 2.35                     | 0.61              |
| 5:AF:22:TRP:HB2   | 5:AF:59:ARG:HB3    | 1.83                     | 0.61              |
| 5:AF:188:LEU:HD22 | 5:AF:189:ALA:H     | 1.64                     | 0.61              |
| 6:AG:87:GLY:O     | 6:AG:89:THR:N      | 2.34                     | 0.61              |
| 6:AG:190:ASP:O    | 6:AG:191:ARG:C     | 2.43                     | 0.61              |
| 9:AJ:50:ILE:HD13  | 9:AJ:58:PRO:HA     | 1.81                     | 0.61              |
| 10:AK:6:ILE:CG2   | 10:AK:7:ALA:H      | 1.91                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 10:AK:8:ASP:OD2  | 10:AK:12:ARG:HD2  | 2.00                     | 0.61              |
| 11:AL:15:ALA:HB3 | 11:AL:76:ALA:CB   | 2.29                     | 0.61              |
| 13:AN:95:ILE:HA  | 13:AN:98:LEU:HD12 | 1.82                     | 0.61              |
| 13:AN:111:ASP:O  | 13:AN:112:THR:C   | 2.43                     | 0.61              |
| 15:AP:16:ASP:HA  | 15:AP:19:LEU:CD2  | 2.30                     | 0.61              |
| 15:AP:66:LEU:CA  | 15:AP:70:LEU:HD12 | 2.25                     | 0.61              |
| 17:AR:62:GLN:CA  | 17:AR:65:ARG:HH22 | 2.07                     | 0.61              |
| 18:AS:51:VAL:O   | 18:AS:52:ASP:C    | 2.42                     | 0.61              |
| 20:AU:77:GLY:C   | 20:AU:79:LEU:HD12 | 2.25                     | 0.61              |
| 21:AV:32:LYS:HA  | 21:AV:50:ALA:CB   | 2.26                     | 0.61              |
| 24:BA:85:G:H1'   | 24:BA:103:A:N1    | 2.16                     | 0.61              |
| 24:BA:252:G:N7   | 54:B7:8:LYS:HE3   | 2.15                     | 0.61              |
| 24:BA:279:C:H41  | 24:BA:359:A:H1'   | 1.66                     | 0.61              |
| 24:BA:302:C:C2   | 24:BA:303:U:C5    | 2.88                     | 0.61              |
| 24:BA:326:G:C4   | 24:BA:327:G:C8    | 2.88                     | 0.61              |
| 24:BA:566:U:OP1  | 24:BA:1253:A:N1   | 2.34                     | 0.61              |
| 24:BA:673:C:H5'' | 29:BF:81:PRO:HG2  | 1.81                     | 0.61              |
| 24:BA:860:U:H2'  | 24:BA:861:A:C5'   | 2.31                     | 0.61              |
| 24:BA:1047:G:OP1 | 24:BA:1047:G:H4'  | 2.00                     | 0.61              |
| 24:BA:1069:A:C4' | 24:BA:1070:A:H3'  | 2.31                     | 0.61              |
| 24:BA:1087:G:N2  | 24:BA:1103:A:H2'  | 2.15                     | 0.61              |
| 24:BA:1207:C:H6  | 24:BA:1207:C:OP2  | 1.84                     | 0.61              |
| 24:BA:1263:U:H4' | 51:B4:10:LYS:CD   | 2.30                     | 0.61              |
| 24:BA:1347:G:N2  | 24:BA:1600:C:C2   | 2.69                     | 0.61              |
| 24:BA:1422:G:O2' | 24:BA:1493:C:O2   | 2.18                     | 0.61              |
| 24:BA:1459:G:O6  | 24:BA:1461:G:C6   | 2.53                     | 0.61              |
| 24:BA:1506:C:N3  | 24:BA:1507:A:H1'  | 2.15                     | 0.61              |
| 24:BA:1531:C:N3  | 24:BA:1532:C:N4   | 2.40                     | 0.61              |
| 24:BA:1661:G:N2  | 24:BA:2000:G:H1'  | 2.15                     | 0.61              |
| 24:BA:1754:C:H5  | 40:BS:98:LYS:HD3  | 1.66                     | 0.61              |
| 24:BA:1797:C:C4  | 24:BA:1798:U:O4   | 2.53                     | 0.61              |
| 24:BA:1823:G:C2  | 24:BA:1824:G:C8   | 2.89                     | 0.61              |
| 24:BA:1972:A:H2' | 24:BA:1973:G:H8   | 1.66                     | 0.61              |
| 24:BA:1995:U:H5' | 24:BA:1996:C:H5'  | 1.82                     | 0.61              |
| 24:BA:2061:G:OP2 | 24:BA:2502:G:OP2  | 2.19                     | 0.61              |
| 24:BA:2072:G:H2' | 24:BA:2073:C:H6   | 1.61                     | 0.61              |
| 24:BA:2284:C:OP1 | 52:B5:9:LEU:HB2   | 1.99                     | 0.61              |
| 24:BA:2298:A:H3' | 24:BA:2299:G:H8   | 1.65                     | 0.61              |
| 24:BA:2352:A:C2  | 24:BA:2353:G:H1'  | 2.34                     | 0.61              |
| 24:BA:2362:G:C2' | 24:BA:2363:C:H5'  | 2.31                     | 0.61              |
| 24:BA:2384:G:O2' | 24:BA:2385:C:OP1  | 2.19                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2450:A:C2    | 24:BA:2451:A:C4    | 2.89                     | 0.61              |
| 24:BA:2469:A:C2    | 24:BA:2482:G:C1'   | 2.83                     | 0.61              |
| 24:BA:2482:G:C2    | 24:BA:2483:C:HI'   | 2.35                     | 0.61              |
| 24:BA:2484:G:N3    | 37:BP:124:LYS:CE   | 2.62                     | 0.61              |
| 24:BA:2550:G:N2    | 24:BA:2559:C:C2    | 2.69                     | 0.61              |
| 24:BA:2563:U:H4'   | 35:BN:28:SER:CB    | 2.29                     | 0.61              |
| 24:BA:2567:G:H2'   | 24:BA:2568:C:C6    | 2.36                     | 0.61              |
| 24:BA:2596:U:C2'   | 27:BD:242:ARG:NH1  | 2.53                     | 0.61              |
| 24:BA:2653:U:C2'   | 24:BA:2654:A:C8    | 2.83                     | 0.61              |
| 24:BA:2657:A:H62   | 24:BA:2664:G:H21   | 1.47                     | 0.61              |
| 25:BB:99:A:C2      | 25:BB:100:G:C4     | 2.88                     | 0.61              |
| 26:BC:193:ILE:HG22 | 26:BC:197:GLU:OE1  | 2.01                     | 0.61              |
| 26:BC:200:LYS:HG2  | 26:BC:200:LYS:O    | 1.99                     | 0.61              |
| 27:BD:29:PRO:HB2   | 27:BD:31:LYS:NZ    | 2.16                     | 0.61              |
| 27:BD:176:ARG:CA   | 27:BD:182:LEU:HD23 | 2.30                     | 0.61              |
| 28:BE:49:LEU:CD2   | 28:BE:76:ARG:N     | 2.64                     | 0.61              |
| 29:BF:113:ALA:HB1  | 29:BF:187:VAL:CG1  | 2.30                     | 0.61              |
| 29:BF:154:VAL:HB   | 29:BF:193:VAL:CG2  | 2.31                     | 0.61              |
| 30:BG:1:MET:C      | 30:BG:3:LEU:H      | 2.08                     | 0.61              |
| 31:BH:101:ARG:CD   | 31:BH:117:PRO:HG3  | 2.30                     | 0.61              |
| 33:BL:19:PRO:CG    | 33:BL:22:PRO:HG2   | 2.30                     | 0.61              |
| 34:BM:33:LEU:HD13  | 34:BM:34:LEU:N     | 2.15                     | 0.61              |
| 34:BM:37:LYS:HD2   | 34:BM:43:THR:N     | 2.14                     | 0.61              |
| 34:BM:48:MET:O     | 34:BM:119:ARG:NH1  | 2.31                     | 0.61              |
| 34:BM:57:ALA:O     | 34:BM:58:ASP:O     | 2.18                     | 0.61              |
| 35:BN:31:LYS:C     | 35:BN:32:TYR:CG    | 2.78                     | 0.61              |
| 36:BO:55:ARG:O     | 36:BO:56:SER:CB    | 2.46                     | 0.61              |
| 39:BR:75:GLU:C     | 39:BR:78:LEU:HB3   | 2.25                     | 0.61              |
| 41:BT:65:ILE:HD12  | 41:BT:96:ALA:CB    | 2.21                     | 0.61              |
| 42:BU:68:LYS:NZ    | 42:BU:95:LEU:HD11  | 2.15                     | 0.61              |
| 44:BW:84:ALA:H     | 44:BW:85:PRO:HD2   | 1.65                     | 0.61              |
| 45:BX:17:SER:OG    | 45:BX:18:GLY:N     | 2.26                     | 0.61              |
| 45:BX:88:LYS:O     | 45:BX:91:GLU:HB2   | 1.99                     | 0.61              |
| 46:BY:10:ARG:NH2   | 46:BY:36:LYS:H     | 1.98                     | 0.61              |
| 46:BY:18:LEU:HD22  | 46:BY:23:LYS:CD    | 2.31                     | 0.61              |
| 47:BZ:46:LYS:HE2   | 47:BZ:77:ARG:O     | 1.99                     | 0.61              |
| 48:B1:12:SER:CB    | 48:B1:13:PRO:CD    | 2.78                     | 0.61              |
| 48:B1:19:LEU:HD13  | 48:B1:19:LEU:C     | 2.24                     | 0.61              |
| 48:B1:48:LEU:HD12  | 48:B1:51:GLN:HE22  | 1.64                     | 0.61              |
| 49:B2:26:LEU:HB2   | 49:B2:28:LEU:CD2   | 2.28                     | 0.61              |
| 50:B3:15:ILE:C     | 50:B3:16:CYS:SG    | 2.81                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 50:B3:18:CYS:SG   | 50:B3:19:GLY:N    | 2.71                     | 0.61              |
| 50:B3:31:ILE:O    | 50:B3:32:TYR:CB   | 2.48                     | 0.61              |
| 50:B3:56:VAL:HB   | 50:B3:61:ARG:CD   | 2.31                     | 0.61              |
| 50:B3:62:ARG:O    | 50:B3:65:ASP:OD1  | 2.17                     | 0.61              |
| 54:B7:42:ARG:HB3  | 54:B7:43:GLN:NE2  | 2.16                     | 0.61              |
| 1:AA:8:A:N6       | 6:AG:209:ARG:NH1  | 2.46                     | 0.61              |
| 1:AA:17:U:O2'     | 1:AA:18:C:H5'     | 2.01                     | 0.61              |
| 1:AA:38:G:N2      | 1:AA:397:A:C4     | 2.68                     | 0.61              |
| 1:AA:414:A:C2'    | 1:AA:415:A:H8     | 2.13                     | 0.61              |
| 1:AA:755:G:N3     | 10:AK:1:MET:HE1   | 2.16                     | 0.61              |
| 1:AA:955:U:C2     | 1:AA:956:U:C5     | 2.87                     | 0.61              |
| 1:AA:995:C:O2'    | 16:AQ:4:LYS:HE2   | 2.00                     | 0.61              |
| 1:AA:1124:G:N7    | 1:AA:1145:C:H2'   | 2.15                     | 0.61              |
| 1:AA:1418:A:C3'   | 1:AA:1419:G:H5'   | 2.30                     | 0.61              |
| 2:A1:27:A:O2'     | 2:A1:28:G:H5'     | 2.01                     | 0.61              |
| 3:AD:19:G:H5'     | 3:AD:20:U:C4      | 2.34                     | 0.61              |
| 4:AE:69:LEU:CD2   | 4:AE:91:PRO:HB3   | 2.30                     | 0.61              |
| 5:AF:3:ASN:CG     | 5:AF:4:LYS:N      | 2.59                     | 0.61              |
| 5:AF:10:PHE:O     | 5:AF:11:ARG:NH2   | 2.33                     | 0.61              |
| 5:AF:47:LEU:HD12  | 5:AF:49:SER:HB3   | 1.82                     | 0.61              |
| 5:AF:67:THR:CA    | 5:AF:102:ASN:HB2  | 2.30                     | 0.61              |
| 6:AG:11:LEU:C     | 6:AG:19:LEU:HD12  | 2.25                     | 0.61              |
| 7:AH:12:LEU:HG    | 7:AH:129:ILE:CG1  | 2.30                     | 0.61              |
| 7:AH:91:LEU:HD12  | 7:AH:118:ILE:CG2  | 2.31                     | 0.61              |
| 9:AJ:22:LEU:HB3   | 9:AJ:62:PHE:HE2   | 1.65                     | 0.61              |
| 9:AJ:50:ILE:HD12  | 9:AJ:58:PRO:HB3   | 1.82                     | 0.61              |
| 11:AL:45:ALA:O    | 11:AL:78:LYS:HG3  | 2.01                     | 0.61              |
| 13:AN:14:VAL:O    | 13:AN:14:VAL:HG12 | 1.99                     | 0.61              |
| 15:AP:20:THR:HA   | 15:AP:25:ILE:CB   | 2.31                     | 0.61              |
| 17:AR:70:LEU:HG   | 17:AR:78:TYR:CB   | 2.30                     | 0.61              |
| 17:AR:71:GLN:HB2  | 17:AR:78:TYR:HE1  | 1.63                     | 0.61              |
| 18:AS:20:VAL:CG1  | 18:AS:32:TYR:HB2  | 2.30                     | 0.61              |
| 20:AU:80:PRO:O    | 20:AU:81:PHE:C    | 2.44                     | 0.61              |
| 22:AW:43:LEU:HD22 | 22:AW:48:LYS:CB   | 2.31                     | 0.61              |
| 22:AW:57:ARG:O    | 22:AW:58:LYS:C    | 2.44                     | 0.61              |
| 24:BA:59:U:H3'    | 24:BA:60:G:H5''   | 1.83                     | 0.61              |
| 24:BA:64:A:C2'    | 24:BA:65:C:C5'    | 2.79                     | 0.61              |
| 24:BA:76:C:O5'    | 24:BA:76:C:C6     | 2.53                     | 0.61              |
| 24:BA:190:A:OP2   | 24:BA:205:G:N2    | 2.33                     | 0.61              |
| 24:BA:373:U:H4'   | 24:BA:374:A:H8    | 1.64                     | 0.61              |
| 24:BA:440:G:H2'   | 24:BA:441:U:C6    | 2.36                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:558:G:C2     | 24:BA:559:G:C5     | 2.89                     | 0.61              |
| 24:BA:566:U:C5'    | 42:BU:82:ARG:NH2   | 2.64                     | 0.61              |
| 24:BA:566:U:C5'    | 42:BU:82:ARG:CZ    | 2.75                     | 0.61              |
| 24:BA:704:G:H22    | 24:BA:726:G:C1'    | 2.12                     | 0.61              |
| 24:BA:729:G:C5'    | 27:BD:211:ARG:HH12 | 2.14                     | 0.61              |
| 24:BA:845:G:H5''   | 24:BA:846:C:OP1    | 2.00                     | 0.61              |
| 24:BA:988:A:H5''   | 49:B2:10:LYS:CE    | 2.31                     | 0.61              |
| 24:BA:1071:G:H2'   | 24:BA:1072:C:H5''  | 1.81                     | 0.61              |
| 24:BA:1096:A:H62   | 33:BL:30:HIS:HB2   | 1.65                     | 0.61              |
| 24:BA:1171:G:H1    | 24:BA:1179:C:N4    | 1.98                     | 0.61              |
| 24:BA:1174:A:N6    | 24:BA:1177:A:C6    | 2.59                     | 0.61              |
| 24:BA:1226:G:H3'   | 24:BA:1226:G:C8    | 2.34                     | 0.61              |
| 24:BA:1227:A:H3'   | 24:BA:1227:A:H8    | 1.65                     | 0.61              |
| 24:BA:1229:G:H2'   | 24:BA:1230:C:O4'   | 1.99                     | 0.61              |
| 24:BA:1363:C:H4'   | 24:BA:1809:A:N7    | 2.15                     | 0.61              |
| 24:BA:1364:G:P     | 24:BA:1809:A:C6    | 2.94                     | 0.61              |
| 24:BA:1675:C:H5    | 28:BE:129:HIS:NE2  | 1.99                     | 0.61              |
| 24:BA:1742:C:C2    | 24:BA:1743:G:O4'   | 2.53                     | 0.61              |
| 24:BA:1833:U:O2'   | 24:BA:1834:U:OP1   | 2.14                     | 0.61              |
| 24:BA:1838:C:H2'   | 24:BA:1898:U:O4    | 1.99                     | 0.61              |
| 24:BA:1853:A:H1'   | 24:BA:2234:G:H5'   | 1.82                     | 0.61              |
| 24:BA:1988:C:H2'   | 24:BA:1989:G:O5'   | 2.00                     | 0.61              |
| 24:BA:1992:G:H22   | 24:BA:1995:U:H5    | 1.47                     | 0.61              |
| 24:BA:2122:U:H2'   | 24:BA:2123:G:C5'   | 2.24                     | 0.61              |
| 24:BA:2254:C:O2'   | 24:BA:2255:G:H5'   | 1.99                     | 0.61              |
| 24:BA:2365:G:OP1   | 47:BZ:55:ARG:N     | 2.31                     | 0.61              |
| 24:BA:2392:A:O2'   | 24:BA:2393:A:H5'   | 2.00                     | 0.61              |
| 24:BA:2439:A:H4'   | 24:BA:2440:C:H5''  | 1.82                     | 0.61              |
| 24:BA:2491:U:C5    | 24:BA:2492:U:OP2   | 2.54                     | 0.61              |
| 24:BA:2507:C:C2    | 24:BA:2583:G:C2    | 2.89                     | 0.61              |
| 24:BA:2570:G:H2'   | 24:BA:2570:G:N3    | 2.16                     | 0.61              |
| 24:BA:2761:G:O2'   | 24:BA:2762:G:H5'   | 2.00                     | 0.61              |
| 25:BB:61:G:C2      | 25:BB:62:C:C4      | 2.89                     | 0.61              |
| 25:BB:99:A:C6      | 25:BB:100:G:C5     | 2.88                     | 0.61              |
| 25:BB:104:A:N6     | 25:BB:105:G:N2     | 2.48                     | 0.61              |
| 26:BC:161:ILE:HG13 | 26:BC:161:ILE:O    | 2.01                     | 0.61              |
| 27:BD:82:ILE:HG22  | 27:BD:83:GLU:N     | 2.15                     | 0.61              |
| 27:BD:176:ARG:N    | 27:BD:182:LEU:HD23 | 2.15                     | 0.61              |
| 29:BF:39:TRP:CE3   | 29:BF:99:TYR:HB3   | 2.36                     | 0.61              |
| 29:BF:41:LEU:HD12  | 29:BF:42:ALA:N     | 2.16                     | 0.61              |
| 29:BF:49:ALA:HB3   | 29:BF:94:PRO:HA    | 1.83                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 31:BH:54:ARG:HH11  | 31:BH:57:ASP:HB2  | 1.65                     | 0.61              |
| 32:BK:123:LEU:HD12 | 32:BK:124:GLY:H   | 1.63                     | 0.61              |
| 33:BL:35:MET:HA    | 33:BL:38:VAL:CB   | 2.27                     | 0.61              |
| 34:BM:69:GLN:C     | 34:BM:70:LYS:HD3  | 2.26                     | 0.61              |
| 35:BN:82:ASN:OD1   | 35:BN:82:ASN:N    | 2.34                     | 0.61              |
| 36:BO:135:LEU:HD12 | 36:BO:135:LEU:H   | 1.65                     | 0.61              |
| 37:BP:104:PHE:O    | 37:BP:105:GLU:CD  | 2.43                     | 0.61              |
| 39:BR:79:ALA:O     | 39:BR:80:LEU:C    | 2.44                     | 0.61              |
| 40:BS:99:LEU:O     | 40:BS:100:TYR:O   | 2.19                     | 0.61              |
| 40:BS:102:ILE:C    | 40:BS:104:ASN:N   | 2.56                     | 0.61              |
| 41:BT:93:LYS:HB2   | 42:BU:10:LYS:CE   | 2.30                     | 0.61              |
| 42:BU:39:LEU:O     | 42:BU:40:LEU:HD12 | 2.00                     | 0.61              |
| 42:BU:43:GLU:C     | 42:BU:44:LYS:HD3  | 2.25                     | 0.61              |
| 42:BU:45:THR:O     | 42:BU:46:VAL:HB   | 1.98                     | 0.61              |
| 43:BV:8:ARG:C      | 43:BV:102:HIS:CD2 | 2.77                     | 0.61              |
| 43:BV:73:ALA:O     | 43:BV:74:ALA:HB2  | 2.00                     | 0.61              |
| 43:BV:76:VAL:CG2   | 43:BV:77:ASP:H    | 2.13                     | 0.61              |
| 47:BZ:44:ARG:HE    | 47:BZ:77:ARG:CD   | 2.12                     | 0.61              |
| 48:B1:28:MET:O     | 48:B1:29:GLU:C    | 2.44                     | 0.61              |
| 49:B2:15:TYR:N     | 49:B2:15:TYR:HD1  | 1.98                     | 0.61              |
| 49:B2:50:VAL:HG13  | 49:B2:53:LEU:HB2  | 1.82                     | 0.61              |
| 50:B3:58:ARG:CB    | 50:B3:62:ARG:NH2  | 2.64                     | 0.61              |
| 51:B4:46:CYS:HB2   | 51:B4:47:PRO:CD   | 2.29                     | 0.61              |
| 52:B5:33:LYS:NZ    | 52:B5:34:LEU:HD23 | 2.15                     | 0.61              |
| 53:B6:34:ARG:HH22  | 53:B6:42:LEU:CD2  | 2.13                     | 0.61              |
| 54:B7:26:LYS:CB    | 54:B7:44:LYS:HZ1  | 2.13                     | 0.61              |
| 1:AA:8:A:H5'       | 7:AH:120:THR:O    | 2.00                     | 0.61              |
| 1:AA:47:C:O2'      | 1:AA:48:C:OP2     | 2.19                     | 0.61              |
| 1:AA:62:U:OP1      | 1:AA:386:C:H5'    | 2.00                     | 0.61              |
| 1:AA:186:C:H2'     | 1:AA:186(A):C:H6  | 1.66                     | 0.61              |
| 1:AA:189:U:N3      | 19:AT:72:ARG:NH2  | 2.44                     | 0.61              |
| 1:AA:373:A:C2      | 1:AA:374:A:C8     | 2.89                     | 0.61              |
| 1:AA:752:G:O4'     | 1:AA:752:G:OP2    | 2.18                     | 0.61              |
| 1:AA:866:C:H3'     | 1:AA:867:G:H8     | 1.66                     | 0.61              |
| 1:AA:986:A:H4'     | 21:AV:55:LYS:CD   | 2.31                     | 0.61              |
| 1:AA:1055:A:N6     | 1:AA:1206:G:C5    | 2.68                     | 0.61              |
| 1:AA:1253:G:OP1    | 12:AM:44:VAL:HB   | 2.01                     | 0.61              |
| 1:AA:1320:C:H3'    | 1:AA:1321:C:C6    | 2.35                     | 0.61              |
| 1:AA:1373:G:OP1    | 11:AL:42:ARG:NH2  | 2.34                     | 0.61              |
| 3:AC:10:G:H8       | 3:AC:10:G:O5'     | 1.83                     | 0.61              |
| 3:AD:64:A:H2'      | 3:AD:65:G:H8      | 1.65                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:AE:58:ILE:O     | 4:AE:61:LEU:HB3   | 2.01                     | 0.61              |
| 4:AE:140:HIS:O    | 4:AE:143:GLU:HB3  | 2.00                     | 0.61              |
| 4:AE:141:GLU:OE1  | 4:AE:142:LEU:N    | 2.33                     | 0.61              |
| 6:AG:120:LEU:HD12 | 6:AG:120:LEU:C    | 2.25                     | 0.61              |
| 6:AG:157:LEU:O    | 6:AG:158:ILE:C    | 2.43                     | 0.61              |
| 7:AH:76:ILE:HG21  | 7:AH:142:LEU:HD13 | 1.82                     | 0.61              |
| 8:AI:39:LYS:O     | 8:AI:63:TYR:HA    | 2.00                     | 0.61              |
| 10:AK:8:ASP:O     | 10:AK:11:THR:OG1  | 2.19                     | 0.61              |
| 10:AK:67:PRO:O    | 10:AK:76:PRO:HA   | 1.99                     | 0.61              |
| 11:AL:111:ARG:HD2 | 16:AQ:61:TRP:NE1  | 2.15                     | 0.61              |
| 16:AQ:4:LYS:O     | 16:AQ:7:ILE:HG13  | 2.00                     | 0.61              |
| 18:AS:4:ILE:N     | 18:AS:4:ILE:CD1   | 2.54                     | 0.61              |
| 18:AS:59:TRP:HA   | 18:AS:59:TRP:CE3  | 2.36                     | 0.61              |
| 19:AT:25:ARG:HG2  | 19:AT:26:GLN:N    | 2.15                     | 0.61              |
| 22:AW:53:LEU:O    | 22:AW:54:LYS:C    | 2.43                     | 0.61              |
| 24:BA:225:A:O2'   | 24:BA:257:A:H4'   | 2.01                     | 0.61              |
| 24:BA:257:A:O5'   | 24:BA:257:A:C8    | 2.53                     | 0.61              |
| 24:BA:336:C:H4'   | 45:BX:67:LEU:HD23 | 1.81                     | 0.61              |
| 24:BA:819:A:H2'   | 24:BA:820:A:O4'   | 2.00                     | 0.61              |
| 24:BA:820:A:O2'   | 24:BA:836:G:N2    | 2.34                     | 0.61              |
| 24:BA:936:C:H2'   | 24:BA:937:U:H6    | 1.65                     | 0.61              |
| 24:BA:961:C:C4    | 24:BA:2031:A:N3   | 2.69                     | 0.61              |
| 24:BA:986:C:O5'   | 24:BA:986:C:H6    | 1.84                     | 0.61              |
| 24:BA:1147:C:C2'  | 24:BA:1148:A:H5'  | 2.30                     | 0.61              |
| 24:BA:1164:G:C5   | 24:BA:1165:U:C5   | 2.89                     | 0.61              |
| 24:BA:1273:U:H4'  | 24:BA:1275:A:OP2  | 2.00                     | 0.61              |
| 24:BA:1309:G:C2'  | 24:BA:1310:G:C5'  | 2.75                     | 0.61              |
| 24:BA:1537:C:C6   | 24:BA:1537:C:C3'  | 2.84                     | 0.61              |
| 24:BA:1567:A:H4'  | 24:BA:1568:G:N1   | 2.14                     | 0.61              |
| 24:BA:1650:G:O6   | 24:BA:2008:C:N4   | 2.34                     | 0.61              |
| 24:BA:1773:A:H2'  | 24:BA:1774:C:O4'  | 1.99                     | 0.61              |
| 24:BA:1774:C:C5   | 27:BD:18:VAL:HG11 | 2.35                     | 0.61              |
| 24:BA:2052:G:H2'  | 24:BA:2053:G:C8   | 2.29                     | 0.61              |
| 24:BA:2058:A:N3   | 24:BA:2059:A:N7   | 2.48                     | 0.61              |
| 24:BA:2127:G:H5'  | 26:BC:36:LYS:CG   | 2.29                     | 0.61              |
| 24:BA:2206:C:H5'' | 24:BA:2228:G:H21  | 1.65                     | 0.61              |
| 24:BA:2378:A:H2'  | 24:BA:2378:A:N3   | 2.13                     | 0.61              |
| 24:BA:2392:A:O3'  | 54:B7:32:LEU:HD11 | 1.99                     | 0.61              |
| 24:BA:2467:C:OP1  | 55:B8:8:LYS:NZ    | 2.25                     | 0.61              |
| 24:BA:2578:G:O2'  | 24:BA:2579:C:H6   | 1.84                     | 0.61              |
| 27:BD:14:ARG:C    | 27:BD:15:PHE:CD1  | 2.79                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 27:BD:226:MET:CE  | 27:BD:237:GLU:H   | 2.11                     | 0.61              |
| 28:BE:120:TRP:CD1 | 28:BE:120:TRP:C   | 2.77                     | 0.61              |
| 30:BG:97:ASP:O    | 30:BG:98:ARG:C    | 2.43                     | 0.61              |
| 30:BG:126:ASP:HA  | 30:BG:166:ASP:OD1 | 2.01                     | 0.61              |
| 31:BH:127:GLU:HB2 | 31:BH:130:ARG:O   | 2.00                     | 0.61              |
| 31:BH:156:ALA:HB1 | 31:BH:172:LYS:HZ1 | 1.65                     | 0.61              |
| 31:BH:171:LEU:CA  | 31:BH:172:LYS:HZ2 | 2.12                     | 0.61              |
| 32:BK:4:ILE:O     | 32:BK:36:ALA:CB   | 2.37                     | 0.61              |
| 32:BK:130:TYR:CD1 | 32:BK:130:TYR:N   | 2.69                     | 0.61              |
| 34:BM:45:ASN:O    | 34:BM:46:VAL:CG2  | 2.45                     | 0.61              |
| 35:BN:11:ALA:HB3  | 35:BN:97:ARG:NH1  | 2.13                     | 0.61              |
| 36:BO:81:GLN:HA   | 36:BO:86:LYS:CE   | 2.30                     | 0.61              |
| 36:BO:91:PHE:CD2  | 36:BO:96:THR:HG22 | 2.36                     | 0.61              |
| 37:BP:43:THR:O    | 37:BP:47:ILE:CG1  | 2.49                     | 0.61              |
| 39:BR:10:ARG:O    | 39:BR:12:PHE:N    | 2.32                     | 0.61              |
| 39:BR:31:SER:HB3  | 39:BR:34:HIS:HB3  | 1.81                     | 0.61              |
| 41:BT:76:TYR:CD2  | 41:BT:80:ILE:CD1  | 2.78                     | 0.61              |
| 41:BT:111:GLU:HG3 | 41:BT:112:ARG:N   | 2.16                     | 0.61              |
| 42:BU:62:LEU:HD13 | 42:BU:98:GLU:CA   | 2.31                     | 0.61              |
| 44:BW:35:THR:HG22 | 44:BW:37:THR:H    | 1.66                     | 0.61              |
| 45:BX:82:PRO:HD3  | 45:BX:97:ARG:H    | 1.63                     | 0.61              |
| 49:B2:36:VAL:O    | 49:B2:36:VAL:HG23 | 1.99                     | 0.61              |
| 54:B7:51:ALA:O    | 54:B7:54:GLU:OE1  | 2.19                     | 0.61              |
| 1:AA:59:A:O2'     | 1:AA:388:G:H5''   | 2.00                     | 0.61              |
| 1:AA:118:U:O4     | 1:AA:289:G:H4'    | 2.00                     | 0.61              |
| 1:AA:131:C:N4     | 1:AA:232:G:N1     | 2.48                     | 0.61              |
| 1:AA:136:C:O2'    | 18:AS:63:GLY:HA2  | 2.01                     | 0.61              |
| 1:AA:255:G:OP2    | 19:AT:66:SER:HB2  | 2.00                     | 0.61              |
| 1:AA:314:C:H2'    | 1:AA:315:A:C1'    | 2.31                     | 0.61              |
| 1:AA:354:G:N2     | 1:AA:355:C:C2     | 2.69                     | 0.61              |
| 1:AA:515:G:H2'    | 1:AA:516:U:O4'    | 2.00                     | 0.61              |
| 1:AA:558:G:C5'    | 1:AA:559:A:H5''   | 2.31                     | 0.61              |
| 1:AA:782:A:C6     | 1:AA:801:U:C2     | 2.88                     | 0.61              |
| 1:AA:1126:U:H2'   | 1:AA:1127:G:C8    | 2.36                     | 0.61              |
| 1:AA:1157:A:C8    | 1:AA:1181:G:N2    | 2.69                     | 0.61              |
| 3:AD:62:C:H4'     | 26:BC:52:ARG:CD   | 2.28                     | 0.61              |
| 3:AD:75:C:H5''    | 3:AD:76:A:C4'     | 2.30                     | 0.61              |
| 3:AB:9:A:O2'      | 3:AB:45:U:C2'     | 2.48                     | 0.61              |
| 4:AE:56:ARG:HD2   | 4:AE:56:ARG:C     | 2.26                     | 0.61              |
| 4:AE:182:ILE:HD13 | 4:AE:182:ILE:H    | 1.66                     | 0.61              |
| 5:AF:10:PHE:HD1   | 5:AF:178:LEU:CD2  | 2.14                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:AF:11:ARG:HH22  | 5:AF:179:ARG:N     | 1.97                     | 0.61              |
| 5:AF:46:GLU:C     | 5:AF:47:LEU:HD22   | 2.26                     | 0.61              |
| 5:AF:91:LEU:HD23  | 5:AF:92:ALA:N      | 2.15                     | 0.61              |
| 5:AF:180:ALA:HB1  | 5:AF:182:ILE:HD11  | 1.81                     | 0.61              |
| 6:AG:80:GLU:HA    | 6:AG:83:SER:OG     | 2.00                     | 0.61              |
| 8:AI:78:GLU:HA    | 8:AI:81:ILE:CD1    | 2.31                     | 0.61              |
| 9:AJ:88:PRO:CG    | 9:AJ:152:ALA:HB2   | 2.29                     | 0.61              |
| 10:AK:75:ARG:HB2  | 10:AK:75:ARG:NH1   | 2.15                     | 0.61              |
| 13:AN:73:MET:SD   | 13:AN:103:LEU:HB3  | 2.40                     | 0.61              |
| 15:AP:52:GLU:HB3  | 15:AP:55:ARG:CZ    | 2.30                     | 0.61              |
| 17:AR:16:ALA:O    | 17:AR:17:ARG:C     | 2.44                     | 0.61              |
| 18:AS:31:LYS:HG2  | 18:AS:32:TYR:N     | 2.15                     | 0.61              |
| 19:AT:43:LEU:C    | 19:AT:43:LEU:CD1   | 2.66                     | 0.61              |
| 19:AT:81:ARG:HG2  | 19:AT:84:LEU:HD21  | 1.83                     | 0.61              |
| 19:AT:100:LYS:HB3 | 19:AT:100:LYS:NZ   | 2.15                     | 0.61              |
| 20:AU:20:ALA:HB1  | 20:AU:55:ARG:HH21  | 1.65                     | 0.61              |
| 21:AV:40:ILE:O    | 21:AV:41:VAL:HG13  | 2.00                     | 0.61              |
| 22:AW:50:GLU:OE1  | 22:AW:100:ILE:HG23 | 2.00                     | 0.61              |
| 22:AW:57:ARG:NH2  | 22:AW:100:ILE:HD12 | 2.15                     | 0.61              |
| 22:AW:79:ARG:O    | 22:AW:80:ARG:C     | 2.42                     | 0.61              |
| 24:BA:46:C:N4     | 24:BA:214:G:C8     | 2.68                     | 0.61              |
| 24:BA:84:A:H5'    | 45:BX:8:LYS:CE     | 2.29                     | 0.61              |
| 24:BA:216:A:H61   | 24:BA:431:U:H3     | 1.46                     | 0.61              |
| 24:BA:318:C:O2    | 24:BA:334:C:C2     | 2.54                     | 0.61              |
| 24:BA:447:A:C6    | 24:BA:454:A:N7     | 2.69                     | 0.61              |
| 24:BA:503:A:H4'   | 24:BA:504:U:O5'    | 2.01                     | 0.61              |
| 24:BA:562:U:N3    | 24:BA:572:A:N3     | 2.44                     | 0.61              |
| 24:BA:637:A:C2    | 24:BA:651:G:C5'    | 2.82                     | 0.61              |
| 24:BA:888:C:H4'   | 24:BA:889:C:O2     | 2.00                     | 0.61              |
| 24:BA:918:A:N3    | 24:BA:918:A:H5'    | 2.15                     | 0.61              |
| 24:BA:969:U:O2'   | 24:BA:970:C:H5'    | 2.01                     | 0.61              |
| 24:BA:1020:A:N3   | 24:BA:1140:C:O2    | 2.33                     | 0.61              |
| 24:BA:1024:G:OP2  | 24:BA:1025:G:H3'   | 2.01                     | 0.61              |
| 24:BA:1054:A:H2'  | 24:BA:1055:G:C8    | 2.36                     | 0.61              |
| 24:BA:1069:A:H4'  | 24:BA:1070:A:O5'   | 2.01                     | 0.61              |
| 24:BA:1303:G:C8   | 24:BA:1304:C:C5    | 2.88                     | 0.61              |
| 24:BA:1419:A:N7   | 24:BA:1421:G:C6    | 2.68                     | 0.61              |
| 24:BA:1521:G:H3'  | 24:BA:1522:G:C5'   | 2.30                     | 0.61              |
| 24:BA:1795:C:O2'  | 24:BA:1796:U:H5'   | 2.01                     | 0.61              |
| 24:BA:1799:G:H5'' | 27:BD:264:LYS:NZ   | 2.14                     | 0.61              |
| 24:BA:1882:C:C2'  | 24:BA:1883:G:H5'   | 2.30                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2431:U:O2'  | 24:BA:2432:A:H5''  | 2.00                     | 0.61              |
| 24:BA:2674:G:C5'  | 35:BN:26:LYS:HD2   | 2.30                     | 0.61              |
| 24:BA:2770:G:H2'  | 24:BA:2771:C:H5'   | 1.82                     | 0.61              |
| 25:BB:6:C:H5'     | 25:BB:27:C:O2'     | 2.01                     | 0.61              |
| 25:BB:12:C:C5     | 47:BZ:74:ARG:O     | 2.53                     | 0.61              |
| 26:BC:22:ILE:CB   | 26:BC:190:ARG:HH22 | 2.14                     | 0.61              |
| 26:BC:77:ILE:HG22 | 26:BC:119:VAL:CG2  | 2.31                     | 0.61              |
| 26:BC:211:SER:HB2 | 26:BC:223:ARG:NH2  | 2.15                     | 0.61              |
| 27:BD:258:LYS:HA  | 27:BD:261:LYS:HD2  | 1.83                     | 0.61              |
| 28:BE:5:LEU:HA    | 28:BE:76:ARG:HH22  | 1.65                     | 0.61              |
| 28:BE:54:GLN:HG2  | 28:BE:57:LYS:HG3   | 1.83                     | 0.61              |
| 28:BE:102:VAL:HA  | 28:BE:202:LYS:HZ1  | 1.66                     | 0.61              |
| 32:BK:29:TYR:N    | 32:BK:29:TYR:CD1   | 2.69                     | 0.61              |
| 32:BK:94:ALA:HA   | 32:BK:97:ILE:CD1   | 2.31                     | 0.61              |
| 32:BK:114:LEU:CA  | 32:BK:130:TYR:HB3  | 2.27                     | 0.61              |
| 37:BP:32:TYR:CZ   | 37:BP:106:VAL:HG23 | 2.35                     | 0.61              |
| 37:BP:111:GLU:HB3 | 37:BP:112:GLU:OE2  | 2.00                     | 0.61              |
| 38:BQ:51:LEU:HG   | 38:BQ:66:VAL:HG11  | 1.81                     | 0.61              |
| 39:BR:57:LYS:NZ   | 39:BR:62:LYS:HB3   | 2.16                     | 0.61              |
| 39:BR:106:ARG:NH2 | 39:BR:110:LEU:CD2  | 2.58                     | 0.61              |
| 40:BS:28:VAL:HG12 | 40:BS:30:VAL:CG1   | 2.30                     | 0.61              |
| 40:BS:57:PHE:C    | 40:BS:58:ASN:ND2   | 2.58                     | 0.61              |
| 42:BU:20:LEU:CB   | 42:BU:95:LEU:HD13  | 2.31                     | 0.61              |
| 46:BY:4:ARG:NE    | 46:BY:44:PHE:HZ    | 1.80                     | 0.61              |
| 46:BY:165:VAL:CG1 | 46:BY:166:SER:H    | 1.97                     | 0.61              |
| 48:B1:2:ARG:CZ    | 48:B1:2:ARG:H      | 2.14                     | 0.61              |
| 48:B1:32:PHE:HD1  | 48:B1:32:PHE:H     | 1.45                     | 0.61              |
| 1:AA:190:G:H8     | 1:AA:190:G:OP1     | 1.82                     | 0.61              |
| 1:AA:224:C:H2'    | 1:AA:225:C:C6      | 2.35                     | 0.61              |
| 1:AA:406:G:H21    | 6:AG:119:GLN:HE22  | 1.48                     | 0.61              |
| 1:AA:467:G:OP2    | 1:AA:467:G:H3'     | 2.01                     | 0.61              |
| 1:AA:721:G:O6     | 20:AU:71:LYS:NZ    | 2.27                     | 0.61              |
| 1:AA:869:G:H4'    | 1:AA:872:A:C8      | 2.35                     | 0.61              |
| 1:AA:918:A:O2'    | 1:AA:919:A:OP1     | 2.19                     | 0.61              |
| 1:AA:934:C:N4     | 1:AA:1344:C:N3     | 2.48                     | 0.61              |
| 1:AA:938:A:C4     | 1:AA:939:G:C8      | 2.89                     | 0.61              |
| 1:AA:969:A:OP1    | 1:AA:969:A:C4'     | 2.48                     | 0.61              |
| 1:AA:1157:A:C1'   | 1:AA:1181:G:H21    | 2.14                     | 0.61              |
| 1:AA:1191:A:P     | 5:AF:4:LYS:HZ3     | 2.23                     | 0.61              |
| 1:AA:1248:A:H2'   | 11:AL:70:LYS:HZ1   | 1.64                     | 0.61              |
| 1:AA:1319:A:H4'   | 21:AV:70:LYS:HZ1   | 1.64                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1327:C:OP1    | 23:AX:20:LYS:HE2   | 2.01                     | 0.61              |
| 1:AA:1373:G:O2'    | 9:AJ:34:GLY:HA2    | 2.00                     | 0.61              |
| 1:AA:1423:G:H5'    | 35:BN:49:ARG:HH21  | 1.66                     | 0.61              |
| 1:AA:1443:G:O3'    | 1:AA:1446:A:H4'    | 2.01                     | 0.61              |
| 3:AD:8:U:O4        | 3:AD:14:A:N7       | 2.34                     | 0.61              |
| 3:AD:63:G:H5'      | 26:BC:53:ARG:NE    | 2.16                     | 0.61              |
| 4:AE:55:PHE:HA     | 4:AE:58:ILE:CG1    | 2.31                     | 0.61              |
| 4:AE:150:SER:O     | 4:AE:151:GLY:C     | 2.44                     | 0.61              |
| 5:AF:120:VAL:HG21  | 5:AF:137:ALA:HB1   | 1.82                     | 0.61              |
| 5:AF:200:ALA:C     | 5:AF:201:TYR:CD1   | 2.79                     | 0.61              |
| 6:AG:170:VAL:HG11  | 6:AG:174:LEU:HB2   | 1.82                     | 0.61              |
| 8:AI:89:MET:CE     | 20:AU:76:LEU:HD21  | 2.31                     | 0.61              |
| 10:AK:22:GLU:HA    | 10:AK:63:LEU:CD2   | 2.22                     | 0.61              |
| 10:AK:46:LYS:HD2   | 10:AK:63:LEU:O     | 2.01                     | 0.61              |
| 11:AL:93:ARG:CZ    | 11:AL:97:LYS:HG2   | 2.29                     | 0.61              |
| 19:AT:3:LYS:O      | 19:AT:5:VAL:HG23   | 2.01                     | 0.61              |
| 19:AT:11:VAL:HB    | 19:AT:20:THR:HG1   | 1.64                     | 0.61              |
| 20:AU:46:GLU:N     | 20:AU:49:LYS:HZ1   | 1.97                     | 0.61              |
| 21:AV:22:LEU:C     | 21:AV:24:ALA:H     | 2.07                     | 0.61              |
| 21:AV:46:GLY:O     | 21:AV:47:HIS:ND1   | 2.34                     | 0.61              |
| 24:BA:18:C:O2      | 24:BA:553:U:H5''   | 2.01                     | 0.61              |
| 24:BA:27:G:N2      | 24:BA:512:G:O2'    | 2.33                     | 0.61              |
| 24:BA:270(X):G:C3' | 24:BA:270(Y):G:H5' | 2.31                     | 0.61              |
| 24:BA:685:A:C2     | 24:BA:689:A:C6     | 2.88                     | 0.61              |
| 24:BA:904:C:O2'    | 24:BA:905:U:H5'    | 2.01                     | 0.61              |
| 24:BA:980:A:H2     | 24:BA:2038:G:C1'   | 2.12                     | 0.61              |
| 24:BA:1022:G:C5    | 24:BA:1139:G:C6    | 2.89                     | 0.61              |
| 24:BA:1106:G:C8    | 24:BA:1106:G:OP2   | 2.54                     | 0.61              |
| 24:BA:1299:G:O4'   | 24:BA:1301:A:N3    | 2.34                     | 0.61              |
| 24:BA:1458:C:H4'   | 24:BA:1459:G:C5    | 2.35                     | 0.61              |
| 24:BA:1519:G:H2'   | 24:BA:1520:U:O4'   | 2.00                     | 0.61              |
| 24:BA:1536:A:H2'   | 24:BA:1537:C:C6    | 2.36                     | 0.61              |
| 24:BA:1675:C:C4    | 28:BE:128:SER:HB2  | 2.35                     | 0.61              |
| 24:BA:1767:C:C4    | 24:BA:1768:U:C5    | 2.89                     | 0.61              |
| 24:BA:1790:C:O2'   | 27:BD:209:ALA:CB   | 2.49                     | 0.61              |
| 24:BA:1824:G:OP1   | 27:BD:53:PHE:CE2   | 2.54                     | 0.61              |
| 24:BA:1954:G:H2'   | 24:BA:1956:U:C4    | 2.36                     | 0.61              |
| 24:BA:2043:C:C2'   | 24:BA:2044:C:O5'   | 2.48                     | 0.61              |
| 24:BA:2313:C:H2'   | 24:BA:2314:C:H6    | 1.65                     | 0.61              |
| 24:BA:2356:C:H3'   | 24:BA:2357:U:C5    | 2.36                     | 0.61              |
| 24:BA:2393:A:C5'   | 36:BO:56:SER:N     | 2.63                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2415:G:C5'  | 36:BO:61:ARG:HB2   | 2.30                     | 0.61              |
| 24:BA:2432:A:C2   | 50:B3:30:GLU:HA    | 2.30                     | 0.61              |
| 24:BA:2469:A:H4'  | 37:BP:56:ARG:HD3   | 1.83                     | 0.61              |
| 24:BA:2491:U:O2   | 24:BA:2492:U:C5    | 2.54                     | 0.61              |
| 24:BA:2653:U:H3'  | 24:BA:2654:A:H8    | 1.66                     | 0.61              |
| 24:BA:2746:U:C4   | 24:BA:2756:U:C4    | 2.88                     | 0.61              |
| 24:BA:2747:G:N2   | 24:BA:2754:U:C2    | 2.68                     | 0.61              |
| 24:BA:2861:G:O4'  | 24:BA:2861:G:OP2   | 2.18                     | 0.61              |
| 24:BA:2895:U:H2'  | 24:BA:2896:C:C6    | 2.35                     | 0.61              |
| 25:BB:13:A:C6     | 25:BB:70:C:O4'     | 2.54                     | 0.61              |
| 25:BB:32:C:H2'    | 25:BB:32:C:O2      | 1.99                     | 0.61              |
| 25:BB:55:U:C2'    | 25:BB:56:G:H5'     | 2.30                     | 0.61              |
| 25:BB:60:C:H2'    | 25:BB:60:C:O2      | 1.99                     | 0.61              |
| 26:BC:7:TYR:OH    | 26:BC:11:LEU:HD13  | 2.00                     | 0.61              |
| 26:BC:77:ILE:HG21 | 26:BC:100:ILE:HD11 | 1.83                     | 0.61              |
| 26:BC:163:PHE:N   | 26:BC:163:PHE:CD2  | 2.68                     | 0.61              |
| 27:BD:143:HIS:O   | 27:BD:145:VAL:N    | 2.26                     | 0.61              |
| 27:BD:181:GLU:HA  | 27:BD:270:ILE:CG2  | 2.29                     | 0.61              |
| 27:BD:268:ARG:O   | 27:BD:269:PHE:CD1  | 2.54                     | 0.61              |
| 28:BE:111:ARG:HD3 | 28:BE:160:TYR:O    | 2.01                     | 0.61              |
| 30:BG:79:ASN:OD1  | 30:BG:82:LEU:HG    | 2.01                     | 0.61              |
| 30:BG:121:ASN:ND2 | 30:BG:133:LEU:HD21 | 2.16                     | 0.61              |
| 32:BK:131:LYS:O   | 32:BK:131:LYS:HD2  | 2.01                     | 0.61              |
| 33:BL:101:TRP:CE3 | 33:BL:105:LEU:HD21 | 2.36                     | 0.61              |
| 35:BN:97:ARG:CZ   | 35:BN:97:ARG:CB    | 2.78                     | 0.61              |
| 36:BO:54:GLY:HA2  | 54:B7:12:LYS:CD    | 2.30                     | 0.61              |
| 38:BQ:14:SER:HA   | 38:BQ:17:ARG:HG2   | 1.81                     | 0.61              |
| 38:BQ:52:ILE:HD12 | 38:BQ:94:TYR:HD1   | 1.65                     | 0.61              |
| 38:BQ:55:ALA:CB   | 38:BQ:79:LEU:HD11  | 2.29                     | 0.61              |
| 38:BQ:67:LEU:O    | 38:BQ:68:ARG:C     | 2.43                     | 0.61              |
| 39:BR:62:LYS:O    | 39:BR:65:VAL:HG22  | 2.01                     | 0.61              |
| 41:BT:9:VAL:HG12  | 41:BT:13:LYS:HD3   | 1.82                     | 0.61              |
| 41:BT:57:PHE:O    | 41:BT:58:ARG:C     | 2.43                     | 0.61              |
| 45:BX:47:LYS:O    | 45:BX:48:ALA:HB3   | 2.00                     | 0.61              |
| 47:BZ:39:ARG:HG2  | 47:BZ:58:THR:OG1   | 2.01                     | 0.61              |
| 48:B1:65:GLN:HE21 | 48:B1:65:GLN:N     | 1.99                     | 0.61              |
| 49:B2:28:LEU:HD23 | 49:B2:28:LEU:H     | 1.64                     | 0.61              |
| 50:B3:29:PRO:CG   | 50:B3:31:ILE:HG23  | 2.27                     | 0.61              |
| 54:B7:7:HIS:O     | 54:B7:8:LYS:C      | 2.43                     | 0.61              |
| 54:B7:49:VAL:O    | 54:B7:53:PRO:CD    | 2.48                     | 0.61              |
| 1:AA:501:C:H2'    | 1:AA:502:G:H8      | 1.65                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:781:A:C2'     | 1:AA:782:A:C5'    | 2.67                     | 0.61              |
| 1:AA:1054:C:H3'    | 1:AA:1054:C:C6    | 2.36                     | 0.61              |
| 1:AA:1215:G:C2     | 1:AA:1216:G:C8    | 2.89                     | 0.61              |
| 1:AA:1269:A:C8     | 1:AA:1270:C:H1'   | 2.36                     | 0.61              |
| 1:AA:1288:A:C4     | 1:AA:1289:A:N7    | 2.69                     | 0.61              |
| 1:AA:1371:G:OP2    | 11:AL:11:LYS:NZ   | 2.34                     | 0.61              |
| 1:AA:1453:G:H2'    | 1:AA:1454:G:C4'   | 2.31                     | 0.61              |
| 3:AC:30:G:C2       | 3:AC:31:A:H1'     | 2.36                     | 0.61              |
| 3:AB:18:G:C2'      | 3:AB:57:G:H1      | 2.14                     | 0.61              |
| 3:AB:72:C:H2'      | 3:AB:73:A:H8      | 1.65                     | 0.61              |
| 4:AE:28:PHE:N      | 4:AE:194:PRO:HG2  | 2.16                     | 0.61              |
| 4:AE:84:GLU:OE1    | 4:AE:216:SER:HA   | 2.01                     | 0.61              |
| 6:AG:35:ARG:O      | 6:AG:37:PRO:CD    | 2.49                     | 0.61              |
| 6:AG:168:ARG:H     | 6:AG:168:ARG:HD2  | 1.66                     | 0.61              |
| 6:AG:195:ALA:O     | 6:AG:196:LEU:C    | 2.44                     | 0.61              |
| 7:AH:75:THR:HA     | 7:AH:118:ILE:HD11 | 1.82                     | 0.61              |
| 8:AI:4:TYR:HB3     | 8:AI:91:VAL:O     | 2.01                     | 0.61              |
| 8:AI:14:LEU:CD1    | 8:AI:15:ASP:N     | 2.57                     | 0.61              |
| 8:AI:50:TYR:HE1    | 20:AU:81:PHE:CE2  | 2.19                     | 0.61              |
| 9:AJ:12:LEU:HD22   | 9:AJ:24:THR:HG22  | 1.83                     | 0.61              |
| 9:AJ:51:GLN:HE22   | 9:AJ:58:PRO:CG    | 2.13                     | 0.61              |
| 9:AJ:106:GLN:HA    | 9:AJ:106:GLN:NE2  | 2.14                     | 0.61              |
| 10:AK:69:ARG:NH1   | 10:AK:73:ASP:O    | 2.34                     | 0.61              |
| 12:AM:23:ILE:CG2   | 12:AM:72:VAL:HG11 | 2.30                     | 0.61              |
| 12:AM:83:GLU:OE1   | 12:AM:83:GLU:HA   | 1.99                     | 0.61              |
| 13:AN:42:TRP:HE3   | 13:AN:43:SER:N    | 1.99                     | 0.61              |
| 13:AN:92:GLU:HA    | 13:AN:92:GLU:OE1  | 2.01                     | 0.61              |
| 13:AN:104:GLN:HE22 | 13:AN:106:LYS:HB2 | 1.65                     | 0.61              |
| 14:AO:11:VAL:HG22  | 19:AT:32:TYR:HD1  | 1.66                     | 0.61              |
| 14:AO:24:VAL:HG22  | 14:AO:98:TYR:CE1  | 2.34                     | 0.61              |
| 14:AO:90:VAL:HG12  | 14:AO:93:LEU:HD21 | 1.82                     | 0.61              |
| 17:AR:39:LEU:CD1   | 17:AR:56:LEU:HD13 | 2.31                     | 0.61              |
| 17:AR:81:LEU:HD23  | 17:AR:81:LEU:C    | 2.25                     | 0.61              |
| 19:AT:66:SER:CB    | 19:AT:69:LYS:NZ   | 2.62                     | 0.61              |
| 24:BA:128:C:H2'    | 24:BA:129:C:H6    | 1.64                     | 0.61              |
| 24:BA:204:A:H4'    | 24:BA:205:G:C5'   | 2.31                     | 0.61              |
| 24:BA:290:G:C8     | 24:BA:290:G:OP1   | 2.54                     | 0.61              |
| 24:BA:453:C:H4'    | 24:BA:457:A:H62   | 1.65                     | 0.61              |
| 24:BA:558:G:C2'    | 24:BA:559:G:H5'   | 2.30                     | 0.61              |
| 24:BA:619:G:H3'    | 24:BA:619:G:H8    | 1.64                     | 0.61              |
| 24:BA:636:G:N2     | 36:BO:75:ILE:CG2  | 2.61                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:775:G:H4'   | 24:BA:777:A:C5     | 2.35                     | 0.61              |
| 24:BA:811:U:H1'   | 24:BA:1251:C:O2    | 2.00                     | 0.61              |
| 24:BA:937:U:O2'   | 24:BA:938:G:H5'    | 2.01                     | 0.61              |
| 24:BA:960:A:C2    | 24:BA:962:G:H1'    | 2.35                     | 0.61              |
| 24:BA:1336:A:H2'  | 24:BA:1337:G:H8    | 1.66                     | 0.61              |
| 24:BA:1419:A:N6   | 24:BA:1421:G:C2    | 2.69                     | 0.61              |
| 24:BA:1475:G:C2   | 24:BA:1477:A:N6    | 2.58                     | 0.61              |
| 24:BA:1572:A:O4'  | 24:BA:1572:A:P     | 2.59                     | 0.61              |
| 24:BA:1928:A:H2'  | 24:BA:1929:G:H5'   | 1.82                     | 0.61              |
| 24:BA:2006:C:H5'' | 24:BA:2048:G:H5''  | 1.83                     | 0.61              |
| 24:BA:2228:G:C8   | 24:BA:2229:C:C6    | 2.88                     | 0.61              |
| 24:BA:2424:C:H2'  | 24:BA:2424:C:O2    | 2.01                     | 0.61              |
| 24:BA:2447:G:O3'  | 24:BA:2499:C:OP1   | 2.18                     | 0.61              |
| 24:BA:2468:G:HO2' | 24:BA:2469:A:H8    | 1.49                     | 0.61              |
| 24:BA:2479:G:C2   | 24:BA:2480:C:H1'   | 2.36                     | 0.61              |
| 24:BA:2548:G:H5'  | 24:BA:2548:G:C8    | 2.32                     | 0.61              |
| 24:BA:2595:G:N2   | 24:BA:2599:G:C6    | 2.69                     | 0.61              |
| 24:BA:2696:U:O2'  | 24:BA:2697:G:H5'   | 2.00                     | 0.61              |
| 25:BB:52:A:H2'    | 25:BB:52:A:N3      | 2.15                     | 0.61              |
| 25:BB:93:C:H2'    | 25:BB:94:C:H6      | 1.66                     | 0.61              |
| 26:BC:6:ARG:C     | 26:BC:8:ARG:N      | 2.57                     | 0.61              |
| 27:BD:80:ALA:O    | 27:BD:81:ALA:HB2   | 2.01                     | 0.61              |
| 27:BD:176:ARG:NH2 | 27:BD:270:ILE:HD11 | 2.10                     | 0.61              |
| 27:BD:183:ARG:HA  | 27:BD:268:ARG:HA   | 1.83                     | 0.61              |
| 28:BE:92:THR:CG2  | 28:BE:96:PHE:HB2   | 2.30                     | 0.61              |
| 30:BG:119:GLY:HA3 | 30:BG:180:PHE:CE2  | 2.35                     | 0.61              |
| 34:BM:33:LEU:CD1  | 34:BM:34:LEU:HG    | 2.29                     | 0.61              |
| 34:BM:43:THR:CB   | 34:BM:44:PRO:CD    | 2.59                     | 0.61              |
| 34:BM:87:LEU:HA   | 34:BM:90:MET:HB2   | 1.82                     | 0.61              |
| 35:BN:3:GLN:O     | 35:BN:3:GLN:OE1    | 2.19                     | 0.61              |
| 37:BP:34:LEU:CG   | 37:BP:67:ARG:HH22  | 2.13                     | 0.61              |
| 37:BP:36:ALA:O    | 37:BP:100:GLY:HA2  | 2.01                     | 0.61              |
| 37:BP:42:ILE:CD1  | 37:BP:42:ILE:C     | 2.72                     | 0.61              |
| 37:BP:96:VAL:HG12 | 37:BP:98:LYS:HZ3   | 1.65                     | 0.61              |
| 40:BS:6:LEU:O     | 40:BS:9:LEU:HB2    | 2.01                     | 0.61              |
| 40:BS:43:GLN:OE1  | 40:BS:43:GLN:N     | 2.30                     | 0.61              |
| 41:BT:53:ARG:O    | 41:BT:56:ASP:HB2   | 2.01                     | 0.61              |
| 41:BT:81:HIS:HB3  | 41:BT:117:GLN:OE1  | 2.01                     | 0.61              |
| 41:BT:88:ILE:HG12 | 42:BU:52:VAL:CG1   | 2.31                     | 0.61              |
| 43:BV:72:LYS:O    | 43:BV:106:ILE:HG22 | 2.00                     | 0.61              |
| 44:BW:29:TRP:CE3  | 44:BW:76:ARG:HG3   | 2.36                     | 0.61              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 44:BW:36:LYS:CD   | 44:BW:39:ILE:HD12  | 2.30                     | 0.61              |
| 44:BW:89:ILE:HG23 | 44:BW:92:LEU:HD22  | 1.83                     | 0.61              |
| 46:BY:24:LEU:HD13 | 46:BY:83:PRO:CG    | 2.29                     | 0.61              |
| 46:BY:115:GLY:O   | 46:BY:117:LEU:HD12 | 2.00                     | 0.61              |
| 53:B6:40:TRP:O    | 53:B6:41:ARG:HB3   | 2.01                     | 0.61              |
| 1:AA:64:G:N2      | 1:AA:67:C:C4       | 2.69                     | 0.60              |
| 1:AA:186(E):C:O2' | 1:AA:186(F):C:H5'  | 2.01                     | 0.60              |
| 1:AA:221:C:H2'    | 1:AA:222:U:H6      | 1.66                     | 0.60              |
| 1:AA:409:G:H5''   | 6:AG:24:GLU:OE1    | 2.01                     | 0.60              |
| 1:AA:571:U:H5''   | 1:AA:571:U:C6      | 2.35                     | 0.60              |
| 1:AA:685:G:H2'    | 1:AA:686:U:C6      | 2.36                     | 0.60              |
| 1:AA:690:G:H2'    | 1:AA:690:G:N3      | 2.15                     | 0.60              |
| 1:AA:761:G:H1'    | 19:AT:104:LYS:O    | 2.01                     | 0.60              |
| 1:AA:765:G:N2     | 1:AA:816:A:C2      | 2.69                     | 0.60              |
| 1:AA:766:A:N7     | 1:AA:814:A:C6      | 2.69                     | 0.60              |
| 1:AA:801:U:H2'    | 1:AA:801:U:O2      | 2.00                     | 0.60              |
| 1:AA:854:G:P      | 1:AA:871:U:O2      | 2.59                     | 0.60              |
| 1:AA:857:C:O2'    | 1:AA:858:G:H5'     | 2.00                     | 0.60              |
| 1:AA:1126:U:C2    | 1:AA:1127:G:C8     | 2.89                     | 0.60              |
| 1:AA:1180:A:O2'   | 1:AA:1181:G:H5'    | 2.00                     | 0.60              |
| 1:AA:1314:C:O5'   | 21:AV:6:LYS:HG2    | 1.99                     | 0.60              |
| 1:AA:1389:C:H2'   | 1:AA:1390:U:C5'    | 2.31                     | 0.60              |
| 3:AC:76:A:H3'     | 3:AC:76:A:C8       | 2.35                     | 0.60              |
| 3:AD:63:G:H2'     | 3:AD:64:A:H8       | 1.66                     | 0.60              |
| 3:AD:71:G:OP1     | 24:BA:1893:C:H5'   | 2.01                     | 0.60              |
| 4:AE:19:HIS:HB3   | 4:AE:189:ASP:OD2   | 2.00                     | 0.60              |
| 4:AE:35:GLU:O     | 4:AE:36:ARG:NE     | 2.35                     | 0.60              |
| 4:AE:87:ARG:C     | 4:AE:89:GLY:N      | 2.54                     | 0.60              |
| 4:AE:115:LEU:HD12 | 4:AE:118:LEU:CD1   | 2.28                     | 0.60              |
| 6:AG:43:HIS:O     | 6:AG:46:LYS:HB2    | 1.99                     | 0.60              |
| 6:AG:58:LEU:CD1   | 6:AG:59:ARG:NH1    | 2.64                     | 0.60              |
| 7:AH:77:PRO:O     | 7:AH:93:PRO:HG3    | 2.01                     | 0.60              |
| 8:AI:33:TYR:CE2   | 8:AI:75:LEU:N      | 2.69                     | 0.60              |
| 8:AI:80:ARG:CG    | 8:AI:88:VAL:HG21   | 2.29                     | 0.60              |
| 10:AK:51:VAL:HG12 | 10:AK:52:ASP:N     | 2.16                     | 0.60              |
| 11:AL:32:ASP:CG   | 11:AL:33:PHE:N     | 2.58                     | 0.60              |
| 12:AM:12:ASP:OD1  | 12:AM:14:LYS:HB2   | 2.01                     | 0.60              |
| 14:AO:34:ARG:HG3  | 14:AO:105:TYR:CE1  | 2.36                     | 0.60              |
| 14:AO:43:VAL:HG12 | 14:AO:44:THR:O     | 2.01                     | 0.60              |
| 14:AO:64:TYR:C    | 14:AO:65:GLU:HG3   | 2.25                     | 0.60              |
| 14:AO:97:ARG:C    | 14:AO:98:TYR:CD1   | 2.79                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 15:AP:4:ILE:O       | 15:AP:5:ALA:HB3    | 2.01                     | 0.60              |
| 15:AP:40:ASN:C      | 15:AP:42:ALA:H     | 2.09                     | 0.60              |
| 17:AR:43:LEU:HD11   | 17:AR:56:LEU:CD2   | 2.31                     | 0.60              |
| 18:AS:4:ILE:CG2     | 18:AS:21:VAL:HG13  | 2.30                     | 0.60              |
| 18:AS:19:ILE:HD12   | 18:AS:38:TYR:N     | 2.16                     | 0.60              |
| 19:AT:7:THR:HG22    | 19:AT:56:VAL:HG12  | 1.83                     | 0.60              |
| 19:AT:58:GLU:OE2    | 19:AT:74:LEU:HB3   | 2.01                     | 0.60              |
| 19:AT:59:ILE:CD1    | 19:AT:72:ARG:N     | 2.64                     | 0.60              |
| 24:BA:139:G:C2'     | 24:BA:140:A:O5'    | 2.49                     | 0.60              |
| 24:BA:140:A:C2      | 24:BA:1408:C:O2    | 2.53                     | 0.60              |
| 24:BA:150:C:O2      | 24:BA:150:C:C2'    | 2.49                     | 0.60              |
| 24:BA:539:G:H2'     | 24:BA:540:G:H8     | 1.66                     | 0.60              |
| 24:BA:628:G:H8      | 24:BA:628:G:P      | 2.24                     | 0.60              |
| 24:BA:675:A:O2'     | 24:BA:2443:C:H4'   | 2.01                     | 0.60              |
| 24:BA:718:A:C8      | 24:BA:719:C:C6     | 2.89                     | 0.60              |
| 24:BA:823:G:C6      | 24:BA:835:A:C6     | 2.88                     | 0.60              |
| 24:BA:887:A:O2'     | 24:BA:889:C:C6     | 2.54                     | 0.60              |
| 24:BA:957:A:C5      | 24:BA:959:A:C8     | 2.89                     | 0.60              |
| 24:BA:1044:G:O6     | 24:BA:1112:G:N3    | 2.34                     | 0.60              |
| 24:BA:1050:A:C8     | 24:BA:1051:G:C8    | 2.89                     | 0.60              |
| 24:BA:1142(A):A:H3' | 24:BA:1143:A:H5''  | 1.83                     | 0.60              |
| 24:BA:1248:G:C8     | 41:BT:2:PRO:CA     | 2.81                     | 0.60              |
| 24:BA:1279:G:H2'    | 24:BA:1280:G:H8    | 1.65                     | 0.60              |
| 24:BA:1602:U:C2'    | 24:BA:1603:A:O5'   | 2.49                     | 0.60              |
| 24:BA:1687:G:C2     | 24:BA:1688:U:C5    | 2.89                     | 0.60              |
| 24:BA:1764:G:O2'    | 24:BA:1765:C:C5'   | 2.45                     | 0.60              |
| 24:BA:1796:U:C2     | 24:BA:1797:C:C5    | 2.90                     | 0.60              |
| 24:BA:1925:C:H2'    | 24:BA:1926:U:O5'   | 2.00                     | 0.60              |
| 24:BA:1993:U:C2     | 24:BA:1994:C:C5    | 2.89                     | 0.60              |
| 24:BA:2085:C:H2'    | 24:BA:2086:U:O4'   | 2.01                     | 0.60              |
| 24:BA:2259:G:C2     | 24:BA:2282:G:C6    | 2.89                     | 0.60              |
| 24:BA:2278:A:N7     | 47:BZ:14:ARG:HG3   | 2.15                     | 0.60              |
| 24:BA:2360:A:C8     | 24:BA:2361:A:C8    | 2.89                     | 0.60              |
| 24:BA:2497:A:C2'    | 24:BA:2498:C:OP2   | 2.49                     | 0.60              |
| 24:BA:2629:A:C6     | 24:BA:2895:U:C2    | 2.89                     | 0.60              |
| 25:BB:30:C:H2'      | 25:BB:31:C:C5'     | 2.28                     | 0.60              |
| 25:BB:73:A:N1       | 46:BY:29:TYR:CE1   | 2.69                     | 0.60              |
| 25:BB:75:G:H2'      | 46:BY:85:HIS:CE1   | 2.32                     | 0.60              |
| 26:BC:10:LEU:O      | 26:BC:13:LYS:HB2   | 2.01                     | 0.60              |
| 26:BC:26:ALA:CB     | 26:BC:185:LEU:HB2  | 2.31                     | 0.60              |
| 27:BD:127:VAL:CA    | 27:BD:193:VAL:HG12 | 2.17                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:214:TRP:O    | 27:BD:215:LEU:C    | 2.42                     | 0.60              |
| 28:BE:13:ARG:CZ    | 28:BE:20:ALA:CB    | 2.79                     | 0.60              |
| 28:BE:81:ILE:HG22  | 28:BE:82:ARG:H     | 1.63                     | 0.60              |
| 28:BE:124:GLY:HA3  | 28:BE:136:ARG:HB3  | 1.81                     | 0.60              |
| 28:BE:136:ARG:CZ   | 28:BE:137:HIS:HA   | 2.30                     | 0.60              |
| 28:BE:154:LYS:HD2  | 28:BE:155:LYS:O    | 2.01                     | 0.60              |
| 29:BF:34:TRP:CH2   | 36:BO:8:PRO:HD2    | 2.36                     | 0.60              |
| 29:BF:109:GLY:C    | 29:BF:111:ALA:N    | 2.57                     | 0.60              |
| 30:BG:7:LEU:HD22   | 30:BG:11:TYR:CE1   | 2.29                     | 0.60              |
| 30:BG:135:LEU:C    | 30:BG:135:LEU:HD13 | 2.26                     | 0.60              |
| 30:BG:139:LEU:HD13 | 30:BG:142:PRO:CB   | 2.31                     | 0.60              |
| 31:BH:68:THR:HG22  | 31:BH:72:ILE:HD12  | 1.82                     | 0.60              |
| 33:BL:138:VAL:O    | 33:BL:139:VAL:CG2  | 2.47                     | 0.60              |
| 34:BM:88:GLU:HB2   | 34:BM:89:LYS:NZ    | 2.16                     | 0.60              |
| 35:BN:63:VAL:HG23  | 35:BN:64:ARG:N     | 2.14                     | 0.60              |
| 36:BO:8:PRO:O      | 36:BO:9:ASN:C      | 2.44                     | 0.60              |
| 36:BO:15:ARG:O     | 36:BO:16:ARG:C     | 2.43                     | 0.60              |
| 37:BP:44:ALA:C     | 37:BP:48:GLU:OE2   | 2.44                     | 0.60              |
| 37:BP:106:VAL:O    | 37:BP:107:ALA:HB2  | 2.00                     | 0.60              |
| 38:BQ:32:GLY:O     | 38:BQ:115:GLU:CB   | 2.32                     | 0.60              |
| 38:BQ:96:ARG:O     | 38:BQ:114:VAL:HG13 | 2.01                     | 0.60              |
| 38:BQ:110:PRO:O    | 38:BQ:111:LEU:HD23 | 2.01                     | 0.60              |
| 39:BR:17:ARG:O     | 39:BR:20:ARG:CG    | 2.49                     | 0.60              |
| 39:BR:56:LEU:HB3   | 39:BR:59:LYS:NZ    | 2.16                     | 0.60              |
| 39:BR:95:HIS:ND1   | 39:BR:96:GLY:N     | 2.49                     | 0.60              |
| 40:BS:57:PHE:N     | 40:BS:57:PHE:HD2   | 1.98                     | 0.60              |
| 42:BU:6:LYS:NZ     | 42:BU:10:LYS:HB3   | 2.16                     | 0.60              |
| 42:BU:28:GLU:C     | 42:BU:30:GLY:N     | 2.59                     | 0.60              |
| 43:BV:75:TYR:O     | 43:BV:104:THR:CG2  | 2.49                     | 0.60              |
| 46:BY:116:VAL:HG21 | 46:BY:145:GLU:CG   | 2.30                     | 0.60              |
| 47:BZ:38:VAL:HG12  | 47:BZ:45:PHE:CE1   | 2.36                     | 0.60              |
| 49:B2:23:LEU:HA    | 49:B2:28:LEU:HD12  | 1.83                     | 0.60              |
| 50:B3:5:ILE:C      | 50:B3:7:PRO:HD2    | 2.25                     | 0.60              |
| 51:B4:36:CYS:HB2   | 51:B4:37:LYS:CD    | 2.31                     | 0.60              |
| 52:B5:20:ASN:CG    | 52:B5:43:CYS:SG    | 2.84                     | 0.60              |
| 55:B8:7:VAL:CG1    | 55:B8:36:GLN:HE22  | 2.10                     | 0.60              |
| 55:B8:9:ARG:NH2    | 55:B8:16:VAL:HG11  | 2.16                     | 0.60              |
| 1:AA:129(A):G:N2   | 1:AA:191(A):G:C4   | 2.69                     | 0.60              |
| 1:AA:155:C:O2'     | 1:AA:156:G:H5'     | 2.01                     | 0.60              |
| 1:AA:161:A:N6      | 1:AA:162:A:C6      | 2.70                     | 0.60              |
| 1:AA:169:C:O2'     | 1:AA:170:U:H5'     | 2.01                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:293:G:H2'    | 1:AA:293:G:N3      | 2.15                     | 0.60              |
| 1:AA:383:A:H2'    | 1:AA:384:G:O4'     | 2.00                     | 0.60              |
| 1:AA:789:U:C6     | 1:AA:789:U:H3'     | 2.36                     | 0.60              |
| 1:AA:1400:C:C4'   | 1:AA:1401:G:OP2    | 2.49                     | 0.60              |
| 1:AA:1498:U:O2'   | 1:AA:1499:A:O5'    | 2.17                     | 0.60              |
| 3:AC:46:G:H2'     | 3:AC:46:G:N3       | 2.17                     | 0.60              |
| 4:AE:77:ALA:O     | 4:AE:80:ILE:N      | 2.34                     | 0.60              |
| 4:AE:92:TYR:H     | 4:AE:152:PHE:HA    | 1.64                     | 0.60              |
| 4:AE:107:THR:O    | 4:AE:108:ILE:C     | 2.43                     | 0.60              |
| 4:AE:138:LEU:O    | 4:AE:141:GLU:HB3   | 2.01                     | 0.60              |
| 4:AE:142:LEU:O    | 4:AE:142:LEU:HD23  | 2.01                     | 0.60              |
| 4:AE:146:GLN:O    | 4:AE:148:TYR:N     | 2.34                     | 0.60              |
| 4:AE:163:PHE:CZ   | 4:AE:186:ALA:HA    | 2.36                     | 0.60              |
| 4:AE:175:ARG:HD2  | 4:AE:179:LYS:NZ    | 2.16                     | 0.60              |
| 4:AE:208:ILE:HA   | 4:AE:211:ILE:HD12  | 1.83                     | 0.60              |
| 5:AF:8:ILE:O      | 5:AF:11:ARG:N      | 2.33                     | 0.60              |
| 5:AF:10:PHE:C     | 5:AF:11:ARG:HE     | 2.09                     | 0.60              |
| 5:AF:33:LEU:CG    | 16:AQ:54:PRO:HD2   | 2.31                     | 0.60              |
| 5:AF:36:ASP:OD2   | 5:AF:40:ARG:NH1    | 2.34                     | 0.60              |
| 6:AG:102:ASP:HB2  | 6:AG:136:PRO:O     | 2.01                     | 0.60              |
| 6:AG:170:VAL:HG12 | 6:AG:171:GLY:N     | 2.17                     | 0.60              |
| 6:AG:205:GLU:O    | 6:AG:206:PHE:C     | 2.44                     | 0.60              |
| 7:AH:15:ARG:CZ    | 7:AH:26:PHE:CE2    | 2.83                     | 0.60              |
| 8:AI:10:LEU:HD11  | 8:AI:61:LEU:CD1    | 2.31                     | 0.60              |
| 8:AI:75:LEU:HD23  | 8:AI:78:GLU:HB3    | 1.82                     | 0.60              |
| 9:AJ:6:ARG:HA     | 9:AJ:6:ARG:NH1     | 2.16                     | 0.60              |
| 9:AJ:26:PHE:CD2   | 9:AJ:43:PHE:HE1    | 2.19                     | 0.60              |
| 11:AL:38:GLN:C    | 11:AL:40:LEU:H     | 2.09                     | 0.60              |
| 12:AM:18:ALA:CB   | 12:AM:91:PRO:HB3   | 2.23                     | 0.60              |
| 12:AM:39:PRO:O    | 12:AM:69:ASN:O     | 2.19                     | 0.60              |
| 13:AN:73:MET:CE   | 13:AN:103:LEU:HD22 | 2.29                     | 0.60              |
| 15:AP:20:THR:HA   | 15:AP:25:ILE:HG22  | 1.81                     | 0.60              |
| 17:AR:49:ASP:OD1  | 17:AR:52:SER:HB2   | 2.01                     | 0.60              |
| 20:AU:67:ALA:O    | 20:AU:70:ILE:N     | 2.34                     | 0.60              |
| 21:AV:46:GLY:HA2  | 21:AV:62:ILE:O     | 2.01                     | 0.60              |
| 21:AV:47:HIS:H    | 21:AV:62:ILE:CG2   | 2.13                     | 0.60              |
| 22:AW:49:ALA:HA   | 22:AW:92:LEU:CD2   | 2.26                     | 0.60              |
| 24:BA:324:A:N3    | 24:BA:324:A:H2'    | 2.16                     | 0.60              |
| 24:BA:557:U:H2'   | 24:BA:558:G:O4'    | 2.01                     | 0.60              |
| 24:BA:586:A:C6    | 24:BA:810:U:H5'    | 2.37                     | 0.60              |
| 24:BA:942:G:H5'   | 36:BO:32:THR:HG23  | 1.82                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:944:G:H4'   | 24:BA:945:A:O5'    | 2.02                     | 0.60              |
| 24:BA:976:C:N4    | 24:BA:988:A:N3     | 2.48                     | 0.60              |
| 24:BA:1059:G:H5'  | 33:BL:116:ASN:HD22 | 1.66                     | 0.60              |
| 24:BA:1458:C:H4'  | 24:BA:1459:G:N7    | 2.15                     | 0.60              |
| 24:BA:1510:A:H3'  | 24:BA:1511:A:C5    | 2.36                     | 0.60              |
| 24:BA:1780:A:OP2  | 24:BA:1782:C:OP2   | 2.19                     | 0.60              |
| 24:BA:1964:G:O2'  | 24:BA:1965:C:OP1   | 2.17                     | 0.60              |
| 24:BA:1996:C:C6   | 24:BA:1996:C:OP1   | 2.54                     | 0.60              |
| 24:BA:2024:G:HO2' | 34:BM:78:TYR:HH    | 1.41                     | 0.60              |
| 24:BA:2053:G:C2'  | 24:BA:2054:A:O5'   | 2.49                     | 0.60              |
| 24:BA:2570:G:C5'  | 24:BA:2571:C:OP2   | 2.47                     | 0.60              |
| 24:BA:2618:G:C2   | 24:BA:2619:C:C5    | 2.89                     | 0.60              |
| 24:BA:2790:A:H2   | 24:BA:2894:G:N7    | 1.98                     | 0.60              |
| 27:BD:146:GLU:HA  | 27:BD:154:LYS:HG2  | 1.81                     | 0.60              |
| 27:BD:176:ARG:HG3 | 27:BD:176:ARG:NH1  | 2.09                     | 0.60              |
| 28:BE:9:VAL:HG12  | 28:BE:192:ASN:ND2  | 2.14                     | 0.60              |
| 29:BF:36:VAL:O    | 29:BF:184:TYR:OH   | 2.19                     | 0.60              |
| 29:BF:64:ILE:CD1  | 29:BF:65:TRP:N     | 2.59                     | 0.60              |
| 29:BF:119:ARG:NH2 | 29:BF:120:GLU:OE1  | 2.34                     | 0.60              |
| 30:BG:119:GLY:HA3 | 30:BG:180:PHE:CZ   | 2.35                     | 0.60              |
| 30:BG:123:ASN:HB2 | 30:BG:126:ASP:HB2  | 1.83                     | 0.60              |
| 31:BH:76:VAL:O    | 31:BH:77:LYS:C     | 2.44                     | 0.60              |
| 31:BH:83:TYR:HB2  | 31:BH:136:ILE:O    | 2.00                     | 0.60              |
| 31:BH:143:GLN:O   | 31:BH:146:ALA:HB3  | 2.01                     | 0.60              |
| 32:BK:75:LEU:O    | 32:BK:141:LYS:NZ   | 2.27                     | 0.60              |
| 32:BK:127:VAL:CG2 | 32:BK:141:LYS:HA   | 2.18                     | 0.60              |
| 33:BL:101:TRP:CZ3 | 33:BL:105:LEU:HD21 | 2.36                     | 0.60              |
| 34:BM:68:GLU:H    | 34:BM:70:LYS:CE    | 2.14                     | 0.60              |
| 35:BN:23:ARG:HB2  | 35:BN:23:ARG:NH1   | 2.04                     | 0.60              |
| 35:BN:111:PHE:O   | 35:BN:112:MET:C    | 2.43                     | 0.60              |
| 36:BO:52:GLU:O    | 36:BO:55:ARG:N     | 2.34                     | 0.60              |
| 36:BO:76:LYS:CE   | 36:BO:99:LEU:HD11  | 2.31                     | 0.60              |
| 37:BP:6:ARG:O     | 37:BP:7:MET:HE2    | 2.01                     | 0.60              |
| 39:BR:9:ARG:HH11  | 39:BR:9:ARG:H      | 1.48                     | 0.60              |
| 39:BR:39:ILE:HD11 | 39:BR:77:ALA:HB2   | 1.83                     | 0.60              |
| 40:BS:30:VAL:C    | 40:BS:32:TYR:OH    | 2.44                     | 0.60              |
| 40:BS:34:VAL:HG21 | 40:BS:36:GLU:CD    | 2.25                     | 0.60              |
| 40:BS:110:ILE:HB  | 40:BS:113:LYS:HG3  | 1.82                     | 0.60              |
| 42:BU:18:LEU:HA   | 42:BU:96:ILE:O     | 2.00                     | 0.60              |
| 42:BU:66:ARG:NE   | 42:BU:95:LEU:HB2   | 2.09                     | 0.60              |
| 43:BV:72:LYS:O    | 43:BV:106:ILE:O    | 2.19                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 44:BW:92:LEU:HA   | 44:BW:95:LEU:HD12  | 1.83                     | 0.60              |
| 45:BX:97:ARG:NH2  | 45:BX:101:LYS:HD3  | 2.16                     | 0.60              |
| 49:B2:29:ARG:CB   | 49:B2:30:ARG:CZ    | 2.79                     | 0.60              |
| 50:B3:22:ILE:HD13 | 50:B3:30:GLU:OE1   | 2.01                     | 0.60              |
| 1:AA:91:C:C2      | 1:AA:92:G:C8       | 2.89                     | 0.60              |
| 1:AA:129(A):G:C2  | 1:AA:188:U:O2'     | 2.53                     | 0.60              |
| 1:AA:189:U:H2'    | 19:AT:63:ARG:NH2   | 2.16                     | 0.60              |
| 1:AA:245:C:C2     | 1:AA:284:G:C2      | 2.89                     | 0.60              |
| 1:AA:600:C:C2     | 1:AA:639:G:N2      | 2.69                     | 0.60              |
| 1:AA:619:U:N3     | 6:AG:135:LEU:HD21  | 2.16                     | 0.60              |
| 1:AA:890:G:O2'    | 1:AA:891:U:P       | 2.60                     | 0.60              |
| 1:AA:944:G:H8     | 1:AA:944:G:O5'     | 1.85                     | 0.60              |
| 1:AA:986:A:C4'    | 21:AV:55:LYS:HG3   | 2.32                     | 0.60              |
| 1:AA:1005:A:C1'   | 1:AA:1036:G:N2     | 2.63                     | 0.60              |
| 1:AA:1010:G:N2    | 1:AA:1020:U:C1'    | 2.61                     | 0.60              |
| 1:AA:1010:G:C2    | 1:AA:1020:U:H1'    | 2.37                     | 0.60              |
| 1:AA:1230:C:O2    | 15:AP:126:LYS:CG   | 2.50                     | 0.60              |
| 1:AA:1232:U:OP1   | 11:AL:125:TYR:O    | 2.19                     | 0.60              |
| 1:AA:1316:G:H5''  | 16:AQ:17:LYS:NZ    | 2.17                     | 0.60              |
| 1:AA:1329:A:O2'   | 1:AA:1330:U:H5'    | 2.01                     | 0.60              |
| 3:AC:73:A:H2'     | 3:AC:74:C:OP1      | 2.01                     | 0.60              |
| 3:AD:47:U:H2'     | 3:AD:48:C:C5'      | 2.21                     | 0.60              |
| 3:AB:52:G:O2'     | 3:AB:53:G:O4'      | 2.18                     | 0.60              |
| 3:AB:63:G:C4'     | 24:BA:2482:G:O3'   | 2.38                     | 0.60              |
| 4:AE:107:THR:C    | 4:AE:109:SER:N     | 2.56                     | 0.60              |
| 4:AE:115:LEU:HB2  | 4:AE:145:LEU:CG    | 2.31                     | 0.60              |
| 5:AF:11:ARG:O     | 5:AF:14:ILE:HB     | 2.02                     | 0.60              |
| 6:AG:25:ARG:C     | 6:AG:27:TYR:N      | 2.59                     | 0.60              |
| 6:AG:31:CYS:SG    | 6:AG:33:MET:CG     | 2.89                     | 0.60              |
| 8:AI:72:VAL:O     | 8:AI:73:ASN:C      | 2.44                     | 0.60              |
| 10:AK:1:MET:CG    | 10:AK:2:LEU:H      | 2.14                     | 0.60              |
| 10:AK:17:THR:HG21 | 10:AK:80:ILE:CG2   | 2.32                     | 0.60              |
| 12:AM:6:ILE:O     | 12:AM:71:LEU:HD13  | 2.00                     | 0.60              |
| 12:AM:75:ILE:HG22 | 12:AM:76:ASN:N     | 2.16                     | 0.60              |
| 13:AN:92:GLU:C    | 13:AN:94:ALA:N     | 2.57                     | 0.60              |
| 14:AO:85:ILE:HD12 | 14:AO:99:HIS:C     | 2.26                     | 0.60              |
| 15:AP:14:ARG:H    | 15:AP:44:ARG:HD2   | 1.65                     | 0.60              |
| 15:AP:22:ILE:HB   | 15:AP:25:ILE:CG1   | 2.31                     | 0.60              |
| 15:AP:98:VAL:H    | 15:AP:110:ARG:HH21 | 1.49                     | 0.60              |
| 16:AQ:26:ARG:CB   | 16:AQ:43:CYS:CB    | 2.79                     | 0.60              |
| 16:AQ:42:ILE:C    | 16:AQ:44:LEU:N     | 2.56                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 16:AQ:54:PRO:O    | 16:AQ:56:VAL:N      | 2.35                     | 0.60              |
| 18:AS:18:ARG:NH1  | 18:AS:35:LYS:CB     | 2.47                     | 0.60              |
| 18:AS:75:ARG:HA   | 18:AS:80:PHE:CB     | 2.31                     | 0.60              |
| 20:AU:53:ARG:HD3  | 20:AU:63:GLN:NE2    | 2.16                     | 0.60              |
| 24:BA:72:U:C5     | 24:BA:112:U:O2      | 2.54                     | 0.60              |
| 24:BA:218:A:N1    | 24:BA:235:U:O2'     | 2.25                     | 0.60              |
| 24:BA:319:C:C2'   | 24:BA:320:A:O4'     | 2.49                     | 0.60              |
| 24:BA:343:C:C2'   | 24:BA:344:G:C5'     | 2.75                     | 0.60              |
| 24:BA:572:A:H2'   | 24:BA:573:G:C1'     | 2.31                     | 0.60              |
| 24:BA:594:U:H2'   | 24:BA:595:C:H6      | 1.61                     | 0.60              |
| 24:BA:613:U:H5    | 24:BA:614:U:O2      | 1.83                     | 0.60              |
| 24:BA:614:U:H5''  | 24:BA:615:G:OP2     | 2.02                     | 0.60              |
| 24:BA:623:G:H8    | 36:BO:105:LEU:CB    | 2.15                     | 0.60              |
| 24:BA:627:A:C4    | 24:BA:637:A:C4      | 2.88                     | 0.60              |
| 24:BA:636:G:H22   | 36:BO:75:ILE:HG23   | 1.64                     | 0.60              |
| 24:BA:669:G:H5''  | 24:BA:670:A:OP2     | 2.01                     | 0.60              |
| 24:BA:744:G:H2'   | 24:BA:745:G:C8      | 2.35                     | 0.60              |
| 24:BA:788:A:O2'   | 24:BA:789:A:OP2     | 2.17                     | 0.60              |
| 24:BA:804:A:C5'   | 24:BA:805:G:OP1     | 2.48                     | 0.60              |
| 24:BA:890:A:H4'   | 24:BA:892:G:H5'     | 1.84                     | 0.60              |
| 24:BA:899:A:H61   | 24:BA:900:A:N6      | 1.99                     | 0.60              |
| 24:BA:944:G:C5'   | 24:BA:945:A:H5''    | 2.24                     | 0.60              |
| 24:BA:977:G:N3    | 24:BA:978:G:H1'     | 2.15                     | 0.60              |
| 24:BA:1127:A:H3'  | 24:BA:1127:A:H8     | 1.65                     | 0.60              |
| 24:BA:1176:G:H5'' | 24:BA:1177:A:C8     | 2.36                     | 0.60              |
| 24:BA:1207:C:C2   | 24:BA:1208:C:C5     | 2.89                     | 0.60              |
| 24:BA:1340:U:H5   | 44:BW:57:LEU:CG     | 2.14                     | 0.60              |
| 24:BA:1388:G:H2'  | 24:BA:1389:G:C8     | 2.34                     | 0.60              |
| 24:BA:1431:U:C2'  | 24:BA:1432:C:H5'    | 2.30                     | 0.60              |
| 24:BA:1447:G:H1'  | 24:BA:1545(A):A:H1' | 1.82                     | 0.60              |
| 24:BA:1557:C:C2'  | 24:BA:1558:A:H8     | 2.04                     | 0.60              |
| 24:BA:1691:C:C2'  | 24:BA:1692:U:H5'    | 2.31                     | 0.60              |
| 24:BA:1834:U:H1'  | 24:BA:1969:A:H2     | 1.63                     | 0.60              |
| 24:BA:1937:A:H2'  | 24:BA:1938:A:OP1    | 2.00                     | 0.60              |
| 24:BA:2009:G:H5'' | 43:BV:41:LYS:CG     | 2.32                     | 0.60              |
| 24:BA:2112:G:H5'' | 24:BA:2113:U:OP2    | 2.01                     | 0.60              |
| 24:BA:2271:G:O5'  | 24:BA:2271:G:H8     | 1.84                     | 0.60              |
| 24:BA:2307:G:H8   | 24:BA:2307:G:OP2    | 1.84                     | 0.60              |
| 24:BA:2358:G:H2'  | 24:BA:2358:G:N3     | 2.15                     | 0.60              |
| 24:BA:2522:U:O2   | 24:BA:2765:A:N6     | 2.34                     | 0.60              |
| 24:BA:2695:C:H2'  | 24:BA:2696:U:H5     | 1.63                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2831:G:O4'  | 24:BA:2883:A:C2    | 2.53                     | 0.60              |
| 25:BB:3:C:H2'     | 25:BB:4:C:C6       | 2.36                     | 0.60              |
| 25:BB:25:A:O2'    | 25:BB:26:A:H5'     | 2.01                     | 0.60              |
| 26:BC:97:GLU:OE1  | 26:BC:122:ALA:HB2  | 2.01                     | 0.60              |
| 26:BC:100:ILE:HA  | 26:BC:127:LEU:HD11 | 1.82                     | 0.60              |
| 27:BD:55:GLY:H    | 27:BD:219:PRO:HD2  | 1.62                     | 0.60              |
| 27:BD:196:VAL:CG1 | 27:BD:197:GLY:N    | 2.31                     | 0.60              |
| 28:BE:37:ARG:HB2  | 28:BE:40:GLU:HB2   | 1.83                     | 0.60              |
| 30:BG:6:ALA:HA    | 30:BG:9:ARG:NE     | 2.17                     | 0.60              |
| 30:BG:6:ALA:CA    | 30:BG:9:ARG:NH2    | 2.64                     | 0.60              |
| 30:BG:13:GLU:O    | 30:BG:17:PRO:HD2   | 2.01                     | 0.60              |
| 30:BG:75:LYS:NZ   | 30:BG:87:PRO:HD3   | 2.15                     | 0.60              |
| 30:BG:102:PHE:O   | 30:BG:103:LEU:C    | 2.42                     | 0.60              |
| 30:BG:135:LEU:CD1 | 30:BG:155:MET:HB2  | 2.32                     | 0.60              |
| 32:BK:5:LEU:HB2   | 32:BK:8:PRO:CG     | 2.30                     | 0.60              |
| 32:BK:81:VAL:HG21 | 32:BK:123:LEU:HD13 | 1.84                     | 0.60              |
| 33:BL:27:LEU:HD22 | 33:BL:32:ALA:CB    | 2.31                     | 0.60              |
| 34:BM:75:TYR:O    | 34:BM:76:SER:O     | 2.19                     | 0.60              |
| 35:BN:25:LEU:N    | 35:BN:39:ILE:HG22  | 2.14                     | 0.60              |
| 35:BN:32:TYR:O    | 35:BN:34:THR:N     | 2.34                     | 0.60              |
| 35:BN:97:ARG:NH1  | 35:BN:98:VAL:CA    | 2.64                     | 0.60              |
| 35:BN:97:ARG:CG   | 35:BN:117:LEU:CD2  | 2.79                     | 0.60              |
| 36:BO:23:PRO:HB2  | 36:BO:29:LYS:H     | 1.65                     | 0.60              |
| 37:BP:39:PRO:HG3  | 37:BP:127:ILE:CG1  | 2.31                     | 0.60              |
| 37:BP:45:GLN:HA   | 37:BP:48:GLU:CG    | 2.30                     | 0.60              |
| 37:BP:52:VAL:O    | 37:BP:53:ALA:C     | 2.43                     | 0.60              |
| 37:BP:64:ILE:HG23 | 37:BP:106:VAL:O    | 2.01                     | 0.60              |
| 38:BQ:33:ARG:HH21 | 51:B4:56:LYS:HE2   | 1.67                     | 0.60              |
| 38:BQ:38:VAL:CB   | 38:BQ:39:PRO:CD    | 2.77                     | 0.60              |
| 40:BS:102:ILE:C   | 40:BS:104:ASN:H    | 2.08                     | 0.60              |
| 41:BT:59:ARG:O    | 41:BT:62:ILE:N     | 2.34                     | 0.60              |
| 41:BT:61:TRP:HZ3  | 41:BT:93:LYS:C     | 2.09                     | 0.60              |
| 42:BU:5:VAL:HG13  | 42:BU:39:LEU:HA    | 1.83                     | 0.60              |
| 45:BX:1:MET:HG2   | 45:BX:33:LYS:HG3   | 1.84                     | 0.60              |
| 46:BY:23:LYS:NZ   | 46:BY:38:TYR:O     | 2.33                     | 0.60              |
| 47:BZ:76:GLY:C    | 47:BZ:78:TYR:CE1   | 2.79                     | 0.60              |
| 48:B1:1:MET:HE3   | 48:B1:4:GLN:OE1    | 2.02                     | 0.60              |
| 50:B3:65:ASP:HA   | 50:B3:68:ARG:CZ    | 2.31                     | 0.60              |
| 51:B4:9:LYS:HD3   | 51:B4:10:LYS:H     | 1.64                     | 0.60              |
| 54:B7:8:LYS:N     | 54:B7:11:LYS:HE3   | 2.16                     | 0.60              |
| 54:B7:50:LEU:O    | 54:B7:53:PRO:HD2   | 2.00                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:127:G:HO2'   | 19:AT:2:PRO:N      | 2.00                     | 0.60              |
| 1:AA:129(A):G:H2' | 1:AA:189:U:C5      | 2.36                     | 0.60              |
| 1:AA:173:U:H4'    | 1:AA:197:A:H1'     | 1.83                     | 0.60              |
| 1:AA:244:U:O2'    | 1:AA:245:C:P       | 2.60                     | 0.60              |
| 1:AA:274:A:H5'    | 1:AA:275:G:OP1     | 2.01                     | 0.60              |
| 1:AA:357:G:OP1    | 1:AA:367:U:H3'     | 2.01                     | 0.60              |
| 1:AA:594:G:H3'    | 1:AA:595:G:O4'     | 2.01                     | 0.60              |
| 1:AA:777:A:C4     | 1:AA:778:G:C8      | 2.89                     | 0.60              |
| 1:AA:794:A:H2'    | 1:AA:795:C:C6      | 2.37                     | 0.60              |
| 1:AA:1005:A:C3'   | 1:AA:1006:C:H6     | 2.09                     | 0.60              |
| 1:AA:1319:A:C2    | 1:AA:1361:G:N2     | 2.70                     | 0.60              |
| 1:AA:1346:A:C8    | 1:AA:1348:U:C2     | 2.88                     | 0.60              |
| 1:AA:1411:C:C2    | 1:AA:1412:C:C5     | 2.90                     | 0.60              |
| 2:A1:21:G:H2'     | 2:A1:22:C:C6       | 2.37                     | 0.60              |
| 2:A1:34:U:H6      | 2:A1:34:U:H3'      | 1.65                     | 0.60              |
| 4:AE:56:ARG:O     | 4:AE:59:GLU:HG3    | 2.02                     | 0.60              |
| 4:AE:70:PHE:HB3   | 4:AE:163:PHE:O     | 2.00                     | 0.60              |
| 4:AE:162:ILE:O    | 4:AE:185:ILE:HD13  | 2.01                     | 0.60              |
| 6:AG:20:TYR:CB    | 6:AG:26:CYS:O      | 2.49                     | 0.60              |
| 7:AH:45:PHE:HE1   | 7:AH:47:LYS:HD2    | 1.65                     | 0.60              |
| 7:AH:94:ALA:CB    | 7:AH:119:LEU:HD21  | 2.31                     | 0.60              |
| 10:AK:114:THR:C   | 10:AK:116:LYS:H    | 2.09                     | 0.60              |
| 14:AO:38:THR:HG22 | 14:AO:58:VAL:HA    | 1.82                     | 0.60              |
| 14:AO:56:ALA:CB   | 14:AO:68:ALA:O     | 2.36                     | 0.60              |
| 15:AP:18:ALA:HB2  | 15:AP:45:VAL:HG21  | 1.83                     | 0.60              |
| 18:AS:58:TYR:HD1  | 18:AS:59:TRP:N     | 1.98                     | 0.60              |
| 20:AU:36:ASN:C    | 20:AU:40:LEU:HG    | 2.26                     | 0.60              |
| 21:AV:27:GLU:HG2  | 21:AV:28:LYS:H     | 1.63                     | 0.60              |
| 24:BA:13:A:C2     | 24:BA:526:A:N6     | 2.68                     | 0.60              |
| 24:BA:197:A:H3'   | 24:BA:198:C:C5     | 2.36                     | 0.60              |
| 24:BA:230:U:O2'   | 24:BA:231:C:O4'    | 2.19                     | 0.60              |
| 24:BA:270(Z):U:C4 | 24:BA:271(C):U:H1' | 2.36                     | 0.60              |
| 24:BA:684:G:H5''  | 24:BA:684:G:H8     | 1.65                     | 0.60              |
| 24:BA:712:G:C5    | 24:BA:713:G:N7     | 2.68                     | 0.60              |
| 24:BA:728:G:H22   | 24:BA:762:U:P      | 2.24                     | 0.60              |
| 24:BA:805:G:H1'   | 24:BA:831:G:O2'    | 2.01                     | 0.60              |
| 24:BA:1022:G:O2'  | 24:BA:1023:U:P     | 2.59                     | 0.60              |
| 24:BA:1050:A:N6   | 24:BA:2751:G:N1    | 2.49                     | 0.60              |
| 24:BA:1071:G:C2'  | 24:BA:1072:C:H5''  | 2.30                     | 0.60              |
| 24:BA:1188:U:O2   | 24:BA:1189:A:O4'   | 2.19                     | 0.60              |
| 24:BA:1322:A:H2'  | 24:BA:1323:U:H5'   | 1.84                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1366:A:C2   | 24:BA:1367:A:N3    | 2.69                     | 0.60              |
| 24:BA:1620:G:O2'  | 24:BA:1621:U:H5'   | 2.01                     | 0.60              |
| 24:BA:1675:C:C2'  | 24:BA:1676:A:H5'   | 2.32                     | 0.60              |
| 24:BA:2071:A:H2   | 24:BA:2441:C:N3    | 1.99                     | 0.60              |
| 24:BA:2209:C:OP2  | 24:BA:2210:G:OP2   | 2.20                     | 0.60              |
| 24:BA:2216:G:O2'  | 24:BA:2217:G:H5'   | 2.01                     | 0.60              |
| 24:BA:2371:G:N2   | 24:BA:2372:G:C5    | 2.69                     | 0.60              |
| 24:BA:2483:C:N3   | 37:BP:124:LYS:HE2  | 2.16                     | 0.60              |
| 24:BA:2582:G:C2   | 24:BA:2583:G:H1'   | 2.35                     | 0.60              |
| 24:BA:2696:U:C2'  | 24:BA:2697:G:O5'   | 2.48                     | 0.60              |
| 25:BB:23:G:N2     | 25:BB:61:G:C5      | 2.70                     | 0.60              |
| 26:BC:20:TYR:O    | 26:BC:225:ASN:HB3  | 2.01                     | 0.60              |
| 27:BD:34:VAL:N    | 27:BD:104:TYR:OH   | 2.34                     | 0.60              |
| 27:BD:58:HIS:O    | 27:BD:59:LYS:CE    | 2.49                     | 0.60              |
| 27:BD:61:LEU:HB3  | 27:BD:86:PRO:HG2   | 1.82                     | 0.60              |
| 27:BD:105:ILE:CD1 | 27:BD:106:ILE:H    | 2.06                     | 0.60              |
| 27:BD:171:ASP:O   | 27:BD:186:HIS:CA   | 2.44                     | 0.60              |
| 28:BE:4:ILE:CD1   | 28:BE:76:ARG:NH2   | 2.64                     | 0.60              |
| 28:BE:47:VAL:HG22 | 28:BE:79:ARG:CG    | 2.30                     | 0.60              |
| 28:BE:66:HIS:ND1  | 28:BE:66:HIS:C     | 2.60                     | 0.60              |
| 28:BE:164:ARG:C   | 28:BE:165:VAL:HG22 | 2.27                     | 0.60              |
| 29:BF:41:LEU:CA   | 29:BF:44:ARG:NE    | 2.63                     | 0.60              |
| 29:BF:185:ASP:O   | 29:BF:188:ARG:HG3  | 2.01                     | 0.60              |
| 31:BH:37:VAL:O    | 31:BH:37:VAL:HG22  | 2.01                     | 0.60              |
| 31:BH:59:ARG:O    | 31:BH:62:LYS:HG2   | 2.02                     | 0.60              |
| 31:BH:85:LYS:NZ   | 31:BH:85:LYS:HB2   | 2.16                     | 0.60              |
| 31:BH:150:ALA:O   | 31:BH:152:ARG:N    | 2.34                     | 0.60              |
| 32:BK:9:LEU:HA    | 32:BK:17:GLN:OE1   | 1.99                     | 0.60              |
| 32:BK:31:LEU:HD22 | 32:BK:36:ALA:N     | 2.16                     | 0.60              |
| 34:BM:74:ARG:CD   | 34:BM:82:LEU:HD13  | 2.31                     | 0.60              |
| 35:BN:31:LYS:HB3  | 35:BN:32:TYR:CZ    | 2.36                     | 0.60              |
| 35:BN:58:VAL:O    | 35:BN:59:LYS:HB3   | 2.01                     | 0.60              |
| 36:BO:112:LEU:O   | 36:BO:129:ALA:HB3  | 2.01                     | 0.60              |
| 37:BP:67:ARG:NH2  | 37:BP:103:MET:C    | 2.58                     | 0.60              |
| 38:BQ:10:LEU:HB2  | 38:BQ:17:ARG:CZ    | 2.32                     | 0.60              |
| 38:BQ:53:HIS:O    | 38:BQ:56:LYS:HE2   | 2.02                     | 0.60              |
| 38:BQ:60:LEU:HD23 | 38:BQ:60:LEU:H     | 1.65                     | 0.60              |
| 39:BR:76:LYS:O    | 39:BR:80:LEU:HD23  | 2.01                     | 0.60              |
| 40:BS:58:ASN:N    | 40:BS:58:ASN:ND2   | 2.30                     | 0.60              |
| 40:BS:95:ARG:NH2  | 40:BS:95:ARG:CB    | 2.64                     | 0.60              |
| 41:BT:88:ILE:HB   | 42:BU:52:VAL:HG13  | 1.83                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 42:BU:65:GLY:CA   | 42:BU:97:LYS:HZ1  | 2.13                     | 0.60              |
| 43:BV:72:LYS:O    | 43:BV:106:ILE:CG2 | 2.49                     | 0.60              |
| 44:BW:5:TYR:CB    | 48:B1:24:LYS:HD3  | 2.29                     | 0.60              |
| 44:BW:50:LYS:HZ3  | 44:BW:85:PRO:HG2  | 1.67                     | 0.60              |
| 44:BW:50:LYS:NZ   | 44:BW:85:PRO:HD2  | 2.15                     | 0.60              |
| 46:BY:39:VAL:HG13 | 46:BY:44:PHE:CG   | 2.36                     | 0.60              |
| 46:BY:127:LYS:CE  | 46:BY:165:VAL:HB  | 2.31                     | 0.60              |
| 52:B5:9:LEU:HD13  | 52:B5:27:LYS:HA   | 1.82                     | 0.60              |
| 54:B7:53:PRO:HA   | 54:B7:56:GLU:CG   | 2.31                     | 0.60              |
| 1:AA:33:A:N3      | 14:AO:32:PHE:CZ   | 2.70                     | 0.60              |
| 1:AA:67:C:H4'     | 1:AA:172:A:C1'    | 2.32                     | 0.60              |
| 1:AA:107:G:C6     | 22:AW:15:ARG:NH2  | 2.69                     | 0.60              |
| 1:AA:130:A:H4'    | 1:AA:190:G:C4     | 2.37                     | 0.60              |
| 1:AA:227:G:H2'    | 1:AA:228:A:C8     | 2.36                     | 0.60              |
| 1:AA:229:U:H2'    | 1:AA:230:G:C8     | 2.37                     | 0.60              |
| 1:AA:397:A:C2'    | 1:AA:399:G:OP2    | 2.49                     | 0.60              |
| 1:AA:404:U:H4'    | 6:AG:122:ARG:NH1  | 2.16                     | 0.60              |
| 1:AA:538:G:N2     | 1:AA:539:A:H1'    | 2.17                     | 0.60              |
| 1:AA:594:G:C5     | 1:AA:595:G:N3     | 2.69                     | 0.60              |
| 1:AA:597:G:H2'    | 1:AA:598:U:C5'    | 2.31                     | 0.60              |
| 1:AA:599:C:O2'    | 10:AK:130:GLY:N   | 2.34                     | 0.60              |
| 1:AA:620:C:C4     | 6:AG:135:LEU:HD22 | 2.36                     | 0.60              |
| 1:AA:877:C:O2'    | 1:AA:878:G:H5'    | 2.02                     | 0.60              |
| 1:AA:890:G:O2'    | 1:AA:891:U:C6     | 2.53                     | 0.60              |
| 1:AA:1011:G:C2'   | 1:AA:1012:U:H5'   | 2.32                     | 0.60              |
| 1:AA:1095:U:H5'   | 1:AA:1109:C:O2    | 2.01                     | 0.60              |
| 1:AA:1196:U:H3'   | 1:AA:1196:U:C6    | 2.36                     | 0.60              |
| 1:AA:1376:U:O2    | 1:AA:1377:A:N6    | 2.35                     | 0.60              |
| 3:AB:22:G:N7      | 3:AB:46:G:N2      | 2.50                     | 0.60              |
| 5:AF:48:TYR:O     | 5:AF:48:TYR:HD2   | 1.85                     | 0.60              |
| 5:AF:156:ARG:NH2  | 5:AF:160:ALA:O    | 2.34                     | 0.60              |
| 6:AG:65:ARG:HG3   | 6:AG:72:GLU:OE1   | 2.01                     | 0.60              |
| 6:AG:128:VAL:HG12 | 6:AG:129:ASN:N    | 2.17                     | 0.60              |
| 7:AH:18:ARG:H     | 7:AH:26:PHE:HB3   | 1.65                     | 0.60              |
| 9:AJ:87:VAL:HG21  | 9:AJ:154:TYR:HB2  | 1.82                     | 0.60              |
| 9:AJ:89:MET:HE2   | 9:AJ:156:TRP:CD1  | 2.37                     | 0.60              |
| 10:AK:28:ALA:O    | 10:AK:29:SER:OG   | 2.20                     | 0.60              |
| 10:AK:37:ARG:HD2  | 10:AK:38:ILE:N    | 2.16                     | 0.60              |
| 10:AK:70:GLN:NE2  | 10:AK:71:GLY:N    | 2.47                     | 0.60              |
| 10:AK:87:SER:HB3  | 10:AK:93:VAL:H    | 1.64                     | 0.60              |
| 10:AK:119:LEU:HB3 | 10:AK:124:ALA:HB2 | 1.83                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 13:AN:45:GLY:O     | 13:AN:50:TYR:HB2   | 2.02                     | 0.60              |
| 14:AO:46:LYS:CE    | 14:AO:47:LYS:HZ1   | 2.15                     | 0.60              |
| 15:AP:13:LYS:HA    | 15:AP:44:ARG:CZ    | 2.31                     | 0.60              |
| 15:AP:98:VAL:CB    | 15:AP:110:ARG:HH21 | 2.14                     | 0.60              |
| 17:AR:42:HIS:O     | 17:AR:43:LEU:C     | 2.45                     | 0.60              |
| 20:AU:34:TYR:HD1   | 20:AU:35:ARG:N     | 1.99                     | 0.60              |
| 20:AU:34:TYR:CD1   | 20:AU:35:ARG:N     | 2.69                     | 0.60              |
| 21:AV:12:ASP:O     | 21:AV:16:LEU:HD22  | 2.01                     | 0.60              |
| 24:BA:111:A:H4'    | 48:B1:60:ASN:OD1   | 2.01                     | 0.60              |
| 24:BA:123:G:H2'    | 24:BA:124:G:C8     | 2.36                     | 0.60              |
| 24:BA:188:G:OP2    | 50:B3:13:ARG:CZ    | 2.49                     | 0.60              |
| 24:BA:410:G:O6     | 24:BA:418:G:C6     | 2.54                     | 0.60              |
| 24:BA:534:U:H4'    | 41:BT:49:HIS:CE1   | 2.36                     | 0.60              |
| 24:BA:974:G:OP2    | 24:BA:974(A):C:OP2 | 2.19                     | 0.60              |
| 24:BA:1044:G:C6    | 24:BA:1112:G:N3    | 2.70                     | 0.60              |
| 24:BA:1138:G:N2    | 24:BA:1139:G:N3    | 2.49                     | 0.60              |
| 24:BA:1264:G:C6    | 24:BA:1265:A:C5    | 2.90                     | 0.60              |
| 24:BA:1287:A:C8    | 38:BQ:104:ARG:NH1  | 2.69                     | 0.60              |
| 24:BA:1534:G:H21   | 24:BA:1537:C:N4    | 1.99                     | 0.60              |
| 24:BA:1554:A:HO2'  | 24:BA:1555:G:P     | 2.25                     | 0.60              |
| 24:BA:1616:A:H5''  | 24:BA:1617:C:OP1   | 2.01                     | 0.60              |
| 24:BA:1746:G:H2'   | 24:BA:1747:G:H8    | 1.67                     | 0.60              |
| 24:BA:1780:A:OP2   | 24:BA:1782:C:OP1   | 2.19                     | 0.60              |
| 24:BA:1939:U:C2'   | 24:BA:1940:U:OP1   | 2.49                     | 0.60              |
| 24:BA:1997:G:C2    | 24:BA:1998:G:C5    | 2.89                     | 0.60              |
| 24:BA:2115:G:C2'   | 24:BA:2117:A:H62   | 2.14                     | 0.60              |
| 24:BA:2286:A:N6    | 52:B5:29:ASN:C     | 2.59                     | 0.60              |
| 24:BA:2320:A:C8    | 24:BA:2320:A:P     | 2.94                     | 0.60              |
| 24:BA:2414:G:H2'   | 24:BA:2414:G:N3    | 2.16                     | 0.60              |
| 24:BA:2417:C:C2    | 24:BA:2418:A:C8    | 2.90                     | 0.60              |
| 25:BB:57:A:H2'     | 25:BB:58:A:H5'     | 1.82                     | 0.60              |
| 27:BD:105:ILE:O    | 27:BD:106:ILE:O    | 2.20                     | 0.60              |
| 27:BD:132:PRO:HB2  | 27:BD:134:ARG:CD   | 2.32                     | 0.60              |
| 27:BD:175:LEU:HD11 | 27:BD:177:LEU:HB3  | 1.83                     | 0.60              |
| 28:BE:27:LEU:HD12  | 28:BE:76:ARG:NH1   | 2.16                     | 0.60              |
| 28:BE:133:LYS:O    | 28:BE:137:HIS:CE1  | 2.54                     | 0.60              |
| 28:BE:187:ALA:O    | 28:BE:188:VAL:C    | 2.44                     | 0.60              |
| 29:BF:74:ARG:O     | 29:BF:75:HIS:CB    | 2.48                     | 0.60              |
| 31:BH:7:LEU:H      | 31:BH:8:PRO:HD3    | 1.64                     | 0.60              |
| 31:BH:110:SER:O    | 31:BH:112:PRO:CD   | 2.46                     | 0.60              |
| 32:BK:43:ASN:N     | 32:BK:43:ASN:HD22  | 2.00                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 32:BK:95:LYS:HG2   | 32:BK:99:GLU:OE2  | 2.00                     | 0.60              |
| 35:BN:9:GLU:O      | 35:BN:82:ASN:HA   | 2.02                     | 0.60              |
| 35:BN:89:ASN:O     | 35:BN:90:GLN:HB2  | 2.00                     | 0.60              |
| 35:BN:112:MET:O    | 35:BN:115:VAL:N   | 2.34                     | 0.60              |
| 36:BO:81:GLN:CG    | 36:BO:86:LYS:HE3  | 2.31                     | 0.60              |
| 36:BO:114:ILE:HG21 | 36:BO:134:ALA:HB2 | 1.83                     | 0.60              |
| 36:BO:122:PRO:HB3  | 36:BO:138:LEU:N   | 2.16                     | 0.60              |
| 37:BP:16:ARG:NE    | 37:BP:73:PRO:CD   | 2.65                     | 0.60              |
| 37:BP:104:PHE:O    | 37:BP:105:GLU:OE2 | 2.20                     | 0.60              |
| 38:BQ:7:GLY:O      | 38:BQ:8:ARG:C     | 2.45                     | 0.60              |
| 38:BQ:25:ALA:HA    | 38:BQ:48:VAL:HG22 | 1.82                     | 0.60              |
| 40:BS:55:ASN:ND2   | 40:BS:57:PHE:HZ   | 1.99                     | 0.60              |
| 41:BT:70:ARG:HB2   | 41:BT:70:ARG:NH1  | 2.16                     | 0.60              |
| 42:BU:12:TYR:O     | 42:BU:13:ARG:HB2  | 2.00                     | 0.60              |
| 43:BV:33:ARG:NH2   | 43:BV:37:ARG:HB3  | 2.17                     | 0.60              |
| 44:BW:35:THR:N     | 44:BW:38:GLU:HB2  | 2.17                     | 0.60              |
| 48:B1:15:GLU:O     | 48:B1:16:LEU:C    | 2.44                     | 0.60              |
| 48:B1:30:LEU:O     | 48:B1:33:GLN:N    | 2.35                     | 0.60              |
| 50:B3:8:LYS:HG2    | 50:B3:9:LEU:N     | 2.12                     | 0.60              |
| 51:B4:4:HIS:CG     | 51:B4:5:PRO:HD3   | 2.36                     | 0.60              |
| 53:B6:43:THR:CG2   | 53:B6:46:VAL:HB   | 2.31                     | 0.60              |
| 1:AA:9:G:H3'       | 7:AH:126:ARG:HH11 | 1.66                     | 0.60              |
| 1:AA:30:U:HO2'     | 1:AA:31:G:P       | 2.24                     | 0.60              |
| 1:AA:65:U:H4'      | 1:AA:66:G:O5'     | 2.01                     | 0.60              |
| 1:AA:90:C:O2'      | 1:AA:91:C:C5'     | 2.50                     | 0.60              |
| 1:AA:167:G:H2'     | 1:AA:168:G:H8     | 1.67                     | 0.60              |
| 1:AA:186:C:O2'     | 1:AA:186(A):C:H5' | 2.00                     | 0.60              |
| 1:AA:258:G:O6      | 1:AA:259:G:O6     | 2.19                     | 0.60              |
| 1:AA:362:G:N3      | 1:AA:364:A:C8     | 2.69                     | 0.60              |
| 1:AA:405:U:H5''    | 1:AA:406:G:O4'    | 2.01                     | 0.60              |
| 1:AA:572:A:O2'     | 1:AA:916:G:O2'    | 2.11                     | 0.60              |
| 1:AA:703:G:H8      | 1:AA:703:G:O5'    | 1.84                     | 0.60              |
| 1:AA:780:A:H2      | 1:AA:803:G:C6     | 2.19                     | 0.60              |
| 1:AA:790:A:N6      | 1:AA:791:G:N1     | 2.49                     | 0.60              |
| 1:AA:791:G:OP2     | 1:AA:791:G:H3'    | 2.02                     | 0.60              |
| 1:AA:796:C:C2      | 1:AA:797:C:C5     | 2.90                     | 0.60              |
| 1:AA:1028(B):C:H2' | 1:AA:1028(B):C:O2 | 1.99                     | 0.60              |
| 1:AA:1044:A:H2'    | 1:AA:1045:C:C5'   | 2.30                     | 0.60              |
| 1:AA:1374:A:H1'    | 9:AJ:31:MET:HE1   | 1.84                     | 0.60              |
| 1:AA:1392:G:H2'    | 1:AA:1393:U:C6    | 2.36                     | 0.60              |
| 3:AC:40:C:C2'      | 3:AC:41:C:C5'     | 2.74                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 3:AB:74:C:N4      | 24:BA:2555:U:N1    | 2.49                     | 0.60              |
| 4:AE:52:GLU:HG2   | 4:AE:53:ARG:N      | 2.16                     | 0.60              |
| 6:AG:128:VAL:HG21 | 6:AG:133:VAL:CB    | 2.31                     | 0.60              |
| 6:AG:176:LEU:HG   | 6:AG:176:LEU:O     | 2.01                     | 0.60              |
| 6:AG:177:ASP:HB3  | 6:AG:182:LYS:O     | 2.02                     | 0.60              |
| 6:AG:187:ARG:CZ   | 6:AG:188:LEU:HG    | 2.31                     | 0.60              |
| 7:AH:40:ARG:N     | 7:AH:68:GLU:OE1    | 2.35                     | 0.60              |
| 7:AH:88:LYS:CB    | 7:AH:123:LEU:O     | 2.50                     | 0.60              |
| 9:AJ:71:PRO:CD    | 9:AJ:100:ALA:HB2   | 2.31                     | 0.60              |
| 9:AJ:97:GLN:O     | 9:AJ:98:SER:C      | 2.45                     | 0.60              |
| 10:AK:6:ILE:CD1   | 10:AK:85:ARG:HD3   | 2.32                     | 0.60              |
| 10:AK:34:GLU:OE1  | 10:AK:34:GLU:HA    | 2.00                     | 0.60              |
| 10:AK:95:VAL:HG11 | 10:AK:133:LEU:HD11 | 1.84                     | 0.60              |
| 10:AK:104:ARG:HB3 | 10:AK:107:LEU:HG   | 1.83                     | 0.60              |
| 13:AN:28:THR:HG22 | 13:AN:29:ILE:N     | 2.16                     | 0.60              |
| 13:AN:66:LEU:CB   | 13:AN:70:LYS:HZ2   | 2.14                     | 0.60              |
| 14:AO:35:GLY:O    | 14:AO:82:VAL:CG1   | 2.50                     | 0.60              |
| 14:AO:41:ARG:HH12 | 14:AO:55:VAL:HG11  | 1.67                     | 0.60              |
| 17:AR:40:SER:O    | 17:AR:43:LEU:HB2   | 2.02                     | 0.60              |
| 18:AS:8:ARG:HD3   | 18:AS:15:PRO:CA    | 2.29                     | 0.60              |
| 18:AS:20:VAL:HG11 | 18:AS:32:TYR:CB    | 2.30                     | 0.60              |
| 20:AU:31:LEU:HD12 | 20:AU:31:LEU:N     | 2.16                     | 0.60              |
| 21:AV:30:LEU:HD21 | 21:AV:50:ALA:HB2   | 1.84                     | 0.60              |
| 21:AV:45:VAL:CG2  | 21:AV:67:VAL:HG21  | 2.27                     | 0.60              |
| 22:AW:63:ILE:HD13 | 22:AW:80:ARG:CB    | 2.29                     | 0.60              |
| 24:BA:273:G:H2'   | 24:BA:273(A):G:H8  | 1.66                     | 0.60              |
| 24:BA:298:G:O5'   | 24:BA:298:G:C8     | 2.48                     | 0.60              |
| 24:BA:482:A:N3    | 24:BA:482:A:C2'    | 2.64                     | 0.60              |
| 24:BA:573:G:O2'   | 24:BA:574:C:P      | 2.59                     | 0.60              |
| 24:BA:730:C:H2'   | 24:BA:731:C:C5     | 2.35                     | 0.60              |
| 24:BA:751:A:H5'   | 43:BV:90:ARG:CZ    | 2.31                     | 0.60              |
| 24:BA:957:A:N6    | 24:BA:959:A:C4     | 2.70                     | 0.60              |
| 24:BA:1050:A:C2   | 24:BA:2751:G:H3'   | 2.36                     | 0.60              |
| 24:BA:1202:C:N3   | 24:BA:1203:G:O2'   | 2.32                     | 0.60              |
| 24:BA:1295:C:H2'  | 24:BA:1296:G:C8    | 2.37                     | 0.60              |
| 24:BA:1567:A:N6   | 27:BD:84:TYR:CD1   | 2.70                     | 0.60              |
| 24:BA:1603:A:OP1  | 24:BA:1604:C:OP2   | 2.19                     | 0.60              |
| 24:BA:1634:A:O3'  | 24:BA:1635:G:C8    | 2.54                     | 0.60              |
| 24:BA:1751:C:O4'  | 24:BA:2860:A:C2    | 2.55                     | 0.60              |
| 24:BA:1839:G:H1'  | 24:BA:1927:A:H5'   | 1.83                     | 0.60              |
| 24:BA:1942:C:OP2  | 24:BA:1943:U:H3'   | 2.01                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1969:A:C5'   | 24:BA:1970:A:OP1   | 2.49                     | 0.60              |
| 24:BA:2100:G:H1'   | 24:BA:2190:G:N2    | 2.17                     | 0.60              |
| 24:BA:2253:G:C5    | 24:BA:2254:C:C5    | 2.90                     | 0.60              |
| 24:BA:2311:A:O3'   | 30:BG:86:MET:HE2   | 2.01                     | 0.60              |
| 24:BA:2357:U:O5'   | 24:BA:2357:U:H6    | 1.84                     | 0.60              |
| 24:BA:2378:A:N3    | 39:BR:20:ARG:NH2   | 2.50                     | 0.60              |
| 24:BA:2655:G:N3    | 24:BA:2655:G:C2'   | 2.64                     | 0.60              |
| 24:BA:2656:U:O2    | 24:BA:2656:U:C2'   | 2.47                     | 0.60              |
| 24:BA:2716:U:O2'   | 24:BA:2717:G:H5'   | 2.01                     | 0.60              |
| 25:BB:31:C:N3      | 25:BB:32:C:C5      | 2.70                     | 0.60              |
| 26:BC:212:VAL:O    | 26:BC:212:VAL:HG12 | 2.01                     | 0.60              |
| 27:BD:5:LYS:CE     | 27:BD:31:LYS:HZ2   | 2.15                     | 0.60              |
| 27:BD:7:LYS:HE2    | 27:BD:25:THR:CG2   | 2.31                     | 0.60              |
| 27:BD:46:GLN:O     | 27:BD:48:ARG:N     | 2.34                     | 0.60              |
| 27:BD:133:LEU:HD12 | 27:BD:187:GLY:HA2  | 1.83                     | 0.60              |
| 27:BD:145:VAL:O    | 27:BD:154:LYS:O    | 2.19                     | 0.60              |
| 27:BD:186:HIS:O    | 27:BD:189:CYS:SG   | 2.60                     | 0.60              |
| 27:BD:256:GLY:O    | 27:BD:257:LEU:HG   | 2.02                     | 0.60              |
| 28:BE:49:LEU:HD21  | 28:BE:75:VAL:CA    | 2.31                     | 0.60              |
| 28:BE:133:LYS:CE   | 28:BE:137:HIS:HB3  | 2.32                     | 0.60              |
| 28:BE:147:PRO:CD   | 28:BE:148:GLY:N    | 2.64                     | 0.60              |
| 29:BF:125:LEU:HD22 | 29:BF:128:ALA:HB2  | 1.82                     | 0.60              |
| 30:BG:1:MET:C      | 30:BG:3:LEU:N      | 2.53                     | 0.60              |
| 30:BG:138:GLN:HB2  | 30:BG:155:MET:CE   | 2.32                     | 0.60              |
| 30:BG:170:ARG:HD3  | 30:BG:174:GLU:CB   | 2.31                     | 0.60              |
| 31:BH:149:ARG:O    | 31:BH:153:LYS:HB3  | 2.01                     | 0.60              |
| 32:BK:31:LEU:HD21  | 32:BK:36:ALA:HB3   | 1.83                     | 0.60              |
| 32:BK:91:SER:CA    | 32:BK:121:LYS:HD2  | 2.30                     | 0.60              |
| 33:BL:79:ARG:HH12  | 33:BL:87:GLY:N     | 2.00                     | 0.60              |
| 33:BL:131:ALA:HB1  | 33:BL:136:VAL:HB   | 1.83                     | 0.60              |
| 34:BM:57:ALA:CB    | 34:BM:124:ALA:HA   | 2.29                     | 0.60              |
| 36:BO:122:PRO:HD3  | 36:BO:137:LYS:HB2  | 1.82                     | 0.60              |
| 37:BP:16:ARG:CG    | 37:BP:72:LYS:HB3   | 2.32                     | 0.60              |
| 37:BP:75:THR:CG2   | 37:BP:77:LYS:HD2   | 2.29                     | 0.60              |
| 37:BP:121:ALA:O    | 37:BP:125:LEU:CG   | 2.44                     | 0.60              |
| 38:BQ:24:GLN:O     | 38:BQ:25:ALA:C     | 2.44                     | 0.60              |
| 38:BQ:45:ARG:O     | 38:BQ:46:GLY:C     | 2.42                     | 0.60              |
| 38:BQ:57:ARG:HB3   | 38:BQ:57:ARG:CZ    | 2.31                     | 0.60              |
| 39:BR:71:ARG:N     | 39:BR:104:GLY:CA   | 2.64                     | 0.60              |
| 39:BR:89:ARG:CG    | 39:BR:90:GLY:N     | 2.57                     | 0.60              |
| 40:BS:2:ASN:O      | 40:BS:5:ALA:HB3    | 2.02                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 40:BS:4:GLY:CA    | 40:BS:8:LYS:HE3   | 2.32                     | 0.60              |
| 40:BS:107:ASP:HB2 | 40:BS:108:ARG:HD3 | 1.84                     | 0.60              |
| 44:BW:63:LYS:HA   | 44:BW:63:LYS:CE   | 2.32                     | 0.60              |
| 46:BY:94:GLU:CA   | 46:BY:130:PRO:HB3 | 2.31                     | 0.60              |
| 46:BY:127:LYS:HD3 | 46:BY:165:VAL:CG2 | 2.31                     | 0.60              |
| 48:B1:16:LEU:O    | 48:B1:20:VAL:HG12 | 2.01                     | 0.60              |
| 49:B2:6:VAL:HG12  | 49:B2:55:ARG:C    | 2.27                     | 0.60              |
| 49:B2:26:LEU:CB   | 49:B2:35:ARG:HH11 | 2.14                     | 0.60              |
| 49:B2:50:VAL:CG1  | 49:B2:53:LEU:HB2  | 2.32                     | 0.60              |
| 49:B2:52:HIS:C    | 49:B2:54:VAL:N    | 2.58                     | 0.60              |
| 53:B6:34:ARG:HH22 | 53:B6:42:LEU:HD23 | 1.67                     | 0.60              |
| 54:B7:5:LYS:HE2   | 54:B7:7:HIS:HA    | 1.84                     | 0.60              |
| 1:AA:49:U:O2'     | 1:AA:50:A:OP1     | 2.16                     | 0.60              |
| 1:AA:254:G:C6     | 1:AA:273:A:N6     | 2.69                     | 0.60              |
| 1:AA:323:U:C5     | 1:AA:324:G:H1'    | 2.37                     | 0.60              |
| 1:AA:362:G:N3     | 1:AA:364:A:H8     | 1.98                     | 0.60              |
| 1:AA:375:U:C3'    | 18:AS:6:LEU:HD21  | 2.30                     | 0.60              |
| 1:AA:390:C:C4     | 1:AA:391:G:N7     | 2.70                     | 0.60              |
| 1:AA:570:G:N2     | 1:AA:873:A:N1     | 2.50                     | 0.60              |
| 1:AA:667:G:H2'    | 1:AA:668:G:C8     | 2.37                     | 0.60              |
| 1:AA:687:A:O2'    | 1:AA:688:G:O5'    | 2.20                     | 0.60              |
| 1:AA:702:A:C2     | 24:BA:1848:A:C5   | 2.90                     | 0.60              |
| 1:AA:784:C:C5'    | 24:BA:1837:C:OP1  | 2.50                     | 0.60              |
| 1:AA:867:G:H2'    | 1:AA:868:C:H6     | 1.63                     | 0.60              |
| 1:AA:923:A:O4'    | 1:AA:1398:A:C2    | 2.54                     | 0.60              |
| 1:AA:1017:G:O2'   | 1:AA:1018:C:H5'   | 2.01                     | 0.60              |
| 1:AA:1041:A:C6    | 1:AA:1042:G:N7    | 2.70                     | 0.60              |
| 1:AA:1062:U:C2'   | 1:AA:1063:C:C6    | 2.82                     | 0.60              |
| 1:AA:1127:G:H21   | 1:AA:1147:C:H42   | 1.50                     | 0.60              |
| 1:AA:1202:G:H1'   | 16:AQ:29:ARG:CD   | 2.31                     | 0.60              |
| 1:AA:1251:A:O2'   | 1:AA:1369:C:O2'   | 2.09                     | 0.60              |
| 1:AA:1320:C:C5    | 21:AV:37:ARG:NH2  | 2.70                     | 0.60              |
| 4:AE:78:GLN:NE2   | 4:AE:96:ARG:HH12  | 1.98                     | 0.60              |
| 5:AF:30:ARG:CG    | 5:AF:31:HIS:H     | 2.09                     | 0.60              |
| 5:AF:55:VAL:HG22  | 5:AF:68:VAL:HG22  | 1.83                     | 0.60              |
| 5:AF:149:ALA:HB3  | 5:AF:170:GLN:HE21 | 1.67                     | 0.60              |
| 5:AF:173:VAL:O    | 5:AF:175:LEU:N    | 2.35                     | 0.60              |
| 6:AG:110:PHE:CE1  | 6:AG:148:VAL:HG23 | 2.34                     | 0.60              |
| 9:AJ:103:TRP:CH2  | 9:AJ:138:LYS:CA   | 2.74                     | 0.60              |
| 10:AK:1:MET:HG2   | 10:AK:2:LEU:H     | 1.66                     | 0.60              |
| 10:AK:97:VAL:HG22 | 10:AK:98:LYS:N    | 2.14                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 10:AK:98:LYS:HG2  | 10:AK:98:LYS:O    | 2.01                     | 0.60              |
| 11:AL:27:THR:HG23 | 11:AL:30:GLY:O    | 2.02                     | 0.60              |
| 11:AL:103:THR:CG2 | 11:AL:104:ARG:H   | 2.12                     | 0.60              |
| 12:AM:63:PHE:HA   | 16:AQ:59:ALA:HB2  | 1.83                     | 0.60              |
| 12:AM:69:ASN:O    | 12:AM:70:ARG:HD3  | 2.01                     | 0.60              |
| 14:AO:7:ILE:HB    | 14:AO:8:ASN:ND2   | 2.16                     | 0.60              |
| 18:AS:52:ASP:C    | 18:AS:52:ASP:OD2  | 2.45                     | 0.60              |
| 19:AT:59:ILE:CD1  | 19:AT:60:ILE:N    | 2.65                     | 0.60              |
| 23:AX:4:GLY:C     | 23:AX:6:ARG:N     | 2.57                     | 0.60              |
| 23:AX:13:ILE:CG2  | 23:AX:14:TRP:N    | 2.65                     | 0.60              |
| 24:BA:32:C:OP1    | 24:BA:1238:G:H5'  | 2.02                     | 0.60              |
| 24:BA:75:G:C4'    | 48:B1:50:ARG:HH11 | 2.14                     | 0.60              |
| 24:BA:187:G:P     | 50:B3:13:ARG:HH22 | 2.24                     | 0.60              |
| 24:BA:243:U:H2'   | 24:BA:244:A:H5'   | 1.82                     | 0.60              |
| 24:BA:294:A:H2'   | 24:BA:295:G:H5'   | 1.84                     | 0.60              |
| 24:BA:361:G:H2'   | 24:BA:362:U:C6    | 2.36                     | 0.60              |
| 24:BA:506:G:H2'   | 24:BA:507:A:OP2   | 2.00                     | 0.60              |
| 24:BA:601:C:O2    | 24:BA:601:C:H2'   | 2.01                     | 0.60              |
| 24:BA:686:G:C4'   | 24:BA:687:C:OP2   | 2.50                     | 0.60              |
| 24:BA:687:C:C5'   | 53:B6:4:THR:HB    | 2.22                     | 0.60              |
| 24:BA:731:C:H5'   | 24:BA:731:C:H6    | 1.66                     | 0.60              |
| 24:BA:734:A:H2'   | 24:BA:735:A:O5'   | 2.01                     | 0.60              |
| 24:BA:749:C:H3'   | 24:BA:749:C:C6    | 2.36                     | 0.60              |
| 24:BA:771:G:C2    | 24:BA:772:C:C4    | 2.90                     | 0.60              |
| 24:BA:1227:A:C2'  | 24:BA:1228:G:H5'' | 2.32                     | 0.60              |
| 24:BA:1301:A:O2'  | 24:BA:1302:A:C8   | 2.55                     | 0.60              |
| 24:BA:1340:U:C5   | 44:BW:57:LEU:HG   | 2.35                     | 0.60              |
| 24:BA:1418:G:C8   | 24:BA:1418:G:OP2  | 2.54                     | 0.60              |
| 24:BA:1652:A:H62  | 24:BA:1653:G:H21  | 1.50                     | 0.60              |
| 24:BA:1675:C:C5   | 28:BE:129:HIS:CD2 | 2.89                     | 0.60              |
| 24:BA:1775:U:O2'  | 24:BA:1776:G:C5'  | 2.47                     | 0.60              |
| 24:BA:1825:A:C6   | 24:BA:1826:G:O6   | 2.54                     | 0.60              |
| 24:BA:1829:A:C2   | 24:BA:1830:C:H1'  | 2.35                     | 0.60              |
| 24:BA:1861:G:H2'  | 24:BA:1862:G:H5'  | 1.82                     | 0.60              |
| 24:BA:1870:C:O2   | 24:BA:1870:C:H2'  | 2.01                     | 0.60              |
| 24:BA:1907:G:H2'  | 24:BA:1908:C:H6   | 1.65                     | 0.60              |
| 24:BA:1992:G:N7   | 24:BA:1997:G:C2   | 2.70                     | 0.60              |
| 24:BA:2445:G:H2'  | 24:BA:2446:G:N7   | 2.13                     | 0.60              |
| 24:BA:2459:A:N3   | 24:BA:2460:U:O2'  | 2.28                     | 0.60              |
| 24:BA:2715:C:H2'  | 24:BA:2716:U:H6   | 1.67                     | 0.60              |
| 24:BA:2866:U:H5'' | 24:BA:2867:G:OP1  | 2.01                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 25:BB:37:C:N4      | 25:BB:44:G:N1      | 2.50                     | 0.60              |
| 26:BC:61:THR:HG21  | 26:BC:160:ARG:NH2  | 2.16                     | 0.60              |
| 27:BD:75:ILE:O     | 27:BD:76:PRO:C     | 2.42                     | 0.60              |
| 27:BD:145:VAL:HB   | 27:BD:155:LEU:HD22 | 1.83                     | 0.60              |
| 27:BD:228:PRO:HD3  | 27:BD:235:GLY:HA3  | 1.83                     | 0.60              |
| 27:BD:260:ARG:HH11 | 27:BD:260:ARG:CB   | 2.14                     | 0.60              |
| 28:BE:14:ILE:HG22  | 28:BE:19:ARG:HA    | 1.82                     | 0.60              |
| 28:BE:98:PRO:HB3   | 28:BE:175:VAL:HG13 | 1.84                     | 0.60              |
| 29:BF:16:GLY:C     | 29:BF:17:ARG:HD3   | 2.27                     | 0.60              |
| 30:BG:36:LYS:NZ    | 30:BG:38:VAL:HG13  | 2.17                     | 0.60              |
| 30:BG:55:LYS:HE2   | 30:BG:151:ALA:CB   | 2.29                     | 0.60              |
| 30:BG:149:VAL:HG13 | 30:BG:150:ASP:H    | 1.66                     | 0.60              |
| 31:BH:45:VAL:CG2   | 31:BH:50:VAL:HG13  | 2.31                     | 0.60              |
| 31:BH:107:VAL:HG13 | 31:BH:152:ARG:HD2  | 1.83                     | 0.60              |
| 31:BH:125:VAL:O    | 31:BH:127:GLU:N    | 2.35                     | 0.60              |
| 31:BH:171:LEU:HA   | 31:BH:172:LYS:NZ   | 2.17                     | 0.60              |
| 31:BH:175:LYS:HG2  | 31:BH:176:ALA:N    | 2.15                     | 0.60              |
| 32:BK:73:GLU:HG3   | 32:BK:138:ILE:HD11 | 1.84                     | 0.60              |
| 34:BM:33:LEU:C     | 34:BM:35:ARG:H     | 2.09                     | 0.60              |
| 35:BN:24:VAL:HG11  | 35:BN:32:TYR:H     | 1.66                     | 0.60              |
| 37:BP:67:ARG:NE    | 37:BP:105:GLU:OE1  | 2.34                     | 0.60              |
| 39:BR:13:ARG:CD    | 39:BR:90:GLY:O     | 2.46                     | 0.60              |
| 41:BT:3:ARG:O      | 41:BT:4:ALA:HB2    | 2.02                     | 0.60              |
| 41:BT:52:ARG:C     | 41:BT:54:LYS:N     | 2.59                     | 0.60              |
| 41:BT:91:ASP:CG    | 42:BU:10:LYS:HD3   | 2.27                     | 0.60              |
| 42:BU:41:GLY:H     | 42:BU:51:VAL:HA    | 1.67                     | 0.60              |
| 43:BV:22:ASP:HB2   | 51:B4:25:LEU:HD21  | 1.83                     | 0.60              |
| 43:BV:33:ARG:O     | 43:BV:37:ARG:HG2   | 2.02                     | 0.60              |
| 43:BV:59:VAL:CG2   | 43:BV:66:GLU:HB2   | 2.30                     | 0.60              |
| 50:B3:6:HIS:HB2    | 50:B3:56:VAL:HA    | 1.84                     | 0.60              |
| 50:B3:64:GLY:HA2   | 50:B3:67:TYR:HD1   | 1.65                     | 0.60              |
| 1:AA:44:G:C6       | 1:AA:45:U:C2       | 2.90                     | 0.60              |
| 1:AA:95:G:C2'      | 1:AA:96:G:H5'      | 2.32                     | 0.60              |
| 1:AA:306:G:O5'     | 1:AA:306:G:H8      | 1.84                     | 0.60              |
| 1:AA:394:G:H2'     | 1:AA:395:C:C6      | 2.36                     | 0.60              |
| 1:AA:425:G:O2'     | 1:AA:426:G:H5'     | 2.00                     | 0.60              |
| 1:AA:677:U:H2'     | 1:AA:678:U:H5      | 1.59                     | 0.60              |
| 1:AA:753:A:H5'     | 1:AA:754:C:C5      | 2.37                     | 0.60              |
| 1:AA:796:C:H2'     | 1:AA:797:C:H6      | 1.66                     | 0.60              |
| 1:AA:887:G:H2'     | 1:AA:888:G:H8      | 1.67                     | 0.60              |
| 1:AA:896:C:C2      | 1:AA:897:C:C5      | 2.90                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1047:G:C5'    | 16:AQ:4:LYS:HD3    | 2.32                     | 0.60              |
| 1:AA:1484:C:C2'    | 1:AA:1485:U:H5'    | 2.31                     | 0.60              |
| 1:AA:1507:A:C2'    | 1:AA:1508:G:H5'    | 2.32                     | 0.60              |
| 2:A1:46:U:N3       | 3:AB:34:G:N1       | 2.49                     | 0.60              |
| 4:AE:113:HIS:HA    | 4:AE:116:GLU:CD    | 2.26                     | 0.60              |
| 4:AE:141:GLU:CD    | 4:AE:141:GLU:C     | 2.69                     | 0.60              |
| 5:AF:39:ILE:HG21   | 5:AF:57:ILE:HD13   | 1.84                     | 0.60              |
| 7:AH:74:GLY:O      | 7:AH:75:THR:HB     | 2.01                     | 0.60              |
| 8:AI:52:ILE:HG21   | 8:AI:87:ARG:NH2    | 2.16                     | 0.60              |
| 8:AI:95:GLU:H      | 8:AI:96:PRO:HD2    | 1.64                     | 0.60              |
| 12:AM:12:ASP:O     | 12:AM:16:LEU:HD23  | 2.01                     | 0.60              |
| 12:AM:62:HIS:O     | 16:AQ:59:ALA:HB3   | 2.01                     | 0.60              |
| 13:AN:15:ALA:O     | 13:AN:78:GLN:NE2   | 2.35                     | 0.60              |
| 14:AO:12:ARG:HB3   | 14:AO:12:ARG:CZ    | 2.30                     | 0.60              |
| 16:AQ:40:CYS:O     | 16:AQ:44:LEU:HB2   | 2.02                     | 0.60              |
| 17:AR:62:GLN:CD    | 17:AR:65:ARG:NH2   | 2.59                     | 0.60              |
| 18:AS:56:ALA:O     | 18:AS:60:LEU:CG    | 2.50                     | 0.60              |
| 19:AT:38:ARG:HG3   | 19:AT:39:SER:N     | 2.16                     | 0.60              |
| 19:AT:95:TYR:O     | 19:AT:97:SER:N     | 2.35                     | 0.60              |
| 21:AV:36:ARG:HH21  | 21:AV:51:VAL:HG12  | 1.65                     | 0.60              |
| 24:BA:270(U):C:H2' | 24:BA:270(V):G:H1' | 1.82                     | 0.60              |
| 24:BA:374:A:C2     | 24:BA:375:C:H1'    | 2.36                     | 0.60              |
| 24:BA:387:U:H3'    | 50:B3:29:PRO:HB3   | 1.84                     | 0.60              |
| 24:BA:501:A:C5     | 24:BA:502:A:N1     | 2.70                     | 0.60              |
| 24:BA:602:G:N2     | 24:BA:655:A:H3'    | 2.15                     | 0.60              |
| 24:BA:653:A:C5'    | 24:BA:654:A:H4'    | 2.32                     | 0.60              |
| 24:BA:756:C:C2'    | 24:BA:757:U:H5'    | 2.30                     | 0.60              |
| 24:BA:886:C:H5''   | 24:BA:887:A:OP1    | 2.01                     | 0.60              |
| 24:BA:1179:C:C2    | 24:BA:1180:C:C5    | 2.90                     | 0.60              |
| 24:BA:1243:G:C6    | 24:BA:1244:G:C5    | 2.89                     | 0.60              |
| 24:BA:1324:G:O2'   | 24:BA:1616:A:C6    | 2.54                     | 0.60              |
| 24:BA:1363:C:N3    | 24:BA:1369:G:C6    | 2.70                     | 0.60              |
| 24:BA:1475:G:N7    | 24:BA:1517:G:N2    | 2.48                     | 0.60              |
| 24:BA:1588:C:H2'   | 24:BA:1589:C:H6    | 1.65                     | 0.60              |
| 24:BA:1604:C:O2    | 24:BA:1605:C:C5    | 2.55                     | 0.60              |
| 24:BA:1613:G:P     | 53:B6:5:TRP:HD1    | 2.24                     | 0.60              |
| 24:BA:1617:C:O2    | 24:BA:1617:C:C2'   | 2.48                     | 0.60              |
| 24:BA:1792:G:O2'   | 24:BA:1830:C:OP1   | 2.18                     | 0.60              |
| 24:BA:1830:C:C2    | 24:BA:1831:G:C8    | 2.90                     | 0.60              |
| 24:BA:2043:C:O2'   | 24:BA:2044:C:O5'   | 2.20                     | 0.60              |
| 24:BA:2043:C:O2'   | 24:BA:2044:C:H5'   | 2.02                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2051:A:C5'  | 24:BA:2578:G:H5''  | 2.28                     | 0.60              |
| 24:BA:2052:G:C1'  | 28:BE:150:VAL:HG23 | 2.32                     | 0.60              |
| 24:BA:2135:A:C5'  | 24:BA:2136:C:H5    | 2.15                     | 0.60              |
| 24:BA:2251:G:N1   | 24:BA:2252:G:C2    | 2.70                     | 0.60              |
| 24:BA:2321:G:H2'  | 24:BA:2321:G:N3    | 2.16                     | 0.60              |
| 24:BA:2336:A:O2'  | 24:BA:2337:G:OP1   | 2.18                     | 0.60              |
| 24:BA:2393:A:H2'  | 24:BA:2394:C:H6    | 1.66                     | 0.60              |
| 24:BA:2408:U:O2   | 24:BA:2409:G:C8    | 2.54                     | 0.60              |
| 24:BA:2415:G:N2   | 24:BA:2416:C:C2    | 2.69                     | 0.60              |
| 24:BA:2533:A:C5'  | 24:BA:2665:A:H5'   | 2.31                     | 0.60              |
| 24:BA:2597:G:H5'  | 27:BD:242:ARG:NE   | 2.16                     | 0.60              |
| 24:BA:2653:U:H2'  | 24:BA:2654:A:N7    | 2.16                     | 0.60              |
| 25:BB:116:G:N3    | 25:BB:117:G:H1'    | 2.17                     | 0.60              |
| 26:BC:28:LEU:O    | 26:BC:32:LEU:HG    | 2.02                     | 0.60              |
| 27:BD:7:LYS:NZ    | 27:BD:91:ARG:NE    | 2.50                     | 0.60              |
| 27:BD:96:HIS:CD2  | 27:BD:102:LYS:HE2  | 2.36                     | 0.60              |
| 27:BD:132:PRO:HG2 | 27:BD:135:PHE:CD1  | 2.37                     | 0.60              |
| 27:BD:160:GLY:C   | 27:BD:196:VAL:HG21 | 2.26                     | 0.60              |
| 27:BD:242:ARG:O   | 27:BD:244:ARG:N    | 2.34                     | 0.60              |
| 29:BF:39:TRP:HE3  | 29:BF:99:TYR:HB3   | 1.66                     | 0.60              |
| 29:BF:132:VAL:C   | 29:BF:134:GLY:N    | 2.60                     | 0.60              |
| 30:BG:77:ILE:O    | 30:BG:83:ARG:CZ    | 2.49                     | 0.60              |
| 30:BG:77:ILE:HD12 | 30:BG:83:ARG:NH1   | 2.16                     | 0.60              |
| 30:BG:118:ARG:O   | 30:BG:180:PHE:CE1  | 2.54                     | 0.60              |
| 30:BG:119:GLY:HA3 | 30:BG:180:PHE:CE1  | 2.37                     | 0.60              |
| 30:BG:139:LEU:O   | 30:BG:139:LEU:HD22 | 2.02                     | 0.60              |
| 32:BK:91:SER:HB2  | 32:BK:119:PRO:HB2  | 1.83                     | 0.60              |
| 34:BM:54:VAL:C    | 34:BM:130:HIS:NE2  | 2.59                     | 0.60              |
| 35:BN:11:ALA:HB2  | 35:BN:17:ARG:CD    | 2.31                     | 0.60              |
| 35:BN:70:LYS:NZ   | 35:BN:103:ALA:HB3  | 2.16                     | 0.60              |
| 35:BN:122:LEU:C   | 40:BS:74:ARG:HH22  | 2.09                     | 0.60              |
| 36:BO:122:PRO:HD3 | 36:BO:137:LYS:CB   | 2.32                     | 0.60              |
| 37:BP:33:GLY:C    | 37:BP:34:LEU:HD23  | 2.26                     | 0.60              |
| 37:BP:137:TYR:C   | 37:BP:138:ASP:CG   | 2.70                     | 0.60              |
| 41:BT:113:ALA:O   | 41:BT:116:ALA:HB3  | 2.01                     | 0.60              |
| 42:BU:40:LEU:CD2  | 42:BU:51:VAL:O     | 2.44                     | 0.60              |
| 46:BY:50:GLN:C    | 46:BY:52:SER:H     | 2.10                     | 0.60              |
| 47:BZ:49:LYS:N    | 47:BZ:80:HIS:CE1   | 2.67                     | 0.60              |
| 49:B2:40:THR:O    | 49:B2:41:PRO:C     | 2.40                     | 0.60              |
| 50:B3:18:CYS:SG   | 50:B3:33:VAL:HG21  | 2.42                     | 0.60              |
| 50:B3:33:VAL:CG1  | 50:B3:35:VAL:HG23  | 2.31                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 52:B5:17:LYS:NZ   | 52:B5:50:ARG:CB    | 2.64                     | 0.60              |
| 54:B7:7:HIS:C     | 54:B7:11:LYS:HE3   | 2.26                     | 0.60              |
| 54:B7:25:MET:O    | 54:B7:27:THR:CG2   | 2.45                     | 0.60              |
| 1:AA:44:G:H2'     | 1:AA:45:U:C5'      | 2.32                     | 0.60              |
| 1:AA:191:G:C1'    | 22:AW:105:SER:HA   | 2.25                     | 0.60              |
| 1:AA:224:C:H2'    | 1:AA:225:C:H6      | 1.66                     | 0.60              |
| 1:AA:306:G:N3     | 1:AA:307:C:C6      | 2.69                     | 0.60              |
| 1:AA:376:G:OP1    | 18:AS:6:LEU:HD13   | 2.00                     | 0.60              |
| 1:AA:657:G:H2'    | 1:AA:658:G:C5'     | 2.30                     | 0.60              |
| 1:AA:766:A:C2     | 1:AA:767:A:H1'     | 2.37                     | 0.60              |
| 1:AA:815:A:C2     | 1:AA:1529:G:C2     | 2.89                     | 0.60              |
| 1:AA:818:G:H3'    | 1:AA:819:A:H5''    | 1.84                     | 0.60              |
| 1:AA:818:G:N3     | 1:AA:820:U:C5      | 2.69                     | 0.60              |
| 1:AA:923:A:C5'    | 7:AH:21:ALA:HB2    | 2.32                     | 0.60              |
| 1:AA:951:G:N2     | 1:AA:952:U:C2      | 2.70                     | 0.60              |
| 1:AA:1224:G:H2'   | 1:AA:1225:A:OP1    | 2.01                     | 0.60              |
| 1:AA:1431:C:H5''  | 40:BS:110:ILE:HD13 | 1.84                     | 0.60              |
| 1:AA:1466:C:H3'   | 1:AA:1467:G:C8     | 2.37                     | 0.60              |
| 1:AA:1468:A:C8    | 1:AA:1469:G:C8     | 2.90                     | 0.60              |
| 2:A1:37:U:H2'     | 2:A1:38:U:C2       | 2.37                     | 0.60              |
| 3:AD:3:C:H2'      | 3:AD:4:C:C6        | 2.36                     | 0.60              |
| 3:AD:37:A:H61     | 9:AJ:79:ARG:NH2    | 1.99                     | 0.60              |
| 3:AD:74:C:OP2     | 50:B3:22:ILE:HG12  | 2.02                     | 0.60              |
| 4:AE:97:TRP:HB3   | 4:AE:172:ILE:HD12  | 1.83                     | 0.60              |
| 4:AE:101:MET:C    | 4:AE:103:THR:N     | 2.59                     | 0.60              |
| 4:AE:102:LEU:HD22 | 4:AE:176:GLU:OE1   | 2.02                     | 0.60              |
| 4:AE:112:VAL:HG13 | 4:AE:149:LEU:HD21  | 1.84                     | 0.60              |
| 4:AE:124:SER:OG   | 4:AE:125:PRO:HD2   | 2.02                     | 0.60              |
| 4:AE:166:ASP:OD1  | 4:AE:205:ASP:OD2   | 2.20                     | 0.60              |
| 5:AF:12:LEU:O     | 5:AF:17:ASP:OD2    | 2.19                     | 0.60              |
| 5:AF:91:LEU:CD2   | 5:AF:92:ALA:N      | 2.64                     | 0.60              |
| 5:AF:142:MET:CB   | 5:AF:149:ALA:HB2   | 2.32                     | 0.60              |
| 5:AF:157:ILE:O    | 5:AF:157:ILE:HG22  | 2.00                     | 0.60              |
| 6:AG:139:ARG:HG2  | 6:AG:140:VAL:H     | 1.66                     | 0.60              |
| 7:AH:80:ILE:HD11  | 7:AH:91:LEU:HB3    | 1.83                     | 0.60              |
| 7:AH:118:ILE:C    | 7:AH:119:LEU:CD2   | 2.74                     | 0.60              |
| 8:AI:95:GLU:C     | 20:AU:32:ARG:HG3   | 2.26                     | 0.60              |
| 10:AK:38:ILE:CA   | 10:AK:41:ARG:HB2   | 2.32                     | 0.60              |
| 13:AN:54:ARG:O    | 13:AN:56:GLY:N     | 2.35                     | 0.60              |
| 13:AN:100:ALA:C   | 13:AN:102:GLY:N    | 2.59                     | 0.60              |
| 15:AP:97:PRO:HG2  | 15:AP:103:THR:CG2  | 2.09                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|---------------------|--------------------------|-------------------|
| 19:AT:28:PRO:C   | 19:AT:36:ILE:HD11   | 2.26                     | 0.60              |
| 21:AV:12:ASP:C   | 21:AV:16:LEU:HD22   | 2.27                     | 0.60              |
| 21:AV:37:ARG:O   | 21:AV:70:LYS:HE2    | 2.02                     | 0.60              |
| 24:BA:4:C:H2'    | 24:BA:5:A:H8        | 1.66                     | 0.60              |
| 24:BA:219:G:O6   | 24:BA:428:A:OP1     | 2.19                     | 0.60              |
| 24:BA:251:A:H3'  | 24:BA:251:A:P       | 2.41                     | 0.60              |
| 24:BA:283:A:C2'  | 24:BA:284:U:H5'     | 2.32                     | 0.60              |
| 24:BA:290:G:H2'  | 24:BA:291:C:O5'     | 2.01                     | 0.60              |
| 24:BA:293:U:H2'  | 24:BA:294:A:H8      | 1.65                     | 0.60              |
| 24:BA:371:A:H62  | 24:BA:424:G:H4'     | 1.66                     | 0.60              |
| 24:BA:403:U:H5'' | 24:BA:404:C:OP1     | 2.01                     | 0.60              |
| 24:BA:565:C:O2   | 24:BA:565:C:C2'     | 2.50                     | 0.60              |
| 24:BA:569:U:P    | 24:BA:945:A:N6      | 2.75                     | 0.60              |
| 24:BA:574:C:C1'  | 24:BA:2055:C:H5     | 2.14                     | 0.60              |
| 24:BA:590:A:H5'  | 29:BF:93:LYS:NZ     | 2.17                     | 0.60              |
| 24:BA:612:G:H4'  | 24:BA:616:A:N1      | 2.16                     | 0.60              |
| 24:BA:626:U:H2'  | 24:BA:626:U:O2      | 2.00                     | 0.60              |
| 24:BA:816:C:O2'  | 24:BA:817:C:H5'     | 2.02                     | 0.60              |
| 24:BA:822:U:OP2  | 24:BA:945:A:H5'     | 2.01                     | 0.60              |
| 24:BA:990:A:N6   | 24:BA:1186:G:H1'    | 2.16                     | 0.60              |
| 24:BA:1048:A:P   | 24:BA:1110:G:H22    | 2.25                     | 0.60              |
| 24:BA:1155:A:OP2 | 24:BA:1155:A:H3'    | 2.02                     | 0.60              |
| 24:BA:1241:A:O2' | 24:BA:1242:A:P      | 2.59                     | 0.60              |
| 24:BA:1248:G:O2' | 24:BA:1249:U:OP1    | 2.14                     | 0.60              |
| 24:BA:1341:U:O4  | 24:BA:1395:A:C2     | 2.54                     | 0.60              |
| 24:BA:1427:A:C8  | 24:BA:1427:A:OP1    | 2.55                     | 0.60              |
| 24:BA:1449:A:C2  | 24:BA:1449(A):G:C1' | 2.85                     | 0.60              |
| 24:BA:1747:G:O2' | 24:BA:1748:G:H5'    | 2.02                     | 0.60              |
| 24:BA:1769:G:C6  | 24:BA:1984:G:C6     | 2.89                     | 0.60              |
| 24:BA:1783:A:OP2 | 24:BA:1783:A:H8     | 1.84                     | 0.60              |
| 24:BA:1912:A:N1  | 24:BA:1919:A:H1'    | 2.17                     | 0.60              |
| 24:BA:1996:C:C5' | 24:BA:1996:C:C6     | 2.76                     | 0.60              |
| 24:BA:2020:A:N6  | 24:BA:2022:U:C2     | 2.70                     | 0.60              |
| 24:BA:2059:A:H2  | 24:BA:2503:A:H62    | 1.42                     | 0.60              |
| 24:BA:2403:C:O2' | 24:BA:2404:C:H5'    | 2.02                     | 0.60              |
| 24:BA:2537:U:N3  | 24:BA:2538:C:N4     | 2.50                     | 0.60              |
| 24:BA:2597:G:O4' | 27:BD:242:ARG:CZ    | 2.49                     | 0.60              |
| 24:BA:2630:G:C5  | 24:BA:2894:G:O6     | 2.54                     | 0.60              |
| 24:BA:2688:U:O2  | 24:BA:2688:U:C2'    | 2.46                     | 0.60              |
| 24:BA:2743:C:C2  | 24:BA:2762:G:C2     | 2.90                     | 0.60              |
| 24:BA:2797:U:O3' | 24:BA:2798:C:H4'    | 2.02                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 25:BB:65:C:H2'    | 25:BB:66:A:H5'     | 1.84                     | 0.60              |
| 25:BB:71:C:C3'    | 25:BB:72:G:H5'     | 2.31                     | 0.60              |
| 27:BD:225:ALA:O   | 27:BD:226:MET:C    | 2.44                     | 0.60              |
| 28:BE:197:ILE:N   | 28:BE:197:ILE:CD1  | 2.60                     | 0.60              |
| 29:BF:95:ARG:CZ   | 29:BF:96:ASP:O     | 2.49                     | 0.60              |
| 30:BG:44:GLY:N    | 30:BG:88:ILE:HG21  | 2.17                     | 0.60              |
| 31:BH:17:VAL:CG2  | 31:BH:45:VAL:HG21  | 2.32                     | 0.60              |
| 31:BH:162:ILE:C   | 31:BH:163:TYR:CD1  | 2.80                     | 0.60              |
| 32:BK:98:ALA:O    | 32:BK:102:SER:HB2  | 2.02                     | 0.60              |
| 33:BL:14:ALA:CB   | 33:BL:48:MET:O     | 2.49                     | 0.60              |
| 33:BL:91:PRO:HG3  | 33:BL:133:SER:O    | 2.02                     | 0.60              |
| 34:BM:24:GLY:O    | 34:BM:27:ALA:HB3   | 2.02                     | 0.60              |
| 34:BM:124:ALA:C   | 34:BM:125:GLY:O    | 2.38                     | 0.60              |
| 35:BN:3:GLN:HE22  | 35:BN:33:ALA:HB3   | 0.68                     | 0.60              |
| 35:BN:18:LYS:CB   | 35:BN:45:GLU:HG3   | 2.24                     | 0.60              |
| 35:BN:23:ARG:H    | 35:BN:23:ARG:HD3   | 1.67                     | 0.60              |
| 35:BN:122:LEU:OXT | 40:BS:74:ARG:NH2   | 2.35                     | 0.60              |
| 37:BP:6:ARG:HE    | 37:BP:8:LYS:CG     | 2.14                     | 0.60              |
| 37:BP:102:VAL:O   | 37:BP:102:VAL:CG1  | 2.50                     | 0.60              |
| 38:BQ:97:VAL:HG13 | 38:BQ:114:VAL:CG2  | 2.30                     | 0.60              |
| 39:BR:49:VAL:HG21 | 39:BR:80:LEU:HG    | 1.82                     | 0.60              |
| 40:BS:24:PRO:HG2  | 40:BS:25:GLY:N     | 2.12                     | 0.60              |
| 40:BS:24:PRO:CG   | 40:BS:25:GLY:H     | 2.09                     | 0.60              |
| 40:BS:28:VAL:HG13 | 40:BS:92:GLY:C     | 2.26                     | 0.60              |
| 40:BS:30:VAL:HG22 | 40:BS:32:TYR:HE2   | 1.58                     | 0.60              |
| 40:BS:92:GLY:HA2  | 40:BS:93:ARG:CZ    | 2.31                     | 0.60              |
| 41:BT:98:LEU:CB   | 41:BT:105:VAL:HG11 | 2.31                     | 0.60              |
| 42:BU:15:GLU:HB3  | 42:BU:16:PRO:CD    | 2.32                     | 0.60              |
| 42:BU:89:GLN:HG2  | 42:BU:91:TYR:CD1   | 2.37                     | 0.60              |
| 44:BW:51:VAL:HG13 | 44:BW:81:VAL:HG21  | 1.83                     | 0.60              |
| 49:B2:16:PRO:HG2  | 49:B2:19:GLN:CB    | 2.31                     | 0.60              |
| 50:B3:52:THR:CG2  | 50:B3:53:GLU:N     | 2.53                     | 0.60              |
| 53:B6:17:GLY:O    | 53:B6:21:ARG:NH2   | 2.34                     | 0.60              |
| 1:AA:12:U:C2      | 1:AA:13:U:O4       | 2.55                     | 0.60              |
| 1:AA:28:G:O2'     | 1:AA:296:U:OP1     | 2.15                     | 0.60              |
| 1:AA:55:A:C2      | 1:AA:56:U:H1'      | 2.37                     | 0.60              |
| 1:AA:123:C:OP1    | 1:AA:311:C:O2'     | 2.20                     | 0.60              |
| 1:AA:438:G:N2     | 1:AA:495:A:C8      | 2.68                     | 0.60              |
| 1:AA:483:C:N4     | 1:AA:484:G:C2      | 2.70                     | 0.60              |
| 1:AA:557:G:H2'    | 1:AA:558:G:C1'     | 2.32                     | 0.60              |
| 1:AA:620:C:N3     | 6:AG:135:LEU:HD22  | 2.17                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:632:A:C4     | 1:AA:633:G:C8     | 2.89                     | 0.60              |
| 1:AA:775:G:H2'    | 1:AA:776:G:N7     | 2.15                     | 0.60              |
| 1:AA:892:A:O2'    | 1:AA:893:C:H5'    | 2.02                     | 0.60              |
| 1:AA:955:U:C2     | 1:AA:956:U:H5     | 2.20                     | 0.60              |
| 1:AA:992:U:H5'    | 1:AA:993:G:C8     | 2.37                     | 0.60              |
| 1:AA:1049:U:C4    | 16:AQ:3:ARG:HB2   | 2.37                     | 0.60              |
| 1:AA:1069:C:N4    | 1:AA:1094:G:O6    | 2.35                     | 0.60              |
| 1:AA:1116:C:H2'   | 1:AA:1117:G:C8    | 2.37                     | 0.60              |
| 1:AA:1300:G:C2    | 1:AA:1335:C:C2    | 2.90                     | 0.60              |
| 4:AE:97:TRP:CE3   | 4:AE:172:ILE:HB   | 2.36                     | 0.60              |
| 5:AF:91:LEU:CD1   | 5:AF:99:VAL:H     | 2.14                     | 0.60              |
| 6:AG:79:PHE:O     | 6:AG:80:GLU:C     | 2.45                     | 0.60              |
| 7:AH:70:PRO:HG2   | 7:AH:143:ARG:HB3  | 1.84                     | 0.60              |
| 7:AH:78:HIS:ND1   | 10:AK:104:ARG:HD3 | 2.17                     | 0.60              |
| 8:AI:77:ARG:O     | 8:AI:81:ILE:HG13  | 2.02                     | 0.60              |
| 9:AJ:107:ALA:HB3  | 9:AJ:123:GLU:OE1  | 2.02                     | 0.60              |
| 10:AK:70:GLN:CB   | 10:AK:73:ASP:O    | 2.50                     | 0.60              |
| 10:AK:84:ARG:HH11 | 10:AK:84:ARG:CB   | 1.99                     | 0.60              |
| 13:AN:23:ALA:HB1  | 13:AN:88:GLY:HA3  | 1.82                     | 0.60              |
| 13:AN:54:ARG:C    | 13:AN:56:GLY:N    | 2.60                     | 0.60              |
| 13:AN:87:THR:HG22 | 13:AN:91:ARG:NH2  | 2.16                     | 0.60              |
| 18:AS:28:ARG:NH1  | 18:AS:29:ASP:OD2  | 2.35                     | 0.60              |
| 22:AW:49:ALA:CB   | 22:AW:99:LEU:HG   | 2.32                     | 0.60              |
| 24:BA:76:C:H4'    | 48:B1:54:ARG:HG2  | 1.83                     | 0.60              |
| 24:BA:198:C:O2'   | 24:BA:199:A:C8    | 2.44                     | 0.60              |
| 24:BA:223:A:H4'   | 24:BA:223:A:OP2   | 2.02                     | 0.60              |
| 24:BA:316:C:OP2   | 24:BA:316:C:H6    | 1.84                     | 0.60              |
| 24:BA:404:C:H5'   | 24:BA:406:G:O4'   | 2.01                     | 0.60              |
| 24:BA:414:C:H1'   | 24:BA:1864:U:C1'  | 2.32                     | 0.60              |
| 24:BA:452:G:N7    | 24:BA:453:C:C5    | 2.70                     | 0.60              |
| 24:BA:511:U:OP2   | 24:BA:512:G:N7    | 2.35                     | 0.60              |
| 24:BA:513:A:C2    | 24:BA:514:A:C8    | 2.90                     | 0.60              |
| 24:BA:625:G:O6    | 36:BO:100:LEU:HB3 | 2.02                     | 0.60              |
| 24:BA:729:G:N7    | 24:BA:730:C:C6    | 2.70                     | 0.60              |
| 24:BA:831:G:N1    | 24:BA:832:G:C4    | 2.70                     | 0.60              |
| 24:BA:1114:G:C2   | 24:BA:1115:G:C1'  | 2.84                     | 0.60              |
| 24:BA:1246:A:N6   | 24:BA:1247:A:C6   | 2.70                     | 0.60              |
| 24:BA:1291:C:O2'  | 24:BA:1292:U:H5'  | 2.02                     | 0.60              |
| 24:BA:1334:G:C5'  | 44:BW:65:ARG:HH12 | 2.14                     | 0.60              |
| 24:BA:1471:A:C8   | 24:BA:1521:G:N2   | 2.70                     | 0.60              |
| 24:BA:1525:G:N2   | 24:BA:1526:G:H1'  | 2.17                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1525:G:O2'  | 24:BA:1526:G:H5'   | 2.02                     | 0.60              |
| 24:BA:1654:A:OP1  | 38:BQ:3:HIS:CE1    | 2.55                     | 0.60              |
| 24:BA:1655:A:C2   | 24:BA:1656:C:H1'   | 2.37                     | 0.60              |
| 24:BA:1830:C:N3   | 24:BA:1831:G:N7    | 2.50                     | 0.60              |
| 24:BA:1944:U:H2'  | 24:BA:1945:G:OP1   | 2.02                     | 0.60              |
| 24:BA:2173:A:H2'  | 24:BA:2174:C:O4'   | 2.02                     | 0.60              |
| 24:BA:2194:G:H2'  | 24:BA:2195:C:C5    | 2.36                     | 0.60              |
| 24:BA:2230:G:H2'  | 24:BA:2231:C:H6    | 1.65                     | 0.60              |
| 24:BA:2311:A:H2   | 30:BG:45:GLU:HG2   | 1.66                     | 0.60              |
| 24:BA:2403:C:N4   | 24:BA:2415:G:C6    | 2.69                     | 0.60              |
| 24:BA:2446:G:O2'  | 24:BA:2448:A:C5'   | 2.50                     | 0.60              |
| 24:BA:2637:U:OP2  | 24:BA:2637:U:O4'   | 2.20                     | 0.60              |
| 24:BA:2691:C:O2'  | 24:BA:2692:C:H5'   | 2.02                     | 0.60              |
| 24:BA:2714:G:O6   | 24:BA:2715:C:N4    | 2.35                     | 0.60              |
| 24:BA:2821:A:H2'  | 24:BA:2822:G:O4'   | 2.01                     | 0.60              |
| 24:BA:2824:C:N4   | 24:BA:2825:C:O2    | 2.35                     | 0.60              |
| 24:BA:2865:U:O4   | 24:BA:2866:U:H5    | 1.85                     | 0.60              |
| 24:BA:2876:G:H2'  | 24:BA:2877:G:C8    | 2.37                     | 0.60              |
| 27:BD:7:LYS:HZ3   | 27:BD:91:ARG:NE    | 2.00                     | 0.60              |
| 27:BD:84:TYR:CB   | 27:BD:91:ARG:HG3   | 2.32                     | 0.60              |
| 28:BE:4:ILE:O     | 28:BE:27:LEU:HB2   | 2.02                     | 0.60              |
| 30:BG:12:TYR:CD1  | 30:BG:12:TYR:C     | 2.80                     | 0.60              |
| 30:BG:47:LYS:HB3  | 30:BG:72:ARG:O     | 2.02                     | 0.60              |
| 30:BG:125:PHE:CZ  | 30:BG:130:ASN:HB2  | 2.37                     | 0.60              |
| 32:BK:25:TYR:H    | 32:BK:25:TYR:HD2   | 1.47                     | 0.60              |
| 34:BM:133:GLN:N   | 34:BM:133:GLN:CD   | 2.60                     | 0.60              |
| 36:BO:130:PHE:HD2 | 36:BO:130:PHE:N    | 2.00                     | 0.60              |
| 37:BP:38:GLU:N    | 37:BP:38:GLU:OE2   | 2.35                     | 0.60              |
| 40:BS:109:GLU:CB  | 40:BS:114:LEU:HD21 | 2.32                     | 0.60              |
| 41:BT:37:GLU:O    | 41:BT:38:THR:C     | 2.44                     | 0.60              |
| 41:BT:53:ARG:NH1  | 41:BT:53:ARG:CB    | 2.62                     | 0.60              |
| 41:BT:111:GLU:O   | 41:BT:114:LYS:HG2  | 2.01                     | 0.60              |
| 42:BU:4:ILE:CG1   | 42:BU:13:ARG:HG2   | 2.32                     | 0.60              |
| 42:BU:11:GLN:CD   | 42:BU:22:VAL:HB    | 2.27                     | 0.60              |
| 44:BW:7:VAL:CG2   | 48:B1:31:ARG:NH2   | 2.65                     | 0.60              |
| 45:BX:45:VAL:CA   | 45:BX:57:GLN:HG2   | 2.32                     | 0.60              |
| 46:BY:18:LEU:HD22 | 46:BY:23:LYS:HD3   | 1.84                     | 0.60              |
| 46:BY:82:ARG:HG3  | 46:BY:83:PRO:N     | 2.17                     | 0.60              |
| 46:BY:151:HIS:CG  | 46:BY:168:GLU:HG2  | 2.37                     | 0.60              |
| 46:BY:161:VAL:CG1 | 46:BY:162:GLU:H    | 2.15                     | 0.60              |
| 50:B3:26:SER:O    | 50:B3:27:THR:HG23  | 2.02                     | 0.60              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 51:B4:9:LYS:O     | 51:B4:10:LYS:HG2   | 2.02                     | 0.60              |
| 53:B6:14:LYS:O    | 53:B6:15:THR:C     | 2.45                     | 0.60              |
| 55:B8:9:ARG:HE    | 55:B8:16:VAL:HB    | 1.66                     | 0.60              |
| 1:AA:121:C:H5'    | 1:AA:122:G:OP1     | 2.02                     | 0.59              |
| 1:AA:130:A:OP2    | 19:AT:63:ARG:NH2   | 2.35                     | 0.59              |
| 1:AA:302:G:O2'    | 1:AA:556:C:H5''    | 2.02                     | 0.59              |
| 1:AA:564:C:C5     | 19:AT:31:LEU:HD11  | 2.37                     | 0.59              |
| 1:AA:678:U:H2'    | 1:AA:679:C:C5      | 2.35                     | 0.59              |
| 1:AA:678:U:C2     | 1:AA:679:C:C5      | 2.90                     | 0.59              |
| 1:AA:719:C:H2'    | 1:AA:720:C:O4'     | 2.02                     | 0.59              |
| 1:AA:748:C:O2'    | 1:AA:749:C:C6      | 2.54                     | 0.59              |
| 1:AA:1308:U:P     | 15:AP:99:ARG:HG3   | 2.42                     | 0.59              |
| 1:AA:1349:A:OP1   | 11:AL:120:ARG:HB2  | 2.02                     | 0.59              |
| 1:AA:1419:G:HO2'  | 1:AA:1420:C:H6     | 1.47                     | 0.59              |
| 3:AB:20:U:H3'     | 3:AB:21:A:C5'      | 2.32                     | 0.59              |
| 4:AE:17:PHE:C     | 4:AE:42:ILE:HG22   | 2.27                     | 0.59              |
| 4:AE:75:LYS:O     | 4:AE:77:ALA:N      | 2.34                     | 0.59              |
| 4:AE:131:PRO:O    | 4:AE:134:GLU:N     | 2.35                     | 0.59              |
| 5:AF:124:ILE:HD11 | 5:AF:130:VAL:HG13  | 1.83                     | 0.59              |
| 5:AF:177:THR:O    | 5:AF:178:LEU:C     | 2.45                     | 0.59              |
| 6:AG:32:ALA:HB3   | 6:AG:33:MET:HE3    | 1.83                     | 0.59              |
| 6:AG:80:GLU:O     | 6:AG:83:SER:N      | 2.34                     | 0.59              |
| 6:AG:114:ARG:HG3  | 6:AG:114:ARG:HH11  | 1.66                     | 0.59              |
| 6:AG:135:LEU:C    | 6:AG:137:SER:N     | 2.55                     | 0.59              |
| 6:AG:172:PRO:HG3  | 6:AG:193:ASP:HB3   | 1.83                     | 0.59              |
| 8:AI:7:ASN:C      | 8:AI:8:ILE:CG1     | 2.74                     | 0.59              |
| 9:AJ:72:ARG:HG2   | 9:AJ:142:GLU:OE1   | 2.02                     | 0.59              |
| 10:AK:10:LEU:CD1  | 10:AK:85:ARG:HB2   | 2.32                     | 0.59              |
| 10:AK:104:ARG:CB  | 10:AK:107:LEU:HG   | 2.32                     | 0.59              |
| 12:AM:26:ALA:C    | 12:AM:28:ARG:H     | 2.09                     | 0.59              |
| 13:AN:87:THR:CG2  | 13:AN:91:ARG:HH22  | 2.14                     | 0.59              |
| 14:AO:100:ILE:O   | 14:AO:101:VAL:HG13 | 2.01                     | 0.59              |
| 15:AP:87:TYR:HB3  | 21:AV:73:GLU:HB2   | 1.84                     | 0.59              |
| 17:AR:11:VAL:O    | 17:AR:12:ILE:C     | 2.45                     | 0.59              |
| 19:AT:31:LEU:C    | 19:AT:32:TYR:CD2   | 2.80                     | 0.59              |
| 20:AU:58:LEU:C    | 20:AU:62:GLU:HB2   | 2.27                     | 0.59              |
| 21:AV:30:LEU:HD11 | 21:AV:50:ALA:HB2   | 1.84                     | 0.59              |
| 22:AW:76:ALA:O    | 22:AW:79:ARG:HG2   | 2.02                     | 0.59              |
| 24:BA:70:G:OP1    | 24:BA:112:U:O4     | 2.20                     | 0.59              |
| 24:BA:143:C:H2'   | 24:BA:144:C:C6     | 2.37                     | 0.59              |
| 24:BA:383:U:C2    | 24:BA:385:C:N4     | 2.70                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:424:G:H21    | 24:BA:425:G:H1'    | 1.67                     | 0.59              |
| 24:BA:444:C:O3'    | 41:BT:2:PRO:HG2    | 2.02                     | 0.59              |
| 24:BA:586:A:OP1    | 29:BF:89:VAL:CG2   | 2.49                     | 0.59              |
| 24:BA:612:G:H21    | 24:BA:617:G:H1     | 1.50                     | 0.59              |
| 24:BA:637:A:N3     | 24:BA:651:G:H4'    | 2.17                     | 0.59              |
| 24:BA:704:G:H22    | 24:BA:726:G:C2'    | 2.14                     | 0.59              |
| 24:BA:709:U:H2'    | 24:BA:710:G:H8     | 1.65                     | 0.59              |
| 24:BA:772:C:H4'    | 27:BD:48:ARG:HD3   | 1.83                     | 0.59              |
| 24:BA:819:A:H62    | 24:BA:1188:U:H3    | 1.49                     | 0.59              |
| 24:BA:822:U:C2     | 24:BA:823:G:C8     | 2.89                     | 0.59              |
| 24:BA:909:A:H2'    | 24:BA:912:C:C5     | 2.37                     | 0.59              |
| 24:BA:933:A:C2     | 24:BA:934:G:C8     | 2.90                     | 0.59              |
| 24:BA:980:A:N6     | 24:BA:1135:C:H5''  | 2.17                     | 0.59              |
| 24:BA:1154:G:O2'   | 24:BA:1155:A:H5'   | 2.02                     | 0.59              |
| 24:BA:1223:C:C6    | 24:BA:1227:A:N1    | 2.70                     | 0.59              |
| 24:BA:1258:C:O2'   | 24:BA:1259:G:H5'   | 2.01                     | 0.59              |
| 24:BA:1264:G:N7    | 24:BA:1265:A:N9    | 2.50                     | 0.59              |
| 24:BA:1270:C:O5'   | 24:BA:1270:C:H6    | 1.84                     | 0.59              |
| 24:BA:1295:C:H2'   | 24:BA:1296:G:H8    | 1.67                     | 0.59              |
| 24:BA:1313:U:P     | 44:BW:63:LYS:HD2   | 2.41                     | 0.59              |
| 24:BA:1464:C:C5'   | 24:BA:1528:A:O2'   | 2.50                     | 0.59              |
| 24:BA:1618:A:OP1   | 24:BA:1618:A:C8    | 2.54                     | 0.59              |
| 24:BA:1630:G:C5    | 24:BA:1630(A):C:C5 | 2.90                     | 0.59              |
| 24:BA:1631:A:N1    | 24:BA:1632:A:C2    | 2.70                     | 0.59              |
| 24:BA:1703:G:N2    | 24:BA:1704:G:N3    | 2.50                     | 0.59              |
| 24:BA:1806:C:N3    | 24:BA:1807:G:C8    | 2.70                     | 0.59              |
| 24:BA:1813:G:O2'   | 27:BD:46:GLN:CG    | 2.49                     | 0.59              |
| 24:BA:1956:U:C2'   | 24:BA:1957:C:H6    | 2.09                     | 0.59              |
| 24:BA:1992:G:C4'   | 24:BA:1993:U:C4    | 2.85                     | 0.59              |
| 24:BA:2091:U:O4    | 24:BA:2092:U:C4    | 2.55                     | 0.59              |
| 24:BA:2287:A:O2'   | 24:BA:2288:A:O5'   | 2.16                     | 0.59              |
| 24:BA:2373:G:H8    | 24:BA:2373:G:OP2   | 1.84                     | 0.59              |
| 24:BA:2436:G:C6    | 24:BA:2437:U:N3    | 2.70                     | 0.59              |
| 24:BA:2455:G:C6    | 24:BA:2456:C:N4    | 2.70                     | 0.59              |
| 24:BA:2543:G:C6    | 24:BA:2544:G:C6    | 2.90                     | 0.59              |
| 24:BA:2696:U:H2'   | 24:BA:2697:G:O5'   | 2.02                     | 0.59              |
| 25:BB:73:A:C8      | 25:BB:104:A:C6     | 2.90                     | 0.59              |
| 25:BB:74:U:O2      | 46:BY:34:ASN:ND2   | 2.35                     | 0.59              |
| 27:BD:157:ARG:O    | 27:BD:158:ALA:C    | 2.45                     | 0.59              |
| 27:BD:174:ILE:HD12 | 27:BD:184:LYS:HE3  | 1.84                     | 0.59              |
| 28:BE:58:ARG:HH11  | 28:BE:75:VAL:HG13  | 1.66                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 28:BE:81:ILE:CG2  | 28:BE:82:ARG:N    | 2.64                     | 0.59              |
| 28:BE:115:GLY:C   | 28:BE:117:MET:N   | 2.54                     | 0.59              |
| 31:BH:153:LYS:H   | 31:BH:154:PRO:CD  | 2.15                     | 0.59              |
| 36:BO:113:LYS:CA  | 36:BO:129:ALA:CB  | 2.80                     | 0.59              |
| 37:BP:12:GLN:NE2  | 37:BP:13:GLN:CG   | 2.62                     | 0.59              |
| 37:BP:37:LEU:C    | 37:BP:39:PRO:HD3  | 2.27                     | 0.59              |
| 40:BS:95:ARG:HB3  | 40:BS:96:ARG:HD2  | 1.84                     | 0.59              |
| 41:BT:14:HIS:CD2  | 41:BT:36:ARG:HH12 | 2.20                     | 0.59              |
| 41:BT:58:ARG:HG3  | 41:BT:58:ARG:HH11 | 1.65                     | 0.59              |
| 42:BU:68:LYS:HZ3  | 42:BU:95:LEU:HD13 | 1.66                     | 0.59              |
| 43:BV:14:PRO:N    | 43:BV:78:GLU:OE1  | 2.35                     | 0.59              |
| 44:BW:21:PHE:HE2  | 44:BW:27:THR:N    | 1.96                     | 0.59              |
| 45:BX:6:HIS:CG    | 45:BX:33:LYS:HZ3  | 2.20                     | 0.59              |
| 45:BX:12:THR:CG2  | 45:BX:13:VAL:H    | 2.05                     | 0.59              |
| 45:BX:21:LYS:HB2  | 45:BX:23:ARG:NH1  | 2.17                     | 0.59              |
| 46:BY:98:MET:O    | 46:BY:125:LEU:O   | 2.19                     | 0.59              |
| 52:B5:19:ARG:CB   | 52:B5:43:CYS:SG   | 2.90                     | 0.59              |
| 1:AA:129(A):G:N2  | 1:AA:191(A):G:N7  | 2.50                     | 0.59              |
| 1:AA:190:G:O2'    | 1:AA:191(A):G:P   | 2.60                     | 0.59              |
| 1:AA:285:G:O2'    | 1:AA:286:G:H5'    | 2.03                     | 0.59              |
| 1:AA:296:U:O2     | 1:AA:302:G:C2     | 2.55                     | 0.59              |
| 1:AA:425:G:C2'    | 1:AA:426:G:H5'    | 2.32                     | 0.59              |
| 1:AA:570:G:O2'    | 1:AA:819:A:H8     | 1.85                     | 0.59              |
| 1:AA:719:C:O2     | 20:AU:50:ILE:HG13 | 2.02                     | 0.59              |
| 1:AA:961:U:O2'    | 1:AA:962:C:C5'    | 2.48                     | 0.59              |
| 1:AA:1025:U:H2'   | 1:AA:1026:G:N7    | 2.17                     | 0.59              |
| 1:AA:1209:C:C2'   | 1:AA:1210:C:H5'   | 2.32                     | 0.59              |
| 1:AA:1343:G:H2'   | 1:AA:1344:C:C6    | 2.37                     | 0.59              |
| 1:AA:1358:U:H5'   | 16:AQ:34:TYR:HA   | 1.83                     | 0.59              |
| 1:AA:1451:A:H5''  | 1:AA:1452:C:H5    | 1.67                     | 0.59              |
| 1:AA:1496:C:H2'   | 1:AA:1497:G:O4'   | 2.02                     | 0.59              |
| 4:AE:115:LEU:HD12 | 4:AE:115:LEU:O    | 2.02                     | 0.59              |
| 5:AF:47:LEU:HD11  | 5:AF:83:ARG:HH21  | 1.67                     | 0.59              |
| 5:AF:110:ASN:CB   | 5:AF:144:SER:OG   | 2.50                     | 0.59              |
| 8:AI:62:TRP:CB    | 20:AU:35:ARG:HH12 | 2.15                     | 0.59              |
| 9:AJ:31:MET:CG    | 9:AJ:32:ARG:H     | 2.15                     | 0.59              |
| 10:AK:6:ILE:O     | 10:AK:7:ALA:C     | 2.42                     | 0.59              |
| 10:AK:9:MET:O     | 10:AK:13:ILE:CG1  | 2.50                     | 0.59              |
| 12:AM:65:LEU:HD13 | 16:AQ:36:PHE:CZ   | 2.37                     | 0.59              |
| 13:AN:20:TYR:O    | 13:AN:30:VAL:HA   | 2.03                     | 0.59              |
| 15:AP:52:GLU:HA   | 15:AP:55:ARG:HD3  | 1.82                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 15:AP:102:ARG:O   | 15:AP:104:ARG:N     | 2.31                     | 0.59              |
| 17:AR:71:GLN:O    | 17:AR:75:PRO:HD3    | 2.01                     | 0.59              |
| 19:AT:104:LYS:CD  | 19:AT:105:ALA:H     | 2.15                     | 0.59              |
| 22:AW:28:ALA:O    | 22:AW:31:SER:OG     | 2.13                     | 0.59              |
| 22:AW:57:ARG:C    | 22:AW:59:ALA:N      | 2.56                     | 0.59              |
| 22:AW:78:ALA:O    | 22:AW:79:ARG:C      | 2.45                     | 0.59              |
| 23:AX:14:TRP:CZ3  | 23:AX:15:ARG:NE     | 2.70                     | 0.59              |
| 24:BA:28:A:H1'    | 24:BA:513:A:C6      | 2.36                     | 0.59              |
| 24:BA:187:G:OP1   | 50:B3:13:ARG:NH2    | 2.35                     | 0.59              |
| 24:BA:241:A:O4'   | 24:BA:241:A:OP1     | 2.20                     | 0.59              |
| 24:BA:450:G:H8    | 24:BA:450:G:O5'     | 1.85                     | 0.59              |
| 24:BA:680:G:O2'   | 24:BA:681:G:H5'     | 2.02                     | 0.59              |
| 24:BA:783:A:O2'   | 24:BA:784:A:P       | 2.60                     | 0.59              |
| 24:BA:919:G:H2'   | 24:BA:920:G:C8      | 2.29                     | 0.59              |
| 24:BA:936:C:H2'   | 24:BA:937:U:C6      | 2.37                     | 0.59              |
| 24:BA:961:C:O2'   | 24:BA:962:G:P       | 2.59                     | 0.59              |
| 24:BA:1069:A:H4'  | 24:BA:1070:A:H3'    | 1.83                     | 0.59              |
| 24:BA:1239:G:H2'  | 24:BA:1240:U:O4'    | 2.01                     | 0.59              |
| 24:BA:1343:G:H21  | 24:BA:1405:U:H1'    | 1.65                     | 0.59              |
| 24:BA:1389:G:H5'  | 24:BA:1525:G:C5'    | 2.31                     | 0.59              |
| 24:BA:1389:G:H5'  | 24:BA:1525:G:H5''   | 1.82                     | 0.59              |
| 24:BA:1472:A:N7   | 24:BA:1474:C:C4     | 2.70                     | 0.59              |
| 24:BA:1488:G:O6   | 24:BA:1489:U:C2     | 2.55                     | 0.59              |
| 24:BA:1523:U:H2'  | 24:BA:1524:G:O4'    | 2.01                     | 0.59              |
| 24:BA:1528:A:N7   | 24:BA:1529:A:N1     | 2.50                     | 0.59              |
| 24:BA:1709:U:H2'  | 24:BA:1710:C:C6     | 2.37                     | 0.59              |
| 24:BA:1784:A:H1'  | 24:BA:1785:A:N7     | 2.16                     | 0.59              |
| 24:BA:1857:G:C8   | 24:BA:1858:G:N7     | 2.69                     | 0.59              |
| 24:BA:1999:C:H5'' | 24:BA:2723:C:O2'    | 2.02                     | 0.59              |
| 24:BA:2058:A:C2   | 24:BA:2059:A:N7     | 2.70                     | 0.59              |
| 24:BA:2187:G:O2'  | 24:BA:2188:C:H5'    | 2.02                     | 0.59              |
| 24:BA:2244:U:O2'  | 24:BA:2434:A:N7     | 2.26                     | 0.59              |
| 24:BA:2283:C:C4   | 24:BA:2389:G:N2     | 2.70                     | 0.59              |
| 24:BA:2484:G:O2'  | 37:BP:46:GLN:HG3    | 2.03                     | 0.59              |
| 24:BA:2495:G:H5'' | 37:BP:82:ARG:HA     | 1.84                     | 0.59              |
| 24:BA:2541:A:H2   | 24:BA:2765:A:N6     | 2.00                     | 0.59              |
| 24:BA:2712:U:C2'  | 24:BA:2712(A):A:C5' | 2.79                     | 0.59              |
| 24:BA:2773:C:H2'  | 24:BA:2774:C:H6     | 1.67                     | 0.59              |
| 25:BB:12:C:C4'    | 47:BZ:74:ARG:HG2    | 2.31                     | 0.59              |
| 25:BB:99:A:C4     | 25:BB:100:G:C8      | 2.91                     | 0.59              |
| 26:BC:58:VAL:HG11 | 26:BC:199:HIS:HB3   | 1.83                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 27:BD:21:PHE:HB3  | 27:BD:205:VAL:HG21 | 1.84                     | 0.59              |
| 27:BD:29:PRO:HB2  | 27:BD:31:LYS:CD    | 2.33                     | 0.59              |
| 27:BD:226:MET:HA  | 27:BD:226:MET:HE2  | 1.84                     | 0.59              |
| 27:BD:260:ARG:HG3 | 27:BD:260:ARG:NH1  | 2.17                     | 0.59              |
| 28:BE:103:ASP:N   | 28:BE:200:GLU:OE1  | 2.34                     | 0.59              |
| 28:BE:159:HIS:O   | 28:BE:160:TYR:CD1  | 2.55                     | 0.59              |
| 29:BF:11:VAL:HG23 | 29:BF:17:ARG:NH2   | 2.15                     | 0.59              |
| 29:BF:36:VAL:CG2  | 29:BF:183:VAL:HG21 | 2.21                     | 0.59              |
| 30:BG:10:LYS:O    | 30:BG:11:TYR:C     | 2.45                     | 0.59              |
| 30:BG:91:ARG:C    | 30:BG:91:ARG:HD3   | 2.26                     | 0.59              |
| 30:BG:130:ASN:HA  | 30:BG:161:THR:OG1  | 2.02                     | 0.59              |
| 31:BH:23:ARG:CZ   | 31:BH:34:GLU:HB3   | 2.32                     | 0.59              |
| 31:BH:139:GLN:O   | 31:BH:143:GLN:HG3  | 2.03                     | 0.59              |
| 31:BH:157:TYR:HD1 | 31:BH:158:HIS:HB2  | 1.66                     | 0.59              |
| 32:BK:45:LYS:O    | 32:BK:48:GLU:N     | 2.35                     | 0.59              |
| 32:BK:88:ILE:HD11 | 32:BK:123:LEU:HD13 | 1.83                     | 0.59              |
| 34:BM:42:TRP:HA   | 34:BM:47:ALA:CB    | 2.31                     | 0.59              |
| 35:BN:8:LEU:HD21  | 35:BN:81:ASP:C     | 2.26                     | 0.59              |
| 35:BN:11:ALA:O    | 35:BN:97:ARG:NH2   | 2.35                     | 0.59              |
| 35:BN:97:ARG:HE   | 35:BN:99:PHE:N     | 2.00                     | 0.59              |
| 36:BO:126:VAL:O   | 36:BO:127:ALA:HB2  | 2.02                     | 0.59              |
| 37:BP:8:LYS:HZ3   | 37:BP:11:LYS:HZ3   | 1.46                     | 0.59              |
| 39:BR:41:ASP:CG   | 39:BR:42:ASP:N     | 2.54                     | 0.59              |
| 40:BS:82:LEU:C    | 40:BS:84:GLN:H     | 2.09                     | 0.59              |
| 41:BT:61:TRP:HA   | 41:BT:65:ILE:HD11  | 1.83                     | 0.59              |
| 44:BW:7:VAL:CG2   | 48:B1:31:ARG:HH22  | 2.14                     | 0.59              |
| 44:BW:90:GLU:O    | 44:BW:93:GLU:CG    | 2.50                     | 0.59              |
| 46:BY:23:LYS:HG3  | 46:BY:39:VAL:O     | 2.01                     | 0.59              |
| 47:BZ:31:VAL:HG21 | 47:BZ:67:VAL:HA    | 1.83                     | 0.59              |
| 50:B3:20:ASN:HB2  | 50:B3:30:GLU:OE2   | 2.01                     | 0.59              |
| 55:B8:19:ARG:HD2  | 55:B8:24:TYR:CG    | 2.38                     | 0.59              |
| 1:AA:109:A:O2'    | 1:AA:110:C:OP1     | 2.19                     | 0.59              |
| 1:AA:290:C:H2'    | 1:AA:291:C:H5'     | 1.83                     | 0.59              |
| 1:AA:321:A:H61    | 1:AA:332:G:H1      | 1.49                     | 0.59              |
| 1:AA:366:C:O2'    | 1:AA:367:U:P       | 2.60                     | 0.59              |
| 1:AA:474:G:O5'    | 18:AS:81:ARG:HG3   | 2.02                     | 0.59              |
| 1:AA:676:A:H5''   | 13:AN:113:PRO:HB2  | 1.84                     | 0.59              |
| 1:AA:696:A:H2'    | 1:AA:697:U:C5'     | 2.31                     | 0.59              |
| 1:AA:745:C:H1'    | 1:AA:836:G:O2'     | 2.02                     | 0.59              |
| 1:AA:940:C:H2'    | 1:AA:941:G:C8      | 2.37                     | 0.59              |
| 1:AA:1065:U:OP2   | 1:AA:1190:G:N2     | 2.35                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1120:G:C8     | 1:AA:1120:G:O5'    | 2.55                     | 0.59              |
| 1:AA:1279:A:O2'    | 1:AA:1282:C:C4     | 2.52                     | 0.59              |
| 1:AA:1320:C:C5     | 21:AV:72:GLY:HA3   | 2.36                     | 0.59              |
| 1:AA:1376:U:OP1    | 9:AJ:98:SER:HB3    | 2.03                     | 0.59              |
| 1:AA:1431:C:O2'    | 1:AA:1432:G:H5'    | 2.02                     | 0.59              |
| 1:AA:1483:A:O5'    | 1:AA:1483:A:C8     | 2.49                     | 0.59              |
| 1:AA:1508:G:H2'    | 1:AA:1509:C:H6     | 1.68                     | 0.59              |
| 1:AA:1517:G:O4'    | 24:BA:1920:C:OP1   | 2.20                     | 0.59              |
| 3:AD:5:G:C2        | 3:AD:6:G:N7        | 2.70                     | 0.59              |
| 3:AD:8:U:N3        | 3:AD:14:A:N6       | 2.38                     | 0.59              |
| 3:AB:33:U:O2'      | 3:AB:35:A:C8       | 2.54                     | 0.59              |
| 3:AB:54:U:OP1      | 37:BP:60:ARG:CG    | 2.47                     | 0.59              |
| 4:AE:33:TYR:HB2    | 4:AE:43:ASP:HB2    | 1.84                     | 0.59              |
| 4:AE:114:ARG:HH12  | 4:AE:141:GLU:HG3   | 1.66                     | 0.59              |
| 4:AE:132:LYS:HA    | 4:AE:135:GLN:OE1   | 2.01                     | 0.59              |
| 4:AE:156:LYS:O     | 4:AE:156:LYS:HG2   | 2.02                     | 0.59              |
| 6:AG:98:GLU:HA     | 6:AG:103:ASN:HD21  | 1.65                     | 0.59              |
| 8:AI:13:ASN:N      | 8:AI:13:ASN:HD22   | 1.98                     | 0.59              |
| 9:AJ:102:ARG:O     | 9:AJ:103:TRP:C     | 2.45                     | 0.59              |
| 11:AL:53:VAL:HG11  | 11:AL:92:TYR:CZ    | 2.37                     | 0.59              |
| 11:AL:87:GLN:O     | 11:AL:90:PRO:HD3   | 2.02                     | 0.59              |
| 12:AM:84:GLN:C     | 12:AM:85:LEU:HD12  | 2.26                     | 0.59              |
| 13:AN:23:ALA:HB2   | 13:AN:28:THR:CG2   | 2.32                     | 0.59              |
| 13:AN:66:LEU:C     | 13:AN:70:LYS:HZ2   | 2.09                     | 0.59              |
| 14:AO:86:ARG:HH22  | 14:AO:119:LYS:CG   | 2.14                     | 0.59              |
| 14:AO:126:LYS:HD2  | 14:AO:128:ALA:HB3  | 1.84                     | 0.59              |
| 15:AP:6:GLY:HA2    | 30:BG:114:ILE:HD12 | 1.83                     | 0.59              |
| 16:AQ:34:TYR:OH    | 16:AQ:41:ARG:HA    | 2.02                     | 0.59              |
| 18:AS:27:LYS:C     | 18:AS:29:ASP:N     | 2.58                     | 0.59              |
| 19:AT:81:ARG:CG    | 19:AT:84:LEU:HD21  | 2.32                     | 0.59              |
| 20:AU:21:LYS:HD2   | 20:AU:22:VAL:N     | 2.17                     | 0.59              |
| 20:AU:22:VAL:HG23  | 20:AU:56:THR:HA    | 1.84                     | 0.59              |
| 20:AU:66:LEU:O     | 20:AU:70:ILE:HG13  | 2.01                     | 0.59              |
| 20:AU:72:ARG:CA    | 20:AU:75:ILE:HD12  | 2.18                     | 0.59              |
| 24:BA:237:C:H2'    | 24:BA:238:C:C6     | 2.36                     | 0.59              |
| 24:BA:250:G:H5'    | 54:B7:8:LYS:HG2    | 1.84                     | 0.59              |
| 24:BA:270(J):G:H2' | 24:BA:270(J):G:N3  | 2.18                     | 0.59              |
| 24:BA:281:G:H8     | 24:BA:427:U:O2     | 1.85                     | 0.59              |
| 24:BA:292:C:C2'    | 24:BA:293:U:N3     | 2.66                     | 0.59              |
| 24:BA:566:U:C6     | 42:BU:82:ARG:NH2   | 2.70                     | 0.59              |
| 24:BA:672:C:H3'    | 36:BO:38:GLN:NE2   | 2.12                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:962:G:C2'    | 24:BA:963:U:H6     | 2.11                     | 0.59              |
| 24:BA:1035:U:O3'   | 31:BH:59:ARG:NH2   | 2.34                     | 0.59              |
| 24:BA:1227:A:H3'   | 24:BA:1227:A:C8    | 2.37                     | 0.59              |
| 24:BA:1242:A:OP1   | 24:BA:1242:A:C8    | 2.55                     | 0.59              |
| 24:BA:1309:G:N1    | 24:BA:1310:G:N7    | 2.50                     | 0.59              |
| 24:BA:1364:G:O5'   | 24:BA:1809:A:C6    | 2.56                     | 0.59              |
| 24:BA:1398:C:C2    | 24:BA:1399:C:C5    | 2.91                     | 0.59              |
| 24:BA:1435:G:O2'   | 24:BA:1436:G:H5'   | 2.02                     | 0.59              |
| 24:BA:1444(A):A:N1 | 24:BA:1461:G:O5'   | 2.35                     | 0.59              |
| 24:BA:1485:G:N2    | 24:BA:1505:C:C2    | 2.71                     | 0.59              |
| 24:BA:1492:G:H5'   | 24:BA:1493:C:OP2   | 2.03                     | 0.59              |
| 24:BA:1579:A:H62   | 24:BA:1581:G:N2    | 1.98                     | 0.59              |
| 24:BA:1795:C:H2'   | 24:BA:1796:U:O4'   | 2.02                     | 0.59              |
| 24:BA:1825:A:O2'   | 27:BD:252:TRP:CH2  | 2.55                     | 0.59              |
| 24:BA:1934:C:H2'   | 24:BA:1935:G:H8    | 1.67                     | 0.59              |
| 24:BA:2043:C:O2'   | 24:BA:2044:C:C5'   | 2.50                     | 0.59              |
| 24:BA:2144:U:OP2   | 24:BA:2144:U:H6    | 1.85                     | 0.59              |
| 24:BA:2637:U:O2'   | 24:BA:2638:G:O4'   | 2.19                     | 0.59              |
| 24:BA:2818:G:H4'   | 24:BA:2837:G:H4'   | 1.85                     | 0.59              |
| 25:BB:87:G:N1      | 25:BB:90:C:C4      | 2.70                     | 0.59              |
| 26:BC:75:LEU:HD13  | 26:BC:110:PHE:CE2  | 2.36                     | 0.59              |
| 26:BC:97:GLU:OE2   | 26:BC:119:VAL:HG12 | 2.02                     | 0.59              |
| 27:BD:5:LYS:HB3    | 27:BD:29:PRO:CD    | 2.31                     | 0.59              |
| 27:BD:143:HIS:O    | 27:BD:144:ALA:HB3  | 2.02                     | 0.59              |
| 28:BE:15:PHE:O     | 28:BE:16:ARG:C     | 2.44                     | 0.59              |
| 30:BG:19:LEU:HA    | 30:BG:22:ARG:HB3   | 1.85                     | 0.59              |
| 30:BG:29:TRP:C     | 30:BG:31:VAL:HG23  | 2.27                     | 0.59              |
| 30:BG:54:GLU:OE1   | 30:BG:69:ALA:O     | 2.20                     | 0.59              |
| 31:BH:6:ARG:O      | 31:BH:6:ARG:HG3    | 2.02                     | 0.59              |
| 31:BH:85:LYS:HD2   | 31:BH:145:ALA:HB2  | 1.83                     | 0.59              |
| 31:BH:87:LEU:N     | 31:BH:132:ARG:HB3  | 2.16                     | 0.59              |
| 32:BK:9:LEU:HD12   | 32:BK:13:GLY:O     | 2.03                     | 0.59              |
| 33:BL:38:VAL:C     | 33:BL:41:PHE:HB2   | 2.27                     | 0.59              |
| 33:BL:99:ILE:HG23  | 33:BL:100:THR:H    | 1.67                     | 0.59              |
| 33:BL:112:MET:HE1  | 33:BL:118:THR:C    | 2.27                     | 0.59              |
| 34:BM:4:TYR:CE1    | 41:BT:101:ARG:NH2  | 2.70                     | 0.59              |
| 34:BM:36:GLY:O     | 34:BM:43:THR:N     | 2.36                     | 0.59              |
| 34:BM:100:GLU:HA   | 34:BM:103:VAL:CG1  | 2.31                     | 0.59              |
| 35:BN:21:CYS:HA    | 35:BN:40:VAL:O     | 2.02                     | 0.59              |
| 35:BN:64:ARG:NH2   | 35:BN:77:ILE:HA    | 2.14                     | 0.59              |
| 35:BN:77:ILE:O     | 40:BS:75:ILE:CG1   | 2.51                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 36:BO:58:THR:OG1  | 54:B7:13:ARG:NH1  | 2.35                     | 0.59              |
| 37:BP:45:GLN:O    | 37:BP:47:ILE:N    | 2.36                     | 0.59              |
| 37:BP:124:LYS:O   | 37:BP:125:LEU:C   | 2.44                     | 0.59              |
| 39:BR:4:LEU:O     | 39:BR:8:GLU:HG3   | 2.02                     | 0.59              |
| 43:BV:36:LEU:CD2  | 43:BV:51:LEU:HD21 | 2.25                     | 0.59              |
| 44:BW:29:TRP:HA   | 44:BW:77:LYS:O    | 2.02                     | 0.59              |
| 44:BW:93:GLU:O    | 44:BW:94:GLY:C    | 2.46                     | 0.59              |
| 45:BX:1:MET:HA    | 45:BX:33:LYS:HG3  | 1.84                     | 0.59              |
| 45:BX:12:THR:HA   | 45:BX:73:ARG:CZ   | 2.33                     | 0.59              |
| 45:BX:76:CYS:HB3  | 45:BX:100:ALA:HB3 | 1.83                     | 0.59              |
| 46:BY:79:ARG:HB2  | 46:BY:80:ARG:HH11 | 1.64                     | 0.59              |
| 49:B2:5:LYS:NZ    | 49:B2:59:VAL:HG22 | 2.17                     | 0.59              |
| 49:B2:26:LEU:CD2  | 49:B2:28:LEU:HD11 | 2.25                     | 0.59              |
| 51:B4:33:CYS:N    | 51:B4:37:LYS:O    | 2.30                     | 0.59              |
| 52:B5:10:LEU:HD12 | 52:B5:28:ARG:NH2  | 2.17                     | 0.59              |
| 55:B8:10:ILE:HD12 | 55:B8:14:CYS:CB   | 2.33                     | 0.59              |
| 1:AA:12:U:N3      | 1:AA:13:U:O4      | 2.36                     | 0.59              |
| 1:AA:20:U:C4      | 1:AA:21:G:C6      | 2.90                     | 0.59              |
| 1:AA:246:A:H1'    | 1:AA:247:G:H1'    | 1.82                     | 0.59              |
| 1:AA:321:A:O3'    | 1:AA:1436:U:H5'   | 2.02                     | 0.59              |
| 1:AA:503:C:N3     | 1:AA:504:C:C5     | 2.70                     | 0.59              |
| 1:AA:524:G:H2'    | 1:AA:525:C:H6     | 1.62                     | 0.59              |
| 1:AA:562:C:C2'    | 14:AO:15:ARG:HB3  | 2.32                     | 0.59              |
| 1:AA:579:G:C5     | 1:AA:580:U:C5     | 2.90                     | 0.59              |
| 1:AA:789:U:O2'    | 1:AA:791:G:N7     | 2.32                     | 0.59              |
| 1:AA:1066:C:C5    | 1:AA:1067:A:N7    | 2.70                     | 0.59              |
| 1:AA:1347:G:C8    | 11:AL:107:ARG:CB  | 2.82                     | 0.59              |
| 1:AA:1419:G:O6    | 1:AA:1482:G:C6    | 2.54                     | 0.59              |
| 1:AA:1435:G:C2    | 1:AA:1436:U:O4    | 2.55                     | 0.59              |
| 3:AC:7:A:H4'      | 3:AC:8:U:OP2      | 2.02                     | 0.59              |
| 3:AC:11:C:H2'     | 3:AC:12:U:H6      | 1.67                     | 0.59              |
| 3:AD:55:U:O5'     | 3:AD:55:U:H6      | 1.85                     | 0.59              |
| 4:AE:91:PRO:HG3   | 4:AE:155:LEU:H    | 1.66                     | 0.59              |
| 5:AF:47:LEU:HD12  | 5:AF:83:ARG:HH21  | 1.66                     | 0.59              |
| 5:AF:131:ARG:NH1  | 7:AH:50:GLU:OE1   | 2.36                     | 0.59              |
| 7:AH:10:MET:HA    | 7:AH:32:VAL:HG22  | 1.84                     | 0.59              |
| 8:AI:52:ILE:HG21  | 8:AI:87:ARG:NH1   | 2.17                     | 0.59              |
| 8:AI:89:MET:HG2   | 20:AU:76:LEU:HD21 | 1.84                     | 0.59              |
| 9:AJ:75:VAL:HG22  | 9:AJ:88:PRO:N     | 2.16                     | 0.59              |
| 9:AJ:149:ARG:O    | 9:AJ:150:ALA:C    | 2.45                     | 0.59              |
| 11:AL:116:LYS:O   | 11:AL:121:ARG:HB3 | 2.02                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 15:AP:13:LYS:HB3  | 15:AP:17:VAL:HB    | 1.83                     | 0.59              |
| 17:AR:77:ARG:NH1  | 17:AR:77:ARG:O     | 2.36                     | 0.59              |
| 22:AW:51:GLU:HA   | 22:AW:54:LYS:CG    | 2.32                     | 0.59              |
| 24:BA:59:U:O5'    | 24:BA:59:U:H6      | 1.84                     | 0.59              |
| 24:BA:247:G:O6    | 54:B7:11:LYS:NZ    | 2.35                     | 0.59              |
| 24:BA:422:A:C2    | 24:BA:423:A:C4     | 2.91                     | 0.59              |
| 24:BA:459:U:OP2   | 53:B6:40:TRP:CA    | 2.49                     | 0.59              |
| 24:BA:475:U:C2    | 24:BA:479:A:N6     | 2.69                     | 0.59              |
| 24:BA:531:C:C2    | 24:BA:532:A:H1'    | 2.38                     | 0.59              |
| 24:BA:534:U:HO2'  | 41:BT:49:HIS:HE2   | 1.47                     | 0.59              |
| 24:BA:601:C:O2'   | 24:BA:604:G:H5''   | 2.02                     | 0.59              |
| 24:BA:613:U:C5'   | 24:BA:614:U:C5     | 2.84                     | 0.59              |
| 24:BA:674:G:C4'   | 29:BF:74:ARG:CZ    | 2.77                     | 0.59              |
| 24:BA:736:C:O2'   | 24:BA:737:C:H5'    | 2.03                     | 0.59              |
| 24:BA:783:A:C2    | 24:BA:785:G:O4'    | 2.56                     | 0.59              |
| 24:BA:980:A:C2    | 24:BA:2038:G:O4'   | 2.53                     | 0.59              |
| 24:BA:1005:C:O2   | 34:BM:28:THR:CB    | 2.47                     | 0.59              |
| 24:BA:1012:U:H5'  | 24:BA:1013:C:OP1   | 2.01                     | 0.59              |
| 24:BA:1115:G:H2'  | 24:BA:1115:G:N3    | 2.16                     | 0.59              |
| 24:BA:1138:G:H2'  | 24:BA:1138:G:N3    | 2.16                     | 0.59              |
| 24:BA:1199:U:O2   | 24:BA:1200:C:C6    | 2.55                     | 0.59              |
| 24:BA:1222:C:H2'  | 24:BA:1223:C:H5'   | 1.84                     | 0.59              |
| 24:BA:1363:C:O3'  | 24:BA:1809:A:C5    | 2.56                     | 0.59              |
| 24:BA:1448:G:H2'  | 24:BA:1449:A:C8    | 2.37                     | 0.59              |
| 24:BA:1449:A:N1   | 24:BA:1449(A):G:C4 | 2.70                     | 0.59              |
| 24:BA:1670:C:H2'  | 24:BA:1671:U:H5'   | 1.85                     | 0.59              |
| 24:BA:1690:A:N6   | 24:BA:1697:G:N2    | 2.49                     | 0.59              |
| 24:BA:1695:G:C3'  | 24:BA:1696:G:H5'   | 2.32                     | 0.59              |
| 24:BA:1790:C:C2'  | 24:BA:1790:C:O2    | 2.50                     | 0.59              |
| 24:BA:1893:C:O2'  | 24:BA:1894:C:H5'   | 2.02                     | 0.59              |
| 24:BA:1955:U:H2'  | 24:BA:1955:U:O2    | 2.01                     | 0.59              |
| 24:BA:1980:G:C4   | 24:BA:1982:C:C5    | 2.91                     | 0.59              |
| 24:BA:2020:A:H4'  | 24:BA:2020:A:OP1   | 2.01                     | 0.59              |
| 24:BA:2135:A:C4'  | 24:BA:2136:C:C5    | 2.76                     | 0.59              |
| 24:BA:2194:G:H2'  | 24:BA:2195:C:H5    | 1.67                     | 0.59              |
| 24:BA:2525:G:N2   | 24:BA:2539:C:N3    | 2.49                     | 0.59              |
| 24:BA:2577:A:O2'  | 24:BA:2612:C:C4    | 2.55                     | 0.59              |
| 24:BA:2810:A:H2'  | 24:BA:2811:G:C5'   | 2.33                     | 0.59              |
| 25:BB:71:C:H2'    | 25:BB:71:C:O2      | 2.03                     | 0.59              |
| 27:BD:31:LYS:HD2  | 27:BD:31:LYS:H     | 1.67                     | 0.59              |
| 27:BD:73:VAL:HG12 | 27:BD:120:GLY:HA3  | 1.85                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:111:LEU:CB   | 27:BD:115:GLN:HE22 | 2.13                     | 0.59              |
| 27:BD:124:PRO:O    | 27:BD:126:GLN:N    | 2.33                     | 0.59              |
| 27:BD:208:LYS:HZ1  | 27:BD:211:ARG:NH2  | 2.01                     | 0.59              |
| 27:BD:227:ASN:C    | 27:BD:229:VAL:H    | 2.10                     | 0.59              |
| 27:BD:232:PRO:HG2  | 27:BD:247:ALA:N    | 2.16                     | 0.59              |
| 27:BD:259:THR:HG21 | 27:BD:260:ARG:HH12 | 1.67                     | 0.59              |
| 30:BG:75:LYS:HD3   | 30:BG:85:GLY:CA    | 2.33                     | 0.59              |
| 30:BG:97:ASP:O     | 30:BG:100:TRP:N    | 2.35                     | 0.59              |
| 30:BG:107:LEU:CD2  | 30:BG:177:GLY:HA3  | 2.33                     | 0.59              |
| 33:BL:38:VAL:HA    | 33:BL:41:PHE:HD1   | 1.67                     | 0.59              |
| 33:BL:38:VAL:HA    | 33:BL:41:PHE:CD1   | 2.37                     | 0.59              |
| 34:BM:25:ARG:C     | 34:BM:28:THR:HG23  | 2.27                     | 0.59              |
| 35:BN:59:LYS:N     | 35:BN:59:LYS:CE    | 2.65                     | 0.59              |
| 35:BN:68:GLU:CA    | 35:BN:104:ARG:CZ   | 2.80                     | 0.59              |
| 37:BP:126:PRO:O    | 37:BP:127:ILE:HG23 | 2.01                     | 0.59              |
| 38:BQ:87:TYR:HE2   | 38:BQ:118:GLU:OE1  | 1.85                     | 0.59              |
| 41:BT:97:ASP:HB3   | 41:BT:101:ARG:NE   | 2.17                     | 0.59              |
| 42:BU:69:LYS:HA    | 42:BU:92:THR:HB    | 1.84                     | 0.59              |
| 44:BW:91:ALA:O     | 44:BW:95:LEU:HG    | 2.02                     | 0.59              |
| 45:BX:12:THR:HG23  | 45:BX:73:ARG:CG    | 2.32                     | 0.59              |
| 46:BY:166:SER:O    | 46:BY:168:GLU:N    | 2.34                     | 0.59              |
| 47:BZ:12:ASN:CA    | 47:BZ:14:ARG:CZ    | 2.68                     | 0.59              |
| 48:B1:59:LEU:HD11  | 48:B1:63:ARG:CD    | 2.31                     | 0.59              |
| 51:B4:55:ARG:C     | 51:B4:57:VAL:H     | 2.09                     | 0.59              |
| 1:AA:89:U:H2'      | 1:AA:90:C:O4'      | 2.03                     | 0.59              |
| 1:AA:130:A:H5''    | 1:AA:190:G:H2'     | 1.85                     | 0.59              |
| 1:AA:305:G:O2'     | 1:AA:306:G:P       | 2.60                     | 0.59              |
| 1:AA:761:G:H5'     | 19:AT:102:GLY:C    | 2.27                     | 0.59              |
| 1:AA:858:G:C2      | 1:AA:869:G:H3'     | 2.36                     | 0.59              |
| 1:AA:866:C:C6      | 1:AA:867:G:C1'     | 2.85                     | 0.59              |
| 1:AA:951:G:O4'     | 1:AA:971:G:H5'     | 2.02                     | 0.59              |
| 1:AA:964:A:OP1     | 1:AA:1199:U:OP1    | 2.21                     | 0.59              |
| 1:AA:1129:C:C4     | 1:AA:1139:G:O6     | 2.56                     | 0.59              |
| 1:AA:1240:U:C6     | 9:AJ:32:ARG:NH2    | 2.71                     | 0.59              |
| 1:AA:1258:G:H2'    | 1:AA:1259:C:C5     | 2.37                     | 0.59              |
| 1:AA:1305:G:H5''   | 23:AX:5:ASP:N      | 2.18                     | 0.59              |
| 1:AA:1443:G:H2'    | 1:AA:1443:G:N3     | 2.16                     | 0.59              |
| 2:A1:52:U:OP1      | 6:AG:50:ARG:HB2    | 2.01                     | 0.59              |
| 4:AE:199:TYR:O     | 4:AE:201:ILE:HD12  | 2.03                     | 0.59              |
| 6:AG:18:LYS:HG2    | 6:AG:33:MET:CB     | 2.25                     | 0.59              |
| 6:AG:43:HIS:CB     | 6:AG:46:LYS:HG3    | 2.18                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 7:AH:34:VAL:HG21   | 7:AH:62:ALA:CB    | 2.32                     | 0.59              |
| 7:AH:79:GLU:HB3    | 7:AH:92:LYS:CA    | 2.23                     | 0.59              |
| 8:AI:16:GLN:HG3    | 8:AI:17:SER:H     | 1.67                     | 0.59              |
| 8:AI:60:PHE:N      | 8:AI:60:PHE:HD1   | 2.01                     | 0.59              |
| 9:AJ:71:PRO:HA     | 9:AJ:138:LYS:HE3  | 1.84                     | 0.59              |
| 10:AK:48:TYR:HA    | 10:AK:60:ARG:O    | 2.01                     | 0.59              |
| 12:AM:20:ALA:HB1   | 12:AM:37:PRO:HB3  | 1.83                     | 0.59              |
| 13:AN:73:MET:SD    | 13:AN:78:GLN:HB3  | 2.42                     | 0.59              |
| 13:AN:85:ARG:HG3   | 13:AN:85:ARG:NH1  | 2.18                     | 0.59              |
| 17:AR:36:ILE:HD11  | 17:AR:60:VAL:CG2  | 2.32                     | 0.59              |
| 19:AT:3:LYS:O      | 19:AT:4:LYS:O     | 2.20                     | 0.59              |
| 20:AU:58:LEU:CB    | 20:AU:62:GLU:HB3  | 2.18                     | 0.59              |
| 21:AV:29:ARG:HG2   | 21:AV:48:THR:HB   | 1.85                     | 0.59              |
| 22:AW:20:LEU:O     | 22:AW:23:ARG:HD3  | 2.03                     | 0.59              |
| 22:AW:23:ARG:NH1   | 22:AW:24:LEU:HG   | 2.18                     | 0.59              |
| 23:AX:6:ARG:NH1    | 23:AX:15:ARG:CZ   | 2.66                     | 0.59              |
| 24:BA:38:A:H5'     | 29:BF:50:SER:HA   | 1.84                     | 0.59              |
| 24:BA:199:A:N1     | 24:BA:2433:A:H2'  | 2.17                     | 0.59              |
| 24:BA:239:U:H1'    | 24:BA:259:G:H22   | 1.67                     | 0.59              |
| 24:BA:270(X):G:H4' | 24:BA:273:G:H5'   | 1.85                     | 0.59              |
| 24:BA:408:G:O2'    | 24:BA:409:C:H5'   | 2.02                     | 0.59              |
| 24:BA:616:A:H2'    | 24:BA:616:A:N3    | 2.17                     | 0.59              |
| 24:BA:637:A:C2     | 24:BA:651:G:H4'   | 2.37                     | 0.59              |
| 24:BA:638:G:N2     | 24:BA:650:C:O2'   | 2.35                     | 0.59              |
| 24:BA:716:A:N7     | 24:BA:717:G:C8    | 2.69                     | 0.59              |
| 24:BA:718:A:H5''   | 24:BA:719:C:H5    | 1.67                     | 0.59              |
| 24:BA:859:G:H3'    | 24:BA:859:G:C8    | 2.37                     | 0.59              |
| 24:BA:890:A:O4'    | 24:BA:890:A:OP2   | 2.21                     | 0.59              |
| 24:BA:898:C:H3'    | 24:BA:899:A:C5'   | 2.31                     | 0.59              |
| 24:BA:928:G:O2'    | 49:B2:43:ILE:HG12 | 2.03                     | 0.59              |
| 24:BA:997:G:N3     | 24:BA:998:C:C5    | 2.71                     | 0.59              |
| 24:BA:1049:C:C4    | 24:BA:1050:A:N7   | 2.70                     | 0.59              |
| 24:BA:1129:A:O2'   | 24:BA:2515:C:H1'  | 2.01                     | 0.59              |
| 24:BA:1314:C:P     | 24:BA:1332:G:H5'  | 2.41                     | 0.59              |
| 24:BA:1498:C:C1'   | 24:BA:1576:U:H4'  | 2.33                     | 0.59              |
| 24:BA:1646:C:C3'   | 24:BA:1647:G:C5'  | 2.68                     | 0.59              |
| 24:BA:1820:U:O4    | 27:BD:159:ALA:O   | 2.20                     | 0.59              |
| 24:BA:1861:G:C2'   | 24:BA:1862:G:H5'  | 2.32                     | 0.59              |
| 24:BA:2018:G:O6    | 24:BA:2035:G:O6   | 2.21                     | 0.59              |
| 24:BA:2047:U:O2'   | 24:BA:2048:G:C5'  | 2.51                     | 0.59              |
| 24:BA:2063:C:C2    | 24:BA:2450:A:N6   | 2.66                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2318:G:H8   | 24:BA:2318:G:P     | 2.25                     | 0.59              |
| 24:BA:2527:C:OP2  | 24:BA:2527:C:H3'   | 2.01                     | 0.59              |
| 24:BA:2618:G:O2'  | 28:BE:150:VAL:HG12 | 2.03                     | 0.59              |
| 24:BA:2777:G:H4'  | 24:BA:2778:A:C5'   | 2.31                     | 0.59              |
| 26:BC:59:ARG:HD2  | 26:BC:162:GLU:CD   | 2.27                     | 0.59              |
| 26:BC:82:LYS:HB3  | 26:BC:149:ILE:HG21 | 1.83                     | 0.59              |
| 26:BC:163:PHE:HD2 | 26:BC:163:PHE:N    | 2.00                     | 0.59              |
| 27:BD:23:GLU:CD   | 27:BD:24:ILE:N     | 2.61                     | 0.59              |
| 27:BD:52:ARG:HD3  | 27:BD:52:ARG:N     | 2.17                     | 0.59              |
| 27:BD:60:ARG:CD   | 27:BD:62:TYR:HE2   | 2.10                     | 0.59              |
| 27:BD:126:GLN:O   | 27:BD:127:VAL:C    | 2.45                     | 0.59              |
| 28:BE:23:VAL:O    | 28:BE:183:LEU:HA   | 2.03                     | 0.59              |
| 28:BE:105:THR:CG2 | 28:BE:197:ILE:HD13 | 2.33                     | 0.59              |
| 28:BE:147:PRO:CG  | 28:BE:149:ARG:CD   | 2.77                     | 0.59              |
| 29:BF:77:ASP:O    | 29:BF:80:ALA:HB2   | 2.01                     | 0.59              |
| 29:BF:183:VAL:C   | 29:BF:186:ILE:HB   | 2.27                     | 0.59              |
| 29:BF:199:TRP:C   | 29:BF:203:GLN:OE1  | 2.46                     | 0.59              |
| 30:BG:36:LYS:HZ3  | 30:BG:38:VAL:H     | 1.50                     | 0.59              |
| 30:BG:142:PRO:C   | 30:BG:143:GLU:HG2  | 2.25                     | 0.59              |
| 31:BH:103:LEU:CD1 | 31:BH:115:VAL:HG11 | 2.23                     | 0.59              |
| 32:BK:114:LEU:CD2 | 32:BK:130:TYR:HB3  | 2.32                     | 0.59              |
| 32:BK:137:PRO:HB2 | 32:BK:139:GLN:HE22 | 1.67                     | 0.59              |
| 33:BL:71:THR:HG23 | 33:BL:114:ASP:HB3  | 1.85                     | 0.59              |
| 34:BM:4:TYR:OH    | 41:BT:101:ARG:NH1  | 2.36                     | 0.59              |
| 35:BN:10:VAL:N    | 35:BN:17:ARG:O     | 2.36                     | 0.59              |
| 35:BN:21:CYS:CA   | 35:BN:41:ALA:HB2   | 2.31                     | 0.59              |
| 35:BN:35:VAL:HG21 | 35:BN:104:ARG:NH1  | 2.18                     | 0.59              |
| 35:BN:99:PHE:CD2  | 35:BN:100:GLY:N    | 2.70                     | 0.59              |
| 38:BQ:11:ASN:OD1  | 38:BQ:12:ARG:HG3   | 2.02                     | 0.59              |
| 40:BS:1:MET:CG    | 40:BS:2:ASN:N      | 2.64                     | 0.59              |
| 41:BT:35:ALA:O    | 41:BT:36:ARG:C     | 2.44                     | 0.59              |
| 45:BX:74:PRO:HB3  | 45:BX:101:LYS:CA   | 2.32                     | 0.59              |
| 50:B3:6:HIS:HB2   | 50:B3:56:VAL:HG13  | 1.84                     | 0.59              |
| 51:B4:48:GLU:HA   | 51:B4:58:LEU:HG    | 1.84                     | 0.59              |
| 53:B6:38:GLY:O    | 53:B6:39:ARG:HB2   | 2.01                     | 0.59              |
| 54:B7:60:LEU:HD11 | 54:B7:64:TYR:CB    | 2.32                     | 0.59              |
| 1:AA:21:G:N2      | 1:AA:916:G:C5      | 2.71                     | 0.59              |
| 1:AA:46:G:H22     | 1:AA:366:C:H1'     | 1.68                     | 0.59              |
| 1:AA:64:G:H5'     | 1:AA:66:G:OP1      | 2.02                     | 0.59              |
| 1:AA:357:G:P      | 1:AA:367:U:H2'     | 2.42                     | 0.59              |
| 1:AA:449:C:C4     | 1:AA:450:G:H1'     | 2.38                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:510:A:H8     | 1:AA:510:A:O5'    | 1.85                     | 0.59              |
| 1:AA:552:U:C2'    | 1:AA:553:A:H5'    | 2.33                     | 0.59              |
| 1:AA:558:G:C4     | 1:AA:559:A:C2     | 2.90                     | 0.59              |
| 1:AA:668:G:O2'    | 1:AA:669:U:H5'    | 2.03                     | 0.59              |
| 1:AA:675:A:H2'    | 1:AA:676:A:O4'    | 2.01                     | 0.59              |
| 1:AA:764:C:C4     | 1:AA:765:G:O6     | 2.56                     | 0.59              |
| 1:AA:859:A:N6     | 1:AA:860:A:C2     | 2.70                     | 0.59              |
| 1:AA:1143:G:N2    | 1:AA:1144:G:C4    | 2.71                     | 0.59              |
| 1:AA:1217:C:OP1   | 16:AQ:8:GLU:OE2   | 2.21                     | 0.59              |
| 1:AA:1285:A:C4'   | 1:AA:1286:A:N7    | 2.65                     | 0.59              |
| 1:AA:1291:G:N2    | 1:AA:1292:U:C2    | 2.71                     | 0.59              |
| 1:AA:1483:A:H2'   | 1:AA:1484:C:C5'   | 2.33                     | 0.59              |
| 3:AB:74:C:C5      | 24:BA:2555:U:N3   | 2.71                     | 0.59              |
| 6:AG:200:GLU:O    | 6:AG:201:GLN:C    | 2.45                     | 0.59              |
| 7:AH:80:ILE:CD1   | 7:AH:91:LEU:HB3   | 2.32                     | 0.59              |
| 7:AH:81:GLU:CD    | 7:AH:81:GLU:H     | 2.09                     | 0.59              |
| 7:AH:114:GLY:O    | 7:AH:115:VAL:CG1  | 2.51                     | 0.59              |
| 9:AJ:38:LEU:CD1   | 9:AJ:41:ARG:HD3   | 2.32                     | 0.59              |
| 12:AM:54:PHE:H    | 16:AQ:41:ARG:NH2  | 2.01                     | 0.59              |
| 13:AN:13:GLN:HA   | 13:AN:76:GLY:HA3  | 1.85                     | 0.59              |
| 14:AO:83:VAL:CG2  | 14:AO:84:LEU:H    | 2.08                     | 0.59              |
| 14:AO:85:ILE:O    | 14:AO:85:ILE:CG2  | 2.51                     | 0.59              |
| 14:AO:91:LYS:O    | 14:AO:92:ASP:HB3  | 2.03                     | 0.59              |
| 15:AP:52:GLU:CA   | 15:AP:55:ARG:NE   | 2.64                     | 0.59              |
| 19:AT:25:ARG:HH21 | 19:AT:40:LYS:CD   | 1.99                     | 0.59              |
| 21:AV:43:GLU:O    | 21:AV:47:HIS:NE2  | 2.30                     | 0.59              |
| 24:BA:315:G:H2'   | 24:BA:316:C:C1'   | 2.32                     | 0.59              |
| 24:BA:366:C:C6    | 24:BA:366:C:O5'   | 2.56                     | 0.59              |
| 24:BA:465:G:O2'   | 24:BA:466:A:H5'   | 2.02                     | 0.59              |
| 24:BA:502:A:C2'   | 24:BA:503:A:H5'   | 2.33                     | 0.59              |
| 24:BA:569:U:P     | 24:BA:945:A:H61   | 2.26                     | 0.59              |
| 24:BA:649:G:H5''  | 24:BA:650:C:OP2   | 2.02                     | 0.59              |
| 24:BA:728:G:O2'   | 24:BA:729:G:C5'   | 2.50                     | 0.59              |
| 24:BA:763:G:H5'   | 27:BD:211:ARG:NH1 | 2.18                     | 0.59              |
| 24:BA:784:A:O2'   | 24:BA:785:G:H5'   | 2.03                     | 0.59              |
| 24:BA:914:C:H2'   | 24:BA:915:C:H5'   | 1.83                     | 0.59              |
| 24:BA:988:A:O3'   | 49:B2:10:LYS:NZ   | 2.36                     | 0.59              |
| 24:BA:996:A:C4'   | 41:BT:93:LYS:HG3  | 2.26                     | 0.59              |
| 24:BA:1000:A:C2   | 24:BA:1155:A:C4   | 2.91                     | 0.59              |
| 24:BA:1137:G:HO2' | 34:BM:105:GLY:HA3 | 1.67                     | 0.59              |
| 24:BA:1423:G:N3   | 24:BA:1424:G:C8   | 2.71                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1439:A:C2    | 24:BA:1553:A:C6    | 2.91                     | 0.59              |
| 24:BA:1445:C:H2'   | 24:BA:1446:C:C6    | 2.38                     | 0.59              |
| 24:BA:1521:G:C3'   | 24:BA:1522:G:H5'   | 2.33                     | 0.59              |
| 24:BA:1583:A:H5'   | 24:BA:1585:C:OP1   | 2.01                     | 0.59              |
| 24:BA:2193:G:C2    | 24:BA:2194:G:C8    | 2.90                     | 0.59              |
| 24:BA:2199:A:OP2   | 24:BA:2205:C:H5    | 1.85                     | 0.59              |
| 24:BA:2283:C:H2'   | 24:BA:2284:C:H4'   | 1.85                     | 0.59              |
| 24:BA:2284:C:P     | 52:B5:9:LEU:HG     | 2.42                     | 0.59              |
| 24:BA:2312:U:OP2   | 30:BG:86:MET:HE2   | 2.03                     | 0.59              |
| 24:BA:2355:C:C4    | 24:BA:2356:C:C4    | 2.91                     | 0.59              |
| 24:BA:2657:A:C4    | 24:BA:2665:A:N3    | 2.71                     | 0.59              |
| 24:BA:2740:A:N6    | 24:BA:2764:A:H1'   | 2.17                     | 0.59              |
| 26:BC:10:LEU:HD11  | 26:BC:32:LEU:CD2   | 2.33                     | 0.59              |
| 27:BD:28:GLU:N     | 27:BD:29:PRO:HD2   | 2.17                     | 0.59              |
| 27:BD:95:LEU:HD13  | 27:BD:96:HIS:N     | 2.18                     | 0.59              |
| 28:BE:5:LEU:HD13   | 28:BE:196:VAL:C    | 2.27                     | 0.59              |
| 28:BE:91:VAL:CG2   | 28:BE:180:ASN:HD21 | 2.15                     | 0.59              |
| 28:BE:104:VAL:HG12 | 28:BE:105:THR:H    | 1.67                     | 0.59              |
| 28:BE:113:PHE:CD1  | 28:BE:113:PHE:N    | 2.69                     | 0.59              |
| 28:BE:118:LYS:O    | 28:BE:120:TRP:N    | 2.34                     | 0.59              |
| 28:BE:119:ARG:HH22 | 28:BE:155:LYS:HD2  | 1.67                     | 0.59              |
| 28:BE:129:HIS:H    | 28:BE:129:HIS:HD2  | 1.50                     | 0.59              |
| 29:BF:146:ALA:HB3  | 29:BF:148:LEU:HD23 | 1.83                     | 0.59              |
| 30:BG:4:ASP:HB3    | 30:BG:104:GLU:OE2  | 2.02                     | 0.59              |
| 30:BG:12:TYR:CZ    | 30:BG:13:GLU:HG3   | 2.38                     | 0.59              |
| 32:BK:9:LEU:HB3    | 32:BK:13:GLY:HA3   | 1.84                     | 0.59              |
| 32:BK:33:ARG:HB2   | 32:BK:35:LEU:CD2   | 2.33                     | 0.59              |
| 33:BL:10:LEU:HD12  | 33:BL:23:VAL:HG22  | 1.81                     | 0.59              |
| 35:BN:25:LEU:HD22  | 35:BN:38:VAL:CG2   | 2.25                     | 0.59              |
| 36:BO:77:ARG:NH2   | 36:BO:117:GLU:HG3  | 2.17                     | 0.59              |
| 36:BO:94:GLU:CD    | 36:BO:94:GLU:C     | 2.70                     | 0.59              |
| 37:BP:48:GLU:O     | 37:BP:51:ARG:CG    | 2.37                     | 0.59              |
| 40:BS:82:LEU:HD22  | 40:BS:84:GLN:HB2   | 1.84                     | 0.59              |
| 41:BT:9:VAL:O      | 41:BT:12:ARG:HB2   | 2.02                     | 0.59              |
| 43:BV:25:ARG:O     | 43:BV:26:GLY:C     | 2.45                     | 0.59              |
| 44:BW:3:THR:O      | 44:BW:4:ALA:CB     | 2.50                     | 0.59              |
| 44:BW:39:ILE:HG21  | 44:BW:54:VAL:CG1   | 2.29                     | 0.59              |
| 44:BW:63:LYS:CE    | 44:BW:63:LYS:CA    | 2.81                     | 0.59              |
| 46:BY:41:LEU:O     | 46:BY:44:PHE:N     | 2.36                     | 0.59              |
| 46:BY:91:LEU:HB2   | 46:BY:131:ARG:NH1  | 2.18                     | 0.59              |
| 46:BY:118:GLN:HB2  | 46:BY:144:LEU:CD2  | 2.27                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 46:BY:166:SER:OG  | 46:BY:167:PRO:CD   | 2.49                     | 0.59              |
| 47:BZ:25:ARG:HG2  | 47:BZ:37:LEU:HA    | 1.84                     | 0.59              |
| 52:B5:22:ALA:O    | 52:B5:23:THR:HG23  | 2.02                     | 0.59              |
| 53:B6:43:THR:HG23 | 53:B6:46:VAL:HB    | 1.85                     | 0.59              |
| 55:B8:17:ILE:CD1  | 55:B8:26:ILE:HD12  | 2.16                     | 0.59              |
| 1:AA:345:C:H5'    | 1:AA:346:G:C5      | 2.38                     | 0.59              |
| 1:AA:369:C:OP2    | 1:AA:388:G:N1      | 2.35                     | 0.59              |
| 1:AA:370:C:H2'    | 1:AA:371:G:H8      | 1.68                     | 0.59              |
| 1:AA:474:G:OP1    | 18:AS:80:PHE:O     | 2.21                     | 0.59              |
| 1:AA:925:G:O2'    | 1:AA:927:G:OP1     | 2.19                     | 0.59              |
| 1:AA:978:A:N6     | 1:AA:1361:G:N2     | 2.38                     | 0.59              |
| 1:AA:1025:U:H2'   | 1:AA:1026:G:C8     | 2.37                     | 0.59              |
| 1:AA:1097:C:H2'   | 1:AA:1098:C:C6     | 2.37                     | 0.59              |
| 1:AA:1177:G:OP2   | 11:AL:93:ARG:NH2   | 2.35                     | 0.59              |
| 1:AA:1358:U:C5'   | 16:AQ:34:TYR:HA    | 2.32                     | 0.59              |
| 1:AA:1376:U:O5'   | 1:AA:1376:U:H6     | 1.85                     | 0.59              |
| 1:AA:1405:G:C4'   | 1:AA:1519:A:H4'    | 2.33                     | 0.59              |
| 1:AA:1433:A:C8    | 1:AA:1468:A:N6     | 2.71                     | 0.59              |
| 1:AA:1487:G:O2'   | 1:AA:1488:G:H5'    | 2.02                     | 0.59              |
| 1:AA:1500:A:OP1   | 1:AA:1508:G:OP1    | 2.21                     | 0.59              |
| 2:A1:39:U:H5''    | 2:A1:40:U:C5'      | 2.32                     | 0.59              |
| 4:AE:15:VAL:HG11  | 4:AE:209:ARG:CB    | 2.31                     | 0.59              |
| 4:AE:41:ILE:HD12  | 4:AE:41:ILE:N      | 2.16                     | 0.59              |
| 4:AE:113:HIS:HA   | 4:AE:116:GLU:OE1   | 2.02                     | 0.59              |
| 5:AF:64:VAL:O     | 5:AF:66:VAL:HG23   | 2.02                     | 0.59              |
| 5:AF:122:GLU:O    | 5:AF:125:GLU:HB2   | 2.02                     | 0.59              |
| 6:AG:151:LYS:CD   | 6:AG:151:LYS:H     | 2.14                     | 0.59              |
| 6:AG:194:LEU:CB   | 6:AG:196:LEU:HD11  | 2.31                     | 0.59              |
| 9:AJ:41:ARG:HG2   | 9:AJ:41:ARG:HH11   | 1.66                     | 0.59              |
| 9:AJ:50:ILE:O     | 9:AJ:54:THR:O      | 2.20                     | 0.59              |
| 9:AJ:122:HIS:HA   | 9:AJ:125:MET:SD    | 2.43                     | 0.59              |
| 10:AK:41:ARG:HB3  | 10:AK:41:ARG:HH11  | 1.64                     | 0.59              |
| 10:AK:79:VAL:O    | 10:AK:81:HIS:N     | 2.36                     | 0.59              |
| 10:AK:122:ARG:N   | 10:AK:122:ARG:HD3  | 2.17                     | 0.59              |
| 13:AN:48:ILE:HD11 | 13:AN:64:ALA:CA    | 2.32                     | 0.59              |
| 13:AN:73:MET:SD   | 13:AN:103:LEU:HD22 | 2.43                     | 0.59              |
| 13:AN:87:THR:HG22 | 13:AN:91:ARG:NH1   | 2.16                     | 0.59              |
| 15:AP:8:GLU:HG3   | 15:AP:22:ILE:CG1   | 2.25                     | 0.59              |
| 15:AP:19:LEU:HD12 | 15:AP:20:THR:H     | 1.66                     | 0.59              |
| 17:AR:70:LEU:HG   | 17:AR:78:TYR:HB2   | 1.85                     | 0.59              |
| 17:AR:70:LEU:HD11 | 17:AR:77:ARG:HH21  | 1.67                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 19:AT:22:LEU:HD12 | 19:AT:40:LYS:O      | 2.02                     | 0.59              |
| 19:AT:51:TYR:CD1  | 19:AT:51:TYR:N      | 2.61                     | 0.59              |
| 20:AU:37:VAL:HG12 | 20:AU:41:LYS:HZ2    | 1.66                     | 0.59              |
| 20:AU:39:VAL:O    | 20:AU:42:ARG:HB2    | 2.03                     | 0.59              |
| 22:AW:104:LEU:O   | 22:AW:105:SER:O     | 2.21                     | 0.59              |
| 24:BA:56:A:H2'    | 24:BA:57:C:C6       | 2.36                     | 0.59              |
| 24:BA:98:G:N2     | 24:BA:103:A:C2      | 2.70                     | 0.59              |
| 24:BA:140:A:H1'   | 24:BA:1409:C:H5'    | 1.84                     | 0.59              |
| 24:BA:145:G:C6    | 24:BA:146:G:C6      | 2.90                     | 0.59              |
| 24:BA:154:G:N2    | 24:BA:155:C:C2      | 2.70                     | 0.59              |
| 24:BA:185:U:C2    | 24:BA:212:G:N2      | 2.71                     | 0.59              |
| 24:BA:197:A:C2    | 24:BA:198:C:O4'     | 2.56                     | 0.59              |
| 24:BA:515:A:C8    | 24:BA:515:A:C3'     | 2.86                     | 0.59              |
| 24:BA:522:G:H2'   | 24:BA:523:C:H6      | 1.67                     | 0.59              |
| 24:BA:573:G:H2'   | 24:BA:574:C:C5'     | 2.33                     | 0.59              |
| 24:BA:695:G:O2'   | 24:BA:696:G:H5'     | 2.03                     | 0.59              |
| 24:BA:748:G:O6    | 43:BV:90:ARG:NH1    | 2.36                     | 0.59              |
| 24:BA:832:G:OP2   | 36:BO:35:HIS:CG     | 2.56                     | 0.59              |
| 24:BA:834:C:O2'   | 24:BA:2358:G:N3     | 2.25                     | 0.59              |
| 24:BA:974:G:C4    | 24:BA:1186:G:C6     | 2.90                     | 0.59              |
| 24:BA:1065:U:C2   | 24:BA:1066:U:O4'    | 2.55                     | 0.59              |
| 24:BA:1065:U:H3'  | 24:BA:1066:U:H5''   | 1.84                     | 0.59              |
| 24:BA:1181:C:H2'  | 24:BA:1182:A:C8     | 2.38                     | 0.59              |
| 24:BA:1214:A:H62  | 24:BA:1236:G:H21    | 1.50                     | 0.59              |
| 24:BA:1410:G:H2'  | 24:BA:1411:C:O4'    | 2.02                     | 0.59              |
| 24:BA:1457:A:O2'  | 24:BA:1458:C:H5'    | 2.02                     | 0.59              |
| 24:BA:1667:G:O6   | 24:BA:1992:G:P      | 2.60                     | 0.59              |
| 24:BA:1771:C:C2   | 24:BA:1772:G:C8     | 2.90                     | 0.59              |
| 24:BA:1789:A:C3'  | 27:BD:213:ARG:HH12  | 2.15                     | 0.59              |
| 24:BA:1826:G:C2'  | 24:BA:1827:C:H5'    | 2.33                     | 0.59              |
| 24:BA:1890:A:H3'  | 24:BA:1891:G:C8     | 2.35                     | 0.59              |
| 24:BA:1908:C:N3   | 24:BA:1923:U:O2     | 2.36                     | 0.59              |
| 24:BA:2046:G:H2'  | 24:BA:2047:U:C5     | 2.38                     | 0.59              |
| 24:BA:2228:G:C8   | 24:BA:2229:C:C5     | 2.90                     | 0.59              |
| 24:BA:2335:A:H2'  | 24:BA:2337:G:C8     | 2.37                     | 0.59              |
| 24:BA:2623:G:H21  | 51:B4:22:HIS:HE1    | 1.46                     | 0.59              |
| 24:BA:2712:U:H2'  | 24:BA:2712(A):A:C5' | 2.18                     | 0.59              |
| 24:BA:2742:C:C5'  | 55:B8:35:ARG:NH1    | 2.65                     | 0.59              |
| 24:BA:2882:A:C2'  | 24:BA:2883:A:O5'    | 2.50                     | 0.59              |
| 25:BB:60:C:O2     | 25:BB:60:C:C2'      | 2.51                     | 0.59              |
| 25:BB:73:A:O2'    | 25:BB:74:U:O5'      | 2.21                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 26:BC:22:ILE:HG23 | 26:BC:189:ILE:CD1  | 2.32                     | 0.59              |
| 27:BD:34:VAL:O    | 27:BD:36:PRO:HD2   | 2.03                     | 0.59              |
| 27:BD:61:LEU:C    | 27:BD:62:TYR:CG    | 2.75                     | 0.59              |
| 27:BD:143:HIS:NE2 | 27:BD:192:THR:CG2  | 2.65                     | 0.59              |
| 28:BE:50:GLY:H    | 28:BE:76:ARG:CG    | 2.10                     | 0.59              |
| 29:BF:39:TRP:CZ3  | 29:BF:43:LYS:HB2   | 2.37                     | 0.59              |
| 30:BG:119:GLY:HA3 | 30:BG:180:PHE:CD2  | 2.37                     | 0.59              |
| 31:BH:90:LYS:HE2  | 31:BH:159:GLU:CD   | 2.28                     | 0.59              |
| 34:BM:13:TRP:HB2  | 34:BM:136:GLU:CD   | 2.28                     | 0.59              |
| 34:BM:28:THR:C    | 34:BM:31:ALA:HB3   | 2.26                     | 0.59              |
| 34:BM:51:PHE:CD2  | 34:BM:119:ARG:HB2  | 2.38                     | 0.59              |
| 35:BN:63:VAL:CG2  | 35:BN:82:ASN:H     | 2.15                     | 0.59              |
| 36:BO:16:ARG:HD3  | 36:BO:19:VAL:H     | 1.66                     | 0.59              |
| 36:BO:36:LYS:HZ2  | 36:BO:42:SER:CB    | 2.15                     | 0.59              |
| 36:BO:81:GLN:HE22 | 36:BO:123:LEU:HD21 | 1.66                     | 0.59              |
| 37:BP:77:LYS:HB2  | 37:BP:78:PRO:CD    | 2.32                     | 0.59              |
| 39:BR:66:ALA:O    | 39:BR:68:GLN:N     | 2.36                     | 0.59              |
| 41:BT:65:ILE:HD13 | 41:BT:65:ILE:H     | 1.65                     | 0.59              |
| 42:BU:93:GLU:OE2  | 42:BU:95:LEU:HD22  | 2.01                     | 0.59              |
| 47:BZ:44:ARG:CG   | 47:BZ:77:ARG:HG3   | 2.33                     | 0.59              |
| 49:B2:44:ARG:O    | 49:B2:45:GLY:C     | 2.45                     | 0.59              |
| 49:B2:45:GLY:C    | 49:B2:48:GLU:HG2   | 2.26                     | 0.59              |
| 49:B2:55:ARG:HH21 | 49:B2:55:ARG:HG3   | 1.67                     | 0.59              |
| 51:B4:37:LYS:HD2  | 51:B4:37:LYS:N     | 2.18                     | 0.59              |
| 55:B8:11:CYS:CB   | 55:B8:32:HIS:NE2   | 2.64                     | 0.59              |
| 1:AA:221:C:H2'    | 1:AA:222:U:C6      | 2.37                     | 0.59              |
| 1:AA:244:U:O4     | 1:AA:893:C:N3      | 2.36                     | 0.59              |
| 1:AA:355:C:N3     | 1:AA:356:A:N7      | 2.51                     | 0.59              |
| 1:AA:555:C:H5''   | 1:AA:556:C:OP2     | 2.02                     | 0.59              |
| 1:AA:619:U:O2     | 6:AG:133:VAL:HG13  | 2.03                     | 0.59              |
| 1:AA:816:A:C2'    | 1:AA:817:C:OP2     | 2.49                     | 0.59              |
| 1:AA:859:A:O2'    | 1:AA:860:A:C5'     | 2.50                     | 0.59              |
| 1:AA:886:G:HO2'   | 1:AA:887:G:H5'     | 1.67                     | 0.59              |
| 1:AA:979:C:P      | 1:AA:981:U:O4      | 2.60                     | 0.59              |
| 1:AA:1269:A:H8    | 1:AA:1270:C:C1'    | 2.15                     | 0.59              |
| 1:AA:1443:G:OP1   | 1:AA:1446:A:OP1    | 2.21                     | 0.59              |
| 1:AA:1490:C:H2'   | 1:AA:1491:G:C5'    | 2.32                     | 0.59              |
| 2:A1:12:U:H5'     | 2:A1:13:U:OP2      | 2.02                     | 0.59              |
| 3:AC:74:C:C2'     | 3:AC:75:C:H5''     | 2.33                     | 0.59              |
| 3:AD:8:U:O4'      | 3:AD:48:C:H4'      | 2.03                     | 0.59              |
| 3:AB:74:C:C2'     | 3:AB:75:C:H5'      | 2.32                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:AE:46:LYS:HA    | 4:AE:49:GLU:OE1   | 2.03                     | 0.59              |
| 4:AE:152:PHE:CD1  | 4:AE:152:PHE:C    | 2.81                     | 0.59              |
| 5:AF:42:LEU:HD12  | 5:AF:94:LEU:CD1   | 2.32                     | 0.59              |
| 5:AF:43:LEU:CD1   | 5:AF:55:VAL:HG11  | 2.32                     | 0.59              |
| 6:AG:52:SER:O     | 6:AG:53:ASP:C     | 2.45                     | 0.59              |
| 7:AH:12:LEU:HD13  | 7:AH:12:LEU:O     | 2.03                     | 0.59              |
| 7:AH:41:VAL:HG21  | 7:AH:113:ALA:HB2  | 1.84                     | 0.59              |
| 7:AH:43:LEU:O     | 7:AH:65:ASN:ND2   | 2.36                     | 0.59              |
| 7:AH:48:ALA:HB3   | 7:AH:53:LEU:CB    | 2.26                     | 0.59              |
| 7:AH:100:VAL:C    | 7:AH:101:ILE:HD13 | 2.27                     | 0.59              |
| 7:AH:140:ARG:HB3  | 7:AH:140:ARG:HH11 | 1.67                     | 0.59              |
| 8:AI:80:ARG:O     | 8:AI:81:ILE:C     | 2.45                     | 0.59              |
| 10:AK:40:ALA:HA   | 10:AK:43:GLY:O    | 2.01                     | 0.59              |
| 11:AL:28:VAL:O    | 11:AL:29:ASN:C    | 2.44                     | 0.59              |
| 13:AN:18:ARG:NH2  | 13:AN:36:ASP:O    | 2.35                     | 0.59              |
| 13:AN:26:ASN:O    | 13:AN:27:ASN:HB2  | 2.02                     | 0.59              |
| 14:AO:110:VAL:O   | 14:AO:113:ARG:HB2 | 2.02                     | 0.59              |
| 20:AU:75:ILE:CG2  | 20:AU:76:LEU:HD22 | 2.33                     | 0.59              |
| 21:AV:2:PRO:O     | 21:AV:3:ARG:O     | 2.19                     | 0.59              |
| 21:AV:19:VAL:HG22 | 21:AV:43:GLU:CD   | 2.27                     | 0.59              |
| 24:BA:36:G:H4'    | 24:BA:451:C:O2    | 2.03                     | 0.59              |
| 24:BA:245:G:H1    | 24:BA:253:C:N4    | 2.00                     | 0.59              |
| 24:BA:344:G:H2'   | 24:BA:345:A:C1'   | 2.33                     | 0.59              |
| 24:BA:412:A:H2'   | 24:BA:413:C:O4'   | 2.01                     | 0.59              |
| 24:BA:476:G:N1    | 24:BA:479:A:OP2   | 2.30                     | 0.59              |
| 24:BA:557:U:O3'   | 34:BM:112:LEU:CG  | 2.50                     | 0.59              |
| 24:BA:648:G:H2'   | 24:BA:649:G:H8    | 1.65                     | 0.59              |
| 24:BA:779:U:H3'   | 24:BA:780:G:C8    | 2.37                     | 0.59              |
| 24:BA:1101:U:H2'  | 24:BA:1102:C:C6   | 2.38                     | 0.59              |
| 24:BA:1122:G:C2   | 24:BA:1123:C:C5   | 2.90                     | 0.59              |
| 24:BA:1264:G:O6   | 24:BA:1265:A:C5   | 2.56                     | 0.59              |
| 24:BA:1427:A:OP1  | 24:BA:1427:A:H8   | 1.85                     | 0.59              |
| 24:BA:1472:A:N6   | 24:BA:1518:C:N4   | 2.51                     | 0.59              |
| 24:BA:1669:A:H5'' | 24:BA:2550:G:P    | 2.42                     | 0.59              |
| 24:BA:1675:C:O2   | 24:BA:1675:C:H2'  | 2.02                     | 0.59              |
| 24:BA:1944:U:O2   | 24:BA:1955:U:C6   | 2.56                     | 0.59              |
| 24:BA:2081:C:C2   | 24:BA:2082:A:C8   | 2.90                     | 0.59              |
| 24:BA:2093:G:H2'  | 24:BA:2094:G:C5'  | 2.32                     | 0.59              |
| 24:BA:2144:U:OP2  | 24:BA:2144:U:C6   | 2.56                     | 0.59              |
| 24:BA:2165:G:C8   | 24:BA:2165:G:OP2  | 2.56                     | 0.59              |
| 24:BA:2216:G:H8   | 24:BA:2216:G:O5'  | 1.85                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2227:A:C5'   | 27:BD:260:ARG:HD2  | 2.33                     | 0.59              |
| 24:BA:2230:G:H2'   | 24:BA:2231:C:C6    | 2.37                     | 0.59              |
| 24:BA:2520:C:H5    | 24:BA:2567:G:C4    | 2.21                     | 0.59              |
| 24:BA:2543:G:C5    | 24:BA:2544:G:C6    | 2.90                     | 0.59              |
| 24:BA:2567:G:C5    | 24:BA:2568:C:N4    | 2.71                     | 0.59              |
| 24:BA:2838:G:O2'   | 38:BQ:45:ARG:NH1   | 2.34                     | 0.59              |
| 25:BB:61:G:H2'     | 25:BB:62:C:C6      | 2.38                     | 0.59              |
| 25:BB:97:G:C2'     | 25:BB:98:G:H5'     | 2.31                     | 0.59              |
| 26:BC:21:THR:HG22  | 26:BC:225:ASN:HD22 | 1.67                     | 0.59              |
| 26:BC:210:ARG:HB3  | 26:BC:210:ARG:CZ   | 2.33                     | 0.59              |
| 27:BD:50:THR:C     | 27:BD:51:VAL:CG2   | 2.76                     | 0.59              |
| 27:BD:60:ARG:HB3   | 27:BD:62:TYR:CE2   | 2.38                     | 0.59              |
| 28:BE:53:PRO:HD2   | 28:BE:75:VAL:HG13  | 1.85                     | 0.59              |
| 29:BF:34:TRP:O     | 29:BF:37:VAL:N     | 2.36                     | 0.59              |
| 29:BF:36:VAL:CG1   | 29:BF:37:VAL:N     | 2.64                     | 0.59              |
| 29:BF:155:LEU:HD22 | 29:BF:157:VAL:HG12 | 1.84                     | 0.59              |
| 30:BG:131:TYR:CZ   | 30:BG:132:ASN:HA   | 2.38                     | 0.59              |
| 31:BH:33:LEU:CD2   | 31:BH:35:VAL:HG13  | 2.32                     | 0.59              |
| 31:BH:156:ALA:HB1  | 31:BH:172:LYS:NZ   | 2.17                     | 0.59              |
| 32:BK:25:TYR:C     | 32:BK:30:LEU:HD23  | 2.28                     | 0.59              |
| 34:BM:7:LYS:HZ2    | 34:BM:10:GLU:H     | 1.49                     | 0.59              |
| 35:BN:47:ILE:O     | 35:BN:48:PRO:C     | 2.45                     | 0.59              |
| 35:BN:109:LYS:O    | 35:BN:111:PHE:N    | 2.35                     | 0.59              |
| 36:BO:46:LYS:HA    | 36:BO:49:ARG:NH1   | 2.17                     | 0.59              |
| 38:BQ:38:VAL:HG23  | 38:BQ:110:PRO:O    | 2.03                     | 0.59              |
| 38:BQ:53:HIS:C     | 38:BQ:56:LYS:HG3   | 2.27                     | 0.59              |
| 38:BQ:61:HIS:C     | 38:BQ:64:ARG:HH11  | 2.10                     | 0.59              |
| 40:BS:33:LYS:HD3   | 40:BS:47:GLY:CA    | 2.32                     | 0.59              |
| 40:BS:103:ARG:O    | 40:BS:107:ASP:CG   | 2.46                     | 0.59              |
| 40:BS:105:LEU:O    | 40:BS:107:ASP:N    | 2.36                     | 0.59              |
| 41:BT:97:ASP:CB    | 41:BT:101:ARG:NH2  | 2.66                     | 0.59              |
| 45:BX:46:LYS:N     | 45:BX:57:GLN:HA    | 2.18                     | 0.59              |
| 49:B2:40:THR:HG21  | 49:B2:42:ALA:HB3   | 1.85                     | 0.59              |
| 50:B3:47:GLN:CA    | 50:B3:52:THR:OG1   | 2.51                     | 0.59              |
| 51:B4:13:LYS:HB3   | 51:B4:16:ARG:HH11  | 1.66                     | 0.59              |
| 54:B7:36:LYS:HG3   | 54:B7:40:GLU:OE1   | 2.03                     | 0.59              |
| 55:B8:3:VAL:O      | 55:B8:5:ALA:N      | 2.35                     | 0.59              |
| 1:AA:5:U:C5        | 6:AG:86:LYS:HD3    | 2.38                     | 0.59              |
| 1:AA:87:A:H62      | 1:AA:88:C:N4       | 2.00                     | 0.59              |
| 1:AA:232:G:C5      | 1:AA:233:C:N4      | 2.71                     | 0.59              |
| 1:AA:251:G:H5'     | 1:AA:252:U:OP1     | 2.01                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:597:G:C5     | 1:AA:644:G:N1     | 2.71                     | 0.59              |
| 1:AA:969:A:OP1    | 1:AA:969:A:O4'    | 2.21                     | 0.59              |
| 1:AA:1085:U:O2    | 1:AA:1094:G:O6    | 2.21                     | 0.59              |
| 1:AA:1129:C:C5    | 1:AA:1139:G:N7    | 2.71                     | 0.59              |
| 1:AA:1269:A:H8    | 1:AA:1270:C:H1'   | 1.68                     | 0.59              |
| 1:AA:1311:G:OP2   | 21:AV:2:PRO:N     | 2.36                     | 0.59              |
| 2:A1:44:U:C2      | 2:A1:45:U:C5      | 2.90                     | 0.59              |
| 3:AC:21:A:N6      | 3:AC:46:G:C2      | 2.70                     | 0.59              |
| 3:AD:18:G:C2      | 3:AD:19:G:H1'     | 2.36                     | 0.59              |
| 3:AD:59:U:O4'     | 3:AD:59:U:OP2     | 2.21                     | 0.59              |
| 3:AD:60:U:H2'     | 3:AD:61:C:OP1     | 2.03                     | 0.59              |
| 3:AB:8:U:O4       | 3:AB:14:A:H5''    | 2.03                     | 0.59              |
| 4:AE:10:LEU:O     | 4:AE:11:LEU:O     | 2.21                     | 0.59              |
| 4:AE:185:ILE:HB   | 4:AE:199:TYR:HB2  | 1.85                     | 0.59              |
| 5:AF:17:ASP:OD2   | 5:AF:18:TRP:CZ3   | 2.56                     | 0.59              |
| 6:AG:57:ARG:HH22  | 7:AH:107:ARG:NE   | 2.01                     | 0.59              |
| 6:AG:170:VAL:HG12 | 6:AG:171:GLY:H    | 1.68                     | 0.59              |
| 7:AH:11:ILE:CB    | 7:AH:31:LEU:HD22  | 2.31                     | 0.59              |
| 9:AJ:77:SER:CA    | 9:AJ:156:TRP:HZ2  | 2.16                     | 0.59              |
| 10:AK:4:ASP:O     | 10:AK:5:PRO:C     | 2.45                     | 0.59              |
| 10:AK:38:ILE:HA   | 10:AK:41:ARG:HB2  | 1.85                     | 0.59              |
| 10:AK:88:LYS:HB2  | 10:AK:88:LYS:HZ3  | 1.68                     | 0.59              |
| 12:AM:16:LEU:HB3  | 12:AM:70:ARG:CG   | 2.32                     | 0.59              |
| 13:AN:19:ALA:N    | 13:AN:80:VAL:CG2  | 2.65                     | 0.59              |
| 14:AO:60:LEU:HD11 | 14:AO:64:TYR:HB3  | 1.85                     | 0.59              |
| 15:AP:78:ILE:O    | 15:AP:81:LEU:HD22 | 2.03                     | 0.59              |
| 16:AQ:23:ARG:C    | 16:AQ:33:VAL:HG11 | 2.28                     | 0.59              |
| 20:AU:62:GLU:O    | 20:AU:63:GLN:C    | 2.45                     | 0.59              |
| 24:BA:77:C:H2'    | 24:BA:78:A:H8     | 1.68                     | 0.59              |
| 24:BA:83:G:N1     | 24:BA:102:G:O2'   | 2.35                     | 0.59              |
| 24:BA:126:A:H5''  | 53:B6:18:PHE:CD1  | 2.37                     | 0.59              |
| 24:BA:150:C:O2    | 24:BA:151:C:C5    | 2.56                     | 0.59              |
| 24:BA:175:G:H21   | 24:BA:176:G:H1'   | 1.66                     | 0.59              |
| 24:BA:223:A:N7    | 24:BA:408:G:H1'   | 2.18                     | 0.59              |
| 24:BA:443:A:O4'   | 24:BA:1201:C:O4'  | 2.21                     | 0.59              |
| 24:BA:714:U:OP2   | 24:BA:714:U:H6    | 1.86                     | 0.59              |
| 24:BA:728:G:C1'   | 24:BA:729:G:C8    | 2.86                     | 0.59              |
| 24:BA:754:C:H2'   | 24:BA:755:C:H5'   | 1.85                     | 0.59              |
| 24:BA:832:G:OP1   | 36:BO:35:HIS:HB2  | 2.02                     | 0.59              |
| 24:BA:914:C:C5    | 24:BA:915:C:C5    | 2.91                     | 0.59              |
| 24:BA:1184:G:O2'  | 24:BA:1185:C:H5'  | 2.02                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1240:U:O2    | 24:BA:1240:U:H2'   | 2.02                     | 0.59              |
| 24:BA:1264:G:N7    | 24:BA:1265:A:C8    | 2.71                     | 0.59              |
| 24:BA:1267:U:OP2   | 24:BA:2012:G:O6    | 2.21                     | 0.59              |
| 24:BA:1275:A:N6    | 24:BA:1295:C:O2'   | 2.35                     | 0.59              |
| 24:BA:1357:U:C4    | 24:BA:1358:G:C2    | 2.91                     | 0.59              |
| 24:BA:1764:G:N2    | 24:BA:1989:G:H1'   | 2.17                     | 0.59              |
| 24:BA:1775:U:C6    | 27:BD:208:LYS:CD   | 2.85                     | 0.59              |
| 24:BA:1819:A:OP1   | 27:BD:157:ARG:HA   | 2.01                     | 0.59              |
| 24:BA:2025:C:H2'   | 24:BA:2026:C:C5    | 2.37                     | 0.59              |
| 24:BA:2075:U:H5    | 24:BA:2435:A:N1    | 2.01                     | 0.59              |
| 24:BA:2124:G:H21   | 26:BC:218:MET:N    | 2.01                     | 0.59              |
| 24:BA:2291:U:H2'   | 24:BA:2292:C:H6    | 1.64                     | 0.59              |
| 24:BA:2396:G:O2'   | 24:BA:2397:G:H5'   | 2.02                     | 0.59              |
| 24:BA:2469:A:C5    | 24:BA:2470:G:C8    | 2.91                     | 0.59              |
| 24:BA:2765:A:N3    | 24:BA:2765:A:C2'   | 2.55                     | 0.59              |
| 24:BA:2772:C:H2'   | 24:BA:2772:C:O2    | 2.03                     | 0.59              |
| 24:BA:2774:C:H3'   | 24:BA:2775:A:H8    | 1.67                     | 0.59              |
| 24:BA:2828:C:N4    | 24:BA:2829:C:H41   | 2.01                     | 0.59              |
| 24:BA:2844:G:H3'   | 24:BA:2845:G:C8    | 2.38                     | 0.59              |
| 24:BA:2845:G:H2'   | 24:BA:2846:G:H8    | 1.68                     | 0.59              |
| 25:BB:4:C:N4       | 25:BB:5:C:C4       | 2.71                     | 0.59              |
| 26:BC:39:GLU:O     | 26:BC:178:ALA:HB2  | 2.02                     | 0.59              |
| 26:BC:77:ILE:CG2   | 26:BC:123:VAL:HG22 | 2.29                     | 0.59              |
| 29:BF:7:TYR:H      | 29:BF:20:LEU:CD2   | 2.15                     | 0.59              |
| 29:BF:56:GLU:C     | 29:BF:60:SER:OG    | 2.46                     | 0.59              |
| 29:BF:122:LYS:CE   | 29:BF:192:LEU:HB3  | 2.33                     | 0.59              |
| 29:BF:189:THR:O    | 29:BF:190:GLU:C    | 2.46                     | 0.59              |
| 30:BG:39:ILE:HA    | 30:BG:157:ILE:HG13 | 1.85                     | 0.59              |
| 30:BG:110:ALA:HB1  | 30:BG:139:LEU:CD2  | 2.32                     | 0.59              |
| 30:BG:116:ASP:CB   | 30:BG:118:ARG:HH21 | 2.12                     | 0.59              |
| 30:BG:147:ASP:O    | 30:BG:148:MET:HB2  | 2.02                     | 0.59              |
| 30:BG:166:ASP:O    | 30:BG:168:GLU:N    | 2.36                     | 0.59              |
| 30:BG:170:ARG:O    | 30:BG:171:ALA:C    | 2.46                     | 0.59              |
| 31:BH:76:VAL:O     | 31:BH:79:VAL:HG22  | 2.02                     | 0.59              |
| 31:BH:163:TYR:O    | 31:BH:164:TYR:O    | 2.21                     | 0.59              |
| 32:BK:69:LYS:HA    | 32:BK:138:ILE:CD1  | 2.33                     | 0.59              |
| 33:BL:21:PRO:HG2   | 33:BL:22:PRO:CD    | 2.32                     | 0.59              |
| 33:BL:79:ARG:HG2   | 33:BL:136:VAL:CG2  | 2.32                     | 0.59              |
| 34:BM:27:ALA:O     | 34:BM:29:LYS:N     | 2.36                     | 0.59              |
| 34:BM:97:ARG:O     | 34:BM:100:GLU:CB   | 2.51                     | 0.59              |
| 34:BM:107:LEU:HD23 | 34:BM:108:PRO:N    | 2.16                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 34:BM:139:GLU:OE2 | 34:BM:139:GLU:C    | 2.45                     | 0.59              |
| 35:BN:39:ILE:HD13 | 35:BN:39:ILE:H     | 1.67                     | 0.59              |
| 36:BO:90:ARG:HA   | 36:BO:125:VAL:HG22 | 1.85                     | 0.59              |
| 37:BP:80:GLU:N    | 37:BP:80:GLU:OE1   | 2.36                     | 0.59              |
| 40:BS:44:ASP:C    | 40:BS:46:GLU:N     | 2.59                     | 0.59              |
| 40:BS:82:LEU:HD22 | 40:BS:84:GLN:H     | 1.68                     | 0.59              |
| 43:BV:31:GLU:N    | 43:BV:31:GLU:OE1   | 2.35                     | 0.59              |
| 44:BW:85:PRO:HB2  | 44:BW:87:GLN:HE21  | 1.68                     | 0.59              |
| 45:BX:7:VAL:O     | 45:BX:8:LYS:HD2    | 2.03                     | 0.59              |
| 45:BX:45:VAL:C    | 45:BX:57:GLN:HG2   | 2.28                     | 0.59              |
| 46:BY:7:ALA:HB1   | 46:BY:9:TYR:O      | 2.02                     | 0.59              |
| 46:BY:96:VAL:CG1  | 46:BY:128:VAL:HG22 | 2.32                     | 0.59              |
| 47:BZ:76:GLY:N    | 47:BZ:78:TYR:HE1   | 2.01                     | 0.59              |
| 48:B1:14:VAL:HA   | 48:B1:17:GLU:OE2   | 2.01                     | 0.59              |
| 48:B1:44:LYS:HG3  | 48:B1:48:LEU:CD2   | 2.28                     | 0.59              |
| 1:AA:173:U:H5''   | 1:AA:197:A:H1'     | 1.82                     | 0.59              |
| 1:AA:508:C:H4'    | 1:AA:509:A:O5'     | 2.03                     | 0.59              |
| 1:AA:692:U:O4     | 13:AN:53:SER:N     | 2.36                     | 0.59              |
| 1:AA:921:U:C2     | 1:AA:922:G:C8      | 2.90                     | 0.59              |
| 1:AA:1074:G:H2'   | 1:AA:1075:C:O4'    | 2.03                     | 0.59              |
| 1:AA:1129:C:C1'   | 1:AA:1130:A:N7     | 2.65                     | 0.59              |
| 1:AA:1262:C:H2'   | 1:AA:1263:C:H6     | 1.65                     | 0.59              |
| 1:AA:1361:G:N7    | 1:AA:1362:C:H5     | 2.01                     | 0.59              |
| 1:AA:1399:C:H4'   | 1:AA:1400:C:O5'    | 2.03                     | 0.59              |
| 1:AA:1507:A:HO2'  | 1:AA:1508:G:H5'    | 1.67                     | 0.59              |
| 4:AE:58:ILE:HG22  | 4:AE:61:LEU:HD22   | 1.83                     | 0.59              |
| 4:AE:58:ILE:HG22  | 4:AE:221:LEU:HD12  | 1.85                     | 0.59              |
| 4:AE:189:ASP:OD2  | 4:AE:205:ASP:OD1   | 2.20                     | 0.59              |
| 5:AF:114:PRO:HD3  | 5:AF:183:ASP:OD1   | 2.03                     | 0.59              |
| 5:AF:150:LYS:CB   | 5:AF:173:VAL:HG21  | 2.22                     | 0.59              |
| 6:AG:82:ALA:HB1   | 6:AG:89:THR:HA     | 1.84                     | 0.59              |
| 7:AH:61:TYR:HA    | 7:AH:64:ARG:HG2    | 1.85                     | 0.59              |
| 7:AH:76:ILE:HG21  | 7:AH:142:LEU:CD1   | 2.33                     | 0.59              |
| 7:AH:106:PRO:HB3  | 7:AH:120:THR:HG21  | 1.85                     | 0.59              |
| 9:AJ:65:ALA:HB2   | 9:AJ:124:LEU:HD23  | 1.83                     | 0.59              |
| 9:AJ:86:GLN:HB2   | 9:AJ:148:ASN:CG    | 2.28                     | 0.59              |
| 10:AK:17:THR:HG21 | 10:AK:80:ILE:HG21  | 1.84                     | 0.59              |
| 10:AK:39:LEU:HD12 | 10:AK:45:ILE:HG22  | 1.85                     | 0.59              |
| 13:AN:86:GLY:CA   | 13:AN:112:THR:HG23 | 2.33                     | 0.59              |
| 13:AN:112:THR:N   | 13:AN:113:PRO:CD   | 2.64                     | 0.59              |
| 15:AP:3:ARG:HG2   | 15:AP:7:VAL:HA     | 1.84                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 15:AP:38:GLY:O    | 15:AP:39:ILE:HG23 | 2.03                     | 0.59              |
| 17:AR:27:VAL:O    | 17:AR:28:GLN:C    | 2.45                     | 0.59              |
| 24:BA:7:G:H2'     | 24:BA:8:A:H8      | 1.67                     | 0.59              |
| 24:BA:31:C:H5''   | 24:BA:1239:G:OP1  | 2.02                     | 0.59              |
| 24:BA:66:C:H2'    | 24:BA:67:U:H5'    | 1.83                     | 0.59              |
| 24:BA:293:U:H2'   | 24:BA:294:A:C8    | 2.36                     | 0.59              |
| 24:BA:386:G:H4'   | 24:BA:387:U:C6    | 2.38                     | 0.59              |
| 24:BA:411:G:N2    | 24:BA:415:A:H61   | 2.00                     | 0.59              |
| 24:BA:733:G:N7    | 24:BA:761:A:C6    | 2.70                     | 0.59              |
| 24:BA:818:G:OP2   | 24:BA:1187:G:O6   | 2.20                     | 0.59              |
| 24:BA:827:U:OP1   | 24:BA:2429:G:OP2  | 2.20                     | 0.59              |
| 24:BA:1050:A:H2'  | 24:BA:1051:G:O4'  | 2.02                     | 0.59              |
| 24:BA:1205:U:O2'  | 24:BA:1206:G:O6   | 2.20                     | 0.59              |
| 24:BA:1248:G:N1   | 29:BF:52:LYS:NZ   | 2.50                     | 0.59              |
| 24:BA:1263:U:H5'' | 51:B4:10:LYS:HZ3  | 1.65                     | 0.59              |
| 24:BA:1296:G:H2'  | 24:BA:1297:C:C6   | 2.36                     | 0.59              |
| 24:BA:1422:G:N3   | 24:BA:1423:G:C8   | 2.70                     | 0.59              |
| 24:BA:1654:A:N3   | 24:BA:1654:A:H2'  | 2.18                     | 0.59              |
| 24:BA:1667:G:O6   | 24:BA:1992:G:OP1  | 2.20                     | 0.59              |
| 24:BA:1684:C:C4   | 24:BA:1705:G:N2   | 2.71                     | 0.59              |
| 24:BA:1913:A:N1   | 24:BA:1918:A:N7   | 2.51                     | 0.59              |
| 24:BA:2018:G:H3'  | 24:BA:2018:G:P    | 2.43                     | 0.59              |
| 24:BA:2049:G:N2   | 24:BA:2620:C:N1   | 2.51                     | 0.59              |
| 24:BA:2135:A:C5'  | 24:BA:2136:C:C5   | 2.86                     | 0.59              |
| 24:BA:2232:U:C2'  | 24:BA:2233:U:H5'  | 2.33                     | 0.59              |
| 24:BA:2269:A:H2'  | 24:BA:2270:G:O4'  | 2.03                     | 0.59              |
| 24:BA:2277:G:H3'  | 24:BA:2278:A:C5'  | 2.25                     | 0.59              |
| 24:BA:2401:U:OP2  | 24:BA:2402:C:N4   | 2.35                     | 0.59              |
| 24:BA:2521:C:C2'  | 24:BA:2522:U:O5'  | 2.51                     | 0.59              |
| 24:BA:2524:G:C6   | 24:BA:2525:G:C4   | 2.91                     | 0.59              |
| 24:BA:2574:G:O2'  | 28:BE:143:ASN:HB3 | 2.03                     | 0.59              |
| 24:BA:2642:G:H2'  | 24:BA:2643:G:H8   | 1.67                     | 0.59              |
| 24:BA:2742:C:H2'  | 24:BA:2742:C:O2   | 2.02                     | 0.59              |
| 24:BA:2778:A:H4'  | 24:BA:2779:U:OP2  | 2.02                     | 0.59              |
| 24:BA:2861:G:H2'  | 24:BA:2862:G:H8   | 1.67                     | 0.59              |
| 24:BA:2879:C:H5'  | 24:BA:2880:C:OP1  | 2.02                     | 0.59              |
| 25:BB:32:C:H3'    | 25:BB:33:G:H8     | 1.68                     | 0.59              |
| 25:BB:69:G:C8     | 25:BB:69:G:OP2    | 2.56                     | 0.59              |
| 27:BD:59:LYS:O    | 27:BD:60:ARG:HG2  | 2.01                     | 0.59              |
| 29:BF:106:ARG:HG3 | 29:BF:107:LYS:HG3 | 1.85                     | 0.59              |
| 30:BG:44:GLY:HA3  | 30:BG:72:ARG:HG2  | 1.84                     | 0.59              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 31:BH:6:ARG:HD3   | 31:BH:69:ARG:CD   | 2.33                     | 0.59              |
| 31:BH:45:VAL:HG13 | 31:BH:50:VAL:CG2  | 2.32                     | 0.59              |
| 31:BH:95:ARG:HB2  | 31:BH:106:THR:HB  | 1.84                     | 0.59              |
| 31:BH:161:GLY:C   | 31:BH:163:TYR:CE1 | 2.81                     | 0.59              |
| 32:BK:21:VAL:HG11 | 32:BK:30:LEU:CG   | 2.33                     | 0.59              |
| 33:BL:95:LYS:HZ2  | 46:BY:112:ARG:HD2 | 1.68                     | 0.59              |
| 34:BM:16:ILE:CB   | 34:BM:54:VAL:HG23 | 2.29                     | 0.59              |
| 34:BM:34:LEU:HA   | 34:BM:49:GLY:C    | 2.28                     | 0.59              |
| 36:BO:49:ARG:CA   | 36:BO:52:GLU:HG2  | 2.33                     | 0.59              |
| 36:BO:55:ARG:HH21 | 36:BO:55:ARG:CA   | 2.16                     | 0.59              |
| 37:BP:12:GLN:NE2  | 37:BP:12:GLN:C    | 2.61                     | 0.59              |
| 37:BP:111:GLU:OE1 | 37:BP:112:GLU:HG3 | 2.02                     | 0.59              |
| 38:BQ:103:ARG:HB2 | 38:BQ:108:GLY:CA  | 2.32                     | 0.59              |
| 39:BR:57:LYS:NZ   | 39:BR:62:LYS:HG3  | 2.17                     | 0.59              |
| 39:BR:71:ARG:N    | 39:BR:104:GLY:HA2 | 2.17                     | 0.59              |
| 39:BR:105:ALA:O   | 39:BR:108:GLY:N   | 2.36                     | 0.59              |
| 40:BS:64:ARG:CZ   | 40:BS:77:PRO:CB   | 2.80                     | 0.59              |
| 41:BT:54:LYS:HE2  | 41:BT:54:LYS:CA   | 2.32                     | 0.59              |
| 41:BT:99:ALA:HA   | 41:BT:106:PHE:CD1 | 2.37                     | 0.59              |
| 42:BU:66:ARG:HE   | 42:BU:95:LEU:CB   | 2.12                     | 0.59              |
| 46:BY:43:GLU:HA   | 46:BY:46:LYS:HD2  | 1.84                     | 0.59              |
| 47:BZ:53:MET:SD   | 47:BZ:59:LEU:HD23 | 2.43                     | 0.59              |
| 49:B2:4:LEU:CD2   | 49:B2:56:VAL:HG23 | 2.27                     | 0.59              |
| 49:B2:23:LEU:CB   | 49:B2:28:LEU:HD12 | 2.32                     | 0.59              |
| 1:AA:135:C:C2     | 18:AS:1:MET:HG2   | 2.38                     | 0.58              |
| 1:AA:173:U:H4'    | 1:AA:197:A:C4     | 2.38                     | 0.58              |
| 1:AA:189:U:C2     | 19:AT:72:ARG:NH1  | 2.70                     | 0.58              |
| 1:AA:230:G:N2     | 1:AA:231:G:H1'    | 2.18                     | 0.58              |
| 1:AA:267:C:N4     | 1:AA:268:C:H41    | 1.99                     | 0.58              |
| 1:AA:278:G:H1'    | 1:AA:282:A:H1'    | 1.85                     | 0.58              |
| 1:AA:362:G:H3'    | 14:AO:34:ARG:NH2  | 2.18                     | 0.58              |
| 1:AA:439:A:H1'    | 1:AA:496:A:N1     | 2.18                     | 0.58              |
| 1:AA:445:G:O2'    | 1:AA:446:G:H5'    | 2.03                     | 0.58              |
| 1:AA:918:A:HO2'   | 1:AA:919:A:P      | 2.26                     | 0.58              |
| 1:AA:926:G:N2     | 2:A1:39:U:P       | 2.76                     | 0.58              |
| 1:AA:953:G:C6     | 1:AA:1229:A:C6    | 2.91                     | 0.58              |
| 1:AA:1044:A:C2'   | 1:AA:1045:C:H5'   | 2.31                     | 0.58              |
| 1:AA:1053:G:H4'   | 1:AA:1054:C:O3'   | 2.02                     | 0.58              |
| 1:AA:1064:G:C1'   | 1:AA:1066:C:N3    | 2.63                     | 0.58              |
| 1:AA:1135:U:O3'   | 1:AA:1136:U:H6    | 1.86                     | 0.58              |
| 1:AA:1228:C:C4'   | 15:AP:116:THR:HA  | 2.28                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:1411:C:H2'    | 1:AA:1412:C:H6    | 1.68                     | 0.58              |
| 1:AA:1437:C:H2'    | 1:AA:1438:G:H8    | 1.68                     | 0.58              |
| 3:AD:56:C:C6       | 24:BA:2169:A:H1'  | 2.38                     | 0.58              |
| 4:AE:25:ASN:HD21   | 4:AE:27:LYS:HG3   | 1.67                     | 0.58              |
| 4:AE:82:ARG:HB2    | 4:AE:94:ASN:HD22  | 1.68                     | 0.58              |
| 5:AF:157:ILE:HG13  | 5:AF:164:ARG:CB   | 2.33                     | 0.58              |
| 6:AG:8:VAL:HG13    | 6:AG:11:LEU:HD12  | 1.85                     | 0.58              |
| 6:AG:52:SER:O      | 6:AG:55:ALA:N     | 2.36                     | 0.58              |
| 6:AG:79:PHE:CE1    | 6:AG:204:ILE:HG23 | 2.38                     | 0.58              |
| 8:AI:69:GLU:O      | 8:AI:72:VAL:HG13  | 2.02                     | 0.58              |
| 9:AJ:75:VAL:CG1    | 9:AJ:76:ARG:N     | 2.66                     | 0.58              |
| 10:AK:7:ALA:O      | 10:AK:8:ASP:C     | 2.46                     | 0.58              |
| 11:AL:11:LYS:HG2   | 11:AL:11:LYS:O    | 2.03                     | 0.58              |
| 11:AL:67:GLY:C     | 11:AL:73:GLN:HE21 | 2.11                     | 0.58              |
| 12:AM:12:ASP:HB3   | 12:AM:15:THR:HG22 | 1.85                     | 0.58              |
| 13:AN:29:ILE:HA    | 13:AN:44:SER:OG   | 2.03                     | 0.58              |
| 14:AO:126:LYS:HE3  | 14:AO:126:LYS:H   | 1.68                     | 0.58              |
| 16:AQ:23:ARG:NE    | 16:AQ:30:ALA:HB2  | 2.17                     | 0.58              |
| 18:AS:31:LYS:HG2   | 18:AS:32:TYR:H    | 1.68                     | 0.58              |
| 20:AU:53:ARG:NH1   | 20:AU:58:LEU:O    | 2.36                     | 0.58              |
| 22:AW:91:LEU:N     | 22:AW:91:LEU:HD23 | 2.18                     | 0.58              |
| 24:BA:4:C:H2'      | 24:BA:5:A:C8      | 2.38                     | 0.58              |
| 24:BA:270(V):G:H2' | 24:BA:270(W):G:C8 | 2.38                     | 0.58              |
| 24:BA:410:G:H5''   | 24:BA:411:G:OP2   | 2.03                     | 0.58              |
| 24:BA:460:A:C3'    | 24:BA:461:C:H6    | 2.16                     | 0.58              |
| 24:BA:729:G:C5     | 24:BA:730:C:C6    | 2.92                     | 0.58              |
| 24:BA:816:C:C2'    | 24:BA:817:C:H5'   | 2.33                     | 0.58              |
| 24:BA:828:U:C2'    | 24:BA:829:A:C8    | 2.74                     | 0.58              |
| 24:BA:881:G:N2     | 24:BA:896:A:C6    | 2.67                     | 0.58              |
| 24:BA:909:A:H2'    | 24:BA:912:C:H5    | 1.67                     | 0.58              |
| 24:BA:976:C:H4'    | 24:BA:1156:A:N7   | 2.17                     | 0.58              |
| 24:BA:1000:A:C8    | 24:BA:1001:A:C5   | 2.91                     | 0.58              |
| 24:BA:1083:U:H1'   | 24:BA:1085:A:N7   | 2.18                     | 0.58              |
| 24:BA:1127:A:H3'   | 24:BA:1127:A:C8   | 2.38                     | 0.58              |
| 24:BA:1147:C:O2'   | 24:BA:1148:A:H5'  | 2.03                     | 0.58              |
| 24:BA:1149:G:O2'   | 24:BA:1150:C:H5'  | 2.03                     | 0.58              |
| 24:BA:1199:U:OP2   | 24:BA:1199:U:H6   | 1.86                     | 0.58              |
| 24:BA:1250:G:H4'   | 41:BT:6:THR:HG21  | 1.83                     | 0.58              |
| 24:BA:1268:A:H2'   | 24:BA:1269:A:C8   | 2.37                     | 0.58              |
| 24:BA:1343:G:N2    | 24:BA:1405:U:N1   | 2.51                     | 0.58              |
| 24:BA:1363:C:H1'   | 24:BA:1810:A:H1'  | 1.83                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1365:A:C5    | 24:BA:1366:A:N7   | 2.70                     | 0.58              |
| 24:BA:1516:U:H2'   | 24:BA:1517:G:C8   | 2.38                     | 0.58              |
| 24:BA:1535:U:H3'   | 24:BA:1536:A:C8   | 2.38                     | 0.58              |
| 24:BA:1612:C:C2    | 24:BA:1620:G:N2   | 2.71                     | 0.58              |
| 24:BA:1625:C:O2    | 24:BA:1626:G:O2'  | 2.15                     | 0.58              |
| 24:BA:1637:A:H2'   | 24:BA:1638:C:C6   | 2.38                     | 0.58              |
| 24:BA:1655:A:C2'   | 24:BA:1656:C:C6   | 2.86                     | 0.58              |
| 24:BA:1667:G:N2    | 24:BA:1991:U:N3   | 2.51                     | 0.58              |
| 24:BA:1827:C:OP1   | 24:BA:1971:A:O2'  | 2.20                     | 0.58              |
| 24:BA:1992:G:C8    | 24:BA:1997:G:C6   | 2.91                     | 0.58              |
| 24:BA:2283:C:C5    | 24:BA:2389:G:C2   | 2.90                     | 0.58              |
| 24:BA:2291:U:H5'   | 24:BA:2380:C:O2   | 2.02                     | 0.58              |
| 24:BA:2346:A:N3    | 24:BA:2383:G:C5   | 2.71                     | 0.58              |
| 24:BA:2371:G:H2'   | 24:BA:2372:G:O4'  | 2.03                     | 0.58              |
| 24:BA:2387:U:O2    | 47:BZ:41:ARG:NH2  | 2.35                     | 0.58              |
| 24:BA:2496:C:N1    | 24:BA:2497:A:H2   | 2.00                     | 0.58              |
| 24:BA:2570:G:C2    | 24:BA:2571:C:C2   | 2.91                     | 0.58              |
| 24:BA:2584:U:C6    | 24:BA:2584:U:C3'  | 2.86                     | 0.58              |
| 24:BA:2626:C:H6    | 24:BA:2626:C:O5'  | 1.85                     | 0.58              |
| 24:BA:2630:G:HO2'  | 24:BA:2892:A:HO2' | 1.51                     | 0.58              |
| 24:BA:2847:U:C3'   | 40:BS:99:LEU:HD12 | 2.31                     | 0.58              |
| 24:BA:2853:C:O2'   | 24:BA:2854:G:H5'  | 2.03                     | 0.58              |
| 24:BA:2884:U:H2'   | 24:BA:2885:C:O4'  | 2.03                     | 0.58              |
| 25:BB:77:U:O2'     | 46:BY:78:LYS:NZ   | 2.33                     | 0.58              |
| 25:BB:99:A:O2'     | 25:BB:100:G:H5'   | 2.03                     | 0.58              |
| 26:BC:89:ALA:C     | 26:BC:154:ARG:HA  | 2.28                     | 0.58              |
| 27:BD:23:GLU:OE2   | 27:BD:24:ILE:O    | 2.20                     | 0.58              |
| 27:BD:229:VAL:HG13 | 27:BD:230:ASP:OD1 | 2.02                     | 0.58              |
| 27:BD:258:LYS:HG2  | 27:BD:259:THR:N   | 2.17                     | 0.58              |
| 28:BE:91:VAL:HG21  | 28:BE:93:VAL:CG1  | 2.24                     | 0.58              |
| 28:BE:167:VAL:HG21 | 28:BE:187:ALA:HB3 | 1.85                     | 0.58              |
| 30:BG:49:ASP:O     | 30:BG:53:LEU:HD13 | 2.03                     | 0.58              |
| 30:BG:134:GLY:O    | 30:BG:135:LEU:HB3 | 2.03                     | 0.58              |
| 32:BK:5:LEU:CD2    | 32:BK:18:VAL:HA   | 2.33                     | 0.58              |
| 33:BL:23:VAL:O     | 33:BL:34:ILE:HA   | 2.02                     | 0.58              |
| 33:BL:35:MET:CA    | 33:BL:38:VAL:HB   | 2.28                     | 0.58              |
| 35:BN:39:ILE:O     | 35:BN:58:VAL:HA   | 2.03                     | 0.58              |
| 35:BN:106:LEU:HD21 | 40:BS:38:ASN:HD21 | 1.68                     | 0.58              |
| 35:BN:116:SER:O    | 35:BN:119:PRO:HG3 | 2.03                     | 0.58              |
| 36:BO:72:PRO:HB2   | 36:BO:111:ARG:HB2 | 1.81                     | 0.58              |
| 37:BP:11:LYS:HZ3   | 37:BP:73:PRO:HG3  | 1.68                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 39:BR:17:ARG:O    | 39:BR:20:ARG:HB2   | 2.03                     | 0.58              |
| 42:BU:17:GLY:O    | 42:BU:98:GLU:HG3   | 2.03                     | 0.58              |
| 42:BU:65:GLY:N    | 42:BU:97:LYS:NZ    | 2.49                     | 0.58              |
| 43:BV:43:GLY:O    | 43:BV:47:VAL:CG2   | 2.51                     | 0.58              |
| 44:BW:5:TYR:HB3   | 48:B1:24:LYS:NZ    | 2.18                     | 0.58              |
| 46:BY:120:ILE:HB  | 46:BY:123:ASP:OD2  | 2.03                     | 0.58              |
| 46:BY:144:LEU:CA  | 46:BY:174:VAL:HG11 | 2.33                     | 0.58              |
| 46:BY:169:GLU:HG2 | 46:BY:169:GLU:O    | 2.02                     | 0.58              |
| 47:BZ:37:LEU:HD21 | 47:BZ:60:PHE:C     | 2.28                     | 0.58              |
| 49:B2:50:VAL:HG13 | 49:B2:53:LEU:CG    | 2.32                     | 0.58              |
| 52:B5:30:THR:HB   | 52:B5:31:PRO:HD2   | 1.83                     | 0.58              |
| 55:B8:1:MET:N     | 55:B8:33:LYS:HB2   | 2.17                     | 0.58              |
| 1:AA:46:G:H1'     | 1:AA:396:G:H22     | 1.68                     | 0.58              |
| 1:AA:582:U:C5'    | 17:AR:64:ARG:NH2   | 2.64                     | 0.58              |
| 1:AA:676:A:H2'    | 1:AA:677:U:H6      | 1.68                     | 0.58              |
| 1:AA:689:C:P      | 13:AN:55:LYS:HZ2   | 2.26                     | 0.58              |
| 1:AA:1212:U:O2'   | 1:AA:1213:A:O5'    | 2.20                     | 0.58              |
| 1:AA:1417:G:H22   | 1:AA:1482:G:H2'    | 1.67                     | 0.58              |
| 1:AA:1419:G:C2'   | 1:AA:1420:C:H6     | 2.16                     | 0.58              |
| 2:A1:31:U:H2'     | 2:A1:32:U:O4'      | 2.03                     | 0.58              |
| 3:AD:67:C:H2'     | 3:AD:68:C:O4'      | 2.03                     | 0.58              |
| 3:AB:55:U:N3      | 3:AB:57:G:H5''     | 2.18                     | 0.58              |
| 4:AE:31:TYR:HE2   | 4:AE:200:ILE:CG2   | 2.15                     | 0.58              |
| 4:AE:58:ILE:O     | 4:AE:61:LEU:N      | 2.36                     | 0.58              |
| 4:AE:173:ALA:O    | 4:AE:174:VAL:C     | 2.46                     | 0.58              |
| 4:AE:212:GLN:O    | 4:AE:213:LEU:C     | 2.43                     | 0.58              |
| 5:AF:30:ARG:HD3   | 5:AF:30:ARG:N      | 2.18                     | 0.58              |
| 5:AF:126:ARG:O    | 5:AF:127:ARG:HB2   | 2.02                     | 0.58              |
| 5:AF:150:LYS:HZ3  | 5:AF:152:ILE:CG2   | 2.15                     | 0.58              |
| 6:AG:30:LYS:NZ    | 6:AG:35:ARG:HD2    | 2.17                     | 0.58              |
| 6:AG:85:LYS:NZ    | 6:AG:85:LYS:HB3    | 2.18                     | 0.58              |
| 6:AG:155:LEU:HB2  | 6:AG:158:ILE:CG1   | 2.26                     | 0.58              |
| 6:AG:185:PHE:CD2  | 6:AG:186:LEU:N     | 2.71                     | 0.58              |
| 6:AG:206:PHE:HD2  | 6:AG:207:TYR:CD1   | 2.20                     | 0.58              |
| 7:AH:73:ASN:O     | 7:AH:73:ASN:ND2    | 2.32                     | 0.58              |
| 7:AH:141:GLN:N    | 7:AH:141:GLN:OE1   | 2.35                     | 0.58              |
| 8:AI:79:LEU:N     | 8:AI:79:LEU:HD23   | 2.17                     | 0.58              |
| 11:AL:89:ASN:ND2  | 11:AL:92:TYR:CE1   | 2.72                     | 0.58              |
| 12:AM:48:THR:HA   | 12:AM:62:HIS:HB3   | 1.84                     | 0.58              |
| 13:AN:23:ALA:CB   | 13:AN:88:GLY:HA3   | 2.32                     | 0.58              |
| 13:AN:63:LEU:HD23 | 13:AN:63:LEU:O     | 2.02                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 15:AP:67:GLU:OE2  | 15:AP:68:GLY:N    | 2.36                     | 0.58              |
| 16:AQ:24:CYS:CB   | 16:AQ:40:CYS:N    | 2.60                     | 0.58              |
| 16:AQ:39:LEU:HD12 | 16:AQ:44:LEU:HD12 | 1.84                     | 0.58              |
| 18:AS:15:PRO:HD2  | 18:AS:42:ARG:NE   | 2.19                     | 0.58              |
| 20:AU:17:SER:HB3  | 20:AU:54:ARG:NH1  | 2.18                     | 0.58              |
| 20:AU:47:THR:O    | 20:AU:47:THR:HG22 | 2.02                     | 0.58              |
| 21:AV:40:ILE:CD1  | 21:AV:71:LEU:HD23 | 2.32                     | 0.58              |
| 24:BA:50:U:H3'    | 24:BA:50:U:H6     | 1.67                     | 0.58              |
| 24:BA:82:G:N2     | 24:BA:83:G:H22    | 2.01                     | 0.58              |
| 24:BA:120:U:O2    | 24:BA:120:U:C2'   | 2.51                     | 0.58              |
| 24:BA:139:G:O6    | 24:BA:1595:G:O2'  | 2.14                     | 0.58              |
| 24:BA:191:A:C2    | 24:BA:192:C:C6    | 2.90                     | 0.58              |
| 24:BA:236:C:H4'   | 24:BA:431:U:H1'   | 1.85                     | 0.58              |
| 24:BA:270(A):A:H8 | 24:BA:370:G:O4'   | 1.85                     | 0.58              |
| 24:BA:295:G:C1'   | 24:BA:345:A:C2    | 2.86                     | 0.58              |
| 24:BA:388:G:P     | 50:B3:23:GLU:HB3  | 2.43                     | 0.58              |
| 24:BA:407:G:H2'   | 24:BA:408:G:N7    | 2.17                     | 0.58              |
| 24:BA:546:C:C4    | 24:BA:547:A:N6    | 2.71                     | 0.58              |
| 24:BA:569:U:H4'   | 24:BA:946:G:N3    | 2.18                     | 0.58              |
| 24:BA:573:G:H2'   | 24:BA:574:C:H5''  | 1.85                     | 0.58              |
| 24:BA:612:G:O2'   | 24:BA:615:G:H2'   | 2.03                     | 0.58              |
| 24:BA:649:G:N3    | 24:BA:649:G:H2'   | 2.18                     | 0.58              |
| 24:BA:811:U:C6    | 24:BA:811:U:H3'   | 2.38                     | 0.58              |
| 24:BA:905:U:N3    | 24:BA:906:G:C8    | 2.71                     | 0.58              |
| 24:BA:921:G:H4'   | 24:BA:2269:A:C8   | 2.38                     | 0.58              |
| 24:BA:980:A:C6    | 24:BA:1135:C:C4'  | 2.86                     | 0.58              |
| 24:BA:1422:G:H2'  | 24:BA:1423:G:C8   | 2.37                     | 0.58              |
| 24:BA:1471:A:C8   | 24:BA:1521:G:C2   | 2.91                     | 0.58              |
| 24:BA:1609:A:H1'  | 24:BA:1616:A:H4'  | 1.85                     | 0.58              |
| 24:BA:1681:G:H2'  | 24:BA:1682:G:OP1  | 2.03                     | 0.58              |
| 24:BA:1688:U:C2   | 24:BA:1700:A:H5'' | 2.38                     | 0.58              |
| 24:BA:1802:A:OP1  | 24:BA:1814:G:N2   | 2.26                     | 0.58              |
| 24:BA:1841:U:C2   | 24:BA:1842:G:N7   | 2.71                     | 0.58              |
| 24:BA:2309:A:C2   | 24:BA:2310:A:O4'  | 2.56                     | 0.58              |
| 24:BA:2493:U:O4   | 24:BA:2494:G:C8   | 2.56                     | 0.58              |
| 24:BA:2586:C:N4   | 24:BA:2587:A:N6   | 2.50                     | 0.58              |
| 24:BA:2859:G:H2'  | 24:BA:2860:A:H8   | 1.68                     | 0.58              |
| 24:BA:2875:C:O3'  | 40:BS:2:ASN:HB3   | 2.04                     | 0.58              |
| 25:BB:62:C:H2'    | 25:BB:63:G:C8     | 2.26                     | 0.58              |
| 25:BB:104:A:O2'   | 46:BY:29:TYR:OH   | 2.19                     | 0.58              |
| 29:BF:74:ARG:CZ   | 29:BF:75:HIS:CA   | 2.81                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 29:BF:124:LEU:HD11 | 29:BF:200:GLU:OE2  | 2.03                     | 0.58              |
| 32:BK:39:ALA:O     | 32:BK:43:ASN:CB    | 2.45                     | 0.58              |
| 32:BK:54:GLN:NE2   | 32:BK:57:ARG:HB3   | 2.18                     | 0.58              |
| 34:BM:23:LEU:HD12  | 34:BM:63:THR:CB    | 2.32                     | 0.58              |
| 34:BM:76:SER:C     | 34:BM:78:TYR:N     | 2.53                     | 0.58              |
| 35:BN:10:VAL:HG13  | 35:BN:17:ARG:HA    | 1.84                     | 0.58              |
| 35:BN:15:GLY:HA2   | 35:BN:47:ILE:HG13  | 1.86                     | 0.58              |
| 35:BN:21:CYS:SG    | 35:BN:40:VAL:O     | 2.62                     | 0.58              |
| 36:BO:76:LYS:HE3   | 36:BO:99:LEU:HD11  | 1.85                     | 0.58              |
| 38:BQ:26:LYS:HE2   | 38:BQ:70:LEU:CA    | 2.32                     | 0.58              |
| 40:BS:6:LEU:HD23   | 40:BS:7:ILE:N      | 2.14                     | 0.58              |
| 42:BU:3:ALA:CB     | 42:BU:44:LYS:HZ2   | 2.15                     | 0.58              |
| 44:BW:90:GLU:O     | 44:BW:93:GLU:HG3   | 2.02                     | 0.58              |
| 45:BX:29:GLU:HB2   | 45:BX:32:PRO:O     | 2.03                     | 0.58              |
| 46:BY:29:TYR:HD2   | 46:BY:89:PHE:CE2   | 2.20                     | 0.58              |
| 46:BY:96:VAL:CA    | 46:BY:128:VAL:HG13 | 2.30                     | 0.58              |
| 48:B1:36:ILE:HG23  | 48:B1:41:GLN:HE22  | 1.67                     | 0.58              |
| 50:B3:7:PRO:O      | 50:B3:60:GLN:OE1   | 2.21                     | 0.58              |
| 50:B3:37:SER:OG    | 50:B3:38:LYS:N     | 2.36                     | 0.58              |
| 50:B3:41:PRO:HB3   | 50:B3:58:ARG:CD    | 2.31                     | 0.58              |
| 1:AA:16:A:H1'      | 7:AH:17:ALA:HB3    | 1.84                     | 0.58              |
| 1:AA:110:C:O5'     | 1:AA:110:C:H6      | 1.85                     | 0.58              |
| 1:AA:114:U:H2'     | 1:AA:115:G:H8      | 1.68                     | 0.58              |
| 1:AA:148:G:N2      | 1:AA:175:C:C4      | 2.71                     | 0.58              |
| 1:AA:244:U:C2'     | 1:AA:245:C:OP2     | 2.50                     | 0.58              |
| 1:AA:246:A:H4'     | 1:AA:247:G:H4'     | 1.84                     | 0.58              |
| 1:AA:262:A:C6      | 1:AA:263:A:N6      | 2.72                     | 0.58              |
| 1:AA:278:G:C4      | 19:AT:95:TYR:HE2   | 2.21                     | 0.58              |
| 1:AA:300:A:H2'     | 1:AA:301:G:C5'     | 2.33                     | 0.58              |
| 1:AA:306:G:C4      | 1:AA:307:C:C5      | 2.91                     | 0.58              |
| 1:AA:866:C:H3'     | 1:AA:867:G:C8      | 2.37                     | 0.58              |
| 1:AA:950:U:O2'     | 1:AA:951:G:H5'     | 2.03                     | 0.58              |
| 1:AA:973:G:C1'     | 12:AM:55:LYS:H     | 2.15                     | 0.58              |
| 1:AA:1034:G:H2'    | 1:AA:1035:A:C8     | 2.38                     | 0.58              |
| 1:AA:1173:G:H2'    | 1:AA:1174:G:H5''   | 1.85                     | 0.58              |
| 1:AA:1178:G:N2     | 1:AA:1180:A:H5''   | 2.18                     | 0.58              |
| 1:AA:1253:G:O2'    | 1:AA:1254:C:H5'    | 2.04                     | 0.58              |
| 1:AA:1274:G:H2'    | 1:AA:1275:A:C8     | 2.38                     | 0.58              |
| 1:AA:1514:C:H2'    | 1:AA:1515:C:C5     | 2.38                     | 0.58              |
| 3:AD:33:U:H3'      | 3:AD:34:G:C5'      | 2.32                     | 0.58              |
| 4:AE:192:SER:O     | 4:AE:194:PRO:CD    | 2.51                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 4:AE:222:ILE:O    | 4:AE:226:ARG:CB     | 2.42                     | 0.58              |
| 5:AF:5:ILE:CG2    | 12:AM:51:ARG:HH12   | 2.16                     | 0.58              |
| 5:AF:157:ILE:HG21 | 5:AF:164:ARG:HE     | 1.67                     | 0.58              |
| 5:AF:178:LEU:O    | 5:AF:179:ARG:CB     | 2.51                     | 0.58              |
| 7:AH:136:MET:HA   | 7:AH:139:LEU:HD12   | 1.84                     | 0.58              |
| 8:AI:41:GLU:H     | 8:AI:63:TYR:HD1     | 1.49                     | 0.58              |
| 8:AI:64:GLN:C     | 8:AI:65:VAL:HG12    | 2.27                     | 0.58              |
| 8:AI:76:ALA:C     | 8:AI:79:LEU:HG      | 2.28                     | 0.58              |
| 9:AJ:47:CYS:HA    | 9:AJ:50:ILE:HD12    | 1.84                     | 0.58              |
| 11:AL:43:ALA:O    | 11:AL:45:ALA:N      | 2.35                     | 0.58              |
| 12:AM:89:ASP:C    | 12:AM:90:LEU:HG     | 2.29                     | 0.58              |
| 14:AO:10:LEU:HD21 | 14:AO:15:ARG:HE     | 1.69                     | 0.58              |
| 15:AP:81:LEU:CD2  | 15:AP:82:MET:N      | 2.66                     | 0.58              |
| 15:AP:95:GLY:C    | 15:AP:110:ARG:HD2   | 2.28                     | 0.58              |
| 19:AT:58:GLU:HG2  | 19:AT:59:ILE:N      | 2.17                     | 0.58              |
| 21:AV:36:ARG:HB2  | 21:AV:71:LEU:HB3    | 1.85                     | 0.58              |
| 22:AW:34:LYS:O    | 22:AW:38:LYS:HG3    | 2.04                     | 0.58              |
| 23:AX:9:ARG:HD2   | 23:AX:9:ARG:N       | 2.16                     | 0.58              |
| 24:BA:64:A:H2     | 44:BW:66:LEU:HD13   | 1.67                     | 0.58              |
| 24:BA:643:A:C1'   | 24:BA:644:A:C8      | 2.87                     | 0.58              |
| 24:BA:763:G:O2'   | 24:BA:765:G:H5'     | 2.03                     | 0.58              |
| 24:BA:775:G:C4'   | 24:BA:777:A:C4      | 2.84                     | 0.58              |
| 24:BA:878:A:H2'   | 24:BA:879:G:C5'     | 2.32                     | 0.58              |
| 24:BA:972:G:N7    | 24:BA:973:A:C8      | 2.71                     | 0.58              |
| 24:BA:1024:G:C4   | 24:BA:1025:G:C8     | 2.91                     | 0.58              |
| 24:BA:1366:A:C8   | 24:BA:1366:A:OP2    | 2.56                     | 0.58              |
| 24:BA:1433:U:H6   | 24:BA:1433:U:H3'    | 1.68                     | 0.58              |
| 24:BA:1448:G:H2'  | 24:BA:1449:A:H8     | 1.68                     | 0.58              |
| 24:BA:1526:G:N2   | 24:BA:1545(A):A:H62 | 2.00                     | 0.58              |
| 24:BA:1671:U:O2'  | 28:BE:129:HIS:CE1   | 2.57                     | 0.58              |
| 24:BA:1953:A:N6   | 24:BA:2550:G:H5'    | 2.18                     | 0.58              |
| 24:BA:1973:G:H2'  | 24:BA:1974:C:C6     | 2.37                     | 0.58              |
| 24:BA:1977:A:N3   | 24:BA:1978:A:C8     | 2.71                     | 0.58              |
| 24:BA:2091:U:H2'  | 24:BA:2092:U:C5'    | 2.24                     | 0.58              |
| 24:BA:2116:G:C5'  | 24:BA:2117:A:OP2    | 2.48                     | 0.58              |
| 24:BA:2278:A:N6   | 47:BZ:14:ARG:HB3    | 2.18                     | 0.58              |
| 24:BA:2306:C:H5   | 24:BA:2311:A:N6     | 2.00                     | 0.58              |
| 24:BA:2466:C:C4   | 24:BA:2485:G:N1     | 2.71                     | 0.58              |
| 24:BA:2512:C:OP1  | 28:BE:120:TRP:CH2   | 2.56                     | 0.58              |
| 24:BA:2545:G:C2'  | 24:BA:2546:U:H5'    | 2.33                     | 0.58              |
| 24:BA:2821:A:OP1  | 28:BE:110:GLY:N     | 2.36                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 25:BB:9:G:C5      | 25:BB:112:G:C6     | 2.91                     | 0.58              |
| 26:BC:32:LEU:HD13 | 26:BC:220:PRO:CB   | 2.33                     | 0.58              |
| 26:BC:97:GLU:CG   | 26:BC:122:ALA:HB3  | 2.30                     | 0.58              |
| 26:BC:108:MET:SD  | 26:BC:131:LEU:CD2  | 2.87                     | 0.58              |
| 27:BD:5:LYS:HD2   | 27:BD:81:ALA:HB1   | 1.85                     | 0.58              |
| 27:BD:17:THR:C    | 27:BD:19:ALA:N     | 2.58                     | 0.58              |
| 27:BD:132:PRO:HD3 | 27:BD:190:TYR:CZ   | 2.38                     | 0.58              |
| 27:BD:228:PRO:C   | 27:BD:230:ASP:N    | 2.57                     | 0.58              |
| 28:BE:8:LYS:CD    | 28:BE:9:VAL:N      | 2.65                     | 0.58              |
| 28:BE:53:PRO:CD   | 28:BE:75:VAL:HG13  | 2.34                     | 0.58              |
| 29:BF:11:VAL:HG22 | 29:BF:125:LEU:O    | 2.03                     | 0.58              |
| 29:BF:84:VAL:O    | 29:BF:86:GLY:N     | 2.36                     | 0.58              |
| 30:BG:33:ARG:NH2  | 30:BG:34:LEU:N     | 2.50                     | 0.58              |
| 30:BG:64:THR:HG21 | 30:BG:92:VAL:HG11  | 1.83                     | 0.58              |
| 30:BG:135:LEU:O   | 30:BG:155:MET:O    | 2.21                     | 0.58              |
| 31:BH:88:LEU:HD23 | 31:BH:89:ILE:C     | 2.27                     | 0.58              |
| 31:BH:103:LEU:O   | 31:BH:113:VAL:O    | 2.21                     | 0.58              |
| 32:BK:57:ARG:CG   | 32:BK:61:ARG:HH21  | 2.16                     | 0.58              |
| 32:BK:130:TYR:O   | 32:BK:138:ILE:HG22 | 2.03                     | 0.58              |
| 33:BL:120:LEU:H   | 33:BL:120:LEU:HD23 | 1.68                     | 0.58              |
| 34:BM:67:LEU:HA   | 34:BM:70:LYS:HZ1   | 1.67                     | 0.58              |
| 35:BN:35:VAL:HA   | 35:BN:61:VAL:HG11  | 1.85                     | 0.58              |
| 36:BO:96:THR:CG2  | 36:BO:99:LEU:HD12  | 2.33                     | 0.58              |
| 36:BO:112:LEU:C   | 36:BO:129:ALA:HB3  | 2.28                     | 0.58              |
| 38:BQ:38:VAL:CG1  | 38:BQ:39:PRO:HD3   | 2.33                     | 0.58              |
| 38:BQ:52:ILE:HD13 | 38:BQ:56:LYS:HG2   | 1.84                     | 0.58              |
| 38:BQ:80:PHE:O    | 38:BQ:84:ALA:HB3   | 2.03                     | 0.58              |
| 39:BR:29:PHE:CE1  | 39:BR:34:HIS:NE2   | 2.71                     | 0.58              |
| 40:BS:95:ARG:HD2  | 40:BS:96:ARG:CZ    | 2.33                     | 0.58              |
| 44:BW:21:PHE:HD2  | 44:BW:26:TYR:HA    | 1.69                     | 0.58              |
| 44:BW:62:LYS:HA   | 44:BW:72:LYS:HB3   | 1.85                     | 0.58              |
| 45:BX:74:PRO:HB2  | 45:BX:100:ALA:CB   | 2.34                     | 0.58              |
| 46:BY:9:TYR:HD2   | 46:BY:14:LYS:HZ3   | 1.47                     | 0.58              |
| 47:BZ:72:ARG:CD   | 47:BZ:75:LEU:HD22  | 2.33                     | 0.58              |
| 48:B1:23:LYS:CE   | 48:B1:55:LEU:HD21  | 2.33                     | 0.58              |
| 52:B5:39:TYR:O    | 52:B5:40:CYS:HB3   | 2.03                     | 0.58              |
| 55:B8:1:MET:O     | 55:B8:33:LYS:O     | 2.22                     | 0.58              |
| 1:AA:101:A:C4     | 1:AA:102:G:N7      | 2.72                     | 0.58              |
| 1:AA:133:U:H5'    | 1:AA:134:A:P       | 2.44                     | 0.58              |
| 1:AA:186(A):C:O2' | 22:AW:89:ARG:NH2   | 2.36                     | 0.58              |
| 1:AA:357:G:H1'    | 1:AA:368:U:O2      | 2.02                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:375:U:O2'     | 18:AS:6:LEU:HD21  | 2.04                     | 0.58              |
| 1:AA:482:A:N3      | 1:AA:482:A:C2'    | 2.66                     | 0.58              |
| 1:AA:656:C:H2'     | 1:AA:657:G:H5'    | 1.85                     | 0.58              |
| 1:AA:815:A:C2      | 1:AA:1527:C:O2    | 2.57                     | 0.58              |
| 1:AA:1143:G:N3     | 1:AA:1144:G:C8    | 2.71                     | 0.58              |
| 1:AA:1181:G:O3'    | 1:AA:1184:G:H5'   | 2.04                     | 0.58              |
| 1:AA:1358:U:OP1    | 16:AQ:34:TYR:HA   | 2.02                     | 0.58              |
| 1:AA:1517:G:H1'    | 24:BA:1920:C:P    | 2.43                     | 0.58              |
| 3:AC:25:C:H2'      | 3:AC:26:A:H8      | 1.68                     | 0.58              |
| 3:AD:19:G:C5       | 24:BA:2112:G:N7   | 2.72                     | 0.58              |
| 4:AE:19:HIS:CA     | 4:AE:39:ILE:HD11  | 2.34                     | 0.58              |
| 6:AG:8:VAL:C       | 6:AG:10:ARG:N     | 2.59                     | 0.58              |
| 6:AG:60:GLU:OE2    | 6:AG:202:LEU:HD12 | 2.02                     | 0.58              |
| 6:AG:63:LYS:H      | 6:AG:63:LYS:HD2   | 1.67                     | 0.58              |
| 6:AG:98:GLU:O      | 6:AG:103:ASN:HB3  | 2.04                     | 0.58              |
| 6:AG:150:GLU:C     | 6:AG:152:SER:H    | 2.12                     | 0.58              |
| 7:AH:72:GLN:NE2    | 7:AH:144:THR:HA   | 2.18                     | 0.58              |
| 7:AH:102:ALA:CB    | 7:AH:106:PRO:CB   | 2.79                     | 0.58              |
| 9:AJ:31:MET:CG     | 9:AJ:32:ARG:N     | 2.58                     | 0.58              |
| 9:AJ:115:ARG:CB    | 9:AJ:118:VAL:CG2  | 2.77                     | 0.58              |
| 10:AK:6:ILE:CD1    | 10:AK:7:ALA:N     | 2.66                     | 0.58              |
| 10:AK:30:ARG:O     | 10:AK:33:GLU:HB2  | 2.03                     | 0.58              |
| 10:AK:119:LEU:HD12 | 10:AK:123:GLU:OE2 | 2.03                     | 0.58              |
| 11:AL:69:GLY:C     | 11:AL:73:GLN:OE1  | 2.46                     | 0.58              |
| 13:AN:126:ARG:C    | 13:AN:128:ALA:N   | 2.62                     | 0.58              |
| 14:AO:85:ILE:HG13  | 14:AO:87:GLY:N    | 2.14                     | 0.58              |
| 15:AP:22:ILE:HB    | 15:AP:25:ILE:HG13 | 1.84                     | 0.58              |
| 17:AR:41:GLU:HA    | 17:AR:44:LYS:HE3  | 1.85                     | 0.58              |
| 17:AR:81:LEU:O     | 17:AR:82:ILE:C    | 2.47                     | 0.58              |
| 19:AT:6:LEU:C      | 19:AT:6:LEU:CD1   | 2.76                     | 0.58              |
| 20:AU:17:SER:HB3   | 20:AU:54:ARG:CZ   | 2.34                     | 0.58              |
| 20:AU:26:LEU:HD22  | 20:AU:39:VAL:CG2  | 2.33                     | 0.58              |
| 22:AW:43:LEU:HD12  | 22:AW:55:ILE:CD1  | 2.24                     | 0.58              |
| 24:BA:85:G:H1'     | 24:BA:103:A:C2    | 2.37                     | 0.58              |
| 24:BA:386:G:H4'    | 24:BA:387:U:H5    | 1.68                     | 0.58              |
| 24:BA:414:C:H1'    | 24:BA:1864:U:O2'  | 2.03                     | 0.58              |
| 24:BA:470:A:C2'    | 24:BA:471:A:O5'   | 2.52                     | 0.58              |
| 24:BA:502:A:H3'    | 24:BA:502:A:H8    | 1.66                     | 0.58              |
| 24:BA:502:A:O2'    | 24:BA:503:A:H5'   | 2.04                     | 0.58              |
| 24:BA:529:A:N6     | 24:BA:2023:G:C4   | 2.71                     | 0.58              |
| 24:BA:548:A:N6     | 24:BA:549:G:N2    | 2.49                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:602:G:O5'    | 24:BA:602:G:C8     | 2.54                     | 0.58              |
| 24:BA:714:U:OP2    | 24:BA:714:U:C6     | 2.56                     | 0.58              |
| 24:BA:723:G:H21    | 24:BA:724:U:H1'    | 1.67                     | 0.58              |
| 24:BA:882:G:N2     | 24:BA:895:U:C2     | 2.71                     | 0.58              |
| 24:BA:900:A:H2'    | 24:BA:901:A:O4'    | 2.03                     | 0.58              |
| 24:BA:923:C:H5'    | 47:BZ:26:TYR:CD1   | 2.38                     | 0.58              |
| 24:BA:966:G:C6     | 24:BA:967:C:N4     | 2.71                     | 0.58              |
| 24:BA:973:A:O4'    | 24:BA:1188:U:C5    | 2.57                     | 0.58              |
| 24:BA:973:A:H4'    | 24:BA:974:G:OP1    | 2.02                     | 0.58              |
| 24:BA:1155:A:O2'   | 24:BA:1156:A:H5''  | 2.03                     | 0.58              |
| 24:BA:1248:G:OP1   | 41:BT:2:PRO:N      | 2.35                     | 0.58              |
| 24:BA:1472:A:N9    | 24:BA:1473:G:N7    | 2.52                     | 0.58              |
| 24:BA:1555:G:H2'   | 24:BA:1556:C:C5    | 2.37                     | 0.58              |
| 24:BA:1560:G:H2'   | 24:BA:1561:G:H8    | 1.67                     | 0.58              |
| 24:BA:1671:U:O2    | 24:BA:1673:U:H5'   | 2.03                     | 0.58              |
| 24:BA:1695:G:N2    | 24:BA:1696:G:C8    | 2.72                     | 0.58              |
| 24:BA:1789:A:C2'   | 27:BD:213:ARG:HH12 | 2.16                     | 0.58              |
| 24:BA:1928:A:C3'   | 24:BA:1929:G:H5'   | 2.33                     | 0.58              |
| 24:BA:2118:U:C5    | 24:BA:2147:G:N7    | 2.72                     | 0.58              |
| 24:BA:2134:A:H2'   | 24:BA:2135:A:H5''  | 1.85                     | 0.58              |
| 24:BA:2135:A:N7    | 24:BA:2160:G:C1'   | 2.66                     | 0.58              |
| 24:BA:2421:G:C2'   | 24:BA:2422:A:H8    | 1.96                     | 0.58              |
| 24:BA:2445:G:C2'   | 24:BA:2446:G:C8    | 2.67                     | 0.58              |
| 24:BA:2484:G:N3    | 37:BP:124:LYS:NZ   | 2.52                     | 0.58              |
| 24:BA:2539:C:H2'   | 24:BA:2540:C:H6    | 1.67                     | 0.58              |
| 24:BA:2619:C:O2'   | 24:BA:2620:C:C5'   | 2.51                     | 0.58              |
| 24:BA:2638:G:C8    | 24:BA:2775:A:N1    | 2.71                     | 0.58              |
| 24:BA:2787:C:O2    | 28:BE:61:ARG:CZ    | 2.51                     | 0.58              |
| 25:BB:87:G:C2      | 25:BB:90:C:N3      | 2.72                     | 0.58              |
| 26:BC:171:ILE:HG12 | 26:BC:172:HIS:H    | 1.67                     | 0.58              |
| 27:BD:136:ILE:CB   | 27:BD:168:ARG:NH2  | 2.59                     | 0.58              |
| 27:BD:199:ALA:HA   | 27:BD:202:LYS:HD3  | 1.85                     | 0.58              |
| 27:BD:201:HIS:HD2  | 27:BD:202:LYS:CE   | 2.15                     | 0.58              |
| 29:BF:46:ARG:CA    | 29:BF:46:ARG:NE    | 2.66                     | 0.58              |
| 31:BH:24:VAL:HG13  | 31:BH:37:VAL:CG1   | 2.33                     | 0.58              |
| 32:BK:5:LEU:HD12   | 32:BK:8:PRO:C      | 2.27                     | 0.58              |
| 32:BK:68:LEU:HD22  | 32:BK:107:VAL:HG11 | 1.86                     | 0.58              |
| 32:BK:111:PRO:HG2  | 32:BK:112:LYS:H    | 1.68                     | 0.58              |
| 33:BL:104:VAL:HG13 | 33:BL:127:ILE:HD12 | 1.84                     | 0.58              |
| 34:BM:3:THR:O      | 34:BM:4:TYR:CB     | 2.49                     | 0.58              |
| 34:BM:82:LEU:O     | 34:BM:83:LYS:O     | 2.21                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 35:BN:19:ILE:HD12 | 35:BN:19:ILE:C     | 2.28                     | 0.58              |
| 35:BN:68:GLU:OE1  | 35:BN:104:ARG:HD2  | 2.04                     | 0.58              |
| 36:BO:89:ALA:O    | 36:BO:125:VAL:HG22 | 2.02                     | 0.58              |
| 37:BP:48:GLU:CA   | 37:BP:51:ARG:HG3   | 2.33                     | 0.58              |
| 42:BU:21:ARG:HG3  | 42:BU:21:ARG:NH1   | 2.13                     | 0.58              |
| 43:BV:82:LEU:HD13 | 43:BV:83:LYS:N     | 2.17                     | 0.58              |
| 44:BW:8:ILE:HD11  | 44:BW:42:ALA:CB    | 2.30                     | 0.58              |
| 46:BY:29:TYR:CG   | 46:BY:72:ARG:NH2   | 2.72                     | 0.58              |
| 46:BY:98:MET:HG3  | 46:BY:133:ILE:CG2  | 2.24                     | 0.58              |
| 48:B1:55:LEU:C    | 48:B1:58:VAL:HG13  | 2.28                     | 0.58              |
| 53:B6:9:ARG:O     | 53:B6:13:ALA:HB2   | 2.03                     | 0.58              |
| 53:B6:11:LYS:HE3  | 53:B6:15:THR:HG21  | 1.84                     | 0.58              |
| 53:B6:42:LEU:HD22 | 53:B6:44:PRO:HG3   | 1.86                     | 0.58              |
| 54:B7:27:THR:H    | 54:B7:44:LYS:NZ    | 2.01                     | 0.58              |
| 1:AA:42:G:H2'     | 1:AA:43:C:H6       | 1.66                     | 0.58              |
| 1:AA:67:C:O2      | 1:AA:171:A:H2      | 1.86                     | 0.58              |
| 1:AA:534:U:H5''   | 1:AA:535:A:OP2     | 2.03                     | 0.58              |
| 1:AA:539:A:OP1    | 14:AO:114:LYS:HE2  | 2.03                     | 0.58              |
| 1:AA:591:U:H2'    | 1:AA:592:G:C8      | 2.39                     | 0.58              |
| 1:AA:666:G:C2     | 1:AA:741:G:N3      | 2.71                     | 0.58              |
| 1:AA:697:U:C2'    | 1:AA:698:G:C8      | 2.83                     | 0.58              |
| 1:AA:822:C:H2'    | 1:AA:823:G:H8      | 1.67                     | 0.58              |
| 1:AA:878:G:H5'    | 10:AK:89:PRO:HG2   | 1.85                     | 0.58              |
| 1:AA:908:A:N3     | 1:AA:909:A:C8      | 2.71                     | 0.58              |
| 1:AA:914:A:H2'    | 1:AA:915:A:C8      | 2.38                     | 0.58              |
| 1:AA:970:C:H4'    | 1:AA:972:C:C6      | 2.38                     | 0.58              |
| 1:AA:1216:G:H2'   | 1:AA:1217:C:C6     | 2.38                     | 0.58              |
| 1:AA:1253:G:H2'   | 1:AA:1254:C:O4'    | 2.03                     | 0.58              |
| 1:AA:1253:G:N3    | 1:AA:1355:G:O2'    | 2.36                     | 0.58              |
| 1:AA:1309:G:C2    | 1:AA:1310:G:C8     | 2.90                     | 0.58              |
| 1:AA:1431:C:O2    | 1:AA:1432:G:O4'    | 2.21                     | 0.58              |
| 2:A1:39:U:O3'     | 2:A1:40:U:H6       | 1.86                     | 0.58              |
| 3:AD:9:A:C2       | 3:AD:46:G:C1'      | 2.86                     | 0.58              |
| 3:AD:59:U:O2      | 3:AD:59:U:C2'      | 2.52                     | 0.58              |
| 4:AE:19:HIS:ND1   | 4:AE:204:ASN:ND2   | 2.52                     | 0.58              |
| 4:AE:91:PRO:HG2   | 4:AE:155:LEU:HB2   | 1.85                     | 0.58              |
| 4:AE:111:ARG:HA   | 4:AE:111:ARG:NH1   | 2.08                     | 0.58              |
| 4:AE:149:LEU:HD22 | 4:AE:153:ARG:HG2   | 1.85                     | 0.58              |
| 4:AE:219:VAL:CG1  | 4:AE:222:ILE:HD11  | 2.32                     | 0.58              |
| 5:AF:26:LYS:O     | 5:AF:28:GLN:HG3    | 2.04                     | 0.58              |
| 6:AG:98:GLU:O     | 6:AG:100:ARG:N     | 2.37                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 7:AH:7:GLU:O       | 7:AH:34:VAL:HA     | 2.03                     | 0.58              |
| 7:AH:12:LEU:HG     | 7:AH:129:ILE:HD11  | 1.83                     | 0.58              |
| 7:AH:63:ARG:HA     | 7:AH:66:MET:CG     | 2.33                     | 0.58              |
| 7:AH:78:HIS:HB2    | 10:AK:104:ARG:HD3  | 1.83                     | 0.58              |
| 8:AI:77:ARG:N      | 8:AI:80:ARG:NH2    | 2.52                     | 0.58              |
| 8:AI:98:LEU:CD2    | 20:AU:28:GLU:HA    | 2.33                     | 0.58              |
| 9:AJ:127:ALA:O     | 9:AJ:128:ALA:C     | 2.46                     | 0.58              |
| 10:AK:8:ASP:OD2    | 10:AK:8:ASP:C      | 2.46                     | 0.58              |
| 10:AK:35:ILE:HD13  | 10:AK:118:VAL:HG21 | 1.85                     | 0.58              |
| 10:AK:126:LYS:HZ2  | 10:AK:127:LEU:HD23 | 1.64                     | 0.58              |
| 13:AN:11:LYS:HB3   | 13:AN:13:GLN:CD    | 2.28                     | 0.58              |
| 16:AQ:26:ARG:HE    | 16:AQ:43:CYS:C     | 2.11                     | 0.58              |
| 17:AR:34:LEU:CD1   | 17:AR:35:ARG:N     | 2.67                     | 0.58              |
| 18:AS:49:LEU:CD2   | 18:AS:73:LEU:HD21  | 2.32                     | 0.58              |
| 18:AS:56:ALA:C     | 18:AS:60:LEU:HD12  | 2.29                     | 0.58              |
| 18:AS:76:GLN:O     | 18:AS:77:ALA:C     | 2.46                     | 0.58              |
| 19:AT:61:GLU:HA    | 19:AT:71:PHE:CD2   | 2.37                     | 0.58              |
| 22:AW:65:LYS:O     | 22:AW:68:LYS:CG    | 2.52                     | 0.58              |
| 24:BA:60:G:O2'     | 24:BA:61:G:OP1     | 2.19                     | 0.58              |
| 24:BA:94:G:N2      | 24:BA:95:G:N3      | 2.51                     | 0.58              |
| 24:BA:126:A:H2'    | 24:BA:127:A:C5'    | 2.32                     | 0.58              |
| 24:BA:204:A:O2'    | 24:BA:205:G:P      | 2.60                     | 0.58              |
| 24:BA:280:C:H41    | 24:BA:283:A:N6     | 2.02                     | 0.58              |
| 24:BA:360:G:C2'    | 24:BA:361:G:C5'    | 2.81                     | 0.58              |
| 24:BA:458:G:C8     | 53:B6:38:GLY:O     | 2.57                     | 0.58              |
| 24:BA:568:U:H2'    | 24:BA:570:G:N7     | 2.19                     | 0.58              |
| 24:BA:689:A:H2'    | 24:BA:690:G:C5'    | 2.34                     | 0.58              |
| 24:BA:783:A:H3'    | 27:BD:227:ASN:OD1  | 2.04                     | 0.58              |
| 24:BA:838:C:H2'    | 24:BA:839:U:H6     | 1.67                     | 0.58              |
| 24:BA:975:G:N1     | 24:BA:976:C:H6     | 2.01                     | 0.58              |
| 24:BA:1000:A:C8    | 24:BA:1154:G:N2    | 2.71                     | 0.58              |
| 24:BA:1203:G:C2    | 24:BA:1241:A:C8    | 2.91                     | 0.58              |
| 24:BA:1313:U:C5    | 24:BA:1313:U:OP2   | 2.57                     | 0.58              |
| 24:BA:1444(A):A:C8 | 24:BA:1460:A:H2'   | 2.38                     | 0.58              |
| 24:BA:1453:A:OP2   | 24:BA:1453:A:O4'   | 2.21                     | 0.58              |
| 24:BA:1499:C:H2'   | 24:BA:1499:C:O2    | 2.02                     | 0.58              |
| 24:BA:1566:A:C2    | 27:BD:215:LEU:CD1  | 2.77                     | 0.58              |
| 24:BA:1759:A:P     | 24:BA:1759:A:H8    | 2.26                     | 0.58              |
| 24:BA:1798:U:H5'   | 27:BD:257:LEU:HB2  | 1.85                     | 0.58              |
| 24:BA:1915:U:H3'   | 24:BA:1915:U:P     | 2.43                     | 0.58              |
| 24:BA:1924:C:C2    | 24:BA:1925:C:C5    | 2.92                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1955:U:O3'   | 24:BA:1956:U:H5    | 1.85                     | 0.58              |
| 24:BA:1973:G:C6    | 24:BA:1974:C:N4    | 2.71                     | 0.58              |
| 24:BA:2029:G:H8    | 24:BA:2029:G:O5'   | 1.86                     | 0.58              |
| 24:BA:2092:U:O5'   | 32:BK:29:TYR:OH    | 2.21                     | 0.58              |
| 24:BA:2278:A:N1    | 24:BA:2279:G:C5    | 2.72                     | 0.58              |
| 24:BA:2472:G:OP1   | 24:BA:2473:U:H5''  | 2.02                     | 0.58              |
| 24:BA:2629:A:N6    | 24:BA:2895:U:C2    | 2.72                     | 0.58              |
| 24:BA:2631:G:N2    | 28:BE:61:ARG:NH1   | 2.50                     | 0.58              |
| 24:BA:2707:G:O2'   | 24:BA:2708:G:H5'   | 2.04                     | 0.58              |
| 24:BA:2749:A:C6    | 24:BA:2750:A:N7    | 2.71                     | 0.58              |
| 25:BB:81:G:C6      | 25:BB:82:G:N7      | 2.72                     | 0.58              |
| 26:BC:225:ASN:C    | 26:BC:227:HIS:H    | 2.11                     | 0.58              |
| 27:BD:7:LYS:HD3    | 27:BD:9:TYR:CZ     | 2.38                     | 0.58              |
| 27:BD:55:GLY:CA    | 27:BD:217:ARG:CZ   | 2.81                     | 0.58              |
| 27:BD:73:VAL:HG12  | 27:BD:120:GLY:CA   | 2.33                     | 0.58              |
| 27:BD:147:LEU:HD23 | 27:BD:154:LYS:HG3  | 1.84                     | 0.58              |
| 27:BD:152:GLY:O    | 27:BD:154:LYS:N    | 2.36                     | 0.58              |
| 27:BD:159:ALA:CB   | 27:BD:202:LYS:HZ1  | 2.16                     | 0.58              |
| 33:BL:98:ARG:CD    | 33:BL:139:VAL:HB   | 2.34                     | 0.58              |
| 34:BM:95:PRO:HG2   | 34:BM:124:ALA:CB   | 2.33                     | 0.58              |
| 35:BN:16:ALA:CB    | 35:BN:45:GLU:CB    | 2.81                     | 0.58              |
| 35:BN:39:ILE:CA    | 35:BN:59:LYS:HZ1   | 2.16                     | 0.58              |
| 38:BQ:98:LEU:H     | 38:BQ:114:VAL:HG22 | 1.67                     | 0.58              |
| 39:BR:57:LYS:HZ2   | 39:BR:65:VAL:N     | 2.02                     | 0.58              |
| 40:BS:27:THR:HB    | 40:BS:95:ARG:H     | 1.67                     | 0.58              |
| 43:BV:78:GLU:HG2   | 43:BV:99:ARG:HD2   | 1.86                     | 0.58              |
| 43:BV:89:ALA:O     | 43:BV:90:ARG:C     | 2.46                     | 0.58              |
| 44:BW:26:TYR:CB    | 44:BW:28:PHE:HZ    | 2.16                     | 0.58              |
| 44:BW:50:LYS:HG3   | 44:BW:84:ALA:CB    | 2.32                     | 0.58              |
| 45:BX:2:ARG:HD2    | 45:BX:3:VAL:HG23   | 1.84                     | 0.58              |
| 45:BX:37:VAL:HG13  | 45:BX:39:VAL:CB    | 2.33                     | 0.58              |
| 45:BX:74:PRO:HB2   | 45:BX:100:ALA:HB1  | 1.84                     | 0.58              |
| 46:BY:44:PHE:HD2   | 46:BY:48:PHE:HE1   | 1.52                     | 0.58              |
| 46:BY:95:PRO:CD    | 46:BY:130:PRO:HA   | 2.33                     | 0.58              |
| 47:BZ:28:GLY:O     | 47:BZ:29:GLN:C     | 2.46                     | 0.58              |
| 47:BZ:37:LEU:N     | 47:BZ:37:LEU:CD2   | 2.64                     | 0.58              |
| 47:BZ:56:ASP:O     | 47:BZ:57:PHE:HB2   | 2.03                     | 0.58              |
| 48:B1:3:LYS:O      | 48:B1:6:GLU:HB2    | 2.03                     | 0.58              |
| 50:B3:23:GLU:O     | 50:B3:25:TYR:N     | 2.32                     | 0.58              |
| 1:AA:7:G:H1'       | 1:AA:298:A:N9      | 2.17                     | 0.58              |
| 1:AA:135:C:H6      | 1:AA:135:C:O5'     | 1.86                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:372:C:O2'    | 1:AA:373:A:OP2    | 2.14                     | 0.58              |
| 1:AA:375:U:C4'    | 18:AS:17:TYR:HE2  | 2.16                     | 0.58              |
| 1:AA:430:A:OP1    | 6:AG:9:CYS:CB     | 2.52                     | 0.58              |
| 1:AA:523:A:O5'    | 1:AA:523:A:C8     | 2.57                     | 0.58              |
| 1:AA:619:U:H3     | 6:AG:135:LEU:HD21 | 1.68                     | 0.58              |
| 1:AA:792:A:O2'    | 1:AA:794:A:N7     | 2.28                     | 0.58              |
| 1:AA:881:G:C6     | 1:AA:882:C:C4     | 2.92                     | 0.58              |
| 1:AA:951:G:O2'    | 1:AA:972:C:H5     | 1.87                     | 0.58              |
| 1:AA:965:A:H1'    | 1:AA:969:A:C8     | 2.39                     | 0.58              |
| 1:AA:1031:G:H2'   | 1:AA:1032:A:C8    | 2.37                     | 0.58              |
| 1:AA:1244:C:OP2   | 23:AX:9:ARG:CD    | 2.49                     | 0.58              |
| 1:AA:1350:A:N6    | 1:AA:1373:G:C2    | 2.71                     | 0.58              |
| 1:AA:1376:U:H2'   | 1:AA:1377:A:N7    | 2.19                     | 0.58              |
| 1:AA:1389:C:H2'   | 1:AA:1390:U:O4'   | 2.03                     | 0.58              |
| 1:AA:1395:C:H2'   | 1:AA:1396:A:H8    | 1.66                     | 0.58              |
| 3:AC:28:G:H8      | 3:AC:28:G:O5'     | 1.87                     | 0.58              |
| 4:AE:7:VAL:HG23   | 4:AE:8:LYS:N      | 2.13                     | 0.58              |
| 4:AE:72:GLY:O     | 4:AE:74:LYS:N     | 2.35                     | 0.58              |
| 5:AF:22:TRP:HH2   | 5:AF:33:LEU:N     | 2.01                     | 0.58              |
| 5:AF:35:GLU:CA    | 5:AF:38:ARG:HG2   | 2.34                     | 0.58              |
| 5:AF:38:ARG:HG3   | 5:AF:94:LEU:HD21  | 1.86                     | 0.58              |
| 6:AG:166:LYS:CE   | 6:AG:178:VAL:HG12 | 2.31                     | 0.58              |
| 7:AH:150:ARG:HD3  | 7:AH:150:ARG:C    | 2.29                     | 0.58              |
| 8:AI:79:LEU:C     | 8:AI:81:ILE:N     | 2.60                     | 0.58              |
| 9:AJ:34:GLY:O     | 9:AJ:36:LYS:N     | 2.37                     | 0.58              |
| 9:AJ:100:ALA:HA   | 9:AJ:103:TRP:HE3  | 1.68                     | 0.58              |
| 10:AK:36:LEU:CA   | 10:AK:39:LEU:HB2  | 2.32                     | 0.58              |
| 10:AK:82:HIS:O    | 10:AK:137:VAL:CG1 | 2.52                     | 0.58              |
| 11:AL:34:ASN:OD1  | 11:AL:43:ALA:CB   | 2.51                     | 0.58              |
| 11:AL:45:ALA:HB3  | 11:AL:74:ILE:HG22 | 1.84                     | 0.58              |
| 12:AM:39:PRO:CA   | 12:AM:70:ARG:HH11 | 2.17                     | 0.58              |
| 12:AM:60:ARG:HH11 | 12:AM:60:ARG:CA   | 2.15                     | 0.58              |
| 19:AT:98:LEU:HD13 | 19:AT:102:GLY:O   | 2.04                     | 0.58              |
| 21:AV:74:PHE:N    | 21:AV:74:PHE:HD1  | 2.00                     | 0.58              |
| 24:BA:294:A:C2    | 24:BA:346:A:C2    | 2.91                     | 0.58              |
| 24:BA:463:G:N2    | 24:BA:466:A:OP2   | 2.26                     | 0.58              |
| 24:BA:475:U:N3    | 24:BA:479:A:N6    | 2.50                     | 0.58              |
| 24:BA:602:G:H2'   | 24:BA:655:A:N1    | 2.18                     | 0.58              |
| 24:BA:612:G:C2'   | 24:BA:615:G:H2'   | 2.34                     | 0.58              |
| 24:BA:641:C:H5    | 24:BA:642:G:N3    | 2.02                     | 0.58              |
| 24:BA:662:G:H5'   | 36:BO:16:ARG:HA   | 1.86                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:671:C:C2     | 24:BA:672:C:C5     | 2.92                     | 0.58              |
| 24:BA:689:A:H2'    | 24:BA:690:G:O4'    | 2.02                     | 0.58              |
| 24:BA:704:G:O2'    | 24:BA:705:A:OP2    | 2.16                     | 0.58              |
| 24:BA:783:A:N6     | 24:BA:785:G:C8     | 2.72                     | 0.58              |
| 24:BA:806:C:O2'    | 24:BA:2445:G:O4'   | 2.21                     | 0.58              |
| 24:BA:920:G:C2     | 24:BA:921:G:C8     | 2.91                     | 0.58              |
| 24:BA:955:C:H5''   | 37:BP:87:LYS:HE2   | 1.86                     | 0.58              |
| 24:BA:961:C:C4     | 24:BA:2031:A:C2    | 2.91                     | 0.58              |
| 24:BA:969:U:C2     | 24:BA:970:C:C6     | 2.92                     | 0.58              |
| 24:BA:1080:C:H4'   | 33:BL:125:ARG:C    | 2.27                     | 0.58              |
| 24:BA:1140:C:H5'   | 34:BM:65:LYS:NZ    | 2.19                     | 0.58              |
| 24:BA:1202:C:C2    | 24:BA:1203:G:O2'   | 2.52                     | 0.58              |
| 24:BA:1255:U:N3    | 29:BF:72:ARG:O     | 2.37                     | 0.58              |
| 24:BA:1341:U:C2'   | 24:BA:1342:A:OP1   | 2.51                     | 0.58              |
| 24:BA:1459:G:O6    | 24:BA:1461:G:N1    | 2.36                     | 0.58              |
| 24:BA:1576:U:H2'   | 24:BA:1577:C:C6    | 2.39                     | 0.58              |
| 24:BA:1629:U:H1'   | 24:BA:2699:C:OP1   | 2.04                     | 0.58              |
| 24:BA:1703:G:C2    | 24:BA:1704:G:N9    | 2.72                     | 0.58              |
| 24:BA:1966:A:O2'   | 24:BA:1967:C:OP2   | 2.20                     | 0.58              |
| 24:BA:2018:G:H8    | 24:BA:2018:G:OP2   | 1.87                     | 0.58              |
| 24:BA:2519:U:H1'   | 24:BA:2542:A:N1    | 2.18                     | 0.58              |
| 24:BA:2572:A:H5''  | 24:BA:2573:C:OP1   | 2.04                     | 0.58              |
| 25:BB:52:A:C2'     | 25:BB:53:A:H5'     | 2.33                     | 0.58              |
| 25:BB:83:G:C2      | 25:BB:84:C:C6      | 2.91                     | 0.58              |
| 26:BC:53:ARG:C     | 26:BC:55:ASP:H     | 2.12                     | 0.58              |
| 27:BD:223:GLY:O    | 27:BD:225:ALA:N    | 2.36                     | 0.58              |
| 29:BF:70:THR:O     | 29:BF:72:ARG:N     | 2.36                     | 0.58              |
| 29:BF:71:GLY:C     | 29:BF:73:ALA:H     | 2.11                     | 0.58              |
| 29:BF:116:ASP:HA   | 29:BF:119:ARG:CG   | 2.33                     | 0.58              |
| 29:BF:192:LEU:HD11 | 29:BF:194:MET:CG   | 2.26                     | 0.58              |
| 30:BG:56:ALA:CB    | 30:BG:68:PRO:HG2   | 2.33                     | 0.58              |
| 31:BH:11:VAL:HG13  | 31:BH:15:VAL:HG12  | 1.85                     | 0.58              |
| 31:BH:26:VAL:CB    | 31:BH:75:ALA:HB1   | 2.33                     | 0.58              |
| 31:BH:76:VAL:CG2   | 31:BH:77:LYS:N     | 2.66                     | 0.58              |
| 37:BP:16:ARG:O     | 37:BP:17:LEU:HG    | 2.04                     | 0.58              |
| 37:BP:75:THR:CG2   | 37:BP:77:LYS:H     | 2.14                     | 0.58              |
| 37:BP:116:GLU:O    | 37:BP:117:ALA:C    | 2.45                     | 0.58              |
| 38:BQ:94:TYR:O     | 38:BQ:117:VAL:HG12 | 2.02                     | 0.58              |
| 38:BQ:100:LEU:CD1  | 38:BQ:101:ALA:H    | 2.16                     | 0.58              |
| 39:BR:77:ALA:O     | 39:BR:78:LEU:C     | 2.47                     | 0.58              |
| 40:BS:37:GLY:HA3   | 40:BS:43:GLN:HA    | 1.85                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 40:BS:38:ASN:C    | 40:BS:39:ARG:HG2  | 2.28                     | 0.58              |
| 40:BS:68:TYR:CD1  | 40:BS:68:TYR:C    | 2.81                     | 0.58              |
| 41:BT:88:ILE:CG2  | 42:BU:55:ALA:HB3  | 2.33                     | 0.58              |
| 41:BT:110:VAL:O   | 41:BT:111:GLU:C   | 2.47                     | 0.58              |
| 42:BU:1:MET:O     | 42:BU:3:ALA:N     | 2.36                     | 0.58              |
| 42:BU:67:GLY:CA   | 42:BU:94:LEU:HD23 | 2.33                     | 0.58              |
| 43:BV:22:ASP:HA   | 43:BV:75:TYR:CZ   | 2.38                     | 0.58              |
| 43:BV:43:GLY:O    | 43:BV:44:ALA:C    | 2.45                     | 0.58              |
| 44:BW:26:TYR:HB3  | 44:BW:28:PHE:CZ   | 2.39                     | 0.58              |
| 44:BW:85:PRO:C    | 44:BW:87:GLN:HE21 | 2.11                     | 0.58              |
| 45:BX:42:VAL:HG22 | 45:BX:61:ILE:HG21 | 1.84                     | 0.58              |
| 45:BX:84:ARG:HG2  | 45:BX:86:ARG:N    | 2.17                     | 0.58              |
| 49:B2:10:LYS:HG3  | 49:B2:31:LEU:HD21 | 1.85                     | 0.58              |
| 51:B4:19:ARG:NH1  | 51:B4:20:ARG:HH11 | 2.01                     | 0.58              |
| 52:B5:27:LYS:HE3  | 52:B5:29:ASN:ND2  | 2.18                     | 0.58              |
| 52:B5:46:HIS:CG   | 52:B5:47:THR:H    | 2.21                     | 0.58              |
| 53:B6:1:MET:O     | 53:B6:1:MET:HG3   | 2.03                     | 0.58              |
| 53:B6:25:PRO:HD3  | 53:B6:28:ARG:HH21 | 1.69                     | 0.58              |
| 1:AA:148:G:H2'    | 1:AA:149:A:H8     | 1.68                     | 0.58              |
| 1:AA:246:A:O2'    | 1:AA:247:G:P      | 2.61                     | 0.58              |
| 1:AA:259:G:H5''   | 22:AW:83:ARG:NH2  | 2.19                     | 0.58              |
| 1:AA:263:A:C3'    | 1:AA:264:U:H5''   | 2.33                     | 0.58              |
| 1:AA:322:C:O2'    | 22:AW:23:ARG:HB2  | 2.04                     | 0.58              |
| 1:AA:358:U:H2'    | 1:AA:359:U:C6     | 2.39                     | 0.58              |
| 1:AA:611:A:H2'    | 1:AA:612:C:H6     | 1.68                     | 0.58              |
| 1:AA:656:C:O2'    | 1:AA:657:G:H5'    | 2.03                     | 0.58              |
| 1:AA:812:C:O4'    | 1:AA:813:U:C5     | 2.56                     | 0.58              |
| 1:AA:986:A:H1'    | 21:AV:55:LYS:HA   | 1.85                     | 0.58              |
| 1:AA:1202:G:H1'   | 16:AQ:29:ARG:NE   | 2.17                     | 0.58              |
| 1:AA:1313:U:O4    | 21:AV:4:SER:CB    | 2.51                     | 0.58              |
| 1:AA:1320:C:O2'   | 21:AV:73:GLU:HB3  | 2.04                     | 0.58              |
| 1:AA:1430:C:C2'   | 1:AA:1431:C:O5'   | 2.50                     | 0.58              |
| 1:AA:1465:C:O2    | 1:AA:1465:C:C2'   | 2.51                     | 0.58              |
| 1:AA:1490:C:C2'   | 1:AA:1491:G:C5'   | 2.81                     | 0.58              |
| 4:AE:33:TYR:CG    | 4:AE:43:ASP:HB2   | 2.38                     | 0.58              |
| 4:AE:69:LEU:HD23  | 4:AE:91:PRO:HB3   | 1.86                     | 0.58              |
| 4:AE:78:GLN:O     | 4:AE:94:ASN:ND2   | 2.37                     | 0.58              |
| 5:AF:71:ALA:HB2   | 5:AF:106:VAL:CG2  | 2.34                     | 0.58              |
| 5:AF:156:ARG:H    | 5:AF:163:ALA:HB1  | 1.67                     | 0.58              |
| 6:AG:19:LEU:O     | 6:AG:26:CYS:SG    | 2.62                     | 0.58              |
| 6:AG:118:ARG:HG3  | 6:AG:136:PRO:HB2  | 1.84                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 7:AH:15:ARG:HG3   | 7:AH:15:ARG:HH11   | 1.69                     | 0.58              |
| 7:AH:84:PHE:CD1   | 7:AH:134:ALA:HA    | 2.39                     | 0.58              |
| 10:AK:51:VAL:CG1  | 10:AK:52:ASP:N     | 2.66                     | 0.58              |
| 10:AK:67:PRO:HD2  | 10:AK:76:PRO:HB3   | 1.85                     | 0.58              |
| 10:AK:82:HIS:C    | 10:AK:137:VAL:HG13 | 2.28                     | 0.58              |
| 11:AL:37:PHE:HA   | 11:AL:40:LEU:HD12  | 1.84                     | 0.58              |
| 13:AN:32:ILE:CG2  | 13:AN:40:ILE:HD11  | 2.22                     | 0.58              |
| 13:AN:128:ALA:O   | 13:AN:129:SER:C    | 2.47                     | 0.58              |
| 14:AO:84:LEU:O    | 14:AO:100:ILE:HA   | 2.04                     | 0.58              |
| 15:AP:14:ARG:O    | 15:AP:45:VAL:HG23  | 2.04                     | 0.58              |
| 20:AU:58:LEU:HD22 | 20:AU:62:GLU:CG    | 2.32                     | 0.58              |
| 22:AW:23:ARG:O    | 22:AW:24:LEU:C     | 2.47                     | 0.58              |
| 24:BA:38:A:H2'    | 24:BA:39:C:H6      | 1.68                     | 0.58              |
| 24:BA:152:G:H22   | 24:BA:175:G:C1'    | 2.13                     | 0.58              |
| 24:BA:196:A:C6    | 24:BA:828:U:H5''   | 2.38                     | 0.58              |
| 24:BA:242:G:C8    | 54:B7:4:MET:CG     | 2.77                     | 0.58              |
| 24:BA:457:A:C2    | 24:BA:470:A:H5'    | 2.39                     | 0.58              |
| 24:BA:515:A:C5'   | 41:BT:32:PHE:CZ    | 2.87                     | 0.58              |
| 24:BA:558:G:P     | 34:BM:111:PRO:HG2  | 2.44                     | 0.58              |
| 24:BA:637:A:H4'   | 24:BA:638:G:O4'    | 2.03                     | 0.58              |
| 24:BA:650:C:OP1   | 54:B7:21:LYS:NZ    | 2.32                     | 0.58              |
| 24:BA:673:C:C5'   | 29:BF:82:ILE:HD12  | 2.34                     | 0.58              |
| 24:BA:692:C:H4'   | 27:BD:42:GLY:HA3   | 1.85                     | 0.58              |
| 24:BA:771:G:H2'   | 24:BA:772:C:C6     | 2.38                     | 0.58              |
| 24:BA:909:A:N3    | 24:BA:912:C:C6     | 2.71                     | 0.58              |
| 24:BA:942:G:O3'   | 36:BO:32:THR:HG22  | 2.02                     | 0.58              |
| 24:BA:1005:C:H1'  | 24:BA:1012:U:O2    | 2.04                     | 0.58              |
| 24:BA:1021:A:C2'  | 24:BA:1022:G:OP1   | 2.49                     | 0.58              |
| 24:BA:1200:C:C2   | 24:BA:1201:C:C5    | 2.91                     | 0.58              |
| 24:BA:1572:A:O2'  | 24:BA:1573:G:OP1   | 2.16                     | 0.58              |
| 24:BA:1620:G:C5   | 24:BA:1621:U:C4    | 2.92                     | 0.58              |
| 24:BA:1698:A:O2'  | 24:BA:1699:G:C3'   | 2.51                     | 0.58              |
| 24:BA:1992:G:C6   | 24:BA:1997:G:C4    | 2.91                     | 0.58              |
| 24:BA:2278:A:N7   | 47:BZ:14:ARG:CG    | 2.66                     | 0.58              |
| 24:BA:2463:C:O2'  | 24:BA:2464:C:H5'   | 2.04                     | 0.58              |
| 24:BA:2466:C:N4   | 24:BA:2485:G:C6    | 2.71                     | 0.58              |
| 24:BA:2580:U:OP2  | 24:BA:2580:U:H6    | 1.87                     | 0.58              |
| 24:BA:2603:G:H2'  | 24:BA:2604:U:O4'   | 2.03                     | 0.58              |
| 24:BA:2657:A:C2   | 24:BA:2665:A:C1'   | 2.79                     | 0.58              |
| 24:BA:2839:G:C2   | 24:BA:2880:C:C4    | 2.91                     | 0.58              |
| 25:BB:105:G:O2'   | 25:BB:106:G:H5'    | 2.02                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 26:BC:161:ILE:HD13 | 26:BC:173:ALA:HB1  | 1.85                     | 0.58              |
| 27:BD:169:GLU:O    | 27:BD:172:TYR:O    | 2.22                     | 0.58              |
| 27:BD:206:LEU:O    | 27:BD:206:LEU:CD2  | 2.50                     | 0.58              |
| 27:BD:254:THR:C    | 27:BD:255:LYS:HG3  | 2.29                     | 0.58              |
| 30:BG:54:GLU:O     | 30:BG:57:ALA:CB    | 2.45                     | 0.58              |
| 30:BG:119:GLY:HA3  | 30:BG:180:PHE:CD1  | 2.39                     | 0.58              |
| 31:BH:124:GLU:HB2  | 31:BH:132:ARG:NE   | 2.19                     | 0.58              |
| 33:BL:10:LEU:N     | 33:BL:10:LEU:HD23  | 2.17                     | 0.58              |
| 33:BL:106:GLU:HA   | 33:BL:109:LYS:HG3  | 1.86                     | 0.58              |
| 35:BN:106:LEU:O    | 35:BN:109:LYS:CA   | 2.51                     | 0.58              |
| 36:BO:107:LYS:CE   | 36:BO:110:TYR:HB3  | 2.33                     | 0.58              |
| 36:BO:126:VAL:HB   | 36:BO:146:VAL:HG23 | 1.86                     | 0.58              |
| 36:BO:131:SER:OG   | 36:BO:134:ALA:HB2  | 2.04                     | 0.58              |
| 37:BP:64:ILE:O     | 37:BP:65:PHE:HD2   | 1.87                     | 0.58              |
| 39:BR:8:GLU:O      | 39:BR:10:ARG:N     | 2.36                     | 0.58              |
| 41:BT:45:TYR:C     | 41:BT:47:TYR:N     | 2.60                     | 0.58              |
| 42:BU:79:VAL:HB    | 42:BU:81:TYR:HD1   | 1.68                     | 0.58              |
| 44:BW:31:HIS:CE1   | 44:BW:33:LYS:HD2   | 2.39                     | 0.58              |
| 45:BX:70:SER:OG    | 45:BX:78:ALA:HA    | 2.03                     | 0.58              |
| 46:BY:44:PHE:CD2   | 46:BY:48:PHE:CE1   | 2.91                     | 0.58              |
| 46:BY:76:LEU:HA    | 46:BY:83:PRO:HA    | 1.85                     | 0.58              |
| 48:B1:20:VAL:CG2   | 48:B1:24:LYS:HE3   | 2.32                     | 0.58              |
| 48:B1:27:LEU:HG    | 48:B1:30:LEU:HD11  | 1.84                     | 0.58              |
| 49:B2:3:ARG:HH11   | 49:B2:3:ARG:CB     | 2.14                     | 0.58              |
| 50:B3:8:LYS:CG     | 50:B3:9:LEU:H      | 2.09                     | 0.58              |
| 51:B4:44:THR:O     | 51:B4:52:TYR:OH    | 2.18                     | 0.58              |
| 52:B5:41:PRO:HG2   | 52:B5:43:CYS:HB2   | 1.86                     | 0.58              |
| 53:B6:34:ARG:HH22  | 53:B6:42:LEU:HG    | 1.67                     | 0.58              |
| 55:B8:28:GLU:O     | 55:B8:29:ASN:HB2   | 2.03                     | 0.58              |
| 1:AA:19:C:H1'      | 1:AA:864:A:N3      | 2.18                     | 0.58              |
| 1:AA:123:C:OP1     | 1:AA:312:C:H5'     | 2.03                     | 0.58              |
| 1:AA:230:G:N2      | 1:AA:231:G:N3      | 2.51                     | 0.58              |
| 1:AA:241:C:O2'     | 1:AA:242:C:H5'     | 2.04                     | 0.58              |
| 1:AA:375:U:C4'     | 18:AS:17:TYR:CE2   | 2.87                     | 0.58              |
| 1:AA:391:G:C6      | 1:AA:392:G:C5      | 2.92                     | 0.58              |
| 1:AA:428:G:O2'     | 1:AA:429:U:P       | 2.62                     | 0.58              |
| 1:AA:448:A:O2'     | 1:AA:449:C:H5'     | 2.04                     | 0.58              |
| 1:AA:676:A:H4'     | 13:AN:114:VAL:O    | 2.03                     | 0.58              |
| 1:AA:689:C:C4      | 1:AA:690:G:N7      | 2.72                     | 0.58              |
| 1:AA:719:C:H3'     | 1:AA:720:C:C5      | 2.39                     | 0.58              |
| 1:AA:891:U:H5      | 1:AA:906:G:C2      | 2.21                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 1:AA:894:G:H2'   | 1:AA:895:G:H8      | 1.68                     | 0.58              |
| 1:AA:934:C:O2    | 1:AA:937:A:N6      | 2.36                     | 0.58              |
| 1:AA:978:A:N1    | 1:AA:1318:A:N6     | 2.52                     | 0.58              |
| 1:AA:1026:G:O6   | 1:AA:1036:G:C2     | 2.57                     | 0.58              |
| 1:AA:1038:C:H2'  | 1:AA:1039:C:C5     | 2.39                     | 0.58              |
| 1:AA:1049:U:C1'  | 1:AA:1201:A:O4'    | 2.52                     | 0.58              |
| 1:AA:1157:A:O4'  | 1:AA:1158:C:N3     | 2.37                     | 0.58              |
| 1:AA:1193:G:C6   | 1:AA:1194:U:C4     | 2.91                     | 0.58              |
| 1:AA:1268:A:H4'  | 23:AX:20:LYS:HB2   | 1.86                     | 0.58              |
| 4:AE:80:ILE:HG23 | 4:AE:212:GLN:HE21  | 1.68                     | 0.58              |
| 4:AE:124:SER:HB3 | 4:AE:126:GLU:CD    | 2.28                     | 0.58              |
| 4:AE:136:VAL:N   | 4:AE:139:LYS:NZ    | 2.51                     | 0.58              |
| 4:AE:150:SER:HA  | 4:AE:153:ARG:CG    | 2.34                     | 0.58              |
| 4:AE:150:SER:O   | 4:AE:151:GLY:O     | 2.22                     | 0.58              |
| 7:AH:34:VAL:CG2  | 7:AH:62:ALA:HB1    | 2.32                     | 0.58              |
| 7:AH:69:VAL:O    | 7:AH:70:PRO:C      | 2.47                     | 0.58              |
| 8:AI:30:LEU:HB3  | 8:AI:35:ALA:CB     | 2.33                     | 0.58              |
| 8:AI:67:MET:SD   | 8:AI:67:MET:O      | 2.62                     | 0.58              |
| 9:AJ:89:MET:N    | 9:AJ:89:MET:SD     | 2.76                     | 0.58              |
| 10:AK:10:LEU:C   | 10:AK:13:ILE:HB    | 2.29                     | 0.58              |
| 11:AL:49:PRO:CG  | 11:AL:81:ILE:HB    | 2.34                     | 0.58              |
| 13:AN:20:TYR:CZ  | 13:AN:83:ILE:HG12  | 2.39                     | 0.58              |
| 15:AP:13:LYS:HA  | 15:AP:44:ARG:NH2   | 2.18                     | 0.58              |
| 15:AP:81:LEU:CD2 | 15:AP:82:MET:HG2   | 2.30                     | 0.58              |
| 17:AR:8:LYS:HE2  | 17:AR:12:ILE:HD11  | 1.86                     | 0.58              |
| 17:AR:79:ARG:CG  | 17:AR:82:ILE:HD12  | 2.33                     | 0.58              |
| 19:AT:10:VAL:CG2 | 19:AT:55:ASP:HB2   | 2.33                     | 0.58              |
| 20:AU:75:ILE:O   | 20:AU:76:LEU:C     | 2.45                     | 0.58              |
| 21:AV:40:ILE:CG1 | 21:AV:71:LEU:HD23  | 2.34                     | 0.58              |
| 21:AV:50:ALA:HB1 | 21:AV:57:HIS:HB3   | 1.85                     | 0.58              |
| 22:AW:54:LYS:H   | 22:AW:100:ILE:HD11 | 1.69                     | 0.58              |
| 22:AW:56:MET:SD  | 22:AW:84:LEU:CD1   | 2.92                     | 0.58              |
| 24:BA:71:A:O2'   | 24:BA:72:U:C5'     | 2.52                     | 0.58              |
| 24:BA:239:U:O2'  | 24:BA:240:G:C5'    | 2.51                     | 0.58              |
| 24:BA:304:G:H2'  | 24:BA:305:U:H6     | 1.68                     | 0.58              |
| 24:BA:361:G:C2'  | 24:BA:362:U:O4'    | 2.52                     | 0.58              |
| 24:BA:429:A:H2'  | 24:BA:430:G:N7     | 2.18                     | 0.58              |
| 24:BA:650:C:O2   | 24:BA:650:C:H2'    | 2.03                     | 0.58              |
| 24:BA:684:G:N2   | 24:BA:794:G:C2     | 2.72                     | 0.58              |
| 24:BA:723:G:H2'  | 24:BA:724:U:H6     | 1.69                     | 0.58              |
| 24:BA:763:G:N3   | 24:BA:765:G:H1'    | 2.19                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1343:G:N2    | 24:BA:1405:U:C1'   | 2.66                     | 0.58              |
| 24:BA:1366:A:C2    | 24:BA:1367:A:C4    | 2.91                     | 0.58              |
| 24:BA:1531:C:O2    | 24:BA:1532:C:C5    | 2.56                     | 0.58              |
| 24:BA:1609:A:C8    | 24:BA:1616:A:C1'   | 2.86                     | 0.58              |
| 24:BA:1628:G:H2'   | 24:BA:1629:U:C6    | 2.39                     | 0.58              |
| 24:BA:1695:G:N3    | 24:BA:1695:G:C3'   | 2.62                     | 0.58              |
| 24:BA:1791:A:OP1   | 27:BD:213:ARG:HD3  | 2.04                     | 0.58              |
| 24:BA:1919:A:C2'   | 24:BA:1920:C:H5'   | 2.33                     | 0.58              |
| 24:BA:1925:C:C2    | 24:BA:1929:G:O6    | 2.57                     | 0.58              |
| 24:BA:2055:C:H4'   | 24:BA:2056:G:O5'   | 2.04                     | 0.58              |
| 24:BA:2093:G:H5'   | 32:BK:25:TYR:CG    | 2.39                     | 0.58              |
| 24:BA:2178:C:O2'   | 26:BC:168:THR:HB   | 2.04                     | 0.58              |
| 24:BA:2263:C:C2'   | 24:BA:2264:C:H5'   | 2.33                     | 0.58              |
| 24:BA:2311:A:C3'   | 24:BA:2312:U:C5    | 2.80                     | 0.58              |
| 24:BA:2423:U:O2    | 24:BA:2423:U:C2'   | 2.51                     | 0.58              |
| 24:BA:2647:U:H2'   | 24:BA:2648:C:C6    | 2.37                     | 0.58              |
| 24:BA:2675:A:N6    | 24:BA:2732:G:H1    | 2.00                     | 0.58              |
| 24:BA:2687:U:O2    | 24:BA:2687:U:C2'   | 2.51                     | 0.58              |
| 24:BA:2719:G:H8    | 24:BA:2719:G:O5'   | 1.87                     | 0.58              |
| 25:BB:68:C:C3'     | 25:BB:69:G:H8      | 2.16                     | 0.58              |
| 27:BD:16:MET:O     | 27:BD:19:ALA:HB3   | 2.03                     | 0.58              |
| 27:BD:92:ILE:HD11  | 27:BD:104:TYR:CD1  | 2.39                     | 0.58              |
| 27:BD:171:ASP:O    | 27:BD:186:HIS:HB3  | 2.04                     | 0.58              |
| 27:BD:258:LYS:HA   | 27:BD:261:LYS:CD   | 2.34                     | 0.58              |
| 28:BE:8:LYS:HD2    | 40:BS:3:ARG:HA     | 1.85                     | 0.58              |
| 28:BE:51:PHE:CE1   | 28:BE:75:VAL:HG22  | 2.39                     | 0.58              |
| 28:BE:117:MET:SD   | 28:BE:136:ARG:CG   | 2.78                     | 0.58              |
| 29:BF:75:HIS:NE2   | 29:BF:80:ALA:HB3   | 2.19                     | 0.58              |
| 29:BF:77:ASP:CG    | 29:BF:80:ALA:HB2   | 2.29                     | 0.58              |
| 29:BF:192:LEU:HD22 | 29:BF:193:VAL:H    | 1.68                     | 0.58              |
| 30:BG:26:GLN:HG2   | 30:BG:29:TRP:CE3   | 2.38                     | 0.58              |
| 30:BG:30:GLU:HG2   | 30:BG:33:ARG:CD    | 2.34                     | 0.58              |
| 30:BG:44:GLY:O     | 30:BG:47:LYS:N     | 2.36                     | 0.58              |
| 30:BG:125:PHE:CD2  | 30:BG:129:GLY:N    | 2.72                     | 0.58              |
| 30:BG:162:THR:O    | 30:BG:164:GLU:N    | 2.31                     | 0.58              |
| 30:BG:181:ARG:N    | 30:BG:181:ARG:CD   | 2.58                     | 0.58              |
| 31:BH:76:VAL:CG2   | 31:BH:77:LYS:H     | 2.16                     | 0.58              |
| 31:BH:103:LEU:CB   | 31:BH:105:LEU:HD11 | 2.34                     | 0.58              |
| 32:BK:58:LEU:HA    | 32:BK:61:ARG:CG    | 2.33                     | 0.58              |
| 32:BK:133:HIS:O    | 32:BK:136:VAL:HG22 | 2.03                     | 0.58              |
| 34:BM:134:ARG:O    | 34:BM:137:LYS:HE3  | 2.02                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 35:BN:16:ALA:HB2  | 35:BN:46:ALA:O    | 2.04                     | 0.58              |
| 36:BO:45:LEU:HD22 | 54:B7:59:LYS:CD   | 2.32                     | 0.58              |
| 36:BO:49:ARG:HG3  | 54:B7:52:LYS:HG3  | 1.85                     | 0.58              |
| 37:BP:9:TYR:CD2   | 37:BP:9:TYR:N     | 2.71                     | 0.58              |
| 37:BP:114:ALA:O   | 37:BP:115:MET:C   | 2.45                     | 0.58              |
| 37:BP:116:GLU:HA  | 37:BP:119:ARG:CG  | 2.33                     | 0.58              |
| 38:BQ:69:ASP:C    | 38:BQ:70:LEU:HD23 | 2.29                     | 0.58              |
| 39:BR:13:ARG:NH1  | 39:BR:94:TYR:OH   | 2.37                     | 0.58              |
| 40:BS:68:TYR:CE1  | 40:BS:69:GLY:O    | 2.57                     | 0.58              |
| 44:BW:18:TYR:OH   | 44:BW:96:ILE:HG12 | 2.03                     | 0.58              |
| 44:BW:36:LYS:HE3  | 44:BW:56:THR:HG23 | 1.84                     | 0.58              |
| 45:BX:12:THR:HA   | 45:BX:73:ARG:NE   | 2.19                     | 0.58              |
| 45:BX:45:VAL:HA   | 45:BX:57:GLN:HG2  | 1.86                     | 0.58              |
| 45:BX:72:VAL:O    | 45:BX:73:ARG:HG3  | 2.03                     | 0.58              |
| 46:BY:1:MET:HE1   | 46:BY:59:LEU:HD22 | 1.84                     | 0.58              |
| 48:B1:24:LYS:HG2  | 48:B1:52:ILE:HG21 | 1.85                     | 0.58              |
| 48:B1:26:GLU:O    | 48:B1:29:GLU:HB2  | 2.03                     | 0.58              |
| 48:B1:32:PHE:N    | 48:B1:32:PHE:CD1  | 2.72                     | 0.58              |
| 50:B3:64:GLY:O    | 50:B3:67:TYR:N    | 2.37                     | 0.58              |
| 54:B7:15:LYS:O    | 54:B7:22:VAL:CA   | 2.50                     | 0.58              |
| 1:AA:296:U:H1'    | 1:AA:302:G:H22    | 1.63                     | 0.58              |
| 1:AA:413:G:H22    | 1:AA:428:G:C2'    | 2.17                     | 0.58              |
| 1:AA:486:U:H2'    | 1:AA:487:A:C5'    | 2.34                     | 0.58              |
| 1:AA:684:A:H1'    | 13:AN:39:PRO:HD2  | 1.86                     | 0.58              |
| 1:AA:750:G:H1'    | 17:AR:23:GLY:N    | 2.18                     | 0.58              |
| 1:AA:939:G:C2     | 1:AA:940:C:C4     | 2.91                     | 0.58              |
| 1:AA:1089:G:H2'   | 1:AA:1090:U:C5'   | 2.32                     | 0.58              |
| 1:AA:1104:G:H2'   | 1:AA:1105:A:C8    | 2.39                     | 0.58              |
| 1:AA:1180:A:OP1   | 11:AL:102:LEU:CD1 | 2.48                     | 0.58              |
| 1:AA:1203:C:H2'   | 1:AA:1204:A:H8    | 1.68                     | 0.58              |
| 1:AA:1333:A:H2'   | 1:AA:1334:G:C8    | 2.39                     | 0.58              |
| 3:AC:21:A:N1      | 3:AC:48:C:C2      | 2.71                     | 0.58              |
| 3:AC:73:A:C2'     | 3:AC:74:C:OP1     | 2.52                     | 0.58              |
| 3:AD:18:G:N3      | 3:AD:58:A:O4'     | 2.35                     | 0.58              |
| 3:AD:21:A:C2'     | 3:AD:22:G:O4'     | 2.51                     | 0.58              |
| 3:AD:76:A:H2      | 24:BA:2432:A:P    | 2.27                     | 0.58              |
| 3:AB:55:U:O2      | 3:AB:55:U:C2'     | 2.50                     | 0.58              |
| 3:AB:75:C:O2      | 3:AB:75:C:H2'     | 2.04                     | 0.58              |
| 4:AE:67:THR:HB    | 4:AE:90:MET:SD    | 2.43                     | 0.58              |
| 4:AE:82:ARG:HA    | 4:AE:92:TYR:CZ    | 2.39                     | 0.58              |
| 4:AE:87:ARG:NH2   | 4:AE:219:VAL:HG11 | 2.19                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:AE:189:ASP:O    | 4:AE:191:ASP:N    | 2.36                     | 0.58              |
| 6:AG:13:ARG:HH21  | 6:AG:40:PRO:CA    | 2.14                     | 0.58              |
| 6:AG:193:ASP:OD2  | 6:AG:194:LEU:HD21 | 2.04                     | 0.58              |
| 9:AJ:133:GLY:O    | 9:AJ:137:LYS:HG3  | 2.03                     | 0.58              |
| 11:AL:26:VAL:HG22 | 11:AL:61:ALA:CB   | 2.34                     | 0.58              |
| 11:AL:49:PRO:CD   | 11:AL:78:LYS:HG2  | 2.29                     | 0.58              |
| 14:AO:46:LYS:HE3  | 14:AO:47:LYS:HZ1  | 1.68                     | 0.58              |
| 14:AO:119:LYS:HB3 | 14:AO:120:TYR:HD1 | 1.69                     | 0.58              |
| 15:AP:20:THR:HA   | 15:AP:25:ILE:HB   | 1.84                     | 0.58              |
| 17:AR:75:PRO:O    | 17:AR:79:ARG:N    | 2.31                     | 0.58              |
| 20:AU:26:LEU:HD22 | 20:AU:39:VAL:HG22 | 1.85                     | 0.58              |
| 22:AW:49:ALA:O    | 22:AW:52:ALA:HB3  | 2.04                     | 0.58              |
| 22:AW:72:LEU:HD22 | 22:AW:76:ALA:CB   | 2.34                     | 0.58              |
| 24:BA:105:C:C2    | 24:BA:106:C:C5    | 2.92                     | 0.58              |
| 24:BA:114:U:H2'   | 24:BA:115:C:H6    | 1.67                     | 0.58              |
| 24:BA:147:U:H2'   | 24:BA:148:C:C6    | 2.39                     | 0.58              |
| 24:BA:182:A:OP2   | 24:BA:182:A:H8    | 1.87                     | 0.58              |
| 24:BA:223:A:C5    | 24:BA:408:G:C1'   | 2.87                     | 0.58              |
| 24:BA:249:C:H5'   | 24:BA:2394:C:O2'  | 2.04                     | 0.58              |
| 24:BA:344:G:H2'   | 24:BA:345:A:O4'   | 2.04                     | 0.58              |
| 24:BA:374:A:N6    | 24:BA:401:A:C1'   | 2.67                     | 0.58              |
| 24:BA:448:U:O4    | 24:BA:583:G:N3    | 2.37                     | 0.58              |
| 24:BA:500:G:H2'   | 24:BA:501:A:C5'   | 2.33                     | 0.58              |
| 24:BA:586:A:N6    | 24:BA:810:U:H5'   | 2.19                     | 0.58              |
| 24:BA:610:C:H2'   | 24:BA:611:C:C6    | 2.38                     | 0.58              |
| 24:BA:650:C:P     | 54:B7:21:LYS:NZ   | 2.77                     | 0.58              |
| 24:BA:666:G:H3'   | 24:BA:666:G:OP2   | 2.03                     | 0.58              |
| 24:BA:674:G:C2    | 24:BA:807:U:O4    | 2.57                     | 0.58              |
| 24:BA:740:U:O2'   | 24:BA:741:G:O5'   | 2.21                     | 0.58              |
| 24:BA:880:G:N3    | 24:BA:881:G:H1'   | 2.18                     | 0.58              |
| 24:BA:904:C:O4'   | 46:BY:169:GLU:OE2 | 2.21                     | 0.58              |
| 24:BA:1029:A:O2'  | 24:BA:1030:G:H5'  | 2.04                     | 0.58              |
| 24:BA:1062:G:H5'' | 24:BA:1070:A:H5'  | 1.86                     | 0.58              |
| 24:BA:1096:A:H62  | 33:BL:30:HIS:CB   | 2.15                     | 0.58              |
| 24:BA:1266:G:HO2' | 24:BA:2012:G:H1   | 1.33                     | 0.58              |
| 24:BA:1394:U:H5'' | 24:BA:1604:C:OP1  | 2.04                     | 0.58              |
| 24:BA:1439:A:N7   | 24:BA:1440:G:C4   | 2.71                     | 0.58              |
| 24:BA:1467:C:N4   | 24:BA:1468:C:N4   | 2.52                     | 0.58              |
| 24:BA:1486:A:H2'  | 24:BA:1487:G:O4'  | 2.04                     | 0.58              |
| 24:BA:1491:G:H2'  | 24:BA:1492:G:C4'  | 2.26                     | 0.58              |
| 24:BA:1658:C:OP1  | 28:BE:134:ILE:CB  | 2.51                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1804:C:P     | 27:BD:257:LEU:HD22 | 2.44                     | 0.58              |
| 24:BA:1950:G:C5    | 24:BA:1951:U:C5    | 2.92                     | 0.58              |
| 24:BA:1956:U:C2    | 24:BA:1957:C:C5    | 2.92                     | 0.58              |
| 24:BA:2029:G:H1    | 24:BA:2033:A:P     | 2.25                     | 0.58              |
| 24:BA:2127:G:C5'   | 26:BC:36:LYS:HG2   | 2.33                     | 0.58              |
| 24:BA:2281:C:O2'   | 24:BA:2282:G:O5'   | 2.22                     | 0.58              |
| 24:BA:2291:U:C2    | 24:BA:2292:C:C5    | 2.92                     | 0.58              |
| 24:BA:2463:C:H2'   | 24:BA:2464:C:H5'   | 1.84                     | 0.58              |
| 24:BA:2509:G:N2    | 24:BA:2510:C:H1'   | 2.18                     | 0.58              |
| 24:BA:2659:G:C2'   | 24:BA:2661:G:OP2   | 2.52                     | 0.58              |
| 24:BA:2785:C:H2'   | 24:BA:2786:U:C6    | 2.38                     | 0.58              |
| 26:BC:104:LEU:HD13 | 26:BC:130:ILE:CD1  | 2.34                     | 0.58              |
| 27:BD:12:SER:HB2   | 27:BD:14:ARG:HH21  | 1.68                     | 0.58              |
| 27:BD:78:LYS:HA    | 27:BD:115:GLN:O    | 2.04                     | 0.58              |
| 27:BD:209:ALA:C    | 27:BD:213:ARG:HG2  | 2.28                     | 0.58              |
| 28:BE:51:PHE:C     | 28:BE:74:PRO:HB3   | 2.25                     | 0.58              |
| 29:BF:203:GLN:N    | 29:BF:203:GLN:NE2  | 2.52                     | 0.58              |
| 32:BK:5:LEU:HG     | 32:BK:17:GLN:O     | 2.04                     | 0.58              |
| 32:BK:132:PRO:HD3  | 32:BK:138:ILE:HG22 | 1.84                     | 0.58              |
| 33:BL:128:ALA:HB1  | 33:BL:138:VAL:HG11 | 1.85                     | 0.58              |
| 34:BM:74:ARG:HD2   | 34:BM:82:LEU:HD13  | 1.86                     | 0.58              |
| 34:BM:107:LEU:HD21 | 34:BM:113:GLY:CA   | 2.31                     | 0.58              |
| 35:BN:97:ARG:HE    | 35:BN:98:VAL:C     | 2.12                     | 0.58              |
| 36:BO:46:LYS:N     | 36:BO:46:LYS:CE    | 2.64                     | 0.58              |
| 36:BO:47:ASP:HB3   | 36:BO:48:PRO:HD3   | 1.86                     | 0.58              |
| 36:BO:58:THR:HG22  | 36:BO:60:MET:H     | 1.69                     | 0.58              |
| 37:BP:68:ILE:HG21  | 37:BP:95:ALA:CB    | 2.34                     | 0.58              |
| 39:BR:103:GLU:HA   | 39:BR:106:ARG:HB3  | 1.85                     | 0.58              |
| 41:BT:40:PHE:CD2   | 42:BU:78:LYS:HE2   | 2.39                     | 0.58              |
| 45:BX:8:LYS:HA     | 45:BX:28:LYS:CD    | 2.31                     | 0.58              |
| 45:BX:14:LEU:HD22  | 45:BX:20:TYR:H     | 1.68                     | 0.58              |
| 45:BX:93:GLY:C     | 45:BX:95:LYS:H     | 2.11                     | 0.58              |
| 46:BY:167:PRO:O    | 46:BY:168:GLU:HB3  | 2.03                     | 0.58              |
| 48:B1:59:LEU:HD11  | 48:B1:63:ARG:HD3   | 1.86                     | 0.58              |
| 50:B3:11:PRO:O     | 50:B3:12:ALA:HB2   | 2.03                     | 0.58              |
| 52:B5:20:ASN:CG    | 52:B5:42:TRP:HD1   | 2.12                     | 0.58              |
| 1:AA:186(A):C:H1'  | 22:AW:104:LEU:HD21 | 1.84                     | 0.58              |
| 1:AA:189:U:C2      | 19:AT:63:ARG:NH2   | 2.72                     | 0.58              |
| 1:AA:191:G:H1'     | 22:AW:105:SER:CA   | 2.27                     | 0.58              |
| 1:AA:341:C:O2'     | 1:AA:342:C:H5'     | 2.04                     | 0.58              |
| 1:AA:429:U:H5'     | 1:AA:430:A:OP1     | 2.03                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:571:U:O4     | 1:AA:865:A:N1     | 2.37                     | 0.58              |
| 1:AA:659:U:OP1    | 17:AR:9:GLN:CD    | 2.46                     | 0.58              |
| 1:AA:859:A:H2'    | 1:AA:860:A:C5'    | 2.34                     | 0.58              |
| 1:AA:954:G:H2'    | 1:AA:955:U:O4'    | 2.04                     | 0.58              |
| 1:AA:972:C:P      | 12:AM:57:LYS:HZ2  | 2.27                     | 0.58              |
| 1:AA:1067:A:O2'   | 1:AA:1068:G:P     | 2.62                     | 0.58              |
| 1:AA:1134:G:C6    | 1:AA:1135:U:H1'   | 2.39                     | 0.58              |
| 1:AA:1394:A:O2'   | 1:AA:1395:C:P     | 2.61                     | 0.58              |
| 3:AB:8:U:H2'      | 3:AB:22:G:O6      | 2.04                     | 0.58              |
| 4:AE:61:LEU:N     | 4:AE:64:ARG:HH11  | 2.01                     | 0.58              |
| 4:AE:72:GLY:O     | 4:AE:73:THR:C     | 2.47                     | 0.58              |
| 5:AF:29:TYR:OH    | 16:AQ:54:PRO:HB2  | 2.02                     | 0.58              |
| 6:AG:98:GLU:CD    | 6:AG:107:ARG:HG3  | 2.28                     | 0.58              |
| 6:AG:165:MET:CE   | 6:AG:167:GLY:H    | 2.15                     | 0.58              |
| 7:AH:76:ILE:HG22  | 7:AH:78:HIS:HD2   | 1.69                     | 0.58              |
| 7:AH:105:VAL:O    | 7:AH:109:ILE:HG22 | 2.04                     | 0.58              |
| 10:AK:5:PRO:CA    | 10:AK:8:ASP:HB3   | 2.34                     | 0.58              |
| 10:AK:17:THR:HB   | 10:AK:18:ARG:CZ   | 2.33                     | 0.58              |
| 10:AK:38:ILE:CD1  | 10:AK:118:VAL:HB  | 2.34                     | 0.58              |
| 10:AK:126:LYS:HZ1 | 10:AK:127:LEU:CB  | 2.17                     | 0.58              |
| 13:AN:111:ASP:OD2 | 13:AN:113:PRO:CD  | 2.46                     | 0.58              |
| 17:AR:26:GLU:OE2  | 17:AR:26:GLU:HA   | 2.04                     | 0.58              |
| 17:AR:54:ARG:NE   | 17:AR:58:MET:HE2  | 2.18                     | 0.58              |
| 19:AT:34:LYS:HD2  | 19:AT:35:VAL:H    | 1.69                     | 0.58              |
| 21:AV:21:GLU:O    | 21:AV:24:ALA:CB   | 2.52                     | 0.58              |
| 21:AV:64:GLU:O    | 21:AV:67:VAL:HG23 | 2.03                     | 0.58              |
| 22:AW:40:ALA:O    | 22:AW:41:ILE:C    | 2.47                     | 0.58              |
| 24:BA:25:U:H2'    | 24:BA:25:U:O2     | 2.03                     | 0.58              |
| 24:BA:76:C:H2'    | 24:BA:76:C:O2     | 2.03                     | 0.58              |
| 24:BA:246:C:N4    | 24:BA:252:G:H1    | 2.01                     | 0.58              |
| 24:BA:252:G:C2    | 24:BA:253:C:C6    | 2.92                     | 0.58              |
| 24:BA:600:G:O2'   | 29:BF:104:LYS:HG2 | 2.04                     | 0.58              |
| 24:BA:670:A:H5''  | 24:BA:671:C:OP1   | 2.03                     | 0.58              |
| 24:BA:1071:G:N2   | 24:BA:1090:U:C5   | 2.71                     | 0.58              |
| 24:BA:1104:C:H2'  | 24:BA:1105:U:C6   | 2.38                     | 0.58              |
| 24:BA:1199:U:C2   | 24:BA:1200:C:C5   | 2.92                     | 0.58              |
| 24:BA:1210:A:H1'  | 24:BA:1212:G:H21  | 1.69                     | 0.58              |
| 24:BA:1223:C:O2   | 24:BA:1225:C:H5'' | 2.04                     | 0.58              |
| 24:BA:1249:U:H3   | 36:BO:21:ARG:NH1  | 2.00                     | 0.58              |
| 24:BA:1491:G:H3'  | 24:BA:1492:G:H4'  | 1.84                     | 0.58              |
| 24:BA:1531:C:C2   | 24:BA:1532:C:H5   | 2.22                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1630(A):C:O2 | 24:BA:1633:G:O6    | 2.22                     | 0.58              |
| 24:BA:1656:C:OP1   | 28:BE:117:MET:HB2  | 2.04                     | 0.58              |
| 24:BA:1670:C:C6    | 24:BA:1671:U:C6    | 2.92                     | 0.58              |
| 24:BA:1759:A:H5'   | 24:BA:2715:C:C1'   | 2.33                     | 0.58              |
| 24:BA:1773:A:C5    | 24:BA:1774:C:O2    | 2.57                     | 0.58              |
| 24:BA:1791:A:O3'   | 27:BD:206:LEU:CD2  | 2.52                     | 0.58              |
| 24:BA:1804:C:OP1   | 27:BD:257:LEU:HD22 | 2.04                     | 0.58              |
| 24:BA:1838:C:O2    | 24:BA:1838:C:C2'   | 2.52                     | 0.58              |
| 24:BA:1971:A:C2    | 27:BD:239:ARG:HB3  | 2.39                     | 0.58              |
| 24:BA:2000:G:C2    | 24:BA:2001:A:N7    | 2.72                     | 0.58              |
| 24:BA:2443:C:H2'   | 24:BA:2444:G:C8    | 2.28                     | 0.58              |
| 24:BA:2479:G:H5''  | 24:BA:2537:U:H4'   | 1.86                     | 0.58              |
| 24:BA:2690:C:H5    | 38:BQ:14:SER:HB2   | 1.65                     | 0.58              |
| 24:BA:2748:A:C6    | 24:BA:2757:A:N6    | 2.72                     | 0.58              |
| 25:BB:52:A:H2'     | 25:BB:53:A:H5'     | 1.85                     | 0.58              |
| 26:BC:22:ILE:HG22  | 26:BC:186:ALA:HA   | 1.86                     | 0.58              |
| 27:BD:244:ARG:O    | 27:BD:252:TRP:CD1  | 2.57                     | 0.58              |
| 28:BE:59:VAL:C     | 28:BE:62:PRO:HD2   | 2.28                     | 0.58              |
| 28:BE:104:VAL:HG21 | 28:BE:198:VAL:HG22 | 1.85                     | 0.58              |
| 28:BE:128:SER:OG   | 28:BE:129:HIS:HD2  | 1.86                     | 0.58              |
| 28:BE:156:MET:O    | 28:BE:160:TYR:CE1  | 2.57                     | 0.58              |
| 29:BF:69:HIS:ND1   | 29:BF:69:HIS:C     | 2.59                     | 0.58              |
| 29:BF:82:ILE:O     | 29:BF:83:PHE:HB3   | 2.04                     | 0.58              |
| 29:BF:156:LEU:HG   | 29:BF:173:VAL:CG2  | 2.34                     | 0.58              |
| 30:BG:26:GLN:OE1   | 30:BG:29:TRP:HE3   | 1.87                     | 0.58              |
| 30:BG:39:ILE:HG13  | 30:BG:157:ILE:CG1  | 2.34                     | 0.58              |
| 33:BL:42:ASN:O     | 33:BL:46:ALA:HB2   | 2.03                     | 0.58              |
| 35:BN:9:GLU:HB2    | 35:BN:81:ASP:O     | 2.03                     | 0.58              |
| 35:BN:23:ARG:CD    | 35:BN:23:ARG:N     | 2.67                     | 0.58              |
| 35:BN:101:PRO:O    | 35:BN:102:VAL:HB   | 2.02                     | 0.58              |
| 36:BO:15:ARG:NH2   | 36:BO:16:ARG:H     | 2.01                     | 0.58              |
| 36:BO:117:GLU:OE2  | 36:BO:117:GLU:N    | 2.34                     | 0.58              |
| 37:BP:37:LEU:CA    | 37:BP:100:GLY:HA2  | 2.33                     | 0.58              |
| 37:BP:94:VAL:HG23  | 37:BP:95:ALA:H     | 1.67                     | 0.58              |
| 37:BP:109:VAL:HG21 | 37:BP:114:ALA:N    | 2.19                     | 0.58              |
| 38:BQ:52:ILE:O     | 38:BQ:55:ALA:HB3   | 2.03                     | 0.58              |
| 40:BS:10:VAL:HB    | 40:BS:11:GLU:OE2   | 2.04                     | 0.58              |
| 41:BT:59:ARG:HA    | 41:BT:62:ILE:CD1   | 2.33                     | 0.58              |
| 42:BU:43:GLU:N     | 42:BU:44:LYS:NZ    | 2.37                     | 0.58              |
| 44:BW:63:LYS:NZ    | 44:BW:72:LYS:HE2   | 2.18                     | 0.58              |
| 45:BX:37:VAL:HG13  | 45:BX:39:VAL:HB    | 1.85                     | 0.58              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 45:BX:69:ALA:HB3  | 45:BX:71:LYS:NZ   | 2.19                     | 0.58              |
| 46:BY:78:LYS:O    | 46:BY:80:ARG:N    | 2.37                     | 0.58              |
| 49:B2:5:LYS:HE2   | 49:B2:57:GLU:OE1  | 2.04                     | 0.58              |
| 50:B3:10:VAL:O    | 50:B3:40:HIS:HD2  | 1.87                     | 0.58              |
| 54:B7:29:LYS:NZ   | 54:B7:36:LYS:NZ   | 2.52                     | 0.58              |
| 54:B7:34:TRP:O    | 54:B7:36:LYS:N    | 2.33                     | 0.58              |
| 1:AA:106:C:O2     | 1:AA:379:C:H4'    | 2.04                     | 0.57              |
| 1:AA:197:A:N6     | 1:AA:221:C:C5'    | 2.65                     | 0.57              |
| 1:AA:225:C:C2'    | 1:AA:226:G:C5'    | 2.79                     | 0.57              |
| 1:AA:341:C:O2'    | 1:AA:342:C:C5'    | 2.52                     | 0.57              |
| 1:AA:522:C:H1'    | 1:AA:536:C:H5''   | 1.85                     | 0.57              |
| 1:AA:644:G:C2'    | 1:AA:645:C:H5'    | 2.33                     | 0.57              |
| 1:AA:689:C:OP2    | 13:AN:46:GLY:HA3  | 2.04                     | 0.57              |
| 1:AA:815:A:H2     | 1:AA:1527:C:O2    | 1.87                     | 0.57              |
| 1:AA:835:U:OP1    | 20:AU:64:ARG:NH1  | 2.33                     | 0.57              |
| 1:AA:908:A:H2'    | 1:AA:909:A:H8     | 1.68                     | 0.57              |
| 1:AA:935:A:H2'    | 1:AA:936:C:H6     | 1.69                     | 0.57              |
| 1:AA:1059:C:O2'   | 12:AM:53:PRO:HD3  | 2.04                     | 0.57              |
| 1:AA:1163:C:H2'   | 1:AA:1164:G:H5'   | 1.84                     | 0.57              |
| 1:AA:1178:G:N2    | 1:AA:1180:A:C5'   | 2.67                     | 0.57              |
| 1:AA:1275:A:H2'   | 1:AA:1276:G:H5'   | 1.86                     | 0.57              |
| 1:AA:1367:C:OP1   | 11:AL:115:GLY:CA  | 2.51                     | 0.57              |
| 2:A1:6:U:H2'      | 2:A1:6:U:O2       | 2.02                     | 0.57              |
| 2:A1:30:U:C2'     | 2:A1:31:U:O4'     | 2.40                     | 0.57              |
| 3:AC:60:U:C5'     | 3:AC:61:C:OP2     | 2.48                     | 0.57              |
| 4:AE:55:PHE:CE2   | 4:AE:218:ALA:HA   | 2.39                     | 0.57              |
| 4:AE:80:ILE:HD13  | 4:AE:211:ILE:HG22 | 1.86                     | 0.57              |
| 4:AE:84:GLU:HG3   | 4:AE:212:GLN:OE1  | 2.03                     | 0.57              |
| 4:AE:200:ILE:O    | 4:AE:200:ILE:HG22 | 2.02                     | 0.57              |
| 4:AE:215:LEU:O    | 4:AE:215:LEU:HD13 | 2.03                     | 0.57              |
| 5:AF:49:SER:C     | 5:AF:51:GLY:H     | 2.11                     | 0.57              |
| 7:AH:62:ALA:HB3   | 7:AH:63:ARG:HE    | 1.68                     | 0.57              |
| 7:AH:80:ILE:HG21  | 7:AH:142:LEU:HD21 | 1.86                     | 0.57              |
| 9:AJ:50:ILE:CD1   | 9:AJ:58:PRO:HB3   | 2.34                     | 0.57              |
| 10:AK:14:ARG:O    | 10:AK:17:THR:CB   | 2.48                     | 0.57              |
| 10:AK:39:LEU:O    | 10:AK:43:GLY:O    | 2.22                     | 0.57              |
| 11:AL:65:VAL:HG21 | 11:AL:77:ILE:HD11 | 1.85                     | 0.57              |
| 11:AL:82:ALA:HB2  | 11:AL:101:PHE:CZ  | 2.39                     | 0.57              |
| 13:AN:28:THR:CG2  | 13:AN:29:ILE:N    | 2.67                     | 0.57              |
| 14:AO:5:PRO:O     | 14:AO:6:THR:CG2   | 2.52                     | 0.57              |
| 15:AP:80:ARG:O    | 15:AP:84:ILE:HG12 | 2.04                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 16:AQ:34:TYR:N    | 16:AQ:34:TYR:CD1   | 2.71                     | 0.57              |
| 18:AS:49:LEU:HD12 | 18:AS:50:LYS:N     | 2.19                     | 0.57              |
| 19:AT:10:VAL:HB   | 19:AT:54:GLY:C     | 2.29                     | 0.57              |
| 20:AU:46:GLU:N    | 20:AU:46:GLU:OE2   | 2.37                     | 0.57              |
| 22:AW:49:ALA:HB3  | 22:AW:99:LEU:HD11  | 1.85                     | 0.57              |
| 24:BA:141:A:H2'   | 24:BA:141:A:N3     | 2.18                     | 0.57              |
| 24:BA:445:C:C3'   | 41:BT:3:ARG:HE     | 2.07                     | 0.57              |
| 24:BA:481:G:H2'   | 24:BA:507:A:N6     | 2.18                     | 0.57              |
| 24:BA:500:G:H1'   | 24:BA:502:A:OP2    | 2.04                     | 0.57              |
| 24:BA:506:G:HO2'  | 24:BA:507:A:H8     | 1.51                     | 0.57              |
| 24:BA:581:C:H5''  | 41:BT:32:PHE:CG    | 2.39                     | 0.57              |
| 24:BA:611:C:O2    | 24:BA:616:A:H2     | 1.87                     | 0.57              |
| 24:BA:669:G:N3    | 24:BA:801:G:N2     | 2.52                     | 0.57              |
| 24:BA:738:G:H2'   | 24:BA:739:G:H1'    | 1.85                     | 0.57              |
| 24:BA:739:G:C2'   | 24:BA:1784:A:H61   | 2.17                     | 0.57              |
| 24:BA:942:G:C6    | 24:BA:943:U:O4     | 2.57                     | 0.57              |
| 24:BA:972:G:OP1   | 24:BA:974(A):C:C5' | 2.47                     | 0.57              |
| 24:BA:1061:U:O2'  | 24:BA:1070:A:H1'   | 2.03                     | 0.57              |
| 24:BA:1124:C:H3'  | 24:BA:1125:G:C8    | 2.39                     | 0.57              |
| 24:BA:1183:G:H1'  | 24:BA:1184:G:N7    | 2.18                     | 0.57              |
| 24:BA:1264:G:OP2  | 24:BA:1265:A:H2    | 1.86                     | 0.57              |
| 24:BA:1664:A:C8   | 24:BA:1664:A:C3'   | 2.86                     | 0.57              |
| 24:BA:1675:C:O2   | 24:BA:1675:C:C2'   | 2.52                     | 0.57              |
| 24:BA:1688:U:O2'  | 24:BA:1689:A:OP2   | 2.20                     | 0.57              |
| 24:BA:1753:G:H2'  | 24:BA:1755:A:N7    | 2.19                     | 0.57              |
| 24:BA:1813:G:O2'  | 27:BD:46:GLN:CD    | 2.47                     | 0.57              |
| 24:BA:1857:G:N7   | 24:BA:1883:G:O6    | 2.37                     | 0.57              |
| 24:BA:2003:G:C6   | 24:BA:2004:G:C6    | 2.92                     | 0.57              |
| 24:BA:2134:A:C6   | 24:BA:2135:A:C2    | 2.92                     | 0.57              |
| 24:BA:2147:G:H2'  | 24:BA:2147:G:N3    | 2.18                     | 0.57              |
| 24:BA:2216:G:H21  | 27:BD:150:LYS:NZ   | 2.02                     | 0.57              |
| 24:BA:2283:C:N3   | 24:BA:2284:C:H1'   | 2.19                     | 0.57              |
| 24:BA:2377:A:H2'  | 24:BA:2378:A:C8    | 2.39                     | 0.57              |
| 24:BA:2472:G:H3'  | 24:BA:2475:C:H42   | 1.69                     | 0.57              |
| 24:BA:2479:G:H5'' | 24:BA:2537:U:C4'   | 2.35                     | 0.57              |
| 24:BA:2508:G:C2'  | 24:BA:2509:G:H5'   | 2.34                     | 0.57              |
| 24:BA:2685:G:H4'  | 35:BN:66:LYS:CE    | 2.33                     | 0.57              |
| 24:BA:2723:C:HO2' | 38:BQ:2:ARG:N      | 2.01                     | 0.57              |
| 24:BA:2733:A:N7   | 24:BA:2734:A:C8    | 2.72                     | 0.57              |
| 24:BA:2747:G:N2   | 24:BA:2748:A:H62   | 2.01                     | 0.57              |
| 24:BA:2777:G:C8   | 24:BA:2777:G:C3'   | 2.86                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2781:A:C2'  | 24:BA:2782:G:H4'   | 2.34                     | 0.57              |
| 25:BB:73:A:N6     | 25:BB:104:A:C1'    | 2.67                     | 0.57              |
| 26:BC:99:ILE:HG23 | 26:BC:107:TRP:HZ3  | 1.69                     | 0.57              |
| 28:BE:51:PHE:CD1  | 28:BE:52:LEU:N     | 2.72                     | 0.57              |
| 28:BE:105:THR:CG2 | 28:BE:199:ARG:NH2  | 2.67                     | 0.57              |
| 28:BE:111:ARG:HB2 | 28:BE:160:TYR:O    | 2.03                     | 0.57              |
| 29:BF:40:GLN:N    | 29:BF:184:TYR:OH   | 2.37                     | 0.57              |
| 29:BF:106:ARG:HG3 | 29:BF:107:LYS:H    | 1.67                     | 0.57              |
| 30:BG:125:PHE:CE2 | 30:BG:127:GLY:C    | 2.82                     | 0.57              |
| 31:BH:15:VAL:HG22 | 31:BH:16:SER:N     | 2.19                     | 0.57              |
| 31:BH:17:VAL:CG2  | 31:BH:45:VAL:HG11  | 2.25                     | 0.57              |
| 31:BH:71:LEU:O    | 31:BH:74:ASN:ND2   | 2.30                     | 0.57              |
| 31:BH:89:ILE:HG12 | 31:BH:94:TYR:CE2   | 2.39                     | 0.57              |
| 31:BH:156:ALA:HA  | 31:BH:171:LEU:HD23 | 1.85                     | 0.57              |
| 33:BL:8:VAL:HG22  | 33:BL:30:HIS:CD2   | 2.38                     | 0.57              |
| 33:BL:10:LEU:HD11 | 33:BL:57:ILE:HD11  | 1.85                     | 0.57              |
| 36:BO:49:ARG:NH2  | 54:B7:55:ALA:HB2   | 2.19                     | 0.57              |
| 37:BP:68:ILE:HG13 | 37:BP:69:PHE:H     | 1.69                     | 0.57              |
| 38:BQ:61:HIS:ND1  | 38:BQ:64:ARG:NE    | 2.51                     | 0.57              |
| 39:BR:9:ARG:O     | 39:BR:12:PHE:CD2   | 2.56                     | 0.57              |
| 40:BS:55:ASN:HD22 | 40:BS:57:PHE:HE2   | 1.52                     | 0.57              |
| 40:BS:101:PHE:C   | 40:BS:103:ARG:H    | 2.12                     | 0.57              |
| 41:BT:81:HIS:CG   | 41:BT:117:GLN:HE22 | 2.22                     | 0.57              |
| 43:BV:18:ARG:HD2  | 43:BV:75:TYR:HB3   | 1.85                     | 0.57              |
| 44:BW:39:ILE:HD12 | 44:BW:54:VAL:CG1   | 2.34                     | 0.57              |
| 44:BW:79:ALA:C    | 44:BW:80:ILE:HD13  | 2.29                     | 0.57              |
| 47:BZ:44:ARG:HH21 | 47:BZ:77:ARG:NH1   | 2.02                     | 0.57              |
| 49:B2:4:LEU:CB    | 49:B2:37:LEU:HD23  | 2.18                     | 0.57              |
| 49:B2:10:LYS:HZ3  | 49:B2:12:PRO:CD    | 2.17                     | 0.57              |
| 49:B2:37:LEU:HG   | 49:B2:38:GLU:C     | 2.30                     | 0.57              |
| 50:B3:43:TYR:CA   | 50:B3:61:ARG:HH22  | 2.07                     | 0.57              |
| 50:B3:58:ARG:HB3  | 50:B3:62:ARG:NH2   | 2.18                     | 0.57              |
| 51:B4:35:GLU:CG   | 51:B4:49:CYS:HB3   | 2.34                     | 0.57              |
| 51:B4:50:GLY:O    | 51:B4:51:TYR:HB3   | 2.04                     | 0.57              |
| 52:B5:16:CYS:CB   | 52:B5:49:HIS:CA    | 2.67                     | 0.57              |
| 52:B5:17:LYS:C    | 52:B5:19:ARG:HD2   | 2.28                     | 0.57              |
| 1:AA:35:G:O2'     | 1:AA:36:C:H5'      | 2.03                     | 0.57              |
| 1:AA:35:G:O2'     | 14:AO:118:SER:HA   | 2.04                     | 0.57              |
| 1:AA:61:G:C6      | 1:AA:107:G:C6      | 2.92                     | 0.57              |
| 1:AA:191:G:O2'    | 22:AW:102:GLY:O    | 2.21                     | 0.57              |
| 1:AA:197:A:O4'    | 1:AA:197:A:OP2     | 2.22                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:276:G:P      | 19:AT:14:LYS:HD3  | 2.44                     | 0.57              |
| 1:AA:301:G:N2     | 1:AA:302:G:N9     | 2.53                     | 0.57              |
| 1:AA:325:A:N7     | 1:AA:326:G:C6     | 2.72                     | 0.57              |
| 1:AA:336:C:H2'    | 1:AA:337:C:C6     | 2.38                     | 0.57              |
| 1:AA:346:G:N2     | 1:AA:347:G:C4     | 2.71                     | 0.57              |
| 1:AA:544:G:H2'    | 1:AA:545:C:H6     | 1.64                     | 0.57              |
| 1:AA:547:A:H5'    | 1:AA:548:G:OP1    | 2.04                     | 0.57              |
| 1:AA:562:C:O2'    | 14:AO:15:ARG:CD   | 2.49                     | 0.57              |
| 1:AA:572:A:O5'    | 1:AA:573:A:P      | 2.62                     | 0.57              |
| 1:AA:586:C:OP1    | 19:AT:34:LYS:CE   | 2.52                     | 0.57              |
| 1:AA:591:U:OP1    | 10:AK:30:ARG:NH2  | 2.37                     | 0.57              |
| 1:AA:600:C:H5'    | 10:AK:129:VAL:HA  | 1.86                     | 0.57              |
| 1:AA:714:G:H8     | 1:AA:714:G:O5'    | 1.87                     | 0.57              |
| 1:AA:744:C:O2'    | 1:AA:851:G:N2     | 2.37                     | 0.57              |
| 1:AA:875:C:C2     | 1:AA:876:G:C8     | 2.91                     | 0.57              |
| 1:AA:900:A:C2'    | 1:AA:901:A:O5'    | 2.53                     | 0.57              |
| 1:AA:924:C:C2     | 1:AA:925:G:N7     | 2.72                     | 0.57              |
| 1:AA:932:C:H3'    | 9:AJ:3:ARG:CG     | 2.21                     | 0.57              |
| 1:AA:1006:C:O2    | 1:AA:1006:C:H2'   | 2.03                     | 0.57              |
| 1:AA:1107:C:P     | 5:AF:172:ARG:HH11 | 2.28                     | 0.57              |
| 1:AA:1147:C:N3    | 1:AA:1148:U:C5    | 2.72                     | 0.57              |
| 1:AA:1194:U:C5    | 1:AA:1195:C:C5    | 2.92                     | 0.57              |
| 1:AA:1319:A:N6    | 1:AA:1323:G:N3    | 2.52                     | 0.57              |
| 1:AA:1448:C:N3    | 1:AA:1459:C:O2    | 2.37                     | 0.57              |
| 2:A1:23:A:H2'     | 2:A1:24:A:H8      | 1.69                     | 0.57              |
| 3:AC:31:A:H3'     | 3:AC:32:U:H6      | 1.68                     | 0.57              |
| 3:AB:19:G:O2'     | 3:AB:57:G:N2      | 2.37                     | 0.57              |
| 3:AB:27:G:H2'     | 3:AB:28:G:C8      | 2.39                     | 0.57              |
| 4:AE:67:THR:OG1   | 4:AE:155:LEU:HD11 | 2.04                     | 0.57              |
| 4:AE:182:ILE:H    | 4:AE:182:ILE:CD1  | 2.16                     | 0.57              |
| 4:AE:196:LEU:C    | 4:AE:196:LEU:CD1  | 2.77                     | 0.57              |
| 5:AF:181:ASN:HD22 | 5:AF:206:GLU:HA   | 1.69                     | 0.57              |
| 5:AF:189:ALA:HB3  | 5:AF:196:LEU:N    | 2.12                     | 0.57              |
| 6:AG:110:PHE:CZ   | 6:AG:147:ALA:CB   | 2.87                     | 0.57              |
| 6:AG:124:GLY:O    | 6:AG:125:HIS:C    | 2.47                     | 0.57              |
| 7:AH:56:GLN:H     | 7:AH:56:GLN:CD    | 2.12                     | 0.57              |
| 7:AH:107:ARG:CZ   | 7:AH:107:ARG:HB2  | 2.33                     | 0.57              |
| 8:AI:83:ASP:OD1   | 8:AI:84:ASN:ND2   | 2.37                     | 0.57              |
| 10:AK:17:THR:HG21 | 10:AK:18:ARG:NH2  | 2.19                     | 0.57              |
| 11:AL:47:LEU:HD21 | 11:AL:50:LEU:HD13 | 1.86                     | 0.57              |
| 11:AL:67:GLY:O    | 11:AL:73:GLN:NE2  | 2.37                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 12:AM:9:ARG:CB    | 12:AM:9:ARG:HH11   | 2.17                     | 0.57              |
| 12:AM:16:LEU:HB3  | 12:AM:70:ARG:HG2   | 1.86                     | 0.57              |
| 24:BA:120:U:H1'   | 24:BA:149:A:H1'    | 1.85                     | 0.57              |
| 24:BA:128:C:H2'   | 24:BA:129:C:C6     | 2.39                     | 0.57              |
| 24:BA:270(C):C:N4 | 24:BA:270(D):C:N4  | 2.51                     | 0.57              |
| 24:BA:281:G:C8    | 24:BA:427:U:O2     | 2.56                     | 0.57              |
| 24:BA:338:G:OP1   | 45:BX:2:ARG:NH2    | 2.37                     | 0.57              |
| 24:BA:366:C:H5''  | 24:BA:403:U:H3     | 1.69                     | 0.57              |
| 24:BA:468:G:N7    | 24:BA:469:G:C4     | 2.72                     | 0.57              |
| 24:BA:510:C:O5'   | 24:BA:512:G:C6     | 2.57                     | 0.57              |
| 24:BA:516:C:H2'   | 24:BA:517:C:C6     | 2.39                     | 0.57              |
| 24:BA:540:G:C6    | 24:BA:541:C:C4     | 2.93                     | 0.57              |
| 24:BA:580:C:C2    | 24:BA:581:C:C5     | 2.92                     | 0.57              |
| 24:BA:673:C:O2'   | 24:BA:674:G:H5'    | 2.03                     | 0.57              |
| 24:BA:1137:G:N7   | 24:BA:1138:G:C8    | 2.72                     | 0.57              |
| 24:BA:1139:G:O5'  | 34:BM:63:THR:HG21  | 2.04                     | 0.57              |
| 24:BA:1142:U:H2'  | 24:BA:1142(A):A:C8 | 2.39                     | 0.57              |
| 24:BA:1429:G:N2   | 24:BA:1565:C:O2    | 2.37                     | 0.57              |
| 24:BA:1435:G:C2   | 24:BA:1558:A:N6    | 2.72                     | 0.57              |
| 24:BA:1447:G:H21  | 24:BA:1545:A:H2    | 1.51                     | 0.57              |
| 24:BA:1494:A:C2   | 24:BA:1495:A:O4'   | 2.56                     | 0.57              |
| 24:BA:1598:C:O2'  | 44:BW:35:THR:HG23  | 2.04                     | 0.57              |
| 24:BA:1853:A:C4   | 24:BA:1854:A:C8    | 2.91                     | 0.57              |
| 24:BA:1913:A:H2'  | 24:BA:1913:A:N3    | 2.20                     | 0.57              |
| 24:BA:1916:A:C8   | 24:BA:1916:A:OP2   | 2.57                     | 0.57              |
| 24:BA:1925:C:H2'  | 24:BA:1925:C:O2    | 2.03                     | 0.57              |
| 24:BA:1944:U:C2'  | 24:BA:1945:G:OP1   | 2.52                     | 0.57              |
| 24:BA:2013:A:H2'  | 24:BA:2014:A:O5'   | 2.04                     | 0.57              |
| 24:BA:2227:A:C5   | 24:BA:2228:G:C8    | 2.92                     | 0.57              |
| 24:BA:2307:G:C8   | 24:BA:2308:G:H1'   | 2.39                     | 0.57              |
| 24:BA:2547:U:H2'  | 24:BA:2548:G:C5'   | 2.34                     | 0.57              |
| 24:BA:2553:G:O6   | 24:BA:2583:G:O2'   | 2.21                     | 0.57              |
| 24:BA:2749:A:H4'  | 31:BH:62:LYS:CB    | 2.34                     | 0.57              |
| 24:BA:2755:C:H4'  | 24:BA:2756:U:C5    | 2.38                     | 0.57              |
| 24:BA:2831:G:H1'  | 24:BA:2883:A:H2'   | 1.86                     | 0.57              |
| 25:BB:14:U:C1'    | 25:BB:107:U:H1'    | 2.34                     | 0.57              |
| 26:BC:68:LEU:HD22 | 26:BC:156:ILE:O    | 2.04                     | 0.57              |
| 26:BC:93:TYR:CE2  | 26:BC:109:ASP:O    | 2.57                     | 0.57              |
| 27:BD:18:VAL:C    | 27:BD:20:ASP:N     | 2.56                     | 0.57              |
| 28:BE:4:ILE:HD12  | 28:BE:4:ILE:C      | 2.29                     | 0.57              |
| 28:BE:31:CYS:O    | 28:BE:33:VAL:HG13  | 2.04                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 28:BE:33:VAL:HG23 | 28:BE:34:VAL:HG23  | 1.86                     | 0.57              |
| 28:BE:59:VAL:HG12 | 28:BE:62:PRO:HD2   | 1.86                     | 0.57              |
| 28:BE:175:VAL:O   | 28:BE:175:VAL:HG23 | 2.04                     | 0.57              |
| 32:BK:85:GLU:CD   | 32:BK:85:GLU:N     | 2.61                     | 0.57              |
| 32:BK:125:GLU:HA  | 32:BK:142:VAL:O    | 2.03                     | 0.57              |
| 34:BM:66:LYS:CA   | 34:BM:69:GLN:OE1   | 2.52                     | 0.57              |
| 36:BO:124:LYS:CA  | 36:BO:143:GLY:HA3  | 2.34                     | 0.57              |
| 36:BO:149:GLU:CD  | 36:BO:150:ALA:N    | 2.58                     | 0.57              |
| 37:BP:109:VAL:CG1 | 37:BP:110:THR:N    | 2.67                     | 0.57              |
| 37:BP:112:GLU:CA  | 37:BP:115:MET:HB2  | 2.34                     | 0.57              |
| 38:BQ:87:TYR:CE2  | 38:BQ:118:GLU:OE1  | 2.57                     | 0.57              |
| 42:BU:11:GLN:O    | 42:BU:21:ARG:CD    | 2.51                     | 0.57              |
| 44:BW:12:VAL:HG22 | 44:BW:29:TRP:CE2   | 2.39                     | 0.57              |
| 45:BX:13:VAL:CG1  | 45:BX:70:SER:HB3   | 2.32                     | 0.57              |
| 47:BZ:82:ARG:HG2  | 47:BZ:83:PRO:N     | 2.18                     | 0.57              |
| 49:B2:14:GLY:C    | 49:B2:15:TYR:CD1   | 2.83                     | 0.57              |
| 52:B5:27:LYS:CG   | 52:B5:29:ASN:HD21  | 2.15                     | 0.57              |
| 53:B6:46:VAL:HG12 | 53:B6:47:ARG:N     | 2.19                     | 0.57              |
| 1:AA:199:G:O2'    | 1:AA:200:G:H5'     | 2.04                     | 0.57              |
| 1:AA:330:C:H2'    | 1:AA:331:G:H8      | 1.70                     | 0.57              |
| 1:AA:338:A:O2'    | 1:AA:339:C:H5'     | 2.03                     | 0.57              |
| 1:AA:346:G:N2     | 1:AA:347:G:C5      | 2.72                     | 0.57              |
| 1:AA:412:A:H4'    | 1:AA:412:A:OP2     | 2.04                     | 0.57              |
| 1:AA:559:A:O2'    | 1:AA:560:U:P       | 2.61                     | 0.57              |
| 1:AA:673:G:N2     | 1:AA:674:G:C2      | 2.72                     | 0.57              |
| 1:AA:689:C:H2'    | 1:AA:690:G:C1'     | 2.34                     | 0.57              |
| 1:AA:696:A:H2'    | 1:AA:697:U:H5'     | 1.86                     | 0.57              |
| 1:AA:708:C:C4'    | 13:AN:37:GLY:HA3   | 2.34                     | 0.57              |
| 1:AA:731:G:O2'    | 1:AA:732:C:C5'     | 2.52                     | 0.57              |
| 1:AA:757:U:H1'    | 1:AA:879:C:O2'     | 2.03                     | 0.57              |
| 1:AA:862:C:C4     | 1:AA:863:U:H5      | 2.21                     | 0.57              |
| 1:AA:873:A:OP1    | 1:AA:873:A:O4'     | 2.22                     | 0.57              |
| 1:AA:878:G:H5''   | 10:AK:89:PRO:O     | 2.03                     | 0.57              |
| 1:AA:968:A:C5'    | 1:AA:969:A:O5'     | 2.51                     | 0.57              |
| 1:AA:981:U:C6     | 1:AA:981:U:H3'     | 2.39                     | 0.57              |
| 1:AA:1133:G:N1    | 1:AA:1142:G:C6     | 2.72                     | 0.57              |
| 3:AC:46:G:O4'     | 3:AC:46:G:OP2      | 2.22                     | 0.57              |
| 3:AC:55:U:C2'     | 3:AC:57:G:N7       | 2.67                     | 0.57              |
| 3:AC:70:G:H2'     | 3:AC:71:G:H8       | 1.67                     | 0.57              |
| 3:AD:35:A:H2'     | 3:AD:36:A:C1'      | 2.34                     | 0.57              |
| 4:AE:100:GLY:HA2  | 4:AE:176:GLU:OE2   | 2.03                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:AE:179:LYS:O    | 4:AE:181:PHE:N    | 2.37                     | 0.57              |
| 5:AF:46:GLU:O     | 5:AF:47:LEU:HD13  | 2.03                     | 0.57              |
| 6:AG:67:ILE:HD12  | 6:AG:68:TYR:N     | 2.19                     | 0.57              |
| 7:AH:132:ALA:O    | 7:AH:135:THR:HB   | 2.04                     | 0.57              |
| 8:AI:12:PRO:CB    | 8:AI:58:GLY:HA2   | 2.20                     | 0.57              |
| 8:AI:67:MET:SD    | 8:AI:67:MET:N     | 2.76                     | 0.57              |
| 9:AJ:71:PRO:CG    | 9:AJ:96:GLN:HA    | 2.34                     | 0.57              |
| 9:AJ:77:SER:C     | 9:AJ:156:TRP:HZ2  | 2.13                     | 0.57              |
| 10:AK:32:LYS:HG3  | 10:AK:59:LEU:CD1  | 2.34                     | 0.57              |
| 10:AK:54:ASP:C    | 10:AK:56:LYS:H    | 2.09                     | 0.57              |
| 10:AK:94:TYR:CE1  | 10:AK:132:GLU:OE1 | 2.57                     | 0.57              |
| 10:AK:126:LYS:NZ  | 10:AK:127:LEU:HB2 | 2.18                     | 0.57              |
| 15:AP:16:ASP:C    | 15:AP:19:LEU:HG   | 2.28                     | 0.57              |
| 16:AQ:24:CYS:N    | 16:AQ:33:VAL:HG11 | 2.18                     | 0.57              |
| 19:AT:8:GLY:C     | 19:AT:56:VAL:HG13 | 2.29                     | 0.57              |
| 20:AU:18:ARG:HH21 | 20:AU:21:LYS:CB   | 2.10                     | 0.57              |
| 24:BA:217:G:H2'   | 24:BA:218:A:O5'   | 2.04                     | 0.57              |
| 24:BA:221:A:N7    | 24:BA:266:G:N7    | 2.52                     | 0.57              |
| 24:BA:243:U:O2    | 24:BA:243:U:C2'   | 2.53                     | 0.57              |
| 24:BA:247:G:C2    | 24:BA:249:C:O2'   | 2.51                     | 0.57              |
| 24:BA:320:A:O2'   | 29:BF:168:ARG:NH1 | 2.37                     | 0.57              |
| 24:BA:387:U:H4'   | 24:BA:388:G:C1'   | 2.33                     | 0.57              |
| 24:BA:434:U:O2'   | 24:BA:435:C:O5'   | 2.23                     | 0.57              |
| 24:BA:494:G:C5'   | 43:BV:7:ALA:HA    | 2.33                     | 0.57              |
| 24:BA:612:G:C4'   | 24:BA:616:A:N6    | 2.53                     | 0.57              |
| 24:BA:712:G:C4    | 24:BA:713:G:N7    | 2.72                     | 0.57              |
| 24:BA:751:A:H4'   | 43:BV:90:ARG:CZ   | 2.34                     | 0.57              |
| 24:BA:827:U:O3'   | 24:BA:828:U:O2    | 2.23                     | 0.57              |
| 24:BA:943:U:OP1   | 24:BA:943:U:C4'   | 2.51                     | 0.57              |
| 24:BA:957:A:N1    | 24:BA:2459:A:H5'  | 2.19                     | 0.57              |
| 24:BA:1084:A:N7   | 24:BA:1085:A:C2   | 2.73                     | 0.57              |
| 24:BA:1343:G:N2   | 24:BA:1405:U:H1'  | 2.20                     | 0.57              |
| 24:BA:1353:A:N7   | 24:BA:1377:G:N2   | 2.53                     | 0.57              |
| 24:BA:1458:C:O2   | 24:BA:1461:G:N2   | 2.37                     | 0.57              |
| 24:BA:1471:A:C4   | 24:BA:1521:G:N2   | 2.72                     | 0.57              |
| 24:BA:1520:U:H3'  | 24:BA:1520:U:C6   | 2.35                     | 0.57              |
| 24:BA:1538:G:C2   | 24:BA:1539:G:N3   | 2.72                     | 0.57              |
| 24:BA:1579:A:N6   | 24:BA:1581:G:C2   | 2.72                     | 0.57              |
| 24:BA:1770:G:H2'  | 24:BA:1771:C:C6   | 2.39                     | 0.57              |
| 24:BA:1780:A:O2'  | 24:BA:1781:C:OP1  | 2.22                     | 0.57              |
| 24:BA:1794:U:H2'  | 24:BA:1795:C:C6   | 2.39                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1832:C:N4    | 24:BA:1833:U:C4   | 2.72                     | 0.57              |
| 24:BA:1855:G:C6    | 24:BA:1856:G:C5   | 2.93                     | 0.57              |
| 24:BA:1857:G:O2'   | 24:BA:1885:A:N6   | 2.38                     | 0.57              |
| 24:BA:1987:G:C2    | 24:BA:1988:C:C4   | 2.92                     | 0.57              |
| 24:BA:2011:U:H2'   | 24:BA:2012:G:H8   | 1.67                     | 0.57              |
| 24:BA:2197:U:H1'   | 24:BA:2198:A:C2   | 2.39                     | 0.57              |
| 24:BA:2285:C:C5    | 52:B5:27:LYS:NZ   | 2.72                     | 0.57              |
| 24:BA:2310:A:C2    | 30:BG:83:ARG:NH2  | 2.72                     | 0.57              |
| 24:BA:2380:C:C4    | 24:BA:2381:C:C5   | 2.92                     | 0.57              |
| 24:BA:2694:G:C6    | 24:BA:2695:C:C4   | 2.92                     | 0.57              |
| 24:BA:2794:C:C2'   | 24:BA:2795:G:OP1  | 2.51                     | 0.57              |
| 27:BD:10:THR:N     | 27:BD:11:PRO:CD   | 2.67                     | 0.57              |
| 28:BE:5:LEU:C      | 28:BE:5:LEU:CD2   | 2.77                     | 0.57              |
| 28:BE:13:ARG:NE    | 28:BE:20:ALA:C    | 2.62                     | 0.57              |
| 28:BE:44:TYR:O     | 28:BE:81:ILE:HG23 | 2.04                     | 0.57              |
| 28:BE:105:THR:CB   | 28:BE:166:THR:CB  | 2.69                     | 0.57              |
| 28:BE:149:ARG:NH1  | 28:BE:151:TYR:HA  | 2.19                     | 0.57              |
| 29:BF:176:LEU:C    | 29:BF:178:PRO:CD  | 2.77                     | 0.57              |
| 29:BF:181:LEU:HD13 | 29:BF:181:LEU:H   | 1.67                     | 0.57              |
| 30:BG:12:TYR:CG    | 30:BG:13:GLU:N    | 2.72                     | 0.57              |
| 30:BG:19:LEU:HA    | 30:BG:22:ARG:NE   | 2.19                     | 0.57              |
| 31:BH:6:ARG:CD     | 31:BH:66:GLY:HA2  | 2.34                     | 0.57              |
| 35:BN:47:ILE:O     | 35:BN:47:ILE:HG23 | 2.04                     | 0.57              |
| 35:BN:63:VAL:O     | 35:BN:64:ARG:CB   | 2.51                     | 0.57              |
| 35:BN:67:LYS:N     | 35:BN:67:LYS:HE2  | 2.20                     | 0.57              |
| 35:BN:121:VAL:O    | 35:BN:122:LEU:HB2 | 2.03                     | 0.57              |
| 36:BO:65:ARG:NH1   | 36:BO:68:GLN:CD   | 2.62                     | 0.57              |
| 36:BO:126:VAL:CG2  | 36:BO:127:ALA:N   | 2.66                     | 0.57              |
| 39:BR:24:LEU:HD11  | 39:BR:41:ASP:HB3  | 1.86                     | 0.57              |
| 41:BT:67:ALA:HB1   | 41:BT:71:GLN:NE2  | 2.15                     | 0.57              |
| 43:BV:40:ASN:O     | 43:BV:41:LYS:HB2  | 2.03                     | 0.57              |
| 45:BX:95:LYS:CG    | 45:BX:103:GLY:HA3 | 2.32                     | 0.57              |
| 46:BY:31:ARG:O     | 46:BY:31:ARG:NH1  | 2.37                     | 0.57              |
| 46:BY:104:PHE:CA   | 46:BY:139:VAL:O   | 2.53                     | 0.57              |
| 46:BY:158:PRO:CB   | 46:BY:159:PRO:HD2 | 2.27                     | 0.57              |
| 47:BZ:63:VAL:O     | 47:BZ:81:VAL:HG11 | 2.04                     | 0.57              |
| 48:B1:32:PHE:HD1   | 48:B1:32:PHE:N    | 2.01                     | 0.57              |
| 48:B1:50:ARG:HB2   | 48:B1:54:ARG:HH12 | 1.69                     | 0.57              |
| 49:B2:6:VAL:HB     | 49:B2:35:ARG:HH21 | 1.68                     | 0.57              |
| 52:B5:51:GLU:OE1   | 52:B5:52:VAL:CA   | 2.52                     | 0.57              |
| 53:B6:42:LEU:C     | 53:B6:44:PRO:CD   | 2.77                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 55:B8:25:VAL:HG21 | 55:B8:34:GLN:OE1   | 2.04                     | 0.57              |
| 1:AA:21:G:C8      | 1:AA:22:G:N7       | 2.71                     | 0.57              |
| 1:AA:109:A:N6     | 1:AA:326:G:C6      | 2.73                     | 0.57              |
| 1:AA:247:G:C6     | 1:AA:278:G:N1      | 2.73                     | 0.57              |
| 1:AA:287:U:H2'    | 1:AA:288:A:C5'     | 2.34                     | 0.57              |
| 1:AA:296:U:H2'    | 1:AA:297:G:H8      | 1.66                     | 0.57              |
| 1:AA:565:U:H2'    | 1:AA:566:G:N7      | 2.19                     | 0.57              |
| 1:AA:799:G:H3'    | 1:AA:800:G:C8      | 2.39                     | 0.57              |
| 1:AA:877:C:OP1    | 10:AK:88:LYS:HD3   | 2.04                     | 0.57              |
| 1:AA:926:G:N2     | 2:A1:39:U:OP2      | 2.37                     | 0.57              |
| 1:AA:952:U:H5'    | 1:AA:972:C:N4      | 2.07                     | 0.57              |
| 1:AA:1022:G:H2'   | 1:AA:1022:G:N3     | 2.18                     | 0.57              |
| 1:AA:1085:U:C5'   | 1:AA:1094:G:N2     | 2.65                     | 0.57              |
| 1:AA:1275:A:C2'   | 1:AA:1276:G:H5'    | 2.34                     | 0.57              |
| 1:AA:1440:C:OP2   | 1:AA:1440:C:H6     | 1.87                     | 0.57              |
| 1:AA:1502:A:C6    | 1:AA:1504:G:C2     | 2.93                     | 0.57              |
| 3:AC:75:C:H2'     | 3:AC:76:A:O3'      | 2.04                     | 0.57              |
| 3:AD:55:U:O2'     | 3:AD:57:G:N7       | 2.37                     | 0.57              |
| 4:AE:70:PHE:HA    | 4:AE:163:PHE:O     | 2.04                     | 0.57              |
| 4:AE:178:ARG:NH2  | 4:AE:196:LEU:O     | 2.37                     | 0.57              |
| 5:AF:44:GLU:HA    | 5:AF:52:LEU:CD1    | 2.33                     | 0.57              |
| 5:AF:84:ILE:HG13  | 5:AF:101:LEU:CD2   | 2.31                     | 0.57              |
| 5:AF:107:GLN:OE1  | 5:AF:111:LEU:HD22  | 2.05                     | 0.57              |
| 6:AG:114:ARG:O    | 6:AG:117:ALA:HB3   | 2.04                     | 0.57              |
| 6:AG:125:HIS:HA   | 6:AG:149:ALA:HB3   | 1.85                     | 0.57              |
| 6:AG:170:VAL:HG11 | 6:AG:174:LEU:CB    | 2.34                     | 0.57              |
| 8:AI:75:LEU:CD2   | 8:AI:79:LEU:HD21   | 2.30                     | 0.57              |
| 9:AJ:113:GLU:HB2  | 9:AJ:118:VAL:HG11  | 1.87                     | 0.57              |
| 12:AM:27:ALA:HB2  | 12:AM:85:LEU:CD2   | 2.34                     | 0.57              |
| 13:AN:13:GLN:CB   | 13:AN:76:GLY:HA3   | 2.33                     | 0.57              |
| 13:AN:59:TYR:O    | 13:AN:60:ALA:C     | 2.47                     | 0.57              |
| 15:AP:52:GLU:HB3  | 15:AP:55:ARG:NH2   | 2.20                     | 0.57              |
| 15:AP:60:VAL:HG22 | 15:AP:64:TRP:CE3   | 2.39                     | 0.57              |
| 17:AR:71:GLN:N    | 17:AR:78:TYR:CD1   | 2.72                     | 0.57              |
| 22:AW:49:ALA:HB1  | 22:AW:99:LEU:HG    | 1.86                     | 0.57              |
| 24:BA:65:C:C2     | 24:BA:66:C:C5      | 2.92                     | 0.57              |
| 24:BA:149:A:C8    | 24:BA:150:C:C6     | 2.93                     | 0.57              |
| 24:BA:221:A:O2'   | 24:BA:222:A:P      | 2.62                     | 0.57              |
| 24:BA:228:A:H2'   | 24:BA:229:A:C5'    | 2.32                     | 0.57              |
| 24:BA:253:C:C2'   | 24:BA:254:G:H5'    | 2.34                     | 0.57              |
| 24:BA:266:G:H5'   | 24:BA:271(A):C:H42 | 1.68                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:360:G:H2'    | 24:BA:361:G:O5'    | 2.04                     | 0.57              |
| 24:BA:449:A:H4'    | 29:BF:52:LYS:NZ    | 2.19                     | 0.57              |
| 24:BA:451:C:C5     | 24:BA:453:C:H5'    | 2.32                     | 0.57              |
| 24:BA:559:G:C2'    | 24:BA:560:C:H6     | 2.04                     | 0.57              |
| 24:BA:672:C:C6     | 36:BO:38:GLN:OE1   | 2.57                     | 0.57              |
| 24:BA:691:C:N3     | 24:BA:692:C:C5     | 2.73                     | 0.57              |
| 24:BA:807:U:O2     | 24:BA:808:G:C8     | 2.57                     | 0.57              |
| 24:BA:811:U:H3'    | 24:BA:811:U:H6     | 1.70                     | 0.57              |
| 24:BA:954:G:O6     | 24:BA:964:C:N4     | 2.37                     | 0.57              |
| 24:BA:977:G:C2     | 24:BA:978:G:H1'    | 2.40                     | 0.57              |
| 24:BA:1052:C:O2'   | 24:BA:1053:C:H5'   | 2.05                     | 0.57              |
| 24:BA:1351:C:O2'   | 24:BA:1571:A:C1'   | 2.49                     | 0.57              |
| 24:BA:1389:G:H2'   | 24:BA:1390:U:C6    | 2.39                     | 0.57              |
| 24:BA:1424:G:H5'   | 24:BA:1499:C:O2'   | 2.05                     | 0.57              |
| 24:BA:1463:C:H2'   | 24:BA:1464:C:O5'   | 2.04                     | 0.57              |
| 24:BA:1477:A:H2'   | 24:BA:1478:G:C1'   | 2.34                     | 0.57              |
| 24:BA:1496:A:H2'   | 24:BA:1496:A:N3    | 2.18                     | 0.57              |
| 24:BA:1603:A:H3'   | 24:BA:1603:A:P     | 2.44                     | 0.57              |
| 24:BA:1707:G:C4    | 24:BA:1708:C:C5    | 2.92                     | 0.57              |
| 24:BA:1784:A:H4'   | 24:BA:1785:A:O4'   | 2.04                     | 0.57              |
| 24:BA:1975:G:C2'   | 24:BA:1976:U:O5'   | 2.52                     | 0.57              |
| 24:BA:1999:C:C2'   | 24:BA:2000:G:O5'   | 2.51                     | 0.57              |
| 24:BA:2075:U:O2    | 24:BA:2076:U:C5'   | 2.52                     | 0.57              |
| 24:BA:2106:G:O2'   | 24:BA:2107:C:H5'   | 2.03                     | 0.57              |
| 24:BA:2161:C:C2'   | 24:BA:2162:G:H8    | 2.13                     | 0.57              |
| 24:BA:2209:C:C4'   | 27:BD:150:LYS:HB3  | 2.27                     | 0.57              |
| 24:BA:2211:G:N3    | 24:BA:2211:G:C3'   | 2.64                     | 0.57              |
| 24:BA:2327:A:C2'   | 24:BA:2328:A:C8    | 2.73                     | 0.57              |
| 24:BA:2394:C:OP1   | 36:BO:57:THR:CA    | 2.52                     | 0.57              |
| 24:BA:2472:G:C2'   | 24:BA:2475:C:H42   | 2.17                     | 0.57              |
| 24:BA:2759:G:O2'   | 24:BA:2760:C:H5'   | 2.04                     | 0.57              |
| 24:BA:2765:A:O2'   | 24:BA:2766:G:OP1   | 2.19                     | 0.57              |
| 24:BA:2784:C:H2'   | 24:BA:2785:C:H6    | 1.69                     | 0.57              |
| 24:BA:2834:G:H3'   | 24:BA:2834:G:H8    | 1.69                     | 0.57              |
| 26:BC:20:TYR:CE1   | 26:BC:222:VAL:HG22 | 2.39                     | 0.57              |
| 26:BC:116:THR:HG22 | 26:BC:149:ILE:HB   | 1.86                     | 0.57              |
| 26:BC:131:LEU:HB3  | 26:BC:136:LEU:HB2  | 1.85                     | 0.57              |
| 27:BD:146:GLU:CA   | 27:BD:154:LYS:HG2  | 2.34                     | 0.57              |
| 27:BD:155:LEU:HG   | 27:BD:157:ARG:CZ   | 2.34                     | 0.57              |
| 28:BE:16:ARG:HB3   | 28:BE:17:ASP:OD2   | 2.04                     | 0.57              |
| 29:BF:194:MET:HE3  | 29:BF:200:GLU:HG2  | 1.85                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 30:BG:33:ARG:HH21 | 30:BG:34:LEU:N     | 2.03                     | 0.57              |
| 30:BG:79:ASN:O    | 30:BG:82:LEU:HD23  | 2.05                     | 0.57              |
| 30:BG:170:ARG:HD3 | 30:BG:174:GLU:HB2  | 1.87                     | 0.57              |
| 31:BH:11:VAL:HG11 | 31:BH:17:VAL:HG21  | 1.86                     | 0.57              |
| 31:BH:67:LEU:O    | 31:BH:68:THR:C     | 2.46                     | 0.57              |
| 32:BK:9:LEU:HG    | 32:BK:17:GLN:CD    | 2.29                     | 0.57              |
| 32:BK:40:THR:HG22 | 32:BK:41:GLU:N     | 2.19                     | 0.57              |
| 34:BM:76:SER:OG   | 34:BM:81:GLY:O     | 2.21                     | 0.57              |
| 34:BM:123:TYR:CG  | 34:BM:129:PRO:HB2  | 2.40                     | 0.57              |
| 36:BO:46:LYS:NZ   | 36:BO:50:ARG:NH1   | 2.52                     | 0.57              |
| 37:BP:14:ARG:O    | 37:BP:73:PRO:HG2   | 2.04                     | 0.57              |
| 37:BP:36:ALA:HA   | 37:BP:129:THR:HG22 | 1.86                     | 0.57              |
| 38:BQ:99:LYS:HE2  | 51:B4:43:HIS:CE1   | 2.39                     | 0.57              |
| 40:BS:7:ILE:O     | 40:BS:9:LEU:N      | 2.37                     | 0.57              |
| 41:BT:30:LYS:O    | 41:BT:32:PHE:CD1   | 2.56                     | 0.57              |
| 41:BT:46:ALA:O    | 41:BT:49:HIS:HB2   | 2.04                     | 0.57              |
| 43:BV:59:VAL:HG21 | 43:BV:66:GLU:CB    | 2.34                     | 0.57              |
| 43:BV:65:LEU:O    | 43:BV:68:ARG:HG2   | 2.05                     | 0.57              |
| 43:BV:76:VAL:HA   | 43:BV:104:THR:HG22 | 1.87                     | 0.57              |
| 43:BV:98:LYS:HZ3  | 43:BV:98:LYS:C     | 2.09                     | 0.57              |
| 46:BY:105:VAL:HB  | 46:BY:140:ASP:CG   | 2.30                     | 0.57              |
| 47:BZ:11:ARG:HH11 | 47:BZ:11:ARG:HG2   | 1.69                     | 0.57              |
| 47:BZ:40:GLN:HG2  | 47:BZ:45:PHE:HD1   | 1.69                     | 0.57              |
| 50:B3:21:VAL:CG1  | 50:B3:22:ILE:H     | 2.06                     | 0.57              |
| 52:B5:32:ASN:ND2  | 52:B5:33:LYS:N     | 2.52                     | 0.57              |
| 54:B7:44:LYS:O    | 54:B7:44:LYS:HG3   | 2.03                     | 0.57              |
| 1:AA:22:G:C2'     | 1:AA:23:C:O4'      | 2.52                     | 0.57              |
| 1:AA:91:C:C2      | 1:AA:92:G:N7       | 2.72                     | 0.57              |
| 1:AA:136:C:H4'    | 18:AS:65:GLN:HE22  | 1.69                     | 0.57              |
| 1:AA:266:G:H2'    | 19:AT:67:LYS:HZ3   | 1.70                     | 0.57              |
| 1:AA:333:G:H4'    | 22:AW:16:HIS:HD2   | 1.65                     | 0.57              |
| 1:AA:540:G:H21    | 6:AG:42:GLN:HE22   | 1.52                     | 0.57              |
| 1:AA:594:G:N2     | 1:AA:596:C:N4      | 2.52                     | 0.57              |
| 1:AA:778:G:C4     | 1:AA:779:C:C5      | 2.92                     | 0.57              |
| 1:AA:932:C:H5''   | 9:AJ:3:ARG:HB3     | 1.86                     | 0.57              |
| 1:AA:1003:G:N7    | 1:AA:1004:A:N3     | 2.52                     | 0.57              |
| 1:AA:1004:A:H2'   | 1:AA:1036:G:O6     | 2.05                     | 0.57              |
| 1:AA:1039:C:H2'   | 1:AA:1040:U:H6     | 1.70                     | 0.57              |
| 1:AA:1161:C:H2'   | 1:AA:1162:C:C6     | 2.39                     | 0.57              |
| 1:AA:1255:G:H21   | 1:AA:1276:G:H22    | 1.49                     | 0.57              |
| 2:A1:34:U:H3'     | 2:A1:34:U:C6       | 2.39                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 3:AC:34:G:C2'     | 3:AC:35:A:H5'      | 2.34                     | 0.57              |
| 3:AC:57:G:H5'     | 30:BG:81:LYS:O     | 2.05                     | 0.57              |
| 3:AD:19:G:N7      | 24:BA:2112:G:N7    | 2.52                     | 0.57              |
| 3:AB:32:U:C4      | 3:AB:33:U:O4       | 2.57                     | 0.57              |
| 4:AE:35:GLU:OE2   | 4:AE:36:ARG:O      | 2.23                     | 0.57              |
| 4:AE:71:VAL:HG13  | 4:AE:73:THR:HG23   | 1.85                     | 0.57              |
| 5:AF:12:LEU:HG    | 16:AQ:57:ARG:HG3   | 1.85                     | 0.57              |
| 6:AG:20:TYR:HB2   | 6:AG:27:TYR:HA     | 1.86                     | 0.57              |
| 6:AG:52:SER:OG    | 6:AG:54:TYR:HB3    | 2.05                     | 0.57              |
| 6:AG:61:LYS:HZ1   | 6:AG:72:GLU:CD     | 2.12                     | 0.57              |
| 6:AG:106:TYR:HB3  | 6:AG:114:ARG:NE    | 2.20                     | 0.57              |
| 6:AG:146:ILE:O    | 6:AG:147:ALA:HB2   | 2.03                     | 0.57              |
| 6:AG:170:VAL:CG1  | 6:AG:174:LEU:HB2   | 2.34                     | 0.57              |
| 6:AG:180:GLY:O    | 6:AG:181:MET:C     | 2.47                     | 0.57              |
| 6:AG:187:ARG:O    | 6:AG:188:LEU:C     | 2.48                     | 0.57              |
| 7:AH:18:ARG:O     | 7:AH:25:ARG:O      | 2.21                     | 0.57              |
| 7:AH:75:THR:HG23  | 7:AH:75:THR:O      | 2.05                     | 0.57              |
| 7:AH:78:HIS:CG    | 10:AK:107:LEU:HD21 | 2.39                     | 0.57              |
| 8:AI:3:ARG:HG3    | 8:AI:65:VAL:C      | 2.28                     | 0.57              |
| 11:AL:50:LEU:CD2  | 11:AL:51:ARG:HH12  | 2.15                     | 0.57              |
| 13:AN:41:THR:HB   | 13:AN:71:LYS:CE    | 2.34                     | 0.57              |
| 14:AO:117:ARG:HG3 | 14:AO:117:ARG:NH1  | 2.14                     | 0.57              |
| 15:AP:23:TYR:O    | 15:AP:66:LEU:HB2   | 2.04                     | 0.57              |
| 15:AP:74:VAL:HG12 | 15:AP:78:ILE:CD1   | 2.26                     | 0.57              |
| 15:AP:100:GLY:O   | 15:AP:101:GLN:O    | 2.23                     | 0.57              |
| 16:AQ:27:CYS:C    | 16:AQ:40:CYS:SG    | 2.88                     | 0.57              |
| 16:AQ:40:CYS:O    | 16:AQ:44:LEU:HB3   | 2.04                     | 0.57              |
| 17:AR:39:LEU:HD21 | 17:AR:56:LEU:HD22  | 1.85                     | 0.57              |
| 17:AR:69:TYR:O    | 17:AR:70:LEU:C     | 2.48                     | 0.57              |
| 20:AU:64:ARG:O    | 20:AU:67:ALA:HB3   | 2.05                     | 0.57              |
| 22:AW:15:ARG:O    | 22:AW:16:HIS:C     | 2.47                     | 0.57              |
| 24:BA:141:A:N1    | 24:BA:141(A):C:O4' | 2.37                     | 0.57              |
| 24:BA:250:G:H5'   | 54:B7:8:LYS:CG     | 2.35                     | 0.57              |
| 24:BA:270(E):G:H8 | 24:BA:270(E):G:OP2 | 1.87                     | 0.57              |
| 24:BA:270(R):G:N2 | 24:BA:270(S):G:N3  | 2.52                     | 0.57              |
| 24:BA:303:U:C2'   | 24:BA:304:G:H5'    | 2.35                     | 0.57              |
| 24:BA:460:A:H3'   | 24:BA:461:C:H6     | 1.69                     | 0.57              |
| 24:BA:464:U:O2    | 24:BA:788:A:N7     | 2.38                     | 0.57              |
| 24:BA:716:A:H2'   | 24:BA:717:G:C5'    | 2.28                     | 0.57              |
| 24:BA:1007:C:H2'  | 24:BA:1008:C:H5    | 1.70                     | 0.57              |
| 24:BA:1131:G:N7   | 24:BA:2025:C:H4'   | 2.20                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1168:G:C6   | 24:BA:1182:A:N1    | 2.72                     | 0.57              |
| 24:BA:1257:C:O2'  | 29:BF:84:VAL:CG2   | 2.46                     | 0.57              |
| 24:BA:1302:A:C5'  | 24:BA:1303:G:OP2   | 2.50                     | 0.57              |
| 24:BA:1304:C:OP1  | 24:BA:1642:G:O2'   | 2.23                     | 0.57              |
| 24:BA:1387:C:C2   | 24:BA:1388:G:N7    | 2.72                     | 0.57              |
| 24:BA:1515:C:H6   | 24:BA:1515:C:OP1   | 1.87                     | 0.57              |
| 24:BA:1759:A:C2'  | 24:BA:1760:A:O5'   | 2.52                     | 0.57              |
| 24:BA:1792:G:P    | 27:BD:206:LEU:HD21 | 2.44                     | 0.57              |
| 24:BA:1799:G:C3'  | 27:BD:183:ARG:NH2  | 2.63                     | 0.57              |
| 24:BA:1982:C:C4   | 24:BA:1983:C:N4    | 2.72                     | 0.57              |
| 24:BA:1992:G:C1'  | 24:BA:1993:U:C4    | 2.88                     | 0.57              |
| 24:BA:2014:A:O2'  | 24:BA:2015:A:N3    | 2.37                     | 0.57              |
| 24:BA:2017:U:H1'  | 51:B4:8:LYS:O      | 2.05                     | 0.57              |
| 24:BA:2210:G:O2'  | 24:BA:2211:G:P     | 2.63                     | 0.57              |
| 24:BA:2311:A:H5'' | 24:BA:2312:U:C5    | 2.40                     | 0.57              |
| 24:BA:2466:C:H5'' | 55:B8:5:ALA:HB1    | 1.86                     | 0.57              |
| 24:BA:2520:C:O2'  | 24:BA:2521:C:C5'   | 2.50                     | 0.57              |
| 24:BA:2721:A:C2   | 24:BA:2873:A:C6    | 2.91                     | 0.57              |
| 24:BA:2754:U:H5'  | 55:B8:15:LYS:NZ    | 2.19                     | 0.57              |
| 24:BA:2755:C:O5'  | 24:BA:2755:C:H6    | 1.87                     | 0.57              |
| 24:BA:2768:C:O2'  | 24:BA:2769:C:H5'   | 2.04                     | 0.57              |
| 24:BA:2809:A:O4'  | 24:BA:2809:A:N3    | 2.35                     | 0.57              |
| 26:BC:100:ILE:CG2 | 26:BC:127:LEU:HG   | 2.18                     | 0.57              |
| 27:BD:29:PRO:CB   | 27:BD:31:LYS:HZ2   | 2.17                     | 0.57              |
| 27:BD:135:PHE:N   | 27:BD:135:PHE:CD1  | 2.73                     | 0.57              |
| 27:BD:178:PRO:HG2 | 27:BD:179:SER:N    | 2.18                     | 0.57              |
| 27:BD:181:GLU:CB  | 27:BD:268:ARG:HE   | 2.14                     | 0.57              |
| 28:BE:100:GLU:HB2 | 28:BE:172:VAL:HG11 | 1.86                     | 0.57              |
| 29:BF:6:VAL:C     | 29:BF:18:ARG:HD2   | 2.30                     | 0.57              |
| 29:BF:109:GLY:O   | 29:BF:111:ALA:N    | 2.36                     | 0.57              |
| 29:BF:120:GLU:OE1 | 29:BF:120:GLU:HA   | 2.04                     | 0.57              |
| 30:BG:32:PRO:HB2  | 30:BG:163:ALA:CA   | 2.33                     | 0.57              |
| 30:BG:44:GLY:N    | 30:BG:88:ILE:CG2   | 2.67                     | 0.57              |
| 30:BG:162:THR:C   | 30:BG:164:GLU:N    | 2.61                     | 0.57              |
| 32:BK:9:LEU:CG    | 32:BK:17:GLN:HE22  | 2.18                     | 0.57              |
| 33:BL:77:LEU:HA   | 33:BL:80:LYS:HB2   | 1.87                     | 0.57              |
| 34:BM:23:LEU:HD23 | 34:BM:60:ILE:HG22  | 1.85                     | 0.57              |
| 34:BM:34:LEU:CD2  | 34:BM:120:LEU:HB2  | 2.33                     | 0.57              |
| 35:BN:39:ILE:N    | 35:BN:39:ILE:CD1   | 2.66                     | 0.57              |
| 35:BN:77:ILE:HG12 | 40:BS:75:ILE:CD1   | 2.34                     | 0.57              |
| 36:BO:135:LEU:H   | 36:BO:135:LEU:CD1  | 2.18                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 37:BP:27:VAL:CG2  | 37:BP:28:ALA:H    | 1.94                     | 0.57              |
| 37:BP:43:THR:HG23 | 37:BP:46:GLN:HE21 | 1.69                     | 0.57              |
| 37:BP:51:ARG:NH2  | 37:BP:63:LYS:HZ1  | 2.03                     | 0.57              |
| 37:BP:111:GLU:HB2 | 37:BP:113:GLN:NE2 | 2.18                     | 0.57              |
| 38:BQ:31:HIS:CD2  | 38:BQ:34:ILE:HD11 | 2.39                     | 0.57              |
| 39:BR:8:GLU:C     | 39:BR:10:ARG:N    | 2.59                     | 0.57              |
| 39:BR:73:LEU:H    | 39:BR:73:LEU:CD1  | 2.17                     | 0.57              |
| 40:BS:50:ILE:HG23 | 40:BS:68:TYR:HB2  | 1.85                     | 0.57              |
| 40:BS:55:ASN:O    | 40:BS:57:PHE:HE2  | 1.87                     | 0.57              |
| 41:BT:105:VAL:O   | 41:BT:108:GLU:CD  | 2.47                     | 0.57              |
| 42:BU:7:THR:O     | 42:BU:9:GLY:N     | 2.38                     | 0.57              |
| 42:BU:13:ARG:NH2  | 42:BU:43:GLU:OE2  | 2.37                     | 0.57              |
| 42:BU:67:GLY:C    | 42:BU:93:GLU:O    | 2.47                     | 0.57              |
| 42:BU:83:ARG:HD3  | 42:BU:84:LYS:HA   | 1.87                     | 0.57              |
| 46:BY:116:VAL:CG2 | 46:BY:144:LEU:O   | 2.52                     | 0.57              |
| 46:BY:116:VAL:HA  | 46:BY:175:VAL:O   | 2.05                     | 0.57              |
| 49:B2:40:THR:HB   | 49:B2:43:ILE:HB   | 1.86                     | 0.57              |
| 52:B5:40:CYS:HA   | 52:B5:47:THR:O    | 2.05                     | 0.57              |
| 1:AA:440:A:C3'    | 1:AA:442:C:H6     | 2.18                     | 0.57              |
| 1:AA:509:A:C5     | 1:AA:510:A:C6     | 2.92                     | 0.57              |
| 1:AA:571:U:C3'    | 1:AA:572:A:C5'    | 2.72                     | 0.57              |
| 1:AA:685:G:H4'    | 13:AN:40:ILE:O    | 2.05                     | 0.57              |
| 1:AA:778:G:N3     | 1:AA:779:C:C6     | 2.73                     | 0.57              |
| 1:AA:812:C:O2'    | 1:AA:813:U:OP2    | 2.20                     | 0.57              |
| 1:AA:815:A:H1'    | 1:AA:817:C:H42    | 1.67                     | 0.57              |
| 1:AA:876:G:O2'    | 10:AK:11:THR:HG21 | 2.05                     | 0.57              |
| 1:AA:944:G:C2'    | 1:AA:945:G:H5''   | 2.34                     | 0.57              |
| 1:AA:973:G:N1     | 1:AA:974:A:C6     | 2.73                     | 0.57              |
| 1:AA:1238:A:N6    | 1:AA:1301:U:H3    | 1.97                     | 0.57              |
| 1:AA:1251:A:H2'   | 1:AA:1252:A:N7    | 2.20                     | 0.57              |
| 1:AA:1270:C:OP1   | 23:AX:24:ARG:NH2  | 2.37                     | 0.57              |
| 1:AA:1468:A:H2'   | 1:AA:1469:G:O5'   | 2.05                     | 0.57              |
| 3:AD:32:U:O2'     | 9:AJ:77:SER:HB2   | 2.03                     | 0.57              |
| 4:AE:48:MET:HE3   | 4:AE:51:LEU:HD11  | 1.85                     | 0.57              |
| 4:AE:69:LEU:CD1   | 4:AE:92:TYR:HA    | 2.32                     | 0.57              |
| 4:AE:79:ASP:O     | 4:AE:82:ARG:HB3   | 2.03                     | 0.57              |
| 4:AE:142:LEU:O    | 4:AE:143:GLU:C    | 2.47                     | 0.57              |
| 4:AE:173:ALA:CA   | 4:AE:176:GLU:HB2  | 2.34                     | 0.57              |
| 4:AE:187:LEU:CA   | 4:AE:201:ILE:O    | 2.45                     | 0.57              |
| 5:AF:8:ILE:HG22   | 5:AF:9:GLY:N      | 2.19                     | 0.57              |
| 5:AF:22:TRP:CH2   | 5:AF:32:LEU:HB3   | 2.39                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 5:AF:159:GLY:N     | 5:AF:193:TYR:CE1   | 2.69                     | 0.57              |
| 7:AH:63:ARG:CA     | 7:AH:66:MET:HG2    | 2.35                     | 0.57              |
| 8:AI:60:PHE:HE2    | 20:AU:78:LEU:HD21  | 1.68                     | 0.57              |
| 8:AI:95:GLU:HA     | 20:AU:32:ARG:HB3   | 1.85                     | 0.57              |
| 10:AK:18:ARG:NH1   | 10:AK:18:ARG:N     | 2.52                     | 0.57              |
| 10:AK:40:ALA:N     | 10:AK:45:ILE:CG2   | 2.68                     | 0.57              |
| 10:AK:45:ILE:HG13  | 10:AK:61:VAL:HG13  | 1.85                     | 0.57              |
| 11:AL:47:LEU:HD11  | 11:AL:56:LEU:CG    | 2.33                     | 0.57              |
| 11:AL:50:LEU:HD23  | 11:AL:50:LEU:C     | 2.29                     | 0.57              |
| 12:AM:10:GLY:N     | 12:AM:16:LEU:HD11  | 2.19                     | 0.57              |
| 12:AM:35:SER:N     | 12:AM:73:ASP:O     | 2.38                     | 0.57              |
| 14:AO:60:LEU:C     | 14:AO:60:LEU:CD2   | 2.77                     | 0.57              |
| 14:AO:88:GLY:O     | 14:AO:90:VAL:HG23  | 2.04                     | 0.57              |
| 15:AP:87:TYR:HB2   | 21:AV:73:GLU:HB2   | 1.85                     | 0.57              |
| 19:AT:68:ARG:H     | 19:AT:70:ARG:CZ    | 2.16                     | 0.57              |
| 19:AT:74:LEU:O     | 19:AT:74:LEU:HD13  | 2.05                     | 0.57              |
| 20:AU:80:PRO:O     | 20:AU:82:THR:O     | 2.22                     | 0.57              |
| 23:AX:12:LYS:HG3   | 23:AX:17:THR:OG1   | 2.05                     | 0.57              |
| 24:BA:14:A:N7      | 24:BA:15:G:C8      | 2.72                     | 0.57              |
| 24:BA:134:C:C2     | 24:BA:146:G:N2     | 2.73                     | 0.57              |
| 24:BA:137(A):G:N2  | 24:BA:142:G:C2     | 2.73                     | 0.57              |
| 24:BA:233:A:H2'    | 24:BA:234:C:O5'    | 2.03                     | 0.57              |
| 24:BA:259:G:H1'    | 24:BA:621:A:O2'    | 2.05                     | 0.57              |
| 24:BA:269:U:C5     | 24:BA:270(Z):U:OP2 | 2.58                     | 0.57              |
| 24:BA:270(J):G:H3' | 24:BA:270(K):C:H6  | 1.68                     | 0.57              |
| 24:BA:360:G:H8     | 24:BA:360:G:O5'    | 1.87                     | 0.57              |
| 24:BA:431:U:H2'    | 24:BA:432:A:H5'    | 1.86                     | 0.57              |
| 24:BA:569:U:O4     | 24:BA:2498:C:H4'   | 2.05                     | 0.57              |
| 24:BA:605:C:H2'    | 24:BA:606:U:C6     | 2.38                     | 0.57              |
| 24:BA:728:G:H21    | 24:BA:730:C:C5'    | 2.18                     | 0.57              |
| 24:BA:733:G:OP2    | 24:BA:761:A:N6     | 2.37                     | 0.57              |
| 24:BA:742:G:H5'    | 24:BA:1675:C:O2'   | 2.04                     | 0.57              |
| 24:BA:758:C:H2'    | 24:BA:759:G:C8     | 2.40                     | 0.57              |
| 24:BA:811:U:C4     | 36:BO:23:PRO:CD    | 2.87                     | 0.57              |
| 24:BA:942:G:C2     | 24:BA:943:U:C4     | 2.92                     | 0.57              |
| 24:BA:1000:A:N6    | 24:BA:1155:A:H5'   | 2.19                     | 0.57              |
| 24:BA:1021:A:C2    | 24:BA:1122:G:H4'   | 2.38                     | 0.57              |
| 24:BA:1033:U:H5'   | 55:B8:16:VAL:CG1   | 2.33                     | 0.57              |
| 24:BA:1065:U:H1'   | 24:BA:1074:G:H1    | 1.69                     | 0.57              |
| 24:BA:1221:C:H2'   | 24:BA:1221:C:O2    | 2.04                     | 0.57              |
| 24:BA:1326:U:H6    | 24:BA:2010:G:H21   | 1.51                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1399:C:H2'  | 24:BA:1400:G:H8    | 1.70                     | 0.57              |
| 24:BA:1424:G:H2'  | 24:BA:1425:G:O5'   | 2.04                     | 0.57              |
| 24:BA:1443:G:C2   | 24:BA:1444:G:C1'   | 2.85                     | 0.57              |
| 24:BA:1453:A:OP2  | 24:BA:1453:A:C4'   | 2.53                     | 0.57              |
| 24:BA:1652:A:N7   | 24:BA:1653:G:N3    | 2.52                     | 0.57              |
| 24:BA:1654:A:HO2' | 28:BE:113:PHE:HD1  | 1.52                     | 0.57              |
| 24:BA:1679:U:C4'  | 24:BA:1990:C:O2'   | 2.53                     | 0.57              |
| 24:BA:1696:G:C6   | 24:BA:1697:G:C2    | 2.93                     | 0.57              |
| 24:BA:1717:G:H21  | 24:BA:1718:G:H1'   | 1.69                     | 0.57              |
| 24:BA:1902:C:H5'  | 27:BD:244:ARG:CZ   | 2.34                     | 0.57              |
| 24:BA:1904:G:C2   | 24:BA:1905:C:C6    | 2.92                     | 0.57              |
| 24:BA:1911:U:O4   | 24:BA:1913:A:N6    | 2.37                     | 0.57              |
| 24:BA:1980:G:O2'  | 24:BA:1981:A:H5''  | 2.04                     | 0.57              |
| 24:BA:2020:A:N6   | 24:BA:2034:U:O4    | 2.34                     | 0.57              |
| 24:BA:2272:U:OP1  | 47:BZ:18:ALA:HB2   | 2.04                     | 0.57              |
| 24:BA:2287:A:C8   | 24:BA:2289:G:C5    | 2.93                     | 0.57              |
| 24:BA:2481:G:HO2' | 24:BA:2482:G:C5'   | 2.18                     | 0.57              |
| 24:BA:2519:U:C2   | 24:BA:2542:A:C2    | 2.92                     | 0.57              |
| 24:BA:2539:C:H1'  | 55:B8:2:LYS:NZ     | 2.19                     | 0.57              |
| 24:BA:2575:C:OP1  | 28:BE:144:ARG:NH2  | 2.37                     | 0.57              |
| 24:BA:2648:C:H2'  | 24:BA:2649:U:C6    | 2.39                     | 0.57              |
| 24:BA:2741:A:O3'  | 55:B8:2:LYS:NZ     | 2.36                     | 0.57              |
| 24:BA:2749:A:H4'  | 31:BH:62:LYS:HB2   | 1.85                     | 0.57              |
| 25:BB:37:C:N3     | 25:BB:49:C:O4'     | 2.38                     | 0.57              |
| 25:BB:50:G:C4'    | 39:BR:61:ASN:OD1   | 2.51                     | 0.57              |
| 26:BC:78:ALA:C    | 26:BC:79:LYS:HG3   | 2.30                     | 0.57              |
| 27:BD:63:ARG:HH11 | 27:BD:63:ARG:HB2   | 1.67                     | 0.57              |
| 27:BD:269:PHE:O   | 27:BD:270:ILE:HG13 | 2.05                     | 0.57              |
| 30:BG:119:GLY:O   | 30:BG:120:LEU:HD23 | 2.04                     | 0.57              |
| 30:BG:132:ASN:O   | 30:BG:133:LEU:HB2  | 2.03                     | 0.57              |
| 32:BK:2:LYS:NZ    | 32:BK:44:LEU:HD11  | 2.18                     | 0.57              |
| 32:BK:21:VAL:O    | 32:BK:21:VAL:HG12  | 2.04                     | 0.57              |
| 34:BM:7:LYS:HZ3   | 34:BM:39:ARG:HH12  | 1.52                     | 0.57              |
| 35:BN:23:ARG:HD3  | 35:BN:23:ARG:N     | 2.18                     | 0.57              |
| 35:BN:37:ASP:O    | 35:BN:61:VAL:HG23  | 2.04                     | 0.57              |
| 35:BN:86:ILE:HG21 | 35:BN:90:GLN:HA    | 1.87                     | 0.57              |
| 36:BO:42:SER:O    | 36:BO:44:GLY:N     | 2.37                     | 0.57              |
| 36:BO:81:GLN:O    | 36:BO:86:LYS:HG2   | 2.04                     | 0.57              |
| 36:BO:123:LEU:O   | 36:BO:138:LEU:HD23 | 2.03                     | 0.57              |
| 37:BP:75:THR:HB   | 37:BP:77:LYS:CE    | 2.35                     | 0.57              |
| 38:BQ:65:LEU:O    | 38:BQ:68:ARG:CB    | 2.52                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 39:BR:24:LEU:HD23 | 39:BR:39:ILE:HG22 | 1.87                     | 0.57              |
| 39:BR:26:LEU:HD21 | 39:BR:37:ALA:C    | 2.30                     | 0.57              |
| 39:BR:76:LYS:O    | 39:BR:80:LEU:CB   | 2.48                     | 0.57              |
| 40:BS:26:ASP:O    | 40:BS:52:ILE:CG2  | 2.52                     | 0.57              |
| 40:BS:56:GLY:O    | 40:BS:61:PHE:CA   | 2.53                     | 0.57              |
| 41:BT:16:LYS:CG   | 41:BT:20:LEU:HD21 | 2.35                     | 0.57              |
| 41:BT:59:ARG:HB3  | 41:BT:59:ARG:HH11 | 1.70                     | 0.57              |
| 41:BT:84:LYS:HE2  | 41:BT:84:LYS:N    | 2.20                     | 0.57              |
| 41:BT:92:ARG:O    | 41:BT:94:ASN:N    | 2.34                     | 0.57              |
| 44:BW:8:ILE:C     | 44:BW:9:LEU:CG    | 2.76                     | 0.57              |
| 45:BX:98:VAL:O    | 45:BX:99:CYS:C    | 2.47                     | 0.57              |
| 46:BY:76:LEU:HD23 | 46:BY:82:ARG:O    | 2.04                     | 0.57              |
| 47:BZ:59:LEU:CD1  | 47:BZ:79:VAL:HG11 | 2.34                     | 0.57              |
| 50:B3:7:PRO:CG    | 50:B3:60:GLN:HB2  | 2.35                     | 0.57              |
| 50:B3:47:GLN:HA   | 50:B3:52:THR:HB   | 1.83                     | 0.57              |
| 51:B4:17:ASP:N    | 51:B4:17:ASP:OD2  | 2.37                     | 0.57              |
| 51:B4:21:SER:C    | 51:B4:23:HIS:N    | 2.59                     | 0.57              |
| 51:B4:32:PRO:HA   | 51:B4:38:ALA:O    | 2.04                     | 0.57              |
| 51:B4:51:TYR:C    | 51:B4:51:TYR:HD2  | 2.11                     | 0.57              |
| 53:B6:5:TRP:HZ3   | 53:B6:12:ARG:HH11 | 1.51                     | 0.57              |
| 55:B8:23:VAL:HB   | 55:B8:36:GLN:HG3  | 1.86                     | 0.57              |
| 1:AA:112:G:OP2    | 18:AS:27:LYS:HD3  | 2.05                     | 0.57              |
| 1:AA:250:A:H4'    | 1:AA:251:G:O5'    | 2.05                     | 0.57              |
| 1:AA:295:C:O2'    | 1:AA:296:U:H5'    | 2.04                     | 0.57              |
| 1:AA:307:C:H41    | 1:AA:308:C:H41    | 1.52                     | 0.57              |
| 1:AA:340:U:C2     | 1:AA:341:C:C5     | 2.92                     | 0.57              |
| 1:AA:505:G:C6     | 1:AA:535:A:C2     | 2.92                     | 0.57              |
| 1:AA:543:C:N3     | 1:AA:544:G:N7     | 2.52                     | 0.57              |
| 1:AA:816:A:H2'    | 1:AA:817:C:OP2    | 2.04                     | 0.57              |
| 1:AA:817:C:C2     | 1:AA:819:A:H5'    | 2.40                     | 0.57              |
| 1:AA:890:G:C2'    | 1:AA:891:U:OP2    | 2.53                     | 0.57              |
| 1:AA:900:A:H2'    | 1:AA:901:A:O5'    | 2.05                     | 0.57              |
| 1:AA:943:U:H2'    | 1:AA:944:G:H8     | 1.70                     | 0.57              |
| 1:AA:1151:A:C5    | 1:AA:1152:A:C8    | 2.92                     | 0.57              |
| 1:AA:1157:A:H1'   | 1:AA:1181:G:H21   | 1.70                     | 0.57              |
| 1:AA:1253:G:N2    | 1:AA:1254:C:H1'   | 2.17                     | 0.57              |
| 1:AA:1302:U:H2'   | 1:AA:1303:C:H5'   | 1.87                     | 0.57              |
| 1:AA:1394:A:H62   | 1:AA:1501:C:C4'   | 2.18                     | 0.57              |
| 1:AA:1504:G:O2'   | 1:AA:1505:G:OP2   | 2.21                     | 0.57              |
| 3:AD:63:G:H2'     | 3:AD:64:A:C8      | 2.40                     | 0.57              |
| 5:AF:187:ALA:N    | 5:AF:198:VAL:HG22 | 2.19                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 6:AG:155:LEU:N    | 6:AG:158:ILE:HG13 | 2.17                     | 0.57              |
| 7:AH:20:GLN:CD    | 7:AH:21:ALA:N     | 2.62                     | 0.57              |
| 7:AH:37:ARG:NH1   | 7:AH:111:GLU:HB2  | 2.20                     | 0.57              |
| 7:AH:50:GLU:HB2   | 7:AH:53:LEU:HD23  | 1.86                     | 0.57              |
| 8:AI:75:LEU:O     | 8:AI:78:GLU:HB3   | 2.04                     | 0.57              |
| 8:AI:95:GLU:H     | 8:AI:96:PRO:HD3   | 1.67                     | 0.57              |
| 10:AK:18:ARG:NH1  | 10:AK:18:ARG:CG   | 2.61                     | 0.57              |
| 10:AK:18:ARG:HH11 | 10:AK:18:ARG:CB   | 2.17                     | 0.57              |
| 10:AK:29:SER:CB   | 10:AK:32:LYS:NZ   | 2.65                     | 0.57              |
| 13:AN:106:LYS:HG2 | 13:AN:107:SER:N   | 2.19                     | 0.57              |
| 15:AP:48:LEU:HD13 | 15:AP:53:VAL:HA   | 1.86                     | 0.57              |
| 15:AP:108:ARG:CZ  | 15:AP:111:LYS:HD3 | 2.34                     | 0.57              |
| 19:AT:20:THR:C    | 19:AT:21:VAL:HG13 | 2.30                     | 0.57              |
| 20:AU:61:LYS:CD   | 20:AU:64:ARG:HH22 | 2.07                     | 0.57              |
| 20:AU:83:GLU:O    | 20:AU:84:LYS:C    | 2.47                     | 0.57              |
| 21:AV:5:LEU:HD12  | 21:AV:9:VAL:CG1   | 2.33                     | 0.57              |
| 21:AV:31:ILE:H    | 21:AV:49:ILE:HA   | 1.67                     | 0.57              |
| 21:AV:32:LYS:HB2  | 21:AV:57:HIS:NE2  | 2.20                     | 0.57              |
| 24:BA:68:G:N2     | 24:BA:74:A:O5'    | 2.38                     | 0.57              |
| 24:BA:130:C:OP1   | 24:BA:1348:G:N2   | 2.36                     | 0.57              |
| 24:BA:142:G:C4'   | 44:BW:35:THR:HG21 | 2.21                     | 0.57              |
| 24:BA:163:U:C4    | 24:BA:171:G:H1'   | 2.39                     | 0.57              |
| 24:BA:224:G:H2'   | 24:BA:225:A:O4'   | 2.04                     | 0.57              |
| 24:BA:228:A:H2'   | 24:BA:230:U:OP1   | 2.04                     | 0.57              |
| 24:BA:308:G:C2    | 24:BA:329:G:N2    | 2.73                     | 0.57              |
| 24:BA:326:G:H22   | 24:BA:337:C:C1'   | 2.17                     | 0.57              |
| 24:BA:396:G:H5''  | 50:B3:10:VAL:HG13 | 1.86                     | 0.57              |
| 24:BA:397:G:OP1   | 50:B3:40:HIS:C    | 2.48                     | 0.57              |
| 24:BA:481:G:H22   | 24:BA:509:C:N4    | 2.01                     | 0.57              |
| 24:BA:565:C:O4'   | 24:BA:1252:G:O6   | 2.23                     | 0.57              |
| 24:BA:565:C:OP2   | 42:BU:80:GLN:O    | 2.22                     | 0.57              |
| 24:BA:653:A:H3'   | 24:BA:654:A:H4'   | 1.87                     | 0.57              |
| 24:BA:809:G:O2'   | 24:BA:1254:A:N3   | 2.35                     | 0.57              |
| 24:BA:814:C:C2    | 24:BA:815:C:C5    | 2.92                     | 0.57              |
| 24:BA:823:G:C2    | 24:BA:824:A:C5    | 2.93                     | 0.57              |
| 24:BA:878:A:N3    | 24:BA:879:G:C8    | 2.72                     | 0.57              |
| 24:BA:952:G:C6    | 24:BA:966:G:C6    | 2.92                     | 0.57              |
| 24:BA:1095:A:O2'  | 24:BA:1096:A:O4'  | 2.21                     | 0.57              |
| 24:BA:1174:A:N3   | 24:BA:1175:U:H5'' | 2.19                     | 0.57              |
| 24:BA:1234:U:H2'  | 24:BA:1235:G:C8   | 2.40                     | 0.57              |
| 24:BA:1315:C:C2   | 24:BA:1316:U:C5   | 2.93                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 24:BA:1545(A):A:O5' | 24:BA:1545(A):A:C8 | 2.58                     | 0.57              |
| 24:BA:1566:A:HO2'   | 24:BA:1567:A:P     | 2.26                     | 0.57              |
| 24:BA:1570:A:C2     | 24:BA:1571:A:N7    | 2.72                     | 0.57              |
| 24:BA:1700:A:C8     | 24:BA:1701:A:C8    | 2.92                     | 0.57              |
| 24:BA:1780:A:C2'    | 24:BA:1781:C:OP1   | 2.52                     | 0.57              |
| 24:BA:1782:C:H3'    | 24:BA:1782:C:H6    | 1.70                     | 0.57              |
| 24:BA:1785:A:P      | 24:BA:1982:C:H4'   | 2.44                     | 0.57              |
| 24:BA:1788:C:C2'    | 27:BD:222:ARG:HE   | 2.18                     | 0.57              |
| 24:BA:1934:C:H4'    | 24:BA:1974:C:H4'   | 1.86                     | 0.57              |
| 24:BA:1973:G:H2'    | 24:BA:1974:C:H6    | 1.70                     | 0.57              |
| 24:BA:2047:U:O2'    | 24:BA:2048:G:H5'   | 2.04                     | 0.57              |
| 24:BA:2053:G:H2'    | 24:BA:2054:A:O5'   | 2.05                     | 0.57              |
| 24:BA:2146:C:N3     | 24:BA:2147:G:H1'   | 2.20                     | 0.57              |
| 24:BA:2168:G:C2     | 24:BA:2170:A:H3'   | 2.40                     | 0.57              |
| 24:BA:2206:C:C2     | 24:BA:2207:C:C5    | 2.92                     | 0.57              |
| 24:BA:2243:U:O2     | 24:BA:2244:U:C6    | 2.57                     | 0.57              |
| 24:BA:2311:A:C2     | 30:BG:45:GLU:CD    | 2.82                     | 0.57              |
| 24:BA:2323:G:H2'    | 24:BA:2324:C:H6    | 1.68                     | 0.57              |
| 24:BA:2596:U:O4     | 24:BA:2597:G:N1    | 2.38                     | 0.57              |
| 24:BA:2619:C:H5''   | 28:BE:152:LYS:CB   | 2.33                     | 0.57              |
| 24:BA:2670:A:C5'    | 28:BE:206:LYS:NZ   | 2.68                     | 0.57              |
| 24:BA:2777:G:O5'    | 24:BA:2777:G:C8    | 2.57                     | 0.57              |
| 24:BA:2811:G:P      | 28:BE:60:ASN:HD22  | 2.28                     | 0.57              |
| 24:BA:2886:G:C2     | 24:BA:2887:U:C6    | 2.92                     | 0.57              |
| 25:BB:88:C:H2'      | 25:BB:89:G:H5'     | 1.86                     | 0.57              |
| 26:BC:33:ALA:HB1    | 26:BC:39:GLU:OE1   | 2.04                     | 0.57              |
| 26:BC:76:ALA:HB2    | 26:BC:153:ILE:HD11 | 1.84                     | 0.57              |
| 26:BC:81:GLU:OE2    | 26:BC:82:LYS:HD3   | 2.05                     | 0.57              |
| 27:BD:54:ARG:C      | 27:BD:219:PRO:CD   | 2.74                     | 0.57              |
| 27:BD:61:LEU:CD1    | 27:BD:86:PRO:HD3   | 2.32                     | 0.57              |
| 27:BD:117:VAL:O     | 27:BD:118:VAL:HG22 | 2.03                     | 0.57              |
| 27:BD:148:GLU:HB2   | 27:BD:151:LYS:HG3  | 1.87                     | 0.57              |
| 27:BD:151:LYS:HB2   | 27:BD:154:LYS:CE   | 2.33                     | 0.57              |
| 27:BD:169:GLU:CB    | 27:BD:184:LYS:NZ   | 2.62                     | 0.57              |
| 27:BD:223:GLY:C     | 27:BD:225:ALA:H    | 2.13                     | 0.57              |
| 27:BD:244:ARG:H     | 27:BD:245:PRO:CD   | 2.05                     | 0.57              |
| 28:BE:113:PHE:O     | 28:BE:158:GLY:HA2  | 2.04                     | 0.57              |
| 28:BE:178:GLU:O     | 28:BE:180:ASN:N    | 2.37                     | 0.57              |
| 29:BF:27:GLU:HG3    | 29:BF:116:ASP:HB2  | 1.86                     | 0.57              |
| 29:BF:34:TRP:CD1    | 29:BF:38:ARG:NH1   | 2.73                     | 0.57              |
| 29:BF:39:TRP:CG     | 29:BF:40:GLN:N     | 2.73                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 29:BF:50:SER:O    | 29:BF:92:PRO:HG2  | 2.04                     | 0.57              |
| 29:BF:204:ASN:N   | 29:BF:204:ASN:OD1 | 2.37                     | 0.57              |
| 30:BG:29:TRP:C    | 30:BG:31:VAL:N    | 2.56                     | 0.57              |
| 30:BG:34:LEU:HD13 | 30:BG:100:TRP:NE1 | 2.18                     | 0.57              |
| 30:BG:61:ALA:HB1  | 30:BG:67:LYS:HE2  | 1.82                     | 0.57              |
| 31:BH:35:VAL:HG21 | 31:BH:75:ALA:CB   | 2.35                     | 0.57              |
| 31:BH:149:ARG:NH1 | 31:BH:164:TYR:HB3 | 2.20                     | 0.57              |
| 33:BL:32:ALA:HB1  | 33:BL:37:PHE:CD1  | 2.40                     | 0.57              |
| 33:BL:57:ILE:CA   | 33:BL:66:THR:O    | 2.46                     | 0.57              |
| 34:BM:13:TRP:HA   | 34:BM:51:PHE:O    | 2.04                     | 0.57              |
| 34:BM:16:ILE:CD1  | 34:BM:52:VAL:HG22 | 2.11                     | 0.57              |
| 34:BM:51:PHE:CE1  | 34:BM:119:ARG:NE  | 2.73                     | 0.57              |
| 34:BM:70:LYS:HD2  | 34:BM:86:PRO:CG   | 2.33                     | 0.57              |
| 34:BM:93:THR:C    | 34:BM:94:HIS:CD2  | 2.81                     | 0.57              |
| 35:BN:86:ILE:HD13 | 35:BN:90:GLN:HG3  | 1.86                     | 0.57              |
| 36:BO:47:ASP:HB3  | 36:BO:48:PRO:HD2  | 1.86                     | 0.57              |
| 36:BO:47:ASP:CB   | 36:BO:48:PRO:CD   | 2.82                     | 0.57              |
| 36:BO:52:GLU:HA   | 36:BO:55:ARG:CG   | 2.30                     | 0.57              |
| 36:BO:54:GLY:O    | 36:BO:56:SER:N    | 2.37                     | 0.57              |
| 36:BO:72:PRO:HA   | 36:BO:110:TYR:CD1 | 2.40                     | 0.57              |
| 39:BR:15:ARG:HG2  | 39:BR:15:ARG:HH21 | 1.69                     | 0.57              |
| 39:BR:51:ALA:HB1  | 39:BR:73:LEU:CG   | 2.32                     | 0.57              |
| 39:BR:51:ALA:O    | 39:BR:73:LEU:HD12 | 2.05                     | 0.57              |
| 42:BU:3:ALA:HA    | 42:BU:44:LYS:NZ   | 2.20                     | 0.57              |
| 44:BW:12:VAL:HB   | 44:BW:27:THR:C    | 2.29                     | 0.57              |
| 44:BW:15:GLU:CB   | 44:BW:16:LYS:HE2  | 2.33                     | 0.57              |
| 44:BW:36:LYS:O    | 44:BW:39:ILE:HB   | 2.05                     | 0.57              |
| 46:BY:31:ARG:HG2  | 46:BY:31:ARG:HH11 | 1.69                     | 0.57              |
| 48:B1:26:GLU:HA   | 48:B1:29:GLU:HG3  | 1.86                     | 0.57              |
| 48:B1:29:GLU:O    | 48:B1:32:PHE:HB2  | 2.04                     | 0.57              |
| 49:B2:10:LYS:HG2  | 49:B2:12:PRO:CD   | 2.33                     | 0.57              |
| 49:B2:17:LYS:CA   | 49:B2:20:LYS:NZ   | 2.68                     | 0.57              |
| 52:B5:38:LYS:HD3  | 52:B5:38:LYS:C    | 2.30                     | 0.57              |
| 54:B7:20:GLY:C    | 54:B7:21:LYS:HG3  | 2.29                     | 0.57              |
| 54:B7:30:ARG:HH21 | 54:B7:43:GLN:CA   | 2.17                     | 0.57              |
| 54:B7:31:HIS:O    | 54:B7:32:LEU:HD23 | 2.05                     | 0.57              |
| 55:B8:9:ARG:NE    | 55:B8:16:VAL:HB   | 2.18                     | 0.57              |
| 1:AA:244:U:O2'    | 1:AA:245:C:OP2    | 2.22                     | 0.57              |
| 1:AA:263:A:O5'    | 1:AA:263:A:H8     | 1.87                     | 0.57              |
| 1:AA:434:U:C2     | 1:AA:435:C:C5     | 2.92                     | 0.57              |
| 1:AA:539:A:OP1    | 14:AO:114:LYS:NZ  | 2.38                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:932:C:H5''   | 9:AJ:3:ARG:CB     | 2.35                     | 0.57              |
| 1:AA:1257:U:O2'   | 1:AA:1258:G:C8    | 2.57                     | 0.57              |
| 1:AA:1269:A:H5'   | 1:AA:1326:C:C4'   | 2.34                     | 0.57              |
| 1:AA:1390:U:C2    | 1:AA:1391:U:C4    | 2.92                     | 0.57              |
| 4:AE:17:PHE:HA    | 4:AE:42:ILE:CG2   | 2.34                     | 0.57              |
| 4:AE:113:HIS:HA   | 4:AE:116:GLU:OE2  | 2.04                     | 0.57              |
| 5:AF:136:GLN:O    | 5:AF:137:ALA:C    | 2.47                     | 0.57              |
| 6:AG:15:GLU:OE2   | 6:AG:66:ARG:NH1   | 2.37                     | 0.57              |
| 7:AH:13:ILE:N     | 7:AH:13:ILE:CD1   | 2.66                     | 0.57              |
| 7:AH:57:LYS:O     | 7:AH:58:ALA:C     | 2.48                     | 0.57              |
| 7:AH:80:ILE:CG2   | 7:AH:142:LEU:HD21 | 2.34                     | 0.57              |
| 10:AK:7:ALA:O     | 10:AK:10:LEU:HB2  | 2.04                     | 0.57              |
| 11:AL:115:GLY:C   | 11:AL:117:HIS:H   | 2.13                     | 0.57              |
| 13:AN:64:ALA:O    | 13:AN:65:ALA:C    | 2.47                     | 0.57              |
| 13:AN:92:GLU:OE2  | 13:AN:96:ARG:HB2  | 2.05                     | 0.57              |
| 15:AP:84:ILE:HD11 | 15:AP:86:CYS:SG   | 2.44                     | 0.57              |
| 15:AP:87:TYR:CD2  | 15:AP:87:TYR:C    | 2.81                     | 0.57              |
| 15:AP:97:PRO:N    | 15:AP:110:ARG:HG2 | 2.19                     | 0.57              |
| 16:AQ:18:VAL:HG23 | 16:AQ:19:ARG:HG3  | 1.86                     | 0.57              |
| 16:AQ:45:ARG:CB   | 16:AQ:45:ARG:NH1  | 2.54                     | 0.57              |
| 18:AS:20:VAL:HA   | 18:AS:36:ILE:HG13 | 1.85                     | 0.57              |
| 19:AT:59:ILE:CG1  | 19:AT:60:ILE:N    | 2.67                     | 0.57              |
| 20:AU:53:ARG:NH2  | 20:AU:60:GLY:N    | 2.50                     | 0.57              |
| 22:AW:55:ILE:C    | 22:AW:57:ARG:N    | 2.60                     | 0.57              |
| 24:BA:197:A:C2    | 24:BA:198:C:H1'   | 2.39                     | 0.57              |
| 24:BA:197:A:C5    | 24:BA:2430:A:N7   | 2.73                     | 0.57              |
| 24:BA:245:G:N2    | 24:BA:254:G:C1'   | 2.68                     | 0.57              |
| 24:BA:251:A:H2'   | 24:BA:252:G:O5'   | 2.05                     | 0.57              |
| 24:BA:252:G:H21   | 24:BA:253:C:H1'   | 1.70                     | 0.57              |
| 24:BA:516:C:H2'   | 24:BA:517:C:H6    | 1.69                     | 0.57              |
| 24:BA:547:A:H2'   | 24:BA:548:A:O4'   | 2.03                     | 0.57              |
| 24:BA:569:U:O4    | 24:BA:570:G:C6    | 2.57                     | 0.57              |
| 24:BA:653:A:H5'   | 24:BA:654:A:HO2'  | 1.68                     | 0.57              |
| 24:BA:724:U:H2'   | 24:BA:725:G:C5'   | 2.33                     | 0.57              |
| 24:BA:793:A:N3    | 24:BA:793:A:H2'   | 2.19                     | 0.57              |
| 24:BA:811:U:C6    | 24:BA:811:U:C3'   | 2.88                     | 0.57              |
| 24:BA:873:G:H4'   | 37:BP:65:PHE:CZ   | 2.40                     | 0.57              |
| 24:BA:931:G:H21   | 49:B2:24:LYS:C    | 2.13                     | 0.57              |
| 24:BA:942:G:N1    | 24:BA:943:U:C4    | 2.73                     | 0.57              |
| 24:BA:1087:G:H2'  | 24:BA:1089:G:C4'  | 2.34                     | 0.57              |
| 24:BA:1153:C:C2   | 24:BA:1154:G:C8   | 2.93                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1173:G:N2   | 24:BA:1175:U:OP1   | 2.37                     | 0.57              |
| 24:BA:1366:A:C2   | 24:BA:1367:A:H1'   | 2.40                     | 0.57              |
| 24:BA:1424:G:C2'  | 24:BA:1425:G:O5'   | 2.53                     | 0.57              |
| 24:BA:1511:A:H3'  | 24:BA:1511:A:H8    | 1.70                     | 0.57              |
| 24:BA:1602:U:OP2  | 24:BA:1602:U:C4    | 2.57                     | 0.57              |
| 24:BA:1668:A:N1   | 24:BA:1993:U:C1'   | 2.59                     | 0.57              |
| 24:BA:1771:C:H2'  | 24:BA:1772:G:C8    | 2.39                     | 0.57              |
| 24:BA:1931:U:C6   | 24:BA:1932:A:C8    | 2.91                     | 0.57              |
| 24:BA:2043:C:C5   | 24:BA:2777:G:H1'   | 2.39                     | 0.57              |
| 24:BA:2168:G:N1   | 24:BA:2171:A:OP2   | 2.38                     | 0.57              |
| 24:BA:2246:G:C4   | 24:BA:2426:A:C2    | 2.93                     | 0.57              |
| 24:BA:2564:A:C2   | 24:BA:2647:U:H4'   | 2.39                     | 0.57              |
| 24:BA:2596:U:H2'  | 27:BD:242:ARG:NH2  | 2.16                     | 0.57              |
| 24:BA:2657:A:H2   | 24:BA:2665:A:H1'   | 1.58                     | 0.57              |
| 24:BA:2674:G:O2'  | 24:BA:2675:A:H5'   | 2.05                     | 0.57              |
| 24:BA:2675:A:O2'  | 24:BA:2676:C:H5'   | 2.04                     | 0.57              |
| 24:BA:2675:A:C2   | 24:BA:2732:G:N2    | 2.73                     | 0.57              |
| 24:BA:2729:G:C2'  | 24:BA:2730:C:H5'   | 2.35                     | 0.57              |
| 25:BB:66:A:C2     | 25:BB:108:C:C6     | 2.92                     | 0.57              |
| 25:BB:67:G:C4     | 25:BB:68:C:C5      | 2.92                     | 0.57              |
| 26:BC:22:ILE:HG12 | 26:BC:189:ILE:HG21 | 1.87                     | 0.57              |
| 27:BD:118:VAL:N   | 27:BD:129:ASN:ND2  | 2.51                     | 0.57              |
| 29:BF:52:LYS:HD2  | 29:BF:88:VAL:HG23  | 1.86                     | 0.57              |
| 29:BF:53:THR:C    | 29:BF:55:GLY:H     | 2.12                     | 0.57              |
| 30:BG:6:ALA:O     | 30:BG:10:LYS:HG2   | 2.04                     | 0.57              |
| 30:BG:36:LYS:NZ   | 30:BG:160:VAL:HG23 | 2.20                     | 0.57              |
| 30:BG:153:ARG:O   | 30:BG:155:MET:SD   | 2.63                     | 0.57              |
| 31:BH:85:LYS:HZ3  | 31:BH:142:GLY:HA2  | 1.69                     | 0.57              |
| 31:BH:135:GLY:HA3 | 31:BH:141:VAL:HG22 | 1.87                     | 0.57              |
| 31:BH:170:ARG:O   | 31:BH:171:LEU:HD23 | 2.04                     | 0.57              |
| 32:BK:9:LEU:HB2   | 32:BK:13:GLY:O     | 2.05                     | 0.57              |
| 33:BL:68:VAL:CB   | 33:BL:70:LYS:HE3   | 2.34                     | 0.57              |
| 33:BL:116:ASN:ND2 | 33:BL:126:MET:HE1  | 2.20                     | 0.57              |
| 35:BN:10:VAL:HG22 | 35:BN:11:ALA:N     | 2.18                     | 0.57              |
| 35:BN:34:THR:O    | 35:BN:61:VAL:HG21  | 2.05                     | 0.57              |
| 35:BN:86:ILE:CG2  | 35:BN:87:ILE:N     | 2.68                     | 0.57              |
| 36:BO:97:PRO:CA   | 36:BO:102:ARG:CZ   | 2.83                     | 0.57              |
| 36:BO:130:PHE:N   | 36:BO:130:PHE:CD2  | 2.71                     | 0.57              |
| 37:BP:56:ARG:O    | 37:BP:60:ARG:HG3   | 2.04                     | 0.57              |
| 38:BQ:25:ALA:HA   | 38:BQ:48:VAL:CG2   | 2.34                     | 0.57              |
| 39:BR:68:GLN:O    | 39:BR:70:GLY:N     | 2.38                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 41:BT:55:ARG:CB   | 41:BT:58:ARG:HE   | 2.14                     | 0.57              |
| 41:BT:93:LYS:NZ   | 41:BT:93:LYS:CA   | 2.60                     | 0.57              |
| 42:BU:7:THR:C     | 42:BU:9:GLY:H     | 2.12                     | 0.57              |
| 44:BW:24:GLY:O    | 44:BW:83:VAL:HG22 | 2.04                     | 0.57              |
| 46:BY:6:LYS:CG    | 46:BY:7:ALA:N     | 2.62                     | 0.57              |
| 46:BY:95:PRO:CD   | 46:BY:131:ARG:HG2 | 2.34                     | 0.57              |
| 49:B2:17:LYS:HA   | 49:B2:20:LYS:HE2  | 1.84                     | 0.57              |
| 51:B4:4:HIS:NE2   | 51:B4:5:PRO:HB3   | 2.20                     | 0.57              |
| 54:B7:15:LYS:O    | 54:B7:22:VAL:CG1  | 2.50                     | 0.57              |
| 54:B7:25:MET:C    | 54:B7:27:THR:N    | 2.58                     | 0.57              |
| 55:B8:9:ARG:C     | 55:B8:10:ILE:CG1  | 2.78                     | 0.57              |
| 55:B8:10:ILE:C    | 55:B8:12:ASP:H    | 2.08                     | 0.57              |
| 1:AA:129(A):G:H4' | 1:AA:130:A:H5''   | 1.86                     | 0.57              |
| 1:AA:175:C:O2'    | 1:AA:176:C:H5'    | 2.04                     | 0.57              |
| 1:AA:237:C:H2'    | 1:AA:238:G:C8     | 2.40                     | 0.57              |
| 1:AA:389:A:N1     | 1:AA:390:C:H1'    | 2.20                     | 0.57              |
| 1:AA:453:A:OP2    | 1:AA:453:A:H8     | 1.87                     | 0.57              |
| 1:AA:575:G:C6     | 1:AA:821:G:C8     | 2.93                     | 0.57              |
| 1:AA:696:A:C2     | 1:AA:697:U:O4'    | 2.58                     | 0.57              |
| 1:AA:763:G:C2'    | 1:AA:764:C:O5'    | 2.53                     | 0.57              |
| 1:AA:769:G:H5'    | 1:AA:1513:A:C4'   | 2.34                     | 0.57              |
| 1:AA:792:A:C2'    | 1:AA:794:A:H62    | 2.06                     | 0.57              |
| 1:AA:843:U:C3'    | 1:AA:848:C:H5'    | 2.35                     | 0.57              |
| 1:AA:861:G:H2'    | 1:AA:862:C:H6     | 1.69                     | 0.57              |
| 1:AA:872:A:C6     | 1:AA:874:G:N7     | 2.73                     | 0.57              |
| 1:AA:978:A:H8     | 1:AA:978:A:H3'    | 1.69                     | 0.57              |
| 1:AA:1005:A:H2'   | 1:AA:1006:C:C5'   | 2.34                     | 0.57              |
| 1:AA:1240:U:O2'   | 1:AA:1241:G:OP1   | 2.21                     | 0.57              |
| 1:AA:1242:C:HO2'  | 1:AA:1303:C:H5''  | 1.64                     | 0.57              |
| 1:AA:1265:G:C2'   | 1:AA:1266:G:H5'   | 2.35                     | 0.57              |
| 1:AA:1364:U:O5'   | 1:AA:1364:U:H6    | 1.88                     | 0.57              |
| 1:AA:1515:C:O2'   | 1:AA:1516:G:H5'   | 2.05                     | 0.57              |
| 3:AC:5:G:C2       | 3:AC:69:G:C2      | 2.92                     | 0.57              |
| 3:AC:14:A:H2'     | 3:AC:15:G:C8      | 2.37                     | 0.57              |
| 4:AE:20:GLU:C     | 4:AE:39:ILE:HG13  | 2.30                     | 0.57              |
| 4:AE:80:ILE:HD12  | 4:AE:208:ILE:CG2  | 2.34                     | 0.57              |
| 4:AE:118:LEU:HD11 | 4:AE:141:GLU:OE1  | 2.04                     | 0.57              |
| 4:AE:189:ASP:CG   | 4:AE:205:ASP:CG   | 2.71                     | 0.57              |
| 5:AF:25:GLY:N     | 5:AF:28:GLN:HE22  | 2.03                     | 0.57              |
| 5:AF:122:GLU:O    | 5:AF:125:GLU:CB   | 2.53                     | 0.57              |
| 5:AF:142:MET:HA   | 5:AF:146:ALA:CB   | 2.34                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 6:AG:141:ARG:HD3  | 6:AG:142:PRO:CD   | 2.23                     | 0.57              |
| 6:AG:169:LYS:CG   | 6:AG:176:LEU:HD21 | 2.34                     | 0.57              |
| 7:AH:18:ARG:HB2   | 7:AH:26:PHE:HA    | 1.86                     | 0.57              |
| 8:AI:37:VAL:HA    | 8:AI:65:VAL:HG11  | 1.87                     | 0.57              |
| 9:AJ:56:GLN:CD    | 9:AJ:56:GLN:H     | 2.12                     | 0.57              |
| 9:AJ:63:LYS:O     | 9:AJ:66:VAL:HB    | 2.05                     | 0.57              |
| 9:AJ:146:GLU:O    | 9:AJ:147:ALA:C    | 2.47                     | 0.57              |
| 10:AK:7:ALA:HA    | 10:AK:10:LEU:CG   | 2.35                     | 0.57              |
| 10:AK:126:LYS:CE  | 10:AK:127:LEU:HB2 | 2.34                     | 0.57              |
| 12:AM:6:ILE:HD11  | 12:AM:73:ASP:H    | 1.70                     | 0.57              |
| 12:AM:29:ARG:HB2  | 12:AM:84:GLN:HE21 | 1.69                     | 0.57              |
| 12:AM:32:ALA:CB   | 12:AM:75:ILE:HB   | 2.34                     | 0.57              |
| 12:AM:41:PRO:O    | 12:AM:42:THR:C    | 2.47                     | 0.57              |
| 12:AM:45:ARG:HG2  | 12:AM:65:LEU:O    | 2.04                     | 0.57              |
| 12:AM:49:VAL:CG2  | 16:AQ:41:ARG:HB2  | 2.35                     | 0.57              |
| 14:AO:29:GLY:O    | 14:AO:30:ALA:O    | 2.21                     | 0.57              |
| 17:AR:27:VAL:HG12 | 17:AR:31:LEU:HD22 | 1.87                     | 0.57              |
| 18:AS:59:TRP:O    | 18:AS:60:LEU:C    | 2.47                     | 0.57              |
| 19:AT:43:LEU:CD2  | 19:AT:44:ALA:O    | 2.53                     | 0.57              |
| 20:AU:22:VAL:HG22 | 20:AU:55:ARG:O    | 2.05                     | 0.57              |
| 20:AU:45:SER:N    | 20:AU:51:LEU:HD21 | 2.20                     | 0.57              |
| 20:AU:75:ILE:HG22 | 20:AU:76:LEU:HD22 | 1.87                     | 0.57              |
| 22:AW:72:LEU:HD22 | 22:AW:76:ALA:C    | 2.30                     | 0.57              |
| 24:BA:14:A:N6     | 24:BA:15:G:C2     | 2.71                     | 0.57              |
| 24:BA:123:G:N2    | 24:BA:124:G:H1'   | 2.19                     | 0.57              |
| 24:BA:124:G:OP1   | 24:BA:1376:C:C1'  | 2.53                     | 0.57              |
| 24:BA:242:G:H8    | 54:B7:4:MET:HG2   | 1.64                     | 0.57              |
| 24:BA:281:G:H22   | 24:BA:283:A:C4'   | 2.18                     | 0.57              |
| 24:BA:323:G:H4'   | 24:BA:324:A:O5'   | 2.04                     | 0.57              |
| 24:BA:330:A:H2    | 24:BA:1210:A:H2'  | 1.70                     | 0.57              |
| 24:BA:714:U:H2'   | 24:BA:715:G:H3'   | 1.85                     | 0.57              |
| 24:BA:763:G:C4    | 24:BA:765:G:C8    | 2.93                     | 0.57              |
| 24:BA:786:C:C5'   | 24:BA:1780:A:C8   | 2.88                     | 0.57              |
| 24:BA:821:A:H8    | 24:BA:946:G:C5    | 2.22                     | 0.57              |
| 24:BA:931:G:C4    | 49:B2:24:LYS:HE3  | 2.38                     | 0.57              |
| 24:BA:981:A:HO2'  | 24:BA:2036:C:HO2' | 1.52                     | 0.57              |
| 24:BA:1092:C:C6   | 24:BA:1092:C:C3'  | 2.87                     | 0.57              |
| 24:BA:1247:A:O2'  | 24:BA:1248:G:P    | 2.63                     | 0.57              |
| 24:BA:1264:G:OP1  | 51:B4:15:ARG:NH1  | 2.35                     | 0.57              |
| 24:BA:1272:A:HO2' | 24:BA:1273:U:P    | 2.27                     | 0.57              |
| 24:BA:1272:A:N1   | 24:BA:1618:A:C2   | 2.73                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1274:A:C2    | 24:BA:1302:A:C2    | 2.91                     | 0.57              |
| 24:BA:1472:A:C2'   | 24:BA:1473:G:C8    | 2.87                     | 0.57              |
| 24:BA:1484:G:H2'   | 24:BA:1485:G:H5''  | 1.85                     | 0.57              |
| 24:BA:1936:A:H1'   | 24:BA:1940:U:C4    | 2.40                     | 0.57              |
| 24:BA:1999:C:H2'   | 24:BA:2000:G:C5'   | 2.34                     | 0.57              |
| 24:BA:2097:C:H2'   | 24:BA:2098:U:C5'   | 2.34                     | 0.57              |
| 24:BA:2132:U:O2    | 24:BA:2132:U:C2'   | 2.53                     | 0.57              |
| 24:BA:2215:G:H2'   | 24:BA:2216:G:H8    | 1.69                     | 0.57              |
| 24:BA:2253:G:H2'   | 24:BA:2254:C:C6    | 2.37                     | 0.57              |
| 24:BA:2416:C:H5''  | 36:BO:59:LEU:CB    | 2.10                     | 0.57              |
| 24:BA:2416:C:O5'   | 24:BA:2416:C:C6    | 2.58                     | 0.57              |
| 24:BA:2470:G:N2    | 24:BA:2471:C:C2    | 2.72                     | 0.57              |
| 24:BA:2523:G:C1'   | 24:BA:2765:A:H62   | 2.17                     | 0.57              |
| 24:BA:2585:U:C6    | 24:BA:2585:U:OP1   | 2.58                     | 0.57              |
| 24:BA:2627:G:C6    | 24:BA:2777:G:O6    | 2.57                     | 0.57              |
| 24:BA:2736:G:N2    | 24:BA:2769:C:H1'   | 2.18                     | 0.57              |
| 24:BA:2782:G:O4'   | 24:BA:2782:G:OP2   | 2.22                     | 0.57              |
| 24:BA:2848:G:C2'   | 40:BS:99:LEU:HD21  | 2.35                     | 0.57              |
| 24:BA:2859:G:O2'   | 24:BA:2860:A:H5'   | 2.04                     | 0.57              |
| 25:BB:76:G:H1'     | 46:BY:75:ASN:ND2   | 2.20                     | 0.57              |
| 25:BB:104:A:C2'    | 25:BB:105:G:O4'    | 2.53                     | 0.57              |
| 26:BC:223:ARG:NH1  | 26:BC:223:ARG:HB2  | 2.19                     | 0.57              |
| 27:BD:8:PRO:HD2    | 27:BD:26:LYS:N     | 2.19                     | 0.57              |
| 27:BD:55:GLY:N     | 27:BD:218:ARG:HD3  | 2.20                     | 0.57              |
| 27:BD:108:PRO:CA   | 27:BD:195:ALA:O    | 2.51                     | 0.57              |
| 27:BD:208:LYS:HE2  | 27:BD:211:ARG:CG   | 2.35                     | 0.57              |
| 28:BE:57:LYS:O     | 28:BE:58:ARG:HB2   | 2.04                     | 0.57              |
| 28:BE:109:LYS:CA   | 28:BE:191:PRO:HD3  | 2.35                     | 0.57              |
| 28:BE:122:PHE:CD1  | 28:BE:122:PHE:N    | 2.72                     | 0.57              |
| 28:BE:127:ASP:CG   | 28:BE:135:HIS:H    | 2.12                     | 0.57              |
| 31:BH:11:VAL:HG21  | 31:BH:17:VAL:HG21  | 1.86                     | 0.57              |
| 31:BH:54:ARG:HH11  | 31:BH:57:ASP:CB    | 2.18                     | 0.57              |
| 31:BH:111:HIS:O    | 31:BH:112:PRO:C    | 2.43                     | 0.57              |
| 32:BK:109:ILE:HG12 | 32:BK:113:ARG:NH2  | 2.20                     | 0.57              |
| 34:BM:46:VAL:O     | 34:BM:47:ALA:CB    | 2.52                     | 0.57              |
| 34:BM:118:LYS:O    | 34:BM:121:LYS:HE3  | 2.03                     | 0.57              |
| 35:BN:18:LYS:HE2   | 35:BN:44:LYS:HD2   | 1.87                     | 0.57              |
| 36:BO:123:LEU:HD12 | 36:BO:130:PHE:CE2  | 2.40                     | 0.57              |
| 37:BP:54:MET:HE1   | 37:BP:118:LEU:HD23 | 1.87                     | 0.57              |
| 37:BP:63:LYS:HZ2   | 37:BP:64:ILE:HG13  | 1.70                     | 0.57              |
| 37:BP:109:VAL:HG11 | 37:BP:114:ALA:N    | 2.20                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 38:BQ:6:SER:OG     | 38:BQ:9:LYS:CE    | 2.53                     | 0.57              |
| 41:BT:89:GLU:O     | 41:BT:90:VAL:CG2  | 2.52                     | 0.57              |
| 42:BU:39:LEU:HG    | 42:BU:58:VAL:C    | 2.29                     | 0.57              |
| 45:BX:97:ARG:CA    | 45:BX:101:LYS:HG3 | 2.27                     | 0.57              |
| 46:BY:4:ARG:HG2    | 46:BY:38:TYR:O    | 2.05                     | 0.57              |
| 46:BY:10:ARG:O     | 46:BY:11:GLU:HB2  | 2.05                     | 0.57              |
| 46:BY:17:ALA:HA    | 46:BY:20:ARG:CZ   | 2.35                     | 0.57              |
| 46:BY:116:VAL:HG21 | 46:BY:145:GLU:HA  | 1.86                     | 0.57              |
| 47:BZ:9:SER:C      | 47:BZ:10:THR:O    | 2.41                     | 0.57              |
| 48:B1:20:VAL:HG21  | 48:B1:56:LEU:CD1  | 2.33                     | 0.57              |
| 52:B5:17:LYS:HD3   | 52:B5:17:LYS:H    | 1.70                     | 0.57              |
| 1:AA:8:A:H4'       | 7:AH:102:ALA:HA   | 1.87                     | 0.57              |
| 1:AA:33:A:O2'      | 1:AA:363:A:H1'    | 2.05                     | 0.57              |
| 1:AA:173:U:C5'     | 1:AA:197:A:O2'    | 2.53                     | 0.57              |
| 1:AA:176:C:H2'     | 1:AA:177:C:H6     | 1.70                     | 0.57              |
| 1:AA:189:U:H3      | 19:AT:63:ARG:HE   | 1.53                     | 0.57              |
| 1:AA:194:C:H5''    | 22:AW:65:LYS:CD   | 2.35                     | 0.57              |
| 1:AA:372:C:N3      | 1:AA:376:G:O6     | 2.37                     | 0.57              |
| 1:AA:406:G:N2      | 1:AA:407:G:C4     | 2.73                     | 0.57              |
| 1:AA:409:G:OP2     | 6:AG:22:LYS:HG2   | 2.04                     | 0.57              |
| 1:AA:654:G:H1'     | 1:AA:753:A:C2     | 2.40                     | 0.57              |
| 1:AA:730:G:C5      | 1:AA:731:G:H1'    | 2.39                     | 0.57              |
| 1:AA:752:G:OP2     | 1:AA:752:G:C8     | 2.58                     | 0.57              |
| 1:AA:889:A:H5''    | 1:AA:890:G:OP1    | 2.04                     | 0.57              |
| 1:AA:1089:G:C2'    | 1:AA:1090:U:H5'   | 2.34                     | 0.57              |
| 1:AA:1103:C:O2'    | 4:AE:111:ARG:HD2  | 2.05                     | 0.57              |
| 1:AA:1114:C:H1'    | 16:AQ:60:SER:CB   | 2.32                     | 0.57              |
| 1:AA:1144:G:N3     | 1:AA:1144:G:H2'   | 2.20                     | 0.57              |
| 1:AA:1196:U:O2'    | 1:AA:1197:G:OP2   | 2.21                     | 0.57              |
| 1:AA:1448:C:C2     | 1:AA:1459:C:O2    | 2.58                     | 0.57              |
| 1:AA:1455:G:O2'    | 1:AA:1459:C:H5'   | 2.05                     | 0.57              |
| 4:AE:15:VAL:HG22   | 4:AE:209:ARG:CZ   | 2.34                     | 0.57              |
| 4:AE:25:ASN:OD1    | 4:AE:192:SER:O    | 2.22                     | 0.57              |
| 4:AE:157:ARG:HG2   | 4:AE:158:LEU:CD2  | 2.35                     | 0.57              |
| 5:AF:21:ARG:HD2    | 5:AF:58:GLU:OE2   | 2.05                     | 0.57              |
| 5:AF:55:VAL:HG22   | 5:AF:68:VAL:CG1   | 2.32                     | 0.57              |
| 6:AG:16:GLY:O      | 6:AG:17:VAL:C     | 2.48                     | 0.57              |
| 6:AG:98:GLU:OE2    | 6:AG:103:ASN:OD1  | 2.22                     | 0.57              |
| 6:AG:137:SER:O     | 6:AG:138:TYR:C    | 2.47                     | 0.57              |
| 6:AG:151:LYS:HD2   | 6:AG:151:LYS:N    | 2.20                     | 0.57              |
| 6:AG:173:TRP:CA    | 6:AG:186:LEU:HD12 | 2.34                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 7:AH:109:ILE:HG23  | 7:AH:110:LEU:CD2  | 2.34                     | 0.57              |
| 8:AI:50:TYR:CZ     | 20:AU:77:GLY:HA2  | 2.39                     | 0.57              |
| 9:AJ:23:VAL:HG12   | 9:AJ:24:THR:N     | 2.19                     | 0.57              |
| 10:AK:9:MET:O      | 10:AK:10:LEU:C    | 2.48                     | 0.57              |
| 10:AK:18:ARG:CZ    | 10:AK:18:ARG:N    | 2.68                     | 0.57              |
| 13:AN:84:VAL:CG2   | 13:AN:111:ASP:H   | 2.17                     | 0.57              |
| 15:AP:2:ALA:O      | 15:AP:4:ILE:N     | 2.37                     | 0.57              |
| 15:AP:90:LEU:HA    | 15:AP:93:ARG:CB   | 2.34                     | 0.57              |
| 17:AR:63:ARG:NH2   | 17:AR:87:ILE:HG21 | 2.19                     | 0.57              |
| 19:AT:7:THR:HG22   | 19:AT:8:GLY:N     | 2.18                     | 0.57              |
| 21:AV:80:TYR:CE2   | 21:AV:81:ARG:HD3  | 2.40                     | 0.57              |
| 24:BA:356:G:H3'    | 24:BA:357:A:C8    | 2.39                     | 0.57              |
| 24:BA:363(B):G:H3' | 24:BA:363(B):G:P  | 2.45                     | 0.57              |
| 24:BA:530:G:H22    | 24:BA:2021:C:C2'  | 2.18                     | 0.57              |
| 24:BA:565:C:O3'    | 24:BA:1253:A:C2   | 2.58                     | 0.57              |
| 24:BA:650:C:O2     | 24:BA:651:G:O4'   | 2.23                     | 0.57              |
| 24:BA:659:C:H5'    | 29:BF:102:PRO:HD3 | 1.87                     | 0.57              |
| 24:BA:721:C:C2     | 24:BA:722:A:N7    | 2.73                     | 0.57              |
| 24:BA:740:U:O5'    | 24:BA:1784:A:N1   | 2.38                     | 0.57              |
| 24:BA:781:A:O2'    | 24:BA:1788:C:O2   | 2.22                     | 0.57              |
| 24:BA:878:A:N9     | 24:BA:879:G:N7    | 2.53                     | 0.57              |
| 24:BA:973:A:O2'    | 24:BA:974:G:C5'   | 2.53                     | 0.57              |
| 24:BA:1316:U:H5'   | 24:BA:1392:A:H1'  | 1.87                     | 0.57              |
| 24:BA:1439:A:H2'   | 24:BA:1440:G:C5'  | 2.34                     | 0.57              |
| 24:BA:1456:G:H1    | 24:BA:2703:C:H42  | 1.51                     | 0.57              |
| 24:BA:1477:A:H3'   | 24:BA:1478:G:O4'  | 2.04                     | 0.57              |
| 24:BA:1482:U:H2'   | 24:BA:1483:G:H4'  | 1.86                     | 0.57              |
| 24:BA:1563:G:H2'   | 24:BA:1564:C:C6   | 2.39                     | 0.57              |
| 24:BA:1579:A:H61   | 24:BA:1581:G:H21  | 1.53                     | 0.57              |
| 24:BA:1943:U:O2'   | 24:BA:1944:U:P    | 2.63                     | 0.57              |
| 24:BA:2051:A:H3'   | 24:BA:2578:G:H5'' | 1.85                     | 0.57              |
| 24:BA:2067:G:N1    | 24:BA:2069:G:C4   | 2.73                     | 0.57              |
| 24:BA:2126:A:N7    | 24:BA:2163:C:H4'  | 2.19                     | 0.57              |
| 24:BA:2134:A:N1    | 24:BA:2135:A:N1   | 2.51                     | 0.57              |
| 24:BA:2259:G:O4'   | 24:BA:2427:C:C6   | 2.58                     | 0.57              |
| 24:BA:2269:A:C2    | 24:BA:2270:G:C1'  | 2.88                     | 0.57              |
| 24:BA:2298:A:N1    | 24:BA:2321:G:C6   | 2.73                     | 0.57              |
| 24:BA:2322:A:N3    | 24:BA:2323:G:H5'  | 2.19                     | 0.57              |
| 24:BA:2333:A:C4'   | 24:BA:2335:A:O4'  | 2.52                     | 0.57              |
| 24:BA:2623:G:H5'   | 24:BA:2826:A:C1'  | 2.33                     | 0.57              |
| 24:BA:2661:G:C4    | 24:BA:2662:A:N7   | 2.72                     | 0.57              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2815:C:H2'  | 24:BA:2816:C:H6    | 1.70                     | 0.57              |
| 24:BA:2815:C:O2   | 24:BA:2816:C:C6    | 2.57                     | 0.57              |
| 25:BB:12:C:O4'    | 47:BZ:74:ARG:HG2   | 2.05                     | 0.57              |
| 26:BC:20:TYR:CE1  | 26:BC:222:VAL:CG2  | 2.88                     | 0.57              |
| 27:BD:168:ARG:CD  | 27:BD:173:VAL:HG22 | 2.29                     | 0.57              |
| 27:BD:219:PRO:C   | 27:BD:220:HIS:CG   | 2.83                     | 0.57              |
| 29:BF:116:ASP:HA  | 29:BF:119:ARG:HG3  | 1.87                     | 0.57              |
| 29:BF:156:LEU:CG  | 29:BF:173:VAL:HG23 | 2.32                     | 0.57              |
| 29:BF:194:MET:SD  | 29:BF:200:GLU:HG2  | 2.44                     | 0.57              |
| 30:BG:30:GLU:OE2  | 30:BG:33:ARG:NE    | 2.36                     | 0.57              |
| 31:BH:69:ARG:HH21 | 31:BH:69:ARG:CG    | 2.17                     | 0.57              |
| 32:BK:4:ILE:HD11  | 32:BK:39:ALA:H     | 1.68                     | 0.57              |
| 32:BK:34:GLY:N    | 32:BK:35:LEU:HD22  | 2.20                     | 0.57              |
| 32:BK:47:LEU:HD11 | 32:BK:51:ILE:HD11  | 1.87                     | 0.57              |
| 34:BM:10:GLU:O    | 34:BM:12:ARG:NH2   | 2.38                     | 0.57              |
| 34:BM:67:LEU:HB2  | 34:BM:88:GLU:OE1   | 2.05                     | 0.57              |
| 37:BP:6:ARG:NH2   | 37:BP:9:TYR:N      | 2.53                     | 0.57              |
| 37:BP:29:PHE:O    | 37:BP:29:PHE:CD1   | 2.56                     | 0.57              |
| 39:BR:42:ASP:OD2  | 39:BR:43:GLU:N     | 2.38                     | 0.57              |
| 40:BS:104:ASN:O   | 40:BS:108:ARG:NH1  | 2.38                     | 0.57              |
| 41:BT:97:ASP:C    | 41:BT:101:ARG:NE   | 2.56                     | 0.57              |
| 42:BU:67:GLY:O    | 42:BU:92:THR:OG1   | 2.23                     | 0.57              |
| 43:BV:20:VAL:CG1  | 43:BV:21:VAL:N     | 2.67                     | 0.57              |
| 43:BV:95:ILE:HD12 | 43:BV:95:ILE:N     | 2.15                     | 0.57              |
| 45:BX:96:ILE:HD12 | 45:BX:96:ILE:H     | 1.69                     | 0.57              |
| 46:BY:144:LEU:C   | 46:BY:174:VAL:HG11 | 2.30                     | 0.57              |
| 48:B1:20:VAL:CG2  | 48:B1:55:LEU:HD23  | 2.34                     | 0.57              |
| 48:B1:27:LEU:C    | 48:B1:30:LEU:HG    | 2.29                     | 0.57              |
| 48:B1:42:ASN:O    | 48:B1:45:ILE:HG23  | 2.05                     | 0.57              |
| 49:B2:8:LEU:HB2   | 49:B2:33:GLN:HB3   | 1.86                     | 0.57              |
| 50:B3:5:ILE:HD13  | 50:B3:60:GLN:OE1   | 2.05                     | 0.57              |
| 53:B6:8:ASN:ND2   | 53:B6:8:ASN:C      | 2.60                     | 0.57              |
| 53:B6:35:ARG:HH11 | 53:B6:35:ARG:HB2   | 1.69                     | 0.57              |
| 1:AA:22:G:C4      | 1:AA:23:C:C5       | 2.93                     | 0.56              |
| 1:AA:173:U:H4'    | 1:AA:197:A:N3      | 2.20                     | 0.56              |
| 1:AA:251:G:C2     | 1:AA:266:G:C6      | 2.93                     | 0.56              |
| 1:AA:366:C:HO2'   | 1:AA:367:U:P       | 2.27                     | 0.56              |
| 1:AA:409:G:C2     | 1:AA:410:G:C8      | 2.93                     | 0.56              |
| 1:AA:533:A:C6     | 1:AA:536:C:C4      | 2.93                     | 0.56              |
| 1:AA:587:G:N2     | 1:AA:755:G:C5      | 2.72                     | 0.56              |
| 1:AA:754:C:C2'    | 1:AA:755:G:OP1     | 2.53                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:934:C:N3     | 1:AA:938:A:N6     | 2.48                     | 0.56              |
| 1:AA:949:A:C1'    | 1:AA:1364:U:H3    | 2.18                     | 0.56              |
| 1:AA:1049:U:O5'   | 1:AA:1049:U:C6    | 2.58                     | 0.56              |
| 1:AA:1216:G:C4    | 1:AA:1217:C:C5    | 2.93                     | 0.56              |
| 1:AA:1226:C:O2'   | 1:AA:1227:A:P     | 2.62                     | 0.56              |
| 1:AA:1436:U:H2'   | 1:AA:1437:C:C6    | 2.38                     | 0.56              |
| 1:AA:1498:U:HO2'  | 1:AA:1499:A:C5'   | 2.18                     | 0.56              |
| 2:A1:39:U:O5'     | 2:A1:40:U:OP1     | 2.23                     | 0.56              |
| 3:AD:18:G:N1      | 3:AD:57:G:C2      | 2.73                     | 0.56              |
| 4:AE:42:ILE:HG12  | 4:AE:43:ASP:N     | 2.16                     | 0.56              |
| 4:AE:57:PHE:O     | 4:AE:57:PHE:HD2   | 1.88                     | 0.56              |
| 4:AE:73:THR:O     | 4:AE:74:LYS:C     | 2.48                     | 0.56              |
| 4:AE:173:ALA:HA   | 4:AE:176:GLU:CB   | 2.34                     | 0.56              |
| 4:AE:193:ASP:O    | 4:AE:194:PRO:C    | 2.46                     | 0.56              |
| 6:AG:15:GLU:CG    | 6:AG:63:LYS:HB3   | 2.35                     | 0.56              |
| 6:AG:17:VAL:O     | 6:AG:18:LYS:C     | 2.48                     | 0.56              |
| 6:AG:114:ARG:HH11 | 6:AG:114:ARG:CG   | 2.17                     | 0.56              |
| 6:AG:154:ASN:HD22 | 6:AG:155:LEU:N    | 2.02                     | 0.56              |
| 6:AG:200:GLU:HG3  | 6:AG:201:GLN:H    | 1.67                     | 0.56              |
| 7:AH:61:TYR:HA    | 7:AH:64:ARG:HG3   | 1.87                     | 0.56              |
| 7:AH:63:ARG:C     | 7:AH:66:MET:HG2   | 2.30                     | 0.56              |
| 7:AH:142:LEU:H    | 7:AH:143:ARG:HE   | 1.52                     | 0.56              |
| 8:AI:6:VAL:HG12   | 8:AI:63:TYR:H     | 1.69                     | 0.56              |
| 8:AI:9:VAL:HG13   | 8:AI:59:TYR:O     | 2.05                     | 0.56              |
| 8:AI:29:ALA:O     | 8:AI:30:LEU:C     | 2.47                     | 0.56              |
| 8:AI:42:GLU:HB2   | 8:AI:61:LEU:HD23  | 1.87                     | 0.56              |
| 8:AI:50:TYR:CZ    | 8:AI:52:ILE:HD11  | 2.40                     | 0.56              |
| 9:AJ:5:ARG:HB3    | 9:AJ:5:ARG:HH11   | 1.68                     | 0.56              |
| 9:AJ:77:SER:C     | 9:AJ:156:TRP:CZ2  | 2.83                     | 0.56              |
| 11:AL:67:GLY:N    | 11:AL:73:GLN:HE21 | 2.03                     | 0.56              |
| 16:AQ:16:PHE:O    | 16:AQ:17:LYS:C    | 2.47                     | 0.56              |
| 18:AS:39:TYR:HD1  | 18:AS:40:ASP:N    | 2.02                     | 0.56              |
| 21:AV:80:TYR:CE2  | 21:AV:81:ARG:CD   | 2.88                     | 0.56              |
| 22:AW:25:ARG:O    | 22:AW:28:ALA:HB3  | 2.04                     | 0.56              |
| 24:BA:180:G:OP1   | 53:B6:32:LYS:HD3  | 2.05                     | 0.56              |
| 24:BA:246:C:C2    | 24:BA:247:G:C8    | 2.93                     | 0.56              |
| 24:BA:373:U:C2    | 24:BA:400:G:N2    | 2.73                     | 0.56              |
| 24:BA:513:A:O2'   | 24:BA:1217:C:OP1  | 2.22                     | 0.56              |
| 24:BA:629:G:H5'   | 24:BA:649:G:N3    | 2.20                     | 0.56              |
| 24:BA:636:G:H2'   | 36:BO:113:LYS:HZ1 | 1.69                     | 0.56              |
| 24:BA:641:C:H2'   | 24:BA:642:G:C5'   | 2.35                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:684:G:C2    | 24:BA:775:G:C6     | 2.93                     | 0.56              |
| 24:BA:1106:G:H8   | 24:BA:1106:G:C5'   | 2.18                     | 0.56              |
| 24:BA:1170:G:N3   | 24:BA:1170:G:C2'   | 2.68                     | 0.56              |
| 24:BA:1205:U:N3   | 24:BA:1207:C:N4    | 2.52                     | 0.56              |
| 24:BA:1207:C:OP2  | 24:BA:1207:C:C6    | 2.58                     | 0.56              |
| 24:BA:1392:A:C6   | 24:BA:1393:A:C6    | 2.92                     | 0.56              |
| 24:BA:1471:A:C8   | 24:BA:1521:G:N1    | 2.72                     | 0.56              |
| 24:BA:1473:G:O2'  | 24:BA:1474:C:H5'   | 2.04                     | 0.56              |
| 24:BA:1514:U:H2'  | 24:BA:1514:U:O2    | 2.03                     | 0.56              |
| 24:BA:1526:G:N2   | 24:BA:1546:C:C4    | 2.72                     | 0.56              |
| 24:BA:1702:G:C5   | 24:BA:1703:G:N7    | 2.72                     | 0.56              |
| 24:BA:1799:G:C6   | 27:BD:177:LEU:HD12 | 2.40                     | 0.56              |
| 24:BA:1838:C:C5   | 24:BA:1899:G:C6    | 2.93                     | 0.56              |
| 24:BA:1905:C:H5'  | 24:BA:1928:A:H61   | 1.69                     | 0.56              |
| 24:BA:1935:G:C1'  | 24:BA:1964:G:N2    | 2.68                     | 0.56              |
| 24:BA:1944:U:O4'  | 24:BA:1955:U:C6    | 2.58                     | 0.56              |
| 24:BA:1955:U:OP2  | 24:BA:1956:U:O4    | 2.22                     | 0.56              |
| 24:BA:1957:C:C2   | 24:BA:1958:C:C5    | 2.93                     | 0.56              |
| 24:BA:1982:C:N4   | 24:BA:1983:C:N4    | 2.53                     | 0.56              |
| 24:BA:1993:U:O2'  | 24:BA:1994:C:H5'   | 2.05                     | 0.56              |
| 24:BA:2011:U:C2'  | 24:BA:2012:G:H8    | 2.18                     | 0.56              |
| 24:BA:2111:C:N4   | 24:BA:2145:C:C5    | 2.73                     | 0.56              |
| 24:BA:2323:G:C2   | 24:BA:2324:C:N3    | 2.72                     | 0.56              |
| 24:BA:2552:U:O2   | 24:BA:2554:U:H5''  | 2.05                     | 0.56              |
| 24:BA:2682:U:C2'  | 24:BA:2683:C:O5'   | 2.53                     | 0.56              |
| 24:BA:2725:A:O2'  | 24:BA:2726:U:H6    | 1.88                     | 0.56              |
| 24:BA:2749:A:O3'  | 31:BH:62:LYS:HE2   | 2.05                     | 0.56              |
| 24:BA:2808:U:O3'  | 24:BA:2810:A:OP1   | 2.23                     | 0.56              |
| 24:BA:2810:A:H2'  | 24:BA:2811:G:H5'   | 1.87                     | 0.56              |
| 26:BC:22:ILE:CD1  | 26:BC:193:ILE:HD11 | 2.35                     | 0.56              |
| 27:BD:64:ILE:O    | 27:BD:64:ILE:CG2   | 2.53                     | 0.56              |
| 27:BD:69:ARG:C    | 27:BD:70:TRP:CG    | 2.83                     | 0.56              |
| 27:BD:169:GLU:CG  | 27:BD:184:LYS:NZ   | 2.68                     | 0.56              |
| 29:BF:54:ARG:C    | 29:BF:56:GLU:H     | 2.11                     | 0.56              |
| 29:BF:103:LYS:HB3 | 29:BF:107:LYS:CE   | 2.32                     | 0.56              |
| 31:BH:61:HIS:O    | 31:BH:64:LEU:HB2   | 2.05                     | 0.56              |
| 32:BK:5:LEU:CD1   | 32:BK:8:PRO:HB2    | 2.35                     | 0.56              |
| 34:BM:36:GLY:C    | 34:BM:47:ALA:HB3   | 2.29                     | 0.56              |
| 35:BN:68:GLU:HB2  | 35:BN:104:ARG:HD2  | 1.86                     | 0.56              |
| 36:BO:81:GLN:CA   | 36:BO:86:LYS:CG    | 2.83                     | 0.56              |
| 36:BO:92:GLU:O    | 36:BO:93:GLY:C     | 2.47                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 37:BP:9:TYR:HD2    | 37:BP:9:TYR:H     | 1.52                     | 0.56              |
| 37:BP:102:VAL:HG13 | 37:BP:104:PHE:CE1 | 2.40                     | 0.56              |
| 37:BP:120:ILE:O    | 37:BP:124:LYS:CG  | 2.53                     | 0.56              |
| 40:BS:32:TYR:CD2   | 40:BS:88:ILE:HA   | 2.40                     | 0.56              |
| 40:BS:72:VAL:N     | 40:BS:74:ARG:NH1  | 2.52                     | 0.56              |
| 43:BV:8:ARG:C      | 43:BV:102:HIS:HD2 | 2.13                     | 0.56              |
| 43:BV:88:ARG:O     | 43:BV:89:ALA:HB3  | 2.04                     | 0.56              |
| 45:BX:49:VAL:HB    | 45:BX:51:VAL:HG23 | 1.86                     | 0.56              |
| 46:BY:118:GLN:NE2  | 46:BY:119:GLU:C   | 2.63                     | 0.56              |
| 47:BZ:1:MET:O      | 47:BZ:2:ALA:HB3   | 2.05                     | 0.56              |
| 47:BZ:46:LYS:HE3   | 47:BZ:76:GLY:HA3  | 1.87                     | 0.56              |
| 1:AA:81:G:H3'      | 1:AA:82:U:H5''    | 1.87                     | 0.56              |
| 1:AA:187:C:C4      | 1:AA:188:U:O2     | 2.58                     | 0.56              |
| 1:AA:560:U:O5'     | 1:AA:566:G:N2     | 2.38                     | 0.56              |
| 1:AA:571:U:H6      | 1:AA:571:U:C5'    | 2.19                     | 0.56              |
| 1:AA:696:A:N3      | 1:AA:786:G:O2'    | 2.35                     | 0.56              |
| 1:AA:738:C:C2      | 1:AA:739:C:C5     | 2.93                     | 0.56              |
| 1:AA:952:U:C5'     | 1:AA:972:C:N4     | 2.65                     | 0.56              |
| 1:AA:993:G:O2'     | 1:AA:994:A:P      | 2.63                     | 0.56              |
| 1:AA:1138:G:N1     | 1:AA:1140:C:C6    | 2.73                     | 0.56              |
| 1:AA:1241:G:OP2    | 1:AA:1241:G:H8    | 1.88                     | 0.56              |
| 1:AA:1305:G:OP1    | 23:AX:2:GLY:HA3   | 2.05                     | 0.56              |
| 1:AA:1348:U:O2     | 1:AA:1349:A:C8    | 2.57                     | 0.56              |
| 1:AA:1361:G:H8     | 1:AA:1361:G:H3'   | 1.69                     | 0.56              |
| 1:AA:1405:G:C4     | 1:AA:1406:U:H5    | 2.23                     | 0.56              |
| 1:AA:1430:C:N3     | 1:AA:1431:C:H5    | 2.02                     | 0.56              |
| 1:AA:1431:C:N4     | 1:AA:1470:G:C6    | 2.74                     | 0.56              |
| 3:AC:74:C:H5''     | 24:BA:2602:A:C3'  | 2.35                     | 0.56              |
| 3:AC:76:A:C2       | 24:BA:2506:U:N3   | 2.73                     | 0.56              |
| 3:AD:37:A:H3'      | 3:AD:38:A:H8      | 1.70                     | 0.56              |
| 5:AF:181:ASN:HD21  | 5:AF:206:GLU:HG2  | 1.70                     | 0.56              |
| 5:AF:201:TYR:N     | 5:AF:201:TYR:HD1  | 2.02                     | 0.56              |
| 6:AG:17:VAL:O      | 6:AG:19:LEU:HD23  | 2.04                     | 0.56              |
| 8:AI:89:MET:CE     | 20:AU:75:ILE:HG21 | 2.36                     | 0.56              |
| 9:AJ:42:ILE:O      | 9:AJ:43:PHE:C     | 2.48                     | 0.56              |
| 9:AJ:69:VAL:HG21   | 9:AJ:104:LEU:CG   | 2.34                     | 0.56              |
| 10:AK:85:ARG:NH1   | 10:AK:85:ARG:CG   | 2.66                     | 0.56              |
| 11:AL:96:LEU:HD12  | 11:AL:101:PHE:HE1 | 1.70                     | 0.56              |
| 12:AM:52:GLY:H     | 12:AM:59:SER:CB   | 2.18                     | 0.56              |
| 18:AS:26:ARG:O     | 18:AS:27:LYS:C    | 2.46                     | 0.56              |
| 18:AS:54:GLU:O     | 18:AS:55:ARG:C    | 2.45                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 19:AT:66:SER:HB3  | 19:AT:69:LYS:HZ3   | 1.68                     | 0.56              |
| 24:BA:27:G:N2     | 24:BA:512:G:C2'    | 2.69                     | 0.56              |
| 24:BA:28:A:C8     | 24:BA:513:A:C6     | 2.93                     | 0.56              |
| 24:BA:86:C:OP1    | 45:BX:30:VAL:HG23  | 2.05                     | 0.56              |
| 24:BA:116:C:O2'   | 24:BA:117:G:H5'    | 2.05                     | 0.56              |
| 24:BA:190:A:N6    | 24:BA:207:A:C8     | 2.73                     | 0.56              |
| 24:BA:209:C:H2'   | 24:BA:210:C:C5'    | 2.33                     | 0.56              |
| 24:BA:221:A:N7    | 24:BA:266:G:C5     | 2.73                     | 0.56              |
| 24:BA:270(V):G:C6 | 24:BA:270(W):G:O6  | 2.57                     | 0.56              |
| 24:BA:270(X):G:N2 | 24:BA:270(Y):G:O2' | 2.38                     | 0.56              |
| 24:BA:400:G:O6    | 50:B3:63:TYR:HE2   | 1.88                     | 0.56              |
| 24:BA:448:U:C2'   | 24:BA:449:A:OP1    | 2.53                     | 0.56              |
| 24:BA:513:A:O2'   | 24:BA:514:A:H5'    | 2.04                     | 0.56              |
| 24:BA:548:A:N7    | 24:BA:549:G:H1'    | 2.20                     | 0.56              |
| 24:BA:573:G:C2'   | 24:BA:574:C:O5'    | 2.53                     | 0.56              |
| 24:BA:584:C:H2'   | 24:BA:585:G:H5'    | 1.87                     | 0.56              |
| 24:BA:769:G:C2    | 24:BA:770:G:C8     | 2.93                     | 0.56              |
| 24:BA:774:A:O2'   | 24:BA:775:G:P      | 2.63                     | 0.56              |
| 24:BA:786:C:H5''  | 24:BA:1780:A:H8    | 1.70                     | 0.56              |
| 24:BA:867:C:N4    | 24:BA:868:U:C4     | 2.73                     | 0.56              |
| 24:BA:896:A:C2    | 24:BA:897:C:C5     | 2.94                     | 0.56              |
| 24:BA:988:A:H62   | 49:B2:13:ILE:CD1   | 2.18                     | 0.56              |
| 24:BA:1024:G:OP2  | 24:BA:1025:G:C2    | 2.58                     | 0.56              |
| 24:BA:1087:G:H2'  | 24:BA:1089:G:H4'   | 1.87                     | 0.56              |
| 24:BA:1151:G:H4'  | 41:BT:81:HIS:CD2   | 2.40                     | 0.56              |
| 24:BA:1199:U:C6   | 24:BA:1199:U:OP2   | 2.58                     | 0.56              |
| 24:BA:1298:C:O2'  | 24:BA:1302:A:C8    | 2.58                     | 0.56              |
| 24:BA:1429:G:C4   | 24:BA:1568:G:C6    | 2.92                     | 0.56              |
| 24:BA:1645:G:H5'' | 24:BA:1646:C:H5'   | 1.86                     | 0.56              |
| 24:BA:1656:C:H5'' | 28:BE:136:ARG:CZ   | 2.35                     | 0.56              |
| 24:BA:1993:U:N1   | 24:BA:1994:C:C5    | 2.73                     | 0.56              |
| 24:BA:2008:C:O2'  | 24:BA:2009:G:H5'   | 2.04                     | 0.56              |
| 24:BA:2283:C:C6   | 24:BA:2389:G:N3    | 2.73                     | 0.56              |
| 24:BA:2290:G:C2   | 24:BA:2291:U:C2    | 2.92                     | 0.56              |
| 24:BA:2432:A:N1   | 50:B3:31:ILE:HD13  | 2.19                     | 0.56              |
| 24:BA:2512:C:OP1  | 28:BE:120:TRP:HH2  | 1.89                     | 0.56              |
| 24:BA:2517:C:C5   | 24:BA:2542:A:N7    | 2.73                     | 0.56              |
| 24:BA:2519:U:C6   | 24:BA:2542:A:N1    | 2.72                     | 0.56              |
| 24:BA:2679:A:C2'  | 24:BA:2680:C:H5'   | 2.34                     | 0.56              |
| 24:BA:2715:C:C2   | 24:BA:2716:U:C6    | 2.93                     | 0.56              |
| 24:BA:2721:A:C2'  | 24:BA:2722:G:H8    | 2.18                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2723:C:O2'  | 38:BQ:2:ARG:CA     | 2.51                     | 0.56              |
| 24:BA:2740:A:N6   | 24:BA:2741:A:N6    | 2.52                     | 0.56              |
| 24:BA:2815:C:C2'  | 51:B4:42:PRO:HG3   | 2.34                     | 0.56              |
| 24:BA:2815:C:C3'  | 51:B4:42:PRO:HG3   | 2.35                     | 0.56              |
| 26:BC:60:GLY:O    | 26:BC:61:THR:CB    | 2.52                     | 0.56              |
| 26:BC:102:LYS:O   | 26:BC:105:ASP:HB2  | 2.05                     | 0.56              |
| 26:BC:161:ILE:C   | 26:BC:161:ILE:HD12 | 2.31                     | 0.56              |
| 26:BC:211:SER:HB2 | 26:BC:213:TYR:CE1  | 2.40                     | 0.56              |
| 27:BD:46:GLN:NE2  | 27:BD:51:VAL:HG23  | 2.19                     | 0.56              |
| 27:BD:183:ARG:HA  | 27:BD:268:ARG:CA   | 2.35                     | 0.56              |
| 28:BE:116:VAL:O   | 28:BE:117:MET:O    | 2.22                     | 0.56              |
| 28:BE:131:ALA:CB  | 28:BE:134:ILE:HG13 | 2.32                     | 0.56              |
| 29:BF:184:TYR:C   | 29:BF:186:ILE:N    | 2.60                     | 0.56              |
| 30:BG:19:LEU:HG   | 30:BG:22:ARG:NE    | 2.19                     | 0.56              |
| 30:BG:74:LYS:CD   | 30:BG:87:PRO:HG3   | 2.30                     | 0.56              |
| 33:BL:17:ALA:HB2  | 33:BL:42:ASN:OD1   | 2.05                     | 0.56              |
| 34:BM:17:ASP:OD1  | 34:BM:18:ALA:N     | 2.39                     | 0.56              |
| 34:BM:67:LEU:HA   | 34:BM:70:LYS:NZ    | 2.21                     | 0.56              |
| 36:BO:122:PRO:HG3 | 36:BO:138:LEU:N    | 2.20                     | 0.56              |
| 37:BP:29:PHE:HB2  | 37:BP:104:PHE:CD2  | 2.40                     | 0.56              |
| 38:BQ:96:ARG:CG   | 38:BQ:98:LEU:CD1   | 2.83                     | 0.56              |
| 41:BT:89:GLU:OE2  | 42:BU:52:VAL:HB    | 2.04                     | 0.56              |
| 42:BU:12:TYR:HE1  | 42:BU:14:VAL:HB    | 1.69                     | 0.56              |
| 42:BU:69:LYS:CG   | 42:BU:70:ILE:HG13  | 2.31                     | 0.56              |
| 42:BU:72:VAL:O    | 42:BU:73:SER:O     | 2.23                     | 0.56              |
| 42:BU:77:ALA:O    | 42:BU:84:LYS:HA    | 2.05                     | 0.56              |
| 44:BW:31:HIS:CD2  | 44:BW:31:HIS:C     | 2.83                     | 0.56              |
| 45:BX:19:LYS:C    | 45:BX:21:LYS:H     | 2.12                     | 0.56              |
| 45:BX:32:PRO:O    | 45:BX:34:LYS:N     | 2.37                     | 0.56              |
| 47:BZ:32:ARG:CB   | 47:BZ:32:ARG:CZ    | 2.83                     | 0.56              |
| 48:B1:7:GLU:CD    | 48:B1:7:GLU:H      | 2.13                     | 0.56              |
| 52:B5:51:GLU:OE1  | 52:B5:52:VAL:N     | 2.38                     | 0.56              |
| 53:B6:21:ARG:HB2  | 53:B6:21:ARG:HH11  | 1.70                     | 0.56              |
| 54:B7:24:ALA:O    | 54:B7:25:MET:C     | 2.48                     | 0.56              |
| 1:AA:37:U:H2'     | 1:AA:38:G:H5'      | 1.86                     | 0.56              |
| 1:AA:55:A:C2'     | 1:AA:56:U:C5'      | 2.80                     | 0.56              |
| 1:AA:80:G:H3'     | 1:AA:81:G:H8       | 1.70                     | 0.56              |
| 1:AA:101:A:C4     | 1:AA:102:G:C8      | 2.93                     | 0.56              |
| 1:AA:132:C:O2'    | 1:AA:133:U:O5'     | 2.23                     | 0.56              |
| 1:AA:171:A:O2'    | 1:AA:172:A:H5'     | 2.05                     | 0.56              |
| 1:AA:230:G:H4'    | 18:AS:25:ARG:NH1   | 2.20                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:256:U:O5'    | 1:AA:256:U:H6     | 1.87                     | 0.56              |
| 1:AA:337:C:N4     | 1:AA:338:A:N6     | 2.54                     | 0.56              |
| 1:AA:379:C:H2'    | 1:AA:380:G:C5'    | 2.35                     | 0.56              |
| 1:AA:465:A:H5'    | 1:AA:466:C:OP2    | 2.06                     | 0.56              |
| 1:AA:511:C:O2'    | 1:AA:512:U:O4'    | 2.23                     | 0.56              |
| 1:AA:517:G:H5''   | 1:AA:518:C:OP1    | 2.06                     | 0.56              |
| 1:AA:589:C:N4     | 1:AA:590:C:N4     | 2.53                     | 0.56              |
| 1:AA:597:G:C2'    | 1:AA:598:U:H5'    | 2.35                     | 0.56              |
| 1:AA:682:G:C6     | 1:AA:683:G:N7     | 2.73                     | 0.56              |
| 1:AA:722:A:O3'    | 1:AA:723:U:C4     | 2.59                     | 0.56              |
| 1:AA:772:U:C2     | 1:AA:773:G:C8     | 2.94                     | 0.56              |
| 1:AA:815:A:C5     | 1:AA:1529:G:C6    | 2.93                     | 0.56              |
| 1:AA:907:A:C2'    | 1:AA:908:A:H8     | 2.16                     | 0.56              |
| 1:AA:935:A:H2'    | 1:AA:936:C:C6     | 2.41                     | 0.56              |
| 1:AA:942:G:N2     | 11:AL:124:GLN:OE1 | 2.38                     | 0.56              |
| 1:AA:970:C:H4'    | 1:AA:972:C:C5     | 2.40                     | 0.56              |
| 1:AA:1000:A:C2    | 1:AA:1001:G:N7    | 2.74                     | 0.56              |
| 1:AA:1160:G:C2    | 1:AA:1161:C:C6    | 2.93                     | 0.56              |
| 1:AA:1187:G:H2'   | 1:AA:1188:A:C8    | 2.40                     | 0.56              |
| 1:AA:1248:A:O2'   | 11:AL:36:TYR:CE1  | 2.57                     | 0.56              |
| 1:AA:1309:G:OP2   | 15:AP:99:ARG:NH2  | 2.38                     | 0.56              |
| 1:AA:1321:C:C5    | 1:AA:1322:C:H3'   | 2.40                     | 0.56              |
| 1:AA:1419:G:H2'   | 1:AA:1420:C:C6    | 2.39                     | 0.56              |
| 3:AC:21:A:C2      | 3:AC:48:C:C4      | 2.93                     | 0.56              |
| 3:AC:41:C:C2'     | 3:AC:42:C:O5'     | 2.53                     | 0.56              |
| 3:AC:70:G:C2      | 3:AC:71:G:C8      | 2.94                     | 0.56              |
| 3:AD:40:C:H2'     | 3:AD:40:C:O2      | 2.04                     | 0.56              |
| 3:AD:44:G:C2'     | 3:AD:45:U:H5'     | 2.36                     | 0.56              |
| 3:AD:57:G:O5'     | 3:AD:57:G:H8      | 1.88                     | 0.56              |
| 3:AD:76:A:C8      | 24:BA:2432:A:N3   | 2.74                     | 0.56              |
| 3:AB:9:A:N3       | 3:AB:45:U:O2      | 2.38                     | 0.56              |
| 4:AE:19:HIS:CE1   | 4:AE:204:ASN:ND2  | 2.73                     | 0.56              |
| 4:AE:44:LEU:O     | 4:AE:45:GLN:C     | 2.48                     | 0.56              |
| 4:AE:78:GLN:HE22  | 4:AE:96:ARG:CZ    | 2.17                     | 0.56              |
| 4:AE:162:ILE:O    | 4:AE:185:ILE:CD1  | 2.53                     | 0.56              |
| 4:AE:208:ILE:HG13 | 4:AE:211:ILE:HD12 | 1.87                     | 0.56              |
| 5:AF:127:ARG:C    | 5:AF:128:PHE:CD1  | 2.84                     | 0.56              |
| 5:AF:151:VAL:CG1  | 5:AF:152:ILE:N    | 2.67                     | 0.56              |
| 5:AF:157:ILE:O    | 5:AF:159:GLY:N    | 2.38                     | 0.56              |
| 6:AG:13:ARG:CB    | 6:AG:40:PRO:HD3   | 2.35                     | 0.56              |
| 6:AG:26:CYS:O     | 6:AG:33:MET:SD    | 2.63                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 6:AG:72:GLU:OE1    | 6:AG:72:GLU:HA    | 2.05                     | 0.56              |
| 6:AG:105:VAL:HG21  | 6:AG:121:VAL:HG21 | 1.87                     | 0.56              |
| 7:AH:16:THR:CG2    | 7:AH:28:PHE:HA    | 2.34                     | 0.56              |
| 7:AH:70:PRO:CB     | 7:AH:143:ARG:HA   | 2.31                     | 0.56              |
| 7:AH:122:GLU:HG2   | 7:AH:126:ARG:HG3  | 1.85                     | 0.56              |
| 7:AH:151:LEU:HD21  | 10:AK:67:PRO:CG   | 2.34                     | 0.56              |
| 8:AI:100:ASN:O     | 20:AU:28:GLU:N    | 2.39                     | 0.56              |
| 9:AJ:43:PHE:HD2    | 9:AJ:44:TYR:CD2   | 2.23                     | 0.56              |
| 9:AJ:76:ARG:HH11   | 9:AJ:89:MET:HG3   | 1.69                     | 0.56              |
| 10:AK:26:VAL:HG13  | 10:AK:27:PRO:CD   | 2.35                     | 0.56              |
| 10:AK:36:LEU:HD23  | 10:AK:36:LEU:N    | 2.10                     | 0.56              |
| 10:AK:69:ARG:NH1   | 10:AK:74:PRO:O    | 2.38                     | 0.56              |
| 10:AK:81:HIS:HB3   | 10:AK:138:TRP:O   | 2.05                     | 0.56              |
| 10:AK:91:ARG:C     | 10:AK:92:ARG:HD2  | 2.31                     | 0.56              |
| 10:AK:123:GLU:O    | 10:AK:126:LYS:HE3 | 2.04                     | 0.56              |
| 12:AM:8:LEU:HD13   | 12:AM:94:VAL:CG1  | 2.22                     | 0.56              |
| 15:AP:10:PRO:HG3   | 15:AP:18:ALA:CA   | 2.35                     | 0.56              |
| 15:AP:23:TYR:HE2   | 15:AP:70:LEU:CD2  | 2.16                     | 0.56              |
| 15:AP:77:ASN:O     | 15:AP:80:ARG:NH1  | 2.38                     | 0.56              |
| 16:AQ:33:VAL:O     | 16:AQ:34:TYR:O    | 2.23                     | 0.56              |
| 16:AQ:55:GLY:O     | 16:AQ:56:VAL:O    | 2.23                     | 0.56              |
| 17:AR:52:SER:O     | 17:AR:53:HIS:C    | 2.46                     | 0.56              |
| 17:AR:60:VAL:HA    | 17:AR:63:ARG:CD   | 2.34                     | 0.56              |
| 17:AR:78:TYR:HD2   | 17:AR:78:TYR:C    | 2.14                     | 0.56              |
| 18:AS:58:TYR:CD1   | 18:AS:59:TRP:N    | 2.73                     | 0.56              |
| 19:AT:4:LYS:C      | 19:AT:5:VAL:HG23  | 2.31                     | 0.56              |
| 19:AT:8:GLY:O      | 19:AT:56:VAL:CG1  | 2.53                     | 0.56              |
| 19:AT:43:LEU:HD11  | 19:AT:69:LYS:CG   | 2.35                     | 0.56              |
| 19:AT:59:ILE:CD1   | 19:AT:72:ARG:O    | 2.49                     | 0.56              |
| 20:AU:63:GLN:O     | 20:AU:67:ALA:CB   | 2.53                     | 0.56              |
| 21:AV:80:TYR:CG    | 21:AV:81:ARG:N    | 2.73                     | 0.56              |
| 24:BA:76:C:O2'     | 24:BA:77:C:H5'    | 2.05                     | 0.56              |
| 24:BA:239:U:C1'    | 24:BA:259:G:H22   | 2.17                     | 0.56              |
| 24:BA:246:C:O2'    | 24:BA:385:C:H4'   | 2.05                     | 0.56              |
| 24:BA:270(B):A:O2' | 24:BA:270(C):C:H6 | 1.86                     | 0.56              |
| 24:BA:297:C:N4     | 24:BA:298:G:N2    | 2.54                     | 0.56              |
| 24:BA:392:C:C5'    | 24:BA:409:C:H5''  | 2.34                     | 0.56              |
| 24:BA:396:G:H1'    | 50:B3:39:CYS:SG   | 2.46                     | 0.56              |
| 24:BA:455:C:P      | 24:BA:455:C:O4'   | 2.63                     | 0.56              |
| 24:BA:484:C:OP1    | 45:BX:48:ALA:HB1  | 2.04                     | 0.56              |
| 24:BA:558:G:O5'    | 34:BM:109:LYS:HD3 | 2.04                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:564:C:H42   | 24:BA:578:A:N6    | 2.02                     | 0.56              |
| 24:BA:585:G:N2    | 24:BA:1256:G:C6   | 2.74                     | 0.56              |
| 24:BA:784:A:H62   | 24:BA:792:G:N2    | 2.01                     | 0.56              |
| 24:BA:811:U:O5'   | 24:BA:811:U:H6    | 1.86                     | 0.56              |
| 24:BA:942:G:C5'   | 36:BO:32:THR:HG22 | 2.35                     | 0.56              |
| 24:BA:957:A:O3'   | 24:BA:958:U:C4'   | 2.50                     | 0.56              |
| 24:BA:958:U:O4    | 37:BP:19:GLY:O    | 2.23                     | 0.56              |
| 24:BA:975:G:N3    | 24:BA:975:G:H2'   | 2.20                     | 0.56              |
| 24:BA:988:A:C2    | 24:BA:989:G:N2    | 2.73                     | 0.56              |
| 24:BA:1022:G:O2'  | 24:BA:1023:U:O5'  | 2.23                     | 0.56              |
| 24:BA:1035:U:H2'  | 24:BA:1036:G:O4'  | 2.05                     | 0.56              |
| 24:BA:1139:G:O5'  | 24:BA:1139:G:H8   | 1.88                     | 0.56              |
| 24:BA:1152:C:H4'  | 41:BT:80:ILE:HG21 | 1.87                     | 0.56              |
| 24:BA:1188:U:O2   | 24:BA:1188:U:C2'  | 2.52                     | 0.56              |
| 24:BA:1223:C:C4   | 24:BA:1227:A:N1   | 2.73                     | 0.56              |
| 24:BA:1227:A:C3'  | 24:BA:1228:G:H5'' | 2.36                     | 0.56              |
| 24:BA:1237:A:O2'  | 24:BA:1238:G:P    | 2.63                     | 0.56              |
| 24:BA:1310:G:H2'  | 24:BA:1311:G:O4'  | 2.05                     | 0.56              |
| 24:BA:1324:G:H1'  | 24:BA:1616:A:H61  | 1.67                     | 0.56              |
| 24:BA:1338:G:H21  | 24:BA:1393:A:H2   | 1.54                     | 0.56              |
| 24:BA:1417:C:O3'  | 24:BA:1588:C:H1'  | 2.05                     | 0.56              |
| 24:BA:1451:C:H5'' | 24:BA:1453:A:O2'  | 2.05                     | 0.56              |
| 24:BA:1523:U:N3   | 24:BA:1524:G:N7   | 2.54                     | 0.56              |
| 24:BA:1591:G:H2'  | 24:BA:1592:C:C6   | 2.40                     | 0.56              |
| 24:BA:1592:C:H2'  | 24:BA:1593:G:C8   | 2.33                     | 0.56              |
| 24:BA:1665:A:O3'  | 35:BN:1:MET:N     | 2.38                     | 0.56              |
| 24:BA:1717:G:N2   | 24:BA:1718:G:H1'  | 2.19                     | 0.56              |
| 24:BA:1754:C:C5   | 40:BS:98:LYS:NZ   | 2.74                     | 0.56              |
| 24:BA:1791:A:H4'  | 27:BD:206:LEU:CD2 | 2.34                     | 0.56              |
| 24:BA:1813:G:C4'  | 27:BD:46:GLN:HB2  | 2.29                     | 0.56              |
| 24:BA:1904:G:C2'  | 24:BA:1905:C:O5'  | 2.53                     | 0.56              |
| 24:BA:1928:A:C2'  | 24:BA:1929:G:H5'  | 2.35                     | 0.56              |
| 24:BA:1941:C:O2   | 24:BA:1941:C:C2'  | 2.52                     | 0.56              |
| 24:BA:1942:C:P    | 24:BA:1943:U:H3'  | 2.46                     | 0.56              |
| 24:BA:1967:C:O2   | 24:BA:1967:C:C2'  | 2.53                     | 0.56              |
| 24:BA:1992:G:H4'  | 24:BA:1993:U:C5   | 2.40                     | 0.56              |
| 24:BA:1995:U:C5'  | 24:BA:1996:C:C5'  | 2.65                     | 0.56              |
| 24:BA:2026:C:C2'  | 24:BA:2027:G:H5'  | 2.35                     | 0.56              |
| 24:BA:2062:A:H2'  | 24:BA:2063:C:OP1  | 2.05                     | 0.56              |
| 24:BA:2074:U:HO2' | 24:BA:2598:A:H1'  | 1.70                     | 0.56              |
| 24:BA:2075:U:O2   | 24:BA:2076:U:H5'  | 2.04                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2097:C:H2'   | 24:BA:2098:U:O4'   | 2.04                     | 0.56              |
| 24:BA:2168:G:N3    | 24:BA:2170:A:C8    | 2.74                     | 0.56              |
| 24:BA:2171:A:O2'   | 24:BA:2172:U:O5'   | 2.22                     | 0.56              |
| 24:BA:2194:G:H2'   | 24:BA:2194:G:N3    | 2.19                     | 0.56              |
| 24:BA:2227:A:N3    | 27:BD:262:ARG:NH1  | 2.53                     | 0.56              |
| 24:BA:2277:G:N7    | 47:BZ:14:ARG:HG3   | 2.21                     | 0.56              |
| 24:BA:2284:C:H3'   | 52:B5:27:LYS:NZ    | 2.19                     | 0.56              |
| 24:BA:2284:C:C5'   | 52:B5:9:LEU:HG     | 2.36                     | 0.56              |
| 24:BA:2286:A:H4'   | 24:BA:2287:A:N3    | 2.20                     | 0.56              |
| 24:BA:2289:G:O2'   | 24:BA:2383:G:H1'   | 2.05                     | 0.56              |
| 24:BA:2322:A:N3    | 24:BA:2322:A:H2'   | 2.20                     | 0.56              |
| 24:BA:2438:U:O2    | 24:BA:2441:C:C5    | 2.58                     | 0.56              |
| 24:BA:2450:A:C2'   | 24:BA:2451:A:H5'   | 2.35                     | 0.56              |
| 24:BA:2519:U:OP1   | 24:BA:2519:U:H3'   | 2.05                     | 0.56              |
| 24:BA:2601:C:O2    | 24:BA:2603:G:N7    | 2.38                     | 0.56              |
| 24:BA:2691:C:O4'   | 24:BA:2872:G:O6    | 2.23                     | 0.56              |
| 24:BA:2706:G:C2    | 24:BA:2707:G:C5    | 2.93                     | 0.56              |
| 24:BA:2715:C:O2'   | 24:BA:2716:U:H5'   | 2.05                     | 0.56              |
| 24:BA:2716:U:C2'   | 24:BA:2717:G:O5'   | 2.53                     | 0.56              |
| 24:BA:2747:G:N2    | 24:BA:2748:A:N6    | 2.54                     | 0.56              |
| 24:BA:2779:U:H5''  | 24:BA:2780:G:H3'   | 1.87                     | 0.56              |
| 24:BA:2781:A:H8    | 24:BA:2781:A:H5'   | 1.71                     | 0.56              |
| 24:BA:2823:A:OP2   | 28:BE:113:PHE:CE1  | 2.59                     | 0.56              |
| 24:BA:2824:C:N4    | 24:BA:2825:C:C2    | 2.73                     | 0.56              |
| 24:BA:2856:C:O2'   | 24:BA:2857:G:H5'   | 2.05                     | 0.56              |
| 24:BA:2866:U:H4'   | 24:BA:2867:G:O5'   | 2.03                     | 0.56              |
| 24:BA:2869:G:C6    | 24:BA:2870:C:C4    | 2.92                     | 0.56              |
| 25:BB:9:G:C2       | 25:BB:10:C:C4      | 2.94                     | 0.56              |
| 25:BB:68:C:H2'     | 25:BB:69:G:O4'     | 2.04                     | 0.56              |
| 25:BB:116:G:C6     | 25:BB:117:G:C4     | 2.93                     | 0.56              |
| 26:BC:8:ARG:HH11   | 26:BC:11:LEU:CD2   | 2.16                     | 0.56              |
| 26:BC:161:ILE:HG22 | 26:BC:174:PRO:HG2  | 1.87                     | 0.56              |
| 26:BC:187:ASP:OD2  | 26:BC:187:ASP:C    | 2.48                     | 0.56              |
| 27:BD:34:VAL:H     | 27:BD:104:TYR:HH   | 1.52                     | 0.56              |
| 27:BD:148:GLU:HA   | 27:BD:186:HIS:HE1  | 1.70                     | 0.56              |
| 27:BD:151:LYS:O    | 27:BD:152:GLY:O    | 2.23                     | 0.56              |
| 27:BD:198:ASN:ND2  | 27:BD:201:HIS:HB2  | 2.19                     | 0.56              |
| 27:BD:211:ARG:C    | 27:BD:215:LEU:HD12 | 2.30                     | 0.56              |
| 28:BE:173:VAL:HG13 | 28:BE:183:LEU:O    | 2.05                     | 0.56              |
| 29:BF:8:GLN:HB3    | 29:BF:18:ARG:HA    | 1.87                     | 0.56              |
| 29:BF:123:LEU:HG   | 29:BF:191:ARG:HD3  | 1.86                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 29:BF:158:THR:CG2 | 29:BF:159:GLY:N    | 2.69                     | 0.56              |
| 30:BG:57:ALA:CA   | 30:BG:68:PRO:HD2   | 2.29                     | 0.56              |
| 31:BH:6:ARG:HD3   | 31:BH:69:ARG:HD3   | 1.87                     | 0.56              |
| 31:BH:7:LEU:N     | 31:BH:8:PRO:HD2    | 2.17                     | 0.56              |
| 31:BH:20:ALA:HB1  | 31:BH:21:PRO:HD3   | 1.87                     | 0.56              |
| 31:BH:69:ARG:CG   | 31:BH:70:THR:H     | 2.18                     | 0.56              |
| 31:BH:87:LEU:HD21 | 31:BH:162:ILE:CG1  | 2.35                     | 0.56              |
| 31:BH:88:LEU:HD21 | 31:BH:90:LYS:HB3   | 1.87                     | 0.56              |
| 31:BH:118:PRO:CD  | 31:BH:121:ILE:HG21 | 2.35                     | 0.56              |
| 32:BK:7:GLU:HA    | 32:BK:14:ASP:OD2   | 2.05                     | 0.56              |
| 33:BL:86:LYS:O    | 33:BL:87:GLY:C     | 2.49                     | 0.56              |
| 34:BM:2:LYS:O     | 34:BM:3:THR:O      | 2.24                     | 0.56              |
| 34:BM:15:LEU:CD1  | 34:BM:137:LYS:HB3  | 2.35                     | 0.56              |
| 34:BM:33:LEU:O    | 34:BM:33:LEU:HD22  | 2.05                     | 0.56              |
| 34:BM:74:ARG:C    | 34:BM:76:SER:N     | 2.54                     | 0.56              |
| 34:BM:96:GLU:OE2  | 34:BM:96:GLU:N     | 2.38                     | 0.56              |
| 34:BM:100:GLU:O   | 34:BM:104:LYS:HG2  | 2.04                     | 0.56              |
| 35:BN:8:LEU:HD22  | 35:BN:81:ASP:O     | 2.05                     | 0.56              |
| 35:BN:73:ASP:HB3  | 40:BS:79:HIS:CD2   | 2.39                     | 0.56              |
| 36:BO:28:GLY:C    | 36:BO:29:LYS:CG    | 2.78                     | 0.56              |
| 36:BO:90:ARG:CA   | 36:BO:125:VAL:HG22 | 2.36                     | 0.56              |
| 36:BO:93:GLY:O    | 36:BO:102:ARG:NH2  | 2.39                     | 0.56              |
| 37:BP:47:ILE:O    | 37:BP:48:GLU:C     | 2.47                     | 0.56              |
| 37:BP:54:MET:HB2  | 37:BP:64:ILE:HD13  | 1.86                     | 0.56              |
| 37:BP:85:LYS:O    | 37:BP:87:LYS:N     | 2.38                     | 0.56              |
| 37:BP:93:TYR:N    | 37:BP:93:TYR:CD1   | 2.73                     | 0.56              |
| 37:BP:115:MET:HA  | 37:BP:118:LEU:HD11 | 1.87                     | 0.56              |
| 37:BP:119:ARG:O   | 37:BP:123:HIS:HB2  | 2.05                     | 0.56              |
| 38:BQ:17:ARG:NH1  | 38:BQ:17:ARG:CB    | 2.69                     | 0.56              |
| 38:BQ:74:LYS:CA   | 38:BQ:77:ARG:HH22  | 2.17                     | 0.56              |
| 38:BQ:96:ARG:NH2  | 38:BQ:117:VAL:HG23 | 2.20                     | 0.56              |
| 39:BR:66:ALA:O    | 39:BR:67:ARG:C     | 2.48                     | 0.56              |
| 39:BR:69:VAL:O    | 39:BR:73:LEU:CD1   | 2.47                     | 0.56              |
| 40:BS:45:PHE:HE1  | 40:BS:86:ILE:HG22  | 1.70                     | 0.56              |
| 40:BS:76:PHE:HZ   | 40:BS:78:LEU:CD1   | 2.18                     | 0.56              |
| 41:BT:26:GLY:O    | 41:BT:27:LEU:HB2   | 2.06                     | 0.56              |
| 41:BT:31:SER:C    | 41:BT:35:ALA:HB2   | 2.29                     | 0.56              |
| 41:BT:52:ARG:O    | 41:BT:54:LYS:N     | 2.38                     | 0.56              |
| 41:BT:59:ARG:O    | 41:BT:60:LEU:C     | 2.47                     | 0.56              |
| 41:BT:61:TRP:HZ3  | 41:BT:94:ASN:N     | 2.04                     | 0.56              |
| 41:BT:63:VAL:O    | 41:BT:65:ILE:N     | 2.38                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 41:BT:81:HIS:O    | 41:BT:117:GLN:NE2 | 2.38                     | 0.56              |
| 41:BT:112:ARG:NH2 | 42:BU:49:THR:HG22 | 2.16                     | 0.56              |
| 42:BU:18:LEU:O    | 42:BU:20:LEU:N    | 2.38                     | 0.56              |
| 42:BU:41:GLY:N    | 42:BU:51:VAL:HG22 | 2.20                     | 0.56              |
| 43:BV:5:ALA:CB    | 43:BV:54:ALA:HB2  | 2.24                     | 0.56              |
| 43:BV:28:SER:HA   | 43:BV:70:TYR:CA   | 2.28                     | 0.56              |
| 43:BV:88:ARG:NE   | 43:BV:88:ARG:CA   | 2.65                     | 0.56              |
| 44:BW:15:GLU:HG3  | 44:BW:16:LYS:N    | 2.19                     | 0.56              |
| 44:BW:55:ASN:N    | 44:BW:55:ASN:ND2  | 2.48                     | 0.56              |
| 45:BX:2:ARG:HD2   | 45:BX:3:VAL:CB    | 2.35                     | 0.56              |
| 45:BX:81:LYS:HD3  | 45:BX:96:ILE:CG1  | 2.36                     | 0.56              |
| 46:BY:176:PRO:HB2 | 46:BY:179:ASP:N   | 2.19                     | 0.56              |
| 47:BZ:43:THR:HG22 | 47:BZ:43:THR:O    | 2.05                     | 0.56              |
| 48:B1:6:GLU:O     | 48:B1:7:GLU:C     | 2.48                     | 0.56              |
| 49:B2:10:LYS:CE   | 49:B2:31:LEU:HD21 | 2.30                     | 0.56              |
| 50:B3:56:VAL:HB   | 50:B3:61:ARG:NE   | 2.20                     | 0.56              |
| 51:B4:19:ARG:C    | 51:B4:21:SER:N    | 2.61                     | 0.56              |
| 52:B5:8:LYS:C     | 52:B5:28:ARG:HB3  | 2.29                     | 0.56              |
| 52:B5:24:GLU:CD   | 54:B7:37:SER:HB2  | 2.30                     | 0.56              |
| 54:B7:40:GLU:O    | 54:B7:43:GLN:OE1  | 2.23                     | 0.56              |
| 1:AA:19:C:N3      | 1:AA:20:U:C5      | 2.73                     | 0.56              |
| 1:AA:22:G:H4'     | 1:AA:885:G:C8     | 2.41                     | 0.56              |
| 1:AA:241:C:H2'    | 1:AA:242:C:O5'    | 2.04                     | 0.56              |
| 1:AA:261:U:C2'    | 1:AA:263:A:OP2    | 2.52                     | 0.56              |
| 1:AA:376:G:OP1    | 18:AS:5:ARG:HB2   | 2.05                     | 0.56              |
| 1:AA:541:G:O4'    | 6:AG:42:GLN:NE2   | 2.36                     | 0.56              |
| 1:AA:782:A:N6     | 1:AA:801:U:C6     | 2.74                     | 0.56              |
| 1:AA:922:G:N3     | 1:AA:1398:A:H2    | 2.02                     | 0.56              |
| 1:AA:1002:G:C6    | 1:AA:1003:G:O6    | 2.59                     | 0.56              |
| 1:AA:1054:C:H2'   | 1:AA:1055:A:C5'   | 2.30                     | 0.56              |
| 1:AA:1315:U:O5'   | 1:AA:1315:U:H6    | 1.87                     | 0.56              |
| 1:AA:1499:A:C5    | 1:AA:1500:A:N7    | 2.74                     | 0.56              |
| 1:AA:1526:G:H2'   | 1:AA:1527:C:C6    | 2.41                     | 0.56              |
| 1:AA:1537:U:C2    | 1:AA:1538:C:C6    | 2.94                     | 0.56              |
| 2:A1:39:U:H5''    | 2:A1:40:U:H5'     | 1.86                     | 0.56              |
| 3:AC:65:G:H2'     | 3:AC:66:U:C6      | 2.40                     | 0.56              |
| 3:AD:8:U:C5       | 3:AD:13:C:N4      | 2.73                     | 0.56              |
| 3:AB:36:A:N6      | 3:AB:37:A:N6      | 2.53                     | 0.56              |
| 4:AE:52:GLU:OE1   | 4:AE:53:ARG:HB2   | 2.06                     | 0.56              |
| 4:AE:97:TRP:HE1   | 4:AE:101:MET:CE   | 2.18                     | 0.56              |
| 5:AF:33:LEU:HD23  | 5:AF:36:ASP:OD1   | 2.05                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:AF:34:LEU:O     | 5:AF:38:ARG:HD3    | 2.06                     | 0.56              |
| 6:AG:4:TYR:CG     | 6:AG:5:ILE:N       | 2.74                     | 0.56              |
| 6:AG:46:LYS:O     | 6:AG:47:ARG:C      | 2.48                     | 0.56              |
| 6:AG:58:LEU:O     | 6:AG:58:LEU:HD22   | 2.06                     | 0.56              |
| 6:AG:78:LEU:O     | 6:AG:81:GLU:N      | 2.39                     | 0.56              |
| 6:AG:100:ARG:CZ   | 6:AG:137:SER:HA    | 2.34                     | 0.56              |
| 6:AG:121:VAL:HB   | 6:AG:136:PRO:CG    | 2.18                     | 0.56              |
| 6:AG:151:LYS:H    | 6:AG:151:LYS:HD2   | 1.71                     | 0.56              |
| 7:AH:72:GLN:NE2   | 7:AH:145:LYS:H     | 2.02                     | 0.56              |
| 8:AI:75:LEU:O     | 8:AI:78:GLU:N      | 2.38                     | 0.56              |
| 9:AJ:50:ILE:HB    | 9:AJ:51:GLN:OE1    | 2.06                     | 0.56              |
| 9:AJ:109:ASN:O    | 9:AJ:119:ARG:NE    | 2.38                     | 0.56              |
| 12:AM:27:ALA:CB   | 12:AM:85:LEU:HD21  | 2.35                     | 0.56              |
| 14:AO:16:GLU:O    | 14:AO:17:LYS:HB3   | 2.04                     | 0.56              |
| 15:AP:69:GLU:O    | 15:AP:70:LEU:C     | 2.49                     | 0.56              |
| 20:AU:40:LEU:N    | 20:AU:40:LEU:HD23  | 2.20                     | 0.56              |
| 22:AW:48:LYS:O    | 22:AW:49:ALA:C     | 2.48                     | 0.56              |
| 22:AW:63:ILE:HG22 | 22:AW:64:ASP:N     | 2.21                     | 0.56              |
| 22:AW:89:ARG:HH21 | 22:AW:104:LEU:HD22 | 1.70                     | 0.56              |
| 24:BA:2:G:C2      | 24:BA:3:U:C2       | 2.94                     | 0.56              |
| 24:BA:124:G:N1    | 53:B6:19:ARG:NH2   | 2.53                     | 0.56              |
| 24:BA:203:C:H3'   | 24:BA:204:A:C8     | 2.36                     | 0.56              |
| 24:BA:223:A:O2'   | 24:BA:420:C:H1'    | 2.06                     | 0.56              |
| 24:BA:296:C:H6    | 24:BA:338:G:N2     | 2.03                     | 0.56              |
| 24:BA:449:A:C2'   | 24:BA:450:G:O4'    | 2.53                     | 0.56              |
| 24:BA:535:C:O2'   | 41:BT:53:ARG:HG2   | 2.06                     | 0.56              |
| 24:BA:636:G:O6    | 36:BO:111:ARG:NH1  | 2.24                     | 0.56              |
| 24:BA:673:C:C2'   | 24:BA:674:G:C5'    | 2.80                     | 0.56              |
| 24:BA:808:G:H2'   | 24:BA:809:G:H8     | 1.70                     | 0.56              |
| 24:BA:943:U:P     | 36:BO:32:THR:HB    | 2.45                     | 0.56              |
| 24:BA:955:C:P     | 37:BP:17:LEU:HD23  | 2.45                     | 0.56              |
| 24:BA:1174:A:H2'  | 24:BA:1175:U:C5'   | 2.20                     | 0.56              |
| 24:BA:1303:G:N7   | 24:BA:1304:C:C4    | 2.73                     | 0.56              |
| 24:BA:1324:G:O2'  | 24:BA:1325:G:OP1   | 2.22                     | 0.56              |
| 24:BA:1341:U:H2'  | 24:BA:1342:A:OP1   | 2.04                     | 0.56              |
| 24:BA:1360:A:N6   | 24:BA:1371:G:H1'   | 2.20                     | 0.56              |
| 24:BA:1418:G:OP2  | 24:BA:1418:G:H8    | 1.89                     | 0.56              |
| 24:BA:1520:U:C6   | 24:BA:1520:U:OP2   | 2.58                     | 0.56              |
| 24:BA:1614:A:N3   | 24:BA:1614:A:C3'   | 2.65                     | 0.56              |
| 24:BA:1655:A:H3'  | 24:BA:1656:C:H6    | 1.70                     | 0.56              |
| 24:BA:1699:G:H2'  | 24:BA:1763:G:H22   | 1.69                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1799:G:C2'   | 24:BA:1800:C:O5'  | 2.54                     | 0.56              |
| 24:BA:1810:A:C2'   | 24:BA:1811:G:H5'  | 2.32                     | 0.56              |
| 24:BA:1861:G:H4'   | 26:BC:205:LYS:HZ1 | 1.69                     | 0.56              |
| 24:BA:1926:U:H3    | 24:BA:1929:G:N2   | 2.03                     | 0.56              |
| 24:BA:1999:C:N3    | 24:BA:2000:G:C8   | 2.73                     | 0.56              |
| 24:BA:2208:U:C2'   | 24:BA:2209:C:H5'  | 2.35                     | 0.56              |
| 24:BA:2259:G:N2    | 24:BA:2282:G:C5   | 2.74                     | 0.56              |
| 24:BA:2278:A:N7    | 47:BZ:14:ARG:CB   | 2.68                     | 0.56              |
| 24:BA:2283:C:N3    | 24:BA:2389:G:N2   | 2.53                     | 0.56              |
| 24:BA:2352:A:C2    | 47:BZ:34:GLY:HA3  | 2.40                     | 0.56              |
| 24:BA:2472:G:O5'   | 24:BA:2472:G:C8   | 2.57                     | 0.56              |
| 24:BA:2487:G:H2'   | 24:BA:2488:A:H8   | 1.70                     | 0.56              |
| 24:BA:2759:G:C6    | 24:BA:2760:C:C5   | 2.93                     | 0.56              |
| 24:BA:2850:A:C2    | 38:BQ:61:HIS:CE1  | 2.93                     | 0.56              |
| 24:BA:2853:C:H2'   | 24:BA:2854:G:C8   | 2.39                     | 0.56              |
| 24:BA:2885:C:N3    | 24:BA:2886:G:H1'  | 2.20                     | 0.56              |
| 26:BC:33:ALA:CB    | 26:BC:39:GLU:OE1  | 2.54                     | 0.56              |
| 26:BC:181:PRO:O    | 26:BC:185:LEU:HG  | 2.04                     | 0.56              |
| 27:BD:90:ALA:O     | 27:BD:91:ARG:O    | 2.23                     | 0.56              |
| 29:BF:31:HIS:CB    | 36:BO:11:GLY:H    | 2.18                     | 0.56              |
| 30:BG:14:GLU:CD    | 30:BG:15:VAL:N    | 2.64                     | 0.56              |
| 30:BG:119:GLY:HA3  | 30:BG:180:PHE:CG  | 2.40                     | 0.56              |
| 31:BH:107:VAL:HG13 | 31:BH:152:ARG:CD  | 2.35                     | 0.56              |
| 31:BH:121:ILE:HG13 | 31:BH:133:VAL:CG2 | 2.33                     | 0.56              |
| 32:BK:66:GLU:HB3   | 32:BK:69:LYS:HZ3  | 1.70                     | 0.56              |
| 33:BL:18:THR:HA    | 33:BL:38:VAL:CG2  | 2.27                     | 0.56              |
| 34:BM:95:PRO:HG2   | 34:BM:96:GLU:H    | 1.69                     | 0.56              |
| 34:BM:99:LEU:HG    | 34:BM:100:GLU:H   | 1.70                     | 0.56              |
| 35:BN:7:TYR:CB     | 35:BN:18:LYS:CE   | 2.83                     | 0.56              |
| 35:BN:19:ILE:C     | 35:BN:19:ILE:CD1  | 2.78                     | 0.56              |
| 35:BN:89:ASN:HD22  | 35:BN:91:LEU:CB   | 2.19                     | 0.56              |
| 35:BN:106:LEU:HA   | 35:BN:111:PHE:HE1 | 1.71                     | 0.56              |
| 36:BO:7:ARG:HD3    | 36:BO:8:PRO:HD3   | 1.88                     | 0.56              |
| 36:BO:45:LEU:CD1   | 54:B7:59:LYS:HZ1  | 2.16                     | 0.56              |
| 37:BP:36:ALA:HA    | 37:BP:129:THR:CG2 | 2.35                     | 0.56              |
| 37:BP:134:ARG:NE   | 37:BP:137:TYR:CA  | 2.64                     | 0.56              |
| 38:BQ:41:ALA:O     | 38:BQ:42:LYS:C    | 2.48                     | 0.56              |
| 38:BQ:60:LEU:H     | 38:BQ:60:LEU:CD2  | 2.19                     | 0.56              |
| 38:BQ:73:VAL:HB    | 38:BQ:77:ARG:NH2  | 2.19                     | 0.56              |
| 38:BQ:83:ILE:O     | 38:BQ:86:ARG:N    | 2.38                     | 0.56              |
| 38:BQ:86:ARG:NH1   | 38:BQ:87:TYR:HE2  | 2.03                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 38:BQ:105:ARG:C   | 38:BQ:107:ASP:H    | 2.13                     | 0.56              |
| 39:BR:70:GLY:O    | 39:BR:71:ARG:C     | 2.47                     | 0.56              |
| 39:BR:95:HIS:CG   | 39:BR:96:GLY:N     | 2.73                     | 0.56              |
| 40:BS:17:THR:HG21 | 40:BS:20:PRO:HG3   | 1.88                     | 0.56              |
| 40:BS:22:PHE:O    | 40:BS:24:PRO:HD3   | 2.04                     | 0.56              |
| 42:BU:28:GLU:N    | 42:BU:29:PRO:CD    | 2.67                     | 0.56              |
| 43:BV:7:ALA:O     | 43:BV:102:HIS:HA   | 2.05                     | 0.56              |
| 44:BW:26:TYR:HB2  | 44:BW:28:PHE:HZ    | 1.70                     | 0.56              |
| 44:BW:52:VAL:O    | 44:BW:82:GLN:HB3   | 2.06                     | 0.56              |
| 45:BX:1:MET:HG2   | 45:BX:33:LYS:CD    | 2.36                     | 0.56              |
| 45:BX:46:LYS:HZ1  | 45:BX:49:VAL:CG2   | 2.17                     | 0.56              |
| 45:BX:88:LYS:HG2  | 45:BX:89:PHE:N     | 2.21                     | 0.56              |
| 46:BY:40:ASP:O    | 46:BY:44:PHE:CD1   | 2.59                     | 0.56              |
| 46:BY:78:LYS:CG   | 46:BY:79:ARG:H     | 2.13                     | 0.56              |
| 1:AA:5:U:O2'      | 1:AA:6:G:OP2       | 2.22                     | 0.56              |
| 1:AA:41:G:C4      | 1:AA:42:G:C8       | 2.94                     | 0.56              |
| 1:AA:225:C:H2'    | 1:AA:226:G:O5'     | 2.04                     | 0.56              |
| 1:AA:474:G:O5'    | 18:AS:81:ARG:HA    | 2.06                     | 0.56              |
| 1:AA:484:G:O4'    | 1:AA:486:U:C6      | 2.58                     | 0.56              |
| 1:AA:501:C:H2'    | 1:AA:502:G:C8      | 2.41                     | 0.56              |
| 1:AA:607:A:C5     | 1:AA:608:A:C8      | 2.93                     | 0.56              |
| 1:AA:718:G:C4'    | 13:AN:117:ASN:HD21 | 2.17                     | 0.56              |
| 1:AA:748:C:H3'    | 1:AA:748:C:H6      | 1.67                     | 0.56              |
| 1:AA:758:G:C2'    | 1:AA:759:A:OP2     | 2.54                     | 0.56              |
| 1:AA:1002:G:N2    | 1:AA:1039:C:C4     | 2.74                     | 0.56              |
| 1:AA:1132:C:H2'   | 1:AA:1133:G:H8     | 1.70                     | 0.56              |
| 1:AA:1187:G:H1'   | 16:AQ:61:TRP:C     | 2.31                     | 0.56              |
| 1:AA:1241:G:O2'   | 1:AA:1242:C:H5'    | 2.06                     | 0.56              |
| 1:AA:1313:U:C4    | 21:AV:4:SER:HB2    | 2.39                     | 0.56              |
| 1:AA:1396:A:C2'   | 1:AA:1397:C:OP2    | 2.52                     | 0.56              |
| 1:AA:1481:U:H2'   | 1:AA:1482:G:N7     | 2.21                     | 0.56              |
| 1:AA:1517:G:C8    | 24:BA:1920:C:OP1   | 2.57                     | 0.56              |
| 2:A1:52:U:H4'     | 6:AG:50:ARG:CB     | 2.34                     | 0.56              |
| 3:AD:32:U:H1'     | 9:AJ:86:GLN:CD     | 2.31                     | 0.56              |
| 3:AB:8:U:H5'      | 3:AB:9:A:OP1       | 2.06                     | 0.56              |
| 5:AF:6:HIS:HB3    | 16:AQ:49:HIS:ND1   | 2.20                     | 0.56              |
| 5:AF:24:ALA:HB2   | 5:AF:32:LEU:CD1    | 2.35                     | 0.56              |
| 5:AF:142:MET:C    | 5:AF:142:MET:SD    | 2.88                     | 0.56              |
| 6:AG:91:SER:O     | 6:AG:92:VAL:C      | 2.49                     | 0.56              |
| 6:AG:120:LEU:HG   | 6:AG:121:VAL:N     | 2.21                     | 0.56              |
| 6:AG:166:LYS:HA   | 6:AG:178:VAL:HG11  | 1.86                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 8:AI:42:GLU:HG3   | 8:AI:44:GLY:H      | 1.70                     | 0.56              |
| 8:AI:57:GLN:N     | 8:AI:57:GLN:OE1    | 2.37                     | 0.56              |
| 9:AJ:64:GLN:O     | 9:AJ:68:ASN:ND2    | 2.38                     | 0.56              |
| 10:AK:45:ILE:HG12 | 10:AK:45:ILE:O     | 2.06                     | 0.56              |
| 10:AK:46:LYS:HE3  | 10:AK:64:LYS:CG    | 2.27                     | 0.56              |
| 10:AK:97:VAL:HG13 | 10:AK:98:LYS:HZ1   | 1.70                     | 0.56              |
| 11:AL:37:PHE:CE1  | 11:AL:74:ILE:HG12  | 2.41                     | 0.56              |
| 11:AL:58:HIS:HD2  | 11:AL:59:PHE:CE1   | 2.23                     | 0.56              |
| 11:AL:97:LYS:NZ   | 11:AL:102:LEU:HD22 | 2.21                     | 0.56              |
| 14:AO:68:ALA:CB   | 14:AO:98:TYR:O     | 2.54                     | 0.56              |
| 15:AP:2:ALA:O     | 15:AP:4:ILE:HD12   | 2.04                     | 0.56              |
| 15:AP:20:THR:HG23 | 15:AP:26:GLY:HA2   | 1.87                     | 0.56              |
| 16:AQ:41:ARG:HA   | 16:AQ:44:LEU:CD2   | 2.35                     | 0.56              |
| 18:AS:30:GLY:C    | 18:AS:31:LYS:O     | 2.45                     | 0.56              |
| 18:AS:39:TYR:CE1  | 18:AS:41:PRO:HG3   | 2.40                     | 0.56              |
| 20:AU:79:LEU:HD12 | 20:AU:79:LEU:N     | 2.20                     | 0.56              |
| 24:BA:26:G:N2     | 24:BA:27:G:N2      | 2.53                     | 0.56              |
| 24:BA:71:A:N6     | 24:BA:114:U:H1'    | 2.19                     | 0.56              |
| 24:BA:72:U:C4     | 24:BA:112:U:H1'    | 2.40                     | 0.56              |
| 24:BA:239:U:C1'   | 24:BA:259:G:N2     | 2.67                     | 0.56              |
| 24:BA:331:A:C2    | 24:BA:1209:G:C6    | 2.93                     | 0.56              |
| 24:BA:354:G:H3'   | 24:BA:354:G:OP2    | 2.05                     | 0.56              |
| 24:BA:492:A:OP2   | 24:BA:492:A:H8     | 1.86                     | 0.56              |
| 24:BA:608:A:H61   | 24:BA:619:G:H2'    | 1.70                     | 0.56              |
| 24:BA:643:A:H4'   | 24:BA:644:A:C5'    | 2.35                     | 0.56              |
| 24:BA:764:A:C6    | 24:BA:1789:A:H2    | 2.24                     | 0.56              |
| 24:BA:948:G:C6    | 24:BA:970:C:C2     | 2.94                     | 0.56              |
| 24:BA:955:C:H5''  | 37:BP:87:LYS:CE    | 2.36                     | 0.56              |
| 24:BA:972:G:C6    | 24:BA:973:A:N7     | 2.74                     | 0.56              |
| 24:BA:1020:A:O2'  | 24:BA:1021:A:C8    | 2.58                     | 0.56              |
| 24:BA:1060:U:H5'' | 24:BA:1061:U:N3    | 2.19                     | 0.56              |
| 24:BA:1264:G:H3'  | 24:BA:1264:G:H8    | 1.71                     | 0.56              |
| 24:BA:1299:G:C6   | 24:BA:1639:U:H5''  | 2.41                     | 0.56              |
| 24:BA:1355:G:N2   | 24:BA:1377:G:N3    | 2.54                     | 0.56              |
| 24:BA:1528:A:H5'  | 24:BA:1529:A:OP2   | 2.06                     | 0.56              |
| 24:BA:1635:G:C2'  | 24:BA:1636:C:H5'   | 2.36                     | 0.56              |
| 24:BA:1699:G:O2'  | 24:BA:1700:A:P     | 2.63                     | 0.56              |
| 24:BA:1729:A:H3'  | 24:BA:1730:U:C6    | 2.40                     | 0.56              |
| 24:BA:1790:C:O2'  | 27:BD:213:ARG:CZ   | 2.54                     | 0.56              |
| 24:BA:2139:C:H2'  | 24:BA:2140:C:H6    | 1.70                     | 0.56              |
| 24:BA:2180:U:H2'  | 24:BA:2181:G:H8    | 1.70                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2226:C:O2   | 27:BD:262:ARG:CZ   | 2.54                     | 0.56              |
| 24:BA:2373:G:C6   | 24:BA:2374:C:N4    | 2.73                     | 0.56              |
| 24:BA:2587:A:HO2' | 24:BA:2588:G:H5'   | 1.70                     | 0.56              |
| 24:BA:2602:A:C2   | 47:BZ:1:MET:HA     | 2.40                     | 0.56              |
| 24:BA:2823:A:P    | 28:BE:113:PHE:CZ   | 2.99                     | 0.56              |
| 24:BA:2840:C:O2'  | 24:BA:2841:C:H5'   | 2.05                     | 0.56              |
| 25:BB:4:C:N3      | 25:BB:117:G:C2     | 2.74                     | 0.56              |
| 25:BB:9:G:N2      | 25:BB:10:C:C2      | 2.73                     | 0.56              |
| 25:BB:11:C:H3'    | 47:BZ:74:ARG:NH2   | 2.20                     | 0.56              |
| 25:BB:90:C:O2'    | 25:BB:91:C:C5'     | 2.54                     | 0.56              |
| 26:BC:10:LEU:CG   | 26:BC:220:PRO:HG3  | 2.35                     | 0.56              |
| 26:BC:56:GLN:HA   | 26:BC:201:PRO:CB   | 2.36                     | 0.56              |
| 27:BD:78:LYS:O    | 27:BD:95:LEU:HD22  | 2.06                     | 0.56              |
| 27:BD:95:LEU:C    | 27:BD:95:LEU:CD1   | 2.77                     | 0.56              |
| 27:BD:226:MET:O   | 27:BD:228:PRO:N    | 2.38                     | 0.56              |
| 28:BE:142:GLY:C   | 28:BE:143:ASN:CG   | 2.71                     | 0.56              |
| 28:BE:201:THR:O   | 28:BE:202:LYS:HD3  | 2.05                     | 0.56              |
| 31:BH:7:LEU:CA    | 31:BH:52:VAL:HG13  | 2.35                     | 0.56              |
| 31:BH:9:ILE:HG13  | 31:BH:69:ARG:HH12  | 1.70                     | 0.56              |
| 31:BH:69:ARG:CG   | 31:BH:70:THR:N     | 2.68                     | 0.56              |
| 31:BH:137:ASP:HB3 | 31:BH:140:LYS:HE2  | 1.86                     | 0.56              |
| 32:BK:7:GLU:OE1   | 32:BK:35:LEU:HA    | 2.05                     | 0.56              |
| 33:BL:10:LEU:HD23 | 33:BL:10:LEU:H     | 1.71                     | 0.56              |
| 34:BM:4:TYR:CE2   | 41:BT:100:VAL:HB   | 2.41                     | 0.56              |
| 34:BM:56:ASN:HB3  | 34:BM:59:LYS:HD2   | 1.87                     | 0.56              |
| 34:BM:65:LYS:O    | 34:BM:66:LYS:O     | 2.22                     | 0.56              |
| 35:BN:8:LEU:O     | 35:BN:18:LYS:HG3   | 2.04                     | 0.56              |
| 35:BN:42:SER:HA   | 35:BN:55:GLY:O     | 2.04                     | 0.56              |
| 35:BN:65:THR:HA   | 35:BN:77:ILE:HG13  | 1.87                     | 0.56              |
| 37:BP:42:ILE:CG1  | 37:BP:46:GLN:NE2   | 2.67                     | 0.56              |
| 37:BP:116:GLU:CA  | 37:BP:119:ARG:HG3  | 2.35                     | 0.56              |
| 38:BQ:65:LEU:O    | 38:BQ:68:ARG:N     | 2.38                     | 0.56              |
| 39:BR:19:LYS:C    | 39:BR:19:LYS:HD3   | 2.31                     | 0.56              |
| 39:BR:96:GLY:O    | 39:BR:99:LYS:N     | 2.38                     | 0.56              |
| 40:BS:7:ILE:C     | 40:BS:9:LEU:N      | 2.61                     | 0.56              |
| 40:BS:7:ILE:CG1   | 40:BS:8:LYS:H      | 2.16                     | 0.56              |
| 41:BT:25:TRP:O    | 41:BT:26:GLY:C     | 2.49                     | 0.56              |
| 41:BT:30:LYS:O    | 41:BT:32:PHE:N     | 2.33                     | 0.56              |
| 41:BT:80:ILE:HA   | 41:BT:83:LEU:HD13  | 1.87                     | 0.56              |
| 41:BT:88:ILE:H    | 41:BT:88:ILE:CD1   | 2.12                     | 0.56              |
| 43:BV:7:ALA:N     | 43:BV:103:ILE:HD13 | 2.21                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 43:BV:33:ARG:CD   | 43:BV:37:ARG:HD3  | 2.35                     | 0.56              |
| 43:BV:82:LEU:H    | 43:BV:98:LYS:HZ3  | 1.54                     | 0.56              |
| 44:BW:31:HIS:NE2  | 44:BW:33:LYS:HB3  | 2.20                     | 0.56              |
| 45:BX:32:PRO:C    | 45:BX:34:LYS:H    | 2.13                     | 0.56              |
| 46:BY:6:LYS:CA    | 46:BY:37:VAL:HG13 | 2.36                     | 0.56              |
| 46:BY:77:ASP:H    | 46:BY:83:PRO:HA   | 1.70                     | 0.56              |
| 46:BY:110:GLY:HA2 | 46:BY:144:LEU:O   | 2.06                     | 0.56              |
| 50:B3:13:ARG:O    | 50:B3:14:ILE:CG1  | 2.50                     | 0.56              |
| 52:B5:17:LYS:HZ3  | 52:B5:50:ARG:CA   | 2.19                     | 0.56              |
| 1:AA:46:G:H1'     | 1:AA:396:G:N2     | 2.21                     | 0.56              |
| 1:AA:164:U:H2'    | 1:AA:165:C:C6     | 2.39                     | 0.56              |
| 1:AA:186:C:O2'    | 22:AW:85:MET:SD   | 2.56                     | 0.56              |
| 1:AA:186(C):G:O2' | 1:AA:186(D):C:H5' | 2.05                     | 0.56              |
| 1:AA:237:C:H2'    | 1:AA:238:G:H8     | 1.71                     | 0.56              |
| 1:AA:308:C:C2'    | 1:AA:309:G:O5'    | 2.53                     | 0.56              |
| 1:AA:564:C:N3     | 19:AT:31:LEU:HD11 | 2.20                     | 0.56              |
| 1:AA:595:G:H8     | 1:AA:641:U:C4     | 2.19                     | 0.56              |
| 1:AA:750:G:H1'    | 17:AR:22:THR:C    | 2.31                     | 0.56              |
| 1:AA:809:G:O2'    | 1:AA:810:C:H5'    | 2.05                     | 0.56              |
| 1:AA:977:A:H4'    | 1:AA:982:U:O4     | 2.06                     | 0.56              |
| 1:AA:1117:G:OP1   | 11:AL:104:ARG:NH1 | 2.38                     | 0.56              |
| 1:AA:1157:A:H4'   | 1:AA:1158:C:C2    | 2.41                     | 0.56              |
| 3:AC:4:C:O2'      | 3:AC:5:G:H5'      | 2.05                     | 0.56              |
| 3:AC:19:G:H5''    | 3:AC:20:U:C4      | 2.40                     | 0.56              |
| 3:AC:44:G:O2'     | 3:AC:45:U:H5'     | 2.06                     | 0.56              |
| 3:AD:56:C:H2'     | 3:AD:57:G:O4'     | 2.04                     | 0.56              |
| 4:AE:16:HIS:NE2   | 4:AE:213:LEU:HB3  | 2.21                     | 0.56              |
| 4:AE:23:ARG:HH11  | 4:AE:24:TRP:H     | 1.49                     | 0.56              |
| 4:AE:52:GLU:CD    | 4:AE:53:ARG:H     | 2.13                     | 0.56              |
| 4:AE:157:ARG:O    | 4:AE:158:LEU:HG   | 2.05                     | 0.56              |
| 4:AE:171:ALA:CA   | 4:AE:174:VAL:HB   | 2.36                     | 0.56              |
| 5:AF:40:ARG:HA    | 5:AF:43:LEU:CD1   | 2.33                     | 0.56              |
| 6:AG:15:GLU:HB3   | 6:AG:19:LEU:HD11  | 1.88                     | 0.56              |
| 7:AH:33:VAL:CG2   | 7:AH:43:LEU:HD12  | 2.32                     | 0.56              |
| 8:AI:37:VAL:HA    | 8:AI:65:VAL:HB    | 1.88                     | 0.56              |
| 8:AI:53:ALA:CB    | 8:AI:86:ARG:HH11  | 2.18                     | 0.56              |
| 9:AJ:57:GLU:O     | 9:AJ:61:VAL:HG23  | 2.06                     | 0.56              |
| 9:AJ:110:GLN:O    | 9:AJ:111:ARG:O    | 2.24                     | 0.56              |
| 11:AL:50:LEU:HD21 | 11:AL:55:ALA:C    | 2.31                     | 0.56              |
| 11:AL:106:ALA:C   | 11:AL:107:ARG:HG3 | 2.29                     | 0.56              |
| 11:AL:111:ARG:HG2 | 11:AL:112:LYS:O   | 2.05                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 12:AM:32:ALA:O      | 12:AM:33:GLN:HB2   | 2.05                     | 0.56              |
| 13:AN:23:ALA:CB     | 13:AN:28:THR:HG23  | 2.35                     | 0.56              |
| 14:AO:23:LYS:O      | 14:AO:24:VAL:HG23  | 2.05                     | 0.56              |
| 14:AO:97:ARG:HB3    | 14:AO:98:TYR:CD1   | 2.41                     | 0.56              |
| 14:AO:115:LYS:O     | 14:AO:116:SER:C    | 2.49                     | 0.56              |
| 15:AP:48:LEU:HD22   | 15:AP:53:VAL:CG2   | 2.31                     | 0.56              |
| 15:AP:120:LYS:O     | 15:AP:121:LYS:CB   | 2.54                     | 0.56              |
| 18:AS:73:LEU:C      | 18:AS:73:LEU:CD1   | 2.76                     | 0.56              |
| 19:AT:3:LYS:HE3     | 19:AT:62:SER:O     | 2.06                     | 0.56              |
| 19:AT:51:TYR:O      | 19:AT:52:LYS:HG3   | 2.06                     | 0.56              |
| 19:AT:53:LEU:O      | 19:AT:82:MET:SD    | 2.63                     | 0.56              |
| 20:AU:30:ASP:OD2    | 20:AU:32:ARG:HB2   | 2.06                     | 0.56              |
| 20:AU:51:LEU:N      | 20:AU:51:LEU:HD12  | 2.21                     | 0.56              |
| 22:AW:16:HIS:O      | 22:AW:17:ARG:C     | 2.48                     | 0.56              |
| 22:AW:18:GLN:O      | 22:AW:19:SER:C     | 2.49                     | 0.56              |
| 22:AW:50:GLU:OE1    | 22:AW:100:ILE:HG12 | 2.05                     | 0.56              |
| 24:BA:140:A:H2      | 24:BA:1408:C:O2    | 1.88                     | 0.56              |
| 24:BA:221:A:C8      | 24:BA:221:A:C3'    | 2.89                     | 0.56              |
| 24:BA:221:A:C4'     | 24:BA:222:A:H5'    | 2.10                     | 0.56              |
| 24:BA:270:A:N6      | 24:BA:370:G:C8     | 2.73                     | 0.56              |
| 24:BA:270(K):C:H5'' | 24:BA:270(L):U:C6  | 2.41                     | 0.56              |
| 24:BA:281:G:C8      | 24:BA:281:G:OP1    | 2.59                     | 0.56              |
| 24:BA:285:C:H2'     | 24:BA:286:C:C6     | 2.39                     | 0.56              |
| 24:BA:643:A:O2'     | 24:BA:644:A:OP2    | 2.21                     | 0.56              |
| 24:BA:650:C:OP1     | 54:B7:19:SER:OG    | 2.21                     | 0.56              |
| 24:BA:772:C:H2'     | 24:BA:773:U:H6     | 1.71                     | 0.56              |
| 24:BA:803:U:O2'     | 24:BA:804:A:H5'    | 2.05                     | 0.56              |
| 24:BA:1024:G:C2     | 24:BA:1139:G:N2    | 2.74                     | 0.56              |
| 24:BA:1189:A:OP1    | 36:BO:29:LYS:HE3   | 2.05                     | 0.56              |
| 24:BA:1256:G:C4     | 24:BA:1257:C:C5    | 2.94                     | 0.56              |
| 24:BA:1257:C:C4     | 24:BA:1258:C:N4    | 2.74                     | 0.56              |
| 24:BA:1397:U:O2'    | 24:BA:1398:C:OP1   | 2.21                     | 0.56              |
| 24:BA:1455:G:H1'    | 24:BA:2853:C:OP1   | 2.06                     | 0.56              |
| 24:BA:1483:G:H1'    | 24:BA:1507:A:H2    | 1.66                     | 0.56              |
| 24:BA:1592:C:O2'    | 24:BA:1593:G:C5'   | 2.53                     | 0.56              |
| 24:BA:1669:A:N6     | 24:BA:1994:C:C2    | 2.73                     | 0.56              |
| 24:BA:1794:U:H5'    | 24:BA:1900:A:N6    | 2.21                     | 0.56              |
| 24:BA:1819:A:OP2    | 27:BD:157:ARG:NE   | 2.39                     | 0.56              |
| 24:BA:1838:C:H2'    | 24:BA:1898:U:C5    | 2.40                     | 0.56              |
| 24:BA:1937:A:O2'    | 24:BA:1938:A:OP1   | 2.23                     | 0.56              |
| 24:BA:1947:C:N3     | 24:BA:1948:G:C8    | 2.74                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1964:G:N1   | 24:BA:1967:C:C5    | 2.73                     | 0.56              |
| 24:BA:1993:U:N1   | 24:BA:1994:C:H5    | 2.04                     | 0.56              |
| 24:BA:1996:C:H2'  | 24:BA:1997:G:O5'   | 2.06                     | 0.56              |
| 24:BA:2052:G:C5   | 24:BA:2053:G:N7    | 2.74                     | 0.56              |
| 24:BA:2075:U:O2   | 24:BA:2075:U:C2'   | 2.53                     | 0.56              |
| 24:BA:2083:G:C4   | 24:BA:2084:C:C5    | 2.93                     | 0.56              |
| 24:BA:2345:G:C5   | 24:BA:2371:G:N2    | 2.73                     | 0.56              |
| 24:BA:2353:G:H1'  | 47:BZ:34:GLY:HA3   | 1.88                     | 0.56              |
| 24:BA:2383:G:N2   | 24:BA:2384:G:N3    | 2.53                     | 0.56              |
| 24:BA:2385:C:N3   | 24:BA:2386:C:C5    | 2.74                     | 0.56              |
| 24:BA:2559:C:O2'  | 24:BA:2560:C:C5'   | 2.53                     | 0.56              |
| 24:BA:2576:G:OP2  | 24:BA:2576:G:N2    | 2.39                     | 0.56              |
| 24:BA:2636:U:O3'  | 28:BE:79:ARG:NH2   | 2.38                     | 0.56              |
| 24:BA:2827:C:O2'  | 24:BA:2828:C:H5'   | 2.05                     | 0.56              |
| 25:BB:77:U:O3'    | 46:BY:78:LYS:CE    | 2.47                     | 0.56              |
| 25:BB:109:G:N1    | 25:BB:110:G:C5     | 2.74                     | 0.56              |
| 26:BC:89:ALA:CA   | 26:BC:154:ARG:HG3  | 2.32                     | 0.56              |
| 26:BC:124:GLY:HA2 | 26:BC:137:LEU:HD21 | 1.86                     | 0.56              |
| 26:BC:127:LEU:HB3 | 26:BC:131:LEU:CD1  | 2.36                     | 0.56              |
| 27:BD:17:THR:O    | 27:BD:17:THR:HG22  | 2.05                     | 0.56              |
| 27:BD:132:PRO:HA  | 27:BD:189:CYS:O    | 2.06                     | 0.56              |
| 28:BE:47:VAL:HA   | 28:BE:48:GLN:NE2   | 2.21                     | 0.56              |
| 28:BE:94:GLU:O    | 28:BE:96:PHE:N     | 2.39                     | 0.56              |
| 28:BE:199:ARG:O   | 28:BE:200:GLU:CD   | 2.48                     | 0.56              |
| 29:BF:52:LYS:O    | 29:BF:53:THR:CG2   | 2.53                     | 0.56              |
| 30:BG:86:MET:H    | 30:BG:87:PRO:HD3   | 1.71                     | 0.56              |
| 32:BK:3:VAL:O     | 32:BK:18:VAL:HG13  | 2.05                     | 0.56              |
| 33:BL:32:ALA:HA   | 33:BL:37:PHE:HE1   | 1.70                     | 0.56              |
| 34:BM:74:ARG:NE   | 34:BM:82:LEU:HD11  | 2.20                     | 0.56              |
| 35:BN:3:GLN:OE1   | 35:BN:6:THR:HG21   | 2.05                     | 0.56              |
| 35:BN:76:ALA:HB1  | 35:BN:78:ARG:HH22  | 1.70                     | 0.56              |
| 37:BP:6:ARG:O     | 37:BP:7:MET:HG2    | 2.05                     | 0.56              |
| 37:BP:98:LYS:CE   | 37:BP:98:LYS:N     | 2.68                     | 0.56              |
| 38:BQ:34:ILE:HG22 | 38:BQ:35:THR:N     | 2.20                     | 0.56              |
| 38:BQ:61:HIS:HA   | 38:BQ:64:ARG:CD    | 2.35                     | 0.56              |
| 39:BR:26:LEU:H    | 39:BR:88:ASP:HB2   | 1.71                     | 0.56              |
| 39:BR:56:LEU:CD1  | 39:BR:59:LYS:HD2   | 2.36                     | 0.56              |
| 41:BT:10:ARG:O    | 41:BT:11:ARG:C     | 2.46                     | 0.56              |
| 41:BT:13:LYS:H    | 41:BT:13:LYS:CD    | 2.08                     | 0.56              |
| 42:BU:5:VAL:HG11  | 42:BU:37:VAL:HG22  | 1.87                     | 0.56              |
| 42:BU:74:LYS:C    | 42:BU:75:PHE:CD1   | 2.83                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 43:BV:14:PRO:CD    | 43:BV:99:ARG:HG3   | 2.35                     | 0.56              |
| 43:BV:16:LYS:HZ2   | 43:BV:16:LYS:H     | 1.44                     | 0.56              |
| 43:BV:34:ASN:ND2   | 43:BV:37:ARG:NH1   | 2.53                     | 0.56              |
| 43:BV:88:ARG:HA    | 43:BV:88:ARG:HE    | 1.70                     | 0.56              |
| 45:BX:26:LYS:HB2   | 45:BX:38:ILE:CD1   | 2.32                     | 0.56              |
| 45:BX:47:LYS:CE    | 45:BX:49:VAL:HG11  | 2.35                     | 0.56              |
| 46:BY:60:GLU:OE2   | 46:BY:67:LEU:O     | 2.24                     | 0.56              |
| 46:BY:100:VAL:HG12 | 46:BY:133:ILE:HB   | 1.86                     | 0.56              |
| 46:BY:102:LEU:HD21 | 46:BY:125:LEU:HD12 | 1.87                     | 0.56              |
| 49:B2:45:GLY:HA2   | 49:B2:48:GLU:OE1   | 2.05                     | 0.56              |
| 50:B3:44:THR:CG2   | 50:B3:45:GLY:N     | 2.69                     | 0.56              |
| 52:B5:25:LYS:O     | 52:B5:26:ASN:HB2   | 2.04                     | 0.56              |
| 54:B7:1:MET:H2     | 54:B7:2:PRO:HD2    | 1.68                     | 0.56              |
| 54:B7:16:ILE:CG2   | 54:B7:21:LYS:O     | 2.54                     | 0.56              |
| 1:AA:254:G:OP1     | 19:AT:67:LYS:O     | 2.23                     | 0.56              |
| 1:AA:295:C:O2      | 1:AA:296:U:O4'     | 2.24                     | 0.56              |
| 1:AA:392:G:H5'     | 18:AS:12:LYS:HZ3   | 1.70                     | 0.56              |
| 1:AA:581:G:O3'     | 17:AR:64:ARG:NH2   | 2.38                     | 0.56              |
| 1:AA:872:A:C5      | 1:AA:874:G:N7      | 2.73                     | 0.56              |
| 1:AA:962:C:O2'     | 1:AA:1200:C:C5     | 2.57                     | 0.56              |
| 1:AA:1443:G:O5'    | 1:AA:1446:A:OP1    | 2.23                     | 0.56              |
| 3:AC:31:A:OP1      | 11:AL:127:LYS:HE3  | 2.04                     | 0.56              |
| 3:AD:67:C:O2'      | 3:AD:68:C:H5'      | 2.05                     | 0.56              |
| 4:AE:134:GLU:HB3   | 4:AE:135:GLN:NE2   | 2.21                     | 0.56              |
| 4:AE:139:LYS:CG    | 4:AE:140:HIS:N     | 2.64                     | 0.56              |
| 5:AF:139:GLN:O     | 5:AF:143:GLU:HG3   | 2.05                     | 0.56              |
| 6:AG:11:LEU:HA     | 6:AG:14:ARG:CB     | 2.32                     | 0.56              |
| 6:AG:31:CYS:C      | 6:AG:33:MET:H      | 2.12                     | 0.56              |
| 6:AG:58:LEU:HD22   | 6:AG:62:GLN:HG2    | 1.88                     | 0.56              |
| 7:AH:79:GLU:HA     | 7:AH:91:LEU:CD2    | 2.35                     | 0.56              |
| 7:AH:109:ILE:HD11  | 7:AH:139:LEU:CD1   | 2.35                     | 0.56              |
| 9:AJ:47:CYS:SG     | 9:AJ:50:ILE:HD12   | 2.46                     | 0.56              |
| 9:AJ:116:ALA:O     | 9:AJ:120:ILE:HG13  | 2.05                     | 0.56              |
| 10:AK:98:LYS:HZ2   | 10:AK:98:LYS:CA    | 2.18                     | 0.56              |
| 10:AK:102:ARG:HD3  | 10:AK:105:ARG:NH1  | 2.21                     | 0.56              |
| 11:AL:15:ALA:HB3   | 11:AL:77:ILE:N     | 2.19                     | 0.56              |
| 11:AL:17:VAL:HG21  | 11:AL:77:ILE:O     | 2.05                     | 0.56              |
| 14:AO:18:VAL:O     | 14:AO:19:ARG:HB2   | 2.06                     | 0.56              |
| 14:AO:27:LEU:CD2   | 14:AO:33:ARG:HH11  | 2.19                     | 0.56              |
| 14:AO:85:ILE:HG13  | 14:AO:99:HIS:O     | 2.05                     | 0.56              |
| 16:AQ:10:ALA:O     | 16:AQ:12:ARG:HG2   | 2.05                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 17:AR:76:GLU:O     | 17:AR:77:ARG:C     | 2.49                     | 0.56              |
| 20:AU:58:LEU:HB2   | 20:AU:63:GLN:OE1   | 2.04                     | 0.56              |
| 22:AW:86:ARG:HG2   | 22:AW:87:LYS:N     | 2.21                     | 0.56              |
| 24:BA:308:G:N1     | 24:BA:309:G:N3     | 2.53                     | 0.56              |
| 24:BA:543:C:H2'    | 24:BA:544:C:H5     | 1.70                     | 0.56              |
| 24:BA:547:A:N6     | 24:BA:548:A:C6     | 2.74                     | 0.56              |
| 24:BA:572:A:C2     | 24:BA:2033:A:C2    | 2.92                     | 0.56              |
| 24:BA:740:U:O4'    | 24:BA:1784:A:C5    | 2.58                     | 0.56              |
| 24:BA:786:C:H5''   | 24:BA:1780:A:C8    | 2.41                     | 0.56              |
| 24:BA:947:G:O5'    | 24:BA:947:G:C8     | 2.54                     | 0.56              |
| 24:BA:948:G:O4'    | 24:BA:984:A:C2     | 2.58                     | 0.56              |
| 24:BA:950:G:C4     | 24:BA:951:C:C5     | 2.94                     | 0.56              |
| 24:BA:972:G:C5     | 24:BA:973:A:C8     | 2.94                     | 0.56              |
| 24:BA:1113:U:O5'   | 24:BA:1113:U:C6    | 2.55                     | 0.56              |
| 24:BA:1188:U:H2'   | 24:BA:1189:A:H5'   | 1.88                     | 0.56              |
| 24:BA:1285:G:C8    | 24:BA:1285:G:O5'   | 2.59                     | 0.56              |
| 24:BA:1374:G:C6    | 24:BA:1375:C:C4    | 2.94                     | 0.56              |
| 24:BA:1790:C:H2'   | 24:BA:1790:C:O2    | 2.05                     | 0.56              |
| 24:BA:2018:G:H1'   | 41:BT:34:LYS:HZ1   | 1.68                     | 0.56              |
| 24:BA:2327:A:O2'   | 24:BA:2328:A:O4'   | 2.18                     | 0.56              |
| 24:BA:2387:U:C1'   | 47:BZ:41:ARG:CZ    | 2.83                     | 0.56              |
| 24:BA:2412:A:H2'   | 24:BA:2413:G:O4'   | 2.06                     | 0.56              |
| 24:BA:2447:G:C4    | 24:BA:2500:U:C5    | 2.94                     | 0.56              |
| 24:BA:2460:U:H3'   | 24:BA:2461:C:C5    | 2.41                     | 0.56              |
| 24:BA:2500:U:H4'   | 24:BA:2501:C:OP2   | 2.02                     | 0.56              |
| 24:BA:2615:U:H2'   | 24:BA:2616:C:C6    | 2.39                     | 0.56              |
| 24:BA:2694:G:O6    | 24:BA:2695:C:N4    | 2.38                     | 0.56              |
| 24:BA:2718:G:C4    | 24:BA:2719:G:C8    | 2.94                     | 0.56              |
| 24:BA:2764:A:OP1   | 24:BA:2764:A:C4'   | 2.48                     | 0.56              |
| 25:BB:80:U:O2'     | 25:BB:81:G:H8      | 1.89                     | 0.56              |
| 25:BB:80:U:C2'     | 25:BB:81:G:H8      | 2.19                     | 0.56              |
| 26:BC:10:LEU:HD13  | 26:BC:13:LYS:HD2   | 1.86                     | 0.56              |
| 26:BC:122:ALA:HB1  | 26:BC:126:LYS:CD   | 2.27                     | 0.56              |
| 27:BD:8:PRO:HD2    | 27:BD:26:LYS:H     | 1.71                     | 0.56              |
| 27:BD:78:LYS:HE2   | 27:BD:114:GLY:O    | 2.06                     | 0.56              |
| 28:BE:165:VAL:HG12 | 28:BE:166:THR:N    | 2.17                     | 0.56              |
| 29:BF:122:LYS:HZ1  | 29:BF:192:LEU:HB3  | 1.70                     | 0.56              |
| 30:BG:162:THR:O    | 30:BG:162:THR:HG22 | 2.06                     | 0.56              |
| 32:BK:24:GLY:O     | 32:BK:27:ARG:HB3   | 2.06                     | 0.56              |
| 34:BM:34:LEU:HD21  | 34:BM:120:LEU:HD13 | 1.87                     | 0.56              |
| 34:BM:34:LEU:HB3   | 34:BM:116:LEU:CD2  | 2.36                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 35:BN:94:ARG:CG    | 35:BN:96:THR:N    | 2.67                     | 0.56              |
| 36:BO:114:ILE:HD11 | 36:BO:123:LEU:HG  | 1.86                     | 0.56              |
| 37:BP:6:ARG:NH2    | 37:BP:8:LYS:C     | 2.64                     | 0.56              |
| 37:BP:36:ALA:HB1   | 37:BP:39:PRO:HG2  | 1.87                     | 0.56              |
| 39:BR:42:ASP:C     | 39:BR:44:LYS:N    | 2.59                     | 0.56              |
| 40:BS:92:GLY:C     | 40:BS:93:ARG:NE   | 2.63                     | 0.56              |
| 42:BU:35:LEU:O     | 42:BU:61:VAL:CA   | 2.53                     | 0.56              |
| 43:BV:6:ILE:CG2    | 43:BV:7:ALA:N     | 2.68                     | 0.56              |
| 44:BW:65:ARG:HA    | 44:BW:70:LEU:CD1  | 2.36                     | 0.56              |
| 45:BX:29:GLU:OE1   | 45:BX:34:LYS:HB2  | 2.05                     | 0.56              |
| 46:BY:29:TYR:CD2   | 46:BY:72:ARG:NH1  | 2.74                     | 0.56              |
| 47:BZ:57:PHE:N     | 47:BZ:57:PHE:CD1  | 2.73                     | 0.56              |
| 47:BZ:76:GLY:C     | 47:BZ:78:TYR:HE1  | 2.14                     | 0.56              |
| 1:AA:124:G:C2'     | 1:AA:125:U:O4'    | 2.54                     | 0.56              |
| 1:AA:182:U:H2'     | 1:AA:182:U:O2     | 2.06                     | 0.56              |
| 1:AA:324:G:N2      | 1:AA:327:A:OP2    | 2.39                     | 0.56              |
| 1:AA:519:C:C5      | 1:AA:520:A:N3     | 2.74                     | 0.56              |
| 1:AA:562:C:O2'     | 14:AO:15:ARG:CB   | 2.53                     | 0.56              |
| 1:AA:640:A:H2'     | 1:AA:641:U:C5'    | 2.36                     | 0.56              |
| 1:AA:794:A:C6      | 1:AA:795:C:N4     | 2.74                     | 0.56              |
| 1:AA:794:A:H4'     | 1:AA:1521:G:HO2'  | 1.70                     | 0.56              |
| 1:AA:815:A:C8      | 1:AA:819:A:H2     | 2.24                     | 0.56              |
| 1:AA:961:U:C6      | 1:AA:983:A:N1     | 2.74                     | 0.56              |
| 1:AA:1113:C:N3     | 1:AA:1114:C:C5    | 2.73                     | 0.56              |
| 1:AA:1228:C:P      | 15:AP:115:LYS:HB3 | 2.46                     | 0.56              |
| 1:AA:1278:U:H5'    | 1:AA:1279:A:C4'   | 2.35                     | 0.56              |
| 1:AA:1446:A:O2'    | 1:AA:1447:G:P     | 2.63                     | 0.56              |
| 1:AA:1516:G:H22    | 1:AA:1518:A:C3'   | 2.15                     | 0.56              |
| 3:AD:41:C:H6       | 3:AD:41:C:C5'     | 2.18                     | 0.56              |
| 3:AD:76:A:C4       | 24:BA:2432:A:C1'  | 2.89                     | 0.56              |
| 3:AB:74:C:N4       | 24:BA:2555:U:C2'  | 2.55                     | 0.56              |
| 4:AE:69:LEU:O      | 4:AE:162:ILE:HB   | 2.06                     | 0.56              |
| 4:AE:101:MET:O     | 4:AE:103:THR:N    | 2.39                     | 0.56              |
| 4:AE:169:LYS:C     | 4:AE:171:ALA:N    | 2.62                     | 0.56              |
| 4:AE:221:LEU:C     | 4:AE:221:LEU:CD1  | 2.75                     | 0.56              |
| 5:AF:8:ILE:HD11    | 5:AF:16:ARG:HD2   | 1.88                     | 0.56              |
| 6:AG:93:PHE:O      | 6:AG:96:LEU:N     | 2.39                     | 0.56              |
| 7:AH:9:LYS:CB      | 7:AH:33:VAL:HB    | 2.30                     | 0.56              |
| 9:AJ:26:PHE:HD2    | 9:AJ:43:PHE:HE1   | 1.52                     | 0.56              |
| 9:AJ:132:GLY:O     | 9:AJ:136:LYS:HB2  | 2.06                     | 0.56              |
| 11:AL:78:LYS:HD3   | 11:AL:79:LEU:HD22 | 1.87                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 12:AM:32:ALA:HB2  | 12:AM:75:ILE:O    | 2.05                     | 0.56              |
| 12:AM:34:VAL:HG22 | 12:AM:74:ILE:CD1  | 2.36                     | 0.56              |
| 14:AO:76:ASN:HD22 | 14:AO:77:LEU:HD23 | 1.69                     | 0.56              |
| 14:AO:84:LEU:HD23 | 14:AO:85:ILE:N    | 2.20                     | 0.56              |
| 15:AP:71:ARG:O    | 15:AP:73:GLU:N    | 2.39                     | 0.56              |
| 19:AT:40:LYS:NZ   | 19:AT:42:TYR:CE1  | 2.74                     | 0.56              |
| 24:BA:61:G:H2'    | 24:BA:62:C:H6     | 1.70                     | 0.56              |
| 24:BA:270(J):G:C6 | 24:BA:270(K):C:C4 | 2.93                     | 0.56              |
| 24:BA:460:A:C6    | 24:BA:470:A:C8    | 2.94                     | 0.56              |
| 24:BA:461:C:N4    | 24:BA:469:G:N2    | 2.54                     | 0.56              |
| 24:BA:472:A:C2'   | 24:BA:473:G:C5'   | 2.75                     | 0.56              |
| 24:BA:582:G:C6    | 24:BA:1259:G:C6   | 2.94                     | 0.56              |
| 24:BA:665:C:OP2   | 24:BA:665:C:C6    | 2.58                     | 0.56              |
| 24:BA:730:C:H5''  | 24:BA:763:G:OP1   | 2.05                     | 0.56              |
| 24:BA:977:G:C5    | 24:BA:987:G:C2    | 2.94                     | 0.56              |
| 24:BA:1045:A:OP1  | 24:BA:1111:A:H2   | 1.87                     | 0.56              |
| 24:BA:1178:C:N3   | 24:BA:1179:C:C4   | 2.74                     | 0.56              |
| 24:BA:1525:G:C4   | 24:BA:1526:G:C8   | 2.94                     | 0.56              |
| 24:BA:1578:U:H3'  | 24:BA:1580:A:C2   | 2.41                     | 0.56              |
| 24:BA:1676:A:C8   | 24:BA:1677:A:N7   | 2.73                     | 0.56              |
| 24:BA:1762:A:H8   | 24:BA:1762:A:C3'  | 2.09                     | 0.56              |
| 24:BA:1840:G:O2'  | 24:BA:1841:U:H5'  | 2.05                     | 0.56              |
| 24:BA:1882:C:H2'  | 24:BA:1883:G:C4'  | 2.35                     | 0.56              |
| 24:BA:1902:C:H2'  | 24:BA:1903:G:C5'  | 2.36                     | 0.56              |
| 24:BA:2067:G:C6   | 24:BA:2069:G:C5   | 2.94                     | 0.56              |
| 24:BA:2210:G:O6   | 27:BD:150:LYS:N   | 2.39                     | 0.56              |
| 24:BA:2215:G:P    | 24:BA:2215:G:H8   | 2.29                     | 0.56              |
| 24:BA:2315:G:H4'  | 30:BG:130:ASN:OD1 | 2.06                     | 0.56              |
| 24:BA:2332:U:O4'  | 24:BA:2336:A:N6   | 2.37                     | 0.56              |
| 24:BA:2371:G:C2'  | 24:BA:2372:G:O4'  | 2.53                     | 0.56              |
| 24:BA:2423:U:C1'  | 24:BA:2425:A:C4   | 2.89                     | 0.56              |
| 24:BA:2453:A:N6   | 24:BA:2500:U:H3   | 2.01                     | 0.56              |
| 24:BA:2466:C:O2'  | 37:BP:123:HIS:NE2 | 2.35                     | 0.56              |
| 24:BA:2501:C:H5'' | 24:BA:2502:G:H5'' | 1.88                     | 0.56              |
| 24:BA:2527:C:H2'  | 24:BA:2528:U:C6   | 2.40                     | 0.56              |
| 24:BA:2572:A:OP1  | 24:BA:2574:G:H4'  | 2.06                     | 0.56              |
| 24:BA:2653:U:C3'  | 24:BA:2654:A:H8   | 2.19                     | 0.56              |
| 24:BA:2713:A:P    | 24:BA:2713:A:H8   | 2.29                     | 0.56              |
| 24:BA:2723:C:C4   | 24:BA:2724:C:C5   | 2.93                     | 0.56              |
| 24:BA:2762:G:N7   | 24:BA:2763:G:N7   | 2.53                     | 0.56              |
| 24:BA:2781:A:C3'  | 24:BA:2782:G:H4'  | 2.35                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2797:U:OP1   | 24:BA:2797:U:O4'   | 2.24                     | 0.56              |
| 24:BA:2859:G:H2'   | 24:BA:2860:A:C8    | 2.40                     | 0.56              |
| 24:BA:2884:U:H3    | 51:B4:40:LYS:HZ3   | 1.53                     | 0.56              |
| 25:BB:64:C:O2'     | 25:BB:65:C:H5'     | 2.04                     | 0.56              |
| 26:BC:7:TYR:CE2    | 26:BC:11:LEU:HD22  | 2.41                     | 0.56              |
| 26:BC:22:ILE:HG23  | 26:BC:189:ILE:HG21 | 1.88                     | 0.56              |
| 26:BC:141:LYS:HG3  | 26:BC:141:LYS:O    | 2.05                     | 0.56              |
| 27:BD:172:TYR:HD2  | 27:BD:185:VAL:C    | 2.13                     | 0.56              |
| 27:BD:172:TYR:HD2  | 27:BD:186:HIS:N    | 2.03                     | 0.56              |
| 28:BE:59:VAL:CG1   | 28:BE:62:PRO:HD2   | 2.36                     | 0.56              |
| 29:BF:148:LEU:N    | 29:BF:148:LEU:HD22 | 2.21                     | 0.56              |
| 29:BF:200:GLU:O    | 29:BF:201:VAL:C    | 2.49                     | 0.56              |
| 30:BG:1:MET:HB3    | 30:BG:2:PRO:HD3    | 1.88                     | 0.56              |
| 30:BG:6:ALA:CA     | 30:BG:9:ARG:HH21   | 2.18                     | 0.56              |
| 30:BG:8:LYS:HB2    | 30:BG:104:GLU:HB2  | 1.87                     | 0.56              |
| 30:BG:45:GLU:C     | 30:BG:47:LYS:N     | 2.58                     | 0.56              |
| 30:BG:149:VAL:HG13 | 30:BG:150:ASP:N    | 2.21                     | 0.56              |
| 31:BH:28:GLY:HA3   | 31:BH:79:VAL:CB    | 2.33                     | 0.56              |
| 31:BH:51:ARG:HD3   | 31:BH:52:VAL:H     | 1.70                     | 0.56              |
| 31:BH:103:LEU:N    | 31:BH:115:VAL:HG12 | 2.21                     | 0.56              |
| 31:BH:157:TYR:CD1  | 31:BH:158:HIS:HB2  | 2.41                     | 0.56              |
| 32:BK:33:ARG:CB    | 32:BK:35:LEU:CD2   | 2.83                     | 0.56              |
| 33:BL:34:ILE:O     | 33:BL:38:VAL:HB    | 2.06                     | 0.56              |
| 33:BL:57:ILE:HA    | 33:BL:67:PHE:HB2   | 1.88                     | 0.56              |
| 34:BM:56:ASN:O     | 34:BM:57:ALA:C     | 2.46                     | 0.56              |
| 34:BM:87:LEU:HA    | 34:BM:90:MET:CB    | 2.36                     | 0.56              |
| 36:BO:51:PHE:O     | 36:BO:55:ARG:CG    | 2.54                     | 0.56              |
| 36:BO:91:PHE:O     | 36:BO:95:VAL:CB    | 2.52                     | 0.56              |
| 37:BP:8:LYS:NZ     | 37:BP:11:LYS:NZ    | 2.51                     | 0.56              |
| 38:BQ:54:LEU:HA    | 38:BQ:57:ARG:CG    | 2.34                     | 0.56              |
| 38:BQ:87:TYR:O     | 38:BQ:89:ASP:CG    | 2.48                     | 0.56              |
| 39:BR:24:LEU:H     | 39:BR:86:ALA:HB2   | 1.70                     | 0.56              |
| 42:BU:40:LEU:HA    | 42:BU:54:GLY:CA    | 2.27                     | 0.56              |
| 44:BW:39:ILE:O     | 44:BW:43:VAL:HG23  | 2.06                     | 0.56              |
| 44:BW:42:ALA:O     | 44:BW:46:ALA:CB    | 2.54                     | 0.56              |
| 46:BY:9:TYR:C      | 46:BY:10:ARG:HG3   | 2.30                     | 0.56              |
| 46:BY:24:LEU:CD2   | 46:BY:25:PRO:HD2   | 2.34                     | 0.56              |
| 46:BY:122:ARG:HG2  | 46:BY:171:ILE:CA   | 2.34                     | 0.56              |
| 48:B1:54:ARG:HH21  | 48:B1:54:ARG:CG    | 2.18                     | 0.56              |
| 50:B3:7:PRO:CD     | 50:B3:56:VAL:CG1   | 2.80                     | 0.56              |
| 50:B3:29:PRO:O     | 50:B3:31:ILE:N     | 2.39                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 50:B3:29:PRO:O    | 50:B3:31:ILE:HG23 | 2.06                     | 0.56              |
| 51:B4:17:ASP:C    | 51:B4:19:ARG:N    | 2.63                     | 0.56              |
| 54:B7:40:GLU:C    | 54:B7:42:ARG:H    | 2.14                     | 0.56              |
| 54:B7:43:GLN:N    | 54:B7:43:GLN:CD   | 2.64                     | 0.56              |
| 1:AA:190:G:HO2'   | 1:AA:191(A):G:P   | 2.28                     | 0.56              |
| 1:AA:283:C:O2     | 1:AA:283:C:C2'    | 2.51                     | 0.56              |
| 1:AA:300:A:C2     | 1:AA:566:G:O6     | 2.59                     | 0.56              |
| 1:AA:366:C:O2'    | 1:AA:394:G:N2     | 2.39                     | 0.56              |
| 1:AA:577:G:N2     | 1:AA:578:C:H1'    | 2.19                     | 0.56              |
| 1:AA:577:G:H1'    | 1:AA:816:A:C2     | 2.41                     | 0.56              |
| 1:AA:944:G:C3'    | 1:AA:945:G:C5'    | 2.82                     | 0.56              |
| 1:AA:944:G:N2     | 1:AA:1339:A:H62   | 1.86                     | 0.56              |
| 1:AA:962:C:O2'    | 1:AA:963:G:H5'    | 2.05                     | 0.56              |
| 1:AA:974:A:H8     | 1:AA:974:A:OP1    | 1.88                     | 0.56              |
| 1:AA:1125:U:H4'   | 1:AA:1126:U:H5    | 1.71                     | 0.56              |
| 1:AA:1251:A:C2'   | 1:AA:1252:A:C8    | 2.88                     | 0.56              |
| 2:A1:37:U:H5''    | 2:A1:38:U:OP1     | 2.06                     | 0.56              |
| 2:A1:38:U:OP2     | 2:A1:38:U:C6      | 2.58                     | 0.56              |
| 4:AE:15:VAL:C     | 4:AE:16:HIS:HD1   | 2.13                     | 0.56              |
| 4:AE:20:GLU:OE1   | 4:AE:20:GLU:N     | 2.38                     | 0.56              |
| 4:AE:189:ASP:HB2  | 4:AE:205:ASP:CB   | 2.36                     | 0.56              |
| 5:AF:117:ALA:O    | 5:AF:118:GLN:C    | 2.49                     | 0.56              |
| 5:AF:183:ASP:OD2  | 5:AF:183:ASP:C    | 2.47                     | 0.56              |
| 6:AG:34:GLU:O     | 6:AG:35:ARG:CB    | 2.54                     | 0.56              |
| 6:AG:144:ASP:HA   | 6:AG:184:LYS:HZ2  | 1.71                     | 0.56              |
| 6:AG:162:LEU:O    | 6:AG:166:LYS:HG2  | 2.05                     | 0.56              |
| 6:AG:192:GLU:H    | 6:AG:192:GLU:CD   | 2.11                     | 0.56              |
| 7:AH:106:PRO:O    | 7:AH:109:ILE:CG2  | 2.54                     | 0.56              |
| 8:AI:23:LYS:HA    | 8:AI:26:ILE:CG1   | 2.35                     | 0.56              |
| 9:AJ:18:TYR:O     | 9:AJ:19:GLY:C     | 2.49                     | 0.56              |
| 10:AK:14:ARG:HD2  | 10:AK:15:ASN:ND2  | 2.21                     | 0.56              |
| 10:AK:44:PHE:HD1  | 10:AK:79:VAL:HG12 | 1.71                     | 0.56              |
| 11:AL:49:PRO:HD3  | 11:AL:78:LYS:CG   | 2.33                     | 0.56              |
| 11:AL:99:LEU:N    | 11:AL:99:LEU:HD22 | 2.20                     | 0.56              |
| 11:AL:111:ARG:HG2 | 11:AL:112:LYS:N   | 2.21                     | 0.56              |
| 13:AN:31:THR:OG1  | 13:AN:42:TRP:HB3  | 2.05                     | 0.56              |
| 13:AN:80:VAL:CG2  | 13:AN:81:ASP:N    | 2.69                     | 0.56              |
| 14:AO:27:LEU:HD21 | 14:AO:33:ARG:HH11 | 1.70                     | 0.56              |
| 14:AO:126:LYS:HZ2 | 14:AO:128:ALA:H   | 1.52                     | 0.56              |
| 16:AQ:11:LYS:O    | 16:AQ:13:THR:N    | 2.39                     | 0.56              |
| 16:AQ:13:THR:O    | 16:AQ:15:LYS:N    | 2.39                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 17:AR:66:LEU:HD23  | 17:AR:66:LEU:H     | 1.70                     | 0.56              |
| 18:AS:3:LYS:C      | 18:AS:4:ILE:HD13   | 2.30                     | 0.56              |
| 19:AT:56:VAL:C     | 19:AT:57:VAL:CG1   | 2.79                     | 0.56              |
| 21:AV:12:ASP:O     | 21:AV:15:LEU:HG    | 2.05                     | 0.56              |
| 22:AW:62:LEU:HD23  | 22:AW:65:LYS:HG3   | 1.87                     | 0.56              |
| 24:BA:64:A:C2      | 44:BW:66:LEU:HB2   | 2.41                     | 0.56              |
| 24:BA:92:G:H2'     | 24:BA:93:C:C6      | 2.40                     | 0.56              |
| 24:BA:184:C:O3'    | 24:BA:217:G:N2     | 2.38                     | 0.56              |
| 24:BA:216:A:C2     | 24:BA:217:G:C5     | 2.94                     | 0.56              |
| 24:BA:270(K):C:H3' | 24:BA:270(L):U:O4' | 2.06                     | 0.56              |
| 24:BA:273(B):C:H2' | 24:BA:273(C):C:H6  | 1.66                     | 0.56              |
| 24:BA:572:A:H61    | 24:BA:2029:G:H1'   | 1.71                     | 0.56              |
| 24:BA:671:C:H5'    | 24:BA:672:C:OP2    | 2.06                     | 0.56              |
| 24:BA:856:C:H1'    | 47:BZ:69:PHE:HE1   | 1.69                     | 0.56              |
| 24:BA:914:C:H5     | 24:BA:915:C:C5     | 2.24                     | 0.56              |
| 24:BA:919:G:N3     | 24:BA:920:G:C8     | 2.74                     | 0.56              |
| 24:BA:1024:G:OP2   | 24:BA:1025:G:N3    | 2.39                     | 0.56              |
| 24:BA:1174:A:N3    | 24:BA:1174:A:C2'   | 2.69                     | 0.56              |
| 24:BA:1366:A:N1    | 24:BA:1367:A:N3    | 2.54                     | 0.56              |
| 24:BA:1472:A:N7    | 24:BA:1474:C:C5    | 2.74                     | 0.56              |
| 24:BA:1527:G:C1'   | 24:BA:1528:A:N3    | 2.68                     | 0.56              |
| 24:BA:1530:G:H22   | 24:BA:1541:U:C2'   | 2.16                     | 0.56              |
| 24:BA:1609:A:N6    | 24:BA:1616:A:C2    | 2.74                     | 0.56              |
| 24:BA:1657:C:O2'   | 24:BA:1658:C:H5'   | 2.05                     | 0.56              |
| 24:BA:1664:A:C2'   | 24:BA:1665:A:H8    | 2.18                     | 0.56              |
| 24:BA:1762:A:C5'   | 24:BA:1763:G:OP2   | 2.53                     | 0.56              |
| 24:BA:1764:G:HO2'  | 24:BA:1765:C:H5'   | 1.71                     | 0.56              |
| 24:BA:1790:C:OP2   | 27:BD:221:VAL:O    | 2.22                     | 0.56              |
| 24:BA:1955:U:O3'   | 24:BA:1956:U:C5    | 2.58                     | 0.56              |
| 24:BA:1971:A:N3    | 27:BD:239:ARG:HA   | 2.20                     | 0.56              |
| 24:BA:1990:C:N3    | 24:BA:1991:U:N3    | 2.54                     | 0.56              |
| 24:BA:2261:C:H6    | 24:BA:2261:C:O5'   | 1.89                     | 0.56              |
| 24:BA:2324:C:O2    | 24:BA:2385:C:C5    | 2.58                     | 0.56              |
| 24:BA:2376:A:C2    | 24:BA:2377:A:C4    | 2.94                     | 0.56              |
| 24:BA:2428:G:C4'   | 24:BA:2429:G:O5'   | 2.54                     | 0.56              |
| 24:BA:2457:U:O2'   | 24:BA:2458:G:H5'   | 2.06                     | 0.56              |
| 24:BA:2531:A:O2'   | 24:BA:2532:G:H5'   | 2.05                     | 0.56              |
| 24:BA:2694:G:C5    | 24:BA:2695:C:C5    | 2.94                     | 0.56              |
| 24:BA:2734:A:N3    | 28:BE:203:LYS:HD2  | 2.21                     | 0.56              |
| 24:BA:2753:A:H2'   | 24:BA:2754:U:O5'   | 2.06                     | 0.56              |
| 24:BA:2845:G:O2'   | 24:BA:2846:G:O5'   | 2.23                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 25:BB:69:G:C5'     | 25:BB:70:C:OP2     | 2.54                     | 0.56              |
| 26:BC:93:TYR:CZ    | 26:BC:109:ASP:HB3  | 2.41                     | 0.56              |
| 26:BC:115:ALA:CB   | 26:BC:120:MET:SD   | 2.85                     | 0.56              |
| 26:BC:180:PHE:HB3  | 26:BC:185:LEU:CD2  | 2.20                     | 0.56              |
| 27:BD:64:ILE:O     | 27:BD:64:ILE:HG23  | 2.06                     | 0.56              |
| 27:BD:94:LEU:HD12  | 27:BD:95:LEU:N     | 2.21                     | 0.56              |
| 27:BD:175:LEU:HD22 | 27:BD:176:ARG:H    | 1.66                     | 0.56              |
| 28:BE:14:ILE:HG22  | 28:BE:19:ARG:CA    | 2.36                     | 0.56              |
| 28:BE:41:LYS:O     | 28:BE:44:TYR:N     | 2.39                     | 0.56              |
| 28:BE:49:LEU:HD13  | 28:BE:50:GLY:H     | 1.71                     | 0.56              |
| 28:BE:111:ARG:HB2  | 28:BE:161:GLY:CA   | 2.35                     | 0.56              |
| 29:BF:5:ALA:O      | 29:BF:20:LEU:HD22  | 2.04                     | 0.56              |
| 30:BG:19:LEU:HD12  | 30:BG:19:LEU:H     | 1.70                     | 0.56              |
| 30:BG:47:LYS:HE2   | 30:BG:73:ALA:CB    | 2.31                     | 0.56              |
| 30:BG:49:ASP:CA    | 30:BG:53:LEU:HD13  | 2.36                     | 0.56              |
| 30:BG:122:PRO:O    | 30:BG:123:ASN:C    | 2.48                     | 0.56              |
| 31:BH:15:VAL:HG21  | 31:BH:79:VAL:HG21  | 1.87                     | 0.56              |
| 31:BH:68:THR:O     | 31:BH:72:ILE:HG13  | 2.06                     | 0.56              |
| 33:BL:17:ALA:HB1   | 33:BL:38:VAL:CG1   | 2.24                     | 0.56              |
| 33:BL:20:ALA:O     | 33:BL:25:PRO:CD    | 2.53                     | 0.56              |
| 33:BL:104:VAL:HG22 | 33:BL:127:ILE:HG21 | 1.88                     | 0.56              |
| 34:BM:39:ARG:HB3   | 34:BM:48:MET:SD    | 2.46                     | 0.56              |
| 34:BM:99:LEU:CD2   | 34:BM:122:VAL:HG21 | 2.36                     | 0.56              |
| 34:BM:133:GLN:OE1  | 34:BM:133:GLN:HA   | 2.06                     | 0.56              |
| 35:BN:3:GLN:NE2    | 35:BN:33:ALA:CB    | 2.41                     | 0.56              |
| 36:BO:36:LYS:NZ    | 36:BO:42:SER:CB    | 2.68                     | 0.56              |
| 38:BQ:85:PRO:O     | 38:BQ:87:TYR:N     | 2.39                     | 0.56              |
| 39:BR:74:ALA:CB    | 39:BR:104:GLY:O    | 2.53                     | 0.56              |
| 39:BR:106:ARG:HH22 | 39:BR:110:LEU:CD1  | 2.16                     | 0.56              |
| 40:BS:7:ILE:CG1    | 40:BS:8:LYS:N      | 2.68                     | 0.56              |
| 41:BT:45:TYR:O     | 41:BT:49:HIS:ND1   | 2.39                     | 0.56              |
| 41:BT:108:GLU:OE1  | 41:BT:109:LEU:CG   | 2.51                     | 0.56              |
| 42:BU:6:LYS:HZ3    | 42:BU:10:LYS:HD2   | 1.69                     | 0.56              |
| 42:BU:13:ARG:O     | 42:BU:14:VAL:CG2   | 2.53                     | 0.56              |
| 42:BU:62:LEU:CD1   | 42:BU:96:ILE:HD13  | 2.35                     | 0.56              |
| 44:BW:7:VAL:CB     | 48:B1:28:MET:HG2   | 2.36                     | 0.56              |
| 45:BX:46:LYS:HD3   | 45:BX:52:SER:OG    | 2.05                     | 0.56              |
| 46:BY:114:GLY:H    | 46:BY:145:GLU:CD   | 2.14                     | 0.56              |
| 46:BY:116:VAL:HG12 | 46:BY:176:PRO:HA   | 1.86                     | 0.56              |
| 47:BZ:31:VAL:HG22  | 47:BZ:67:VAL:N     | 2.21                     | 0.56              |
| 47:BZ:46:LYS:HG3   | 47:BZ:78:TYR:CD2   | 2.39                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 50:B3:55:ARG:O     | 50:B3:61:ARG:NE   | 2.38                     | 0.56              |
| 50:B3:65:ASP:OD2   | 50:B3:69:LYS:HE3  | 2.05                     | 0.56              |
| 54:B7:23:VAL:HG13  | 54:B7:24:ALA:N    | 2.20                     | 0.56              |
| 1:AA:62:U:H1'      | 1:AA:379:C:H1'    | 1.87                     | 0.56              |
| 1:AA:151:A:N6      | 1:AA:152:A:C2     | 2.74                     | 0.56              |
| 1:AA:409:G:C5'     | 6:AG:24:GLU:OE1   | 2.54                     | 0.56              |
| 1:AA:435:C:C2'     | 1:AA:436:C:H5'    | 2.36                     | 0.56              |
| 1:AA:532:A:C5'     | 5:AF:161:GLU:OE1  | 2.54                     | 0.56              |
| 1:AA:597:G:O2'     | 1:AA:598:U:H5'    | 2.05                     | 0.56              |
| 1:AA:893:C:C2      | 1:AA:894:G:C8     | 2.94                     | 0.56              |
| 1:AA:962:C:H2'     | 1:AA:963:G:C8     | 2.41                     | 0.56              |
| 1:AA:1159:U:C5'    | 1:AA:1160:G:OP1   | 2.51                     | 0.56              |
| 1:AA:1238:A:N7     | 1:AA:1303:C:H1'   | 2.21                     | 0.56              |
| 1:AA:1261:A:C2     | 1:AA:1262:C:C2    | 2.93                     | 0.56              |
| 1:AA:1299:A:N6     | 1:AA:1301:U:C2    | 2.74                     | 0.56              |
| 1:AA:1362(A):C:H5' | 1:AA:1363:A:P     | 2.45                     | 0.56              |
| 1:AA:1429:C:O2'    | 1:AA:1430:C:O5'   | 2.23                     | 0.56              |
| 1:AA:1466:C:C3'    | 1:AA:1467:G:C8    | 2.89                     | 0.56              |
| 3:AB:59:U:C5       | 3:AB:60:U:C4      | 2.94                     | 0.56              |
| 4:AE:135:GLN:O     | 4:AE:139:LYS:HG2  | 2.06                     | 0.56              |
| 5:AF:84:ILE:HG13   | 5:AF:101:LEU:CD1  | 2.35                     | 0.56              |
| 5:AF:116:VAL:C     | 5:AF:119:ARG:HB3  | 2.30                     | 0.56              |
| 5:AF:131:ARG:HH12  | 7:AH:51:VAL:CG2   | 2.19                     | 0.56              |
| 6:AG:63:LYS:HD2    | 6:AG:63:LYS:N     | 2.21                     | 0.56              |
| 6:AG:200:GLU:HG3   | 6:AG:201:GLN:HE21 | 1.70                     | 0.56              |
| 7:AH:72:GLN:HG3    | 7:AH:77:PRO:HD3   | 1.88                     | 0.56              |
| 8:AI:76:ALA:HA     | 8:AI:79:LEU:HD12  | 1.88                     | 0.56              |
| 9:AJ:26:PHE:CD2    | 9:AJ:43:PHE:CE1   | 2.94                     | 0.56              |
| 9:AJ:75:VAL:HG12   | 9:AJ:76:ARG:N     | 2.19                     | 0.56              |
| 10:AK:6:ILE:C      | 10:AK:6:ILE:CD1   | 2.79                     | 0.56              |
| 11:AL:36:TYR:HD2   | 11:AL:37:PHE:CE2  | 2.23                     | 0.56              |
| 12:AM:27:ALA:HB2   | 12:AM:85:LEU:HD21 | 1.87                     | 0.56              |
| 12:AM:27:ALA:CB    | 12:AM:85:LEU:HD11 | 2.36                     | 0.56              |
| 13:AN:62:GLN:HA    | 13:AN:97:ALA:CB   | 2.36                     | 0.56              |
| 13:AN:85:ARG:NH2   | 13:AN:111:ASP:OD2 | 2.38                     | 0.56              |
| 14:AO:96:VAL:O     | 14:AO:96:VAL:HG12 | 2.05                     | 0.56              |
| 15:AP:3:ARG:HA     | 15:AP:7:VAL:HA    | 1.88                     | 0.56              |
| 17:AR:70:LEU:O     | 17:AR:74:ASP:O    | 2.23                     | 0.56              |
| 18:AS:12:LYS:NZ    | 18:AS:13:HIS:CE1  | 2.74                     | 0.56              |
| 19:AT:18:THR:HG23  | 19:AT:69:LYS:HE3  | 1.87                     | 0.56              |
| 19:AT:44:ALA:CB    | 19:AT:71:PHE:O    | 2.55                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 19:AT:53:LEU:O   | 19:AT:53:LEU:HG  | 2.06                     | 0.56              |
| 21:AV:69:HIS:CB  | 21:AV:74:PHE:HZ  | 2.04                     | 0.56              |
| 24:BA:27:G:H22   | 24:BA:512:G:C2'  | 2.19                     | 0.56              |
| 24:BA:253:C:H2'  | 24:BA:254:G:O5'  | 2.06                     | 0.56              |
| 24:BA:373:U:C4   | 50:B3:63:TYR:HE1 | 2.23                     | 0.56              |
| 24:BA:513:A:N1   | 24:BA:514:A:N7   | 2.54                     | 0.56              |
| 24:BA:574:C:H41  | 24:BA:2054:A:C5' | 2.19                     | 0.56              |
| 24:BA:727:A:N3   | 24:BA:727:A:C2'  | 2.68                     | 0.56              |
| 24:BA:780:G:N3   | 24:BA:785:G:O6   | 2.38                     | 0.56              |
| 24:BA:827:U:H4'  | 24:BA:828:U:H3   | 1.70                     | 0.56              |
| 24:BA:907:U:OP1  | 37:BP:26:TYR:CE1 | 2.59                     | 0.56              |
| 24:BA:943:U:O4'  | 24:BA:943:U:P    | 2.64                     | 0.56              |
| 24:BA:1000:A:N7  | 24:BA:1001:A:C5  | 2.74                     | 0.56              |
| 24:BA:1131:G:N2  | 24:BA:1132:A:C2  | 2.74                     | 0.56              |
| 24:BA:1177:A:C2  | 24:BA:1178:C:C2  | 2.93                     | 0.56              |
| 24:BA:1178:C:C4  | 24:BA:1179:C:N4  | 2.74                     | 0.56              |
| 24:BA:1179:C:C2' | 24:BA:1180:C:H6  | 2.19                     | 0.56              |
| 24:BA:1182:A:C6  | 24:BA:1183:G:C6  | 2.94                     | 0.56              |
| 24:BA:1224:G:C2' | 42:BU:87:HIS:CE1 | 2.89                     | 0.56              |
| 24:BA:1286:A:C2  | 24:BA:1329:U:C2  | 2.94                     | 0.56              |
| 24:BA:1358:G:N7  | 24:BA:1371:G:C6  | 2.74                     | 0.56              |
| 24:BA:1401:G:C5  | 24:BA:1402:C:C5  | 2.93                     | 0.56              |
| 24:BA:1636:C:H2' | 24:BA:1636:C:O2  | 2.07                     | 0.56              |
| 24:BA:1699:G:C8  | 24:BA:1763:G:N2  | 2.74                     | 0.56              |
| 24:BA:1699:G:O6  | 24:BA:1763:G:O4' | 2.24                     | 0.56              |
| 24:BA:1917:U:H6  | 24:BA:1918:A:C8  | 2.24                     | 0.56              |
| 24:BA:2040:C:C2  | 24:BA:2041:U:C5  | 2.94                     | 0.56              |
| 24:BA:2048:G:C2  | 24:BA:2049:G:C4  | 2.94                     | 0.56              |
| 24:BA:2074:U:O2' | 24:BA:2075:U:H5' | 2.05                     | 0.56              |
| 24:BA:2163:C:C2' | 24:BA:2164:C:H5' | 2.36                     | 0.56              |
| 24:BA:2184:G:N3  | 24:BA:2184:G:H2' | 2.21                     | 0.56              |
| 24:BA:2273:A:C8  | 24:BA:2274:A:C8  | 2.94                     | 0.56              |
| 24:BA:2296:U:C5  | 39:BR:5:THR:HG23 | 2.41                     | 0.56              |
| 24:BA:2309:A:N7  | 30:BG:80:PHE:CZ  | 2.73                     | 0.56              |
| 24:BA:2320:A:N6  | 39:BR:4:LEU:CD1  | 2.69                     | 0.56              |
| 24:BA:2375:G:H21 | 24:BA:2378:A:H61 | 1.45                     | 0.56              |
| 24:BA:2441:C:H2' | 24:BA:2442:C:H6  | 1.71                     | 0.56              |
| 24:BA:2467:C:P   | 55:B8:8:LYS:HZ2  | 2.27                     | 0.56              |
| 24:BA:2491:U:C6  | 24:BA:2492:U:OP2 | 2.59                     | 0.56              |
| 24:BA:2737:G:H2' | 24:BA:2738:A:H8  | 1.71                     | 0.56              |
| 27:BD:178:PRO:CG | 27:BD:179:SER:H  | 2.14                     | 0.56              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 29:BF:36:VAL:HG13 | 29:BF:37:VAL:N     | 2.21                     | 0.56              |
| 29:BF:53:THR:OG1  | 29:BF:54:ARG:N     | 2.37                     | 0.56              |
| 30:BG:68:PRO:HB3  | 30:BG:72:ARG:NH1   | 2.21                     | 0.56              |
| 31:BH:29:PRO:CD   | 31:BH:79:VAL:HA    | 2.35                     | 0.56              |
| 31:BH:30:LYS:O    | 31:BH:32:GLU:N     | 2.39                     | 0.56              |
| 31:BH:94:TYR:HE2  | 31:BH:96:ALA:CB    | 2.19                     | 0.56              |
| 31:BH:127:GLU:HB3 | 31:BH:129:THR:N    | 2.21                     | 0.56              |
| 32:BK:114:LEU:C   | 32:BK:130:TYR:HA   | 2.32                     | 0.56              |
| 33:BL:61:ALA:O    | 33:BL:62:ASP:HB2   | 2.06                     | 0.56              |
| 34:BM:53:VAL:CA   | 34:BM:121:LYS:O    | 2.45                     | 0.56              |
| 35:BN:59:LYS:CB   | 35:BN:84:ALA:O     | 2.50                     | 0.56              |
| 36:BO:74:GLU:HG2  | 36:BO:112:LEU:HD23 | 1.88                     | 0.56              |
| 37:BP:126:PRO:C   | 37:BP:127:ILE:CG1  | 2.78                     | 0.56              |
| 39:BR:17:ARG:O    | 39:BR:20:ARG:CB    | 2.54                     | 0.56              |
| 39:BR:42:ASP:OD1  | 39:BR:44:LYS:HD2   | 2.05                     | 0.56              |
| 39:BR:93:LYS:O    | 39:BR:98:VAL:HG13  | 2.06                     | 0.56              |
| 39:BR:103:GLU:C   | 39:BR:106:ARG:HB3  | 2.32                     | 0.56              |
| 40:BS:76:PHE:CZ   | 40:BS:78:LEU:HG    | 2.41                     | 0.56              |
| 41:BT:45:TYR:O    | 41:BT:46:ALA:C     | 2.49                     | 0.56              |
| 41:BT:46:ALA:HA   | 41:BT:49:HIS:ND1   | 2.20                     | 0.56              |
| 42:BU:73:SER:OG   | 42:BU:89:GLN:NE2   | 2.39                     | 0.56              |
| 43:BV:72:LYS:CB   | 43:BV:108:GLY:HA3  | 2.36                     | 0.56              |
| 44:BW:24:GLY:O    | 44:BW:82:GLN:HG3   | 2.06                     | 0.56              |
| 45:BX:7:VAL:C     | 45:BX:8:LYS:HD2    | 2.30                     | 0.56              |
| 46:BY:18:LEU:O    | 46:BY:19:ARG:C     | 2.48                     | 0.56              |
| 46:BY:39:VAL:HG22 | 46:BY:44:PHE:HE2   | 1.65                     | 0.56              |
| 47:BZ:12:ASN:O    | 47:BZ:14:ARG:HG2   | 2.06                     | 0.56              |
| 47:BZ:50:ASN:HB2  | 47:BZ:81:VAL:HB    | 1.87                     | 0.56              |
| 47:BZ:56:ASP:C    | 47:BZ:57:PHE:CD1   | 2.85                     | 0.56              |
| 50:B3:5:ILE:HB    | 50:B3:8:LYS:O      | 2.06                     | 0.56              |
| 1:AA:68:G:H4'     | 1:AA:171:A:O4'     | 2.06                     | 0.55              |
| 1:AA:250:A:H5'    | 1:AA:252:U:O4'     | 2.05                     | 0.55              |
| 1:AA:373:A:C6     | 1:AA:482:A:N6      | 2.74                     | 0.55              |
| 1:AA:432:A:N7     | 1:AA:433:C:C6      | 2.74                     | 0.55              |
| 1:AA:454:C:H5''   | 1:AA:455:C:OP2     | 2.06                     | 0.55              |
| 1:AA:587:G:N3     | 1:AA:755:G:C2      | 2.74                     | 0.55              |
| 1:AA:728:A:H5'    | 17:AR:54:ARG:HH22  | 1.70                     | 0.55              |
| 1:AA:768:A:N6     | 1:AA:769:G:C6      | 2.74                     | 0.55              |
| 1:AA:949:A:O2'    | 1:AA:971:G:N2      | 2.39                     | 0.55              |
| 1:AA:978:A:N1     | 1:AA:1318:A:C6     | 2.74                     | 0.55              |
| 1:AA:1004:A:H5''  | 1:AA:1025:U:C5     | 2.41                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1017:G:H2'   | 1:AA:1018:C:H6    | 1.71                     | 0.55              |
| 1:AA:1069:C:H1'   | 1:AA:1191:A:C2    | 2.40                     | 0.55              |
| 1:AA:1077:G:H21   | 1:AA:1079:G:H3'   | 1.64                     | 0.55              |
| 1:AA:1204:A:H2'   | 1:AA:1205:U:H5'   | 1.87                     | 0.55              |
| 1:AA:1222:G:OP2   | 1:AA:1322:C:H5    | 1.89                     | 0.55              |
| 1:AA:1259:C:O5'   | 1:AA:1259:C:H6    | 1.89                     | 0.55              |
| 1:AA:1300:G:O2'   | 1:AA:1301:U:O5'   | 2.24                     | 0.55              |
| 1:AA:1377:A:H5''  | 1:AA:1378:C:C6    | 2.41                     | 0.55              |
| 1:AA:1430:C:C2    | 1:AA:1431:C:C5    | 2.93                     | 0.55              |
| 1:AA:1500:A:OP2   | 1:AA:1505:G:OP2   | 2.24                     | 0.55              |
| 1:AA:1516:G:N2    | 1:AA:1518:A:P     | 2.79                     | 0.55              |
| 2:A1:12:U:OP1     | 4:AE:37:ASN:HB2   | 2.05                     | 0.55              |
| 4:AE:97:TRP:CZ2   | 4:AE:102:LEU:CD1  | 2.82                     | 0.55              |
| 5:AF:59:ARG:CZ    | 5:AF:64:VAL:HG22  | 2.36                     | 0.55              |
| 6:AG:185:PHE:HD2  | 6:AG:186:LEU:H    | 1.54                     | 0.55              |
| 8:AI:46:ARG:NH2   | 20:AU:37:VAL:CG2  | 2.68                     | 0.55              |
| 9:AJ:85:TYR:HD1   | 9:AJ:154:TYR:CE1  | 2.24                     | 0.55              |
| 10:AK:6:ILE:HD12  | 10:AK:85:ARG:HD3  | 1.88                     | 0.55              |
| 11:AL:49:PRO:HD3  | 11:AL:78:LYS:NZ   | 2.20                     | 0.55              |
| 11:AL:114:TYR:CE1 | 12:AM:60:ARG:NH1  | 2.74                     | 0.55              |
| 13:AN:44:SER:N    | 13:AN:47:VAL:HG21 | 2.21                     | 0.55              |
| 13:AN:71:LYS:HG3  | 13:AN:72:ALA:H    | 1.71                     | 0.55              |
| 14:AO:24:VAL:HG13 | 14:AO:98:TYR:CE2  | 2.41                     | 0.55              |
| 14:AO:85:ILE:CD1  | 14:AO:98:TYR:HB3  | 2.37                     | 0.55              |
| 17:AR:71:GLN:N    | 17:AR:78:TYR:HD1  | 2.03                     | 0.55              |
| 18:AS:12:LYS:HZ1  | 18:AS:13:HIS:CD2  | 2.24                     | 0.55              |
| 18:AS:49:LEU:HD12 | 18:AS:50:LYS:H    | 1.70                     | 0.55              |
| 18:AS:60:LEU:CA   | 18:AS:64:ALA:HB3  | 2.28                     | 0.55              |
| 23:AX:6:ARG:HH11  | 23:AX:15:ARG:NH2  | 2.03                     | 0.55              |
| 24:BA:13:A:C8     | 24:BA:15:G:O6     | 2.59                     | 0.55              |
| 24:BA:41:C:C2     | 24:BA:43:G:C8     | 2.94                     | 0.55              |
| 24:BA:112:U:O2    | 24:BA:112:U:H2'   | 2.06                     | 0.55              |
| 24:BA:186:G:O2'   | 24:BA:187:G:H5'   | 2.06                     | 0.55              |
| 24:BA:271(C):U:O4 | 24:BA:421:U:C4    | 2.60                     | 0.55              |
| 24:BA:566:U:O2'   | 24:BA:809:G:OP2   | 2.17                     | 0.55              |
| 24:BA:609:A:N1    | 24:BA:619:G:C2    | 2.74                     | 0.55              |
| 24:BA:621:A:C8    | 24:BA:622:G:C4'   | 2.89                     | 0.55              |
| 24:BA:724:U:H2'   | 24:BA:725:G:H5'   | 1.88                     | 0.55              |
| 24:BA:820:A:N1    | 24:BA:821:A:N3    | 2.53                     | 0.55              |
| 24:BA:848:G:N2    | 24:BA:933:A:C4    | 2.74                     | 0.55              |
| 24:BA:904:C:O4'   | 46:BY:169:GLU:OE1 | 2.24                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:946:G:O6     | 24:BA:972:G:N2     | 2.38                     | 0.55              |
| 24:BA:1029:A:H2'   | 24:BA:1030:G:C4'   | 2.36                     | 0.55              |
| 24:BA:1083:U:C2    | 24:BA:1085:A:C8    | 2.94                     | 0.55              |
| 24:BA:1244:G:C5'   | 36:BO:9:ASN:CB     | 2.81                     | 0.55              |
| 24:BA:1364:G:OP1   | 50:B3:3:GLU:HB2    | 2.06                     | 0.55              |
| 24:BA:1407:C:C2    | 24:BA:1408:C:C5    | 2.94                     | 0.55              |
| 24:BA:1477:A:C2    | 24:BA:1516:U:C2    | 2.94                     | 0.55              |
| 24:BA:1488:G:C3'   | 24:BA:1489:U:C5'   | 2.83                     | 0.55              |
| 24:BA:1510:A:H5'   | 24:BA:1511:A:OP2   | 2.06                     | 0.55              |
| 24:BA:1515:C:OP1   | 24:BA:1515:C:C6    | 2.59                     | 0.55              |
| 24:BA:1649:G:C2    | 24:BA:1650:G:N7    | 2.74                     | 0.55              |
| 24:BA:1935:G:N2    | 24:BA:1962:C:C2'   | 2.69                     | 0.55              |
| 24:BA:1946:U:H2'   | 24:BA:1947:C:H6    | 1.71                     | 0.55              |
| 24:BA:1956:U:O2'   | 24:BA:1985:G:H4'   | 2.06                     | 0.55              |
| 24:BA:2003:G:N1    | 24:BA:2004:G:C2    | 2.74                     | 0.55              |
| 24:BA:2051:A:H1'   | 28:BE:141:ILE:HD11 | 1.88                     | 0.55              |
| 24:BA:2238:G:H2'   | 24:BA:2239:G:H5''  | 1.87                     | 0.55              |
| 24:BA:2274:A:N7    | 24:BA:2276:G:C8    | 2.74                     | 0.55              |
| 24:BA:2361:A:H3'   | 24:BA:2362:G:C8    | 2.28                     | 0.55              |
| 24:BA:2478:A:O4'   | 55:B8:31:LYS:NZ    | 2.39                     | 0.55              |
| 24:BA:2486:G:N1    | 24:BA:2487:G:C5    | 2.75                     | 0.55              |
| 24:BA:2560:C:C2'   | 24:BA:2561:A:H5'   | 2.36                     | 0.55              |
| 24:BA:2594:C:H2'   | 24:BA:2595:G:O4'   | 2.06                     | 0.55              |
| 24:BA:2606:C:C2    | 24:BA:2607:G:C8    | 2.93                     | 0.55              |
| 24:BA:2670:A:C5'   | 28:BE:206:LYS:HZ3  | 2.19                     | 0.55              |
| 24:BA:2825:C:O5'   | 24:BA:2825:C:C6    | 2.52                     | 0.55              |
| 24:BA:2851:A:N1    | 24:BA:2852:G:N3    | 2.54                     | 0.55              |
| 24:BA:2884:U:H3    | 51:B4:40:LYS:NZ    | 2.03                     | 0.55              |
| 26:BC:7:TYR:CE2    | 26:BC:11:LEU:HD13  | 2.41                     | 0.55              |
| 27:BD:90:ALA:CA    | 27:BD:91:ARG:NH1   | 2.69                     | 0.55              |
| 27:BD:159:ALA:HA   | 27:BD:196:VAL:HG11 | 1.88                     | 0.55              |
| 28:BE:13:ARG:HE    | 28:BE:21:VAL:CA    | 2.18                     | 0.55              |
| 29:BF:201:VAL:HG12 | 29:BF:205:ARG:CZ   | 2.36                     | 0.55              |
| 30:BG:16:ARG:NH2   | 30:BG:16:ARG:CG    | 2.68                     | 0.55              |
| 30:BG:54:GLU:OE2   | 30:BG:70:VAL:HG22  | 2.06                     | 0.55              |
| 30:BG:125:PHE:HD2  | 30:BG:129:GLY:H    | 1.53                     | 0.55              |
| 31:BH:126:PRO:O    | 31:BH:127:GLU:CG   | 2.50                     | 0.55              |
| 32:BK:26:ALA:CA    | 32:BK:30:LEU:HD23  | 2.35                     | 0.55              |
| 32:BK:31:LEU:N     | 32:BK:32:PRO:CD    | 2.69                     | 0.55              |
| 32:BK:115:ALA:HB2  | 32:BK:129:THR:C    | 2.32                     | 0.55              |
| 33:BL:20:ALA:HB3   | 33:BL:21:PRO:CD    | 2.36                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 34:BM:42:TRP:O     | 34:BM:43:THR:CG2   | 2.53                     | 0.55              |
| 34:BM:49:GLY:O     | 34:BM:50:ASP:O     | 2.24                     | 0.55              |
| 35:BN:35:VAL:HG11  | 35:BN:64:ARG:HD3   | 1.88                     | 0.55              |
| 35:BN:97:ARG:CD    | 35:BN:118:ALA:HB2  | 2.36                     | 0.55              |
| 38:BQ:20:LEU:CD1   | 38:BQ:21:TYR:N     | 2.69                     | 0.55              |
| 38:BQ:47:PHE:O     | 38:BQ:48:VAL:C     | 2.49                     | 0.55              |
| 38:BQ:65:LEU:C     | 38:BQ:65:LEU:CD2   | 2.77                     | 0.55              |
| 38:BQ:97:VAL:CA    | 38:BQ:114:VAL:HG22 | 2.32                     | 0.55              |
| 39:BR:3:ARG:HG2    | 39:BR:4:LEU:CG     | 2.21                     | 0.55              |
| 41:BT:29:SER:OG    | 41:BT:30:LYS:HD2   | 2.06                     | 0.55              |
| 41:BT:40:PHE:HD2   | 42:BU:84:LYS:HG2   | 1.71                     | 0.55              |
| 41:BT:55:ARG:HH11  | 41:BT:55:ARG:CG    | 2.04                     | 0.55              |
| 41:BT:105:VAL:HG22 | 41:BT:109:LEU:HD11 | 1.87                     | 0.55              |
| 42:BU:3:ALA:HB1    | 42:BU:44:LYS:NZ    | 2.21                     | 0.55              |
| 44:BW:63:LYS:HE2   | 44:BW:63:LYS:CA    | 2.35                     | 0.55              |
| 45:BX:75:ILE:N     | 45:BX:100:ALA:HB1  | 2.18                     | 0.55              |
| 46:BY:29:TYR:CD1   | 46:BY:72:ARG:NH2   | 2.74                     | 0.55              |
| 47:BZ:70:GLN:O     | 47:BZ:78:TYR:O     | 2.23                     | 0.55              |
| 50:B3:38:LYS:HG2   | 50:B3:40:HIS:HD1   | 1.71                     | 0.55              |
| 51:B4:9:LYS:CD     | 51:B4:10:LYS:H     | 2.19                     | 0.55              |
| 51:B4:46:CYS:H     | 51:B4:50:GLY:HA2   | 1.71                     | 0.55              |
| 1:AA:9:G:H3'       | 7:AH:126:ARG:NH1   | 2.21                     | 0.55              |
| 1:AA:155:C:C2      | 1:AA:167:G:C2      | 2.94                     | 0.55              |
| 1:AA:402:G:P       | 6:AG:74:GLN:HE21   | 2.28                     | 0.55              |
| 1:AA:476:G:O2'     | 1:AA:477:G:H5'     | 2.06                     | 0.55              |
| 1:AA:545:C:OP2     | 6:AG:62:GLN:OE1    | 2.23                     | 0.55              |
| 1:AA:781:A:H4'     | 1:AA:1522:U:HO2'   | 1.67                     | 0.55              |
| 1:AA:878:G:O4'     | 10:AK:3:THR:HG21   | 2.06                     | 0.55              |
| 1:AA:886:G:C2'     | 1:AA:887:G:C5'     | 2.82                     | 0.55              |
| 1:AA:966:G:C2'     | 1:AA:967:C:O5'     | 2.54                     | 0.55              |
| 1:AA:974:A:P       | 16:AQ:31:ARG:HG2   | 2.46                     | 0.55              |
| 1:AA:1109:C:OP2    | 5:AF:176:HIS:CD2   | 2.59                     | 0.55              |
| 1:AA:1125:U:OP2    | 1:AA:1126:U:O4     | 2.24                     | 0.55              |
| 1:AA:1234:C:C4'    | 1:AA:1364:U:H1'    | 2.34                     | 0.55              |
| 1:AA:1319:A:C5'    | 21:AV:5:LEU:HD21   | 2.36                     | 0.55              |
| 1:AA:1329:A:H5''   | 15:AP:29:ARG:CG    | 2.37                     | 0.55              |
| 1:AA:1332:A:H2'    | 1:AA:1332:A:N3     | 2.21                     | 0.55              |
| 1:AA:1346:A:O2'    | 1:AA:1347:G:OP2    | 2.22                     | 0.55              |
| 1:AA:1428:A:C6     | 1:AA:1429:C:N4     | 2.75                     | 0.55              |
| 1:AA:1464:G:N3     | 1:AA:1465:C:C5     | 2.74                     | 0.55              |
| 3:AC:50:U:O2'      | 3:AC:51:U:H5'      | 2.05                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:AC:73:A:O2'     | 3:AC:74:C:P       | 2.64                     | 0.55              |
| 4:AE:31:TYR:OH    | 4:AE:200:ILE:HD13 | 2.07                     | 0.55              |
| 4:AE:149:LEU:O    | 4:AE:151:GLY:N    | 2.39                     | 0.55              |
| 4:AE:176:GLU:O    | 4:AE:180:LEU:CG   | 2.52                     | 0.55              |
| 5:AF:37:GLN:O     | 5:AF:38:ARG:C     | 2.47                     | 0.55              |
| 5:AF:47:LEU:CD1   | 5:AF:83:ARG:NH2   | 2.70                     | 0.55              |
| 6:AG:31:CYS:C     | 6:AG:33:MET:N     | 2.64                     | 0.55              |
| 6:AG:67:ILE:C     | 6:AG:67:ILE:CD1   | 2.79                     | 0.55              |
| 6:AG:80:GLU:CA    | 6:AG:83:SER:OG    | 2.54                     | 0.55              |
| 6:AG:101:LEU:C    | 6:AG:104:VAL:HG22 | 2.26                     | 0.55              |
| 7:AH:20:GLN:NE2   | 7:AH:21:ALA:H     | 2.03                     | 0.55              |
| 7:AH:72:GLN:HE21  | 7:AH:144:THR:HG23 | 1.71                     | 0.55              |
| 8:AI:12:PRO:C     | 8:AI:14:LEU:H     | 2.14                     | 0.55              |
| 8:AI:49:ALA:HB3   | 20:AU:79:LEU:CA   | 2.36                     | 0.55              |
| 10:AK:119:LEU:HB3 | 10:AK:123:GLU:CD  | 2.31                     | 0.55              |
| 11:AL:16:ARG:NH1  | 11:AL:64:THR:HG21 | 2.21                     | 0.55              |
| 12:AM:47:PHE:CE2  | 16:AQ:37:PHE:HZ   | 2.24                     | 0.55              |
| 13:AN:67:ASP:N    | 13:AN:70:LYS:HZ2  | 2.03                     | 0.55              |
| 14:AO:26:ALA:O    | 14:AO:27:LEU:HB3  | 2.06                     | 0.55              |
| 15:AP:64:TRP:CD1  | 15:AP:65:LYS:H    | 2.25                     | 0.55              |
| 15:AP:73:GLU:O    | 15:AP:74:VAL:C    | 2.50                     | 0.55              |
| 17:AR:78:TYR:C    | 17:AR:78:TYR:CD2  | 2.84                     | 0.55              |
| 18:AS:57:ARG:O    | 18:AS:58:TYR:C    | 2.48                     | 0.55              |
| 18:AS:72:ARG:NH2  | 18:AS:73:LEU:HD23 | 2.19                     | 0.55              |
| 19:AT:32:TYR:O    | 19:AT:33:GLY:C    | 2.48                     | 0.55              |
| 19:AT:86:GLU:O    | 19:AT:89:LEU:HB2  | 2.06                     | 0.55              |
| 20:AU:34:TYR:HE1  | 20:AU:35:ARG:HE   | 1.53                     | 0.55              |
| 21:AV:62:ILE:HD11 | 21:AV:67:VAL:CG1  | 2.35                     | 0.55              |
| 24:BA:37:C:O2'    | 29:BF:50:SER:CB   | 2.54                     | 0.55              |
| 24:BA:184:C:H2'   | 24:BA:185:U:C5    | 2.41                     | 0.55              |
| 24:BA:270(F):U:C4 | 24:BA:270(G):C:C5 | 2.94                     | 0.55              |
| 24:BA:348:G:N3    | 24:BA:349:G:C8    | 2.75                     | 0.55              |
| 24:BA:410:G:H8    | 24:BA:410:G:O5'   | 1.89                     | 0.55              |
| 24:BA:558:G:H5''  | 34:BM:109:LYS:CD  | 2.37                     | 0.55              |
| 24:BA:641:C:N4    | 24:BA:646:A:N6    | 2.54                     | 0.55              |
| 24:BA:771:G:N1    | 24:BA:772:C:C4    | 2.74                     | 0.55              |
| 24:BA:785:G:C4    | 24:BA:786:C:C5    | 2.94                     | 0.55              |
| 24:BA:840:C:H4'   | 24:BA:1192:G:O2'  | 2.06                     | 0.55              |
| 24:BA:945:A:H2'   | 24:BA:946:G:C5'   | 2.36                     | 0.55              |
| 24:BA:945:A:OP1   | 24:BA:945:A:C4'   | 2.54                     | 0.55              |
| 24:BA:960:A:C4    | 24:BA:962:G:C8    | 2.94                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 24:BA:996:A:N6     | 24:BA:1160:G:C6     | 2.75                     | 0.55              |
| 24:BA:1061:U:O3'   | 24:BA:1070:A:O4'    | 2.24                     | 0.55              |
| 24:BA:1069:A:C4'   | 24:BA:1070:A:O5'    | 2.54                     | 0.55              |
| 24:BA:1073:A:N7    | 24:BA:1074:G:C6     | 2.75                     | 0.55              |
| 24:BA:1127:A:C8    | 24:BA:1127:A:C3'    | 2.89                     | 0.55              |
| 24:BA:1142(A):A:N6 | 24:BA:1143:A:C8     | 2.74                     | 0.55              |
| 24:BA:1314:C:O2'   | 24:BA:1315:C:H5'    | 2.05                     | 0.55              |
| 24:BA:1354:A:H62   | 24:BA:1377:G:H21    | 1.53                     | 0.55              |
| 24:BA:1366:A:C5'   | 50:B3:1:MET:N       | 2.69                     | 0.55              |
| 24:BA:1447:G:H1'   | 24:BA:1545(A):A:C1' | 2.36                     | 0.55              |
| 24:BA:1449:A:C2    | 24:BA:1449(A):G:N9  | 2.75                     | 0.55              |
| 24:BA:1456:G:C2    | 24:BA:1457:A:C8     | 2.95                     | 0.55              |
| 24:BA:1460:A:N1    | 24:BA:1732:A:C6     | 2.74                     | 0.55              |
| 24:BA:1473:G:C2'   | 24:BA:1474:C:O4'    | 2.54                     | 0.55              |
| 24:BA:1566:A:C2    | 27:BD:215:LEU:HD22  | 2.41                     | 0.55              |
| 24:BA:1650:G:N2    | 24:BA:1651:G:C1'    | 2.62                     | 0.55              |
| 24:BA:1697:G:C8    | 24:BA:1698:A:C5'    | 2.85                     | 0.55              |
| 24:BA:1900:A:H2    | 24:BA:1970:A:C6     | 2.24                     | 0.55              |
| 24:BA:1936:A:C4    | 24:BA:1940:U:N3     | 2.75                     | 0.55              |
| 24:BA:1975:G:H2'   | 24:BA:1976:U:O5'    | 2.06                     | 0.55              |
| 24:BA:1993:U:C6    | 24:BA:1993:U:H3'    | 2.41                     | 0.55              |
| 24:BA:2091:U:C3'   | 24:BA:2092:U:H5'    | 2.36                     | 0.55              |
| 24:BA:2208:U:O2'   | 24:BA:2217:G:N2     | 2.39                     | 0.55              |
| 24:BA:2346:A:H4'   | 24:BA:2383:G:O4'    | 2.05                     | 0.55              |
| 24:BA:2412:A:C8    | 24:BA:2413:G:C8     | 2.94                     | 0.55              |
| 24:BA:2436:G:O2'   | 24:BA:2437:U:H5'    | 2.06                     | 0.55              |
| 24:BA:2498:C:C3'   | 24:BA:2499:C:H5''   | 2.37                     | 0.55              |
| 24:BA:2718:G:C5    | 24:BA:2719:G:C5     | 2.94                     | 0.55              |
| 24:BA:2748:A:N3    | 31:BH:67:LEU:HD11   | 2.20                     | 0.55              |
| 24:BA:2749:A:C2    | 24:BA:2757:A:N1     | 2.74                     | 0.55              |
| 25:BB:33:G:H2'     | 25:BB:34:U:C5       | 2.38                     | 0.55              |
| 25:BB:57:A:O4'     | 30:BG:29:TRP:CH2    | 2.59                     | 0.55              |
| 26:BC:83:ILE:HD11  | 26:BC:95:GLY:HA2    | 1.88                     | 0.55              |
| 26:BC:103:ILE:CD1  | 26:BC:110:PHE:HZ    | 2.20                     | 0.55              |
| 27:BD:63:ARG:HD3   | 27:BD:65:ILE:HD11   | 1.88                     | 0.55              |
| 27:BD:133:LEU:CB   | 27:BD:136:ILE:HD11  | 2.26                     | 0.55              |
| 27:BD:199:ALA:O    | 27:BD:200:ASP:C     | 2.48                     | 0.55              |
| 27:BD:244:ARG:C    | 27:BD:252:TRP:CD1   | 2.84                     | 0.55              |
| 28:BE:19:ARG:HB3   | 35:BN:73:ASP:CG     | 2.31                     | 0.55              |
| 28:BE:147:PRO:HD2  | 28:BE:148:GLY:H     | 1.72                     | 0.55              |
| 28:BE:170:LEU:N    | 28:BE:170:LEU:CD2   | 2.67                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 29:BF:71:GLY:O    | 29:BF:73:ALA:N     | 2.31                     | 0.55              |
| 30:BG:76:SER:O    | 30:BG:82:LEU:O     | 2.24                     | 0.55              |
| 30:BG:110:ALA:CB  | 30:BG:139:LEU:HG   | 2.31                     | 0.55              |
| 30:BG:128:ARG:CZ  | 30:BG:130:ASN:HD21 | 2.19                     | 0.55              |
| 30:BG:148:MET:HG2 | 30:BG:151:ALA:H    | 1.70                     | 0.55              |
| 31:BH:7:LEU:HB2   | 31:BH:52:VAL:O     | 2.06                     | 0.55              |
| 31:BH:74:ASN:ND2  | 31:BH:75:ALA:N     | 2.53                     | 0.55              |
| 31:BH:76:VAL:HA   | 31:BH:79:VAL:CG2   | 2.36                     | 0.55              |
| 32:BK:31:LEU:O    | 32:BK:32:PRO:C     | 2.47                     | 0.55              |
| 33:BL:99:ILE:HG22 | 33:BL:100:THR:N    | 2.21                     | 0.55              |
| 33:BL:105:LEU:N   | 33:BL:105:LEU:HD23 | 2.20                     | 0.55              |
| 35:BN:63:VAL:HG12 | 35:BN:99:PHE:CZ    | 2.41                     | 0.55              |
| 35:BN:75:SER:O    | 40:BS:77:PRO:O     | 2.23                     | 0.55              |
| 36:BO:124:LYS:HA  | 36:BO:138:LEU:HD23 | 1.87                     | 0.55              |
| 38:BQ:28:LEU:HD13 | 38:BQ:28:LEU:C     | 2.31                     | 0.55              |
| 38:BQ:33:ARG:NH2  | 51:B4:56:LYS:HE2   | 2.21                     | 0.55              |
| 38:BQ:104:ARG:NH2 | 38:BQ:107:ASP:OD1  | 2.38                     | 0.55              |
| 39:BR:106:ARG:CD  | 39:BR:107:GLU:OE2  | 2.54                     | 0.55              |
| 40:BS:85:LYS:N    | 40:BS:85:LYS:HZ3   | 2.04                     | 0.55              |
| 42:BU:15:GLU:C    | 42:BU:100:ARG:NH2  | 2.64                     | 0.55              |
| 43:BV:33:ARG:HA   | 43:BV:33:ARG:NE    | 2.14                     | 0.55              |
| 44:BW:26:TYR:CB   | 44:BW:28:PHE:CZ    | 2.88                     | 0.55              |
| 45:BX:37:VAL:CG1  | 45:BX:64:GLU:HG2   | 2.34                     | 0.55              |
| 46:BY:56:VAL:HG13 | 46:BY:133:ILE:CD1  | 2.36                     | 0.55              |
| 46:BY:104:PHE:N   | 46:BY:104:PHE:HD2  | 2.03                     | 0.55              |
| 46:BY:120:ILE:HB  | 46:BY:123:ASP:CG   | 2.32                     | 0.55              |
| 48:B1:7:GLU:C     | 48:B1:10:LYS:HG2   | 2.30                     | 0.55              |
| 50:B3:59:PHE:C    | 50:B3:61:ARG:N     | 2.56                     | 0.55              |
| 53:B6:5:TRP:HZ3   | 53:B6:12:ARG:NH1   | 2.04                     | 0.55              |
| 1:AA:60:A:H62     | 1:AA:110:C:H42     | 1.53                     | 0.55              |
| 1:AA:277:C:OP2    | 19:AT:41:LYS:NZ    | 2.34                     | 0.55              |
| 1:AA:378:G:H2'    | 1:AA:379:C:H6      | 1.71                     | 0.55              |
| 1:AA:529:G:H1     | 14:AO:49:ASN:CB    | 2.15                     | 0.55              |
| 1:AA:562:C:O2     | 14:AO:15:ARG:O     | 2.23                     | 0.55              |
| 1:AA:679:C:H2'    | 1:AA:680:C:C6      | 2.40                     | 0.55              |
| 1:AA:815:A:C2     | 1:AA:1529:G:N2     | 2.74                     | 0.55              |
| 1:AA:815:A:C8     | 1:AA:819:A:C2      | 2.94                     | 0.55              |
| 1:AA:859:A:C2'    | 1:AA:860:A:C5'     | 2.84                     | 0.55              |
| 1:AA:866:C:C5     | 1:AA:867:G:C1'     | 2.86                     | 0.55              |
| 1:AA:945:G:N2     | 1:AA:1337:G:C2     | 2.75                     | 0.55              |
| 1:AA:1014:A:H4'   | 21:AV:14:HIS:ND1   | 2.20                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1269:A:H5'    | 1:AA:1326:C:H4'    | 1.87                     | 0.55              |
| 1:AA:1494:G:O2'    | 1:AA:1495:U:C6     | 2.57                     | 0.55              |
| 2:A1:10:U:O2       | 2:A1:12:U:H5''     | 2.06                     | 0.55              |
| 2:A1:31:U:O2'      | 2:A1:32:U:H5'      | 2.07                     | 0.55              |
| 3:AD:21:A:N1       | 3:AD:46:G:N2       | 2.42                     | 0.55              |
| 3:AB:9:A:O2'       | 3:AB:45:U:H2'      | 2.06                     | 0.55              |
| 4:AE:57:PHE:HD2    | 4:AE:57:PHE:C      | 2.15                     | 0.55              |
| 4:AE:75:LYS:NZ     | 4:AE:75:LYS:CA     | 2.69                     | 0.55              |
| 4:AE:115:LEU:HD22  | 4:AE:145:LEU:HG    | 1.88                     | 0.55              |
| 6:AG:21:LEU:CD1    | 6:AG:67:ILE:HG22   | 2.34                     | 0.55              |
| 7:AH:91:LEU:HG     | 7:AH:92:LYS:N      | 2.21                     | 0.55              |
| 7:AH:102:ALA:CB    | 7:AH:120:THR:HG22  | 2.32                     | 0.55              |
| 7:AH:106:PRO:HG3   | 7:AH:122:GLU:OE2   | 2.07                     | 0.55              |
| 8:AI:55:ASP:OD2    | 8:AI:86:ARG:NH1    | 2.39                     | 0.55              |
| 9:AJ:49:ILE:HD12   | 9:AJ:49:ILE:H      | 1.72                     | 0.55              |
| 9:AJ:111:ARG:CZ    | 9:AJ:112:PRO:HD2   | 2.36                     | 0.55              |
| 10:AK:19:VAL:HB    | 10:AK:21:LYS:CG    | 2.35                     | 0.55              |
| 11:AL:17:VAL:HG11  | 11:AL:81:ILE:HA    | 1.88                     | 0.55              |
| 11:AL:78:LYS:NZ    | 11:AL:101:PHE:HE2  | 1.96                     | 0.55              |
| 11:AL:81:ILE:O     | 11:AL:84:ALA:HB3   | 2.07                     | 0.55              |
| 12:AM:28:ARG:HG2   | 12:AM:28:ARG:HH11  | 1.71                     | 0.55              |
| 13:AN:83:ILE:HD12  | 13:AN:83:ILE:N     | 2.21                     | 0.55              |
| 13:AN:112:THR:O    | 13:AN:112:THR:HG22 | 2.06                     | 0.55              |
| 14:AO:5:PRO:O      | 14:AO:6:THR:OG1    | 2.23                     | 0.55              |
| 14:AO:62:SER:C     | 14:AO:64:TYR:N     | 2.62                     | 0.55              |
| 18:AS:18:ARG:HH11  | 18:AS:20:VAL:HG21  | 1.71                     | 0.55              |
| 21:AV:47:HIS:O     | 21:AV:61:TYR:HA    | 2.06                     | 0.55              |
| 24:BA:18:C:H4'     | 41:BT:23:GLY:O     | 2.06                     | 0.55              |
| 24:BA:86:C:O5'     | 24:BA:86:C:H6      | 1.89                     | 0.55              |
| 24:BA:108:U:H2'    | 24:BA:109:G:H8     | 1.71                     | 0.55              |
| 24:BA:141:A:H2     | 24:BA:1597:A:H5'   | 1.71                     | 0.55              |
| 24:BA:197:A:H3'    | 24:BA:198:C:H6     | 1.67                     | 0.55              |
| 24:BA:236:C:N3     | 24:BA:237:C:C5     | 2.74                     | 0.55              |
| 24:BA:270(E):G:OP2 | 24:BA:270(E):G:C8  | 2.60                     | 0.55              |
| 24:BA:270(X):G:C2  | 24:BA:270(Y):G:H1' | 2.41                     | 0.55              |
| 24:BA:475:U:C6     | 24:BA:475:U:OP2    | 2.59                     | 0.55              |
| 24:BA:662:G:N1     | 24:BA:663:G:O6     | 2.39                     | 0.55              |
| 24:BA:714:U:O2     | 24:BA:715:G:H8     | 1.89                     | 0.55              |
| 24:BA:754:C:O2'    | 24:BA:755:C:H5'    | 2.05                     | 0.55              |
| 24:BA:775:G:N2     | 24:BA:788:A:OP2    | 2.38                     | 0.55              |
| 24:BA:824:A:C3'    | 24:BA:825:C:C5     | 2.89                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:833:U:C1'  | 36:BO:48:PRO:HD2  | 2.36                     | 0.55              |
| 24:BA:848:G:C2   | 24:BA:931:G:O6    | 2.58                     | 0.55              |
| 24:BA:887:A:O3'  | 24:BA:889:C:H5'   | 2.06                     | 0.55              |
| 24:BA:1024:G:C3' | 24:BA:1025:G:H5'' | 2.35                     | 0.55              |
| 24:BA:1034:G:C6  | 24:BA:1035:U:C4   | 2.95                     | 0.55              |
| 24:BA:1163:G:C6  | 24:BA:1164:G:N7   | 2.74                     | 0.55              |
| 24:BA:1221:C:N3  | 24:BA:1229:G:N1   | 2.54                     | 0.55              |
| 24:BA:1269:A:H8  | 24:BA:1269:A:O5'  | 1.90                     | 0.55              |
| 24:BA:1344:G:H4' | 24:BA:1384:A:C6   | 2.41                     | 0.55              |
| 24:BA:1392:A:H2' | 24:BA:1393:A:C8   | 2.42                     | 0.55              |
| 24:BA:1565:C:C4  | 24:BA:1567:A:C8   | 2.94                     | 0.55              |
| 24:BA:1698:A:O2' | 24:BA:1699:G:P    | 2.65                     | 0.55              |
| 24:BA:1780:A:O5' | 24:BA:1781:C:H3'  | 2.06                     | 0.55              |
| 24:BA:1780:A:P   | 24:BA:1782:C:OP1  | 2.64                     | 0.55              |
| 24:BA:1784:A:H4' | 24:BA:1785:A:C8   | 2.42                     | 0.55              |
| 24:BA:1826:G:N2  | 24:BA:1970:A:C2   | 2.73                     | 0.55              |
| 24:BA:1842:G:O2' | 24:BA:1843:C:C5'  | 2.54                     | 0.55              |
| 24:BA:1954:G:H2' | 24:BA:1956:U:O4   | 2.06                     | 0.55              |
| 24:BA:2000:G:OP2 | 38:BQ:2:ARG:HG2   | 2.06                     | 0.55              |
| 24:BA:2041:U:O2  | 24:BA:2042:A:C8   | 2.60                     | 0.55              |
| 24:BA:2047:U:O2' | 24:BA:2048:G:O5'  | 2.24                     | 0.55              |
| 24:BA:2051:A:C6  | 24:BA:2614:A:C6   | 2.94                     | 0.55              |
| 24:BA:2287:A:C2  | 24:BA:2346:A:N6   | 2.74                     | 0.55              |
| 24:BA:2346:A:H5' | 24:BA:2383:G:O4'  | 2.06                     | 0.55              |
| 24:BA:2436:G:C5  | 24:BA:2437:U:C4   | 2.94                     | 0.55              |
| 24:BA:2437:U:C2  | 24:BA:2438:U:C5   | 2.94                     | 0.55              |
| 24:BA:2520:C:H2' | 24:BA:2521:C:H6   | 1.71                     | 0.55              |
| 24:BA:2530:A:H3' | 24:BA:2531:A:H5'' | 1.85                     | 0.55              |
| 24:BA:2595:G:N3  | 24:BA:2599:G:N1   | 2.54                     | 0.55              |
| 24:BA:2717:G:C2  | 24:BA:2718:G:C5   | 2.94                     | 0.55              |
| 24:BA:2815:C:C2  | 24:BA:2816:C:C5   | 2.94                     | 0.55              |
| 24:BA:2825:C:C4  | 24:BA:2826:A:N7   | 2.74                     | 0.55              |
| 24:BA:2848:G:C1' | 40:BS:99:LEU:HD21 | 2.37                     | 0.55              |
| 24:BA:2895:U:H2' | 24:BA:2896:C:H6   | 1.71                     | 0.55              |
| 25:BB:7:G:O2'    | 25:BB:8:U:OP1     | 2.25                     | 0.55              |
| 25:BB:61:G:C6    | 25:BB:62:C:N4     | 2.74                     | 0.55              |
| 25:BB:77:U:H5    | 25:BB:98:G:N2     | 2.04                     | 0.55              |
| 27:BD:5:LYS:HE2  | 27:BD:29:PRO:HA   | 1.88                     | 0.55              |
| 27:BD:28:GLU:N   | 27:BD:29:PRO:CD   | 2.70                     | 0.55              |
| 27:BD:77:ALA:HB1 | 27:BD:95:LEU:CG   | 2.36                     | 0.55              |
| 27:BD:148:GLU:O  | 27:BD:149:PRO:C   | 2.50                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:150:LYS:O    | 27:BD:152:GLY:N    | 2.39                     | 0.55              |
| 27:BD:260:ARG:HH11 | 27:BD:260:ARG:HB2  | 1.71                     | 0.55              |
| 28:BE:105:THR:HB   | 28:BE:166:THR:OG1  | 2.05                     | 0.55              |
| 28:BE:113:PHE:CA   | 28:BE:158:GLY:HA2  | 2.35                     | 0.55              |
| 28:BE:171:GLU:OE1  | 28:BE:172:VAL:HG22 | 2.05                     | 0.55              |
| 29:BF:196:LEU:HD22 | 29:BF:199:TRP:NE1  | 2.21                     | 0.55              |
| 30:BG:20:ILE:HG22  | 30:BG:21:ARG:N     | 2.22                     | 0.55              |
| 30:BG:80:PHE:HD1   | 30:BG:81:LYS:H     | 1.44                     | 0.55              |
| 31:BH:33:LEU:HD22  | 31:BH:35:VAL:HG22  | 1.89                     | 0.55              |
| 31:BH:95:ARG:HD2   | 31:BH:95:ARG:N     | 2.20                     | 0.55              |
| 31:BH:98:LEU:C     | 31:BH:100:GLY:H    | 2.12                     | 0.55              |
| 31:BH:107:VAL:O    | 31:BH:107:VAL:CG2  | 2.54                     | 0.55              |
| 32:BK:5:LEU:HD21   | 32:BK:18:VAL:HA    | 1.87                     | 0.55              |
| 32:BK:9:LEU:HG     | 32:BK:17:GLN:OE1   | 2.06                     | 0.55              |
| 32:BK:123:LEU:CD1  | 32:BK:144:VAL:HG13 | 2.36                     | 0.55              |
| 34:BM:4:TYR:CZ     | 41:BT:101:ARG:CZ   | 2.88                     | 0.55              |
| 34:BM:39:ARG:HG2   | 34:BM:40:PRO:CD    | 2.36                     | 0.55              |
| 34:BM:99:LEU:CG    | 34:BM:100:GLU:N    | 2.69                     | 0.55              |
| 34:BM:126:PRO:O    | 34:BM:127:ASP:CB   | 2.53                     | 0.55              |
| 38:BQ:102:GLU:CD   | 38:BQ:103:ARG:HG2  | 2.31                     | 0.55              |
| 39:BR:12:PHE:C     | 39:BR:14:VAL:N     | 2.53                     | 0.55              |
| 40:BS:113:LYS:O    | 40:BS:116:ALA:N    | 2.39                     | 0.55              |
| 41:BT:47:TYR:CZ    | 42:BU:76:LYS:O     | 2.59                     | 0.55              |
| 41:BT:49:HIS:HA    | 41:BT:52:ARG:NE    | 2.20                     | 0.55              |
| 42:BU:6:LYS:CD     | 42:BU:10:LYS:HG2   | 2.27                     | 0.55              |
| 43:BV:86:LEU:HB3   | 43:BV:87:PRO:HD2   | 1.88                     | 0.55              |
| 46:BY:57:ILE:O     | 46:BY:58:VAL:HG22  | 2.05                     | 0.55              |
| 46:BY:127:LYS:HA   | 46:BY:164:ALA:N    | 2.21                     | 0.55              |
| 48:B1:41:GLN:O     | 48:B1:44:LYS:N     | 2.39                     | 0.55              |
| 53:B6:5:TRP:CE3    | 53:B6:5:TRP:HA     | 2.42                     | 0.55              |
| 53:B6:43:THR:O     | 53:B6:46:VAL:CB    | 2.54                     | 0.55              |
| 54:B7:30:ARG:C     | 54:B7:34:TRP:HE1   | 2.14                     | 0.55              |
| 1:AA:170:U:O2'     | 1:AA:171:A:H5'     | 2.07                     | 0.55              |
| 1:AA:319:G:C2'     | 1:AA:320:C:H5'     | 2.36                     | 0.55              |
| 1:AA:352:C:C6      | 1:AA:352:C:OP1     | 2.60                     | 0.55              |
| 1:AA:483:C:O5'     | 1:AA:483:C:H6      | 1.88                     | 0.55              |
| 1:AA:521:G:O6      | 14:AO:49:ASN:ND2   | 2.40                     | 0.55              |
| 1:AA:575:G:N1      | 1:AA:821:G:N7      | 2.53                     | 0.55              |
| 1:AA:624:C:H2'     | 1:AA:625:G:C8      | 2.38                     | 0.55              |
| 1:AA:902:G:H2'     | 1:AA:903:G:H8      | 1.70                     | 0.55              |
| 1:AA:1065:U:C5     | 1:AA:1190:G:H1'    | 2.42                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1171:G:H2'   | 1:AA:1172:C:C5    | 2.40                     | 0.55              |
| 1:AA:1452:C:H5'   | 1:AA:1453:G:N3    | 2.22                     | 0.55              |
| 3:AC:10:G:O5'     | 3:AC:10:G:C8      | 2.59                     | 0.55              |
| 3:AD:70:G:H2'     | 3:AD:71:G:H8      | 1.70                     | 0.55              |
| 3:AD:71:G:H1'     | 24:BA:1851:U:O2'  | 2.06                     | 0.55              |
| 3:AB:13:C:H2'     | 3:AB:14:A:C5'     | 2.35                     | 0.55              |
| 3:AB:30:G:O2'     | 3:AB:31:A:H5'     | 2.06                     | 0.55              |
| 3:AB:34:G:N1      | 3:AB:35:A:H1'     | 2.19                     | 0.55              |
| 4:AE:54:THR:HG23  | 4:AE:199:TYR:CB   | 2.36                     | 0.55              |
| 4:AE:69:LEU:HD22  | 4:AE:91:PRO:CB    | 2.36                     | 0.55              |
| 4:AE:147:LYS:HE2  | 4:AE:147:LYS:CA   | 2.36                     | 0.55              |
| 6:AG:20:TYR:HB2   | 6:AG:27:TYR:CA    | 2.36                     | 0.55              |
| 6:AG:64:LEU:HD13  | 6:AG:64:LEU:C     | 2.31                     | 0.55              |
| 6:AG:100:ARG:HH22 | 6:AG:137:SER:CA   | 2.13                     | 0.55              |
| 6:AG:171:GLY:HA3  | 6:AG:173:TRP:HZ3  | 1.71                     | 0.55              |
| 7:AH:105:VAL:HG12 | 7:AH:106:PRO:CD   | 2.36                     | 0.55              |
| 8:AI:14:LEU:CD1   | 8:AI:19:LEU:N     | 2.66                     | 0.55              |
| 8:AI:36:ARG:HB2   | 8:AI:36:ARG:NH1   | 2.20                     | 0.55              |
| 9:AJ:75:VAL:CG2   | 9:AJ:88:PRO:HB3   | 2.36                     | 0.55              |
| 10:AK:23:SER:O    | 10:AK:24:THR:HB   | 2.07                     | 0.55              |
| 14:AO:45:PRO:HG2  | 14:AO:49:ASN:O    | 2.06                     | 0.55              |
| 15:AP:87:TYR:HD1  | 21:AV:73:GLU:CB   | 2.19                     | 0.55              |
| 17:AR:79:ARG:HA   | 17:AR:82:ILE:HG13 | 1.86                     | 0.55              |
| 19:AT:44:ALA:HB1  | 19:AT:71:PHE:O    | 2.06                     | 0.55              |
| 19:AT:87:LYS:O    | 19:AT:91:ARG:HB3  | 2.06                     | 0.55              |
| 19:AT:104:LYS:CG  | 19:AT:105:ALA:H   | 2.19                     | 0.55              |
| 21:AV:11:VAL:HG13 | 21:AV:38:SER:OG   | 2.06                     | 0.55              |
| 21:AV:40:ILE:HD11 | 21:AV:71:LEU:HD23 | 1.88                     | 0.55              |
| 22:AW:53:LEU:HD21 | 22:AW:92:LEU:CD1  | 2.37                     | 0.55              |
| 24:BA:62:C:H6     | 24:BA:62:C:O5'    | 1.90                     | 0.55              |
| 24:BA:108:U:H4'   | 24:BA:348:G:C2    | 2.41                     | 0.55              |
| 24:BA:179:G:H3'   | 24:BA:180:G:H8    | 1.70                     | 0.55              |
| 24:BA:257:A:O2'   | 24:BA:258:G:H5'   | 2.06                     | 0.55              |
| 24:BA:400:G:N2    | 50:B3:63:TYR:HH   | 2.04                     | 0.55              |
| 24:BA:526:A:C2    | 24:BA:2626:C:O4'  | 2.58                     | 0.55              |
| 24:BA:558:G:O2'   | 24:BA:559:G:H5''  | 2.07                     | 0.55              |
| 24:BA:559:G:O2'   | 24:BA:560:C:O5'   | 2.16                     | 0.55              |
| 24:BA:594:U:C5'   | 54:B7:61:LEU:HD13 | 2.33                     | 0.55              |
| 24:BA:641:C:O2'   | 24:BA:642:G:H5'   | 2.06                     | 0.55              |
| 24:BA:722:A:N3    | 24:BA:723:G:C8    | 2.75                     | 0.55              |
| 24:BA:740:U:HO2'  | 24:BA:741:G:P     | 2.24                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:749:C:C6    | 24:BA:749:C:C3'   | 2.90                     | 0.55              |
| 24:BA:754:C:N3    | 24:BA:755:C:C5    | 2.75                     | 0.55              |
| 24:BA:768:G:O2'   | 24:BA:769:G:H5'   | 2.07                     | 0.55              |
| 24:BA:838:C:N3    | 24:BA:941:A:N7    | 2.54                     | 0.55              |
| 24:BA:850:C:H5''  | 49:B2:18:ASP:HB2  | 1.88                     | 0.55              |
| 24:BA:873:G:C2    | 24:BA:874:G:H1'   | 2.42                     | 0.55              |
| 24:BA:922:U:H2'   | 24:BA:923:C:C6    | 2.41                     | 0.55              |
| 24:BA:988:A:H5''  | 49:B2:10:LYS:HE3  | 1.87                     | 0.55              |
| 24:BA:1015:G:O2'  | 24:BA:1016:G:H5'  | 2.06                     | 0.55              |
| 24:BA:1134:G:C5   | 24:BA:1136:G:OP2  | 2.59                     | 0.55              |
| 24:BA:1179:C:H6   | 24:BA:1179:C:OP2  | 1.90                     | 0.55              |
| 24:BA:1201:C:N4   | 24:BA:1241:A:H62  | 2.04                     | 0.55              |
| 24:BA:1256:G:C5   | 24:BA:1257:C:C5   | 2.94                     | 0.55              |
| 24:BA:1540:G:C2'  | 24:BA:1541:U:H5'  | 2.36                     | 0.55              |
| 24:BA:1655:A:H61  | 24:BA:2005:A:C1'  | 2.18                     | 0.55              |
| 24:BA:1655:A:N6   | 24:BA:2005:A:O2'  | 2.39                     | 0.55              |
| 24:BA:1670:C:C6   | 24:BA:1671:U:C5   | 2.94                     | 0.55              |
| 24:BA:1742:C:C6   | 24:BA:1743:G:H5'' | 2.41                     | 0.55              |
| 24:BA:1749:A:O2'  | 24:BA:1750:G:H5'  | 2.05                     | 0.55              |
| 24:BA:1811:G:H2'  | 24:BA:1812:A:O4'  | 2.06                     | 0.55              |
| 24:BA:1818:U:O2   | 24:BA:1818:U:C2'  | 2.55                     | 0.55              |
| 24:BA:1912:A:H8   | 24:BA:1913:A:H1'  | 1.70                     | 0.55              |
| 24:BA:2066:C:C4   | 24:BA:2067:G:N7   | 2.74                     | 0.55              |
| 24:BA:2266:A:C5'  | 24:BA:2267:A:N3   | 2.66                     | 0.55              |
| 24:BA:2300:G:O2'  | 24:BA:2301:C:H5'  | 2.07                     | 0.55              |
| 24:BA:2347:C:C5   | 24:BA:2382:G:H1'  | 2.41                     | 0.55              |
| 24:BA:2529:G:H5'' | 24:BA:2530:A:C5'  | 2.37                     | 0.55              |
| 24:BA:2597:G:H5'  | 27:BD:242:ARG:CD  | 2.36                     | 0.55              |
| 24:BA:2748:A:N6   | 24:BA:2756:U:C2   | 2.74                     | 0.55              |
| 24:BA:2756:U:O2'  | 24:BA:2757:A:C5'  | 2.55                     | 0.55              |
| 25:BB:80:U:C2     | 25:BB:81:G:N7     | 2.74                     | 0.55              |
| 25:BB:82:G:C2     | 25:BB:83:G:N7     | 2.74                     | 0.55              |
| 27:BD:5:LYS:HD3   | 27:BD:31:LYS:HZ2  | 1.71                     | 0.55              |
| 27:BD:5:LYS:O     | 27:BD:27:THR:CG2  | 2.54                     | 0.55              |
| 27:BD:7:LYS:CD    | 27:BD:25:THR:HG22 | 2.36                     | 0.55              |
| 28:BE:48:GLN:O    | 28:BE:77:ILE:HG13 | 2.05                     | 0.55              |
| 28:BE:51:PHE:HZ   | 28:BE:75:VAL:HG22 | 1.66                     | 0.55              |
| 28:BE:53:PRO:CG   | 28:BE:75:VAL:HG22 | 2.31                     | 0.55              |
| 28:BE:148:GLY:O   | 28:BE:149:ARG:CB  | 2.54                     | 0.55              |
| 29:BF:18:ARG:HG3  | 29:BF:19:GLU:N    | 2.21                     | 0.55              |
| 30:BG:9:ARG:HD2   | 30:BG:10:LYS:CE   | 2.37                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 30:BG:62:LEU:HD23 | 30:BG:143:GLU:HB3  | 1.86                     | 0.55              |
| 31:BH:6:ARG:O     | 31:BH:69:ARG:HD2   | 2.06                     | 0.55              |
| 32:BK:109:ILE:CG2 | 32:BK:113:ARG:NH2  | 2.69                     | 0.55              |
| 34:BM:24:GLY:O    | 34:BM:27:ALA:N     | 2.40                     | 0.55              |
| 34:BM:82:LEU:O    | 34:BM:83:LYS:C     | 2.50                     | 0.55              |
| 35:BN:64:ARG:HH11 | 35:BN:67:LYS:CA    | 2.16                     | 0.55              |
| 37:BP:34:LEU:HD21 | 37:BP:118:LEU:HD22 | 1.88                     | 0.55              |
| 37:BP:49:ALA:O    | 37:BP:50:ALA:C     | 2.48                     | 0.55              |
| 38:BQ:45:ARG:CG   | 38:BQ:46:GLY:N     | 2.68                     | 0.55              |
| 39:BR:17:ARG:NH1  | 39:BR:25:ARG:HD2   | 2.21                     | 0.55              |
| 39:BR:24:LEU:HG   | 39:BR:41:ASP:HA    | 1.87                     | 0.55              |
| 39:BR:60:GLY:C    | 39:BR:62:LYS:N     | 2.59                     | 0.55              |
| 39:BR:76:LYS:HG2  | 39:BR:77:ALA:N     | 2.20                     | 0.55              |
| 39:BR:93:LYS:O    | 39:BR:98:VAL:CG1   | 2.54                     | 0.55              |
| 41:BT:50:ARG:NE   | 42:BU:75:PHE:CD2   | 2.74                     | 0.55              |
| 41:BT:65:ILE:HG21 | 41:BT:95:LEU:HB2   | 1.88                     | 0.55              |
| 41:BT:111:GLU:CG  | 41:BT:112:ARG:N    | 2.70                     | 0.55              |
| 42:BU:67:GLY:O    | 42:BU:68:LYS:CB    | 2.47                     | 0.55              |
| 43:BV:12:ILE:HD12 | 43:BV:46:PHE:CE2   | 2.41                     | 0.55              |
| 43:BV:16:LYS:HA   | 43:BV:19:LEU:HD12  | 1.88                     | 0.55              |
| 44:BW:29:TRP:CB   | 44:BW:76:ARG:HH21  | 2.19                     | 0.55              |
| 44:BW:73:ARG:NH2  | 44:BW:74:PRO:C     | 2.65                     | 0.55              |
| 44:BW:85:PRO:CB   | 44:BW:87:GLN:HE21  | 2.19                     | 0.55              |
| 46:BY:47:VAL:O    | 46:BY:48:PHE:C     | 2.50                     | 0.55              |
| 46:BY:99:TYR:CE1  | 46:BY:124:ILE:HB   | 2.41                     | 0.55              |
| 48:B1:63:ARG:HB3  | 48:B1:63:ARG:HH21  | 1.71                     | 0.55              |
| 51:B4:20:ARG:HA   | 51:B4:23:HIS:HD2   | 1.70                     | 0.55              |
| 51:B4:51:TYR:CD1  | 51:B4:55:ARG:N     | 2.75                     | 0.55              |
| 54:B7:23:VAL:HG11 | 54:B7:46:ARG:HB3   | 1.87                     | 0.55              |
| 54:B7:52:LYS:HZ2  | 54:B7:52:LYS:HB2   | 1.71                     | 0.55              |
| 1:AA:38:G:O2'     | 1:AA:39:G:H5''     | 2.07                     | 0.55              |
| 1:AA:179:A:H3'    | 1:AA:180:U:C6      | 2.41                     | 0.55              |
| 1:AA:266:G:N2     | 1:AA:270:A:N6      | 2.53                     | 0.55              |
| 1:AA:308:C:H2'    | 1:AA:309:G:O5'     | 2.07                     | 0.55              |
| 1:AA:558:G:O5'    | 1:AA:559:A:H3'     | 2.06                     | 0.55              |
| 1:AA:591:U:OP1    | 10:AK:30:ARG:CZ    | 2.54                     | 0.55              |
| 1:AA:706:A:H4'    | 13:AN:29:ILE:HD13  | 1.88                     | 0.55              |
| 1:AA:713:G:H2'    | 1:AA:714:G:N7      | 2.20                     | 0.55              |
| 1:AA:717:C:C2'    | 1:AA:718:G:OP2     | 2.55                     | 0.55              |
| 1:AA:766:A:H2'    | 1:AA:767:A:H8      | 1.70                     | 0.55              |
| 1:AA:781:A:O2'    | 1:AA:782:A:OP1     | 2.24                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:858:G:H8     | 1:AA:858:G:O5'    | 1.89                     | 0.55              |
| 1:AA:917:G:O2'    | 1:AA:918:A:C5'    | 2.54                     | 0.55              |
| 1:AA:939:G:N2     | 1:AA:940:C:C2     | 2.75                     | 0.55              |
| 1:AA:975:A:C8     | 1:AA:1365:G:N2    | 2.74                     | 0.55              |
| 1:AA:978:A:H8     | 1:AA:980:C:N4     | 2.05                     | 0.55              |
| 1:AA:1213:A:N6    | 1:AA:1215:G:C2    | 2.74                     | 0.55              |
| 1:AA:1342:C:C1'   | 11:AL:124:GLN:OE1 | 2.49                     | 0.55              |
| 1:AA:1452:C:H4'   | 1:AA:1453:G:H5''  | 1.89                     | 0.55              |
| 2:A1:51:U:O2'     | 2:A1:52:U:O5'     | 2.23                     | 0.55              |
| 3:AD:76:A:N7      | 24:BA:2432:A:C4   | 2.75                     | 0.55              |
| 3:AB:75:C:O2'     | 24:BA:2508:G:OP1  | 2.25                     | 0.55              |
| 4:AE:60:ASP:CG    | 4:AE:64:ARG:HH22  | 2.14                     | 0.55              |
| 4:AE:70:PHE:HB3   | 4:AE:163:PHE:HB3  | 1.87                     | 0.55              |
| 4:AE:102:LEU:CB   | 4:AE:180:LEU:CD1  | 2.84                     | 0.55              |
| 4:AE:121:LEU:HD22 | 4:AE:126:GLU:OE2  | 2.06                     | 0.55              |
| 4:AE:124:SER:C    | 4:AE:126:GLU:H    | 2.15                     | 0.55              |
| 4:AE:149:LEU:O    | 4:AE:150:SER:C    | 2.50                     | 0.55              |
| 4:AE:150:SER:C    | 4:AE:153:ARG:HB2  | 2.32                     | 0.55              |
| 4:AE:208:ILE:CA   | 4:AE:211:ILE:HB   | 2.35                     | 0.55              |
| 4:AE:221:LEU:HD13 | 4:AE:222:ILE:N    | 2.21                     | 0.55              |
| 5:AF:182:ILE:HG23 | 5:AF:202:ILE:C    | 2.32                     | 0.55              |
| 6:AG:13:ARG:HB3   | 6:AG:40:PRO:HD3   | 1.89                     | 0.55              |
| 6:AG:19:LEU:O     | 6:AG:20:TYR:C     | 2.48                     | 0.55              |
| 6:AG:107:ARG:HD2  | 6:AG:174:LEU:HD11 | 1.89                     | 0.55              |
| 7:AH:37:ARG:NH1   | 7:AH:111:GLU:C    | 2.65                     | 0.55              |
| 7:AH:37:ARG:NH1   | 7:AH:112:LEU:N    | 2.55                     | 0.55              |
| 7:AH:101:ILE:HD13 | 7:AH:101:ILE:N    | 2.22                     | 0.55              |
| 10:AK:70:GLN:HE21 | 10:AK:70:GLN:C    | 2.14                     | 0.55              |
| 12:AM:65:LEU:CB   | 16:AQ:56:VAL:HG13 | 2.31                     | 0.55              |
| 14:AO:86:ARG:HH22 | 14:AO:119:LYS:HG2 | 1.70                     | 0.55              |
| 15:AP:73:GLU:C    | 15:AP:75:ALA:N    | 2.62                     | 0.55              |
| 15:AP:88:ARG:NH2  | 15:AP:92:HIS:HD2  | 2.05                     | 0.55              |
| 15:AP:99:ARG:HG3  | 15:AP:99:ARG:NH1  | 2.19                     | 0.55              |
| 17:AR:15:PHE:O    | 17:AR:16:ALA:C    | 2.49                     | 0.55              |
| 18:AS:6:LEU:N     | 18:AS:6:LEU:CD1   | 2.67                     | 0.55              |
| 18:AS:7:ALA:HB3   | 18:AS:18:ARG:HB2  | 1.87                     | 0.55              |
| 24:BA:172:C:H2'   | 24:BA:173:G:C8    | 2.41                     | 0.55              |
| 24:BA:424:G:C2'   | 24:BA:425:G:H5'   | 2.35                     | 0.55              |
| 24:BA:513:A:C2    | 24:BA:514:A:H8    | 2.24                     | 0.55              |
| 24:BA:519:U:H4'   | 43:BV:75:TYR:HB2  | 1.88                     | 0.55              |
| 24:BA:687:C:O2    | 24:BA:788:A:P     | 2.63                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:740:U:H2'   | 24:BA:741:G:O5'    | 2.04                     | 0.55              |
| 24:BA:779:U:OP1   | 27:BD:50:THR:HB    | 2.07                     | 0.55              |
| 24:BA:783:A:C6    | 24:BA:785:G:C8     | 2.95                     | 0.55              |
| 24:BA:819:A:C8    | 24:BA:973:A:C2     | 2.94                     | 0.55              |
| 24:BA:947:G:C2'   | 24:BA:948:G:H5'    | 2.36                     | 0.55              |
| 24:BA:949:C:C2    | 24:BA:950:G:N7     | 2.74                     | 0.55              |
| 24:BA:1093:G:H21  | 24:BA:1098:A:N6    | 2.05                     | 0.55              |
| 24:BA:1135:C:HO2' | 24:BA:2038:G:HO2'  | 1.53                     | 0.55              |
| 24:BA:1359:A:C8   | 24:BA:1359:A:O5'   | 2.60                     | 0.55              |
| 24:BA:1455:G:C2'  | 24:BA:1456:G:H5'   | 2.37                     | 0.55              |
| 24:BA:1471:A:N6   | 24:BA:1519:G:N2    | 2.48                     | 0.55              |
| 24:BA:1520:U:OP2  | 24:BA:1520:U:C5    | 2.59                     | 0.55              |
| 24:BA:1522:G:C8   | 24:BA:1522:G:H3'   | 2.41                     | 0.55              |
| 24:BA:1680:U:O5'  | 24:BA:1680:U:H6    | 1.90                     | 0.55              |
| 24:BA:1685:C:H2'  | 24:BA:1686:C:H6    | 1.72                     | 0.55              |
| 24:BA:1708:C:C2'  | 24:BA:1709:U:C5'   | 2.79                     | 0.55              |
| 24:BA:1770:G:O2'  | 24:BA:1771:C:C5'   | 2.52                     | 0.55              |
| 24:BA:1784:A:H4'  | 24:BA:1785:A:C1'   | 2.37                     | 0.55              |
| 24:BA:1807:G:N2   | 24:BA:1809:A:H5'   | 2.22                     | 0.55              |
| 24:BA:1827:C:C1'  | 24:BA:1970:A:H2    | 2.20                     | 0.55              |
| 24:BA:1834:U:C1'  | 24:BA:1969:A:H2    | 2.19                     | 0.55              |
| 24:BA:1934:C:H5'  | 24:BA:1974:C:C4'   | 2.30                     | 0.55              |
| 24:BA:2126:A:N1   | 24:BA:2162:G:O2'   | 2.40                     | 0.55              |
| 24:BA:2132:U:C3'  | 24:BA:2133:G:C5'   | 2.68                     | 0.55              |
| 24:BA:2286:A:N7   | 52:B5:31:PRO:HD2   | 2.21                     | 0.55              |
| 24:BA:2306:C:OP1  | 30:BG:136:ARG:CD   | 2.53                     | 0.55              |
| 24:BA:2309:A:H3'  | 24:BA:2309:A:N3    | 2.21                     | 0.55              |
| 24:BA:2366:A:N6   | 24:BA:2367:G:C2    | 2.74                     | 0.55              |
| 24:BA:2443:C:C2   | 24:BA:2444:G:C8    | 2.95                     | 0.55              |
| 24:BA:2570:G:N2   | 24:BA:2571:C:N1    | 2.54                     | 0.55              |
| 24:BA:2617:C:N3   | 24:BA:2618:G:C8    | 2.74                     | 0.55              |
| 24:BA:2637:U:OP2  | 24:BA:2637:U:H6    | 1.87                     | 0.55              |
| 24:BA:2688:U:H1'  | 24:BA:2721:A:N6    | 2.21                     | 0.55              |
| 24:BA:2822:G:N7   | 38:BQ:4:LEU:HD21   | 2.21                     | 0.55              |
| 24:BA:2881:C:OP1  | 38:BQ:90:ARG:NH1   | 2.40                     | 0.55              |
| 25:BB:43:C:O2     | 30:BG:95:ARG:CB    | 2.49                     | 0.55              |
| 25:BB:48:A:O3'    | 39:BR:95:HIS:CE1   | 2.59                     | 0.55              |
| 26:BC:4:GLY:O     | 26:BC:5:LYS:HG3    | 2.06                     | 0.55              |
| 26:BC:64:LEU:HD11 | 26:BC:161:ILE:HG12 | 1.86                     | 0.55              |
| 27:BD:29:PRO:CB   | 27:BD:31:LYS:NZ    | 2.70                     | 0.55              |
| 27:BD:102:LYS:O   | 27:BD:103:ARG:HG3  | 2.06                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:126:GLN:O    | 27:BD:126:GLN:HG3  | 2.06                     | 0.55              |
| 27:BD:132:PRO:O    | 27:BD:133:LEU:O    | 2.25                     | 0.55              |
| 27:BD:165:ILE:HD12 | 27:BD:165:ILE:N    | 2.21                     | 0.55              |
| 27:BD:236:GLY:O    | 27:BD:237:GLU:HG2  | 2.05                     | 0.55              |
| 27:BD:268:ARG:C    | 27:BD:269:PHE:CD1  | 2.85                     | 0.55              |
| 28:BE:4:ILE:HG13   | 28:BE:27:LEU:CD1   | 2.34                     | 0.55              |
| 28:BE:5:LEU:HD23   | 28:BE:6:GLY:C      | 2.32                     | 0.55              |
| 28:BE:30:PRO:HB2   | 28:BE:48:GLN:CB    | 2.30                     | 0.55              |
| 28:BE:166:THR:OG1  | 28:BE:167:VAL:N    | 2.36                     | 0.55              |
| 29:BF:31:HIS:CG    | 36:BO:14:LYS:HZ2   | 2.24                     | 0.55              |
| 29:BF:37:VAL:HA    | 29:BF:184:TYR:CE2  | 2.41                     | 0.55              |
| 29:BF:182:ASN:OD1  | 29:BF:185:ASP:OD1  | 2.23                     | 0.55              |
| 30:BG:74:LYS:HB3   | 30:BG:87:PRO:CG    | 2.36                     | 0.55              |
| 31:BH:38:SER:HB3   | 31:BH:41:MET:SD    | 2.46                     | 0.55              |
| 31:BH:40:GLU:O     | 31:BH:55:PRO:HD3   | 2.07                     | 0.55              |
| 31:BH:101:ARG:C    | 31:BH:117:PRO:HD3  | 2.31                     | 0.55              |
| 31:BH:124:GLU:C    | 31:BH:126:PRO:HD2  | 2.31                     | 0.55              |
| 31:BH:152:ARG:HG3  | 31:BH:152:ARG:HH21 | 1.71                     | 0.55              |
| 32:BK:9:LEU:HG     | 32:BK:17:GLN:NE2   | 2.21                     | 0.55              |
| 33:BL:129:GLY:O    | 33:BL:132:ARG:HB2  | 2.06                     | 0.55              |
| 35:BN:64:ARG:NH1   | 35:BN:66:LYS:H     | 2.04                     | 0.55              |
| 37:BP:19:GLY:O     | 37:BP:20:ALA:HB3   | 2.06                     | 0.55              |
| 37:BP:35:VAL:O     | 37:BP:35:VAL:HG13  | 2.06                     | 0.55              |
| 37:BP:43:THR:OG1   | 37:BP:45:GLN:HB2   | 2.07                     | 0.55              |
| 38:BQ:22:ARG:O     | 38:BQ:23:ASN:C     | 2.48                     | 0.55              |
| 39:BR:106:ARG:C    | 39:BR:106:ARG:HH11 | 2.14                     | 0.55              |
| 40:BS:23:ARG:NH2   | 40:BS:88:ILE:O     | 2.40                     | 0.55              |
| 45:BX:7:VAL:CG1    | 45:BX:71:LYS:HB3   | 2.32                     | 0.55              |
| 45:BX:19:LYS:HD2   | 45:BX:40:GLU:OE1   | 2.06                     | 0.55              |
| 46:BY:102:LEU:CD1  | 46:BY:137:ILE:HG22 | 2.36                     | 0.55              |
| 48:B1:12:SER:H     | 48:B1:15:GLU:CD    | 2.15                     | 0.55              |
| 52:B5:20:ASN:CG    | 52:B5:42:TRP:CD1   | 2.85                     | 0.55              |
| 54:B7:8:LYS:HE2    | 54:B7:8:LYS:N      | 2.11                     | 0.55              |
| 55:B8:25:VAL:HG21  | 55:B8:34:GLN:CD    | 2.32                     | 0.55              |
| 1:AA:32:A:H2'      | 1:AA:33:A:C8       | 2.41                     | 0.55              |
| 1:AA:34:C:O2'      | 1:AA:35:G:C5'      | 2.51                     | 0.55              |
| 1:AA:110:C:C2'     | 1:AA:111:G:H5'     | 2.37                     | 0.55              |
| 1:AA:266:G:N2      | 1:AA:270:A:H62     | 2.05                     | 0.55              |
| 1:AA:327:A:C2      | 1:AA:329:A:C4      | 2.95                     | 0.55              |
| 1:AA:355:C:C2      | 1:AA:356:A:N7      | 2.75                     | 0.55              |
| 1:AA:465:A:N7      | 1:AA:467:G:N1      | 2.53                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:558:G:C3'    | 1:AA:559:A:C5'    | 2.72                     | 0.55              |
| 1:AA:574:A:H8     | 1:AA:574:A:O5'    | 1.89                     | 0.55              |
| 1:AA:594:G:N7     | 1:AA:595:G:N3     | 2.55                     | 0.55              |
| 1:AA:643:C:H5'    | 10:AK:31:PHE:CZ   | 2.42                     | 0.55              |
| 1:AA:1060:C:H4'   | 12:AM:52:GLY:HA2  | 1.87                     | 0.55              |
| 1:AA:1113:C:C2    | 1:AA:1114:C:C6    | 2.94                     | 0.55              |
| 1:AA:1158:C:O2    | 1:AA:1158:C:C2'   | 2.54                     | 0.55              |
| 3:AC:15:G:N2      | 3:AC:48:C:H42     | 1.99                     | 0.55              |
| 3:AD:32:U:H1'     | 9:AJ:86:GLN:NE2   | 2.21                     | 0.55              |
| 3:AD:58:A:O2'     | 3:AD:61:C:H5      | 1.89                     | 0.55              |
| 3:AB:34:G:C2      | 3:AB:35:A:C1'     | 2.79                     | 0.55              |
| 4:AE:85:ALA:O     | 4:AE:86:GLU:C     | 2.50                     | 0.55              |
| 4:AE:105:PHE:CD1  | 4:AE:108:ILE:HB   | 2.42                     | 0.55              |
| 4:AE:115:LEU:HD13 | 4:AE:145:LEU:HG   | 1.88                     | 0.55              |
| 4:AE:142:LEU:HD23 | 4:AE:142:LEU:C    | 2.31                     | 0.55              |
| 5:AF:5:ILE:HD12   | 5:AF:5:ILE:N      | 2.21                     | 0.55              |
| 5:AF:40:ARG:NH1   | 5:AF:40:ARG:HG3   | 2.22                     | 0.55              |
| 5:AF:155:GLY:O    | 5:AF:196:LEU:HB2  | 2.06                     | 0.55              |
| 6:AG:50:ARG:CG    | 6:AG:51:PRO:HD2   | 2.23                     | 0.55              |
| 7:AH:43:LEU:HD23  | 7:AH:44:GLY:CA    | 2.36                     | 0.55              |
| 8:AI:50:TYR:CE1   | 20:AU:81:PHE:CE2  | 2.95                     | 0.55              |
| 9:AJ:78:ARG:O     | 9:AJ:84:ASN:CA    | 2.29                     | 0.55              |
| 10:AK:44:PHE:O    | 10:AK:64:LYS:CD   | 2.55                     | 0.55              |
| 10:AK:82:HIS:CD2  | 10:AK:138:TRP:HE1 | 2.25                     | 0.55              |
| 10:AK:121:ASP:O   | 10:AK:122:ARG:C   | 2.49                     | 0.55              |
| 11:AL:15:ALA:CB   | 11:AL:77:ILE:N    | 2.70                     | 0.55              |
| 11:AL:100:GLY:C   | 11:AL:101:PHE:CD1 | 2.84                     | 0.55              |
| 12:AM:49:VAL:CG1  | 16:AQ:41:ARG:HD2  | 2.24                     | 0.55              |
| 13:AN:85:ARG:HD2  | 13:AN:113:PRO:HD2 | 1.89                     | 0.55              |
| 14:AO:7:ILE:HB    | 14:AO:8:ASN:HD22  | 1.70                     | 0.55              |
| 14:AO:8:ASN:O     | 14:AO:9:GLN:C     | 2.50                     | 0.55              |
| 15:AP:59:TYR:CD2  | 15:AP:60:VAL:N    | 2.75                     | 0.55              |
| 17:AR:31:LEU:HD12 | 17:AR:31:LEU:N    | 2.21                     | 0.55              |
| 19:AT:48:GLU:OE1  | 19:AT:50:LYS:HB2  | 2.07                     | 0.55              |
| 23:AX:3:LYS:O     | 23:AX:14:TRP:CE3  | 2.60                     | 0.55              |
| 24:BA:83:G:C6     | 24:BA:102:G:H1'   | 2.42                     | 0.55              |
| 24:BA:273(E):U:C6 | 24:BA:363(B):G:N2 | 2.75                     | 0.55              |
| 24:BA:328:U:H6    | 24:BA:328:U:O5'   | 1.90                     | 0.55              |
| 24:BA:458:G:OP1   | 53:B6:39:ARG:NH1  | 2.40                     | 0.55              |
| 24:BA:619:G:C8    | 24:BA:619:G:C3'   | 2.89                     | 0.55              |
| 24:BA:763:G:C2'   | 24:BA:764:A:C5'   | 2.83                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:820:A:N7    | 24:BA:973:A:C6     | 2.75                     | 0.55              |
| 24:BA:836:G:C5    | 24:BA:837:C:N4     | 2.75                     | 0.55              |
| 24:BA:838:C:C4    | 24:BA:839:U:C4     | 2.94                     | 0.55              |
| 24:BA:866:A:N7    | 24:BA:914:C:O2     | 2.40                     | 0.55              |
| 24:BA:1000:A:N1   | 24:BA:1155:A:C4    | 2.74                     | 0.55              |
| 24:BA:1011:G:OP2  | 41:BT:75:ASN:CG    | 2.50                     | 0.55              |
| 24:BA:1062:G:C6   | 24:BA:1077:A:C4    | 2.94                     | 0.55              |
| 24:BA:1073:A:N7   | 24:BA:1074:G:C5    | 2.75                     | 0.55              |
| 24:BA:1144:G:C4   | 24:BA:1145:C:C5    | 2.94                     | 0.55              |
| 24:BA:1183:G:H3'  | 24:BA:1183:G:P     | 2.47                     | 0.55              |
| 24:BA:1419:A:C3'  | 24:BA:1420:U:O4'   | 2.55                     | 0.55              |
| 24:BA:1428:C:N4   | 24:BA:1569:A:H5''  | 2.22                     | 0.55              |
| 24:BA:1470:G:C8   | 24:BA:1470:G:C3'   | 2.88                     | 0.55              |
| 24:BA:1540:G:C4   | 24:BA:1541:U:H1'   | 2.41                     | 0.55              |
| 24:BA:1580:A:H2'  | 24:BA:1581:G:C1'   | 2.36                     | 0.55              |
| 24:BA:1655:A:H5'' | 28:BE:113:PHE:C    | 2.32                     | 0.55              |
| 24:BA:1791:A:H4'  | 27:BD:206:LEU:HD23 | 1.88                     | 0.55              |
| 24:BA:1819:A:C5'  | 27:BD:178:PRO:HG3  | 2.21                     | 0.55              |
| 24:BA:1917:U:H6   | 24:BA:1917:U:H3'   | 1.71                     | 0.55              |
| 24:BA:1930:G:C2'  | 24:BA:1931:U:OP2   | 2.55                     | 0.55              |
| 24:BA:1936:A:O4'  | 24:BA:1940:U:C4    | 2.59                     | 0.55              |
| 24:BA:2020:A:OP2  | 41:BT:27:LEU:HD22  | 2.06                     | 0.55              |
| 24:BA:2052:G:O5'  | 28:BE:141:ILE:HG13 | 2.07                     | 0.55              |
| 24:BA:2197:U:H3'  | 24:BA:2197:U:OP2   | 2.07                     | 0.55              |
| 24:BA:2211:G:H21  | 24:BA:2212:A:C5'   | 2.19                     | 0.55              |
| 24:BA:2458:G:C8   | 24:BA:2490:G:O6    | 2.60                     | 0.55              |
| 24:BA:2523:G:H1'  | 24:BA:2765:A:N6    | 2.21                     | 0.55              |
| 24:BA:2740:A:N6   | 24:BA:2764:A:N9    | 2.54                     | 0.55              |
| 24:BA:2740:A:C6   | 24:BA:2741:A:N6    | 2.74                     | 0.55              |
| 24:BA:2747:G:C2   | 24:BA:2754:U:N3    | 2.75                     | 0.55              |
| 25:BB:74:U:H2'    | 25:BB:75:G:C1'     | 2.36                     | 0.55              |
| 26:BC:42:GLU:O    | 26:BC:215:THR:O    | 2.24                     | 0.55              |
| 26:BC:73:ARG:HG2  | 26:BC:92:ASP:CG    | 2.31                     | 0.55              |
| 27:BD:111:LEU:HB3 | 27:BD:115:GLN:CD   | 2.32                     | 0.55              |
| 27:BD:157:ARG:O   | 27:BD:160:GLY:N    | 2.40                     | 0.55              |
| 27:BD:221:VAL:O   | 27:BD:222:ARG:CG   | 2.52                     | 0.55              |
| 27:BD:244:ARG:HA  | 27:BD:252:TRP:NE1  | 2.22                     | 0.55              |
| 28:BE:7:VAL:HG13  | 28:BE:194:GLY:C    | 2.31                     | 0.55              |
| 28:BE:45:THR:HG1  | 28:BE:46:ALA:H     | 1.54                     | 0.55              |
| 28:BE:55:ASN:ND2  | 28:BE:73:GLU:HG3   | 2.22                     | 0.55              |
| 28:BE:171:GLU:HB2 | 28:BE:185:LYS:NZ   | 2.06                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 29:BF:31:HIS:HB2   | 36:BO:14:LYS:NZ    | 2.10                     | 0.55              |
| 29:BF:32:LEU:HD11  | 29:BF:105:VAL:HG11 | 1.88                     | 0.55              |
| 29:BF:43:LYS:HG3   | 29:BF:98:SER:CA    | 2.36                     | 0.55              |
| 30:BG:36:LYS:HA    | 30:BG:95:ARG:O     | 2.07                     | 0.55              |
| 30:BG:140:ILE:HG22 | 30:BG:141:PHE:CD1  | 2.41                     | 0.55              |
| 31:BH:105:LEU:HD23 | 31:BH:105:LEU:H    | 1.68                     | 0.55              |
| 31:BH:152:ARG:HB2  | 31:BH:152:ARG:CZ   | 2.37                     | 0.55              |
| 32:BK:25:TYR:O     | 32:BK:30:LEU:HD23  | 2.07                     | 0.55              |
| 32:BK:93:THR:O     | 32:BK:96:ASP:HB2   | 2.06                     | 0.55              |
| 34:BM:67:LEU:O     | 34:BM:68:GLU:CB    | 2.54                     | 0.55              |
| 34:BM:127:ASP:OD1  | 34:BM:128:HIS:ND1  | 2.39                     | 0.55              |
| 35:BN:89:ASN:ND2   | 35:BN:91:LEU:CB    | 2.67                     | 0.55              |
| 36:BO:56:SER:CB    | 54:B7:13:ARG:NE    | 2.69                     | 0.55              |
| 36:BO:99:LEU:CD2   | 36:BO:101:VAL:HG13 | 2.35                     | 0.55              |
| 37:BP:63:LYS:O     | 37:BP:106:VAL:HG13 | 2.06                     | 0.55              |
| 37:BP:122:GLY:O    | 37:BP:124:LYS:C    | 2.50                     | 0.55              |
| 38:BQ:14:SER:HA    | 38:BQ:17:ARG:CD    | 2.36                     | 0.55              |
| 38:BQ:59:ASP:OD1   | 38:BQ:62:ALA:N     | 2.39                     | 0.55              |
| 38:BQ:63:ARG:HG2   | 38:BQ:63:ARG:HH11  | 1.71                     | 0.55              |
| 38:BQ:88:ARG:O     | 38:BQ:89:ASP:CB    | 2.55                     | 0.55              |
| 40:BS:64:ARG:NH2   | 40:BS:77:PRO:HB2   | 2.21                     | 0.55              |
| 40:BS:85:LYS:H     | 40:BS:85:LYS:HZ3   | 1.55                     | 0.55              |
| 41:BT:45:TYR:HB3   | 41:BT:49:HIS:CE1   | 2.40                     | 0.55              |
| 41:BT:57:PHE:HA    | 41:BT:60:LEU:CD1   | 2.36                     | 0.55              |
| 42:BU:35:LEU:C     | 42:BU:61:VAL:HG13  | 2.30                     | 0.55              |
| 42:BU:40:LEU:N     | 42:BU:54:GLY:HA3   | 2.21                     | 0.55              |
| 42:BU:60:GLU:OE1   | 42:BU:101:GLY:HA3  | 2.07                     | 0.55              |
| 43:BV:29:LEU:HD23  | 43:BV:29:LEU:C     | 2.31                     | 0.55              |
| 44:BW:15:GLU:O     | 44:BW:18:TYR:N     | 2.26                     | 0.55              |
| 46:BY:23:LYS:HA    | 46:BY:39:VAL:O     | 2.06                     | 0.55              |
| 46:BY:41:LEU:HA    | 46:BY:44:PHE:HB2   | 1.87                     | 0.55              |
| 46:BY:80:ARG:O     | 46:BY:81:ARG:HG3   | 2.07                     | 0.55              |
| 46:BY:96:VAL:HG13  | 46:BY:128:VAL:HG13 | 1.88                     | 0.55              |
| 47:BZ:72:ARG:HD3   | 47:BZ:75:LEU:HD22  | 1.89                     | 0.55              |
| 50:B3:42:PHE:CE2   | 50:B3:43:TYR:O     | 2.60                     | 0.55              |
| 51:B4:44:THR:N     | 51:B4:52:TYR:OH    | 2.39                     | 0.55              |
| 55:B8:10:ILE:HD13  | 55:B8:14:CYS:SG    | 2.47                     | 0.55              |
| 55:B8:22:ARG:HB3   | 55:B8:24:TYR:CE1   | 2.42                     | 0.55              |
| 1:AA:9:G:P         | 7:AH:122:GLU:OE1   | 2.65                     | 0.55              |
| 1:AA:23:C:O2'      | 1:AA:24:U:H5'      | 2.06                     | 0.55              |
| 1:AA:413:G:H2'     | 1:AA:414:A:OP2     | 2.06                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 1:AA:432:A:H3'      | 1:AA:432:A:H8      | 1.71                     | 0.55              |
| 1:AA:593:G:C5       | 1:AA:594:G:C8      | 2.94                     | 0.55              |
| 1:AA:646:U:C2       | 1:AA:647:C:C5      | 2.95                     | 0.55              |
| 1:AA:675:A:H2'      | 1:AA:676:A:H8      | 1.69                     | 0.55              |
| 1:AA:720:C:H1'      | 20:AU:50:ILE:HD12  | 1.88                     | 0.55              |
| 1:AA:939:G:C2       | 1:AA:940:C:N3      | 2.75                     | 0.55              |
| 1:AA:942:G:N2       | 11:AL:124:GLN:NE2  | 2.49                     | 0.55              |
| 1:AA:966:G:C2       | 3:AC:34:G:H5'      | 2.40                     | 0.55              |
| 1:AA:980:C:C4       | 1:AA:981:U:N3      | 2.75                     | 0.55              |
| 1:AA:1094:G:H2'     | 1:AA:1108:G:H22    | 1.72                     | 0.55              |
| 1:AA:1112:C:O2      | 5:AF:179:ARG:NE    | 2.40                     | 0.55              |
| 1:AA:1127:G:H21     | 1:AA:1147:C:N4     | 2.04                     | 0.55              |
| 4:AE:82:ARG:H       | 4:AE:94:ASN:ND2    | 2.04                     | 0.55              |
| 5:AF:28:GLN:CD      | 5:AF:29:TYR:N      | 2.64                     | 0.55              |
| 6:AG:39:PRO:O       | 6:AG:44:GLY:CA     | 2.55                     | 0.55              |
| 6:AG:170:VAL:HG11   | 6:AG:174:LEU:HD12  | 1.88                     | 0.55              |
| 7:AH:5:ASP:O        | 7:AH:36:ASP:HA     | 2.07                     | 0.55              |
| 7:AH:76:ILE:HG23    | 7:AH:77:PRO:HD2    | 1.89                     | 0.55              |
| 7:AH:115:VAL:HG11   | 7:AH:118:ILE:HD12  | 1.89                     | 0.55              |
| 9:AJ:68:ASN:ND2     | 9:AJ:127:ALA:O     | 2.39                     | 0.55              |
| 10:AK:17:THR:HB     | 10:AK:18:ARG:NH2   | 2.21                     | 0.55              |
| 10:AK:123:GLU:OE1   | 10:AK:124:ALA:N    | 2.39                     | 0.55              |
| 10:AK:138:TRP:OXT   | 10:AK:138:TRP:CE3  | 2.60                     | 0.55              |
| 12:AM:7:LYS:HZ2     | 12:AM:71:LEU:HD11  | 1.71                     | 0.55              |
| 12:AM:46:ARG:NH1    | 16:AQ:59:ALA:HB1   | 2.22                     | 0.55              |
| 15:AP:108:ARG:HD2   | 15:AP:108:ARG:N    | 2.22                     | 0.55              |
| 16:AQ:10:ALA:C      | 16:AQ:12:ARG:N     | 2.64                     | 0.55              |
| 19:AT:92:ARG:O      | 19:AT:95:TYR:N     | 2.36                     | 0.55              |
| 20:AU:76:LEU:H      | 20:AU:76:LEU:CD2   | 2.14                     | 0.55              |
| 22:AW:42:GLN:O      | 22:AW:43:LEU:C     | 2.49                     | 0.55              |
| 24:BA:124:G:H8      | 24:BA:124:G:O5'    | 1.89                     | 0.55              |
| 24:BA:179:G:H5'     | 53:B6:32:LYS:CE    | 2.36                     | 0.55              |
| 24:BA:267:C:OP2     | 24:BA:271(A):C:C5  | 2.60                     | 0.55              |
| 24:BA:270(Y):G:H5'' | 24:BA:270(Z):U:OP1 | 2.07                     | 0.55              |
| 24:BA:281:G:OP1     | 24:BA:281:G:N7     | 2.40                     | 0.55              |
| 24:BA:533:G:H5'     | 41:BT:24:TYR:HD2   | 1.72                     | 0.55              |
| 24:BA:602:G:H2'     | 24:BA:655:A:C6     | 2.42                     | 0.55              |
| 24:BA:696:G:N2      | 24:BA:697:C:C2     | 2.74                     | 0.55              |
| 24:BA:714:U:O4      | 24:BA:717:G:OP2    | 2.24                     | 0.55              |
| 24:BA:721:C:N3      | 24:BA:722:A:N7     | 2.55                     | 0.55              |
| 24:BA:768:G:H2'     | 24:BA:769:G:H8     | 1.71                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:775:G:C2'   | 24:BA:794:G:C8    | 2.89                     | 0.55              |
| 24:BA:792:G:H21   | 24:BA:2072:G:C2'  | 2.19                     | 0.55              |
| 24:BA:852:G:C5    | 24:BA:853:G:N7    | 2.75                     | 0.55              |
| 24:BA:902:C:C2    | 24:BA:903:C:C5    | 2.95                     | 0.55              |
| 24:BA:919:G:C2'   | 24:BA:920:G:O5'   | 2.55                     | 0.55              |
| 24:BA:954:G:C6    | 24:BA:964:C:C4    | 2.95                     | 0.55              |
| 24:BA:1065:U:H1'  | 24:BA:1074:G:N2   | 2.22                     | 0.55              |
| 24:BA:1206:G:H2'  | 24:BA:1207:C:C4'  | 2.32                     | 0.55              |
| 24:BA:1273:U:H5'' | 24:BA:1646:C:H41  | 1.72                     | 0.55              |
| 24:BA:1351:C:O2'  | 24:BA:1571:A:C8   | 2.59                     | 0.55              |
| 24:BA:1357:U:N3   | 24:BA:1358:G:N3   | 2.55                     | 0.55              |
| 24:BA:1388:G:C2   | 24:BA:1400:G:C2   | 2.95                     | 0.55              |
| 24:BA:1428:C:C4   | 24:BA:1569:A:H5'' | 2.41                     | 0.55              |
| 24:BA:1524:G:C4   | 24:BA:1525:G:C8   | 2.95                     | 0.55              |
| 24:BA:1530:G:O3'  | 24:BA:1531:C:O4'  | 2.25                     | 0.55              |
| 24:BA:1782:C:H3'  | 24:BA:1782:C:C6   | 2.41                     | 0.55              |
| 24:BA:1788:C:O5'  | 24:BA:1788:C:H6   | 1.89                     | 0.55              |
| 24:BA:1964:G:C8   | 24:BA:1964:G:OP1  | 2.59                     | 0.55              |
| 24:BA:2030:A:O2'  | 24:BA:2031:A:O5'  | 2.21                     | 0.55              |
| 24:BA:2059:A:C2   | 24:BA:2503:A:N6   | 2.65                     | 0.55              |
| 24:BA:2163:C:H2'  | 24:BA:2164:C:H5'  | 1.88                     | 0.55              |
| 24:BA:2313:C:H2'  | 24:BA:2314:C:C6   | 2.41                     | 0.55              |
| 24:BA:2318:G:O5'  | 24:BA:2318:G:C8   | 2.54                     | 0.55              |
| 24:BA:2387:U:H1'  | 47:BZ:41:ARG:CZ   | 2.33                     | 0.55              |
| 24:BA:2459:A:C2   | 24:BA:2492:U:N3   | 2.74                     | 0.55              |
| 24:BA:2543:G:N2   | 24:BA:2765:A:C2   | 2.74                     | 0.55              |
| 24:BA:2576:G:C5'  | 24:BA:2577:A:OP1  | 2.54                     | 0.55              |
| 24:BA:2754:U:H2'  | 24:BA:2756:U:OP1  | 2.06                     | 0.55              |
| 24:BA:2786:U:O4'  | 28:BE:65:GLY:HA2  | 2.06                     | 0.55              |
| 24:BA:2791:C:C5   | 24:BA:2893:G:N7   | 2.71                     | 0.55              |
| 24:BA:2842:G:H2'  | 24:BA:2843:G:O4'  | 2.07                     | 0.55              |
| 25:BB:58:A:N7     | 25:BB:59:A:N7     | 2.55                     | 0.55              |
| 25:BB:73:A:C2     | 25:BB:74:U:C2     | 2.95                     | 0.55              |
| 25:BB:115:G:H4'   | 39:BR:50:SER:OG   | 2.07                     | 0.55              |
| 26:BC:56:GLN:NE2  | 26:BC:203:GLY:C   | 2.65                     | 0.55              |
| 26:BC:94:VAL:C    | 26:BC:99:ILE:HD12 | 2.32                     | 0.55              |
| 26:BC:142:ALA:O   | 26:BC:143:GLY:C   | 2.50                     | 0.55              |
| 27:BD:29:PRO:O    | 27:BD:31:LYS:N    | 2.39                     | 0.55              |
| 27:BD:79:VAL:HG11 | 27:BD:113:VAL:HA  | 1.89                     | 0.55              |
| 28:BE:38:THR:CB   | 28:BE:39:PRO:HD3  | 2.36                     | 0.55              |
| 28:BE:53:PRO:O    | 28:BE:54:GLN:O    | 2.25                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 28:BE:133:LYS:HB3  | 28:BE:137:HIS:CD2  | 2.42                     | 0.55              |
| 28:BE:164:ARG:HG2  | 28:BE:165:VAL:N    | 2.22                     | 0.55              |
| 29:BF:29:ASN:ND2   | 29:BF:29:ASN:C     | 2.62                     | 0.55              |
| 29:BF:34:TRP:CD1   | 29:BF:38:ARG:HH11  | 2.18                     | 0.55              |
| 29:BF:120:GLU:OE1  | 29:BF:120:GLU:CA   | 2.54                     | 0.55              |
| 29:BF:133:ASN:CG   | 29:BF:162:LEU:HD13 | 2.31                     | 0.55              |
| 30:BG:35:GLU:HA    | 30:BG:100:TRP:HH2  | 1.70                     | 0.55              |
| 30:BG:125:PHE:CE2  | 30:BG:130:ASN:HB2  | 2.42                     | 0.55              |
| 31:BH:41:MET:SD    | 31:BH:64:LEU:HD22  | 2.46                     | 0.55              |
| 31:BH:149:ARG:CA   | 31:BH:162:ILE:HD13 | 2.37                     | 0.55              |
| 31:BH:157:TYR:CD1  | 31:BH:157:TYR:C    | 2.85                     | 0.55              |
| 32:BK:75:LEU:HD13  | 32:BK:76:THR:N     | 2.20                     | 0.55              |
| 32:BK:114:LEU:H    | 32:BK:131:LYS:NZ   | 2.05                     | 0.55              |
| 34:BM:107:LEU:HD13 | 34:BM:117:PHE:CE1  | 2.41                     | 0.55              |
| 35:BN:106:LEU:CD2  | 40:BS:38:ASN:HD21  | 2.19                     | 0.55              |
| 36:BO:9:ASN:O      | 36:BO:10:PRO:C     | 2.49                     | 0.55              |
| 36:BO:70:GLN:HB3   | 36:BO:110:TYR:OH   | 2.06                     | 0.55              |
| 37:BP:26:TYR:H     | 37:BP:102:VAL:CB   | 2.18                     | 0.55              |
| 38:BQ:54:LEU:O     | 38:BQ:80:PHE:CE1   | 2.60                     | 0.55              |
| 40:BS:49:VAL:O     | 40:BS:50:ILE:HG23  | 2.07                     | 0.55              |
| 41:BT:32:PHE:N     | 41:BT:32:PHE:HD1   | 2.02                     | 0.55              |
| 45:BX:14:LEU:CB    | 45:BX:20:TYR:HA    | 2.20                     | 0.55              |
| 46:BY:25:PRO:HG2   | 46:BY:85:HIS:HA    | 1.88                     | 0.55              |
| 46:BY:118:GLN:OE1  | 46:BY:172:ALA:HB1  | 2.05                     | 0.55              |
| 54:B7:58:ILE:CG2   | 54:B7:61:LEU:HD12  | 2.37                     | 0.55              |
| 1:AA:20:U:C2'      | 1:AA:21:G:O4'      | 2.55                     | 0.55              |
| 1:AA:232:G:C4      | 1:AA:233:C:C5      | 2.95                     | 0.55              |
| 1:AA:265:G:C8      | 1:AA:267:C:C5      | 2.94                     | 0.55              |
| 1:AA:429:U:O2'     | 1:AA:430:A:H5''    | 2.07                     | 0.55              |
| 1:AA:519:C:H5''    | 14:AO:51:ALA:HB2   | 1.87                     | 0.55              |
| 1:AA:657:G:C4'     | 17:AR:28:GLN:HE22  | 2.20                     | 0.55              |
| 1:AA:801:U:C2      | 1:AA:802:A:C8      | 2.95                     | 0.55              |
| 1:AA:983:A:O2'     | 1:AA:1050:G:OP2    | 2.22                     | 0.55              |
| 1:AA:1054:C:C6     | 1:AA:1054:C:C3'    | 2.89                     | 0.55              |
| 1:AA:1082:G:H2'    | 1:AA:1083:U:H5'    | 1.88                     | 0.55              |
| 1:AA:1150:U:H5'    | 1:AA:1280:A:N1     | 2.22                     | 0.55              |
| 1:AA:1288:A:O5'    | 1:AA:1288:A:H8     | 1.89                     | 0.55              |
| 1:AA:1409:C:O2'    | 1:AA:1410:G:H5'    | 2.06                     | 0.55              |
| 3:AD:48:C:C4       | 3:AD:59:U:O2       | 2.59                     | 0.55              |
| 4:AE:15:VAL:CG2    | 4:AE:209:ARG:NE    | 2.66                     | 0.55              |
| 5:AF:67:THR:CG2    | 5:AF:104:GLN:CG    | 2.85                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 5:AF:91:LEU:CD2    | 5:AF:91:LEU:C      | 2.79                     | 0.55              |
| 6:AG:15:GLU:HA     | 6:AG:15:GLU:OE1    | 2.06                     | 0.55              |
| 6:AG:60:GLU:HA     | 6:AG:63:LYS:CD     | 2.37                     | 0.55              |
| 7:AH:109:ILE:CD1   | 7:AH:135:THR:HB    | 2.34                     | 0.55              |
| 7:AH:122:GLU:HB3   | 7:AH:126:ARG:HG3   | 1.89                     | 0.55              |
| 7:AH:140:ARG:HB2   | 7:AH:140:ARG:CZ    | 2.37                     | 0.55              |
| 8:AI:48:LEU:HB3    | 20:AU:78:LEU:CD2   | 2.28                     | 0.55              |
| 8:AI:75:LEU:O      | 8:AI:76:ALA:C      | 2.50                     | 0.55              |
| 8:AI:79:LEU:O      | 8:AI:85:VAL:HG21   | 2.07                     | 0.55              |
| 9:AJ:5:ARG:C       | 9:AJ:5:ARG:HH11    | 2.15                     | 0.55              |
| 9:AJ:109:ASN:HA    | 9:AJ:119:ARG:HD3   | 1.88                     | 0.55              |
| 10:AK:10:LEU:O     | 10:AK:14:ARG:NH1   | 2.30                     | 0.55              |
| 10:AK:47:GLY:O     | 10:AK:61:VAL:HA    | 2.06                     | 0.55              |
| 10:AK:114:THR:O    | 10:AK:116:LYS:N    | 2.40                     | 0.55              |
| 11:AL:11:LYS:O     | 11:AL:12:GLU:HG2   | 2.07                     | 0.55              |
| 11:AL:27:THR:HG22  | 11:AL:30:GLY:H     | 1.71                     | 0.55              |
| 13:AN:122:LYS:O    | 13:AN:123:LYS:C    | 2.50                     | 0.55              |
| 19:AT:4:LYS:CD     | 19:AT:5:VAL:N      | 2.63                     | 0.55              |
| 21:AV:52:TYR:HA    | 21:AV:56:GLN:O     | 2.07                     | 0.55              |
| 24:BA:41:C:H2'     | 24:BA:43:G:H8      | 1.71                     | 0.55              |
| 24:BA:46:C:C6      | 24:BA:215:G:H8     | 2.24                     | 0.55              |
| 24:BA:67:U:O5'     | 24:BA:67:U:H6      | 1.89                     | 0.55              |
| 24:BA:72:U:C1'     | 48:B1:56:LEU:HD23  | 2.29                     | 0.55              |
| 24:BA:96:G:H4'     | 48:B1:43:HIS:CD2   | 2.42                     | 0.55              |
| 24:BA:154:G:C2     | 24:BA:155:C:C2     | 2.95                     | 0.55              |
| 24:BA:214:G:H2'    | 24:BA:215:G:O4'    | 2.07                     | 0.55              |
| 24:BA:270(U):C:H2' | 24:BA:270(V):G:O4' | 2.06                     | 0.55              |
| 24:BA:341:G:H2'    | 24:BA:342:G:O4'    | 2.07                     | 0.55              |
| 24:BA:344:G:H5''   | 24:BA:345:A:OP2    | 2.06                     | 0.55              |
| 24:BA:460:A:H2'    | 24:BA:461:C:O4'    | 2.06                     | 0.55              |
| 24:BA:493:G:H21    | 24:BA:494:G:H1'    | 1.71                     | 0.55              |
| 24:BA:542:C:H2'    | 24:BA:543:C:H6     | 1.72                     | 0.55              |
| 24:BA:621:A:C8     | 24:BA:622:G:H5'    | 2.42                     | 0.55              |
| 24:BA:729:G:H2'    | 24:BA:730:C:C3'    | 2.36                     | 0.55              |
| 24:BA:738:G:N3     | 24:BA:739:G:H1'    | 2.21                     | 0.55              |
| 24:BA:807:U:O2     | 24:BA:807:U:H2'    | 2.06                     | 0.55              |
| 24:BA:842:G:C6     | 24:BA:843:G:C6     | 2.94                     | 0.55              |
| 24:BA:852:G:C4     | 24:BA:853:G:C8     | 2.95                     | 0.55              |
| 24:BA:967:C:H2'    | 24:BA:968:G:H8     | 1.72                     | 0.55              |
| 24:BA:988:A:OP1    | 49:B2:12:PRO:HD2   | 2.06                     | 0.55              |
| 24:BA:1058:G:H2'   | 24:BA:1058:G:N3    | 2.22                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1116:C:N4    | 24:BA:1117:G:O6    | 2.40                     | 0.55              |
| 24:BA:1434:A:C2    | 24:BA:1435:G:C1'   | 2.89                     | 0.55              |
| 24:BA:1471:A:H2'   | 24:BA:1472:A:C4'   | 2.37                     | 0.55              |
| 24:BA:2094:G:N2    | 24:BA:2196:C:C2    | 2.75                     | 0.55              |
| 24:BA:2232:U:H2'   | 24:BA:2233:U:O5'   | 2.07                     | 0.55              |
| 24:BA:2357:U:OP2   | 24:BA:2357:U:C6    | 2.60                     | 0.55              |
| 24:BA:2436:G:C5    | 24:BA:2437:U:C5    | 2.95                     | 0.55              |
| 24:BA:2463:C:H2'   | 24:BA:2464:C:C5'   | 2.36                     | 0.55              |
| 24:BA:2652:C:C2'   | 24:BA:2653:U:O4'   | 2.55                     | 0.55              |
| 24:BA:2657:A:O2'   | 31:BH:160:LYS:NZ   | 2.40                     | 0.55              |
| 24:BA:2667:C:H2'   | 24:BA:2668:G:O4'   | 2.06                     | 0.55              |
| 24:BA:2745:C:H1'   | 31:BH:143:GLN:CG   | 2.35                     | 0.55              |
| 24:BA:2764:A:N7    | 24:BA:2766:G:C5    | 2.75                     | 0.55              |
| 24:BA:2785:C:C4    | 24:BA:2786:U:O4    | 2.59                     | 0.55              |
| 24:BA:2792:G:N1    | 24:BA:2793:G:C6    | 2.74                     | 0.55              |
| 25:BB:29:A:C4      | 25:BB:56:G:N2      | 2.75                     | 0.55              |
| 26:BC:87:GLU:OE2   | 26:BC:94:VAL:HG11  | 2.06                     | 0.55              |
| 26:BC:213:TYR:N    | 26:BC:213:TYR:HD1  | 2.04                     | 0.55              |
| 27:BD:7:LYS:CD     | 27:BD:91:ARG:HE    | 2.20                     | 0.55              |
| 27:BD:135:PHE:N    | 27:BD:135:PHE:HD1  | 2.04                     | 0.55              |
| 28:BE:149:ARG:NE   | 28:BE:150:VAL:O    | 2.40                     | 0.55              |
| 29:BF:74:ARG:CZ    | 29:BF:75:HIS:N     | 2.69                     | 0.55              |
| 29:BF:75:HIS:NE2   | 29:BF:80:ALA:CB    | 2.69                     | 0.55              |
| 29:BF:201:VAL:HG12 | 29:BF:205:ARG:NH2  | 2.22                     | 0.55              |
| 30:BG:18:GLU:OE1   | 30:BG:19:LEU:N     | 2.40                     | 0.55              |
| 30:BG:127:GLY:O    | 30:BG:128:ARG:CB   | 2.55                     | 0.55              |
| 32:BK:28:ASN:C     | 32:BK:32:PRO:HD3   | 2.31                     | 0.55              |
| 32:BK:116:LEU:C    | 32:BK:116:LEU:HD13 | 2.32                     | 0.55              |
| 34:BM:100:GLU:HB3  | 34:BM:104:LYS:CE   | 2.36                     | 0.55              |
| 34:BM:127:ASP:O    | 34:BM:130:HIS:N    | 2.40                     | 0.55              |
| 36:BO:81:GLN:HA    | 36:BO:86:LYS:HG2   | 1.89                     | 0.55              |
| 36:BO:81:GLN:CA    | 36:BO:86:LYS:HG3   | 2.36                     | 0.55              |
| 37:BP:85:LYS:HZ2   | 47:BZ:10:THR:CG2   | 2.19                     | 0.55              |
| 37:BP:130:LYS:NZ   | 37:BP:132:VAL:CG1  | 2.70                     | 0.55              |
| 38:BQ:73:VAL:O     | 38:BQ:76:VAL:HB    | 2.07                     | 0.55              |
| 38:BQ:105:ARG:HG3  | 38:BQ:106:GLY:N    | 2.20                     | 0.55              |
| 39:BR:88:ASP:CG    | 39:BR:89:ARG:N     | 2.62                     | 0.55              |
| 40:BS:28:VAL:HG22  | 40:BS:92:GLY:O     | 2.06                     | 0.55              |
| 40:BS:80:SER:O     | 40:BS:81:PRO:C     | 2.47                     | 0.55              |
| 41:BT:83:LEU:HD21  | 41:BT:95:LEU:HD13  | 1.88                     | 0.55              |
| 43:BV:25:ARG:C     | 43:BV:71:VAL:HG13  | 2.31                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 43:BV:53:SER:O     | 43:BV:54:ALA:C     | 2.49                     | 0.55              |
| 43:BV:59:VAL:HG21  | 43:BV:66:GLU:CG    | 2.37                     | 0.55              |
| 45:BX:97:ARG:O     | 45:BX:98:VAL:HG22  | 2.07                     | 0.55              |
| 46:BY:70:LEU:HD12  | 46:BY:70:LEU:C     | 2.32                     | 0.55              |
| 46:BY:100:VAL:HG23 | 46:BY:102:LEU:CD2  | 2.36                     | 0.55              |
| 46:BY:152:ALA:CA   | 46:BY:155:LEU:HD22 | 2.37                     | 0.55              |
| 47:BZ:12:ASN:CA    | 47:BZ:14:ARG:NE    | 2.69                     | 0.55              |
| 48:B1:16:LEU:HD22  | 48:B1:58:VAL:HG22  | 1.88                     | 0.55              |
| 49:B2:29:ARG:O     | 49:B2:30:ARG:O     | 2.24                     | 0.55              |
| 50:B3:64:GLY:C     | 50:B3:68:ARG:CZ    | 2.80                     | 0.55              |
| 51:B4:13:LYS:O     | 51:B4:14:ALA:C     | 2.50                     | 0.55              |
| 51:B4:50:GLY:HA3   | 51:B4:57:VAL:HG23  | 1.87                     | 0.55              |
| 54:B7:33:ASN:C     | 54:B7:34:TRP:CG    | 2.83                     | 0.55              |
| 54:B7:36:LYS:HE3   | 54:B7:40:GLU:OE1   | 2.07                     | 0.55              |
| 55:B8:32:HIS:O     | 55:B8:33:LYS:C     | 2.49                     | 0.55              |
| 1:AA:49:U:C5       | 1:AA:361:G:C2      | 2.95                     | 0.55              |
| 1:AA:151:A:H62     | 1:AA:152:A:H2      | 1.55                     | 0.55              |
| 1:AA:229:U:H2'     | 1:AA:230:G:H8      | 1.72                     | 0.55              |
| 1:AA:272:C:C2'     | 1:AA:273:A:H8      | 2.17                     | 0.55              |
| 1:AA:505:G:C8      | 1:AA:535:A:H1'     | 2.42                     | 0.55              |
| 1:AA:619:U:O4      | 6:AG:134:ASP:OD1   | 2.24                     | 0.55              |
| 1:AA:686:U:OP1     | 1:AA:686:U:H4'     | 2.06                     | 0.55              |
| 1:AA:756:C:O2'     | 1:AA:823:G:H1'     | 2.07                     | 0.55              |
| 1:AA:787:A:C2      | 1:AA:788:U:O4'     | 2.60                     | 0.55              |
| 1:AA:855:G:O5'     | 1:AA:871:U:O4      | 2.25                     | 0.55              |
| 1:AA:947:G:O3'     | 15:AP:109:THR:OG1  | 2.24                     | 0.55              |
| 1:AA:1054:C:OP1    | 1:AA:1197:G:OP1    | 2.25                     | 0.55              |
| 1:AA:1123:A:H5''   | 12:AM:36:GLY:HA3   | 1.89                     | 0.55              |
| 1:AA:1160:G:N3     | 1:AA:1160:G:C2'    | 2.67                     | 0.55              |
| 1:AA:1224:G:O6     | 1:AA:1322:C:H1'    | 2.06                     | 0.55              |
| 1:AA:1230:C:O2'    | 15:AP:126:LYS:CE   | 2.54                     | 0.55              |
| 2:A1:17:U:O2'      | 2:A1:18:U:P        | 2.65                     | 0.55              |
| 3:AC:59:U:N3       | 3:AC:60:U:C4       | 2.75                     | 0.55              |
| 3:AD:48:C:O2'      | 3:AD:49:C:OP2      | 2.23                     | 0.55              |
| 3:AD:62:C:H5'      | 26:BC:52:ARG:HH11  | 1.71                     | 0.55              |
| 4:AE:84:GLU:OE1    | 4:AE:233:SER:OG    | 2.23                     | 0.55              |
| 4:AE:104:ASN:OD1   | 4:AE:108:ILE:CG1   | 2.53                     | 0.55              |
| 6:AG:58:LEU:CD2    | 6:AG:62:GLN:HG2    | 2.36                     | 0.55              |
| 6:AG:59:ARG:HH11   | 6:AG:59:ARG:CA     | 2.13                     | 0.55              |
| 7:AH:78:HIS:CE1    | 7:AH:142:LEU:HD22  | 2.42                     | 0.55              |
| 7:AH:109:ILE:HG12  | 7:AH:110:LEU:HD23  | 1.87                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 9:AJ:51:GLN:CD     | 9:AJ:58:PRO:HD3    | 2.32                     | 0.55              |
| 10:AK:63:LEU:HB2   | 10:AK:65:TYR:CE1   | 2.42                     | 0.55              |
| 10:AK:95:VAL:CG1   | 10:AK:133:LEU:HD11 | 2.37                     | 0.55              |
| 10:AK:112:LEU:HA   | 10:AK:134:ILE:H    | 1.72                     | 0.55              |
| 12:AM:8:LEU:HD12   | 12:AM:16:LEU:HA    | 1.89                     | 0.55              |
| 12:AM:19:SER:N     | 12:AM:91:PRO:HG3   | 2.21                     | 0.55              |
| 12:AM:44:VAL:HG22  | 12:AM:66:ARG:CD    | 2.37                     | 0.55              |
| 14:AO:60:LEU:HD21  | 14:AO:64:TYR:CD2   | 2.42                     | 0.55              |
| 16:AQ:42:ILE:O     | 16:AQ:44:LEU:N     | 2.39                     | 0.55              |
| 17:AR:61:GLY:O     | 17:AR:62:GLN:C     | 2.50                     | 0.55              |
| 22:AW:27:LYS:C     | 22:AW:27:LYS:CD    | 2.79                     | 0.55              |
| 24:BA:60:G:N3      | 24:BA:74:A:O4'     | 2.40                     | 0.55              |
| 24:BA:154:G:C2     | 24:BA:155:C:N3     | 2.75                     | 0.55              |
| 24:BA:175:G:C2     | 24:BA:176:G:C4     | 2.95                     | 0.55              |
| 24:BA:204:A:OP1    | 24:BA:204:A:C8     | 2.60                     | 0.55              |
| 24:BA:270(Z):U:O2' | 24:BA:271(A):C:OP1 | 2.23                     | 0.55              |
| 24:BA:388:G:OP1    | 50:B3:29:PRO:HD3   | 2.07                     | 0.55              |
| 24:BA:547:A:O2'    | 24:BA:548:A:H5'    | 2.06                     | 0.55              |
| 24:BA:558:G:O2'    | 24:BA:559:G:C5'    | 2.55                     | 0.55              |
| 24:BA:588:U:H2'    | 24:BA:589:C:C6     | 2.42                     | 0.55              |
| 24:BA:678:C:O2'    | 24:BA:679:C:H5'    | 2.07                     | 0.55              |
| 24:BA:819:A:C2     | 24:BA:943:U:O2     | 2.60                     | 0.55              |
| 24:BA:847:U:O4     | 24:BA:933:A:C2     | 2.59                     | 0.55              |
| 24:BA:969:U:H2'    | 24:BA:970:C:C4'    | 2.36                     | 0.55              |
| 24:BA:1095:A:H2'   | 24:BA:1096:A:O4'   | 2.07                     | 0.55              |
| 24:BA:1175:U:H5'   | 24:BA:1176:G:P     | 2.47                     | 0.55              |
| 24:BA:1248:G:H4'   | 24:BA:1249:U:OP1   | 2.07                     | 0.55              |
| 24:BA:1312:U:H2'   | 24:BA:1313:U:C1'   | 2.34                     | 0.55              |
| 24:BA:1416:G:OP2   | 24:BA:1416:G:H4'   | 2.07                     | 0.55              |
| 24:BA:1430:C:C2    | 24:BA:1431:U:C5    | 2.95                     | 0.55              |
| 24:BA:1439:A:C5    | 24:BA:1440:G:H1'   | 2.41                     | 0.55              |
| 24:BA:1450:C:H2'   | 24:BA:1451:C:OP2   | 2.07                     | 0.55              |
| 24:BA:1538:G:N2    | 24:BA:1539:G:N3    | 2.55                     | 0.55              |
| 24:BA:1827:C:H1'   | 24:BA:1970:A:C2    | 2.40                     | 0.55              |
| 24:BA:1891:G:N3    | 24:BA:1891:G:H2'   | 2.21                     | 0.55              |
| 24:BA:1906:G:C4    | 24:BA:1929:G:C5    | 2.95                     | 0.55              |
| 24:BA:1953:A:H62   | 24:BA:2550:G:H4'   | 1.71                     | 0.55              |
| 24:BA:1987:G:N3    | 24:BA:1988:C:C5    | 2.75                     | 0.55              |
| 24:BA:1992:G:N1    | 24:BA:1995:U:O4    | 2.39                     | 0.55              |
| 24:BA:2051:A:H5''  | 24:BA:2578:G:C5'   | 2.33                     | 0.55              |
| 24:BA:2053:G:O2'   | 24:BA:2054:A:C5'   | 2.53                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2075:U:H2'   | 24:BA:2075:U:O2    | 2.05                     | 0.55              |
| 24:BA:2166:G:H2'   | 24:BA:2167:U:H6    | 1.72                     | 0.55              |
| 24:BA:2206:C:O2'   | 24:BA:2207:C:H5'   | 2.06                     | 0.55              |
| 24:BA:2285:C:H3'   | 24:BA:2285:C:C6    | 2.42                     | 0.55              |
| 24:BA:2305:A:H2'   | 30:BG:154:GLY:CA   | 2.32                     | 0.55              |
| 24:BA:2378:A:C2    | 24:BA:2379:G:C1'   | 2.88                     | 0.55              |
| 24:BA:2639:A:C4    | 24:BA:2778:A:C2    | 2.95                     | 0.55              |
| 24:BA:2639:A:C4    | 24:BA:2778:A:N1    | 2.75                     | 0.55              |
| 24:BA:2734:A:H2'   | 24:BA:2735:G:O4'   | 2.07                     | 0.55              |
| 24:BA:2821:A:O2'   | 24:BA:2822:G:H5'   | 2.07                     | 0.55              |
| 24:BA:2845:G:C5'   | 40:BS:57:PHE:O     | 2.55                     | 0.55              |
| 24:BA:2850:A:C4    | 24:BA:2869:G:H4'   | 2.42                     | 0.55              |
| 25:BB:112:G:C5'    | 25:BB:113:C:OP2    | 2.54                     | 0.55              |
| 26:BC:113:VAL:CG1  | 26:BC:138:PRO:HG3  | 2.37                     | 0.55              |
| 27:BD:105:ILE:HD11 | 27:BD:106:ILE:HD13 | 1.88                     | 0.55              |
| 27:BD:134:ARG:C    | 27:BD:168:ARG:NH2  | 2.57                     | 0.55              |
| 27:BD:150:LYS:C    | 27:BD:152:GLY:N    | 2.65                     | 0.55              |
| 27:BD:199:ALA:O    | 27:BD:202:LYS:N    | 2.40                     | 0.55              |
| 28:BE:7:VAL:HG11   | 28:BE:196:VAL:CG2  | 2.32                     | 0.55              |
| 28:BE:53:PRO:CG    | 28:BE:75:VAL:CG1   | 2.84                     | 0.55              |
| 28:BE:102:VAL:HG22 | 28:BE:104:VAL:HG23 | 1.88                     | 0.55              |
| 28:BE:154:LYS:HZ3  | 28:BE:156:MET:CE   | 2.08                     | 0.55              |
| 30:BG:12:TYR:CE1   | 30:BG:13:GLU:HG3   | 2.41                     | 0.55              |
| 31:BH:85:LYS:HB2   | 31:BH:85:LYS:HZ2   | 1.72                     | 0.55              |
| 31:BH:89:ILE:HG12  | 31:BH:94:TYR:CD2   | 2.41                     | 0.55              |
| 31:BH:148:ILE:HG23 | 31:BH:149:ARG:N    | 2.21                     | 0.55              |
| 32:BK:58:LEU:HA    | 32:BK:61:ARG:HG2   | 1.87                     | 0.55              |
| 32:BK:115:ALA:CB   | 32:BK:128:LEU:HD22 | 2.36                     | 0.55              |
| 32:BK:132:PRO:HD2  | 32:BK:138:ILE:N    | 2.22                     | 0.55              |
| 35:BN:8:LEU:HD13   | 35:BN:9:GLU:N      | 2.22                     | 0.55              |
| 35:BN:24:VAL:HG22  | 35:BN:30:ALA:CB    | 2.37                     | 0.55              |
| 35:BN:42:SER:HA    | 35:BN:56:ASP:HA    | 1.89                     | 0.55              |
| 35:BN:43:VAL:HG22  | 35:BN:44:LYS:N     | 2.22                     | 0.55              |
| 35:BN:59:LYS:HE2   | 35:BN:59:LYS:C     | 2.31                     | 0.55              |
| 36:BO:111:ARG:HH21 | 36:BO:129:ALA:CB   | 2.20                     | 0.55              |
| 36:BO:124:LYS:CB   | 36:BO:143:GLY:HA3  | 2.37                     | 0.55              |
| 36:BO:130:PHE:HB3  | 36:BO:134:ALA:CB   | 2.37                     | 0.55              |
| 37:BP:68:ILE:HG23  | 37:BP:69:PHE:N     | 2.22                     | 0.55              |
| 37:BP:77:LYS:HA    | 37:BP:89:ASN:HB2   | 1.88                     | 0.55              |
| 37:BP:99:PRO:O     | 37:BP:99:PRO:HG2   | 2.07                     | 0.55              |
| 37:BP:99:PRO:CG    | 37:BP:101:ARG:NE   | 2.69                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 38:BQ:25:ALA:CB  | 38:BQ:48:VAL:HG22 | 2.37                     | 0.55              |
| 38:BQ:50:HIS:CE1 | 38:BQ:54:LEU:HD11 | 2.42                     | 0.55              |
| 39:BR:16:ASN:CG  | 39:BR:17:ARG:N    | 2.64                     | 0.55              |
| 42:BU:3:ALA:CB   | 42:BU:44:LYS:NZ   | 2.70                     | 0.55              |
| 42:BU:30:GLY:O   | 42:BU:33:VAL:HG23 | 2.07                     | 0.55              |
| 43:BV:81:ALA:CB  | 43:BV:98:LYS:O    | 2.54                     | 0.55              |
| 44:BW:32:PRO:HG3 | 44:BW:77:LYS:CB   | 2.37                     | 0.55              |
| 44:BW:40:LYS:O   | 44:BW:51:VAL:HG21 | 2.07                     | 0.55              |
| 45:BX:12:THR:CG2 | 45:BX:70:SER:O    | 2.54                     | 0.55              |
| 45:BX:32:PRO:C   | 45:BX:34:LYS:N    | 2.65                     | 0.55              |
| 45:BX:50:ARG:HB2 | 45:BX:54:LYS:CD   | 2.36                     | 0.55              |
| 46:BY:177:PRO:CG | 46:BY:178:GLU:N   | 2.69                     | 0.55              |
| 47:BZ:50:ASN:HB3 | 47:BZ:63:VAL:CG2  | 2.36                     | 0.55              |
| 49:B2:18:ASP:OD1 | 49:B2:19:GLN:N    | 2.39                     | 0.55              |
| 50:B3:68:ARG:H   | 50:B3:68:ARG:CZ   | 2.20                     | 0.55              |
| 54:B7:5:LYS:C    | 54:B7:7:HIS:N     | 2.64                     | 0.55              |
| 1:AA:8:A:C4'     | 7:AH:102:ALA:HA   | 2.36                     | 0.55              |
| 1:AA:20:U:O4'    | 1:AA:572:A:N1     | 2.40                     | 0.55              |
| 1:AA:103:C:H1'   | 1:AA:151:A:H2     | 1.70                     | 0.55              |
| 1:AA:263:A:C5'   | 22:AW:75:ASN:HD21 | 2.19                     | 0.55              |
| 1:AA:294:U:O2    | 1:AA:295:C:C5     | 2.61                     | 0.55              |
| 1:AA:296:U:O2'   | 1:AA:556:C:O2'    | 2.22                     | 0.55              |
| 1:AA:494:U:O2'   | 1:AA:495:A:H5'    | 2.07                     | 0.55              |
| 1:AA:528:C:H42   | 14:AO:49:ASN:ND2  | 2.01                     | 0.55              |
| 1:AA:712:A:O2'   | 1:AA:713:G:O4'    | 2.22                     | 0.55              |
| 1:AA:833:U:C2    | 1:AA:834:C:C5     | 2.95                     | 0.55              |
| 1:AA:891:U:C5    | 1:AA:906:G:C2     | 2.95                     | 0.55              |
| 1:AA:954:G:N2    | 1:AA:1228:C:C4    | 2.75                     | 0.55              |
| 1:AA:1021:G:H2'  | 1:AA:1022:G:H1'   | 1.89                     | 0.55              |
| 1:AA:1193:G:C8   | 1:AA:1193:G:H3'   | 2.42                     | 0.55              |
| 1:AA:1217:C:H2'  | 1:AA:1218:C:H6    | 1.71                     | 0.55              |
| 1:AA:1345:U:C2   | 1:AA:1377:A:C6    | 2.95                     | 0.55              |
| 1:AA:1514:C:C2   | 1:AA:1515:C:C5    | 2.95                     | 0.55              |
| 3:AC:5:G:O2'     | 3:AC:6:G:O5'      | 2.24                     | 0.55              |
| 3:AC:36:A:C6     | 3:AC:37:A:C5      | 2.94                     | 0.55              |
| 3:AD:60:U:C2'    | 3:AD:61:C:OP1     | 2.55                     | 0.55              |
| 4:AE:105:PHE:C   | 4:AE:107:THR:N    | 2.62                     | 0.55              |
| 4:AE:152:PHE:O   | 4:AE:154:LEU:N    | 2.38                     | 0.55              |
| 5:AF:58:GLU:N    | 5:AF:65:ALA:HB3   | 2.18                     | 0.55              |
| 5:AF:69:HIS:HA   | 5:AF:104:GLN:O    | 2.06                     | 0.55              |
| 6:AG:110:PHE:CZ  | 6:AG:147:ALA:HB1  | 2.42                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 7:AH:11:ILE:O     | 7:AH:12:LEU:C      | 2.50                     | 0.55              |
| 7:AH:70:PRO:O     | 7:AH:76:ILE:HG12   | 2.06                     | 0.55              |
| 10:AK:24:THR:H    | 10:AK:60:ARG:HD3   | 1.72                     | 0.55              |
| 11:AL:11:LYS:H    | 11:AL:104:ARG:HH21 | 1.51                     | 0.55              |
| 11:AL:11:LYS:HB2  | 11:AL:108:VAL:HG12 | 1.88                     | 0.55              |
| 11:AL:15:ALA:CB   | 11:AL:76:ALA:HB3   | 2.36                     | 0.55              |
| 11:AL:15:ALA:HB2  | 11:AL:73:GLN:O     | 2.07                     | 0.55              |
| 12:AM:57:LYS:O    | 12:AM:58:ASP:CG    | 2.50                     | 0.55              |
| 13:AN:59:TYR:O    | 13:AN:62:GLN:NE2   | 2.40                     | 0.55              |
| 13:AN:91:ARG:HD2  | 13:AN:95:ILE:HD11  | 1.90                     | 0.55              |
| 14:AO:53:ARG:HB3  | 14:AO:69:TYR:CE1   | 2.41                     | 0.55              |
| 15:AP:63:THR:O    | 15:AP:63:THR:HG23  | 2.06                     | 0.55              |
| 16:AQ:23:ARG:NH1  | 16:AQ:29:ARG:N     | 2.54                     | 0.55              |
| 16:AQ:42:ILE:HG13 | 16:AQ:43:CYS:H     | 1.72                     | 0.55              |
| 17:AR:31:LEU:HA   | 17:AR:34:LEU:HD21  | 1.88                     | 0.55              |
| 17:AR:44:LYS:O    | 17:AR:46:HIS:N     | 2.40                     | 0.55              |
| 20:AU:75:ILE:HG22 | 20:AU:76:LEU:N     | 2.21                     | 0.55              |
| 21:AV:39:THR:O    | 21:AV:40:ILE:C     | 2.50                     | 0.55              |
| 24:BA:95:G:O3'    | 48:B1:40:SER:HA    | 2.07                     | 0.55              |
| 24:BA:112:U:C6    | 24:BA:112:U:OP2    | 2.60                     | 0.55              |
| 24:BA:155:C:N3    | 24:BA:171:G:N1     | 2.55                     | 0.55              |
| 24:BA:172:C:O5'   | 24:BA:172:C:H6     | 1.89                     | 0.55              |
| 24:BA:265:A:C2    | 24:BA:281:G:O5'    | 2.60                     | 0.55              |
| 24:BA:339:U:H2'   | 24:BA:340:A:H8     | 1.67                     | 0.55              |
| 24:BA:487:C:H3'   | 24:BA:487:C:C6     | 2.42                     | 0.55              |
| 24:BA:612:G:N2    | 24:BA:617:G:C6     | 2.68                     | 0.55              |
| 24:BA:675:A:C4'   | 29:BF:67:GLN:NE2   | 2.64                     | 0.55              |
| 24:BA:748:G:H8    | 24:BA:750:A:OP2    | 1.89                     | 0.55              |
| 24:BA:802:A:H3'   | 24:BA:803:U:C5     | 2.42                     | 0.55              |
| 24:BA:850:C:H2'   | 24:BA:851:U:H6     | 1.72                     | 0.55              |
| 24:BA:1026:U:O2   | 24:BA:1026:U:C2'   | 2.40                     | 0.55              |
| 24:BA:1164:G:H2'  | 24:BA:1165:U:O5'   | 2.07                     | 0.55              |
| 24:BA:1201:C:N4   | 24:BA:1241:A:H61   | 2.04                     | 0.55              |
| 24:BA:1310:G:N2   | 24:BA:1610:A:C2    | 2.75                     | 0.55              |
| 24:BA:1334:G:C4   | 24:BA:1335:U:C5    | 2.95                     | 0.55              |
| 24:BA:1638:C:H5'' | 24:BA:2710:C:H1'   | 1.89                     | 0.55              |
| 24:BA:1650:G:C2   | 24:BA:1651:G:N9    | 2.75                     | 0.55              |
| 24:BA:1655:A:N6   | 24:BA:2005:A:C1'   | 2.70                     | 0.55              |
| 24:BA:1679:U:H4'  | 24:BA:1990:C:O2'   | 2.06                     | 0.55              |
| 24:BA:1683:C:O2   | 24:BA:1684:C:C5    | 2.60                     | 0.55              |
| 24:BA:1707:G:C2   | 24:BA:1756:G:N2    | 2.75                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1794:U:O2    | 24:BA:1795:C:C6    | 2.60                     | 0.55              |
| 24:BA:1956:U:C2'   | 24:BA:1957:C:C6    | 2.74                     | 0.55              |
| 24:BA:1980:G:O2'   | 24:BA:1981:A:P     | 2.65                     | 0.55              |
| 24:BA:2033:A:N1    | 24:BA:2036:C:C5    | 2.75                     | 0.55              |
| 24:BA:2091:U:H5''  | 24:BA:2093:G:OP1   | 2.07                     | 0.55              |
| 24:BA:2215:G:C8    | 24:BA:2215:G:O5'   | 2.60                     | 0.55              |
| 24:BA:2273:A:H8    | 24:BA:2274:A:O4'   | 1.89                     | 0.55              |
| 24:BA:2512:C:O5'   | 24:BA:2512:C:H6    | 1.89                     | 0.55              |
| 24:BA:2514:U:C2    | 24:BA:2515:C:C5    | 2.95                     | 0.55              |
| 24:BA:2626:C:O2'   | 24:BA:2627:G:O4'   | 2.25                     | 0.55              |
| 24:BA:2752:C:OP1   | 24:BA:2752:C:H6    | 1.90                     | 0.55              |
| 25:BB:29:A:O2'     | 25:BB:58:A:N1      | 2.38                     | 0.55              |
| 26:BC:177:LYS:HB2  | 26:BC:180:PHE:CB   | 2.31                     | 0.55              |
| 28:BE:8:LYS:HZ2    | 40:BS:3:ARG:CG     | 2.19                     | 0.55              |
| 28:BE:103:ASP:CA   | 28:BE:170:LEU:HD21 | 2.37                     | 0.55              |
| 29:BF:46:ARG:HG2   | 29:BF:46:ARG:HH21  | 1.71                     | 0.55              |
| 29:BF:61:GLY:HA3   | 29:BF:78:ILE:HG22  | 1.89                     | 0.55              |
| 29:BF:141:ALA:O    | 29:BF:142:TRP:C    | 2.47                     | 0.55              |
| 30:BG:8:LYS:HE2    | 30:BG:100:TRP:CD1  | 2.42                     | 0.55              |
| 30:BG:165:THR:HG22 | 30:BG:167:GLU:OE1  | 2.07                     | 0.55              |
| 31:BH:133:VAL:HG22 | 31:BH:134:SER:H    | 1.70                     | 0.55              |
| 32:BK:133:HIS:HB3  | 32:BK:136:VAL:CG2  | 2.36                     | 0.55              |
| 33:BL:10:LEU:HD13  | 33:BL:27:LEU:CG    | 2.37                     | 0.55              |
| 33:BL:10:LEU:HD11  | 33:BL:57:ILE:HD13  | 1.88                     | 0.55              |
| 33:BL:16:LYS:O     | 33:BL:17:ALA:HB2   | 2.06                     | 0.55              |
| 34:BM:8:GLN:O      | 34:BM:9:VAL:C      | 2.50                     | 0.55              |
| 34:BM:38:HIS:O     | 41:BT:71:GLN:NE2   | 2.39                     | 0.55              |
| 34:BM:107:LEU:HD22 | 34:BM:117:PHE:CZ   | 2.41                     | 0.55              |
| 34:BM:126:PRO:C    | 34:BM:127:ASP:CG   | 2.72                     | 0.55              |
| 35:BN:22:ILE:HB    | 35:BN:23:ARG:HD2   | 1.88                     | 0.55              |
| 35:BN:24:VAL:HG21  | 35:BN:30:ALA:HA    | 1.87                     | 0.55              |
| 35:BN:26:LYS:HG3   | 35:BN:27:GLY:H     | 1.70                     | 0.55              |
| 35:BN:62:VAL:HG23  | 35:BN:83:ALA:CA    | 2.17                     | 0.55              |
| 37:BP:51:ARG:HH21  | 37:BP:55:VAL:HG21  | 1.72                     | 0.55              |
| 37:BP:77:LYS:HD2   | 37:BP:77:LYS:N     | 2.22                     | 0.55              |
| 38:BQ:17:ARG:NH1   | 38:BQ:17:ARG:HB2   | 2.21                     | 0.55              |
| 39:BR:51:ALA:CA    | 39:BR:73:LEU:HG    | 2.36                     | 0.55              |
| 39:BR:57:LYS:NZ    | 39:BR:65:VAL:HA    | 2.13                     | 0.55              |
| 39:BR:101:LEU:HD13 | 39:BR:101:LEU:O    | 2.07                     | 0.55              |
| 40:BS:28:VAL:HG22  | 40:BS:92:GLY:C     | 2.32                     | 0.55              |
| 42:BU:6:LYS:HD3    | 42:BU:10:LYS:CB    | 2.37                     | 0.55              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 42:BU:20:LEU:HB2  | 42:BU:95:LEU:CD2   | 2.31                     | 0.55              |
| 43:BV:36:LEU:CD2  | 43:BV:47:VAL:HB    | 2.33                     | 0.55              |
| 43:BV:90:ARG:HH21 | 43:BV:90:ARG:CA    | 2.20                     | 0.55              |
| 44:BW:27:THR:CG2  | 44:BW:80:ILE:HD12  | 2.37                     | 0.55              |
| 45:BX:74:PRO:HB3  | 45:BX:101:LYS:O    | 2.07                     | 0.55              |
| 46:BY:51:ALA:HA   | 46:BY:53:ILE:O     | 2.06                     | 0.55              |
| 47:BZ:45:PHE:HB3  | 47:BZ:59:LEU:HD11  | 1.88                     | 0.55              |
| 49:B2:38:GLU:HG2  | 49:B2:40:THR:OG1   | 2.07                     | 0.55              |
| 49:B2:52:HIS:NE2  | 49:B2:53:LEU:HD21  | 2.22                     | 0.55              |
| 50:B3:56:VAL:C    | 50:B3:61:ARG:NH2   | 2.65                     | 0.55              |
| 50:B3:59:PHE:N    | 50:B3:59:PHE:CD1   | 2.72                     | 0.55              |
| 55:B8:1:MET:H3    | 55:B8:33:LYS:CB    | 2.21                     | 0.55              |
| 1:AA:17:U:H2'     | 1:AA:18:C:C6       | 2.37                     | 0.54              |
| 1:AA:49:U:N1      | 1:AA:364:A:N6      | 2.54                     | 0.54              |
| 1:AA:350:G:N3     | 1:AA:350:G:H2'     | 2.22                     | 0.54              |
| 1:AA:635:G:C6     | 1:AA:636:U:C4      | 2.96                     | 0.54              |
| 1:AA:812:C:O2'    | 1:AA:813:U:P       | 2.64                     | 0.54              |
| 1:AA:1053:G:O6    | 1:AA:1199:U:H2'    | 2.08                     | 0.54              |
| 1:AA:1081:G:OP1   | 7:AH:17:ALA:O      | 2.25                     | 0.54              |
| 1:AA:1099:G:HO2'  | 1:AA:1542:U:H4'    | 1.72                     | 0.54              |
| 1:AA:1203:C:HO2'  | 1:AA:1204:A:H5'    | 1.72                     | 0.54              |
| 1:AA:1395:C:C2'   | 1:AA:1396:A:O5'    | 2.55                     | 0.54              |
| 1:AA:1450:U:H1'   | 1:AA:1454:G:N2     | 2.22                     | 0.54              |
| 3:AC:44:G:C2      | 3:AC:45:U:O2       | 2.60                     | 0.54              |
| 3:AD:13:C:OP2     | 3:AD:13:C:H6       | 1.89                     | 0.54              |
| 3:AB:62:C:O2'     | 3:AB:63:G:H5'      | 2.06                     | 0.54              |
| 4:AE:61:LEU:N     | 4:AE:64:ARG:NH1    | 2.55                     | 0.54              |
| 4:AE:171:ALA:O    | 4:AE:172:ILE:C     | 2.49                     | 0.54              |
| 5:AF:132:ARG:C    | 5:AF:136:GLN:HE21  | 2.15                     | 0.54              |
| 6:AG:78:LEU:CD2   | 6:AG:96:LEU:HD22   | 2.37                     | 0.54              |
| 6:AG:93:PHE:O     | 6:AG:95:GLY:N      | 2.40                     | 0.54              |
| 7:AH:76:ILE:CD1   | 7:AH:142:LEU:HB2   | 2.27                     | 0.54              |
| 7:AH:122:GLU:O    | 7:AH:123:LEU:HD22  | 2.07                     | 0.54              |
| 9:AJ:69:VAL:C     | 9:AJ:138:LYS:HD2   | 2.32                     | 0.54              |
| 9:AJ:123:GLU:OE1  | 9:AJ:134:ALA:HB2   | 2.06                     | 0.54              |
| 10:AK:32:LYS:HG3  | 10:AK:59:LEU:HD12  | 1.89                     | 0.54              |
| 10:AK:61:VAL:CG1  | 10:AK:62:TYR:H     | 2.19                     | 0.54              |
| 10:AK:72:PRO:O    | 10:AK:73:ASP:HB2   | 2.06                     | 0.54              |
| 10:AK:110:ALA:C   | 10:AK:111:ILE:HD12 | 2.31                     | 0.54              |
| 11:AL:22:GLY:C    | 11:AL:58:HIS:O     | 2.50                     | 0.54              |
| 11:AL:45:ALA:HB3  | 11:AL:74:ILE:HG21  | 1.88                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 11:AL:118:LYS:O   | 11:AL:119:ALA:C    | 2.50                     | 0.54              |
| 12:AM:40:LEU:HD12 | 12:AM:69:ASN:CB    | 2.37                     | 0.54              |
| 13:AN:24:SER:OG   | 13:AN:25:TYR:N     | 2.39                     | 0.54              |
| 14:AO:83:VAL:C    | 14:AO:104:VAL:HG11 | 2.32                     | 0.54              |
| 15:AP:37:THR:HG23 | 15:AP:56:LEU:HD22  | 1.89                     | 0.54              |
| 15:AP:39:ILE:O    | 15:AP:40:ASN:C     | 2.49                     | 0.54              |
| 15:AP:81:LEU:HD22 | 15:AP:82:MET:H     | 1.69                     | 0.54              |
| 24:BA:35:G:C6     | 24:BA:446:G:N2     | 2.75                     | 0.54              |
| 24:BA:143:C:H2'   | 24:BA:144:C:H6     | 1.71                     | 0.54              |
| 24:BA:274:G:N3    | 24:BA:274:G:O5'    | 2.40                     | 0.54              |
| 24:BA:510:C:OP1   | 24:BA:512:G:N2     | 2.36                     | 0.54              |
| 24:BA:529:A:O3'   | 24:BA:530:G:C8     | 2.60                     | 0.54              |
| 24:BA:543:C:C2    | 24:BA:544:C:C5     | 2.95                     | 0.54              |
| 24:BA:569:U:OP1   | 24:BA:945:A:N6     | 2.40                     | 0.54              |
| 24:BA:577:G:C5    | 24:BA:578:A:N7     | 2.76                     | 0.54              |
| 24:BA:679:C:H2'   | 24:BA:679:C:O2     | 2.06                     | 0.54              |
| 24:BA:747:U:O2    | 24:BA:2613:U:O4    | 2.25                     | 0.54              |
| 24:BA:748:G:OP1   | 43:BV:88:ARG:HD3   | 2.07                     | 0.54              |
| 24:BA:792:G:N2    | 24:BA:2072:G:C1'   | 2.66                     | 0.54              |
| 24:BA:813:U:H2'   | 24:BA:814:C:O4'    | 2.08                     | 0.54              |
| 24:BA:900:A:C2'   | 24:BA:901:A:H5'    | 2.38                     | 0.54              |
| 24:BA:975:G:C6    | 24:BA:976:C:H5     | 2.24                     | 0.54              |
| 24:BA:977:G:O2'   | 24:BA:978:G:H5'    | 2.06                     | 0.54              |
| 24:BA:996:A:H5'   | 41:BT:93:LYS:HD2   | 1.88                     | 0.54              |
| 24:BA:1056:G:O4'  | 24:BA:1056:G:OP2   | 2.25                     | 0.54              |
| 24:BA:1127:A:C2   | 24:BA:2518:A:N3    | 2.76                     | 0.54              |
| 24:BA:1127:A:C6   | 24:BA:2518:A:C2    | 2.94                     | 0.54              |
| 24:BA:1160:G:N1   | 24:BA:1161:C:N4    | 2.55                     | 0.54              |
| 24:BA:1309:G:H1   | 24:BA:1605:C:H42   | 1.54                     | 0.54              |
| 24:BA:1349:A:H5'  | 24:BA:1350:C:H5''  | 1.88                     | 0.54              |
| 24:BA:1534:G:O5'  | 24:BA:1534:G:H8    | 1.90                     | 0.54              |
| 24:BA:1558:A:H2   | 24:BA:1560:G:C8    | 2.24                     | 0.54              |
| 24:BA:1558:A:C2   | 24:BA:1560:G:C1'   | 2.90                     | 0.54              |
| 24:BA:1613:G:N2   | 24:BA:1619:G:C5    | 2.75                     | 0.54              |
| 24:BA:1642:G:C2   | 24:BA:1643:G:C8    | 2.95                     | 0.54              |
| 24:BA:1769:G:H2'  | 24:BA:1770:G:C8    | 2.42                     | 0.54              |
| 24:BA:1803:A:C3'  | 27:BD:257:LEU:HD13 | 2.37                     | 0.54              |
| 24:BA:1818:U:C5'  | 27:BD:158:ALA:HB2  | 2.29                     | 0.54              |
| 24:BA:1835:G:N3   | 24:BA:1931:U:N3    | 2.54                     | 0.54              |
| 24:BA:1901:A:H4'  | 27:BD:244:ARG:NH1  | 2.17                     | 0.54              |
| 24:BA:2093:G:N3   | 24:BA:2198:A:N1    | 2.55                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2127:G:N2    | 24:BA:2128:C:O2    | 2.41                     | 0.54              |
| 24:BA:2127:G:C6    | 24:BA:2162:G:C6    | 2.95                     | 0.54              |
| 24:BA:2314:C:C5'   | 30:BG:38:VAL:HG21  | 2.36                     | 0.54              |
| 24:BA:2333:A:N3    | 24:BA:2333:A:C2'   | 2.67                     | 0.54              |
| 24:BA:2466:C:HO2'  | 37:BP:123:HIS:HE2  | 1.52                     | 0.54              |
| 24:BA:2612:C:O2'   | 51:B4:4:HIS:HB3    | 2.07                     | 0.54              |
| 24:BA:2709:G:H2'   | 24:BA:2710:C:O5'   | 2.06                     | 0.54              |
| 24:BA:2830:G:N1    | 24:BA:2831:G:C5    | 2.75                     | 0.54              |
| 25:BB:68:C:H2'     | 25:BB:69:G:C1'     | 2.36                     | 0.54              |
| 26:BC:50:ASP:OD1   | 26:BC:53:ARG:HG3   | 2.07                     | 0.54              |
| 27:BD:79:VAL:CG1   | 27:BD:113:VAL:HA   | 2.37                     | 0.54              |
| 28:BE:73:GLU:N     | 28:BE:74:PRO:HD3   | 2.22                     | 0.54              |
| 28:BE:97:LYS:HG3   | 28:BE:100:GLU:CD   | 2.33                     | 0.54              |
| 28:BE:151:TYR:CD2  | 28:BE:152:LYS:N    | 2.75                     | 0.54              |
| 29:BF:9:ILE:HG21   | 29:BF:124:LEU:O    | 2.06                     | 0.54              |
| 29:BF:31:HIS:CG    | 36:BO:14:LYS:NZ    | 2.74                     | 0.54              |
| 29:BF:36:VAL:CG1   | 29:BF:183:VAL:HB   | 2.37                     | 0.54              |
| 29:BF:45:ARG:CG    | 29:BF:46:ARG:H     | 2.20                     | 0.54              |
| 29:BF:154:VAL:HG21 | 29:BF:193:VAL:HG21 | 1.88                     | 0.54              |
| 30:BG:12:TYR:CA    | 30:BG:15:VAL:HG22  | 2.33                     | 0.54              |
| 31:BH:98:LEU:N     | 31:BH:125:VAL:HG21 | 2.22                     | 0.54              |
| 31:BH:118:PRO:HG3  | 31:BH:144:VAL:CG2  | 2.33                     | 0.54              |
| 32:BK:5:LEU:HD21   | 32:BK:17:GLN:C     | 2.32                     | 0.54              |
| 32:BK:19:VAL:CG1   | 32:BK:20:ASP:N     | 2.63                     | 0.54              |
| 33:BL:70:LYS:HB3   | 33:BL:114:ASP:OD2  | 2.06                     | 0.54              |
| 35:BN:12:ASP:O     | 35:BN:94:ARG:CZ    | 2.54                     | 0.54              |
| 35:BN:15:GLY:HA3   | 35:BN:52:VAL:HG21  | 1.84                     | 0.54              |
| 36:BO:81:GLN:HA    | 36:BO:86:LYS:CG    | 2.36                     | 0.54              |
| 37:BP:22:LYS:CE    | 37:BP:23:GLY:H     | 2.20                     | 0.54              |
| 37:BP:50:ALA:O     | 37:BP:51:ARG:C     | 2.50                     | 0.54              |
| 37:BP:63:LYS:HD2   | 37:BP:64:ILE:O     | 2.06                     | 0.54              |
| 38:BQ:14:SER:HA    | 38:BQ:17:ARG:NE    | 2.22                     | 0.54              |
| 39:BR:52:SER:CB    | 39:BR:69:VAL:HG13  | 2.35                     | 0.54              |
| 39:BR:57:LYS:O     | 39:BR:58:LEU:HB2   | 2.06                     | 0.54              |
| 40:BS:52:ILE:CA    | 40:BS:66:VAL:CG1   | 2.80                     | 0.54              |
| 40:BS:107:ASP:OD1  | 40:BS:107:ASP:N    | 2.39                     | 0.54              |
| 42:BU:14:VAL:HG12  | 42:BU:15:GLU:N     | 2.09                     | 0.54              |
| 42:BU:17:GLY:C     | 42:BU:19:LYS:H     | 2.15                     | 0.54              |
| 42:BU:28:GLU:OE1   | 42:BU:94:LEU:HG    | 2.07                     | 0.54              |
| 42:BU:56:SER:O     | 42:BU:57:VAL:CG2   | 2.55                     | 0.54              |
| 45:BX:26:LYS:NZ    | 45:BX:36:ALA:CB    | 2.70                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 46:BY:68:PRO:O    | 46:BY:90:VAL:HG12 | 2.07                     | 0.54              |
| 46:BY:94:GLU:O    | 46:BY:96:VAL:HG23 | 2.06                     | 0.54              |
| 46:BY:168:GLU:OE1 | 46:BY:169:GLU:CA  | 2.55                     | 0.54              |
| 47:BZ:44:ARG:O    | 47:BZ:77:ARG:CB   | 2.53                     | 0.54              |
| 49:B2:39:ASP:C    | 49:B2:44:ARG:HD3  | 2.33                     | 0.54              |
| 49:B2:44:ARG:O    | 49:B2:47:VAL:N    | 2.40                     | 0.54              |
| 50:B3:44:THR:CG2  | 50:B3:45:GLY:H    | 2.20                     | 0.54              |
| 52:B5:22:ALA:C    | 52:B5:23:THR:HG23 | 2.32                     | 0.54              |
| 52:B5:25:LYS:C    | 52:B5:26:ASN:ND2  | 2.66                     | 0.54              |
| 53:B6:30:VAL:HG22 | 53:B6:33:ARG:NH2  | 2.22                     | 0.54              |
| 54:B7:13:ARG:CD   | 54:B7:24:ALA:HB1  | 2.35                     | 0.54              |
| 54:B7:16:ILE:CG2  | 54:B7:57:ARG:NH2  | 2.70                     | 0.54              |
| 54:B7:61:LEU:O    | 54:B7:62:LEU:CB   | 2.53                     | 0.54              |
| 55:B8:11:CYS:CB   | 55:B8:32:HIS:CE1  | 2.86                     | 0.54              |
| 1:AA:22:G:C5'     | 1:AA:885:G:O4'    | 2.53                     | 0.54              |
| 1:AA:27:G:N1      | 1:AA:557:G:C4     | 2.75                     | 0.54              |
| 1:AA:232:G:C6     | 1:AA:233:C:N4     | 2.75                     | 0.54              |
| 1:AA:313:A:H2'    | 1:AA:314:C:H6     | 1.58                     | 0.54              |
| 1:AA:557:G:H2'    | 1:AA:558:G:N9     | 2.22                     | 0.54              |
| 1:AA:580:U:H2'    | 1:AA:581:G:O4'    | 2.07                     | 0.54              |
| 1:AA:619:U:H3     | 6:AG:135:LEU:CD2  | 2.20                     | 0.54              |
| 1:AA:652:U:O4     | 1:AA:752:G:H2'    | 2.07                     | 0.54              |
| 1:AA:664:G:H22    | 1:AA:741:G:H22    | 1.54                     | 0.54              |
| 1:AA:968:A:H5''   | 1:AA:969:A:C5'    | 2.37                     | 0.54              |
| 1:AA:1064:G:OP1   | 1:AA:1386:G:H5'   | 2.07                     | 0.54              |
| 1:AA:1145:C:O2'   | 1:AA:1146:A:H8    | 1.90                     | 0.54              |
| 1:AA:1165:C:C5    | 1:AA:1166:G:C8    | 2.95                     | 0.54              |
| 1:AA:1179:A:C4'   | 11:AL:103:THR:OG1 | 2.49                     | 0.54              |
| 1:AA:1239:A:H1'   | 1:AA:1241:G:C5    | 2.42                     | 0.54              |
| 1:AA:1277:C:H2'   | 1:AA:1278:U:O4'   | 2.06                     | 0.54              |
| 1:AA:1371:G:C5    | 1:AA:1372:U:C5    | 2.96                     | 0.54              |
| 1:AA:1406:U:O2    | 1:AA:1407:C:C6    | 2.60                     | 0.54              |
| 2:A1:37:U:C3'     | 2:A1:38:U:C6      | 2.91                     | 0.54              |
| 3:AC:9:A:H5''     | 3:AC:10:G:OP2     | 2.06                     | 0.54              |
| 3:AC:58:A:H4'     | 3:AC:59:U:OP1     | 2.07                     | 0.54              |
| 3:AB:72:C:N4      | 3:AB:73:A:N6      | 2.55                     | 0.54              |
| 3:AB:75:C:O3'     | 24:BA:2573:C:N3   | 2.40                     | 0.54              |
| 4:AE:58:ILE:CG2   | 4:AE:221:LEU:HD12 | 2.38                     | 0.54              |
| 4:AE:82:ARG:HB2   | 4:AE:94:ASN:HD21  | 1.73                     | 0.54              |
| 4:AE:131:PRO:O    | 4:AE:134:GLU:HB2  | 2.07                     | 0.54              |
| 5:AF:72:LYS:O     | 5:AF:76:VAL:HB    | 2.06                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:AF:110:ASN:CG   | 5:AF:144:SER:OG    | 2.51                     | 0.54              |
| 6:AG:129:ASN:ND2  | 6:AG:145:GLU:HG2   | 2.22                     | 0.54              |
| 7:AH:109:ILE:HG23 | 7:AH:110:LEU:H     | 1.73                     | 0.54              |
| 8:AI:14:LEU:CD1   | 8:AI:15:ASP:O      | 2.55                     | 0.54              |
| 9:AJ:45:ASP:HB2   | 9:AJ:117:ALA:HB2   | 1.88                     | 0.54              |
| 9:AJ:66:VAL:O     | 9:AJ:70:LYS:HG3    | 2.06                     | 0.54              |
| 10:AK:24:THR:O    | 10:AK:60:ARG:CA    | 2.54                     | 0.54              |
| 10:AK:33:GLU:CA   | 10:AK:36:LEU:HD21  | 2.34                     | 0.54              |
| 11:AL:11:LYS:C    | 11:AL:12:GLU:HG2   | 2.32                     | 0.54              |
| 11:AL:70:LYS:CD   | 11:AL:70:LYS:H     | 2.20                     | 0.54              |
| 11:AL:118:LYS:HB2 | 11:AL:121:ARG:HB2  | 1.87                     | 0.54              |
| 12:AM:59:SER:O    | 12:AM:60:ARG:O     | 2.25                     | 0.54              |
| 13:AN:18:ARG:CA   | 13:AN:80:VAL:HG23  | 2.34                     | 0.54              |
| 13:AN:58:PRO:HB2  | 13:AN:93:GLN:CG    | 2.37                     | 0.54              |
| 13:AN:99:GLN:O    | 13:AN:105:VAL:HG21 | 2.07                     | 0.54              |
| 14:AO:102:ARG:HD3 | 14:AO:110:VAL:HG13 | 1.87                     | 0.54              |
| 15:AP:36:LYS:HB3  | 15:AP:59:TYR:CZ    | 2.42                     | 0.54              |
| 15:AP:59:TYR:CE2  | 15:AP:60:VAL:CG2   | 2.90                     | 0.54              |
| 16:AQ:23:ARG:HH11 | 16:AQ:29:ARG:N     | 2.05                     | 0.54              |
| 16:AQ:48:ALA:HA   | 16:AQ:53:LEU:HD12  | 1.88                     | 0.54              |
| 17:AR:13:GLN:O    | 17:AR:14:GLU:C     | 2.50                     | 0.54              |
| 18:AS:19:ILE:CB   | 18:AS:37:GLY:O     | 2.51                     | 0.54              |
| 18:AS:59:TRP:HA   | 18:AS:59:TRP:HE3   | 1.70                     | 0.54              |
| 19:AT:31:LEU:O    | 19:AT:32:TYR:CD2   | 2.52                     | 0.54              |
| 20:AU:37:VAL:CG1  | 20:AU:41:LYS:NZ    | 2.70                     | 0.54              |
| 24:BA:26:G:N2     | 24:BA:27:G:H21     | 2.05                     | 0.54              |
| 24:BA:61:G:O2'    | 24:BA:62:C:H5'     | 2.07                     | 0.54              |
| 24:BA:71:A:N3     | 24:BA:73:A:N6      | 2.54                     | 0.54              |
| 24:BA:71:A:O2'    | 24:BA:72:U:P       | 2.65                     | 0.54              |
| 24:BA:270(W):G:C4 | 24:BA:270(X):G:C8  | 2.94                     | 0.54              |
| 24:BA:278:A:H2'   | 24:BA:279:C:N1     | 2.21                     | 0.54              |
| 24:BA:280:C:N3    | 24:BA:283:A:N7     | 2.54                     | 0.54              |
| 24:BA:285:C:C2    | 24:BA:286:C:C5     | 2.95                     | 0.54              |
| 24:BA:394:A:C6    | 24:BA:395:U:C4     | 2.95                     | 0.54              |
| 24:BA:495:G:O3'   | 43:BV:4:LYS:HE3    | 2.06                     | 0.54              |
| 24:BA:545:G:H1'   | 24:BA:549:G:C2     | 2.41                     | 0.54              |
| 24:BA:563:G:O5'   | 24:BA:564:C:P      | 2.65                     | 0.54              |
| 24:BA:595:C:H2'   | 24:BA:596:G:C8     | 2.41                     | 0.54              |
| 24:BA:1291:C:H2'  | 24:BA:1292:U:C6    | 2.42                     | 0.54              |
| 24:BA:1342:A:C4   | 24:BA:1345:C:N4    | 2.75                     | 0.54              |
| 24:BA:1364:G:N1   | 24:BA:1367:A:OP2   | 2.40                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1407:C:O2'  | 24:BA:1408:C:C5'  | 2.55                     | 0.54              |
| 24:BA:1555:G:C4   | 24:BA:1556:C:C5   | 2.94                     | 0.54              |
| 24:BA:1565:C:C4   | 24:BA:1567:A:H1'  | 2.42                     | 0.54              |
| 24:BA:1604:C:O2'  | 24:BA:1605:C:C5'  | 2.55                     | 0.54              |
| 24:BA:1667:G:O5'  | 35:BN:7:TYR:CE1   | 2.61                     | 0.54              |
| 24:BA:1675:C:N4   | 28:BE:128:SER:CB  | 2.69                     | 0.54              |
| 24:BA:1688:U:C2'  | 24:BA:1689:A:OP2  | 2.54                     | 0.54              |
| 24:BA:1700:A:O2'  | 24:BA:1701:A:OP1  | 2.25                     | 0.54              |
| 24:BA:1743:G:OP1  | 24:BA:1743:G:C4'  | 2.54                     | 0.54              |
| 24:BA:1789:A:C8   | 24:BA:1790:C:C6   | 2.96                     | 0.54              |
| 24:BA:1936:A:C5   | 24:BA:1945:G:C6   | 2.95                     | 0.54              |
| 24:BA:1981:A:C5'  | 24:BA:1982:C:OP2  | 2.50                     | 0.54              |
| 24:BA:2011:U:C2'  | 24:BA:2012:G:C8   | 2.90                     | 0.54              |
| 24:BA:2043:C:OP1  | 24:BA:2043:C:C6   | 2.54                     | 0.54              |
| 24:BA:2056:G:C4   | 24:BA:2577:A:N3   | 2.75                     | 0.54              |
| 24:BA:2093:G:H1'  | 32:BK:29:TYR:CD2  | 2.43                     | 0.54              |
| 24:BA:2283:C:C4   | 24:BA:2389:G:C2   | 2.95                     | 0.54              |
| 24:BA:2286:A:C2   | 52:B5:27:LYS:CB   | 2.73                     | 0.54              |
| 24:BA:2311:A:H5'' | 24:BA:2312:U:H5   | 1.71                     | 0.54              |
| 24:BA:2331:G:C5   | 24:BA:2332:U:N3   | 2.76                     | 0.54              |
| 24:BA:2335:A:O2'  | 24:BA:2336:A:H8   | 1.89                     | 0.54              |
| 24:BA:2437:U:H2'  | 24:BA:2438:U:H6   | 1.69                     | 0.54              |
| 24:BA:2455:G:C4   | 24:BA:2456:C:C5   | 2.95                     | 0.54              |
| 24:BA:2588:G:H8   | 24:BA:2588:G:O5'  | 1.90                     | 0.54              |
| 24:BA:2619:C:O3'  | 28:BE:152:LYS:O   | 2.25                     | 0.54              |
| 24:BA:2645:G:O2'  | 24:BA:2733:A:P    | 2.65                     | 0.54              |
| 24:BA:2653:U:C2   | 24:BA:2654:A:N7   | 2.76                     | 0.54              |
| 24:BA:2674:G:H2'  | 24:BA:2675:A:C8   | 2.40                     | 0.54              |
| 24:BA:2690:C:HO2' | 24:BA:2691:C:P    | 2.31                     | 0.54              |
| 24:BA:2694:G:C6   | 24:BA:2695:C:C5   | 2.95                     | 0.54              |
| 24:BA:2781:A:H2'  | 24:BA:2782:G:H4'  | 1.89                     | 0.54              |
| 24:BA:2877:G:C2   | 24:BA:2878:U:C2   | 2.94                     | 0.54              |
| 24:BA:2886:G:O2'  | 51:B4:31:VAL:CB   | 2.51                     | 0.54              |
| 25:BB:1:U:C4      | 25:BB:2:C:N4      | 2.75                     | 0.54              |
| 26:BC:75:LEU:HD13 | 26:BC:110:PHE:CD2 | 2.42                     | 0.54              |
| 26:BC:163:PHE:CZ  | 26:BC:195:ALA:HB3 | 2.42                     | 0.54              |
| 26:BC:184:LYS:O   | 26:BC:185:LEU:C   | 2.49                     | 0.54              |
| 27:BD:5:LYS:HD2   | 27:BD:113:VAL:CG2 | 2.36                     | 0.54              |
| 27:BD:155:LEU:O   | 27:BD:155:LEU:CD2 | 2.55                     | 0.54              |
| 27:BD:188:GLU:CD  | 27:BD:188:GLU:H   | 2.15                     | 0.54              |
| 27:BD:258:LYS:CA  | 27:BD:261:LYS:HZ2 | 2.12                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 28:BE:55:ASN:C     | 28:BE:57:LYS:N     | 2.61                     | 0.54              |
| 29:BF:68:LYS:O     | 29:BF:69:HIS:HB3   | 2.06                     | 0.54              |
| 29:BF:126:VAL:HG23 | 29:BF:197:ASP:OD1  | 2.08                     | 0.54              |
| 29:BF:184:TYR:O    | 29:BF:186:ILE:N    | 2.40                     | 0.54              |
| 30:BG:15:VAL:O     | 30:BG:18:GLU:CB    | 2.54                     | 0.54              |
| 31:BH:33:LEU:CD2   | 31:BH:35:VAL:HG22  | 2.36                     | 0.54              |
| 32:BK:86:THR:O     | 32:BK:123:LEU:HB2  | 2.07                     | 0.54              |
| 32:BK:102:SER:HA   | 32:BK:108:THR:HG22 | 1.89                     | 0.54              |
| 34:BM:112:LEU:C    | 34:BM:114:ARG:N    | 2.63                     | 0.54              |
| 35:BN:11:ALA:HB1   | 35:BN:97:ARG:NH1   | 2.22                     | 0.54              |
| 35:BN:112:MET:O    | 35:BN:113:LYS:C    | 2.50                     | 0.54              |
| 35:BN:112:MET:HA   | 35:BN:115:VAL:HG21 | 1.87                     | 0.54              |
| 36:BO:23:PRO:CG    | 36:BO:29:LYS:H     | 2.20                     | 0.54              |
| 37:BP:6:ARG:HE     | 37:BP:8:LYS:HG3    | 1.71                     | 0.54              |
| 37:BP:6:ARG:NE     | 37:BP:8:LYS:HG3    | 2.21                     | 0.54              |
| 37:BP:98:LYS:N     | 37:BP:98:LYS:HE3   | 2.21                     | 0.54              |
| 37:BP:110:THR:O    | 37:BP:110:THR:HG22 | 2.07                     | 0.54              |
| 37:BP:114:ALA:O    | 37:BP:117:ALA:HB3  | 2.06                     | 0.54              |
| 38:BQ:35:THR:HG22  | 38:BQ:113:LEU:HD23 | 1.88                     | 0.54              |
| 39:BR:7:TYR:O      | 39:BR:11:LYS:HD3   | 2.07                     | 0.54              |
| 41:BT:14:HIS:O     | 41:BT:15:LYS:C     | 2.50                     | 0.54              |
| 41:BT:99:ALA:CA    | 41:BT:106:PHE:CD1  | 2.90                     | 0.54              |
| 42:BU:3:ALA:O      | 42:BU:13:ARG:HA    | 2.07                     | 0.54              |
| 42:BU:27:ALA:O     | 42:BU:33:VAL:CG2   | 2.52                     | 0.54              |
| 45:BX:14:LEU:HD13  | 45:BX:20:TYR:O     | 2.06                     | 0.54              |
| 45:BX:32:PRO:HB2   | 45:BX:34:LYS:CG    | 2.35                     | 0.54              |
| 45:BX:50:ARG:CA    | 45:BX:54:LYS:HA    | 2.31                     | 0.54              |
| 46:BY:5:LEU:HB2    | 46:BY:23:LYS:HZ3   | 1.72                     | 0.54              |
| 46:BY:44:PHE:CD2   | 46:BY:48:PHE:HE1   | 2.24                     | 0.54              |
| 46:BY:122:ARG:HB2  | 46:BY:171:ILE:HD13 | 1.89                     | 0.54              |
| 48:B1:39:LEU:O     | 48:B1:42:ASN:ND2   | 2.38                     | 0.54              |
| 49:B2:5:LYS:CE     | 49:B2:57:GLU:HB2   | 2.36                     | 0.54              |
| 49:B2:9:VAL:CG2    | 49:B2:10:LYS:N     | 2.57                     | 0.54              |
| 49:B2:50:VAL:O     | 49:B2:52:HIS:CE1   | 2.60                     | 0.54              |
| 52:B5:16:CYS:SG    | 52:B5:41:PRO:HG3   | 2.48                     | 0.54              |
| 52:B5:16:CYS:HA    | 52:B5:49:HIS:O     | 2.07                     | 0.54              |
| 1:AA:69:G:C2       | 1:AA:101:A:C2      | 2.96                     | 0.54              |
| 1:AA:258:G:H2'     | 1:AA:259:G:H8      | 1.71                     | 0.54              |
| 1:AA:265:G:C2'     | 1:AA:267:C:H5      | 2.10                     | 0.54              |
| 1:AA:595:G:N7      | 1:AA:641:U:C2      | 2.75                     | 0.54              |
| 1:AA:596:C:H2'     | 1:AA:596:C:O2      | 2.07                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:738:C:N4     | 1:AA:739:C:H41    | 2.05                     | 0.54              |
| 1:AA:741:G:O2'    | 1:AA:742:G:H5'    | 2.08                     | 0.54              |
| 1:AA:763:G:H2'    | 1:AA:764:C:O5'    | 2.07                     | 0.54              |
| 1:AA:789:U:C6     | 1:AA:789:U:C3'    | 2.90                     | 0.54              |
| 1:AA:832:C:C2     | 1:AA:833:U:C5     | 2.95                     | 0.54              |
| 1:AA:858:G:N2     | 1:AA:870:U:P      | 2.80                     | 0.54              |
| 1:AA:859:A:C2'    | 1:AA:860:A:O5'    | 2.55                     | 0.54              |
| 1:AA:875:C:O2'    | 1:AA:876:G:O5'    | 2.18                     | 0.54              |
| 1:AA:913:A:O2'    | 1:AA:914:A:P      | 2.66                     | 0.54              |
| 1:AA:956:U:O2'    | 1:AA:957:U:C5'    | 2.55                     | 0.54              |
| 1:AA:959:A:C3'    | 1:AA:960:U:C5'    | 2.83                     | 0.54              |
| 1:AA:1066:C:H5    | 1:AA:1067:A:H62   | 1.55                     | 0.54              |
| 1:AA:1145:C:O2'   | 1:AA:1146:A:C8    | 2.61                     | 0.54              |
| 1:AA:1267:C:O2    | 1:AA:1267:C:C2'   | 2.55                     | 0.54              |
| 1:AA:1342:C:O2'   | 11:AL:124:GLN:CB  | 2.52                     | 0.54              |
| 1:AA:1415:G:C6    | 1:AA:1416:G:N7    | 2.76                     | 0.54              |
| 1:AA:1446:A:HO2'  | 1:AA:1447:G:P     | 2.29                     | 0.54              |
| 1:AA:1524:C:H2'   | 1:AA:1525:G:O4'   | 2.06                     | 0.54              |
| 3:AC:19:G:N2      | 30:BG:82:LEU:HD13 | 2.21                     | 0.54              |
| 3:AD:32:U:H1'     | 9:AJ:86:GLN:OE1   | 2.06                     | 0.54              |
| 4:AE:14:GLY:CA    | 4:AE:209:ARG:HH21 | 2.13                     | 0.54              |
| 4:AE:32:ILE:HD12  | 4:AE:190:THR:HG22 | 1.90                     | 0.54              |
| 4:AE:53:ARG:NH1   | 4:AE:200:ILE:HD12 | 2.21                     | 0.54              |
| 4:AE:69:LEU:HD22  | 4:AE:92:TYR:N     | 2.22                     | 0.54              |
| 5:AF:72:LYS:O     | 5:AF:76:VAL:CG2   | 2.56                     | 0.54              |
| 5:AF:150:LYS:NZ   | 5:AF:152:ILE:CG2  | 2.69                     | 0.54              |
| 5:AF:157:ILE:HG13 | 5:AF:164:ARG:HB3  | 1.89                     | 0.54              |
| 6:AG:122:ARG:HA   | 6:AG:134:ASP:O    | 2.07                     | 0.54              |
| 7:AH:8:GLU:CD     | 7:AH:8:GLU:O      | 2.50                     | 0.54              |
| 8:AI:97:PHE:HE2   | 20:AU:62:GLU:OE2  | 1.91                     | 0.54              |
| 9:AJ:69:VAL:CG1   | 9:AJ:104:LEU:HD21 | 2.36                     | 0.54              |
| 10:AK:87:SER:CB   | 10:AK:93:VAL:N    | 2.70                     | 0.54              |
| 11:AL:9:ARG:CD    | 11:AL:14:VAL:HG13 | 2.38                     | 0.54              |
| 11:AL:37:PHE:HD1  | 11:AL:43:ALA:HA   | 1.72                     | 0.54              |
| 12:AM:75:ILE:HG22 | 12:AM:76:ASN:ND2  | 2.22                     | 0.54              |
| 13:AN:84:VAL:CG2  | 20:AU:88:LYS:HD3  | 2.33                     | 0.54              |
| 17:AR:36:ILE:HD11 | 17:AR:60:VAL:CB   | 2.38                     | 0.54              |
| 17:AR:36:ILE:CD1  | 17:AR:60:VAL:HG22 | 2.36                     | 0.54              |
| 18:AS:67:THR:HB   | 18:AS:70:ALA:CB   | 2.36                     | 0.54              |
| 19:AT:38:ARG:HG3  | 19:AT:39:SER:H    | 1.73                     | 0.54              |
| 19:AT:84:LEU:O    | 19:AT:87:LYS:HB2  | 2.06                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 21:AV:45:VAL:CA  | 21:AV:67:VAL:HG21 | 2.36                     | 0.54              |
| 22:AW:86:ARG:HG2 | 22:AW:87:LYS:H    | 1.72                     | 0.54              |
| 24:BA:85:G:C4    | 24:BA:103:A:H2    | 2.25                     | 0.54              |
| 24:BA:98:G:O2'   | 24:BA:103:A:H1'   | 2.07                     | 0.54              |
| 24:BA:140:A:N3   | 24:BA:1408:C:H1'  | 2.22                     | 0.54              |
| 24:BA:219:G:C2'  | 24:BA:220:G:H5'   | 2.38                     | 0.54              |
| 24:BA:308:G:N2   | 24:BA:329:G:C2    | 2.76                     | 0.54              |
| 24:BA:417:C:C4   | 24:BA:418:G:N7    | 2.75                     | 0.54              |
| 24:BA:516:C:C2   | 24:BA:517:C:C5    | 2.95                     | 0.54              |
| 24:BA:556:G:C4   | 24:BA:557:U:C5    | 2.94                     | 0.54              |
| 24:BA:603:A:C6   | 24:BA:625:G:C5    | 2.95                     | 0.54              |
| 24:BA:627:A:OP1  | 24:BA:637:A:N6    | 2.41                     | 0.54              |
| 24:BA:674:G:C5'  | 29:BF:74:ARG:NH1  | 2.65                     | 0.54              |
| 24:BA:819:A:H8   | 24:BA:819:A:H5'   | 1.72                     | 0.54              |
| 24:BA:882:G:H1'  | 24:BA:896:A:H61   | 1.71                     | 0.54              |
| 24:BA:960:A:C5'  | 24:BA:961:C:OP1   | 2.54                     | 0.54              |
| 24:BA:967:C:H2'  | 24:BA:968:G:C8    | 2.42                     | 0.54              |
| 24:BA:1047:G:H2' | 24:BA:1110:G:C2   | 2.41                     | 0.54              |
| 24:BA:1108:U:C5  | 24:BA:1109:C:N4   | 2.75                     | 0.54              |
| 24:BA:1165:U:C2' | 24:BA:1166:C:C6   | 2.91                     | 0.54              |
| 24:BA:1221:C:H2' | 24:BA:1222:C:O5'  | 2.07                     | 0.54              |
| 24:BA:1264:G:H3' | 24:BA:1264:G:C8   | 2.42                     | 0.54              |
| 24:BA:1342:A:C1' | 24:BA:1345:C:N4   | 2.68                     | 0.54              |
| 24:BA:1487:G:H2' | 24:BA:1488:G:H8   | 1.72                     | 0.54              |
| 24:BA:1655:A:H2' | 24:BA:1656:C:H6   | 1.70                     | 0.54              |
| 24:BA:1688:U:O2  | 24:BA:1698:A:C5   | 2.60                     | 0.54              |
| 24:BA:1815:A:C1' | 24:BA:1817:G:C4   | 2.89                     | 0.54              |
| 24:BA:1935:G:O2' | 24:BA:1936:A:OP2  | 2.25                     | 0.54              |
| 24:BA:1939:U:H2' | 24:BA:1940:U:OP1  | 2.07                     | 0.54              |
| 24:BA:1971:A:C2  | 27:BD:239:ARG:CA  | 2.90                     | 0.54              |
| 24:BA:1980:G:O2' | 24:BA:1981:A:OP1  | 2.21                     | 0.54              |
| 24:BA:2007:C:C4  | 24:BA:2008:C:C5   | 2.94                     | 0.54              |
| 24:BA:2049:G:C2' | 24:BA:2050:C:O5'  | 2.55                     | 0.54              |
| 24:BA:2075:U:N3  | 24:BA:2238:G:N1   | 2.47                     | 0.54              |
| 24:BA:2078:C:O2' | 24:BA:2433:A:O2'  | 2.17                     | 0.54              |
| 24:BA:2158:A:O2' | 24:BA:2159:G:OP2  | 2.21                     | 0.54              |
| 24:BA:2357:U:C2' | 24:BA:2358:G:O5'  | 2.55                     | 0.54              |
| 24:BA:2385:C:N3  | 24:BA:2386:C:C6   | 2.74                     | 0.54              |
| 24:BA:2491:U:H2' | 24:BA:2492:U:H5'' | 1.89                     | 0.54              |
| 24:BA:2498:C:C2' | 24:BA:2498:C:O2   | 2.56                     | 0.54              |
| 24:BA:2586:C:N4  | 24:BA:2587:A:H62  | 2.05                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2699:C:C2'  | 24:BA:2700:C:H5'   | 2.37                     | 0.54              |
| 24:BA:2779:U:C6   | 24:BA:2779:U:C3'   | 2.90                     | 0.54              |
| 24:BA:2816:C:C2   | 24:BA:2817:G:C8    | 2.96                     | 0.54              |
| 24:BA:2817:G:H2'  | 24:BA:2818:G:H8    | 1.72                     | 0.54              |
| 25:BB:38:C:O3'    | 39:BR:93:LYS:NZ    | 2.39                     | 0.54              |
| 25:BB:51:G:OP1    | 39:BR:60:GLY:O     | 2.25                     | 0.54              |
| 26:BC:192:PHE:O   | 26:BC:196:LEU:HB2  | 2.08                     | 0.54              |
| 26:BC:225:ASN:OD1 | 26:BC:227:HIS:HB2  | 2.08                     | 0.54              |
| 27:BD:253:GLN:O   | 27:BD:254:THR:HG23 | 2.07                     | 0.54              |
| 28:BE:64:LYS:O    | 28:BE:65:GLY:C     | 2.50                     | 0.54              |
| 28:BE:144:ARG:HG2 | 28:BE:144:ARG:O    | 2.07                     | 0.54              |
| 31:BH:33:LEU:HD11 | 31:BH:74:ASN:HD21  | 1.73                     | 0.54              |
| 31:BH:126:PRO:HG3 | 31:BH:132:ARG:NH1  | 2.22                     | 0.54              |
| 33:BL:12:LEU:HD22 | 33:BL:19:PRO:HG2   | 1.88                     | 0.54              |
| 34:BM:13:TRP:C    | 34:BM:14:VAL:CG2   | 2.79                     | 0.54              |
| 34:BM:60:ILE:CG2  | 34:BM:61:ARG:N     | 2.70                     | 0.54              |
| 34:BM:62:VAL:O    | 34:BM:64:GLY:N     | 2.36                     | 0.54              |
| 34:BM:87:LEU:HA   | 34:BM:90:MET:CG    | 2.37                     | 0.54              |
| 34:BM:114:ARG:O   | 34:BM:115:ARG:C    | 2.48                     | 0.54              |
| 34:BM:126:PRO:O   | 34:BM:127:ASP:HB3  | 2.07                     | 0.54              |
| 35:BN:77:ILE:CG2  | 40:BS:75:ILE:HD12  | 2.33                     | 0.54              |
| 36:BO:65:ARG:HH11 | 36:BO:67:MET:H     | 1.49                     | 0.54              |
| 36:BO:107:LYS:O   | 36:BO:108:LYS:C    | 2.50                     | 0.54              |
| 36:BO:116:GLY:HA3 | 36:BO:121:LYS:HB3  | 1.89                     | 0.54              |
| 37:BP:16:ARG:HG2  | 37:BP:73:PRO:CD    | 2.34                     | 0.54              |
| 37:BP:43:THR:HG1  | 37:BP:45:GLN:HB2   | 1.72                     | 0.54              |
| 38:BQ:52:ILE:O    | 38:BQ:56:LYS:HG3   | 2.06                     | 0.54              |
| 38:BQ:76:VAL:HG12 | 38:BQ:77:ARG:N     | 2.22                     | 0.54              |
| 39:BR:76:LYS:CG   | 39:BR:77:ALA:N     | 2.68                     | 0.54              |
| 39:BR:78:LEU:C    | 39:BR:78:LEU:CD2   | 2.76                     | 0.54              |
| 39:BR:99:LYS:O    | 39:BR:103:GLU:OE2  | 2.26                     | 0.54              |
| 42:BU:33:VAL:CG1  | 42:BU:34:GLU:N     | 2.69                     | 0.54              |
| 43:BV:18:ARG:HH21 | 43:BV:18:ARG:CB    | 2.20                     | 0.54              |
| 45:BX:1:MET:HA    | 45:BX:33:LYS:CG    | 2.37                     | 0.54              |
| 46:BY:57:ILE:C    | 46:BY:58:VAL:CG2   | 2.80                     | 0.54              |
| 46:BY:80:ARG:C    | 46:BY:81:ARG:HG3   | 2.32                     | 0.54              |
| 51:B4:9:LYS:O     | 51:B4:10:LYS:CG    | 2.56                     | 0.54              |
| 51:B4:15:ARG:O    | 51:B4:18:ALA:N     | 2.40                     | 0.54              |
| 54:B7:9:GLY:O     | 54:B7:10:ALA:C     | 2.50                     | 0.54              |
| 54:B7:15:LYS:HE2  | 54:B7:15:LYS:HA    | 1.89                     | 0.54              |
| 54:B7:53:PRO:HA   | 54:B7:56:GLU:HG2   | 1.89                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 55:B8:20:HIS:O     | 55:B8:22:ARG:N     | 2.40                     | 0.54              |
| 1:AA:152:A:H3'     | 1:AA:152:A:H8      | 1.72                     | 0.54              |
| 1:AA:192:U:H4'     | 22:AW:103:GLY:N    | 2.23                     | 0.54              |
| 1:AA:498:A:O2'     | 1:AA:500:G:C8      | 2.60                     | 0.54              |
| 1:AA:598:U:C4'     | 10:AK:94:TYR:CD2   | 2.86                     | 0.54              |
| 1:AA:622:A:H2'     | 1:AA:623:C:C5'     | 2.37                     | 0.54              |
| 1:AA:647:C:O2'     | 1:AA:648:A:H5'     | 2.08                     | 0.54              |
| 1:AA:691:G:N2      | 13:AN:51:LYS:NZ    | 2.55                     | 0.54              |
| 1:AA:778:G:C2'     | 1:AA:779:C:H5'     | 2.37                     | 0.54              |
| 1:AA:791:G:H2'     | 1:AA:792:A:O4'     | 2.06                     | 0.54              |
| 1:AA:848:C:C4      | 1:AA:849:C:C5      | 2.95                     | 0.54              |
| 1:AA:1037:C:C4     | 1:AA:1038:C:N4     | 2.76                     | 0.54              |
| 1:AA:1057:G:C4'    | 5:AF:197:GLY:H     | 2.16                     | 0.54              |
| 1:AA:1104:G:O2'    | 4:AE:111:ARG:NH2   | 2.38                     | 0.54              |
| 1:AA:1104:G:C4     | 1:AA:1105:A:C8     | 2.96                     | 0.54              |
| 1:AA:1134:G:C6     | 1:AA:1135:U:C1'    | 2.90                     | 0.54              |
| 1:AA:1438:G:C5     | 1:AA:1439:C:C5     | 2.95                     | 0.54              |
| 3:AC:47:U:H3'      | 3:AC:47:U:H6       | 1.71                     | 0.54              |
| 3:AD:39:U:H2'      | 3:AD:40:C:O4'      | 2.06                     | 0.54              |
| 4:AE:8:LYS:O       | 4:AE:9:GLU:HB2     | 2.06                     | 0.54              |
| 4:AE:177:ALA:O     | 4:AE:178:ARG:C     | 2.49                     | 0.54              |
| 5:AF:35:GLU:O      | 5:AF:39:ILE:HG13   | 2.07                     | 0.54              |
| 5:AF:110:ASN:ND2   | 5:AF:140:ARG:O     | 2.40                     | 0.54              |
| 5:AF:192:THR:O     | 5:AF:192:THR:HG22  | 2.06                     | 0.54              |
| 6:AG:152:SER:HA    | 6:AG:155:LEU:CD2   | 2.37                     | 0.54              |
| 6:AG:152:SER:HA    | 6:AG:155:LEU:HD21  | 1.88                     | 0.54              |
| 7:AH:79:GLU:O      | 7:AH:80:ILE:HG23   | 2.07                     | 0.54              |
| 7:AH:152:ARG:HH21  | 10:AK:44:PHE:N     | 2.06                     | 0.54              |
| 10:AK:10:LEU:CA    | 10:AK:13:ILE:HD12  | 2.37                     | 0.54              |
| 10:AK:88:LYS:HZ3   | 10:AK:88:LYS:CB    | 2.20                     | 0.54              |
| 10:AK:112:LEU:HD11 | 10:AK:114:THR:HG22 | 1.89                     | 0.54              |
| 13:AN:66:LEU:O     | 13:AN:70:LYS:HD2   | 2.08                     | 0.54              |
| 14:AO:53:ARG:NH2   | 14:AO:92:ASP:OD2   | 2.41                     | 0.54              |
| 15:AP:34:LEU:HD23  | 15:AP:39:ILE:CD1   | 2.37                     | 0.54              |
| 16:AQ:27:CYS:N     | 16:AQ:43:CYS:HB3   | 2.23                     | 0.54              |
| 16:AQ:41:ARG:HA    | 16:AQ:44:LEU:HD23  | 1.90                     | 0.54              |
| 17:AR:29:VAL:O     | 17:AR:30:ALA:C     | 2.50                     | 0.54              |
| 17:AR:69:TYR:OH    | 17:AR:73:GLU:HG3   | 2.08                     | 0.54              |
| 17:AR:83:GLU:O     | 17:AR:84:LYS:C     | 2.49                     | 0.54              |
| 18:AS:4:ILE:HG12   | 18:AS:66:PRO:HA    | 1.88                     | 0.54              |
| 19:AT:29:HIS:HE1   | 19:AT:31:LEU:HB3   | 1.72                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 19:AT:33:GLY:O     | 19:AT:34:LYS:C     | 2.50                     | 0.54              |
| 20:AU:62:GLU:C     | 20:AU:66:LEU:HG    | 2.31                     | 0.54              |
| 22:AW:43:LEU:CD1   | 22:AW:51:GLU:HB2   | 2.37                     | 0.54              |
| 22:AW:83:ARG:HA    | 22:AW:86:ARG:CD    | 2.38                     | 0.54              |
| 24:BA:12:U:O2      | 24:BA:2627:G:OP1   | 2.25                     | 0.54              |
| 24:BA:64:A:H5''    | 44:BW:73:ARG:HA    | 1.86                     | 0.54              |
| 24:BA:74:A:N1      | 48:B1:46:ARG:CD    | 2.70                     | 0.54              |
| 24:BA:188:G:OP2    | 50:B3:13:ARG:NH2   | 2.40                     | 0.54              |
| 24:BA:204:A:H5'    | 24:BA:206:U:O4'    | 2.06                     | 0.54              |
| 24:BA:271(B):G:C5' | 24:BA:271(C):U:O4' | 2.53                     | 0.54              |
| 24:BA:400:G:N1     | 50:B3:63:TYR:OH    | 2.30                     | 0.54              |
| 24:BA:584:C:H2'    | 24:BA:585:G:C5'    | 2.36                     | 0.54              |
| 24:BA:655:A:H5'    | 24:BA:656:G:OP1    | 2.07                     | 0.54              |
| 24:BA:1027:A:H2'   | 24:BA:1028:A:C8    | 2.41                     | 0.54              |
| 24:BA:1128:A:O2'   | 24:BA:1129:A:H5'   | 2.07                     | 0.54              |
| 24:BA:1201:C:H42   | 24:BA:1241:A:N6    | 2.03                     | 0.54              |
| 24:BA:1287:A:H5'   | 38:BQ:104:ARG:CG   | 2.38                     | 0.54              |
| 24:BA:1353:A:H2'   | 24:BA:1354:A:O4'   | 2.07                     | 0.54              |
| 24:BA:1374:G:C5    | 24:BA:1375:C:C5    | 2.96                     | 0.54              |
| 24:BA:1469:A:H2'   | 24:BA:1470:G:H5'   | 1.88                     | 0.54              |
| 24:BA:1477:A:H4'   | 24:BA:1478:G:OP2   | 2.07                     | 0.54              |
| 24:BA:1526:G:N2    | 24:BA:1546:C:N3    | 2.54                     | 0.54              |
| 24:BA:1563:G:O2'   | 24:BA:1564:C:H5'   | 2.07                     | 0.54              |
| 24:BA:1566:A:C5    | 27:BD:215:LEU:HD22 | 2.42                     | 0.54              |
| 24:BA:1605:C:H3'   | 24:BA:1606:G:H8    | 1.72                     | 0.54              |
| 24:BA:1618:A:O2'   | 24:BA:1619:G:OP1   | 2.18                     | 0.54              |
| 24:BA:1672:C:O2    | 24:BA:2582:G:C1'   | 2.55                     | 0.54              |
| 24:BA:1681:G:C6    | 24:BA:1762:A:N7    | 2.76                     | 0.54              |
| 24:BA:1785:A:O5'   | 24:BA:1982:C:C4'   | 2.52                     | 0.54              |
| 24:BA:1914:C:N3    | 24:BA:1915:U:H5    | 2.06                     | 0.54              |
| 24:BA:2114:A:N6    | 24:BA:2170:A:H61   | 2.06                     | 0.54              |
| 24:BA:2135:A:OP2   | 24:BA:2160:G:H5'   | 2.07                     | 0.54              |
| 24:BA:2190:G:C2    | 24:BA:2191:G:C8    | 2.96                     | 0.54              |
| 24:BA:2208:U:H1'   | 24:BA:2217:G:H1    | 1.70                     | 0.54              |
| 24:BA:2209:C:H3'   | 24:BA:2209:C:C6    | 2.42                     | 0.54              |
| 24:BA:2227:A:H4'   | 27:BD:262:ARG:CG   | 2.34                     | 0.54              |
| 24:BA:2447:G:C4    | 24:BA:2500:U:C4    | 2.94                     | 0.54              |
| 24:BA:2519:U:O2    | 24:BA:2519:U:H2'   | 2.08                     | 0.54              |
| 24:BA:2527:C:O2'   | 24:BA:2528:U:H5'   | 2.08                     | 0.54              |
| 24:BA:2554:U:H5    | 24:BA:2556:C:N3    | 2.06                     | 0.54              |
| 24:BA:2703:C:C2'   | 24:BA:2704:C:O5'   | 2.56                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2747:G:N2    | 24:BA:2754:U:H3    | 2.04                     | 0.54              |
| 24:BA:2848:G:H21   | 24:BA:2849:U:H3    | 1.51                     | 0.54              |
| 25:BB:5:C:H2'      | 25:BB:6:C:C6       | 2.43                     | 0.54              |
| 25:BB:45:A:C5      | 25:BB:46:A:C5      | 2.95                     | 0.54              |
| 27:BD:58:HIS:CD2   | 27:BD:215:LEU:HA   | 2.42                     | 0.54              |
| 27:BD:63:ARG:HG2   | 27:BD:65:ILE:HG12  | 1.88                     | 0.54              |
| 27:BD:239:ARG:N    | 27:BD:239:ARG:CD   | 2.70                     | 0.54              |
| 27:BD:273:ARG:O    | 27:BD:273:ARG:CZ   | 2.55                     | 0.54              |
| 28:BE:104:VAL:HG11 | 28:BE:198:VAL:HG22 | 1.88                     | 0.54              |
| 28:BE:115:GLY:O    | 28:BE:117:MET:N    | 2.41                     | 0.54              |
| 29:BF:106:ARG:CG   | 29:BF:107:LYS:N    | 2.65                     | 0.54              |
| 30:BG:18:GLU:OE1   | 30:BG:18:GLU:C     | 2.50                     | 0.54              |
| 32:BK:93:THR:HG22  | 32:BK:96:ASP:H     | 1.71                     | 0.54              |
| 33:BL:24:GLY:HA2   | 33:BL:34:ILE:CG2   | 2.37                     | 0.54              |
| 34:BM:14:VAL:HG13  | 34:BM:138:LEU:C    | 2.32                     | 0.54              |
| 34:BM:69:GLN:OE1   | 34:BM:87:LEU:HD13  | 2.08                     | 0.54              |
| 34:BM:99:LEU:HD12  | 34:BM:103:VAL:CG1  | 2.37                     | 0.54              |
| 34:BM:107:LEU:C    | 34:BM:107:LEU:CD2  | 2.71                     | 0.54              |
| 34:BM:122:VAL:C    | 34:BM:123:TYR:CG   | 2.85                     | 0.54              |
| 35:BN:21:CYS:SG    | 35:BN:22:ILE:N     | 2.80                     | 0.54              |
| 35:BN:106:LEU:HA   | 35:BN:111:PHE:CE1  | 2.42                     | 0.54              |
| 36:BO:138:LEU:HD13 | 36:BO:139:LYS:N    | 2.22                     | 0.54              |
| 37:BP:27:VAL:CG1   | 37:BP:104:PHE:CE2  | 2.91                     | 0.54              |
| 37:BP:85:LYS:CE    | 37:BP:88:GLY:HA3   | 2.36                     | 0.54              |
| 40:BS:9:LEU:O      | 40:BS:10:VAL:C     | 2.51                     | 0.54              |
| 41:BT:32:PHE:HB3   | 41:BT:36:ARG:HH21  | 1.72                     | 0.54              |
| 41:BT:113:ALA:HA   | 41:BT:116:ALA:HB2  | 1.90                     | 0.54              |
| 42:BU:75:PHE:CD1   | 42:BU:75:PHE:N     | 2.76                     | 0.54              |
| 43:BV:21:VAL:HG13  | 43:BV:75:TYR:CD2   | 2.42                     | 0.54              |
| 44:BW:30:VAL:HG23  | 44:BW:77:LYS:HD3   | 1.89                     | 0.54              |
| 44:BW:50:LYS:HG3   | 44:BW:84:ALA:H     | 1.71                     | 0.54              |
| 46:BY:1:MET:H2     | 46:BY:53:ILE:HD11  | 1.72                     | 0.54              |
| 47:BZ:27:GLU:OE1   | 47:BZ:27:GLU:HA    | 2.06                     | 0.54              |
| 50:B3:22:ILE:N     | 50:B3:22:ILE:HD12  | 2.23                     | 0.54              |
| 50:B3:56:VAL:C     | 50:B3:61:ARG:CZ    | 2.80                     | 0.54              |
| 50:B3:57:GLU:CA    | 50:B3:61:ARG:CZ    | 2.85                     | 0.54              |
| 50:B3:59:PHE:CD1   | 50:B3:60:GLN:HG2   | 2.41                     | 0.54              |
| 55:B8:17:ILE:HB    | 55:B8:24:TYR:O     | 2.06                     | 0.54              |
| 1:AA:9:G:C2        | 1:AA:26:A:C2       | 2.96                     | 0.54              |
| 1:AA:153:C:C2      | 1:AA:154:C:C5      | 2.96                     | 0.54              |
| 1:AA:265:G:C4      | 1:AA:267:C:C6      | 2.96                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:307:C:O2      | 1:AA:307:C:H2'    | 2.06                     | 0.54              |
| 1:AA:362:G:H2'     | 1:AA:364:A:OP2    | 2.07                     | 0.54              |
| 1:AA:397:A:C2      | 1:AA:548:G:C6     | 2.96                     | 0.54              |
| 1:AA:407:G:H5''    | 6:AG:115:ARG:HD2  | 1.90                     | 0.54              |
| 1:AA:427:U:OP1     | 6:AG:41:GLY:N     | 2.36                     | 0.54              |
| 1:AA:446:G:H2'     | 1:AA:447:G:C8     | 2.42                     | 0.54              |
| 1:AA:519:C:C4      | 1:AA:520:A:N3     | 2.76                     | 0.54              |
| 1:AA:553:A:C2      | 1:AA:554:C:C2     | 2.96                     | 0.54              |
| 1:AA:563:A:C5      | 1:AA:567:G:H1'    | 2.42                     | 0.54              |
| 1:AA:628:G:H2'     | 1:AA:629:G:O4'    | 2.08                     | 0.54              |
| 1:AA:714:G:HO2'    | 1:AA:777:A:N6     | 2.06                     | 0.54              |
| 1:AA:806:C:O2'     | 1:AA:807:A:H5'    | 2.07                     | 0.54              |
| 1:AA:861:G:H2'     | 1:AA:862:C:C6     | 2.43                     | 0.54              |
| 1:AA:1009:G:H2'    | 1:AA:1010:G:H8    | 1.73                     | 0.54              |
| 1:AA:1058:G:H8     | 1:AA:1058:G:O5'   | 1.91                     | 0.54              |
| 3:AC:46:G:OP2      | 3:AC:46:G:C8      | 2.61                     | 0.54              |
| 5:AF:18:TRP:CZ2    | 16:AQ:57:ARG:HB2  | 2.43                     | 0.54              |
| 5:AF:193:TYR:N     | 5:AF:193:TYR:HD2  | 2.05                     | 0.54              |
| 6:AG:6:GLY:O       | 6:AG:8:VAL:HG22   | 2.07                     | 0.54              |
| 6:AG:105:VAL:CG2   | 6:AG:121:VAL:HG22 | 2.29                     | 0.54              |
| 6:AG:165:MET:O     | 6:AG:166:LYS:C    | 2.50                     | 0.54              |
| 6:AG:172:PRO:CG    | 6:AG:193:ASP:HB3  | 2.37                     | 0.54              |
| 6:AG:199:ASN:CG    | 6:AG:200:GLU:N    | 2.64                     | 0.54              |
| 6:AG:200:GLU:CG    | 6:AG:201:GLN:N    | 2.68                     | 0.54              |
| 7:AH:45:PHE:CD1    | 7:AH:45:PHE:O     | 2.61                     | 0.54              |
| 7:AH:106:PRO:CG    | 7:AH:122:GLU:OE2  | 2.56                     | 0.54              |
| 8:AI:77:ARG:HA     | 8:AI:80:ARG:HE    | 1.71                     | 0.54              |
| 10:AK:41:ARG:HB3   | 10:AK:41:ARG:CZ   | 2.38                     | 0.54              |
| 10:AK:69:ARG:HG3   | 10:AK:69:ARG:HH11 | 1.72                     | 0.54              |
| 11:AL:15:ALA:HB3   | 11:AL:76:ALA:C    | 2.32                     | 0.54              |
| 14:AO:48:PRO:CG    | 14:AO:49:ASN:N    | 2.70                     | 0.54              |
| 14:AO:50:SER:O     | 14:AO:51:ALA:CB   | 2.55                     | 0.54              |
| 14:AO:60:LEU:HD13  | 14:AO:64:TYR:O    | 2.06                     | 0.54              |
| 14:AO:100:ILE:HD13 | 14:AO:100:ILE:H   | 1.71                     | 0.54              |
| 15:AP:60:VAL:HG22  | 15:AP:64:TRP:HE3  | 1.72                     | 0.54              |
| 15:AP:69:GLU:O     | 15:AP:71:ARG:N    | 2.41                     | 0.54              |
| 20:AU:45:SER:HB3   | 20:AU:51:LEU:CD1  | 2.31                     | 0.54              |
| 22:AW:22:ARG:O     | 22:AW:26:ASN:OD1  | 2.26                     | 0.54              |
| 22:AW:83:ARG:HA    | 22:AW:86:ARG:HD3  | 1.90                     | 0.54              |
| 22:AW:87:LYS:O     | 22:AW:91:LEU:HG   | 2.08                     | 0.54              |
| 24:BA:75:G:O2'     | 48:B1:50:ARG:NH1  | 2.40                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:270(X):G:O3' | 24:BA:272:G:H4'   | 2.08                     | 0.54              |
| 24:BA:448:U:O2'    | 24:BA:449:A:OP1   | 2.23                     | 0.54              |
| 24:BA:460:A:C8     | 24:BA:461:C:C5    | 2.96                     | 0.54              |
| 24:BA:463:G:N2     | 24:BA:467:G:C5    | 2.76                     | 0.54              |
| 24:BA:497:A:H2'    | 24:BA:498:G:C8    | 2.43                     | 0.54              |
| 24:BA:578:A:H2     | 41:BT:34:LYS:NZ   | 2.03                     | 0.54              |
| 24:BA:627:A:N6     | 24:BA:636:G:O2'   | 2.39                     | 0.54              |
| 24:BA:630:G:H5''   | 54:B7:46:ARG:CZ   | 2.36                     | 0.54              |
| 24:BA:675:A:H2'    | 24:BA:676:A:C2    | 2.43                     | 0.54              |
| 24:BA:728:G:C6     | 24:BA:762:U:C3'   | 2.90                     | 0.54              |
| 24:BA:826:U:C2     | 24:BA:828:U:C6    | 2.95                     | 0.54              |
| 24:BA:861:A:C6     | 24:BA:917:A:C2    | 2.95                     | 0.54              |
| 24:BA:942:G:H3'    | 36:BO:32:THR:HG22 | 1.86                     | 0.54              |
| 24:BA:996:A:C2     | 24:BA:997:G:N7    | 2.76                     | 0.54              |
| 24:BA:1161:C:C1'   | 42:BU:22:VAL:HG11 | 2.34                     | 0.54              |
| 24:BA:1178:C:O2'   | 24:BA:1179:C:O5'  | 2.24                     | 0.54              |
| 24:BA:1246:A:OP2   | 36:BO:15:ARG:CZ   | 2.55                     | 0.54              |
| 24:BA:1491:G:H4'   | 27:BD:72:LYS:NZ   | 2.22                     | 0.54              |
| 24:BA:1497:U:O4    | 24:BA:1577:C:H4'  | 2.08                     | 0.54              |
| 24:BA:1556:C:C2    | 24:BA:1557:C:C5   | 2.96                     | 0.54              |
| 24:BA:1582:C:C3'   | 24:BA:1583:A:O4'  | 2.56                     | 0.54              |
| 24:BA:1670:C:H3'   | 24:BA:1671:U:C5   | 2.43                     | 0.54              |
| 24:BA:1684:C:C4    | 24:BA:1705:G:C2   | 2.96                     | 0.54              |
| 24:BA:1718:G:N2    | 24:BA:1742:C:C4   | 2.75                     | 0.54              |
| 24:BA:1725:G:N2    | 24:BA:1726:G:O4'  | 2.40                     | 0.54              |
| 24:BA:1728:G:H1    | 24:BA:1733:G:H22  | 1.56                     | 0.54              |
| 24:BA:1882:C:H2'   | 24:BA:1883:G:C5'  | 2.37                     | 0.54              |
| 24:BA:2058:A:N1    | 24:BA:2059:A:N6   | 2.52                     | 0.54              |
| 24:BA:2210:G:O6    | 27:BD:150:LYS:CA  | 2.55                     | 0.54              |
| 24:BA:2215:G:H8    | 24:BA:2215:G:O5'  | 1.91                     | 0.54              |
| 24:BA:2271:G:H5'   | 47:BZ:20:ARG:HH12 | 1.71                     | 0.54              |
| 24:BA:2273:A:N7    | 24:BA:2274:A:C8   | 2.75                     | 0.54              |
| 24:BA:2277:G:H5''  | 47:BZ:12:ASN:HD21 | 1.70                     | 0.54              |
| 24:BA:2335:A:HO2'  | 24:BA:2336:A:H8   | 1.55                     | 0.54              |
| 24:BA:2392:A:C2    | 24:BA:2429:G:N3   | 2.75                     | 0.54              |
| 24:BA:2552:U:C2    | 24:BA:2554:U:H5'' | 2.42                     | 0.54              |
| 24:BA:2623:G:H21   | 51:B4:22:HIS:CE1  | 2.23                     | 0.54              |
| 24:BA:2653:U:P     | 24:BA:2654:A:H3'  | 2.48                     | 0.54              |
| 24:BA:2730:C:H4'   | 28:BE:169:ASN:O   | 2.06                     | 0.54              |
| 24:BA:2737:G:N1    | 24:BA:2768:C:N4   | 2.56                     | 0.54              |
| 25:BB:30:C:C1'     | 25:BB:58:A:H2     | 2.21                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 25:BB:51:G:N7      | 39:BR:32:LEU:HD21  | 2.21                     | 0.54              |
| 26:BC:10:LEU:CD1   | 26:BC:32:LEU:CD2   | 2.85                     | 0.54              |
| 26:BC:39:GLU:HB3   | 26:BC:178:ALA:CB   | 2.37                     | 0.54              |
| 28:BE:49:LEU:CD2   | 28:BE:75:VAL:C     | 2.79                     | 0.54              |
| 28:BE:149:ARG:HH11 | 28:BE:151:TYR:HA   | 1.71                     | 0.54              |
| 30:BG:151:ALA:C    | 30:BG:152:LEU:CG   | 2.80                     | 0.54              |
| 30:BG:174:GLU:HG2  | 30:BG:175:LEU:N    | 2.21                     | 0.54              |
| 31:BH:7:LEU:HD13   | 31:BH:65:HIS:CE1   | 2.42                     | 0.54              |
| 31:BH:8:PRO:HA     | 31:BH:51:ARG:CZ    | 2.37                     | 0.54              |
| 31:BH:74:ASN:ND2   | 31:BH:75:ALA:H     | 2.05                     | 0.54              |
| 35:BN:35:VAL:HA    | 35:BN:61:VAL:HG12  | 1.89                     | 0.54              |
| 36:BO:79:ARG:O     | 36:BO:83:VAL:HG22  | 2.07                     | 0.54              |
| 37:BP:104:PHE:C    | 37:BP:105:GLU:CD   | 2.75                     | 0.54              |
| 37:BP:118:LEU:CB   | 37:BP:131:ILE:HD13 | 2.37                     | 0.54              |
| 38:BQ:22:ARG:HA    | 38:BQ:47:PHE:HE2   | 1.72                     | 0.54              |
| 40:BS:30:VAL:HB    | 40:BS:91:ARG:H     | 1.73                     | 0.54              |
| 40:BS:110:ILE:HD12 | 40:BS:113:LYS:CE   | 2.37                     | 0.54              |
| 41:BT:76:TYR:O     | 41:BT:77:SER:C     | 2.50                     | 0.54              |
| 42:BU:33:VAL:O     | 42:BU:63:GLY:HA2   | 2.08                     | 0.54              |
| 44:BW:49:VAL:HG12  | 44:BW:88:LYS:HB2   | 1.90                     | 0.54              |
| 44:BW:73:ARG:HH22  | 44:BW:74:PRO:C     | 2.16                     | 0.54              |
| 44:BW:82:GLN:HG2   | 44:BW:83:VAL:N     | 2.23                     | 0.54              |
| 45:BX:14:LEU:HB2   | 45:BX:20:TYR:H     | 1.72                     | 0.54              |
| 46:BY:110:GLY:HA3  | 46:BY:144:LEU:HD12 | 1.89                     | 0.54              |
| 46:BY:129:SER:CB   | 46:BY:133:ILE:HG22 | 2.36                     | 0.54              |
| 46:BY:159:PRO:O    | 46:BY:161:VAL:N    | 2.34                     | 0.54              |
| 47:BZ:27:GLU:OE1   | 47:BZ:28:GLY:N     | 2.39                     | 0.54              |
| 47:BZ:40:GLN:HE22  | 47:BZ:43:THR:HA    | 1.72                     | 0.54              |
| 51:B4:41:PRO:O     | 51:B4:42:PRO:C     | 2.49                     | 0.54              |
| 52:B5:7:ILE:HG22   | 52:B5:8:LYS:N      | 2.22                     | 0.54              |
| 52:B5:12:GLU:HG3   | 52:B5:53:LYS:O     | 2.07                     | 0.54              |
| 1:AA:46:G:N2       | 1:AA:366:C:H1'     | 2.22                     | 0.54              |
| 1:AA:129(A):G:C8   | 1:AA:129(A):G:C3'  | 2.89                     | 0.54              |
| 1:AA:859:A:N7      | 1:AA:860:A:C4      | 2.76                     | 0.54              |
| 1:AA:862:C:C2      | 1:AA:863:U:H5      | 2.24                     | 0.54              |
| 1:AA:965:A:O2'     | 1:AA:966:G:O5'     | 2.24                     | 0.54              |
| 1:AA:970:C:O2      | 15:AP:126:LYS:HD2  | 2.07                     | 0.54              |
| 1:AA:1057:G:C5     | 1:AA:1204:A:C2     | 2.96                     | 0.54              |
| 1:AA:1057:G:OP1    | 5:AF:155:GLY:CA    | 2.56                     | 0.54              |
| 1:AA:1099:G:C5     | 1:AA:1100:C:C5     | 2.95                     | 0.54              |
| 1:AA:1151:A:H1'    | 12:AM:39:PRO:HB2   | 1.90                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1186:G:H21   | 16:AQ:61:TRP:C    | 2.13                     | 0.54              |
| 1:AA:1201:A:C2'   | 1:AA:1202:G:OP2   | 2.55                     | 0.54              |
| 1:AA:1350:A:P     | 11:AL:118:LYS:HG3 | 2.48                     | 0.54              |
| 1:AA:1363:A:H5''  | 1:AA:1364:U:C5    | 2.43                     | 0.54              |
| 1:AA:1512:U:C2    | 1:AA:1513:A:N7    | 2.76                     | 0.54              |
| 1:AA:1513:A:N1    | 1:AA:1523:G:C6    | 2.76                     | 0.54              |
| 2:A1:36:U:O2      | 9:AJ:82:GLY:HA2   | 2.08                     | 0.54              |
| 3:AC:10:G:C6      | 3:AC:11:C:C4      | 2.95                     | 0.54              |
| 4:AE:35:GLU:HG2   | 4:AE:39:ILE:C     | 2.33                     | 0.54              |
| 4:AE:46:LYS:HA    | 4:AE:46:LYS:CE    | 2.34                     | 0.54              |
| 4:AE:57:PHE:C     | 4:AE:57:PHE:CD2   | 2.86                     | 0.54              |
| 4:AE:64:ARG:CD    | 4:AE:64:ARG:H     | 2.20                     | 0.54              |
| 4:AE:100:GLY:O    | 4:AE:104:ASN:ND2  | 2.41                     | 0.54              |
| 5:AF:30:ARG:HD3   | 5:AF:30:ARG:H     | 1.71                     | 0.54              |
| 5:AF:123:GLN:HB3  | 5:AF:128:PHE:CE2  | 2.41                     | 0.54              |
| 5:AF:135:LYS:NZ   | 7:AH:52:PRO:HG2   | 2.23                     | 0.54              |
| 5:AF:138:VAL:O    | 5:AF:139:GLN:C    | 2.50                     | 0.54              |
| 6:AG:13:ARG:NH1   | 6:AG:38:TYR:CE1   | 2.75                     | 0.54              |
| 6:AG:30:LYS:HG2   | 6:AG:35:ARG:CG    | 2.38                     | 0.54              |
| 6:AG:87:GLY:O     | 6:AG:88:VAL:C     | 2.51                     | 0.54              |
| 6:AG:101:LEU:O    | 6:AG:104:VAL:CG2  | 2.40                     | 0.54              |
| 7:AH:136:MET:CA   | 7:AH:139:LEU:HD12 | 2.38                     | 0.54              |
| 8:AI:36:ARG:CZ    | 8:AI:36:ARG:CB    | 2.85                     | 0.54              |
| 9:AJ:87:VAL:HB    | 9:AJ:156:TRP:CH2  | 2.42                     | 0.54              |
| 10:AK:110:ALA:O   | 10:AK:120:THR:HA  | 2.08                     | 0.54              |
| 10:AK:112:LEU:CB  | 10:AK:133:LEU:HA  | 2.37                     | 0.54              |
| 13:AN:115:PRO:O   | 13:AN:116:HIS:ND1 | 2.40                     | 0.54              |
| 15:AP:91:ARG:HH12 | 15:AP:103:THR:CG2 | 2.19                     | 0.54              |
| 18:AS:6:LEU:CD2   | 18:AS:17:TYR:CD2  | 2.85                     | 0.54              |
| 20:AU:47:THR:H    | 20:AU:49:LYS:NZ   | 2.00                     | 0.54              |
| 21:AV:36:ARG:NH2  | 21:AV:51:VAL:HG12 | 2.23                     | 0.54              |
| 21:AV:58:VAL:HG21 | 21:AV:75:ALA:HB1  | 1.89                     | 0.54              |
| 24:BA:27:G:C2     | 24:BA:512:G:H2'   | 2.41                     | 0.54              |
| 24:BA:269:U:H2'   | 24:BA:269:U:O2    | 2.07                     | 0.54              |
| 24:BA:271:G:N3    | 24:BA:272:G:C8    | 2.75                     | 0.54              |
| 24:BA:350:U:O2    | 24:BA:350:U:C2'   | 2.44                     | 0.54              |
| 24:BA:489:G:C5    | 24:BA:1284:A:C2   | 2.95                     | 0.54              |
| 24:BA:507:A:H5'   | 24:BA:509:C:C1'   | 2.37                     | 0.54              |
| 24:BA:509:C:H2'   | 24:BA:510:C:OP2   | 2.08                     | 0.54              |
| 24:BA:527:C:C5    | 24:BA:2780:G:OP1  | 2.60                     | 0.54              |
| 24:BA:570:G:H1    | 24:BA:2498:C:C3'  | 2.19                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:819:A:N6    | 24:BA:1188:U:H3   | 2.04                     | 0.54              |
| 24:BA:873:G:O2'   | 37:BP:65:PHE:CZ   | 2.59                     | 0.54              |
| 24:BA:951:C:C2'   | 24:BA:952:G:H5'   | 2.37                     | 0.54              |
| 24:BA:1031:G:C5   | 24:BA:1032:A:N7   | 2.75                     | 0.54              |
| 24:BA:1047:G:N2   | 24:BA:1110:G:H2'  | 2.23                     | 0.54              |
| 24:BA:1050:A:H2'  | 24:BA:1051:G:C5'  | 2.38                     | 0.54              |
| 24:BA:1068:G:H1'  | 24:BA:1069:A:C5   | 2.42                     | 0.54              |
| 24:BA:1127:A:N1   | 24:BA:2518:A:N3   | 2.55                     | 0.54              |
| 24:BA:1269:A:C8   | 24:BA:1269:A:O5'  | 2.59                     | 0.54              |
| 24:BA:1343:G:O6   | 24:BA:1404:C:N3   | 2.40                     | 0.54              |
| 24:BA:1348:G:N1   | 24:BA:1599:C:C2   | 2.76                     | 0.54              |
| 24:BA:1406:U:C2'  | 24:BA:1407:C:O5'  | 2.56                     | 0.54              |
| 24:BA:1470:G:H2'  | 24:BA:1519:G:O6   | 2.07                     | 0.54              |
| 24:BA:1562:A:O2'  | 24:BA:1563:G:H5'  | 2.07                     | 0.54              |
| 24:BA:1566:A:C2'  | 24:BA:1567:A:H5'  | 2.35                     | 0.54              |
| 24:BA:1571:A:C8   | 24:BA:1571:A:OP2  | 2.60                     | 0.54              |
| 24:BA:1581:G:O2'  | 24:BA:1582:C:H5'  | 2.07                     | 0.54              |
| 24:BA:1683:C:H2'  | 24:BA:1684:C:C6   | 2.42                     | 0.54              |
| 24:BA:1689:A:C5   | 24:BA:1700:A:C5   | 2.96                     | 0.54              |
| 24:BA:1696:G:H2'  | 24:BA:1697:G:O4'  | 2.08                     | 0.54              |
| 24:BA:1787:A:H8   | 24:BA:1787:A:O5'  | 1.91                     | 0.54              |
| 24:BA:1799:G:H5'' | 27:BD:264:LYS:HZ3 | 1.73                     | 0.54              |
| 24:BA:1820:U:H2'  | 27:BD:202:LYS:NZ  | 2.23                     | 0.54              |
| 24:BA:1930:G:H2'  | 24:BA:1968:G:O6   | 2.06                     | 0.54              |
| 24:BA:1950:G:N7   | 24:BA:1951:U:H5   | 2.01                     | 0.54              |
| 24:BA:1988:C:C2'  | 24:BA:1989:G:O5'  | 2.56                     | 0.54              |
| 24:BA:1997:G:C2   | 24:BA:1998:G:C4   | 2.96                     | 0.54              |
| 24:BA:2056:G:C4   | 24:BA:2577:A:C2   | 2.95                     | 0.54              |
| 24:BA:2075:U:C1'  | 24:BA:2597:G:N2   | 2.71                     | 0.54              |
| 24:BA:2118:U:OP1  | 24:BA:2147:G:N1   | 2.40                     | 0.54              |
| 24:BA:2134:A:C2   | 24:BA:2135:A:N1   | 2.76                     | 0.54              |
| 24:BA:2311:A:H2   | 30:BG:45:GLU:CD   | 2.14                     | 0.54              |
| 24:BA:2472:G:H2'  | 24:BA:2475:C:H42  | 1.73                     | 0.54              |
| 24:BA:2558:C:H2'  | 24:BA:2558:C:O2   | 2.06                     | 0.54              |
| 24:BA:2671:A:OP2  | 28:BE:206:LYS:HD2 | 2.07                     | 0.54              |
| 24:BA:2720:U:C4   | 24:BA:2873:A:N6   | 2.73                     | 0.54              |
| 24:BA:2746:U:C4'  | 31:BH:139:GLN:HA  | 2.38                     | 0.54              |
| 24:BA:2786:U:H2'  | 24:BA:2787:C:H6   | 1.72                     | 0.54              |
| 24:BA:2857:G:H3'  | 24:BA:2857:G:C8   | 2.43                     | 0.54              |
| 24:BA:2882:A:C2   | 24:BA:2883:A:C8   | 2.95                     | 0.54              |
| 27:BD:50:THR:O    | 27:BD:51:VAL:HG22 | 2.07                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 27:BD:181:GLU:CD   | 27:BD:271:ILE:O   | 2.50                     | 0.54              |
| 27:BD:242:ARG:O    | 27:BD:244:ARG:HG2 | 2.08                     | 0.54              |
| 28:BE:8:LYS:CA     | 28:BE:8:LYS:CE    | 2.78                     | 0.54              |
| 28:BE:119:ARG:CZ   | 28:BE:155:LYS:CB  | 2.81                     | 0.54              |
| 29:BF:74:ARG:HH12  | 29:BF:76:GLY:N    | 2.06                     | 0.54              |
| 29:BF:107:LYS:O    | 29:BF:108:LYS:C   | 2.51                     | 0.54              |
| 32:BK:53:ALA:HB1   | 32:BK:57:ARG:NH2  | 2.22                     | 0.54              |
| 32:BK:86:THR:CG2   | 32:BK:87:LYS:H    | 2.16                     | 0.54              |
| 33:BL:8:VAL:HG11   | 33:BL:27:LEU:HD23 | 1.90                     | 0.54              |
| 33:BL:98:ARG:HD3   | 33:BL:139:VAL:CG1 | 2.37                     | 0.54              |
| 34:BM:51:PHE:CD1   | 34:BM:119:ARG:HB2 | 2.43                     | 0.54              |
| 35:BN:59:LYS:HE2   | 35:BN:59:LYS:CA   | 2.38                     | 0.54              |
| 36:BO:6:LEU:C      | 36:BO:7:ARG:HG3   | 2.32                     | 0.54              |
| 37:BP:42:ILE:CD1   | 37:BP:43:THR:O    | 2.55                     | 0.54              |
| 38:BQ:65:LEU:O     | 38:BQ:66:VAL:C    | 2.46                     | 0.54              |
| 39:BR:12:PHE:CD1   | 39:BR:12:PHE:C    | 2.85                     | 0.54              |
| 40:BS:2:ASN:O      | 40:BS:6:LEU:HD22  | 2.07                     | 0.54              |
| 40:BS:76:PHE:HZ    | 40:BS:78:LEU:HD12 | 1.70                     | 0.54              |
| 40:BS:112:ARG:O    | 40:BS:113:LYS:C   | 2.50                     | 0.54              |
| 41:BT:6:THR:O      | 41:BT:9:VAL:HB    | 2.07                     | 0.54              |
| 41:BT:76:TYR:HD2   | 41:BT:80:ILE:HD11 | 1.63                     | 0.54              |
| 41:BT:91:ASP:OD1   | 42:BU:10:LYS:HD3  | 2.07                     | 0.54              |
| 41:BT:94:ASN:ND2   | 42:BU:6:LYS:CE    | 2.61                     | 0.54              |
| 42:BU:50:PRO:CB    | 42:BU:53:GLU:OE1  | 2.55                     | 0.54              |
| 43:BV:8:ARG:O      | 43:BV:10:VAL:HG22 | 2.08                     | 0.54              |
| 43:BV:89:ALA:C     | 43:BV:91:GLY:N    | 2.63                     | 0.54              |
| 44:BW:12:VAL:C     | 44:BW:14:SER:N    | 2.65                     | 0.54              |
| 45:BX:53:PRO:C     | 45:BX:55:TYR:N    | 2.63                     | 0.54              |
| 46:BY:141:VAL:HG12 | 46:BY:142:SER:N   | 2.22                     | 0.54              |
| 47:BZ:21:LEU:CD1   | 47:BZ:41:ARG:HG2  | 2.35                     | 0.54              |
| 47:BZ:53:MET:HE3   | 47:BZ:58:THR:N    | 2.23                     | 0.54              |
| 49:B2:22:ALA:HB1   | 49:B2:46:ASN:CG   | 2.32                     | 0.54              |
| 49:B2:50:VAL:HG12  | 49:B2:51:ALA:O    | 2.08                     | 0.54              |
| 52:B5:9:LEU:O      | 52:B5:10:LEU:HD23 | 2.08                     | 0.54              |
| 54:B7:5:LYS:HA     | 54:B7:59:LYS:O    | 2.08                     | 0.54              |
| 54:B7:36:LYS:O     | 54:B7:37:SER:HB3  | 2.08                     | 0.54              |
| 54:B7:58:ILE:HA    | 54:B7:61:LEU:HD12 | 1.90                     | 0.54              |
| 1:AA:133:U:H4'     | 1:AA:134:A:OP1    | 2.08                     | 0.54              |
| 1:AA:278:G:C1'     | 1:AA:282:A:H1'    | 2.38                     | 0.54              |
| 1:AA:280:C:H1'     | 19:AT:38:ARG:CZ   | 2.38                     | 0.54              |
| 1:AA:290:C:C2'     | 1:AA:291:C:H5'    | 2.38                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:493:G:H2'     | 1:AA:494:U:C5     | 2.41                     | 0.54              |
| 1:AA:520:A:OP1     | 14:AO:52:LEU:HD21 | 2.07                     | 0.54              |
| 1:AA:522:C:H1'     | 1:AA:536:C:C5'    | 2.37                     | 0.54              |
| 1:AA:540:G:O6      | 1:AA:541:G:C6     | 2.60                     | 0.54              |
| 1:AA:541:G:H2'     | 1:AA:542:G:H8     | 1.72                     | 0.54              |
| 1:AA:735:C:H5'     | 20:AU:71:LYS:CD   | 2.38                     | 0.54              |
| 1:AA:920:U:H2'     | 1:AA:921:U:H6     | 1.72                     | 0.54              |
| 1:AA:946:A:H2'     | 1:AA:947:G:H8     | 1.63                     | 0.54              |
| 1:AA:968:A:H2'     | 1:AA:968:A:N3     | 2.22                     | 0.54              |
| 1:AA:974:A:OP2     | 16:AQ:31:ARG:CG   | 2.49                     | 0.54              |
| 1:AA:979:C:OP2     | 1:AA:980:C:C5     | 2.61                     | 0.54              |
| 1:AA:1036:G:N7     | 1:AA:1037:C:C5    | 2.76                     | 0.54              |
| 1:AA:1055:A:N1     | 1:AA:1056:U:H1'   | 2.23                     | 0.54              |
| 1:AA:1215:G:C2     | 1:AA:1216:G:N7    | 2.76                     | 0.54              |
| 1:AA:1227:A:P      | 15:AP:111:LYS:HE3 | 2.48                     | 0.54              |
| 1:AA:1283:G:H2'    | 1:AA:1284:C:H5'   | 1.90                     | 0.54              |
| 1:AA:1316:G:H5''   | 16:AQ:17:LYS:HZ1  | 1.73                     | 0.54              |
| 1:AA:1342:C:H2'    | 1:AA:1343:G:H8    | 1.72                     | 0.54              |
| 1:AA:1361:G:H3'    | 1:AA:1361:G:C8    | 2.43                     | 0.54              |
| 1:AA:1365:G:C6     | 1:AA:1366:C:C4    | 2.95                     | 0.54              |
| 3:AB:75:C:H42      | 24:BA:2553:G:H1   | 1.56                     | 0.54              |
| 4:AE:84:GLU:OE2    | 4:AE:84:GLU:HA    | 2.06                     | 0.54              |
| 5:AF:29:TYR:CD1    | 16:AQ:36:PHE:CZ   | 2.95                     | 0.54              |
| 5:AF:65:ALA:O      | 5:AF:66:VAL:HB    | 2.06                     | 0.54              |
| 5:AF:110:ASN:HD21  | 5:AF:140:ARG:CG   | 2.19                     | 0.54              |
| 6:AG:99:SER:O      | 6:AG:140:VAL:HG23 | 2.08                     | 0.54              |
| 8:AI:12:PRO:CB     | 8:AI:57:GLN:HE21  | 2.20                     | 0.54              |
| 8:AI:52:ILE:CG2    | 8:AI:53:ALA:N     | 2.71                     | 0.54              |
| 8:AI:76:ALA:C      | 8:AI:80:ARG:CZ    | 2.81                     | 0.54              |
| 8:AI:80:ARG:CB     | 8:AI:88:VAL:HG21  | 2.38                     | 0.54              |
| 8:AI:100:ASN:OD1   | 20:AU:26:LEU:O    | 2.25                     | 0.54              |
| 10:AK:6:ILE:HD12   | 10:AK:7:ALA:N     | 2.23                     | 0.54              |
| 10:AK:91:ARG:CG    | 19:AT:34:LYS:HB2  | 2.27                     | 0.54              |
| 10:AK:111:ILE:HG23 | 10:AK:119:LEU:O   | 2.07                     | 0.54              |
| 11:AL:70:LYS:HD2   | 11:AL:70:LYS:N    | 2.22                     | 0.54              |
| 13:AN:99:GLN:HA    | 13:AN:105:VAL:CG1 | 2.37                     | 0.54              |
| 14:AO:48:PRO:HG2   | 14:AO:49:ASN:N    | 2.21                     | 0.54              |
| 15:AP:27:LYS:HD2   | 15:AP:31:LYS:HZ2  | 1.68                     | 0.54              |
| 19:AT:5:VAL:HG13   | 19:AT:59:ILE:C    | 2.31                     | 0.54              |
| 19:AT:16:GLN:O     | 19:AT:17:LYS:CB   | 2.55                     | 0.54              |
| 19:AT:44:ALA:CA    | 19:AT:71:PHE:O    | 2.55                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 19:AT:51:TYR:CD2 | 19:AT:57:VAL:HG11 | 2.43                     | 0.54              |
| 23:AX:14:TRP:HZ3 | 23:AX:15:ARG:NE   | 2.02                     | 0.54              |
| 24:BA:195:A:H5'' | 24:BA:196:A:OP2   | 2.07                     | 0.54              |
| 24:BA:292:C:C2'  | 24:BA:293:U:H3    | 2.20                     | 0.54              |
| 24:BA:763:G:H5'  | 27:BD:211:ARG:CZ  | 2.38                     | 0.54              |
| 24:BA:764:A:C4   | 24:BA:781:A:N6    | 2.76                     | 0.54              |
| 24:BA:775:G:O4'  | 24:BA:777:A:C2    | 2.60                     | 0.54              |
| 24:BA:856:C:H4'  | 47:BZ:69:PHE:HB3  | 1.89                     | 0.54              |
| 24:BA:859:G:O2'  | 24:BA:860:U:H5''  | 2.07                     | 0.54              |
| 24:BA:864:G:N2   | 24:BA:913:U:H1'   | 2.22                     | 0.54              |
| 24:BA:977:G:H4'  | 24:BA:1155:A:H5'' | 1.90                     | 0.54              |
| 24:BA:1043:C:O2' | 24:BA:1048:A:H1'  | 2.08                     | 0.54              |
| 24:BA:1100:C:C6  | 24:BA:1100:C:O5'  | 2.61                     | 0.54              |
| 24:BA:1174:A:H2  | 24:BA:1176:G:O5'  | 1.91                     | 0.54              |
| 24:BA:1195:G:O2' | 24:BA:1226:G:N2   | 2.39                     | 0.54              |
| 24:BA:1267:U:O2' | 24:BA:1268:A:OP1  | 2.19                     | 0.54              |
| 24:BA:1519:G:C2' | 24:BA:1520:U:O4'  | 2.55                     | 0.54              |
| 24:BA:1534:G:N2  | 24:BA:1537:C:C5   | 2.61                     | 0.54              |
| 24:BA:1621:U:H3' | 24:BA:1621:U:C6   | 2.43                     | 0.54              |
| 24:BA:1663:C:O2' | 24:BA:1664:A:O4'  | 2.24                     | 0.54              |
| 24:BA:1710:C:O2' | 24:BA:2858:C:N4   | 2.41                     | 0.54              |
| 24:BA:1764:G:C6  | 24:BA:1989:G:C2   | 2.96                     | 0.54              |
| 24:BA:1783:A:OP2 | 24:BA:1783:A:C8   | 2.59                     | 0.54              |
| 24:BA:1806:C:C2  | 24:BA:1807:G:C8   | 2.96                     | 0.54              |
| 24:BA:1842:G:C4  | 24:BA:1843:C:C5   | 2.96                     | 0.54              |
| 24:BA:1951:U:C2  | 24:BA:1953:A:H5'  | 2.43                     | 0.54              |
| 24:BA:2092:U:H4' | 24:BA:2225:A:C2   | 2.42                     | 0.54              |
| 24:BA:2160:G:O2' | 24:BA:2161:C:O4'  | 2.26                     | 0.54              |
| 24:BA:2227:A:C6  | 24:BA:2228:G:N7   | 2.76                     | 0.54              |
| 24:BA:2266:A:H5' | 24:BA:2267:A:C4   | 2.42                     | 0.54              |
| 24:BA:2285:C:C2  | 24:BA:2384:G:N2   | 2.75                     | 0.54              |
| 24:BA:2436:G:O2' | 24:BA:2437:U:P    | 2.66                     | 0.54              |
| 24:BA:2462:U:C4  | 24:BA:2463:C:N4   | 2.76                     | 0.54              |
| 24:BA:2510:C:N4  | 24:BA:2511:U:C4   | 2.76                     | 0.54              |
| 24:BA:2519:U:C1' | 24:BA:2542:A:N1   | 2.71                     | 0.54              |
| 24:BA:2574:G:H2' | 24:BA:2575:C:C6   | 2.43                     | 0.54              |
| 24:BA:2677:G:C2' | 24:BA:2678:C:H5'  | 2.38                     | 0.54              |
| 24:BA:2749:A:OP2 | 24:BA:2751:G:OP2  | 2.26                     | 0.54              |
| 24:BA:2776:A:C4' | 24:BA:2777:G:H5'' | 2.37                     | 0.54              |
| 24:BA:2808:U:O2' | 24:BA:2810:A:OP1  | 2.26                     | 0.54              |
| 24:BA:2834:G:C4  | 24:BA:2879:C:C4   | 2.96                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2856:C:H2'  | 24:BA:2857:G:O5'   | 2.08                     | 0.54              |
| 25:BB:37:C:O2     | 39:BR:95:HIS:CD2   | 2.61                     | 0.54              |
| 26:BC:103:ILE:HA  | 26:BC:107:TRP:O    | 2.07                     | 0.54              |
| 27:BD:90:ALA:C    | 27:BD:91:ARG:NH1   | 2.66                     | 0.54              |
| 27:BD:132:PRO:HA  | 27:BD:190:TYR:CD1  | 2.42                     | 0.54              |
| 28:BE:27:LEU:HD13 | 28:BE:76:ARG:NH1   | 2.23                     | 0.54              |
| 28:BE:51:PHE:HE1  | 28:BE:76:ARG:H     | 1.55                     | 0.54              |
| 28:BE:109:LYS:CG  | 28:BE:191:PRO:HG3  | 2.25                     | 0.54              |
| 29:BF:3:GLU:OE1   | 29:BF:21:ALA:HA    | 2.08                     | 0.54              |
| 30:BG:40:ASN:O    | 30:BG:156:ASP:O    | 2.25                     | 0.54              |
| 30:BG:55:LYS:CE   | 30:BG:151:ALA:HB1  | 2.36                     | 0.54              |
| 30:BG:82:LEU:O    | 30:BG:83:ARG:HG3   | 2.07                     | 0.54              |
| 30:BG:130:ASN:O   | 30:BG:161:THR:HG23 | 2.08                     | 0.54              |
| 30:BG:153:ARG:O   | 30:BG:155:MET:N    | 2.41                     | 0.54              |
| 31:BH:35:VAL:CB   | 31:BH:72:ILE:HG23  | 2.37                     | 0.54              |
| 31:BH:54:ARG:C    | 31:BH:56:SER:H     | 2.15                     | 0.54              |
| 32:BK:3:VAL:O     | 32:BK:18:VAL:HA    | 2.08                     | 0.54              |
| 32:BK:52:ARG:O    | 32:BK:55:ALA:HB3   | 2.07                     | 0.54              |
| 33:BL:18:THR:N    | 33:BL:38:VAL:CG2   | 2.70                     | 0.54              |
| 33:BL:20:ALA:O    | 33:BL:25:PRO:HD3   | 2.07                     | 0.54              |
| 34:BM:99:LEU:HD12 | 34:BM:100:GLU:CA   | 2.37                     | 0.54              |
| 35:BN:20:MET:O    | 35:BN:41:ALA:HB1   | 2.07                     | 0.54              |
| 35:BN:64:ARG:NE   | 35:BN:67:LYS:N     | 2.55                     | 0.54              |
| 37:BP:45:GLN:C    | 37:BP:47:ILE:N     | 2.65                     | 0.54              |
| 37:BP:56:ARG:HD2  | 37:BP:56:ARG:C     | 2.33                     | 0.54              |
| 38:BQ:20:LEU:HD11 | 38:BQ:24:GLN:CD    | 2.31                     | 0.54              |
| 38:BQ:87:TYR:O    | 38:BQ:89:ASP:N     | 2.41                     | 0.54              |
| 39:BR:49:VAL:C    | 39:BR:76:LYS:HZ1   | 2.15                     | 0.54              |
| 40:BS:57:PHE:O    | 40:BS:58:ASN:HB3   | 2.08                     | 0.54              |
| 41:BT:83:LEU:O    | 41:BT:90:VAL:CG2   | 2.55                     | 0.54              |
| 41:BT:88:ILE:HB   | 42:BU:52:VAL:CA    | 2.38                     | 0.54              |
| 41:BT:92:ARG:C    | 41:BT:93:LYS:HZ3   | 2.16                     | 0.54              |
| 42:BU:21:ARG:N    | 42:BU:93:GLU:OE2   | 2.40                     | 0.54              |
| 43:BV:24:ILE:O    | 43:BV:25:ARG:O     | 2.26                     | 0.54              |
| 43:BV:38:TYR:CD1  | 43:BV:38:TYR:N     | 2.75                     | 0.54              |
| 45:BX:35:TYR:OH   | 45:BX:67:LEU:HB2   | 2.07                     | 0.54              |
| 45:BX:46:LYS:HZ2  | 45:BX:46:LYS:HB3   | 1.71                     | 0.54              |
| 45:BX:50:ARG:HA   | 45:BX:54:LYS:CA    | 2.32                     | 0.54              |
| 48:B1:56:LEU:N    | 48:B1:56:LEU:CD1   | 2.70                     | 0.54              |
| 50:B3:43:TYR:O    | 50:B3:44:THR:OG1   | 2.21                     | 0.54              |
| 51:B4:60:VAL:O    | 51:B4:60:VAL:HG22  | 2.08                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 54:B7:25:MET:HE3  | 54:B7:44:LYS:CD   | 2.38                     | 0.54              |
| 1:AA:27:G:C2      | 1:AA:557:G:N3     | 2.75                     | 0.54              |
| 1:AA:110:C:H2'    | 1:AA:111:G:C5'    | 2.37                     | 0.54              |
| 1:AA:321:A:H2'    | 1:AA:322:C:C6     | 2.43                     | 0.54              |
| 1:AA:389:A:C4     | 1:AA:390:C:O4'    | 2.61                     | 0.54              |
| 1:AA:450:G:H5''   | 1:AA:451:A:H3'    | 1.90                     | 0.54              |
| 1:AA:451:A:OP1    | 1:AA:481:G:N2     | 2.40                     | 0.54              |
| 1:AA:474:G:H5'    | 18:AS:81:ARG:CD   | 2.36                     | 0.54              |
| 1:AA:486:U:N3     | 1:AA:487:A:C8     | 2.76                     | 0.54              |
| 1:AA:600:C:H5'    | 10:AK:129:VAL:CA  | 2.38                     | 0.54              |
| 1:AA:738:C:N4     | 1:AA:739:C:N4     | 2.56                     | 0.54              |
| 1:AA:769:G:C5'    | 1:AA:1513:A:H4'   | 2.37                     | 0.54              |
| 1:AA:789:U:H2'    | 1:AA:790:A:H3'    | 1.90                     | 0.54              |
| 1:AA:1068:G:H2'   | 1:AA:1069:C:C6    | 2.41                     | 0.54              |
| 1:AA:1263:C:C2'   | 1:AA:1264:C:H6    | 2.16                     | 0.54              |
| 1:AA:1277:C:O2'   | 1:AA:1279:A:C8    | 2.60                     | 0.54              |
| 1:AA:1316:G:C4'   | 16:AQ:17:LYS:HD2  | 2.36                     | 0.54              |
| 1:AA:1345:U:N3    | 1:AA:1377:A:C6    | 2.75                     | 0.54              |
| 1:AA:1392:G:H2'   | 1:AA:1393:U:H6    | 1.73                     | 0.54              |
| 1:AA:1446:A:O2'   | 1:AA:1447:G:OP1   | 2.25                     | 0.54              |
| 1:AA:1465:C:N4    | 1:AA:1466:C:C4    | 2.75                     | 0.54              |
| 3:AD:26:A:H2'     | 3:AD:26:A:N3      | 2.23                     | 0.54              |
| 3:AB:47:U:N3      | 3:AB:49:C:H4'     | 2.23                     | 0.54              |
| 3:AB:48:C:N3      | 3:AB:59:U:C6      | 2.75                     | 0.54              |
| 4:AE:221:LEU:O    | 4:AE:221:LEU:HD22 | 2.07                     | 0.54              |
| 6:AG:32:ALA:C     | 6:AG:34:GLU:N     | 2.63                     | 0.54              |
| 6:AG:38:TYR:CE1   | 6:AG:45:GLN:NE2   | 2.70                     | 0.54              |
| 7:AH:35:GLY:HA3   | 7:AH:41:VAL:HG12  | 1.89                     | 0.54              |
| 7:AH:80:ILE:HA    | 7:AH:81:GLU:OE2   | 2.07                     | 0.54              |
| 9:AJ:5:ARG:NH1    | 9:AJ:5:ARG:O      | 2.41                     | 0.54              |
| 9:AJ:107:ALA:CB   | 9:AJ:123:GLU:OE1  | 2.56                     | 0.54              |
| 10:AK:18:ARG:HH12 | 10:AK:78:GLN:CD   | 2.16                     | 0.54              |
| 10:AK:70:GLN:HE21 | 10:AK:70:GLN:HA   | 1.72                     | 0.54              |
| 11:AL:93:ARG:HH22 | 11:AL:97:LYS:HE2  | 1.73                     | 0.54              |
| 14:AO:7:ILE:HG22  | 14:AO:8:ASN:N     | 2.23                     | 0.54              |
| 14:AO:18:VAL:O    | 14:AO:19:ARG:CB   | 2.55                     | 0.54              |
| 14:AO:106:ASP:O   | 14:AO:107:ALA:C   | 2.51                     | 0.54              |
| 15:AP:20:THR:HG23 | 15:AP:25:ILE:O    | 2.07                     | 0.54              |
| 17:AR:29:VAL:HG12 | 17:AR:85:LEU:HD21 | 1.89                     | 0.54              |
| 17:AR:79:ARG:HH11 | 17:AR:79:ARG:HB3  | 1.73                     | 0.54              |
| 18:AS:20:VAL:HG12 | 18:AS:21:VAL:N    | 2.21                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 18:AS:61:SER:OG    | 18:AS:62:VAL:N    | 2.39                     | 0.54              |
| 20:AU:44:LEU:O     | 20:AU:45:SER:OG   | 2.21                     | 0.54              |
| 21:AV:16:LEU:HD12  | 21:AV:44:MET:CE   | 2.38                     | 0.54              |
| 22:AW:29:LYS:O     | 22:AW:30:LYS:C    | 2.50                     | 0.54              |
| 24:BA:14:A:N1      | 24:BA:526:A:C6    | 2.76                     | 0.54              |
| 24:BA:55:G:H2'     | 24:BA:56:A:H8     | 1.72                     | 0.54              |
| 24:BA:149:A:C8     | 24:BA:149:A:H3'   | 2.43                     | 0.54              |
| 24:BA:237:C:C2     | 24:BA:238:C:C5    | 2.96                     | 0.54              |
| 24:BA:248:G:OP1    | 50:B3:28:LYS:CE   | 2.55                     | 0.54              |
| 24:BA:270(H):C:H2' | 24:BA:270(I):G:C8 | 2.40                     | 0.54              |
| 24:BA:295:G:N2     | 24:BA:344:G:H1'   | 2.23                     | 0.54              |
| 24:BA:310:A:OP1    | 45:BX:16:ALA:HB1  | 2.08                     | 0.54              |
| 24:BA:318:C:O2'    | 24:BA:319:C:H5'   | 2.08                     | 0.54              |
| 24:BA:462:C:C4     | 24:BA:468:G:C2    | 2.96                     | 0.54              |
| 24:BA:544:C:O2'    | 24:BA:545:G:H5'   | 2.08                     | 0.54              |
| 24:BA:563:G:N2     | 41:BT:34:LYS:HZ3  | 2.04                     | 0.54              |
| 24:BA:660:G:H5''   | 29:BF:99:TYR:CE1  | 2.43                     | 0.54              |
| 24:BA:666:G:H5'    | 36:BO:45:LEU:HD12 | 1.89                     | 0.54              |
| 24:BA:816:C:H5'    | 24:BA:816:C:C6    | 2.35                     | 0.54              |
| 24:BA:846:C:H4'    | 24:BA:847:U:O5'   | 2.07                     | 0.54              |
| 24:BA:862:G:N3     | 24:BA:863:A:H1'   | 2.23                     | 0.54              |
| 24:BA:959:A:C4     | 24:BA:960:A:N7    | 2.76                     | 0.54              |
| 24:BA:1031:G:N1    | 24:BA:1032:A:C6   | 2.75                     | 0.54              |
| 24:BA:1093:G:N2    | 24:BA:1098:A:H62  | 2.06                     | 0.54              |
| 24:BA:1213:A:C6    | 24:BA:1237:A:H1'  | 2.42                     | 0.54              |
| 24:BA:1401:G:C6    | 24:BA:1402:C:C4   | 2.95                     | 0.54              |
| 24:BA:1480:G:C6    | 24:BA:1514:U:O4   | 2.60                     | 0.54              |
| 24:BA:1509:C:OP2   | 24:BA:1509:C:H3'  | 2.07                     | 0.54              |
| 24:BA:1613:G:OP1   | 53:B6:5:TRP:CD1   | 2.61                     | 0.54              |
| 24:BA:1637:A:C6    | 24:BA:1638:C:N4   | 2.76                     | 0.54              |
| 24:BA:1653:G:O6    | 38:BQ:11:ASN:HA   | 2.08                     | 0.54              |
| 24:BA:1655:A:N3    | 24:BA:1656:C:H1'  | 2.23                     | 0.54              |
| 24:BA:1670:C:O5'   | 24:BA:1671:U:C5   | 2.61                     | 0.54              |
| 24:BA:1819:A:O2'   | 24:BA:1820:U:C5'  | 2.55                     | 0.54              |
| 24:BA:1909:C:C4    | 24:BA:1922:G:N1   | 2.76                     | 0.54              |
| 24:BA:1996:C:H2'   | 24:BA:1997:G:H5'  | 1.84                     | 0.54              |
| 24:BA:2323:G:C6    | 24:BA:2324:C:N4   | 2.76                     | 0.54              |
| 24:BA:2375:G:H1'   | 24:BA:2377:A:N7   | 2.23                     | 0.54              |
| 24:BA:2394:C:N4    | 24:BA:2422:A:C6   | 2.76                     | 0.54              |
| 24:BA:2523:G:C1'   | 24:BA:2765:A:N7   | 2.71                     | 0.54              |
| 24:BA:2544:G:H4'   | 24:BA:2645:G:OP1  | 2.07                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2644:G:H1    | 24:BA:2645:G:N2    | 2.04                     | 0.54              |
| 24:BA:2834:G:H3'   | 24:BA:2834:G:C8    | 2.42                     | 0.54              |
| 24:BA:2848:G:N9    | 40:BS:99:LEU:HD21  | 2.23                     | 0.54              |
| 25:BB:7:G:C4'      | 39:BR:29:PHE:CE2   | 2.84                     | 0.54              |
| 25:BB:32:C:C2'     | 25:BB:33:G:C8      | 2.87                     | 0.54              |
| 25:BB:80:U:O2      | 25:BB:81:G:N7      | 2.41                     | 0.54              |
| 25:BB:85:G:N3      | 25:BB:86:G:C8      | 2.76                     | 0.54              |
| 26:BC:29:VAL:HG21  | 26:BC:41:VAL:CG1   | 2.37                     | 0.54              |
| 27:BD:13:ARG:HD3   | 27:BD:22:SER:HB2   | 1.90                     | 0.54              |
| 27:BD:117:VAL:CG1  | 27:BD:128:GLY:C    | 2.79                     | 0.54              |
| 28:BE:91:VAL:HG13  | 28:BE:92:THR:H     | 1.73                     | 0.54              |
| 28:BE:121:ASN:O    | 28:BE:122:PHE:O    | 2.25                     | 0.54              |
| 28:BE:195:LEU:HD13 | 28:BE:195:LEU:C    | 2.30                     | 0.54              |
| 29:BF:97:TYR:C     | 29:BF:98:SER:O     | 2.44                     | 0.54              |
| 31:BH:35:VAL:HB    | 31:BH:72:ILE:HG12  | 1.90                     | 0.54              |
| 31:BH:74:ASN:CG    | 31:BH:75:ALA:N     | 2.66                     | 0.54              |
| 31:BH:87:LEU:N     | 31:BH:132:ARG:CB   | 2.71                     | 0.54              |
| 31:BH:98:LEU:HD21  | 31:BH:123:PHE:HD2  | 1.73                     | 0.54              |
| 33:BL:138:VAL:O    | 33:BL:138:VAL:HG23 | 2.07                     | 0.54              |
| 35:BN:19:ILE:HB    | 35:BN:42:SER:O     | 2.07                     | 0.54              |
| 36:BO:15:ARG:HG3   | 36:BO:16:ARG:N     | 2.21                     | 0.54              |
| 36:BO:77:ARG:HA    | 36:BO:115:LEU:HB2  | 1.89                     | 0.54              |
| 37:BP:72:LYS:HE2   | 37:BP:96:VAL:HG21  | 1.89                     | 0.54              |
| 37:BP:106:VAL:O    | 37:BP:107:ALA:CB   | 2.56                     | 0.54              |
| 38:BQ:5:LYS:C      | 38:BQ:5:LYS:NZ     | 2.65                     | 0.54              |
| 42:BU:15:GLU:CD    | 42:BU:16:PRO:CD    | 2.79                     | 0.54              |
| 43:BV:8:ARG:CZ     | 43:BV:102:HIS:ND1  | 2.71                     | 0.54              |
| 43:BV:60:ASN:ND2   | 43:BV:61:ASN:ND2   | 2.55                     | 0.54              |
| 43:BV:74:ALA:CB    | 43:BV:105:VAL:HA   | 2.38                     | 0.54              |
| 44:BW:34:ALA:HB1   | 44:BW:38:GLU:HB3   | 1.90                     | 0.54              |
| 44:BW:89:ILE:HG22  | 44:BW:89:ILE:O     | 2.08                     | 0.54              |
| 46:BY:18:LEU:HB3   | 46:BY:23:LYS:C     | 2.32                     | 0.54              |
| 47:BZ:50:ASN:HB3   | 47:BZ:63:VAL:CG1   | 2.37                     | 0.54              |
| 48:B1:63:ARG:HB3   | 48:B1:63:ARG:NH2   | 2.22                     | 0.54              |
| 50:B3:39:CYS:C     | 50:B3:40:HIS:CG    | 2.85                     | 0.54              |
| 52:B5:12:GLU:CG    | 52:B5:53:LYS:O     | 2.56                     | 0.54              |
| 1:AA:145:G:N1      | 1:AA:178:C:C4      | 2.76                     | 0.54              |
| 1:AA:198:G:H2'     | 1:AA:199:G:O5'     | 2.08                     | 0.54              |
| 1:AA:199:G:H2'     | 1:AA:200:G:H8      | 1.73                     | 0.54              |
| 1:AA:363:A:C4      | 14:AO:31:PRO:HG2   | 2.42                     | 0.54              |
| 1:AA:475:G:C2'     | 1:AA:476:G:C8      | 2.79                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:696:A:C6     | 1:AA:697:U:H1'    | 2.43                     | 0.54              |
| 1:AA:752:G:OP2    | 1:AA:752:G:H8     | 1.90                     | 0.54              |
| 1:AA:755:G:OP2    | 17:AR:65:ARG:CD   | 2.56                     | 0.54              |
| 1:AA:799:G:N2     | 1:AA:800:G:H1'    | 2.23                     | 0.54              |
| 1:AA:876:G:O2'    | 10:AK:11:THR:CG2  | 2.56                     | 0.54              |
| 1:AA:950:U:H1'    | 1:AA:971:G:N3     | 2.23                     | 0.54              |
| 1:AA:1056:U:O2    | 1:AA:1056:U:H2'   | 2.07                     | 0.54              |
| 1:AA:1059:C:O2'   | 12:AM:53:PRO:CD   | 2.56                     | 0.54              |
| 1:AA:1126:U:H2'   | 1:AA:1127:G:O4'   | 2.08                     | 0.54              |
| 1:AA:1347:G:H2'   | 11:AL:107:ARG:O   | 2.07                     | 0.54              |
| 1:AA:1411:C:N3    | 1:AA:1412:C:C5    | 2.75                     | 0.54              |
| 3:AC:19:G:C2      | 3:AC:57:G:N3      | 2.76                     | 0.54              |
| 3:AC:59:U:O2      | 3:AC:59:U:C2'     | 2.54                     | 0.54              |
| 3:AB:37:A:C2'     | 3:AB:38:A:H5'     | 2.38                     | 0.54              |
| 4:AE:163:PHE:CZ   | 4:AE:186:ALA:C    | 2.86                     | 0.54              |
| 5:AF:17:ASP:O     | 5:AF:18:TRP:C     | 2.51                     | 0.54              |
| 6:AG:31:CYS:O     | 6:AG:33:MET:CG    | 2.53                     | 0.54              |
| 7:AH:104:ALA:N    | 7:AH:107:ARG:HH12 | 2.06                     | 0.54              |
| 8:AI:19:LEU:HG    | 8:AI:23:LYS:HD3   | 1.89                     | 0.54              |
| 10:AK:65:TYR:HA   | 10:AK:79:VAL:HG23 | 1.88                     | 0.54              |
| 10:AK:96:GLY:O    | 10:AK:97:VAL:C    | 2.51                     | 0.54              |
| 12:AM:48:THR:HG23 | 12:AM:61:GLU:C    | 2.33                     | 0.54              |
| 13:AN:57:THR:C    | 13:AN:59:TYR:N    | 2.60                     | 0.54              |
| 13:AN:63:LEU:C    | 13:AN:63:LEU:CD2  | 2.81                     | 0.54              |
| 13:AN:101:SER:OG  | 13:AN:103:LEU:HG  | 2.08                     | 0.54              |
| 14:AO:34:ARG:HA   | 14:AO:84:LEU:HB2  | 1.89                     | 0.54              |
| 14:AO:62:SER:OG   | 14:AO:64:TYR:CG   | 2.57                     | 0.54              |
| 15:AP:13:LYS:O    | 15:AP:17:VAL:HB   | 2.08                     | 0.54              |
| 19:AT:81:ARG:HG3  | 19:AT:84:LEU:CG   | 2.38                     | 0.54              |
| 20:AU:62:GLU:O    | 20:AU:66:LEU:CG   | 2.42                     | 0.54              |
| 20:AU:75:ILE:HG22 | 20:AU:76:LEU:HD13 | 1.89                     | 0.54              |
| 20:AU:81:PHE:O    | 20:AU:82:THR:HG22 | 2.07                     | 0.54              |
| 21:AV:27:GLU:HG2  | 21:AV:29:ARG:N    | 2.11                     | 0.54              |
| 24:BA:37:C:O2'    | 29:BF:50:SER:OG   | 2.21                     | 0.54              |
| 24:BA:247:G:H1    | 54:B7:8:LYS:CD    | 2.21                     | 0.54              |
| 24:BA:269:U:N3    | 24:BA:424:G:C6    | 2.76                     | 0.54              |
| 24:BA:334:C:OP2   | 24:BA:335:C:H5    | 1.90                     | 0.54              |
| 24:BA:412:A:H2'   | 24:BA:413:C:C5'   | 2.38                     | 0.54              |
| 24:BA:522:G:H2'   | 24:BA:523:C:C6    | 2.43                     | 0.54              |
| 24:BA:676:A:O4'   | 24:BA:2443:C:O4'  | 2.26                     | 0.54              |
| 24:BA:733:G:O6    | 24:BA:761:A:C8    | 2.60                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:735:A:H2'    | 24:BA:736:C:C5'    | 2.37                     | 0.54              |
| 24:BA:832:G:H8     | 24:BA:944:G:H21    | 1.56                     | 0.54              |
| 24:BA:832:G:C2'    | 24:BA:833:U:C5     | 2.89                     | 0.54              |
| 24:BA:840:C:H5'    | 24:BA:1192:G:H1'   | 1.89                     | 0.54              |
| 24:BA:931:G:H21    | 49:B2:24:LYS:CB    | 2.15                     | 0.54              |
| 24:BA:987:G:C6     | 24:BA:988:A:C5     | 2.96                     | 0.54              |
| 24:BA:1027:A:C6    | 24:BA:1126:A:C4    | 2.96                     | 0.54              |
| 24:BA:1069:A:C5'   | 24:BA:1070:A:O5'   | 2.56                     | 0.54              |
| 24:BA:1137:G:C8    | 24:BA:1138:G:C8    | 2.95                     | 0.54              |
| 24:BA:1289:C:C2    | 24:BA:1290:C:C5    | 2.96                     | 0.54              |
| 24:BA:1364:G:O6    | 50:B3:2:LYS:HG3    | 2.08                     | 0.54              |
| 24:BA:1409:C:H2'   | 24:BA:1410:G:O4'   | 2.07                     | 0.54              |
| 24:BA:1432:C:O2'   | 24:BA:1433:U:H5'   | 2.08                     | 0.54              |
| 24:BA:1437:C:O3'   | 24:BA:1517:G:H5'   | 2.08                     | 0.54              |
| 24:BA:1477:A:H2'   | 24:BA:1478:G:H1'   | 1.90                     | 0.54              |
| 24:BA:1591:G:H2'   | 24:BA:1592:C:H6    | 1.73                     | 0.54              |
| 24:BA:1598:C:H5''  | 44:BW:36:LYS:CB    | 2.19                     | 0.54              |
| 24:BA:1632:A:H8    | 24:BA:1632:A:O5'   | 1.90                     | 0.54              |
| 24:BA:1669:A:C5'   | 24:BA:2550:G:OP1   | 2.46                     | 0.54              |
| 24:BA:1688:U:H3    | 24:BA:1700:A:H5''  | 1.73                     | 0.54              |
| 24:BA:1692:U:H1'   | 24:BA:1696:G:H21   | 1.71                     | 0.54              |
| 24:BA:1835:G:C4    | 24:BA:1931:U:N3    | 2.74                     | 0.54              |
| 24:BA:1857:G:H2'   | 24:BA:1858:G:C5    | 2.42                     | 0.54              |
| 24:BA:1952:A:C5    | 24:BA:1953:A:N1    | 2.76                     | 0.54              |
| 24:BA:2004:G:C5    | 24:BA:2005:A:C5    | 2.96                     | 0.54              |
| 24:BA:2118:U:OP1   | 24:BA:2147:G:C6    | 2.60                     | 0.54              |
| 24:BA:2286:A:H3'   | 24:BA:2286:A:H8    | 1.71                     | 0.54              |
| 24:BA:2449:U:OP1   | 24:BA:2449:U:O4'   | 2.26                     | 0.54              |
| 24:BA:2638:G:N7    | 24:BA:2775:A:N1    | 2.55                     | 0.54              |
| 24:BA:2784:C:H1'   | 28:BE:41:LYS:HZ3   | 1.73                     | 0.54              |
| 25:BB:59:A:C5      | 25:BB:60:C:C6      | 2.96                     | 0.54              |
| 25:BB:61:G:C2      | 25:BB:62:C:N3      | 2.75                     | 0.54              |
| 25:BB:63:G:H2'     | 25:BB:64:C:H6      | 1.73                     | 0.54              |
| 26:BC:131:LEU:HD13 | 26:BC:136:LEU:O    | 2.07                     | 0.54              |
| 27:BD:45:ASN:C     | 27:BD:46:GLN:CG    | 2.81                     | 0.54              |
| 27:BD:53:PHE:CD2   | 27:BD:221:VAL:HG13 | 2.42                     | 0.54              |
| 27:BD:142:VAL:HB   | 27:BD:192:THR:O    | 2.08                     | 0.54              |
| 28:BE:67:PHE:O     | 28:BE:68:ALA:C     | 2.51                     | 0.54              |
| 28:BE:103:ASP:C    | 28:BE:104:VAL:CG2  | 2.81                     | 0.54              |
| 31:BH:8:PRO:CB     | 31:BH:51:ARG:NH1   | 2.70                     | 0.54              |
| 31:BH:104:GLU:C    | 31:BH:105:LEU:HG   | 2.33                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 31:BH:149:ARG:CZ   | 31:BH:164:TYR:CD1  | 2.82                     | 0.54              |
| 32:BK:5:LEU:HD21   | 32:BK:18:VAL:CA    | 2.38                     | 0.54              |
| 32:BK:69:LYS:O     | 32:BK:73:GLU:CG    | 2.56                     | 0.54              |
| 32:BK:132:PRO:CD   | 32:BK:138:ILE:N    | 2.71                     | 0.54              |
| 33:BL:30:HIS:ND1   | 33:BL:30:HIS:O     | 2.40                     | 0.54              |
| 33:BL:71:THR:HB    | 33:BL:111:LYS:HE2  | 1.89                     | 0.54              |
| 33:BL:89:HIS:O     | 33:BL:90:LYS:CG    | 2.55                     | 0.54              |
| 34:BM:3:THR:CG2    | 34:BM:4:TYR:H      | 2.07                     | 0.54              |
| 34:BM:127:ASP:O    | 34:BM:128:HIS:C    | 2.50                     | 0.54              |
| 36:BO:48:PRO:O     | 36:BO:51:PHE:HB2   | 2.08                     | 0.54              |
| 36:BO:114:ILE:HG12 | 36:BO:130:PHE:CA   | 2.35                     | 0.54              |
| 37:BP:27:VAL:CG1   | 37:BP:102:VAL:HG21 | 2.38                     | 0.54              |
| 37:BP:45:GLN:C     | 37:BP:48:GLU:HG2   | 2.32                     | 0.54              |
| 37:BP:67:ARG:HH21  | 37:BP:103:MET:C    | 2.15                     | 0.54              |
| 39:BR:77:ALA:HA    | 39:BR:80:LEU:HB2   | 1.90                     | 0.54              |
| 40:BS:31:SER:C     | 40:BS:32:TYR:CG    | 2.81                     | 0.54              |
| 40:BS:48:ILE:HG12  | 40:BS:49:VAL:N     | 2.22                     | 0.54              |
| 41:BT:27:LEU:C     | 41:BT:29:SER:N     | 2.62                     | 0.54              |
| 42:BU:12:TYR:CD1   | 42:BU:14:VAL:HG23  | 2.43                     | 0.54              |
| 43:BV:5:ALA:O      | 43:BV:105:VAL:HG13 | 2.08                     | 0.54              |
| 43:BV:58:ALA:HA    | 43:BV:62:HIS:HB3   | 1.90                     | 0.54              |
| 46:BY:25:PRO:CG    | 46:BY:84:GLU:O     | 2.56                     | 0.54              |
| 46:BY:37:VAL:C     | 46:BY:38:TYR:HD2   | 2.16                     | 0.54              |
| 46:BY:157:LEU:HD22 | 46:BY:161:VAL:HG22 | 1.90                     | 0.54              |
| 1:AA:50:A:O2'      | 1:AA:52:G:C5       | 2.61                     | 0.54              |
| 1:AA:51:A:C2'      | 1:AA:52:G:OP2      | 2.56                     | 0.54              |
| 1:AA:167:G:H2'     | 1:AA:168:G:C8      | 2.43                     | 0.54              |
| 1:AA:620:C:C1'     | 6:AG:135:LEU:HD13  | 2.38                     | 0.54              |
| 1:AA:703:G:O5'     | 1:AA:703:G:C8      | 2.61                     | 0.54              |
| 1:AA:864:A:C6      | 1:AA:865:A:N1      | 2.76                     | 0.54              |
| 1:AA:927:G:C5'     | 1:AA:1503:A:H62    | 2.20                     | 0.54              |
| 1:AA:950:U:C2'     | 1:AA:951:G:H5'     | 2.38                     | 0.54              |
| 1:AA:965:A:C8      | 1:AA:969:A:N3      | 2.76                     | 0.54              |
| 1:AA:1085:U:H5''   | 1:AA:1086:U:C5     | 2.43                     | 0.54              |
| 1:AA:1172:C:H2'    | 1:AA:1173:G:O4'    | 2.08                     | 0.54              |
| 1:AA:1205:U:C4'    | 5:AF:195:VAL:HG13  | 2.26                     | 0.54              |
| 1:AA:1339:A:O5'    | 1:AA:1339:A:H8     | 1.91                     | 0.54              |
| 1:AA:1373:G:H4'    | 9:AJ:34:GLY:O      | 2.08                     | 0.54              |
| 1:AA:1405:G:C4     | 1:AA:1406:U:C5     | 2.96                     | 0.54              |
| 1:AA:1431:C:N3     | 1:AA:1469:G:N1     | 2.55                     | 0.54              |
| 3:AC:21:A:C2'      | 3:AC:22:G:O5'      | 2.55                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 3:AC:70:G:C4       | 3:AC:71:G:C8       | 2.95                     | 0.54              |
| 3:AD:27:G:H2'      | 3:AD:28:G:H8       | 1.73                     | 0.54              |
| 3:AD:40:C:C3'      | 3:AD:41:C:C5'      | 2.83                     | 0.54              |
| 3:AD:48:C:H6       | 3:AD:48:C:OP1      | 1.91                     | 0.54              |
| 3:AB:21:A:C2       | 3:AB:48:C:H1'      | 2.43                     | 0.54              |
| 4:AE:58:ILE:HG22   | 4:AE:221:LEU:CD1   | 2.38                     | 0.54              |
| 4:AE:80:ILE:HD13   | 4:AE:212:GLN:HE21  | 1.73                     | 0.54              |
| 4:AE:175:ARG:HA    | 4:AE:178:ARG:CB    | 2.38                     | 0.54              |
| 4:AE:187:LEU:HB2   | 4:AE:201:ILE:CG2   | 2.38                     | 0.54              |
| 4:AE:192:SER:C     | 4:AE:194:PRO:CD    | 2.80                     | 0.54              |
| 5:AF:40:ARG:HG3    | 5:AF:40:ARG:HH11   | 1.72                     | 0.54              |
| 6:AG:8:VAL:C       | 6:AG:10:ARG:H      | 2.15                     | 0.54              |
| 6:AG:30:LYS:H      | 6:AG:34:GLU:HB3    | 1.71                     | 0.54              |
| 6:AG:133:VAL:CG1   | 6:AG:138:TYR:HD1   | 2.07                     | 0.54              |
| 6:AG:159:ARG:HH11  | 6:AG:159:ARG:HG2   | 1.73                     | 0.54              |
| 6:AG:188:LEU:C     | 6:AG:189:PRO:O     | 2.46                     | 0.54              |
| 6:AG:191:ARG:C     | 6:AG:191:ARG:CD    | 2.81                     | 0.54              |
| 7:AH:76:ILE:CG2    | 7:AH:78:HIS:CD2    | 2.91                     | 0.54              |
| 8:AI:13:ASN:N      | 8:AI:13:ASN:ND2    | 2.56                     | 0.54              |
| 9:AJ:21:VAL:HG23   | 9:AJ:22:LEU:CD2    | 2.38                     | 0.54              |
| 9:AJ:38:LEU:HA     | 9:AJ:41:ARG:CB     | 2.37                     | 0.54              |
| 10:AK:67:PRO:CD    | 10:AK:76:PRO:HB3   | 2.38                     | 0.54              |
| 12:AM:10:GLY:CA    | 12:AM:16:LEU:HD21  | 2.38                     | 0.54              |
| 14:AO:27:LEU:HD22  | 14:AO:62:SER:OG    | 2.07                     | 0.54              |
| 18:AS:39:TYR:CD1   | 18:AS:39:TYR:C     | 2.85                     | 0.54              |
| 20:AU:41:LYS:O     | 20:AU:43:PHE:N     | 2.36                     | 0.54              |
| 21:AV:22:LEU:HA    | 21:AV:25:LYS:NZ    | 2.23                     | 0.54              |
| 24:BA:61:G:C5      | 24:BA:62:C:C4      | 2.96                     | 0.54              |
| 24:BA:112:U:H3'    | 24:BA:113:G:C4'    | 2.38                     | 0.54              |
| 24:BA:188:G:H2'    | 24:BA:189:G:H8     | 1.73                     | 0.54              |
| 24:BA:226:G:N1     | 24:BA:227:A:C2     | 2.76                     | 0.54              |
| 24:BA:270(F):U:H2' | 24:BA:270(G):C:O4' | 2.08                     | 0.54              |
| 24:BA:303:U:C2     | 24:BA:315:G:N2     | 2.76                     | 0.54              |
| 24:BA:364:C:C4     | 24:BA:365:C:N4     | 2.76                     | 0.54              |
| 24:BA:388:G:C5'    | 50:B3:23:GLU:HB3   | 2.38                     | 0.54              |
| 24:BA:522:G:C6     | 24:BA:523:C:C4     | 2.96                     | 0.54              |
| 24:BA:523:C:C2'    | 24:BA:524:U:H5'    | 2.38                     | 0.54              |
| 24:BA:530:G:O2'    | 24:BA:531:C:O3'    | 2.25                     | 0.54              |
| 24:BA:532:A:C8     | 24:BA:533:G:H1'    | 2.41                     | 0.54              |
| 24:BA:568:U:O4     | 24:BA:973:A:OP2    | 2.26                     | 0.54              |
| 24:BA:696:G:N3     | 24:BA:697:C:C6     | 2.76                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:729:G:OP1    | 27:BD:13:ARG:NH2   | 2.40                     | 0.54              |
| 24:BA:781:A:C8     | 27:BD:220:HIS:CE1  | 2.96                     | 0.54              |
| 24:BA:824:A:C2'    | 24:BA:825:C:C5     | 2.91                     | 0.54              |
| 24:BA:908:C:H2'    | 24:BA:909:A:O5'    | 2.07                     | 0.54              |
| 24:BA:988:A:O3'    | 49:B2:10:LYS:CE    | 2.56                     | 0.54              |
| 24:BA:1071:G:C2    | 24:BA:1089:G:H2'   | 2.43                     | 0.54              |
| 24:BA:1174:A:N6    | 24:BA:1177:A:N1    | 2.49                     | 0.54              |
| 24:BA:1291:C:H2'   | 24:BA:1292:U:H6    | 1.71                     | 0.54              |
| 24:BA:1314:C:N3    | 24:BA:1315:C:C5    | 2.76                     | 0.54              |
| 24:BA:1367:A:H62   | 24:BA:1368:G:H1'   | 1.72                     | 0.54              |
| 24:BA:1559:G:H2'   | 24:BA:1559:G:N3    | 2.23                     | 0.54              |
| 24:BA:1665:A:H1'   | 35:BN:1:MET:HG2    | 1.90                     | 0.54              |
| 24:BA:1710:C:C1'   | 24:BA:2858:C:H42   | 2.21                     | 0.54              |
| 24:BA:1717:G:H1    | 24:BA:1718:G:N2    | 2.06                     | 0.54              |
| 24:BA:1779:U:C6    | 24:BA:1779:U:C3'   | 2.91                     | 0.54              |
| 24:BA:1909:C:C2    | 24:BA:1922:G:N2    | 2.76                     | 0.54              |
| 24:BA:2110:G:H4'   | 24:BA:2111:C:OP1   | 2.07                     | 0.54              |
| 24:BA:2207:C:C3'   | 24:BA:2208:U:H5''  | 2.34                     | 0.54              |
| 24:BA:2403:C:O2    | 24:BA:2404:C:C6    | 2.61                     | 0.54              |
| 24:BA:2458:G:C8    | 24:BA:2490:G:C6    | 2.96                     | 0.54              |
| 24:BA:2706:G:C4    | 24:BA:2707:G:C8    | 2.95                     | 0.54              |
| 24:BA:2751:G:H2'   | 24:BA:2751:G:N3    | 2.23                     | 0.54              |
| 24:BA:2776:A:N7    | 24:BA:2781:A:C5    | 2.76                     | 0.54              |
| 24:BA:2848:G:C2    | 24:BA:2867:G:N3    | 2.76                     | 0.54              |
| 25:BB:79:C:O2'     | 25:BB:80:U:H5'     | 2.07                     | 0.54              |
| 26:BC:126:LYS:O    | 26:BC:130:ILE:HD13 | 2.07                     | 0.54              |
| 26:BC:210:ARG:HH11 | 26:BC:210:ARG:HG2  | 1.73                     | 0.54              |
| 27:BD:175:LEU:C    | 27:BD:175:LEU:CD1  | 2.77                     | 0.54              |
| 28:BE:53:PRO:HD2   | 28:BE:74:PRO:C     | 2.33                     | 0.54              |
| 28:BE:133:LYS:HZ2  | 28:BE:137:HIS:HB3  | 1.68                     | 0.54              |
| 28:BE:176:ILE:HD13 | 28:BE:176:ILE:C    | 2.32                     | 0.54              |
| 29:BF:18:ARG:C     | 29:BF:19:GLU:CG    | 2.77                     | 0.54              |
| 30:BG:177:GLY:O    | 30:BG:178:PHE:CB   | 2.56                     | 0.54              |
| 31:BH:6:ARG:HD2    | 31:BH:66:GLY:CA    | 2.36                     | 0.54              |
| 32:BK:31:LEU:CD2   | 32:BK:36:ALA:N     | 2.71                     | 0.54              |
| 32:BK:72:LEU:C     | 32:BK:140:LEU:HD21 | 2.32                     | 0.54              |
| 34:BM:74:ARG:HG2   | 34:BM:76:SER:HB2   | 1.90                     | 0.54              |
| 34:BM:98:VAL:O     | 34:BM:99:LEU:C     | 2.50                     | 0.54              |
| 35:BN:84:ALA:HB3   | 35:BN:114:ILE:HD11 | 1.89                     | 0.54              |
| 36:BO:46:LYS:CB    | 36:BO:49:ARG:HB2   | 2.20                     | 0.54              |
| 37:BP:42:ILE:C     | 37:BP:94:VAL:HG21  | 2.33                     | 0.54              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 37:BP:85:LYS:HG3  | 37:BP:86:GLY:N    | 2.24                     | 0.54              |
| 38:BQ:31:HIS:HD2  | 38:BQ:34:ILE:HD11 | 1.72                     | 0.54              |
| 38:BQ:53:HIS:HA   | 38:BQ:56:LYS:CD   | 2.38                     | 0.54              |
| 38:BQ:65:LEU:O    | 38:BQ:68:ARG:HB3  | 2.08                     | 0.54              |
| 38:BQ:116:LEU:HG  | 38:BQ:116:LEU:O   | 2.07                     | 0.54              |
| 39:BR:62:LYS:O    | 39:BR:64:GLU:N    | 2.41                     | 0.54              |
| 39:BR:94:TYR:HB3  | 39:BR:99:LYS:HA   | 1.89                     | 0.54              |
| 40:BS:3:ARG:HA    | 40:BS:6:LEU:HD21  | 1.89                     | 0.54              |
| 41:BT:41:ALA:O    | 41:BT:42:ALA:C    | 2.51                     | 0.54              |
| 43:BV:19:LEU:HA   | 51:B4:25:LEU:HD22 | 1.90                     | 0.54              |
| 44:BW:7:VAL:HB    | 48:B1:28:MET:HG2  | 1.89                     | 0.54              |
| 45:BX:47:LYS:HB2  | 45:BX:49:VAL:CG1  | 2.38                     | 0.54              |
| 45:BX:72:VAL:HG21 | 45:BX:96:ILE:HG21 | 1.89                     | 0.54              |
| 46:BY:82:ARG:CG   | 46:BY:83:PRO:N    | 2.70                     | 0.54              |
| 46:BY:100:VAL:CG1 | 46:BY:133:ILE:HB  | 2.38                     | 0.54              |
| 48:B1:27:LEU:HD11 | 48:B1:48:LEU:HG   | 1.90                     | 0.54              |
| 48:B1:50:ARG:HB3  | 48:B1:54:ARG:HH22 | 1.73                     | 0.54              |
| 51:B4:47:PRO:O    | 51:B4:58:LEU:HG   | 2.08                     | 0.54              |
| 53:B6:32:LYS:HA   | 53:B6:35:ARG:HD3  | 1.88                     | 0.54              |
| 54:B7:25:MET:O    | 54:B7:27:THR:N    | 2.41                     | 0.54              |
| 1:AA:88:C:H2'     | 1:AA:89:U:OP2     | 2.07                     | 0.53              |
| 1:AA:120:A:C8     | 1:AA:122:G:C6     | 2.96                     | 0.53              |
| 1:AA:306:G:C2'    | 1:AA:307:C:H5'    | 2.37                     | 0.53              |
| 1:AA:362:G:O5'    | 14:AO:34:ARG:NH2  | 2.41                     | 0.53              |
| 1:AA:509:A:OP1    | 6:AG:52:SER:HB3   | 2.08                     | 0.53              |
| 1:AA:582:U:O5'    | 1:AA:582:U:H6     | 1.90                     | 0.53              |
| 1:AA:607:A:C4     | 1:AA:608:A:C8     | 2.96                     | 0.53              |
| 1:AA:689:C:C5     | 1:AA:690:G:N7     | 2.76                     | 0.53              |
| 1:AA:728:A:H8     | 17:AR:54:ARG:NH2  | 2.06                     | 0.53              |
| 1:AA:735:C:O5'    | 1:AA:735:C:H6     | 1.90                     | 0.53              |
| 1:AA:756:C:H4'    | 1:AA:823:G:O2'    | 2.08                     | 0.53              |
| 1:AA:961:U:C6     | 1:AA:983:A:C6     | 2.95                     | 0.53              |
| 1:AA:974:A:H5'    | 1:AA:975:A:P      | 2.48                     | 0.53              |
| 1:AA:981:U:C6     | 1:AA:981:U:C3'    | 2.91                     | 0.53              |
| 1:AA:993:G:HO2'   | 1:AA:994:A:P      | 2.32                     | 0.53              |
| 1:AA:1026:G:N7    | 1:AA:1027:C:C6    | 2.76                     | 0.53              |
| 1:AA:1048:G:N2    | 1:AA:1210:C:H1'   | 2.22                     | 0.53              |
| 1:AA:1064:G:N2    | 1:AA:1192:C:N3    | 2.56                     | 0.53              |
| 1:AA:1068:G:OP2   | 1:AA:1094:G:H5'   | 2.07                     | 0.53              |
| 1:AA:1178:G:H21   | 1:AA:1180:A:H3'   | 1.74                     | 0.53              |
| 1:AA:1185:G:C2'   | 1:AA:1186:G:H5'   | 2.38                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1319:A:H4'   | 21:AV:70:LYS:HZ2   | 1.71                     | 0.53              |
| 1:AA:1321:C:H4'   | 15:AP:87:TYR:HH    | 1.71                     | 0.53              |
| 1:AA:1346:A:C2    | 9:AJ:10:ARG:CD     | 2.87                     | 0.53              |
| 1:AA:1353:G:C4    | 1:AA:1370:G:N2     | 2.76                     | 0.53              |
| 1:AA:1353:G:N3    | 1:AA:1370:G:N2     | 2.55                     | 0.53              |
| 1:AA:1399:C:N3    | 1:AA:1502:A:N6     | 2.56                     | 0.53              |
| 1:AA:1462:G:H2'   | 1:AA:1463:C:H6     | 1.73                     | 0.53              |
| 3:AD:32:U:H2'     | 3:AD:33:U:H5'      | 1.90                     | 0.53              |
| 3:AD:47:U:H3      | 3:AD:49:C:H5''     | 1.72                     | 0.53              |
| 3:AD:71:G:H5''    | 24:BA:1892:C:O2'   | 2.07                     | 0.53              |
| 3:AB:52:G:H4'     | 24:BA:2471:C:H5''  | 1.89                     | 0.53              |
| 3:AB:63:G:H1'     | 24:BA:2482:G:C4'   | 2.38                     | 0.53              |
| 3:AB:74:C:C4      | 24:BA:2555:U:N3    | 2.76                     | 0.53              |
| 4:AE:52:GLU:OE1   | 4:AE:53:ARG:N      | 2.41                     | 0.53              |
| 4:AE:80:ILE:HD13  | 4:AE:211:ILE:HG21  | 1.90                     | 0.53              |
| 5:AF:43:LEU:HD11  | 5:AF:55:VAL:HG11   | 1.89                     | 0.53              |
| 6:AG:118:ARG:HH21 | 6:AG:136:PRO:HB2   | 1.70                     | 0.53              |
| 6:AG:123:HIS:HB2  | 6:AG:125:HIS:HE1   | 1.71                     | 0.53              |
| 6:AG:146:ILE:O    | 6:AG:146:ILE:CD1   | 2.56                     | 0.53              |
| 7:AH:34:VAL:HG21  | 7:AH:62:ALA:HB1    | 1.89                     | 0.53              |
| 7:AH:44:GLY:HA3   | 7:AH:61:TYR:HB2    | 1.90                     | 0.53              |
| 7:AH:149:GLU:O    | 7:AH:150:ARG:C     | 2.51                     | 0.53              |
| 8:AI:68:PRO:O     | 8:AI:69:GLU:C      | 2.51                     | 0.53              |
| 9:AJ:15:ASP:HB2   | 9:AJ:23:VAL:HB     | 1.90                     | 0.53              |
| 9:AJ:45:ASP:O     | 9:AJ:49:ILE:HD12   | 2.07                     | 0.53              |
| 10:AK:82:HIS:NE2  | 10:AK:84:ARG:CG    | 2.70                     | 0.53              |
| 10:AK:109:ILE:O   | 10:AK:109:ILE:CG1  | 2.57                     | 0.53              |
| 12:AM:49:VAL:C    | 12:AM:60:ARG:HB3   | 2.32                     | 0.53              |
| 12:AM:60:ARG:HB2  | 12:AM:60:ARG:NH1   | 2.23                     | 0.53              |
| 13:AN:71:LYS:O    | 13:AN:74:ALA:N     | 2.41                     | 0.53              |
| 13:AN:110:ASP:HB2 | 20:AU:88:LYS:CD    | 2.38                     | 0.53              |
| 14:AO:41:ARG:CG   | 14:AO:42:THR:H     | 2.21                     | 0.53              |
| 16:AQ:27:CYS:SG   | 16:AQ:42:ILE:CD1   | 2.96                     | 0.53              |
| 17:AR:69:TYR:HA   | 17:AR:72:ARG:HB3   | 1.90                     | 0.53              |
| 18:AS:55:ARG:O    | 18:AS:56:ALA:C     | 2.51                     | 0.53              |
| 19:AT:75:ARG:HH22 | 19:AT:77:VAL:CG2   | 2.13                     | 0.53              |
| 21:AV:51:VAL:HG21 | 21:AV:60:VAL:HG21  | 1.91                     | 0.53              |
| 22:AW:57:ARG:HH21 | 22:AW:100:ILE:HD12 | 1.73                     | 0.53              |
| 22:AW:72:LEU:CD2  | 22:AW:76:ALA:CB    | 2.86                     | 0.53              |
| 24:BA:247:G:H1    | 54:B7:8:LYS:HD2    | 1.72                     | 0.53              |
| 24:BA:270(L):U:C6 | 24:BA:270(L):U:OP2 | 2.61                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:291:C:N4    | 24:BA:292:C:N4    | 2.56                     | 0.53              |
| 24:BA:307:G:H2'   | 24:BA:309:G:C8    | 2.43                     | 0.53              |
| 24:BA:531:C:O4'   | 24:BA:532:A:N3    | 2.41                     | 0.53              |
| 24:BA:581:C:H5''  | 41:BT:32:PHE:CD1  | 2.43                     | 0.53              |
| 24:BA:627:A:C1'   | 24:BA:637:A:C6    | 2.89                     | 0.53              |
| 24:BA:720:C:C2    | 24:BA:721:C:C5    | 2.96                     | 0.53              |
| 24:BA:734:A:C2'   | 24:BA:735:A:O5'   | 2.55                     | 0.53              |
| 24:BA:760:G:C2    | 24:BA:761:A:H1'   | 2.43                     | 0.53              |
| 24:BA:849:A:C4    | 24:BA:850:C:C6    | 2.96                     | 0.53              |
| 24:BA:941:A:C2    | 24:BA:942:G:N3    | 2.76                     | 0.53              |
| 24:BA:945:A:H3'   | 24:BA:946:G:H5''  | 1.90                     | 0.53              |
| 24:BA:1040:C:C6   | 24:BA:1040:C:OP2  | 2.61                     | 0.53              |
| 24:BA:1044:G:H2'  | 24:BA:1111:A:C2   | 2.43                     | 0.53              |
| 24:BA:1062:G:C5'  | 24:BA:1070:A:H5'  | 2.38                     | 0.53              |
| 24:BA:1085:A:HO2' | 24:BA:1086:A:P    | 2.30                     | 0.53              |
| 24:BA:1168:G:O6   | 24:BA:1169:G:C6   | 2.62                     | 0.53              |
| 24:BA:1210:A:H5'' | 24:BA:1211:U:H3'  | 1.91                     | 0.53              |
| 24:BA:1225:C:N3   | 24:BA:1226:G:N1   | 2.56                     | 0.53              |
| 24:BA:1311:G:C8   | 53:B6:48:LYS:HD3  | 2.43                     | 0.53              |
| 24:BA:1340:U:C2   | 24:BA:1602:U:C5   | 2.95                     | 0.53              |
| 24:BA:1404:C:O2   | 24:BA:1405:U:C6   | 2.61                     | 0.53              |
| 24:BA:1511:A:C3'  | 24:BA:1512:G:H5'' | 2.37                     | 0.53              |
| 24:BA:1613:G:H2'  | 24:BA:1614:A:OP1  | 2.08                     | 0.53              |
| 24:BA:1670:C:H1'  | 24:BA:1994:C:H4'  | 1.89                     | 0.53              |
| 24:BA:1780:A:H3'  | 24:BA:1781:C:C5'  | 2.25                     | 0.53              |
| 24:BA:1818:U:O4   | 27:BD:67:PHE:CE1  | 2.61                     | 0.53              |
| 24:BA:1965:C:C5'  | 24:BA:1966:A:H3'  | 2.39                     | 0.53              |
| 24:BA:1972:A:H2'  | 24:BA:1973:G:C8   | 2.43                     | 0.53              |
| 24:BA:2018:G:C1'  | 41:BT:34:LYS:HZ1  | 2.20                     | 0.53              |
| 24:BA:2045:C:O2'  | 24:BA:2046:G:H5'  | 2.08                     | 0.53              |
| 24:BA:2065:C:C4   | 24:BA:2066:C:C4   | 2.96                     | 0.53              |
| 24:BA:2218:G:C6   | 24:BA:2219:G:N7   | 2.76                     | 0.53              |
| 24:BA:2246:G:H1'  | 24:BA:2426:A:H2   | 1.73                     | 0.53              |
| 24:BA:2269:A:O2'  | 24:BA:2270:G:H5'  | 2.08                     | 0.53              |
| 24:BA:2355:C:C5   | 24:BA:2356:C:C4   | 2.96                     | 0.53              |
| 24:BA:2364:C:H1'  | 47:BZ:36:ILE:HD11 | 1.89                     | 0.53              |
| 24:BA:2459:A:C6   | 24:BA:2493:U:O4   | 2.61                     | 0.53              |
| 24:BA:2606:C:O2   | 24:BA:2607:G:C8   | 2.61                     | 0.53              |
| 24:BA:2626:C:H2'  | 24:BA:2627:G:O4'  | 2.08                     | 0.53              |
| 24:BA:2838:G:O2'  | 24:BA:2839:G:H5'  | 2.08                     | 0.53              |
| 25:BB:32:C:H2'    | 25:BB:33:G:H8     | 1.71                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:5:LYS:CB     | 27:BD:82:ILE:HB    | 2.34                     | 0.53              |
| 27:BD:7:LYS:HG3    | 27:BD:26:LYS:C     | 2.32                     | 0.53              |
| 27:BD:37:LEU:CD1   | 27:BD:62:TYR:O     | 2.56                     | 0.53              |
| 27:BD:45:ASN:O     | 27:BD:46:GLN:HG3   | 2.08                     | 0.53              |
| 27:BD:65:ILE:HD12  | 27:BD:104:TYR:CB   | 2.38                     | 0.53              |
| 27:BD:75:ILE:HD13  | 27:BD:99:ASP:CB    | 2.39                     | 0.53              |
| 28:BE:27:LEU:HG    | 28:BE:27:LEU:O     | 2.08                     | 0.53              |
| 28:BE:44:TYR:C     | 28:BE:45:THR:CG2   | 2.79                     | 0.53              |
| 28:BE:46:ALA:HB2   | 28:BE:85:ASN:ND2   | 2.21                     | 0.53              |
| 29:BF:145:GLU:C    | 29:BF:147:GLY:H    | 2.16                     | 0.53              |
| 29:BF:157:VAL:O    | 29:BF:157:VAL:HG23 | 2.08                     | 0.53              |
| 29:BF:182:ASN:OD1  | 29:BF:182:ASN:O    | 2.25                     | 0.53              |
| 30:BG:26:GLN:CD    | 30:BG:29:TRP:HE3   | 2.16                     | 0.53              |
| 30:BG:96:ARG:O     | 30:BG:100:TRP:HE3  | 1.89                     | 0.53              |
| 30:BG:107:LEU:HD23 | 30:BG:177:GLY:HA3  | 1.91                     | 0.53              |
| 30:BG:135:LEU:CD2  | 30:BG:137:GLU:H    | 2.21                     | 0.53              |
| 31:BH:148:ILE:HG23 | 31:BH:162:ILE:HD13 | 1.89                     | 0.53              |
| 32:BK:77:LEU:CD1   | 32:BK:140:LEU:HB3  | 2.32                     | 0.53              |
| 33:BL:23:VAL:CG1   | 33:BL:27:LEU:HD12  | 2.07                     | 0.53              |
| 33:BL:78:ILE:HG12  | 33:BL:127:ILE:HG23 | 1.89                     | 0.53              |
| 34:BM:100:GLU:HB3  | 34:BM:104:LYS:HE2  | 1.89                     | 0.53              |
| 35:BN:64:ARG:NE    | 35:BN:67:LYS:C     | 2.66                     | 0.53              |
| 35:BN:77:ILE:HG12  | 40:BS:75:ILE:HD11  | 1.91                     | 0.53              |
| 35:BN:86:ILE:HG12  | 35:BN:90:GLN:O     | 2.07                     | 0.53              |
| 36:BO:57:THR:HG21  | 54:B7:31:HIS:HD2   | 1.73                     | 0.53              |
| 36:BO:111:ARG:HH21 | 36:BO:129:ALA:HB2  | 1.73                     | 0.53              |
| 37:BP:22:LYS:CD    | 37:BP:23:GLY:N     | 2.70                     | 0.53              |
| 38:BQ:85:PRO:O     | 38:BQ:86:ARG:C     | 2.50                     | 0.53              |
| 38:BQ:98:LEU:C     | 38:BQ:112:ALA:HB1  | 2.28                     | 0.53              |
| 39:BR:59:LYS:H     | 39:BR:59:LYS:HE2   | 1.73                     | 0.53              |
| 42:BU:4:ILE:O      | 42:BU:40:LEU:O     | 2.26                     | 0.53              |
| 42:BU:7:THR:O      | 42:BU:11:GLN:NE2   | 2.41                     | 0.53              |
| 43:BV:64:MET:CB    | 43:BV:109:GLU:HG3  | 2.38                     | 0.53              |
| 45:BX:37:VAL:HG13  | 45:BX:39:VAL:HG23  | 1.89                     | 0.53              |
| 45:BX:65:ALA:CB    | 45:BX:66:PRO:CD    | 2.85                     | 0.53              |
| 46:BY:11:GLU:O     | 46:BY:15:PRO:HG3   | 2.07                     | 0.53              |
| 47:BZ:32:ARG:HB2   | 47:BZ:32:ARG:HH11  | 1.70                     | 0.53              |
| 47:BZ:54:GLY:C     | 47:BZ:56:ASP:N     | 2.66                     | 0.53              |
| 47:BZ:78:TYR:CD1   | 47:BZ:78:TYR:N     | 2.75                     | 0.53              |
| 48:B1:25:ARG:HH21  | 48:B1:25:ARG:CG    | 2.17                     | 0.53              |
| 49:B2:8:LEU:HD13   | 49:B2:8:LEU:C      | 2.32                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 49:B2:9:VAL:HG21  | 49:B2:52:HIS:O    | 2.08                     | 0.53              |
| 51:B4:10:LYS:HD2  | 51:B4:15:ARG:NH2  | 2.24                     | 0.53              |
| 52:B5:17:LYS:HZ3  | 52:B5:50:ARG:CB   | 2.21                     | 0.53              |
| 53:B6:5:TRP:CE3   | 53:B6:5:TRP:C     | 2.86                     | 0.53              |
| 1:AA:229:U:C2     | 1:AA:230:G:C8     | 2.96                     | 0.53              |
| 1:AA:393:A:OP2    | 18:AS:12:LYS:HE3  | 2.08                     | 0.53              |
| 1:AA:491:G:N2     | 1:AA:492:G:H1'    | 2.23                     | 0.53              |
| 1:AA:568:G:N2     | 1:AA:883:C:H1'    | 2.22                     | 0.53              |
| 1:AA:586:C:OP1    | 19:AT:34:LYS:HE3  | 2.08                     | 0.53              |
| 1:AA:673:G:H2'    | 1:AA:674:G:N7     | 2.23                     | 0.53              |
| 1:AA:735:C:C4'    | 20:AU:75:ILE:HD11 | 2.38                     | 0.53              |
| 1:AA:819:A:C5'    | 1:AA:820:U:OP2    | 2.54                     | 0.53              |
| 1:AA:932:C:OP1    | 9:AJ:3:ARG:O      | 2.27                     | 0.53              |
| 1:AA:939:G:H4'    | 1:AA:1375:A:O2'   | 2.08                     | 0.53              |
| 1:AA:991:U:O2'    | 1:AA:993:G:H8     | 1.92                     | 0.53              |
| 1:AA:1133:G:C6    | 1:AA:1134:G:N7    | 2.77                     | 0.53              |
| 1:AA:1256:A:N6    | 1:AA:1278:U:O2'   | 2.41                     | 0.53              |
| 1:AA:1363:A:H5''  | 1:AA:1364:U:P     | 2.47                     | 0.53              |
| 3:AC:7:A:HO2'     | 3:AC:8:U:P        | 2.30                     | 0.53              |
| 3:AD:28:G:N3      | 3:AD:29:G:C8      | 2.76                     | 0.53              |
| 3:AD:76:A:C5      | 24:BA:2432:A:C4   | 2.96                     | 0.53              |
| 4:AE:55:PHE:O     | 4:AE:58:ILE:HB    | 2.07                     | 0.53              |
| 4:AE:144:ARG:HD3  | 4:AE:148:TYR:OH   | 2.09                     | 0.53              |
| 4:AE:149:LEU:HD23 | 4:AE:153:ARG:HG2  | 1.89                     | 0.53              |
| 4:AE:217:ARG:HG3  | 4:AE:217:ARG:NH1  | 2.22                     | 0.53              |
| 4:AE:234:PRO:HB2  | 4:AE:238:LEU:HD22 | 1.89                     | 0.53              |
| 5:AF:66:VAL:HG12  | 5:AF:66:VAL:O     | 2.08                     | 0.53              |
| 5:AF:164:ARG:CG   | 5:AF:165:THR:N    | 2.71                     | 0.53              |
| 6:AG:63:LYS:CA    | 6:AG:66:ARG:HD2   | 2.37                     | 0.53              |
| 6:AG:132:ARG:NH1  | 6:AG:132:ARG:CG   | 2.63                     | 0.53              |
| 6:AG:205:GLU:CD   | 7:AH:100:VAL:H    | 2.16                     | 0.53              |
| 7:AH:80:ILE:HG22  | 10:AK:104:ARG:NH2 | 2.24                     | 0.53              |
| 8:AI:12:PRO:HG2   | 8:AI:13:ASN:H     | 1.74                     | 0.53              |
| 9:AJ:37:ASN:OD1   | 9:AJ:38:LEU:N     | 2.24                     | 0.53              |
| 9:AJ:78:ARG:HE    | 9:AJ:80:VAL:CG2   | 2.21                     | 0.53              |
| 10:AK:79:VAL:O    | 10:AK:80:ILE:C    | 2.47                     | 0.53              |
| 17:AR:32:LEU:HD12 | 17:AR:59:MET:HG2  | 1.89                     | 0.53              |
| 18:AS:27:LYS:O    | 18:AS:30:GLY:N    | 2.36                     | 0.53              |
| 19:AT:88:TYR:HA   | 19:AT:91:ARG:NH2  | 2.23                     | 0.53              |
| 20:AU:87:ARG:O    | 20:AU:88:LYS:OXT  | 2.26                     | 0.53              |
| 24:BA:97:C:O5'    | 24:BA:97:C:H6     | 1.90                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:223:A:N6    | 24:BA:408:G:O4'   | 2.42                     | 0.53              |
| 24:BA:270(W):G:N2 | 24:BA:273:G:H4'   | 2.23                     | 0.53              |
| 24:BA:309:G:O6    | 24:BA:1210:A:O2'  | 2.22                     | 0.53              |
| 24:BA:483:A:N6    | 24:BA:497:A:C2    | 2.76                     | 0.53              |
| 24:BA:539:G:H2'   | 24:BA:540:G:C8    | 2.44                     | 0.53              |
| 24:BA:586:A:OP1   | 29:BF:89:VAL:HG23 | 2.08                     | 0.53              |
| 24:BA:746:A:C8    | 24:BA:2611:U:O2'  | 2.58                     | 0.53              |
| 24:BA:781:A:N1    | 24:BA:1776:G:O2'  | 2.39                     | 0.53              |
| 24:BA:796:C:O5'   | 24:BA:796:C:H6    | 1.91                     | 0.53              |
| 24:BA:805:G:O6    | 24:BA:2068:U:OP1  | 2.26                     | 0.53              |
| 24:BA:860:U:H6    | 24:BA:2267:A:H4'  | 1.70                     | 0.53              |
| 24:BA:875:G:C6    | 24:BA:876:C:N4    | 2.76                     | 0.53              |
| 24:BA:876:C:O5'   | 24:BA:876:C:C6    | 2.60                     | 0.53              |
| 24:BA:957:A:C2    | 24:BA:2459:A:C5'  | 2.91                     | 0.53              |
| 24:BA:968:G:H2'   | 24:BA:969:U:C6    | 2.43                     | 0.53              |
| 24:BA:975:G:N7    | 24:BA:1186:G:N2   | 2.45                     | 0.53              |
| 24:BA:1129:A:N3   | 24:BA:2516:G:H1'  | 2.23                     | 0.53              |
| 24:BA:1183:G:OP2  | 49:B2:30:ARG:NH1  | 2.41                     | 0.53              |
| 24:BA:1242:A:H3'  | 24:BA:1243:G:H8   | 1.72                     | 0.53              |
| 24:BA:1265:A:H1'  | 24:BA:1267:U:O4   | 2.09                     | 0.53              |
| 24:BA:1492:G:N2   | 24:BA:1499:C:C5   | 2.75                     | 0.53              |
| 24:BA:1521:G:H3'  | 24:BA:1522:G:H5'  | 1.90                     | 0.53              |
| 24:BA:1534:G:N2   | 24:BA:1538:G:C8   | 2.77                     | 0.53              |
| 24:BA:1742:C:C3'  | 24:BA:1743:G:C5'  | 2.86                     | 0.53              |
| 24:BA:1794:U:H2'  | 24:BA:1795:C:H6   | 1.73                     | 0.53              |
| 24:BA:1861:G:O2'  | 24:BA:1862:G:H5'  | 2.07                     | 0.53              |
| 24:BA:1909:C:O2'  | 24:BA:1910:G:H5'  | 2.08                     | 0.53              |
| 24:BA:2093:G:H1'  | 24:BA:2198:A:N1   | 2.23                     | 0.53              |
| 24:BA:2157:G:OP2  | 24:BA:2157:G:N3   | 2.41                     | 0.53              |
| 24:BA:2246:G:N2   | 24:BA:2247:A:C6   | 2.77                     | 0.53              |
| 24:BA:2306:C:C5   | 24:BA:2311:A:N1   | 2.76                     | 0.53              |
| 24:BA:2346:A:H4'  | 24:BA:2383:G:C5'  | 2.35                     | 0.53              |
| 24:BA:2425:A:H2'  | 24:BA:2425:A:N3   | 2.23                     | 0.53              |
| 24:BA:2496:C:C6   | 24:BA:2497:A:H2   | 2.26                     | 0.53              |
| 24:BA:2585:U:O2   | 24:BA:2585:U:C2'  | 2.57                     | 0.53              |
| 24:BA:2645:G:C4'  | 24:BA:2732:G:O2'  | 2.40                     | 0.53              |
| 24:BA:2703:C:H2'  | 24:BA:2704:C:O5'  | 2.08                     | 0.53              |
| 24:BA:2749:A:N1   | 24:BA:2750:A:N6   | 2.45                     | 0.53              |
| 24:BA:2825:C:H42  | 24:BA:2826:A:N6   | 2.05                     | 0.53              |
| 24:BA:2864:G:O2'  | 24:BA:2865:U:H5'  | 2.07                     | 0.53              |
| 24:BA:2875:C:O2'  | 40:BS:4:GLY:HA3   | 2.08                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:2876:G:P     | 40:BS:2:ASN:CB    | 2.96                     | 0.53              |
| 25:BB:15:A:H5'     | 25:BB:16:G:O5'    | 2.08                     | 0.53              |
| 25:BB:37:C:N4      | 25:BB:44:G:H1     | 2.06                     | 0.53              |
| 25:BB:58:A:H62     | 25:BB:59:A:N6     | 2.06                     | 0.53              |
| 26:BC:22:ILE:CD1   | 26:BC:190:ARG:NH1 | 2.71                     | 0.53              |
| 26:BC:26:ALA:O     | 26:BC:29:VAL:HG12 | 2.08                     | 0.53              |
| 26:BC:93:TYR:HD1   | 26:BC:107:TRP:HZ2 | 1.55                     | 0.53              |
| 26:BC:100:ILE:HD13 | 26:BC:123:VAL:N   | 2.23                     | 0.53              |
| 26:BC:223:ARG:HG2  | 26:BC:224:ILE:N   | 2.22                     | 0.53              |
| 27:BD:53:PHE:C     | 27:BD:54:ARG:O    | 2.50                     | 0.53              |
| 27:BD:57:GLY:O     | 27:BD:217:ARG:HB2 | 2.08                     | 0.53              |
| 27:BD:234:GLY:CA   | 27:BD:241:PRO:CG  | 2.86                     | 0.53              |
| 28:BE:51:PHE:HE1   | 28:BE:76:ARG:N    | 2.06                     | 0.53              |
| 28:BE:85:ASN:ND2   | 28:BE:85:ASN:N    | 2.56                     | 0.53              |
| 29:BF:37:VAL:O     | 29:BF:41:LEU:HD23 | 2.08                     | 0.53              |
| 29:BF:46:ARG:HG2   | 29:BF:46:ARG:NH2  | 2.23                     | 0.53              |
| 29:BF:74:ARG:CZ    | 29:BF:75:HIS:HA   | 2.38                     | 0.53              |
| 30:BG:75:LYS:CB    | 30:BG:84:LYS:HB2  | 2.39                     | 0.53              |
| 30:BG:125:PHE:CD1  | 30:BG:131:TYR:N   | 2.76                     | 0.53              |
| 31:BH:35:VAL:CG2   | 31:BH:75:ALA:HB2  | 2.38                     | 0.53              |
| 31:BH:90:LYS:NZ    | 31:BH:163:TYR:CG  | 2.76                     | 0.53              |
| 31:BH:149:ARG:O    | 31:BH:153:LYS:CB  | 2.57                     | 0.53              |
| 34:BM:46:VAL:O     | 34:BM:47:ALA:HB3  | 2.09                     | 0.53              |
| 35:BN:8:LEU:CD2    | 35:BN:9:GLU:H     | 2.11                     | 0.53              |
| 36:BO:27:HIS:CE1   | 42:BU:82:ARG:O    | 2.60                     | 0.53              |
| 36:BO:57:THR:O     | 36:BO:58:THR:OG1  | 2.26                     | 0.53              |
| 36:BO:92:GLU:HA    | 36:BO:92:GLU:OE2  | 2.09                     | 0.53              |
| 37:BP:77:LYS:O     | 37:BP:78:PRO:O    | 2.26                     | 0.53              |
| 38:BQ:56:LYS:C     | 38:BQ:58:GLY:N    | 2.66                     | 0.53              |
| 38:BQ:113:LEU:CD1  | 38:BQ:114:VAL:N   | 2.70                     | 0.53              |
| 39:BR:75:GLU:HA    | 39:BR:78:LEU:CB   | 2.38                     | 0.53              |
| 40:BS:17:THR:HG21  | 40:BS:20:PRO:HA   | 1.90                     | 0.53              |
| 41:BT:8:VAL:HA     | 41:BT:11:ARG:NE   | 2.23                     | 0.53              |
| 41:BT:74:LEU:O     | 41:BT:75:ASN:O    | 2.27                     | 0.53              |
| 41:BT:111:GLU:CG   | 41:BT:112:ARG:H   | 2.20                     | 0.53              |
| 42:BU:70:ILE:HG23  | 42:BU:90:PRO:CA   | 2.37                     | 0.53              |
| 43:BV:11:ARG:HH21  | 43:BV:11:ARG:CB   | 2.20                     | 0.53              |
| 43:BV:21:VAL:HG11  | 43:BV:75:TYR:HA   | 1.90                     | 0.53              |
| 44:BW:23:GLU:C     | 44:BW:23:GLU:OE1  | 2.51                     | 0.53              |
| 45:BX:53:PRO:O     | 45:BX:55:TYR:N    | 2.40                     | 0.53              |
| 46:BY:24:LEU:HD12  | 46:BY:41:LEU:CD1  | 2.38                     | 0.53              |

*Continued on next page...*

Continued from previous page...

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 48:B1:20:VAL:HG23 | 48:B1:55:LEU:CD2   | 2.38                     | 0.53              |
| 50:B3:22:ILE:O    | 50:B3:22:ILE:HG22  | 2.06                     | 0.53              |
| 51:B4:39:MET:HE3  | 51:B4:39:MET:O     | 2.08                     | 0.53              |
| 52:B5:36:LEU:O    | 52:B5:51:GLU:CB    | 2.36                     | 0.53              |
| 54:B7:13:ARG:HG3  | 54:B7:13:ARG:HH11  | 1.73                     | 0.53              |
| 1:AA:377:G:C2     | 1:AA:378:G:N7      | 2.76                     | 0.53              |
| 1:AA:425:G:N2     | 1:AA:426:G:C1'     | 2.70                     | 0.53              |
| 1:AA:426:G:O3'    | 6:AG:41:GLY:O      | 2.26                     | 0.53              |
| 1:AA:568:G:C4     | 1:AA:569:C:C5      | 2.97                     | 0.53              |
| 1:AA:646:U:H2'    | 1:AA:647:C:H6      | 1.73                     | 0.53              |
| 1:AA:669:U:O4'    | 17:AR:46:HIS:HE1   | 1.91                     | 0.53              |
| 1:AA:687:A:C4     | 1:AA:704:A:N6      | 2.77                     | 0.53              |
| 1:AA:728:A:N1     | 1:AA:729:A:C4      | 2.76                     | 0.53              |
| 1:AA:818:G:C2'    | 1:AA:819:A:OP1     | 2.56                     | 0.53              |
| 1:AA:822:C:C2     | 1:AA:823:G:C8      | 2.96                     | 0.53              |
| 1:AA:931:C:H2'    | 1:AA:932:C:H5      | 1.72                     | 0.53              |
| 1:AA:998(A):C:H2' | 1:AA:998(A):C:O2   | 2.08                     | 0.53              |
| 1:AA:1003:G:OP2   | 1:AA:1004:A:N3     | 2.41                     | 0.53              |
| 1:AA:1094:G:C3'   | 1:AA:1108:G:H22    | 2.20                     | 0.53              |
| 1:AA:1103:C:HO2'  | 4:AE:111:ARG:HD2   | 1.71                     | 0.53              |
| 1:AA:1138:G:H3'   | 1:AA:1138:G:N3     | 2.23                     | 0.53              |
| 1:AA:1202:G:N7    | 12:AM:53:PRO:HB2   | 2.22                     | 0.53              |
| 1:AA:1227:A:N9    | 15:AP:117:VAL:HG21 | 2.23                     | 0.53              |
| 1:AA:1286:A:OP1   | 23:AX:25:LYS:HG3   | 2.08                     | 0.53              |
| 1:AA:1300:G:O2'   | 1:AA:1301:U:P      | 2.66                     | 0.53              |
| 1:AA:1438:G:C6    | 1:AA:1439:C:C5     | 2.96                     | 0.53              |
| 1:AA:1449:C:H2'   | 1:AA:1450:U:O5'    | 2.08                     | 0.53              |
| 1:AA:1479:C:H2'   | 1:AA:1480:G:H8     | 1.73                     | 0.53              |
| 1:AA:1517:G:H2'   | 1:AA:1517:G:N3     | 2.23                     | 0.53              |
| 1:AA:1521:G:HO2'  | 1:AA:1522:U:H5'    | 1.72                     | 0.53              |
| 3:AC:21:A:N1      | 3:AC:48:C:N3       | 2.55                     | 0.53              |
| 3:AD:9:A:N3       | 3:AD:46:G:C1'      | 2.72                     | 0.53              |
| 3:AD:21:A:N6      | 3:AD:48:C:C5       | 2.76                     | 0.53              |
| 5:AF:142:MET:HB3  | 5:AF:149:ALA:HB2   | 1.90                     | 0.53              |
| 5:AF:142:MET:SD   | 5:AF:146:ALA:HB3   | 2.48                     | 0.53              |
| 5:AF:190:ARG:O    | 5:AF:191:THR:C     | 2.51                     | 0.53              |
| 6:AG:19:LEU:N     | 6:AG:33:MET:HE1    | 2.09                     | 0.53              |
| 6:AG:107:ARG:CD   | 6:AG:174:LEU:HD11  | 2.37                     | 0.53              |
| 7:AH:23:GLY:HA3   | 7:AH:25:ARG:HH12   | 1.71                     | 0.53              |
| 7:AH:59:GLY:O     | 7:AH:62:ALA:CB     | 2.56                     | 0.53              |
| 7:AH:76:ILE:HD12  | 7:AH:142:LEU:HD12  | 1.89                     | 0.53              |

Continued on next page...

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 7:AH:105:VAL:O     | 7:AH:106:PRO:C     | 2.51                     | 0.53              |
| 7:AH:105:VAL:HG21  | 7:AH:132:ALA:HB2   | 1.89                     | 0.53              |
| 7:AH:122:GLU:CB    | 7:AH:126:ARG:HG3   | 2.39                     | 0.53              |
| 8:AI:20:ALA:O      | 8:AI:24:GLU:HG3    | 2.08                     | 0.53              |
| 8:AI:47:ARG:C      | 8:AI:48:LEU:HD23   | 2.31                     | 0.53              |
| 8:AI:77:ARG:N      | 8:AI:80:ARG:CZ     | 2.71                     | 0.53              |
| 9:AJ:71:PRO:C      | 9:AJ:96:GLN:HE21   | 2.16                     | 0.53              |
| 9:AJ:88:PRO:HG2    | 9:AJ:152:ALA:CB    | 2.37                     | 0.53              |
| 10:AK:100:ILE:HB   | 10:AK:125:ARG:HH21 | 1.71                     | 0.53              |
| 10:AK:124:ALA:O    | 10:AK:125:ARG:C    | 2.51                     | 0.53              |
| 11:AL:70:LYS:H     | 11:AL:70:LYS:HD2   | 1.72                     | 0.53              |
| 13:AN:73:MET:CG    | 13:AN:103:LEU:HD13 | 2.37                     | 0.53              |
| 15:AP:92:HIS:CD2   | 15:AP:98:VAL:HG11  | 2.43                     | 0.53              |
| 17:AR:31:LEU:N     | 17:AR:31:LEU:CD1   | 2.71                     | 0.53              |
| 18:AS:35:LYS:HZ2   | 18:AS:37:GLY:N     | 2.06                     | 0.53              |
| 19:AT:35:VAL:HA    | 19:AT:36:ILE:HD13  | 1.90                     | 0.53              |
| 20:AU:74:ARG:HH11  | 20:AU:74:ARG:CG    | 2.17                     | 0.53              |
| 21:AV:22:LEU:C     | 21:AV:24:ALA:N     | 2.64                     | 0.53              |
| 24:BA:141(A):C:O2' | 24:BA:142:G:H5'    | 2.07                     | 0.53              |
| 24:BA:274:G:N3     | 24:BA:274:G:C3'    | 2.70                     | 0.53              |
| 24:BA:322:A:O4'    | 24:BA:341:G:H5'    | 2.08                     | 0.53              |
| 24:BA:389:G:N3     | 24:BA:389:G:H2'    | 2.21                     | 0.53              |
| 24:BA:443:A:C4'    | 24:BA:1201:C:H5'   | 2.36                     | 0.53              |
| 24:BA:500:G:H2'    | 24:BA:501:A:H3'    | 1.89                     | 0.53              |
| 24:BA:511:U:H5     | 24:BA:512:G:C2     | 2.26                     | 0.53              |
| 24:BA:638:G:C2'    | 24:BA:639:U:H5'    | 2.37                     | 0.53              |
| 24:BA:786:C:C2'    | 24:BA:787:U:C5'    | 2.87                     | 0.53              |
| 24:BA:1083:U:O2    | 24:BA:1083:U:C2'   | 2.56                     | 0.53              |
| 24:BA:1223:C:N1    | 24:BA:1227:A:N1    | 2.57                     | 0.53              |
| 24:BA:1249:U:O4    | 36:BO:21:ARG:NH2   | 2.42                     | 0.53              |
| 24:BA:1416:G:O2'   | 24:BA:1417:C:C6    | 2.57                     | 0.53              |
| 24:BA:1427:A:O2'   | 24:BA:1428:C:OP2   | 2.27                     | 0.53              |
| 24:BA:1492:G:N3    | 24:BA:1493:C:C4    | 2.77                     | 0.53              |
| 24:BA:1529:A:H8    | 24:BA:1530:G:N9    | 2.07                     | 0.53              |
| 24:BA:1605:C:H3'   | 24:BA:1606:G:C8    | 2.44                     | 0.53              |
| 24:BA:1607:C:O2    | 24:BA:1607:C:C2'   | 2.56                     | 0.53              |
| 24:BA:1607:C:O2'   | 24:BA:1608:A:OP2   | 2.25                     | 0.53              |
| 24:BA:1650:G:O2'   | 24:BA:1651:G:O5'   | 2.26                     | 0.53              |
| 24:BA:1671:U:O2'   | 28:BE:129:HIS:HE1  | 1.92                     | 0.53              |
| 24:BA:1784:A:C8    | 24:BA:1981:A:C5    | 2.96                     | 0.53              |
| 24:BA:1847:A:C2    | 24:BA:1851:U:O4    | 2.61                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1905:C:H5'  | 24:BA:1928:A:N6    | 2.23                     | 0.53              |
| 24:BA:2097:C:C2'  | 24:BA:2098:U:C5'   | 2.86                     | 0.53              |
| 24:BA:2224:G:O2'  | 24:BA:2226:C:C5    | 2.57                     | 0.53              |
| 24:BA:2303:G:C6   | 24:BA:2304:G:N7    | 2.76                     | 0.53              |
| 24:BA:2312:U:P    | 30:BG:86:MET:HE2   | 2.48                     | 0.53              |
| 24:BA:2655:G:H2'  | 24:BA:2656:U:OP2   | 2.09                     | 0.53              |
| 24:BA:2686:G:O2'  | 24:BA:2687:U:C5'   | 2.56                     | 0.53              |
| 24:BA:2714:G:C5   | 24:BA:2715:C:C5    | 2.96                     | 0.53              |
| 24:BA:2720:U:C3'  | 24:BA:2721:A:H8    | 2.21                     | 0.53              |
| 24:BA:2732:G:H8   | 24:BA:2732:G:OP2   | 1.92                     | 0.53              |
| 24:BA:2809:A:C1'  | 24:BA:2811:G:N7    | 2.72                     | 0.53              |
| 24:BA:2817:G:C2   | 24:BA:2830:G:N3    | 2.77                     | 0.53              |
| 24:BA:2892:A:H2'  | 24:BA:2893:G:H1'   | 1.91                     | 0.53              |
| 26:BC:39:GLU:HB3  | 26:BC:178:ALA:HB2  | 1.90                     | 0.53              |
| 26:BC:70:LYS:O    | 26:BC:71:GLN:HB3   | 2.07                     | 0.53              |
| 26:BC:87:GLU:CG   | 26:BC:94:VAL:HG21  | 2.24                     | 0.53              |
| 27:BD:27:THR:HG21 | 27:BD:82:ILE:HG22  | 1.90                     | 0.53              |
| 27:BD:134:ARG:CA  | 27:BD:168:ARG:HH22 | 2.21                     | 0.53              |
| 28:BE:92:THR:HG23 | 28:BE:96:PHE:N     | 2.22                     | 0.53              |
| 28:BE:100:GLU:O   | 28:BE:172:VAL:CG1  | 2.52                     | 0.53              |
| 29:BF:11:VAL:HG22 | 29:BF:126:VAL:HG12 | 1.89                     | 0.53              |
| 29:BF:78:ILE:CD1  | 29:BF:79:GLY:H     | 2.20                     | 0.53              |
| 29:BF:155:LEU:HA  | 29:BF:174:VAL:CG2  | 2.38                     | 0.53              |
| 30:BG:8:LYS:O     | 30:BG:9:ARG:C      | 2.51                     | 0.53              |
| 32:BK:11:ASN:O    | 32:BK:13:GLY:N     | 2.41                     | 0.53              |
| 32:BK:93:THR:HG23 | 32:BK:95:LYS:CB    | 2.37                     | 0.53              |
| 33:BL:111:LYS:C   | 33:BL:113:PRO:CD   | 2.82                     | 0.53              |
| 34:BM:13:TRP:O    | 34:BM:14:VAL:CG2   | 2.56                     | 0.53              |
| 35:BN:6:THR:HG23  | 35:BN:21:CYS:HB3   | 1.90                     | 0.53              |
| 35:BN:70:LYS:HZ1  | 35:BN:102:VAL:HG13 | 1.73                     | 0.53              |
| 35:BN:97:ARG:C    | 35:BN:97:ARG:CD    | 2.80                     | 0.53              |
| 36:BO:16:ARG:HG3  | 36:BO:19:VAL:CG2   | 2.38                     | 0.53              |
| 36:BO:76:LYS:HG3  | 36:BO:77:ARG:N     | 2.22                     | 0.53              |
| 37:BP:65:PHE:O    | 37:BP:66:ILE:CG1   | 2.54                     | 0.53              |
| 38:BQ:53:HIS:ND1  | 38:BQ:56:LYS:HE2   | 2.24                     | 0.53              |
| 38:BQ:67:LEU:HD21 | 38:BQ:72:ASP:H     | 1.73                     | 0.53              |
| 39:BR:62:LYS:O    | 39:BR:65:VAL:HG13  | 2.07                     | 0.53              |
| 40:BS:33:LYS:HG3  | 40:BS:45:PHE:CE2   | 2.43                     | 0.53              |
| 40:BS:33:LYS:HG3  | 40:BS:45:PHE:CZ    | 2.44                     | 0.53              |
| 42:BU:23:GLU:CA   | 42:BU:93:GLU:HB3   | 2.37                     | 0.53              |
| 42:BU:40:LEU:HB3  | 42:BU:51:VAL:HG13  | 1.91                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 42:BU:57:VAL:HG12  | 42:BU:58:VAL:HG23 | 1.89                     | 0.53              |
| 42:BU:68:LYS:HG2   | 42:BU:95:LEU:CD2  | 2.31                     | 0.53              |
| 43:BV:42:ARG:HG3   | 43:BV:43:GLY:H    | 1.71                     | 0.53              |
| 44:BW:20:GLY:O     | 44:BW:25:LYS:O    | 2.27                     | 0.53              |
| 46:BY:139:VAL:HG12 | 46:BY:140:ASP:N   | 2.23                     | 0.53              |
| 46:BY:153:SER:N    | 46:BY:168:GLU:HB2 | 2.24                     | 0.53              |
| 47:BZ:32:ARG:HB2   | 47:BZ:32:ARG:CZ   | 2.38                     | 0.53              |
| 48:B1:27:LEU:HD12  | 48:B1:27:LEU:N    | 2.24                     | 0.53              |
| 49:B2:3:ARG:HH12   | 49:B2:59:VAL:CG2  | 2.21                     | 0.53              |
| 50:B3:44:THR:HG22  | 50:B3:45:GLY:H    | 1.72                     | 0.53              |
| 50:B3:65:ASP:O     | 50:B3:66:SER:C    | 2.49                     | 0.53              |
| 53:B6:25:PRO:HD3   | 53:B6:28:ARG:NH2  | 2.23                     | 0.53              |
| 53:B6:35:ARG:NH1   | 53:B6:35:ARG:HB2  | 2.22                     | 0.53              |
| 54:B7:30:ARG:HH21  | 54:B7:43:GLN:N    | 2.05                     | 0.53              |
| 1:AA:67:C:C4'      | 1:AA:172:A:H1'    | 2.39                     | 0.53              |
| 1:AA:119:A:O2'     | 1:AA:120:A:OP2    | 2.13                     | 0.53              |
| 1:AA:251:G:C2      | 1:AA:266:G:O6     | 2.61                     | 0.53              |
| 1:AA:258:G:C6      | 1:AA:259:G:C6     | 2.97                     | 0.53              |
| 1:AA:328:C:H3'     | 1:AA:328:C:O2     | 2.08                     | 0.53              |
| 1:AA:328:C:H4'     | 1:AA:329:A:O5'    | 2.09                     | 0.53              |
| 1:AA:433:C:C4      | 1:AA:434:U:O4     | 2.62                     | 0.53              |
| 1:AA:519:C:H5'     | 14:AO:51:ALA:HB2  | 1.90                     | 0.53              |
| 1:AA:539:A:OP1     | 14:AO:114:LYS:CE  | 2.56                     | 0.53              |
| 1:AA:601:C:H2'     | 1:AA:602:A:O4'    | 2.07                     | 0.53              |
| 1:AA:601:C:C2      | 1:AA:638:G:C2     | 2.96                     | 0.53              |
| 1:AA:660:G:H2'     | 1:AA:661:G:H8     | 1.72                     | 0.53              |
| 1:AA:667:G:H5''    | 17:AR:51:HIS:CE1  | 2.43                     | 0.53              |
| 1:AA:691:G:N2      | 13:AN:51:LYS:HZ3  | 2.07                     | 0.53              |
| 1:AA:739:C:O2'     | 1:AA:740:U:H5'    | 2.09                     | 0.53              |
| 1:AA:758:G:H4'     | 1:AA:880:C:H4'    | 1.90                     | 0.53              |
| 1:AA:832:C:C2      | 1:AA:855:G:N1     | 2.77                     | 0.53              |
| 1:AA:868:C:H3'     | 1:AA:869:G:H8     | 1.73                     | 0.53              |
| 1:AA:876:G:H1'     | 10:AK:11:THR:HG21 | 1.90                     | 0.53              |
| 1:AA:1068:G:C6     | 1:AA:1108:G:N3    | 2.77                     | 0.53              |
| 1:AA:1124:G:OP1    | 12:AM:35:SER:O    | 2.26                     | 0.53              |
| 1:AA:1159:U:O4     | 1:AA:1182:G:N3    | 2.41                     | 0.53              |
| 3:AC:57:G:H2'      | 3:AC:58:A:H5''    | 1.91                     | 0.53              |
| 3:AD:56:C:C4       | 24:BA:2169:A:C4   | 2.97                     | 0.53              |
| 3:AB:50:U:H2'      | 3:AB:51:U:H6      | 1.73                     | 0.53              |
| 4:AE:12:GLU:OE1    | 4:AE:209:ARG:NH2  | 2.40                     | 0.53              |
| 4:AE:58:ILE:O      | 4:AE:59:GLU:C     | 2.51                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 4:AE:219:VAL:HA   | 4:AE:222:ILE:HD11  | 1.90                     | 0.53              |
| 5:AF:112:SER:OG   | 5:AF:115:LEU:HD12  | 2.08                     | 0.53              |
| 5:AF:193:TYR:N    | 5:AF:193:TYR:CD2   | 2.75                     | 0.53              |
| 6:AG:107:ARG:HH11 | 6:AG:107:ARG:CA    | 2.07                     | 0.53              |
| 7:AH:78:HIS:HB3   | 10:AK:104:ARG:HB3  | 1.90                     | 0.53              |
| 9:AJ:108:ALA:HA   | 9:AJ:111:ARG:HG3   | 1.90                     | 0.53              |
| 14:AO:32:PHE:HB2  | 14:AO:84:LEU:CD1   | 2.36                     | 0.53              |
| 16:AQ:39:LEU:HB2  | 16:AQ:44:LEU:HD13  | 1.89                     | 0.53              |
| 17:AR:17:ARG:NH1  | 17:AR:77:ARG:CD    | 2.70                     | 0.53              |
| 17:AR:64:ARG:HG2  | 17:AR:65:ARG:N     | 2.22                     | 0.53              |
| 18:AS:68:ASP:O    | 18:AS:69:THR:C     | 2.49                     | 0.53              |
| 19:AT:3:LYS:HD3   | 19:AT:60:ILE:HD11  | 1.90                     | 0.53              |
| 19:AT:66:SER:HB3  | 19:AT:69:LYS:NZ    | 2.23                     | 0.53              |
| 20:AU:58:LEU:O    | 20:AU:59:SER:O     | 2.27                     | 0.53              |
| 24:BA:52:A:H8     | 24:BA:52:A:O5'     | 1.92                     | 0.53              |
| 24:BA:67:U:O5'    | 24:BA:67:U:C6      | 2.61                     | 0.53              |
| 24:BA:120:U:C1'   | 24:BA:149:A:N3     | 2.71                     | 0.53              |
| 24:BA:181:A:C2    | 24:BA:434:U:O2'    | 2.62                     | 0.53              |
| 24:BA:195:A:OP2   | 24:BA:196:A:O3'    | 2.27                     | 0.53              |
| 24:BA:218:A:C2    | 24:BA:235:U:H4'    | 2.43                     | 0.53              |
| 24:BA:289:A:C2'   | 24:BA:351:G:N1     | 2.63                     | 0.53              |
| 24:BA:290:G:C8    | 24:BA:290:G:C3'    | 2.91                     | 0.53              |
| 24:BA:412:A:C8    | 24:BA:2412:A:N3    | 2.76                     | 0.53              |
| 24:BA:623:G:P     | 36:BO:105:LEU:HD11 | 2.48                     | 0.53              |
| 24:BA:623:G:H2'   | 24:BA:624:C:C5'    | 2.36                     | 0.53              |
| 24:BA:662:G:H5'   | 36:BO:17:LYS:N     | 2.20                     | 0.53              |
| 24:BA:811:U:O2'   | 24:BA:812:C:OP1    | 2.24                     | 0.53              |
| 24:BA:946:G:H2'   | 24:BA:947:G:C8     | 2.44                     | 0.53              |
| 24:BA:956:G:H3'   | 24:BA:956:G:C8     | 2.43                     | 0.53              |
| 24:BA:991:C:O2'   | 24:BA:992:C:H5'    | 2.08                     | 0.53              |
| 24:BA:1021:A:H2   | 24:BA:1122:G:H4'   | 1.73                     | 0.53              |
| 24:BA:1287:A:H2'  | 24:BA:1287:A:N3    | 2.24                     | 0.53              |
| 24:BA:1309:G:C6   | 24:BA:1310:G:N7    | 2.76                     | 0.53              |
| 24:BA:1422:G:C2   | 24:BA:1423:G:C8    | 2.96                     | 0.53              |
| 24:BA:1656:C:H5'  | 28:BE:136:ARG:NH1  | 2.23                     | 0.53              |
| 24:BA:1660:C:C4   | 24:BA:2001:A:N6    | 2.76                     | 0.53              |
| 24:BA:1703:G:H2'  | 24:BA:1704:G:C5'   | 2.38                     | 0.53              |
| 24:BA:1771:C:O2'  | 24:BA:1772:G:H5'   | 2.07                     | 0.53              |
| 24:BA:1786:A:H4'  | 24:BA:1938:A:N6    | 2.10                     | 0.53              |
| 24:BA:1790:C:P    | 27:BD:220:HIS:HB3  | 2.48                     | 0.53              |
| 24:BA:1803:A:C8   | 24:BA:1803:A:OP2   | 2.60                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1820:U:C2'  | 27:BD:202:LYS:CG   | 2.83                     | 0.53              |
| 24:BA:1826:G:H2'  | 24:BA:1827:C:C5'   | 2.36                     | 0.53              |
| 24:BA:2051:A:C3'  | 28:BE:141:ILE:HD11 | 2.38                     | 0.53              |
| 24:BA:2055:C:H2'  | 24:BA:2055:C:O2    | 2.08                     | 0.53              |
| 24:BA:2206:C:C2   | 24:BA:2207:C:C6    | 2.96                     | 0.53              |
| 24:BA:2210:G:C6   | 27:BD:150:LYS:CA   | 2.82                     | 0.53              |
| 24:BA:2215:G:H2'  | 24:BA:2216:G:C8    | 2.44                     | 0.53              |
| 24:BA:2238:G:O2'  | 24:BA:2239:G:C5'   | 2.55                     | 0.53              |
| 24:BA:2263:C:H4'  | 24:BA:2329:G:H4'   | 1.90                     | 0.53              |
| 24:BA:2309:A:N3   | 24:BA:2309:A:C2'   | 2.72                     | 0.53              |
| 24:BA:2393:A:O3'  | 36:BO:57:THR:HA    | 2.08                     | 0.53              |
| 24:BA:2615:U:C2   | 24:BA:2616:C:C5    | 2.97                     | 0.53              |
| 24:BA:2686:G:O2'  | 24:BA:2687:U:H5'   | 2.07                     | 0.53              |
| 24:BA:2789:C:C2'  | 24:BA:2893:G:N2    | 2.70                     | 0.53              |
| 24:BA:2792:G:N1   | 24:BA:2793:G:C5    | 2.77                     | 0.53              |
| 25:BB:50:G:OP1    | 39:BR:63:THR:OG1   | 2.24                     | 0.53              |
| 25:BB:56:G:H4'    | 25:BB:57:A:H5''    | 1.89                     | 0.53              |
| 26:BC:185:LEU:N   | 26:BC:185:LEU:HD23 | 2.23                     | 0.53              |
| 27:BD:5:LYS:HD3   | 27:BD:31:LYS:NZ    | 2.23                     | 0.53              |
| 27:BD:91:ARG:NH2  | 27:BD:198:ASN:CG   | 2.66                     | 0.53              |
| 28:BE:176:ILE:CG2 | 28:BE:181:LEU:O    | 2.56                     | 0.53              |
| 29:BF:201:VAL:CG1 | 29:BF:205:ARG:NH2  | 2.72                     | 0.53              |
| 30:BG:120:LEU:HA  | 30:BG:181:ARG:HG2  | 1.89                     | 0.53              |
| 31:BH:6:ARG:N     | 31:BH:7:LEU:HD23   | 2.22                     | 0.53              |
| 31:BH:117:PRO:HB3 | 31:BH:123:PHE:CE2  | 2.43                     | 0.53              |
| 32:BK:59:ALA:CA   | 32:BK:62:LYS:HD2   | 2.32                     | 0.53              |
| 32:BK:76:THR:HG22 | 32:BK:141:LYS:CD   | 2.38                     | 0.53              |
| 32:BK:78:THR:CA   | 32:BK:79:ILE:HD12  | 2.37                     | 0.53              |
| 32:BK:93:THR:HG22 | 32:BK:96:ASP:OD2   | 2.06                     | 0.53              |
| 32:BK:133:HIS:HB3 | 32:BK:136:VAL:HG23 | 1.91                     | 0.53              |
| 35:BN:31:LYS:HB3  | 35:BN:32:TYR:CE2   | 2.43                     | 0.53              |
| 36:BO:17:LYS:HB2  | 36:BO:17:LYS:HZ2   | 1.74                     | 0.53              |
| 37:BP:81:VAL:CG1  | 37:BP:82:ARG:N     | 2.54                     | 0.53              |
| 38:BQ:26:LYS:HE2  | 38:BQ:70:LEU:HB3   | 1.90                     | 0.53              |
| 39:BR:73:LEU:HD13 | 39:BR:73:LEU:N     | 2.17                     | 0.53              |
| 39:BR:74:ALA:HB1  | 39:BR:108:GLY:HA2  | 1.79                     | 0.53              |
| 40:BS:20:PRO:HB3  | 40:BS:22:PHE:HE1   | 1.73                     | 0.53              |
| 40:BS:93:ARG:HG2  | 40:BS:95:ARG:HH11  | 1.74                     | 0.53              |
| 40:BS:105:LEU:HG  | 40:BS:106:SER:N    | 2.23                     | 0.53              |
| 41:BT:56:ASP:O    | 41:BT:60:LEU:HG    | 2.09                     | 0.53              |
| 41:BT:68:ALA:O    | 41:BT:72:HIS:ND1   | 2.38                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 41:BT:88:ILE:CB   | 42:BU:52:VAL:HG13 | 2.37                     | 0.53              |
| 43:BV:34:ASN:CG   | 43:BV:37:ARG:HH11 | 2.17                     | 0.53              |
| 43:BV:40:ASN:O    | 43:BV:41:LYS:CB   | 2.56                     | 0.53              |
| 43:BV:76:VAL:CG2  | 43:BV:102:HIS:O   | 2.56                     | 0.53              |
| 44:BW:9:LEU:HD12  | 44:BW:9:LEU:H     | 1.72                     | 0.53              |
| 44:BW:31:HIS:CE1  | 44:BW:33:LYS:HB3  | 2.43                     | 0.53              |
| 44:BW:85:PRO:HG2  | 44:BW:87:GLN:CG   | 2.31                     | 0.53              |
| 46:BY:6:LYS:CG    | 46:BY:7:ALA:H     | 2.20                     | 0.53              |
| 47:BZ:59:LEU:HD21 | 47:BZ:79:VAL:HG21 | 1.90                     | 0.53              |
| 48:B1:13:PRO:O    | 48:B1:17:GLU:HG3  | 2.08                     | 0.53              |
| 48:B1:21:ARG:O    | 48:B1:24:LYS:HB2  | 2.08                     | 0.53              |
| 50:B3:5:ILE:O     | 50:B3:6:HIS:CB    | 2.55                     | 0.53              |
| 54:B7:16:ILE:HG22 | 54:B7:57:ARG:HH22 | 1.72                     | 0.53              |
| 1:AA:46:G:C2      | 1:AA:396:G:C6     | 2.96                     | 0.53              |
| 1:AA:81:G:C6      | 1:AA:82:U:O4      | 2.62                     | 0.53              |
| 1:AA:105:G:H2'    | 1:AA:106:C:H6     | 1.69                     | 0.53              |
| 1:AA:130:A:C6     | 1:AA:264:U:H1'    | 2.43                     | 0.53              |
| 1:AA:235:C:OP1    | 19:AT:70:ARG:HG3  | 2.07                     | 0.53              |
| 1:AA:277:C:OP1    | 19:AT:68:ARG:NH1  | 2.41                     | 0.53              |
| 1:AA:292:G:C2     | 1:AA:309:G:C2     | 2.97                     | 0.53              |
| 1:AA:399:G:C4     | 1:AA:400:C:C5     | 2.96                     | 0.53              |
| 1:AA:450:G:H5'    | 18:AS:43:LYS:HZ2  | 1.74                     | 0.53              |
| 1:AA:490:G:H2'    | 1:AA:491:G:H8     | 1.72                     | 0.53              |
| 1:AA:585:G:O2'    | 1:AA:879:C:H5''   | 2.08                     | 0.53              |
| 1:AA:587:G:C2     | 1:AA:755:G:C6     | 2.96                     | 0.53              |
| 1:AA:780:A:OP1    | 13:AN:122:LYS:HA  | 2.08                     | 0.53              |
| 1:AA:992:U:H4'    | 1:AA:993:G:C5'    | 2.39                     | 0.53              |
| 1:AA:994:A:N3     | 16:AQ:5:ALA:HA    | 2.22                     | 0.53              |
| 1:AA:1041:A:C2    | 1:AA:1042:G:C8    | 2.96                     | 0.53              |
| 1:AA:1055:A:N7    | 1:AA:1206:G:C2    | 2.76                     | 0.53              |
| 1:AA:1068:G:N1    | 1:AA:1108:G:H1'   | 2.24                     | 0.53              |
| 1:AA:1157:A:H5''  | 1:AA:1158:C:OP1   | 2.09                     | 0.53              |
| 1:AA:1164:G:H1'   | 1:AA:1173:G:N2    | 2.23                     | 0.53              |
| 1:AA:1321:C:N3    | 21:AV:37:ARG:NH2  | 2.56                     | 0.53              |
| 1:AA:1422:G:C2    | 1:AA:1423:G:C5    | 2.97                     | 0.53              |
| 1:AA:1508:G:H2'   | 1:AA:1509:C:C6    | 2.43                     | 0.53              |
| 2:A1:23:A:H2'     | 2:A1:24:A:C8      | 2.44                     | 0.53              |
| 2:A1:35:U:C6      | 2:A1:35:U:H3'     | 2.43                     | 0.53              |
| 2:A1:37:U:O5'     | 2:A1:37:U:C6      | 2.61                     | 0.53              |
| 3:AD:74:C:OP2     | 50:B3:30:GLU:OE1  | 2.27                     | 0.53              |
| 4:AE:82:ARG:HA    | 4:AE:92:TYR:OH    | 2.08                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:AF:11:ARG:HH12  | 5:AF:180:ALA:N     | 2.05                     | 0.53              |
| 5:AF:29:TYR:HD2   | 5:AF:29:TYR:C      | 2.15                     | 0.53              |
| 5:AF:126:ARG:O    | 5:AF:127:ARG:CB    | 2.56                     | 0.53              |
| 5:AF:151:VAL:HG13 | 5:AF:200:ALA:HB2   | 1.90                     | 0.53              |
| 5:AF:182:ILE:HG22 | 5:AF:183:ASP:N     | 2.23                     | 0.53              |
| 6:AG:106:TYR:CD2  | 6:AG:114:ARG:N     | 2.77                     | 0.53              |
| 6:AG:128:VAL:HG21 | 6:AG:133:VAL:CG2   | 2.38                     | 0.53              |
| 6:AG:179:GLU:O    | 6:AG:181:MET:N     | 2.33                     | 0.53              |
| 7:AH:50:GLU:HB2   | 7:AH:53:LEU:CD2    | 2.38                     | 0.53              |
| 7:AH:78:HIS:CD2   | 7:AH:78:HIS:N      | 2.72                     | 0.53              |
| 8:AI:47:ARG:O     | 20:AU:78:LEU:HD22  | 2.08                     | 0.53              |
| 10:AK:7:ALA:O     | 10:AK:10:LEU:N     | 2.41                     | 0.53              |
| 10:AK:36:LEU:C    | 10:AK:39:LEU:HB2   | 2.33                     | 0.53              |
| 10:AK:69:ARG:NH2  | 10:AK:75:ARG:O     | 2.41                     | 0.53              |
| 11:AL:23:ASN:O    | 11:AL:59:PHE:N     | 2.41                     | 0.53              |
| 11:AL:31:GLN:N    | 11:AL:31:GLN:OE1   | 2.41                     | 0.53              |
| 13:AN:48:ILE:HD12 | 13:AN:63:LEU:CD2   | 2.22                     | 0.53              |
| 13:AN:67:ASP:O    | 13:AN:68:ALA:C     | 2.50                     | 0.53              |
| 17:AR:70:LEU:HD21 | 17:AR:81:LEU:HD13  | 1.90                     | 0.53              |
| 19:AT:4:LYS:O     | 19:AT:5:VAL:CG2    | 2.57                     | 0.53              |
| 19:AT:60:ILE:HD11 | 19:AT:62:SER:HA    | 1.89                     | 0.53              |
| 21:AV:79:THR:HG22 | 21:AV:79:THR:O     | 2.08                     | 0.53              |
| 22:AW:72:LEU:HD13 | 22:AW:77:ALA:CA    | 2.38                     | 0.53              |
| 23:AX:21:TYR:O    | 23:AX:22:ARG:HB2   | 2.08                     | 0.53              |
| 24:BA:70:G:H4'    | 24:BA:71:A:H5''    | 1.89                     | 0.53              |
| 24:BA:107:C:C4'   | 24:BA:293:U:H1'    | 2.32                     | 0.53              |
| 24:BA:154:G:O2'   | 24:BA:155:C:H5'    | 2.07                     | 0.53              |
| 24:BA:201:C:C2'   | 24:BA:202:U:H5'    | 2.37                     | 0.53              |
| 24:BA:243:U:H5'   | 54:B7:5:LYS:NZ     | 2.24                     | 0.53              |
| 24:BA:269:U:N3    | 24:BA:424:G:N1     | 2.56                     | 0.53              |
| 24:BA:616:A:C4'   | 24:BA:617:G:OP1    | 2.54                     | 0.53              |
| 24:BA:624:C:OP2   | 36:BO:105:LEU:HD23 | 2.08                     | 0.53              |
| 24:BA:641:C:H2'   | 24:BA:642:G:C4'    | 2.37                     | 0.53              |
| 24:BA:672:C:H2'   | 24:BA:673:C:C5     | 2.44                     | 0.53              |
| 24:BA:673:C:C4    | 24:BA:808:G:N2     | 2.77                     | 0.53              |
| 24:BA:685:A:H1'   | 24:BA:688:U:O4     | 2.07                     | 0.53              |
| 24:BA:858:U:C6    | 24:BA:859:G:N2     | 2.77                     | 0.53              |
| 24:BA:889:C:H1'   | 24:BA:892:G:N7     | 2.23                     | 0.53              |
| 24:BA:989:G:P     | 49:B2:10:LYS:HZ1   | 2.32                     | 0.53              |
| 24:BA:999:U:O2    | 24:BA:1157:G:C2    | 2.62                     | 0.53              |
| 24:BA:1057:A:H2'  | 24:BA:1058:G:C8    | 2.41                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1291:C:H2'   | 24:BA:1292:U:O4'   | 2.09                     | 0.53              |
| 24:BA:1433:U:O2    | 24:BA:1561:G:N2    | 2.42                     | 0.53              |
| 24:BA:1539:G:O6    | 24:BA:1540:G:C6    | 2.62                     | 0.53              |
| 24:BA:1676:A:N7    | 24:BA:1677:A:N7    | 2.56                     | 0.53              |
| 24:BA:1759:A:H3'   | 24:BA:1759:A:OP2   | 2.08                     | 0.53              |
| 24:BA:1869:G:N3    | 24:BA:1878:G:C6    | 2.77                     | 0.53              |
| 24:BA:1899:G:C8    | 24:BA:1899:G:H3'   | 2.44                     | 0.53              |
| 24:BA:1930:G:O2'   | 24:BA:1931:U:O5'   | 2.26                     | 0.53              |
| 24:BA:1945:G:C4    | 24:BA:1946:U:C5    | 2.97                     | 0.53              |
| 24:BA:2051:A:C2    | 24:BA:2614:A:C6    | 2.97                     | 0.53              |
| 24:BA:2083:G:O2'   | 24:BA:2084:C:H5'   | 2.09                     | 0.53              |
| 24:BA:2128:C:H5''  | 26:BC:218:MET:CE   | 2.28                     | 0.53              |
| 24:BA:2132:U:O2    | 24:BA:2133:G:H5''  | 2.09                     | 0.53              |
| 24:BA:2230:G:N2    | 24:BA:2231:C:C2    | 2.77                     | 0.53              |
| 24:BA:2246:G:N9    | 24:BA:2426:A:C2    | 2.77                     | 0.53              |
| 24:BA:2285:C:O2    | 24:BA:2384:G:N2    | 2.41                     | 0.53              |
| 24:BA:2293:C:H2'   | 24:BA:2294:C:H6    | 1.73                     | 0.53              |
| 24:BA:2412:A:H3'   | 24:BA:2413:G:H8    | 1.74                     | 0.53              |
| 24:BA:2526:G:H1'   | 55:B8:35:ARG:HH12  | 1.74                     | 0.53              |
| 24:BA:2893:G:OP2   | 24:BA:2893:G:C8    | 2.61                     | 0.53              |
| 25:BB:32:C:C3'     | 25:BB:33:G:H8      | 2.21                     | 0.53              |
| 27:BD:40:THR:HG22  | 27:BD:41:GLY:O     | 2.09                     | 0.53              |
| 27:BD:117:VAL:HG22 | 27:BD:129:ASN:OD1  | 2.08                     | 0.53              |
| 27:BD:117:VAL:C    | 27:BD:118:VAL:CG2  | 2.81                     | 0.53              |
| 27:BD:264:LYS:O    | 27:BD:265:PRO:C    | 2.49                     | 0.53              |
| 28:BE:38:THR:HG22  | 28:BE:39:PRO:N     | 2.22                     | 0.53              |
| 28:BE:85:ASN:C     | 28:BE:87:GLU:N     | 2.67                     | 0.53              |
| 29:BF:15:SER:OG    | 29:BF:16:GLY:N     | 2.41                     | 0.53              |
| 29:BF:32:LEU:O     | 29:BF:35:GLU:HB2   | 2.07                     | 0.53              |
| 29:BF:118:ALA:CA   | 29:BF:122:LYS:HB2  | 2.38                     | 0.53              |
| 29:BF:196:LEU:HD22 | 29:BF:199:TRP:CD1  | 2.44                     | 0.53              |
| 29:BF:201:VAL:HG12 | 29:BF:205:ARG:HH21 | 1.73                     | 0.53              |
| 30:BG:56:ALA:HB1   | 30:BG:68:PRO:HG2   | 1.90                     | 0.53              |
| 31:BH:9:ILE:HD13   | 31:BH:73:ALA:HB2   | 1.87                     | 0.53              |
| 31:BH:87:LEU:O     | 31:BH:132:ARG:HB3  | 2.08                     | 0.53              |
| 34:BM:53:VAL:HG11  | 34:BM:123:TYR:HE2  | 1.73                     | 0.53              |
| 34:BM:134:ARG:O    | 34:BM:135:PRO:O    | 2.27                     | 0.53              |
| 36:BO:32:THR:OG1   | 36:BO:35:HIS:CE1   | 2.61                     | 0.53              |
| 36:BO:33:ARG:HG3   | 36:BO:35:HIS:CD2   | 2.43                     | 0.53              |
| 36:BO:99:LEU:HD23  | 36:BO:100:LEU:N    | 2.23                     | 0.53              |
| 37:BP:6:ARG:CZ     | 37:BP:8:LYS:HG3    | 2.39                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 40:BS:17:THR:CB   | 40:BS:20:PRO:CD   | 2.85                     | 0.53              |
| 40:BS:30:VAL:CG2  | 40:BS:32:TYR:CE2  | 2.85                     | 0.53              |
| 42:BU:13:ARG:C    | 42:BU:14:VAL:CG2  | 2.82                     | 0.53              |
| 42:BU:40:LEU:CA   | 42:BU:51:VAL:HG13 | 2.38                     | 0.53              |
| 43:BV:98:LYS:HE2  | 43:BV:99:ARG:C    | 2.32                     | 0.53              |
| 44:BW:32:PRO:O    | 44:BW:33:LYS:CB   | 2.57                     | 0.53              |
| 44:BW:39:ILE:HD12 | 44:BW:54:VAL:HG12 | 1.89                     | 0.53              |
| 45:BX:75:ILE:HG23 | 45:BX:75:ILE:O    | 2.07                     | 0.53              |
| 46:BY:95:PRO:CB   | 46:BY:130:PRO:HA  | 2.39                     | 0.53              |
| 47:BZ:21:LEU:HD11 | 47:BZ:40:GLN:CA   | 2.39                     | 0.53              |
| 47:BZ:23:VAL:HA   | 47:BZ:38:VAL:CG1  | 2.37                     | 0.53              |
| 48:B1:30:LEU:O    | 48:B1:33:GLN:HB2  | 2.09                     | 0.53              |
| 50:B3:42:PHE:H    | 50:B3:58:ARG:HG3  | 1.74                     | 0.53              |
| 51:B4:30:LEU:HD23 | 51:B4:39:MET:SD   | 2.47                     | 0.53              |
| 53:B6:17:GLY:N    | 53:B6:21:ARG:NH2  | 2.45                     | 0.53              |
| 1:AA:33:A:N3      | 14:AO:32:PHE:HZ   | 2.06                     | 0.53              |
| 1:AA:193:C:H2'    | 1:AA:194:C:H6     | 1.73                     | 0.53              |
| 1:AA:275:G:H5'    | 19:AT:14:LYS:HZ2  | 1.68                     | 0.53              |
| 1:AA:290:C:O5'    | 1:AA:290:C:C6     | 2.55                     | 0.53              |
| 1:AA:515:G:H3'    | 1:AA:516:U:H6     | 1.73                     | 0.53              |
| 1:AA:594:G:H2'    | 1:AA:595:G:C1'    | 2.38                     | 0.53              |
| 1:AA:597:G:C5     | 1:AA:644:G:C2     | 2.96                     | 0.53              |
| 1:AA:658:G:O2'    | 1:AA:659:U:H5'    | 2.09                     | 0.53              |
| 1:AA:716:A:C2'    | 1:AA:717:C:H5'    | 2.39                     | 0.53              |
| 1:AA:821:G:O2'    | 1:AA:822:C:C5'    | 2.55                     | 0.53              |
| 1:AA:828:A:C8     | 1:AA:829:G:C8     | 2.97                     | 0.53              |
| 1:AA:969:A:H5'    | 1:AA:970:C:OP2    | 2.08                     | 0.53              |
| 1:AA:1109:C:OP1   | 5:AF:176:HIS:NE2  | 2.42                     | 0.53              |
| 1:AA:1138:G:N1    | 1:AA:1140:C:C5    | 2.77                     | 0.53              |
| 1:AA:1161:C:OP2   | 1:AA:1161:C:H6    | 1.92                     | 0.53              |
| 1:AA:1308:U:O5'   | 15:AP:99:ARG:NH1  | 2.41                     | 0.53              |
| 1:AA:1443:G:O2'   | 1:AA:1446:A:O3'   | 2.27                     | 0.53              |
| 1:AA:1443:G:O2'   | 1:AA:1447:G:P     | 2.66                     | 0.53              |
| 2:A1:25:G:C2      | 2:A1:26:G:H1'     | 2.44                     | 0.53              |
| 3:AC:19:G:H21     | 30:BG:82:LEU:CD1  | 2.19                     | 0.53              |
| 3:AC:21:A:N7      | 3:AC:46:G:C6      | 2.76                     | 0.53              |
| 3:AD:73:A:C2      | 3:AD:74:C:O4'     | 2.61                     | 0.53              |
| 4:AE:99:GLY:HA3   | 4:AE:101:MET:SD   | 2.48                     | 0.53              |
| 4:AE:107:THR:HA   | 4:AE:110:GLN:OE1  | 2.09                     | 0.53              |
| 4:AE:170:GLU:C    | 4:AE:174:VAL:HG23 | 2.34                     | 0.53              |
| 4:AE:175:ARG:HD2  | 4:AE:179:LYS:CE   | 2.38                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 5:AF:17:ASP:OD2    | 5:AF:18:TRP:HZ3    | 1.90                     | 0.53              |
| 5:AF:24:ALA:CB     | 5:AF:32:LEU:HD12   | 2.38                     | 0.53              |
| 5:AF:87:LEU:HD12   | 5:AF:101:LEU:HD11  | 1.91                     | 0.53              |
| 5:AF:114:PRO:HD3   | 5:AF:183:ASP:CG    | 2.34                     | 0.53              |
| 6:AG:6:GLY:O       | 6:AG:8:VAL:CG2     | 2.56                     | 0.53              |
| 6:AG:18:LYS:HE2    | 6:AG:20:TYR:CD2    | 2.44                     | 0.53              |
| 6:AG:118:ARG:NH2   | 6:AG:118:ARG:HG3   | 2.21                     | 0.53              |
| 6:AG:187:ARG:HD2   | 6:AG:188:LEU:H     | 1.73                     | 0.53              |
| 6:AG:200:GLU:CG    | 6:AG:201:GLN:H     | 2.22                     | 0.53              |
| 7:AH:141:GLN:OE1   | 7:AH:141:GLN:CA    | 2.55                     | 0.53              |
| 8:AI:76:ALA:HB1    | 8:AI:80:ARG:CZ     | 2.39                     | 0.53              |
| 9:AJ:76:ARG:HD3    | 9:AJ:156:TRP:CD1   | 2.43                     | 0.53              |
| 10:AK:97:VAL:CG1   | 10:AK:98:LYS:HZ1   | 2.20                     | 0.53              |
| 11:AL:19:LEU:HD22  | 11:AL:59:PHE:CD2   | 2.40                     | 0.53              |
| 11:AL:58:HIS:HD2   | 11:AL:59:PHE:CD1   | 2.25                     | 0.53              |
| 12:AM:6:ILE:HG21   | 12:AM:98:ILE:HG13  | 1.90                     | 0.53              |
| 12:AM:23:ILE:O     | 12:AM:27:ALA:HB3   | 2.08                     | 0.53              |
| 12:AM:24:VAL:CA    | 12:AM:34:VAL:HG21  | 2.35                     | 0.53              |
| 13:AN:50:TYR:CZ    | 13:AN:54:ARG:HB3   | 2.44                     | 0.53              |
| 18:AS:26:ARG:HD2   | 18:AS:31:LYS:H     | 1.73                     | 0.53              |
| 20:AU:29:PHE:CE1   | 20:AU:36:ASN:OD1   | 2.62                     | 0.53              |
| 20:AU:72:ARG:HA    | 20:AU:75:ILE:CD1   | 2.20                     | 0.53              |
| 22:AW:79:ARG:HG3   | 22:AW:79:ARG:HH11  | 1.73                     | 0.53              |
| 24:BA:33:U:O2'     | 24:BA:34:C:C5      | 2.56                     | 0.53              |
| 24:BA:141(A):C:O5' | 24:BA:141(A):C:H6  | 1.92                     | 0.53              |
| 24:BA:155:C:C2     | 24:BA:171:G:N2     | 2.77                     | 0.53              |
| 24:BA:243:U:N3     | 24:BA:244:A:C8     | 2.77                     | 0.53              |
| 24:BA:270(Z):U:O2  | 24:BA:270(Z):U:C2' | 2.56                     | 0.53              |
| 24:BA:446:G:H4'    | 24:BA:449:A:N7     | 2.23                     | 0.53              |
| 24:BA:469:G:C2     | 53:B6:40:TRP:HZ2   | 2.21                     | 0.53              |
| 24:BA:565:C:C1'    | 24:BA:1252:G:O6    | 2.56                     | 0.53              |
| 24:BA:581:C:OP1    | 41:BT:32:PHE:HB2   | 2.09                     | 0.53              |
| 24:BA:608:A:H2'    | 24:BA:609:A:H5'    | 1.90                     | 0.53              |
| 24:BA:805:G:C2'    | 24:BA:806:C:OP1    | 2.53                     | 0.53              |
| 24:BA:834:C:O5'    | 24:BA:834:C:H6     | 1.91                     | 0.53              |
| 24:BA:957:A:OP2    | 37:BP:77:LYS:CD    | 2.46                     | 0.53              |
| 24:BA:989:G:HO2'   | 24:BA:990:A:P      | 2.31                     | 0.53              |
| 24:BA:1048:A:C2    | 24:BA:1049:C:H1'   | 2.44                     | 0.53              |
| 24:BA:1065:U:C3'   | 24:BA:1066:U:H5''  | 2.38                     | 0.53              |
| 24:BA:1483:G:C1'   | 24:BA:1507:A:C2    | 2.90                     | 0.53              |
| 24:BA:1489:U:O2'   | 24:BA:1490:A:OP2   | 2.24                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1499:C:H3'   | 24:BA:1500:G:C8    | 2.43                     | 0.53              |
| 24:BA:1505:C:O2    | 24:BA:1505:C:H2'   | 2.09                     | 0.53              |
| 24:BA:1543:A:N7    | 24:BA:1544:C:H1'   | 2.23                     | 0.53              |
| 24:BA:1624:G:N1    | 24:BA:1625:C:N4    | 2.57                     | 0.53              |
| 24:BA:1640:C:H2'   | 24:BA:1641:A:O4'   | 2.07                     | 0.53              |
| 24:BA:1657:C:N3    | 24:BA:2004:G:N2    | 2.56                     | 0.53              |
| 24:BA:1772:G:H21   | 24:BA:1774:C:C5'   | 2.21                     | 0.53              |
| 24:BA:1801:G:C8    | 24:BA:1801:G:OP1   | 2.61                     | 0.53              |
| 24:BA:1808:U:H2'   | 24:BA:1808:U:O2    | 2.07                     | 0.53              |
| 24:BA:1813:G:H2'   | 24:BA:1813:G:N3    | 2.24                     | 0.53              |
| 24:BA:1820:U:H2'   | 27:BD:202:LYS:HZ3  | 1.74                     | 0.53              |
| 24:BA:1842:G:N3    | 24:BA:1843:C:C6    | 2.77                     | 0.53              |
| 24:BA:1952:A:C4    | 24:BA:1953:A:C2    | 2.96                     | 0.53              |
| 24:BA:2092:U:H5    | 24:BA:2227:A:C6    | 2.26                     | 0.53              |
| 24:BA:2125:G:N2    | 24:BA:2172:U:H5'   | 2.23                     | 0.53              |
| 24:BA:2226:C:O2'   | 24:BA:2227:A:H5'   | 2.08                     | 0.53              |
| 24:BA:2373:G:O2'   | 24:BA:2374:C:C6    | 2.61                     | 0.53              |
| 24:BA:2387:U:C2    | 47:BZ:41:ARG:NH2   | 2.77                     | 0.53              |
| 24:BA:2416:C:OP1   | 36:BO:59:LEU:C     | 2.52                     | 0.53              |
| 24:BA:2421:G:N3    | 24:BA:2422:A:N7    | 2.57                     | 0.53              |
| 24:BA:2545:G:H2'   | 24:BA:2546:U:H5'   | 1.91                     | 0.53              |
| 24:BA:2728:U:H2'   | 24:BA:2729:G:C8    | 2.44                     | 0.53              |
| 24:BA:2731:G:C2    | 24:BA:2732:G:C2    | 2.96                     | 0.53              |
| 24:BA:2813:A:H2'   | 24:BA:2814:C:C6    | 2.43                     | 0.53              |
| 24:BA:2828:C:N3    | 24:BA:2829:C:C5    | 2.76                     | 0.53              |
| 25:BB:62:C:O2      | 25:BB:63:G:C8      | 2.62                     | 0.53              |
| 25:BB:79:C:N4      | 25:BB:80:U:C4      | 2.76                     | 0.53              |
| 25:BB:89:G:C8      | 25:BB:89(A):A:N7   | 2.76                     | 0.53              |
| 26:BC:30:LYS:HD2   | 26:BC:185:LEU:HD11 | 1.91                     | 0.53              |
| 26:BC:113:VAL:HG12 | 26:BC:138:PRO:CG   | 2.38                     | 0.53              |
| 27:BD:5:LYS:O      | 27:BD:27:THR:HG22  | 2.08                     | 0.53              |
| 27:BD:167:GLY:C    | 27:BD:174:ILE:HD13 | 2.33                     | 0.53              |
| 28:BE:4:ILE:CD1    | 28:BE:76:ARG:CZ    | 2.81                     | 0.53              |
| 28:BE:149:ARG:NH1  | 28:BE:150:VAL:O    | 2.40                     | 0.53              |
| 29:BF:122:LYS:HE3  | 29:BF:192:LEU:HB3  | 1.89                     | 0.53              |
| 30:BG:26:GLN:O     | 30:BG:27:ASN:HB2   | 2.09                     | 0.53              |
| 30:BG:33:ARG:NH2   | 30:BG:33:ARG:C     | 2.66                     | 0.53              |
| 30:BG:40:ASN:HD22  | 30:BG:41:GLN:N     | 2.00                     | 0.53              |
| 30:BG:59:GLU:HB3   | 30:BG:152:LEU:HD13 | 1.89                     | 0.53              |
| 32:BK:132:PRO:HD3  | 32:BK:138:ILE:H    | 1.71                     | 0.53              |
| 33:BL:11:GLN:C     | 33:BL:12:LEU:HG    | 2.33                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 33:BL:112:MET:CE  | 33:BL:118:THR:HG22 | 2.39                     | 0.53              |
| 35:BN:1:MET:HG3   | 35:BN:2:ILE:H      | 1.72                     | 0.53              |
| 35:BN:63:VAL:CG2  | 35:BN:80:ASP:O     | 2.57                     | 0.53              |
| 35:BN:94:ARG:HG3  | 35:BN:96:THR:N     | 2.21                     | 0.53              |
| 35:BN:97:ARG:C    | 35:BN:97:ARG:CZ    | 2.79                     | 0.53              |
| 38:BQ:83:ILE:CD1  | 38:BQ:86:ARG:HE    | 2.16                     | 0.53              |
| 41:BT:5:LYS:C     | 41:BT:7:GLY:N      | 2.65                     | 0.53              |
| 42:BU:34:GLU:CA   | 42:BU:62:LEU:O     | 2.50                     | 0.53              |
| 45:BX:71:LYS:H    | 45:BX:71:LYS:CD    | 2.16                     | 0.53              |
| 46:BY:3:TYR:HB3   | 46:BY:61:LEU:HB2   | 1.91                     | 0.53              |
| 46:BY:39:VAL:CG1  | 46:BY:41:LEU:HD23  | 2.38                     | 0.53              |
| 46:BY:117:LEU:O   | 46:BY:174:VAL:HG12 | 2.09                     | 0.53              |
| 46:BY:152:ALA:HB3 | 46:BY:168:GLU:N    | 2.23                     | 0.53              |
| 47:BZ:22:GLY:O    | 47:BZ:38:VAL:CG1   | 2.56                     | 0.53              |
| 48:B1:52:ILE:HG23 | 48:B1:55:LEU:HD22  | 1.90                     | 0.53              |
| 50:B3:12:ALA:N    | 50:B3:40:HIS:NE2   | 2.56                     | 0.53              |
| 53:B6:8:ASN:ND2   | 53:B6:10:ARG:N     | 2.56                     | 0.53              |
| 1:AA:131:C:C4     | 1:AA:232:G:C2      | 2.97                     | 0.53              |
| 1:AA:190:G:H4'    | 1:AA:191(A):G:OP2  | 2.08                     | 0.53              |
| 1:AA:196:A:H1'    | 1:AA:222:U:C1'     | 2.38                     | 0.53              |
| 1:AA:295:C:H2'    | 1:AA:296:U:O5'     | 2.09                     | 0.53              |
| 1:AA:352:C:OP1    | 1:AA:352:C:H6      | 1.92                     | 0.53              |
| 1:AA:465:A:C8     | 1:AA:467:G:C6      | 2.96                     | 0.53              |
| 1:AA:530:G:C6     | 3:AB:35:A:O2'      | 2.53                     | 0.53              |
| 1:AA:637:G:O2'    | 1:AA:638:G:H5'     | 2.09                     | 0.53              |
| 1:AA:736:C:OP1    | 20:AU:72:ARG:NH2   | 2.42                     | 0.53              |
| 1:AA:737:A:H5'    | 8:AI:90:VAL:HG13   | 1.90                     | 0.53              |
| 1:AA:740:U:H2'    | 1:AA:741:G:C8      | 2.42                     | 0.53              |
| 1:AA:979:C:H2'    | 1:AA:980:C:C5'     | 2.38                     | 0.53              |
| 1:AA:1004:A:H3'   | 1:AA:1025:U:C2     | 2.42                     | 0.53              |
| 1:AA:1073:U:H2'   | 1:AA:1074:G:C8     | 2.32                     | 0.53              |
| 1:AA:1101:A:O2'   | 1:AA:1102:A:P      | 2.67                     | 0.53              |
| 1:AA:1191:A:P     | 5:AF:4:LYS:NZ      | 2.81                     | 0.53              |
| 1:AA:1239:A:H5''  | 1:AA:1240:U:OP1    | 2.09                     | 0.53              |
| 1:AA:1284:C:H2'   | 1:AA:1285:A:C8     | 2.44                     | 0.53              |
| 1:AA:1284:C:N3    | 1:AA:1285:A:N6     | 2.56                     | 0.53              |
| 1:AA:1292:U:OP2   | 1:AA:1292:U:H6     | 1.92                     | 0.53              |
| 1:AA:1336:C:O2'   | 1:AA:1337:G:C5     | 2.56                     | 0.53              |
| 1:AA:1440:C:OP2   | 1:AA:1440:C:C6     | 2.62                     | 0.53              |
| 1:AA:1451:A:N3    | 1:AA:1451:A:H2'    | 2.22                     | 0.53              |
| 1:AA:1454:G:H2'   | 1:AA:1455:G:C8     | 2.30                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:AE:54:THR:HG23  | 4:AE:199:TYR:HB3  | 1.89                     | 0.53              |
| 4:AE:77:ALA:O     | 4:AE:78:GLN:C     | 2.51                     | 0.53              |
| 4:AE:79:ASP:O     | 4:AE:83:MET:HG2   | 2.08                     | 0.53              |
| 4:AE:80:ILE:HG12  | 4:AE:212:GLN:HG2  | 1.91                     | 0.53              |
| 4:AE:209:ARG:HD2  | 4:AE:209:ARG:C    | 2.33                     | 0.53              |
| 5:AF:24:ALA:CB    | 5:AF:28:GLN:HE22  | 2.20                     | 0.53              |
| 5:AF:125:GLU:O    | 5:AF:127:ARG:HG3  | 2.09                     | 0.53              |
| 6:AG:78:LEU:HD13  | 6:AG:96:LEU:CB    | 2.38                     | 0.53              |
| 6:AG:143:GLY:CA   | 6:AG:185:PHE:HB3  | 2.33                     | 0.53              |
| 6:AG:161:ASN:O    | 6:AG:165:MET:HB3  | 2.08                     | 0.53              |
| 7:AH:107:ARG:O    | 7:AH:108:ALA:C    | 2.50                     | 0.53              |
| 10:AK:19:VAL:O    | 10:AK:20:TYR:HB2  | 2.09                     | 0.53              |
| 12:AM:39:PRO:O    | 12:AM:40:LEU:CB   | 2.56                     | 0.53              |
| 14:AO:41:ARG:CG   | 14:AO:42:THR:N    | 2.61                     | 0.53              |
| 14:AO:102:ARG:CZ  | 14:AO:109:GLY:C   | 2.82                     | 0.53              |
| 15:AP:81:LEU:HB2  | 15:AP:86:CYS:SG   | 2.49                     | 0.53              |
| 18:AS:14:ASN:OD1  | 18:AS:14:ASN:C    | 2.51                     | 0.53              |
| 19:AT:27:PHE:O    | 19:AT:36:ILE:CD1  | 2.57                     | 0.53              |
| 20:AU:46:GLU:N    | 20:AU:49:LYS:NZ   | 2.56                     | 0.53              |
| 20:AU:71:LYS:O    | 20:AU:72:ARG:C    | 2.51                     | 0.53              |
| 22:AW:91:LEU:HD23 | 22:AW:91:LEU:H    | 1.74                     | 0.53              |
| 24:BA:197:A:H5''  | 24:BA:2068:U:C4   | 2.44                     | 0.53              |
| 24:BA:304:G:C2    | 24:BA:305:U:H1'   | 2.43                     | 0.53              |
| 24:BA:420:C:H2'   | 24:BA:421:U:O4'   | 2.09                     | 0.53              |
| 24:BA:424:G:C2    | 24:BA:425:G:C8    | 2.97                     | 0.53              |
| 24:BA:443:A:N7    | 29:BF:45:ARG:HD3  | 2.23                     | 0.53              |
| 24:BA:454:A:H8    | 24:BA:454:A:H3'   | 1.74                     | 0.53              |
| 24:BA:498:G:C2'   | 24:BA:499:U:H5'   | 2.38                     | 0.53              |
| 24:BA:531:C:H2'   | 24:BA:531:C:O2    | 2.08                     | 0.53              |
| 24:BA:531:C:O2    | 41:BT:28:ARG:CZ   | 2.57                     | 0.53              |
| 24:BA:616:A:H1'   | 29:BF:180:GLY:HA3 | 1.91                     | 0.53              |
| 24:BA:650:C:C4    | 24:BA:651:G:C2    | 2.97                     | 0.53              |
| 24:BA:742:G:C4'   | 24:BA:1675:C:O2'  | 2.56                     | 0.53              |
| 24:BA:780:G:C5    | 24:BA:782:A:N6    | 2.76                     | 0.53              |
| 24:BA:857:C:O2'   | 47:BZ:23:VAL:HB   | 2.09                     | 0.53              |
| 24:BA:875:G:C6    | 24:BA:876:C:C4    | 2.96                     | 0.53              |
| 24:BA:944:G:O2'   | 24:BA:945:A:OP2   | 2.26                     | 0.53              |
| 24:BA:972:G:O4'   | 24:BA:972:G:OP2   | 2.27                     | 0.53              |
| 24:BA:1011:G:C5'  | 24:BA:1012:U:OP2  | 2.57                     | 0.53              |
| 24:BA:1069:A:C6   | 24:BA:1096:A:OP1  | 2.62                     | 0.53              |
| 24:BA:1122:G:C2   | 24:BA:1123:C:C6   | 2.96                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1189:A:H5''  | 36:BO:29:LYS:NZ   | 2.24                     | 0.53              |
| 24:BA:1212:G:O2'   | 24:BA:1213:A:C8   | 2.51                     | 0.53              |
| 24:BA:1322:A:N7    | 24:BA:1323:U:C5   | 2.77                     | 0.53              |
| 24:BA:1568:G:OP2   | 27:BD:61:LEU:CD1  | 2.57                     | 0.53              |
| 24:BA:1655:A:C5'   | 28:BE:113:PHE:C   | 2.82                     | 0.53              |
| 24:BA:1787:A:O2'   | 24:BA:1788:C:H5'  | 2.08                     | 0.53              |
| 24:BA:1842:G:C6    | 24:BA:1901:A:N1   | 2.77                     | 0.53              |
| 24:BA:1858:G:H22   | 24:BA:1884:A:C1'  | 2.22                     | 0.53              |
| 24:BA:1950:G:C5    | 24:BA:1951:U:H5   | 2.27                     | 0.53              |
| 24:BA:2134:A:C6    | 24:BA:2135:A:H2   | 2.26                     | 0.53              |
| 24:BA:2136:C:C2    | 24:BA:2137:C:C6   | 2.97                     | 0.53              |
| 24:BA:2253:G:C4    | 24:BA:2254:C:C5   | 2.97                     | 0.53              |
| 24:BA:2393:A:H2'   | 24:BA:2394:C:O4'  | 2.09                     | 0.53              |
| 24:BA:2506:U:C2'   | 24:BA:2507:C:H5'  | 2.39                     | 0.53              |
| 24:BA:2606:C:H6    | 24:BA:2606:C:C5'  | 2.21                     | 0.53              |
| 24:BA:2618:G:N3    | 24:BA:2619:C:C6   | 2.77                     | 0.53              |
| 24:BA:2630:G:O2'   | 24:BA:2892:A:O2'  | 2.25                     | 0.53              |
| 24:BA:2637:U:H3    | 24:BA:2782:G:N2   | 2.07                     | 0.53              |
| 24:BA:2737:G:H1    | 24:BA:2768:C:N4   | 2.06                     | 0.53              |
| 26:BC:68:LEU:CD2   | 26:BC:69:GLY:N    | 2.69                     | 0.53              |
| 27:BD:133:LEU:HD12 | 27:BD:187:GLY:CA  | 2.39                     | 0.53              |
| 27:BD:240:ALA:O    | 27:BD:241:PRO:O   | 2.26                     | 0.53              |
| 27:BD:267:SER:OG   | 27:BD:268:ARG:N   | 2.40                     | 0.53              |
| 29:BF:156:LEU:O    | 29:BF:176:LEU:O   | 2.26                     | 0.53              |
| 30:BG:8:LYS:HZ1    | 30:BG:103:LEU:HG  | 1.71                     | 0.53              |
| 30:BG:50:ALA:CA    | 30:BG:70:VAL:HG13 | 2.38                     | 0.53              |
| 31:BH:121:ILE:HD11 | 31:BH:123:PHE:CZ  | 2.43                     | 0.53              |
| 32:BK:69:LYS:C     | 32:BK:73:GLU:OE1  | 2.52                     | 0.53              |
| 33:BL:7:VAL:HA     | 33:BL:58:THR:HB   | 1.90                     | 0.53              |
| 33:BL:99:ILE:CG2   | 33:BL:100:THR:H   | 2.19                     | 0.53              |
| 34:BM:66:LYS:C     | 34:BM:69:GLN:OE1  | 2.52                     | 0.53              |
| 35:BN:105:GLU:O    | 35:BN:108:GLU:N   | 2.41                     | 0.53              |
| 36:BO:126:VAL:HB   | 36:BO:146:VAL:H   | 1.74                     | 0.53              |
| 37:BP:46:GLN:HE22  | 37:BP:126:PRO:HG3 | 1.74                     | 0.53              |
| 38:BQ:17:ARG:O     | 38:BQ:18:LEU:C    | 2.52                     | 0.53              |
| 38:BQ:32:GLY:O     | 38:BQ:116:LEU:CD2 | 2.56                     | 0.53              |
| 40:BS:17:THR:C     | 40:BS:19:LEU:N    | 2.64                     | 0.53              |
| 41:BT:48:ALA:CA    | 41:BT:51:LYS:HD2  | 2.38                     | 0.53              |
| 42:BU:14:VAL:CG1   | 42:BU:19:LYS:HE2  | 2.38                     | 0.53              |
| 42:BU:23:GLU:HA    | 42:BU:93:GLU:HB3  | 1.89                     | 0.53              |
| 44:BW:21:PHE:HA    | 44:BW:26:TYR:CD2  | 2.44                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|------------------|--------------------------|-------------------|
| 44:BW:32:PRO:HG3   | 44:BW:77:LYS:HB2 | 1.89                     | 0.53              |
| 46:BY:11:GLU:HG3   | 46:BY:36:LYS:HZ2 | 1.72                     | 0.53              |
| 46:BY:43:GLU:HA    | 46:BY:46:LYS:CD  | 2.38                     | 0.53              |
| 46:BY:87:ASP:N     | 46:BY:87:ASP:OD2 | 2.39                     | 0.53              |
| 46:BY:141:VAL:HG12 | 46:BY:143:GLY:H  | 1.73                     | 0.53              |
| 46:BY:161:VAL:CG1  | 46:BY:162:GLU:N  | 2.72                     | 0.53              |
| 48:B1:14:VAL:HG13  | 48:B1:18:LYS:NZ  | 2.24                     | 0.53              |
| 52:B5:19:ARG:C     | 52:B5:43:CYS:SG  | 2.87                     | 0.53              |
| 53:B6:22:MET:C     | 53:B6:28:ARG:HG2 | 2.33                     | 0.53              |
| 1:AA:67:C:H2'      | 1:AA:68:G:C8     | 2.44                     | 0.53              |
| 1:AA:363:A:N1      | 1:AA:364:A:N3    | 2.57                     | 0.53              |
| 1:AA:424:G:O2'     | 1:AA:425:G:H5'   | 2.09                     | 0.53              |
| 1:AA:498:A:O2'     | 1:AA:500:G:O4'   | 2.26                     | 0.53              |
| 1:AA:521:G:C2      | 1:AA:522:C:C2    | 2.96                     | 0.53              |
| 1:AA:577:G:OP1     | 1:AA:577:G:H8    | 1.91                     | 0.53              |
| 1:AA:593:G:C6      | 1:AA:594:G:C5    | 2.97                     | 0.53              |
| 1:AA:791:G:C8      | 1:AA:792:A:N7    | 2.76                     | 0.53              |
| 1:AA:855:G:O2'     | 1:AA:856:C:H5'   | 2.08                     | 0.53              |
| 1:AA:1072:G:C6     | 1:AA:1104:G:C6   | 2.96                     | 0.53              |
| 1:AA:1251:A:C2     | 1:AA:1354:C:H1'  | 2.43                     | 0.53              |
| 1:AA:1302:U:O2'    | 1:AA:1303:C:P    | 2.67                     | 0.53              |
| 1:AA:1307:U:H2'    | 1:AA:1308:U:O4'  | 2.09                     | 0.53              |
| 1:AA:1418:A:C2'    | 1:AA:1419:G:H5'  | 2.38                     | 0.53              |
| 1:AA:1468:A:H2'    | 1:AA:1469:G:H5'  | 1.89                     | 0.53              |
| 3:AC:5:G:H2'       | 3:AC:6:G:C8      | 2.44                     | 0.53              |
| 3:AC:34:G:H2'      | 3:AC:35:A:H8     | 1.73                     | 0.53              |
| 4:AE:75:LYS:HZ2    | 4:AE:75:LYS:C    | 2.15                     | 0.53              |
| 6:AG:128:VAL:O     | 6:AG:130:GLY:N   | 2.42                     | 0.53              |
| 6:AG:201:GLN:O     | 6:AG:202:LEU:C   | 2.52                     | 0.53              |
| 9:AJ:10:ARG:HB2    | 9:AJ:10:ARG:HH11 | 1.74                     | 0.53              |
| 9:AJ:12:LEU:HD22   | 9:AJ:24:THR:CG2  | 2.38                     | 0.53              |
| 10:AK:41:ARG:HH11  | 10:AK:41:ARG:C   | 2.17                     | 0.53              |
| 10:AK:48:TYR:CD1   | 10:AK:49:GLU:N   | 2.77                     | 0.53              |
| 11:AL:23:ASN:ND2   | 11:AL:24:GLY:N   | 2.57                     | 0.53              |
| 12:AM:30:SER:HB3   | 12:AM:80:LYS:CG  | 2.37                     | 0.53              |
| 12:AM:61:GLU:CG    | 12:AM:62:HIS:H   | 2.19                     | 0.53              |
| 13:AN:40:ILE:N     | 13:AN:40:ILE:CD1 | 2.61                     | 0.53              |
| 13:AN:43:SER:HB3   | 13:AN:64:ALA:HB1 | 1.91                     | 0.53              |
| 13:AN:58:PRO:HB2   | 13:AN:93:GLN:HG3 | 1.91                     | 0.53              |
| 13:AN:78:GLN:CD    | 13:AN:78:GLN:N   | 2.66                     | 0.53              |
| 14:AO:21:LYS:O     | 14:AO:22:SER:O   | 2.27                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 14:AO:32:PHE:HB3  | 14:AO:85:ILE:O    | 2.09                     | 0.53              |
| 14:AO:36:VAL:HG23 | 14:AO:81:SER:O    | 2.08                     | 0.53              |
| 17:AR:36:ILE:HG13 | 17:AR:59:MET:SD   | 2.49                     | 0.53              |
| 17:AR:54:ARG:HD3  | 17:AR:55:GLY:N    | 2.24                     | 0.53              |
| 17:AR:57:LEU:O    | 17:AR:58:MET:C    | 2.52                     | 0.53              |
| 17:AR:79:ARG:HA   | 17:AR:82:ILE:CG1  | 2.38                     | 0.53              |
| 19:AT:7:THR:HG23  | 19:AT:8:GLY:H     | 1.74                     | 0.53              |
| 19:AT:59:ILE:O    | 19:AT:59:ILE:HG23 | 2.08                     | 0.53              |
| 20:AU:26:LEU:CD2  | 20:AU:29:PHE:HB2  | 2.39                     | 0.53              |
| 20:AU:38:GLU:CD   | 20:AU:38:GLU:N    | 2.64                     | 0.53              |
| 20:AU:39:VAL:O    | 20:AU:43:PHE:CE1  | 2.62                     | 0.53              |
| 23:AX:3:LYS:HD2   | 23:AX:14:TRP:HB2  | 1.90                     | 0.53              |
| 24:BA:52:A:C4     | 24:BA:53:A:C8     | 2.97                     | 0.53              |
| 24:BA:67:U:H2'    | 24:BA:68:G:H8     | 1.67                     | 0.53              |
| 24:BA:126:A:C2    | 53:B6:18:PHE:HB3  | 2.44                     | 0.53              |
| 24:BA:140:A:H61   | 24:BA:1596:A:C4'  | 2.20                     | 0.53              |
| 24:BA:143:C:O2    | 24:BA:144:C:C5    | 2.61                     | 0.53              |
| 24:BA:261:G:C4'   | 24:BA:608:A:H2    | 1.99                     | 0.53              |
| 24:BA:265:A:H2'   | 24:BA:266:G:C4'   | 2.39                     | 0.53              |
| 24:BA:292:C:C2'   | 24:BA:293:U:C2    | 2.91                     | 0.53              |
| 24:BA:307:G:N2    | 24:BA:310:A:O4'   | 2.42                     | 0.53              |
| 24:BA:514:A:H2'   | 24:BA:515:A:H5'   | 1.91                     | 0.53              |
| 24:BA:563:G:H2'   | 24:BA:563:G:N3    | 2.23                     | 0.53              |
| 24:BA:648:G:C2'   | 24:BA:649:G:H8    | 2.21                     | 0.53              |
| 24:BA:730:C:H2'   | 24:BA:730:C:O2    | 2.06                     | 0.53              |
| 24:BA:731:C:H2'   | 24:BA:732:C:O5'   | 2.09                     | 0.53              |
| 24:BA:735:A:O5'   | 24:BA:735:A:C8    | 2.57                     | 0.53              |
| 24:BA:848:G:N2    | 24:BA:931:G:N7    | 2.57                     | 0.53              |
| 24:BA:874:G:C2    | 24:BA:904:C:N3    | 2.77                     | 0.53              |
| 24:BA:1069:A:C5'  | 24:BA:1070:A:H3'  | 2.39                     | 0.53              |
| 24:BA:1255:U:C5'  | 24:BA:1256:G:C5'  | 2.69                     | 0.53              |
| 24:BA:1341:U:O2'  | 44:BW:56:THR:O    | 2.20                     | 0.53              |
| 24:BA:1344:G:C5   | 24:BA:1385:G:C8   | 2.97                     | 0.53              |
| 24:BA:1451:C:C3'  | 24:BA:1453:A:H4'  | 2.38                     | 0.53              |
| 24:BA:1475:G:N3   | 24:BA:1475:G:C2'  | 2.71                     | 0.53              |
| 24:BA:1547:C:HO2' | 24:BA:1548:C:H5'  | 1.74                     | 0.53              |
| 24:BA:1632:A:C6   | 24:BA:1633:G:N1   | 2.76                     | 0.53              |
| 24:BA:1691:C:N3   | 24:BA:1697:G:N2   | 2.56                     | 0.53              |
| 24:BA:1752:C:H5'' | 24:BA:2862:G:OP1  | 2.08                     | 0.53              |
| 24:BA:1790:C:N3   | 24:BA:1791:A:N6   | 2.57                     | 0.53              |
| 24:BA:1807:G:N3   | 24:BA:1809:A:H5'  | 2.24                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1829:A:C2    | 24:BA:1830:C:Cl1'  | 2.91                     | 0.53              |
| 24:BA:1911:U:H2'   | 24:BA:1912:A:C5'   | 2.36                     | 0.53              |
| 24:BA:1944:U:O2    | 24:BA:1955:U:H6    | 1.91                     | 0.53              |
| 24:BA:1971:A:H8    | 24:BA:1971:A:C3'   | 2.16                     | 0.53              |
| 24:BA:1996:C:C2    | 24:BA:1997:G:H4'   | 2.44                     | 0.53              |
| 24:BA:2018:G:C2'   | 24:BA:2019:A:O4'   | 2.57                     | 0.53              |
| 24:BA:2155:G:H2'   | 24:BA:2156:G:O5'   | 2.09                     | 0.53              |
| 24:BA:2165:G:C8    | 24:BA:2166:G:C8    | 2.97                     | 0.53              |
| 24:BA:2186:G:N1    | 24:BA:2187:G:O6    | 2.42                     | 0.53              |
| 24:BA:2197:U:C2'   | 24:BA:2198:A:H5''  | 2.39                     | 0.53              |
| 24:BA:2209:C:H2'   | 24:BA:2210:G:C3'   | 2.36                     | 0.53              |
| 24:BA:2230:G:O2'   | 24:BA:2231:C:H5'   | 2.09                     | 0.53              |
| 24:BA:2273:A:C8    | 24:BA:2274:A:O4'   | 2.62                     | 0.53              |
| 24:BA:2286:A:H62   | 52:B5:30:THR:C     | 2.17                     | 0.53              |
| 24:BA:2389:G:C5'   | 24:BA:2390:U:H6    | 2.21                     | 0.53              |
| 24:BA:2415:G:OP1   | 36:BO:61:ARG:CD    | 2.53                     | 0.53              |
| 24:BA:2436:G:O2'   | 24:BA:2437:U:OP1   | 2.27                     | 0.53              |
| 24:BA:2553:G:C6    | 24:BA:2583:G:O2'   | 2.61                     | 0.53              |
| 24:BA:2573:C:H6    | 24:BA:2573:C:O5'   | 1.92                     | 0.53              |
| 24:BA:2617:C:O2'   | 24:BA:2618:G:H5'   | 2.09                     | 0.53              |
| 24:BA:2675:A:H61   | 24:BA:2732:G:H1    | 1.53                     | 0.53              |
| 24:BA:2690:C:C2'   | 24:BA:2691:C:OP2   | 2.56                     | 0.53              |
| 24:BA:2808:U:N1    | 24:BA:2892:A:N6    | 2.57                     | 0.53              |
| 24:BA:2868:A:C4    | 24:BA:2869:G:C8    | 2.97                     | 0.53              |
| 24:BA:2870:C:H2'   | 24:BA:2871:C:O4'   | 2.09                     | 0.53              |
| 24:BA:2882:A:H5''  | 38:BQ:98:LEU:HD21  | 1.91                     | 0.53              |
| 25:BB:12:C:C4      | 47:BZ:74:ARG:O     | 2.62                     | 0.53              |
| 25:BB:48:A:C2      | 25:BB:49:C:C2      | 2.96                     | 0.53              |
| 25:BB:72:G:H5''    | 25:BB:73:A:OP1     | 2.09                     | 0.53              |
| 25:BB:113:C:H2'    | 25:BB:114:G:H8     | 1.74                     | 0.53              |
| 26:BC:7:TYR:CZ     | 26:BC:11:LEU:HD13  | 2.44                     | 0.53              |
| 26:BC:86:ALA:O     | 26:BC:89:ALA:HB3   | 2.09                     | 0.53              |
| 26:BC:89:ALA:HB2   | 26:BC:154:ARG:HH11 | 1.72                     | 0.53              |
| 26:BC:97:GLU:HB3   | 26:BC:126:LYS:HZ2  | 1.74                     | 0.53              |
| 27:BD:112:GLN:N    | 27:BD:115:GLN:HE22 | 2.03                     | 0.53              |
| 27:BD:175:LEU:O    | 27:BD:182:LEU:HD23 | 2.07                     | 0.53              |
| 27:BD:181:GLU:HA   | 27:BD:270:ILE:CB   | 2.39                     | 0.53              |
| 27:BD:183:ARG:HG2  | 27:BD:268:ARG:CD   | 2.37                     | 0.53              |
| 27:BD:196:VAL:HG12 | 27:BD:198:ASN:N    | 2.24                     | 0.53              |
| 28:BE:47:VAL:CG2   | 28:BE:79:ARG:HB2   | 2.35                     | 0.53              |
| 28:BE:176:ILE:CD1  | 28:BE:179:GLU:O    | 2.53                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 29:BF:37:VAL:O     | 29:BF:184:TYR:OH   | 2.27                     | 0.53              |
| 30:BG:47:LYS:NZ    | 30:BG:73:ALA:HB3   | 2.23                     | 0.53              |
| 31:BH:85:LYS:NZ    | 31:BH:142:GLY:CA   | 2.72                     | 0.53              |
| 31:BH:101:ARG:O    | 31:BH:116:GLU:HA   | 2.09                     | 0.53              |
| 31:BH:105:LEU:N    | 31:BH:105:LEU:CD2  | 2.63                     | 0.53              |
| 32:BK:77:LEU:HD12  | 32:BK:142:VAL:HG22 | 1.89                     | 0.53              |
| 32:BK:79:ILE:O     | 32:BK:144:VAL:HG23 | 2.08                     | 0.53              |
| 34:BM:87:LEU:HD23  | 34:BM:88:GLU:CD    | 2.34                     | 0.53              |
| 35:BN:3:GLN:CD     | 35:BN:3:GLN:C      | 2.76                     | 0.53              |
| 35:BN:13:ASN:O     | 35:BN:14:THR:O     | 2.26                     | 0.53              |
| 35:BN:63:VAL:CG1   | 35:BN:99:PHE:CZ    | 2.92                     | 0.53              |
| 35:BN:81:ASP:C     | 35:BN:82:ASN:OD1   | 2.51                     | 0.53              |
| 36:BO:29:LYS:N     | 36:BO:29:LYS:CD    | 2.71                     | 0.53              |
| 36:BO:63:PRO:O     | 36:BO:65:ARG:HG3   | 2.09                     | 0.53              |
| 36:BO:122:PRO:CB   | 36:BO:138:LEU:CA   | 2.87                     | 0.53              |
| 37:BP:7:MET:O      | 37:BP:69:PHE:CE1   | 2.62                     | 0.53              |
| 37:BP:125:LEU:HB3  | 37:BP:126:PRO:HD3  | 1.91                     | 0.53              |
| 39:BR:28:VAL:HB    | 39:BR:101:LEU:HG   | 1.90                     | 0.53              |
| 40:BS:2:ASN:OD1    | 40:BS:3:ARG:N      | 2.36                     | 0.53              |
| 43:BV:36:LEU:CD2   | 43:BV:51:LEU:HD11  | 2.39                     | 0.53              |
| 43:BV:104:THR:HG23 | 43:BV:104:THR:O    | 2.09                     | 0.53              |
| 44:BW:50:LYS:HG3   | 44:BW:85:PRO:HD2   | 1.90                     | 0.53              |
| 45:BX:7:VAL:HG22   | 45:BX:71:LYS:HG3   | 1.88                     | 0.53              |
| 46:BY:62:PRO:O     | 46:BY:64:GLY:N     | 2.41                     | 0.53              |
| 46:BY:163:LEU:HD12 | 46:BY:163:LEU:H    | 1.74                     | 0.53              |
| 46:BY:168:GLU:OE1  | 46:BY:169:GLU:N    | 2.41                     | 0.53              |
| 47:BZ:27:GLU:CA    | 47:BZ:69:PHE:CE1   | 2.92                     | 0.53              |
| 47:BZ:68:GLU:CB    | 47:BZ:80:HIS:C     | 2.81                     | 0.53              |
| 49:B2:17:LYS:HA    | 49:B2:20:LYS:HZ3   | 1.71                     | 0.53              |
| 52:B5:41:PRO:HD2   | 52:B5:47:THR:OG1   | 2.08                     | 0.53              |
| 1:AA:112:G:N2      | 1:AA:113:G:N9      | 2.57                     | 0.53              |
| 1:AA:151:A:N6      | 1:AA:152:A:H2      | 2.06                     | 0.53              |
| 1:AA:166:G:C2      | 1:AA:167:G:C8      | 2.97                     | 0.53              |
| 1:AA:300:A:C2'     | 1:AA:301:G:H5'     | 2.38                     | 0.53              |
| 1:AA:335:C:H1'     | 1:AA:1434:A:H1'    | 1.91                     | 0.53              |
| 1:AA:557:G:C3'     | 1:AA:558:G:C8      | 2.88                     | 0.53              |
| 1:AA:566:G:C4'     | 1:AA:567:G:OP1     | 2.57                     | 0.53              |
| 1:AA:745:C:H2'     | 1:AA:746:A:C8      | 2.44                     | 0.53              |
| 1:AA:875:C:C2'     | 1:AA:876:G:O5'     | 2.56                     | 0.53              |
| 1:AA:900:A:N7      | 1:AA:901:A:N7      | 2.56                     | 0.53              |
| 1:AA:1053:G:N7     | 1:AA:1200:C:OP2    | 2.42                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:1184:G:C2     | 1:AA:1185:G:C5    | 2.97                     | 0.53              |
| 1:AA:1222:G:C2     | 1:AA:1223:C:N3    | 2.76                     | 0.53              |
| 1:AA:1320:C:H5     | 21:AV:37:ARG:CZ   | 2.21                     | 0.53              |
| 1:AA:1386:G:O2'    | 1:AA:1387:G:H5'   | 2.09                     | 0.53              |
| 1:AA:1405:G:O4'    | 1:AA:1519:A:C4'   | 2.56                     | 0.53              |
| 1:AA:1442:G:C6     | 1:AA:1446:A:C6    | 2.97                     | 0.53              |
| 1:AA:1453:G:H2'    | 1:AA:1454:G:C5'   | 2.39                     | 0.53              |
| 2:A1:40:U:C4       | 3:AC:37:A:N1      | 2.77                     | 0.53              |
| 2:A1:52:U:OP2      | 6:AG:50:ARG:HG3   | 2.09                     | 0.53              |
| 3:AC:5:G:H2'       | 3:AC:6:G:H8       | 1.74                     | 0.53              |
| 3:AC:12:U:H6       | 3:AC:12:U:O5'     | 1.92                     | 0.53              |
| 3:AB:8:U:H3'       | 3:AB:13:C:H41     | 1.74                     | 0.53              |
| 3:AB:62:C:O5'      | 3:AB:62:C:H6      | 1.92                     | 0.53              |
| 4:AE:52:GLU:O      | 4:AE:53:ARG:C     | 2.52                     | 0.53              |
| 4:AE:70:PHE:CA     | 4:AE:163:PHE:O    | 2.57                     | 0.53              |
| 4:AE:80:ILE:HB     | 4:AE:208:ILE:HD11 | 1.89                     | 0.53              |
| 4:AE:132:LYS:HZ3   | 4:AE:132:LYS:N    | 2.07                     | 0.53              |
| 5:AF:46:GLU:HB3    | 5:AF:47:LEU:CD2   | 2.38                     | 0.53              |
| 5:AF:136:GLN:HA    | 5:AF:139:GLN:HB2  | 1.91                     | 0.53              |
| 6:AG:94:LEU:HA     | 6:AG:97:LEU:HD11  | 1.89                     | 0.53              |
| 6:AG:173:TRP:CD1   | 6:AG:189:PRO:CB   | 2.91                     | 0.53              |
| 7:AH:112:LEU:O     | 7:AH:113:ALA:C    | 2.52                     | 0.53              |
| 7:AH:149:GLU:O     | 7:AH:152:ARG:N    | 2.42                     | 0.53              |
| 8:AI:79:LEU:HB2    | 8:AI:88:VAL:CG1   | 2.39                     | 0.53              |
| 8:AI:98:LEU:HD21   | 20:AU:28:GLU:HA   | 1.90                     | 0.53              |
| 9:AJ:17:VAL:CG1    | 9:AJ:17:VAL:O     | 2.54                     | 0.53              |
| 9:AJ:56:GLN:H      | 9:AJ:56:GLN:NE2   | 2.07                     | 0.53              |
| 10:AK:103:VAL:HG11 | 10:AK:109:ILE:N   | 2.24                     | 0.53              |
| 10:AK:104:ARG:O    | 10:AK:105:ARG:C   | 2.51                     | 0.53              |
| 17:AR:56:LEU:HD12  | 17:AR:59:MET:HE3  | 1.89                     | 0.53              |
| 19:AT:10:VAL:CG2   | 19:AT:55:ASP:O    | 2.49                     | 0.53              |
| 19:AT:40:LYS:HB3   | 19:AT:42:TYR:HE1  | 1.73                     | 0.53              |
| 21:AV:11:VAL:HG12  | 21:AV:16:LEU:HD11 | 1.91                     | 0.53              |
| 21:AV:47:HIS:H     | 21:AV:62:ILE:HG22 | 1.73                     | 0.53              |
| 22:AW:54:LYS:O     | 22:AW:57:ARG:CB   | 2.56                     | 0.53              |
| 24:BA:126:A:OP1    | 53:B6:17:GLY:CA   | 2.57                     | 0.53              |
| 24:BA:149:A:C5     | 24:BA:150:C:C4    | 2.97                     | 0.53              |
| 24:BA:215:G:HO2'   | 24:BA:216:A:P     | 2.32                     | 0.53              |
| 24:BA:270(J):G:C2  | 24:BA:270(K):C:C2 | 2.97                     | 0.53              |
| 24:BA:447:A:N1     | 24:BA:454:A:N7    | 2.57                     | 0.53              |
| 24:BA:527:C:H2'    | 34:BM:114:ARG:NH1 | 2.23                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:617:G:H2'   | 24:BA:618:G:C8     | 2.43                     | 0.53              |
| 24:BA:648:G:N3    | 24:BA:649:G:N7     | 2.57                     | 0.53              |
| 24:BA:699:A:H1'   | 24:BA:1634:A:N7    | 2.24                     | 0.53              |
| 24:BA:822:U:OP2   | 24:BA:945:A:O3'    | 2.26                     | 0.53              |
| 24:BA:937:U:H2'   | 24:BA:938:G:O4'    | 2.09                     | 0.53              |
| 24:BA:1069:A:N1   | 24:BA:1096:A:OP1   | 2.41                     | 0.53              |
| 24:BA:1256:G:C6   | 24:BA:1257:C:N4    | 2.77                     | 0.53              |
| 24:BA:1559:G:C6   | 24:BA:1560:G:C4'   | 2.91                     | 0.53              |
| 24:BA:1599:C:OP2  | 44:BW:36:LYS:NZ    | 2.41                     | 0.53              |
| 24:BA:1678:G:H22  | 24:BA:1989:G:N2    | 2.05                     | 0.53              |
| 24:BA:1944:U:C1'  | 24:BA:1955:U:H1'   | 2.38                     | 0.53              |
| 24:BA:2132:U:O2   | 24:BA:2134:A:C5    | 2.62                     | 0.53              |
| 24:BA:2278:A:C6   | 24:BA:2279:G:N7    | 2.77                     | 0.53              |
| 24:BA:2348:U:H2'  | 24:BA:2349:G:O5'   | 2.09                     | 0.53              |
| 24:BA:2497:A:O2'  | 24:BA:2498:C:P     | 2.67                     | 0.53              |
| 24:BA:2571:C:O2'  | 28:BE:146:THR:HG23 | 2.08                     | 0.53              |
| 24:BA:2734:A:N7   | 24:BA:2735:G:C4    | 2.76                     | 0.53              |
| 24:BA:2766:G:C2   | 24:BA:2767:C:C5    | 2.96                     | 0.53              |
| 24:BA:2811:G:N2   | 24:BA:2891:G:H1'   | 2.24                     | 0.53              |
| 24:BA:2841:C:C2   | 24:BA:2842:G:C8    | 2.97                     | 0.53              |
| 26:BC:7:TYR:OH    | 26:BC:14:VAL:HG21  | 2.08                     | 0.53              |
| 27:BD:56:GLY:HA3  | 27:BD:214:TRP:HZ3  | 1.74                     | 0.53              |
| 27:BD:72:LYS:CD   | 27:BD:75:ILE:HD12  | 2.38                     | 0.53              |
| 27:BD:168:ARG:HA  | 27:BD:174:ILE:CD1  | 2.39                     | 0.53              |
| 27:BD:176:ARG:HA  | 27:BD:181:GLU:O    | 2.09                     | 0.53              |
| 28:BE:47:VAL:CA   | 28:BE:48:GLN:NE2   | 2.71                     | 0.53              |
| 28:BE:173:VAL:CG2 | 28:BE:183:LEU:O    | 2.54                     | 0.53              |
| 30:BG:99:MET:O    | 30:BG:102:PHE:CB   | 2.57                     | 0.53              |
| 31:BH:137:ASP:HB3 | 31:BH:140:LYS:CD   | 2.39                     | 0.53              |
| 33:BL:23:VAL:HG12 | 33:BL:34:ILE:CA    | 2.34                     | 0.53              |
| 33:BL:72:PRO:HD2  | 33:BL:111:LYS:HE3  | 1.91                     | 0.53              |
| 34:BM:17:ASP:OD1  | 34:BM:17:ASP:C     | 2.51                     | 0.53              |
| 34:BM:23:LEU:HD23 | 34:BM:60:ILE:HG21  | 1.90                     | 0.53              |
| 34:BM:69:GLN:N    | 34:BM:70:LYS:HE2   | 2.24                     | 0.53              |
| 34:BM:122:VAL:CG2 | 34:BM:123:TYR:N    | 2.71                     | 0.53              |
| 35:BN:70:LYS:HB3  | 35:BN:107:ARG:HH12 | 1.73                     | 0.53              |
| 35:BN:103:ALA:O   | 35:BN:105:GLU:N    | 2.42                     | 0.53              |
| 35:BN:121:VAL:O   | 35:BN:122:LEU:CB   | 2.56                     | 0.53              |
| 36:BO:117:GLU:CD  | 36:BO:117:GLU:N    | 2.67                     | 0.53              |
| 37:BP:25:ASP:HB3  | 37:BP:102:VAL:CG1  | 2.35                     | 0.53              |
| 37:BP:137:TYR:HE2 | 46:BY:124:ILE:HD12 | 1.72                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 38:BQ:73:VAL:HB   | 38:BQ:77:ARG:CZ  | 2.39                     | 0.53              |
| 39:BR:29:PHE:C    | 39:BR:30:ARG:HG2 | 2.34                     | 0.53              |
| 40:BS:109:GLU:CD  | 40:BS:110:ILE:H  | 2.17                     | 0.53              |
| 42:BU:6:LYS:N     | 42:BU:12:TYR:HB3 | 2.24                     | 0.53              |
| 44:BW:7:VAL:HB    | 48:B1:28:MET:CG  | 2.38                     | 0.53              |
| 47:BZ:21:LEU:HG   | 47:BZ:22:GLY:N   | 2.17                     | 0.53              |
| 48:B1:30:LEU:HD11 | 48:B1:48:LEU:CD2 | 2.39                     | 0.53              |
| 50:B3:39:CYS:O    | 50:B3:40:HIS:CG  | 2.62                     | 0.53              |
| 50:B3:58:ARG:HG2  | 50:B3:62:ARG:NH2 | 2.24                     | 0.53              |
| 53:B6:5:TRP:CZ3   | 53:B6:12:ARG:NH1 | 2.77                     | 0.53              |
| 1:AA:68:G:H5'     | 1:AA:171:A:O2'   | 2.08                     | 0.53              |
| 1:AA:241:C:C2'    | 1:AA:242:C:O5'   | 2.57                     | 0.53              |
| 1:AA:269:C:H2'    | 1:AA:270:A:C8    | 2.43                     | 0.53              |
| 1:AA:281:G:O2'    | 1:AA:282:A:H8    | 1.92                     | 0.53              |
| 1:AA:382:A:C2'    | 1:AA:383:A:O5'   | 2.57                     | 0.53              |
| 1:AA:574:A:O3'    | 1:AA:575:G:H4'   | 2.06                     | 0.53              |
| 1:AA:739:C:H2'    | 1:AA:740:U:C5'   | 2.40                     | 0.53              |
| 1:AA:754:C:O2     | 1:AA:755:G:H5'   | 2.08                     | 0.53              |
| 1:AA:765:G:H8     | 1:AA:765:G:O5'   | 1.92                     | 0.53              |
| 1:AA:867:G:N2     | 1:AA:868:C:C2    | 2.77                     | 0.53              |
| 1:AA:955:U:N3     | 1:AA:956:U:C5    | 2.77                     | 0.53              |
| 1:AA:980:C:H3'    | 1:AA:981:U:C5    | 2.44                     | 0.53              |
| 1:AA:1150:U:H2'   | 1:AA:1151:A:C8   | 2.44                     | 0.53              |
| 1:AA:1151:A:OP1   | 12:AM:41:PRO:CA  | 2.55                     | 0.53              |
| 1:AA:1189:C:OP1   | 5:AF:5:ILE:HG21  | 2.09                     | 0.53              |
| 1:AA:1223:C:O5'   | 1:AA:1224:G:H5'' | 2.08                     | 0.53              |
| 1:AA:1430:C:C2    | 1:AA:1471:G:N2   | 2.77                     | 0.53              |
| 3:AC:75:C:C2'     | 3:AC:76:A:O3'    | 2.56                     | 0.53              |
| 3:AB:63:G:H1'     | 24:BA:2482:G:H4' | 1.91                     | 0.53              |
| 4:AE:103:THR:O    | 4:AE:104:ASN:CB  | 2.57                     | 0.53              |
| 4:AE:124:SER:C    | 4:AE:126:GLU:N   | 2.67                     | 0.53              |
| 5:AF:28:GLN:C     | 5:AF:30:ARG:HD3  | 2.33                     | 0.53              |
| 5:AF:140:ARG:HB3  | 5:AF:140:ARG:CZ  | 2.38                     | 0.53              |
| 5:AF:179:ARG:O    | 5:AF:179:ARG:HG2 | 2.08                     | 0.53              |
| 6:AG:106:TYR:CE1  | 6:AG:112:VAL:C   | 2.87                     | 0.53              |
| 6:AG:126:ILE:HG21 | 6:AG:133:VAL:O   | 2.08                     | 0.53              |
| 6:AG:128:VAL:HA   | 6:AG:146:ILE:CG2 | 2.39                     | 0.53              |
| 6:AG:129:ASN:ND2  | 6:AG:144:ASP:OD1 | 2.41                     | 0.53              |
| 7:AH:9:LYS:HD2    | 7:AH:111:GLU:OE1 | 2.09                     | 0.53              |
| 7:AH:90:VAL:O     | 7:AH:120:THR:OG1 | 2.16                     | 0.53              |
| 7:AH:95:ALA:O     | 7:AH:96:PRO:O    | 2.28                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 10:AK:18:ARG:H    | 10:AK:18:ARG:CD   | 2.21                     | 0.53              |
| 10:AK:62:TYR:O    | 10:AK:63:LEU:O    | 2.26                     | 0.53              |
| 11:AL:7:THR:O     | 11:AL:83:ARG:CZ   | 2.56                     | 0.53              |
| 11:AL:15:ALA:HB3  | 11:AL:76:ALA:HB3  | 1.88                     | 0.53              |
| 12:AM:23:ILE:CD1  | 12:AM:85:LEU:HB3  | 2.39                     | 0.53              |
| 12:AM:31:GLY:HA2  | 12:AM:81:THR:OG1  | 2.08                     | 0.53              |
| 13:AN:119:CYS:O   | 13:AN:120:ARG:C   | 2.52                     | 0.53              |
| 14:AO:12:ARG:HB3  | 14:AO:12:ARG:HH11 | 1.73                     | 0.53              |
| 14:AO:28:LYS:CE   | 14:AO:33:ARG:HH22 | 2.22                     | 0.53              |
| 14:AO:126:LYS:HE3 | 14:AO:126:LYS:CA  | 2.39                     | 0.53              |
| 17:AR:35:ARG:CZ   | 17:AR:35:ARG:HB3  | 2.37                     | 0.53              |
| 18:AS:81:ARG:HG2  | 18:AS:83:GLU:HG2  | 1.90                     | 0.53              |
| 19:AT:5:VAL:HA    | 19:AT:59:ILE:O    | 2.09                     | 0.53              |
| 20:AU:68:LYS:O    | 20:AU:72:ARG:HG3  | 2.08                     | 0.53              |
| 21:AV:42:PRO:O    | 21:AV:44:MET:N    | 2.42                     | 0.53              |
| 21:AV:64:GLU:HG2  | 21:AV:65:ASN:N    | 2.23                     | 0.53              |
| 23:AX:6:ARG:HG3   | 23:AX:7:ARG:N     | 2.24                     | 0.53              |
| 24:BA:47:C:O5'    | 24:BA:47:C:C6     | 2.55                     | 0.53              |
| 24:BA:48:G:H4'    | 24:BA:52:A:O4'    | 2.09                     | 0.53              |
| 24:BA:61:G:H5'    | 48:B1:45:ILE:CG1  | 2.39                     | 0.53              |
| 24:BA:173:G:H21   | 24:BA:174:C:C1'   | 2.19                     | 0.53              |
| 24:BA:241:A:C8    | 24:BA:243:U:C2    | 2.97                     | 0.53              |
| 24:BA:278:A:H2'   | 24:BA:279:C:C2    | 2.44                     | 0.53              |
| 24:BA:322:A:O2'   | 24:BA:340:A:C5    | 2.62                     | 0.53              |
| 24:BA:350:U:C6    | 24:BA:350:U:OP2   | 2.61                     | 0.53              |
| 24:BA:410:G:C6    | 24:BA:411:G:O6    | 2.62                     | 0.53              |
| 24:BA:445:C:OP1   | 41:BT:2:PRO:HB2   | 2.09                     | 0.53              |
| 24:BA:449:A:O2'   | 29:BF:52:LYS:NZ   | 2.37                     | 0.53              |
| 24:BA:450:G:P     | 29:BF:52:LYS:HD3  | 2.49                     | 0.53              |
| 24:BA:526:A:OP1   | 24:BA:527:C:OP2   | 2.27                     | 0.53              |
| 24:BA:532:A:OP1   | 24:BA:532:A:C4'   | 2.57                     | 0.53              |
| 24:BA:721:C:H2'   | 24:BA:722:A:H8    | 1.73                     | 0.53              |
| 24:BA:733:G:C6    | 24:BA:761:A:C4    | 2.97                     | 0.53              |
| 24:BA:847:U:N3    | 24:BA:933:A:C2    | 2.65                     | 0.53              |
| 24:BA:858:U:H3'   | 24:BA:859:G:N3    | 2.23                     | 0.53              |
| 24:BA:988:A:OP1   | 49:B2:10:LYS:CD   | 2.56                     | 0.53              |
| 24:BA:1058:G:O2'  | 33:BL:116:ASN:HB3 | 2.09                     | 0.53              |
| 24:BA:1065:U:H2'  | 24:BA:1066:U:C5'  | 2.39                     | 0.53              |
| 24:BA:1199:U:C2   | 24:BA:1200:C:C6   | 2.96                     | 0.53              |
| 24:BA:1299:G:N2   | 24:BA:1640:C:OP2  | 2.39                     | 0.53              |
| 24:BA:1568:G:OP2  | 27:BD:61:LEU:HD12 | 2.09                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1582:C:H3'   | 24:BA:1583:A:O4'   | 2.09                     | 0.53              |
| 24:BA:1612:C:H2'   | 53:B6:3:ARG:NH2    | 2.24                     | 0.53              |
| 24:BA:1633:G:N7    | 24:BA:1635:G:N1    | 2.55                     | 0.53              |
| 24:BA:1746:G:H2'   | 24:BA:1747:G:O4'   | 2.10                     | 0.53              |
| 24:BA:1839:G:N7    | 24:BA:1927:A:N3    | 2.56                     | 0.53              |
| 24:BA:1919:A:OP2   | 24:BA:1919:A:C8    | 2.62                     | 0.53              |
| 24:BA:1980:G:C2'   | 24:BA:1981:A:H5''  | 2.39                     | 0.53              |
| 24:BA:1991:U:H2'   | 24:BA:1992:G:OP2   | 2.09                     | 0.53              |
| 24:BA:1993:U:C6    | 24:BA:1993:U:C3'   | 2.92                     | 0.53              |
| 24:BA:2126:A:H4'   | 24:BA:2127:G:O5'   | 2.08                     | 0.53              |
| 24:BA:2166:G:C2    | 24:BA:2172:U:O4    | 2.62                     | 0.53              |
| 24:BA:2191:G:N2    | 24:BA:2192:G:H1'   | 2.24                     | 0.53              |
| 24:BA:2239:G:H3'   | 24:BA:2240:C:C5'   | 2.17                     | 0.53              |
| 24:BA:2305:A:C6    | 30:BG:42:GLY:HA2   | 2.43                     | 0.53              |
| 24:BA:2496:C:OP1   | 37:BP:83:MET:CE    | 2.52                     | 0.53              |
| 24:BA:2505:G:O6    | 24:BA:2576:G:N9    | 2.42                     | 0.53              |
| 24:BA:2521:C:H2'   | 24:BA:2522:U:O5'   | 2.09                     | 0.53              |
| 24:BA:2538:C:H2'   | 24:BA:2539:C:C5    | 2.43                     | 0.53              |
| 24:BA:2546:U:O4'   | 24:BA:2565:A:H2    | 1.92                     | 0.53              |
| 24:BA:2638:G:HO2'  | 24:BA:2639:A:H8    | 1.50                     | 0.53              |
| 24:BA:2768:C:C2    | 24:BA:2769:C:C6    | 2.97                     | 0.53              |
| 24:BA:2809:A:H4'   | 24:BA:2811:G:N7    | 2.23                     | 0.53              |
| 24:BA:2815:C:O2'   | 51:B4:42:PRO:CG    | 2.57                     | 0.53              |
| 24:BA:2845:G:OP1   | 40:BS:57:PHE:O     | 2.27                     | 0.53              |
| 25:BB:33:G:N2      | 25:BB:34:U:C2      | 2.77                     | 0.53              |
| 25:BB:117:G:N3     | 25:BB:118:G:C8     | 2.77                     | 0.53              |
| 27:BD:5:LYS:CE     | 27:BD:31:LYS:NZ    | 2.72                     | 0.53              |
| 27:BD:130:ALA:O    | 27:BD:131:LEU:CD1  | 2.55                     | 0.53              |
| 28:BE:104:VAL:HG13 | 28:BE:197:ILE:C    | 2.33                     | 0.53              |
| 28:BE:151:TYR:OH   | 28:BE:152:LYS:HG3  | 2.08                     | 0.53              |
| 29:BF:158:THR:HG22 | 29:BF:160:ASN:H    | 1.74                     | 0.53              |
| 30:BG:77:ILE:HB    | 30:BG:83:ARG:HH11  | 1.73                     | 0.53              |
| 31:BH:102:ALA:CA   | 31:BH:115:VAL:HG12 | 2.38                     | 0.53              |
| 31:BH:103:LEU:O    | 31:BH:104:GLU:O    | 2.26                     | 0.53              |
| 33:BL:79:ARG:NH1   | 33:BL:87:GLY:N     | 2.56                     | 0.53              |
| 34:BM:88:GLU:H     | 34:BM:88:GLU:CD    | 2.17                     | 0.53              |
| 35:BN:12:ASP:OD1   | 35:BN:12:ASP:N     | 2.42                     | 0.53              |
| 36:BO:90:ARG:N     | 36:BO:125:VAL:HG22 | 2.24                     | 0.53              |
| 36:BO:126:VAL:CB   | 36:BO:146:VAL:H    | 2.22                     | 0.53              |
| 37:BP:35:VAL:CG2   | 37:BP:101:ARG:O    | 2.53                     | 0.53              |
| 37:BP:42:ILE:O     | 37:BP:94:VAL:CG2   | 2.57                     | 0.53              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 37:BP:45:GLN:CA   | 37:BP:48:GLU:HG2  | 2.39                     | 0.53              |
| 37:BP:66:ILE:O    | 37:BP:67:ARG:CB   | 2.57                     | 0.53              |
| 38:BQ:75:LEU:HD23 | 38:BQ:78:LYS:HG2  | 1.91                     | 0.53              |
| 39:BR:28:VAL:CG1  | 39:BR:90:GLY:HA2  | 2.39                     | 0.53              |
| 41:BT:48:ALA:C    | 41:BT:52:ARG:HE   | 2.16                     | 0.53              |
| 41:BT:53:ARG:O    | 41:BT:57:PHE:HD1  | 1.92                     | 0.53              |
| 45:BX:52:SER:O    | 45:BX:53:PRO:C    | 2.48                     | 0.53              |
| 46:BY:43:GLU:CD   | 46:BY:43:GLU:N    | 2.51                     | 0.53              |
| 46:BY:77:ASP:OD1  | 46:BY:78:LYS:HG2  | 2.09                     | 0.53              |
| 48:B1:6:GLU:CD    | 48:B1:6:GLU:N     | 2.66                     | 0.53              |
| 1:AA:57:G:N2      | 1:AA:388:G:N7     | 2.58                     | 0.52              |
| 1:AA:86:U:OP2     | 1:AA:87:A:N1      | 2.42                     | 0.52              |
| 1:AA:112:G:C2'    | 1:AA:113:G:H5'    | 2.39                     | 0.52              |
| 1:AA:250:A:N3     | 1:AA:252:U:C2     | 2.77                     | 0.52              |
| 1:AA:267:C:OP2    | 19:AT:67:LYS:NZ   | 2.34                     | 0.52              |
| 1:AA:407:G:H1'    | 6:AG:119:GLN:OE1  | 2.08                     | 0.52              |
| 1:AA:521:G:OP2    | 14:AO:54:LYS:NZ   | 2.38                     | 0.52              |
| 1:AA:559:A:C8     | 1:AA:561:U:C5     | 2.96                     | 0.52              |
| 1:AA:562:C:H2'    | 14:AO:15:ARG:HB3  | 1.91                     | 0.52              |
| 1:AA:583:A:H2'    | 1:AA:584:G:C8     | 2.44                     | 0.52              |
| 1:AA:585:G:H2'    | 1:AA:586:C:H6     | 1.74                     | 0.52              |
| 1:AA:720:C:H5''   | 20:AU:52:PRO:HB3  | 1.92                     | 0.52              |
| 1:AA:817:C:O2     | 1:AA:817:C:H2'    | 2.09                     | 0.52              |
| 1:AA:886:G:H2'    | 1:AA:887:G:C5'    | 2.39                     | 0.52              |
| 1:AA:922:G:H2'    | 1:AA:923:A:O4'    | 2.09                     | 0.52              |
| 1:AA:1002:G:N2    | 1:AA:1039:C:N4    | 2.58                     | 0.52              |
| 1:AA:1026:G:H2'   | 1:AA:1027:C:C5'   | 2.38                     | 0.52              |
| 1:AA:1039:C:C4    | 1:AA:1040:U:C5    | 2.96                     | 0.52              |
| 1:AA:1073:U:O2'   | 1:AA:1074:G:C5'   | 2.57                     | 0.52              |
| 1:AA:1188:A:C8    | 1:AA:1188:A:OP2   | 2.62                     | 0.52              |
| 1:AA:1202:G:N7    | 12:AM:53:PRO:CB   | 2.72                     | 0.52              |
| 1:AA:1237:C:O4'   | 1:AA:1334:G:N2    | 2.42                     | 0.52              |
| 2:A1:33:U:H2'     | 2:A1:34:U:C5      | 2.44                     | 0.52              |
| 3:AC:72:C:O2'     | 3:AC:73:A:O4'     | 2.24                     | 0.52              |
| 3:AC:76:A:C5      | 24:BA:2585:U:H1'  | 2.43                     | 0.52              |
| 4:AE:50:GLU:CG    | 4:AE:200:ILE:O    | 2.42                     | 0.52              |
| 4:AE:82:ARG:CB    | 4:AE:94:ASN:HD21  | 2.22                     | 0.52              |
| 4:AE:102:LEU:O    | 4:AE:180:LEU:HD13 | 2.09                     | 0.52              |
| 4:AE:173:ALA:HA   | 4:AE:176:GLU:CG   | 2.39                     | 0.52              |
| 4:AE:181:PHE:HE1  | 10:AK:72:PRO:HD2  | 1.73                     | 0.52              |
| 4:AE:193:ASP:CG   | 4:AE:196:LEU:HD11 | 2.34                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 4:AE:234:PRO:CA   | 4:AE:238:LEU:HD13  | 2.38                     | 0.52              |
| 5:AF:11:ARG:O     | 5:AF:12:LEU:C      | 2.52                     | 0.52              |
| 5:AF:12:LEU:CD1   | 5:AF:18:TRP:CH2    | 2.92                     | 0.52              |
| 5:AF:36:ASP:OD2   | 5:AF:57:ILE:HD12   | 2.08                     | 0.52              |
| 5:AF:132:ARG:HB3  | 5:AF:136:GLN:HE22  | 1.73                     | 0.52              |
| 5:AF:134:ILE:HD12 | 5:AF:134:ILE:N     | 2.22                     | 0.52              |
| 6:AG:10:ARG:NH1   | 6:AG:11:LEU:HD23   | 2.23                     | 0.52              |
| 6:AG:51:PRO:O     | 6:AG:52:SER:C      | 2.50                     | 0.52              |
| 7:AH:80:ILE:HD12  | 7:AH:80:ILE:N      | 2.24                     | 0.52              |
| 7:AH:110:LEU:HD22 | 7:AH:139:LEU:HD21  | 1.91                     | 0.52              |
| 7:AH:115:VAL:CG2  | 7:AH:118:ILE:HD12  | 2.36                     | 0.52              |
| 7:AH:151:LEU:HD11 | 10:AK:77:GLU:HB2   | 1.91                     | 0.52              |
| 8:AI:45:LEU:HD23  | 8:AI:59:TYR:CA     | 2.39                     | 0.52              |
| 9:AJ:123:GLU:O    | 9:AJ:124:LEU:C     | 2.50                     | 0.52              |
| 9:AJ:153:HIS:CE1  | 13:AN:58:PRO:CG    | 2.93                     | 0.52              |
| 11:AL:17:VAL:HA   | 11:AL:63:ILE:HG23  | 1.89                     | 0.52              |
| 12:AM:8:LEU:CD1   | 12:AM:16:LEU:HA    | 2.39                     | 0.52              |
| 12:AM:44:VAL:HG22 | 12:AM:66:ARG:HD3   | 1.91                     | 0.52              |
| 13:AN:63:LEU:O    | 13:AN:66:LEU:CB    | 2.56                     | 0.52              |
| 13:AN:128:ALA:O   | 13:AN:129:SER:OXT  | 2.27                     | 0.52              |
| 14:AO:5:PRO:O     | 14:AO:6:THR:CB     | 2.57                     | 0.52              |
| 15:AP:15:VAL:HG11 | 15:AP:34:LEU:CD2   | 2.39                     | 0.52              |
| 15:AP:55:ARG:HH21 | 15:AP:56:LEU:CD2   | 2.17                     | 0.52              |
| 15:AP:64:TRP:HD1  | 15:AP:65:LYS:H     | 1.55                     | 0.52              |
| 15:AP:71:ARG:O    | 15:AP:72:ALA:C     | 2.50                     | 0.52              |
| 19:AT:66:SER:OG   | 19:AT:67:LYS:N     | 2.36                     | 0.52              |
| 21:AV:32:LYS:CB   | 21:AV:50:ALA:HB3   | 2.39                     | 0.52              |
| 22:AW:29:LYS:O    | 22:AW:32:ALA:N     | 2.42                     | 0.52              |
| 23:AX:8:THR:HG22  | 23:AX:21:TYR:CE2   | 2.44                     | 0.52              |
| 24:BA:64:A:O5'    | 24:BA:64:A:C8      | 2.60                     | 0.52              |
| 24:BA:244:A:C6    | 24:BA:245:G:H1'    | 2.44                     | 0.52              |
| 24:BA:422:A:N3    | 24:BA:422:A:C2'    | 2.68                     | 0.52              |
| 24:BA:511:U:C4    | 24:BA:512:G:H1'    | 2.45                     | 0.52              |
| 24:BA:565:C:H5''  | 42:BU:82:ARG:HE    | 1.75                     | 0.52              |
| 24:BA:600:G:H1'   | 29:BF:105:VAL:HG21 | 1.91                     | 0.52              |
| 24:BA:705:A:N7    | 24:BA:727:A:C8     | 2.77                     | 0.52              |
| 24:BA:786:C:C5'   | 24:BA:1780:A:H8    | 2.20                     | 0.52              |
| 24:BA:817:C:O2    | 24:BA:839:U:C5'    | 2.57                     | 0.52              |
| 24:BA:869:G:C6    | 24:BA:909:A:N6     | 2.77                     | 0.52              |
| 24:BA:910:A:O2'   | 24:BA:911:A:H5'    | 2.09                     | 0.52              |
| 24:BA:1006:C:O2'  | 34:BM:106:MET:CB   | 2.54                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1028:A:N6    | 24:BA:1126:A:C8   | 2.73                     | 0.52              |
| 24:BA:1043:C:O2'   | 24:BA:1048:A:O2'  | 2.24                     | 0.52              |
| 24:BA:1062:G:H2'   | 24:BA:1062:G:N3   | 2.24                     | 0.52              |
| 24:BA:1082:U:O5'   | 24:BA:1082:U:H6   | 1.92                     | 0.52              |
| 24:BA:1101:U:H2'   | 24:BA:1102:C:H6   | 1.73                     | 0.52              |
| 24:BA:1151:G:C5'   | 41:BT:81:HIS:NE2  | 2.63                     | 0.52              |
| 24:BA:1520:U:C3'   | 24:BA:1520:U:C6   | 2.92                     | 0.52              |
| 24:BA:1746:G:C6    | 24:BA:1747:G:C5   | 2.97                     | 0.52              |
| 24:BA:1784:A:C4'   | 24:BA:1785:A:C8   | 2.92                     | 0.52              |
| 24:BA:1818:U:C5    | 27:BD:156:ALA:HB3 | 2.42                     | 0.52              |
| 24:BA:1818:U:OP1   | 27:BD:158:ALA:HA  | 2.08                     | 0.52              |
| 24:BA:1913:A:N3    | 24:BA:1916:A:H2   | 2.07                     | 0.52              |
| 24:BA:1949:G:C5    | 24:BA:1950:G:C8   | 2.96                     | 0.52              |
| 24:BA:2095:C:H2'   | 24:BA:2096:U:O4'  | 2.08                     | 0.52              |
| 24:BA:2196:C:H2'   | 24:BA:2196:C:O2   | 2.08                     | 0.52              |
| 24:BA:2232:U:H2'   | 24:BA:2233:U:C5'  | 2.39                     | 0.52              |
| 24:BA:2244:U:C1'   | 24:BA:2434:A:C6   | 2.89                     | 0.52              |
| 24:BA:2468:G:H8    | 24:BA:2476:A:N1   | 2.06                     | 0.52              |
| 24:BA:2505:G:O6    | 24:BA:2576:G:C8   | 2.63                     | 0.52              |
| 24:BA:2657:A:N3    | 24:BA:2665:A:N3   | 2.57                     | 0.52              |
| 24:BA:2740:A:C6    | 24:BA:2764:A:C4   | 2.97                     | 0.52              |
| 24:BA:2893:G:O2'   | 24:BA:2894:G:O4'  | 2.17                     | 0.52              |
| 25:BB:28:C:O5'     | 25:BB:28:C:C6     | 2.57                     | 0.52              |
| 25:BB:43:C:H2'     | 25:BB:44:G:H5''   | 1.91                     | 0.52              |
| 26:BC:52:ARG:CG    | 26:BC:53:ARG:HG3  | 2.38                     | 0.52              |
| 26:BC:116:THR:HG23 | 26:BC:149:ILE:HB  | 1.88                     | 0.52              |
| 26:BC:131:LEU:O    | 26:BC:134:ARG:HB2 | 2.08                     | 0.52              |
| 26:BC:134:ARG:HD3  | 26:BC:136:LEU:CD1 | 2.38                     | 0.52              |
| 27:BD:6:PHE:C      | 27:BD:28:GLU:OE1  | 2.52                     | 0.52              |
| 27:BD:226:MET:O    | 27:BD:227:ASN:C   | 2.53                     | 0.52              |
| 27:BD:230:ASP:O    | 27:BD:232:PRO:N   | 2.41                     | 0.52              |
| 29:BF:39:TRP:HZ3   | 29:BF:43:LYS:HD2  | 1.74                     | 0.52              |
| 30:BG:147:ASP:O    | 30:BG:148:MET:CB  | 2.56                     | 0.52              |
| 31:BH:164:TYR:HD2  | 31:BH:166:GLY:H   | 1.56                     | 0.52              |
| 32:BK:32:PRO:CG    | 32:BK:33:ARG:N    | 2.53                     | 0.52              |
| 33:BL:10:LEU:HD11  | 33:BL:41:PHE:CE1  | 2.44                     | 0.52              |
| 33:BL:75:SER:OG    | 33:BL:130:SER:HB2 | 2.09                     | 0.52              |
| 34:BM:58:ASP:O     | 34:BM:59:LYS:C    | 2.52                     | 0.52              |
| 34:BM:66:LYS:O     | 34:BM:67:LEU:O    | 2.27                     | 0.52              |
| 34:BM:89:LYS:H     | 34:BM:89:LYS:HE3  | 1.63                     | 0.52              |
| 34:BM:104:LYS:O    | 34:BM:105:GLY:C   | 2.52                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 35:BN:6:THR:CA     | 35:BN:7:TYR:HD1    | 2.21                     | 0.52              |
| 36:BO:8:PRO:O      | 36:BO:9:ASN:O      | 2.27                     | 0.52              |
| 36:BO:37:GLY:O     | 36:BO:40:SER:HB3   | 2.10                     | 0.52              |
| 36:BO:52:GLU:OE1   | 54:B7:52:LYS:HE2   | 2.09                     | 0.52              |
| 36:BO:114:ILE:HB   | 36:BO:131:SER:H    | 1.73                     | 0.52              |
| 36:BO:114:ILE:HG23 | 36:BO:122:PRO:O    | 2.09                     | 0.52              |
| 36:BO:123:LEU:HB3  | 36:BO:130:PHE:CE1  | 2.44                     | 0.52              |
| 37:BP:35:VAL:HA    | 37:BP:101:ARG:O    | 2.09                     | 0.52              |
| 38:BQ:61:HIS:O     | 38:BQ:62:ALA:C     | 2.51                     | 0.52              |
| 38:BQ:100:LEU:O    | 51:B4:44:THR:CG2   | 2.57                     | 0.52              |
| 40:BS:2:ASN:CG     | 40:BS:3:ARG:H      | 2.08                     | 0.52              |
| 40:BS:23:ARG:CZ    | 40:BS:88:ILE:O     | 2.57                     | 0.52              |
| 40:BS:28:VAL:HG13  | 40:BS:92:GLY:N     | 2.24                     | 0.52              |
| 40:BS:57:PHE:HA    | 40:BS:61:PHE:HD2   | 1.72                     | 0.52              |
| 40:BS:113:LYS:O    | 40:BS:114:LEU:O    | 2.27                     | 0.52              |
| 42:BU:67:GLY:HA2   | 42:BU:93:GLU:C     | 2.34                     | 0.52              |
| 44:BW:5:TYR:O      | 44:BW:7:VAL:N      | 2.42                     | 0.52              |
| 45:BX:13:VAL:HA    | 45:BX:73:ARG:NH1   | 2.23                     | 0.52              |
| 45:BX:13:VAL:HG23  | 45:BX:14:LEU:N     | 2.24                     | 0.52              |
| 46:BY:78:LYS:CE    | 46:BY:84:GLU:OE2   | 2.55                     | 0.52              |
| 46:BY:98:MET:HE2   | 46:BY:133:ILE:CG1  | 2.39                     | 0.52              |
| 46:BY:99:TYR:CD1   | 46:BY:126:VAL:HG23 | 2.44                     | 0.52              |
| 50:B3:24:THR:O     | 50:B3:25:TYR:HD2   | 1.91                     | 0.52              |
| 54:B7:50:LEU:C     | 54:B7:53:PRO:HD2   | 2.33                     | 0.52              |
| 1:AA:29:G:H4'      | 1:AA:295:C:O3'     | 2.10                     | 0.52              |
| 1:AA:36:C:O3'      | 14:AO:123:LYS:HA   | 2.09                     | 0.52              |
| 1:AA:80:G:C2       | 1:AA:81:G:H1'      | 2.44                     | 0.52              |
| 1:AA:132:C:O2'     | 1:AA:133:U:O4'     | 2.26                     | 0.52              |
| 1:AA:230:G:C2      | 1:AA:231:G:C4      | 2.98                     | 0.52              |
| 1:AA:283:C:O2      | 1:AA:284:G:O4'     | 2.28                     | 0.52              |
| 1:AA:563:A:H1'     | 1:AA:566:G:C2'     | 2.39                     | 0.52              |
| 1:AA:657:G:C6      | 1:AA:658:G:N7      | 2.76                     | 0.52              |
| 1:AA:675:A:N1      | 1:AA:716:A:C2      | 2.77                     | 0.52              |
| 1:AA:775:G:N3      | 1:AA:776:G:C8      | 2.77                     | 0.52              |
| 1:AA:889:A:OP1     | 1:AA:891:U:H1'     | 2.09                     | 0.52              |
| 1:AA:1418:A:C2     | 24:BA:1959:G:H1'   | 2.43                     | 0.52              |
| 3:AC:16:U:O5'      | 3:AC:16:U:H6       | 1.91                     | 0.52              |
| 3:AC:24:G:C4       | 3:AC:25:C:C5       | 2.98                     | 0.52              |
| 3:AC:76:A:C8       | 3:AC:76:A:C3'      | 2.93                     | 0.52              |
| 3:AB:55:U:OP1      | 46:BY:178:GLU:OE2  | 2.26                     | 0.52              |
| 4:AE:61:LEU:HD23   | 4:AE:62:ALA:H      | 1.72                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:AE:186:ALA:O    | 4:AE:201:ILE:HD13 | 2.09                     | 0.52              |
| 4:AE:208:ILE:HD12 | 4:AE:239:VAL:HG11 | 1.90                     | 0.52              |
| 5:AF:14:ILE:CG2   | 5:AF:179:ARG:HA   | 2.30                     | 0.52              |
| 6:AG:30:LYS:CA    | 6:AG:34:GLU:HB3   | 2.39                     | 0.52              |
| 6:AG:104:VAL:O    | 6:AG:105:VAL:C    | 2.52                     | 0.52              |
| 7:AH:60:TYR:HD1   | 7:AH:64:ARG:HD2   | 1.73                     | 0.52              |
| 8:AI:62:TRP:CG    | 20:AU:35:ARG:HH12 | 2.27                     | 0.52              |
| 9:AJ:38:LEU:C     | 9:AJ:41:ARG:HB2   | 2.34                     | 0.52              |
| 9:AJ:72:ARG:HG2   | 9:AJ:142:GLU:CD   | 2.33                     | 0.52              |
| 9:AJ:125:MET:O    | 9:AJ:126:ASP:C    | 2.52                     | 0.52              |
| 11:AL:50:LEU:CD2  | 11:AL:51:ARG:NH1  | 2.72                     | 0.52              |
| 11:AL:79:LEU:HD22 | 11:AL:101:PHE:HD2 | 1.74                     | 0.52              |
| 12:AM:24:VAL:O    | 12:AM:28:ARG:HG3  | 2.09                     | 0.52              |
| 13:AN:22:HIS:CD2  | 13:AN:22:HIS:C    | 2.87                     | 0.52              |
| 14:AO:43:VAL:CG1  | 14:AO:44:THR:N    | 2.72                     | 0.52              |
| 15:AP:22:ILE:HB   | 15:AP:25:ILE:HD11 | 1.90                     | 0.52              |
| 19:AT:29:HIS:CG   | 19:AT:30:PRO:HD2  | 2.45                     | 0.52              |
| 19:AT:65:ILE:O    | 19:AT:69:LYS:O    | 2.27                     | 0.52              |
| 20:AU:61:LYS:HB3  | 20:AU:62:GLU:OE1  | 2.09                     | 0.52              |
| 22:AW:33:ILE:HD11 | 22:AW:62:LEU:O    | 2.10                     | 0.52              |
| 24:BA:247:G:H1    | 54:B7:11:LYS:NZ   | 2.07                     | 0.52              |
| 24:BA:320:A:H3'   | 29:BF:136:THR:OG1 | 2.09                     | 0.52              |
| 24:BA:506:G:C2'   | 24:BA:507:A:OP2   | 2.57                     | 0.52              |
| 24:BA:556:G:C2'   | 24:BA:557:U:O5'   | 2.57                     | 0.52              |
| 24:BA:563:G:N2    | 24:BA:564:C:N3    | 2.57                     | 0.52              |
| 24:BA:595:C:C2    | 24:BA:596:G:C8    | 2.98                     | 0.52              |
| 24:BA:602:G:O2'   | 24:BA:603:A:OP2   | 2.24                     | 0.52              |
| 24:BA:712:G:C4    | 24:BA:713:G:C8    | 2.97                     | 0.52              |
| 24:BA:818:G:C2'   | 24:BA:819:A:H5''  | 2.39                     | 0.52              |
| 24:BA:837:C:O2'   | 24:BA:838:C:H5'   | 2.08                     | 0.52              |
| 24:BA:880:G:H2'   | 24:BA:881:G:O4'   | 2.09                     | 0.52              |
| 24:BA:886:C:H5''  | 24:BA:887:A:H5'   | 1.91                     | 0.52              |
| 24:BA:954:G:C2'   | 24:BA:955:C:H5'   | 2.39                     | 0.52              |
| 24:BA:1013:C:P    | 24:BA:1142:U:O2   | 2.67                     | 0.52              |
| 24:BA:1023:U:C2   | 24:BA:1024:G:H4'  | 2.44                     | 0.52              |
| 24:BA:1044:G:H22  | 24:BA:1111:A:H4'  | 1.69                     | 0.52              |
| 24:BA:1137:G:C5   | 24:BA:1138:G:H1'  | 2.45                     | 0.52              |
| 24:BA:1194:A:C6   | 24:BA:1195:G:N7   | 2.78                     | 0.52              |
| 24:BA:1250:G:C4'  | 41:BT:6:THR:HG21  | 2.39                     | 0.52              |
| 24:BA:1266:G:O4'  | 43:BV:15:ARG:NH2  | 2.43                     | 0.52              |
| 24:BA:1363:C:H42  | 50:B3:2:LYS:HE2   | 1.63                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1524:G:C5    | 24:BA:1525:G:N7    | 2.77                     | 0.52              |
| 24:BA:1753:G:C8    | 24:BA:1753:G:H3'   | 2.43                     | 0.52              |
| 24:BA:1789:A:C8    | 24:BA:1790:C:C5    | 2.97                     | 0.52              |
| 24:BA:1812:A:C4    | 24:BA:1813:G:C8    | 2.97                     | 0.52              |
| 24:BA:1819:A:O2'   | 24:BA:1820:U:H5'   | 2.09                     | 0.52              |
| 24:BA:1861:G:H2'   | 24:BA:1862:G:C5'   | 2.39                     | 0.52              |
| 24:BA:1889:A:N1    | 24:BA:1890:A:C6    | 2.78                     | 0.52              |
| 24:BA:1944:U:H1'   | 24:BA:1955:U:H1'   | 1.90                     | 0.52              |
| 24:BA:2095:C:O2'   | 24:BA:2096:U:H5'   | 2.08                     | 0.52              |
| 24:BA:2136:C:H2'   | 24:BA:2137:C:O4'   | 2.09                     | 0.52              |
| 24:BA:2226:C:C2    | 27:BD:262:ARG:NH2  | 2.77                     | 0.52              |
| 24:BA:2259:G:H5'   | 24:BA:2427:C:C3'   | 2.38                     | 0.52              |
| 24:BA:2305:A:C3'   | 24:BA:2306:C:H5''  | 2.39                     | 0.52              |
| 24:BA:2311:A:H2    | 30:BG:45:GLU:CG    | 2.22                     | 0.52              |
| 24:BA:2312:U:C2    | 24:BA:2313:C:C5    | 2.97                     | 0.52              |
| 24:BA:2406:U:OP2   | 24:BA:2411:A:N6    | 2.34                     | 0.52              |
| 24:BA:2413:G:H2'   | 24:BA:2414:G:O4'   | 2.09                     | 0.52              |
| 24:BA:2415:G:C5'   | 36:BO:61:ARG:HD2   | 2.37                     | 0.52              |
| 24:BA:2431:U:O2'   | 24:BA:2432:A:H8    | 1.92                     | 0.52              |
| 24:BA:2459:A:N3    | 24:BA:2460:U:C2'   | 2.72                     | 0.52              |
| 24:BA:2497:A:H1'   | 24:BA:2498:C:C4    | 2.44                     | 0.52              |
| 24:BA:2588:G:N1    | 24:BA:2607:G:C6    | 2.77                     | 0.52              |
| 24:BA:2649:U:O2'   | 24:BA:2650:U:H5'   | 2.08                     | 0.52              |
| 24:BA:2717:G:O2'   | 24:BA:2718:G:O5'   | 2.16                     | 0.52              |
| 24:BA:2718:G:C6    | 24:BA:2719:G:C5    | 2.97                     | 0.52              |
| 24:BA:2753:A:H2'   | 24:BA:2753:A:N3    | 2.25                     | 0.52              |
| 24:BA:2771:C:C2    | 24:BA:2772:C:C5    | 2.97                     | 0.52              |
| 24:BA:2773:C:H2'   | 24:BA:2774:C:C6    | 2.44                     | 0.52              |
| 24:BA:2787:C:O2'   | 28:BE:61:ARG:NH2   | 2.42                     | 0.52              |
| 24:BA:2815:C:H4'   | 51:B4:42:PRO:CG    | 2.36                     | 0.52              |
| 25:BB:65:C:C2      | 25:BB:108:C:N4     | 2.77                     | 0.52              |
| 26:BC:97:GLU:HG2   | 26:BC:122:ALA:CB   | 2.34                     | 0.52              |
| 27:BD:29:PRO:C     | 27:BD:31:LYS:H     | 2.17                     | 0.52              |
| 27:BD:106:ILE:HG13 | 27:BD:108:PRO:CD   | 2.37                     | 0.52              |
| 27:BD:208:LYS:O    | 27:BD:211:ARG:HB2  | 2.09                     | 0.52              |
| 28:BE:4:ILE:O      | 28:BE:4:ILE:CG1    | 2.55                     | 0.52              |
| 28:BE:36:ARG:HB3   | 28:BE:41:LYS:CB    | 2.38                     | 0.52              |
| 28:BE:51:PHE:CD1   | 28:BE:51:PHE:C     | 2.87                     | 0.52              |
| 28:BE:109:LYS:H    | 28:BE:191:PRO:HD3  | 1.74                     | 0.52              |
| 28:BE:176:ILE:O    | 28:BE:176:ILE:HD13 | 2.08                     | 0.52              |
| 28:BE:185:LYS:HD3  | 28:BE:185:LYS:O    | 2.09                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 30:BG:19:LEU:HA    | 30:BG:22:ARG:CG    | 2.38                     | 0.52              |
| 30:BG:121:ASN:CG   | 30:BG:133:LEU:HD21 | 2.34                     | 0.52              |
| 30:BG:148:MET:HB3  | 30:BG:151:ALA:CB   | 2.39                     | 0.52              |
| 32:BK:111:PRO:O    | 32:BK:114:LEU:HG   | 2.09                     | 0.52              |
| 33:BL:65:PHE:CD1   | 33:BL:65:PHE:O     | 2.62                     | 0.52              |
| 33:BL:112:MET:SD   | 33:BL:115:LEU:CD1  | 2.97                     | 0.52              |
| 34:BM:47:ALA:O     | 34:BM:48:MET:C     | 2.51                     | 0.52              |
| 35:BN:2:ILE:HB     | 35:BN:32:TYR:HA    | 1.91                     | 0.52              |
| 35:BN:106:LEU:HD21 | 40:BS:38:ASN:ND2   | 2.25                     | 0.52              |
| 36:BO:72:PRO:O     | 36:BO:111:ARG:CB   | 2.56                     | 0.52              |
| 36:BO:81:GLN:C     | 36:BO:86:LYS:CG    | 2.83                     | 0.52              |
| 37:BP:44:ALA:N     | 37:BP:94:VAL:HB    | 2.24                     | 0.52              |
| 38:BQ:25:ALA:CA    | 38:BQ:48:VAL:HG22  | 2.39                     | 0.52              |
| 38:BQ:26:LYS:HE2   | 38:BQ:70:LEU:CB    | 2.39                     | 0.52              |
| 38:BQ:57:ARG:HE    | 38:BQ:62:ALA:CB    | 2.17                     | 0.52              |
| 39:BR:13:ARG:NH2   | 39:BR:90:GLY:O     | 2.43                     | 0.52              |
| 39:BR:38:GLN:CD    | 39:BR:40:ILE:HD11  | 2.33                     | 0.52              |
| 40:BS:30:VAL:O     | 40:BS:49:VAL:HA    | 2.09                     | 0.52              |
| 41:BT:61:TRP:CZ3   | 41:BT:93:LYS:C     | 2.87                     | 0.52              |
| 42:BU:59:ALA:O     | 42:BU:60:GLU:OE2   | 2.26                     | 0.52              |
| 42:BU:79:VAL:CB    | 42:BU:81:TYR:HD1   | 2.23                     | 0.52              |
| 43:BV:19:LEU:CB    | 51:B4:25:LEU:HD13  | 2.14                     | 0.52              |
| 43:BV:87:PRO:C     | 43:BV:94:ASP:OD1   | 2.52                     | 0.52              |
| 46:BY:149:SER:OG   | 46:BY:173:ALA:HB2  | 2.10                     | 0.52              |
| 47:BZ:40:GLN:O     | 47:BZ:57:PHE:HB3   | 2.09                     | 0.52              |
| 50:B3:50:VAL:C     | 50:B3:51:ASP:CG    | 2.76                     | 0.52              |
| 52:B5:42:TRP:CD1   | 52:B5:42:TRP:C     | 2.87                     | 0.52              |
| 53:B6:11:LYS:HD2   | 53:B6:15:THR:HG23  | 1.90                     | 0.52              |
| 54:B7:25:MET:HE3   | 54:B7:44:LYS:HE2   | 1.91                     | 0.52              |
| 54:B7:42:ARG:C     | 54:B7:43:GLN:CD    | 2.77                     | 0.52              |
| 1:AA:14:U:C6       | 1:AA:16:A:OP2      | 2.62                     | 0.52              |
| 1:AA:160:A:C2      | 1:AA:343:U:H1'     | 2.45                     | 0.52              |
| 1:AA:250:A:N3      | 1:AA:252:U:N3      | 2.57                     | 0.52              |
| 1:AA:320:C:O2'     | 1:AA:321:A:H5'     | 2.10                     | 0.52              |
| 1:AA:386:C:C4      | 1:AA:387:U:C5      | 2.98                     | 0.52              |
| 1:AA:620:C:C6      | 1:AA:621:A:C8      | 2.98                     | 0.52              |
| 1:AA:657:G:O2'     | 1:AA:658:G:H5'     | 2.09                     | 0.52              |
| 1:AA:671:G:C2      | 1:AA:672:U:C2      | 2.98                     | 0.52              |
| 1:AA:702:A:HO2'    | 1:AA:703:G:P       | 2.32                     | 0.52              |
| 1:AA:857:C:C2      | 1:AA:858:G:C1'     | 2.92                     | 0.52              |
| 1:AA:899:C:H2'     | 1:AA:900:A:O4'     | 2.09                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:AA:923:A:OP1   | 7:AH:21:ALA:CB    | 2.55                     | 0.52              |
| 1:AA:944:G:H2'   | 1:AA:945:G:H5''   | 1.89                     | 0.52              |
| 1:AA:952:U:HO2'  | 15:AP:126:LYS:C   | 2.17                     | 0.52              |
| 1:AA:952:U:H1'   | 15:AP:126:LYS:O   | 2.09                     | 0.52              |
| 1:AA:960:U:N3    | 1:AA:1225:A:C5    | 2.75                     | 0.52              |
| 1:AA:976:G:C2    | 1:AA:1362:C:C2    | 2.96                     | 0.52              |
| 1:AA:1005:A:C6   | 1:AA:1026:G:N2    | 2.76                     | 0.52              |
| 1:AA:1056:U:H5'  | 5:AF:163:ALA:HB3  | 1.90                     | 0.52              |
| 1:AA:1113:C:C2   | 1:AA:1114:C:C5    | 2.97                     | 0.52              |
| 1:AA:1157:A:C6   | 1:AA:1180:A:C5    | 2.97                     | 0.52              |
| 1:AA:1215:G:N2   | 1:AA:1216:G:C8    | 2.78                     | 0.52              |
| 1:AA:1238:A:N7   | 1:AA:1301:U:O4    | 2.41                     | 0.52              |
| 1:AA:1251:A:N6   | 1:AA:1285:A:H2    | 2.06                     | 0.52              |
| 1:AA:1252:A:C5   | 1:AA:1253:G:C8    | 2.98                     | 0.52              |
| 1:AA:1263:C:O2'  | 1:AA:1264:C:H5'   | 2.09                     | 0.52              |
| 1:AA:1321:C:C6   | 1:AA:1321:C:H3'   | 2.44                     | 0.52              |
| 1:AA:1376:U:C2   | 1:AA:1377:A:N7    | 2.77                     | 0.52              |
| 1:AA:1520:G:O2'  | 1:AA:1521:G:H8    | 1.92                     | 0.52              |
| 2:A1:37:U:O5'    | 2:A1:37:U:H6      | 1.93                     | 0.52              |
| 3:AC:11:C:C2     | 3:AC:12:U:C5      | 2.97                     | 0.52              |
| 3:AB:26:A:OP1    | 3:AB:27:G:OP2     | 2.27                     | 0.52              |
| 4:AE:35:GLU:O    | 4:AE:36:ARG:NH2   | 2.43                     | 0.52              |
| 4:AE:42:ILE:HG23 | 4:AE:43:ASP:N     | 2.24                     | 0.52              |
| 4:AE:50:GLU:O    | 4:AE:51:LEU:C     | 2.53                     | 0.52              |
| 4:AE:84:GLU:CD   | 4:AE:234:PRO:HD2  | 2.34                     | 0.52              |
| 4:AE:166:ASP:O   | 4:AE:169:LYS:HD3  | 2.09                     | 0.52              |
| 5:AF:48:TYR:CD2  | 5:AF:48:TYR:C     | 2.87                     | 0.52              |
| 5:AF:52:LEU:CA   | 5:AF:70:VAL:HG22  | 2.27                     | 0.52              |
| 5:AF:177:THR:O   | 5:AF:179:ARG:N    | 2.42                     | 0.52              |
| 6:AG:170:VAL:H   | 6:AG:176:LEU:CD2  | 2.16                     | 0.52              |
| 6:AG:193:ASP:C   | 6:AG:194:LEU:HD22 | 2.34                     | 0.52              |
| 11:AL:7:THR:O    | 11:AL:83:ARG:NH1  | 2.42                     | 0.52              |
| 13:AN:29:ILE:O   | 13:AN:29:ILE:HG13 | 2.10                     | 0.52              |
| 14:AO:16:GLU:OE1 | 14:AO:17:LYS:O    | 2.27                     | 0.52              |
| 14:AO:69:TYR:O   | 14:AO:100:ILE:CD1 | 2.57                     | 0.52              |
| 14:AO:82:VAL:O   | 14:AO:83:VAL:HB   | 2.09                     | 0.52              |
| 15:AP:27:LYS:O   | 15:AP:29:ARG:N    | 2.39                     | 0.52              |
| 17:AR:64:ARG:O   | 17:AR:67:LEU:HB2  | 2.09                     | 0.52              |
| 17:AR:79:ARG:HG2 | 17:AR:82:ILE:HD12 | 1.91                     | 0.52              |
| 18:AS:14:ASN:HA  | 18:AS:42:ARG:NH2  | 2.25                     | 0.52              |
| 19:AT:66:SER:HB3 | 19:AT:69:LYS:HB3  | 1.91                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 21:AV:44:MET:O     | 21:AV:62:ILE:HG21 | 2.08                     | 0.52              |
| 22:AW:81:LYS:HB3   | 22:AW:85:MET:CE   | 2.36                     | 0.52              |
| 22:AW:85:MET:O     | 22:AW:86:ARG:C    | 2.52                     | 0.52              |
| 24:BA:5:A:C4       | 24:BA:6:A:C8      | 2.97                     | 0.52              |
| 24:BA:253:C:O2'    | 24:BA:254:G:H5'   | 2.09                     | 0.52              |
| 24:BA:265:A:C6     | 24:BA:428:A:N7    | 2.76                     | 0.52              |
| 24:BA:278:A:N7     | 24:BA:359:A:C2    | 2.77                     | 0.52              |
| 24:BA:306:U:O4     | 24:BA:310:A:N7    | 2.43                     | 0.52              |
| 24:BA:360:G:H2'    | 24:BA:361:G:C4'   | 2.38                     | 0.52              |
| 24:BA:428:A:H5'    | 24:BA:429:A:OP2   | 2.09                     | 0.52              |
| 24:BA:464:U:N3     | 24:BA:465:G:C6    | 2.78                     | 0.52              |
| 24:BA:502:A:C8     | 24:BA:502:A:C3'   | 2.92                     | 0.52              |
| 24:BA:629:G:H5'    | 24:BA:649:G:H21   | 1.75                     | 0.52              |
| 24:BA:636:G:C4'    | 24:BA:638:G:O2'   | 2.56                     | 0.52              |
| 24:BA:714:U:C2'    | 24:BA:715:G:C8    | 2.88                     | 0.52              |
| 24:BA:788:A:H4'    | 24:BA:789:A:O5'   | 2.09                     | 0.52              |
| 24:BA:942:G:H1'    | 24:BA:1189:A:C2   | 2.44                     | 0.52              |
| 24:BA:945:A:C2'    | 24:BA:946:G:O5'   | 2.56                     | 0.52              |
| 24:BA:1085:A:O2'   | 24:BA:1086:A:P    | 2.68                     | 0.52              |
| 24:BA:1142(A):A:N3 | 24:BA:1143:A:H5'' | 2.24                     | 0.52              |
| 24:BA:1152:C:O4'   | 41:BT:77:SER:HA   | 2.09                     | 0.52              |
| 24:BA:1227:A:H3'   | 24:BA:1228:G:H5'' | 1.92                     | 0.52              |
| 24:BA:1227:A:C8    | 24:BA:1228:G:H5'' | 2.45                     | 0.52              |
| 24:BA:1242:A:H3'   | 24:BA:1243:G:C8   | 2.45                     | 0.52              |
| 24:BA:1243:G:C2    | 24:BA:1244:G:C4   | 2.98                     | 0.52              |
| 24:BA:1315:C:O2    | 24:BA:1392:A:C2   | 2.62                     | 0.52              |
| 24:BA:1326:U:H2'   | 24:BA:1326:U:O2   | 2.09                     | 0.52              |
| 24:BA:1449(A):G:C6 | 24:BA:1450:C:N4   | 2.78                     | 0.52              |
| 24:BA:1451:C:H2'   | 24:BA:1457:A:C6   | 2.43                     | 0.52              |
| 24:BA:1462:C:H4'   | 24:BA:2703:C:OP1  | 2.10                     | 0.52              |
| 24:BA:1472:A:N7    | 24:BA:1474:C:N4   | 2.56                     | 0.52              |
| 24:BA:1608:A:C4'   | 24:BA:1609:A:OP1  | 2.56                     | 0.52              |
| 24:BA:1655:A:C3'   | 24:BA:1656:C:H6   | 2.22                     | 0.52              |
| 24:BA:1670:C:O2'   | 24:BA:1671:U:H5'  | 2.09                     | 0.52              |
| 24:BA:1672:C:C2'   | 24:BA:1673:U:H5'' | 2.38                     | 0.52              |
| 24:BA:1712:C:C2'   | 24:BA:1716:U:H6   | 2.22                     | 0.52              |
| 24:BA:1832:C:H2'   | 24:BA:1833:U:C5'  | 2.37                     | 0.52              |
| 24:BA:2004:G:C8    | 24:BA:2005:A:C8   | 2.97                     | 0.52              |
| 24:BA:2057:A:H2'   | 24:BA:2058:A:C8   | 2.38                     | 0.52              |
| 24:BA:2069:G:O2'   | 24:BA:2070:G:H5'  | 2.10                     | 0.52              |
| 24:BA:2078:C:H2'   | 24:BA:2079:U:C6   | 2.44                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2166:G:H2'   | 24:BA:2167:U:C6    | 2.43                     | 0.52              |
| 24:BA:2205:C:H2'   | 24:BA:2206:C:H6    | 1.74                     | 0.52              |
| 24:BA:2376:A:C2    | 24:BA:2377:A:H1'   | 2.44                     | 0.52              |
| 24:BA:2468:G:O2'   | 24:BA:2469:A:H8    | 1.93                     | 0.52              |
| 24:BA:2481:G:HO2'  | 24:BA:2482:G:H8    | 1.57                     | 0.52              |
| 24:BA:2688:U:O2'   | 24:BA:2689:U:OP2   | 2.25                     | 0.52              |
| 24:BA:2720:U:H3'   | 24:BA:2721:A:H8    | 1.73                     | 0.52              |
| 24:BA:2821:A:H3'   | 24:BA:2821:A:P     | 2.49                     | 0.52              |
| 24:BA:2833:G:O4'   | 24:BA:2833:G:OP1   | 2.28                     | 0.52              |
| 24:BA:2849:U:C2'   | 24:BA:2850:A:OP2   | 2.57                     | 0.52              |
| 25:BB:11:C:H3'     | 47:BZ:74:ARG:NH1   | 2.24                     | 0.52              |
| 25:BB:24:G:C8      | 25:BB:24:G:O5'     | 2.62                     | 0.52              |
| 25:BB:32:C:C2'     | 25:BB:33:G:H8      | 2.22                     | 0.52              |
| 26:BC:29:VAL:CG1   | 26:BC:30:LYS:N     | 2.71                     | 0.52              |
| 26:BC:59:ARG:HH11  | 26:BC:59:ARG:CB    | 2.23                     | 0.52              |
| 27:BD:10:THR:H     | 27:BD:23:GLU:CD    | 2.14                     | 0.52              |
| 27:BD:33:LEU:HD12  | 27:BD:61:LEU:HD21  | 1.91                     | 0.52              |
| 27:BD:79:VAL:HB    | 27:BD:114:GLY:H    | 1.73                     | 0.52              |
| 27:BD:89:SER:C     | 27:BD:159:ALA:HB2  | 2.34                     | 0.52              |
| 27:BD:144:ALA:O    | 27:BD:145:VAL:O    | 2.27                     | 0.52              |
| 28:BE:27:LEU:CD1   | 28:BE:76:ARG:HH12  | 2.21                     | 0.52              |
| 28:BE:49:LEU:CD1   | 28:BE:50:GLY:N     | 2.73                     | 0.52              |
| 28:BE:152:LYS:HE2  | 34:BM:77:GLY:O     | 2.08                     | 0.52              |
| 28:BE:154:LYS:C    | 28:BE:154:LYS:CD   | 2.80                     | 0.52              |
| 28:BE:202:LYS:C    | 28:BE:204:ALA:N    | 2.64                     | 0.52              |
| 29:BF:64:ILE:HD13  | 29:BF:64:ILE:C     | 2.33                     | 0.52              |
| 29:BF:77:ASP:OD1   | 29:BF:77:ASP:C     | 2.52                     | 0.52              |
| 29:BF:80:ALA:HB3   | 29:BF:83:PHE:CE2   | 2.44                     | 0.52              |
| 29:BF:153:SER:OG   | 29:BF:190:GLU:CG   | 2.56                     | 0.52              |
| 29:BF:157:VAL:O    | 29:BF:158:THR:HB   | 2.07                     | 0.52              |
| 30:BG:26:GLN:HE22  | 30:BG:31:VAL:HG22  | 1.74                     | 0.52              |
| 30:BG:34:LEU:O     | 30:BG:34:LEU:HD12  | 2.09                     | 0.52              |
| 30:BG:114:ILE:O    | 30:BG:117:PHE:HB2  | 2.09                     | 0.52              |
| 31:BH:65:HIS:O     | 31:BH:66:GLY:C     | 2.53                     | 0.52              |
| 31:BH:146:ALA:O    | 31:BH:147:ASN:C    | 2.52                     | 0.52              |
| 31:BH:149:ARG:HD3  | 31:BH:153:LYS:HE3  | 1.91                     | 0.52              |
| 31:BH:156:ALA:HA   | 31:BH:171:LEU:HD22 | 1.92                     | 0.52              |
| 33:BL:10:LEU:HD11  | 33:BL:41:PHE:HZ    | 1.70                     | 0.52              |
| 33:BL:18:THR:N     | 33:BL:38:VAL:HG21  | 2.25                     | 0.52              |
| 33:BL:24:GLY:HA2   | 33:BL:34:ILE:HG23  | 1.90                     | 0.52              |
| 33:BL:115:LEU:HD12 | 33:BL:118:THR:HG22 | 1.91                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 33:BL:131:ALA:HB1 | 33:BL:136:VAL:CB   | 2.39                     | 0.52              |
| 34:BM:42:TRP:C    | 34:BM:43:THR:OG1   | 2.51                     | 0.52              |
| 34:BM:73:THR:OG1  | 34:BM:83:LYS:HD3   | 2.09                     | 0.52              |
| 35:BN:68:GLU:HG2  | 35:BN:76:ALA:CA    | 2.39                     | 0.52              |
| 36:BO:16:ARG:HG2  | 36:BO:19:VAL:CG1   | 2.39                     | 0.52              |
| 36:BO:49:ARG:HH22 | 54:B7:55:ALA:HB2   | 1.74                     | 0.52              |
| 37:BP:74:TYR:HD2  | 37:BP:74:TYR:H     | 1.54                     | 0.52              |
| 39:BR:35:ILE:O    | 39:BR:36:TYR:CB    | 2.58                     | 0.52              |
| 40:BS:64:ARG:NH1  | 40:BS:78:LEU:H     | 2.07                     | 0.52              |
| 40:BS:108:ARG:O   | 40:BS:109:GLU:C    | 2.52                     | 0.52              |
| 41:BT:89:GLU:C    | 41:BT:90:VAL:HG23  | 2.35                     | 0.52              |
| 45:BX:35:TYR:CD1  | 45:BX:64:GLU:O     | 2.62                     | 0.52              |
| 46:BY:5:LEU:HB2   | 46:BY:23:LYS:NZ    | 2.24                     | 0.52              |
| 46:BY:68:PRO:HB2  | 46:BY:131:ARG:HH12 | 1.75                     | 0.52              |
| 46:BY:69:THR:HG1  | 46:BY:89:PHE:C     | 2.14                     | 0.52              |
| 46:BY:100:VAL:O   | 46:BY:124:ILE:CG2  | 2.56                     | 0.52              |
| 47:BZ:26:TYR:O    | 47:BZ:29:GLN:OE1   | 2.27                     | 0.52              |
| 48:B1:54:ARG:O    | 48:B1:57:THR:N     | 2.42                     | 0.52              |
| 49:B2:19:GLN:HE22 | 49:B2:50:VAL:HA    | 1.73                     | 0.52              |
| 50:B3:20:ASN:HB2  | 50:B3:30:GLU:CG    | 2.39                     | 0.52              |
| 50:B3:21:VAL:O    | 50:B3:22:ILE:HB    | 2.09                     | 0.52              |
| 52:B5:50:ARG:CZ   | 52:B5:52:VAL:CG2   | 2.83                     | 0.52              |
| 1:AA:261:U:C4     | 1:AA:264:U:OP2     | 2.62                     | 0.52              |
| 1:AA:286:G:H2'    | 1:AA:287:U:H6      | 1.73                     | 0.52              |
| 1:AA:321:A:C6     | 1:AA:322:C:N4      | 2.78                     | 0.52              |
| 1:AA:321:A:C2     | 1:AA:322:C:C4      | 2.98                     | 0.52              |
| 1:AA:551:U:O2'    | 14:AO:86:ARG:HD2   | 2.09                     | 0.52              |
| 1:AA:587:G:C2     | 1:AA:755:G:C5      | 2.98                     | 0.52              |
| 1:AA:587:G:H4'    | 10:AK:3:THR:O      | 2.09                     | 0.52              |
| 1:AA:591:U:H2'    | 1:AA:592:G:H8      | 1.72                     | 0.52              |
| 1:AA:758:G:H2'    | 1:AA:759:A:OP2     | 2.10                     | 0.52              |
| 1:AA:811:C:H3'    | 1:AA:811:C:C6      | 2.43                     | 0.52              |
| 1:AA:828:A:C2'    | 1:AA:829:G:O5'     | 2.57                     | 0.52              |
| 1:AA:857:C:N3     | 1:AA:858:G:H1'     | 2.25                     | 0.52              |
| 1:AA:918:A:H2'    | 1:AA:919:A:H8      | 1.69                     | 0.52              |
| 1:AA:953:G:O2'    | 1:AA:954:G:H5'     | 2.09                     | 0.52              |
| 1:AA:993:G:C6     | 1:AA:1046:A:C6     | 2.97                     | 0.52              |
| 1:AA:1083:U:H3'   | 1:AA:1084:G:H8     | 1.74                     | 0.52              |
| 1:AA:1192:C:N4    | 1:AA:1193:G:N7     | 2.57                     | 0.52              |
| 1:AA:1210:C:O2'   | 1:AA:1214:C:N3     | 2.38                     | 0.52              |
| 1:AA:1262:C:C2    | 1:AA:1263:C:C5     | 2.98                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:AC:2:C:O5'      | 3:AC:2:C:H6       | 1.92                     | 0.52              |
| 4:AE:95:GLN:CD    | 4:AE:148:TYR:HB3  | 2.35                     | 0.52              |
| 5:AF:110:ASN:HD21 | 5:AF:140:ARG:CD   | 2.22                     | 0.52              |
| 6:AG:159:ARG:HD2  | 6:AG:163:GLU:CD   | 2.34                     | 0.52              |
| 6:AG:168:ARG:CD   | 6:AG:168:ARG:N    | 2.69                     | 0.52              |
| 7:AH:9:LYS:HB2    | 7:AH:33:VAL:CB    | 2.32                     | 0.52              |
| 7:AH:117:ASP:O    | 7:AH:118:ILE:HG13 | 2.09                     | 0.52              |
| 8:AI:41:GLU:HG2   | 8:AI:42:GLU:N     | 2.24                     | 0.52              |
| 9:AJ:69:VAL:CB    | 9:AJ:135:VAL:HG22 | 2.39                     | 0.52              |
| 9:AJ:119:ARG:O    | 9:AJ:120:ILE:C    | 2.52                     | 0.52              |
| 9:AJ:150:ALA:HB2  | 13:AN:59:TYR:CD2  | 2.45                     | 0.52              |
| 10:AK:49:GLU:O    | 10:AK:49:GLU:OE1  | 2.28                     | 0.52              |
| 11:AL:106:ALA:O   | 11:AL:107:ARG:CG  | 2.53                     | 0.52              |
| 12:AM:79:ARG:HD3  | 12:AM:80:LYS:N    | 2.24                     | 0.52              |
| 12:AM:87:THR:O    | 12:AM:87:THR:HG22 | 2.09                     | 0.52              |
| 13:AN:57:THR:OG1  | 13:AN:59:TYR:CB   | 2.57                     | 0.52              |
| 15:AP:91:ARG:O    | 15:AP:96:LEU:HD23 | 2.09                     | 0.52              |
| 17:AR:55:GLY:O    | 17:AR:56:LEU:C    | 2.51                     | 0.52              |
| 17:AR:70:LEU:CG   | 17:AR:78:TYR:CD1  | 2.88                     | 0.52              |
| 22:AW:100:ILE:C   | 22:AW:102:GLY:H   | 2.14                     | 0.52              |
| 24:BA:71:A:H2     | 24:BA:73:A:N1     | 2.06                     | 0.52              |
| 24:BA:149:A:C2'   | 24:BA:150:C:H5'   | 2.37                     | 0.52              |
| 24:BA:195:A:H4'   | 24:BA:251:A:C4'   | 2.40                     | 0.52              |
| 24:BA:209:C:C6    | 24:BA:209:C:O5'   | 2.62                     | 0.52              |
| 24:BA:247:G:O2'   | 24:BA:386:G:N2    | 2.42                     | 0.52              |
| 24:BA:263:C:O2    | 24:BA:264:C:O4'   | 2.27                     | 0.52              |
| 24:BA:281:G:N3    | 24:BA:281:G:C2'   | 2.72                     | 0.52              |
| 24:BA:458:G:N7    | 53:B6:38:GLY:HA2  | 2.24                     | 0.52              |
| 24:BA:599:G:H5'   | 29:BF:31:HIS:NE2  | 2.24                     | 0.52              |
| 24:BA:638:G:C8    | 24:BA:638:G:C3'   | 2.91                     | 0.52              |
| 24:BA:672:C:C6    | 36:BO:38:GLN:CD   | 2.88                     | 0.52              |
| 24:BA:687:C:H4'   | 53:B6:4:THR:CG2   | 2.40                     | 0.52              |
| 24:BA:730:C:H5'   | 24:BA:761:A:OP1   | 2.10                     | 0.52              |
| 24:BA:736:C:C4    | 24:BA:737:C:C5    | 2.97                     | 0.52              |
| 24:BA:809:G:O4'   | 24:BA:1254:A:H1'  | 2.10                     | 0.52              |
| 24:BA:833:U:H2'   | 24:BA:834:C:C6    | 2.44                     | 0.52              |
| 24:BA:957:A:N6    | 24:BA:959:A:C5    | 2.77                     | 0.52              |
| 24:BA:969:U:H6    | 24:BA:969:U:O5'   | 1.92                     | 0.52              |
| 24:BA:1072:C:OP2  | 24:BA:1073:A:OP1  | 2.26                     | 0.52              |
| 24:BA:1076:C:C4'  | 33:BL:93:ARG:NH2  | 2.71                     | 0.52              |
| 24:BA:1080:C:H4'  | 33:BL:125:ARG:O   | 2.10                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1085:A:H5''  | 24:BA:1104:C:O2'   | 2.09                     | 0.52              |
| 24:BA:1100:C:C2'   | 24:BA:1101:U:OP1   | 2.58                     | 0.52              |
| 24:BA:1249:U:C4    | 36:BO:21:ARG:CZ    | 2.92                     | 0.52              |
| 24:BA:1290:C:C2    | 24:BA:1291:C:C5    | 2.98                     | 0.52              |
| 24:BA:1363:C:C2    | 24:BA:1369:G:N1    | 2.78                     | 0.52              |
| 24:BA:1378:A:O2'   | 24:BA:1379:A:P     | 2.67                     | 0.52              |
| 24:BA:1528:A:N7    | 24:BA:1529:A:C6    | 2.78                     | 0.52              |
| 24:BA:1567:A:N1    | 27:BD:85:ASP:N     | 2.57                     | 0.52              |
| 24:BA:1754:C:H2'   | 24:BA:1755:A:C1'   | 2.38                     | 0.52              |
| 24:BA:1912:A:C2    | 24:BA:1919:A:N3    | 2.77                     | 0.52              |
| 24:BA:1954:G:C2'   | 24:BA:1956:U:C4    | 2.93                     | 0.52              |
| 24:BA:1992:G:C1'   | 24:BA:1993:U:H5    | 2.19                     | 0.52              |
| 24:BA:2239:G:H4'   | 27:BD:249:PRO:HG3  | 1.91                     | 0.52              |
| 24:BA:2297:C:H2'   | 24:BA:2298:A:H8    | 1.73                     | 0.52              |
| 24:BA:2309:A:N3    | 24:BA:2309:A:H2'   | 2.24                     | 0.52              |
| 24:BA:2385:C:C2'   | 24:BA:2386:C:O5'   | 2.58                     | 0.52              |
| 24:BA:2393:A:H5''  | 36:BO:56:SER:HA    | 1.87                     | 0.52              |
| 24:BA:2436:G:O2'   | 24:BA:2437:U:C5'   | 2.58                     | 0.52              |
| 24:BA:2447:G:H3'   | 24:BA:2499:C:O5'   | 2.10                     | 0.52              |
| 24:BA:2625:G:C2'   | 24:BA:2626:C:O5'   | 2.57                     | 0.52              |
| 24:BA:2648:C:H2'   | 24:BA:2649:U:H6    | 1.72                     | 0.52              |
| 24:BA:2813:A:C2    | 24:BA:2888:C:C2    | 2.98                     | 0.52              |
| 24:BA:2843:G:C4    | 24:BA:2844:G:C8    | 2.97                     | 0.52              |
| 24:BA:2854:G:C6    | 24:BA:2855:C:C4    | 2.97                     | 0.52              |
| 24:BA:2857:G:H2'   | 24:BA:2858:C:C5'   | 2.39                     | 0.52              |
| 26:BC:100:ILE:HG12 | 26:BC:127:LEU:HD12 | 1.91                     | 0.52              |
| 27:BD:8:PRO:O      | 27:BD:25:THR:CG2   | 2.58                     | 0.52              |
| 27:BD:34:VAL:C     | 27:BD:36:PRO:HD2   | 2.34                     | 0.52              |
| 27:BD:52:ARG:N     | 27:BD:52:ARG:CD    | 2.72                     | 0.52              |
| 27:BD:78:LYS:CG    | 27:BD:114:GLY:O    | 2.57                     | 0.52              |
| 28:BE:4:ILE:HG12   | 28:BE:30:PRO:HB3   | 1.91                     | 0.52              |
| 28:BE:38:THR:HG1   | 28:BE:44:TYR:CB    | 2.23                     | 0.52              |
| 28:BE:51:PHE:CE1   | 28:BE:76:ARG:N     | 2.77                     | 0.52              |
| 29:BF:155:LEU:HD22 | 29:BF:157:VAL:CG1  | 2.40                     | 0.52              |
| 30:BG:20:ILE:HD12  | 30:BG:28:VAL:CG1   | 2.40                     | 0.52              |
| 30:BG:21:ARG:O     | 30:BG:22:ARG:C     | 2.52                     | 0.52              |
| 30:BG:26:GLN:OE1   | 30:BG:29:TRP:CE3   | 2.63                     | 0.52              |
| 30:BG:35:GLU:HA    | 30:BG:100:TRP:CH2  | 2.44                     | 0.52              |
| 30:BG:44:GLY:CA    | 30:BG:72:ARG:HG2   | 2.39                     | 0.52              |
| 30:BG:125:PHE:CD1  | 30:BG:131:TYR:C    | 2.88                     | 0.52              |
| 31:BH:6:ARG:C      | 31:BH:7:LEU:HD23   | 2.34                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 31:BH:29:PRO:N    | 31:BH:79:VAL:O     | 2.43                     | 0.52              |
| 31:BH:44:VAL:HG22 | 31:BH:45:VAL:N     | 2.23                     | 0.52              |
| 31:BH:122:THR:HB  | 31:BH:134:SER:HG   | 1.73                     | 0.52              |
| 31:BH:122:THR:HB  | 31:BH:134:SER:OG   | 2.09                     | 0.52              |
| 33:BL:14:ALA:CB   | 33:BL:53:VAL:HG21  | 2.40                     | 0.52              |
| 33:BL:106:GLU:OE1 | 33:BL:107:ILE:N    | 2.43                     | 0.52              |
| 34:BM:18:ALA:O    | 34:BM:19:GLU:C     | 2.53                     | 0.52              |
| 34:BM:115:ARG:O   | 34:BM:118:LYS:CB   | 2.52                     | 0.52              |
| 35:BN:47:ILE:HG12 | 35:BN:48:PRO:O     | 2.09                     | 0.52              |
| 35:BN:63:VAL:CA   | 35:BN:78:ARG:HD3   | 2.36                     | 0.52              |
| 35:BN:92:GLU:CD   | 35:BN:113:LYS:HB3  | 2.34                     | 0.52              |
| 36:BO:97:PRO:HD3  | 36:BO:102:ARG:NH2  | 2.24                     | 0.52              |
| 36:BO:113:LYS:HG2 | 36:BO:114:ILE:N    | 2.25                     | 0.52              |
| 37:BP:126:PRO:O   | 37:BP:127:ILE:HG13 | 2.09                     | 0.52              |
| 38:BQ:34:ILE:O    | 38:BQ:113:LEU:HA   | 2.10                     | 0.52              |
| 38:BQ:67:LEU:HD23 | 38:BQ:76:VAL:HG22  | 1.91                     | 0.52              |
| 40:BS:51:ARG:O    | 40:BS:66:VAL:CA    | 2.55                     | 0.52              |
| 40:BS:65:LYS:CE   | 40:BS:75:ILE:HD13  | 2.39                     | 0.52              |
| 41:BT:47:TYR:OH   | 42:BU:77:ALA:CA    | 2.57                     | 0.52              |
| 41:BT:85:LYS:HB3  | 41:BT:116:ALA:O    | 2.10                     | 0.52              |
| 43:BV:33:ARG:CA   | 43:BV:33:ARG:NE    | 2.68                     | 0.52              |
| 46:BY:19:ARG:HE   | 46:BY:24:LEU:CD2   | 2.22                     | 0.52              |
| 46:BY:28:MET:SD   | 46:BY:28:MET:C     | 2.92                     | 0.52              |
| 46:BY:116:VAL:CG2 | 46:BY:145:GLU:CG   | 2.88                     | 0.52              |
| 48:B1:16:LEU:CD2  | 48:B1:58:VAL:HG22  | 2.39                     | 0.52              |
| 49:B2:26:LEU:CG   | 49:B2:35:ARG:HH11  | 2.22                     | 0.52              |
| 51:B4:10:LYS:HD2  | 51:B4:15:ARG:NH1   | 2.24                     | 0.52              |
| 54:B7:29:LYS:O    | 54:B7:30:ARG:O     | 2.26                     | 0.52              |
| 1:AA:37:U:O2      | 1:AA:548:G:N1      | 2.43                     | 0.52              |
| 1:AA:38:G:N2      | 1:AA:397:A:C8      | 2.75                     | 0.52              |
| 1:AA:50:A:H61     | 1:AA:361:G:H4'     | 1.70                     | 0.52              |
| 1:AA:127:G:N2     | 1:AA:128:G:H1'     | 2.24                     | 0.52              |
| 1:AA:280:C:N3     | 19:AT:39:SER:CB    | 2.73                     | 0.52              |
| 1:AA:333:G:C2     | 1:AA:334:C:C5      | 2.98                     | 0.52              |
| 1:AA:474:G:O2'    | 1:AA:475:G:H5'     | 2.09                     | 0.52              |
| 1:AA:498:A:H1'    | 1:AA:500:G:O4'     | 2.09                     | 0.52              |
| 1:AA:579:G:C4     | 1:AA:580:U:C6      | 2.98                     | 0.52              |
| 1:AA:947:G:C2     | 1:AA:948:C:C6      | 2.97                     | 0.52              |
| 1:AA:1123:A:O4'   | 1:AA:1123:A:OP2    | 2.27                     | 0.52              |
| 1:AA:1207:G:O2'   | 1:AA:1208:C:H5'    | 2.10                     | 0.52              |
| 1:AA:1232:U:OP1   | 11:AL:126:SER:HB2  | 2.10                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1326:C:O2'   | 1:AA:1327:C:H5'    | 2.08                     | 0.52              |
| 1:AA:1361:G:N7    | 1:AA:1362:C:C5     | 2.77                     | 0.52              |
| 1:AA:1393:U:H2'   | 1:AA:1394:A:OP2    | 2.10                     | 0.52              |
| 1:AA:1411:C:O5'   | 1:AA:1411:C:H6     | 1.92                     | 0.52              |
| 1:AA:1422:G:N1    | 1:AA:1423:G:C5     | 2.78                     | 0.52              |
| 2:A1:51:U:O2'     | 2:A1:52:U:C5'      | 2.57                     | 0.52              |
| 3:AD:58:A:C2      | 3:AD:61:C:H1'      | 2.44                     | 0.52              |
| 4:AE:56:ARG:HH11  | 4:AE:57:PHE:N      | 2.07                     | 0.52              |
| 4:AE:119:GLU:HA   | 4:AE:142:LEU:CD1   | 2.37                     | 0.52              |
| 4:AE:136:VAL:O    | 4:AE:139:LYS:CG    | 2.56                     | 0.52              |
| 5:AF:142:MET:HA   | 5:AF:146:ALA:HB3   | 1.92                     | 0.52              |
| 6:AG:79:PHE:CG    | 6:AG:80:GLU:N      | 2.77                     | 0.52              |
| 6:AG:154:ASN:ND2  | 6:AG:155:LEU:CD2   | 2.72                     | 0.52              |
| 7:AH:107:ARG:NH1  | 7:AH:107:ARG:CB    | 2.72                     | 0.52              |
| 7:AH:133:TYR:HA   | 7:AH:136:MET:CG    | 2.40                     | 0.52              |
| 7:AH:147:ASP:O    | 7:AH:150:ARG:HB3   | 2.09                     | 0.52              |
| 8:AI:11:ASN:CB    | 8:AI:84:ASN:HB3    | 2.39                     | 0.52              |
| 8:AI:61:LEU:HD22  | 8:AI:63:TYR:OH     | 2.09                     | 0.52              |
| 10:AK:36:LEU:CD1  | 10:AK:48:TYR:HB2   | 2.37                     | 0.52              |
| 10:AK:86:ILE:HG22 | 10:AK:87:SER:N     | 2.24                     | 0.52              |
| 11:AL:28:VAL:C    | 11:AL:30:GLY:N     | 2.64                     | 0.52              |
| 13:AN:65:ALA:CB   | 13:AN:98:LEU:HD23  | 2.33                     | 0.52              |
| 13:AN:102:GLY:HA2 | 13:AN:105:VAL:HG23 | 1.90                     | 0.52              |
| 14:AO:35:GLY:HA3  | 14:AO:60:LEU:CB    | 2.40                     | 0.52              |
| 17:AR:53:HIS:O    | 17:AR:57:LEU:CD1   | 2.56                     | 0.52              |
| 17:AR:78:TYR:O    | 17:AR:81:LEU:HB3   | 2.10                     | 0.52              |
| 18:AS:43:LYS:HE3  | 18:AS:48:TRP:HZ3   | 1.74                     | 0.52              |
| 18:AS:52:ASP:OD1  | 18:AS:55:ARG:CG    | 2.57                     | 0.52              |
| 18:AS:53:VAL:HG12 | 18:AS:79:VAL:HG22  | 1.92                     | 0.52              |
| 19:AT:15:MET:H    | 19:AT:15:MET:HE3   | 1.74                     | 0.52              |
| 19:AT:36:ILE:HD13 | 19:AT:36:ILE:H     | 1.74                     | 0.52              |
| 19:AT:69:LYS:HZ2  | 19:AT:69:LYS:CB    | 2.22                     | 0.52              |
| 22:AW:40:ALA:CB   | 22:AW:55:ILE:HG21  | 2.38                     | 0.52              |
| 23:AX:17:THR:O    | 23:AX:22:ARG:NH2   | 2.43                     | 0.52              |
| 24:BA:223:A:C4    | 24:BA:422:A:C8     | 2.97                     | 0.52              |
| 24:BA:292:C:H2'   | 24:BA:293:U:N3     | 2.25                     | 0.52              |
| 24:BA:386:G:O5'   | 24:BA:388:G:N2     | 2.43                     | 0.52              |
| 24:BA:448:U:O2    | 24:BA:448:U:C2'    | 2.53                     | 0.52              |
| 24:BA:495:G:O4'   | 43:BV:57:ASN:CG    | 2.53                     | 0.52              |
| 24:BA:507:A:O4'   | 24:BA:509:C:C2     | 2.63                     | 0.52              |
| 24:BA:598:G:N2    | 24:BA:599:G:H1'    | 2.25                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:685:A:O2'   | 24:BA:686:G:P     | 2.68                     | 0.52              |
| 24:BA:795:C:H2'   | 24:BA:796:C:C6    | 2.45                     | 0.52              |
| 24:BA:820:A:H2'   | 24:BA:820:A:N3    | 2.24                     | 0.52              |
| 24:BA:844:C:OP2   | 24:BA:844:C:C6    | 2.62                     | 0.52              |
| 24:BA:848:G:H2'   | 24:BA:849:A:N7    | 2.23                     | 0.52              |
| 24:BA:871:U:H5''  | 37:BP:9:TYR:CE2   | 2.44                     | 0.52              |
| 24:BA:907:U:H5'   | 37:BP:24:GLY:O    | 2.09                     | 0.52              |
| 24:BA:910:A:C5    | 37:BP:17:LEU:HD11 | 2.43                     | 0.52              |
| 24:BA:945:A:OP1   | 24:BA:945:A:H4'   | 2.08                     | 0.52              |
| 24:BA:950:G:C6    | 24:BA:951:C:N4    | 2.77                     | 0.52              |
| 24:BA:957:A:C6    | 24:BA:959:A:C4    | 2.98                     | 0.52              |
| 24:BA:974:G:O2'   | 24:BA:1186:G:N3   | 2.38                     | 0.52              |
| 24:BA:979:G:C3'   | 24:BA:980:A:C5'   | 2.78                     | 0.52              |
| 24:BA:1010:A:O2'  | 24:BA:1152:C:O2   | 2.26                     | 0.52              |
| 24:BA:1019:U:O2   | 24:BA:1144:G:N2   | 2.42                     | 0.52              |
| 24:BA:1096:A:N1   | 33:BL:26:ALA:HB1  | 2.25                     | 0.52              |
| 24:BA:1162:G:H4'  | 42:BU:23:GLU:O    | 2.09                     | 0.52              |
| 24:BA:1267:U:C5   | 24:BA:2012:G:N2   | 2.75                     | 0.52              |
| 24:BA:1343:G:H2'  | 24:BA:1384:A:H2   | 1.74                     | 0.52              |
| 24:BA:1475:G:N7   | 24:BA:1517:G:C2   | 2.77                     | 0.52              |
| 24:BA:1531:C:H2'  | 24:BA:1532:C:H5   | 1.68                     | 0.52              |
| 24:BA:1754:C:C5   | 40:BS:98:LYS:HD3  | 2.45                     | 0.52              |
| 24:BA:1790:C:H4'  | 27:BD:213:ARG:CZ  | 2.40                     | 0.52              |
| 24:BA:1802:A:N6   | 24:BA:1822:G:H1'  | 2.08                     | 0.52              |
| 24:BA:1809:A:H8   | 24:BA:1810:A:O4'  | 1.92                     | 0.52              |
| 24:BA:1834:U:O2'  | 24:BA:1969:A:C2   | 2.50                     | 0.52              |
| 24:BA:1993:U:N3   | 24:BA:1994:C:N4   | 2.56                     | 0.52              |
| 24:BA:2000:G:O6   | 24:BA:2001:A:N6   | 2.41                     | 0.52              |
| 24:BA:2055:C:C2'  | 24:BA:2504:U:H5'  | 2.33                     | 0.52              |
| 24:BA:2124:G:N1   | 24:BA:2173:A:N6   | 2.58                     | 0.52              |
| 24:BA:2331:G:C5   | 24:BA:2332:U:C2   | 2.97                     | 0.52              |
| 24:BA:2332:U:P    | 47:BZ:43:THR:HB   | 2.50                     | 0.52              |
| 24:BA:2343:C:O2   | 24:BA:2344:U:H6   | 1.93                     | 0.52              |
| 24:BA:2384:G:H5'' | 24:BA:2386:C:OP1  | 2.09                     | 0.52              |
| 24:BA:2415:G:N1   | 24:BA:2416:C:C4   | 2.78                     | 0.52              |
| 24:BA:2512:C:H3'  | 24:BA:2512:C:C6   | 2.45                     | 0.52              |
| 24:BA:2588:G:O6   | 24:BA:2589:A:N6   | 2.43                     | 0.52              |
| 24:BA:2636:U:P    | 28:BE:79:ARG:HB3  | 2.48                     | 0.52              |
| 24:BA:2684:U:O2'  | 35:BN:67:LYS:CG   | 2.57                     | 0.52              |
| 24:BA:2699:C:O2'  | 24:BA:2700:C:H5'  | 2.09                     | 0.52              |
| 24:BA:2711:A:OP2  | 24:BA:2714:G:OP1  | 2.28                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2731:G:H4'  | 28:BE:168:MET:CE   | 2.38                     | 0.52              |
| 24:BA:2780:G:N2   | 34:BM:97:ARG:NH2   | 2.57                     | 0.52              |
| 24:BA:2815:C:O2'  | 51:B4:42:PRO:HG3   | 2.10                     | 0.52              |
| 24:BA:2815:C:N3   | 24:BA:2816:C:C5    | 2.78                     | 0.52              |
| 25:BB:52:A:C4'    | 25:BB:52:A:OP1     | 2.58                     | 0.52              |
| 25:BB:75:G:N2     | 46:BY:87:ASP:CG    | 2.66                     | 0.52              |
| 26:BC:19:ILE:HG23 | 26:BC:223:ARG:CB   | 2.39                     | 0.52              |
| 27:BD:46:GLN:O    | 27:BD:47:GLY:C     | 2.50                     | 0.52              |
| 28:BE:5:LEU:O     | 28:BE:195:LEU:CD2  | 2.58                     | 0.52              |
| 28:BE:38:THR:HA   | 28:BE:42:ASP:HA    | 1.91                     | 0.52              |
| 28:BE:47:VAL:HG13 | 28:BE:78:LEU:C     | 2.34                     | 0.52              |
| 28:BE:51:PHE:HD1  | 28:BE:76:ARG:HG2   | 1.73                     | 0.52              |
| 28:BE:105:THR:HB  | 28:BE:166:THR:HG1  | 1.74                     | 0.52              |
| 28:BE:174:ASP:OD1 | 28:BE:175:VAL:N    | 2.43                     | 0.52              |
| 29:BF:41:LEU:HD12 | 29:BF:41:LEU:C     | 2.34                     | 0.52              |
| 30:BG:36:LYS:HG3  | 30:BG:160:VAL:CG2  | 2.40                     | 0.52              |
| 31:BH:11:VAL:HG11 | 31:BH:17:VAL:CB    | 2.40                     | 0.52              |
| 31:BH:157:TYR:HD1 | 31:BH:157:TYR:C    | 2.18                     | 0.52              |
| 32:BK:93:THR:CG2  | 32:BK:96:ASP:N     | 2.64                     | 0.52              |
| 32:BK:93:THR:N    | 32:BK:96:ASP:OD2   | 2.28                     | 0.52              |
| 33:BL:129:GLY:N   | 33:BL:132:ARG:NH2  | 2.58                     | 0.52              |
| 34:BM:55:VAL:O    | 34:BM:56:ASN:C     | 2.50                     | 0.52              |
| 34:BM:99:LEU:HD12 | 34:BM:103:VAL:HG11 | 1.91                     | 0.52              |
| 34:BM:111:PRO:C   | 34:BM:114:ARG:HB3  | 2.35                     | 0.52              |
| 36:BO:24:GLY:O    | 36:BO:25:SER:C     | 2.52                     | 0.52              |
| 36:BO:105:LEU:O   | 36:BO:106:LEU:CG   | 2.53                     | 0.52              |
| 36:BO:114:ILE:HB  | 36:BO:130:PHE:HA   | 1.91                     | 0.52              |
| 36:BO:116:GLY:CA  | 36:BO:121:LYS:HB3  | 2.40                     | 0.52              |
| 38:BQ:51:LEU:O    | 38:BQ:52:ILE:C     | 2.50                     | 0.52              |
| 39:BR:20:ARG:O    | 39:BR:21:THR:HG23  | 2.10                     | 0.52              |
| 39:BR:40:ILE:CG2  | 39:BR:41:ASP:N     | 2.72                     | 0.52              |
| 39:BR:76:LYS:CE   | 39:BR:77:ALA:HB2   | 2.38                     | 0.52              |
| 40:BS:56:GLY:O    | 40:BS:61:PHE:CB    | 2.57                     | 0.52              |
| 40:BS:70:VAL:HG23 | 40:BS:74:ARG:HD3   | 1.89                     | 0.52              |
| 42:BU:10:LYS:C    | 42:BU:12:TYR:H     | 2.18                     | 0.52              |
| 43:BV:12:ILE:HD13 | 43:BV:12:ILE:N     | 2.24                     | 0.52              |
| 44:BW:12:VAL:HG13 | 44:BW:14:SER:CB    | 2.39                     | 0.52              |
| 44:BW:18:TYR:HD1  | 44:BW:21:PHE:CE1   | 2.26                     | 0.52              |
| 45:BX:13:VAL:CG2  | 45:BX:14:LEU:N     | 2.72                     | 0.52              |
| 46:BY:6:LYS:HB2   | 46:BY:37:VAL:HG13  | 1.92                     | 0.52              |
| 46:BY:151:HIS:CG  | 46:BY:170:THR:H    | 2.28                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 47:BZ:19:LYS:HG2  | 47:BZ:20:ARG:N    | 2.21                     | 0.52              |
| 47:BZ:44:ARG:HG2  | 47:BZ:77:ARG:HG3  | 1.91                     | 0.52              |
| 48:B1:7:GLU:HA    | 48:B1:10:LYS:CG   | 2.39                     | 0.52              |
| 53:B6:30:VAL:HG13 | 53:B6:33:ARG:NH1  | 2.24                     | 0.52              |
| 54:B7:23:VAL:CG1  | 54:B7:24:ALA:N    | 2.72                     | 0.52              |
| 1:AA:20:U:H6      | 1:AA:916:G:N2     | 2.08                     | 0.52              |
| 1:AA:178:C:H2'    | 1:AA:179:A:H8     | 1.73                     | 0.52              |
| 1:AA:186(B):C:C2' | 1:AA:186(C):G:H5' | 2.39                     | 0.52              |
| 1:AA:186(C):G:C6  | 1:AA:186(D):C:C4  | 2.97                     | 0.52              |
| 1:AA:216:G:H2'    | 1:AA:217:C:C6     | 2.44                     | 0.52              |
| 1:AA:226:G:C2     | 1:AA:227:G:C4     | 2.97                     | 0.52              |
| 1:AA:314:C:O3'    | 1:AA:315:A:O4'    | 2.27                     | 0.52              |
| 1:AA:595:G:H8     | 1:AA:641:U:O4     | 1.93                     | 0.52              |
| 1:AA:598:U:C2     | 1:AA:599:C:C6     | 2.97                     | 0.52              |
| 1:AA:640:A:H2'    | 1:AA:641:U:C4'    | 2.40                     | 0.52              |
| 1:AA:739:C:H2'    | 1:AA:739:C:O2     | 2.10                     | 0.52              |
| 1:AA:779:C:H4'    | 13:AN:120:ARG:O   | 2.10                     | 0.52              |
| 1:AA:790:A:C2'    | 1:AA:791:G:O5'    | 2.57                     | 0.52              |
| 1:AA:817:C:C6     | 1:AA:819:A:H4'    | 2.44                     | 0.52              |
| 1:AA:915:A:O2'    | 1:AA:916:G:H5'    | 2.08                     | 0.52              |
| 1:AA:948:C:H2'    | 1:AA:949:A:C8     | 2.42                     | 0.52              |
| 1:AA:973:G:N1     | 1:AA:974:A:C5     | 2.78                     | 0.52              |
| 1:AA:1034:G:C2    | 1:AA:1035:A:C5    | 2.98                     | 0.52              |
| 1:AA:1048:G:H1'   | 1:AA:1215:G:H5'   | 1.92                     | 0.52              |
| 1:AA:1064:G:OP1   | 1:AA:1386:G:C5'   | 2.58                     | 0.52              |
| 1:AA:1227:A:H4'   | 15:AP:115:LYS:NZ  | 2.25                     | 0.52              |
| 1:AA:1270:C:O2'   | 1:AA:1313:U:O2'   | 2.23                     | 0.52              |
| 1:AA:1317:C:O2'   | 1:AA:1318:A:H5'   | 2.10                     | 0.52              |
| 1:AA:1422:G:H2'   | 1:AA:1423:G:C8    | 2.41                     | 0.52              |
| 2:A1:46:U:H3'     | 2:A1:46:U:C6      | 2.45                     | 0.52              |
| 3:AC:53:G:N2      | 3:AC:62:C:C2      | 2.77                     | 0.52              |
| 3:AC:56:C:O2      | 30:BG:82:LEU:HD13 | 2.10                     | 0.52              |
| 3:AD:58:A:O2'     | 3:AD:59:U:P       | 2.67                     | 0.52              |
| 4:AE:47:THR:CG2   | 4:AE:51:LEU:HD21  | 2.37                     | 0.52              |
| 4:AE:80:ILE:HD11  | 4:AE:212:GLN:HG2  | 1.92                     | 0.52              |
| 4:AE:217:ARG:O    | 4:AE:220:ASP:CB   | 2.52                     | 0.52              |
| 5:AF:14:ILE:HG22  | 5:AF:15:THR:HG22  | 1.92                     | 0.52              |
| 5:AF:29:TYR:HB3   | 16:AQ:36:PHE:CE1  | 2.45                     | 0.52              |
| 5:AF:48:TYR:HD2   | 5:AF:48:TYR:C     | 2.17                     | 0.52              |
| 7:AH:34:VAL:O     | 7:AH:41:VAL:HA    | 2.09                     | 0.52              |
| 7:AH:78:HIS:CG    | 10:AK:104:ARG:HD3 | 2.43                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 7:AH:96:PRO:C     | 7:AH:98:THR:H     | 2.17                     | 0.52              |
| 7:AH:103:GLY:O    | 7:AH:104:ALA:C    | 2.52                     | 0.52              |
| 8:AI:25:ILE:O     | 8:AI:26:ILE:C     | 2.52                     | 0.52              |
| 9:AJ:87:VAL:HB    | 9:AJ:156:TRP:CZ3  | 2.45                     | 0.52              |
| 10:AK:14:ARG:N    | 10:AK:14:ARG:HH11 | 2.08                     | 0.52              |
| 12:AM:33:GLN:C    | 12:AM:34:VAL:HG23 | 2.35                     | 0.52              |
| 14:AO:28:LYS:NZ   | 14:AO:33:ARG:NH2  | 2.41                     | 0.52              |
| 14:AO:57:LYS:CG   | 14:AO:67:THR:HG22 | 2.28                     | 0.52              |
| 20:AU:20:ALA:HB1  | 20:AU:55:ARG:NH2  | 2.24                     | 0.52              |
| 20:AU:31:LEU:HD21 | 20:AU:62:GLU:OE2  | 2.10                     | 0.52              |
| 22:AW:22:ARG:C    | 22:AW:26:ASN:OD1  | 2.52                     | 0.52              |
| 24:BA:95:G:P      | 48:B1:39:LEU:HB3  | 2.48                     | 0.52              |
| 24:BA:152:G:N1    | 24:BA:175:G:C4    | 2.78                     | 0.52              |
| 24:BA:428:A:N3    | 24:BA:428:A:H2'   | 2.25                     | 0.52              |
| 24:BA:438:G:O2'   | 24:BA:439:G:H5'   | 2.08                     | 0.52              |
| 24:BA:534:U:OP1   | 41:BT:24:TYR:HE2  | 1.93                     | 0.52              |
| 24:BA:564:C:H5''  | 42:BU:80:GLN:HA   | 1.90                     | 0.52              |
| 24:BA:612:G:N2    | 24:BA:617:G:H1    | 2.07                     | 0.52              |
| 24:BA:637:A:C2    | 24:BA:651:G:C4'   | 2.92                     | 0.52              |
| 24:BA:714:U:O2    | 24:BA:717:G:N7    | 2.42                     | 0.52              |
| 24:BA:781:A:H8    | 27:BD:220:HIS:NE2 | 2.07                     | 0.52              |
| 24:BA:945:A:C3'   | 24:BA:946:G:C5'   | 2.87                     | 0.52              |
| 24:BA:1163:G:O2'  | 24:BA:1164:G:H5'  | 2.08                     | 0.52              |
| 24:BA:1222:C:H2'  | 24:BA:1223:C:C5'  | 2.39                     | 0.52              |
| 24:BA:1312:U:O5'  | 44:BW:62:LYS:HD2  | 2.09                     | 0.52              |
| 24:BA:1338:G:O2'  | 44:BW:16:LYS:HD3  | 2.08                     | 0.52              |
| 24:BA:1365:A:C8   | 24:BA:1366:A:N7   | 2.77                     | 0.52              |
| 24:BA:1381:G:C5   | 24:BA:1382:G:C5   | 2.98                     | 0.52              |
| 24:BA:1496:A:N3   | 24:BA:1498:C:N4   | 2.50                     | 0.52              |
| 24:BA:1534:G:C8   | 24:BA:1534:G:H3'  | 2.45                     | 0.52              |
| 24:BA:1538:G:N1   | 24:BA:1539:G:C2   | 2.77                     | 0.52              |
| 24:BA:1579:A:H2'  | 24:BA:1580:A:H4'  | 1.90                     | 0.52              |
| 24:BA:1660:C:O2'  | 24:BA:1661:G:H5'  | 2.09                     | 0.52              |
| 24:BA:1693:U:O2   | 24:BA:1693:U:C2'  | 2.56                     | 0.52              |
| 24:BA:1742:C:N4   | 24:BA:1743:G:H8   | 2.00                     | 0.52              |
| 24:BA:1746:G:OP2  | 24:BA:1746:G:C8   | 2.63                     | 0.52              |
| 24:BA:1784:A:C8   | 24:BA:1981:A:C4   | 2.97                     | 0.52              |
| 24:BA:2045:C:O2'  | 51:B4:22:HIS:HB2  | 2.09                     | 0.52              |
| 24:BA:2094:G:N1   | 24:BA:2196:C:C4   | 2.78                     | 0.52              |
| 24:BA:2096:U:H2'  | 24:BA:2097:C:C6   | 2.44                     | 0.52              |
| 24:BA:2216:G:N3   | 27:BD:150:LYS:NZ  | 2.57                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2245:U:O2    | 24:BA:2435:A:H3'   | 2.09                     | 0.52              |
| 24:BA:2265:U:O2    | 24:BA:2266:A:N7    | 2.41                     | 0.52              |
| 24:BA:2309:A:H5''  | 24:BA:2310:A:C8    | 2.45                     | 0.52              |
| 24:BA:2582:G:H2'   | 24:BA:2583:G:H5'   | 1.89                     | 0.52              |
| 24:BA:2596:U:O3'   | 27:BD:242:ARG:NE   | 2.43                     | 0.52              |
| 24:BA:2660:A:O2'   | 24:BA:2661:G:H5'   | 2.09                     | 0.52              |
| 24:BA:2749:A:C2    | 24:BA:2750:A:N6    | 2.77                     | 0.52              |
| 24:BA:2845:G:O2'   | 24:BA:2846:G:O4'   | 2.23                     | 0.52              |
| 24:BA:2876:G:C5'   | 40:BS:1:MET:N      | 2.73                     | 0.52              |
| 25:BB:73:A:C8      | 25:BB:104:A:N1     | 2.78                     | 0.52              |
| 25:BB:87:G:N2      | 25:BB:90:C:C2      | 2.78                     | 0.52              |
| 25:BB:90:C:H2'     | 25:BB:91:C:C6      | 2.44                     | 0.52              |
| 26:BC:129:ARG:C    | 26:BC:130:ILE:HD12 | 2.35                     | 0.52              |
| 26:BC:177:LYS:CB   | 26:BC:180:PHE:HB2  | 2.36                     | 0.52              |
| 26:BC:189:ILE:HD11 | 26:BC:214:VAL:HG21 | 1.92                     | 0.52              |
| 27:BD:90:ALA:C     | 27:BD:91:ARG:HH11  | 2.17                     | 0.52              |
| 27:BD:107:ALA:N    | 27:BD:108:PRO:CD   | 2.71                     | 0.52              |
| 27:BD:142:VAL:HG22 | 27:BD:165:ILE:HD11 | 1.91                     | 0.52              |
| 28:BE:26:ILE:HG13  | 28:BE:181:LEU:HD23 | 1.91                     | 0.52              |
| 28:BE:102:VAL:O    | 28:BE:170:LEU:HD23 | 2.09                     | 0.52              |
| 28:BE:103:ASP:O    | 28:BE:104:VAL:HG23 | 2.10                     | 0.52              |
| 28:BE:136:ARG:C    | 28:BE:136:ARG:HD3  | 2.34                     | 0.52              |
| 28:BE:179:GLU:CB   | 28:BE:181:LEU:HD11 | 2.36                     | 0.52              |
| 28:BE:200:GLU:CA   | 28:BE:202:LYS:HZ3  | 2.23                     | 0.52              |
| 29:BF:56:GLU:O     | 29:BF:60:SER:N     | 2.43                     | 0.52              |
| 29:BF:103:LYS:HA   | 29:BF:106:ARG:NE   | 2.24                     | 0.52              |
| 30:BG:35:GLU:O     | 30:BG:160:VAL:HB   | 2.09                     | 0.52              |
| 30:BG:38:VAL:CG1   | 30:BG:93:THR:HG23  | 2.40                     | 0.52              |
| 30:BG:85:GLY:O     | 30:BG:86:MET:HB2   | 2.09                     | 0.52              |
| 31:BH:23:ARG:NH2   | 31:BH:36:PRO:N     | 2.57                     | 0.52              |
| 31:BH:35:VAL:CG1   | 31:BH:75:ALA:HB2   | 2.39                     | 0.52              |
| 31:BH:69:ARG:O     | 31:BH:73:ALA:HB2   | 2.10                     | 0.52              |
| 32:BK:31:LEU:N     | 32:BK:32:PRO:HD2   | 2.24                     | 0.52              |
| 32:BK:109:ILE:HG21 | 32:BK:113:ARG:CZ   | 2.40                     | 0.52              |
| 32:BK:125:GLU:O    | 32:BK:125:GLU:OE1  | 2.28                     | 0.52              |
| 34:BM:34:LEU:CA    | 34:BM:49:GLY:HA2   | 2.39                     | 0.52              |
| 34:BM:58:ASP:HB3   | 34:BM:124:ALA:HB1  | 1.90                     | 0.52              |
| 35:BN:12:ASP:O     | 35:BN:94:ARG:HD2   | 2.09                     | 0.52              |
| 35:BN:48:PRO:O     | 35:BN:49:ARG:C     | 2.52                     | 0.52              |
| 36:BO:95:VAL:C     | 36:BO:97:PRO:CD    | 2.79                     | 0.52              |
| 36:BO:127:ALA:O    | 36:BO:147:LEU:HD13 | 2.09                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 37:BP:12:GLN:HE22 | 37:BP:13:GLN:CD    | 2.18                     | 0.52              |
| 37:BP:122:GLY:HA2 | 37:BP:125:LEU:CD1  | 2.39                     | 0.52              |
| 37:BP:136:ALA:HB1 | 46:BY:76:LEU:CD1   | 2.40                     | 0.52              |
| 39:BR:30:ARG:HD2  | 39:BR:91:PRO:HB2   | 1.91                     | 0.52              |
| 39:BR:78:LEU:HD22 | 39:BR:78:LEU:O     | 2.10                     | 0.52              |
| 39:BR:95:HIS:HA   | 39:BR:99:LYS:CD    | 2.36                     | 0.52              |
| 40:BS:17:THR:HG21 | 40:BS:20:PRO:CA    | 2.40                     | 0.52              |
| 40:BS:104:ASN:HA  | 40:BS:108:ARG:HH12 | 1.74                     | 0.52              |
| 41:BT:47:TYR:CE1  | 42:BU:77:ALA:HA    | 2.45                     | 0.52              |
| 41:BT:55:ARG:HB3  | 41:BT:58:ARG:NE    | 2.15                     | 0.52              |
| 42:BU:36:PRO:HB3  | 42:BU:61:VAL:CG2   | 2.39                     | 0.52              |
| 44:BW:7:VAL:HB    | 48:B1:28:MET:SD    | 2.50                     | 0.52              |
| 44:BW:58:HIS:CE1  | 44:BW:77:LYS:HE3   | 2.44                     | 0.52              |
| 46:BY:1:MET:HE1   | 46:BY:61:LEU:HG    | 1.92                     | 0.52              |
| 46:BY:17:ALA:CA   | 46:BY:20:ARG:NH2   | 2.72                     | 0.52              |
| 46:BY:153:SER:O   | 46:BY:154:ASP:C    | 2.52                     | 0.52              |
| 48:B1:30:LEU:O    | 48:B1:31:ARG:C     | 2.52                     | 0.52              |
| 50:B3:15:ILE:HG13 | 50:B3:36:CYS:SG    | 2.50                     | 0.52              |
| 50:B3:57:GLU:CA   | 50:B3:61:ARG:HG3   | 2.40                     | 0.52              |
| 50:B3:57:GLU:O    | 50:B3:61:ARG:HG3   | 2.07                     | 0.52              |
| 54:B7:51:ALA:C    | 54:B7:53:PRO:HD2   | 2.35                     | 0.52              |
| 54:B7:60:LEU:O    | 54:B7:63:PRO:HD3   | 2.09                     | 0.52              |
| 1:AA:46:G:C2      | 1:AA:366:C:C2      | 2.98                     | 0.52              |
| 1:AA:66:G:C5'     | 1:AA:173:U:O4      | 2.55                     | 0.52              |
| 1:AA:133:U:O4     | 1:AA:229:U:O4      | 2.27                     | 0.52              |
| 1:AA:151:A:C5     | 1:AA:152:A:C2      | 2.97                     | 0.52              |
| 1:AA:355:C:C4     | 1:AA:356:A:N7      | 2.78                     | 0.52              |
| 1:AA:382:A:H2'    | 1:AA:383:A:O5'     | 2.10                     | 0.52              |
| 1:AA:393:A:H5'    | 1:AA:483:C:H4'     | 1.92                     | 0.52              |
| 1:AA:581:G:C2'    | 1:AA:582:U:OP2     | 2.57                     | 0.52              |
| 1:AA:608:A:C2     | 1:AA:609:A:O4'     | 2.62                     | 0.52              |
| 1:AA:673:G:C2'    | 1:AA:674:G:C8      | 2.91                     | 0.52              |
| 1:AA:766:A:C8     | 1:AA:814:A:C6      | 2.97                     | 0.52              |
| 1:AA:785:G:C6     | 1:AA:798:G:C6      | 2.98                     | 0.52              |
| 1:AA:872:A:O2'    | 1:AA:873:A:P       | 2.68                     | 0.52              |
| 1:AA:895:G:H2'    | 1:AA:896:C:H6      | 1.73                     | 0.52              |
| 1:AA:1045:C:C2'   | 1:AA:1046:A:H8     | 2.19                     | 0.52              |
| 1:AA:1048:G:C5'   | 16:AQ:3:ARG:NH1    | 2.68                     | 0.52              |
| 1:AA:1155:G:H2'   | 1:AA:1156:G:C8     | 2.44                     | 0.52              |
| 1:AA:1203:C:C2    | 1:AA:1204:A:C8     | 2.97                     | 0.52              |
| 1:AA:1216:G:OP1   | 16:AQ:3:ARG:NH2    | 2.43                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1226:C:C5'   | 15:AP:103:THR:O    | 2.54                     | 0.52              |
| 1:AA:1234:C:C4    | 1:AA:1235:U:C4     | 2.97                     | 0.52              |
| 1:AA:1310:G:O2'   | 1:AA:1311:G:H5'    | 2.09                     | 0.52              |
| 1:AA:1373:G:H5'   | 9:AJ:36:LYS:HB2    | 1.92                     | 0.52              |
| 1:AA:1450:U:H1'   | 1:AA:1453:G:H1     | 1.75                     | 0.52              |
| 3:AB:12:U:C2      | 3:AB:24:G:N2       | 2.78                     | 0.52              |
| 4:AE:72:GLY:HA2   | 4:AE:165:VAL:HG22  | 1.91                     | 0.52              |
| 4:AE:218:ALA:O    | 4:AE:219:VAL:C     | 2.52                     | 0.52              |
| 5:AF:28:GLN:NE2   | 5:AF:29:TYR:H      | 2.08                     | 0.52              |
| 6:AG:9:CYS:O      | 6:AG:12:CYS:HB2    | 2.10                     | 0.52              |
| 6:AG:61:LYS:HA    | 6:AG:203:VAL:CG2   | 2.39                     | 0.52              |
| 6:AG:128:VAL:N    | 6:AG:146:ILE:HG22  | 2.24                     | 0.52              |
| 6:AG:141:ARG:CG   | 6:AG:142:PRO:HD2   | 2.39                     | 0.52              |
| 7:AH:65:ASN:O     | 7:AH:65:ASN:CG     | 2.53                     | 0.52              |
| 7:AH:98:THR:CG2   | 7:AH:119:LEU:HD21  | 2.39                     | 0.52              |
| 8:AI:40:VAL:HG22  | 8:AI:40:VAL:O      | 2.09                     | 0.52              |
| 8:AI:46:ARG:NH2   | 20:AU:37:VAL:HG11  | 2.25                     | 0.52              |
| 9:AJ:146:GLU:O    | 9:AJ:149:ARG:N     | 2.42                     | 0.52              |
| 11:AL:4:TYR:CE1   | 11:AL:59:PHE:CE2   | 2.91                     | 0.52              |
| 13:AN:99:GLN:HA   | 13:AN:105:VAL:HG13 | 1.91                     | 0.52              |
| 14:AO:24:VAL:HG13 | 14:AO:26:ALA:N     | 2.23                     | 0.52              |
| 14:AO:84:LEU:O    | 14:AO:100:ILE:HG22 | 2.10                     | 0.52              |
| 18:AS:38:TYR:O    | 18:AS:49:LEU:HD12  | 2.10                     | 0.52              |
| 19:AT:7:THR:HG23  | 19:AT:8:GLY:N      | 2.24                     | 0.52              |
| 19:AT:22:LEU:HD11 | 19:AT:39:SER:OG    | 2.09                     | 0.52              |
| 21:AV:35:SER:C    | 21:AV:37:ARG:H     | 2.18                     | 0.52              |
| 22:AW:29:LYS:O    | 22:AW:32:ALA:CB    | 2.56                     | 0.52              |
| 22:AW:67:ALA:O    | 22:AW:68:LYS:C     | 2.52                     | 0.52              |
| 24:BA:19:C:N3     | 24:BA:20:C:C5      | 2.78                     | 0.52              |
| 24:BA:51:G:C5'    | 24:BA:52:A:OP1     | 2.54                     | 0.52              |
| 24:BA:144:C:O2'   | 24:BA:145:G:H5'    | 2.10                     | 0.52              |
| 24:BA:175:G:N2    | 24:BA:176:G:C1'    | 2.71                     | 0.52              |
| 24:BA:182:A:O2'   | 24:BA:183:C:H5'    | 2.09                     | 0.52              |
| 24:BA:215:G:H1'   | 24:BA:216:A:C4'    | 2.40                     | 0.52              |
| 24:BA:319:C:O2'   | 24:BA:320:A:O4'    | 2.27                     | 0.52              |
| 24:BA:423:A:H2'   | 24:BA:424:G:OP1    | 2.10                     | 0.52              |
| 24:BA:487:C:C6    | 24:BA:487:C:C3'    | 2.93                     | 0.52              |
| 24:BA:616:A:H2'   | 24:BA:617:G:N3     | 2.25                     | 0.52              |
| 24:BA:630:G:N1    | 24:BA:634:C:N4     | 2.58                     | 0.52              |
| 24:BA:675:A:O3'   | 29:BF:67:GLN:OE1   | 2.27                     | 0.52              |
| 24:BA:691:C:O2'   | 24:BA:692:C:H5'    | 2.08                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 24:BA:702:G:C2'  | 24:BA:703:U:H5'    | 2.39                     | 0.52              |
| 24:BA:728:G:H1'  | 24:BA:729:G:H8     | 1.75                     | 0.52              |
| 24:BA:763:G:N3   | 24:BA:765:G:C1'    | 2.73                     | 0.52              |
| 24:BA:855:G:H21  | 47:BZ:27:GLU:HB2   | 1.71                     | 0.52              |
| 24:BA:878:A:C4   | 24:BA:879:G:C8     | 2.98                     | 0.52              |
| 24:BA:962:G:C3'  | 24:BA:963:U:H6     | 2.23                     | 0.52              |
| 24:BA:1024:G:OP2 | 24:BA:1025:G:N2    | 2.43                     | 0.52              |
| 24:BA:1139:G:C5' | 34:BM:24:GLY:HA3   | 2.40                     | 0.52              |
| 24:BA:1142:U:H3' | 24:BA:1142(A):A:C8 | 2.42                     | 0.52              |
| 24:BA:1143:A:O2' | 24:BA:1144:G:H5'   | 2.09                     | 0.52              |
| 24:BA:1151:G:H2' | 24:BA:1152:C:C5    | 2.45                     | 0.52              |
| 24:BA:1222:C:N3  | 24:BA:1223:C:C5    | 2.78                     | 0.52              |
| 24:BA:1263:U:C5  | 24:BA:1265:A:N6    | 2.75                     | 0.52              |
| 24:BA:1264:G:OP2 | 24:BA:1265:A:C2    | 2.63                     | 0.52              |
| 24:BA:1360:A:C8  | 24:BA:1361:G:C8    | 2.97                     | 0.52              |
| 24:BA:1692:U:C1' | 24:BA:1696:G:H22   | 2.22                     | 0.52              |
| 24:BA:1735:C:H42 | 24:BA:1741:C:N4    | 2.05                     | 0.52              |
| 24:BA:1773:A:C6  | 24:BA:1829:A:C1'   | 2.88                     | 0.52              |
| 24:BA:1782:C:C6  | 24:BA:1782:C:C3'   | 2.93                     | 0.52              |
| 24:BA:1788:C:C6  | 24:BA:1788:C:C3'   | 2.93                     | 0.52              |
| 24:BA:1799:G:H22 | 27:BD:157:ARG:NH2  | 2.04                     | 0.52              |
| 24:BA:1939:U:O2' | 24:BA:2592:G:O2'   | 2.17                     | 0.52              |
| 24:BA:1956:U:C6  | 24:BA:1956:U:O5'   | 2.63                     | 0.52              |
| 24:BA:2009:G:C2  | 24:BA:2010:G:C8    | 2.98                     | 0.52              |
| 24:BA:2033:A:O2' | 24:BA:2034:U:P     | 2.68                     | 0.52              |
| 24:BA:2054:A:H62 | 24:BA:2577:A:N6    | 2.07                     | 0.52              |
| 24:BA:2067:G:C6  | 24:BA:2069:G:N7    | 2.77                     | 0.52              |
| 24:BA:2208:U:H1' | 24:BA:2217:G:N2    | 2.25                     | 0.52              |
| 24:BA:2285:C:H4' | 24:BA:2288:A:N1    | 2.25                     | 0.52              |
| 24:BA:2301:C:N3  | 24:BA:2302:G:N7    | 2.58                     | 0.52              |
| 24:BA:2302:G:C6  | 24:BA:2315:G:C6    | 2.98                     | 0.52              |
| 24:BA:2366:A:H3' | 24:BA:2367:G:C8    | 2.45                     | 0.52              |
| 24:BA:2460:U:H2' | 24:BA:2492:U:O4    | 2.09                     | 0.52              |
| 24:BA:2484:G:H21 | 37:BP:124:LYS:HD2  | 1.75                     | 0.52              |
| 24:BA:2617:C:C2  | 24:BA:2618:G:C8    | 2.98                     | 0.52              |
| 24:BA:2626:C:C2  | 24:BA:2627:G:C8    | 2.98                     | 0.52              |
| 24:BA:2638:G:N2  | 24:BA:2781:A:N6    | 2.57                     | 0.52              |
| 24:BA:2675:A:H2' | 24:BA:2676:C:C6    | 2.45                     | 0.52              |
| 24:BA:2834:G:C5  | 24:BA:2879:C:C4    | 2.97                     | 0.52              |
| 25:BB:50:G:O3'   | 39:BR:61:ASN:HA    | 2.10                     | 0.52              |
| 25:BB:100:G:C5   | 25:BB:101:A:N7     | 2.78                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 25:BB:117:G:C2    | 25:BB:118:G:N7     | 2.78                     | 0.52              |
| 26:BC:93:TYR:CE1  | 26:BC:109:ASP:HB2  | 2.45                     | 0.52              |
| 26:BC:200:LYS:HG3 | 26:BC:208:PHE:CE2  | 2.45                     | 0.52              |
| 27:BD:96:HIS:CG   | 27:BD:102:LYS:HG2  | 2.44                     | 0.52              |
| 27:BD:246:PRO:HG2 | 27:BD:250:TRP:HD1  | 1.75                     | 0.52              |
| 28:BE:4:ILE:HD11  | 28:BE:76:ARG:NH2   | 2.24                     | 0.52              |
| 28:BE:97:LYS:HD2  | 28:BE:98:PRO:HD2   | 1.90                     | 0.52              |
| 28:BE:113:PHE:C   | 28:BE:158:GLY:HA2  | 2.35                     | 0.52              |
| 29:BF:63:LYS:CA   | 29:BF:76:GLY:O     | 2.53                     | 0.52              |
| 29:BF:133:ASN:HB3 | 29:BF:165:ARG:NH2  | 2.24                     | 0.52              |
| 30:BG:163:ALA:CB  | 30:BG:169:ALA:HA   | 2.25                     | 0.52              |
| 32:BK:8:PRO:CD    | 32:BK:35:LEU:O     | 2.58                     | 0.52              |
| 32:BK:73:GLU:HG3  | 32:BK:138:ILE:CD1  | 2.39                     | 0.52              |
| 33:BL:12:LEU:CB   | 33:BL:19:PRO:HG3   | 2.32                     | 0.52              |
| 33:BL:78:ILE:HG21 | 33:BL:131:ALA:HB2  | 1.90                     | 0.52              |
| 34:BM:39:ARG:CB   | 34:BM:48:MET:SD    | 2.98                     | 0.52              |
| 36:BO:73:GLY:C    | 36:BO:107:LYS:HE3  | 2.35                     | 0.52              |
| 36:BO:92:GLU:N    | 36:BO:125:VAL:HG11 | 2.21                     | 0.52              |
| 37:BP:51:ARG:CD   | 37:BP:52:VAL:N     | 2.70                     | 0.52              |
| 37:BP:62:GLY:CA   | 46:BY:177:PRO:HA   | 2.37                     | 0.52              |
| 38:BQ:22:ARG:HG2  | 38:BQ:70:LEU:CD2   | 2.40                     | 0.52              |
| 38:BQ:54:LEU:N    | 38:BQ:54:LEU:CD1   | 2.71                     | 0.52              |
| 39:BR:26:LEU:O    | 39:BR:88:ASP:CB    | 2.53                     | 0.52              |
| 39:BR:49:VAL:CG2  | 39:BR:80:LEU:HG    | 2.40                     | 0.52              |
| 40:BS:21:GLU:O    | 40:BS:23:ARG:CD    | 2.53                     | 0.52              |
| 40:BS:28:VAL:HG23 | 40:BS:93:ARG:C     | 2.34                     | 0.52              |
| 40:BS:67:SER:CB   | 40:BS:75:ILE:HG23  | 2.39                     | 0.52              |
| 43:BV:33:ARG:O    | 43:BV:34:ASN:C     | 2.51                     | 0.52              |
| 43:BV:74:ALA:HB1  | 43:BV:105:VAL:CA   | 2.40                     | 0.52              |
| 44:BW:58:HIS:NE2  | 44:BW:77:LYS:NZ    | 2.56                     | 0.52              |
| 45:BX:53:PRO:O    | 45:BX:54:LYS:C     | 2.51                     | 0.52              |
| 46:BY:43:GLU:N    | 46:BY:43:GLU:OE2   | 2.43                     | 0.52              |
| 46:BY:96:VAL:HG13 | 46:BY:128:VAL:CG1  | 2.40                     | 0.52              |
| 47:BZ:11:ARG:HG2  | 47:BZ:11:ARG:NH1   | 2.25                     | 0.52              |
| 47:BZ:22:GLY:O    | 47:BZ:38:VAL:HA    | 2.09                     | 0.52              |
| 47:BZ:44:ARG:HG3  | 47:BZ:77:ARG:HG3   | 1.92                     | 0.52              |
| 47:BZ:56:ASP:CG   | 47:BZ:58:THR:HB    | 2.34                     | 0.52              |
| 47:BZ:83:PRO:O    | 47:BZ:84:LEU:C     | 2.53                     | 0.52              |
| 48:B1:23:LYS:O    | 48:B1:26:GLU:CB    | 2.52                     | 0.52              |
| 48:B1:59:LEU:HD11 | 48:B1:63:ARG:HE    | 1.74                     | 0.52              |
| 49:B2:50:VAL:HG12 | 49:B2:51:ALA:N     | 2.23                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 50:B3:31:ILE:O     | 50:B3:32:TYR:CD2   | 2.63                     | 0.52              |
| 54:B7:8:LYS:O      | 54:B7:9:GLY:C      | 2.53                     | 0.52              |
| 1:AA:88:C:C2'      | 1:AA:89:U:OP2      | 2.58                     | 0.52              |
| 1:AA:210:U:H4'     | 1:AA:216:G:O4'     | 2.10                     | 0.52              |
| 1:AA:299:G:C2'     | 1:AA:300:A:C8      | 2.92                     | 0.52              |
| 1:AA:375:U:H2'     | 1:AA:376:G:C5'     | 2.39                     | 0.52              |
| 1:AA:411:A:C5      | 1:AA:429:U:C5      | 2.98                     | 0.52              |
| 1:AA:432:A:H3'     | 1:AA:432:A:C8      | 2.44                     | 0.52              |
| 1:AA:543:C:P       | 6:AG:10:ARG:NH2    | 2.83                     | 0.52              |
| 1:AA:573:A:OP2     | 1:AA:574:A:OP2     | 2.28                     | 0.52              |
| 1:AA:729:A:H2'     | 1:AA:730:G:O5'     | 2.10                     | 0.52              |
| 1:AA:776:G:C5'     | 1:AA:777:A:OP1     | 2.51                     | 0.52              |
| 1:AA:811:C:H5      | 1:AA:812:C:C2      | 2.28                     | 0.52              |
| 1:AA:817:C:N1      | 1:AA:819:A:H5'     | 2.25                     | 0.52              |
| 1:AA:1032(B):G:H2' | 1:AA:1033:G:O4'    | 2.10                     | 0.52              |
| 1:AA:1047:G:HO2'   | 1:AA:1215:G:HO2'   | 1.48                     | 0.52              |
| 1:AA:1056:U:O2'    | 5:AF:195:VAL:O     | 2.17                     | 0.52              |
| 1:AA:1060:C:H2'    | 1:AA:1061:G:H8     | 1.75                     | 0.52              |
| 1:AA:1285:A:O4'    | 1:AA:1286:A:N7     | 2.42                     | 0.52              |
| 1:AA:1321:C:C5     | 1:AA:1322:C:C2'    | 2.93                     | 0.52              |
| 1:AA:1323:G:C4     | 1:AA:1324:A:N7     | 2.78                     | 0.52              |
| 3:AC:75:C:O5'      | 3:AC:76:A:OP2      | 2.27                     | 0.52              |
| 3:AD:54:U:OP2      | 3:AD:55:U:C4       | 2.62                     | 0.52              |
| 3:AB:16:U:C6       | 3:AB:16:U:OP1      | 2.62                     | 0.52              |
| 4:AE:15:VAL:O      | 4:AE:16:HIS:HB2    | 2.08                     | 0.52              |
| 4:AE:43:ASP:O      | 4:AE:47:THR:HB     | 2.10                     | 0.52              |
| 4:AE:72:GLY:C      | 4:AE:74:LYS:N      | 2.63                     | 0.52              |
| 4:AE:130:ARG:CB    | 4:AE:131:PRO:CD    | 2.88                     | 0.52              |
| 5:AF:37:GLN:HA     | 5:AF:37:GLN:OE1    | 2.09                     | 0.52              |
| 5:AF:43:LEU:CD2    | 5:AF:55:VAL:HG21   | 2.40                     | 0.52              |
| 6:AG:15:GLU:HB2    | 6:AG:19:LEU:HD11   | 1.92                     | 0.52              |
| 9:AJ:121:ALA:O     | 9:AJ:122:HIS:C     | 2.52                     | 0.52              |
| 10:AK:68:ARG:N     | 10:AK:76:PRO:HG3   | 2.25                     | 0.52              |
| 10:AK:111:ILE:HG13 | 10:AK:120:THR:HG22 | 1.92                     | 0.52              |
| 10:AK:123:GLU:O    | 10:AK:124:ALA:C    | 2.51                     | 0.52              |
| 12:AM:78:ASN:O     | 12:AM:79:ARG:C     | 2.51                     | 0.52              |
| 16:AQ:13:THR:C     | 16:AQ:15:LYS:N     | 2.66                     | 0.52              |
| 16:AQ:14:PRO:HB2   | 16:AQ:17:LYS:HA    | 1.91                     | 0.52              |
| 17:AR:77:ARG:NH1   | 17:AR:81:LEU:H     | 2.07                     | 0.52              |
| 18:AS:12:LYS:O     | 18:AS:13:HIS:HB2   | 2.08                     | 0.52              |
| 18:AS:82:GLN:O     | 18:AS:82:GLN:CG    | 2.57                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 23:AX:14:TRP:O    | 23:AX:15:ARG:C    | 2.52                     | 0.52              |
| 24:BA:30:G:C5     | 24:BA:31:C:C5     | 2.98                     | 0.52              |
| 24:BA:45:G:H2'    | 24:BA:215:G:H2'   | 1.92                     | 0.52              |
| 24:BA:91:A:H2     | 24:BA:92:G:H5'    | 1.73                     | 0.52              |
| 24:BA:140:A:N6    | 24:BA:1596:A:H4'  | 2.21                     | 0.52              |
| 24:BA:221:A:O2'   | 24:BA:271(B):G:N1 | 2.43                     | 0.52              |
| 24:BA:247:G:N7    | 24:BA:249:C:O2    | 2.42                     | 0.52              |
| 24:BA:251:A:C2'   | 24:BA:252:G:O5'   | 2.58                     | 0.52              |
| 24:BA:506:G:O2'   | 24:BA:507:A:H8    | 1.91                     | 0.52              |
| 24:BA:534:U:OP1   | 41:BT:24:TYR:CE2  | 2.62                     | 0.52              |
| 24:BA:604:G:C2'   | 24:BA:605:C:O5'   | 2.57                     | 0.52              |
| 24:BA:814:C:N3    | 24:BA:815:C:C5    | 2.78                     | 0.52              |
| 24:BA:963:U:C1'   | 24:BA:2250:G:H21  | 2.19                     | 0.52              |
| 24:BA:1007:C:O3'  | 34:BM:108:PRO:HG3 | 2.10                     | 0.52              |
| 24:BA:1139:G:N7   | 34:BM:65:LYS:HE2  | 2.24                     | 0.52              |
| 24:BA:1212:G:C8   | 24:BA:1212:G:H3'  | 2.45                     | 0.52              |
| 24:BA:1238:G:N2   | 24:BA:1239:G:H1'  | 2.25                     | 0.52              |
| 24:BA:1265:A:O5'  | 24:BA:1267:U:O2   | 2.28                     | 0.52              |
| 24:BA:1277:G:O2'  | 38:BQ:24:GLN:HG2  | 2.10                     | 0.52              |
| 24:BA:1354:A:C2'  | 24:BA:1355:G:H5'  | 2.40                     | 0.52              |
| 24:BA:1392:A:C5   | 24:BA:1393:A:C6   | 2.97                     | 0.52              |
| 24:BA:1405:U:C2   | 24:BA:1406:U:C4   | 2.98                     | 0.52              |
| 24:BA:1510:A:N3   | 24:BA:1511:A:C2   | 2.77                     | 0.52              |
| 24:BA:1673:U:HO2' | 24:BA:1674:G:P    | 2.32                     | 0.52              |
| 24:BA:1788:C:C2'  | 27:BD:222:ARG:NH2 | 2.49                     | 0.52              |
| 24:BA:1820:U:H2'  | 27:BD:202:LYS:CG  | 2.30                     | 0.52              |
| 24:BA:1861:G:N2   | 24:BA:1862:G:H1'  | 2.24                     | 0.52              |
| 24:BA:1879:C:H2'  | 24:BA:1880:C:C6   | 2.44                     | 0.52              |
| 24:BA:1890:A:C2   | 24:BA:1891:G:H1'  | 2.45                     | 0.52              |
| 24:BA:1906:G:C2   | 24:BA:1907:G:N7   | 2.78                     | 0.52              |
| 24:BA:2051:A:OP2  | 24:BA:2051:A:H8   | 1.92                     | 0.52              |
| 24:BA:2213:U:OP2  | 24:BA:2215:G:C6   | 2.62                     | 0.52              |
| 24:BA:2255:G:N2   | 24:BA:2256:G:H1'  | 2.25                     | 0.52              |
| 24:BA:2327:A:N7   | 24:BA:2388:A:N6   | 2.57                     | 0.52              |
| 24:BA:2353:G:C6   | 24:BA:2365:G:N2   | 2.78                     | 0.52              |
| 24:BA:2435:A:C2'  | 24:BA:2436:G:O5'  | 2.57                     | 0.52              |
| 24:BA:2466:C:C4   | 24:BA:2485:G:C6   | 2.97                     | 0.52              |
| 24:BA:2470:G:O6   | 24:BA:2481:G:C2   | 2.63                     | 0.52              |
| 24:BA:2507:C:C4'  | 24:BA:2573:C:N4   | 2.72                     | 0.52              |
| 24:BA:2544:G:O2'  | 24:BA:2545:G:H5'  | 2.10                     | 0.52              |
| 24:BA:2562:U:H2'  | 24:BA:2562:U:O2   | 2.10                     | 0.52              |

*Continued on next page...*

Continued from previous page...

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2568:C:O2'  | 24:BA:2569:G:H5'   | 2.10                     | 0.52              |
| 24:BA:2602:A:O2'  | 47:BZ:1:MET:HB2    | 2.10                     | 0.52              |
| 24:BA:2603:G:OP2  | 47:BZ:1:MET:SD     | 2.67                     | 0.52              |
| 24:BA:2617:C:H2'  | 24:BA:2618:G:O5'   | 2.10                     | 0.52              |
| 24:BA:2640:G:O3'  | 34:BM:75:TYR:CZ    | 2.63                     | 0.52              |
| 24:BA:2730:C:H2'  | 24:BA:2731:G:H8    | 1.75                     | 0.52              |
| 24:BA:2767:C:O2   | 24:BA:2768:C:C5    | 2.63                     | 0.52              |
| 24:BA:2776:A:C8   | 24:BA:2781:A:N7    | 2.77                     | 0.52              |
| 24:BA:2777:G:O5'  | 24:BA:2777:G:H8    | 1.93                     | 0.52              |
| 24:BA:2844:G:H3'  | 24:BA:2845:G:H8    | 1.73                     | 0.52              |
| 24:BA:2876:G:C2   | 24:BA:2877:G:N7    | 2.77                     | 0.52              |
| 26:BC:54:SER:HA   | 26:BC:57:ASN:ND2   | 2.25                     | 0.52              |
| 26:BC:195:ALA:O   | 26:BC:199:HIS:ND1  | 2.30                     | 0.52              |
| 27:BD:105:ILE:O   | 27:BD:106:ILE:C    | 2.52                     | 0.52              |
| 27:BD:246:PRO:HG2 | 27:BD:250:TRP:HB3  | 1.90                     | 0.52              |
| 28:BE:5:LEU:HD23  | 28:BE:7:VAL:N      | 2.24                     | 0.52              |
| 30:BG:36:LYS:NZ   | 30:BG:38:VAL:HG22  | 2.25                     | 0.52              |
| 30:BG:55:LYS:HB3  | 30:BG:152:LEU:HD21 | 1.92                     | 0.52              |
| 31:BH:35:VAL:HG12 | 31:BH:71:LEU:CD2   | 2.38                     | 0.52              |
| 31:BH:153:LYS:HA  | 31:BH:162:ILE:H    | 1.74                     | 0.52              |
| 34:BM:6:PRO:HB3   | 34:BM:41:ASP:HB3   | 1.92                     | 0.52              |
| 35:BN:80:ASP:CG   | 35:BN:82:ASN:OD1   | 2.53                     | 0.52              |
| 36:BO:49:ARG:HG3  | 54:B7:52:LYS:CG    | 2.38                     | 0.52              |
| 36:BO:77:ARG:CZ   | 36:BO:79:ARG:HG2   | 2.40                     | 0.52              |
| 36:BO:99:LEU:HD23 | 36:BO:100:LEU:H    | 1.74                     | 0.52              |
| 36:BO:111:ARG:HD2 | 36:BO:129:ALA:HB2  | 1.89                     | 0.52              |
| 37:BP:16:ARG:C    | 37:BP:17:LEU:HD12  | 2.35                     | 0.52              |
| 38:BQ:43:GLU:OE2  | 38:BQ:43:GLU:HA    | 2.10                     | 0.52              |
| 38:BQ:73:VAL:O    | 38:BQ:76:VAL:N     | 2.43                     | 0.52              |
| 39:BR:39:ILE:O    | 39:BR:47:THR:CG2   | 2.58                     | 0.52              |
| 40:BS:28:VAL:HG11 | 40:BS:90:GLN:HB2   | 1.92                     | 0.52              |
| 40:BS:32:TYR:C    | 40:BS:33:LYS:HG2   | 2.35                     | 0.52              |
| 41:BT:59:ARG:O    | 41:BT:62:ILE:CB    | 2.48                     | 0.52              |
| 42:BU:43:GLU:C    | 42:BU:44:LYS:CD    | 2.83                     | 0.52              |
| 43:BV:74:ALA:HB1  | 43:BV:105:VAL:CB   | 2.40                     | 0.52              |
| 43:BV:74:ALA:HB2  | 43:BV:106:ILE:H    | 1.74                     | 0.52              |
| 44:BW:57:LEU:HD23 | 44:BW:57:LEU:C     | 2.35                     | 0.52              |
| 45:BX:9:LYS:HD2   | 45:BX:110:GLU:CD   | 2.35                     | 0.52              |
| 46:BY:26:GLY:O    | 46:BY:37:VAL:O     | 2.28                     | 0.52              |
| 46:BY:29:TYR:CE2  | 46:BY:72:ARG:NH1   | 2.76                     | 0.52              |
| 46:BY:99:TYR:CD1  | 46:BY:126:VAL:CG2  | 2.93                     | 0.52              |

Continued on next page...

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 46:BY:171:ILE:HD12 | 46:BY:171:ILE:C   | 2.35                     | 0.52              |
| 48:B1:59:LEU:HD11  | 48:B1:63:ARG:NE   | 2.24                     | 0.52              |
| 49:B2:35:ARG:HH22  | 49:B2:47:VAL:HG11 | 1.74                     | 0.52              |
| 51:B4:12:SER:OG    | 51:B4:13:LYS:N    | 2.43                     | 0.52              |
| 52:B5:22:ALA:CB    | 52:B5:39:TYR:HE2  | 2.22                     | 0.52              |
| 53:B6:9:ARG:O      | 53:B6:13:ALA:HB3  | 2.08                     | 0.52              |
| 54:B7:29:LYS:NZ    | 54:B7:36:LYS:HZ1  | 2.07                     | 0.52              |
| 55:B8:9:ARG:NH2    | 55:B8:16:VAL:CG1  | 2.73                     | 0.52              |
| 1:AA:124:G:OP1     | 1:AA:310:G:N2     | 2.33                     | 0.52              |
| 1:AA:186:C:H2'     | 1:AA:186(A):C:C6  | 2.44                     | 0.52              |
| 1:AA:263:A:H5'     | 22:AW:75:ASN:HD21 | 1.75                     | 0.52              |
| 1:AA:304:U:O2'     | 1:AA:305:G:H5'    | 2.10                     | 0.52              |
| 1:AA:390:C:N4      | 1:AA:391:G:O6     | 2.43                     | 0.52              |
| 1:AA:458:C:N4      | 1:AA:464:G:C6     | 2.78                     | 0.52              |
| 1:AA:527:G:N2      | 1:AA:528:C:C2     | 2.77                     | 0.52              |
| 1:AA:533:A:OP2     | 1:AA:533:A:O4'    | 2.27                     | 0.52              |
| 1:AA:671:G:C2      | 1:AA:672:U:H1'    | 2.44                     | 0.52              |
| 1:AA:675:A:N3      | 13:AN:116:HIS:HB2 | 2.25                     | 0.52              |
| 1:AA:754:C:H1'     | 17:AR:69:TYR:CG   | 2.44                     | 0.52              |
| 1:AA:920:U:O2'     | 1:AA:921:U:H5'    | 2.10                     | 0.52              |
| 1:AA:977:A:N6      | 1:AA:1224:G:OP1   | 2.42                     | 0.52              |
| 1:AA:978:A:H3'     | 1:AA:978:A:C8     | 2.44                     | 0.52              |
| 1:AA:986:A:O2'     | 21:AV:55:LYS:HG3  | 2.09                     | 0.52              |
| 1:AA:996:A:C2      | 1:AA:997:U:C5     | 2.98                     | 0.52              |
| 1:AA:1118:C:C4     | 1:AA:1156:G:N2    | 2.78                     | 0.52              |
| 1:AA:1134:G:N2     | 1:AA:1136:U:O4    | 2.42                     | 0.52              |
| 1:AA:1202:G:C2'    | 1:AA:1203:C:O5'   | 2.58                     | 0.52              |
| 1:AA:1240:U:C1'    | 9:AJ:42:ILE:HD11  | 2.39                     | 0.52              |
| 1:AA:1251:A:H2'    | 1:AA:1252:A:C5    | 2.45                     | 0.52              |
| 1:AA:1406:U:H2'    | 1:AA:1407:C:O5'   | 2.09                     | 0.52              |
| 1:AA:1430:C:N3     | 1:AA:1471:G:C2    | 2.78                     | 0.52              |
| 3:AC:65:G:C6       | 3:AC:66:U:C4      | 2.98                     | 0.52              |
| 3:AB:34:G:H8       | 3:AB:34:G:OP1     | 1.93                     | 0.52              |
| 3:AB:74:C:C5       | 24:BA:2556:C:N1   | 2.78                     | 0.52              |
| 4:AE:115:LEU:CD2   | 4:AE:149:LEU:HD22 | 2.36                     | 0.52              |
| 4:AE:123:ALA:O     | 4:AE:124:SER:O    | 2.28                     | 0.52              |
| 4:AE:184:VAL:HB    | 4:AE:198:ASP:CG   | 2.33                     | 0.52              |
| 6:AG:54:TYR:C      | 6:AG:56:VAL:N     | 2.67                     | 0.52              |
| 6:AG:171:GLY:HA3   | 6:AG:173:TRP:CZ3  | 2.44                     | 0.52              |
| 7:AH:47:LYS:H      | 7:AH:57:LYS:CE    | 2.23                     | 0.52              |
| 7:AH:71:LEU:HD21   | 7:AH:74:GLY:N     | 2.24                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 9:AJ:44:TYR:O      | 9:AJ:45:ASP:C       | 2.52                     | 0.52              |
| 10:AK:49:GLU:OE1   | 10:AK:60:ARG:HB3    | 2.09                     | 0.52              |
| 10:AK:100:ILE:HG23 | 10:AK:121:ASP:HA    | 1.92                     | 0.52              |
| 10:AK:102:ARG:HH21 | 10:AK:105:ARG:HA    | 1.74                     | 0.52              |
| 11:AL:7:THR:CG2    | 11:AL:9:ARG:HH11    | 2.22                     | 0.52              |
| 12:AM:5:ARG:NH2    | 12:AM:73:ASP:OD2    | 2.43                     | 0.52              |
| 12:AM:28:ARG:HG2   | 12:AM:28:ARG:NH1    | 2.24                     | 0.52              |
| 13:AN:80:VAL:HG22  | 13:AN:81:ASP:N      | 2.25                     | 0.52              |
| 13:AN:84:VAL:HG23  | 13:AN:84:VAL:O      | 2.09                     | 0.52              |
| 18:AS:60:LEU:O     | 18:AS:61:SER:C      | 2.53                     | 0.52              |
| 19:AT:75:ARG:HH12  | 19:AT:77:VAL:CG2    | 2.23                     | 0.52              |
| 22:AW:51:GLU:HB3   | 22:AW:54:LYS:HZ1    | 1.75                     | 0.52              |
| 24:BA:90:U:OP1     | 24:BA:90:U:C6       | 2.63                     | 0.52              |
| 24:BA:274:G:N2     | 24:BA:274:G:OP2     | 2.42                     | 0.52              |
| 24:BA:324:A:C2     | 24:BA:325:G:C1'     | 2.93                     | 0.52              |
| 24:BA:515:A:H5'    | 41:BT:32:PHE:HZ     | 1.74                     | 0.52              |
| 24:BA:565:C:N3     | 24:BA:566:U:N3      | 2.58                     | 0.52              |
| 24:BA:572:A:C8     | 24:BA:573:G:C4      | 2.98                     | 0.52              |
| 24:BA:716:A:C8     | 24:BA:717:G:O4'     | 2.63                     | 0.52              |
| 24:BA:729:G:H2'    | 24:BA:730:C:C1'     | 2.40                     | 0.52              |
| 24:BA:744:G:O6     | 24:BA:745:G:O6      | 2.27                     | 0.52              |
| 24:BA:819:A:H2'    | 24:BA:820:A:H8      | 1.69                     | 0.52              |
| 24:BA:872:A:O2'    | 37:BP:66:ILE:HG12   | 2.09                     | 0.52              |
| 24:BA:893:C:C2     | 24:BA:894:C:C5      | 2.98                     | 0.52              |
| 24:BA:946:G:C6     | 24:BA:972:G:N2      | 2.76                     | 0.52              |
| 24:BA:1005:C:C5    | 24:BA:1142(A):A:O3' | 2.63                     | 0.52              |
| 24:BA:1075:C:O2    | 24:BA:1075:C:C2'    | 2.58                     | 0.52              |
| 24:BA:1107:G:H8    | 24:BA:1107:G:O5'    | 1.93                     | 0.52              |
| 24:BA:1176:G:C2'   | 24:BA:1177:A:H5'    | 2.34                     | 0.52              |
| 24:BA:1256:G:C6    | 24:BA:1257:C:C4     | 2.98                     | 0.52              |
| 24:BA:1263:U:H4'   | 51:B4:10:LYS:HD3    | 1.92                     | 0.52              |
| 24:BA:1358:G:C8    | 24:BA:1371:G:N1     | 2.78                     | 0.52              |
| 24:BA:1511:A:H3'   | 24:BA:1511:A:C8     | 2.45                     | 0.52              |
| 24:BA:1540:G:H2'   | 24:BA:1541:U:C4'    | 2.40                     | 0.52              |
| 24:BA:1607:C:O2    | 24:BA:1607:C:H2'    | 2.09                     | 0.52              |
| 24:BA:1627:G:H2'   | 24:BA:1627:G:N3     | 2.24                     | 0.52              |
| 24:BA:1632:A:O5'   | 24:BA:1632:A:C8     | 2.63                     | 0.52              |
| 24:BA:1677:A:C2    | 24:BA:1678:G:C4     | 2.97                     | 0.52              |
| 24:BA:1683:C:C2    | 24:BA:1684:C:H5     | 2.25                     | 0.52              |
| 24:BA:1683:C:O5'   | 24:BA:1683:C:H6     | 1.93                     | 0.52              |
| 24:BA:1764:G:C2'   | 24:BA:1765:C:O5'    | 2.57                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1803:A:O3'   | 27:BD:257:LEU:HD13 | 2.10                     | 0.52              |
| 24:BA:1813:G:H5''  | 24:BA:1814:G:OP2   | 2.09                     | 0.52              |
| 24:BA:1819:A:N7    | 27:BD:179:SER:HB3  | 2.25                     | 0.52              |
| 24:BA:1844:C:C2    | 24:BA:1845:G:C8    | 2.98                     | 0.52              |
| 24:BA:1952:A:C2    | 35:BN:22:ILE:HG12  | 2.39                     | 0.52              |
| 24:BA:1954:G:N3    | 24:BA:2551:C:H4'   | 2.25                     | 0.52              |
| 24:BA:1955:U:H3'   | 24:BA:1956:U:H5    | 1.74                     | 0.52              |
| 24:BA:1997:G:C6    | 24:BA:1998:G:C6    | 2.97                     | 0.52              |
| 24:BA:2093:G:H2'   | 24:BA:2094:G:H5'   | 1.92                     | 0.52              |
| 24:BA:2143:C:C4    | 24:BA:2144:U:O4    | 2.63                     | 0.52              |
| 24:BA:2171:A:O2'   | 24:BA:2172:U:C6    | 2.56                     | 0.52              |
| 24:BA:2182:G:C2    | 24:BA:2183:C:C2    | 2.97                     | 0.52              |
| 24:BA:2216:G:O5'   | 24:BA:2216:G:C8    | 2.62                     | 0.52              |
| 24:BA:2274:A:C5    | 24:BA:2276:G:C8    | 2.98                     | 0.52              |
| 24:BA:2298:A:H62   | 24:BA:2318:G:H21   | 1.58                     | 0.52              |
| 24:BA:2408:U:C2    | 24:BA:2409:G:C8    | 2.98                     | 0.52              |
| 24:BA:2744:G:O2'   | 24:BA:2745:C:H5'   | 2.09                     | 0.52              |
| 24:BA:2848:G:H2'   | 40:BS:99:LEU:HD21  | 1.92                     | 0.52              |
| 25:BB:30:C:O4'     | 25:BB:58:A:C2      | 2.62                     | 0.52              |
| 25:BB:85:G:C4      | 25:BB:92:G:N2      | 2.78                     | 0.52              |
| 26:BC:10:LEU:CD1   | 26:BC:32:LEU:HD23  | 2.40                     | 0.52              |
| 26:BC:46:LYS:HD3   | 26:BC:46:LYS:O     | 2.10                     | 0.52              |
| 26:BC:131:LEU:HB2  | 26:BC:137:LEU:HB2  | 1.92                     | 0.52              |
| 27:BD:5:LYS:O      | 27:BD:29:PRO:HD3   | 2.09                     | 0.52              |
| 27:BD:244:ARG:HB3  | 27:BD:252:TRP:CD1  | 2.44                     | 0.52              |
| 27:BD:250:TRP:CE3  | 27:BD:250:TRP:CA   | 2.92                     | 0.52              |
| 28:BE:13:ARG:HD2   | 28:BE:13:ARG:O     | 2.09                     | 0.52              |
| 28:BE:91:VAL:HG23  | 28:BE:180:ASN:CG   | 2.34                     | 0.52              |
| 29:BF:104:LYS:C    | 29:BF:108:LYS:NZ   | 2.68                     | 0.52              |
| 30:BG:47:LYS:CD    | 30:BG:49:ASP:OD2   | 2.53                     | 0.52              |
| 30:BG:174:GLU:CG   | 30:BG:175:LEU:N    | 2.73                     | 0.52              |
| 31:BH:38:SER:CB    | 31:BH:41:MET:HE2   | 2.39                     | 0.52              |
| 31:BH:107:VAL:HG11 | 31:BH:152:ARG:HD2  | 1.92                     | 0.52              |
| 31:BH:122:THR:O    | 31:BH:133:VAL:CG2  | 2.56                     | 0.52              |
| 32:BK:4:ILE:HD11   | 32:BK:39:ALA:CA    | 2.40                     | 0.52              |
| 33:BL:26:ALA:O     | 33:BL:30:HIS:HB3   | 2.09                     | 0.52              |
| 33:BL:60:TYR:CD2   | 33:BL:67:PHE:HE1   | 2.28                     | 0.52              |
| 33:BL:121:GLU:HB3  | 33:BL:125:ARG:CZ   | 2.40                     | 0.52              |
| 34:BM:18:ALA:H     | 34:BM:21:LYS:HD2   | 1.74                     | 0.52              |
| 34:BM:55:VAL:HB    | 34:BM:130:HIS:NE2  | 2.23                     | 0.52              |
| 35:BN:22:ILE:HD12  | 35:BN:40:VAL:HG21  | 1.91                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 35:BN:113:LYS:NZ   | 35:BN:117:LEU:HB2  | 2.25                     | 0.52              |
| 36:BO:18:ARG:C     | 36:BO:20:GLY:H     | 2.17                     | 0.52              |
| 36:BO:124:LYS:HD2  | 36:BO:142:GLY:O    | 2.10                     | 0.52              |
| 38:BQ:75:LEU:HD23  | 38:BQ:78:LYS:CB    | 2.40                     | 0.52              |
| 40:BS:31:SER:OG    | 40:BS:91:ARG:NH1   | 2.43                     | 0.52              |
| 40:BS:56:GLY:C     | 40:BS:57:PHE:CD2   | 2.87                     | 0.52              |
| 40:BS:104:ASN:HA   | 40:BS:107:ASP:OD2  | 2.10                     | 0.52              |
| 41:BT:2:PRO:O      | 41:BT:3:ARG:O      | 2.28                     | 0.52              |
| 41:BT:12:ARG:O     | 41:BT:13:LYS:C     | 2.53                     | 0.52              |
| 41:BT:26:GLY:O     | 41:BT:27:LEU:HD12  | 2.10                     | 0.52              |
| 41:BT:61:TRP:CE3   | 41:BT:93:LYS:NZ    | 2.77                     | 0.52              |
| 41:BT:74:LEU:C     | 41:BT:78:THR:OG1   | 2.52                     | 0.52              |
| 41:BT:98:LEU:O     | 41:BT:99:ALA:C     | 2.52                     | 0.52              |
| 42:BU:20:LEU:CB    | 42:BU:95:LEU:HB3   | 2.40                     | 0.52              |
| 42:BU:57:VAL:CG1   | 42:BU:58:VAL:H     | 2.02                     | 0.52              |
| 44:BW:15:GLU:CA    | 44:BW:16:LYS:HE2   | 2.40                     | 0.52              |
| 44:BW:50:LYS:HZ3   | 44:BW:85:PRO:CG    | 2.23                     | 0.52              |
| 46:BY:29:TYR:O     | 46:BY:89:PHE:HD2   | 1.93                     | 0.52              |
| 46:BY:30:ASN:CB    | 46:BY:90:VAL:HG23  | 2.27                     | 0.52              |
| 46:BY:111:VAL:HG22 | 46:BY:117:LEU:CG   | 2.32                     | 0.52              |
| 46:BY:123:ASP:H    | 46:BY:171:ILE:HD13 | 1.74                     | 0.52              |
| 46:BY:127:LYS:HD3  | 46:BY:165:VAL:H    | 1.75                     | 0.52              |
| 46:BY:157:LEU:HD23 | 46:BY:158:PRO:N    | 2.24                     | 0.52              |
| 46:BY:161:VAL:O    | 46:BY:162:GLU:CB   | 2.56                     | 0.52              |
| 47:BZ:42:GLY:O     | 47:BZ:57:PHE:HD2   | 1.92                     | 0.52              |
| 47:BZ:56:ASP:OD2   | 47:BZ:58:THR:OG1   | 2.24                     | 0.52              |
| 48:B1:27:LEU:HD21  | 48:B1:49:LYS:N     | 2.25                     | 0.52              |
| 49:B2:13:ILE:CG2   | 49:B2:14:GLY:N     | 2.66                     | 0.52              |
| 52:B5:48:VAL:HG22  | 52:B5:49:HIS:N     | 2.25                     | 0.52              |
| 54:B7:2:PRO:HB2    | 54:B7:4:MET:CE     | 2.39                     | 0.52              |
| 1:AA:62:U:H4'      | 1:AA:385:C:O2      | 2.10                     | 0.52              |
| 1:AA:93:U:H2'      | 1:AA:95:G:H8       | 1.71                     | 0.52              |
| 1:AA:254:G:N1      | 1:AA:273:A:C6      | 2.78                     | 0.52              |
| 1:AA:259:G:N2      | 1:AA:260:G:N3      | 2.58                     | 0.52              |
| 1:AA:263:A:C2'     | 1:AA:264:U:C5'     | 2.75                     | 0.52              |
| 1:AA:280:C:C5'     | 1:AA:281:G:OP2     | 2.57                     | 0.52              |
| 1:AA:355:C:N4      | 1:AA:356:A:N6      | 2.56                     | 0.52              |
| 1:AA:381:C:H2'     | 1:AA:381:C:O2      | 2.10                     | 0.52              |
| 1:AA:390:C:C2      | 1:AA:391:G:C8      | 2.97                     | 0.52              |
| 1:AA:429:U:H1'     | 1:AA:430:A:H5''    | 1.90                     | 0.52              |
| 1:AA:465:A:H61     | 18:AS:82:GLN:HE22  | 1.58                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:485:G:O2'     | 1:AA:486:U:H6     | 1.93                     | 0.52              |
| 1:AA:558:G:O5'     | 1:AA:559:A:C3'    | 2.58                     | 0.52              |
| 1:AA:717:C:O2'     | 1:AA:718:G:P      | 2.68                     | 0.52              |
| 1:AA:735:C:O2'     | 20:AU:75:ILE:CD1  | 2.57                     | 0.52              |
| 1:AA:812:C:H4'     | 1:AA:813:U:H6     | 1.75                     | 0.52              |
| 1:AA:854:G:H5''    | 1:AA:871:U:N3     | 2.20                     | 0.52              |
| 1:AA:924:C:O2'     | 1:AA:925:G:H5'    | 2.10                     | 0.52              |
| 1:AA:954:G:H2'     | 1:AA:955:U:C6     | 2.45                     | 0.52              |
| 1:AA:978:A:C8      | 1:AA:980:C:N4     | 2.78                     | 0.52              |
| 1:AA:1170:A:C8     | 1:AA:1171:G:C8    | 2.98                     | 0.52              |
| 1:AA:1188:A:C5'    | 12:AM:61:GLU:OE2  | 2.54                     | 0.52              |
| 1:AA:1343:G:H2'    | 1:AA:1344:C:O4'   | 2.10                     | 0.52              |
| 1:AA:1362(A):C:H5' | 1:AA:1363:A:OP1   | 2.10                     | 0.52              |
| 2:A1:36:U:H6       | 2:A1:36:U:H5''    | 1.74                     | 0.52              |
| 3:AC:16:U:H4'      | 3:AC:18:G:C5'     | 2.37                     | 0.52              |
| 3:AC:60:U:OP1      | 3:AC:61:C:C5      | 2.63                     | 0.52              |
| 3:AC:75:C:O5'      | 3:AC:76:A:P       | 2.68                     | 0.52              |
| 3:AD:9:A:H5''      | 3:AD:10:G:OP2     | 2.10                     | 0.52              |
| 3:AB:9:A:O2'       | 3:AB:45:U:O2'     | 2.25                     | 0.52              |
| 4:AE:105:PHE:O     | 4:AE:109:SER:OG   | 2.21                     | 0.52              |
| 4:AE:117:GLU:CD    | 4:AE:118:LEU:N    | 2.68                     | 0.52              |
| 4:AE:213:LEU:CD2   | 4:AE:213:LEU:C    | 2.82                     | 0.52              |
| 4:AE:238:LEU:O     | 4:AE:238:LEU:HD23 | 2.09                     | 0.52              |
| 6:AG:30:LYS:HG2    | 6:AG:35:ARG:CD    | 2.40                     | 0.52              |
| 6:AG:35:ARG:O      | 6:AG:36:ARG:C     | 2.53                     | 0.52              |
| 7:AH:72:GLN:HE22   | 7:AH:144:THR:HG23 | 1.74                     | 0.52              |
| 8:AI:48:LEU:CD1    | 8:AI:50:TYR:O     | 2.55                     | 0.52              |
| 9:AJ:140:ASP:O     | 9:AJ:144:MET:HB2  | 2.10                     | 0.52              |
| 10:AK:78:GLN:O     | 10:AK:79:VAL:C    | 2.52                     | 0.52              |
| 11:AL:82:ALA:HB1   | 11:AL:101:PHE:CE1 | 2.45                     | 0.52              |
| 14:AO:90:VAL:HG12  | 14:AO:90:VAL:O    | 2.10                     | 0.52              |
| 14:AO:104:VAL:O    | 14:AO:106:ASP:N   | 2.43                     | 0.52              |
| 15:AP:19:LEU:O     | 15:AP:22:ILE:HG13 | 2.10                     | 0.52              |
| 15:AP:23:TYR:HB3   | 15:AP:67:GLU:CA   | 2.19                     | 0.52              |
| 16:AQ:16:PHE:C     | 16:AQ:18:VAL:N    | 2.67                     | 0.52              |
| 17:AR:17:ARG:HH11  | 17:AR:77:ARG:HD3  | 1.72                     | 0.52              |
| 17:AR:26:GLU:OE2   | 17:AR:26:GLU:CA   | 2.56                     | 0.52              |
| 18:AS:18:ARG:NH1   | 18:AS:32:TYR:CE2  | 2.78                     | 0.52              |
| 18:AS:20:VAL:HG11  | 18:AS:32:TYR:CD2  | 2.44                     | 0.52              |
| 18:AS:57:ARG:HA    | 18:AS:60:LEU:HD12 | 1.92                     | 0.52              |
| 21:AV:27:GLU:OE2   | 21:AV:29:ARG:HA   | 2.10                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 21:AV:62:ILE:CG1  | 21:AV:67:VAL:HG22  | 2.38                     | 0.52              |
| 22:AW:62:LEU:O    | 22:AW:63:ILE:C     | 2.53                     | 0.52              |
| 24:BA:119:A:O2'   | 24:BA:120:U:P      | 2.67                     | 0.52              |
| 24:BA:223:A:C6    | 24:BA:408:G:O4'    | 2.62                     | 0.52              |
| 24:BA:270(Z):U:H3 | 24:BA:271(C):U:H1' | 1.73                     | 0.52              |
| 24:BA:328:U:O4'   | 45:BX:1:MET:HE1    | 2.09                     | 0.52              |
| 24:BA:388:G:OP2   | 50:B3:23:GLU:CG    | 2.58                     | 0.52              |
| 24:BA:415:A:N1    | 24:BA:416:C:O2     | 2.43                     | 0.52              |
| 24:BA:592:G:O2'   | 54:B7:3:LYS:N      | 2.40                     | 0.52              |
| 24:BA:724:U:C2'   | 24:BA:725:G:C5'    | 2.88                     | 0.52              |
| 24:BA:740:U:C6    | 24:BA:741:G:N7     | 2.78                     | 0.52              |
| 24:BA:761:A:H5''  | 24:BA:762:U:OP1    | 2.09                     | 0.52              |
| 24:BA:763:G:C6    | 24:BA:765:G:C5     | 2.98                     | 0.52              |
| 24:BA:829:A:C5'   | 24:BA:830:G:H5''   | 2.36                     | 0.52              |
| 24:BA:916:G:O2'   | 25:BB:99:A:H1'     | 2.10                     | 0.52              |
| 24:BA:972:G:C8    | 24:BA:972:G:OP2    | 2.62                     | 0.52              |
| 24:BA:1069:A:H5'  | 24:BA:1070:A:C3'   | 2.40                     | 0.52              |
| 24:BA:1078:U:C2   | 24:BA:1088:A:H1'   | 2.44                     | 0.52              |
| 24:BA:1116:C:OP2  | 24:BA:1116:C:C6    | 2.61                     | 0.52              |
| 24:BA:1148:A:N1   | 24:BA:1149:G:C5    | 2.77                     | 0.52              |
| 24:BA:1288:U:C2   | 24:BA:1327:C:C2    | 2.97                     | 0.52              |
| 24:BA:1306:C:H2'  | 24:BA:1307:A:O4'   | 2.10                     | 0.52              |
| 24:BA:1358:G:N1   | 24:BA:1372:U:OP2   | 2.36                     | 0.52              |
| 24:BA:1360:A:C2'  | 24:BA:1361:G:H5'   | 2.40                     | 0.52              |
| 24:BA:1440:G:H2'  | 24:BA:1441:G:H8    | 1.75                     | 0.52              |
| 24:BA:1442:G:C2   | 24:BA:1443:G:C5    | 2.98                     | 0.52              |
| 24:BA:1731:G:H3'  | 24:BA:1731:G:N3    | 2.24                     | 0.52              |
| 24:BA:1802:A:N3   | 24:BA:1802:A:C2'   | 2.67                     | 0.52              |
| 24:BA:1818:U:C4   | 27:BD:156:ALA:CB   | 2.92                     | 0.52              |
| 24:BA:1858:G:HO2' | 24:BA:1859:A:H8    | 1.54                     | 0.52              |
| 24:BA:1879:C:H2'  | 24:BA:1880:C:O4'   | 2.09                     | 0.52              |
| 24:BA:1911:U:C2'  | 24:BA:1912:A:C5'   | 2.77                     | 0.52              |
| 24:BA:1921:G:O2'  | 24:BA:1922:G:H5'   | 2.10                     | 0.52              |
| 24:BA:2168:G:H1'  | 24:BA:2170:A:N7    | 2.25                     | 0.52              |
| 24:BA:2183:C:O2   | 24:BA:2183:C:H2'   | 2.08                     | 0.52              |
| 24:BA:2256:G:N2   | 24:BA:2275:C:N4    | 2.58                     | 0.52              |
| 24:BA:2287:A:C2'  | 24:BA:2288:A:O5'   | 2.58                     | 0.52              |
| 24:BA:2369:A:N6   | 24:BA:2382:G:N2    | 2.57                     | 0.52              |
| 24:BA:2432:A:C8   | 24:BA:2433:A:C5    | 2.98                     | 0.52              |
| 24:BA:2447:G:H3'  | 24:BA:2499:C:OP2   | 2.10                     | 0.52              |
| 24:BA:2525:G:O2'  | 24:BA:2741:A:C2    | 2.63                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2639:A:C5    | 24:BA:2778:A:C6    | 2.98                     | 0.52              |
| 24:BA:2689:U:C2    | 24:BA:2713:A:N7    | 2.78                     | 0.52              |
| 24:BA:2767:C:N3    | 24:BA:2768:C:N4    | 2.57                     | 0.52              |
| 24:BA:2811:G:H22   | 24:BA:2891:G:H1'   | 1.75                     | 0.52              |
| 24:BA:2886:G:N2    | 24:BA:2887:U:H1'   | 2.26                     | 0.52              |
| 25:BB:11:C:P       | 47:BZ:74:ARG:HH12  | 2.32                     | 0.52              |
| 25:BB:81:G:C6      | 25:BB:82:G:C5      | 2.97                     | 0.52              |
| 26:BC:36:LYS:O     | 26:BC:37:PHE:CG    | 2.63                     | 0.52              |
| 26:BC:138:PRO:HB3  | 26:BC:145:VAL:CG2  | 2.40                     | 0.52              |
| 26:BC:192:PHE:CE1  | 26:BC:196:LEU:HD13 | 2.45                     | 0.52              |
| 27:BD:182:LEU:N    | 27:BD:270:ILE:HG13 | 2.25                     | 0.52              |
| 27:BD:246:PRO:O    | 27:BD:247:ALA:O    | 2.28                     | 0.52              |
| 28:BE:61:ARG:O     | 28:BE:62:PRO:C     | 2.51                     | 0.52              |
| 28:BE:67:PHE:O     | 28:BE:70:ALA:N     | 2.43                     | 0.52              |
| 28:BE:80:GLU:N     | 28:BE:80:GLU:CD    | 2.68                     | 0.52              |
| 28:BE:98:PRO:HG3   | 28:BE:175:VAL:HG22 | 1.91                     | 0.52              |
| 28:BE:103:ASP:O    | 28:BE:104:VAL:HG22 | 2.09                     | 0.52              |
| 29:BF:22:ALA:HB1   | 29:BF:115:ALA:HB2  | 1.92                     | 0.52              |
| 29:BF:46:ARG:NE    | 29:BF:46:ARG:HA    | 2.25                     | 0.52              |
| 29:BF:49:ALA:HB3   | 29:BF:94:PRO:CA    | 2.40                     | 0.52              |
| 29:BF:53:THR:O     | 29:BF:56:GLU:OE1   | 2.28                     | 0.52              |
| 29:BF:121:GLY:CA   | 29:BF:191:ARG:NE   | 2.73                     | 0.52              |
| 30:BG:19:LEU:H     | 30:BG:19:LEU:CD1   | 2.22                     | 0.52              |
| 30:BG:38:VAL:O     | 30:BG:157:ILE:HG13 | 2.09                     | 0.52              |
| 30:BG:74:LYS:CE    | 30:BG:75:LYS:HE3   | 2.39                     | 0.52              |
| 30:BG:76:SER:C     | 30:BG:78:SER:N     | 2.62                     | 0.52              |
| 31:BH:85:LYS:HZ2   | 31:BH:85:LYS:CB    | 2.23                     | 0.52              |
| 31:BH:94:TYR:O     | 31:BH:95:ARG:HD2   | 2.10                     | 0.52              |
| 31:BH:120:GLY:C    | 31:BH:135:GLY:HA2  | 2.35                     | 0.52              |
| 31:BH:136:ILE:CG2  | 31:BH:137:ASP:H    | 2.20                     | 0.52              |
| 34:BM:44:PRO:HG2   | 34:BM:45:ASN:OD1   | 2.10                     | 0.52              |
| 34:BM:85:ILE:HD12  | 34:BM:85:ILE:H     | 1.73                     | 0.52              |
| 35:BN:63:VAL:HG12  | 35:BN:99:PHE:HZ    | 1.75                     | 0.52              |
| 35:BN:117:LEU:HD23 | 35:BN:118:ALA:CA   | 2.40                     | 0.52              |
| 36:BO:15:ARG:HH22  | 36:BO:16:ARG:HB2   | 1.71                     | 0.52              |
| 36:BO:76:LYS:HE2   | 36:BO:81:GLN:NE2   | 2.25                     | 0.52              |
| 36:BO:126:VAL:CA   | 36:BO:146:VAL:H    | 2.22                     | 0.52              |
| 37:BP:22:LYS:CD    | 37:BP:99:PRO:HG3   | 2.25                     | 0.52              |
| 37:BP:25:ASP:C     | 37:BP:102:VAL:HB   | 2.34                     | 0.52              |
| 37:BP:39:PRO:HA    | 37:BP:127:ILE:HG21 | 1.91                     | 0.52              |
| 37:BP:57:HIS:O     | 37:BP:59:ARG:N     | 2.42                     | 0.52              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 37:BP:85:LYS:NZ    | 47:BZ:10:THR:OG1   | 2.37                     | 0.52              |
| 37:BP:127:ILE:HD13 | 37:BP:129:THR:HG23 | 1.92                     | 0.52              |
| 38:BQ:34:ILE:CG2   | 38:BQ:35:THR:N     | 2.73                     | 0.52              |
| 38:BQ:37:THR:HG23  | 38:BQ:40:LYS:CD    | 2.37                     | 0.52              |
| 38:BQ:96:ARG:C     | 38:BQ:114:VAL:HG13 | 2.35                     | 0.52              |
| 39:BR:31:SER:C     | 39:BR:97:ARG:NH2   | 2.68                     | 0.52              |
| 39:BR:33:LYS:CG    | 39:BR:54:LEU:HD21  | 2.39                     | 0.52              |
| 39:BR:69:VAL:HG13  | 39:BR:73:LEU:HD11  | 1.92                     | 0.52              |
| 40:BS:104:ASN:CA   | 40:BS:108:ARG:HH12 | 2.23                     | 0.52              |
| 41:BT:39:LEU:C     | 41:BT:41:ALA:N     | 2.68                     | 0.52              |
| 41:BT:106:PHE:O    | 41:BT:107:ALA:C    | 2.51                     | 0.52              |
| 42:BU:28:GLU:CG    | 42:BU:94:LEU:HB2   | 2.39                     | 0.52              |
| 44:BW:12:VAL:HG22  | 44:BW:29:TRP:NE1   | 2.25                     | 0.52              |
| 45:BX:37:VAL:CG1   | 45:BX:39:VAL:HB    | 2.40                     | 0.52              |
| 46:BY:152:ALA:C    | 46:BY:155:LEU:HD22 | 2.34                     | 0.52              |
| 47:BZ:20:ARG:HB3   | 47:BZ:24:LYS:HZ1   | 1.73                     | 0.52              |
| 47:BZ:50:ASN:O     | 47:BZ:62:LEU:CB    | 2.57                     | 0.52              |
| 47:BZ:52:GLY:HA3   | 47:BZ:60:PHE:CE1   | 2.44                     | 0.52              |
| 52:B5:19:ARG:HH12  | 52:B5:43:CYS:CB    | 2.05                     | 0.52              |
| 52:B5:22:ALA:O     | 52:B5:23:THR:OG1   | 2.24                     | 0.52              |
| 1:AA:73:G:C6       | 1:AA:74:C:C4       | 2.98                     | 0.51              |
| 1:AA:233:C:C2'     | 1:AA:234:C:H5'     | 2.39                     | 0.51              |
| 1:AA:246:A:O2'     | 1:AA:247:G:O5'     | 2.27                     | 0.51              |
| 1:AA:404:U:OP2     | 6:AG:118:ARG:NH1   | 2.42                     | 0.51              |
| 1:AA:475:G:C2      | 1:AA:476:G:C5      | 2.98                     | 0.51              |
| 1:AA:583:A:H2'     | 1:AA:584:G:O4'     | 2.10                     | 0.51              |
| 1:AA:587:G:N3      | 1:AA:755:G:N1      | 2.58                     | 0.51              |
| 1:AA:626:U:O2'     | 1:AA:627:G:H5'     | 2.10                     | 0.51              |
| 1:AA:652:U:H1'     | 1:AA:653:A:C2      | 2.45                     | 0.51              |
| 1:AA:667:G:OP2     | 1:AA:732:C:O2'     | 2.25                     | 0.51              |
| 1:AA:686:U:H2'     | 1:AA:687:A:C8      | 2.45                     | 0.51              |
| 1:AA:833:U:O2'     | 1:AA:834:C:H6      | 1.92                     | 0.51              |
| 1:AA:946:A:O2'     | 1:AA:1333:A:H1'    | 2.10                     | 0.51              |
| 1:AA:961:U:C2'     | 1:AA:962:C:H5'     | 2.40                     | 0.51              |
| 1:AA:971:G:N2      | 1:AA:1363:A:OP2    | 2.43                     | 0.51              |
| 1:AA:1003:G:N2     | 1:AA:1038:C:H1'    | 2.24                     | 0.51              |
| 1:AA:1129:C:H4'    | 1:AA:1130:A:H8     | 1.74                     | 0.51              |
| 1:AA:1230:C:H5''   | 11:AL:127:LYS:HE3  | 1.91                     | 0.51              |
| 1:AA:1234:C:H4'    | 1:AA:1364:U:C1'    | 2.38                     | 0.51              |
| 1:AA:1246:C:H2'    | 1:AA:1247:U:H6     | 1.75                     | 0.51              |
| 1:AA:1278:U:H5'    | 1:AA:1279:A:C5'    | 2.40                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1305:G:H5'   | 23:AX:4:GLY:HA3    | 1.92                     | 0.51              |
| 1:AA:1319:A:O2'   | 1:AA:1321:C:N4     | 2.43                     | 0.51              |
| 1:AA:1396:A:O2'   | 1:AA:1397:C:H5''   | 2.10                     | 0.51              |
| 1:AA:1401:G:H2'   | 1:AA:1402:C:C5'    | 2.40                     | 0.51              |
| 1:AA:1404:C:O4'   | 1:AA:1499:A:N1     | 2.43                     | 0.51              |
| 2:A1:28:G:H2'     | 2:A1:29:G:C8       | 2.45                     | 0.51              |
| 2:A1:37:U:H2'     | 2:A1:38:U:C6       | 2.46                     | 0.51              |
| 2:A1:46:U:N3      | 3:AB:34:G:C6       | 2.78                     | 0.51              |
| 3:AD:47:U:C2      | 3:AD:48:C:H5'      | 2.45                     | 0.51              |
| 4:AE:16:HIS:O     | 4:AE:204:ASN:CB    | 2.55                     | 0.51              |
| 4:AE:74:LYS:O     | 4:AE:75:LYS:C      | 2.50                     | 0.51              |
| 5:AF:84:ILE:HD11  | 5:AF:88:ARG:HH21   | 1.76                     | 0.51              |
| 5:AF:186:PHE:HB2  | 5:AF:199:LYS:HG2   | 1.92                     | 0.51              |
| 6:AG:10:ARG:HH11  | 6:AG:11:LEU:HD23   | 1.74                     | 0.51              |
| 6:AG:25:ARG:NH1   | 6:AG:30:LYS:HB3    | 2.25                     | 0.51              |
| 6:AG:101:LEU:O    | 6:AG:104:VAL:N     | 2.43                     | 0.51              |
| 6:AG:166:LYS:HD3  | 6:AG:178:VAL:CG1   | 2.39                     | 0.51              |
| 6:AG:170:VAL:HG23 | 6:AG:176:LEU:CD2   | 2.38                     | 0.51              |
| 8:AI:71:ARG:O     | 8:AI:72:VAL:C      | 2.53                     | 0.51              |
| 9:AJ:16:LEU:HD12  | 11:AL:44:VAL:CG2   | 2.41                     | 0.51              |
| 9:AJ:68:ASN:O     | 9:AJ:135:VAL:HG13  | 2.10                     | 0.51              |
| 10:AK:34:GLU:C    | 10:AK:37:ARG:HB3   | 2.32                     | 0.51              |
| 11:AL:11:LYS:CB   | 11:AL:108:VAL:HG12 | 2.41                     | 0.51              |
| 11:AL:97:LYS:CE   | 11:AL:102:LEU:HD22 | 2.40                     | 0.51              |
| 11:AL:113:LYS:NZ  | 11:AL:119:ALA:CB   | 2.72                     | 0.51              |
| 12:AM:5:ARG:CZ    | 12:AM:5:ARG:CB     | 2.88                     | 0.51              |
| 13:AN:33:THR:HA   | 13:AN:38:ASN:O     | 2.10                     | 0.51              |
| 13:AN:110:ASP:HB3 | 20:AU:85:LEU:HB3   | 1.92                     | 0.51              |
| 14:AO:12:ARG:CZ   | 14:AO:12:ARG:CB    | 2.87                     | 0.51              |
| 15:AP:20:THR:CG2  | 15:AP:26:GLY:HA2   | 2.40                     | 0.51              |
| 15:AP:62:ASN:C    | 15:AP:64:TRP:N     | 2.65                     | 0.51              |
| 15:AP:81:LEU:HA   | 15:AP:84:ILE:HD11  | 1.92                     | 0.51              |
| 18:AS:6:LEU:CA    | 18:AS:18:ARG:O     | 2.56                     | 0.51              |
| 18:AS:20:VAL:HG11 | 18:AS:32:TYR:HB2   | 1.89                     | 0.51              |
| 19:AT:60:ILE:O    | 19:AT:62:SER:OG    | 2.26                     | 0.51              |
| 19:AT:84:LEU:O    | 19:AT:87:LYS:N     | 2.43                     | 0.51              |
| 20:AU:36:ASN:O    | 20:AU:37:VAL:C     | 2.52                     | 0.51              |
| 20:AU:56:THR:O    | 20:AU:57:GLY:C     | 2.53                     | 0.51              |
| 24:BA:46:C:C5     | 24:BA:215:G:H8     | 2.28                     | 0.51              |
| 24:BA:136:G:H2'   | 24:BA:137:C:C6     | 2.44                     | 0.51              |
| 24:BA:200:U:O4    | 24:BA:201:C:H1'    | 2.11                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:210:C:O2'   | 24:BA:211:A:H5'   | 2.10                     | 0.51              |
| 24:BA:248:G:N2    | 24:BA:2431:U:H5'  | 2.25                     | 0.51              |
| 24:BA:299:A:H5''  | 24:BA:300:A:OP2   | 2.10                     | 0.51              |
| 24:BA:308:G:N7    | 24:BA:501:A:C4    | 2.78                     | 0.51              |
| 24:BA:330:A:HO2'  | 24:BA:1210:A:N6   | 2.07                     | 0.51              |
| 24:BA:371:A:C2    | 24:BA:372:G:N1    | 2.78                     | 0.51              |
| 24:BA:447:A:O2'   | 24:BA:449:A:N6    | 2.43                     | 0.51              |
| 24:BA:569:U:H1'   | 24:BA:947:G:O4'   | 2.10                     | 0.51              |
| 24:BA:598:G:H1'   | 36:BO:14:LYS:HG2  | 1.90                     | 0.51              |
| 24:BA:617:G:OP2   | 29:BF:40:GLN:NE2  | 2.44                     | 0.51              |
| 24:BA:675:A:C5    | 24:BA:804:A:C2    | 2.98                     | 0.51              |
| 24:BA:804:A:O2'   | 24:BA:806:C:N3    | 2.38                     | 0.51              |
| 24:BA:872:A:O2'   | 37:BP:66:ILE:HD13 | 2.09                     | 0.51              |
| 24:BA:980:A:C4    | 24:BA:981:A:C2    | 2.98                     | 0.51              |
| 24:BA:1020:A:H2   | 24:BA:1140:C:H2'  | 1.71                     | 0.51              |
| 24:BA:1069:A:H5'' | 24:BA:1070:A:O5'  | 2.10                     | 0.51              |
| 24:BA:1157:G:C6   | 24:BA:1158:C:C4   | 2.98                     | 0.51              |
| 24:BA:1223:C:O2'  | 24:BA:1225:C:H5   | 1.93                     | 0.51              |
| 24:BA:1264:G:O2'  | 51:B4:7:PRO:HG3   | 2.10                     | 0.51              |
| 24:BA:1265:A:O4'  | 24:BA:1267:U:N3   | 2.43                     | 0.51              |
| 24:BA:1272:A:O2'  | 24:BA:1273:U:P    | 2.68                     | 0.51              |
| 24:BA:1307:A:H4'  | 24:BA:1379:A:H62  | 1.75                     | 0.51              |
| 24:BA:1313:U:H2'  | 24:BA:1314:C:C5   | 2.45                     | 0.51              |
| 24:BA:1540:G:C6   | 24:BA:1541:U:H1'  | 2.44                     | 0.51              |
| 24:BA:1591:G:C2   | 24:BA:1592:C:C4   | 2.99                     | 0.51              |
| 24:BA:1650:G:C2'  | 24:BA:1651:G:O5'  | 2.58                     | 0.51              |
| 24:BA:1657:C:P    | 28:BE:136:ARG:NH2 | 2.82                     | 0.51              |
| 24:BA:1675:C:OP2  | 24:BA:1676:A:OP2  | 2.28                     | 0.51              |
| 24:BA:1803:A:C8   | 24:BA:1804:C:C5   | 2.98                     | 0.51              |
| 24:BA:1853:A:N3   | 24:BA:2233:U:O2'  | 2.42                     | 0.51              |
| 24:BA:1859:A:H61  | 24:BA:1883:G:C2'  | 2.23                     | 0.51              |
| 24:BA:1946:U:O2'  | 24:BA:1947:C:O5'  | 2.27                     | 0.51              |
| 24:BA:1948:G:C4   | 24:BA:1959:G:C2   | 2.99                     | 0.51              |
| 24:BA:2127:G:C4   | 24:BA:2162:G:C2   | 2.98                     | 0.51              |
| 24:BA:2197:U:O2'  | 24:BA:2198:A:O4'  | 2.28                     | 0.51              |
| 24:BA:2246:G:H1'  | 24:BA:2426:A:C2   | 2.45                     | 0.51              |
| 24:BA:2262:U:O4   | 47:BZ:15:ASP:O    | 2.28                     | 0.51              |
| 24:BA:2291:U:O2'  | 24:BA:2374:C:H1'  | 2.10                     | 0.51              |
| 24:BA:2304:G:OP1  | 30:BG:132:ASN:ND2 | 2.43                     | 0.51              |
| 24:BA:2393:A:H4'  | 36:BO:56:SER:H    | 1.74                     | 0.51              |
| 24:BA:2476:A:C8   | 24:BA:2477:C:C6   | 2.98                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2537:U:H2'   | 24:BA:2538:C:H6    | 1.71                     | 0.51              |
| 24:BA:2544:G:C2'   | 24:BA:2545:G:H5'   | 2.41                     | 0.51              |
| 24:BA:2564:A:C4    | 24:BA:2565:A:N7    | 2.78                     | 0.51              |
| 24:BA:2682:U:H2'   | 24:BA:2683:C:C5'   | 2.40                     | 0.51              |
| 24:BA:2773:C:P     | 28:BE:164:ARG:NH2  | 2.83                     | 0.51              |
| 24:BA:2807:G:H2'   | 24:BA:2807:G:N3    | 2.25                     | 0.51              |
| 24:BA:2848:G:O4'   | 40:BS:99:LEU:HD11  | 2.10                     | 0.51              |
| 24:BA:2884:U:C2'   | 24:BA:2885:C:H5'   | 2.40                     | 0.51              |
| 25:BB:14:U:C3'     | 25:BB:14:U:C6      | 2.94                     | 0.51              |
| 25:BB:99:A:C6      | 25:BB:100:G:C6     | 2.97                     | 0.51              |
| 26:BC:59:ARG:CG    | 26:BC:60:GLY:N     | 2.69                     | 0.51              |
| 26:BC:171:ILE:CD1  | 26:BC:196:LEU:HD11 | 2.40                     | 0.51              |
| 27:BD:9:TYR:OH     | 27:BD:91:ARG:CZ    | 2.56                     | 0.51              |
| 27:BD:63:ARG:HG2   | 27:BD:65:ILE:CG1   | 2.40                     | 0.51              |
| 27:BD:72:LYS:O     | 27:BD:73:VAL:C     | 2.53                     | 0.51              |
| 27:BD:143:HIS:NE2  | 27:BD:192:THR:HG21 | 2.25                     | 0.51              |
| 27:BD:250:TRP:HA   | 27:BD:250:TRP:HE3  | 1.71                     | 0.51              |
| 28:BE:12:THR:CA    | 28:BE:22:PRO:HD2   | 2.39                     | 0.51              |
| 28:BE:14:ILE:CG2   | 28:BE:19:ARG:HA    | 2.40                     | 0.51              |
| 28:BE:57:LYS:O     | 28:BE:58:ARG:NH2   | 2.43                     | 0.51              |
| 28:BE:104:VAL:CG1  | 28:BE:105:THR:H    | 2.23                     | 0.51              |
| 28:BE:127:ASP:O    | 28:BE:128:SER:CB   | 2.59                     | 0.51              |
| 28:BE:152:LYS:O    | 28:BE:152:LYS:CD   | 2.58                     | 0.51              |
| 29:BF:8:GLN:HB3    | 29:BF:18:ARG:HB2   | 1.93                     | 0.51              |
| 29:BF:46:ARG:HE    | 29:BF:47:GLY:N     | 2.07                     | 0.51              |
| 29:BF:197:ASP:CA   | 29:BF:200:GLU:CG   | 2.71                     | 0.51              |
| 30:BG:125:PHE:HD1  | 30:BG:132:ASN:N    | 2.08                     | 0.51              |
| 31:BH:32:GLU:O     | 31:BH:33:LEU:C     | 2.52                     | 0.51              |
| 34:BM:4:TYR:HB3    | 41:BT:64:ARG:HH22  | 1.74                     | 0.51              |
| 34:BM:30:ILE:C     | 34:BM:33:LEU:HB3   | 2.33                     | 0.51              |
| 34:BM:107:LEU:HD13 | 34:BM:117:PHE:CD2  | 2.45                     | 0.51              |
| 35:BN:12:ASP:N     | 35:BN:14:THR:HG22  | 2.24                     | 0.51              |
| 35:BN:15:GLY:N     | 35:BN:52:VAL:HG21  | 2.25                     | 0.51              |
| 37:BP:12:GLN:NE2   | 37:BP:12:GLN:O     | 2.43                     | 0.51              |
| 39:BR:31:SER:HB3   | 39:BR:34:HIS:CB    | 2.39                     | 0.51              |
| 41:BT:81:HIS:CB    | 41:BT:117:GLN:NE2  | 2.72                     | 0.51              |
| 41:BT:84:LYS:HA    | 41:BT:84:LYS:CE    | 2.40                     | 0.51              |
| 42:BU:88:ARG:HG2   | 42:BU:89:GLN:N     | 2.22                     | 0.51              |
| 43:BV:18:ARG:CD    | 43:BV:76:VAL:HG12  | 2.36                     | 0.51              |
| 43:BV:42:ARG:CG    | 43:BV:43:GLY:N     | 2.73                     | 0.51              |
| 44:BW:12:VAL:CG2   | 44:BW:28:PHE:HA    | 2.36                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 45:BX:54:LYS:C   | 45:BX:56:PRO:HD3  | 2.35                     | 0.51              |
| 45:BX:97:ARG:CB  | 45:BX:101:LYS:HG2 | 2.41                     | 0.51              |
| 46:BY:120:ILE:HB | 46:BY:123:ASP:OD1 | 2.09                     | 0.51              |
| 46:BY:127:LYS:HA | 46:BY:164:ALA:CB  | 2.40                     | 0.51              |
| 47:BZ:19:LYS:CG  | 47:BZ:20:ARG:N    | 2.71                     | 0.51              |
| 47:BZ:26:TYR:CE1 | 47:BZ:29:GLN:NE2  | 2.78                     | 0.51              |
| 47:BZ:28:GLY:C   | 47:BZ:67:VAL:HB   | 2.35                     | 0.51              |
| 50:B3:65:ASP:O   | 50:B3:69:LYS:CG   | 2.46                     | 0.51              |
| 53:B6:2:LYS:C    | 53:B6:4:THR:N     | 2.66                     | 0.51              |
| 1:AA:35:G:C6     | 1:AA:36:C:C4      | 2.97                     | 0.51              |
| 1:AA:159:G:C2    | 1:AA:161:A:OP2    | 2.63                     | 0.51              |
| 1:AA:279:A:C1'   | 1:AA:281:G:C4     | 2.90                     | 0.51              |
| 1:AA:291:C:C3'   | 1:AA:305:G:N2     | 2.64                     | 0.51              |
| 1:AA:317:G:C2'   | 1:AA:318:G:H5'    | 2.39                     | 0.51              |
| 1:AA:413:G:N2    | 1:AA:428:G:O2'    | 2.41                     | 0.51              |
| 1:AA:503:C:C2    | 1:AA:504:C:C5     | 2.98                     | 0.51              |
| 1:AA:687:A:N3    | 1:AA:704:A:C6     | 2.78                     | 0.51              |
| 1:AA:689:C:H2'   | 1:AA:690:G:H1'    | 1.91                     | 0.51              |
| 1:AA:945:G:N1    | 1:AA:946:A:N7     | 2.57                     | 0.51              |
| 1:AA:947:G:H21   | 1:AA:948:C:H1'    | 1.75                     | 0.51              |
| 1:AA:953:G:H1'   | 15:AP:126:LYS:N   | 2.25                     | 0.51              |
| 1:AA:961:U:C5    | 1:AA:983:A:C6     | 2.99                     | 0.51              |
| 1:AA:1048:G:O3'  | 1:AA:1049:U:H3'   | 2.10                     | 0.51              |
| 1:AA:1117:G:C2   | 1:AA:1184:G:C2    | 2.98                     | 0.51              |
| 1:AA:1202:G:N3   | 1:AA:1203:C:C6    | 2.78                     | 0.51              |
| 1:AA:1273:G:H2'  | 1:AA:1274:G:O4'   | 2.09                     | 0.51              |
| 1:AA:1293:G:C4   | 1:AA:1294:G:C8    | 2.98                     | 0.51              |
| 1:AA:1370:G:H5'' | 11:AL:12:GLU:HG3  | 1.92                     | 0.51              |
| 1:AA:1500:A:H2'  | 1:AA:1501:C:C6    | 2.45                     | 0.51              |
| 1:AA:1511:G:O2'  | 1:AA:1512:U:H5'   | 2.10                     | 0.51              |
| 1:AA:1539:C:H2'  | 1:AA:1540:U:O4'   | 2.09                     | 0.51              |
| 2:A1:10:U:C2     | 2:A1:12:U:OP2     | 2.63                     | 0.51              |
| 3:AD:74:C:OP1    | 50:B3:22:ILE:HG12 | 2.09                     | 0.51              |
| 4:AE:67:THR:HB   | 4:AE:155:LEU:CD2  | 2.37                     | 0.51              |
| 4:AE:69:LEU:CD1  | 4:AE:70:PHE:N     | 2.74                     | 0.51              |
| 4:AE:91:PRO:CG   | 4:AE:155:LEU:H    | 2.23                     | 0.51              |
| 5:AF:12:LEU:CD2  | 16:AQ:57:ARG:CG   | 2.80                     | 0.51              |
| 5:AF:27:LYS:O    | 5:AF:28:GLN:HB3   | 2.11                     | 0.51              |
| 7:AH:37:ARG:HG2  | 7:AH:112:LEU:O    | 2.11                     | 0.51              |
| 8:AI:40:VAL:HA   | 8:AI:63:TYR:HD1   | 1.74                     | 0.51              |
| 8:AI:51:PRO:HA   | 8:AI:55:ASP:O     | 2.10                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 9:AJ:16:LEU:HB3   | 11:AL:41:VAL:HG12 | 1.93                     | 0.51              |
| 9:AJ:16:LEU:O     | 9:AJ:17:VAL:HG23  | 2.09                     | 0.51              |
| 9:AJ:74:GLU:O     | 9:AJ:88:PRO:CA    | 2.53                     | 0.51              |
| 9:AJ:99:LEU:O     | 9:AJ:99:LEU:HD23  | 2.10                     | 0.51              |
| 9:AJ:111:ARG:HD2  | 9:AJ:123:GLU:CB   | 2.36                     | 0.51              |
| 10:AK:10:LEU:HD11 | 10:AK:85:ARG:CD   | 2.26                     | 0.51              |
| 10:AK:14:ARG:HB3  | 10:AK:83:ILE:HG21 | 1.92                     | 0.51              |
| 10:AK:97:VAL:HG12 | 10:AK:99:GLU:OE2  | 2.10                     | 0.51              |
| 14:AO:100:ILE:C   | 14:AO:101:VAL:CG2 | 2.83                     | 0.51              |
| 14:AO:118:SER:O   | 14:AO:121:GLY:HA2 | 2.09                     | 0.51              |
| 20:AU:36:ASN:OD1  | 20:AU:39:VAL:HB   | 2.11                     | 0.51              |
| 24:BA:59:U:C3'    | 24:BA:60:G:H5''   | 2.40                     | 0.51              |
| 24:BA:152:G:C2    | 24:BA:153:C:C2    | 2.98                     | 0.51              |
| 24:BA:247:G:C2    | 54:B7:8:LYS:HD2   | 2.45                     | 0.51              |
| 24:BA:302:C:H2'   | 24:BA:303:U:C6    | 2.45                     | 0.51              |
| 24:BA:311:A:C2    | 24:BA:331:A:H5''  | 2.45                     | 0.51              |
| 24:BA:360:G:C2'   | 24:BA:361:G:H5'   | 2.40                     | 0.51              |
| 24:BA:541:C:OP2   | 24:BA:541:C:H6    | 1.92                     | 0.51              |
| 24:BA:546:C:N3    | 24:BA:547:A:C6    | 2.78                     | 0.51              |
| 24:BA:584:C:C2'   | 24:BA:585:G:H5'   | 2.40                     | 0.51              |
| 24:BA:637:A:H2    | 24:BA:651:G:C4'   | 2.23                     | 0.51              |
| 24:BA:675:A:O2'   | 24:BA:676:A:H5'   | 2.10                     | 0.51              |
| 24:BA:730:C:C3'   | 24:BA:731:C:H5'   | 2.40                     | 0.51              |
| 24:BA:775:G:N2    | 24:BA:787:U:O2'   | 2.43                     | 0.51              |
| 24:BA:815:C:C2'   | 24:BA:816:C:C5'   | 2.88                     | 0.51              |
| 24:BA:836:G:C6    | 24:BA:837:C:C4    | 2.98                     | 0.51              |
| 24:BA:973:A:O2'   | 24:BA:974:G:H5'   | 2.08                     | 0.51              |
| 24:BA:975:G:N3    | 24:BA:975:G:C2'   | 2.73                     | 0.51              |
| 24:BA:1064:C:H3'  | 24:BA:1065:U:C5   | 2.45                     | 0.51              |
| 24:BA:1222:C:C4   | 24:BA:1227:A:N6   | 2.79                     | 0.51              |
| 24:BA:1236:G:O2'  | 24:BA:1237:A:O5'  | 2.28                     | 0.51              |
| 24:BA:1319:G:C6   | 24:BA:1334:G:C6   | 2.97                     | 0.51              |
| 24:BA:1364:G:O6   | 50:B3:2:LYS:NZ    | 2.40                     | 0.51              |
| 24:BA:1597:A:O3'  | 24:BA:1598:C:H6   | 1.93                     | 0.51              |
| 24:BA:1754:C:C2   | 24:BA:1755:A:C1'  | 2.93                     | 0.51              |
| 24:BA:1764:G:H2'  | 24:BA:1765:C:O5'  | 2.08                     | 0.51              |
| 24:BA:1788:C:C4   | 24:BA:1789:A:H8   | 2.20                     | 0.51              |
| 24:BA:1838:C:C2'  | 24:BA:1898:U:O4   | 2.58                     | 0.51              |
| 24:BA:1930:G:O2'  | 24:BA:1931:U:P    | 2.67                     | 0.51              |
| 24:BA:1936:A:H1'  | 24:BA:1940:U:N3   | 2.24                     | 0.51              |
| 24:BA:1938:A:H2   | 24:BA:2590:A:O4'  | 1.93                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2046:G:H5'   | 51:B4:22:HIS:HB2   | 1.93                     | 0.51              |
| 24:BA:2136:C:C4    | 24:BA:2137:C:C5    | 2.98                     | 0.51              |
| 24:BA:2243:U:C2    | 24:BA:2244:U:C6    | 2.98                     | 0.51              |
| 24:BA:2286:A:N1    | 52:B5:28:ARG:C     | 2.68                     | 0.51              |
| 24:BA:2384:G:OP2   | 24:BA:2384:G:C8    | 2.54                     | 0.51              |
| 24:BA:2424:C:H5''  | 24:BA:2425:A:H5'   | 1.93                     | 0.51              |
| 24:BA:2426:A:H3'   | 24:BA:2427:C:C5'   | 2.40                     | 0.51              |
| 24:BA:2578:G:N7    | 28:BE:140:SER:HB2  | 2.25                     | 0.51              |
| 24:BA:2792:G:N2    | 24:BA:2793:G:C4    | 2.77                     | 0.51              |
| 24:BA:2884:U:O4    | 51:B4:40:LYS:HE2   | 2.10                     | 0.51              |
| 25:BB:13:A:N6      | 25:BB:70:C:H5'     | 2.25                     | 0.51              |
| 25:BB:24:G:C2      | 25:BB:27:C:N4      | 2.77                     | 0.51              |
| 25:BB:37:C:H3'     | 25:BB:38:C:C6      | 2.45                     | 0.51              |
| 25:BB:85:G:C2      | 25:BB:92:G:N3      | 2.77                     | 0.51              |
| 26:BC:52:ARG:HB3   | 26:BC:52:ARG:CZ    | 2.40                     | 0.51              |
| 27:BD:60:ARG:HG2   | 27:BD:62:TYR:OH    | 2.10                     | 0.51              |
| 27:BD:201:HIS:CD2  | 27:BD:202:LYS:CE   | 2.92                     | 0.51              |
| 27:BD:244:ARG:O    | 27:BD:252:TRP:CG   | 2.63                     | 0.51              |
| 28:BE:195:LEU:CD1  | 28:BE:196:VAL:N    | 2.53                     | 0.51              |
| 29:BF:122:LYS:CD   | 29:BF:192:LEU:HD12 | 2.40                     | 0.51              |
| 30:BG:105:LYS:HA   | 30:BG:109:VAL:CG1  | 2.40                     | 0.51              |
| 30:BG:121:ASN:OD1  | 30:BG:180:PHE:HB2  | 2.10                     | 0.51              |
| 31:BH:25:LYS:HZ3   | 31:BH:32:GLU:CB    | 2.18                     | 0.51              |
| 31:BH:102:ALA:HB1  | 31:BH:115:VAL:N    | 2.25                     | 0.51              |
| 31:BH:161:GLY:C    | 31:BH:163:TYR:HE1  | 2.18                     | 0.51              |
| 32:BK:4:ILE:HG23   | 32:BK:18:VAL:CG2   | 2.40                     | 0.51              |
| 33:BL:35:MET:SD    | 33:BL:39:LYS:HE3   | 2.50                     | 0.51              |
| 34:BM:23:LEU:HG    | 34:BM:61:ARG:O     | 2.10                     | 0.51              |
| 35:BN:22:ILE:HG13  | 35:BN:40:VAL:HG13  | 1.91                     | 0.51              |
| 36:BO:101:VAL:CG2  | 36:BO:112:LEU:HD22 | 2.36                     | 0.51              |
| 36:BO:113:LYS:HD3  | 36:BO:113:LYS:C    | 2.35                     | 0.51              |
| 37:BP:37:LEU:N     | 37:BP:100:GLY:HA2  | 2.25                     | 0.51              |
| 37:BP:109:VAL:HG11 | 37:BP:114:ALA:CA   | 2.40                     | 0.51              |
| 38:BQ:96:ARG:HD2   | 38:BQ:115:GLU:OE1  | 2.09                     | 0.51              |
| 39:BR:78:LEU:HD13  | 39:BR:79:ALA:CB    | 2.39                     | 0.51              |
| 40:BS:53:ARG:NH2   | 40:BS:102:ILE:CG1  | 2.72                     | 0.51              |
| 41:BT:14:HIS:O     | 41:BT:17:ILE:N     | 2.43                     | 0.51              |
| 41:BT:33:ARG:C     | 41:BT:35:ALA:N     | 2.66                     | 0.51              |
| 42:BU:62:LEU:CD1   | 42:BU:98:GLU:HA    | 2.39                     | 0.51              |
| 43:BV:25:ARG:HD3   | 43:BV:74:ALA:CA    | 2.40                     | 0.51              |
| 43:BV:50:VAL:HG11  | 43:BV:103:ILE:HG13 | 1.92                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 46:BY:56:VAL:HG22  | 46:BY:133:ILE:CD1 | 2.40                     | 0.51              |
| 46:BY:116:VAL:HG21 | 46:BY:144:LEU:O   | 2.10                     | 0.51              |
| 47:BZ:76:GLY:CA    | 47:BZ:78:TYR:HE1  | 2.23                     | 0.51              |
| 49:B2:9:VAL:CG2    | 49:B2:53:LEU:C    | 2.71                     | 0.51              |
| 50:B3:31:ILE:HD13  | 50:B3:31:ILE:N    | 2.10                     | 0.51              |
| 52:B5:31:PRO:O     | 52:B5:34:LEU:HG   | 2.09                     | 0.51              |
| 53:B6:5:TRP:CE2    | 53:B6:7:PRO:HD3   | 2.45                     | 0.51              |
| 53:B6:40:TRP:O     | 53:B6:41:ARG:CB   | 2.58                     | 0.51              |
| 1:AA:45:U:H2'      | 1:AA:46:G:C8      | 2.45                     | 0.51              |
| 1:AA:67:C:C4'      | 1:AA:172:A:C1'    | 2.89                     | 0.51              |
| 1:AA:309:G:O2'     | 1:AA:310:G:O4'    | 2.22                     | 0.51              |
| 1:AA:599:C:N4      | 1:AA:640:A:N6     | 2.59                     | 0.51              |
| 1:AA:621:A:H2'     | 1:AA:622:A:C8     | 2.46                     | 0.51              |
| 1:AA:808:C:C4      | 1:AA:809:G:N7     | 2.79                     | 0.51              |
| 1:AA:893:C:N3      | 1:AA:894:G:N7     | 2.58                     | 0.51              |
| 1:AA:959:A:C2      | 1:AA:1221:G:N3    | 2.76                     | 0.51              |
| 1:AA:990:C:H2'     | 1:AA:991:U:N1     | 2.26                     | 0.51              |
| 1:AA:1060:C:H2'    | 1:AA:1061:G:C8    | 2.45                     | 0.51              |
| 1:AA:1169:A:OP2    | 1:AA:1169:A:H8    | 1.93                     | 0.51              |
| 1:AA:1190:G:P      | 5:AF:5:ILE:HG13   | 2.50                     | 0.51              |
| 1:AA:1376:U:H3     | 1:AA:1377:A:N6    | 2.07                     | 0.51              |
| 1:AA:1376:U:O4     | 9:AJ:10:ARG:HD2   | 2.10                     | 0.51              |
| 1:AA:1400:C:OP1    | 1:AA:1400:C:C5    | 2.63                     | 0.51              |
| 1:AA:1455:G:C2'    | 1:AA:1459:C:H5'   | 2.40                     | 0.51              |
| 3:AC:36:A:N6       | 3:AC:37:A:C6      | 2.78                     | 0.51              |
| 3:AB:55:U:OP1      | 46:BY:178:GLU:CD  | 2.53                     | 0.51              |
| 3:AB:72:C:C2       | 3:AB:73:A:N7      | 2.78                     | 0.51              |
| 4:AE:25:ASN:HB3    | 4:AE:191:ASP:CA   | 2.40                     | 0.51              |
| 4:AE:25:ASN:HD21   | 4:AE:27:LYS:CG    | 2.23                     | 0.51              |
| 4:AE:92:TYR:CE2    | 4:AE:151:GLY:O    | 2.63                     | 0.51              |
| 4:AE:189:ASP:OD2   | 4:AE:205:ASP:CG   | 2.54                     | 0.51              |
| 5:AF:132:ARG:C     | 5:AF:136:GLN:NE2  | 2.69                     | 0.51              |
| 5:AF:157:ILE:HG13  | 5:AF:164:ARG:NE   | 2.26                     | 0.51              |
| 5:AF:174:PRO:HB2   | 5:AF:177:THR:HG22 | 1.92                     | 0.51              |
| 6:AG:82:ALA:CB     | 6:AG:92:VAL:HB    | 2.39                     | 0.51              |
| 7:AH:39:GLY:C      | 7:AH:68:GLU:OE1   | 2.54                     | 0.51              |
| 8:AI:30:LEU:C      | 8:AI:35:ALA:HB3   | 2.35                     | 0.51              |
| 8:AI:37:VAL:HA     | 8:AI:65:VAL:CB    | 2.41                     | 0.51              |
| 9:AJ:37:ASN:O      | 9:AJ:38:LEU:C     | 2.53                     | 0.51              |
| 10:AK:101:PRO:HG2  | 10:AK:102:ARG:H   | 1.74                     | 0.51              |
| 13:AN:12:ARG:HH11  | 13:AN:40:ILE:HG23 | 1.76                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 13:AN:13:GLN:O    | 13:AN:14:VAL:HG23 | 2.11                     | 0.51              |
| 15:AP:19:LEU:HD11 | 15:AP:30:ALA:CB   | 2.40                     | 0.51              |
| 15:AP:24:GLY:O    | 15:AP:25:ILE:HG12 | 2.11                     | 0.51              |
| 15:AP:24:GLY:C    | 15:AP:66:LEU:HD13 | 2.35                     | 0.51              |
| 15:AP:27:LYS:O    | 15:AP:28:ALA:HB3  | 2.10                     | 0.51              |
| 16:AQ:35:ARG:C    | 16:AQ:37:PHE:N    | 2.67                     | 0.51              |
| 17:AR:12:ILE:HG12 | 17:AR:31:LEU:HD11 | 1.91                     | 0.51              |
| 17:AR:21:ASP:OD2  | 17:AR:24:SER:CB   | 2.59                     | 0.51              |
| 18:AS:58:TYR:O    | 18:AS:61:SER:CB   | 2.58                     | 0.51              |
| 19:AT:75:ARG:HG2  | 19:AT:75:ARG:HH11 | 1.76                     | 0.51              |
| 22:AW:31:SER:O    | 22:AW:32:ALA:C    | 2.53                     | 0.51              |
| 22:AW:38:LYS:O    | 22:AW:39:LYS:C    | 2.53                     | 0.51              |
| 22:AW:73:HIS:HD2  | 22:AW:74:LYS:NZ   | 2.08                     | 0.51              |
| 23:AX:4:GLY:C     | 23:AX:6:ARG:H     | 2.18                     | 0.51              |
| 24:BA:129:C:H5'   | 24:BA:1599:C:O2'  | 2.10                     | 0.51              |
| 24:BA:135:G:H2'   | 24:BA:136:G:O4'   | 2.10                     | 0.51              |
| 24:BA:185:U:C4    | 24:BA:212:G:N2    | 2.79                     | 0.51              |
| 24:BA:236:C:H2'   | 24:BA:237:C:O5'   | 2.10                     | 0.51              |
| 24:BA:243:U:OP2   | 54:B7:4:MET:HB3   | 2.10                     | 0.51              |
| 24:BA:400:G:H22   | 50:B3:63:TYR:HH   | 1.57                     | 0.51              |
| 24:BA:464:U:C2    | 24:BA:788:A:C5    | 2.98                     | 0.51              |
| 24:BA:504:U:H5'   | 24:BA:506:G:OP1   | 2.09                     | 0.51              |
| 24:BA:543:C:C2    | 24:BA:551:G:C2    | 2.98                     | 0.51              |
| 24:BA:586:A:N6    | 24:BA:809:G:O2'   | 2.43                     | 0.51              |
| 24:BA:647:G:H5'   | 24:BA:2352:A:H5'  | 1.92                     | 0.51              |
| 24:BA:648:G:C2    | 24:BA:649:G:N7    | 2.79                     | 0.51              |
| 24:BA:809:G:C5    | 24:BA:810:U:C5    | 2.98                     | 0.51              |
| 24:BA:823:G:C3'   | 24:BA:824:A:H8    | 2.20                     | 0.51              |
| 24:BA:860:U:H5    | 24:BA:2267:A:O3'  | 1.92                     | 0.51              |
| 24:BA:885:C:N4    | 24:BA:889:C:C6    | 2.78                     | 0.51              |
| 24:BA:988:A:OP1   | 49:B2:10:LYS:HD3  | 2.10                     | 0.51              |
| 24:BA:989:G:C2'   | 24:BA:990:A:OP2   | 2.58                     | 0.51              |
| 24:BA:1021:A:C6   | 24:BA:1023:U:C6   | 2.98                     | 0.51              |
| 24:BA:1022:G:C6   | 24:BA:1139:G:C2   | 2.99                     | 0.51              |
| 24:BA:1073:A:OP2  | 24:BA:1094:U:O4   | 2.29                     | 0.51              |
| 24:BA:1076:C:C5'  | 33:BL:93:ARG:HH21 | 2.23                     | 0.51              |
| 24:BA:1180:C:C2   | 24:BA:1181:C:C5   | 2.98                     | 0.51              |
| 24:BA:1310:G:N7   | 24:BA:1311:G:N3   | 2.59                     | 0.51              |
| 24:BA:1313:U:P    | 44:BW:63:LYS:CD   | 2.98                     | 0.51              |
| 24:BA:1388:G:H4'  | 24:BA:1524:G:O2'  | 2.09                     | 0.51              |
| 24:BA:1403:C:H4'  | 24:BA:1471:A:C5'  | 2.37                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1405:U:C2'   | 24:BA:1406:U:C6    | 2.77                     | 0.51              |
| 24:BA:1467:C:C4    | 24:BA:1468:C:N4    | 2.79                     | 0.51              |
| 24:BA:1515:C:C2'   | 24:BA:1516:U:OP1   | 2.58                     | 0.51              |
| 24:BA:1634:A:O3'   | 24:BA:1635:G:N7    | 2.43                     | 0.51              |
| 24:BA:1639:U:O2'   | 24:BA:2699:C:H4'   | 2.10                     | 0.51              |
| 24:BA:1769:G:C6    | 24:BA:1770:G:O6    | 2.64                     | 0.51              |
| 24:BA:1819:A:H2'   | 24:BA:1820:U:OP2   | 2.09                     | 0.51              |
| 24:BA:1864:U:C4'   | 24:BA:2409:G:H22   | 2.20                     | 0.51              |
| 24:BA:1943:U:C4'   | 24:BA:1944:U:O5'   | 2.53                     | 0.51              |
| 24:BA:2128:C:N4    | 24:BA:2129:C:N4    | 2.58                     | 0.51              |
| 24:BA:2134:A:O4'   | 24:BA:2134:A:OP2   | 2.28                     | 0.51              |
| 24:BA:2208:U:H4'   | 27:BD:151:LYS:HZ2  | 1.73                     | 0.51              |
| 24:BA:2210:G:O6    | 27:BD:70:TRP:CZ3   | 2.64                     | 0.51              |
| 24:BA:2318:G:C8    | 24:BA:2318:G:OP2   | 2.63                     | 0.51              |
| 24:BA:2352:A:C2'   | 24:BA:2353:G:O4'   | 2.56                     | 0.51              |
| 24:BA:2423:U:C2'   | 24:BA:2424:C:OP2   | 2.58                     | 0.51              |
| 24:BA:2572:A:H3'   | 28:BE:144:ARG:NH2  | 2.26                     | 0.51              |
| 24:BA:2704:C:H2'   | 24:BA:2705:A:N9    | 2.23                     | 0.51              |
| 24:BA:2777:G:H4'   | 24:BA:2778:A:OP2   | 2.10                     | 0.51              |
| 24:BA:2828:C:C2    | 24:BA:2829:C:H5    | 2.28                     | 0.51              |
| 25:BB:79:C:C2'     | 25:BB:80:U:H5'     | 2.41                     | 0.51              |
| 25:BB:97:G:C5      | 25:BB:98:G:C8      | 2.98                     | 0.51              |
| 27:BD:56:GLY:N     | 27:BD:217:ARG:O    | 2.43                     | 0.51              |
| 27:BD:169:GLU:CG   | 27:BD:184:LYS:HZ1  | 2.24                     | 0.51              |
| 27:BD:176:ARG:HA   | 27:BD:182:LEU:HD23 | 1.91                     | 0.51              |
| 27:BD:234:GLY:CA   | 27:BD:241:PRO:HG3  | 2.38                     | 0.51              |
| 28:BE:77:ILE:CG1   | 28:BE:78:LEU:N     | 2.71                     | 0.51              |
| 28:BE:121:ASN:O    | 28:BE:122:PHE:C    | 2.52                     | 0.51              |
| 28:BE:161:GLY:O    | 28:BE:163:GLU:OE1  | 2.29                     | 0.51              |
| 28:BE:199:ARG:N    | 28:BE:199:ARG:CD   | 2.71                     | 0.51              |
| 29:BF:24:LEU:H     | 29:BF:25:PRO:CD    | 2.21                     | 0.51              |
| 29:BF:200:GLU:CD   | 29:BF:201:VAL:H    | 2.15                     | 0.51              |
| 30:BG:85:GLY:O     | 30:BG:86:MET:CB    | 2.57                     | 0.51              |
| 30:BG:96:ARG:O     | 30:BG:99:MET:CB    | 2.54                     | 0.51              |
| 30:BG:107:LEU:HD22 | 30:BG:173:LEU:HD21 | 1.92                     | 0.51              |
| 32:BK:9:LEU:HD23   | 32:BK:17:GLN:NE2   | 2.23                     | 0.51              |
| 32:BK:45:LYS:HA    | 32:BK:45:LYS:HE3   | 1.91                     | 0.51              |
| 32:BK:95:LYS:O     | 32:BK:98:ALA:CB    | 2.55                     | 0.51              |
| 34:BM:8:GLN:HA     | 34:BM:8:GLN:OE1    | 2.10                     | 0.51              |
| 34:BM:15:LEU:CD2   | 34:BM:137:LYS:HA   | 2.29                     | 0.51              |
| 34:BM:85:ILE:N     | 34:BM:85:ILE:CD1   | 2.69                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 34:BM:107:LEU:HD11 | 34:BM:113:GLY:C   | 2.33                     | 0.51              |
| 35:BN:10:VAL:CG2   | 35:BN:12:ASP:OD1  | 2.55                     | 0.51              |
| 35:BN:61:VAL:HA    | 35:BN:83:ALA:HB2  | 1.93                     | 0.51              |
| 37:BP:48:GLU:HA    | 37:BP:51:ARG:CG   | 2.39                     | 0.51              |
| 37:BP:64:ILE:HG22  | 37:BP:105:GLU:HB3 | 1.92                     | 0.51              |
| 37:BP:97:VAL:HG11  | 37:BP:103:MET:HE3 | 1.91                     | 0.51              |
| 37:BP:118:LEU:O    | 37:BP:119:ARG:C   | 2.53                     | 0.51              |
| 39:BR:106:ARG:HD3  | 39:BR:107:GLU:CD  | 2.35                     | 0.51              |
| 41:BT:25:TRP:HE3   | 41:BT:25:TRP:C    | 2.18                     | 0.51              |
| 41:BT:55:ARG:HA    | 41:BT:58:ARG:CZ   | 2.40                     | 0.51              |
| 42:BU:45:THR:O     | 42:BU:46:VAL:CB   | 2.57                     | 0.51              |
| 42:BU:66:ARG:HE    | 42:BU:95:LEU:HD12 | 1.73                     | 0.51              |
| 42:BU:67:GLY:HA2   | 42:BU:94:LEU:HA   | 1.91                     | 0.51              |
| 42:BU:74:LYS:C     | 42:BU:75:PHE:CG   | 2.88                     | 0.51              |
| 45:BX:12:THR:HG21  | 45:BX:71:LYS:HA   | 1.89                     | 0.51              |
| 45:BX:31:LEU:O     | 45:BX:32:PRO:C    | 2.49                     | 0.51              |
| 46:BY:75:ASN:HB3   | 46:BY:84:GLU:HB2  | 1.92                     | 0.51              |
| 47:BZ:57:PHE:HD1   | 47:BZ:57:PHE:N    | 2.08                     | 0.51              |
| 47:BZ:74:ARG:O     | 47:BZ:75:LEU:C    | 2.53                     | 0.51              |
| 48:B1:22:GLU:OE1   | 48:B1:22:GLU:HA   | 2.11                     | 0.51              |
| 49:B2:4:LEU:HD23   | 49:B2:4:LEU:C     | 2.35                     | 0.51              |
| 50:B3:46:GLN:O     | 50:B3:52:THR:HB   | 2.10                     | 0.51              |
| 51:B4:13:LYS:N     | 51:B4:13:LYS:CD   | 2.65                     | 0.51              |
| 51:B4:51:TYR:CE1   | 51:B4:55:ARG:HD3  | 2.46                     | 0.51              |
| 53:B6:24:THR:HG23  | 53:B6:27:GLY:CA   | 2.40                     | 0.51              |
| 54:B7:16:ILE:CG2   | 54:B7:57:ARG:HH22 | 2.24                     | 0.51              |
| 54:B7:34:TRP:HE3   | 54:B7:36:LYS:HD3  | 1.74                     | 0.51              |
| 1:AA:96:G:C5       | 1:AA:97:U:C4      | 2.99                     | 0.51              |
| 1:AA:553:A:C2'     | 1:AA:554:C:O4'    | 2.59                     | 0.51              |
| 1:AA:597:G:N2      | 10:AK:94:TYR:CZ   | 2.79                     | 0.51              |
| 1:AA:730:G:H2'     | 1:AA:731:G:C4'    | 2.41                     | 0.51              |
| 1:AA:775:G:C4      | 1:AA:776:G:N7     | 2.78                     | 0.51              |
| 1:AA:828:A:H4'     | 1:AA:828:A:OP1    | 2.10                     | 0.51              |
| 1:AA:890:G:H2'     | 1:AA:891:U:OP2    | 2.11                     | 0.51              |
| 1:AA:957:U:H3      | 1:AA:960:U:C5'    | 2.23                     | 0.51              |
| 1:AA:1053:G:N2     | 1:AA:1058:G:O6    | 2.43                     | 0.51              |
| 1:AA:1104:G:H4'    | 4:AE:111:ARG:CZ   | 2.40                     | 0.51              |
| 1:AA:1145:C:C1'    | 1:AA:1146:A:C8    | 2.89                     | 0.51              |
| 1:AA:1151:A:O2'    | 12:AM:70:ARG:NH1  | 2.43                     | 0.51              |
| 1:AA:1157:A:N1     | 1:AA:1180:A:C5    | 2.78                     | 0.51              |
| 1:AA:1187:G:O2'    | 16:AQ:61:TRP:OXT  | 2.22                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1248:A:HO2'  | 11:AL:36:TYR:HE1  | 1.48                     | 0.51              |
| 1:AA:1302:U:O2'   | 1:AA:1303:C:C5'   | 2.58                     | 0.51              |
| 1:AA:1314:C:N4    | 21:AV:4:SER:O     | 2.43                     | 0.51              |
| 1:AA:1419:G:H2'   | 1:AA:1420:C:H6    | 1.74                     | 0.51              |
| 1:AA:1465:C:N3    | 1:AA:1466:C:C5    | 2.78                     | 0.51              |
| 2:A1:36:U:H1'     | 9:AJ:82:GLY:CA    | 2.39                     | 0.51              |
| 3:AC:9:A:N6       | 3:AC:22:G:C5      | 2.79                     | 0.51              |
| 3:AC:37:A:C5      | 3:AC:38:A:C5      | 2.98                     | 0.51              |
| 3:AC:49:C:H2'     | 3:AC:49:C:O2      | 2.09                     | 0.51              |
| 3:AC:70:G:C6      | 3:AC:71:G:N7      | 2.78                     | 0.51              |
| 3:AB:52:G:H4'     | 24:BA:2471:C:P    | 2.47                     | 0.51              |
| 5:AF:204:LEU:O    | 5:AF:205:GLY:C    | 2.53                     | 0.51              |
| 6:AG:20:TYR:C     | 6:AG:22:LYS:H     | 2.12                     | 0.51              |
| 6:AG:90:GLY:O     | 6:AG:94:LEU:HG    | 2.11                     | 0.51              |
| 6:AG:126:ILE:O    | 6:AG:132:ARG:CB   | 2.57                     | 0.51              |
| 6:AG:128:VAL:HG23 | 6:AG:133:VAL:N    | 2.25                     | 0.51              |
| 7:AH:53:LEU:O     | 7:AH:54:ALA:C     | 2.53                     | 0.51              |
| 7:AH:79:GLU:CD    | 7:AH:79:GLU:N     | 2.62                     | 0.51              |
| 8:AI:76:ALA:HA    | 8:AI:79:LEU:HD11  | 1.92                     | 0.51              |
| 9:AJ:64:GLN:C     | 9:AJ:128:ALA:HA   | 2.36                     | 0.51              |
| 9:AJ:75:VAL:HG13  | 9:AJ:87:VAL:C     | 2.35                     | 0.51              |
| 9:AJ:152:ALA:O    | 9:AJ:154:TYR:N    | 2.42                     | 0.51              |
| 10:AK:6:ILE:CG1   | 10:AK:85:ARG:CZ   | 2.89                     | 0.51              |
| 11:AL:32:ASP:OD1  | 11:AL:35:GLU:HB2  | 2.10                     | 0.51              |
| 12:AM:7:LYS:NZ    | 12:AM:71:LEU:HD11 | 2.25                     | 0.51              |
| 12:AM:19:SER:OG   | 12:AM:91:PRO:HG3  | 2.10                     | 0.51              |
| 12:AM:51:ARG:NH2  | 12:AM:61:GLU:OE1  | 2.44                     | 0.51              |
| 12:AM:72:VAL:HG12 | 12:AM:73:ASP:N    | 2.25                     | 0.51              |
| 13:AN:42:TRP:CZ3  | 13:AN:47:VAL:CG2  | 2.94                     | 0.51              |
| 14:AO:24:VAL:CG1  | 14:AO:26:ALA:HB2  | 2.40                     | 0.51              |
| 15:AP:78:ILE:HG23 | 15:AP:81:LEU:HD11 | 1.93                     | 0.51              |
| 18:AS:55:ARG:NH2  | 18:AS:58:TYR:CG   | 2.79                     | 0.51              |
| 19:AT:75:ARG:HH12 | 19:AT:77:VAL:CA   | 2.23                     | 0.51              |
| 21:AV:30:LEU:HD12 | 21:AV:59:PRO:CA   | 2.39                     | 0.51              |
| 21:AV:39:THR:C    | 21:AV:40:ILE:O    | 2.53                     | 0.51              |
| 21:AV:71:LEU:O    | 21:AV:74:PHE:CD1  | 2.63                     | 0.51              |
| 24:BA:51:G:C1'    | 24:BA:118:A:N6    | 2.69                     | 0.51              |
| 24:BA:52:A:N7     | 24:BA:117:G:N2    | 2.58                     | 0.51              |
| 24:BA:71:A:C2     | 24:BA:73:A:C6     | 2.99                     | 0.51              |
| 24:BA:120:U:C6    | 24:BA:150:C:H5    | 2.28                     | 0.51              |
| 24:BA:221:A:C2    | 24:BA:233:A:C4    | 2.98                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:270(N):G:H3' | 24:BA:270(O):U:C6 | 2.45                     | 0.51              |
| 24:BA:308:G:C2     | 24:BA:329:G:C2    | 2.97                     | 0.51              |
| 24:BA:335:C:N3     | 24:BA:336:C:C5    | 2.78                     | 0.51              |
| 24:BA:339:U:C6     | 24:BA:340:A:N7    | 2.79                     | 0.51              |
| 24:BA:393:C:H2'    | 24:BA:394:A:O4'   | 2.10                     | 0.51              |
| 24:BA:446:G:OP2    | 24:BA:446:G:O4'   | 2.29                     | 0.51              |
| 24:BA:465:G:N2     | 24:BA:683:C:H2'   | 2.24                     | 0.51              |
| 24:BA:473:G:N2     | 24:BA:474:G:N3    | 2.59                     | 0.51              |
| 24:BA:520:G:OP1    | 43:BV:25:ARG:NH1  | 2.43                     | 0.51              |
| 24:BA:624:C:H3'    | 24:BA:624:C:H6    | 1.69                     | 0.51              |
| 24:BA:665:C:O2'    | 24:BA:666:G:O5'   | 2.19                     | 0.51              |
| 24:BA:672:C:C2     | 24:BA:673:C:C5    | 2.98                     | 0.51              |
| 24:BA:691:C:H1'    | 27:BD:45:ASN:ND2  | 2.16                     | 0.51              |
| 24:BA:707:G:H2'    | 24:BA:708:C:O4'   | 2.10                     | 0.51              |
| 24:BA:762:U:H1'    | 24:BA:763:G:C5    | 2.45                     | 0.51              |
| 24:BA:775:G:O2'    | 24:BA:794:G:C8    | 2.61                     | 0.51              |
| 24:BA:1071:G:H21   | 24:BA:1090:U:H5   | 1.58                     | 0.51              |
| 24:BA:1099:G:C2    | 24:BA:1100:C:C6   | 2.99                     | 0.51              |
| 24:BA:1221:C:C4    | 24:BA:1229:G:N1   | 2.78                     | 0.51              |
| 24:BA:1258:C:H2'   | 24:BA:1259:G:C8   | 2.40                     | 0.51              |
| 24:BA:1327:C:H5''  | 24:BA:1328:G:OP2  | 2.11                     | 0.51              |
| 24:BA:1477:A:H8    | 24:BA:1477:A:OP2  | 1.93                     | 0.51              |
| 24:BA:1569:A:O2'   | 27:BD:39:LYS:NZ   | 2.38                     | 0.51              |
| 24:BA:1682:G:H3'   | 24:BA:1683:C:C5   | 2.45                     | 0.51              |
| 24:BA:1749:A:H2'   | 24:BA:1750:G:O4'  | 2.11                     | 0.51              |
| 24:BA:1914:C:O2    | 24:BA:1914:C:C2'  | 2.56                     | 0.51              |
| 24:BA:1996:C:C6    | 24:BA:1996:C:C4'  | 2.92                     | 0.51              |
| 24:BA:2046:G:C4    | 24:BA:2047:U:C5   | 2.98                     | 0.51              |
| 24:BA:2175:C:OP1   | 26:BC:5:LYS:CG    | 2.58                     | 0.51              |
| 24:BA:2191:G:H21   | 24:BA:2192:G:H1'  | 1.75                     | 0.51              |
| 24:BA:2225:A:C4'   | 24:BA:2226:C:C6   | 2.93                     | 0.51              |
| 24:BA:2320:A:H5'   | 24:BA:2321:G:N7   | 2.26                     | 0.51              |
| 24:BA:2589:A:P     | 27:BD:226:MET:SD  | 3.09                     | 0.51              |
| 24:BA:2662:A:N3    | 24:BA:2663:G:H5'  | 2.26                     | 0.51              |
| 24:BA:2691:C:O4'   | 24:BA:2872:G:N7   | 2.43                     | 0.51              |
| 24:BA:2710:C:H2'   | 24:BA:2711:A:O4'  | 2.10                     | 0.51              |
| 24:BA:2773:C:C2    | 24:BA:2774:C:C5   | 2.98                     | 0.51              |
| 24:BA:2812:G:C6    | 24:BA:2813:A:N6   | 2.78                     | 0.51              |
| 24:BA:2875:C:OP1   | 40:BS:3:ARG:NH1   | 2.43                     | 0.51              |
| 24:BA:2887:U:C2    | 24:BA:2888:C:C5   | 2.99                     | 0.51              |
| 25:BB:6:C:H5'      | 25:BB:27:C:C2'    | 2.40                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 25:BB:50:G:H5''    | 39:BR:61:ASN:CA    | 2.40                     | 0.51              |
| 25:BB:112:G:N2     | 25:BB:113:C:C2     | 2.78                     | 0.51              |
| 26:BC:23:ASP:OD1   | 26:BC:186:ALA:HB2  | 2.09                     | 0.51              |
| 26:BC:49:ILE:HD11  | 26:BC:165:ASN:ND2  | 2.24                     | 0.51              |
| 26:BC:63:SER:O     | 26:BC:65:PRO:CD    | 2.57                     | 0.51              |
| 26:BC:153:ILE:HA   | 26:BC:156:ILE:CD1  | 2.26                     | 0.51              |
| 26:BC:209:LEU:HG   | 26:BC:212:VAL:CG2  | 2.39                     | 0.51              |
| 27:BD:65:ILE:CG2   | 27:BD:66:ASP:N     | 2.73                     | 0.51              |
| 27:BD:154:LYS:O    | 27:BD:154:LYS:CG   | 2.56                     | 0.51              |
| 27:BD:228:PRO:O    | 27:BD:229:VAL:C    | 2.53                     | 0.51              |
| 28:BE:103:ASP:O    | 28:BE:199:ARG:O    | 2.28                     | 0.51              |
| 28:BE:169:ASN:C    | 28:BE:170:LEU:HD23 | 2.35                     | 0.51              |
| 29:BF:82:ILE:HD13  | 29:BF:82:ILE:H     | 1.68                     | 0.51              |
| 29:BF:114:VAL:HG23 | 29:BF:186:ILE:HD13 | 1.92                     | 0.51              |
| 31:BH:35:VAL:CG1   | 31:BH:72:ILE:HA    | 2.15                     | 0.51              |
| 31:BH:103:LEU:O    | 31:BH:104:GLU:C    | 2.53                     | 0.51              |
| 31:BH:137:ASP:OD2  | 31:BH:139:GLN:HG3  | 2.09                     | 0.51              |
| 32:BK:69:LYS:O     | 32:BK:73:GLU:OE1   | 2.28                     | 0.51              |
| 32:BK:88:ILE:HG22  | 32:BK:90:GLY:H     | 1.75                     | 0.51              |
| 34:BM:67:LEU:O     | 34:BM:68:GLU:HB2   | 2.10                     | 0.51              |
| 36:BO:56:SER:HG    | 54:B7:27:THR:CB    | 2.23                     | 0.51              |
| 36:BO:96:THR:OG1   | 36:BO:112:LEU:HD11 | 2.11                     | 0.51              |
| 36:BO:97:PRO:HD3   | 36:BO:102:ARG:CZ   | 2.41                     | 0.51              |
| 36:BO:122:PRO:CG   | 36:BO:137:LYS:C    | 2.77                     | 0.51              |
| 37:BP:85:LYS:HZ1   | 47:BZ:10:THR:HG21  | 1.73                     | 0.51              |
| 38:BQ:20:LEU:HD21  | 38:BQ:24:GLN:CD    | 2.35                     | 0.51              |
| 38:BQ:32:GLY:C     | 38:BQ:116:LEU:HD21 | 2.32                     | 0.51              |
| 38:BQ:53:HIS:C     | 38:BQ:53:HIS:ND1   | 2.68                     | 0.51              |
| 40:BS:34:VAL:O     | 40:BS:44:ASP:O     | 2.29                     | 0.51              |
| 40:BS:65:LYS:HA    | 40:BS:76:PHE:C     | 2.35                     | 0.51              |
| 41:BT:16:LYS:HD2   | 41:BT:17:ILE:CD1   | 2.41                     | 0.51              |
| 41:BT:80:ILE:O     | 41:BT:81:HIS:C     | 2.52                     | 0.51              |
| 41:BT:106:PHE:HA   | 41:BT:109:LEU:HD12 | 1.92                     | 0.51              |
| 42:BU:25:LEU:HA    | 42:BU:28:GLU:CG    | 2.40                     | 0.51              |
| 42:BU:34:GLU:O     | 42:BU:35:LEU:CD1   | 2.58                     | 0.51              |
| 42:BU:73:SER:OG    | 42:BU:89:GLN:CB    | 2.56                     | 0.51              |
| 43:BV:89:ALA:O     | 43:BV:91:GLY:N     | 2.44                     | 0.51              |
| 44:BW:63:LYS:HA    | 44:BW:63:LYS:HZ3   | 1.75                     | 0.51              |
| 46:BY:18:LEU:HD11  | 46:BY:38:TYR:CG    | 2.45                     | 0.51              |
| 46:BY:95:PRO:HD2   | 46:BY:130:PRO:HA   | 1.91                     | 0.51              |
| 46:BY:102:LEU:CD2  | 46:BY:137:ILE:HB   | 2.40                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 48:B1:1:MET:O    | 48:B1:4:GLN:N     | 2.43                     | 0.51              |
| 48:B1:27:LEU:HG  | 48:B1:48:LEU:HB3  | 1.92                     | 0.51              |
| 48:B1:52:ILE:HA  | 48:B1:55:LEU:HD13 | 1.93                     | 0.51              |
| 48:B1:58:VAL:O   | 48:B1:61:GLU:N    | 2.42                     | 0.51              |
| 49:B2:40:THR:O   | 49:B2:44:ARG:HG3  | 2.10                     | 0.51              |
| 51:B4:55:ARG:O   | 51:B4:57:VAL:N    | 2.43                     | 0.51              |
| 52:B5:17:LYS:HZ3 | 52:B5:50:ARG:HA   | 1.75                     | 0.51              |
| 52:B5:20:ASN:ND2 | 52:B5:42:TRP:CD1  | 2.66                     | 0.51              |
| 53:B6:8:ASN:ND2  | 53:B6:10:ARG:H    | 2.08                     | 0.51              |
| 54:B7:9:GLY:O    | 54:B7:14:VAL:CB   | 2.59                     | 0.51              |
| 1:AA:196:A:H1'   | 1:AA:222:U:H1'    | 1.92                     | 0.51              |
| 1:AA:295:C:C2'   | 1:AA:296:U:O5'    | 2.59                     | 0.51              |
| 1:AA:447:G:H1'   | 1:AA:487:A:H61    | 1.76                     | 0.51              |
| 1:AA:467:G:N2    | 1:AA:468:A:C4     | 2.78                     | 0.51              |
| 1:AA:486:U:H2'   | 1:AA:486:U:O2     | 2.10                     | 0.51              |
| 1:AA:652:U:H2'   | 1:AA:752:G:H22    | 1.75                     | 0.51              |
| 1:AA:801:U:O2    | 1:AA:801:U:C2'    | 2.58                     | 0.51              |
| 1:AA:809:G:H2'   | 1:AA:810:C:C5'    | 2.40                     | 0.51              |
| 1:AA:834:C:O2'   | 1:AA:835:U:O4'    | 2.28                     | 0.51              |
| 1:AA:978:A:C6    | 1:AA:1318:A:N6    | 2.79                     | 0.51              |
| 1:AA:1081:G:OP2  | 7:AH:27:ARG:HD2   | 2.11                     | 0.51              |
| 1:AA:1147:C:HO2' | 11:AL:5:TYR:HE1   | 1.57                     | 0.51              |
| 1:AA:1182:G:C4'  | 1:AA:1183:A:O5'   | 2.58                     | 0.51              |
| 1:AA:1226:C:OP2  | 15:AP:103:THR:HB  | 2.10                     | 0.51              |
| 1:AA:1450:U:C1'  | 1:AA:1454:G:N2    | 2.73                     | 0.51              |
| 3:AC:5:G:C2'     | 3:AC:6:G:O5'      | 2.58                     | 0.51              |
| 3:AD:34:G:H2'    | 3:AD:34:G:N3      | 2.25                     | 0.51              |
| 4:AE:45:GLN:O    | 4:AE:48:MET:HB2   | 2.11                     | 0.51              |
| 4:AE:48:MET:O    | 4:AE:49:GLU:C     | 2.50                     | 0.51              |
| 4:AE:163:PHE:CE1 | 4:AE:186:ALA:CA   | 2.94                     | 0.51              |
| 4:AE:207:ALA:C   | 4:AE:209:ARG:N    | 2.67                     | 0.51              |
| 5:AF:22:TRP:CZ2  | 5:AF:33:LEU:HG    | 2.45                     | 0.51              |
| 6:AG:106:TYR:OH  | 6:AG:112:VAL:O    | 2.22                     | 0.51              |
| 6:AG:127:THR:OG1 | 6:AG:149:ALA:HA   | 2.10                     | 0.51              |
| 6:AG:173:TRP:H   | 6:AG:173:TRP:HE3  | 1.58                     | 0.51              |
| 7:AH:43:LEU:N    | 7:AH:65:ASN:ND2   | 2.48                     | 0.51              |
| 7:AH:136:MET:HA  | 7:AH:139:LEU:CD1  | 2.40                     | 0.51              |
| 8:AI:6:VAL:O     | 8:AI:6:VAL:HG13   | 2.11                     | 0.51              |
| 9:AJ:23:VAL:HG13 | 9:AJ:43:PHE:CE2   | 2.46                     | 0.51              |
| 11:AL:3:GLN:HG3  | 11:AL:20:ARG:CG   | 2.41                     | 0.51              |
| 11:AL:97:LYS:NZ  | 11:AL:102:LEU:HB3 | 2.25                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 15:AP:45:VAL:O    | 15:AP:47:ASP:N    | 2.43                     | 0.51              |
| 18:AS:32:TYR:N    | 18:AS:32:TYR:HD1  | 2.07                     | 0.51              |
| 21:AV:18:LYS:HE2  | 21:AV:22:LEU:CD1  | 2.41                     | 0.51              |
| 23:AX:9:ARG:NH1   | 23:AX:21:TYR:CD2  | 2.76                     | 0.51              |
| 24:BA:140:A:N3    | 24:BA:1408:C:O2'  | 2.40                     | 0.51              |
| 24:BA:231:C:C4    | 24:BA:232:G:C2    | 2.98                     | 0.51              |
| 24:BA:281:G:N2    | 24:BA:283:A:C4'   | 2.74                     | 0.51              |
| 24:BA:312:G:O4'   | 24:BA:312:G:P     | 2.68                     | 0.51              |
| 24:BA:313:C:C2    | 24:BA:314:A:C8    | 2.99                     | 0.51              |
| 24:BA:330:A:O2'   | 24:BA:1210:A:C6   | 2.63                     | 0.51              |
| 24:BA:483:A:C2    | 24:BA:484:C:O4'   | 2.64                     | 0.51              |
| 24:BA:533:G:N7    | 24:BA:534:U:C4    | 2.78                     | 0.51              |
| 24:BA:714:U:O2    | 24:BA:715:G:C8    | 2.64                     | 0.51              |
| 24:BA:817:C:H3'   | 24:BA:818:G:H8    | 1.76                     | 0.51              |
| 24:BA:832:G:OP1   | 36:BO:36:LYS:HE2  | 2.10                     | 0.51              |
| 24:BA:847:U:C4    | 24:BA:933:A:H2    | 2.27                     | 0.51              |
| 24:BA:912:C:O2'   | 24:BA:913:U:H5'   | 2.10                     | 0.51              |
| 24:BA:971:C:OP2   | 24:BA:974(A):C:C5 | 2.64                     | 0.51              |
| 24:BA:1115:G:N2   | 24:BA:1116:C:C2   | 2.78                     | 0.51              |
| 24:BA:1128:A:C2   | 24:BA:2490:G:OP1  | 2.64                     | 0.51              |
| 24:BA:1131:G:H4'  | 24:BA:1132:A:OP1  | 2.10                     | 0.51              |
| 24:BA:1176:G:C5'  | 24:BA:1177:A:C8   | 2.94                     | 0.51              |
| 24:BA:1212:G:N7   | 24:BA:1235:G:C6   | 2.78                     | 0.51              |
| 24:BA:1441:G:N2   | 24:BA:1442:G:H1'  | 2.24                     | 0.51              |
| 24:BA:1528:A:H3'  | 24:BA:1529:A:O4'  | 2.11                     | 0.51              |
| 24:BA:1539:G:C8   | 24:BA:1540:G:C8   | 2.99                     | 0.51              |
| 24:BA:1577:C:OP2  | 24:BA:1577:C:H6   | 1.94                     | 0.51              |
| 24:BA:1669:A:C6   | 24:BA:1994:C:O2   | 2.64                     | 0.51              |
| 24:BA:1681:G:O6   | 24:BA:1762:A:N6   | 2.43                     | 0.51              |
| 24:BA:1726:G:C5   | 24:BA:1727:U:O4   | 2.62                     | 0.51              |
| 24:BA:1917:U:C5   | 24:BA:1918:A:C8   | 2.98                     | 0.51              |
| 24:BA:1997:G:H5'  | 28:BE:123:ALA:HB3 | 1.93                     | 0.51              |
| 24:BA:2033:A:HO2' | 24:BA:2034:U:P    | 2.34                     | 0.51              |
| 24:BA:2246:G:N3   | 24:BA:2247:A:C5   | 2.79                     | 0.51              |
| 24:BA:2260:C:H2'  | 24:BA:2261:C:C6   | 2.46                     | 0.51              |
| 24:BA:2287:A:N7   | 24:BA:2289:G:N7   | 2.56                     | 0.51              |
| 24:BA:2345:G:H21  | 24:BA:2381:C:C3'  | 2.23                     | 0.51              |
| 24:BA:2361:A:H2'  | 24:BA:2361:A:N3   | 2.26                     | 0.51              |
| 24:BA:2523:G:O2'  | 24:BA:2765:A:N7   | 2.43                     | 0.51              |
| 24:BA:2584:U:C5   | 24:BA:2585:U:C2   | 2.98                     | 0.51              |
| 24:BA:2586:C:H6   | 24:BA:2586:C:H3'  | 1.74                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2695:C:H2'   | 24:BA:2696:U:C6    | 2.45                     | 0.51              |
| 24:BA:2696:U:C2    | 24:BA:2697:G:C8    | 2.99                     | 0.51              |
| 24:BA:2716:U:O2'   | 24:BA:2717:G:C5'   | 2.59                     | 0.51              |
| 24:BA:2731:G:C4'   | 28:BE:168:MET:SD   | 2.94                     | 0.51              |
| 24:BA:2742:C:H4'   | 55:B8:35:ARG:NH1   | 2.25                     | 0.51              |
| 24:BA:2761:G:C2'   | 24:BA:2762:G:H5'   | 2.41                     | 0.51              |
| 24:BA:2815:C:C2'   | 24:BA:2816:C:H5'   | 2.40                     | 0.51              |
| 24:BA:2820:A:H62   | 28:BE:191:PRO:HB3  | 1.75                     | 0.51              |
| 24:BA:2820:A:H4'   | 38:BQ:4:LEU:HD22   | 1.92                     | 0.51              |
| 25:BB:96:G:C2      | 25:BB:97:G:C8      | 2.99                     | 0.51              |
| 26:BC:75:LEU:HD23  | 26:BC:77:ILE:CD1   | 2.34                     | 0.51              |
| 26:BC:82:LYS:CG    | 26:BC:116:THR:HG21 | 2.40                     | 0.51              |
| 26:BC:148:ASN:HB2  | 26:BC:151:GLU:HB2  | 1.92                     | 0.51              |
| 26:BC:188:ASN:O    | 26:BC:189:ILE:C    | 2.54                     | 0.51              |
| 27:BD:71:ASP:O     | 27:BD:72:LYS:CB    | 2.59                     | 0.51              |
| 27:BD:252:TRP:N    | 27:BD:255:LYS:HZ2  | 2.08                     | 0.51              |
| 28:BE:33:VAL:HG22  | 28:BE:47:VAL:C     | 2.35                     | 0.51              |
| 28:BE:138:PRO:O    | 28:BE:139:GLY:O    | 2.28                     | 0.51              |
| 28:BE:176:ILE:HG22 | 28:BE:181:LEU:C    | 2.34                     | 0.51              |
| 29:BF:39:TRP:C     | 29:BF:39:TRP:CD2   | 2.88                     | 0.51              |
| 29:BF:130:ALA:O    | 29:BF:139:PHE:CA   | 2.56                     | 0.51              |
| 29:BF:136:THR:O    | 29:BF:137:LYS:C    | 2.52                     | 0.51              |
| 30:BG:11:TYR:O     | 30:BG:15:VAL:CG1   | 2.57                     | 0.51              |
| 30:BG:16:ARG:C     | 30:BG:20:ILE:HG13  | 2.36                     | 0.51              |
| 30:BG:19:LEU:O     | 30:BG:20:ILE:C     | 2.54                     | 0.51              |
| 30:BG:138:GLN:N    | 30:BG:155:MET:SD   | 2.83                     | 0.51              |
| 31:BH:56:SER:HB3   | 31:BH:61:HIS:ND1   | 2.25                     | 0.51              |
| 31:BH:85:LYS:HZ3   | 31:BH:142:GLY:CA   | 2.23                     | 0.51              |
| 31:BH:121:ILE:HD11 | 31:BH:123:PHE:HE1  | 1.73                     | 0.51              |
| 32:BK:51:ILE:O     | 32:BK:52:ARG:C     | 2.53                     | 0.51              |
| 32:BK:77:LEU:HD22  | 32:BK:140:LEU:HD23 | 1.93                     | 0.51              |
| 33:BL:115:LEU:O    | 33:BL:115:LEU:HD13 | 2.11                     | 0.51              |
| 34:BM:72:TYR:CE1   | 34:BM:74:ARG:HB3   | 2.45                     | 0.51              |
| 35:BN:72:PRO:O     | 40:BS:84:GLN:NE2   | 2.44                     | 0.51              |
| 37:BP:37:LEU:HD23  | 37:BP:100:GLY:CA   | 2.40                     | 0.51              |
| 37:BP:42:ILE:CG2   | 37:BP:42:ILE:O     | 2.58                     | 0.51              |
| 37:BP:109:VAL:HG22 | 37:BP:113:GLN:CB   | 2.39                     | 0.51              |
| 38:BQ:44:LEU:HD13  | 38:BQ:48:VAL:HG23  | 1.91                     | 0.51              |
| 38:BQ:103:ARG:HA   | 38:BQ:109:ALA:O    | 2.10                     | 0.51              |
| 39:BR:31:SER:CB    | 39:BR:34:HIS:HB3   | 2.40                     | 0.51              |
| 39:BR:65:VAL:HG23  | 39:BR:66:ALA:N     | 2.25                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 39:BR:67:ARG:NE    | 39:BR:71:ARG:HD2  | 2.25                     | 0.51              |
| 41:BT:39:LEU:O     | 41:BT:41:ALA:N    | 2.44                     | 0.51              |
| 43:BV:11:ARG:HB2   | 43:BV:98:LYS:CD   | 2.41                     | 0.51              |
| 44:BW:5:TYR:HB3    | 48:B1:24:LYS:HZ3  | 1.76                     | 0.51              |
| 44:BW:73:ARG:HG2   | 44:BW:74:PRO:CD   | 2.35                     | 0.51              |
| 44:BW:85:PRO:HG3   | 44:BW:87:GLN:HG2  | 1.90                     | 0.51              |
| 44:BW:87:GLN:N     | 44:BW:87:GLN:CD   | 2.68                     | 0.51              |
| 45:BX:26:LYS:HE3   | 45:BX:36:ALA:HB3  | 1.91                     | 0.51              |
| 46:BY:139:VAL:HG12 | 46:BY:140:ASP:H   | 1.75                     | 0.51              |
| 47:BZ:31:VAL:HG13  | 47:BZ:67:VAL:CG2  | 2.40                     | 0.51              |
| 47:BZ:40:GLN:NE2   | 47:BZ:42:GLY:O    | 2.43                     | 0.51              |
| 50:B3:58:ARG:C     | 50:B3:62:ARG:NE   | 2.69                     | 0.51              |
| 51:B4:15:ARG:O     | 51:B4:16:ARG:C    | 2.54                     | 0.51              |
| 52:B5:9:LEU:C      | 52:B5:10:LEU:HD23 | 2.35                     | 0.51              |
| 52:B5:16:CYS:HB2   | 52:B5:49:HIS:C    | 2.34                     | 0.51              |
| 1:AA:186(B):C:C4'  | 22:AW:89:ARG:HH22 | 2.23                     | 0.51              |
| 1:AA:390:C:N3      | 1:AA:391:G:N7     | 2.59                     | 0.51              |
| 1:AA:497:U:O2      | 1:AA:498:A:C8     | 2.64                     | 0.51              |
| 1:AA:611:A:H2'     | 1:AA:612:C:C6     | 2.46                     | 0.51              |
| 1:AA:754:C:H1'     | 17:AR:69:TYR:CB   | 2.41                     | 0.51              |
| 1:AA:901:A:N3      | 1:AA:902:G:C1'    | 2.74                     | 0.51              |
| 1:AA:946:A:C2'     | 1:AA:947:G:H8     | 2.21                     | 0.51              |
| 1:AA:1003:G:N2     | 1:AA:1005:A:H5'   | 2.26                     | 0.51              |
| 1:AA:1061:G:H5'    | 12:AM:59:SER:OG   | 2.11                     | 0.51              |
| 1:AA:1205:U:H1'    | 5:AF:195:VAL:HG22 | 1.93                     | 0.51              |
| 1:AA:1213:A:C2     | 1:AA:1215:G:C4    | 2.99                     | 0.51              |
| 1:AA:1384:C:H2'    | 1:AA:1385:G:O4'   | 2.09                     | 0.51              |
| 1:AA:1406:U:O4'    | 1:AA:1518:A:H4'   | 2.11                     | 0.51              |
| 1:AA:1430:C:O2'    | 1:AA:1431:C:C5'   | 2.59                     | 0.51              |
| 1:AA:1507:A:C2     | 1:AA:1530:G:H1'   | 2.46                     | 0.51              |
| 2:A1:10:U:O2'      | 2:A1:12:U:C5      | 2.61                     | 0.51              |
| 3:AC:21:A:C2       | 3:AC:48:C:N3      | 2.79                     | 0.51              |
| 3:AC:55:U:H6       | 3:AC:55:U:O5'     | 1.92                     | 0.51              |
| 3:AD:20:U:O2       | 3:AD:20:U:C2'     | 2.57                     | 0.51              |
| 3:AD:48:C:OP1      | 3:AD:48:C:O4'     | 2.29                     | 0.51              |
| 4:AE:35:GLU:OE2    | 4:AE:39:ILE:N     | 2.44                     | 0.51              |
| 4:AE:163:PHE:CA    | 4:AE:185:ILE:O    | 2.47                     | 0.51              |
| 4:AE:187:LEU:HD23  | 4:AE:201:ILE:HG22 | 1.93                     | 0.51              |
| 5:AF:60:ALA:HA     | 12:AM:92:THR:O    | 2.11                     | 0.51              |
| 5:AF:127:ARG:C     | 5:AF:128:PHE:HD1  | 2.18                     | 0.51              |
| 6:AG:62:GLN:C      | 6:AG:66:ARG:HD2   | 2.36                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 6:AG:80:GLU:O     | 6:AG:81:GLU:C     | 2.51                     | 0.51              |
| 6:AG:82:ALA:C     | 6:AG:89:THR:HG23  | 2.35                     | 0.51              |
| 6:AG:113:SER:HB3  | 6:AG:116:GLN:CG   | 2.41                     | 0.51              |
| 7:AH:80:ILE:HD12  | 7:AH:80:ILE:H     | 1.74                     | 0.51              |
| 7:AH:140:ARG:CB   | 7:AH:140:ARG:CZ   | 2.88                     | 0.51              |
| 8:AI:36:ARG:NH1   | 8:AI:36:ARG:CB    | 2.74                     | 0.51              |
| 9:AJ:74:GLU:CG    | 9:AJ:75:VAL:H     | 2.10                     | 0.51              |
| 10:AK:97:VAL:HG13 | 10:AK:98:LYS:N    | 2.25                     | 0.51              |
| 11:AL:67:GLY:N    | 11:AL:73:GLN:NE2  | 2.58                     | 0.51              |
| 12:AM:44:VAL:HA   | 12:AM:66:ARG:HB3  | 1.92                     | 0.51              |
| 13:AN:18:ARG:CD   | 13:AN:34:ASP:O    | 2.59                     | 0.51              |
| 13:AN:63:LEU:HG   | 13:AN:66:LEU:HD12 | 1.91                     | 0.51              |
| 13:AN:68:ALA:O    | 13:AN:72:ALA:HB2  | 2.11                     | 0.51              |
| 15:AP:3:ARG:NH1   | 30:BG:113:ARG:CG  | 2.74                     | 0.51              |
| 16:AQ:40:CYS:O    | 16:AQ:41:ARG:C    | 2.54                     | 0.51              |
| 18:AS:26:ARG:NE   | 18:AS:31:LYS:HZ3  | 2.08                     | 0.51              |
| 19:AT:100:LYS:HB3 | 19:AT:100:LYS:HZ2 | 1.74                     | 0.51              |
| 20:AU:41:LYS:HA   | 20:AU:44:LEU:HD23 | 1.93                     | 0.51              |
| 24:BA:6:A:C4'     | 34:BM:132:ALA:O   | 2.55                     | 0.51              |
| 24:BA:8:A:H2'     | 24:BA:9:U:H6      | 1.76                     | 0.51              |
| 24:BA:29:U:O2     | 24:BA:30:G:O6     | 2.28                     | 0.51              |
| 24:BA:49:A:C5     | 24:BA:177:G:N1    | 2.79                     | 0.51              |
| 24:BA:63:U:O2'    | 24:BA:64:A:N7     | 2.40                     | 0.51              |
| 24:BA:220:G:O2'   | 24:BA:233:A:N3    | 2.44                     | 0.51              |
| 24:BA:226:G:O2'   | 24:BA:227:A:O4'   | 2.28                     | 0.51              |
| 24:BA:253:C:H2'   | 24:BA:253:C:O2    | 2.11                     | 0.51              |
| 24:BA:398:G:C2    | 24:BA:399:G:H1'   | 2.46                     | 0.51              |
| 24:BA:484:C:C2'   | 24:BA:485:C:H6    | 2.13                     | 0.51              |
| 24:BA:547:A:C6    | 24:BA:548:A:C6    | 2.99                     | 0.51              |
| 24:BA:562:U:O2'   | 24:BA:563:G:H5'   | 2.11                     | 0.51              |
| 24:BA:563:G:C2    | 24:BA:564:C:C4    | 2.99                     | 0.51              |
| 24:BA:566:U:C6    | 24:BA:567:A:C8    | 2.98                     | 0.51              |
| 24:BA:570:G:H2'   | 24:BA:2030:A:N6   | 2.26                     | 0.51              |
| 24:BA:675:A:H5''  | 29:BF:67:GLN:OE1  | 2.09                     | 0.51              |
| 24:BA:715:G:H2'   | 24:BA:716:A:O5'   | 2.11                     | 0.51              |
| 24:BA:753:C:O2    | 24:BA:753:C:H2'   | 2.10                     | 0.51              |
| 24:BA:789:A:OP1   | 24:BA:789:A:C3'   | 2.51                     | 0.51              |
| 24:BA:852:G:C6    | 24:BA:853:G:N7    | 2.78                     | 0.51              |
| 24:BA:859:G:O2'   | 24:BA:2268:A:C2   | 2.53                     | 0.51              |
| 24:BA:945:A:C3'   | 24:BA:946:G:H5''  | 2.40                     | 0.51              |
| 24:BA:1063:G:N2   | 24:BA:1076:C:C4   | 2.78                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1063:G:H5'  | 33:BL:87:GLY:HA3   | 1.92                     | 0.51              |
| 24:BA:1095:A:C2'  | 24:BA:1096:A:O4'   | 2.58                     | 0.51              |
| 24:BA:1096:A:N6   | 33:BL:30:HIS:CD2   | 2.78                     | 0.51              |
| 24:BA:1243:G:N1   | 24:BA:1244:G:C5    | 2.79                     | 0.51              |
| 24:BA:1273:U:H4'  | 24:BA:1275:A:OP1   | 2.09                     | 0.51              |
| 24:BA:1303:G:O2'  | 24:BA:1641:A:N1    | 2.43                     | 0.51              |
| 24:BA:1308:A:N3   | 24:BA:1309:G:C1'   | 2.73                     | 0.51              |
| 24:BA:1403:C:H5'' | 24:BA:1471:A:O4'   | 2.11                     | 0.51              |
| 24:BA:1442:G:H2'  | 24:BA:1442:G:N3    | 2.26                     | 0.51              |
| 24:BA:1513:C:H2'  | 24:BA:1514:U:C5    | 2.46                     | 0.51              |
| 24:BA:1559:G:N3   | 24:BA:1559:G:C2'   | 2.73                     | 0.51              |
| 24:BA:1718:G:O6   | 24:BA:1735:C:N4    | 2.43                     | 0.51              |
| 24:BA:1787:A:C2'  | 24:BA:1788:C:H5'   | 2.40                     | 0.51              |
| 24:BA:1902:C:H4'  | 27:BD:242:ARG:O    | 2.10                     | 0.51              |
| 24:BA:1917:U:C5   | 24:BA:1918:A:C4    | 2.98                     | 0.51              |
| 24:BA:1949:G:C5   | 24:BA:1950:G:N7    | 2.79                     | 0.51              |
| 24:BA:1957:C:O2   | 24:BA:1958:C:C5    | 2.64                     | 0.51              |
| 24:BA:1995:U:H3'  | 24:BA:1995:U:C6    | 2.46                     | 0.51              |
| 24:BA:1996:C:C5   | 24:BA:1996:C:OP1   | 2.63                     | 0.51              |
| 24:BA:2014:A:C2   | 24:BA:2613:U:N3    | 2.79                     | 0.51              |
| 24:BA:2232:U:N3   | 24:BA:2233:U:C5    | 2.78                     | 0.51              |
| 24:BA:2298:A:C3'  | 24:BA:2299:G:H8    | 2.24                     | 0.51              |
| 24:BA:2645:G:H4'  | 24:BA:2732:G:HO2'  | 1.69                     | 0.51              |
| 24:BA:2682:U:C2   | 28:BE:21:VAL:HG21  | 2.46                     | 0.51              |
| 24:BA:2754:U:O5'  | 24:BA:2754:U:H6    | 1.94                     | 0.51              |
| 24:BA:2848:G:P    | 40:BS:99:LEU:HD12  | 2.51                     | 0.51              |
| 25:BB:11:C:OP1    | 47:BZ:75:LEU:HD11  | 2.11                     | 0.51              |
| 25:BB:31:C:N3     | 25:BB:32:C:H5      | 2.06                     | 0.51              |
| 25:BB:82:G:C2     | 25:BB:83:G:C8      | 2.98                     | 0.51              |
| 26:BC:22:ILE:CG2  | 26:BC:186:ALA:HA   | 2.41                     | 0.51              |
| 26:BC:54:SER:CA   | 26:BC:57:ASN:HD22  | 2.23                     | 0.51              |
| 26:BC:213:TYR:HB3 | 26:BC:223:ARG:CA   | 2.23                     | 0.51              |
| 27:BD:80:ALA:CB   | 27:BD:96:HIS:ND1   | 2.73                     | 0.51              |
| 28:BE:54:GLN:HB3  | 28:BE:57:LYS:CE    | 2.41                     | 0.51              |
| 28:BE:100:GLU:O   | 28:BE:172:VAL:HG22 | 2.11                     | 0.51              |
| 29:BF:64:ILE:HG21 | 29:BF:78:ILE:HB    | 1.93                     | 0.51              |
| 29:BF:119:ARG:CZ  | 29:BF:120:GLU:OE1  | 2.59                     | 0.51              |
| 29:BF:173:VAL:CG2 | 29:BF:174:VAL:N    | 2.74                     | 0.51              |
| 30:BG:8:LYS:CE    | 30:BG:100:TRP:HD1  | 2.23                     | 0.51              |
| 30:BG:9:ARG:CZ    | 30:BG:9:ARG:HB2    | 2.41                     | 0.51              |
| 31:BH:42:ARG:HA   | 31:BH:42:ARG:CZ    | 2.41                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 34:BM:16:ILE:CD1  | 34:BM:53:VAL:O     | 2.57                     | 0.51              |
| 36:BO:45:LEU:CD1  | 54:B7:3:LYS:HZ3    | 2.23                     | 0.51              |
| 36:BO:46:LYS:HZ1  | 36:BO:50:ARG:NH1   | 2.08                     | 0.51              |
| 36:BO:98:GLU:O    | 36:BO:100:LEU:HD23 | 2.11                     | 0.51              |
| 37:BP:6:ARG:CG    | 37:BP:70:PRO:HB3   | 2.38                     | 0.51              |
| 37:BP:109:VAL:CG2 | 37:BP:113:GLN:HB2  | 2.38                     | 0.51              |
| 38:BQ:67:LEU:HD23 | 38:BQ:76:VAL:CG2   | 2.39                     | 0.51              |
| 39:BR:26:LEU:CD1  | 39:BR:37:ALA:HB1   | 2.40                     | 0.51              |
| 40:BS:40:THR:O    | 40:BS:41:ARG:C     | 2.53                     | 0.51              |
| 40:BS:58:ASN:N    | 40:BS:61:PHE:CE2   | 2.77                     | 0.51              |
| 41:BT:54:LYS:HE2  | 41:BT:54:LYS:HA    | 1.92                     | 0.51              |
| 41:BT:55:ARG:C    | 41:BT:58:ARG:HB3   | 2.34                     | 0.51              |
| 41:BT:67:ALA:O    | 41:BT:71:GLN:CD    | 2.54                     | 0.51              |
| 42:BU:10:LYS:O    | 42:BU:12:TYR:N     | 2.44                     | 0.51              |
| 45:BX:2:ARG:CG    | 45:BX:3:VAL:H      | 2.22                     | 0.51              |
| 45:BX:97:ARG:CA   | 45:BX:101:LYS:CG   | 2.89                     | 0.51              |
| 46:BY:53:ILE:CG1  | 46:BY:58:VAL:HG21  | 2.32                     | 0.51              |
| 46:BY:176:PRO:HB2 | 46:BY:179:ASP:H    | 1.75                     | 0.51              |
| 47:BZ:46:LYS:N    | 47:BZ:46:LYS:CD    | 2.73                     | 0.51              |
| 48:B1:1:MET:SD    | 48:B1:3:LYS:HB2    | 2.51                     | 0.51              |
| 48:B1:25:ARG:HG3  | 48:B1:25:ARG:NH2   | 2.22                     | 0.51              |
| 49:B2:40:THR:HG22 | 49:B2:42:ALA:HB3   | 1.91                     | 0.51              |
| 50:B3:33:VAL:O    | 50:B3:33:VAL:HG12  | 2.10                     | 0.51              |
| 51:B4:6:VAL:O     | 51:B4:7:PRO:O      | 2.28                     | 0.51              |
| 55:B8:11:CYS:N    | 55:B8:14:CYS:SG    | 2.83                     | 0.51              |
| 1:AA:80:G:H2'     | 1:AA:81:G:C8       | 2.45                     | 0.51              |
| 1:AA:85:U:H2'     | 1:AA:86:U:C5'      | 2.40                     | 0.51              |
| 1:AA:85:U:O2'     | 1:AA:86:U:H5'      | 2.11                     | 0.51              |
| 1:AA:149:A:H2'    | 1:AA:150:C:C6      | 2.46                     | 0.51              |
| 1:AA:332:G:O2'    | 1:AA:333:G:H5'     | 2.11                     | 0.51              |
| 1:AA:438:G:H5''   | 6:AG:123:HIS:HB3   | 1.92                     | 0.51              |
| 1:AA:513:C:C4     | 1:AA:514:C:C5      | 2.98                     | 0.51              |
| 1:AA:539:A:OP2    | 14:AO:115:LYS:CE   | 2.58                     | 0.51              |
| 1:AA:570:G:C6     | 1:AA:866:C:N4      | 2.78                     | 0.51              |
| 1:AA:577:G:O2'    | 1:AA:578:C:O5'     | 2.22                     | 0.51              |
| 1:AA:629:G:C2     | 1:AA:630:G:C8      | 2.99                     | 0.51              |
| 1:AA:657:G:H4'    | 17:AR:28:GLN:NE2   | 2.25                     | 0.51              |
| 1:AA:686:U:H2'    | 1:AA:687:A:H8      | 1.76                     | 0.51              |
| 1:AA:706:A:N3     | 1:AA:707:C:C6      | 2.78                     | 0.51              |
| 1:AA:765:G:N2     | 1:AA:816:A:H2      | 2.06                     | 0.51              |
| 1:AA:851:G:C2     | 1:AA:852:G:C1'     | 2.94                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:AA:857:C:C2    | 1:AA:858:G:H1'   | 2.45                     | 0.51              |
| 1:AA:872:A:C5    | 1:AA:874:G:C8    | 2.99                     | 0.51              |
| 1:AA:958:A:H2'   | 1:AA:959:A:C8    | 2.45                     | 0.51              |
| 1:AA:971:G:C5    | 1:AA:1365:G:H5'  | 2.46                     | 0.51              |
| 1:AA:1064:G:O2'  | 1:AA:1065:U:H1'  | 2.10                     | 0.51              |
| 1:AA:1102:A:C6   | 1:AA:1103:C:C4   | 2.99                     | 0.51              |
| 1:AA:1227:A:C8   | 1:AA:1228:C:O4'  | 2.58                     | 0.51              |
| 1:AA:1248:A:C2   | 1:AA:1249:C:N3   | 2.78                     | 0.51              |
| 1:AA:1329:A:C2'  | 1:AA:1330:U:H5'  | 2.40                     | 0.51              |
| 1:AA:1350:A:N6   | 1:AA:1373:G:N2   | 2.59                     | 0.51              |
| 1:AA:1415:G:C2   | 1:AA:1416:G:C8   | 2.99                     | 0.51              |
| 1:AA:1418:A:N1   | 1:AA:1483:A:C6   | 2.79                     | 0.51              |
| 1:AA:1425:U:C2   | 1:AA:1426:C:C5   | 2.98                     | 0.51              |
| 1:AA:1442:G:O5'  | 1:AA:1442:G:N3   | 2.44                     | 0.51              |
| 1:AA:1510:U:C2'  | 1:AA:1511:G:C8   | 2.92                     | 0.51              |
| 3:AD:40:C:H3'    | 3:AD:41:C:H5''   | 1.91                     | 0.51              |
| 3:AB:75:C:O2     | 24:BA:2508:G:C5' | 2.54                     | 0.51              |
| 4:AE:35:GLU:HG2  | 4:AE:39:ILE:O    | 2.11                     | 0.51              |
| 4:AE:58:ILE:O    | 4:AE:61:LEU:CB   | 2.59                     | 0.51              |
| 5:AF:179:ARG:O   | 5:AF:206:GLU:HG3 | 2.11                     | 0.51              |
| 6:AG:17:VAL:O    | 6:AG:18:LYS:O    | 2.29                     | 0.51              |
| 6:AG:60:GLU:O    | 6:AG:63:LYS:HD2  | 2.10                     | 0.51              |
| 6:AG:76:ARG:HG3  | 6:AG:207:TYR:CE2 | 2.46                     | 0.51              |
| 7:AH:14:ARG:HG2  | 7:AH:29:GLY:O    | 2.10                     | 0.51              |
| 7:AH:20:GLN:NE2  | 7:AH:21:ALA:N    | 2.59                     | 0.51              |
| 7:AH:32:VAL:C    | 7:AH:43:LEU:HG   | 2.35                     | 0.51              |
| 8:AI:11:ASN:ND2  | 8:AI:86:ARG:HH22 | 2.07                     | 0.51              |
| 8:AI:52:ILE:CG2  | 8:AI:53:ALA:H    | 2.23                     | 0.51              |
| 9:AJ:71:PRO:CG   | 9:AJ:96:GLN:HG3  | 2.40                     | 0.51              |
| 9:AJ:71:PRO:HD2  | 9:AJ:100:ALA:HB2 | 1.92                     | 0.51              |
| 9:AJ:71:PRO:HD3  | 9:AJ:100:ALA:HB2 | 1.92                     | 0.51              |
| 12:AM:9:ARG:HG3  | 12:AM:95:GLU:OE2 | 2.11                     | 0.51              |
| 12:AM:82:ILE:O   | 12:AM:86:MET:CB  | 2.56                     | 0.51              |
| 13:AN:43:SER:CB  | 13:AN:64:ALA:HB1 | 2.40                     | 0.51              |
| 13:AN:57:THR:OG1 | 13:AN:59:TYR:HB2 | 2.10                     | 0.51              |
| 13:AN:58:PRO:CA  | 13:AN:90:GLY:HA3 | 2.41                     | 0.51              |
| 13:AN:73:MET:C   | 13:AN:75:TYR:H   | 2.18                     | 0.51              |
| 14:AO:35:GLY:HA3 | 14:AO:60:LEU:HB3 | 1.93                     | 0.51              |
| 16:AQ:24:CYS:SG  | 16:AQ:27:CYS:C   | 2.94                     | 0.51              |
| 16:AQ:36:PHE:O   | 16:AQ:36:PHE:CD1 | 2.64                     | 0.51              |
| 18:AS:58:TYR:O   | 18:AS:61:SER:HB3 | 2.11                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 18:AS:63:GLY:O     | 18:AS:64:ALA:C     | 2.52                     | 0.51              |
| 24:BA:24:G:H1'     | 43:BV:77:ASP:OD1   | 2.10                     | 0.51              |
| 24:BA:47:C:N3      | 24:BA:179:G:C6     | 2.78                     | 0.51              |
| 24:BA:70:G:H2'     | 24:BA:114:U:C5     | 2.46                     | 0.51              |
| 24:BA:205:G:O2'    | 24:BA:206:U:OP1    | 2.28                     | 0.51              |
| 24:BA:209:C:O5'    | 24:BA:209:C:H6     | 1.94                     | 0.51              |
| 24:BA:270(B):A:C5' | 24:BA:366:C:O4'    | 2.57                     | 0.51              |
| 24:BA:271(B):G:OP1 | 24:BA:271(C):U:O4' | 2.28                     | 0.51              |
| 24:BA:271:G:C2     | 24:BA:272:G:C8     | 2.99                     | 0.51              |
| 24:BA:452:G:H5''   | 24:BA:453:C:OP2    | 2.10                     | 0.51              |
| 24:BA:479:A:N3     | 24:BA:480:A:N7     | 2.58                     | 0.51              |
| 24:BA:481:G:H2'    | 24:BA:507:A:H61    | 1.75                     | 0.51              |
| 24:BA:531:C:H6     | 24:BA:532:A:C2     | 2.28                     | 0.51              |
| 24:BA:606:U:O5'    | 24:BA:606:U:C6     | 2.52                     | 0.51              |
| 24:BA:731:C:H2'    | 24:BA:732:C:C5'    | 2.41                     | 0.51              |
| 24:BA:742:G:O2'    | 24:BA:1676:A:H4'   | 2.10                     | 0.51              |
| 24:BA:859:G:C8     | 24:BA:859:G:C3'    | 2.93                     | 0.51              |
| 24:BA:918:A:N3     | 24:BA:918:A:H3'    | 2.26                     | 0.51              |
| 24:BA:1066:U:O2    | 24:BA:1069:A:OP2   | 2.29                     | 0.51              |
| 24:BA:1068:G:C6    | 24:BA:1073:A:N1    | 2.78                     | 0.51              |
| 24:BA:1147:C:H2'   | 24:BA:1148:A:H5'   | 1.92                     | 0.51              |
| 24:BA:1163:G:N1    | 24:BA:1164:G:N7    | 2.59                     | 0.51              |
| 24:BA:1183:G:O2'   | 24:BA:1184:G:OP2   | 2.25                     | 0.51              |
| 24:BA:1189:A:N7    | 24:BA:1190:G:C8    | 2.78                     | 0.51              |
| 24:BA:1203:G:H5'   | 24:BA:1205:U:OP2   | 2.11                     | 0.51              |
| 24:BA:1299:G:H5'   | 24:BA:1301:A:C1'   | 2.39                     | 0.51              |
| 24:BA:1313:U:OP1   | 44:BW:63:LYS:HG2   | 2.11                     | 0.51              |
| 24:BA:1335:U:OP2   | 44:BW:65:ARG:CZ    | 2.58                     | 0.51              |
| 24:BA:1420:U:O2'   | 24:BA:1421:G:C8    | 2.63                     | 0.51              |
| 24:BA:1426:G:C8    | 24:BA:1427:A:N7    | 2.79                     | 0.51              |
| 24:BA:1455:G:OP2   | 24:BA:1456:G:OP2   | 2.29                     | 0.51              |
| 24:BA:1471:A:N7    | 24:BA:1521:G:N2    | 2.59                     | 0.51              |
| 24:BA:1540:G:H2'   | 24:BA:1541:U:H5'   | 1.92                     | 0.51              |
| 24:BA:1541:U:O2    | 24:BA:1541:U:C2'   | 2.51                     | 0.51              |
| 24:BA:1552:G:H5'   | 24:BA:1553:A:OP1   | 2.11                     | 0.51              |
| 24:BA:1667:G:C2    | 24:BA:1991:U:C5    | 2.99                     | 0.51              |
| 24:BA:1800:C:O2'   | 24:BA:1802:A:OP2   | 2.25                     | 0.51              |
| 24:BA:1834:U:H1'   | 24:BA:1969:A:N3    | 2.25                     | 0.51              |
| 24:BA:1879:C:C4    | 24:BA:1880:C:C4    | 2.99                     | 0.51              |
| 24:BA:1913:A:C2    | 24:BA:1918:A:N7    | 2.78                     | 0.51              |
| 24:BA:2013:A:C2'   | 24:BA:2014:A:O5'   | 2.59                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2106:G:C6    | 24:BA:2184:G:C6    | 2.99                     | 0.51              |
| 24:BA:2323:G:N2    | 24:BA:2324:C:C2    | 2.79                     | 0.51              |
| 24:BA:2353:G:O2'   | 47:BZ:35:ASN:ND2   | 2.43                     | 0.51              |
| 24:BA:2377:A:N3    | 24:BA:2378:A:N7    | 2.58                     | 0.51              |
| 24:BA:2496:C:P     | 37:BP:83:MET:HE1   | 2.51                     | 0.51              |
| 24:BA:2618:G:C2    | 28:BE:150:VAL:HG11 | 2.46                     | 0.51              |
| 24:BA:2676:C:C2    | 24:BA:2677:G:N7    | 2.79                     | 0.51              |
| 24:BA:2735:G:H4'   | 28:BE:203:LYS:HE3  | 1.92                     | 0.51              |
| 24:BA:2779:U:C6    | 24:BA:2779:U:H3'   | 2.46                     | 0.51              |
| 24:BA:2836:U:H2'   | 24:BA:2837:G:C8    | 2.46                     | 0.51              |
| 25:BB:57:A:C8      | 25:BB:57:A:C3'     | 2.94                     | 0.51              |
| 25:BB:66:A:N1      | 25:BB:107:U:H2'    | 2.26                     | 0.51              |
| 26:BC:209:LEU:HG   | 26:BC:212:VAL:HG23 | 1.92                     | 0.51              |
| 27:BD:157:ARG:CB   | 27:BD:160:GLY:O    | 2.56                     | 0.51              |
| 28:BE:4:ILE:HG23   | 28:BE:30:PRO:HG3   | 1.92                     | 0.51              |
| 28:BE:37:ARG:O     | 28:BE:38:THR:CB    | 2.47                     | 0.51              |
| 28:BE:176:ILE:HD11 | 28:BE:179:GLU:HG2  | 1.93                     | 0.51              |
| 29:BF:5:ALA:O      | 29:BF:20:LEU:HD13  | 2.11                     | 0.51              |
| 29:BF:12:LEU:HD22  | 29:BF:129:PHE:N    | 2.26                     | 0.51              |
| 29:BF:34:TRP:CE3   | 36:BO:8:PRO:HB2    | 2.46                     | 0.51              |
| 29:BF:45:ARG:HD3   | 29:BF:97:TYR:CE1   | 2.46                     | 0.51              |
| 29:BF:117:ARG:HG3  | 29:BF:187:VAL:HA   | 1.93                     | 0.51              |
| 29:BF:149:ASP:HA   | 29:BF:172:TRP:HE1  | 1.76                     | 0.51              |
| 29:BF:177:ALA:N    | 29:BF:178:PRO:CD   | 2.74                     | 0.51              |
| 30:BG:44:GLY:O     | 30:BG:72:ARG:O     | 2.28                     | 0.51              |
| 31:BH:33:LEU:HD22  | 31:BH:75:ALA:CB    | 2.41                     | 0.51              |
| 33:BL:10:LEU:CD1   | 33:BL:57:ILE:HD11  | 2.41                     | 0.51              |
| 33:BL:105:LEU:CD2  | 33:BL:124:ALA:HB1  | 2.40                     | 0.51              |
| 34:BM:69:GLN:N     | 34:BM:69:GLN:HE21  | 2.09                     | 0.51              |
| 35:BN:10:VAL:CG1   | 35:BN:11:ALA:N     | 2.54                     | 0.51              |
| 35:BN:68:GLU:O     | 35:BN:68:GLU:CG    | 2.52                     | 0.51              |
| 36:BO:6:LEU:C      | 36:BO:7:ARG:CG     | 2.83                     | 0.51              |
| 36:BO:114:ILE:CG2  | 36:BO:134:ALA:HB2  | 2.41                     | 0.51              |
| 37:BP:131:ILE:O    | 37:BP:132:VAL:CG1  | 2.57                     | 0.51              |
| 38:BQ:61:HIS:O     | 38:BQ:64:ARG:N     | 2.44                     | 0.51              |
| 38:BQ:61:HIS:CE1   | 38:BQ:64:ARG:CZ    | 2.92                     | 0.51              |
| 38:BQ:99:LYS:O     | 51:B4:44:THR:HG22  | 2.11                     | 0.51              |
| 39:BR:7:TYR:HB3    | 39:BR:11:LYS:HZ2   | 1.75                     | 0.51              |
| 40:BS:30:VAL:CG2   | 40:BS:31:SER:N     | 2.73                     | 0.51              |
| 40:BS:33:LYS:HB3   | 40:BS:45:PHE:C     | 2.36                     | 0.51              |
| 40:BS:103:ARG:O    | 40:BS:107:ASP:OD1  | 2.28                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 41:BT:50:ARG:NE    | 42:BU:75:PHE:HE2  | 2.02                     | 0.51              |
| 41:BT:52:ARG:O     | 41:BT:53:ARG:C    | 2.53                     | 0.51              |
| 42:BU:4:ILE:HA     | 42:BU:12:TYR:CE2  | 2.45                     | 0.51              |
| 42:BU:57:VAL:CG1   | 42:BU:58:VAL:N    | 2.64                     | 0.51              |
| 42:BU:68:LYS:CG    | 42:BU:95:LEU:HD11 | 2.41                     | 0.51              |
| 42:BU:79:VAL:HB    | 42:BU:81:TYR:CD1  | 2.45                     | 0.51              |
| 42:BU:81:TYR:O     | 42:BU:82:ARG:CB   | 2.56                     | 0.51              |
| 43:BV:25:ARG:O     | 43:BV:71:VAL:HG13 | 2.10                     | 0.51              |
| 43:BV:34:ASN:ND2   | 43:BV:34:ASN:N    | 2.59                     | 0.51              |
| 44:BW:50:LYS:O     | 44:BW:52:VAL:HG23 | 2.11                     | 0.51              |
| 45:BX:32:PRO:HB2   | 45:BX:34:LYS:CE   | 2.40                     | 0.51              |
| 46:BY:20:ARG:HH11  | 46:BY:20:ARG:HG3  | 1.74                     | 0.51              |
| 46:BY:39:VAL:O     | 46:BY:39:VAL:HG12 | 2.11                     | 0.51              |
| 46:BY:53:ILE:O     | 46:BY:53:ILE:HG22 | 2.11                     | 0.51              |
| 46:BY:91:LEU:CD1   | 46:BY:95:PRO:HG3  | 2.41                     | 0.51              |
| 46:BY:102:LEU:HD13 | 46:BY:137:ILE:C   | 2.35                     | 0.51              |
| 46:BY:150:LEU:C    | 46:BY:151:HIS:CG  | 2.89                     | 0.51              |
| 49:B2:17:LYS:CA    | 49:B2:20:LYS:HZ3  | 2.24                     | 0.51              |
| 50:B3:55:ARG:O     | 50:B3:61:ARG:NH2  | 2.44                     | 0.51              |
| 1:AA:40:C:O2'      | 1:AA:41:G:H5'     | 2.10                     | 0.51              |
| 1:AA:44:G:H2'      | 1:AA:45:U:O5'     | 2.10                     | 0.51              |
| 1:AA:135:C:C6      | 1:AA:135:C:C3'    | 2.93                     | 0.51              |
| 1:AA:192:U:H5'     | 22:AW:102:GLY:HA2 | 1.91                     | 0.51              |
| 1:AA:300:A:H8      | 1:AA:300:A:O5'    | 1.94                     | 0.51              |
| 1:AA:306:G:O5'     | 1:AA:306:G:C8     | 2.64                     | 0.51              |
| 1:AA:411:A:C5      | 1:AA:429:U:C4     | 2.99                     | 0.51              |
| 1:AA:474:G:H2'     | 1:AA:475:G:H8     | 1.76                     | 0.51              |
| 1:AA:491:G:O2'     | 1:AA:492:G:H5'    | 2.10                     | 0.51              |
| 1:AA:494:U:C2'     | 1:AA:495:A:H5'    | 2.41                     | 0.51              |
| 1:AA:527:G:H2'     | 1:AA:528:C:C6     | 2.46                     | 0.51              |
| 1:AA:531:U:H5''    | 1:AA:532:A:OP1    | 2.11                     | 0.51              |
| 1:AA:684:A:C3'     | 13:AN:12:ARG:HH22 | 2.23                     | 0.51              |
| 1:AA:782:A:N1      | 1:AA:801:U:C2     | 2.78                     | 0.51              |
| 1:AA:828:A:O2'     | 1:AA:829:G:O5'    | 2.27                     | 0.51              |
| 1:AA:1071:C:N4     | 1:AA:1084:G:N2    | 2.58                     | 0.51              |
| 1:AA:1198:G:O2'    | 1:AA:1199:U:H5'   | 2.11                     | 0.51              |
| 1:AA:1230:C:O2     | 15:AP:126:LYS:CD  | 2.58                     | 0.51              |
| 1:AA:1276:G:O2'    | 1:AA:1277:C:H5'   | 2.10                     | 0.51              |
| 1:AA:1298:C:C6     | 9:AJ:114:ARG:NH1  | 2.79                     | 0.51              |
| 1:AA:1399:C:C4     | 1:AA:1502:A:N6    | 2.77                     | 0.51              |
| 4:AE:19:HIS:C      | 4:AE:20:GLU:HG2   | 2.36                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 4:AE:58:ILE:O      | 4:AE:61:LEU:CD2   | 2.58                     | 0.51              |
| 4:AE:59:GLU:O      | 4:AE:62:ALA:HB3   | 2.11                     | 0.51              |
| 4:AE:97:TRP:CZ3    | 4:AE:172:ILE:HB   | 2.46                     | 0.51              |
| 4:AE:135:GLN:C     | 4:AE:139:LYS:NZ   | 2.59                     | 0.51              |
| 5:AF:12:LEU:CD2    | 16:AQ:58:LYS:H    | 2.20                     | 0.51              |
| 5:AF:96:GLY:O      | 5:AF:97:LYS:C     | 2.53                     | 0.51              |
| 5:AF:108:ASN:O     | 5:AF:110:ASN:N    | 2.44                     | 0.51              |
| 6:AG:30:LYS:CG     | 6:AG:35:ARG:HD2   | 2.39                     | 0.51              |
| 6:AG:81:GLU:O      | 6:AG:85:LYS:HB2   | 2.11                     | 0.51              |
| 6:AG:147:ALA:O     | 6:AG:149:ALA:N    | 2.43                     | 0.51              |
| 6:AG:191:ARG:HD3   | 6:AG:191:ARG:C    | 2.35                     | 0.51              |
| 7:AH:94:ALA:HB1    | 7:AH:98:THR:CG2   | 2.31                     | 0.51              |
| 7:AH:133:TYR:O     | 7:AH:136:MET:HB2  | 2.11                     | 0.51              |
| 8:AI:79:LEU:O      | 8:AI:81:ILE:N     | 2.44                     | 0.51              |
| 8:AI:89:MET:HE2    | 20:AU:75:ILE:HG21 | 1.90                     | 0.51              |
| 9:AJ:16:LEU:HD12   | 11:AL:44:VAL:HG23 | 1.93                     | 0.51              |
| 10:AK:6:ILE:HG21   | 10:AK:85:ARG:NH2  | 2.26                     | 0.51              |
| 10:AK:11:THR:HA    | 10:AK:14:ARG:NH2  | 2.25                     | 0.51              |
| 10:AK:26:VAL:HG13  | 10:AK:27:PRO:HD2  | 1.91                     | 0.51              |
| 10:AK:39:LEU:HB3   | 10:AK:45:ILE:CG2  | 2.38                     | 0.51              |
| 11:AL:11:LYS:N     | 11:AL:104:ARG:NH2 | 2.55                     | 0.51              |
| 11:AL:49:PRO:HG3   | 11:AL:81:ILE:HB   | 1.92                     | 0.51              |
| 12:AM:97:GLU:C     | 12:AM:98:ILE:HD12 | 2.36                     | 0.51              |
| 13:AN:41:THR:HB    | 13:AN:71:LYS:HD3  | 1.92                     | 0.51              |
| 13:AN:126:ARG:HB3  | 13:AN:126:ARG:CZ  | 2.41                     | 0.51              |
| 18:AS:75:ARG:O     | 18:AS:78:GLY:N    | 2.44                     | 0.51              |
| 19:AT:29:HIS:CE1   | 19:AT:31:LEU:HB3  | 2.46                     | 0.51              |
| 19:AT:63:ARG:CG    | 19:AT:64:PRO:HD2  | 2.38                     | 0.51              |
| 19:AT:81:ARG:HG3   | 19:AT:84:LEU:HG   | 1.93                     | 0.51              |
| 20:AU:26:LEU:HB2   | 20:AU:42:ARG:NH1  | 2.26                     | 0.51              |
| 24:BA:27:G:C2      | 24:BA:512:G:C2'   | 2.93                     | 0.51              |
| 24:BA:78:A:H2'     | 24:BA:79:G:C8     | 2.45                     | 0.51              |
| 24:BA:141(A):C:C2' | 24:BA:142:G:H5'   | 2.41                     | 0.51              |
| 24:BA:179:G:OP1    | 53:B6:32:LYS:NZ   | 2.30                     | 0.51              |
| 24:BA:327:G:N2     | 24:BA:328:U:C2    | 2.79                     | 0.51              |
| 24:BA:416:C:H3'    | 24:BA:416:C:C6    | 2.46                     | 0.51              |
| 24:BA:481:G:O2'    | 24:BA:482:A:H8    | 1.92                     | 0.51              |
| 24:BA:498:G:O5'    | 24:BA:498:G:C8    | 2.61                     | 0.51              |
| 24:BA:605:C:H4'    | 29:BF:102:PRO:HG3 | 1.91                     | 0.51              |
| 24:BA:611:C:O2     | 24:BA:616:A:C2    | 2.63                     | 0.51              |
| 24:BA:733:G:C5     | 24:BA:761:A:C6    | 2.99                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 24:BA:746:A:N7    | 24:BA:2612:C:OP1 | 2.44                     | 0.51              |
| 24:BA:758:C:H2'   | 24:BA:759:G:H8   | 1.75                     | 0.51              |
| 24:BA:774:A:H5''  | 24:BA:778:G:C4'  | 2.40                     | 0.51              |
| 24:BA:792:G:C6    | 24:BA:2440:C:N1  | 2.78                     | 0.51              |
| 24:BA:858:U:OP1   | 47:BZ:44:ARG:NH2 | 2.43                     | 0.51              |
| 24:BA:879:G:N2    | 24:BA:880:G:C4   | 2.79                     | 0.51              |
| 24:BA:879:G:N1    | 24:BA:880:G:C5   | 2.78                     | 0.51              |
| 24:BA:993:G:C5    | 24:BA:994:C:N4   | 2.79                     | 0.51              |
| 24:BA:996:A:C6    | 24:BA:1160:G:C2  | 2.99                     | 0.51              |
| 24:BA:1013:C:H2'  | 24:BA:1014:U:H6  | 1.76                     | 0.51              |
| 24:BA:1060:U:OP1  | 33:BL:73:PRO:HB3 | 2.11                     | 0.51              |
| 24:BA:1224:G:N7   | 24:BA:1225:C:C5  | 2.79                     | 0.51              |
| 24:BA:1227:A:H2'  | 24:BA:1228:G:C5' | 2.41                     | 0.51              |
| 24:BA:1277:G:HO2' | 38:BQ:24:GLN:HG2 | 1.76                     | 0.51              |
| 24:BA:1332:G:H5'' | 24:BA:1333:C:OP2 | 2.11                     | 0.51              |
| 24:BA:1394:U:C4'  | 24:BA:1603:A:H4' | 2.38                     | 0.51              |
| 24:BA:1397:U:OP1  | 24:BA:1398:C:H5  | 1.94                     | 0.51              |
| 24:BA:1476:C:C5   | 24:BA:1477:A:C6  | 2.98                     | 0.51              |
| 24:BA:1543:A:H3'  | 24:BA:1544:C:C5' | 2.41                     | 0.51              |
| 24:BA:1568:G:P    | 27:BD:61:LEU:HG  | 2.51                     | 0.51              |
| 24:BA:1575:C:N4   | 24:BA:1576:U:N3  | 2.59                     | 0.51              |
| 24:BA:1588:C:H2'  | 24:BA:1589:C:C6  | 2.44                     | 0.51              |
| 24:BA:1613:G:C1'  | 53:B6:3:ARG:CZ   | 2.89                     | 0.51              |
| 24:BA:1620:G:H2'  | 24:BA:1621:U:C6  | 2.46                     | 0.51              |
| 24:BA:1753:G:O6   | 24:BA:1756:G:C6  | 2.64                     | 0.51              |
| 24:BA:1804:C:C2   | 24:BA:1805:U:C5  | 2.98                     | 0.51              |
| 24:BA:1854:A:H1'  | 24:BA:2087:G:N2  | 2.25                     | 0.51              |
| 24:BA:1970:A:C2'  | 24:BA:1971:A:OP2 | 2.59                     | 0.51              |
| 24:BA:1980:G:H2'  | 24:BA:1982:C:OP2 | 2.11                     | 0.51              |
| 24:BA:2046:G:H4'  | 51:B4:22:HIS:HB3 | 1.93                     | 0.51              |
| 24:BA:2118:U:C6   | 24:BA:2147:G:O6  | 2.64                     | 0.51              |
| 24:BA:2119:A:N1   | 24:BA:2171:A:C6  | 2.79                     | 0.51              |
| 24:BA:2205:C:C2'  | 24:BA:2206:C:H5' | 2.40                     | 0.51              |
| 24:BA:2244:U:H2'  | 24:BA:2245:U:O5' | 2.09                     | 0.51              |
| 24:BA:2312:U:OP2  | 30:BG:86:MET:HG2 | 2.09                     | 0.51              |
| 24:BA:2373:G:H2'  | 24:BA:2374:C:C5  | 2.46                     | 0.51              |
| 24:BA:2398:U:H2'  | 24:BA:2399:G:C8  | 2.45                     | 0.51              |
| 24:BA:2533:A:H2'  | 24:BA:2534:A:O4' | 2.10                     | 0.51              |
| 24:BA:2544:G:C6   | 24:BA:2545:G:C5  | 2.98                     | 0.51              |
| 24:BA:2653:U:N3   | 24:BA:2654:A:C6  | 2.79                     | 0.51              |
| 24:BA:2662:A:H2'  | 24:BA:2662:A:N3  | 2.25                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2707:G:C2'  | 24:BA:2708:G:O5'   | 2.58                     | 0.51              |
| 24:BA:2867:G:H5'  | 24:BA:2868:A:OP1   | 2.11                     | 0.51              |
| 24:BA:2886:G:N2   | 24:BA:2887:U:Cl'   | 2.74                     | 0.51              |
| 25:BB:47:C:H6     | 25:BB:47:C:O5'     | 1.93                     | 0.51              |
| 25:BB:79:C:H2'    | 25:BB:80:U:C5'     | 2.41                     | 0.51              |
| 26:BC:21:THR:HG21 | 26:BC:228:SER:HB3  | 1.93                     | 0.51              |
| 27:BD:13:ARG:NH2  | 27:BD:19:ALA:HB1   | 2.25                     | 0.51              |
| 27:BD:27:THR:CG2  | 27:BD:82:ILE:HG21  | 2.41                     | 0.51              |
| 27:BD:55:GLY:N    | 27:BD:218:ARG:CD   | 2.73                     | 0.51              |
| 27:BD:108:PRO:O   | 27:BD:109:ASP:C    | 2.54                     | 0.51              |
| 27:BD:225:ALA:HB3 | 27:BD:231:HIS:NE2  | 2.25                     | 0.51              |
| 28:BE:45:THR:HG1  | 28:BE:80:GLU:C     | 2.08                     | 0.51              |
| 28:BE:66:HIS:NE2  | 28:BE:71:GLY:N     | 2.59                     | 0.51              |
| 29:BF:37:VAL:C    | 29:BF:184:TYR:HH   | 2.19                     | 0.51              |
| 30:BG:56:ALA:HA   | 30:BG:59:GLU:CD    | 2.33                     | 0.51              |
| 30:BG:110:ALA:HB2 | 30:BG:139:LEU:HD11 | 1.92                     | 0.51              |
| 30:BG:152:LEU:C   | 30:BG:155:MET:HE1  | 2.36                     | 0.51              |
| 32:BK:62:LYS:O    | 32:BK:66:GLU:OE1   | 2.28                     | 0.51              |
| 32:BK:137:PRO:HB2 | 32:BK:139:GLN:NE2  | 2.25                     | 0.51              |
| 33:BL:9:LYS:HG2   | 33:BL:56:GLU:CD    | 2.36                     | 0.51              |
| 33:BL:33:ASN:H    | 33:BL:37:PHE:HD1   | 1.56                     | 0.51              |
| 34:BM:112:LEU:O   | 34:BM:114:ARG:N    | 2.44                     | 0.51              |
| 35:BN:15:GLY:HA2  | 35:BN:47:ILE:CG1   | 2.41                     | 0.51              |
| 35:BN:41:ALA:O    | 35:BN:56:ASP:CA    | 2.59                     | 0.51              |
| 35:BN:107:ARG:O   | 35:BN:108:GLU:C    | 2.54                     | 0.51              |
| 35:BN:109:LYS:O   | 35:BN:110:GLY:C    | 2.54                     | 0.51              |
| 36:BO:80:TYR:CE2  | 36:BO:85:LEU:HD22  | 2.46                     | 0.51              |
| 37:BP:8:LYS:NZ    | 37:BP:11:LYS:HZ3   | 2.07                     | 0.51              |
| 37:BP:90:VAL:C    | 37:BP:91:GLU:OE2   | 2.54                     | 0.51              |
| 38:BQ:25:ALA:HB2  | 38:BQ:48:VAL:HG22  | 1.93                     | 0.51              |
| 38:BQ:52:ILE:HD13 | 38:BQ:52:ILE:C     | 2.35                     | 0.51              |
| 38:BQ:55:ALA:HA   | 38:BQ:80:PHE:HD1   | 1.75                     | 0.51              |
| 38:BQ:63:ARG:HH12 | 38:BQ:80:PHE:CB    | 2.24                     | 0.51              |
| 38:BQ:99:LYS:HG2  | 51:B4:43:HIS:CD2   | 2.45                     | 0.51              |
| 39:BR:31:SER:HB3  | 39:BR:34:HIS:CG    | 2.45                     | 0.51              |
| 40:BS:30:VAL:CB   | 40:BS:90:GLN:HA    | 2.39                     | 0.51              |
| 40:BS:54:ARG:HE   | 40:BS:100:TYR:HD1  | 1.59                     | 0.51              |
| 42:BU:83:ARG:HH21 | 42:BU:85:LYS:HE2   | 1.76                     | 0.51              |
| 43:BV:74:ALA:O    | 43:BV:75:TYR:CD2   | 2.64                     | 0.51              |
| 44:BW:24:GLY:O    | 44:BW:83:VAL:CG2   | 2.58                     | 0.51              |
| 44:BW:32:PRO:O    | 44:BW:33:LYS:HB2   | 2.11                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 46:BY:9:TYR:HB3    | 46:BY:14:LYS:HG2   | 1.93                     | 0.51              |
| 46:BY:16:SER:O     | 46:BY:19:ARG:HB2   | 2.11                     | 0.51              |
| 46:BY:41:LEU:O     | 46:BY:45:ASP:OD1   | 2.29                     | 0.51              |
| 46:BY:68:PRO:O     | 46:BY:90:VAL:CA    | 2.55                     | 0.51              |
| 46:BY:100:VAL:HG12 | 46:BY:133:ILE:HD13 | 1.93                     | 0.51              |
| 46:BY:111:VAL:HG22 | 46:BY:117:LEU:HA   | 1.93                     | 0.51              |
| 47:BZ:20:ARG:O     | 47:BZ:21:LEU:HB3   | 2.10                     | 0.51              |
| 49:B2:5:LYS:NZ     | 49:B2:59:VAL:CG2   | 2.73                     | 0.51              |
| 49:B2:31:LEU:HB3   | 49:B2:32:GLN:HE22  | 1.74                     | 0.51              |
| 49:B2:35:ARG:HH22  | 49:B2:47:VAL:HG13  | 1.76                     | 0.51              |
| 50:B3:14:ILE:CG1   | 50:B3:39:CYS:HB2   | 2.39                     | 0.51              |
| 51:B4:10:LYS:CE    | 51:B4:15:ARG:CZ    | 2.86                     | 0.51              |
| 54:B7:26:LYS:O     | 54:B7:28:GLY:N     | 2.43                     | 0.51              |
| 54:B7:44:LYS:NZ    | 54:B7:44:LYS:HA    | 2.26                     | 0.51              |
| 1:AA:27:G:H22      | 1:AA:557:G:H1'     | 1.73                     | 0.51              |
| 1:AA:191(D):U:O2'  | 1:AA:191(E):G:H5'  | 2.11                     | 0.51              |
| 1:AA:219:C:O5'     | 1:AA:219:C:H6      | 1.94                     | 0.51              |
| 1:AA:270:A:H8      | 1:AA:270:A:OP2     | 1.94                     | 0.51              |
| 1:AA:323:U:C5      | 1:AA:324:G:C1'     | 2.94                     | 0.51              |
| 1:AA:380:G:N2      | 1:AA:383:A:OP2     | 2.44                     | 0.51              |
| 1:AA:735:C:HO2'    | 20:AU:75:ILE:HD13  | 1.75                     | 0.51              |
| 1:AA:759:A:N6      | 1:AA:760:G:C2      | 2.79                     | 0.51              |
| 1:AA:795:C:C4'     | 1:AA:1506:U:C2     | 2.94                     | 0.51              |
| 1:AA:848:C:C2      | 1:AA:849:C:C6      | 2.98                     | 0.51              |
| 1:AA:872:A:C2'     | 1:AA:873:A:C5'     | 2.82                     | 0.51              |
| 1:AA:955:U:H2'     | 1:AA:956:U:H6      | 1.76                     | 0.51              |
| 1:AA:967:C:H2'     | 1:AA:968:A:C8      | 2.45                     | 0.51              |
| 1:AA:1003:G:C2     | 1:AA:1004:A:O2'    | 2.53                     | 0.51              |
| 1:AA:1026:G:C8     | 1:AA:1027:C:H6     | 2.28                     | 0.51              |
| 1:AA:1049:U:O4     | 16:AQ:3:ARG:HB2    | 2.11                     | 0.51              |
| 1:AA:1051:C:H2'    | 1:AA:1052:U:C6     | 2.46                     | 0.51              |
| 1:AA:1064:G:N3     | 1:AA:1066:C:C4     | 2.78                     | 0.51              |
| 1:AA:1151:A:P      | 12:AM:41:PRO:HA    | 2.50                     | 0.51              |
| 1:AA:1212:U:O2'    | 1:AA:1213:A:H8     | 1.92                     | 0.51              |
| 1:AA:1251:A:C4'    | 1:AA:1370:G:H4'    | 2.41                     | 0.51              |
| 1:AA:1465:C:C2'    | 1:AA:1466:C:O5'    | 2.59                     | 0.51              |
| 2:A1:30:U:H6       | 2:A1:30:U:C5'      | 2.11                     | 0.51              |
| 3:AD:75:C:H5''     | 3:AD:76:A:C1'      | 2.41                     | 0.51              |
| 3:AB:39:U:H2'      | 3:AB:40:C:O4'      | 2.11                     | 0.51              |
| 4:AE:101:MET:HB3   | 4:AE:105:PHE:CE1   | 2.46                     | 0.51              |
| 6:AG:8:VAL:O       | 6:AG:11:LEU:HB2    | 2.11                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:AG:13:ARG:HA    | 6:AG:32:ALA:CB     | 2.41                     | 0.51              |
| 6:AG:159:ARG:O    | 6:AG:163:GLU:HB3   | 2.11                     | 0.51              |
| 8:AI:2:ARG:NE     | 8:AI:69:GLU:HG2    | 2.26                     | 0.51              |
| 8:AI:14:LEU:HD22  | 8:AI:18:GLN:CD     | 2.35                     | 0.51              |
| 8:AI:97:PHE:CE2   | 20:AU:31:LEU:HD22  | 2.46                     | 0.51              |
| 9:AJ:42:ILE:HD13  | 9:AJ:116:ALA:CB    | 2.41                     | 0.51              |
| 9:AJ:72:ARG:HG3   | 9:AJ:73:MET:N      | 2.24                     | 0.51              |
| 9:AJ:135:VAL:O    | 9:AJ:139:GLU:OE2   | 2.29                     | 0.51              |
| 11:AL:47:LEU:HD11 | 11:AL:50:LEU:HD22  | 1.93                     | 0.51              |
| 11:AL:49:PRO:HB3  | 11:AL:101:PHE:CZ   | 2.46                     | 0.51              |
| 13:AN:82:VAL:CG1  | 13:AN:108:ILE:HG23 | 2.40                     | 0.51              |
| 15:AP:96:LEU:O    | 15:AP:97:PRO:C     | 2.52                     | 0.51              |
| 17:AR:7:GLU:C     | 17:AR:10:LYS:HG2   | 2.34                     | 0.51              |
| 17:AR:70:LEU:CD2  | 17:AR:81:LEU:HD13  | 2.41                     | 0.51              |
| 18:AS:54:GLU:O    | 18:AS:57:ARG:N     | 2.44                     | 0.51              |
| 19:AT:27:PHE:CD2  | 19:AT:27:PHE:C     | 2.87                     | 0.51              |
| 19:AT:60:ILE:HD13 | 19:AT:62:SER:HG    | 1.73                     | 0.51              |
| 19:AT:84:LEU:O    | 19:AT:85:VAL:C     | 2.54                     | 0.51              |
| 20:AU:22:VAL:HG22 | 20:AU:55:ARG:NH1   | 2.25                     | 0.51              |
| 21:AV:30:LEU:CG   | 21:AV:50:ALA:HB2   | 2.41                     | 0.51              |
| 22:AW:13:LEU:H    | 22:AW:13:LEU:CD1   | 1.99                     | 0.51              |
| 22:AW:37:SER:O    | 22:AW:41:ILE:HG13  | 2.09                     | 0.51              |
| 22:AW:88:VAL:O    | 22:AW:92:LEU:HD12  | 2.11                     | 0.51              |
| 24:BA:13:A:O2'    | 24:BA:14:A:O5'     | 2.20                     | 0.51              |
| 24:BA:84:A:N6     | 24:BA:99:U:O2'     | 2.44                     | 0.51              |
| 24:BA:195:A:C4    | 24:BA:198:C:N4     | 2.79                     | 0.51              |
| 24:BA:228:A:N6    | 24:BA:230:U:N3     | 2.59                     | 0.51              |
| 24:BA:247:G:O3'   | 24:BA:386:G:N2     | 2.44                     | 0.51              |
| 24:BA:263:C:N3    | 24:BA:264:C:C6     | 2.79                     | 0.51              |
| 24:BA:331:A:N6    | 24:BA:1209:G:H2'   | 2.24                     | 0.51              |
| 24:BA:412:A:N6    | 24:BA:2411:A:O2'   | 2.44                     | 0.51              |
| 24:BA:450:G:H3'   | 24:BA:451:C:H5'    | 1.93                     | 0.51              |
| 24:BA:533:G:C5    | 24:BA:534:U:N3     | 2.79                     | 0.51              |
| 24:BA:552:G:C5    | 24:BA:553:U:C5     | 2.98                     | 0.51              |
| 24:BA:616:A:H3'   | 24:BA:616:A:P      | 2.51                     | 0.51              |
| 24:BA:696:G:O2'   | 24:BA:697:C:C5'    | 2.59                     | 0.51              |
| 24:BA:795:C:C2    | 24:BA:796:C:C5     | 2.99                     | 0.51              |
| 24:BA:822:U:O2'   | 24:BA:823:G:OP1    | 2.22                     | 0.51              |
| 24:BA:977:G:N7    | 24:BA:987:G:N1     | 2.58                     | 0.51              |
| 24:BA:1045:A:P    | 24:BA:1111:A:H2    | 2.33                     | 0.51              |
| 24:BA:1085:A:O2'  | 24:BA:1086:A:OP2   | 2.28                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1226:G:C8    | 24:BA:1226:G:C3'   | 2.93                     | 0.51              |
| 24:BA:1228:G:H5'   | 24:BA:1228:G:H8    | 1.76                     | 0.51              |
| 24:BA:1301:A:O2'   | 24:BA:1302:A:H8    | 1.92                     | 0.51              |
| 24:BA:1466:G:O4'   | 24:BA:1545(A):A:C2 | 2.64                     | 0.51              |
| 24:BA:1519:G:H3'   | 24:BA:1520:U:N1    | 2.26                     | 0.51              |
| 24:BA:1619:G:C2    | 24:BA:1620:G:C4    | 2.99                     | 0.51              |
| 24:BA:1709:U:C1'   | 24:BA:2860:A:H1'   | 2.39                     | 0.51              |
| 24:BA:1743:G:C5    | 24:BA:1746:G:N7    | 2.79                     | 0.51              |
| 24:BA:1754:C:C2    | 24:BA:1755:A:N9    | 2.79                     | 0.51              |
| 24:BA:1756:G:OP1   | 24:BA:1756:G:H3'   | 2.11                     | 0.51              |
| 24:BA:1817:G:P     | 27:BD:88:ARG:NH1   | 2.76                     | 0.51              |
| 24:BA:1871:A:H2'   | 24:BA:1872:A:H8    | 1.75                     | 0.51              |
| 24:BA:1942:C:H3'   | 24:BA:1942:C:OP2   | 2.11                     | 0.51              |
| 24:BA:2018:G:OP1   | 24:BA:2019:A:OP2   | 2.28                     | 0.51              |
| 24:BA:2195:C:C2'   | 24:BA:2196:C:O4'   | 2.57                     | 0.51              |
| 24:BA:2365:G:H4'   | 47:BZ:60:PHE:CE2   | 2.45                     | 0.51              |
| 24:BA:2400:G:C6    | 24:BA:2401:U:N3    | 2.79                     | 0.51              |
| 24:BA:2507:C:H1'   | 24:BA:2583:G:H21   | 1.75                     | 0.51              |
| 24:BA:2521:C:C5    | 24:BA:2522:U:C5    | 2.99                     | 0.51              |
| 24:BA:2607:G:N2    | 24:BA:2608:G:H1'   | 2.25                     | 0.51              |
| 24:BA:2639:A:H2'   | 24:BA:2640:G:O5'   | 2.11                     | 0.51              |
| 24:BA:2716:U:H2'   | 24:BA:2717:G:C8    | 2.46                     | 0.51              |
| 24:BA:2785:C:C4    | 24:BA:2786:U:C4    | 2.99                     | 0.51              |
| 25:BB:80:U:C2'     | 25:BB:81:G:C8      | 2.93                     | 0.51              |
| 25:BB:100:G:C2'    | 25:BB:101:A:H8     | 2.19                     | 0.51              |
| 25:BB:117:G:N2     | 25:BB:118:G:N9     | 2.59                     | 0.51              |
| 26:BC:163:PHE:HB3  | 26:BC:171:ILE:HD12 | 1.92                     | 0.51              |
| 26:BC:181:PRO:O    | 26:BC:184:LYS:HB2  | 2.11                     | 0.51              |
| 27:BD:63:ARG:HH12  | 27:BD:86:PRO:HD2   | 1.76                     | 0.51              |
| 27:BD:89:SER:O     | 27:BD:202:LYS:HE3  | 2.11                     | 0.51              |
| 27:BD:111:LEU:HD12 | 27:BD:115:GLN:OE1  | 2.11                     | 0.51              |
| 27:BD:136:ILE:H    | 27:BD:168:ARG:HH22 | 1.56                     | 0.51              |
| 28:BE:38:THR:C     | 28:BE:40:GLU:N     | 2.68                     | 0.51              |
| 28:BE:38:THR:O     | 28:BE:42:ASP:OD2   | 2.28                     | 0.51              |
| 28:BE:108:SER:O    | 28:BE:109:LYS:C    | 2.53                     | 0.51              |
| 28:BE:142:GLY:O    | 28:BE:143:ASN:CB   | 2.56                     | 0.51              |
| 28:BE:185:LYS:O    | 28:BE:185:LYS:CG   | 2.58                     | 0.51              |
| 29:BF:98:SER:O     | 29:BF:99:TYR:CB    | 2.58                     | 0.51              |
| 29:BF:146:ALA:O    | 29:BF:148:LEU:HD22 | 2.10                     | 0.51              |
| 30:BG:8:LYS:O      | 30:BG:8:LYS:HD3    | 2.09                     | 0.51              |
| 32:BK:57:ARG:HG2   | 32:BK:61:ARG:NH2   | 2.26                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 32:BK:76:THR:N     | 32:BK:141:LYS:HE2  | 2.26                     | 0.51              |
| 33:BL:27:LEU:HB3   | 33:BL:32:ALA:HB3   | 1.93                     | 0.51              |
| 34:BM:70:LYS:HZ3   | 34:BM:86:PRO:HB3   | 1.76                     | 0.51              |
| 34:BM:106:MET:O    | 34:BM:108:PRO:HD3  | 2.10                     | 0.51              |
| 35:BN:9:GLU:HB2    | 35:BN:82:ASN:CB    | 2.27                     | 0.51              |
| 36:BO:64:LYS:O     | 36:BO:64:LYS:CD    | 2.59                     | 0.51              |
| 36:BO:122:PRO:CG   | 36:BO:138:LEU:N    | 2.74                     | 0.51              |
| 36:BO:126:VAL:HG23 | 36:BO:127:ALA:N    | 2.25                     | 0.51              |
| 36:BO:138:LEU:C    | 36:BO:138:LEU:HD22 | 2.35                     | 0.51              |
| 37:BP:46:GLN:OE1   | 37:BP:125:LEU:O    | 2.28                     | 0.51              |
| 37:BP:59:ARG:C     | 37:BP:60:ARG:CD    | 2.84                     | 0.51              |
| 39:BR:38:GLN:O     | 39:BR:38:GLN:HG3   | 2.11                     | 0.51              |
| 39:BR:49:VAL:CG1   | 39:BR:76:LYS:HZ1   | 2.24                     | 0.51              |
| 40:BS:3:ARG:O      | 40:BS:6:LEU:CD2    | 2.57                     | 0.51              |
| 40:BS:93:ARG:N     | 40:BS:93:ARG:CD    | 2.74                     | 0.51              |
| 40:BS:97:ALA:O     | 40:BS:99:LEU:N     | 2.42                     | 0.51              |
| 41:BT:25:TRP:O     | 41:BT:28:ARG:HG2   | 2.10                     | 0.51              |
| 41:BT:65:ILE:O     | 41:BT:68:ALA:N     | 2.44                     | 0.51              |
| 42:BU:21:ARG:O     | 42:BU:93:GLU:OE1   | 2.29                     | 0.51              |
| 44:BW:26:TYR:HB3   | 44:BW:28:PHE:CE1   | 2.46                     | 0.51              |
| 46:BY:70:LEU:C     | 46:BY:70:LEU:CD1   | 2.84                     | 0.51              |
| 46:BY:71:VAL:HG11  | 46:BY:74:VAL:HG23  | 1.91                     | 0.51              |
| 52:B5:17:LYS:HZ2   | 52:B5:50:ARG:HG3   | 1.74                     | 0.51              |
| 52:B5:19:ARG:HH11  | 52:B5:43:CYS:CB    | 2.20                     | 0.51              |
| 52:B5:51:GLU:CD    | 52:B5:52:VAL:N     | 2.68                     | 0.51              |
| 1:AA:16:A:H2'      | 1:AA:16:A:N3       | 2.26                     | 0.51              |
| 1:AA:25:C:H4'      | 1:AA:524:G:N3      | 2.25                     | 0.51              |
| 1:AA:247:G:C6      | 1:AA:248:C:C5      | 2.99                     | 0.51              |
| 1:AA:254:G:O6      | 1:AA:273:A:N6      | 2.44                     | 0.51              |
| 1:AA:450:G:H5''    | 1:AA:451:A:O5'     | 2.11                     | 0.51              |
| 1:AA:598:U:N3      | 1:AA:599:C:C5      | 2.78                     | 0.51              |
| 1:AA:688:G:C6      | 1:AA:700:G:C6      | 2.99                     | 0.51              |
| 1:AA:692:U:N3      | 1:AA:695:A:OP2     | 2.44                     | 0.51              |
| 1:AA:896:C:H2'     | 1:AA:897:C:H6      | 1.76                     | 0.51              |
| 1:AA:957:U:O2      | 1:AA:959:A:C8      | 2.64                     | 0.51              |
| 1:AA:1014:A:O3'    | 21:AV:14:HIS:HE1   | 1.94                     | 0.51              |
| 1:AA:1094:G:H3'    | 1:AA:1108:G:H22    | 1.76                     | 0.51              |
| 1:AA:1124:G:N2     | 1:AA:1126:U:N3     | 2.39                     | 0.51              |
| 1:AA:1224:G:O6     | 1:AA:1322:C:C1'    | 2.59                     | 0.51              |
| 1:AA:1308:U:H6     | 15:AP:99:ARG:HH12  | 1.49                     | 0.51              |
| 1:AA:1320:C:H3'    | 1:AA:1321:C:C5     | 2.46                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:1321:C:C6     | 1:AA:1321:C:C3'   | 2.94                     | 0.51              |
| 1:AA:1326:C:C2     | 1:AA:1327:C:C6    | 2.99                     | 0.51              |
| 1:AA:1339:A:C2     | 3:AC:31:A:O2'     | 2.64                     | 0.51              |
| 1:AA:1419:G:C6     | 1:AA:1482:G:C2    | 2.99                     | 0.51              |
| 1:AA:1506:U:O4     | 1:AA:1521:G:O3'   | 2.27                     | 0.51              |
| 3:AC:57:G:H4'      | 30:BG:82:LEU:HD21 | 1.93                     | 0.51              |
| 3:AC:74:C:H6       | 3:AC:75:C:H5''    | 1.76                     | 0.51              |
| 4:AE:20:GLU:N      | 4:AE:39:ILE:HD11  | 2.25                     | 0.51              |
| 4:AE:28:PHE:CD1    | 4:AE:32:ILE:HD12  | 2.46                     | 0.51              |
| 4:AE:56:ARG:O      | 4:AE:57:PHE:C     | 2.53                     | 0.51              |
| 4:AE:152:PHE:CG    | 4:AE:153:ARG:N    | 2.77                     | 0.51              |
| 5:AF:39:ILE:HG21   | 5:AF:57:ILE:CD1   | 2.40                     | 0.51              |
| 5:AF:52:LEU:O      | 5:AF:53:ALA:CB    | 2.59                     | 0.51              |
| 5:AF:78:GLY:O      | 5:AF:80:GLY:N     | 2.43                     | 0.51              |
| 5:AF:179:ARG:HD2   | 5:AF:206:GLU:OE1  | 2.10                     | 0.51              |
| 5:AF:182:ILE:HD11  | 5:AF:203:PHE:CD1  | 2.46                     | 0.51              |
| 6:AG:79:PHE:HE1    | 6:AG:204:ILE:HG23 | 1.75                     | 0.51              |
| 8:AI:40:VAL:HA     | 8:AI:63:TYR:CD1   | 2.46                     | 0.51              |
| 9:AJ:20:ASP:OD1    | 9:AJ:22:LEU:HB2   | 2.10                     | 0.51              |
| 9:AJ:78:ARG:NE     | 9:AJ:80:VAL:HG23  | 2.26                     | 0.51              |
| 9:AJ:155:ARG:C     | 9:AJ:156:TRP:HE3  | 2.19                     | 0.51              |
| 10:AK:35:ILE:C     | 10:AK:37:ARG:N    | 2.68                     | 0.51              |
| 10:AK:35:ILE:O     | 10:AK:36:LEU:C    | 2.52                     | 0.51              |
| 10:AK:103:VAL:CB   | 10:AK:108:GLY:C   | 2.81                     | 0.51              |
| 10:AK:127:LEU:HD13 | 10:AK:127:LEU:C   | 2.35                     | 0.51              |
| 12:AM:9:ARG:HH11   | 12:AM:9:ARG:HB2   | 1.75                     | 0.51              |
| 15:AP:58:GLU:O     | 15:AP:61:GLU:HB3  | 2.11                     | 0.51              |
| 16:AQ:27:CYS:O     | 16:AQ:40:CYS:SG   | 2.69                     | 0.51              |
| 16:AQ:41:ARG:O     | 16:AQ:44:LEU:HB3  | 2.11                     | 0.51              |
| 17:AR:79:ARG:NH1   | 17:AR:79:ARG:CB   | 2.74                     | 0.51              |
| 19:AT:56:VAL:C     | 19:AT:57:VAL:HG12 | 2.36                     | 0.51              |
| 19:AT:59:ILE:HG12  | 19:AT:71:PHE:HB3  | 1.93                     | 0.51              |
| 19:AT:88:TYR:HA    | 19:AT:91:ARG:HE   | 1.76                     | 0.51              |
| 19:AT:101:ARG:HD2  | 19:AT:101:ARG:N   | 2.25                     | 0.51              |
| 23:AX:3:LYS:HZ2    | 23:AX:13:ILE:HG21 | 1.75                     | 0.51              |
| 23:AX:7:ARG:O      | 23:AX:12:LYS:HD3  | 2.11                     | 0.51              |
| 24:BA:116:C:H2'    | 24:BA:117:G:O5'   | 2.10                     | 0.51              |
| 24:BA:126:A:O2'    | 24:BA:127:A:H5'   | 2.11                     | 0.51              |
| 24:BA:203:C:C6     | 24:BA:204:A:N7    | 2.79                     | 0.51              |
| 24:BA:208:C:H2'    | 24:BA:209:C:C6    | 2.46                     | 0.51              |
| 24:BA:387:U:O2'    | 24:BA:388:G:C8    | 2.62                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:415:A:O4'   | 24:BA:1869:G:H5'' | 2.11                     | 0.51              |
| 24:BA:458:G:H3'   | 53:B6:39:ARG:HD2  | 1.93                     | 0.51              |
| 24:BA:471:A:N7    | 24:BA:472:A:N7    | 2.59                     | 0.51              |
| 24:BA:609:A:C8    | 24:BA:609(A):G:N7 | 2.79                     | 0.51              |
| 24:BA:625:G:H1    | 36:BO:100:LEU:HB3 | 1.76                     | 0.51              |
| 24:BA:630:G:H4'   | 54:B7:46:ARG:HH22 | 1.75                     | 0.51              |
| 24:BA:650:C:P     | 54:B7:21:LYS:HZ1  | 2.33                     | 0.51              |
| 24:BA:716:A:C8    | 24:BA:717:G:C8    | 2.99                     | 0.51              |
| 24:BA:751:A:N7    | 24:BA:789:A:N6    | 2.59                     | 0.51              |
| 24:BA:922:U:H2'   | 24:BA:923:C:C5    | 2.46                     | 0.51              |
| 24:BA:1024:G:C6   | 24:BA:1134:G:H1'  | 2.46                     | 0.51              |
| 24:BA:1128:A:C6   | 24:BA:1129:A:N1   | 2.79                     | 0.51              |
| 24:BA:1168:G:C6   | 24:BA:1169:G:C6   | 2.98                     | 0.51              |
| 24:BA:1180:C:C2'  | 24:BA:1181:C:C6   | 2.89                     | 0.51              |
| 24:BA:1365:A:OP2  | 50:B3:3:GLU:OE2   | 2.29                     | 0.51              |
| 24:BA:1464:C:C4'  | 24:BA:1528:A:O2'  | 2.59                     | 0.51              |
| 24:BA:1475:G:C2   | 24:BA:1476:C:C6   | 2.98                     | 0.51              |
| 24:BA:1476:C:O2   | 24:BA:1476:C:H2'  | 2.11                     | 0.51              |
| 24:BA:1531:C:C2   | 24:BA:1532:C:C5   | 2.97                     | 0.51              |
| 24:BA:1892:C:N4   | 24:BA:1893:C:N4   | 2.58                     | 0.51              |
| 24:BA:1897:G:N1   | 24:BA:1898:U:C2   | 2.79                     | 0.51              |
| 24:BA:1899:G:H3'  | 24:BA:1899:G:H8   | 1.75                     | 0.51              |
| 24:BA:1956:U:C5'  | 24:BA:1956:U:H6   | 2.24                     | 0.51              |
| 24:BA:1992:G:H1'  | 24:BA:1993:U:O4   | 2.11                     | 0.51              |
| 24:BA:1997:G:H5'  | 28:BE:123:ALA:CB  | 2.41                     | 0.51              |
| 24:BA:1999:C:C2   | 24:BA:2000:G:C8   | 2.99                     | 0.51              |
| 24:BA:2000:G:OP2  | 38:BQ:2:ARG:CG    | 2.59                     | 0.51              |
| 24:BA:2006:C:O3'  | 24:BA:2823:A:H2   | 1.94                     | 0.51              |
| 24:BA:2007:C:H5'  | 24:BA:2824:C:H1'  | 1.93                     | 0.51              |
| 24:BA:2124:G:C2'  | 26:BC:217:THR:HA  | 2.41                     | 0.51              |
| 24:BA:2152:G:N1   | 24:BA:2153:G:C6   | 2.79                     | 0.51              |
| 24:BA:2209:C:H3'  | 24:BA:2209:C:H6   | 1.75                     | 0.51              |
| 24:BA:2209:C:C6   | 24:BA:2209:C:C3'  | 2.94                     | 0.51              |
| 24:BA:2216:G:H21  | 27:BD:150:LYS:HZ3 | 1.58                     | 0.51              |
| 24:BA:2301:C:C2   | 24:BA:2302:G:C8   | 2.99                     | 0.51              |
| 24:BA:2321:G:N3   | 24:BA:2321:G:C2'  | 2.73                     | 0.51              |
| 24:BA:2569:G:C4   | 24:BA:2570:G:C8   | 2.99                     | 0.51              |
| 24:BA:2584:U:H6   | 24:BA:2584:U:C3'  | 2.22                     | 0.51              |
| 24:BA:2589:A:HO2' | 24:BA:2590:A:H5'  | 1.74                     | 0.51              |
| 24:BA:2627:G:C2'  | 24:BA:2628:C:C5'  | 2.87                     | 0.51              |
| 24:BA:2711:A:H3'  | 24:BA:2714:G:O4'  | 2.11                     | 0.51              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2787:C:H5'' | 28:BE:64:LYS:HD2   | 1.92                     | 0.51              |
| 26:BC:104:LEU:CD2 | 26:BC:127:LEU:HD23 | 2.41                     | 0.51              |
| 27:BD:77:ALA:HB1  | 27:BD:95:LEU:CD1   | 2.40                     | 0.51              |
| 27:BD:90:ALA:HA   | 27:BD:91:ARG:HH12  | 1.74                     | 0.51              |
| 27:BD:92:ILE:HG13 | 27:BD:93:ALA:N     | 2.26                     | 0.51              |
| 27:BD:120:GLY:O   | 27:BD:131:LEU:CD1  | 2.48                     | 0.51              |
| 29:BF:31:HIS:ND1  | 36:BO:11:GLY:CA    | 2.72                     | 0.51              |
| 29:BF:39:TRP:NE1  | 29:BF:106:ARG:NH2  | 2.59                     | 0.51              |
| 29:BF:154:VAL:O   | 29:BF:174:VAL:HG22 | 2.11                     | 0.51              |
| 29:BF:168:ARG:HD3 | 29:BF:169:ASN:H    | 1.76                     | 0.51              |
| 30:BG:57:ALA:H    | 30:BG:68:PRO:HB2   | 1.73                     | 0.51              |
| 30:BG:104:GLU:HG3 | 30:BG:105:LYS:H    | 1.74                     | 0.51              |
| 31:BH:54:ARG:HB3  | 31:BH:54:ARG:NH2   | 2.26                     | 0.51              |
| 32:BK:9:LEU:CB    | 32:BK:13:GLY:HA3   | 2.41                     | 0.51              |
| 32:BK:88:ILE:O    | 32:BK:121:LYS:HE3  | 2.11                     | 0.51              |
| 34:BM:23:LEU:HD11 | 34:BM:62:VAL:CA    | 2.39                     | 0.51              |
| 34:BM:99:LEU:O    | 34:BM:102:ALA:N    | 2.43                     | 0.51              |
| 35:BN:10:VAL:C    | 35:BN:17:ARG:CG    | 2.80                     | 0.51              |
| 35:BN:18:LYS:NZ   | 35:BN:44:LYS:HZ2   | 1.93                     | 0.51              |
| 35:BN:62:VAL:CB   | 35:BN:82:ASN:O     | 2.59                     | 0.51              |
| 36:BO:117:GLU:CD  | 36:BO:117:GLU:H    | 2.19                     | 0.51              |
| 37:BP:6:ARG:HH21  | 37:BP:8:LYS:H      | 1.55                     | 0.51              |
| 37:BP:8:LYS:HZ3   | 37:BP:11:LYS:HE2   | 1.75                     | 0.51              |
| 38:BQ:23:ASN:O    | 38:BQ:26:LYS:HB2   | 2.11                     | 0.51              |
| 38:BQ:82:GLU:O    | 38:BQ:83:ILE:HD13  | 2.11                     | 0.51              |
| 39:BR:70:GLY:O    | 39:BR:72:ALA:N     | 2.43                     | 0.51              |
| 40:BS:97:ALA:C    | 40:BS:99:LEU:H     | 2.19                     | 0.51              |
| 41:BT:70:ARG:C    | 41:BT:72:HIS:N     | 2.67                     | 0.51              |
| 42:BU:7:THR:C     | 42:BU:9:GLY:N      | 2.69                     | 0.51              |
| 42:BU:15:GLU:O    | 42:BU:98:GLU:CD    | 2.55                     | 0.51              |
| 42:BU:40:LEU:CG   | 42:BU:55:ALA:CA    | 2.89                     | 0.51              |
| 45:BX:75:ILE:N    | 45:BX:100:ALA:CB   | 2.74                     | 0.51              |
| 46:BY:40:ASP:O    | 46:BY:44:PHE:HB2   | 2.10                     | 0.51              |
| 46:BY:118:GLN:C   | 46:BY:118:GLN:CD   | 2.79                     | 0.51              |
| 48:B1:2:ARG:O     | 48:B1:6:GLU:OE2    | 2.29                     | 0.51              |
| 48:B1:10:LYS:HB2  | 48:B1:11:LEU:HD12  | 1.92                     | 0.51              |
| 49:B2:9:VAL:CG1   | 49:B2:54:VAL:HA    | 2.33                     | 0.51              |
| 50:B3:68:ARG:H    | 50:B3:68:ARG:CD    | 2.19                     | 0.51              |
| 50:B3:68:ARG:O    | 50:B3:71:ARG:HA    | 2.11                     | 0.51              |
| 1:AA:9:G:C8       | 7:AH:126:ARG:NH2   | 2.79                     | 0.50              |
| 1:AA:55:A:H2'     | 1:AA:56:U:C4'      | 2.41                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:68:G:C5      | 1:AA:69:G:C8       | 2.99                     | 0.50              |
| 1:AA:134:A:N6     | 1:AA:135:C:N4      | 2.59                     | 0.50              |
| 1:AA:145:G:C6     | 1:AA:178:C:C4      | 2.99                     | 0.50              |
| 1:AA:191(C):G:C2' | 1:AA:191(D):U:O4'  | 2.59                     | 0.50              |
| 1:AA:210:U:H4'    | 1:AA:216:G:O5'     | 2.10                     | 0.50              |
| 1:AA:266:G:H22    | 1:AA:270:A:N6      | 2.09                     | 0.50              |
| 1:AA:267:C:H2'    | 1:AA:268:C:C6      | 2.46                     | 0.50              |
| 1:AA:294:U:C2     | 1:AA:295:C:C5      | 2.99                     | 0.50              |
| 1:AA:439:A:H1'    | 1:AA:496:A:C2      | 2.46                     | 0.50              |
| 1:AA:440:A:H62    | 1:AA:493:G:H21     | 1.58                     | 0.50              |
| 1:AA:701:C:H4'    | 1:AA:702:A:OP2     | 2.12                     | 0.50              |
| 1:AA:702:A:N1     | 24:BA:1848:A:C6    | 2.78                     | 0.50              |
| 1:AA:834:C:C4     | 1:AA:853:G:N1      | 2.79                     | 0.50              |
| 1:AA:939:G:H2'    | 1:AA:940:C:C5      | 2.44                     | 0.50              |
| 1:AA:1028(B):C:O2 | 1:AA:1028(B):C:C2' | 2.58                     | 0.50              |
| 1:AA:1039:C:O2'   | 1:AA:1040:U:H5'    | 2.11                     | 0.50              |
| 1:AA:1109:C:H2'   | 1:AA:1110:A:C8     | 2.47                     | 0.50              |
| 1:AA:1129:C:C4    | 1:AA:1139:G:C6     | 3.00                     | 0.50              |
| 1:AA:1279:A:O2'   | 1:AA:1282:C:N4     | 2.44                     | 0.50              |
| 1:AA:1382:C:C6    | 1:AA:1383:C:H5     | 2.29                     | 0.50              |
| 1:AA:1475:G:O2'   | 1:AA:1476:G:H5'    | 2.10                     | 0.50              |
| 1:AA:1487:G:C2    | 1:AA:1488:G:C8     | 2.98                     | 0.50              |
| 2:A1:9:U:N3       | 2:A1:13:U:C4       | 2.80                     | 0.50              |
| 3:AD:57:G:H8      | 3:AD:57:G:P        | 2.34                     | 0.50              |
| 4:AE:100:GLY:C    | 4:AE:104:ASN:ND2   | 2.69                     | 0.50              |
| 5:AF:11:ARG:HH11  | 5:AF:15:THR:CG2    | 2.23                     | 0.50              |
| 7:AH:12:LEU:C     | 7:AH:13:ILE:HD12   | 2.35                     | 0.50              |
| 7:AH:45:PHE:O     | 7:AH:45:PHE:CG     | 2.64                     | 0.50              |
| 7:AH:78:HIS:HE2   | 7:AH:142:LEU:HB3   | 1.75                     | 0.50              |
| 7:AH:147:ASP:O    | 7:AH:150:ARG:N     | 2.44                     | 0.50              |
| 9:AJ:70:LYS:C     | 9:AJ:138:LYS:HE3   | 2.36                     | 0.50              |
| 10:AK:14:ARG:HD2  | 10:AK:14:ARG:C     | 2.35                     | 0.50              |
| 10:AK:14:ARG:HD2  | 10:AK:15:ASN:HD22  | 1.76                     | 0.50              |
| 10:AK:19:VAL:HB   | 10:AK:21:LYS:CD    | 2.41                     | 0.50              |
| 11:AL:16:ARG:O    | 11:AL:63:ILE:HG23  | 2.10                     | 0.50              |
| 14:AO:52:LEU:HG   | 14:AO:52:LEU:O     | 2.11                     | 0.50              |
| 14:AO:84:LEU:CD2  | 14:AO:85:ILE:N     | 2.74                     | 0.50              |
| 15:AP:11:ARG:NH1  | 15:AP:11:ARG:CG    | 2.71                     | 0.50              |
| 15:AP:88:ARG:HE   | 15:AP:98:VAL:HG11  | 1.76                     | 0.50              |
| 17:AR:49:ASP:O    | 17:AR:50:HIS:C     | 2.53                     | 0.50              |
| 18:AS:67:THR:N    | 18:AS:70:ALA:HB3   | 2.26                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 19:AT:80:GLY:O     | 19:AT:81:ARG:C    | 2.54                     | 0.50              |
| 21:AV:15:LEU:O     | 21:AV:16:LEU:C    | 2.53                     | 0.50              |
| 22:AW:13:LEU:CB    | 22:AW:17:ARG:HH21 | 2.13                     | 0.50              |
| 24:BA:37:C:H2'     | 24:BA:38:A:H8     | 1.76                     | 0.50              |
| 24:BA:66:C:C4      | 24:BA:89:G:N1     | 2.80                     | 0.50              |
| 24:BA:82:G:H21     | 24:BA:83:G:N2     | 2.09                     | 0.50              |
| 24:BA:137(A):G:C2  | 24:BA:138:G:O6    | 2.64                     | 0.50              |
| 24:BA:246:C:O2     | 24:BA:246:C:H2'   | 2.11                     | 0.50              |
| 24:BA:270(A):A:OP2 | 24:BA:270(B):A:C2 | 2.64                     | 0.50              |
| 24:BA:270(L):U:O2' | 24:BA:270(M):U:P  | 2.69                     | 0.50              |
| 24:BA:279:C:N3     | 24:BA:360:G:O6    | 2.44                     | 0.50              |
| 24:BA:287:C:C3'    | 24:BA:288:C:H5    | 2.23                     | 0.50              |
| 24:BA:375:C:H2'    | 24:BA:375:C:O2    | 2.10                     | 0.50              |
| 24:BA:422:A:N1     | 24:BA:423:A:C2    | 2.80                     | 0.50              |
| 24:BA:451:C:H5     | 24:BA:453:C:C5'   | 2.19                     | 0.50              |
| 24:BA:487:C:N4     | 24:BA:488:G:C6    | 2.79                     | 0.50              |
| 24:BA:493:G:C2     | 24:BA:494:G:C8    | 3.00                     | 0.50              |
| 24:BA:510:C:C2     | 24:BA:511:U:C6    | 2.99                     | 0.50              |
| 24:BA:531:C:C4'    | 24:BA:2035:G:H21  | 2.24                     | 0.50              |
| 24:BA:568:U:H3'    | 24:BA:570:G:OP2   | 2.10                     | 0.50              |
| 24:BA:760:G:H2'    | 24:BA:761:A:C5'   | 2.41                     | 0.50              |
| 24:BA:772:C:H2'    | 24:BA:773:U:C6    | 2.45                     | 0.50              |
| 24:BA:814:C:H4'    | 24:BA:1224:G:H22  | 1.76                     | 0.50              |
| 24:BA:975:G:N1     | 24:BA:976:C:C5    | 2.79                     | 0.50              |
| 24:BA:978:G:C2     | 24:BA:979:G:C2    | 3.00                     | 0.50              |
| 24:BA:981:A:H1'    | 24:BA:2037:G:O4'  | 2.11                     | 0.50              |
| 24:BA:1069:A:C8    | 24:BA:1073:A:N7   | 2.79                     | 0.50              |
| 24:BA:1085:A:O2'   | 24:BA:1086:A:C4'  | 2.59                     | 0.50              |
| 24:BA:1131:G:C2    | 34:BM:74:ARG:HD2  | 2.46                     | 0.50              |
| 24:BA:1135:C:C2    | 24:BA:1136:G:C8   | 2.99                     | 0.50              |
| 24:BA:1305:C:H2'   | 24:BA:1306:C:C6   | 2.46                     | 0.50              |
| 24:BA:1477:A:OP2   | 24:BA:1477:A:C8   | 2.64                     | 0.50              |
| 24:BA:1508:A:C5'   | 24:BA:1510:A:C5   | 2.90                     | 0.50              |
| 24:BA:1619:G:N2    | 24:BA:1620:G:C4   | 2.79                     | 0.50              |
| 24:BA:1789:A:H3'   | 24:BA:1790:C:C4'  | 2.41                     | 0.50              |
| 24:BA:2000:G:H2'   | 24:BA:2001:A:H8   | 1.76                     | 0.50              |
| 24:BA:2009:G:C1'   | 38:BQ:107:ASP:O   | 2.59                     | 0.50              |
| 24:BA:2049:G:O2'   | 24:BA:2050:C:O5'  | 2.29                     | 0.50              |
| 24:BA:2153:G:H8    | 24:BA:2153:G:O5'  | 1.94                     | 0.50              |
| 24:BA:2199:A:C4    | 24:BA:2225:A:N1   | 2.80                     | 0.50              |
| 24:BA:2239:G:H1'   | 27:BD:249:PRO:HB3 | 1.92                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2265:U:H2'   | 24:BA:2265:U:O2    | 2.10                     | 0.50              |
| 24:BA:2308:G:N3    | 24:BA:2308:G:C2'   | 2.73                     | 0.50              |
| 24:BA:2407:G:H3'   | 24:BA:2408:U:H5    | 1.75                     | 0.50              |
| 24:BA:2415:G:C6    | 24:BA:2416:C:C4    | 2.99                     | 0.50              |
| 24:BA:2462:U:C4    | 24:BA:2463:C:C4    | 2.98                     | 0.50              |
| 24:BA:2512:C:H2'   | 24:BA:2513:G:C4'   | 2.41                     | 0.50              |
| 24:BA:2594:C:C2'   | 24:BA:2595:G:H5'   | 2.40                     | 0.50              |
| 24:BA:2675:A:H2'   | 24:BA:2676:C:O4'   | 2.10                     | 0.50              |
| 24:BA:2681:C:C4    | 24:BA:2725:A:N6    | 2.75                     | 0.50              |
| 24:BA:2711:A:P     | 24:BA:2712(A):A:P  | 3.09                     | 0.50              |
| 24:BA:2825:C:N3    | 24:BA:2826:A:N7    | 2.60                     | 0.50              |
| 24:BA:2830:G:N3    | 24:BA:2830:G:H2'   | 2.26                     | 0.50              |
| 24:BA:2832:U:C1'   | 24:BA:2834:G:N2    | 2.58                     | 0.50              |
| 25:BB:38:C:O5'     | 25:BB:38:C:H6      | 1.94                     | 0.50              |
| 25:BB:66:A:H2      | 25:BB:108:C:N1     | 2.09                     | 0.50              |
| 25:BB:82:G:HO2'    | 25:BB:83:G:P       | 2.34                     | 0.50              |
| 26:BC:209:LEU:HD23 | 26:BC:209:LEU:C    | 2.36                     | 0.50              |
| 27:BD:27:THR:CG2   | 27:BD:82:ILE:CG2   | 2.89                     | 0.50              |
| 27:BD:146:GLU:HA   | 27:BD:154:LYS:CG   | 2.41                     | 0.50              |
| 27:BD:176:ARG:CG   | 27:BD:176:ARG:NH1  | 2.67                     | 0.50              |
| 28:BE:32:PRO:HB3   | 28:BE:35:GLN:HE22  | 1.76                     | 0.50              |
| 28:BE:52:LEU:CB    | 28:BE:73:GLU:O     | 2.57                     | 0.50              |
| 28:BE:58:ARG:HG2   | 28:BE:63:LEU:HD21  | 1.92                     | 0.50              |
| 29:BF:34:TRP:O     | 29:BF:37:VAL:CB    | 2.59                     | 0.50              |
| 29:BF:36:VAL:HG11  | 29:BF:183:VAL:CG2  | 2.41                     | 0.50              |
| 29:BF:110:LEU:HG   | 29:BF:183:VAL:H    | 1.77                     | 0.50              |
| 29:BF:125:LEU:HD13 | 29:BF:128:ALA:CB   | 2.41                     | 0.50              |
| 29:BF:160:ASN:HB2  | 29:BF:195:ASP:OD2  | 2.11                     | 0.50              |
| 30:BG:43:LEU:CD1   | 30:BG:88:ILE:HG22  | 2.41                     | 0.50              |
| 30:BG:110:ALA:HB1  | 30:BG:139:LEU:HD21 | 1.92                     | 0.50              |
| 31:BH:103:LEU:HB2  | 31:BH:115:VAL:CG1  | 2.41                     | 0.50              |
| 34:BM:18:ALA:HB2   | 34:BM:54:VAL:HG21  | 1.93                     | 0.50              |
| 34:BM:55:VAL:O     | 34:BM:57:ALA:N     | 2.43                     | 0.50              |
| 35:BN:13:ASN:N     | 35:BN:94:ARG:HB3   | 2.25                     | 0.50              |
| 35:BN:15:GLY:O     | 35:BN:47:ILE:HA    | 2.10                     | 0.50              |
| 36:BO:72:PRO:HA    | 36:BO:110:TYR:CE1  | 2.45                     | 0.50              |
| 36:BO:96:THR:HG21  | 36:BO:112:LEU:CD1  | 2.34                     | 0.50              |
| 37:BP:43:THR:O     | 37:BP:44:ALA:C     | 2.54                     | 0.50              |
| 37:BP:112:GLU:HA   | 37:BP:115:MET:CB   | 2.40                     | 0.50              |
| 38:BQ:33:ARG:NH2   | 51:B4:56:LYS:HB2   | 2.25                     | 0.50              |
| 45:BX:12:THR:HG22  | 45:BX:13:VAL:CG1   | 2.41                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 46:BY:77:ASP:O    | 46:BY:78:LYS:C    | 2.53                     | 0.50              |
| 49:B2:41:PRO:HA   | 49:B2:44:ARG:HE   | 1.76                     | 0.50              |
| 51:B4:11:THR:O    | 51:B4:14:ALA:HB3  | 2.11                     | 0.50              |
| 53:B6:5:TRP:CE3   | 53:B6:5:TRP:CA    | 2.94                     | 0.50              |
| 54:B7:1:MET:N     | 54:B7:2:PRO:CD    | 2.73                     | 0.50              |
| 54:B7:22:VAL:HB   | 54:B7:48:PHE:CE2  | 2.45                     | 0.50              |
| 1:AA:34:C:O4'     | 14:AO:32:PHE:CE2  | 2.64                     | 0.50              |
| 1:AA:160:A:O2'    | 1:AA:161:A:H5'    | 2.11                     | 0.50              |
| 1:AA:559:A:O2'    | 1:AA:560:U:OP2    | 2.23                     | 0.50              |
| 1:AA:836:G:C2     | 1:AA:837:G:C8     | 2.99                     | 0.50              |
| 1:AA:836:G:C6     | 1:AA:851:G:C6     | 2.99                     | 0.50              |
| 1:AA:850:U:H2'    | 1:AA:851:G:H8     | 1.76                     | 0.50              |
| 1:AA:862:C:C4     | 1:AA:863:U:C5     | 2.99                     | 0.50              |
| 1:AA:915:A:O5'    | 1:AA:915:A:C8     | 2.62                     | 0.50              |
| 1:AA:927:G:N1     | 1:AA:1391:U:C2    | 2.79                     | 0.50              |
| 1:AA:936:C:H2'    | 1:AA:937:A:C5'    | 2.41                     | 0.50              |
| 1:AA:939:G:N2     | 1:AA:940:C:N3     | 2.59                     | 0.50              |
| 1:AA:1105:A:O2'   | 1:AA:1106:G:H5'   | 2.11                     | 0.50              |
| 1:AA:1112:C:O2    | 5:AF:179:ARG:CZ   | 2.59                     | 0.50              |
| 1:AA:1324:A:C6    | 1:AA:1325:C:C5    | 3.00                     | 0.50              |
| 1:AA:1495:U:O2'   | 1:AA:1496:C:O5'   | 2.29                     | 0.50              |
| 3:AC:14:A:C4      | 3:AC:15:G:C8      | 2.99                     | 0.50              |
| 3:AB:4:C:C2       | 3:AB:5:G:N7       | 2.79                     | 0.50              |
| 4:AE:16:HIS:NE2   | 4:AE:210:SER:HA   | 2.25                     | 0.50              |
| 4:AE:35:GLU:CD    | 4:AE:36:ARG:N     | 2.69                     | 0.50              |
| 4:AE:44:LEU:CD2   | 4:AE:44:LEU:H     | 2.22                     | 0.50              |
| 4:AE:58:ILE:HG23  | 4:AE:61:LEU:HD13  | 1.93                     | 0.50              |
| 4:AE:72:GLY:CA    | 4:AE:81:VAL:HG21  | 2.41                     | 0.50              |
| 4:AE:80:ILE:CD1   | 4:AE:208:ILE:CG2  | 2.87                     | 0.50              |
| 4:AE:82:ARG:CB    | 4:AE:94:ASN:ND2   | 2.70                     | 0.50              |
| 4:AE:167:PRO:CG   | 4:AE:168:THR:H    | 2.21                     | 0.50              |
| 6:AG:62:GLN:O     | 6:AG:66:ARG:HD2   | 2.10                     | 0.50              |
| 6:AG:148:VAL:HG11 | 6:AG:153:ARG:HA   | 1.92                     | 0.50              |
| 6:AG:155:LEU:H    | 6:AG:155:LEU:HD22 | 1.77                     | 0.50              |
| 7:AH:84:PHE:HB3   | 7:AH:87:SER:O     | 2.10                     | 0.50              |
| 7:AH:129:ILE:O    | 7:AH:130:ASN:C    | 2.54                     | 0.50              |
| 8:AI:60:PHE:HE2   | 20:AU:78:LEU:HD11 | 1.76                     | 0.50              |
| 10:AK:14:ARG:HH11 | 10:AK:14:ARG:CA   | 2.24                     | 0.50              |
| 10:AK:84:ARG:O    | 10:AK:135:CYS:SG  | 2.69                     | 0.50              |
| 11:AL:55:ALA:HB1  | 11:AL:58:HIS:HD1  | 1.72                     | 0.50              |
| 11:AL:113:LYS:O   | 11:AL:115:GLY:N   | 2.38                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 13:AN:121:PRO:HB2 | 13:AN:125:PHE:HD1   | 1.75                     | 0.50              |
| 14:AO:90:VAL:HB   | 14:AO:96:VAL:CG1    | 2.42                     | 0.50              |
| 15:AP:29:ARG:HD3  | 15:AP:64:TRP:CE2    | 2.46                     | 0.50              |
| 15:AP:90:LEU:CD2  | 15:AP:93:ARG:HH11   | 2.24                     | 0.50              |
| 15:AP:96:LEU:O    | 15:AP:98:VAL:N      | 2.45                     | 0.50              |
| 15:AP:125:ARG:O   | 15:AP:125:ARG:HG3   | 2.11                     | 0.50              |
| 17:AR:11:VAL:C    | 17:AR:13:GLN:N      | 2.62                     | 0.50              |
| 18:AS:75:ARG:O    | 18:AS:76:GLN:C      | 2.54                     | 0.50              |
| 20:AU:26:LEU:HD23 | 20:AU:29:PHE:HB2    | 1.93                     | 0.50              |
| 22:AW:21:LYS:HA   | 22:AW:24:LEU:CD1    | 2.36                     | 0.50              |
| 24:BA:126:A:H5''  | 53:B6:18:PHE:HD1    | 1.76                     | 0.50              |
| 24:BA:188:G:H2'   | 24:BA:189:G:O4'     | 2.11                     | 0.50              |
| 24:BA:244:A:O2'   | 36:BO:66:GLY:CA     | 2.58                     | 0.50              |
| 24:BA:245:G:C4    | 24:BA:246:C:C5      | 2.95                     | 0.50              |
| 24:BA:299:A:O2'   | 24:BA:319:C:C4'     | 2.60                     | 0.50              |
| 24:BA:354:G:OP2   | 24:BA:354:G:H8      | 1.93                     | 0.50              |
| 24:BA:548:A:C5    | 24:BA:549:G:H1'     | 2.46                     | 0.50              |
| 24:BA:566:U:O4'   | 42:BU:82:ARG:NH2    | 2.44                     | 0.50              |
| 24:BA:590:A:H5'   | 29:BF:93:LYS:HZ2    | 1.76                     | 0.50              |
| 24:BA:641:C:H41   | 24:BA:646:A:H61     | 1.59                     | 0.50              |
| 24:BA:655:A:O3'   | 24:BA:656:G:O4'     | 2.28                     | 0.50              |
| 24:BA:771:G:C4    | 24:BA:772:C:C5      | 2.98                     | 0.50              |
| 24:BA:800:A:HO2'  | 24:BA:801:G:P       | 2.32                     | 0.50              |
| 24:BA:848:G:C8    | 24:BA:848:G:H3'     | 2.46                     | 0.50              |
| 24:BA:873:G:H2'   | 24:BA:874:G:O4'     | 2.10                     | 0.50              |
| 24:BA:874:G:N3    | 24:BA:874:G:C2'     | 2.69                     | 0.50              |
| 24:BA:905:U:C4    | 24:BA:906:G:C8      | 2.99                     | 0.50              |
| 24:BA:915:C:H1'   | 25:BB:100:G:H4'     | 1.93                     | 0.50              |
| 24:BA:989:G:O2'   | 24:BA:990:A:P       | 2.70                     | 0.50              |
| 24:BA:1045:A:O4'  | 24:BA:1045:A:OP2    | 2.30                     | 0.50              |
| 24:BA:1142:U:O2'  | 24:BA:1142(A):A:H5' | 2.11                     | 0.50              |
| 24:BA:1257:C:N4   | 24:BA:1258:C:N4     | 2.59                     | 0.50              |
| 24:BA:1334:G:P    | 44:BW:65:ARG:HH12   | 2.34                     | 0.50              |
| 24:BA:1530:G:C5   | 24:BA:1531:C:N4     | 2.79                     | 0.50              |
| 24:BA:1655:A:C2'  | 24:BA:1656:C:H6     | 2.22                     | 0.50              |
| 24:BA:1685:C:H2'  | 24:BA:1686:C:O5'    | 2.11                     | 0.50              |
| 24:BA:1773:A:N7   | 24:BA:1774:C:N3     | 2.58                     | 0.50              |
| 24:BA:1797:C:O2'  | 27:BD:257:LEU:HD12  | 2.11                     | 0.50              |
| 24:BA:1809:A:N1   | 50:B3:3:GLU:CD      | 2.69                     | 0.50              |
| 24:BA:1815:A:HO2' | 24:BA:1816:G:H4'    | 1.77                     | 0.50              |
| 24:BA:1819:A:OP2  | 27:BD:157:ARG:HA    | 2.11                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1856:G:C2'  | 24:BA:1857:G:H5'   | 2.33                     | 0.50              |
| 24:BA:1936:A:N3   | 24:BA:1940:U:O2    | 2.44                     | 0.50              |
| 24:BA:1944:U:C1'  | 24:BA:1955:U:C1'   | 2.86                     | 0.50              |
| 24:BA:1945:G:H5'  | 24:BA:1945:G:C8    | 2.46                     | 0.50              |
| 24:BA:2046:G:N3   | 24:BA:2047:U:C5    | 2.79                     | 0.50              |
| 24:BA:2048:G:H2'  | 24:BA:2049:G:O5'   | 2.12                     | 0.50              |
| 24:BA:2373:G:C4   | 24:BA:2374:C:C5    | 2.99                     | 0.50              |
| 24:BA:2431:U:O2'  | 24:BA:2432:A:C8    | 2.65                     | 0.50              |
| 24:BA:2557:G:H2'  | 24:BA:2558:C:C5    | 2.46                     | 0.50              |
| 24:BA:2654:A:H62  | 24:BA:2667:C:N4    | 2.09                     | 0.50              |
| 24:BA:2740:A:H61  | 24:BA:2764:A:H1'   | 1.74                     | 0.50              |
| 24:BA:2837:G:N2   | 24:BA:2882:A:C4    | 2.79                     | 0.50              |
| 24:BA:2844:G:N2   | 24:BA:2845:G:C1'   | 2.74                     | 0.50              |
| 24:BA:2862:G:C4   | 24:BA:2863:C:C5    | 2.99                     | 0.50              |
| 24:BA:2893:G:H4'  | 24:BA:2894:G:C1'   | 2.42                     | 0.50              |
| 25:BB:58:A:C5     | 25:BB:59:A:N7      | 2.79                     | 0.50              |
| 25:BB:68:C:H3'    | 25:BB:69:G:C8      | 2.37                     | 0.50              |
| 25:BB:73:A:C2     | 46:BY:29:TYR:HE1   | 2.30                     | 0.50              |
| 25:BB:103:U:H6    | 25:BB:103:U:C5'    | 2.24                     | 0.50              |
| 26:BC:22:ILE:HG12 | 26:BC:224:ILE:HD12 | 1.94                     | 0.50              |
| 26:BC:163:PHE:HZ  | 26:BC:195:ALA:HB3  | 1.75                     | 0.50              |
| 27:BD:106:ILE:O   | 27:BD:107:ALA:CB   | 2.58                     | 0.50              |
| 27:BD:134:ARG:C   | 27:BD:136:ILE:N    | 2.69                     | 0.50              |
| 27:BD:146:GLU:HG3 | 27:BD:152:GLY:O    | 2.11                     | 0.50              |
| 27:BD:183:ARG:HG2 | 27:BD:268:ARG:HD2  | 1.92                     | 0.50              |
| 27:BD:210:GLY:O   | 27:BD:214:TRP:HB2  | 2.12                     | 0.50              |
| 28:BE:47:VAL:CG1  | 28:BE:79:ARG:HB2   | 2.41                     | 0.50              |
| 28:BE:84:PHE:C    | 28:BE:85:ASN:ND2   | 2.64                     | 0.50              |
| 28:BE:92:THR:HG23 | 28:BE:96:PHE:H     | 1.76                     | 0.50              |
| 28:BE:148:GLY:O   | 28:BE:149:ARG:HG3  | 2.10                     | 0.50              |
| 28:BE:154:LYS:HZ1 | 28:BE:156:MET:HB2  | 1.74                     | 0.50              |
| 29:BF:182:ASN:O   | 29:BF:186:ILE:HG13 | 2.11                     | 0.50              |
| 29:BF:185:ASP:HA  | 29:BF:188:ARG:CG   | 2.41                     | 0.50              |
| 30:BG:39:ILE:CA   | 30:BG:157:ILE:HG13 | 2.41                     | 0.50              |
| 32:BK:57:ARG:HG3  | 32:BK:57:ARG:HH11  | 1.77                     | 0.50              |
| 32:BK:79:ILE:O    | 32:BK:144:VAL:CG2  | 2.59                     | 0.50              |
| 33:BL:104:VAL:CG1 | 33:BL:124:ALA:HA   | 2.41                     | 0.50              |
| 34:BM:31:ALA:C    | 34:BM:33:LEU:N     | 2.69                     | 0.50              |
| 35:BN:64:ARG:HE   | 35:BN:67:LYS:C     | 2.19                     | 0.50              |
| 35:BN:76:ALA:CB   | 35:BN:78:ARG:HH22  | 2.24                     | 0.50              |
| 36:BO:84:ASN:O    | 36:BO:85:LEU:CG    | 2.60                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 36:BO:88:LEU:HD21  | 36:BO:124:LYS:NZ   | 2.26                     | 0.50              |
| 36:BO:112:LEU:O    | 36:BO:128:HIS:HE1  | 1.94                     | 0.50              |
| 36:BO:114:ILE:HG12 | 36:BO:130:PHE:CG   | 2.46                     | 0.50              |
| 37:BP:11:LYS:HD3   | 37:BP:16:ARG:HH21  | 1.76                     | 0.50              |
| 37:BP:36:ALA:C     | 37:BP:37:LEU:HG    | 2.34                     | 0.50              |
| 37:BP:104:PHE:C    | 37:BP:105:GLU:OE1  | 2.55                     | 0.50              |
| 37:BP:134:ARG:NE   | 37:BP:137:TYR:H    | 2.06                     | 0.50              |
| 38:BQ:107:ASP:OD2  | 38:BQ:108:GLY:N    | 2.44                     | 0.50              |
| 41:BT:15:LYS:O     | 41:BT:16:LYS:C     | 2.52                     | 0.50              |
| 41:BT:17:ILE:HG23  | 41:BT:20:LEU:HD12  | 1.92                     | 0.50              |
| 41:BT:48:ALA:O     | 41:BT:52:ARG:NE    | 2.44                     | 0.50              |
| 41:BT:75:ASN:O     | 41:BT:79:PHE:HB3   | 2.11                     | 0.50              |
| 42:BU:72:VAL:HG12  | 42:BU:73:SER:N     | 2.26                     | 0.50              |
| 42:BU:79:VAL:HG12  | 42:BU:81:TYR:CD1   | 2.46                     | 0.50              |
| 43:BV:7:ALA:H      | 43:BV:103:ILE:HD13 | 1.75                     | 0.50              |
| 44:BW:9:LEU:N      | 44:BW:9:LEU:CD1    | 2.66                     | 0.50              |
| 44:BW:61:GLY:N     | 44:BW:73:ARG:HH12  | 2.10                     | 0.50              |
| 44:BW:88:LYS:O     | 44:BW:89:ILE:HB    | 2.12                     | 0.50              |
| 46:BY:12:GLY:O     | 46:BY:15:PRO:HG2   | 2.10                     | 0.50              |
| 46:BY:152:ALA:HA   | 46:BY:155:LEU:HD22 | 1.93                     | 0.50              |
| 48:B1:27:LEU:O     | 48:B1:30:LEU:HG    | 2.11                     | 0.50              |
| 51:B4:11:THR:O     | 51:B4:11:THR:OG1   | 2.27                     | 0.50              |
| 51:B4:35:GLU:HG2   | 51:B4:49:CYS:HB3   | 1.94                     | 0.50              |
| 52:B5:54:ILE:C     | 52:B5:54:ILE:CD1   | 2.85                     | 0.50              |
| 1:AA:22:G:C4       | 1:AA:23:C:C6       | 2.98                     | 0.50              |
| 1:AA:49:U:C4       | 1:AA:364:A:N7      | 2.79                     | 0.50              |
| 1:AA:116:A:O5'     | 1:AA:116:A:C8      | 2.65                     | 0.50              |
| 1:AA:126:G:C6      | 1:AA:236:G:O6      | 2.65                     | 0.50              |
| 1:AA:136:C:H2'     | 1:AA:137:C:C6      | 2.46                     | 0.50              |
| 1:AA:308:C:O2      | 1:AA:309:G:C8      | 2.64                     | 0.50              |
| 1:AA:356:A:H2'     | 1:AA:357:G:O4'     | 2.11                     | 0.50              |
| 1:AA:404:U:P       | 6:AG:118:ARG:NH1   | 2.84                     | 0.50              |
| 1:AA:404:U:H5'     | 6:AG:122:ARG:HD3   | 1.94                     | 0.50              |
| 1:AA:409:G:H2'     | 1:AA:410:G:O5'     | 2.12                     | 0.50              |
| 1:AA:558:G:C4'     | 1:AA:559:A:H5''    | 2.42                     | 0.50              |
| 1:AA:606:G:N2      | 1:AA:631:G:N3      | 2.59                     | 0.50              |
| 1:AA:611:A:N6      | 1:AA:629:G:C6      | 2.74                     | 0.50              |
| 1:AA:622:A:H2'     | 1:AA:623:C:H5'     | 1.93                     | 0.50              |
| 1:AA:957:U:H1'     | 1:AA:960:U:H5      | 1.76                     | 0.50              |
| 1:AA:978:A:H61     | 1:AA:1361:G:N2     | 2.05                     | 0.50              |
| 1:AA:1015:A:H2'    | 1:AA:1016:A:H8     | 1.76                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1128:C:H4'   | 1:AA:1148:U:C5    | 2.46                     | 0.50              |
| 1:AA:1189:C:O2'   | 1:AA:1190:G:H5'   | 2.11                     | 0.50              |
| 1:AA:1202:G:H21   | 1:AA:1203:C:H1'   | 1.70                     | 0.50              |
| 1:AA:1259:C:O2'   | 1:AA:1283:G:N2    | 2.43                     | 0.50              |
| 1:AA:1277:C:C2'   | 1:AA:1279:A:H8    | 2.24                     | 0.50              |
| 1:AA:1303:C:N4    | 1:AA:1304:G:C2    | 2.79                     | 0.50              |
| 1:AA:1324:A:C6    | 1:AA:1325:C:C4    | 3.00                     | 0.50              |
| 1:AA:1342:C:O2'   | 11:AL:124:GLN:HA  | 2.11                     | 0.50              |
| 4:AE:9:GLU:OE1    | 4:AE:12:GLU:HG2   | 2.10                     | 0.50              |
| 4:AE:73:THR:HG22  | 4:AE:94:ASN:C     | 2.35                     | 0.50              |
| 4:AE:208:ILE:HD13 | 4:AE:239:VAL:HG11 | 1.94                     | 0.50              |
| 5:AF:36:ASP:OD2   | 5:AF:36:ASP:C     | 2.54                     | 0.50              |
| 5:AF:172:ARG:NH1  | 5:AF:174:PRO:HD3  | 2.25                     | 0.50              |
| 6:AG:61:LYS:HA    | 6:AG:203:VAL:HG22 | 1.93                     | 0.50              |
| 6:AG:104:VAL:HG11 | 6:AG:140:VAL:CG2  | 2.26                     | 0.50              |
| 7:AH:127:ASN:O    | 7:AH:127:ASN:OD1  | 2.29                     | 0.50              |
| 10:AK:89:PRO:CB   | 10:AK:92:ARG:HH21 | 2.23                     | 0.50              |
| 12:AM:22:LYS:NZ   | 12:AM:90:LEU:CD1  | 2.73                     | 0.50              |
| 12:AM:48:THR:CA   | 12:AM:62:HIS:HB3  | 2.40                     | 0.50              |
| 14:AO:22:SER:C    | 14:AO:24:VAL:N    | 2.70                     | 0.50              |
| 15:AP:90:LEU:O    | 15:AP:91:ARG:C    | 2.52                     | 0.50              |
| 18:AS:21:VAL:N    | 18:AS:36:ILE:HD11 | 2.26                     | 0.50              |
| 19:AT:10:VAL:HB   | 19:AT:55:ASP:N    | 2.26                     | 0.50              |
| 19:AT:10:VAL:CB   | 19:AT:54:GLY:H    | 2.24                     | 0.50              |
| 19:AT:29:HIS:CD2  | 19:AT:30:PRO:HD2  | 2.47                     | 0.50              |
| 19:AT:51:TYR:CE1  | 19:AT:73:VAL:HG11 | 2.46                     | 0.50              |
| 19:AT:75:ARG:CG   | 19:AT:76:LEU:N    | 2.74                     | 0.50              |
| 20:AU:40:LEU:O    | 20:AU:41:LYS:C    | 2.54                     | 0.50              |
| 20:AU:63:GLN:HA   | 20:AU:66:LEU:HD21 | 1.94                     | 0.50              |
| 20:AU:81:PHE:O    | 20:AU:82:THR:CB   | 2.59                     | 0.50              |
| 24:BA:120:U:C2    | 24:BA:149:A:C2    | 2.99                     | 0.50              |
| 24:BA:143:C:C2    | 24:BA:144:C:H5    | 2.27                     | 0.50              |
| 24:BA:179:G:H5'   | 53:B6:32:LYS:HZ1  | 1.71                     | 0.50              |
| 24:BA:230:U:H2'   | 24:BA:231:C:O4'   | 2.11                     | 0.50              |
| 24:BA:234:C:H2'   | 24:BA:235:U:O5'   | 2.10                     | 0.50              |
| 24:BA:243:U:C4    | 24:BA:244:A:C8    | 3.00                     | 0.50              |
| 24:BA:270(X):G:O6 | 24:BA:270(Y):G:N3 | 2.43                     | 0.50              |
| 24:BA:273(F):C:O2 | 24:BA:363(A):A:C6 | 2.65                     | 0.50              |
| 24:BA:295:G:O4'   | 24:BA:345:A:H2    | 1.93                     | 0.50              |
| 24:BA:484:C:H2'   | 24:BA:485:C:C5    | 2.44                     | 0.50              |
| 24:BA:527:C:H5    | 24:BA:2780:G:OP1  | 1.94                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:558:G:N3   | 24:BA:559:G:N7    | 2.59                     | 0.50              |
| 24:BA:575:A:C2'  | 24:BA:576:U:H5'   | 2.42                     | 0.50              |
| 24:BA:637:A:H4'  | 24:BA:638:G:C4'   | 2.41                     | 0.50              |
| 24:BA:714:U:O2'  | 24:BA:715:G:N7    | 2.40                     | 0.50              |
| 24:BA:751:A:H4'  | 43:BV:90:ARG:NE   | 2.26                     | 0.50              |
| 24:BA:753:C:H2'  | 24:BA:754:C:C6    | 2.46                     | 0.50              |
| 24:BA:815:C:C4   | 24:BA:1193:G:N1   | 2.78                     | 0.50              |
| 24:BA:821:A:OP1  | 24:BA:822:U:C6    | 2.65                     | 0.50              |
| 24:BA:833:U:H4'  | 36:BO:49:ARG:HE   | 1.77                     | 0.50              |
| 24:BA:906:G:N3   | 24:BA:906:G:C2'   | 2.73                     | 0.50              |
| 24:BA:980:A:C5   | 24:BA:981:A:C2    | 3.00                     | 0.50              |
| 24:BA:1009:A:O4' | 41:BT:59:ARG:CZ   | 2.59                     | 0.50              |
| 24:BA:1013:C:OP2 | 24:BA:1142:U:O2   | 2.30                     | 0.50              |
| 24:BA:1019:U:OP1 | 24:BA:1120:G:N2   | 2.42                     | 0.50              |
| 24:BA:1155:A:O2' | 24:BA:1156:A:C5'  | 2.60                     | 0.50              |
| 24:BA:1308:A:H61 | 24:BA:1606:G:H1'  | 1.76                     | 0.50              |
| 24:BA:1324:G:C1' | 24:BA:1616:A:H62  | 2.24                     | 0.50              |
| 24:BA:1364:G:C2  | 24:BA:1368:G:C5   | 2.99                     | 0.50              |
| 24:BA:1410:G:H2' | 24:BA:1411:C:C6   | 2.46                     | 0.50              |
| 24:BA:1532:C:N4  | 24:BA:1540:G:C2   | 2.80                     | 0.50              |
| 24:BA:1672:C:N4  | 24:BA:1673:U:C5   | 2.79                     | 0.50              |
| 24:BA:1675:C:H2' | 24:BA:1676:A:H5'  | 1.93                     | 0.50              |
| 24:BA:1750:G:O2' | 24:BA:1751:C:C5'  | 2.59                     | 0.50              |
| 24:BA:1775:U:C1' | 27:BD:208:LYS:HZ2 | 2.25                     | 0.50              |
| 24:BA:1807:G:C2  | 24:BA:1809:A:OP2  | 2.64                     | 0.50              |
| 24:BA:1890:A:N3  | 24:BA:1891:G:H1'  | 2.26                     | 0.50              |
| 24:BA:1906:G:C4  | 24:BA:1929:G:N7   | 2.79                     | 0.50              |
| 24:BA:1912:A:H8  | 24:BA:1913:A:C1'  | 2.25                     | 0.50              |
| 24:BA:2052:G:C4  | 28:BE:150:VAL:HB  | 2.45                     | 0.50              |
| 24:BA:2072:G:N3  | 24:BA:2073:C:C5   | 2.79                     | 0.50              |
| 24:BA:2102:U:C4  | 24:BA:2103:C:N4   | 2.80                     | 0.50              |
| 24:BA:2260:C:O2' | 24:BA:2261:C:H5'  | 2.11                     | 0.50              |
| 24:BA:2261:C:OP1 | 47:BZ:17:GLN:CB   | 2.59                     | 0.50              |
| 24:BA:2327:A:C5  | 24:BA:2388:A:N1   | 2.79                     | 0.50              |
| 24:BA:2328:A:H2' | 24:BA:2329:G:C8   | 2.45                     | 0.50              |
| 24:BA:2409:G:C2  | 24:BA:2410:G:H1'  | 2.46                     | 0.50              |
| 24:BA:2491:U:H5  | 24:BA:2492:U:OP2  | 1.94                     | 0.50              |
| 24:BA:2512:C:H2' | 24:BA:2513:G:C5'  | 2.41                     | 0.50              |
| 24:BA:2519:U:C6  | 24:BA:2542:A:N6   | 2.79                     | 0.50              |
| 24:BA:2637:U:OP1 | 28:BE:81:ILE:HD11 | 2.10                     | 0.50              |
| 24:BA:2748:A:N1  | 24:BA:2757:A:N6   | 2.59                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2749:A:OP2   | 24:BA:2749:A:C8    | 2.62                     | 0.50              |
| 24:BA:2807:G:N3    | 24:BA:2808:U:C5    | 2.79                     | 0.50              |
| 24:BA:2830:G:H5'   | 28:BE:57:LYS:CE    | 2.42                     | 0.50              |
| 24:BA:2872:G:C2    | 24:BA:2873:A:C6    | 3.00                     | 0.50              |
| 25:BB:49:C:OP1     | 39:BR:96:GLY:HA3   | 2.10                     | 0.50              |
| 25:BB:58:A:N6      | 25:BB:59:A:C6      | 2.79                     | 0.50              |
| 25:BB:110:G:C2'    | 25:BB:111:U:O5'    | 2.58                     | 0.50              |
| 26:BC:8:ARG:O      | 26:BC:12:GLU:HG2   | 2.12                     | 0.50              |
| 26:BC:23:ASP:CG    | 26:BC:186:ALA:HB2  | 2.36                     | 0.50              |
| 26:BC:26:ALA:CB    | 26:BC:182:PRO:HA   | 2.39                     | 0.50              |
| 26:BC:93:TYR:CE1   | 26:BC:109:ASP:CB   | 2.94                     | 0.50              |
| 26:BC:134:ARG:HB2  | 26:BC:136:LEU:HG   | 1.93                     | 0.50              |
| 26:BC:213:TYR:CZ   | 26:BC:223:ARG:NH2  | 2.79                     | 0.50              |
| 27:BD:79:VAL:HG12  | 27:BD:81:ALA:HA    | 1.94                     | 0.50              |
| 27:BD:182:LEU:O    | 27:BD:268:ARG:HA   | 2.11                     | 0.50              |
| 28:BE:132:HIS:O    | 28:BE:133:LYS:CB   | 2.59                     | 0.50              |
| 28:BE:144:ARG:O    | 28:BE:146:THR:N    | 2.45                     | 0.50              |
| 30:BG:17:PRO:HA    | 30:BG:20:ILE:CB    | 2.39                     | 0.50              |
| 30:BG:105:LYS:C    | 30:BG:109:VAL:HG22 | 2.34                     | 0.50              |
| 30:BG:107:LEU:HD12 | 30:BG:111:LEU:CD1  | 2.39                     | 0.50              |
| 33:BL:12:LEU:CD1   | 33:BL:23:VAL:CG2   | 2.89                     | 0.50              |
| 33:BL:79:ARG:HA    | 33:BL:82:ALA:HB3   | 1.93                     | 0.50              |
| 34:BM:12:ARG:O     | 34:BM:12:ARG:CD    | 2.55                     | 0.50              |
| 34:BM:135:PRO:O    | 34:BM:136:GLU:O    | 2.29                     | 0.50              |
| 34:BM:136:GLU:C    | 34:BM:137:LYS:HG3  | 2.36                     | 0.50              |
| 35:BN:106:LEU:O    | 35:BN:109:LYS:N    | 2.44                     | 0.50              |
| 36:BO:114:ILE:N    | 36:BO:129:ALA:O    | 2.45                     | 0.50              |
| 36:BO:130:PHE:HB3  | 36:BO:134:ALA:HB1  | 1.93                     | 0.50              |
| 37:BP:16:ARG:O     | 37:BP:17:LEU:CG    | 2.60                     | 0.50              |
| 37:BP:115:MET:O    | 37:BP:116:GLU:C    | 2.53                     | 0.50              |
| 37:BP:133:ARG:C    | 37:BP:133:ARG:HD2  | 2.36                     | 0.50              |
| 38:BQ:75:LEU:O     | 38:BQ:78:LYS:HB3   | 2.11                     | 0.50              |
| 39:BR:74:ALA:CB    | 39:BR:108:GLY:HA3  | 2.35                     | 0.50              |
| 40:BS:5:ALA:O      | 40:BS:8:LYS:HB2    | 2.11                     | 0.50              |
| 40:BS:18:ASP:O     | 40:BS:19:LEU:CB    | 2.58                     | 0.50              |
| 42:BU:56:SER:O     | 42:BU:56:SER:OG    | 2.23                     | 0.50              |
| 43:BV:50:VAL:HG21  | 43:BV:103:ILE:HG13 | 1.94                     | 0.50              |
| 45:BX:15:VAL:HG12  | 45:BX:16:ALA:H     | 1.77                     | 0.50              |
| 45:BX:40:GLU:N     | 45:BX:62:GLU:OE2   | 2.44                     | 0.50              |
| 45:BX:70:SER:O     | 45:BX:71:LYS:O     | 2.30                     | 0.50              |
| 45:BX:75:ILE:CG2   | 45:BX:100:ALA:HB2  | 2.29                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 47:BZ:22:GLY:C     | 47:BZ:38:VAL:HG13 | 2.37                     | 0.50              |
| 47:BZ:50:ASN:C     | 47:BZ:62:LEU:HB3  | 2.36                     | 0.50              |
| 48:B1:26:GLU:O     | 48:B1:29:GLU:CB   | 2.60                     | 0.50              |
| 50:B3:7:PRO:HG2    | 50:B3:60:GLN:CD   | 2.36                     | 0.50              |
| 50:B3:38:LYS:HG2   | 50:B3:40:HIS:ND1  | 2.26                     | 0.50              |
| 50:B3:39:CYS:C     | 50:B3:40:HIS:ND1  | 2.69                     | 0.50              |
| 1:AA:245:C:N3      | 1:AA:284:G:N1     | 2.59                     | 0.50              |
| 1:AA:336:C:C2      | 1:AA:337:C:C5     | 2.99                     | 0.50              |
| 1:AA:341:C:O2'     | 1:AA:342:C:O5'    | 2.29                     | 0.50              |
| 1:AA:577:G:N2      | 1:AA:578:C:C2     | 2.79                     | 0.50              |
| 1:AA:579:G:C6      | 1:AA:580:U:C5     | 3.00                     | 0.50              |
| 1:AA:595:G:N7      | 1:AA:641:U:N3     | 2.59                     | 0.50              |
| 1:AA:663:A:C5'     | 1:AA:836:G:OP1    | 2.57                     | 0.50              |
| 1:AA:712:A:H2'     | 1:AA:713:G:C8     | 2.47                     | 0.50              |
| 1:AA:739:C:H2'     | 1:AA:740:U:H5'    | 1.94                     | 0.50              |
| 1:AA:750:G:H1'     | 17:AR:23:GLY:CA   | 2.42                     | 0.50              |
| 1:AA:778:G:C5      | 1:AA:779:C:C5     | 2.99                     | 0.50              |
| 1:AA:792:A:C4      | 1:AA:794:A:N6     | 2.79                     | 0.50              |
| 1:AA:829:G:O2'     | 1:AA:830:G:H5'    | 2.12                     | 0.50              |
| 1:AA:848:C:N3      | 1:AA:849:C:C5     | 2.79                     | 0.50              |
| 1:AA:872:A:C2      | 1:AA:874:G:O6     | 2.64                     | 0.50              |
| 1:AA:899:C:N4      | 1:AA:900:A:C6     | 2.79                     | 0.50              |
| 1:AA:1031:G:O2'    | 1:AA:1032:A:H5'   | 2.10                     | 0.50              |
| 1:AA:1101:A:C4'    | 1:AA:1102:A:O5'   | 2.52                     | 0.50              |
| 1:AA:1362(A):C:H5' | 1:AA:1363:A:O5'   | 2.11                     | 0.50              |
| 1:AA:1401:G:H2'    | 1:AA:1402:C:C4'   | 2.41                     | 0.50              |
| 1:AA:1463:C:O2'    | 1:AA:1464:G:H5'   | 2.12                     | 0.50              |
| 1:AA:1517:G:N2     | 1:AA:1518:A:C1'   | 2.73                     | 0.50              |
| 2:A1:3:U:H2'       | 2:A1:4:U:C5       | 2.47                     | 0.50              |
| 3:AC:21:A:N6       | 3:AC:46:G:N1      | 2.59                     | 0.50              |
| 3:AC:73:A:HO2'     | 3:AC:74:C:P       | 2.34                     | 0.50              |
| 3:AD:70:G:H2'      | 3:AD:71:G:C8      | 2.46                     | 0.50              |
| 6:AG:66:ARG:O      | 6:AG:68:TYR:N     | 2.44                     | 0.50              |
| 6:AG:100:ARG:NH2   | 6:AG:136:PRO:O    | 2.44                     | 0.50              |
| 6:AG:105:VAL:HG13  | 6:AG:120:LEU:HD21 | 1.93                     | 0.50              |
| 6:AG:110:PHE:HZ    | 6:AG:147:ALA:CB   | 2.24                     | 0.50              |
| 6:AG:123:HIS:CB    | 6:AG:125:HIS:HE1  | 2.24                     | 0.50              |
| 6:AG:170:VAL:CG1   | 6:AG:171:GLY:H    | 2.24                     | 0.50              |
| 7:AH:7:GLU:HG2     | 7:AH:112:LEU:CD2  | 2.41                     | 0.50              |
| 9:AJ:49:ILE:HG21   | 9:AJ:121:ALA:CB   | 2.30                     | 0.50              |
| 9:AJ:75:VAL:HG22   | 9:AJ:88:PRO:CB    | 2.41                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 9:AJ:87:VAL:CG1    | 9:AJ:152:ALA:HA     | 2.31                     | 0.50              |
| 10:AK:40:ALA:CB    | 10:AK:45:ILE:HG23   | 2.41                     | 0.50              |
| 10:AK:63:LEU:HD23  | 10:AK:63:LEU:C      | 2.36                     | 0.50              |
| 10:AK:123:GLU:CD   | 10:AK:124:ALA:H     | 2.13                     | 0.50              |
| 11:AL:67:GLY:C     | 11:AL:73:GLN:NE2    | 2.69                     | 0.50              |
| 13:AN:69:ALA:O     | 13:AN:72:ALA:N      | 2.44                     | 0.50              |
| 15:AP:48:LEU:CD1   | 15:AP:53:VAL:HA     | 2.41                     | 0.50              |
| 15:AP:69:GLU:C     | 15:AP:71:ARG:N      | 2.66                     | 0.50              |
| 17:AR:36:ILE:CG2   | 17:AR:37:ASN:N      | 2.73                     | 0.50              |
| 18:AS:74:LEU:HD22  | 18:AS:79:VAL:CG2    | 2.42                     | 0.50              |
| 18:AS:75:ARG:HG3   | 18:AS:80:PHE:CD1    | 2.46                     | 0.50              |
| 21:AV:51:VAL:O     | 21:AV:58:VAL:HG22   | 2.11                     | 0.50              |
| 22:AW:81:LYS:O     | 22:AW:82:SER:C      | 2.53                     | 0.50              |
| 24:BA:17:G:H4'     | 41:BT:25:TRP:CZ3    | 2.46                     | 0.50              |
| 24:BA:66:C:C4      | 24:BA:67:U:C5       | 2.99                     | 0.50              |
| 24:BA:72:U:H5      | 24:BA:112:U:C2'     | 2.23                     | 0.50              |
| 24:BA:155:C:O2     | 24:BA:171:G:N2      | 2.44                     | 0.50              |
| 24:BA:184:C:O2     | 24:BA:185:U:C5      | 2.65                     | 0.50              |
| 24:BA:262:A:H2'    | 24:BA:263:C:H6      | 1.76                     | 0.50              |
| 24:BA:374:A:N6     | 24:BA:401:A:H1'     | 2.27                     | 0.50              |
| 24:BA:396:G:OP1    | 50:B3:10:VAL:HG13   | 2.11                     | 0.50              |
| 24:BA:408:G:C4     | 24:BA:409:C:C6      | 3.00                     | 0.50              |
| 24:BA:497:A:H8     | 24:BA:497:A:O5'     | 1.95                     | 0.50              |
| 24:BA:504:U:H6     | 24:BA:504:U:OP2     | 1.94                     | 0.50              |
| 24:BA:514:A:H2'    | 24:BA:514:A:N3      | 2.27                     | 0.50              |
| 24:BA:530:G:N2     | 24:BA:2021:C:C6     | 2.80                     | 0.50              |
| 24:BA:530:G:N2     | 24:BA:2021:C:H2'    | 2.27                     | 0.50              |
| 24:BA:534:U:HO2'   | 41:BT:49:HIS:CE1    | 2.25                     | 0.50              |
| 24:BA:563:G:C5     | 24:BA:2018:G:N1     | 2.79                     | 0.50              |
| 24:BA:605:C:OP1    | 29:BF:104:LYS:HD2   | 2.12                     | 0.50              |
| 24:BA:611:C:N4     | 24:BA:618:G:H1      | 2.10                     | 0.50              |
| 24:BA:630:G:OP1    | 54:B7:46:ARG:NH1    | 2.44                     | 0.50              |
| 24:BA:678:C:C2     | 24:BA:679:C:C5      | 2.99                     | 0.50              |
| 24:BA:685:A:C4     | 24:BA:774:A:C6      | 2.99                     | 0.50              |
| 24:BA:847:U:C4     | 24:BA:933:A:C2      | 3.00                     | 0.50              |
| 24:BA:918:A:C8     | 25:BB:80:U:C4'      | 2.93                     | 0.50              |
| 24:BA:943:U:H5''   | 24:BA:944:G:O6      | 2.12                     | 0.50              |
| 24:BA:1056:G:N2    | 24:BA:1104:C:N4     | 2.59                     | 0.50              |
| 24:BA:1096:A:C5    | 24:BA:1097:U:H1'    | 2.46                     | 0.50              |
| 24:BA:1142(A):A:C8 | 24:BA:1142(A):A:O5' | 2.65                     | 0.50              |
| 24:BA:1157:G:OP2   | 24:BA:1158:C:OP2    | 2.30                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1208:C:N4    | 24:BA:1209:G:C6   | 2.79                     | 0.50              |
| 24:BA:1237:A:O2'   | 24:BA:1238:G:O5'  | 2.30                     | 0.50              |
| 24:BA:1287:A:H3'   | 24:BA:1288:U:C6   | 2.46                     | 0.50              |
| 24:BA:1381:G:C6    | 24:BA:1382:G:C5   | 3.00                     | 0.50              |
| 24:BA:1472:A:O2'   | 24:BA:1473:G:C8   | 2.62                     | 0.50              |
| 24:BA:1730:U:O5'   | 24:BA:1730:U:H6   | 1.93                     | 0.50              |
| 24:BA:1789:A:OP1   | 27:BD:222:ARG:CG  | 2.51                     | 0.50              |
| 24:BA:1826:G:O5'   | 24:BA:1826:G:C8   | 2.64                     | 0.50              |
| 24:BA:1833:U:C2    | 24:BA:1834:U:O2   | 2.65                     | 0.50              |
| 24:BA:2052:G:O2'   | 24:BA:2053:G:H5'  | 2.11                     | 0.50              |
| 24:BA:2158:A:O2'   | 24:BA:2159:G:P    | 2.70                     | 0.50              |
| 24:BA:2243:U:C2    | 24:BA:2244:U:C5   | 3.00                     | 0.50              |
| 24:BA:2305:A:C1'   | 30:BG:154:GLY:C   | 2.84                     | 0.50              |
| 24:BA:2329:G:H1    | 24:BA:2386:C:H41  | 1.57                     | 0.50              |
| 24:BA:2343:C:O2    | 24:BA:2344:U:C6   | 2.65                     | 0.50              |
| 24:BA:2399:G:C2    | 24:BA:2400:G:C1'  | 2.89                     | 0.50              |
| 24:BA:2548:G:C6    | 24:BA:2561:A:C6   | 3.00                     | 0.50              |
| 24:BA:2820:A:N3    | 38:BQ:5:LYS:HG3   | 2.25                     | 0.50              |
| 25:BB:46:A:C2'     | 25:BB:47:C:C6     | 2.78                     | 0.50              |
| 25:BB:87:G:C2      | 25:BB:90:C:C4     | 3.00                     | 0.50              |
| 26:BC:10:LEU:HD12  | 26:BC:32:LEU:HD23 | 1.94                     | 0.50              |
| 26:BC:34:THR:O     | 26:BC:35:ALA:O    | 2.30                     | 0.50              |
| 26:BC:90:GLY:CA    | 26:BC:157:LYS:HB2 | 2.38                     | 0.50              |
| 27:BD:13:ARG:HH12  | 27:BD:19:ALA:HB1  | 1.75                     | 0.50              |
| 27:BD:36:PRO:O     | 27:BD:37:LEU:HD22 | 2.11                     | 0.50              |
| 27:BD:63:ARG:CD    | 27:BD:65:ILE:HD11 | 2.42                     | 0.50              |
| 28:BE:4:ILE:HD12   | 28:BE:76:ARG:NH2  | 2.26                     | 0.50              |
| 28:BE:91:VAL:HG11  | 28:BE:93:VAL:CG2  | 2.37                     | 0.50              |
| 28:BE:91:VAL:HG13  | 28:BE:95:ILE:HD13 | 1.92                     | 0.50              |
| 28:BE:92:THR:HG23  | 28:BE:95:ILE:HG22 | 1.93                     | 0.50              |
| 28:BE:102:VAL:HG23 | 28:BE:200:GLU:OE2 | 2.11                     | 0.50              |
| 29:BF:162:LEU:O    | 29:BF:165:ARG:HB3 | 2.11                     | 0.50              |
| 30:BG:57:ALA:CA    | 30:BG:68:PRO:N    | 2.68                     | 0.50              |
| 30:BG:173:LEU:HA   | 30:BG:176:LEU:HB3 | 1.92                     | 0.50              |
| 31:BH:41:MET:HE3   | 31:BH:68:THR:CG2  | 2.42                     | 0.50              |
| 31:BH:102:ALA:HB1  | 31:BH:115:VAL:H   | 1.76                     | 0.50              |
| 33:BL:12:LEU:HD13  | 33:BL:23:VAL:CG2  | 2.40                     | 0.50              |
| 33:BL:108:ALA:HB1  | 33:BL:123:ALA:HB1 | 1.90                     | 0.50              |
| 34:BM:63:THR:OG1   | 34:BM:65:LYS:HD3  | 2.12                     | 0.50              |
| 34:BM:66:LYS:N     | 34:BM:69:GLN:OE1  | 2.44                     | 0.50              |
| 35:BN:11:ALA:CB    | 35:BN:97:ARG:HH22 | 2.24                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 35:BN:22:ILE:HB   | 35:BN:40:VAL:CG1  | 2.40                     | 0.50              |
| 36:BO:10:PRO:O    | 36:BO:11:GLY:O    | 2.29                     | 0.50              |
| 36:BO:130:PHE:HE1 | 36:BO:145:PRO:HB3 | 1.77                     | 0.50              |
| 37:BP:51:ARG:HE   | 37:BP:55:VAL:HG21 | 1.77                     | 0.50              |
| 37:BP:75:THR:C    | 37:BP:77:LYS:HD2  | 2.36                     | 0.50              |
| 37:BP:130:LYS:HE3 | 37:BP:131:ILE:C   | 2.35                     | 0.50              |
| 38:BQ:20:LEU:HD22 | 38:BQ:24:GLN:HG3  | 1.89                     | 0.50              |
| 39:BR:26:LEU:N    | 39:BR:88:ASP:HB2  | 2.25                     | 0.50              |
| 39:BR:57:LYS:NZ   | 39:BR:62:LYS:CB   | 2.74                     | 0.50              |
| 39:BR:92:TYR:O    | 39:BR:98:VAL:HG21 | 2.11                     | 0.50              |
| 40:BS:19:LEU:O    | 40:BS:21:GLU:HG2  | 2.10                     | 0.50              |
| 40:BS:67:SER:HA   | 40:BS:75:ILE:CG2  | 2.41                     | 0.50              |
| 41:BT:89:GLU:N    | 42:BU:52:VAL:HA   | 2.23                     | 0.50              |
| 41:BT:93:LYS:O    | 41:BT:94:ASN:ND2  | 2.44                     | 0.50              |
| 42:BU:22:VAL:HG12 | 42:BU:23:GLU:N    | 2.26                     | 0.50              |
| 43:BV:16:LYS:N    | 43:BV:16:LYS:CD   | 2.62                     | 0.50              |
| 43:BV:38:TYR:N    | 43:BV:38:TYR:HD1  | 2.08                     | 0.50              |
| 45:BX:45:VAL:HA   | 45:BX:57:GLN:CG   | 2.41                     | 0.50              |
| 46:BY:99:TYR:CZ   | 46:BY:124:ILE:HB  | 2.46                     | 0.50              |
| 46:BY:122:ARG:C   | 46:BY:124:ILE:H   | 2.18                     | 0.50              |
| 50:B3:62:ARG:O    | 50:B3:63:TYR:C    | 2.54                     | 0.50              |
| 51:B4:8:LYS:C     | 51:B4:9:LYS:HG3   | 2.36                     | 0.50              |
| 51:B4:31:VAL:HG23 | 51:B4:32:PRO:N    | 2.25                     | 0.50              |
| 51:B4:34:PRO:HB3  | 51:B4:40:LYS:NZ   | 2.26                     | 0.50              |
| 53:B6:32:LYS:CA   | 53:B6:35:ARG:HD3  | 2.41                     | 0.50              |
| 54:B7:1:MET:H1    | 54:B7:1:MET:HE2   | 1.76                     | 0.50              |
| 54:B7:6:THR:HG23  | 54:B7:9:GLY:CA    | 2.39                     | 0.50              |
| 54:B7:17:THR:C    | 54:B7:19:SER:H    | 2.19                     | 0.50              |
| 1:AA:16:A:O4'     | 7:AH:17:ALA:HB3   | 2.12                     | 0.50              |
| 1:AA:27:G:C6      | 1:AA:557:G:C2     | 3.00                     | 0.50              |
| 1:AA:32:A:N6      | 1:AA:553:A:N6     | 2.59                     | 0.50              |
| 1:AA:50:A:O2'     | 1:AA:360:A:C2     | 2.63                     | 0.50              |
| 1:AA:96:G:C2      | 1:AA:97:U:C2      | 3.00                     | 0.50              |
| 1:AA:108:G:C2     | 1:AA:109:A:N1     | 2.80                     | 0.50              |
| 1:AA:258:G:C6     | 1:AA:259:G:O6     | 2.65                     | 0.50              |
| 1:AA:262:A:C4'    | 22:AW:74:LYS:HG3  | 2.41                     | 0.50              |
| 1:AA:295:C:N4     | 1:AA:303:A:C2     | 2.80                     | 0.50              |
| 1:AA:337:C:H2'    | 1:AA:338:A:H8     | 1.75                     | 0.50              |
| 1:AA:393:A:H2'    | 1:AA:394:G:H8     | 1.77                     | 0.50              |
| 1:AA:410:G:N2     | 1:AA:429:U:N3     | 2.60                     | 0.50              |
| 1:AA:465:A:N6     | 18:AS:82:GLN:HE22 | 2.10                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:627:G:O2'     | 1:AA:628:G:C5'    | 2.57                     | 0.50              |
| 1:AA:671:G:H2'     | 1:AA:672:U:H1'    | 1.93                     | 0.50              |
| 1:AA:686:U:OP1     | 1:AA:686:U:C4'    | 2.60                     | 0.50              |
| 1:AA:826:C:H5'     | 10:AK:12:ARG:CZ   | 2.41                     | 0.50              |
| 1:AA:860:A:N7      | 1:AA:861:G:C4     | 2.79                     | 0.50              |
| 1:AA:885:G:C2      | 1:AA:913:A:N1     | 2.80                     | 0.50              |
| 1:AA:926:G:H22     | 2:A1:39:U:P       | 2.33                     | 0.50              |
| 1:AA:997:U:OP2     | 1:AA:997:U:H6     | 1.94                     | 0.50              |
| 1:AA:1117:G:N2     | 1:AA:1184:G:C4    | 2.80                     | 0.50              |
| 1:AA:1128:C:C4     | 1:AA:1139:G:O6    | 2.64                     | 0.50              |
| 1:AA:1148:U:O2     | 1:AA:1148:U:C2'   | 2.58                     | 0.50              |
| 1:AA:1255:G:H1'    | 1:AA:1259:C:H1'   | 1.93                     | 0.50              |
| 3:AB:9:A:C4        | 3:AB:46:G:N2      | 2.79                     | 0.50              |
| 3:AB:74:C:H2'      | 3:AB:75:C:O4'     | 2.11                     | 0.50              |
| 4:AE:28:PHE:CA     | 4:AE:194:PRO:HG2  | 2.41                     | 0.50              |
| 4:AE:69:LEU:HB3    | 4:AE:162:ILE:CG2  | 2.36                     | 0.50              |
| 4:AE:114:ARG:O     | 4:AE:118:LEU:HB2  | 2.11                     | 0.50              |
| 4:AE:179:LYS:C     | 4:AE:181:PHE:H    | 2.18                     | 0.50              |
| 5:AF:28:GLN:NE2    | 5:AF:29:TYR:N     | 2.60                     | 0.50              |
| 5:AF:78:GLY:HA3    | 5:AF:82:GLU:OE1   | 2.11                     | 0.50              |
| 5:AF:156:ARG:O     | 5:AF:157:ILE:C    | 2.54                     | 0.50              |
| 6:AG:88:VAL:HG13   | 7:AH:97:GLY:HA3   | 1.93                     | 0.50              |
| 6:AG:169:LYS:HA    | 6:AG:176:LEU:CD1  | 2.41                     | 0.50              |
| 6:AG:199:ASN:OD1   | 6:AG:202:LEU:HG   | 2.12                     | 0.50              |
| 7:AH:115:VAL:HG11  | 7:AH:118:ILE:CD1  | 2.41                     | 0.50              |
| 8:AI:46:ARG:NH2    | 20:AU:37:VAL:HG13 | 2.27                     | 0.50              |
| 8:AI:95:GLU:CD     | 8:AI:95:GLU:N     | 2.69                     | 0.50              |
| 10:AK:26:VAL:O     | 10:AK:58:TYR:HD1  | 1.94                     | 0.50              |
| 10:AK:112:LEU:HD12 | 10:AK:131:GLY:O   | 2.11                     | 0.50              |
| 11:AL:97:LYS:HB3   | 11:AL:98:PRO:CD   | 2.39                     | 0.50              |
| 13:AN:57:THR:HG21  | 13:AN:59:TYR:HB3  | 1.93                     | 0.50              |
| 13:AN:70:LYS:HD2   | 13:AN:70:LYS:H    | 1.77                     | 0.50              |
| 14:AO:102:ARG:NH2  | 14:AO:109:GLY:C   | 2.69                     | 0.50              |
| 15:AP:20:THR:OG1   | 15:AP:26:GLY:HA2  | 2.11                     | 0.50              |
| 15:AP:67:GLU:HG3   | 15:AP:68:GLY:N    | 2.23                     | 0.50              |
| 15:AP:90:LEU:HD23  | 15:AP:93:ARG:HD3  | 1.93                     | 0.50              |
| 17:AR:71:GLN:CG    | 17:AR:75:PRO:HB3  | 2.23                     | 0.50              |
| 18:AS:7:ALA:O      | 18:AS:17:TYR:HA   | 2.11                     | 0.50              |
| 18:AS:75:ARG:CG    | 18:AS:80:PHE:CB   | 2.81                     | 0.50              |
| 19:AT:45:HIS:ND1   | 19:AT:46:ASP:N    | 2.60                     | 0.50              |
| 19:AT:59:ILE:HD11  | 19:AT:71:PHE:C    | 2.36                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 19:AT:88:TYR:N    | 19:AT:91:ARG:NH2   | 2.40                     | 0.50              |
| 20:AU:59:SER:O    | 20:AU:60:GLY:C     | 2.54                     | 0.50              |
| 21:AV:11:VAL:HG22 | 21:AV:39:THR:O     | 2.11                     | 0.50              |
| 24:BA:204:A:O2'   | 24:BA:205:G:O5'    | 2.29                     | 0.50              |
| 24:BA:270(X):G:N3 | 24:BA:270(Y):G:H4' | 2.27                     | 0.50              |
| 24:BA:284:U:H2'   | 24:BA:285:C:C6     | 2.47                     | 0.50              |
| 24:BA:461:C:N4    | 24:BA:469:G:H21    | 2.10                     | 0.50              |
| 24:BA:487:C:O5'   | 24:BA:487:C:H6     | 1.95                     | 0.50              |
| 24:BA:507:A:H1'   | 24:BA:509:C:C4     | 2.47                     | 0.50              |
| 24:BA:553:U:C4    | 24:BA:554:U:C4     | 3.00                     | 0.50              |
| 24:BA:587:C:C4    | 24:BA:671:C:C6     | 3.00                     | 0.50              |
| 24:BA:603:A:N6    | 24:BA:624:C:H41    | 2.06                     | 0.50              |
| 24:BA:609:A:C5    | 24:BA:609(A):G:O6  | 2.64                     | 0.50              |
| 24:BA:673:C:H5''  | 29:BF:81:PRO:HG3   | 1.93                     | 0.50              |
| 24:BA:702:G:H2'   | 24:BA:703:U:C5'    | 2.41                     | 0.50              |
| 24:BA:705:A:N6    | 24:BA:727:A:H1'    | 2.27                     | 0.50              |
| 24:BA:940:G:N3    | 24:BA:1191:G:H4'   | 2.26                     | 0.50              |
| 24:BA:964:C:C2'   | 24:BA:965:C:O5'    | 2.60                     | 0.50              |
| 24:BA:1024:G:OP2  | 24:BA:1026:U:OP1   | 2.30                     | 0.50              |
| 24:BA:1029:A:H61  | 24:BA:1125:G:H2'   | 1.76                     | 0.50              |
| 24:BA:1034:G:OP2  | 55:B8:18:ARG:CZ    | 2.60                     | 0.50              |
| 24:BA:1289:C:H4'  | 24:BA:1330:C:C4'   | 2.41                     | 0.50              |
| 24:BA:1483:G:N9   | 24:BA:1507:A:C2    | 2.80                     | 0.50              |
| 24:BA:1613:G:N2   | 24:BA:1619:G:C8    | 2.76                     | 0.50              |
| 24:BA:1907:G:C4   | 24:BA:1908:C:C5    | 3.00                     | 0.50              |
| 24:BA:1920:C:O2'  | 24:BA:1921:G:H5'   | 2.11                     | 0.50              |
| 24:BA:2029:G:C4   | 24:BA:2031:A:OP1   | 2.65                     | 0.50              |
| 24:BA:2043:C:O2   | 24:BA:2044:C:C6    | 2.65                     | 0.50              |
| 24:BA:2111:C:C4   | 24:BA:2145:C:C4    | 3.00                     | 0.50              |
| 24:BA:2348:U:H2'  | 24:BA:2349:G:C5'   | 2.42                     | 0.50              |
| 24:BA:2356:C:C4   | 24:BA:2357:U:O4    | 2.64                     | 0.50              |
| 24:BA:2394:C:H5'  | 54:B7:12:LYS:HZ1   | 1.77                     | 0.50              |
| 24:BA:2424:C:C5'  | 24:BA:2425:A:H5'   | 2.42                     | 0.50              |
| 24:BA:2516:G:C4   | 24:BA:2569:G:C2    | 2.99                     | 0.50              |
| 24:BA:2623:G:H2'  | 24:BA:2623:G:N3    | 2.26                     | 0.50              |
| 24:BA:2722:G:C2   | 24:BA:2723:C:C2    | 3.00                     | 0.50              |
| 25:BB:47:C:O2'    | 39:BR:92:TYR:CE1   | 2.64                     | 0.50              |
| 25:BB:59:A:N1     | 25:BB:60:C:H1'     | 2.27                     | 0.50              |
| 25:BB:79:C:H2'    | 25:BB:80:U:O4'     | 2.12                     | 0.50              |
| 26:BC:21:THR:HG1  | 26:BC:24:GLU:CD    | 2.19                     | 0.50              |
| 26:BC:49:ILE:HG13 | 26:BC:50:ASP:N     | 2.26                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 26:BC:90:GLY:C     | 26:BC:153:ILE:HG22 | 2.36                     | 0.50              |
| 26:BC:97:GLU:HB3   | 26:BC:126:LYS:HZ3  | 1.75                     | 0.50              |
| 27:BD:89:SER:HB2   | 27:BD:202:LYS:NZ   | 2.26                     | 0.50              |
| 27:BD:200:ASP:O    | 27:BD:201:HIS:C    | 2.54                     | 0.50              |
| 28:BE:176:ILE:HD11 | 28:BE:178:GLU:HB2  | 1.94                     | 0.50              |
| 29:BF:45:ARG:HG2   | 29:BF:97:TYR:CG    | 2.47                     | 0.50              |
| 29:BF:161:GLU:OE2  | 29:BF:161:GLU:HA   | 2.11                     | 0.50              |
| 30:BG:63:ILE:CG2   | 30:BG:64:THR:N     | 2.74                     | 0.50              |
| 30:BG:87:PRO:C     | 30:BG:88:ILE:HG13  | 2.35                     | 0.50              |
| 30:BG:91:ARG:CB    | 30:BG:91:ARG:NH2   | 2.64                     | 0.50              |
| 30:BG:120:LEU:HA   | 30:BG:181:ARG:CB   | 2.42                     | 0.50              |
| 31:BH:105:LEU:HD12 | 31:BH:113:VAL:CG1  | 2.40                     | 0.50              |
| 32:BK:5:LEU:C      | 32:BK:8:PRO:HD2    | 2.37                     | 0.50              |
| 33:BL:27:LEU:CD2   | 33:BL:57:ILE:HD11  | 2.41                     | 0.50              |
| 33:BL:90:LYS:HZ2   | 33:BL:93:ARG:HH22  | 1.59                     | 0.50              |
| 34:BM:87:LEU:HD23  | 34:BM:88:GLU:N     | 2.27                     | 0.50              |
| 34:BM:97:ARG:CA    | 34:BM:100:GLU:HG2  | 2.32                     | 0.50              |
| 35:BN:9:GLU:CA     | 35:BN:17:ARG:O     | 2.57                     | 0.50              |
| 36:BO:97:PRO:O     | 36:BO:98:GLU:C     | 2.53                     | 0.50              |
| 36:BO:115:LEU:O    | 36:BO:117:GLU:OE1  | 2.28                     | 0.50              |
| 36:BO:130:PHE:C    | 36:BO:131:SER:O    | 2.53                     | 0.50              |
| 36:BO:131:SER:O    | 36:BO:135:LEU:HD13 | 2.11                     | 0.50              |
| 37:BP:6:ARG:C      | 37:BP:6:ARG:CD     | 2.82                     | 0.50              |
| 37:BP:44:ALA:CB    | 37:BP:93:TYR:O     | 2.58                     | 0.50              |
| 37:BP:85:LYS:NZ    | 47:BZ:10:THR:CG2   | 2.74                     | 0.50              |
| 37:BP:85:LYS:CG    | 37:BP:86:GLY:N     | 2.73                     | 0.50              |
| 39:BR:69:VAL:CG1   | 39:BR:73:LEU:HD21  | 2.41                     | 0.50              |
| 40:BS:53:ARG:O     | 40:BS:100:TYR:CD2  | 2.64                     | 0.50              |
| 41:BT:46:ALA:CA    | 41:BT:49:HIS:ND1   | 2.75                     | 0.50              |
| 41:BT:83:LEU:H     | 41:BT:83:LEU:CD1   | 2.16                     | 0.50              |
| 42:BU:60:GLU:OE1   | 42:BU:101:GLY:CA   | 2.60                     | 0.50              |
| 45:BX:1:MET:HG2    | 45:BX:33:LYS:CG    | 2.41                     | 0.50              |
| 50:B3:54:GLY:O     | 50:B3:55:ARG:CB    | 2.59                     | 0.50              |
| 51:B4:47:PRO:HG2   | 51:B4:48:GLU:OE1   | 2.11                     | 0.50              |
| 52:B5:25:LYS:O     | 52:B5:26:ASN:CG    | 2.54                     | 0.50              |
| 54:B7:37:SER:OG    | 54:B7:38:GLY:N     | 2.43                     | 0.50              |
| 1:AA:5:U:O2'       | 1:AA:6:G:P         | 2.70                     | 0.50              |
| 1:AA:102:G:H2'     | 1:AA:103:C:O4'     | 2.12                     | 0.50              |
| 1:AA:393:A:C6      | 1:AA:394:G:N7      | 2.80                     | 0.50              |
| 1:AA:430:A:N7      | 1:AA:431:A:N7      | 2.60                     | 0.50              |
| 1:AA:433:C:H2'     | 1:AA:434:U:C6      | 2.47                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:446:G:O2'    | 1:AA:447:G:H5'     | 2.11                     | 0.50              |
| 1:AA:749:C:O2     | 1:AA:749:C:C2'     | 2.59                     | 0.50              |
| 1:AA:831:U:C2     | 1:AA:832:C:C5      | 2.99                     | 0.50              |
| 1:AA:1054:C:H41   | 3:AB:34:G:HO2'     | 1.57                     | 0.50              |
| 1:AA:1196:U:C6    | 1:AA:1196:U:C3'    | 2.94                     | 0.50              |
| 1:AA:1224:G:C2'   | 1:AA:1225:A:OP1    | 2.60                     | 0.50              |
| 1:AA:1284:C:C2    | 1:AA:1285:A:N7     | 2.79                     | 0.50              |
| 1:AA:1302:U:O2'   | 1:AA:1303:C:OP1    | 2.24                     | 0.50              |
| 1:AA:1314:C:N4    | 21:AV:4:SER:OG     | 2.45                     | 0.50              |
| 1:AA:1377:A:C5'   | 1:AA:1378:C:C5     | 2.95                     | 0.50              |
| 2:A1:22:C:H2'     | 2:A1:23:A:N9       | 2.26                     | 0.50              |
| 3:AC:23:A:N6      | 3:AC:24:G:O6       | 2.45                     | 0.50              |
| 3:AD:50:U:H2'     | 3:AD:51:U:C6       | 2.47                     | 0.50              |
| 3:AD:54:U:OP2     | 3:AD:55:U:O4       | 2.29                     | 0.50              |
| 4:AE:19:HIS:C     | 4:AE:39:ILE:HD11   | 2.37                     | 0.50              |
| 4:AE:67:THR:CG2   | 4:AE:155:LEU:HD21  | 2.42                     | 0.50              |
| 4:AE:171:ALA:HA   | 4:AE:174:VAL:CB    | 2.40                     | 0.50              |
| 4:AE:179:LYS:O    | 4:AE:180:LEU:C     | 2.53                     | 0.50              |
| 5:AF:76:VAL:CG1   | 5:AF:77:ILE:N      | 2.74                     | 0.50              |
| 6:AG:24:GLU:C     | 6:AG:24:GLU:OE2    | 2.55                     | 0.50              |
| 6:AG:64:LEU:CD1   | 6:AG:75:PHE:CZ     | 2.95                     | 0.50              |
| 6:AG:98:GLU:CA    | 6:AG:103:ASN:ND2   | 2.68                     | 0.50              |
| 6:AG:139:ARG:CG   | 6:AG:140:VAL:N     | 2.74                     | 0.50              |
| 6:AG:165:MET:HG3  | 6:AG:166:LYS:N     | 2.26                     | 0.50              |
| 6:AG:187:ARG:CD   | 6:AG:188:LEU:H     | 2.24                     | 0.50              |
| 8:AI:1:MET:HA     | 8:AI:67:MET:O      | 2.11                     | 0.50              |
| 9:AJ:79:ARG:HA    | 9:AJ:83:ALA:O      | 2.11                     | 0.50              |
| 9:AJ:79:ARG:NE    | 9:AJ:84:ASN:HB3    | 2.27                     | 0.50              |
| 9:AJ:139:GLU:H    | 9:AJ:139:GLU:CD    | 2.20                     | 0.50              |
| 11:AL:5:TYR:CZ    | 11:AL:18:PHE:CZ    | 2.99                     | 0.50              |
| 11:AL:20:ARG:O    | 11:AL:21:PRO:C     | 2.53                     | 0.50              |
| 11:AL:67:GLY:O    | 11:AL:68:GLY:C     | 2.54                     | 0.50              |
| 11:AL:69:GLY:O    | 11:AL:70:LYS:C     | 2.55                     | 0.50              |
| 12:AM:19:SER:CA   | 12:AM:91:PRO:HG3   | 2.41                     | 0.50              |
| 13:AN:18:ARG:HB2  | 13:AN:20:TYR:CE1   | 2.44                     | 0.50              |
| 13:AN:79:SER:HA   | 13:AN:104:GLN:HE21 | 1.76                     | 0.50              |
| 13:AN:85:ARG:NE   | 13:AN:111:ASP:OD2  | 2.45                     | 0.50              |
| 14:AO:39:VAL:HG11 | 14:AO:41:ARG:NH2   | 2.26                     | 0.50              |
| 15:AP:88:ARG:CG   | 15:AP:98:VAL:HG12  | 2.27                     | 0.50              |
| 16:AQ:28:GLY:O    | 16:AQ:29:ARG:C     | 2.54                     | 0.50              |
| 17:AR:4:THR:HG22  | 17:AR:6:GLU:OE1    | 2.12                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 18:AS:34:GLU:CD  | 18:AS:35:LYS:N     | 2.70                     | 0.50              |
| 19:AT:2:PRO:O    | 19:AT:4:LYS:N      | 2.45                     | 0.50              |
| 19:AT:7:THR:CG2  | 19:AT:57:VAL:O     | 2.58                     | 0.50              |
| 19:AT:12:SER:OG  | 19:AT:14:LYS:HD2   | 2.11                     | 0.50              |
| 22:AW:91:LEU:C   | 22:AW:93:GLU:H     | 2.20                     | 0.50              |
| 24:BA:109:G:C6   | 24:BA:110:G:C8     | 3.00                     | 0.50              |
| 24:BA:154:G:N2   | 24:BA:173:G:C2     | 2.80                     | 0.50              |
| 24:BA:193:U:H4'  | 24:BA:803:U:C5'    | 2.42                     | 0.50              |
| 24:BA:303:U:C2   | 24:BA:304:G:C8     | 3.00                     | 0.50              |
| 24:BA:311:A:C1'  | 24:BA:332:A:C5     | 2.94                     | 0.50              |
| 24:BA:439:G:H2'  | 24:BA:440:G:O4'    | 2.12                     | 0.50              |
| 24:BA:447:A:C6   | 24:BA:473:G:N9     | 2.79                     | 0.50              |
| 24:BA:571:A:N3   | 24:BA:573:G:N7     | 2.60                     | 0.50              |
| 24:BA:588:U:O2'  | 24:BA:589:C:H5'    | 2.11                     | 0.50              |
| 24:BA:627:A:N6   | 24:BA:637:A:H1'    | 2.26                     | 0.50              |
| 24:BA:724:U:C2   | 24:BA:725:G:C8     | 3.00                     | 0.50              |
| 24:BA:764:A:OP1  | 27:BD:211:ARG:CA   | 2.57                     | 0.50              |
| 24:BA:778:G:N2   | 24:BA:787:U:H1'    | 2.26                     | 0.50              |
| 24:BA:909:A:C2   | 24:BA:912:C:C1'    | 2.95                     | 0.50              |
| 24:BA:917:A:N6   | 24:BA:918:A:N1     | 2.60                     | 0.50              |
| 24:BA:969:U:N3   | 24:BA:970:C:C5     | 2.79                     | 0.50              |
| 24:BA:972:G:H3'  | 24:BA:973:A:C5'    | 2.41                     | 0.50              |
| 24:BA:974:G:P    | 24:BA:974(A):C:OP2 | 2.69                     | 0.50              |
| 24:BA:1077:A:OP1 | 33:BL:93:ARG:HB2   | 2.12                     | 0.50              |
| 24:BA:1110:G:O3' | 24:BA:1111:A:O4'   | 2.29                     | 0.50              |
| 24:BA:1115:G:N3  | 24:BA:1115:G:C2'   | 2.73                     | 0.50              |
| 24:BA:1158:C:H5' | 49:B2:31:LEU:HB2   | 1.94                     | 0.50              |
| 24:BA:1241:A:C2' | 24:BA:1242:A:OP1   | 2.60                     | 0.50              |
| 24:BA:1272:A:H5' | 24:BA:1646:C:C2    | 2.46                     | 0.50              |
| 24:BA:1321:A:N3  | 24:BA:1321:A:C2'   | 2.74                     | 0.50              |
| 24:BA:1326:U:C3' | 24:BA:1327:C:H5'   | 2.42                     | 0.50              |
| 24:BA:1331:A:O2' | 24:BA:1332:G:C8    | 2.65                     | 0.50              |
| 24:BA:1379:A:OP2 | 53:B6:10:ARG:NH2   | 2.39                     | 0.50              |
| 24:BA:1439:A:H2' | 24:BA:1440:G:O4'   | 2.12                     | 0.50              |
| 24:BA:1485:G:O2' | 24:BA:1486:A:H5'   | 2.11                     | 0.50              |
| 24:BA:1511:A:H2' | 24:BA:1512:G:C4'   | 2.41                     | 0.50              |
| 24:BA:1517:G:N2  | 24:BA:1518:C:H1'   | 2.23                     | 0.50              |
| 24:BA:1525:G:C2  | 24:BA:1526:G:C4    | 3.00                     | 0.50              |
| 24:BA:1527:G:H3' | 24:BA:1527:G:H8    | 1.71                     | 0.50              |
| 24:BA:1636:C:C1' | 24:BA:1761:C:H1'   | 2.41                     | 0.50              |
| 24:BA:1638:C:O5' | 24:BA:1638:C:H6    | 1.95                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 24:BA:1742:C:C3' | 24:BA:1743:G:H5''  | 2.38                     | 0.50              |
| 24:BA:1809:A:C5' | 24:BA:1810:A:C2    | 2.88                     | 0.50              |
| 24:BA:1819:A:OP1 | 27:BD:158:ALA:N    | 2.44                     | 0.50              |
| 24:BA:1838:C:H5' | 24:BA:1839:G:OP1   | 2.11                     | 0.50              |
| 24:BA:1861:G:H5' | 26:BC:205:LYS:HD2  | 1.92                     | 0.50              |
| 24:BA:1917:U:C6  | 24:BA:1917:U:C3'   | 2.93                     | 0.50              |
| 24:BA:1964:G:C4  | 24:BA:1967:C:H5    | 2.29                     | 0.50              |
| 24:BA:2014:A:H2  | 24:BA:2613:U:C2    | 2.29                     | 0.50              |
| 24:BA:2047:U:C2  | 24:BA:2048:G:N7    | 2.79                     | 0.50              |
| 24:BA:2211:G:OP1 | 24:BA:2212:A:C5'   | 2.59                     | 0.50              |
| 24:BA:2306:C:H5  | 24:BA:2311:A:C6    | 2.30                     | 0.50              |
| 24:BA:2344:U:O2  | 24:BA:2344:U:C3'   | 2.58                     | 0.50              |
| 24:BA:2356:C:C4  | 24:BA:2357:U:C4    | 2.99                     | 0.50              |
| 24:BA:2376:A:OP1 | 24:BA:2376:A:C8    | 2.61                     | 0.50              |
| 24:BA:2638:G:N1  | 24:BA:2776:A:OP2   | 2.37                     | 0.50              |
| 24:BA:2692:C:O2' | 24:BA:2693:A:H5'   | 2.11                     | 0.50              |
| 24:BA:2771:C:H2' | 24:BA:2772:C:H6    | 1.75                     | 0.50              |
| 24:BA:2876:G:OP1 | 40:BS:2:ASN:HB2    | 2.11                     | 0.50              |
| 25:BB:7:G:HO2'   | 25:BB:8:U:P        | 2.34                     | 0.50              |
| 25:BB:43:C:O5'   | 25:BB:43:C:C6      | 2.48                     | 0.50              |
| 26:BC:6:ARG:C    | 26:BC:8:ARG:H      | 2.17                     | 0.50              |
| 26:BC:64:LEU:HB3 | 26:BC:188:ASN:HD21 | 1.74                     | 0.50              |
| 27:BD:53:PHE:CE2 | 27:BD:221:VAL:HG13 | 2.46                     | 0.50              |
| 27:BD:181:GLU:CB | 27:BD:268:ARG:NE   | 2.75                     | 0.50              |
| 28:BE:8:LYS:HG3  | 40:BS:6:LEU:HD11   | 1.92                     | 0.50              |
| 28:BE:136:ARG:C  | 28:BE:137:HIS:CG   | 2.86                     | 0.50              |
| 28:BE:154:LYS:NZ | 28:BE:156:MET:CB   | 2.71                     | 0.50              |
| 29:BF:93:LYS:O   | 29:BF:94:PRO:C     | 2.54                     | 0.50              |
| 31:BH:119:GLU:HA | 31:BH:119:GLU:OE2  | 2.12                     | 0.50              |
| 32:BK:125:GLU:C  | 32:BK:125:GLU:CD   | 2.79                     | 0.50              |
| 34:BM:67:LEU:N   | 34:BM:69:GLN:OE1   | 2.45                     | 0.50              |
| 34:BM:115:ARG:HA | 34:BM:118:LYS:CE   | 2.41                     | 0.50              |
| 36:BO:40:SER:O   | 36:BO:40:SER:OG    | 2.28                     | 0.50              |
| 36:BO:70:GLN:CB  | 36:BO:110:TYR:OH   | 2.60                     | 0.50              |
| 37:BP:30:GLY:O   | 37:BP:31:ASP:HB2   | 2.12                     | 0.50              |
| 39:BR:27:SER:O   | 39:BR:28:VAL:O     | 2.30                     | 0.50              |
| 39:BR:37:ALA:H   | 39:BR:51:ALA:HB3   | 1.76                     | 0.50              |
| 39:BR:57:LYS:NZ  | 39:BR:65:VAL:N     | 2.60                     | 0.50              |
| 39:BR:57:LYS:HD3 | 39:BR:57:LYS:C     | 2.37                     | 0.50              |
| 40:BS:26:ASP:HA  | 40:BS:100:TYR:HH   | 1.77                     | 0.50              |
| 40:BS:68:TYR:CE1 | 40:BS:70:VAL:HA    | 2.47                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 40:BS:103:ARG:O   | 40:BS:105:LEU:C   | 2.55                     | 0.50              |
| 41:BT:94:ASN:O    | 41:BT:97:ASP:N    | 2.44                     | 0.50              |
| 41:BT:113:ALA:HA  | 41:BT:116:ALA:CB  | 2.42                     | 0.50              |
| 42:BU:89:GLN:HG2  | 42:BU:91:TYR:CE1  | 2.47                     | 0.50              |
| 43:BV:64:MET:HB3  | 43:BV:109:GLU:HG3 | 1.94                     | 0.50              |
| 44:BW:3:THR:O     | 44:BW:4:ALA:HB3   | 2.11                     | 0.50              |
| 45:BX:46:LYS:NZ   | 45:BX:49:VAL:CG2  | 2.74                     | 0.50              |
| 46:BY:6:LYS:HE3   | 46:BY:35:ARG:HG3  | 1.93                     | 0.50              |
| 46:BY:102:LEU:HG  | 46:BY:125:LEU:CD1 | 2.42                     | 0.50              |
| 50:B3:68:ARG:HB2  | 50:B3:68:ARG:CZ   | 2.42                     | 0.50              |
| 52:B5:19:ARG:NH2  | 52:B5:41:PRO:HG3  | 2.27                     | 0.50              |
| 52:B5:27:LYS:HE3  | 52:B5:29:ASN:HD21 | 1.77                     | 0.50              |
| 54:B7:54:GLU:O    | 54:B7:55:ALA:C    | 2.55                     | 0.50              |
| 1:AA:156:G:C6     | 1:AA:157:G:N7     | 2.80                     | 0.50              |
| 1:AA:254:G:C6     | 1:AA:273:A:C6     | 3.00                     | 0.50              |
| 1:AA:451:A:OP1    | 1:AA:481:G:N1     | 2.43                     | 0.50              |
| 1:AA:465:A:N6     | 1:AA:467:G:N3     | 2.60                     | 0.50              |
| 1:AA:532:A:H5''   | 5:AF:161:GLU:OE1  | 2.11                     | 0.50              |
| 1:AA:652:U:C2     | 1:AA:752:G:N2     | 2.79                     | 0.50              |
| 1:AA:696:A:N6     | 1:AA:797:C:O2'    | 2.43                     | 0.50              |
| 1:AA:778:G:C4     | 1:AA:779:C:C6     | 3.00                     | 0.50              |
| 1:AA:833:U:C2     | 1:AA:834:C:H5     | 2.30                     | 0.50              |
| 1:AA:957:U:H2'    | 1:AA:959:A:OP2    | 2.11                     | 0.50              |
| 1:AA:999:U:C4     | 1:AA:1042:G:N1    | 2.80                     | 0.50              |
| 1:AA:1058:G:C2'   | 1:AA:1059:C:H5'   | 2.42                     | 0.50              |
| 1:AA:1094:G:H3'   | 1:AA:1108:G:N2    | 2.27                     | 0.50              |
| 1:AA:1113:C:H2'   | 1:AA:1114:C:H6    | 1.77                     | 0.50              |
| 1:AA:1160:G:O6    | 1:AA:1177:G:N2    | 2.44                     | 0.50              |
| 1:AA:1191:A:H5''  | 5:AF:4:LYS:HD3    | 1.94                     | 0.50              |
| 1:AA:1365:G:N1    | 1:AA:1366:C:C4    | 2.80                     | 0.50              |
| 1:AA:1379:G:C5    | 1:AA:1380:U:C5    | 3.00                     | 0.50              |
| 1:AA:1463:C:C2'   | 1:AA:1464:G:H5'   | 2.41                     | 0.50              |
| 2:A1:41:U:H2'     | 2:A1:42:U:O4'     | 2.12                     | 0.50              |
| 2:A1:51:U:O2'     | 2:A1:52:U:H5'     | 2.10                     | 0.50              |
| 3:AC:38:A:C2'     | 3:AC:39:U:H5'     | 2.42                     | 0.50              |
| 4:AE:157:ARG:C    | 4:AE:158:LEU:CD2  | 2.81                     | 0.50              |
| 4:AE:177:ALA:O    | 4:AE:179:LYS:N    | 2.45                     | 0.50              |
| 4:AE:178:ARG:O    | 10:AK:71:GLY:O    | 2.30                     | 0.50              |
| 4:AE:208:ILE:HG21 | 4:AE:239:VAL:CG1  | 2.37                     | 0.50              |
| 5:AF:11:ARG:HH22  | 5:AF:178:LEU:HA   | 1.77                     | 0.50              |
| 5:AF:11:ARG:HH11  | 5:AF:15:THR:HG21  | 1.77                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 5:AF:31:HIS:CE1   | 5:AF:34:LEU:HD13  | 2.47                     | 0.50              |
| 5:AF:47:LEU:HD22  | 5:AF:47:LEU:N     | 2.27                     | 0.50              |
| 6:AG:187:ARG:HH21 | 6:AG:188:LEU:HD11 | 1.77                     | 0.50              |
| 7:AH:122:GLU:HG2  | 7:AH:126:ARG:CG   | 2.41                     | 0.50              |
| 8:AI:53:ALA:O     | 8:AI:55:ASP:CG    | 2.55                     | 0.50              |
| 10:AK:69:ARG:O    | 10:AK:74:PRO:HA   | 2.10                     | 0.50              |
| 11:AL:45:ALA:O    | 11:AL:78:LYS:CB   | 2.58                     | 0.50              |
| 13:AN:13:GLN:CA   | 13:AN:76:GLY:HA3  | 2.42                     | 0.50              |
| 13:AN:63:LEU:HA   | 13:AN:66:LEU:CG   | 2.41                     | 0.50              |
| 13:AN:90:GLY:C    | 13:AN:92:GLU:N    | 2.67                     | 0.50              |
| 13:AN:102:GLY:O   | 13:AN:104:GLN:N   | 2.45                     | 0.50              |
| 14:AO:69:TYR:O    | 14:AO:71:PRO:CD   | 2.59                     | 0.50              |
| 14:AO:85:ILE:CG1  | 14:AO:99:HIS:O    | 2.60                     | 0.50              |
| 14:AO:89:ARG:NE   | 14:AO:97:ARG:HG3  | 2.25                     | 0.50              |
| 16:AQ:26:ARG:HB3  | 16:AQ:43:CYS:HB3  | 1.94                     | 0.50              |
| 17:AR:24:SER:O    | 17:AR:25:THR:C    | 2.55                     | 0.50              |
| 17:AR:62:GLN:N    | 17:AR:65:ARG:HH12 | 2.10                     | 0.50              |
| 20:AU:60:GLY:O    | 20:AU:64:ARG:HG3  | 2.11                     | 0.50              |
| 21:AV:24:ALA:C    | 21:AV:26:GLY:N    | 2.70                     | 0.50              |
| 21:AV:58:VAL:HG23 | 21:AV:58:VAL:O    | 2.11                     | 0.50              |
| 21:AV:58:VAL:HG21 | 21:AV:75:ALA:CB   | 2.41                     | 0.50              |
| 24:BA:149:A:N7    | 24:BA:150:C:N1    | 2.60                     | 0.50              |
| 24:BA:233:A:H2'   | 24:BA:234:C:H5'   | 1.92                     | 0.50              |
| 24:BA:283:A:H2'   | 24:BA:284:U:H5'   | 1.93                     | 0.50              |
| 24:BA:408:G:N3    | 24:BA:409:C:C6    | 2.79                     | 0.50              |
| 24:BA:450:G:O6    | 24:BA:453:C:P     | 2.69                     | 0.50              |
| 24:BA:452:G:C2    | 24:BA:458:G:N2    | 2.79                     | 0.50              |
| 24:BA:459:U:O5'   | 53:B6:40:TRP:CZ3  | 2.65                     | 0.50              |
| 24:BA:571:A:C5    | 24:BA:2030:A:C6   | 3.00                     | 0.50              |
| 24:BA:593:G:C5    | 24:BA:594:U:C5    | 3.00                     | 0.50              |
| 24:BA:627:A:P     | 24:BA:637:A:N6    | 2.85                     | 0.50              |
| 24:BA:653:A:H3'   | 24:BA:654:A:C4'   | 2.41                     | 0.50              |
| 24:BA:733:G:H5''  | 24:BA:761:A:H61   | 1.76                     | 0.50              |
| 24:BA:748:G:OP1   | 43:BV:88:ARG:CD   | 2.60                     | 0.50              |
| 24:BA:774:A:C5'   | 24:BA:778:G:H4'   | 2.41                     | 0.50              |
| 24:BA:813:U:C4    | 36:BO:25:SER:HB3  | 2.47                     | 0.50              |
| 24:BA:823:G:H5'   | 24:BA:824:A:OP2   | 2.11                     | 0.50              |
| 24:BA:918:A:H2    | 24:BA:919:G:C4    | 2.30                     | 0.50              |
| 24:BA:957:A:H4'   | 24:BA:958:U:OP2   | 2.04                     | 0.50              |
| 24:BA:1007:C:H4'  | 34:BM:108:PRO:CD  | 2.41                     | 0.50              |
| 24:BA:1020:A:O2'  | 24:BA:1021:A:N7   | 2.43                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1176:G:C8    | 24:BA:1177:A:O4'   | 2.65                     | 0.50              |
| 24:BA:1203:G:O6    | 24:BA:1240:U:N1    | 2.35                     | 0.50              |
| 24:BA:1231:G:C4    | 24:BA:1232:G:C8    | 3.00                     | 0.50              |
| 24:BA:1373:A:C8    | 24:BA:1374:G:N7    | 2.80                     | 0.50              |
| 24:BA:1444(A):A:N7 | 24:BA:1460:A:H2'   | 2.27                     | 0.50              |
| 24:BA:1451:C:H5''  | 24:BA:1453:A:H4'   | 1.93                     | 0.50              |
| 24:BA:1453:A:C2    | 24:BA:1454:U:H1'   | 2.47                     | 0.50              |
| 24:BA:1582:C:C2    | 24:BA:1583:A:N7    | 2.80                     | 0.50              |
| 24:BA:1804:C:O3'   | 27:BD:250:TRP:CH2  | 2.64                     | 0.50              |
| 24:BA:1820:U:C5    | 27:BD:159:ALA:C    | 2.89                     | 0.50              |
| 24:BA:1833:U:O2    | 24:BA:1834:U:O2    | 2.28                     | 0.50              |
| 24:BA:1939:U:O4    | 24:BA:1967:C:H1'   | 2.11                     | 0.50              |
| 24:BA:2014:A:O5'   | 24:BA:2014:A:C8    | 2.61                     | 0.50              |
| 24:BA:2257:U:H5'   | 47:BZ:11:ARG:HD3   | 1.92                     | 0.50              |
| 24:BA:2277:G:C6    | 24:BA:2278:A:N7    | 2.79                     | 0.50              |
| 24:BA:2336:A:O2'   | 24:BA:2385:C:O4'   | 2.29                     | 0.50              |
| 24:BA:2417:C:C2    | 24:BA:2418:A:N7    | 2.79                     | 0.50              |
| 24:BA:2469:A:C6    | 24:BA:2482:G:C8    | 3.00                     | 0.50              |
| 24:BA:2491:U:C5    | 24:BA:2492:U:H5'   | 2.41                     | 0.50              |
| 24:BA:2681:C:C5    | 24:BA:2727:G:C2    | 2.99                     | 0.50              |
| 24:BA:2695:C:HO2'  | 24:BA:2696:U:H6    | 1.57                     | 0.50              |
| 24:BA:2764:A:N7    | 24:BA:2766:G:O6    | 2.45                     | 0.50              |
| 25:BB:75:G:N2      | 46:BY:27:VAL:HG21  | 2.26                     | 0.50              |
| 25:BB:104:A:H62    | 25:BB:105:G:N2     | 2.09                     | 0.50              |
| 26:BC:71:GLN:CG    | 26:BC:72:VAL:N     | 2.75                     | 0.50              |
| 26:BC:97:GLU:OE1   | 26:BC:122:ALA:CB   | 2.60                     | 0.50              |
| 27:BD:96:HIS:NE2   | 27:BD:102:LYS:CE   | 2.74                     | 0.50              |
| 27:BD:177:LEU:O    | 27:BD:178:PRO:O    | 2.30                     | 0.50              |
| 28:BE:111:ARG:HB2  | 28:BE:160:TYR:C    | 2.37                     | 0.50              |
| 28:BE:201:THR:O    | 28:BE:202:LYS:HB3  | 2.11                     | 0.50              |
| 29:BF:3:GLU:O      | 29:BF:3:GLU:CD     | 2.54                     | 0.50              |
| 29:BF:110:LEU:HD23 | 29:BF:186:ILE:CD1  | 2.41                     | 0.50              |
| 29:BF:125:LEU:HD13 | 29:BF:128:ALA:HB2  | 1.93                     | 0.50              |
| 30:BG:30:GLU:HB3   | 30:BG:162:THR:HB   | 1.93                     | 0.50              |
| 30:BG:33:ARG:HH21  | 30:BG:33:ARG:C     | 2.20                     | 0.50              |
| 31:BH:69:ARG:HG3   | 31:BH:70:THR:HG23  | 1.93                     | 0.50              |
| 31:BH:114:VAL:O    | 31:BH:114:VAL:HG13 | 2.11                     | 0.50              |
| 31:BH:159:GLU:O    | 31:BH:160:LYS:HB2  | 2.11                     | 0.50              |
| 32:BK:96:ASP:O     | 32:BK:97:ILE:C     | 2.54                     | 0.50              |
| 34:BM:99:LEU:O     | 34:BM:100:GLU:C    | 2.53                     | 0.50              |
| 35:BN:36:GLY:H     | 35:BN:61:VAL:HG12  | 1.76                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 35:BN:111:PHE:O    | 35:BN:114:ILE:N    | 2.44                     | 0.50              |
| 36:BO:7:ARG:H      | 36:BO:8:PRO:CD     | 2.24                     | 0.50              |
| 36:BO:88:LEU:HD21  | 36:BO:124:LYS:HZ1  | 1.76                     | 0.50              |
| 37:BP:6:ARG:CZ     | 37:BP:8:LYS:H      | 2.25                     | 0.50              |
| 37:BP:61:GLY:O     | 46:BY:177:PRO:O    | 2.30                     | 0.50              |
| 38:BQ:53:HIS:CD2   | 38:BQ:56:LYS:NZ    | 2.80                     | 0.50              |
| 38:BQ:58:GLY:CA    | 38:BQ:80:PHE:CZ    | 2.94                     | 0.50              |
| 39:BR:33:LYS:HE2   | 39:BR:54:LEU:CD2   | 2.35                     | 0.50              |
| 40:BS:49:VAL:O     | 40:BS:50:ILE:HG12  | 2.11                     | 0.50              |
| 40:BS:63:VAL:C     | 40:BS:64:ARG:NH1   | 2.69                     | 0.50              |
| 40:BS:110:ILE:CD1  | 40:BS:113:LYS:HE3  | 2.41                     | 0.50              |
| 41:BT:42:ALA:O     | 41:BT:45:TYR:HB2   | 2.11                     | 0.50              |
| 41:BT:81:HIS:CB    | 41:BT:117:GLN:HE22 | 2.25                     | 0.50              |
| 41:BT:102:GLU:O    | 41:BT:105:VAL:CB   | 2.59                     | 0.50              |
| 43:BV:20:VAL:CG1   | 43:BV:21:VAL:H     | 2.24                     | 0.50              |
| 45:BX:69:ALA:O     | 45:BX:71:LYS:HD2   | 2.11                     | 0.50              |
| 46:BY:31:ARG:O     | 46:BY:31:ARG:CZ    | 2.60                     | 0.50              |
| 46:BY:105:VAL:HG12 | 46:BY:107:THR:HG23 | 1.94                     | 0.50              |
| 46:BY:111:VAL:HG21 | 46:BY:117:LEU:HG   | 1.92                     | 0.50              |
| 49:B2:6:VAL:CG1    | 49:B2:55:ARG:O     | 2.52                     | 0.50              |
| 49:B2:31:LEU:HD12  | 49:B2:32:GLN:CD    | 2.37                     | 0.50              |
| 54:B7:8:LYS:NZ     | 54:B7:11:LYS:HZ2   | 2.08                     | 0.50              |
| 55:B8:13:LYS:NZ    | 55:B8:13:LYS:HB3   | 2.27                     | 0.50              |
| 1:AA:35:G:C6       | 1:AA:550:G:N1      | 2.80                     | 0.50              |
| 1:AA:363:A:N7      | 14:AO:31:PRO:HD2   | 2.25                     | 0.50              |
| 1:AA:404:U:O4'     | 6:AG:122:ARG:NH1   | 2.45                     | 0.50              |
| 1:AA:429:U:O2      | 1:AA:430:A:C8      | 2.65                     | 0.50              |
| 1:AA:571:U:OP1     | 1:AA:819:A:C8      | 2.65                     | 0.50              |
| 1:AA:580:U:C4'     | 17:AR:58:MET:HG2   | 2.42                     | 0.50              |
| 1:AA:598:U:O2'     | 1:AA:599:C:H5'     | 2.12                     | 0.50              |
| 1:AA:615:C:H2'     | 1:AA:616:G:O4'     | 2.11                     | 0.50              |
| 1:AA:676:A:C4      | 1:AA:677:U:C5      | 2.99                     | 0.50              |
| 1:AA:1204:A:C2'    | 1:AA:1205:U:H5'    | 2.41                     | 0.50              |
| 1:AA:1229:A:O2'    | 1:AA:1230:C:O4'    | 2.29                     | 0.50              |
| 1:AA:1237:C:H5''   | 1:AA:1238:A:C8     | 2.47                     | 0.50              |
| 1:AA:1300:G:HO2'   | 1:AA:1301:U:H6     | 1.59                     | 0.50              |
| 2:A1:28:G:C2'      | 2:A1:29:G:H5'      | 2.41                     | 0.50              |
| 3:AC:34:G:C4       | 3:AC:35:A:N7       | 2.80                     | 0.50              |
| 3:AD:56:C:N4       | 24:BA:2169:A:C2    | 2.80                     | 0.50              |
| 3:AB:41:C:H6       | 3:AB:41:C:H5'      | 1.75                     | 0.50              |
| 4:AE:163:PHE:CE1   | 4:AE:201:ILE:HD13  | 2.45                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 5:AF:30:ARG:H       | 5:AF:30:ARG:CD     | 2.23                     | 0.50              |
| 6:AG:108:LEU:HD12   | 6:AG:183:GLY:HA3   | 1.93                     | 0.50              |
| 7:AH:71:LEU:HG      | 7:AH:72:GLN:H      | 1.77                     | 0.50              |
| 7:AH:114:GLY:C      | 7:AH:115:VAL:HG13  | 2.36                     | 0.50              |
| 8:AI:52:ILE:CG2     | 8:AI:87:ARG:HH22   | 2.25                     | 0.50              |
| 9:AJ:3:ARG:C        | 9:AJ:4:ARG:HG2     | 2.36                     | 0.50              |
| 9:AJ:68:ASN:ND2     | 9:AJ:128:ALA:HA    | 2.27                     | 0.50              |
| 9:AJ:147:ALA:C      | 9:AJ:149:ARG:H     | 2.19                     | 0.50              |
| 12:AM:57:LYS:O      | 12:AM:57:LYS:HG2   | 2.11                     | 0.50              |
| 13:AN:22:HIS:O      | 13:AN:28:THR:HG23  | 2.12                     | 0.50              |
| 13:AN:62:GLN:OE1    | 13:AN:63:LEU:N     | 2.45                     | 0.50              |
| 13:AN:63:LEU:HA     | 13:AN:66:LEU:CD1   | 2.41                     | 0.50              |
| 14:AO:41:ARG:NH1    | 14:AO:41:ARG:CB    | 2.70                     | 0.50              |
| 15:AP:3:ARG:HH22    | 30:BG:139:LEU:HD22 | 1.76                     | 0.50              |
| 15:AP:96:LEU:HD23   | 15:AP:96:LEU:N     | 2.27                     | 0.50              |
| 18:AS:52:ASP:OD2    | 18:AS:55:ARG:N     | 2.45                     | 0.50              |
| 19:AT:3:LYS:O       | 19:AT:4:LYS:C      | 2.54                     | 0.50              |
| 20:AU:83:GLU:HA     | 20:AU:83:GLU:OE1   | 2.09                     | 0.50              |
| 21:AV:29:ARG:HG2    | 21:AV:48:THR:CB    | 2.42                     | 0.50              |
| 21:AV:39:THR:O      | 21:AV:39:THR:HG22  | 2.11                     | 0.50              |
| 21:AV:40:ILE:HB     | 21:AV:68:GLY:HA2   | 1.94                     | 0.50              |
| 24:BA:13:A:HO2'     | 24:BA:14:A:P       | 2.35                     | 0.50              |
| 24:BA:112:U:OP2     | 24:BA:112:U:H6     | 1.93                     | 0.50              |
| 24:BA:120:U:C2'     | 24:BA:149:A:N3     | 2.75                     | 0.50              |
| 24:BA:271(B):G:H5'' | 24:BA:271(C):U:H5' | 1.92                     | 0.50              |
| 24:BA:311:A:C2      | 24:BA:328:U:O4     | 2.64                     | 0.50              |
| 24:BA:379:G:O6      | 24:BA:380:U:C4     | 2.65                     | 0.50              |
| 24:BA:448:U:O4      | 24:BA:583:G:C4     | 2.65                     | 0.50              |
| 24:BA:530:G:N2      | 24:BA:2021:C:H3'   | 2.19                     | 0.50              |
| 24:BA:588:U:C1'     | 29:BF:90:PHE:CD1   | 2.95                     | 0.50              |
| 24:BA:591:C:C4      | 24:BA:592:G:N7     | 2.80                     | 0.50              |
| 24:BA:606:U:OP2     | 24:BA:606:U:H5     | 1.95                     | 0.50              |
| 24:BA:646:A:H2'     | 24:BA:647:G:C8     | 2.47                     | 0.50              |
| 24:BA:730:C:C2'     | 24:BA:731:C:H5'    | 2.42                     | 0.50              |
| 24:BA:731:C:C2'     | 24:BA:732:C:H5'    | 2.41                     | 0.50              |
| 24:BA:764:A:OP1     | 27:BD:211:ARG:CB   | 2.60                     | 0.50              |
| 24:BA:859:G:H3'     | 24:BA:859:G:H8     | 1.77                     | 0.50              |
| 24:BA:1031:G:C6     | 24:BA:1032:A:N6    | 2.80                     | 0.50              |
| 24:BA:1045:A:H1'    | 24:BA:1047:G:C8    | 2.46                     | 0.50              |
| 24:BA:1057:A:C5     | 24:BA:1085:A:N1    | 2.79                     | 0.50              |
| 24:BA:1061:U:C4'    | 24:BA:1070:A:H1'   | 2.41                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1120:G:H2'  | 24:BA:1121:C:C6    | 2.47                     | 0.50              |
| 24:BA:1179:C:O2'  | 24:BA:1180:C:P     | 2.69                     | 0.50              |
| 24:BA:1189:A:OP2  | 24:BA:1190:G:N7    | 2.44                     | 0.50              |
| 24:BA:1212:G:C5   | 24:BA:1236:G:N1    | 2.77                     | 0.50              |
| 24:BA:1223:C:C5   | 24:BA:1227:A:N1    | 2.80                     | 0.50              |
| 24:BA:1265:A:P    | 24:BA:2615:U:OP1   | 2.69                     | 0.50              |
| 24:BA:1448:G:H21  | 24:BA:1529:A:H2    | 1.59                     | 0.50              |
| 24:BA:1451:C:OP2  | 24:BA:1451:C:C4'   | 2.60                     | 0.50              |
| 24:BA:1495:A:O5'  | 24:BA:1495:A:H8    | 1.94                     | 0.50              |
| 24:BA:1534:G:H2'  | 24:BA:1536:A:N7    | 2.27                     | 0.50              |
| 24:BA:1544:C:H2'  | 24:BA:1545:A:O4'   | 2.12                     | 0.50              |
| 24:BA:1622:G:H8   | 24:BA:1622:G:O5'   | 1.95                     | 0.50              |
| 24:BA:1789:A:N7   | 24:BA:1790:C:C5    | 2.79                     | 0.50              |
| 24:BA:1907:G:H2'  | 24:BA:1908:C:C6    | 2.44                     | 0.50              |
| 24:BA:1917:U:C6   | 24:BA:1917:U:H3'   | 2.46                     | 0.50              |
| 24:BA:1919:A:O5'  | 24:BA:1919:A:H8    | 1.91                     | 0.50              |
| 24:BA:1953:A:H62  | 24:BA:2550:G:C5'   | 2.25                     | 0.50              |
| 24:BA:2029:G:O6   | 24:BA:2033:A:OP1   | 2.30                     | 0.50              |
| 24:BA:2114:A:H61  | 24:BA:2170:A:H61   | 1.59                     | 0.50              |
| 24:BA:2150:U:O2   | 24:BA:2151:G:C8    | 2.64                     | 0.50              |
| 24:BA:2158:A:HO2' | 24:BA:2159:G:P     | 2.33                     | 0.50              |
| 24:BA:2213:U:O2   | 24:BA:2213:U:C2'   | 2.60                     | 0.50              |
| 24:BA:2297:C:C2   | 24:BA:2333:A:N6    | 2.80                     | 0.50              |
| 24:BA:2426:A:H3'  | 24:BA:2427:C:H5'   | 1.93                     | 0.50              |
| 24:BA:2441:C:H2'  | 24:BA:2442:C:C6    | 2.47                     | 0.50              |
| 24:BA:2461:C:C1'  | 24:BA:2492:U:C5    | 2.81                     | 0.50              |
| 24:BA:2468:G:C5   | 24:BA:2481:G:C2    | 3.00                     | 0.50              |
| 24:BA:2483:C:O2   | 24:BA:2483:C:H2'   | 2.10                     | 0.50              |
| 24:BA:2603:G:C6   | 24:BA:2604:U:C4    | 3.00                     | 0.50              |
| 24:BA:2630:G:C4   | 24:BA:2894:G:C6    | 2.99                     | 0.50              |
| 24:BA:2653:U:C3'  | 24:BA:2654:A:C8    | 2.93                     | 0.50              |
| 24:BA:2716:U:H2'  | 24:BA:2717:G:O5'   | 2.12                     | 0.50              |
| 24:BA:2877:G:H3'  | 24:BA:2878:U:H6    | 1.72                     | 0.50              |
| 25:BB:14:U:H3'    | 25:BB:14:U:C6      | 2.43                     | 0.50              |
| 25:BB:47:C:C2'    | 25:BB:48:A:H5'     | 2.42                     | 0.50              |
| 25:BB:53:A:C6     | 25:BB:54:G:C5      | 3.00                     | 0.50              |
| 26:BC:58:VAL:CG1  | 26:BC:199:HIS:HB3  | 2.42                     | 0.50              |
| 26:BC:59:ARG:HH12 | 26:BC:164:ARG:HH11 | 1.57                     | 0.50              |
| 26:BC:161:ILE:HB  | 26:BC:174:PRO:HD2  | 1.93                     | 0.50              |
| 27:BD:7:LYS:HZ2   | 27:BD:91:ARG:CD    | 2.25                     | 0.50              |
| 27:BD:106:ILE:CG1 | 27:BD:108:PRO:HD3  | 2.36                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:136:ILE:CG2  | 27:BD:165:ILE:HG21 | 2.41                     | 0.50              |
| 27:BD:246:PRO:CB   | 27:BD:250:TRP:HB3  | 2.42                     | 0.50              |
| 28:BE:115:GLY:O    | 28:BE:118:LYS:O    | 2.29                     | 0.50              |
| 28:BE:116:VAL:HG12 | 28:BE:120:TRP:NE1  | 2.27                     | 0.50              |
| 28:BE:119:ARG:CD   | 28:BE:156:MET:H    | 2.25                     | 0.50              |
| 29:BF:169:ASN:HD21 | 29:BF:171:PRO:HG2  | 1.76                     | 0.50              |
| 30:BG:62:LEU:HD23  | 30:BG:143:GLU:CG   | 2.40                     | 0.50              |
| 31:BH:85:LYS:HZ3   | 31:BH:141:VAL:C    | 2.20                     | 0.50              |
| 31:BH:87:LEU:O     | 31:BH:131:VAL:C    | 2.55                     | 0.50              |
| 33:BL:52:ILE:HG13  | 33:BL:80:LYS:NZ    | 2.26                     | 0.50              |
| 36:BO:73:GLY:N     | 36:BO:107:LYS:HE3  | 2.27                     | 0.50              |
| 36:BO:88:LEU:CD2   | 36:BO:124:LYS:HZ1  | 2.25                     | 0.50              |
| 36:BO:108:LYS:CD   | 36:BO:109:GLY:N    | 2.73                     | 0.50              |
| 37:BP:11:LYS:NZ    | 37:BP:73:PRO:HB3   | 2.27                     | 0.50              |
| 37:BP:42:ILE:O     | 37:BP:94:VAL:CB    | 2.57                     | 0.50              |
| 37:BP:66:ILE:O     | 37:BP:67:ARG:HB3   | 2.12                     | 0.50              |
| 37:BP:122:GLY:HA2  | 37:BP:125:LEU:HD12 | 1.94                     | 0.50              |
| 37:BP:134:ARG:HH21 | 37:BP:137:TYR:CB   | 2.25                     | 0.50              |
| 38:BQ:4:LEU:O      | 38:BQ:6:SER:N      | 2.45                     | 0.50              |
| 38:BQ:8:ARG:NH2    | 38:BQ:17:ARG:CD    | 2.74                     | 0.50              |
| 38:BQ:57:ARG:HG2   | 38:BQ:57:ARG:HH11  | 1.76                     | 0.50              |
| 38:BQ:93:GLY:O     | 38:BQ:95:THR:N     | 2.45                     | 0.50              |
| 38:BQ:116:LEU:HD23 | 38:BQ:116:LEU:H    | 1.77                     | 0.50              |
| 39:BR:30:ARG:HD2   | 39:BR:91:PRO:CG    | 2.42                     | 0.50              |
| 40:BS:26:ASP:OD2   | 40:BS:26:ASP:C     | 2.54                     | 0.50              |
| 40:BS:82:LEU:HD13  | 40:BS:84:GLN:CB    | 2.41                     | 0.50              |
| 41:BT:66:ASN:OD1   | 41:BT:76:TYR:CD1   | 2.65                     | 0.50              |
| 42:BU:20:LEU:HB2   | 42:BU:93:GLU:OE2   | 2.12                     | 0.50              |
| 45:BX:35:TYR:CE2   | 45:BX:67:LEU:HD13  | 2.46                     | 0.50              |
| 48:B1:14:VAL:O     | 48:B1:18:LYS:HG2   | 2.12                     | 0.50              |
| 48:B1:25:ARG:CG    | 48:B1:25:ARG:NH2   | 2.73                     | 0.50              |
| 49:B2:5:LYS:NZ     | 49:B2:57:GLU:HB2   | 2.26                     | 0.50              |
| 50:B3:65:ASP:HA    | 50:B3:68:ARG:NH1   | 2.27                     | 0.50              |
| 51:B4:56:LYS:HG3   | 51:B4:57:VAL:HG13  | 1.93                     | 0.50              |
| 53:B6:10:ARG:HD3   | 53:B6:14:LYS:NZ    | 2.27                     | 0.50              |
| 1:AA:50:A:C2       | 1:AA:360:A:C2'     | 2.94                     | 0.50              |
| 1:AA:152:A:H3'     | 1:AA:152:A:C8      | 2.47                     | 0.50              |
| 1:AA:181:G:C2'     | 1:AA:182:U:OP2     | 2.59                     | 0.50              |
| 1:AA:186(D):C:H2'  | 1:AA:186(E):C:C5   | 2.46                     | 0.50              |
| 1:AA:299:G:H2'     | 1:AA:300:A:C5      | 2.46                     | 0.50              |
| 1:AA:322:C:H2'     | 1:AA:323:U:O4'     | 2.11                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:327:A:O3'    | 1:AA:328:C:O4'    | 2.30                     | 0.50              |
| 1:AA:333:G:C4'    | 22:AW:16:HIS:CD2  | 2.93                     | 0.50              |
| 1:AA:355:C:H2'    | 1:AA:356:A:H8     | 1.77                     | 0.50              |
| 1:AA:373:A:H1'    | 1:AA:481:G:C1'    | 2.24                     | 0.50              |
| 1:AA:380:G:N2     | 1:AA:382:A:C3'    | 2.75                     | 0.50              |
| 1:AA:494:U:H2'    | 1:AA:495:A:C5'    | 2.42                     | 0.50              |
| 1:AA:668:G:H1'    | 17:AR:46:HIS:NE2  | 2.27                     | 0.50              |
| 1:AA:698:G:C6     | 1:AA:699:C:C4     | 3.00                     | 0.50              |
| 1:AA:850:U:C2     | 1:AA:851:G:N7     | 2.80                     | 0.50              |
| 1:AA:888:G:N1     | 1:AA:889:A:N6     | 2.60                     | 0.50              |
| 1:AA:962:C:N3     | 1:AA:974:A:N1     | 2.59                     | 0.50              |
| 1:AA:1027:C:C4    | 1:AA:1028:C:C5    | 2.99                     | 0.50              |
| 1:AA:1058:G:C8    | 1:AA:1058:G:O5'   | 2.64                     | 0.50              |
| 1:AA:1065:U:C2'   | 1:AA:1066:C:OP2   | 2.59                     | 0.50              |
| 1:AA:1329:A:O3'   | 15:AP:24:GLY:HA2  | 2.12                     | 0.50              |
| 1:AA:1352:C:H2'   | 1:AA:1353:G:O4'   | 2.12                     | 0.50              |
| 1:AA:1413:A:H61   | 1:AA:1487:G:H1    | 1.60                     | 0.50              |
| 1:AA:1419:G:O2'   | 1:AA:1420:C:C5'   | 2.60                     | 0.50              |
| 1:AA:1533:C:C2'   | 1:AA:1534:A:O5'   | 2.60                     | 0.50              |
| 2:A1:43:U:O2      | 2:A1:44:U:C5      | 2.65                     | 0.50              |
| 3:AC:57:G:OP1     | 30:BG:81:LYS:CD   | 2.60                     | 0.50              |
| 3:AD:49:C:N3      | 3:AD:50:U:C5      | 2.80                     | 0.50              |
| 3:AD:75:C:H5''    | 3:AD:76:A:H4'     | 1.91                     | 0.50              |
| 3:AD:76:A:N7      | 24:BA:2432:A:C2   | 2.79                     | 0.50              |
| 4:AE:12:GLU:C     | 4:AE:14:GLY:N     | 2.70                     | 0.50              |
| 4:AE:80:ILE:HB    | 4:AE:208:ILE:CD1  | 2.42                     | 0.50              |
| 4:AE:165:VAL:O    | 4:AE:187:LEU:O    | 2.30                     | 0.50              |
| 5:AF:114:PRO:HD3  | 5:AF:183:ASP:OD2  | 2.12                     | 0.50              |
| 6:AG:173:TRP:HD1  | 6:AG:185:PHE:CE2  | 2.30                     | 0.50              |
| 6:AG:195:ALA:C    | 6:AG:196:LEU:HG   | 2.35                     | 0.50              |
| 8:AI:1:MET:CB     | 8:AI:67:MET:O     | 2.59                     | 0.50              |
| 8:AI:26:ILE:CG2   | 8:AI:30:LEU:HD11  | 2.39                     | 0.50              |
| 8:AI:46:ARG:HH22  | 20:AU:37:VAL:HG13 | 1.74                     | 0.50              |
| 9:AJ:17:VAL:O     | 9:AJ:17:VAL:HG13  | 2.12                     | 0.50              |
| 9:AJ:69:VAL:CA    | 9:AJ:135:VAL:HG22 | 2.42                     | 0.50              |
| 9:AJ:107:ALA:HB3  | 9:AJ:134:ALA:HB2  | 1.94                     | 0.50              |
| 10:AK:44:PHE:O    | 10:AK:64:LYS:HD2  | 2.12                     | 0.50              |
| 11:AL:5:TYR:CD2   | 11:AL:6:GLY:N     | 2.80                     | 0.50              |
| 11:AL:27:THR:HG21 | 11:AL:62:TYR:CE1  | 2.47                     | 0.50              |
| 11:AL:94:ALA:O    | 11:AL:95:LYS:HG2  | 2.12                     | 0.50              |
| 13:AN:46:GLY:HA2  | 13:AN:55:LYS:HD2  | 1.93                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 13:AN:114:VAL:CG2  | 13:AN:115:PRO:N     | 2.75                     | 0.50              |
| 19:AT:26:GLN:O     | 19:AT:27:PHE:HB3    | 2.12                     | 0.50              |
| 19:AT:65:ILE:CG2   | 19:AT:69:LYS:HD2    | 2.40                     | 0.50              |
| 20:AU:50:ILE:O     | 20:AU:52:PRO:HD3    | 2.12                     | 0.50              |
| 20:AU:79:LEU:CD1   | 20:AU:79:LEU:N      | 2.75                     | 0.50              |
| 21:AV:22:LEU:CA    | 21:AV:25:LYS:HZ1    | 2.24                     | 0.50              |
| 21:AV:33:THR:OG1   | 21:AV:49:ILE:HD12   | 2.12                     | 0.50              |
| 22:AW:23:ARG:HA    | 22:AW:26:ASN:CG     | 2.37                     | 0.50              |
| 24:BA:14:A:H2      | 24:BA:2625:G:HO2'   | 1.60                     | 0.50              |
| 24:BA:105:C:H2'    | 24:BA:106:C:C6      | 2.47                     | 0.50              |
| 24:BA:117:G:C4     | 24:BA:119:A:N6      | 2.80                     | 0.50              |
| 24:BA:215:G:O4'    | 24:BA:216:A:H4'     | 2.11                     | 0.50              |
| 24:BA:244:A:N3     | 24:BA:255:A:C2      | 2.80                     | 0.50              |
| 24:BA:270(H):C:O2' | 24:BA:270(I):G:H5'  | 2.12                     | 0.50              |
| 24:BA:307:G:H22    | 24:BA:310:A:C5'     | 2.25                     | 0.50              |
| 24:BA:386:G:O2'    | 24:BA:387:U:C5      | 2.60                     | 0.50              |
| 24:BA:411:G:O5'    | 24:BA:412:A:OP2     | 2.29                     | 0.50              |
| 24:BA:462:C:C5     | 24:BA:468:G:N2      | 2.80                     | 0.50              |
| 24:BA:532:A:P      | 24:BA:2021:C:N4     | 2.84                     | 0.50              |
| 24:BA:558:G:H5''   | 34:BM:109:LYS:CG    | 2.41                     | 0.50              |
| 24:BA:572:A:C5     | 24:BA:573:G:N1      | 2.80                     | 0.50              |
| 24:BA:576:U:O5'    | 24:BA:576:U:H6      | 1.95                     | 0.50              |
| 24:BA:618:G:N7     | 24:BA:618(A):C:C5   | 2.80                     | 0.50              |
| 24:BA:678:C:C2     | 24:BA:679:C:C6      | 3.00                     | 0.50              |
| 24:BA:699:A:H1'    | 24:BA:1634:A:C8     | 2.47                     | 0.50              |
| 24:BA:764:A:C6     | 24:BA:1789:A:C2     | 3.00                     | 0.50              |
| 24:BA:799:G:C6     | 24:BA:800:A:N1      | 2.80                     | 0.50              |
| 24:BA:880:G:C4     | 24:BA:881:G:H1'     | 2.47                     | 0.50              |
| 24:BA:978:G:H2'    | 24:BA:979:G:C8      | 2.47                     | 0.50              |
| 24:BA:997:G:H2'    | 24:BA:998:C:H5      | 1.75                     | 0.50              |
| 24:BA:1176:G:H8    | 24:BA:1177:A:O4'    | 1.95                     | 0.50              |
| 24:BA:1239:G:H2'   | 24:BA:1240:U:C4'    | 2.42                     | 0.50              |
| 24:BA:1311:G:N7    | 53:B6:48:LYS:HD3    | 2.27                     | 0.50              |
| 24:BA:1314:C:C6    | 24:BA:1314:C:O5'    | 2.65                     | 0.50              |
| 24:BA:1357:U:N3    | 24:BA:1358:G:C2     | 2.80                     | 0.50              |
| 24:BA:1444:G:H5'   | 24:BA:1444(A):A:OP2 | 2.12                     | 0.50              |
| 24:BA:1767:C:C2    | 24:BA:1768:U:C6     | 3.00                     | 0.50              |
| 24:BA:1807:G:N2    | 24:BA:1809:A:P      | 2.85                     | 0.50              |
| 24:BA:1825:A:O2'   | 27:BD:252:TRP:CZ3   | 2.64                     | 0.50              |
| 24:BA:1925:C:C2'   | 24:BA:1926:U:O5'    | 2.60                     | 0.50              |
| 24:BA:1930:G:H2'   | 24:BA:1931:U:OP2    | 2.12                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1936:A:C4    | 24:BA:1945:G:C5    | 3.00                     | 0.50              |
| 24:BA:1968:G:O2'   | 24:BA:1969:A:H8    | 1.95                     | 0.50              |
| 24:BA:2037:G:H2'   | 24:BA:2038:G:H8    | 1.74                     | 0.50              |
| 24:BA:2111:C:N3    | 24:BA:2145:C:H2'   | 2.27                     | 0.50              |
| 24:BA:2178:C:C5'   | 26:BC:46:LYS:HZ2   | 2.19                     | 0.50              |
| 24:BA:2247:A:H2'   | 24:BA:2248:C:C6    | 2.47                     | 0.50              |
| 24:BA:2256:G:C8    | 24:BA:2256:G:H5''  | 2.46                     | 0.50              |
| 24:BA:2346:A:C5'   | 24:BA:2383:G:O4'   | 2.60                     | 0.50              |
| 24:BA:2525:G:O2'   | 24:BA:2741:A:H2    | 1.93                     | 0.50              |
| 24:BA:2587:A:C3'   | 24:BA:2588:G:H5'   | 2.42                     | 0.50              |
| 24:BA:2597:G:O2'   | 24:BA:2598:A:O5'   | 2.30                     | 0.50              |
| 24:BA:2635:C:O2'   | 28:BE:79:ARG:HD2   | 2.12                     | 0.50              |
| 24:BA:2745:C:C4    | 24:BA:2746:U:C5    | 3.00                     | 0.50              |
| 24:BA:2839:G:C4    | 24:BA:2840:C:C6    | 3.00                     | 0.50              |
| 25:BB:71:C:C2      | 25:BB:72:G:O4'     | 2.65                     | 0.50              |
| 26:BC:66:HIS:CD2   | 26:BC:180:PHE:HE2  | 2.30                     | 0.50              |
| 26:BC:78:ALA:HA    | 26:BC:119:VAL:CG2  | 2.42                     | 0.50              |
| 26:BC:127:LEU:HA   | 26:BC:130:ILE:HD13 | 1.93                     | 0.50              |
| 27:BD:5:LYS:HB2    | 27:BD:82:ILE:CD1   | 2.39                     | 0.50              |
| 27:BD:85:ASP:C     | 27:BD:87:ASN:HD22  | 2.20                     | 0.50              |
| 27:BD:117:VAL:CG1  | 27:BD:118:VAL:N    | 2.74                     | 0.50              |
| 27:BD:205:VAL:O    | 27:BD:205:VAL:HG13 | 2.11                     | 0.50              |
| 27:BD:224:ALA:HB2  | 27:BD:233:HIS:CG   | 2.47                     | 0.50              |
| 28:BE:5:LEU:CD1    | 28:BE:197:ILE:HA   | 2.42                     | 0.50              |
| 28:BE:120:TRP:CG   | 28:BE:121:ASN:N    | 2.77                     | 0.50              |
| 29:BF:196:LEU:O    | 29:BF:199:TRP:HB2  | 2.11                     | 0.50              |
| 30:BG:170:ARG:HH11 | 30:BG:170:ARG:HG2  | 1.77                     | 0.50              |
| 31:BH:74:ASN:HB2   | 31:BH:138:LYS:HZ1  | 1.75                     | 0.50              |
| 32:BK:32:PRO:O     | 32:BK:33:ARG:C     | 2.54                     | 0.50              |
| 33:BL:79:ARG:NH1   | 33:BL:87:GLY:CA    | 2.75                     | 0.50              |
| 34:BM:23:LEU:CG    | 34:BM:61:ARG:O     | 2.60                     | 0.50              |
| 34:BM:35:ARG:HB3   | 34:BM:37:LYS:H     | 1.76                     | 0.50              |
| 34:BM:44:PRO:HG2   | 34:BM:45:ASN:H     | 1.77                     | 0.50              |
| 35:BN:23:ARG:NH1   | 35:BN:30:ALA:HB2   | 2.27                     | 0.50              |
| 36:BO:79:ARG:HA    | 36:BO:79:ARG:NH2   | 2.26                     | 0.50              |
| 36:BO:87:ASP:O     | 36:BO:89:ALA:N     | 2.45                     | 0.50              |
| 36:BO:97:PRO:CD    | 36:BO:102:ARG:CZ   | 2.90                     | 0.50              |
| 36:BO:108:LYS:CG   | 36:BO:109:GLY:N    | 2.75                     | 0.50              |
| 36:BO:122:PRO:HB2  | 36:BO:138:LEU:CA   | 2.40                     | 0.50              |
| 37:BP:61:GLY:HA2   | 46:BY:178:GLU:HG3  | 1.94                     | 0.50              |
| 38:BQ:99:LYS:HE2   | 51:B4:43:HIS:ND1   | 2.26                     | 0.50              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 40:BS:76:PHE:CZ   | 40:BS:78:LEU:CD1  | 2.94                     | 0.50              |
| 41:BT:65:ILE:HG23 | 41:BT:96:ALA:HA   | 1.94                     | 0.50              |
| 41:BT:111:GLU:HG3 | 41:BT:112:ARG:H   | 1.77                     | 0.50              |
| 45:BX:6:HIS:CD2   | 45:BX:33:LYS:HZ3  | 2.29                     | 0.50              |
| 46:BY:95:PRO:N    | 46:BY:130:PRO:HA  | 2.26                     | 0.50              |
| 46:BY:152:ALA:HA  | 46:BY:155:LEU:CD2 | 2.42                     | 0.50              |
| 48:B1:19:LEU:O    | 48:B1:19:LEU:HD22 | 2.11                     | 0.50              |
| 50:B3:29:PRO:CG   | 50:B3:31:ILE:CG2  | 2.88                     | 0.50              |
| 50:B3:29:PRO:O    | 50:B3:31:ILE:HD12 | 2.12                     | 0.50              |
| 53:B6:22:MET:O    | 53:B6:28:ARG:CG   | 2.60                     | 0.50              |
| 1:AA:50:A:O2'     | 1:AA:52:G:C8      | 2.57                     | 0.49              |
| 1:AA:56:U:H2'     | 1:AA:57:G:C8      | 2.44                     | 0.49              |
| 1:AA:246:A:C4     | 1:AA:282:A:N6     | 2.79                     | 0.49              |
| 1:AA:247:G:O2'    | 1:AA:248:C:H5'    | 2.12                     | 0.49              |
| 1:AA:275:G:O2'    | 1:AA:276:G:H5'    | 2.12                     | 0.49              |
| 1:AA:295:C:H2'    | 1:AA:296:U:O4'    | 2.11                     | 0.49              |
| 1:AA:484:G:C8     | 1:AA:486:U:C4     | 3.00                     | 0.49              |
| 1:AA:579:G:HO2'   | 1:AA:580:U:H5'    | 1.76                     | 0.49              |
| 1:AA:594:G:H2'    | 1:AA:595:G:H1'    | 1.94                     | 0.49              |
| 1:AA:687:A:H2     | 1:AA:700:G:H21    | 1.56                     | 0.49              |
| 1:AA:757:U:H4'    | 1:AA:879:C:O2     | 2.12                     | 0.49              |
| 1:AA:926:G:C4     | 1:AA:1505:G:N2    | 2.80                     | 0.49              |
| 1:AA:947:G:C2     | 1:AA:948:C:C2     | 3.00                     | 0.49              |
| 1:AA:1042:G:O2'   | 1:AA:1043:C:H5'   | 2.12                     | 0.49              |
| 1:AA:1181:G:N7    | 1:AA:1182:G:C2    | 2.80                     | 0.49              |
| 1:AA:1240:U:H2'   | 9:AJ:32:ARG:NH2   | 2.20                     | 0.49              |
| 1:AA:1242:C:C4    | 1:AA:1243:C:C5    | 3.00                     | 0.49              |
| 1:AA:1301:U:C4    | 1:AA:1303:C:N1    | 2.81                     | 0.49              |
| 1:AA:1306:A:H3'   | 1:AA:1307:U:C6    | 2.47                     | 0.49              |
| 2:A1:34:U:C6      | 2:A1:34:U:OP2     | 2.65                     | 0.49              |
| 3:AC:7:A:O2'      | 3:AC:8:U:OP1      | 2.25                     | 0.49              |
| 3:AD:58:A:O2'     | 3:AD:61:C:C5      | 2.64                     | 0.49              |
| 3:AB:58:A:O2'     | 3:AB:59:U:H5''    | 2.12                     | 0.49              |
| 4:AE:60:ASP:CB    | 4:AE:64:ARG:NH1   | 2.74                     | 0.49              |
| 4:AE:92:TYR:O     | 4:AE:152:PHE:CB   | 2.59                     | 0.49              |
| 4:AE:144:ARG:O    | 4:AE:147:LYS:CB   | 2.60                     | 0.49              |
| 5:AF:119:ARG:HG2  | 5:AF:120:VAL:N    | 2.25                     | 0.49              |
| 5:AF:138:VAL:HG12 | 5:AF:170:GLN:HE21 | 1.77                     | 0.49              |
| 5:AF:157:ILE:CG1  | 5:AF:164:ARG:HG2  | 2.40                     | 0.49              |
| 5:AF:191:THR:HB   | 5:AF:193:TYR:CD2  | 2.47                     | 0.49              |
| 6:AG:148:VAL:HG21 | 6:AG:162:LEU:HD21 | 1.93                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 7:AH:108:ALA:HA    | 7:AH:111:GLU:OE1   | 2.12                     | 0.49              |
| 9:AJ:104:LEU:O     | 9:AJ:105:VAL:C     | 2.55                     | 0.49              |
| 9:AJ:111:ARG:HH12  | 9:AJ:112:PRO:HD2   | 1.74                     | 0.49              |
| 10:AK:60:ARG:HG3   | 10:AK:61:VAL:N     | 2.26                     | 0.49              |
| 11:AL:47:LEU:CD1   | 11:AL:50:LEU:HB3   | 2.31                     | 0.49              |
| 11:AL:51:ARG:NH1   | 11:AL:51:ARG:CA    | 2.73                     | 0.49              |
| 12:AM:5:ARG:O      | 12:AM:6:ILE:HG23   | 2.12                     | 0.49              |
| 13:AN:20:TYR:CD2   | 13:AN:83:ILE:HG21  | 2.47                     | 0.49              |
| 13:AN:24:SER:O     | 13:AN:88:GLY:HA2   | 2.12                     | 0.49              |
| 14:AO:100:ILE:H    | 14:AO:100:ILE:CD1  | 2.21                     | 0.49              |
| 14:AO:117:ARG:HH11 | 14:AO:117:ARG:CG   | 2.12                     | 0.49              |
| 15:AP:26:GLY:O     | 15:AP:29:ARG:HB2   | 2.12                     | 0.49              |
| 15:AP:40:ASN:C     | 15:AP:42:ALA:N     | 2.69                     | 0.49              |
| 15:AP:40:ASN:CG    | 15:AP:42:ALA:HB3   | 2.37                     | 0.49              |
| 17:AR:15:PHE:N     | 17:AR:15:PHE:CD2   | 2.79                     | 0.49              |
| 19:AT:11:VAL:HB    | 19:AT:20:THR:CB    | 2.41                     | 0.49              |
| 19:AT:22:LEU:HD13  | 19:AT:41:LYS:CA    | 2.42                     | 0.49              |
| 20:AU:52:PRO:O     | 20:AU:55:ARG:N     | 2.40                     | 0.49              |
| 21:AV:19:VAL:HG22  | 21:AV:43:GLU:OE2   | 2.12                     | 0.49              |
| 21:AV:25:LYS:C     | 21:AV:25:LYS:CD    | 2.82                     | 0.49              |
| 22:AW:30:LYS:O     | 22:AW:34:LYS:HG3   | 2.12                     | 0.49              |
| 22:AW:53:LEU:HB2   | 22:AW:100:ILE:HG13 | 1.94                     | 0.49              |
| 24:BA:98:G:O2'     | 24:BA:103:A:C1'    | 2.60                     | 0.49              |
| 24:BA:195:A:H4'    | 24:BA:251:A:O4'    | 2.11                     | 0.49              |
| 24:BA:220:G:O2'    | 24:BA:233:A:C2     | 2.65                     | 0.49              |
| 24:BA:237:C:O2'    | 24:BA:238:C:H5'    | 2.12                     | 0.49              |
| 24:BA:239:U:C2     | 24:BA:259:G:N1     | 2.80                     | 0.49              |
| 24:BA:257:A:C2'    | 24:BA:258:G:H5'    | 2.42                     | 0.49              |
| 24:BA:360:G:C2'    | 24:BA:361:G:O5'    | 2.59                     | 0.49              |
| 24:BA:364:C:C2'    | 24:BA:365:C:C5     | 2.80                     | 0.49              |
| 24:BA:397:G:OP2    | 50:B3:10:VAL:HG11  | 2.11                     | 0.49              |
| 24:BA:410:G:C2     | 24:BA:2407:G:N7    | 2.80                     | 0.49              |
| 24:BA:429:A:C2'    | 24:BA:430:G:C8     | 2.89                     | 0.49              |
| 24:BA:547:A:C5     | 24:BA:548:A:C5     | 2.99                     | 0.49              |
| 24:BA:751:A:OP1    | 24:BA:1614:A:OP1   | 2.30                     | 0.49              |
| 24:BA:800:A:N9     | 24:BA:802:A:H5'    | 2.27                     | 0.49              |
| 24:BA:866:A:N3     | 24:BA:866:A:C2'    | 2.74                     | 0.49              |
| 24:BA:928:G:N7     | 24:BA:929:G:C4     | 2.80                     | 0.49              |
| 24:BA:931:G:C2     | 49:B2:24:LYS:HB3   | 2.46                     | 0.49              |
| 24:BA:934:G:C6     | 24:BA:935:C:C5     | 3.00                     | 0.49              |
| 24:BA:957:A:H2     | 24:BA:2459:A:OP1   | 1.95                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:974:G:H8     | 24:BA:974(A):C:O4' | 1.95                     | 0.49              |
| 24:BA:988:A:H8     | 24:BA:988:A:O5'    | 1.96                     | 0.49              |
| 24:BA:997:G:H2'    | 24:BA:998:C:C6     | 2.47                     | 0.49              |
| 24:BA:1120:G:H2'   | 24:BA:1121:C:H6    | 1.77                     | 0.49              |
| 24:BA:1164:G:C2'   | 24:BA:1165:U:O5'   | 2.60                     | 0.49              |
| 24:BA:1235:G:C2    | 24:BA:1236:G:N2    | 2.80                     | 0.49              |
| 24:BA:1457:A:H2'   | 24:BA:1458:C:H5'   | 1.94                     | 0.49              |
| 24:BA:1510:A:C5'   | 24:BA:1511:A:OP2   | 2.60                     | 0.49              |
| 24:BA:1729:A:H3'   | 24:BA:1730:U:O4'   | 2.12                     | 0.49              |
| 24:BA:1729:A:H2'   | 24:BA:1730:U:H5'   | 1.94                     | 0.49              |
| 24:BA:1731:G:N3    | 24:BA:1731:G:C2'   | 2.74                     | 0.49              |
| 24:BA:1759:A:N1    | 24:BA:1760:A:C2    | 2.81                     | 0.49              |
| 24:BA:1969:A:O2'   | 24:BA:1972:A:H1'   | 2.12                     | 0.49              |
| 24:BA:1975:G:O2'   | 24:BA:1976:U:C5'   | 2.60                     | 0.49              |
| 24:BA:2057:A:C8    | 24:BA:2058:A:N7    | 2.80                     | 0.49              |
| 24:BA:2296:U:O4    | 39:BR:5:THR:HG23   | 2.12                     | 0.49              |
| 24:BA:2312:U:O4'   | 30:BG:43:LEU:HD13  | 2.12                     | 0.49              |
| 24:BA:2358:G:N2    | 24:BA:2359:C:C1'   | 2.75                     | 0.49              |
| 24:BA:2393:A:H5''  | 36:BO:56:SER:C     | 2.37                     | 0.49              |
| 24:BA:2464:C:C4    | 24:BA:2465:C:C5    | 3.00                     | 0.49              |
| 24:BA:2544:G:H2'   | 24:BA:2545:G:C5'   | 2.42                     | 0.49              |
| 24:BA:2717:G:HO2'  | 24:BA:2718:G:P     | 2.35                     | 0.49              |
| 24:BA:2794:C:C2    | 24:BA:2799:A:C2    | 3.00                     | 0.49              |
| 24:BA:2854:G:H2'   | 24:BA:2855:C:C6    | 2.47                     | 0.49              |
| 24:BA:2882:A:H4'   | 38:BQ:98:LEU:HD21  | 1.92                     | 0.49              |
| 24:BA:2899:G:C5    | 24:BA:2900:A:N7    | 2.80                     | 0.49              |
| 25:BB:7:G:C4'      | 39:BR:29:PHE:HE2   | 2.17                     | 0.49              |
| 25:BB:43:C:N3      | 30:BG:95:ARG:NH2   | 2.59                     | 0.49              |
| 25:BB:60:C:H2'     | 25:BB:61:G:C8      | 2.47                     | 0.49              |
| 25:BB:112:G:N3     | 25:BB:112:G:C2'    | 2.74                     | 0.49              |
| 27:BD:97:TYR:HB3   | 27:BD:99:ASP:OD1   | 2.12                     | 0.49              |
| 28:BE:32:PRO:CD    | 28:BE:88:GLY:C     | 2.85                     | 0.49              |
| 28:BE:127:ASP:O    | 28:BE:128:SER:HB3  | 2.11                     | 0.49              |
| 29:BF:20:LEU:HD23  | 29:BF:20:LEU:N     | 2.11                     | 0.49              |
| 29:BF:97:TYR:N     | 29:BF:97:TYR:CD2   | 2.78                     | 0.49              |
| 30:BG:39:ILE:HG23  | 30:BG:157:ILE:HG13 | 1.91                     | 0.49              |
| 30:BG:56:ALA:HB3   | 30:BG:68:PRO:CB    | 2.41                     | 0.49              |
| 30:BG:111:LEU:HD23 | 30:BG:178:PHE:HD2  | 1.77                     | 0.49              |
| 30:BG:115:ARG:O    | 30:BG:117:PHE:N    | 2.45                     | 0.49              |
| 30:BG:135:LEU:HD11 | 30:BG:137:GLU:O    | 2.11                     | 0.49              |
| 32:BK:53:ALA:HB1   | 32:BK:57:ARG:HH21  | 1.77                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 35:BN:38:VAL:C    | 35:BN:39:ILE:HG23 | 2.36                     | 0.49              |
| 35:BN:59:LYS:HE2  | 35:BN:59:LYS:O    | 2.12                     | 0.49              |
| 38:BQ:105:ARG:O   | 38:BQ:107:ASP:N   | 2.43                     | 0.49              |
| 39:BR:9:ARG:NH1   | 39:BR:9:ARG:CB    | 2.47                     | 0.49              |
| 39:BR:12:PHE:CG   | 39:BR:13:ARG:N    | 2.80                     | 0.49              |
| 41:BT:69:CYS:SG   | 41:BT:70:ARG:N    | 2.85                     | 0.49              |
| 41:BT:88:ILE:HG12 | 42:BU:52:VAL:CG2  | 2.41                     | 0.49              |
| 43:BV:24:ILE:HG22 | 43:BV:32:ALA:CB   | 2.39                     | 0.49              |
| 43:BV:29:LEU:O    | 43:BV:30:GLU:C    | 2.55                     | 0.49              |
| 44:BW:35:THR:HB   | 44:BW:38:GLU:HB2  | 1.93                     | 0.49              |
| 44:BW:42:ALA:O    | 44:BW:46:ALA:HB3  | 2.12                     | 0.49              |
| 44:BW:60:ARG:HD3  | 44:BW:62:LYS:HZ1  | 1.74                     | 0.49              |
| 44:BW:85:PRO:C    | 44:BW:87:GLN:NE2  | 2.70                     | 0.49              |
| 45:BX:57:GLN:O    | 45:BX:58:GLY:C    | 2.55                     | 0.49              |
| 48:B1:19:LEU:CD1  | 48:B1:55:LEU:HG   | 2.42                     | 0.49              |
| 48:B1:54:ARG:O    | 48:B1:55:LEU:C    | 2.55                     | 0.49              |
| 49:B2:26:LEU:CG   | 49:B2:35:ARG:NH1  | 2.70                     | 0.49              |
| 54:B7:30:ARG:CG   | 54:B7:31:HIS:H    | 2.23                     | 0.49              |
| 55:B8:11:CYS:C    | 55:B8:13:LYS:H    | 2.20                     | 0.49              |
| 1:AA:21:G:N2      | 1:AA:916:G:C6     | 2.80                     | 0.49              |
| 1:AA:22:G:C2      | 1:AA:23:C:C2      | 3.00                     | 0.49              |
| 1:AA:44:G:H2'     | 1:AA:45:U:H5'     | 1.94                     | 0.49              |
| 1:AA:110:C:O5'    | 1:AA:110:C:C6     | 2.65                     | 0.49              |
| 1:AA:122:G:C2     | 1:AA:123:C:H1'    | 2.47                     | 0.49              |
| 1:AA:306:G:C4     | 1:AA:307:C:C6     | 3.00                     | 0.49              |
| 1:AA:315:A:H2'    | 1:AA:315:A:N3     | 2.27                     | 0.49              |
| 1:AA:364:A:C2     | 1:AA:365:U:O4     | 2.65                     | 0.49              |
| 1:AA:429:U:H4'    | 1:AA:430:A:C5'    | 2.41                     | 0.49              |
| 1:AA:447:G:O5'    | 1:AA:447:G:C8     | 2.59                     | 0.49              |
| 1:AA:468:A:C5     | 1:AA:474:G:C5     | 3.00                     | 0.49              |
| 1:AA:511:C:O2'    | 1:AA:512:U:P      | 2.70                     | 0.49              |
| 1:AA:595:G:N7     | 1:AA:641:U:C4     | 2.80                     | 0.49              |
| 1:AA:720:C:H4'    | 20:AU:50:ILE:HG22 | 1.94                     | 0.49              |
| 1:AA:769:G:H22    | 1:AA:811:C:H1'    | 1.77                     | 0.49              |
| 1:AA:778:G:C6     | 1:AA:779:C:C4     | 2.99                     | 0.49              |
| 1:AA:817:C:O2'    | 1:AA:818:G:OP2    | 2.30                     | 0.49              |
| 1:AA:929:G:C6     | 1:AA:930:C:C5     | 3.00                     | 0.49              |
| 1:AA:935:A:C4     | 1:AA:936:C:C5     | 3.00                     | 0.49              |
| 1:AA:947:G:C2     | 1:AA:948:C:N1     | 2.80                     | 0.49              |
| 1:AA:960:U:O2     | 1:AA:960:U:H2'    | 2.11                     | 0.49              |
| 1:AA:967:C:OP2    | 1:AA:968:A:H3'    | 2.13                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1037:C:C4    | 1:AA:1038:C:C4    | 3.00                     | 0.49              |
| 1:AA:1107:C:OP1   | 5:AF:172:ARG:NH1  | 2.45                     | 0.49              |
| 1:AA:1171:G:C2'   | 1:AA:1172:C:C6    | 2.95                     | 0.49              |
| 1:AA:1205:U:H2'   | 1:AA:1206:G:C8    | 2.46                     | 0.49              |
| 1:AA:1415:G:C6    | 1:AA:1486:G:C6    | 3.00                     | 0.49              |
| 1:AA:1436:U:H3'   | 1:AA:1437:C:C6    | 2.47                     | 0.49              |
| 2:A1:37:U:H3'     | 2:A1:38:U:C5      | 2.46                     | 0.49              |
| 3:AC:19:G:N2      | 3:AC:56:C:N3      | 2.60                     | 0.49              |
| 3:AC:47:U:C6      | 3:AC:47:U:C3'     | 2.94                     | 0.49              |
| 3:AC:65:G:H2'     | 3:AC:66:U:H6      | 1.77                     | 0.49              |
| 3:AC:75:C:OP2     | 24:BA:2602:A:C8   | 2.65                     | 0.49              |
| 3:AD:41:C:H2'     | 3:AD:42:C:O4'     | 2.12                     | 0.49              |
| 3:AD:44:G:H2'     | 3:AD:45:U:H5'     | 1.94                     | 0.49              |
| 3:AB:63:G:O2'     | 24:BA:2482:G:C5'  | 2.60                     | 0.49              |
| 3:AB:71:G:N2      | 3:AB:72:C:C1'     | 2.68                     | 0.49              |
| 4:AE:61:LEU:HD21  | 4:AE:68:ILE:HD11  | 1.93                     | 0.49              |
| 4:AE:70:PHE:HB3   | 4:AE:163:PHE:C    | 2.38                     | 0.49              |
| 4:AE:136:VAL:CA   | 4:AE:139:LYS:NZ   | 2.73                     | 0.49              |
| 5:AF:6:HIS:NE2    | 5:AF:8:ILE:HB     | 2.26                     | 0.49              |
| 5:AF:12:LEU:CD1   | 16:AQ:57:ARG:HG3  | 2.41                     | 0.49              |
| 6:AG:135:LEU:CD1  | 6:AG:138:TYR:HB2  | 2.39                     | 0.49              |
| 7:AH:44:GLY:O     | 7:AH:58:ALA:HB1   | 2.12                     | 0.49              |
| 8:AI:1:MET:HB3    | 8:AI:67:MET:O     | 2.12                     | 0.49              |
| 8:AI:42:GLU:HB2   | 8:AI:61:LEU:CD2   | 2.41                     | 0.49              |
| 8:AI:96:PRO:HD2   | 20:AU:32:ARG:HE   | 1.76                     | 0.49              |
| 9:AJ:73:MET:HE3   | 9:AJ:146:GLU:CB   | 2.26                     | 0.49              |
| 11:AL:5:TYR:HD2   | 11:AL:6:GLY:N     | 2.10                     | 0.49              |
| 11:AL:47:LEU:O    | 11:AL:50:LEU:HB3  | 2.13                     | 0.49              |
| 12:AM:23:ILE:HG13 | 12:AM:85:LEU:CB   | 2.30                     | 0.49              |
| 13:AN:84:VAL:HG21 | 20:AU:88:LYS:NZ   | 2.27                     | 0.49              |
| 15:AP:4:ILE:O     | 15:AP:5:ALA:CB    | 2.60                     | 0.49              |
| 15:AP:23:TYR:HD2  | 15:AP:70:LEU:HD13 | 1.77                     | 0.49              |
| 17:AR:79:ARG:HA   | 17:AR:82:ILE:CD1  | 2.42                     | 0.49              |
| 18:AS:14:ASN:CA   | 18:AS:42:ARG:NH2  | 2.76                     | 0.49              |
| 20:AU:49:LYS:H    | 20:AU:49:LYS:CE   | 2.20                     | 0.49              |
| 23:AX:23:PRO:C    | 23:AX:25:LYS:N    | 2.69                     | 0.49              |
| 24:BA:220:G:O6    | 24:BA:427:U:H3'   | 2.12                     | 0.49              |
| 24:BA:251:A:H3'   | 24:BA:251:A:OP2   | 2.12                     | 0.49              |
| 24:BA:493:G:N2    | 24:BA:494:G:C1'   | 2.75                     | 0.49              |
| 24:BA:531:C:O4'   | 24:BA:2035:G:N2   | 2.43                     | 0.49              |
| 24:BA:532:A:N7    | 41:BT:45:TYR:CE2  | 2.80                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 24:BA:572:A:N7   | 24:BA:573:G:C5     | 2.80                     | 0.49              |
| 24:BA:601:C:C4'  | 29:BF:104:LYS:HZ3  | 2.25                     | 0.49              |
| 24:BA:602:G:H4'  | 24:BA:603:A:O3'    | 2.12                     | 0.49              |
| 24:BA:646:A:C2   | 24:BA:647:G:C5     | 3.00                     | 0.49              |
| 24:BA:744:G:H5'  | 24:BA:1659:U:OP1   | 2.12                     | 0.49              |
| 24:BA:764:A:OP1  | 27:BD:211:ARG:HB3  | 2.12                     | 0.49              |
| 24:BA:820:A:N7   | 24:BA:973:A:N6     | 2.59                     | 0.49              |
| 24:BA:858:U:C5   | 24:BA:859:G:N2     | 2.80                     | 0.49              |
| 24:BA:863:A:H2'  | 24:BA:864:G:C8     | 2.47                     | 0.49              |
| 24:BA:962:G:C2   | 24:BA:963:U:C2     | 3.00                     | 0.49              |
| 24:BA:991:C:C5   | 24:BA:1185:C:C4    | 3.00                     | 0.49              |
| 24:BA:1103:A:OP2 | 24:BA:1104:C:C6    | 2.65                     | 0.49              |
| 24:BA:1196:C:H2' | 24:BA:1197:G:C1'   | 2.42                     | 0.49              |
| 24:BA:1300:U:O2' | 24:BA:1301:A:OP2   | 2.28                     | 0.49              |
| 24:BA:1309:G:OP1 | 53:B6:8:ASN:ND2    | 2.44                     | 0.49              |
| 24:BA:1312:U:C6  | 24:BA:1313:U:C5    | 3.00                     | 0.49              |
| 24:BA:1361:G:H2' | 24:BA:1362:C:H6    | 1.77                     | 0.49              |
| 24:BA:1475:G:C2  | 24:BA:1476:C:H6    | 2.31                     | 0.49              |
| 24:BA:1544:C:O2' | 24:BA:1545:A:O4'   | 2.30                     | 0.49              |
| 24:BA:1567:A:N1  | 27:BD:85:ASP:C     | 2.70                     | 0.49              |
| 24:BA:1575:C:N4  | 24:BA:1576:U:C4    | 2.80                     | 0.49              |
| 24:BA:1665:A:C4' | 35:BN:66:LYS:HB2   | 2.43                     | 0.49              |
| 24:BA:1672:C:H2' | 24:BA:1673:U:H5''  | 1.94                     | 0.49              |
| 24:BA:1905:C:H2' | 24:BA:1930:G:C8    | 2.47                     | 0.49              |
| 24:BA:2007:C:N3  | 24:BA:2008:C:C5    | 2.80                     | 0.49              |
| 24:BA:2041:U:C2  | 24:BA:2042:A:N7    | 2.80                     | 0.49              |
| 24:BA:2051:A:C2' | 28:BE:141:ILE:HD11 | 2.43                     | 0.49              |
| 24:BA:2052:G:C4  | 24:BA:2053:G:C8    | 2.99                     | 0.49              |
| 24:BA:2076:U:C5' | 24:BA:2077:A:P     | 3.00                     | 0.49              |
| 24:BA:2124:G:H2' | 26:BC:217:THR:OG1  | 2.12                     | 0.49              |
| 24:BA:2146:C:C6  | 24:BA:2146:C:O5'   | 2.66                     | 0.49              |
| 24:BA:2168:G:N3  | 24:BA:2170:A:H8    | 2.10                     | 0.49              |
| 24:BA:2247:A:H2' | 24:BA:2248:C:H6    | 1.76                     | 0.49              |
| 24:BA:2345:G:P   | 52:B5:39:TYR:HA    | 2.52                     | 0.49              |
| 24:BA:2385:C:C4  | 24:BA:2386:C:C5    | 3.01                     | 0.49              |
| 24:BA:2427:C:H4' | 24:BA:2428:G:C5'   | 2.42                     | 0.49              |
| 24:BA:2461:C:O2' | 24:BA:2462:U:H5'   | 2.11                     | 0.49              |
| 24:BA:2589:A:C4  | 24:BA:2590:A:C8    | 3.01                     | 0.49              |
| 24:BA:2675:A:N1  | 24:BA:2732:G:C2    | 2.80                     | 0.49              |
| 24:BA:2736:G:C2  | 24:BA:2769:C:C2    | 3.00                     | 0.49              |
| 24:BA:2748:A:C4  | 31:BH:67:LEU:HD21  | 2.41                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2787:C:C2    | 28:BE:61:ARG:CZ    | 2.96                     | 0.49              |
| 24:BA:2808:U:C2    | 24:BA:2892:A:C6    | 2.99                     | 0.49              |
| 24:BA:2850:A:C5    | 24:BA:2851:A:N7    | 2.80                     | 0.49              |
| 24:BA:2881:C:C2    | 24:BA:2882:A:N7    | 2.80                     | 0.49              |
| 25:BB:16:G:H22     | 25:BB:69:G:H1'     | 1.77                     | 0.49              |
| 25:BB:81:G:C5      | 25:BB:82:G:N7      | 2.80                     | 0.49              |
| 27:BD:91:ARG:NH2   | 27:BD:198:ASN:ND2  | 2.61                     | 0.49              |
| 27:BD:105:ILE:CD1  | 27:BD:106:ILE:N    | 2.70                     | 0.49              |
| 27:BD:117:VAL:CG2  | 27:BD:126:GLN:NE2  | 2.68                     | 0.49              |
| 27:BD:172:TYR:CE2  | 27:BD:186:HIS:CD2  | 3.00                     | 0.49              |
| 28:BE:37:ARG:O     | 28:BE:39:PRO:CD    | 2.60                     | 0.49              |
| 28:BE:55:ASN:O     | 28:BE:57:LYS:N     | 2.46                     | 0.49              |
| 28:BE:154:LYS:HD2  | 28:BE:154:LYS:O    | 2.12                     | 0.49              |
| 30:BG:33:ARG:NH2   | 30:BG:34:LEU:C     | 2.70                     | 0.49              |
| 30:BG:114:ILE:HG12 | 30:BG:140:ILE:HD11 | 1.93                     | 0.49              |
| 31:BH:43:VAL:CG1   | 31:BH:51:ARG:O     | 2.52                     | 0.49              |
| 31:BH:76:VAL:O     | 31:BH:78:GLY:N     | 2.46                     | 0.49              |
| 31:BH:118:PRO:CG   | 31:BH:144:VAL:HG21 | 2.37                     | 0.49              |
| 31:BH:152:ARG:HH21 | 31:BH:152:ARG:CG   | 2.26                     | 0.49              |
| 32:BK:43:ASN:O     | 32:BK:46:ALA:HB3   | 2.12                     | 0.49              |
| 33:BL:11:GLN:O     | 33:BL:12:LEU:HD23  | 2.12                     | 0.49              |
| 33:BL:18:THR:CG2   | 33:BL:38:VAL:HG21  | 2.42                     | 0.49              |
| 34:BM:23:LEU:HB2   | 34:BM:63:THR:HG23  | 1.94                     | 0.49              |
| 35:BN:19:ILE:O     | 35:BN:19:ILE:CD1   | 2.53                     | 0.49              |
| 35:BN:20:MET:HE1   | 35:BN:44:LYS:HE3   | 1.94                     | 0.49              |
| 35:BN:71:ARG:N     | 35:BN:72:PRO:HD2   | 2.27                     | 0.49              |
| 37:BP:46:GLN:NE2   | 37:BP:126:PRO:HG3  | 2.27                     | 0.49              |
| 37:BP:51:ARG:HD3   | 37:BP:52:VAL:CA    | 2.42                     | 0.49              |
| 38:BQ:5:LYS:HZ3    | 38:BQ:6:SER:N      | 2.07                     | 0.49              |
| 38:BQ:14:SER:CA    | 38:BQ:17:ARG:HG2   | 2.42                     | 0.49              |
| 38:BQ:31:HIS:C     | 38:BQ:33:ARG:H     | 2.20                     | 0.49              |
| 38:BQ:83:ILE:O     | 38:BQ:84:ALA:C     | 2.53                     | 0.49              |
| 38:BQ:97:VAL:O     | 38:BQ:98:LEU:CD2   | 2.60                     | 0.49              |
| 38:BQ:102:GLU:HG3  | 38:BQ:103:ARG:N    | 2.26                     | 0.49              |
| 41:BT:37:GLU:C     | 41:BT:39:LEU:N     | 2.70                     | 0.49              |
| 41:BT:112:ARG:HH22 | 42:BU:49:THR:CG2   | 2.22                     | 0.49              |
| 42:BU:79:VAL:CG1   | 42:BU:81:TYR:CD1   | 2.95                     | 0.49              |
| 43:BV:59:VAL:HG21  | 43:BV:66:GLU:HG3   | 1.94                     | 0.49              |
| 45:BX:17:SER:OG    | 45:BX:19:LYS:HE3   | 2.11                     | 0.49              |
| 46:BY:48:PHE:CB    | 46:BY:54:HIS:CE1   | 2.91                     | 0.49              |
| 46:BY:145:GLU:O    | 46:BY:147:GLY:N    | 2.45                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 53:B6:5:TRP:HA   | 53:B6:5:TRP:HE3   | 1.77                     | 0.49              |
| 53:B6:19:ARG:O   | 53:B6:20:ALA:C    | 2.53                     | 0.49              |
| 1:AA:9:G:C8      | 7:AH:126:ARG:CZ   | 2.95                     | 0.49              |
| 1:AA:15:G:C2     | 1:AA:16:A:C5      | 3.01                     | 0.49              |
| 1:AA:136:C:H2'   | 1:AA:137:C:H6     | 1.77                     | 0.49              |
| 1:AA:735:C:H4'   | 20:AU:75:ILE:HD11 | 1.95                     | 0.49              |
| 1:AA:745:C:H2'   | 1:AA:746:A:H8     | 1.76                     | 0.49              |
| 1:AA:874:G:C2    | 1:AA:875:C:C6     | 3.00                     | 0.49              |
| 1:AA:924:C:H2'   | 1:AA:925:G:C8     | 2.47                     | 0.49              |
| 1:AA:937:A:H1'   | 1:AA:1379:G:H22   | 1.77                     | 0.49              |
| 1:AA:975:A:O2'   | 1:AA:1358:U:C1'   | 2.54                     | 0.49              |
| 1:AA:1298:C:C2   | 9:AJ:114:ARG:NH1  | 2.80                     | 0.49              |
| 1:AA:1306:A:C2   | 1:AA:1332:A:C8    | 3.00                     | 0.49              |
| 1:AA:1319:A:OP1  | 21:AV:5:LEU:HD11  | 2.12                     | 0.49              |
| 1:AA:1348:U:OP2  | 11:AL:109:VAL:HA  | 2.13                     | 0.49              |
| 1:AA:1400:C:OP1  | 1:AA:1400:C:C6    | 2.66                     | 0.49              |
| 1:AA:1415:G:H2'  | 1:AA:1416:G:O5'   | 2.12                     | 0.49              |
| 1:AA:1431:C:H2'  | 1:AA:1432:G:C4'   | 2.42                     | 0.49              |
| 1:AA:1451:A:H8   | 1:AA:1451:A:OP1   | 1.95                     | 0.49              |
| 1:AA:1479:C:H2'  | 1:AA:1480:G:O4'   | 2.12                     | 0.49              |
| 1:AA:1480:G:C2'  | 1:AA:1481:U:O5'   | 2.60                     | 0.49              |
| 3:AC:58:A:H2'    | 3:AC:61:C:C5      | 2.46                     | 0.49              |
| 3:AD:34:G:OP1    | 3:AD:35:A:C8      | 2.64                     | 0.49              |
| 3:AB:13:C:O2'    | 3:AB:14:A:H4'     | 2.12                     | 0.49              |
| 4:AE:43:ASP:OD1  | 4:AE:44:LEU:N     | 2.45                     | 0.49              |
| 4:AE:71:VAL:O    | 4:AE:165:VAL:HG22 | 2.12                     | 0.49              |
| 4:AE:153:ARG:NH2 | 4:AE:154:LEU:O    | 2.45                     | 0.49              |
| 5:AF:12:LEU:HD12 | 5:AF:18:TRP:CH2   | 2.46                     | 0.49              |
| 5:AF:15:THR:HG21 | 5:AF:181:ASN:N    | 2.26                     | 0.49              |
| 5:AF:142:MET:CA  | 5:AF:146:ALA:HB3  | 2.43                     | 0.49              |
| 6:AG:12:CYS:SG   | 6:AG:19:LEU:O     | 2.70                     | 0.49              |
| 6:AG:128:VAL:CG1 | 6:AG:129:ASN:N    | 2.75                     | 0.49              |
| 7:AH:26:PHE:N    | 7:AH:26:PHE:HD1   | 2.08                     | 0.49              |
| 7:AH:91:LEU:HD12 | 7:AH:118:ILE:HG23 | 1.94                     | 0.49              |
| 7:AH:95:ALA:C    | 7:AH:96:PRO:O     | 2.53                     | 0.49              |
| 7:AH:145:LYS:O   | 7:AH:148:VAL:CB   | 2.50                     | 0.49              |
| 8:AI:7:ASN:O     | 8:AI:89:MET:O     | 2.30                     | 0.49              |
| 8:AI:50:TYR:OH   | 20:AU:74:ARG:O    | 2.26                     | 0.49              |
| 10:AK:6:ILE:HG21 | 10:AK:85:ARG:HH22 | 1.76                     | 0.49              |
| 14:AO:117:ARG:O  | 14:AO:121:GLY:HA2 | 2.12                     | 0.49              |
| 14:AO:125:PRO:C  | 14:AO:127:GLU:H   | 2.20                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 17:AR:46:HIS:O     | 17:AR:47:LYS:HB2   | 2.11                     | 0.49              |
| 18:AS:40:ASP:O     | 18:AS:40:ASP:CG    | 2.55                     | 0.49              |
| 18:AS:56:ALA:HB1   | 18:AS:79:VAL:HG11  | 1.92                     | 0.49              |
| 19:AT:21:VAL:O     | 19:AT:42:TYR:O     | 2.29                     | 0.49              |
| 21:AV:51:VAL:HB    | 21:AV:58:VAL:HG22  | 1.94                     | 0.49              |
| 22:AW:65:LYS:O     | 22:AW:68:LYS:HG2   | 2.12                     | 0.49              |
| 22:AW:84:LEU:CD1   | 22:AW:84:LEU:C     | 2.86                     | 0.49              |
| 24:BA:10:G:C2      | 24:BA:2629:A:N3    | 2.80                     | 0.49              |
| 24:BA:60:G:O2'     | 24:BA:61:G:P       | 2.70                     | 0.49              |
| 24:BA:70:G:H4'     | 24:BA:71:A:O5'     | 2.10                     | 0.49              |
| 24:BA:134:C:O5'    | 24:BA:134:C:H6     | 1.94                     | 0.49              |
| 24:BA:155:C:C4     | 24:BA:171:G:N1     | 2.80                     | 0.49              |
| 24:BA:182:A:O2'    | 24:BA:183:C:O4'    | 2.29                     | 0.49              |
| 24:BA:188:G:O4'    | 24:BA:1365:A:C2    | 2.66                     | 0.49              |
| 24:BA:319:C:N4     | 24:BA:320:A:N6     | 2.60                     | 0.49              |
| 24:BA:331:A:C6     | 24:BA:1209:G:C4    | 3.00                     | 0.49              |
| 24:BA:363(A):A:C2' | 24:BA:363(B):G:O5' | 2.60                     | 0.49              |
| 24:BA:414:C:O2     | 24:BA:1864:U:H4'   | 2.11                     | 0.49              |
| 24:BA:455:C:C5'    | 24:BA:456:C:OP1    | 2.60                     | 0.49              |
| 24:BA:470:A:N6     | 24:BA:471:A:C2     | 2.80                     | 0.49              |
| 24:BA:503:A:H2     | 24:BA:506:G:C2     | 2.30                     | 0.49              |
| 24:BA:552:G:C6     | 24:BA:553:U:C4     | 3.00                     | 0.49              |
| 24:BA:691:C:C2'    | 27:BD:45:ASN:HD21  | 2.25                     | 0.49              |
| 24:BA:711:G:C6     | 24:BA:712:G:N7     | 2.80                     | 0.49              |
| 24:BA:904:C:H2'    | 24:BA:905:U:H6     | 1.77                     | 0.49              |
| 24:BA:963:U:O2     | 24:BA:963:U:H2'    | 2.11                     | 0.49              |
| 24:BA:1125:G:H5''  | 55:B8:4:ARG:HD2    | 1.94                     | 0.49              |
| 24:BA:1128:A:C5    | 24:BA:2518:A:N6    | 2.80                     | 0.49              |
| 24:BA:1197:G:N7    | 24:BA:1198:U:C5    | 2.80                     | 0.49              |
| 24:BA:1210:A:C1'   | 24:BA:1212:G:H21   | 2.25                     | 0.49              |
| 24:BA:1357:U:O4    | 24:BA:1358:G:C2    | 2.65                     | 0.49              |
| 24:BA:1372:U:O2'   | 24:BA:1373:A:H5'   | 2.11                     | 0.49              |
| 24:BA:1455:G:O2'   | 24:BA:1456:G:H5'   | 2.12                     | 0.49              |
| 24:BA:1485:G:H2'   | 24:BA:1486:A:H8    | 1.74                     | 0.49              |
| 24:BA:1503:U:H2'   | 24:BA:1504:C:H6    | 1.70                     | 0.49              |
| 24:BA:1563:G:C4    | 24:BA:1564:C:C5    | 3.00                     | 0.49              |
| 24:BA:1651:G:N2    | 24:BA:1652:A:C2    | 2.80                     | 0.49              |
| 24:BA:1655:A:H5''  | 28:BE:114:ALA:CA   | 2.42                     | 0.49              |
| 24:BA:1689:A:C2    | 24:BA:1690:A:N7    | 2.79                     | 0.49              |
| 24:BA:1690:A:N3    | 24:BA:1691:C:O4'   | 2.45                     | 0.49              |
| 24:BA:1748:G:H2'   | 24:BA:1749:A:H8    | 1.73                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1772:G:C2    | 24:BA:1773:A:O2'   | 2.65                     | 0.49              |
| 24:BA:1827:C:O2    | 24:BA:1828:G:H1'   | 2.12                     | 0.49              |
| 24:BA:1964:G:HO2'  | 24:BA:1965:C:P     | 2.35                     | 0.49              |
| 24:BA:2021:C:H41   | 41:BT:28:ARG:HH22  | 1.60                     | 0.49              |
| 24:BA:2022:U:O2    | 24:BA:2022:U:C2'   | 2.54                     | 0.49              |
| 24:BA:2047:U:C2'   | 24:BA:2048:G:O5'   | 2.60                     | 0.49              |
| 24:BA:2072:G:H2'   | 24:BA:2073:C:C5    | 2.46                     | 0.49              |
| 24:BA:2076:U:H2'   | 24:BA:2076:U:O2    | 2.12                     | 0.49              |
| 24:BA:2265:U:C2'   | 24:BA:2266:A:OP1   | 2.60                     | 0.49              |
| 24:BA:2305:A:H62   | 24:BA:2306:C:H5    | 1.60                     | 0.49              |
| 24:BA:2325:G:O2'   | 24:BA:2326:C:H5'   | 2.11                     | 0.49              |
| 24:BA:2452:C:H2'   | 24:BA:2453:A:O4'   | 2.12                     | 0.49              |
| 24:BA:2458:G:C6    | 24:BA:2490:G:C2    | 2.99                     | 0.49              |
| 24:BA:2466:C:P     | 55:B8:5:ALA:HB3    | 2.52                     | 0.49              |
| 24:BA:2589:A:C2'   | 24:BA:2590:A:H5'   | 2.41                     | 0.49              |
| 24:BA:2657:A:N1    | 24:BA:2665:A:H1'   | 2.26                     | 0.49              |
| 24:BA:2756:U:C2    | 24:BA:2758:A:C6    | 2.98                     | 0.49              |
| 24:BA:2849:U:H2'   | 24:BA:2850:A:OP2   | 2.11                     | 0.49              |
| 25:BB:16:G:O2'     | 25:BB:17:C:C5'     | 2.60                     | 0.49              |
| 25:BB:75:G:H21     | 46:BY:27:VAL:HG21  | 1.76                     | 0.49              |
| 25:BB:109:G:N1     | 25:BB:110:G:C6     | 2.80                     | 0.49              |
| 26:BC:108:MET:CE   | 26:BC:131:LEU:HD23 | 2.42                     | 0.49              |
| 26:BC:131:LEU:CD1  | 26:BC:137:LEU:HA   | 2.42                     | 0.49              |
| 27:BD:23:GLU:CD    | 27:BD:24:ILE:O     | 2.55                     | 0.49              |
| 27:BD:61:LEU:O     | 27:BD:62:TYR:CB    | 2.60                     | 0.49              |
| 27:BD:91:ARG:NH1   | 27:BD:198:ASN:HD22 | 2.11                     | 0.49              |
| 27:BD:121:PRO:C    | 27:BD:135:PHE:CE2  | 2.80                     | 0.49              |
| 27:BD:122:ASP:N    | 27:BD:135:PHE:HE2  | 2.08                     | 0.49              |
| 27:BD:136:ILE:HD12 | 27:BD:168:ARG:CZ   | 2.42                     | 0.49              |
| 27:BD:141:VAL:HG12 | 27:BD:194:GLY:O    | 2.12                     | 0.49              |
| 27:BD:181:GLU:OE1  | 27:BD:271:ILE:O    | 2.30                     | 0.49              |
| 29:BF:101:LEU:O    | 29:BF:106:ARG:CZ   | 2.60                     | 0.49              |
| 29:BF:178:PRO:O    | 29:BF:180:GLY:N    | 2.41                     | 0.49              |
| 30:BG:26:GLN:NE2   | 30:BG:31:VAL:HG22  | 2.23                     | 0.49              |
| 31:BH:8:PRO:O      | 31:BH:9:ILE:HG13   | 2.11                     | 0.49              |
| 31:BH:11:VAL:HG22  | 31:BH:76:VAL:HG11  | 1.94                     | 0.49              |
| 31:BH:33:LEU:HD22  | 31:BH:75:ALA:HB2   | 1.94                     | 0.49              |
| 31:BH:150:ALA:O    | 31:BH:151:ILE:C    | 2.55                     | 0.49              |
| 32:BK:21:VAL:HB    | 32:BK:26:ALA:CA    | 2.39                     | 0.49              |
| 32:BK:91:SER:HB2   | 32:BK:119:PRO:CB   | 2.42                     | 0.49              |
| 32:BK:111:PRO:HG2  | 32:BK:112:LYS:CD   | 2.37                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 33:BL:33:ASN:O    | 33:BL:37:PHE:HB2   | 2.12                     | 0.49              |
| 33:BL:115:LEU:O   | 33:BL:116:ASN:C    | 2.55                     | 0.49              |
| 34:BM:22:THR:HG21 | 34:BM:61:ARG:HH12  | 1.78                     | 0.49              |
| 34:BM:23:LEU:HD12 | 34:BM:63:THR:N     | 2.21                     | 0.49              |
| 34:BM:74:ARG:NE   | 34:BM:82:LEU:CD1   | 2.76                     | 0.49              |
| 35:BN:89:ASN:HD21 | 35:BN:91:LEU:HB2   | 1.74                     | 0.49              |
| 36:BO:76:LYS:HE2  | 36:BO:81:GLN:CD    | 2.37                     | 0.49              |
| 36:BO:81:GLN:C    | 36:BO:86:LYS:HG3   | 2.37                     | 0.49              |
| 36:BO:114:ILE:O   | 36:BO:116:GLY:N    | 2.41                     | 0.49              |
| 37:BP:59:ARG:NH2  | 37:BP:62:GLY:H     | 2.10                     | 0.49              |
| 39:BR:106:ARG:NH1 | 39:BR:106:ARG:O    | 2.44                     | 0.49              |
| 40:BS:30:VAL:HG23 | 40:BS:31:SER:H     | 1.77                     | 0.49              |
| 40:BS:59:THR:N    | 40:BS:61:PHE:CE2   | 2.80                     | 0.49              |
| 40:BS:76:PHE:CZ   | 40:BS:78:LEU:CG    | 2.94                     | 0.49              |
| 41:BT:37:GLU:O    | 41:BT:40:PHE:N     | 2.45                     | 0.49              |
| 41:BT:88:ILE:CG1  | 42:BU:52:VAL:HG22  | 2.41                     | 0.49              |
| 41:BT:96:ALA:O    | 41:BT:100:VAL:HG23 | 2.12                     | 0.49              |
| 42:BU:78:LYS:HB2  | 42:BU:78:LYS:HZ3   | 1.76                     | 0.49              |
| 43:BV:22:ASP:HA   | 43:BV:75:TYR:OH    | 2.11                     | 0.49              |
| 45:BX:39:VAL:O    | 45:BX:39:VAL:HG12  | 2.13                     | 0.49              |
| 45:BX:44:ILE:O    | 45:BX:45:VAL:C     | 2.55                     | 0.49              |
| 45:BX:67:LEU:CD1  | 45:BX:71:LYS:NZ    | 2.75                     | 0.49              |
| 46:BY:10:ARG:CB   | 46:BY:36:LYS:HD2   | 2.25                     | 0.49              |
| 46:BY:79:ARG:O    | 46:BY:80:ARG:HG3   | 2.12                     | 0.49              |
| 52:B5:30:THR:CB   | 52:B5:31:PRO:HD3   | 2.42                     | 0.49              |
| 1:AA:5:U:N3       | 6:AG:86:LYS:HB3    | 2.27                     | 0.49              |
| 1:AA:67:C:O2      | 1:AA:171:A:C2      | 2.64                     | 0.49              |
| 1:AA:108:G:O6     | 22:AW:15:ARG:HD2   | 2.12                     | 0.49              |
| 1:AA:176:C:O2'    | 1:AA:177:C:H5'     | 2.13                     | 0.49              |
| 1:AA:186(A):C:N4  | 1:AA:191:G:C6      | 2.80                     | 0.49              |
| 1:AA:208:U:O3'    | 1:AA:209:U:H6      | 1.95                     | 0.49              |
| 1:AA:226:G:O2'    | 1:AA:227:G:C5'     | 2.59                     | 0.49              |
| 1:AA:236:G:C2'    | 1:AA:237:C:C6      | 2.95                     | 0.49              |
| 1:AA:325:A:H2'    | 1:AA:326:G:O5'     | 2.13                     | 0.49              |
| 1:AA:327:A:C2     | 1:AA:329:A:N3      | 2.80                     | 0.49              |
| 1:AA:341:C:C2'    | 1:AA:342:C:O5'     | 2.61                     | 0.49              |
| 1:AA:407:G:C1'    | 6:AG:119:GLN:OE1   | 2.60                     | 0.49              |
| 1:AA:413:G:C2'    | 1:AA:414:A:OP2     | 2.60                     | 0.49              |
| 1:AA:501:C:O2'    | 1:AA:549:C:O2      | 2.26                     | 0.49              |
| 1:AA:584:G:H2'    | 1:AA:585:G:O5'     | 2.13                     | 0.49              |
| 1:AA:610:G:H2'    | 1:AA:611:A:H5'     | 1.92                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:711:G:O2'    | 1:AA:712:A:C5'    | 2.61                     | 0.49              |
| 1:AA:760:G:N1     | 19:AT:105:ALA:C   | 2.68                     | 0.49              |
| 1:AA:870:U:C5'    | 1:AA:871:U:OP1    | 2.61                     | 0.49              |
| 1:AA:910:C:HO2'   | 1:AA:911:U:H5'    | 1.77                     | 0.49              |
| 1:AA:956:U:O2'    | 1:AA:957:U:H5'    | 2.13                     | 0.49              |
| 1:AA:1002:G:N7    | 1:AA:1004:A:N1    | 2.60                     | 0.49              |
| 1:AA:1009:G:N2    | 1:AA:1010:G:H1'   | 2.27                     | 0.49              |
| 1:AA:1251:A:C2    | 1:AA:1252:A:C6    | 3.01                     | 0.49              |
| 1:AA:1287:A:H2'   | 1:AA:1288:A:N7    | 2.28                     | 0.49              |
| 1:AA:1307:U:N3    | 1:AA:1308:U:C5    | 2.80                     | 0.49              |
| 1:AA:1399:C:O2    | 1:AA:1401:G:C5    | 2.66                     | 0.49              |
| 1:AA:1428:A:C4    | 1:AA:1429:C:C5    | 3.01                     | 0.49              |
| 1:AA:1440:C:C2    | 1:AA:1441:G:C8    | 3.00                     | 0.49              |
| 1:AA:1499:A:O5'   | 1:AA:1499:A:H8    | 1.96                     | 0.49              |
| 3:AC:19:G:N2      | 3:AC:57:G:C4      | 2.80                     | 0.49              |
| 3:AD:17:C:C5      | 3:AD:19:G:H8      | 2.30                     | 0.49              |
| 3:AD:63:G:C2      | 3:AD:64:A:C4      | 3.00                     | 0.49              |
| 4:AE:76:GLN:O     | 4:AE:211:ILE:CD1  | 2.61                     | 0.49              |
| 4:AE:88:ALA:HA    | 4:AE:222:ILE:HD11 | 1.93                     | 0.49              |
| 4:AE:187:LEU:HA   | 4:AE:201:ILE:HB   | 1.93                     | 0.49              |
| 5:AF:176:HIS:O    | 5:AF:177:THR:C    | 2.55                     | 0.49              |
| 6:AG:121:VAL:O    | 6:AG:134:ASP:CB   | 2.61                     | 0.49              |
| 6:AG:155:LEU:CB   | 6:AG:158:ILE:HG12 | 2.33                     | 0.49              |
| 7:AH:43:LEU:C     | 7:AH:43:LEU:CD2   | 2.86                     | 0.49              |
| 7:AH:54:ALA:O     | 7:AH:57:LYS:HB3   | 2.13                     | 0.49              |
| 7:AH:152:ARG:NH2  | 10:AK:44:PHE:N    | 2.59                     | 0.49              |
| 8:AI:41:GLU:O     | 8:AI:42:GLU:CB    | 2.60                     | 0.49              |
| 9:AJ:46:ALA:O     | 9:AJ:49:ILE:N     | 2.46                     | 0.49              |
| 9:AJ:49:ILE:HG12  | 9:AJ:121:ALA:HB2  | 1.94                     | 0.49              |
| 10:AK:15:ASN:O    | 10:AK:16:ALA:C    | 2.55                     | 0.49              |
| 10:AK:82:HIS:CE1  | 10:AK:84:ARG:HG3  | 2.48                     | 0.49              |
| 10:AK:85:ARG:CD   | 10:AK:134:ILE:O   | 2.59                     | 0.49              |
| 11:AL:11:LYS:O    | 11:AL:11:LYS:CG   | 2.59                     | 0.49              |
| 11:AL:69:GLY:O    | 11:AL:73:GLN:HG3  | 2.12                     | 0.49              |
| 12:AM:16:LEU:HD22 | 12:AM:16:LEU:N    | 2.27                     | 0.49              |
| 12:AM:24:VAL:HG13 | 12:AM:34:VAL:HG11 | 1.95                     | 0.49              |
| 12:AM:56:HIS:O    | 12:AM:58:ASP:N    | 2.42                     | 0.49              |
| 14:AO:25:PRO:HD2  | 14:AO:98:TYR:OH   | 2.12                     | 0.49              |
| 15:AP:16:ASP:HB3  | 15:AP:34:LEU:HD11 | 1.93                     | 0.49              |
| 15:AP:26:GLY:C    | 15:AP:27:LYS:O    | 2.55                     | 0.49              |
| 17:AR:59:MET:O    | 17:AR:62:GLN:HB3  | 2.13                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 17:AR:79:ARG:HA  | 17:AR:82:ILE:HD12 | 1.94                     | 0.49              |
| 21:AV:40:ILE:O   | 21:AV:68:GLY:CA   | 2.59                     | 0.49              |
| 22:AW:33:ILE:O   | 22:AW:34:LYS:C    | 2.53                     | 0.49              |
| 22:AW:98:PRO:O   | 22:AW:99:LEU:C    | 2.54                     | 0.49              |
| 24:BA:50:U:H3'   | 24:BA:50:U:C6     | 2.46                     | 0.49              |
| 24:BA:71:A:C2    | 24:BA:73:A:N1     | 2.80                     | 0.49              |
| 24:BA:116:C:H4'  | 24:BA:127:A:C4'   | 2.41                     | 0.49              |
| 24:BA:193:U:O4   | 24:BA:202:U:O2    | 2.30                     | 0.49              |
| 24:BA:215:G:H4'  | 24:BA:216:A:C5'   | 2.41                     | 0.49              |
| 24:BA:292:C:O5'  | 24:BA:293:U:O4    | 2.31                     | 0.49              |
| 24:BA:296:C:C2'  | 24:BA:297:C:O4'   | 2.60                     | 0.49              |
| 24:BA:370:G:O2'  | 24:BA:371:A:O4'   | 2.25                     | 0.49              |
| 24:BA:385:C:O2'  | 24:BA:386:G:C5'   | 2.60                     | 0.49              |
| 24:BA:410:G:H3'  | 24:BA:411:G:C8    | 2.47                     | 0.49              |
| 24:BA:411:G:H5'  | 24:BA:2407:G:OP2  | 2.12                     | 0.49              |
| 24:BA:467:G:C2'  | 24:BA:468:G:H5'   | 2.43                     | 0.49              |
| 24:BA:547:A:N6   | 24:BA:548:A:N1    | 2.60                     | 0.49              |
| 24:BA:635:C:H2'  | 24:BA:636:G:O4'   | 2.12                     | 0.49              |
| 24:BA:728:G:C1'  | 24:BA:729:G:H8    | 2.25                     | 0.49              |
| 24:BA:730:C:OP2  | 24:BA:763:G:OP1   | 2.29                     | 0.49              |
| 24:BA:793:A:OP2  | 24:BA:2072:G:H5'  | 2.13                     | 0.49              |
| 24:BA:851:U:O4'  | 49:B2:46:ASN:ND2  | 2.29                     | 0.49              |
| 24:BA:874:G:N1   | 24:BA:875:G:C5    | 2.80                     | 0.49              |
| 24:BA:985:C:H2'  | 24:BA:986:C:C5    | 2.48                     | 0.49              |
| 24:BA:1047:G:H2' | 24:BA:1110:G:H1   | 1.72                     | 0.49              |
| 24:BA:1052:C:O2' | 24:BA:1053:C:C5'  | 2.59                     | 0.49              |
| 24:BA:1175:U:H3' | 24:BA:1176:G:O4'  | 2.13                     | 0.49              |
| 24:BA:1200:C:C2  | 24:BA:1246:A:C2   | 3.01                     | 0.49              |
| 24:BA:1210:A:C1' | 24:BA:1212:G:N2   | 2.75                     | 0.49              |
| 24:BA:1338:G:O2' | 44:BW:16:LYS:NZ   | 2.39                     | 0.49              |
| 24:BA:1427:A:O2' | 24:BA:1428:C:P    | 2.70                     | 0.49              |
| 24:BA:1489:U:O2' | 24:BA:1490:A:P    | 2.70                     | 0.49              |
| 24:BA:1615:C:C5  | 24:BA:1617:C:C2   | 3.00                     | 0.49              |
| 24:BA:1682:G:H5' | 24:BA:1762:A:O2'  | 2.13                     | 0.49              |
| 24:BA:1752:C:C5' | 24:BA:2862:G:OP1  | 2.61                     | 0.49              |
| 24:BA:1861:G:H4' | 26:BC:205:LYS:HZ2 | 1.76                     | 0.49              |
| 24:BA:1936:A:C8  | 24:BA:1945:G:O6   | 2.66                     | 0.49              |
| 24:BA:1982:C:H2' | 24:BA:1983:C:C6   | 2.47                     | 0.49              |
| 24:BA:2024:G:C5  | 24:BA:2025:C:C5   | 3.00                     | 0.49              |
| 24:BA:2051:A:O2' | 24:BA:2052:G:P    | 2.71                     | 0.49              |
| 24:BA:2059:A:O3' | 29:BF:69:HIS:O    | 2.30                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:2282:G:O2'   | 24:BA:2390:U:O4   | 2.21                     | 0.49              |
| 24:BA:2297:C:C4    | 24:BA:2333:A:N6   | 2.76                     | 0.49              |
| 24:BA:2297:C:N3    | 24:BA:2333:A:N6   | 2.60                     | 0.49              |
| 24:BA:2298:A:H2'   | 24:BA:2299:G:C8   | 2.47                     | 0.49              |
| 24:BA:2558:C:C2'   | 24:BA:2559:C:O5'  | 2.61                     | 0.49              |
| 24:BA:2560:C:H2'   | 24:BA:2561:A:H5'  | 1.95                     | 0.49              |
| 24:BA:2617:C:C2    | 24:BA:2618:G:H8   | 2.30                     | 0.49              |
| 24:BA:2620:C:C2'   | 24:BA:2621:A:O5'  | 2.60                     | 0.49              |
| 24:BA:2651:C:C2    | 24:BA:2652:C:C5   | 3.01                     | 0.49              |
| 24:BA:2681:C:C5    | 24:BA:2727:G:N2   | 2.81                     | 0.49              |
| 24:BA:2709:G:C2'   | 24:BA:2710:C:C5'  | 2.89                     | 0.49              |
| 24:BA:2716:U:H2'   | 24:BA:2717:G:H8   | 1.77                     | 0.49              |
| 24:BA:2812:G:C2    | 24:BA:2813:A:C5   | 3.01                     | 0.49              |
| 25:BB:6:C:H5'      | 25:BB:27:C:H2'    | 1.95                     | 0.49              |
| 25:BB:76:G:C5'     | 46:BY:85:HIS:ND1  | 2.74                     | 0.49              |
| 25:BB:83:G:H5'     | 49:B2:52:HIS:NE2  | 2.27                     | 0.49              |
| 26:BC:19:ILE:CG2   | 26:BC:223:ARG:HG2 | 2.40                     | 0.49              |
| 26:BC:59:ARG:NH1   | 26:BC:164:ARG:CG  | 2.75                     | 0.49              |
| 27:BD:231:HIS:O    | 27:BD:233:HIS:N   | 2.44                     | 0.49              |
| 27:BD:246:PRO:HD2  | 27:BD:250:TRP:CA  | 2.42                     | 0.49              |
| 28:BE:14:ILE:HD12  | 28:BE:14:ILE:O    | 2.12                     | 0.49              |
| 28:BE:31:CYS:O     | 28:BE:33:VAL:N    | 2.44                     | 0.49              |
| 28:BE:85:ASN:HD22  | 28:BE:85:ASN:N    | 2.04                     | 0.49              |
| 28:BE:91:VAL:HG13  | 28:BE:93:VAL:HG22 | 1.90                     | 0.49              |
| 29:BF:74:ARG:HH12  | 29:BF:76:GLY:H    | 1.55                     | 0.49              |
| 29:BF:118:ALA:CB   | 29:BF:122:LYS:HB2 | 2.42                     | 0.49              |
| 29:BF:132:VAL:HG22 | 29:BF:135:LYS:CB  | 2.42                     | 0.49              |
| 30:BG:22:ARG:HG3   | 30:BG:23:PHE:N    | 2.23                     | 0.49              |
| 30:BG:33:ARG:HH22  | 30:BG:34:LEU:C    | 2.20                     | 0.49              |
| 30:BG:86:MET:N     | 30:BG:87:PRO:CD   | 2.72                     | 0.49              |
| 30:BG:100:TRP:C    | 30:BG:102:PHE:N   | 2.63                     | 0.49              |
| 31:BH:54:ARG:NH1   | 31:BH:57:ASP:HA   | 2.27                     | 0.49              |
| 31:BH:136:ILE:HG23 | 31:BH:140:LYS:HE2 | 1.94                     | 0.49              |
| 33:BL:12:LEU:CD1   | 33:BL:23:VAL:HG21 | 2.43                     | 0.49              |
| 34:BM:10:GLU:HB3   | 34:BM:39:ARG:HH12 | 1.76                     | 0.49              |
| 34:BM:17:ASP:OD1   | 34:BM:19:GLU:O    | 2.31                     | 0.49              |
| 34:BM:23:LEU:HD21  | 34:BM:62:VAL:HA   | 1.93                     | 0.49              |
| 34:BM:91:LEU:HA    | 34:BM:95:PRO:CA   | 2.43                     | 0.49              |
| 35:BN:85:VAL:CG1   | 35:BN:86:ILE:N    | 2.73                     | 0.49              |
| 36:BO:50:ARG:NH2   | 54:B7:6:THR:OG1   | 2.45                     | 0.49              |
| 36:BO:58:THR:HG23  | 54:B7:13:ARG:H    | 1.76                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 38:BQ:13:HIS:HB3  | 38:BQ:16:HIS:HD2  | 1.66                     | 0.49              |
| 38:BQ:26:LYS:CE   | 38:BQ:70:LEU:HA   | 2.41                     | 0.49              |
| 38:BQ:96:ARG:O    | 38:BQ:114:VAL:HA  | 2.13                     | 0.49              |
| 39:BR:92:TYR:CE2  | 39:BR:93:LYS:HB3  | 2.48                     | 0.49              |
| 40:BS:2:ASN:C     | 40:BS:6:LEU:HD22  | 2.37                     | 0.49              |
| 40:BS:55:ASN:O    | 40:BS:57:PHE:CE2  | 2.66                     | 0.49              |
| 40:BS:109:GLU:O   | 40:BS:110:ILE:CB  | 2.59                     | 0.49              |
| 42:BU:6:LYS:HZ3   | 42:BU:10:LYS:CB   | 2.20                     | 0.49              |
| 42:BU:14:VAL:CG2  | 42:BU:21:ARG:HH22 | 2.23                     | 0.49              |
| 42:BU:20:LEU:HD22 | 42:BU:68:LYS:HZ1  | 1.77                     | 0.49              |
| 42:BU:78:LYS:HB2  | 42:BU:84:LYS:CB   | 2.42                     | 0.49              |
| 43:BV:64:MET:O    | 43:BV:65:LEU:C    | 2.55                     | 0.49              |
| 46:BY:25:PRO:HG2  | 46:BY:84:GLU:O    | 2.12                     | 0.49              |
| 46:BY:37:VAL:C    | 46:BY:38:TYR:CD2  | 2.91                     | 0.49              |
| 46:BY:56:VAL:HG11 | 46:BY:135:GLU:OE2 | 2.12                     | 0.49              |
| 48:B1:12:SER:N    | 48:B1:15:GLU:OE1  | 2.45                     | 0.49              |
| 49:B2:4:LEU:HD23  | 49:B2:5:LYS:O     | 2.12                     | 0.49              |
| 50:B3:61:ARG:O    | 50:B3:62:ARG:C    | 2.56                     | 0.49              |
| 50:B3:64:GLY:C    | 50:B3:68:ARG:NH2  | 2.70                     | 0.49              |
| 52:B5:28:ARG:O    | 52:B5:32:ASN:HA   | 2.13                     | 0.49              |
| 53:B6:33:ARG:CG   | 53:B6:37:LYS:HD3  | 2.33                     | 0.49              |
| 1:AA:49:U:C4      | 1:AA:361:G:C2     | 3.00                     | 0.49              |
| 1:AA:60:A:H62     | 1:AA:110:C:N4     | 2.10                     | 0.49              |
| 1:AA:85:U:C2'     | 1:AA:86:U:H5'     | 2.43                     | 0.49              |
| 1:AA:123:C:O2'    | 1:AA:290:C:H1'    | 2.13                     | 0.49              |
| 1:AA:138:G:N2     | 1:AA:226:G:C1'    | 2.74                     | 0.49              |
| 1:AA:518:C:H3'    | 1:AA:530:G:H21    | 1.76                     | 0.49              |
| 1:AA:521:G:C5     | 1:AA:529:G:N2     | 2.81                     | 0.49              |
| 1:AA:565:U:N3     | 1:AA:566:G:O6     | 2.46                     | 0.49              |
| 1:AA:607:A:C2'    | 1:AA:608:A:H5'    | 2.42                     | 0.49              |
| 1:AA:723:U:O2     | 1:AA:723:U:H2'    | 2.12                     | 0.49              |
| 1:AA:797:C:C2'    | 1:AA:798:G:H5'    | 2.41                     | 0.49              |
| 1:AA:821:G:H2'    | 1:AA:822:C:C6     | 2.42                     | 0.49              |
| 1:AA:852:G:C6     | 1:AA:853:G:N7     | 2.81                     | 0.49              |
| 1:AA:978:A:O4'    | 1:AA:1322:C:O2    | 2.30                     | 0.49              |
| 1:AA:1227:A:OP2   | 15:AP:111:LYS:HE3 | 2.13                     | 0.49              |
| 1:AA:1251:A:H2    | 1:AA:1354:C:H1'   | 1.76                     | 0.49              |
| 1:AA:1253:G:C2    | 1:AA:1285:A:N6    | 2.75                     | 0.49              |
| 1:AA:1268:A:H1'   | 1:AA:1326:C:O2'   | 2.12                     | 0.49              |
| 1:AA:1305:G:P     | 1:AA:1305:G:O4'   | 2.71                     | 0.49              |
| 2:A1:40:U:H2'     | 2:A1:41:U:H6      | 1.77                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:AB:37:A:N6      | 3:AB:38:A:C2      | 2.81                     | 0.49              |
| 4:AE:212:GLN:HB3  | 4:AE:235:SER:HG   | 1.71                     | 0.49              |
| 4:AE:223:ILE:C    | 4:AE:226:ARG:HB3  | 2.37                     | 0.49              |
| 5:AF:11:ARG:NH2   | 5:AF:178:LEU:HA   | 2.27                     | 0.49              |
| 5:AF:64:VAL:O     | 5:AF:65:ALA:C     | 2.54                     | 0.49              |
| 5:AF:77:ILE:CG2   | 5:AF:81:GLY:HA2   | 2.42                     | 0.49              |
| 5:AF:188:LEU:HD13 | 5:AF:189:ALA:N    | 2.28                     | 0.49              |
| 6:AG:146:ILE:N    | 6:AG:146:ILE:CD1  | 2.69                     | 0.49              |
| 6:AG:148:VAL:CB   | 6:AG:181:MET:HE3  | 2.14                     | 0.49              |
| 6:AG:191:ARG:HD3  | 6:AG:192:GLU:CA   | 2.42                     | 0.49              |
| 7:AH:45:PHE:CD1   | 7:AH:47:LYS:HD2   | 2.47                     | 0.49              |
| 8:AI:34:GLY:C     | 8:AI:68:PRO:HD3   | 2.38                     | 0.49              |
| 8:AI:49:ALA:HB3   | 20:AU:79:LEU:N    | 2.28                     | 0.49              |
| 9:AJ:6:ARG:HA     | 9:AJ:6:ARG:HH11   | 1.77                     | 0.49              |
| 9:AJ:149:ARG:HB3  | 13:AN:59:TYR:CE2  | 2.47                     | 0.49              |
| 10:AK:14:ARG:CA   | 10:AK:17:THR:OG1  | 2.54                     | 0.49              |
| 10:AK:40:ALA:HB2  | 10:AK:45:ILE:CD1  | 2.41                     | 0.49              |
| 11:AL:91:ASP:O    | 11:AL:91:ASP:CG   | 2.54                     | 0.49              |
| 12:AM:4:ILE:HD13  | 12:AM:98:ILE:HG23 | 1.94                     | 0.49              |
| 12:AM:31:GLY:N    | 12:AM:81:THR:OG1  | 2.46                     | 0.49              |
| 13:AN:62:GLN:HA   | 13:AN:97:ALA:HB2  | 1.94                     | 0.49              |
| 13:AN:95:ILE:CG2  | 13:AN:98:LEU:HD12 | 2.41                     | 0.49              |
| 14:AO:25:PRO:CD   | 14:AO:98:TYR:OH   | 2.61                     | 0.49              |
| 14:AO:42:THR:CA   | 14:AO:55:VAL:HG23 | 2.42                     | 0.49              |
| 14:AO:88:GLY:O    | 14:AO:89:ARG:C    | 2.55                     | 0.49              |
| 15:AP:66:LEU:HA   | 15:AP:70:LEU:CD1  | 2.33                     | 0.49              |
| 18:AS:14:ASN:O    | 18:AS:14:ASN:CG   | 2.56                     | 0.49              |
| 18:AS:26:ARG:HB3  | 18:AS:30:GLY:HA3  | 1.95                     | 0.49              |
| 19:AT:44:ALA:HB2  | 19:AT:59:ILE:HD13 | 1.95                     | 0.49              |
| 20:AU:22:VAL:HG13 | 20:AU:55:ARG:HH12 | 1.77                     | 0.49              |
| 20:AU:25:THR:HG22 | 20:AU:42:ARG:NE   | 2.28                     | 0.49              |
| 20:AU:38:GLU:HG2  | 20:AU:39:VAL:H    | 1.77                     | 0.49              |
| 22:AW:16:HIS:O    | 22:AW:19:SER:N    | 2.46                     | 0.49              |
| 22:AW:40:ALA:CA   | 22:AW:55:ILE:HG21 | 2.42                     | 0.49              |
| 22:AW:51:GLU:HA   | 22:AW:54:LYS:HG3  | 1.94                     | 0.49              |
| 23:AX:12:LYS:HB3  | 23:AX:17:THR:O    | 2.12                     | 0.49              |
| 24:BA:270:A:OP2   | 24:BA:270(X):G:N2 | 2.37                     | 0.49              |
| 24:BA:336:C:H4'   | 45:BX:67:LEU:HD21 | 1.93                     | 0.49              |
| 24:BA:379:G:C2    | 24:BA:396:G:C4    | 3.00                     | 0.49              |
| 24:BA:533:G:C5    | 24:BA:534:U:C2    | 3.01                     | 0.49              |
| 24:BA:535:C:HO2'  | 24:BA:536:A:H5'   | 1.77                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:547:A:H2'  | 24:BA:548:A:C8    | 2.47                     | 0.49              |
| 24:BA:558:G:C2'  | 24:BA:559:G:C5'   | 2.89                     | 0.49              |
| 24:BA:587:C:O2'  | 24:BA:588:U:P     | 2.71                     | 0.49              |
| 24:BA:592:G:N3   | 24:BA:592:G:H2'   | 2.27                     | 0.49              |
| 24:BA:617:G:P    | 29:BF:40:GLN:OE1  | 2.71                     | 0.49              |
| 24:BA:656:G:C5   | 24:BA:657:U:C4    | 3.01                     | 0.49              |
| 24:BA:686:G:N7   | 53:B6:12:ARG:HB2  | 2.27                     | 0.49              |
| 24:BA:740:U:H2'  | 24:BA:741:G:H8    | 1.77                     | 0.49              |
| 24:BA:744:G:C6   | 24:BA:745:G:O6    | 2.66                     | 0.49              |
| 24:BA:773:U:O2'  | 24:BA:774:A:OP1   | 2.30                     | 0.49              |
| 24:BA:819:A:C8   | 24:BA:819:A:H5'   | 2.46                     | 0.49              |
| 24:BA:849:A:N3   | 24:BA:850:C:C6    | 2.81                     | 0.49              |
| 24:BA:881:G:C2   | 24:BA:897:C:C4    | 3.00                     | 0.49              |
| 24:BA:964:C:O5'  | 24:BA:964:C:H6    | 1.95                     | 0.49              |
| 24:BA:1008:C:O2' | 24:BA:1009:A:P    | 2.71                     | 0.49              |
| 24:BA:1024:G:C6  | 24:BA:1025:G:H8   | 2.26                     | 0.49              |
| 24:BA:1139:G:C2' | 24:BA:1140:C:H5'' | 2.39                     | 0.49              |
| 24:BA:1154:G:O2' | 24:BA:1155:A:C5'  | 2.61                     | 0.49              |
| 24:BA:1204:A:C4  | 29:BF:188:ARG:HB2 | 2.45                     | 0.49              |
| 24:BA:1272:A:C2  | 24:BA:1618:A:C2   | 3.01                     | 0.49              |
| 24:BA:1284:A:C2  | 24:BA:1285:G:N2   | 2.81                     | 0.49              |
| 24:BA:1472:A:C2' | 24:BA:1473:G:O5'  | 2.61                     | 0.49              |
| 24:BA:1530:G:H2' | 24:BA:1531:C:C2   | 2.47                     | 0.49              |
| 24:BA:1559:G:C8  | 24:BA:1559:G:H5'' | 2.47                     | 0.49              |
| 24:BA:1613:G:N2  | 24:BA:1619:G:N9   | 2.60                     | 0.49              |
| 24:BA:1657:C:OP1 | 28:BE:136:ARG:O   | 2.30                     | 0.49              |
| 24:BA:1777:U:C2' | 24:BA:1778:U:H5'  | 2.42                     | 0.49              |
| 24:BA:1845:G:C6  | 24:BA:1896:G:C6   | 3.00                     | 0.49              |
| 24:BA:1897:G:C6  | 24:BA:1898:U:C2   | 3.01                     | 0.49              |
| 24:BA:1899:G:C8  | 24:BA:1899:G:C3'  | 2.95                     | 0.49              |
| 24:BA:1924:C:H2' | 24:BA:1925:C:C6   | 2.46                     | 0.49              |
| 24:BA:1942:C:C5  | 24:BA:1943:U:C4   | 3.00                     | 0.49              |
| 24:BA:1991:U:H3' | 24:BA:1991:U:C6   | 2.47                     | 0.49              |
| 24:BA:1999:C:H4' | 24:BA:2723:C:O2   | 2.12                     | 0.49              |
| 24:BA:2014:A:N3  | 24:BA:2015:A:C2   | 2.81                     | 0.49              |
| 24:BA:2041:U:C6  | 24:BA:2041:U:OP2  | 2.66                     | 0.49              |
| 24:BA:2452:C:O2' | 24:BA:2453:A:H5'  | 2.13                     | 0.49              |
| 24:BA:2520:C:H2' | 24:BA:2521:C:C6   | 2.48                     | 0.49              |
| 24:BA:2526:G:C2' | 24:BA:2527:C:O5'  | 2.61                     | 0.49              |
| 24:BA:2606:C:H5' | 24:BA:2606:C:C6   | 2.38                     | 0.49              |
| 24:BA:2652:C:C4  | 24:BA:2653:U:C4   | 3.00                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2694:G:C6   | 24:BA:2695:C:N4    | 2.80                     | 0.49              |
| 24:BA:2701:C:H5'  | 24:BA:2701:C:H6    | 1.78                     | 0.49              |
| 24:BA:2705:A:H2'  | 24:BA:2706:G:O5'   | 2.13                     | 0.49              |
| 24:BA:2803:C:OP2  | 24:BA:2803:C:H6    | 1.95                     | 0.49              |
| 24:BA:2841:C:O2   | 24:BA:2842:G:C8    | 2.66                     | 0.49              |
| 26:BC:38:ASP:O    | 26:BC:39:GLU:O     | 2.29                     | 0.49              |
| 26:BC:120:MET:HE1 | 26:BC:138:PRO:CB   | 2.34                     | 0.49              |
| 29:BF:39:TRP:O    | 29:BF:42:ALA:HB3   | 2.12                     | 0.49              |
| 29:BF:41:LEU:O    | 29:BF:44:ARG:NH2   | 2.45                     | 0.49              |
| 29:BF:43:LYS:HG3  | 29:BF:98:SER:C     | 2.37                     | 0.49              |
| 30:BG:39:ILE:HG13 | 30:BG:157:ILE:HD11 | 1.92                     | 0.49              |
| 30:BG:77:ILE:O    | 30:BG:78:SER:C     | 2.56                     | 0.49              |
| 30:BG:91:ARG:HH21 | 30:BG:91:ARG:CG    | 2.24                     | 0.49              |
| 31:BH:137:ASP:OD2 | 31:BH:140:LYS:HB3  | 2.13                     | 0.49              |
| 31:BH:163:TYR:CB  | 31:BH:166:GLY:HA2  | 2.40                     | 0.49              |
| 32:BK:33:ARG:HB2  | 32:BK:35:LEU:HD23  | 1.95                     | 0.49              |
| 33:BL:78:ILE:HG22 | 33:BL:136:VAL:HG11 | 1.94                     | 0.49              |
| 34:BM:25:ARG:CA   | 34:BM:28:THR:HG23  | 2.42                     | 0.49              |
| 34:BM:96:GLU:HG2  | 34:BM:97:ARG:HD3   | 1.94                     | 0.49              |
| 34:BM:122:VAL:O   | 34:BM:123:TYR:CD1  | 2.65                     | 0.49              |
| 35:BN:3:GLN:OE1   | 35:BN:3:GLN:C      | 2.56                     | 0.49              |
| 36:BO:23:PRO:HG2  | 36:BO:28:GLY:C     | 2.38                     | 0.49              |
| 37:BP:56:ARG:O    | 37:BP:57:HIS:C     | 2.54                     | 0.49              |
| 38:BQ:28:LEU:HD21 | 38:BQ:115:GLU:HA   | 1.94                     | 0.49              |
| 38:BQ:63:ARG:NH1  | 38:BQ:80:PHE:CG    | 2.81                     | 0.49              |
| 38:BQ:98:LEU:N    | 38:BQ:114:VAL:HG22 | 2.27                     | 0.49              |
| 39:BR:57:LYS:HD2  | 39:BR:65:VAL:HA    | 1.95                     | 0.49              |
| 40:BS:64:ARG:HH11 | 40:BS:64:ARG:N     | 2.08                     | 0.49              |
| 41:BT:52:ARG:C    | 41:BT:54:LYS:H     | 2.19                     | 0.49              |
| 41:BT:61:TRP:C    | 41:BT:65:ILE:HD11  | 2.37                     | 0.49              |
| 41:BT:67:ALA:C    | 41:BT:71:GLN:NE2   | 2.70                     | 0.49              |
| 45:BX:32:PRO:HB2  | 45:BX:34:LYS:CD    | 2.43                     | 0.49              |
| 45:BX:37:VAL:HG13 | 45:BX:39:VAL:CG2   | 2.42                     | 0.49              |
| 45:BX:97:ARG:C    | 45:BX:98:VAL:CG2   | 2.85                     | 0.49              |
| 46:BY:48:PHE:O    | 46:BY:53:ILE:HG22  | 2.12                     | 0.49              |
| 46:BY:60:GLU:HG3  | 46:BY:69:THR:HG22  | 1.95                     | 0.49              |
| 48:B1:28:MET:HA   | 48:B1:31:ARG:CG    | 2.37                     | 0.49              |
| 49:B2:12:PRO:HA   | 49:B2:15:TYR:CZ    | 2.46                     | 0.49              |
| 49:B2:26:LEU:HD13 | 49:B2:26:LEU:N     | 2.26                     | 0.49              |
| 49:B2:38:GLU:HG2  | 49:B2:38:GLU:O     | 2.11                     | 0.49              |
| 53:B6:20:ALA:HB3  | 53:B6:21:ARG:HH21  | 1.76                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:51:A:C2      | 1:AA:116:A:H1'    | 2.47                     | 0.49              |
| 1:AA:78:G:C6      | 1:AA:79:G:C5      | 3.01                     | 0.49              |
| 1:AA:87:A:N7      | 1:AA:88:C:N3      | 2.60                     | 0.49              |
| 1:AA:186(B):C:H4' | 22:AW:89:ARG:CZ   | 2.42                     | 0.49              |
| 1:AA:309:G:H2'    | 1:AA:310:G:H8     | 1.76                     | 0.49              |
| 1:AA:423:G:N2     | 1:AA:424:G:C5     | 2.80                     | 0.49              |
| 1:AA:430:A:H4'    | 6:AG:7:PRO:HA     | 1.94                     | 0.49              |
| 1:AA:430:A:P      | 6:AG:9:CYS:H      | 2.36                     | 0.49              |
| 1:AA:607:A:N1     | 18:AS:31:LYS:HG3  | 2.27                     | 0.49              |
| 1:AA:684:A:O2'    | 13:AN:39:PRO:O    | 2.30                     | 0.49              |
| 1:AA:707:C:H2'    | 1:AA:708:C:O5'    | 2.13                     | 0.49              |
| 1:AA:812:C:O4'    | 1:AA:813:U:H5     | 1.95                     | 0.49              |
| 1:AA:858:G:O5'    | 1:AA:858:G:C8     | 2.66                     | 0.49              |
| 1:AA:859:A:C2'    | 1:AA:860:A:O4'    | 2.58                     | 0.49              |
| 1:AA:888:G:H3'    | 1:AA:889:A:H8     | 1.78                     | 0.49              |
| 1:AA:1108:G:C8    | 1:AA:1109:C:C5    | 3.01                     | 0.49              |
| 1:AA:1109:C:O2'   | 1:AA:1110:A:H5'   | 2.13                     | 0.49              |
| 1:AA:1274:G:H21   | 1:AA:1275:A:N6    | 2.11                     | 0.49              |
| 1:AA:1285:A:C4'   | 1:AA:1286:A:C8    | 2.95                     | 0.49              |
| 1:AA:1317:C:H2'   | 1:AA:1318:A:H5'   | 1.94                     | 0.49              |
| 1:AA:1413:A:C2    | 1:AA:1414:U:N1    | 2.81                     | 0.49              |
| 3:AD:26:A:C2      | 3:AD:27:G:C8      | 3.00                     | 0.49              |
| 3:AD:62:C:HO2'    | 26:BC:53:ARG:HG2  | 1.75                     | 0.49              |
| 4:AE:50:GLU:CD    | 4:AE:200:ILE:C    | 2.81                     | 0.49              |
| 4:AE:134:GLU:O    | 4:AE:138:LEU:CG   | 2.56                     | 0.49              |
| 4:AE:208:ILE:HA   | 4:AE:211:ILE:CD1  | 2.42                     | 0.49              |
| 5:AF:71:ALA:HB2   | 5:AF:106:VAL:HG23 | 1.94                     | 0.49              |
| 5:AF:144:SER:OG   | 5:AF:144:SER:O    | 2.21                     | 0.49              |
| 6:AG:65:ARG:HG3   | 6:AG:72:GLU:CD    | 2.38                     | 0.49              |
| 6:AG:127:THR:O    | 6:AG:146:ILE:CG2  | 2.58                     | 0.49              |
| 6:AG:128:VAL:HG21 | 6:AG:133:VAL:HG23 | 1.94                     | 0.49              |
| 6:AG:148:VAL:HG13 | 6:AG:152:SER:OG   | 2.13                     | 0.49              |
| 6:AG:152:SER:O    | 6:AG:154:ASN:ND2  | 2.45                     | 0.49              |
| 6:AG:178:VAL:O    | 6:AG:179:GLU:O    | 2.31                     | 0.49              |
| 7:AH:43:LEU:CD2   | 7:AH:44:GLY:N     | 2.67                     | 0.49              |
| 7:AH:140:ARG:O    | 7:AH:141:GLN:C    | 2.52                     | 0.49              |
| 8:AI:57:GLN:NE2   | 8:AI:57:GLN:O     | 2.45                     | 0.49              |
| 8:AI:78:GLU:O     | 8:AI:81:ILE:CB    | 2.57                     | 0.49              |
| 9:AJ:47:CYS:O     | 9:AJ:51:GLN:HG2   | 2.12                     | 0.49              |
| 9:AJ:136:LYS:HB3  | 9:AJ:136:LYS:HE3  | 1.55                     | 0.49              |
| 10:AK:89:PRO:HA   | 10:AK:92:ARG:NE   | 2.28                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 11:AL:48:GLU:N     | 11:AL:49:PRO:CD   | 2.73                     | 0.49              |
| 11:AL:85:LEU:HD12  | 11:AL:89:ASN:ND2  | 2.28                     | 0.49              |
| 13:AN:18:ARG:HG2   | 13:AN:18:ARG:NH1  | 2.26                     | 0.49              |
| 13:AN:45:GLY:O     | 13:AN:50:TYR:CB   | 2.60                     | 0.49              |
| 14:AO:82:VAL:HB    | 14:AO:106:ASP:OD2 | 2.13                     | 0.49              |
| 15:AP:13:LYS:CB    | 15:AP:17:VAL:HG11 | 2.39                     | 0.49              |
| 15:AP:58:GLU:O     | 15:AP:61:GLU:CB   | 2.61                     | 0.49              |
| 15:AP:90:LEU:HD21  | 15:AP:93:ARG:HH11 | 1.76                     | 0.49              |
| 15:AP:96:LEU:O     | 15:AP:98:VAL:HG23 | 2.12                     | 0.49              |
| 16:AQ:26:ARG:HB3   | 16:AQ:43:CYS:CB   | 2.43                     | 0.49              |
| 18:AS:16:HIS:C     | 18:AS:17:TYR:HD1  | 2.19                     | 0.49              |
| 18:AS:21:VAL:HG22  | 18:AS:36:ILE:HD13 | 1.95                     | 0.49              |
| 20:AU:52:PRO:C     | 20:AU:54:ARG:N    | 2.67                     | 0.49              |
| 20:AU:74:ARG:NH1   | 20:AU:81:PHE:HB3  | 2.27                     | 0.49              |
| 22:AW:12:ALA:C     | 22:AW:14:LYS:N    | 2.68                     | 0.49              |
| 22:AW:45:GLN:NE2   | 22:AW:91:LEU:HB3  | 2.28                     | 0.49              |
| 24:BA:37:C:H5'     | 24:BA:451:C:H5''  | 1.95                     | 0.49              |
| 24:BA:64:A:C2      | 24:BA:65:C:H1'    | 2.47                     | 0.49              |
| 24:BA:149:A:C8     | 24:BA:150:C:O4'   | 2.66                     | 0.49              |
| 24:BA:297:C:C4     | 24:BA:298:G:C2    | 3.00                     | 0.49              |
| 24:BA:361:G:H2'    | 24:BA:362:U:H6    | 1.78                     | 0.49              |
| 24:BA:386:G:O2'    | 24:BA:387:U:OP2   | 2.31                     | 0.49              |
| 24:BA:411:G:O4'    | 24:BA:2407:G:OP2  | 2.31                     | 0.49              |
| 24:BA:540:G:C5     | 24:BA:541:C:C5    | 3.00                     | 0.49              |
| 24:BA:573:G:C2'    | 24:BA:574:C:C5'   | 2.91                     | 0.49              |
| 24:BA:600:G:H21    | 24:BA:604:G:H4'   | 1.77                     | 0.49              |
| 24:BA:629:G:N2     | 24:BA:635:C:C2    | 2.81                     | 0.49              |
| 24:BA:632:A:C2     | 24:BA:633:A:C4    | 3.00                     | 0.49              |
| 24:BA:688:U:P      | 53:B6:2:LYS:HE2   | 2.52                     | 0.49              |
| 24:BA:704:G:C2     | 24:BA:725:G:N2    | 2.80                     | 0.49              |
| 24:BA:715:G:C2'    | 24:BA:716:A:O5'   | 2.61                     | 0.49              |
| 24:BA:749:C:H4'    | 24:BA:1271:G:N3   | 2.28                     | 0.49              |
| 24:BA:832:G:OP1    | 36:BO:36:LYS:CE   | 2.61                     | 0.49              |
| 24:BA:956:G:OP1    | 37:BP:87:LYS:HG3  | 2.13                     | 0.49              |
| 24:BA:1008:C:H6    | 24:BA:1008:C:OP1  | 1.95                     | 0.49              |
| 24:BA:1071:G:O4'   | 24:BA:1089:G:C5   | 2.65                     | 0.49              |
| 24:BA:1095:A:N7    | 24:BA:1097:U:O4   | 2.45                     | 0.49              |
| 24:BA:1142(A):A:C2 | 24:BA:1143:A:O4'  | 2.66                     | 0.49              |
| 24:BA:1183:G:C1'   | 24:BA:1184:G:C8   | 2.93                     | 0.49              |
| 24:BA:1250:G:O2'   | 24:BA:1251:C:OP2  | 2.30                     | 0.49              |
| 24:BA:1288:U:C2    | 24:BA:1327:C:O2   | 2.66                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1299:G:O4'  | 24:BA:1301:A:C2   | 2.65                     | 0.49              |
| 24:BA:1469:A:H8   | 24:BA:1469:A:H3'  | 1.76                     | 0.49              |
| 24:BA:1544:C:O2'  | 24:BA:1545:A:C4'  | 2.61                     | 0.49              |
| 24:BA:1661:G:C6   | 24:BA:1662:C:C4   | 3.01                     | 0.49              |
| 24:BA:1687:G:H1'  | 24:BA:1702:G:N2   | 2.26                     | 0.49              |
| 24:BA:1775:U:C4   | 27:BD:208:LYS:HD2 | 2.47                     | 0.49              |
| 24:BA:1789:A:O4'  | 27:BD:222:ARG:CZ  | 2.61                     | 0.49              |
| 24:BA:1814:G:C2'  | 24:BA:1815:A:C8   | 2.90                     | 0.49              |
| 24:BA:1816:G:O3'  | 24:BA:1817:G:H8   | 1.96                     | 0.49              |
| 24:BA:1821:A:N6   | 24:BA:1822:G:O6   | 2.46                     | 0.49              |
| 24:BA:1903:G:C4   | 24:BA:1904:G:C8   | 3.01                     | 0.49              |
| 24:BA:1906:G:N9   | 24:BA:1929:G:C8   | 2.80                     | 0.49              |
| 24:BA:1919:A:H3'  | 24:BA:1919:A:P    | 2.53                     | 0.49              |
| 24:BA:1937:A:N7   | 24:BA:1939:U:C4   | 2.81                     | 0.49              |
| 24:BA:2051:A:H3'  | 24:BA:2578:G:C5'  | 2.43                     | 0.49              |
| 24:BA:2053:G:N1   | 24:BA:2054:A:C5   | 2.80                     | 0.49              |
| 24:BA:2157:G:H4'  | 24:BA:2158:A:OP1  | 2.13                     | 0.49              |
| 24:BA:2227:A:C5   | 24:BA:2228:G:N7   | 2.80                     | 0.49              |
| 24:BA:2296:U:C6   | 24:BA:2296:U:O5'  | 2.65                     | 0.49              |
| 24:BA:2306:C:O2'  | 30:BG:153:ARG:NH1 | 2.45                     | 0.49              |
| 24:BA:2347:C:H5   | 24:BA:2382:G:H1'  | 1.77                     | 0.49              |
| 24:BA:2440:C:H2'  | 24:BA:2441:C:O5'  | 2.13                     | 0.49              |
| 24:BA:2453:A:C2   | 24:BA:2499:C:N4   | 2.80                     | 0.49              |
| 24:BA:2472:G:C3'  | 24:BA:2475:C:H42  | 2.25                     | 0.49              |
| 24:BA:2497:A:C8   | 24:BA:2497:A:H3'  | 2.48                     | 0.49              |
| 24:BA:2527:C:O2'  | 24:BA:2528:U:C5'  | 2.61                     | 0.49              |
| 24:BA:2600:A:C2   | 24:BA:2601:C:C5   | 3.01                     | 0.49              |
| 24:BA:2618:G:H2'  | 24:BA:2619:C:H6   | 1.77                     | 0.49              |
| 24:BA:2654:A:C4'  | 24:BA:2656:U:C5   | 2.91                     | 0.49              |
| 24:BA:2680:C:H4'  | 28:BE:188:VAL:HB  | 1.95                     | 0.49              |
| 24:BA:2699:C:H2'  | 24:BA:2700:C:H5'  | 1.95                     | 0.49              |
| 24:BA:2705:A:HO2' | 24:BA:2706:G:P    | 2.35                     | 0.49              |
| 24:BA:2766:G:C2   | 24:BA:2767:C:C6   | 3.00                     | 0.49              |
| 24:BA:2773:C:OP1  | 28:BE:164:ARG:NH2 | 2.46                     | 0.49              |
| 24:BA:2787:C:H1'  | 28:BE:61:ARG:CZ   | 2.43                     | 0.49              |
| 24:BA:2828:C:H2'  | 24:BA:2829:C:H6   | 1.78                     | 0.49              |
| 25:BB:75:G:O6     | 25:BB:76:G:N2     | 2.46                     | 0.49              |
| 25:BB:97:G:H2'    | 25:BB:98:G:C5'    | 2.33                     | 0.49              |
| 26:BC:177:LYS:HB2 | 26:BC:180:PHE:CG  | 2.47                     | 0.49              |
| 27:BD:124:PRO:HG2 | 27:BD:126:GLN:HG2 | 1.94                     | 0.49              |
| 27:BD:172:TYR:CD2 | 27:BD:186:HIS:N   | 2.80                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 28:BE:8:LYS:CD     | 28:BE:8:LYS:C     | 2.85                     | 0.49              |
| 28:BE:148:GLY:O    | 28:BE:149:ARG:HB3 | 2.12                     | 0.49              |
| 28:BE:196:VAL:HG13 | 28:BE:197:ILE:H   | 1.77                     | 0.49              |
| 28:BE:203:LYS:O    | 28:BE:203:LYS:CD  | 2.58                     | 0.49              |
| 29:BF:47:GLY:O     | 29:BF:95:ARG:O    | 2.30                     | 0.49              |
| 30:BG:53:LEU:HD21  | 30:BG:72:ARG:N    | 2.28                     | 0.49              |
| 31:BH:58:GLU:HG2   | 31:BH:59:ARG:N    | 2.27                     | 0.49              |
| 31:BH:69:ARG:CG    | 31:BH:69:ARG:NH2  | 2.74                     | 0.49              |
| 34:BM:48:MET:C     | 34:BM:50:ASP:N    | 2.67                     | 0.49              |
| 34:BM:69:GLN:HE21  | 34:BM:69:GLN:H    | 1.60                     | 0.49              |
| 34:BM:70:LYS:HD3   | 34:BM:86:PRO:HA   | 1.94                     | 0.49              |
| 34:BM:99:LEU:HD12  | 34:BM:100:GLU:HA  | 1.95                     | 0.49              |
| 35:BN:8:LEU:CD2    | 35:BN:81:ASP:O    | 2.60                     | 0.49              |
| 35:BN:12:ASP:O     | 35:BN:94:ARG:NH2  | 2.46                     | 0.49              |
| 36:BO:51:PHE:O     | 36:BO:52:GLU:C    | 2.54                     | 0.49              |
| 37:BP:17:LEU:C     | 37:BP:18:LYS:HG2  | 2.37                     | 0.49              |
| 39:BR:89:ARG:NE    | 39:BR:90:GLY:O    | 2.44                     | 0.49              |
| 40:BS:53:ARG:NH2   | 40:BS:102:ILE:N   | 2.57                     | 0.49              |
| 43:BV:78:GLU:OE2   | 43:BV:101:SER:N   | 2.46                     | 0.49              |
| 45:BX:81:LYS:CE    | 45:BX:96:ILE:HG12 | 2.42                     | 0.49              |
| 46:BY:95:PRO:HD2   | 46:BY:131:ARG:N   | 2.28                     | 0.49              |
| 46:BY:107:THR:OG1  | 46:BY:141:VAL:O   | 2.29                     | 0.49              |
| 47:BZ:40:GLN:HG2   | 47:BZ:45:PHE:CD1  | 2.48                     | 0.49              |
| 48:B1:30:LEU:HD11  | 48:B1:48:LEU:HD23 | 1.94                     | 0.49              |
| 48:B1:51:GLN:O     | 48:B1:54:ARG:HG3  | 2.12                     | 0.49              |
| 49:B2:5:LYS:HE2    | 49:B2:57:GLU:HB2  | 1.94                     | 0.49              |
| 49:B2:12:PRO:O     | 49:B2:13:ILE:O    | 2.30                     | 0.49              |
| 52:B5:8:LYS:O      | 52:B5:9:LEU:HD22  | 2.13                     | 0.49              |
| 54:B7:16:ILE:HG22  | 54:B7:21:LYS:O    | 2.13                     | 0.49              |
| 1:AA:134:A:N1      | 1:AA:135:C:C4     | 2.80                     | 0.49              |
| 1:AA:160:A:H1'     | 1:AA:344:A:H62    | 1.77                     | 0.49              |
| 1:AA:250:A:C2      | 1:AA:274:A:N1     | 2.81                     | 0.49              |
| 1:AA:262:A:C5      | 1:AA:263:A:N6     | 2.81                     | 0.49              |
| 1:AA:453:A:N6      | 1:AA:480:U:C2     | 2.73                     | 0.49              |
| 1:AA:519:C:N4      | 1:AA:520:A:N3     | 2.59                     | 0.49              |
| 1:AA:529:G:N1      | 14:AO:49:ASN:CG   | 2.71                     | 0.49              |
| 1:AA:631:G:O2'     | 1:AA:632:A:C8     | 2.60                     | 0.49              |
| 1:AA:643:C:C2      | 1:AA:644:G:C8     | 3.01                     | 0.49              |
| 1:AA:781:A:O4'     | 1:AA:1523:G:H1'   | 2.11                     | 0.49              |
| 1:AA:843:U:H3      | 4:AE:37:ASN:HA    | 1.77                     | 0.49              |
| 1:AA:945:G:C2      | 1:AA:1337:G:C4    | 3.00                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:978:A:N6     | 1:AA:1318:A:N6    | 2.60                     | 0.49              |
| 1:AA:1054:C:C5    | 3:AB:34:G:H4'     | 2.48                     | 0.49              |
| 1:AA:1197:G:H3'   | 1:AA:1197:G:P     | 2.49                     | 0.49              |
| 1:AA:1260:C:O5'   | 1:AA:1284:C:H4'   | 2.12                     | 0.49              |
| 1:AA:1311:G:N7    | 21:AV:2:PRO:HA    | 2.27                     | 0.49              |
| 1:AA:1336:C:H4'   | 1:AA:1337:G:N1    | 2.28                     | 0.49              |
| 1:AA:1340:A:H2'   | 1:AA:1341:U:C6    | 2.47                     | 0.49              |
| 1:AA:1353:G:C2    | 1:AA:1370:G:C2    | 3.01                     | 0.49              |
| 1:AA:1371:G:OP2   | 11:AL:11:LYS:HE3  | 2.13                     | 0.49              |
| 1:AA:1410:G:H2'   | 1:AA:1411:C:C6    | 2.48                     | 0.49              |
| 2:A1:21:G:H2'     | 2:A1:22:C:O4'     | 2.12                     | 0.49              |
| 2:A1:34:U:H6      | 2:A1:34:U:OP2     | 1.96                     | 0.49              |
| 3:AB:34:G:C6      | 3:AB:35:A:C8      | 3.00                     | 0.49              |
| 4:AE:71:VAL:HG22  | 4:AE:93:VAL:N     | 2.28                     | 0.49              |
| 4:AE:82:ARG:HB3   | 4:AE:83:MET:HE2   | 1.94                     | 0.49              |
| 4:AE:91:PRO:CG    | 4:AE:155:LEU:HD23 | 2.42                     | 0.49              |
| 5:AF:6:HIS:O      | 5:AF:8:ILE:N      | 2.45                     | 0.49              |
| 5:AF:55:VAL:HG12  | 5:AF:57:ILE:HG13  | 1.95                     | 0.49              |
| 5:AF:55:VAL:CG2   | 5:AF:68:VAL:HG13  | 2.39                     | 0.49              |
| 6:AG:64:LEU:HD12  | 6:AG:75:PHE:CZ    | 2.47                     | 0.49              |
| 6:AG:128:VAL:HG23 | 6:AG:133:VAL:H    | 1.78                     | 0.49              |
| 6:AG:152:SER:OG   | 6:AG:158:ILE:HD12 | 2.12                     | 0.49              |
| 9:AJ:2:ALA:CB     | 9:AJ:5:ARG:O      | 2.60                     | 0.49              |
| 9:AJ:15:ASP:N     | 9:AJ:20:ASP:H     | 2.09                     | 0.49              |
| 9:AJ:76:ARG:NH1   | 9:AJ:89:MET:CG    | 2.72                     | 0.49              |
| 9:AJ:106:GLN:O    | 9:AJ:109:ASN:N    | 2.45                     | 0.49              |
| 11:AL:78:LYS:HD3  | 11:AL:79:LEU:CD2  | 2.41                     | 0.49              |
| 11:AL:113:LYS:HZ1 | 11:AL:119:ALA:HB1 | 1.77                     | 0.49              |
| 12:AM:54:PHE:CE1  | 12:AM:55:LYS:HB3  | 2.48                     | 0.49              |
| 13:AN:46:GLY:HA3  | 13:AN:55:LYS:HD2  | 1.91                     | 0.49              |
| 13:AN:84:VAL:O    | 13:AN:85:ARG:HD3  | 2.13                     | 0.49              |
| 15:AP:81:LEU:HD11 | 15:AP:88:ARG:NH2  | 2.20                     | 0.49              |
| 16:AQ:34:TYR:CE1  | 16:AQ:39:LEU:O    | 2.65                     | 0.49              |
| 17:AR:54:ARG:O    | 17:AR:55:GLY:C    | 2.56                     | 0.49              |
| 17:AR:63:ARG:HH12 | 17:AR:87:ILE:HD13 | 1.76                     | 0.49              |
| 17:AR:63:ARG:O    | 17:AR:64:ARG:C    | 2.56                     | 0.49              |
| 19:AT:20:THR:O    | 19:AT:21:VAL:HG13 | 2.13                     | 0.49              |
| 21:AV:18:LYS:HE2  | 21:AV:22:LEU:CB   | 2.43                     | 0.49              |
| 21:AV:31:ILE:O    | 21:AV:33:THR:N    | 2.46                     | 0.49              |
| 21:AV:64:GLU:CG   | 21:AV:65:ASN:N    | 2.73                     | 0.49              |
| 23:AX:12:LYS:O    | 23:AX:13:ILE:C    | 2.56                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:14:A:C8    | 24:BA:15:G:O4'    | 2.66                     | 0.49              |
| 24:BA:183:C:H1'  | 24:BA:433:C:C1'   | 2.27                     | 0.49              |
| 24:BA:227:A:N6   | 24:BA:410:G:H1'   | 2.27                     | 0.49              |
| 24:BA:280:C:O3'  | 24:BA:281:G:C3'   | 2.34                     | 0.49              |
| 24:BA:400:G:C8   | 24:BA:400:G:C3'   | 2.95                     | 0.49              |
| 24:BA:503:A:C5   | 24:BA:505:A:N7    | 2.81                     | 0.49              |
| 24:BA:820:A:C2   | 24:BA:943:U:C2'   | 2.95                     | 0.49              |
| 24:BA:851:U:C5'  | 49:B2:49:LYS:HD2  | 2.38                     | 0.49              |
| 24:BA:874:G:C2   | 24:BA:904:C:C4    | 3.01                     | 0.49              |
| 24:BA:880:G:H2'  | 24:BA:881:G:C4'   | 2.43                     | 0.49              |
| 24:BA:980:A:N1   | 24:BA:1135:C:H4'  | 2.28                     | 0.49              |
| 24:BA:1044:G:C8  | 24:BA:1048:A:H1'  | 2.48                     | 0.49              |
| 24:BA:1061:U:H4' | 24:BA:1070:A:O4'  | 2.13                     | 0.49              |
| 24:BA:1284:A:C5  | 24:BA:1285:G:N1   | 2.80                     | 0.49              |
| 24:BA:1304:C:C4  | 24:BA:1305:C:C5   | 3.01                     | 0.49              |
| 24:BA:1331:A:O2' | 24:BA:1332:G:H8   | 1.95                     | 0.49              |
| 24:BA:1342:A:C4  | 24:BA:1397:U:H1'  | 2.48                     | 0.49              |
| 24:BA:1364:G:C5  | 24:BA:1366:A:OP1  | 2.65                     | 0.49              |
| 24:BA:1420:U:O2' | 24:BA:1421:G:C5'  | 2.60                     | 0.49              |
| 24:BA:1479:G:N2  | 24:BA:1515:C:N3   | 2.61                     | 0.49              |
| 24:BA:1595:G:N2  | 24:BA:1596:A:H1'  | 2.27                     | 0.49              |
| 24:BA:1769:G:N1  | 24:BA:1984:G:C5   | 2.80                     | 0.49              |
| 24:BA:1857:G:H2' | 24:BA:1858:G:C4   | 2.48                     | 0.49              |
| 24:BA:1857:G:C5  | 24:BA:1858:G:O6   | 2.66                     | 0.49              |
| 24:BA:1864:U:O2' | 24:BA:1869:G:H5'  | 2.12                     | 0.49              |
| 24:BA:1893:C:C2' | 24:BA:1894:C:H5'  | 2.43                     | 0.49              |
| 24:BA:2019:A:C6  | 24:BA:2020:A:C4   | 3.01                     | 0.49              |
| 24:BA:2078:C:H4' | 24:BA:2433:A:O2'  | 2.12                     | 0.49              |
| 24:BA:2080:G:C6  | 24:BA:2241:A:C6   | 3.00                     | 0.49              |
| 24:BA:2146:C:N3  | 24:BA:2147:G:C1'  | 2.75                     | 0.49              |
| 24:BA:2264:C:C5  | 24:BA:2265:U:C5   | 3.00                     | 0.49              |
| 24:BA:2304:G:N2  | 30:BG:156:ASP:OD1 | 2.46                     | 0.49              |
| 24:BA:2415:G:C2  | 24:BA:2416:C:C2   | 3.00                     | 0.49              |
| 24:BA:2418:A:C2  | 24:BA:2419:U:C2   | 3.00                     | 0.49              |
| 24:BA:2469:A:C2  | 24:BA:2482:G:H1'  | 2.48                     | 0.49              |
| 24:BA:2484:G:C1' | 37:BP:124:LYS:NZ  | 2.73                     | 0.49              |
| 24:BA:2509:G:H2' | 24:BA:2510:C:O4'  | 2.13                     | 0.49              |
| 24:BA:2525:G:C2  | 24:BA:2539:C:N4   | 2.80                     | 0.49              |
| 24:BA:2623:G:N2  | 24:BA:2624:G:C4   | 2.81                     | 0.49              |
| 24:BA:2679:A:O2' | 28:BE:189:PRO:HA  | 2.13                     | 0.49              |
| 24:BA:2754:U:H2' | 24:BA:2755:C:C5'  | 2.35                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2811:G:N1    | 24:BA:2891:G:C2    | 2.80                     | 0.49              |
| 24:BA:2858:C:H3'   | 24:BA:2859:G:C8    | 2.47                     | 0.49              |
| 24:BA:2901:C:C2    | 24:BA:2902:C:C5    | 3.00                     | 0.49              |
| 25:BB:12:C:C5'     | 47:BZ:74:ARG:CG    | 2.86                     | 0.49              |
| 26:BC:19:ILE:O     | 26:BC:19:ILE:HG22  | 2.12                     | 0.49              |
| 26:BC:22:ILE:HD13  | 26:BC:189:ILE:HG22 | 1.95                     | 0.49              |
| 26:BC:34:THR:O     | 26:BC:34:THR:CG2   | 2.59                     | 0.49              |
| 26:BC:49:ILE:HG23  | 26:BC:208:PHE:CE1  | 2.47                     | 0.49              |
| 26:BC:77:ILE:HB    | 26:BC:115:ALA:CB   | 2.42                     | 0.49              |
| 26:BC:155:GLU:OE1  | 26:BC:155:GLU:HA   | 2.13                     | 0.49              |
| 27:BD:21:PHE:O     | 27:BD:205:VAL:CG2  | 2.56                     | 0.49              |
| 27:BD:23:GLU:HB3   | 27:BD:204:ILE:CG1  | 2.43                     | 0.49              |
| 27:BD:82:ILE:CG2   | 27:BD:83:GLU:N     | 2.76                     | 0.49              |
| 28:BE:50:GLY:CA    | 28:BE:76:ARG:HE    | 2.24                     | 0.49              |
| 28:BE:92:THR:N     | 28:BE:95:ILE:HD13  | 2.20                     | 0.49              |
| 28:BE:158:GLY:O    | 28:BE:160:TYR:CD1  | 2.51                     | 0.49              |
| 28:BE:169:ASN:HD22 | 28:BE:170:LEU:N    | 2.04                     | 0.49              |
| 29:BF:65:TRP:HE1   | 29:BF:73:ALA:CB    | 2.17                     | 0.49              |
| 31:BH:23:ARG:NE    | 31:BH:34:GLU:HB3   | 2.27                     | 0.49              |
| 31:BH:25:LYS:HD3   | 31:BH:27:LYS:HZ2   | 1.77                     | 0.49              |
| 31:BH:125:VAL:N    | 31:BH:126:PRO:CD   | 2.76                     | 0.49              |
| 31:BH:136:ILE:H    | 31:BH:141:VAL:HG21 | 1.78                     | 0.49              |
| 32:BK:2:LYS:CE     | 32:BK:39:ALA:HB2   | 2.43                     | 0.49              |
| 32:BK:6:LEU:HD23   | 32:BK:6:LEU:C      | 2.37                     | 0.49              |
| 32:BK:128:LEU:HD22 | 32:BK:129:THR:H    | 1.74                     | 0.49              |
| 35:BN:37:ASP:HB2   | 35:BN:61:VAL:HG21  | 1.94                     | 0.49              |
| 35:BN:99:PHE:CA    | 35:BN:122:LEU:O    | 2.61                     | 0.49              |
| 37:BP:34:LEU:CD2   | 37:BP:118:LEU:HD22 | 2.42                     | 0.49              |
| 38:BQ:97:VAL:C     | 38:BQ:98:LEU:CG    | 2.85                     | 0.49              |
| 38:BQ:105:ARG:CA   | 38:BQ:105:ARG:NH1  | 2.76                     | 0.49              |
| 39:BR:32:LEU:O     | 39:BR:34:HIS:N     | 2.45                     | 0.49              |
| 39:BR:43:GLU:C     | 39:BR:45:GLY:N     | 2.67                     | 0.49              |
| 39:BR:76:LYS:HD3   | 39:BR:77:ALA:H     | 1.77                     | 0.49              |
| 39:BR:112:PHE:CD1  | 39:BR:112:PHE:C    | 2.91                     | 0.49              |
| 40:BS:57:PHE:O     | 40:BS:58:ASN:CB    | 2.59                     | 0.49              |
| 40:BS:64:ARG:HH12  | 40:BS:78:LEU:H     | 1.60                     | 0.49              |
| 41:BT:96:ALA:O     | 41:BT:97:ASP:C     | 2.54                     | 0.49              |
| 41:BT:105:VAL:HG13 | 41:BT:106:PHE:N    | 2.27                     | 0.49              |
| 42:BU:2:PHE:O      | 42:BU:43:GLU:OE1   | 2.30                     | 0.49              |
| 43:BV:21:VAL:HG22  | 43:BV:75:TYR:CD2   | 2.47                     | 0.49              |
| 43:BV:33:ARG:NH1   | 43:BV:48:ALA:HB2   | 2.21                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1          | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|-------------------|--------------------------|-------------------|
| 43:BV:59:VAL:C  | 43:BV:63:ASP:HA   | 2.36                     | 0.49              |
| 45:BX:8:LYS:O   | 45:BX:9:LYS:C     | 2.55                     | 0.49              |
| 45:BX:75:ILE:O  | 45:BX:75:ILE:HD12 | 2.12                     | 0.49              |
| 46:BY:6:LYS:CB  | 46:BY:37:VAL:HG13 | 2.42                     | 0.49              |
| 46:BY:14:LYS:O  | 46:BY:15:PRO:C    | 2.53                     | 0.49              |
| 49:B2:52:HIS:CG | 49:B2:53:LEU:H    | 2.30                     | 0.49              |
| 50:B3:57:GLU:O  | 50:B3:60:GLN:HG3  | 2.12                     | 0.49              |
| 51:B4:29:THR:C  | 51:B4:30:LEU:CG   | 2.85                     | 0.49              |
| 53:B6:19:ARG:CB | 53:B6:23:ARG:NH2  | 2.73                     | 0.49              |
| 53:B6:43:THR:C  | 53:B6:46:VAL:HB   | 2.37                     | 0.49              |
| 54:B7:8:LYS:HA  | 54:B7:11:LYS:CD   | 2.40                     | 0.49              |
| 1:AA:28:G:C6    | 1:AA:556:C:N4     | 2.81                     | 0.49              |
| 1:AA:41:G:C4    | 1:AA:42:G:N7      | 2.81                     | 0.49              |
| 1:AA:132:C:C2   | 1:AA:133:U:C5     | 3.00                     | 0.49              |
| 1:AA:194:C:O2'  | 1:AA:195:A:H4'    | 2.13                     | 0.49              |
| 1:AA:228:A:O2'  | 1:AA:229:U:H5'    | 2.12                     | 0.49              |
| 1:AA:277:C:P    | 19:AT:68:ARG:HH12 | 2.36                     | 0.49              |
| 1:AA:320:C:O2'  | 1:AA:321:A:O4'    | 2.28                     | 0.49              |
| 1:AA:367:U:O2'  | 1:AA:368:U:H4'    | 2.12                     | 0.49              |
| 1:AA:447:G:N2   | 1:AA:486:U:C5     | 2.81                     | 0.49              |
| 1:AA:609:A:H2'  | 1:AA:610:G:O4'    | 2.13                     | 0.49              |
| 1:AA:908:A:C2   | 1:AA:909:A:C5     | 3.01                     | 0.49              |
| 1:AA:1062:U:C2  | 1:AA:1063:C:N4    | 2.80                     | 0.49              |
| 1:AA:1100:C:O2  | 1:AA:1102:A:C5'   | 2.56                     | 0.49              |
| 1:AA:1346:A:C8  | 1:AA:1348:U:N3    | 2.81                     | 0.49              |
| 1:AA:1368:G:OP1 | 11:AL:113:LYS:HA  | 2.13                     | 0.49              |
| 1:AA:1441:G:N2  | 1:AA:1459:C:C5    | 2.81                     | 0.49              |
| 1:AA:1477:C:O5' | 1:AA:1477:C:H6    | 1.95                     | 0.49              |
| 1:AA:1478:C:O2' | 1:AA:1479:C:H5'   | 2.12                     | 0.49              |
| 2:A1:31:U:O5'   | 2:A1:31:U:H6      | 1.96                     | 0.49              |
| 2:A1:40:U:H2'   | 2:A1:41:U:C6      | 2.47                     | 0.49              |
| 3:AC:72:C:N4    | 3:AC:73:A:N6      | 2.61                     | 0.49              |
| 3:AB:14:A:C8    | 3:AB:22:G:N2      | 2.81                     | 0.49              |
| 3:AB:44:G:H2'   | 3:AB:45:U:H5'     | 1.95                     | 0.49              |
| 3:AB:58:A:C4'   | 3:AB:59:U:OP1     | 2.60                     | 0.49              |
| 4:AE:60:ASP:O   | 4:AE:64:ARG:HD2   | 2.12                     | 0.49              |
| 4:AE:77:ALA:HA  | 4:AE:208:ILE:CD1  | 2.33                     | 0.49              |
| 5:AF:28:GLN:HA  | 5:AF:30:ARG:NH1   | 2.27                     | 0.49              |
| 5:AF:84:ILE:CD1 | 5:AF:101:LEU:HD22 | 2.42                     | 0.49              |
| 5:AF:187:ALA:CB | 5:AF:198:VAL:HG22 | 2.42                     | 0.49              |
| 7:AH:19:MET:HE3 | 7:AH:20:GLN:N     | 2.27                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 7:AH:34:VAL:CG2    | 7:AH:62:ALA:CB     | 2.91                     | 0.49              |
| 7:AH:79:GLU:CG     | 7:AH:93:PRO:CD     | 2.89                     | 0.49              |
| 8:AI:28:ARG:HD3    | 8:AI:28:ARG:N      | 2.27                     | 0.49              |
| 8:AI:86:ARG:O      | 8:AI:87:ARG:HG2    | 2.12                     | 0.49              |
| 9:AJ:43:PHE:CD2    | 9:AJ:44:TYR:CE2    | 2.99                     | 0.49              |
| 9:AJ:75:VAL:HG11   | 9:AJ:86:GLN:HB3    | 1.95                     | 0.49              |
| 10:AK:33:GLU:OE2   | 10:AK:50:ARG:HD2   | 2.12                     | 0.49              |
| 10:AK:122:ARG:HD3  | 10:AK:122:ARG:H    | 1.76                     | 0.49              |
| 11:AL:4:TYR:CE1    | 11:AL:59:PHE:HE2   | 2.14                     | 0.49              |
| 11:AL:27:THR:HB    | 11:AL:62:TYR:HD1   | 1.76                     | 0.49              |
| 11:AL:79:LEU:O     | 11:AL:82:ALA:HB3   | 2.12                     | 0.49              |
| 11:AL:112:LYS:HG3  | 11:AL:117:HIS:CA   | 2.41                     | 0.49              |
| 12:AM:6:ILE:CG1    | 12:AM:73:ASP:H     | 2.26                     | 0.49              |
| 12:AM:12:ASP:HB3   | 12:AM:15:THR:CG2   | 2.43                     | 0.49              |
| 17:AR:6:GLU:C      | 17:AR:8:LYS:N      | 2.64                     | 0.49              |
| 17:AR:33:THR:O     | 17:AR:34:LEU:C     | 2.56                     | 0.49              |
| 18:AS:3:LYS:HA     | 18:AS:4:ILE:HD13   | 1.94                     | 0.49              |
| 20:AU:39:VAL:O     | 20:AU:43:PHE:HE1   | 1.95                     | 0.49              |
| 21:AV:19:VAL:CG1   | 21:AV:20:LEU:N     | 2.75                     | 0.49              |
| 21:AV:81:ARG:HB2   | 21:AV:81:ARG:HH11  | 1.78                     | 0.49              |
| 24:BA:28:A:C1'     | 24:BA:513:A:C6     | 2.95                     | 0.49              |
| 24:BA:164:U:O2     | 24:BA:164:U:C2'    | 2.60                     | 0.49              |
| 24:BA:245:G:C6     | 24:BA:246:C:N4     | 2.80                     | 0.49              |
| 24:BA:270(P):C:O2' | 24:BA:270(Q):C:H5' | 2.12                     | 0.49              |
| 24:BA:459:U:OP2    | 53:B6:40:TRP:CD2   | 2.66                     | 0.49              |
| 24:BA:493:G:C2     | 24:BA:494:G:N9     | 2.81                     | 0.49              |
| 24:BA:604:G:O2'    | 24:BA:605:C:O5'    | 2.31                     | 0.49              |
| 24:BA:660:G:H2'    | 24:BA:661:C:H6     | 1.76                     | 0.49              |
| 24:BA:680:G:C4     | 24:BA:798:G:N2     | 2.81                     | 0.49              |
| 24:BA:750:A:H2'    | 43:BV:90:ARG:NH1   | 2.26                     | 0.49              |
| 24:BA:774:A:C5'    | 24:BA:778:G:C4'    | 2.90                     | 0.49              |
| 24:BA:906:G:N1     | 24:BA:907:U:C4     | 2.81                     | 0.49              |
| 24:BA:961:C:N4     | 24:BA:2031:A:C4    | 2.81                     | 0.49              |
| 24:BA:993:G:C6     | 24:BA:994:C:N4     | 2.81                     | 0.49              |
| 24:BA:1000:A:C2    | 24:BA:1155:A:N3    | 2.81                     | 0.49              |
| 24:BA:1011:G:C6    | 24:BA:1151:G:C6    | 3.01                     | 0.49              |
| 24:BA:1263:U:C5'   | 51:B4:10:LYS:NZ    | 2.70                     | 0.49              |
| 24:BA:1296:G:C4    | 24:BA:1297:C:C5    | 3.01                     | 0.49              |
| 24:BA:1314:C:H6    | 24:BA:1314:C:O5'   | 1.96                     | 0.49              |
| 24:BA:1340:U:C6    | 44:BW:57:LEU:HD11  | 2.48                     | 0.49              |
| 24:BA:1349:A:H5'   | 24:BA:1350:C:C5'   | 2.42                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1353:A:O2'  | 24:BA:1354:A:O4'  | 2.30                     | 0.49              |
| 24:BA:1356:G:N2   | 24:BA:1357:U:H1'  | 2.27                     | 0.49              |
| 24:BA:1560:G:H2'  | 24:BA:1561:G:C8   | 2.48                     | 0.49              |
| 24:BA:1567:A:N3   | 24:BA:1567:A:C2'  | 2.74                     | 0.49              |
| 24:BA:1583:A:OP2  | 24:BA:1586:A:O3'  | 2.30                     | 0.49              |
| 24:BA:1729:A:H5'' | 24:BA:1730:U:C5   | 2.47                     | 0.49              |
| 24:BA:1742:C:C6   | 24:BA:1742:C:OP2  | 2.65                     | 0.49              |
| 24:BA:1747:G:C2   | 24:BA:1748:G:C8   | 3.01                     | 0.49              |
| 24:BA:1801:G:OP1  | 24:BA:1801:G:H8   | 1.96                     | 0.49              |
| 24:BA:1858:G:C6   | 24:BA:1883:G:C6   | 3.00                     | 0.49              |
| 24:BA:1903:G:C4   | 24:BA:1904:G:N7   | 2.81                     | 0.49              |
| 24:BA:1993:U:H6   | 24:BA:1993:U:C3'  | 2.24                     | 0.49              |
| 24:BA:2168:G:N9   | 24:BA:2170:A:OP2  | 2.46                     | 0.49              |
| 24:BA:2186:G:C2   | 24:BA:2187:G:C5   | 3.01                     | 0.49              |
| 24:BA:2357:U:H6   | 24:BA:2357:U:P    | 2.36                     | 0.49              |
| 24:BA:2399:G:N3   | 52:B5:21:TYR:CE1  | 2.80                     | 0.49              |
| 24:BA:2426:A:C3'  | 24:BA:2427:C:H5'  | 2.42                     | 0.49              |
| 24:BA:2468:G:H4'  | 37:BP:120:ILE:CD1 | 2.40                     | 0.49              |
| 24:BA:2496:C:C2   | 24:BA:2497:A:H2   | 2.30                     | 0.49              |
| 24:BA:2520:C:C2   | 24:BA:2521:C:C5   | 3.01                     | 0.49              |
| 24:BA:2573:C:H3'  | 24:BA:2573:C:C6   | 2.48                     | 0.49              |
| 24:BA:2588:G:C5   | 24:BA:2589:A:N7   | 2.80                     | 0.49              |
| 24:BA:2632:A:C6   | 24:BA:2787:C:N4   | 2.81                     | 0.49              |
| 24:BA:2787:C:H2'  | 24:BA:2788:C:C5   | 2.48                     | 0.49              |
| 24:BA:2810:A:C2'  | 24:BA:2811:G:H5'  | 2.43                     | 0.49              |
| 24:BA:2835:A:N6   | 24:BA:2879:C:OP2  | 2.45                     | 0.49              |
| 24:BA:2847:U:H5'  | 24:BA:2848:G:OP2  | 2.13                     | 0.49              |
| 25:BB:99:A:H2'    | 25:BB:100:G:C5'   | 2.43                     | 0.49              |
| 26:BC:47:LEU:H    | 26:BC:47:LEU:CD2  | 2.24                     | 0.49              |
| 26:BC:102:LYS:HZ1 | 26:BC:107:TRP:HB2 | 1.77                     | 0.49              |
| 26:BC:160:ARG:HD3 | 26:BC:160:ARG:C   | 2.38                     | 0.49              |
| 27:BD:5:LYS:CD    | 27:BD:31:LYS:HZ2  | 2.26                     | 0.49              |
| 27:BD:144:ALA:HB3 | 27:BD:192:THR:HB  | 1.95                     | 0.49              |
| 28:BE:55:ASN:HA   | 28:BE:58:ARG:HH22 | 1.78                     | 0.49              |
| 28:BE:81:ILE:CG2  | 28:BE:82:ARG:HG2  | 2.40                     | 0.49              |
| 28:BE:142:GLY:O   | 28:BE:143:ASN:CG  | 2.55                     | 0.49              |
| 29:BF:11:VAL:HB   | 29:BF:17:ARG:HH12 | 1.77                     | 0.49              |
| 29:BF:80:ALA:O    | 29:BF:81:PRO:C    | 2.55                     | 0.49              |
| 29:BF:136:THR:O   | 29:BF:139:PHE:HB3 | 2.13                     | 0.49              |
| 30:BG:14:GLU:CD   | 30:BG:14:GLU:C    | 2.80                     | 0.49              |
| 31:BH:28:GLY:HA3  | 31:BH:79:VAL:C    | 2.38                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 31:BH:159:GLU:HG2  | 31:BH:163:TYR:OH  | 2.11                     | 0.49              |
| 32:BK:94:ALA:CA    | 32:BK:97:ILE:HG13 | 2.36                     | 0.49              |
| 33:BL:105:LEU:HD22 | 33:BL:124:ALA:HB2 | 1.93                     | 0.49              |
| 33:BL:127:ILE:O    | 33:BL:131:ALA:CB  | 2.60                     | 0.49              |
| 34:BM:95:PRO:HG2   | 34:BM:124:ALA:HB2 | 1.94                     | 0.49              |
| 35:BN:9:GLU:HA     | 35:BN:9:GLU:OE1   | 2.13                     | 0.49              |
| 35:BN:39:ILE:HG12  | 35:BN:59:LYS:HZ2  | 1.67                     | 0.49              |
| 35:BN:64:ARG:CZ    | 35:BN:67:LYS:N    | 2.76                     | 0.49              |
| 35:BN:96:THR:CG2   | 35:BN:97:ARG:N    | 2.54                     | 0.49              |
| 36:BO:86:LYS:HZ1   | 36:BO:99:LEU:HD11 | 1.78                     | 0.49              |
| 37:BP:80:GLU:O     | 37:BP:81:VAL:O    | 2.31                     | 0.49              |
| 39:BR:24:LEU:HD11  | 39:BR:41:ASP:CB   | 2.43                     | 0.49              |
| 40:BS:103:ARG:C    | 40:BS:107:ASP:OD2 | 2.56                     | 0.49              |
| 42:BU:23:GLU:HA    | 42:BU:93:GLU:CB   | 2.42                     | 0.49              |
| 43:BV:10:VAL:HB    | 43:BV:12:ILE:CD1  | 2.42                     | 0.49              |
| 43:BV:25:ARG:O     | 43:BV:27:LYS:N    | 2.46                     | 0.49              |
| 45:BX:26:LYS:HD2   | 45:BX:27:VAL:HB   | 1.94                     | 0.49              |
| 48:B1:28:MET:O     | 48:B1:31:ARG:N    | 2.46                     | 0.49              |
| 48:B1:36:ILE:CG1   | 48:B1:37:GLY:N    | 2.69                     | 0.49              |
| 50:B3:65:ASP:O     | 50:B3:68:ARG:NH1  | 2.45                     | 0.49              |
| 1:AA:59:A:H4'      | 1:AA:388:G:O5'    | 2.13                     | 0.49              |
| 1:AA:109:A:N3      | 1:AA:109:A:O4'    | 2.46                     | 0.49              |
| 1:AA:113:G:C4'     | 1:AA:354:G:H5''   | 2.43                     | 0.49              |
| 1:AA:138:G:C2      | 1:AA:226:G:C4     | 3.01                     | 0.49              |
| 1:AA:270:A:O2'     | 1:AA:271:C:C5'    | 2.56                     | 0.49              |
| 1:AA:408:A:C5'     | 6:AG:116:GLN:HE21 | 2.25                     | 0.49              |
| 1:AA:423:G:N2      | 1:AA:424:G:C4     | 2.80                     | 0.49              |
| 1:AA:432:A:C8      | 1:AA:433:C:C6     | 3.01                     | 0.49              |
| 1:AA:527:G:H2'     | 1:AA:528:C:H6     | 1.78                     | 0.49              |
| 1:AA:649:G:H2'     | 1:AA:650:G:C8     | 2.44                     | 0.49              |
| 1:AA:736:C:C5'     | 20:AU:72:ARG:NH2  | 2.68                     | 0.49              |
| 1:AA:744:C:H2'     | 1:AA:745:C:C6     | 2.48                     | 0.49              |
| 1:AA:907:A:C4      | 1:AA:908:A:C8     | 3.00                     | 0.49              |
| 1:AA:924:C:C2'     | 1:AA:925:G:O5'    | 2.61                     | 0.49              |
| 1:AA:1239:A:N3     | 1:AA:1239:A:C2'   | 2.74                     | 0.49              |
| 1:AA:1301:U:C4     | 1:AA:1303:C:C6    | 3.00                     | 0.49              |
| 1:AA:1338:G:C2     | 1:AA:1339:A:C5    | 3.01                     | 0.49              |
| 1:AA:1416:G:N2     | 1:AA:1485:U:H1'   | 2.27                     | 0.49              |
| 1:AA:1419:G:C2'    | 1:AA:1420:C:C6    | 2.95                     | 0.49              |
| 1:AA:1429:C:H2'    | 1:AA:1430:C:H6    | 1.78                     | 0.49              |
| 1:AA:1539:C:O5'    | 1:AA:1539:C:H6    | 1.96                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 3:AC:23:A:C6      | 3:AC:24:G:C6        | 3.01                     | 0.49              |
| 3:AB:75:C:C2      | 24:BA:2508:G:H5'    | 2.46                     | 0.49              |
| 4:AE:25:ASN:O     | 4:AE:26:PRO:C       | 2.56                     | 0.49              |
| 4:AE:167:PRO:HG2  | 4:AE:168:THR:N      | 2.24                     | 0.49              |
| 5:AF:14:ILE:HG13  | 5:AF:178:LEU:CD1    | 2.43                     | 0.49              |
| 5:AF:135:LYS:HZ2  | 7:AH:52:PRO:HG2     | 1.78                     | 0.49              |
| 5:AF:179:ARG:CD   | 5:AF:206:GLU:OE1    | 2.61                     | 0.49              |
| 6:AG:98:GLU:OE2   | 6:AG:107:ARG:HG3    | 2.12                     | 0.49              |
| 6:AG:144:ASP:HA   | 6:AG:184:LYS:HZ3    | 1.77                     | 0.49              |
| 6:AG:200:GLU:OE2  | 6:AG:201:GLN:NE2    | 2.45                     | 0.49              |
| 7:AH:56:GLN:N     | 7:AH:56:GLN:HE21    | 2.10                     | 0.49              |
| 8:AI:98:LEU:CG    | 20:AU:28:GLU:HG3    | 2.41                     | 0.49              |
| 9:AJ:49:ILE:CG2   | 9:AJ:121:ALA:HB1    | 2.33                     | 0.49              |
| 9:AJ:65:ALA:CB    | 9:AJ:124:LEU:HD23   | 2.43                     | 0.49              |
| 9:AJ:72:ARG:O     | 9:AJ:91:VAL:N       | 2.43                     | 0.49              |
| 10:AK:14:ARG:NH1  | 10:AK:14:ARG:CB     | 2.56                     | 0.49              |
| 10:AK:68:ARG:CD   | 10:AK:69:ARG:N      | 2.73                     | 0.49              |
| 11:AL:85:LEU:HD11 | 11:AL:92:TYR:HE1    | 1.77                     | 0.49              |
| 11:AL:100:GLY:C   | 11:AL:101:PHE:CG    | 2.91                     | 0.49              |
| 13:AN:51:LYS:HD3  | 13:AN:52:GLY:N      | 2.24                     | 0.49              |
| 13:AN:80:VAL:H    | 13:AN:104:GLN:HE21  | 1.58                     | 0.49              |
| 14:AO:59:ARG:HE   | 14:AO:65:GLU:CG     | 2.26                     | 0.49              |
| 16:AQ:23:ARG:HA   | 16:AQ:30:ALA:HA     | 1.93                     | 0.49              |
| 18:AS:42:ARG:C    | 18:AS:43:LYS:HD2    | 2.38                     | 0.49              |
| 18:AS:68:ASP:C    | 18:AS:70:ALA:N      | 2.69                     | 0.49              |
| 19:AT:41:LYS:C    | 19:AT:42:TYR:CD1    | 2.91                     | 0.49              |
| 19:AT:68:ARG:N    | 19:AT:70:ARG:NH2    | 2.46                     | 0.49              |
| 24:BA:24:G:C4     | 24:BA:25:U:C5       | 3.01                     | 0.49              |
| 24:BA:24:G:O2'    | 43:BV:77:ASP:OD1    | 2.27                     | 0.49              |
| 24:BA:119:A:C4'   | 24:BA:120:U:H5'     | 2.42                     | 0.49              |
| 24:BA:163:U:O5'   | 24:BA:163:U:H6      | 1.95                     | 0.49              |
| 24:BA:196:A:N1    | 24:BA:828:U:C5'     | 2.61                     | 0.49              |
| 24:BA:249:C:C5    | 24:BA:2395:C:OP1    | 2.66                     | 0.49              |
| 24:BA:252:G:O6    | 54:B7:8:LYS:NZ      | 2.27                     | 0.49              |
| 24:BA:270(X):G:N2 | 24:BA:270(Y):G:HO2' | 2.11                     | 0.49              |
| 24:BA:572:A:N6    | 24:BA:2029:G:H1'    | 2.27                     | 0.49              |
| 24:BA:662:G:C5'   | 36:BO:17:LYS:H      | 2.22                     | 0.49              |
| 24:BA:673:C:H2'   | 24:BA:674:G:O5'     | 2.12                     | 0.49              |
| 24:BA:684:G:N2    | 24:BA:794:G:N2      | 2.60                     | 0.49              |
| 24:BA:696:G:C2    | 24:BA:697:C:C6      | 3.01                     | 0.49              |
| 24:BA:715:G:C4    | 24:BA:716:A:C6      | 3.01                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:734:A:C2     | 24:BA:735:A:N9     | 2.80                     | 0.49              |
| 24:BA:776:G:N3     | 24:BA:793:A:C6     | 2.81                     | 0.49              |
| 24:BA:868:U:C4     | 24:BA:869:G:N7     | 2.80                     | 0.49              |
| 24:BA:881:G:N2     | 24:BA:897:C:C4     | 2.81                     | 0.49              |
| 24:BA:917:A:C3'    | 24:BA:918:A:C5'    | 2.79                     | 0.49              |
| 24:BA:1238:G:C2    | 24:BA:1239:G:N9    | 2.81                     | 0.49              |
| 24:BA:1267:U:C6    | 24:BA:1267:U:H3'   | 2.48                     | 0.49              |
| 24:BA:1269:A:N6    | 24:BA:2011:U:H3    | 2.06                     | 0.49              |
| 24:BA:1281:G:C4    | 24:BA:1282:U:C5    | 3.01                     | 0.49              |
| 24:BA:1395:A:OP1   | 24:BA:1602:U:O2'   | 2.29                     | 0.49              |
| 24:BA:1493:C:O2    | 24:BA:1493:C:C2'   | 2.53                     | 0.49              |
| 24:BA:1500:G:O2'   | 24:BA:1501:C:H5'   | 2.12                     | 0.49              |
| 24:BA:1568:G:N3    | 24:BA:1568:G:O4'   | 2.46                     | 0.49              |
| 24:BA:1710:C:H6    | 24:BA:1710:C:O5'   | 1.95                     | 0.49              |
| 24:BA:1788:C:C6    | 24:BA:1788:C:H3'   | 2.47                     | 0.49              |
| 24:BA:1949:G:C2'   | 24:BA:1950:G:O4'   | 2.61                     | 0.49              |
| 24:BA:2024:G:C4    | 24:BA:2025:C:C6    | 3.01                     | 0.49              |
| 24:BA:2096:U:C2    | 24:BA:2097:C:C5    | 3.01                     | 0.49              |
| 24:BA:2134:A:H5''  | 24:BA:2134:A:N3    | 2.27                     | 0.49              |
| 24:BA:2160:G:C2    | 24:BA:2161:C:C2    | 3.01                     | 0.49              |
| 24:BA:2169:A:H2'   | 24:BA:2169:A:N3    | 2.28                     | 0.49              |
| 24:BA:2219:G:C2'   | 24:BA:2224:G:O5'   | 2.61                     | 0.49              |
| 24:BA:2235:G:N2    | 24:BA:2236:C:C2    | 2.81                     | 0.49              |
| 24:BA:2238:G:O2'   | 24:BA:2239:G:O4'   | 2.31                     | 0.49              |
| 24:BA:2259:G:O4'   | 24:BA:2427:C:C5    | 2.66                     | 0.49              |
| 24:BA:2302:G:N2    | 24:BA:2303:G:H1'   | 2.28                     | 0.49              |
| 24:BA:2349:G:C4    | 24:BA:2369:A:C2    | 3.01                     | 0.49              |
| 24:BA:2377:A:N3    | 24:BA:2378:A:C8    | 2.81                     | 0.49              |
| 24:BA:2385:C:O2'   | 24:BA:2386:C:O5'   | 2.28                     | 0.49              |
| 24:BA:2415:G:C2    | 24:BA:2416:C:C4    | 3.01                     | 0.49              |
| 24:BA:2509:G:C2    | 24:BA:2510:C:H1'   | 2.48                     | 0.49              |
| 24:BA:2640:G:H2'   | 24:BA:2641:G:H8    | 1.77                     | 0.49              |
| 24:BA:2731:G:N2    | 24:BA:2732:G:N2    | 2.60                     | 0.49              |
| 24:BA:2752:C:N3    | 24:BA:2753:A:C8    | 2.81                     | 0.49              |
| 25:BB:32:C:C2      | 25:BB:33:G:C8      | 3.01                     | 0.49              |
| 25:BB:65:C:C5      | 25:BB:108:C:C5     | 3.01                     | 0.49              |
| 25:BB:78:A:H5'     | 46:BY:78:LYS:HE3   | 1.95                     | 0.49              |
| 26:BC:21:THR:N     | 26:BC:24:GLU:OE1   | 2.45                     | 0.49              |
| 26:BC:62:VAL:CB    | 26:BC:195:ALA:CB   | 2.78                     | 0.49              |
| 26:BC:89:ALA:O     | 26:BC:157:LYS:HE2  | 2.12                     | 0.49              |
| 26:BC:171:ILE:HD13 | 26:BC:196:LEU:HD11 | 1.95                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:23:GLU:C     | 27:BD:23:GLU:OE1   | 2.55                     | 0.49              |
| 27:BD:27:THR:CG2   | 27:BD:29:PRO:HD2   | 2.36                     | 0.49              |
| 27:BD:85:ASP:HB2   | 27:BD:87:ASN:ND2   | 2.23                     | 0.49              |
| 27:BD:116:GLN:O    | 27:BD:117:VAL:HG23 | 2.13                     | 0.49              |
| 28:BE:9:VAL:CG1    | 40:BS:3:ARG:HG2    | 2.41                     | 0.49              |
| 28:BE:36:ARG:CD    | 28:BE:41:LYS:NZ    | 2.68                     | 0.49              |
| 28:BE:54:GLN:CG    | 28:BE:57:LYS:HG3   | 2.43                     | 0.49              |
| 29:BF:33:LEU:HD23  | 29:BF:112:MET:SD   | 2.52                     | 0.49              |
| 29:BF:80:ALA:HB1   | 29:BF:81:PRO:HD2   | 1.95                     | 0.49              |
| 29:BF:119:ARG:HH21 | 29:BF:119:ARG:C    | 2.21                     | 0.49              |
| 30:BG:2:PRO:C      | 30:BG:5:VAL:HB     | 2.34                     | 0.49              |
| 30:BG:103:LEU:HD12 | 30:BG:103:LEU:O    | 2.13                     | 0.49              |
| 30:BG:136:ARG:O    | 30:BG:153:ARG:HG2  | 2.12                     | 0.49              |
| 31:BH:63:SER:O     | 31:BH:67:LEU:HD23  | 2.12                     | 0.49              |
| 33:BL:24:GLY:CA    | 33:BL:34:ILE:HG12  | 2.37                     | 0.49              |
| 34:BM:89:LYS:N     | 34:BM:89:LYS:HE3   | 2.22                     | 0.49              |
| 37:BP:12:GLN:NE2   | 37:BP:13:GLN:NE2   | 2.41                     | 0.49              |
| 38:BQ:100:LEU:HD12 | 38:BQ:101:ALA:H    | 1.76                     | 0.49              |
| 39:BR:73:LEU:CD1   | 39:BR:73:LEU:N     | 2.74                     | 0.49              |
| 39:BR:103:GLU:HA   | 39:BR:106:ARG:HB2  | 1.94                     | 0.49              |
| 40:BS:102:ILE:O    | 40:BS:103:ARG:C    | 2.56                     | 0.49              |
| 41:BT:5:LYS:O      | 41:BT:7:GLY:N      | 2.46                     | 0.49              |
| 43:BV:5:ALA:O      | 43:BV:105:VAL:CG1  | 2.61                     | 0.49              |
| 43:BV:23:LEU:HD21  | 51:B4:25:LEU:O     | 2.13                     | 0.49              |
| 44:BW:36:LYS:NZ    | 44:BW:36:LYS:HB2   | 2.28                     | 0.49              |
| 44:BW:60:ARG:CD    | 44:BW:62:LYS:NZ    | 2.72                     | 0.49              |
| 46:BY:10:ARG:HD3   | 46:BY:36:LYS:CG    | 2.42                     | 0.49              |
| 48:B1:20:VAL:HG23  | 48:B1:52:ILE:CG2   | 2.30                     | 0.49              |
| 49:B2:35:ARG:NH1   | 49:B2:47:VAL:CG2   | 2.74                     | 0.49              |
| 50:B3:17:GLY:O     | 50:B3:18:CYS:HB3   | 2.13                     | 0.49              |
| 50:B3:59:PHE:CA    | 50:B3:62:ARG:CZ    | 2.90                     | 0.49              |
| 51:B4:34:PRO:HG3   | 51:B4:40:LYS:HZ1   | 1.78                     | 0.49              |
| 53:B6:32:LYS:O     | 53:B6:33:ARG:C     | 2.55                     | 0.49              |
| 1:AA:293:G:OP2     | 1:AA:293:G:C8      | 2.66                     | 0.49              |
| 1:AA:297:G:O2'     | 1:AA:299:G:N7      | 2.37                     | 0.49              |
| 1:AA:392:G:H5'     | 18:AS:12:LYS:HZ2   | 1.78                     | 0.49              |
| 1:AA:404:U:OP1     | 6:AG:118:ARG:CZ    | 2.61                     | 0.49              |
| 1:AA:498:A:C4'     | 1:AA:500:G:H5'     | 2.39                     | 0.49              |
| 1:AA:521:G:N2      | 1:AA:522:C:C2      | 2.81                     | 0.49              |
| 1:AA:537:G:H5''    | 14:AO:113:ARG:NH1  | 2.28                     | 0.49              |
| 1:AA:545:C:O2'     | 1:AA:546:G:C5'     | 2.55                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:547:A:H4'    | 1:AA:548:G:O5'     | 2.10                     | 0.49              |
| 1:AA:598:U:C4'    | 10:AK:94:TYR:HD2   | 2.17                     | 0.49              |
| 1:AA:675:A:N3     | 13:AN:116:HIS:CB   | 2.76                     | 0.49              |
| 1:AA:748:C:O2'    | 1:AA:749:C:C5'     | 2.61                     | 0.49              |
| 1:AA:769:G:O2'    | 1:AA:770:C:C5'     | 2.61                     | 0.49              |
| 1:AA:925:G:H1'    | 1:AA:1502:A:H1'    | 1.95                     | 0.49              |
| 1:AA:949:A:H2'    | 1:AA:950:U:C5      | 2.48                     | 0.49              |
| 1:AA:972:C:O2     | 1:AA:972:C:H2'     | 2.12                     | 0.49              |
| 1:AA:983:A:N3     | 1:AA:983:A:C2'     | 2.76                     | 0.49              |
| 1:AA:986:A:H4'    | 21:AV:55:LYS:HE3   | 1.94                     | 0.49              |
| 1:AA:1034:G:N3    | 1:AA:1035:A:N7     | 2.61                     | 0.49              |
| 1:AA:1053:G:C2    | 1:AA:1199:U:C4     | 3.01                     | 0.49              |
| 1:AA:1118:C:H1'   | 1:AA:1179:A:C8     | 2.48                     | 0.49              |
| 1:AA:1330:U:OP1   | 15:AP:25:ILE:N     | 2.37                     | 0.49              |
| 1:AA:1354:C:H2'   | 1:AA:1355:G:C8     | 2.48                     | 0.49              |
| 1:AA:1413:A:N1    | 1:AA:1487:G:N2     | 2.41                     | 0.49              |
| 1:AA:1435:G:H2'   | 1:AA:1436:U:C6     | 2.47                     | 0.49              |
| 1:AA:1469:G:N2    | 1:AA:1470:G:C4     | 2.81                     | 0.49              |
| 1:AA:1488:G:C6    | 1:AA:1489:G:N7     | 2.81                     | 0.49              |
| 4:AE:168:THR:CB   | 4:AE:192:SER:HA    | 2.43                     | 0.49              |
| 5:AF:88:ARG:HG3   | 5:AF:99:VAL:O      | 2.13                     | 0.49              |
| 6:AG:133:VAL:HG11 | 6:AG:135:LEU:HD12  | 1.95                     | 0.49              |
| 7:AH:74:GLY:O     | 7:AH:75:THR:CB     | 2.61                     | 0.49              |
| 7:AH:108:ALA:HA   | 7:AH:111:GLU:CD    | 2.38                     | 0.49              |
| 7:AH:125:SER:C    | 7:AH:127:ASN:N     | 2.61                     | 0.49              |
| 9:AJ:70:LYS:O     | 9:AJ:138:LYS:CE    | 2.61                     | 0.49              |
| 12:AM:7:LYS:HZ2   | 12:AM:71:LEU:HD21  | 1.77                     | 0.49              |
| 13:AN:18:ARG:HD3  | 13:AN:18:ARG:N     | 2.28                     | 0.49              |
| 13:AN:31:THR:HG22 | 13:AN:32:ILE:N     | 2.27                     | 0.49              |
| 13:AN:94:ALA:O    | 13:AN:98:LEU:HG    | 2.13                     | 0.49              |
| 13:AN:120:ARG:HE  | 13:AN:126:ARG:HH21 | 1.60                     | 0.49              |
| 14:AO:24:VAL:HG12 | 14:AO:24:VAL:O     | 2.12                     | 0.49              |
| 14:AO:60:LEU:HD21 | 14:AO:64:TYR:HD2   | 1.76                     | 0.49              |
| 15:AP:10:PRO:HG3  | 15:AP:18:ALA:HA    | 1.93                     | 0.49              |
| 17:AR:42:HIS:CD2  | 17:AR:43:LEU:N     | 2.81                     | 0.49              |
| 18:AS:8:ARG:O     | 18:AS:9:PHE:HD2    | 1.95                     | 0.49              |
| 19:AT:58:GLU:OE1  | 19:AT:58:GLU:C     | 2.55                     | 0.49              |
| 19:AT:75:ARG:HH12 | 19:AT:77:VAL:HA    | 1.77                     | 0.49              |
| 21:AV:30:LEU:HD23 | 21:AV:30:LEU:C     | 2.38                     | 0.49              |
| 24:BA:20:C:HO2'   | 24:BA:21:A:C5'     | 2.26                     | 0.49              |
| 24:BA:28:A:N3     | 24:BA:29:U:O4'     | 2.46                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:83:G:C6     | 24:BA:102:G:N3    | 2.81                     | 0.49              |
| 24:BA:289:A:C4    | 24:BA:351:G:C6    | 3.01                     | 0.49              |
| 24:BA:348:G:N3    | 24:BA:349:G:N7    | 2.61                     | 0.49              |
| 24:BA:478:A:N6    | 24:BA:480:A:N1    | 2.61                     | 0.49              |
| 24:BA:583:G:C2'   | 24:BA:584:C:O5'   | 2.61                     | 0.49              |
| 24:BA:625:G:O6    | 36:BO:100:LEU:O   | 2.31                     | 0.49              |
| 24:BA:692:C:H2'   | 24:BA:693:C:O5'   | 2.13                     | 0.49              |
| 24:BA:700:G:C6    | 24:BA:701:G:N7    | 2.81                     | 0.49              |
| 24:BA:730:C:H2'   | 24:BA:731:C:H6    | 1.73                     | 0.49              |
| 24:BA:746:A:O2'   | 24:BA:747:U:OP1   | 2.31                     | 0.49              |
| 24:BA:774:A:HO2'  | 24:BA:775:G:H8    | 1.48                     | 0.49              |
| 24:BA:1123:C:C2   | 24:BA:1124:C:C5   | 3.01                     | 0.49              |
| 24:BA:1129:A:HO2' | 24:BA:2515:C:H1'  | 1.77                     | 0.49              |
| 24:BA:1143:A:O2'  | 24:BA:1144:G:C5'  | 2.61                     | 0.49              |
| 24:BA:1147:C:H2'  | 24:BA:1148:A:C5'  | 2.42                     | 0.49              |
| 24:BA:1212:G:H3'  | 24:BA:1212:G:H8   | 1.77                     | 0.49              |
| 24:BA:1240:U:O2   | 24:BA:1240:U:C2'  | 2.61                     | 0.49              |
| 24:BA:1251:C:C5'  | 41:BT:10:ARG:HE   | 2.26                     | 0.49              |
| 24:BA:1343:G:H1'  | 24:BA:1597:A:N1   | 2.28                     | 0.49              |
| 24:BA:1356:G:C2'  | 24:BA:1357:U:H5'  | 2.42                     | 0.49              |
| 24:BA:1390:U:O5'  | 24:BA:1390:U:H6   | 1.96                     | 0.49              |
| 24:BA:1401:G:H8   | 24:BA:1401:G:O5'  | 1.95                     | 0.49              |
| 24:BA:1689:A:H2'  | 24:BA:1690:A:H8   | 1.77                     | 0.49              |
| 24:BA:1727:U:HO2' | 24:BA:1728:G:P    | 2.35                     | 0.49              |
| 24:BA:1790:C:O3'  | 27:BD:213:ARG:HD3 | 2.13                     | 0.49              |
| 24:BA:1807:G:H21  | 24:BA:1809:A:C4'  | 2.25                     | 0.49              |
| 24:BA:1882:C:C4   | 24:BA:1883:G:H1'  | 2.48                     | 0.49              |
| 24:BA:1915:U:H2'  | 24:BA:1915:U:O2   | 2.13                     | 0.49              |
| 24:BA:2103:C:C2   | 24:BA:2104:G:C8   | 3.01                     | 0.49              |
| 24:BA:2113:U:N3   | 24:BA:2169:A:N6   | 2.60                     | 0.49              |
| 24:BA:2118:U:H5   | 24:BA:2147:G:N7   | 2.10                     | 0.49              |
| 24:BA:2213:U:C3'  | 24:BA:2213:U:C2   | 2.96                     | 0.49              |
| 24:BA:2218:G:O3'  | 27:BD:186:HIS:NE2 | 2.46                     | 0.49              |
| 24:BA:2225:A:C5'  | 24:BA:2226:C:O4'  | 2.52                     | 0.49              |
| 24:BA:2243:U:O2'  | 24:BA:2244:U:O4'  | 2.31                     | 0.49              |
| 24:BA:2331:G:H4'  | 47:BZ:42:GLY:CA   | 2.43                     | 0.49              |
| 24:BA:2723:C:C4'  | 38:BQ:2:ARG:O     | 2.58                     | 0.49              |
| 24:BA:2753:A:C2'  | 24:BA:2754:U:O5'  | 2.61                     | 0.49              |
| 24:BA:2801:A:C2   | 24:BA:2895:U:H1'  | 2.41                     | 0.49              |
| 24:BA:2828:C:H2'  | 24:BA:2829:C:C6   | 2.48                     | 0.49              |
| 25:BB:86:G:C2     | 25:BB:91:C:C2     | 3.00                     | 0.49              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 26:BC:27:HIS:NE2   | 26:BC:182:PRO:HG3  | 2.27                     | 0.49              |
| 26:BC:91:ALA:CB    | 26:BC:153:ILE:HG21 | 2.35                     | 0.49              |
| 27:BD:24:ILE:CG2   | 27:BD:25:THR:N     | 2.76                     | 0.49              |
| 27:BD:79:VAL:HG12  | 27:BD:81:ALA:CA    | 2.43                     | 0.49              |
| 27:BD:131:LEU:HA   | 27:BD:190:TYR:CE2  | 2.47                     | 0.49              |
| 28:BE:13:ARG:CZ    | 28:BE:20:ALA:C     | 2.86                     | 0.49              |
| 28:BE:37:ARG:CB    | 28:BE:40:GLU:HB2   | 2.43                     | 0.49              |
| 28:BE:49:LEU:HD11  | 28:BE:51:PHE:HD1   | 1.78                     | 0.49              |
| 28:BE:98:PRO:HA    | 28:BE:172:VAL:HG21 | 1.95                     | 0.49              |
| 28:BE:136:ARG:NH1  | 28:BE:137:HIS:HA   | 2.28                     | 0.49              |
| 28:BE:150:VAL:HG12 | 28:BE:150:VAL:O    | 2.13                     | 0.49              |
| 29:BF:31:HIS:ND1   | 36:BO:14:LYS:CE    | 2.75                     | 0.49              |
| 29:BF:202:PHE:CD2  | 29:BF:205:ARG:HD2  | 2.48                     | 0.49              |
| 30:BG:4:ASP:C      | 30:BG:7:LEU:HB2    | 2.37                     | 0.49              |
| 32:BK:113:ARG:HA   | 32:BK:131:LYS:NZ   | 2.28                     | 0.49              |
| 34:BM:2:LYS:N      | 41:BT:61:TRP:CH2   | 2.80                     | 0.49              |
| 34:BM:78:TYR:O     | 34:BM:80:GLY:N     | 2.46                     | 0.49              |
| 35:BN:7:TYR:CA     | 35:BN:18:LYS:CE    | 2.85                     | 0.49              |
| 36:BO:6:LEU:O      | 36:BO:7:ARG:HG3    | 2.13                     | 0.49              |
| 36:BO:107:LYS:O    | 36:BO:107:LYS:HG3  | 2.13                     | 0.49              |
| 36:BO:114:ILE:CD1  | 36:BO:129:ALA:O    | 2.44                     | 0.49              |
| 37:BP:16:ARG:NH1   | 37:BP:72:LYS:HG2   | 2.27                     | 0.49              |
| 38:BQ:14:SER:HA    | 38:BQ:17:ARG:CG    | 2.41                     | 0.49              |
| 38:BQ:102:GLU:HG3  | 38:BQ:103:ARG:H    | 1.75                     | 0.49              |
| 39:BR:6:ALA:O      | 39:BR:7:TYR:C      | 2.55                     | 0.49              |
| 39:BR:49:VAL:HB    | 39:BR:80:LEU:HD12  | 1.95                     | 0.49              |
| 40:BS:91:ARG:C     | 40:BS:93:ARG:HH21  | 2.12                     | 0.49              |
| 40:BS:104:ASN:O    | 40:BS:105:LEU:O    | 2.31                     | 0.49              |
| 41:BT:52:ARG:HB2   | 41:BT:55:ARG:HD3   | 1.94                     | 0.49              |
| 41:BT:59:ARG:C     | 41:BT:62:ILE:HB    | 2.36                     | 0.49              |
| 42:BU:3:ALA:C      | 42:BU:12:TYR:CE2   | 2.90                     | 0.49              |
| 43:BV:76:VAL:HG22  | 43:BV:102:HIS:O    | 2.13                     | 0.49              |
| 44:BW:61:GLY:N     | 44:BW:73:ARG:NH1   | 2.61                     | 0.49              |
| 45:BX:35:TYR:HE2   | 45:BX:67:LEU:HD13  | 1.78                     | 0.49              |
| 45:BX:46:LYS:HB3   | 45:BX:46:LYS:HZ3   | 1.77                     | 0.49              |
| 46:BY:171:ILE:HG23 | 46:BY:172:ALA:N    | 2.28                     | 0.49              |
| 49:B2:6:VAL:HG12   | 49:B2:56:VAL:HA    | 1.93                     | 0.49              |
| 49:B2:23:LEU:HA    | 49:B2:28:LEU:HD11  | 1.95                     | 0.49              |
| 50:B3:56:VAL:CG1   | 50:B3:61:ARG:HG2   | 2.43                     | 0.49              |
| 54:B7:22:VAL:HG13  | 54:B7:23:VAL:H     | 1.78                     | 0.49              |
| 1:AA:66:G:C4'      | 1:AA:173:U:O4      | 2.59                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:69:G:H2'     | 1:AA:69:G:N3       | 2.28                     | 0.48              |
| 1:AA:279:A:H5''   | 1:AA:280:C:H3'     | 1.93                     | 0.48              |
| 1:AA:295:C:C4     | 1:AA:303:A:C2      | 3.01                     | 0.48              |
| 1:AA:451:A:O2'    | 1:AA:452:A:C8      | 2.65                     | 0.48              |
| 1:AA:505:G:N1     | 1:AA:535:A:C2      | 2.81                     | 0.48              |
| 1:AA:672:U:O2     | 1:AA:673:G:N7      | 2.45                     | 0.48              |
| 1:AA:874:G:N2     | 1:AA:875:C:C2      | 2.80                     | 0.48              |
| 1:AA:946:A:N6     | 1:AA:1236:A:C6     | 2.80                     | 0.48              |
| 1:AA:972:C:OP2    | 12:AM:57:LYS:HD2   | 2.13                     | 0.48              |
| 1:AA:1081:G:H2'   | 1:AA:1082:G:C8     | 2.48                     | 0.48              |
| 1:AA:1085:U:O2    | 1:AA:1094:G:C6     | 2.66                     | 0.48              |
| 1:AA:1177:G:H8    | 1:AA:1177:G:O5'    | 1.96                     | 0.48              |
| 1:AA:1300:G:O2'   | 1:AA:1301:U:H6     | 1.95                     | 0.48              |
| 1:AA:1347:G:HO2'  | 1:AA:1348:U:P      | 2.35                     | 0.48              |
| 1:AA:1369:C:H2'   | 1:AA:1370:G:O4'    | 2.13                     | 0.48              |
| 1:AA:1370:G:H5''  | 11:AL:12:GLU:CG    | 2.43                     | 0.48              |
| 1:AA:1387:G:C4    | 1:AA:1388:C:C5     | 3.01                     | 0.48              |
| 1:AA:1454:G:C4    | 1:AA:1455:G:N7     | 2.80                     | 0.48              |
| 1:AA:1499:A:H2'   | 1:AA:1500:A:H5'    | 1.95                     | 0.48              |
| 1:AA:1512:U:O2'   | 1:AA:1513:A:H5'    | 2.13                     | 0.48              |
| 3:AC:57:G:OP1     | 30:BG:81:LYS:HD2   | 2.13                     | 0.48              |
| 3:AD:56:C:N1      | 24:BA:2169:A:H1'   | 2.28                     | 0.48              |
| 3:AB:29:G:C4      | 3:AB:30:G:C8       | 3.01                     | 0.48              |
| 4:AE:28:PHE:CE1   | 4:AE:31:TYR:HB2    | 2.48                     | 0.48              |
| 4:AE:55:PHE:CD2   | 4:AE:58:ILE:HD12   | 2.48                     | 0.48              |
| 4:AE:76:GLN:O     | 4:AE:211:ILE:HD11  | 2.12                     | 0.48              |
| 4:AE:115:LEU:HD23 | 4:AE:149:LEU:CD2   | 2.35                     | 0.48              |
| 4:AE:234:PRO:O    | 4:AE:238:LEU:HD22  | 2.12                     | 0.48              |
| 5:AF:12:LEU:HD11  | 16:AQ:57:ARG:HG3   | 1.94                     | 0.48              |
| 5:AF:16:ARG:O     | 5:AF:17:ASP:OD1    | 2.31                     | 0.48              |
| 7:AH:71:LEU:HD23  | 7:AH:72:GLN:N      | 2.28                     | 0.48              |
| 7:AH:80:ILE:HG22  | 10:AK:104:ARG:HH22 | 1.78                     | 0.48              |
| 7:AH:82:VAL:HG11  | 7:AH:134:ALA:O     | 2.12                     | 0.48              |
| 8:AI:14:LEU:HD11  | 8:AI:19:LEU:CA     | 2.43                     | 0.48              |
| 8:AI:67:MET:N     | 8:AI:67:MET:HE3    | 2.28                     | 0.48              |
| 9:AJ:47:CYS:HA    | 9:AJ:50:ILE:HG13   | 1.93                     | 0.48              |
| 9:AJ:99:LEU:O     | 9:AJ:99:LEU:CD2    | 2.61                     | 0.48              |
| 9:AJ:115:ARG:O    | 9:AJ:118:VAL:CB    | 2.60                     | 0.48              |
| 10:AK:89:PRO:HA   | 10:AK:92:ARG:HE    | 1.78                     | 0.48              |
| 11:AL:23:ASN:HD22 | 11:AL:24:GLY:N     | 2.09                     | 0.48              |
| 12:AM:49:VAL:O    | 12:AM:60:ARG:HA    | 2.13                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 13:AN:22:HIS:HD2  | 13:AN:23:ALA:N    | 2.11                     | 0.48              |
| 13:AN:23:ALA:CB   | 13:AN:88:GLY:CA   | 2.91                     | 0.48              |
| 15:AP:14:ARG:HG3  | 15:AP:16:ASP:OD2  | 2.12                     | 0.48              |
| 15:AP:29:ARG:NH1  | 15:AP:66:LEU:HD22 | 2.28                     | 0.48              |
| 15:AP:77:ASN:OD1  | 15:AP:78:ILE:HG13 | 2.13                     | 0.48              |
| 15:AP:87:TYR:C    | 15:AP:87:TYR:HD2  | 2.20                     | 0.48              |
| 17:AR:36:ILE:O    | 17:AR:40:SER:OG   | 2.20                     | 0.48              |
| 18:AS:53:VAL:HG23 | 18:AS:54:GLU:H    | 1.78                     | 0.48              |
| 22:AW:85:MET:CA   | 22:AW:88:VAL:HG23 | 2.39                     | 0.48              |
| 24:BA:92:G:O2'    | 24:BA:93:C:H5'    | 2.13                     | 0.48              |
| 24:BA:149:A:C8    | 24:BA:150:C:N1    | 2.81                     | 0.48              |
| 24:BA:193:U:H4'   | 24:BA:803:U:H5'   | 1.95                     | 0.48              |
| 24:BA:323:G:H2'   | 29:BF:170:LEU:CG  | 2.43                     | 0.48              |
| 24:BA:332:A:C8    | 24:BA:335:C:C4    | 3.01                     | 0.48              |
| 24:BA:348:G:C2    | 24:BA:349:G:N7    | 2.81                     | 0.48              |
| 24:BA:352:G:C2    | 24:BA:353:G:H1'   | 2.48                     | 0.48              |
| 24:BA:410:G:O3'   | 24:BA:2407:G:OP2  | 2.29                     | 0.48              |
| 24:BA:411:G:C2    | 24:BA:2407:G:C5   | 3.01                     | 0.48              |
| 24:BA:483:A:H2'   | 24:BA:484:C:H5'   | 1.95                     | 0.48              |
| 24:BA:515:A:H5''  | 41:BT:32:PHE:HZ   | 1.72                     | 0.48              |
| 24:BA:527:C:N4    | 24:BA:2780:G:OP1  | 2.42                     | 0.48              |
| 24:BA:556:G:H8    | 24:BA:556:G:P     | 2.35                     | 0.48              |
| 24:BA:566:U:H3'   | 24:BA:567:A:H8    | 1.77                     | 0.48              |
| 24:BA:588:U:C4    | 24:BA:589:C:N4    | 2.81                     | 0.48              |
| 24:BA:591:C:C2    | 24:BA:592:G:C8    | 3.01                     | 0.48              |
| 24:BA:697:C:O2'   | 24:BA:698:C:O4'   | 2.25                     | 0.48              |
| 24:BA:780:G:H2'   | 24:BA:782:A:C5    | 2.47                     | 0.48              |
| 24:BA:820:A:C2    | 24:BA:943:U:O2'   | 2.62                     | 0.48              |
| 24:BA:833:U:H1'   | 36:BO:48:PRO:HB2  | 1.95                     | 0.48              |
| 24:BA:942:G:C6    | 24:BA:943:U:C4    | 3.01                     | 0.48              |
| 24:BA:973:A:H1'   | 24:BA:1188:U:C4   | 2.45                     | 0.48              |
| 24:BA:1011:G:O2'  | 24:BA:1013:C:C4'  | 2.60                     | 0.48              |
| 24:BA:1067:A:OP2  | 24:BA:1068:G:OP2  | 2.31                     | 0.48              |
| 24:BA:1132:A:H2'  | 24:BA:1133:U:O2   | 2.12                     | 0.48              |
| 24:BA:1197:G:C6   | 24:BA:1198:U:C5   | 3.01                     | 0.48              |
| 24:BA:1202:C:C2'  | 24:BA:1203:G:H4'  | 2.37                     | 0.48              |
| 24:BA:1310:G:N7   | 24:BA:1311:G:C2   | 2.81                     | 0.48              |
| 24:BA:1368:G:O6   | 50:B3:2:LYS:NZ    | 2.45                     | 0.48              |
| 24:BA:1563:G:C6   | 24:BA:1564:C:N4   | 2.81                     | 0.48              |
| 24:BA:1578:U:O2'  | 24:BA:1579:A:H5'  | 2.13                     | 0.48              |
| 24:BA:1620:G:C2   | 24:BA:1621:U:C2   | 3.01                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1667:G:OP1   | 35:BN:7:TYR:CD1    | 2.66                     | 0.48              |
| 24:BA:1754:C:C2    | 24:BA:1755:A:C8    | 3.00                     | 0.48              |
| 24:BA:1775:U:C1'   | 27:BD:208:LYS:NZ   | 2.76                     | 0.48              |
| 24:BA:1775:U:O4'   | 27:BD:208:LYS:NZ   | 2.45                     | 0.48              |
| 24:BA:1806:C:C2    | 24:BA:1807:G:H8    | 2.31                     | 0.48              |
| 24:BA:1812:A:C5    | 24:BA:1813:G:C8    | 3.01                     | 0.48              |
| 24:BA:1824:G:OP1   | 27:BD:53:PHE:CZ    | 2.66                     | 0.48              |
| 24:BA:1853:A:H2'   | 24:BA:1854:A:O4'   | 2.13                     | 0.48              |
| 24:BA:1889:A:C2    | 24:BA:2234:G:H1'   | 2.47                     | 0.48              |
| 24:BA:2080:G:C2'   | 24:BA:2081:C:O5'   | 2.60                     | 0.48              |
| 24:BA:2081:C:C2    | 24:BA:2082:A:H8    | 2.29                     | 0.48              |
| 24:BA:2094:G:C5    | 24:BA:2095:C:C4    | 3.01                     | 0.48              |
| 24:BA:2257:U:OP1   | 47:BZ:11:ARG:NH2   | 2.45                     | 0.48              |
| 24:BA:2259:G:C5    | 24:BA:2260:C:C5    | 3.01                     | 0.48              |
| 24:BA:2305:A:H3'   | 24:BA:2306:C:C5'   | 2.43                     | 0.48              |
| 24:BA:2377:A:C2    | 24:BA:2378:A:C8    | 3.01                     | 0.48              |
| 24:BA:2420:C:H5''  | 54:B7:35:GLN:NE2   | 2.25                     | 0.48              |
| 24:BA:2562:U:H2'   | 24:BA:2563:U:H5'   | 1.94                     | 0.48              |
| 24:BA:2593:U:OP2   | 24:BA:2593:U:C6    | 2.63                     | 0.48              |
| 24:BA:2600:A:O2'   | 24:BA:2601:C:H5'   | 2.13                     | 0.48              |
| 24:BA:2645:G:H8    | 24:BA:2645:G:H5''  | 1.78                     | 0.48              |
| 24:BA:2680:C:H5''  | 28:BE:188:VAL:O    | 2.13                     | 0.48              |
| 24:BA:2791:C:N4    | 24:BA:2807:G:N7    | 2.61                     | 0.48              |
| 24:BA:2818:G:H4'   | 24:BA:2837:G:C4'   | 2.43                     | 0.48              |
| 24:BA:2850:A:C2'   | 24:BA:2851:A:O5'   | 2.61                     | 0.48              |
| 24:BA:2866:U:O2    | 24:BA:2868:A:C1'   | 2.60                     | 0.48              |
| 25:BB:2:C:H2'      | 25:BB:3:C:O5'      | 2.13                     | 0.48              |
| 25:BB:77:U:C6      | 25:BB:77:U:C3'     | 2.95                     | 0.48              |
| 25:BB:103:U:C3'    | 25:BB:104:A:H5'    | 2.42                     | 0.48              |
| 26:BC:21:THR:CG2   | 26:BC:225:ASN:HD22 | 2.26                     | 0.48              |
| 26:BC:161:ILE:O    | 26:BC:161:ILE:CG1  | 2.61                     | 0.48              |
| 27:BD:63:ARG:CG    | 27:BD:65:ILE:HG12  | 2.43                     | 0.48              |
| 27:BD:77:ALA:O     | 27:BD:116:GLN:HA   | 2.13                     | 0.48              |
| 27:BD:133:LEU:HG   | 27:BD:187:GLY:O    | 2.12                     | 0.48              |
| 27:BD:176:ARG:HH12 | 27:BD:270:ILE:HD12 | 1.78                     | 0.48              |
| 28:BE:40:GLU:OE2   | 28:BE:41:LYS:HE2   | 2.13                     | 0.48              |
| 28:BE:91:VAL:HG22  | 28:BE:92:THR:N     | 2.28                     | 0.48              |
| 28:BE:93:VAL:O     | 28:BE:94:GLU:HG2   | 2.13                     | 0.48              |
| 29:BF:163:VAL:HG11 | 29:BF:195:ASP:OD2  | 2.13                     | 0.48              |
| 30:BG:72:ARG:HA    | 30:BG:88:ILE:HD11  | 1.95                     | 0.48              |
| 30:BG:179:PRO:O    | 30:BG:181:ARG:NH2  | 2.45                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 31:BH:11:VAL:HG13 | 31:BH:15:VAL:HG11  | 1.95                     | 0.48              |
| 32:BK:77:LEU:CD1  | 32:BK:142:VAL:HG22 | 2.43                     | 0.48              |
| 33:BL:45:THR:CG2  | 33:BL:53:VAL:HG11  | 2.41                     | 0.48              |
| 34:BM:9:VAL:O     | 34:BM:11:PRO:HD3   | 2.13                     | 0.48              |
| 35:BN:78:ARG:HD2  | 35:BN:78:ARG:H     | 1.78                     | 0.48              |
| 36:BO:72:PRO:HB3  | 36:BO:110:TYR:O    | 2.13                     | 0.48              |
| 37:BP:51:ARG:HD3  | 37:BP:52:VAL:CG2   | 2.43                     | 0.48              |
| 39:BR:59:LYS:HD3  | 39:BR:59:LYS:N     | 2.26                     | 0.48              |
| 40:BS:51:ARG:HH12 | 40:BS:114:LEU:CD1  | 2.26                     | 0.48              |
| 40:BS:99:LEU:O    | 40:BS:102:ILE:HG23 | 2.13                     | 0.48              |
| 42:BU:5:VAL:N     | 42:BU:12:TYR:CD2   | 2.65                     | 0.48              |
| 42:BU:40:LEU:HG   | 42:BU:55:ALA:H     | 1.68                     | 0.48              |
| 42:BU:52:VAL:O    | 42:BU:55:ALA:N     | 2.46                     | 0.48              |
| 44:BW:47:PHE:HE2  | 44:BW:89:ILE:CA    | 2.08                     | 0.48              |
| 45:BX:42:VAL:C    | 45:BX:61:ILE:HD13  | 2.38                     | 0.48              |
| 45:BX:96:ILE:HB   | 45:BX:102:CYS:O    | 2.13                     | 0.48              |
| 45:BX:97:ARG:CZ   | 45:BX:101:LYS:CG   | 2.90                     | 0.48              |
| 48:B1:2:ARG:HA    | 48:B1:5:LEU:CD1    | 2.28                     | 0.48              |
| 48:B1:19:LEU:C    | 48:B1:19:LEU:HD22  | 2.37                     | 0.48              |
| 48:B1:28:MET:HE2  | 48:B1:32:PHE:CZ    | 2.48                     | 0.48              |
| 53:B6:34:ARG:NH2  | 53:B6:42:LEU:HD23  | 2.28                     | 0.48              |
| 55:B8:9:ARG:O     | 55:B8:10:ILE:HG13  | 2.12                     | 0.48              |
| 1:AA:68:G:H5'     | 1:AA:171:A:H1'     | 1.95                     | 0.48              |
| 1:AA:115:G:O2'    | 1:AA:116:A:N7      | 2.47                     | 0.48              |
| 1:AA:124:G:N2     | 1:AA:238:G:H1'     | 2.28                     | 0.48              |
| 1:AA:151:A:C5     | 1:AA:152:A:N3      | 2.80                     | 0.48              |
| 1:AA:198:G:C2'    | 1:AA:199:G:O5'     | 2.61                     | 0.48              |
| 1:AA:242:C:C2     | 1:AA:285:G:N2      | 2.81                     | 0.48              |
| 1:AA:262:A:C2     | 1:AA:263:A:C6      | 3.01                     | 0.48              |
| 1:AA:287:U:C2'    | 1:AA:288:A:H5'     | 2.42                     | 0.48              |
| 1:AA:323:U:H3'    | 1:AA:323:U:C6      | 2.47                     | 0.48              |
| 1:AA:424:G:C4     | 1:AA:425:G:C8      | 3.00                     | 0.48              |
| 1:AA:445:G:H2'    | 1:AA:446:G:H8      | 1.77                     | 0.48              |
| 1:AA:543:C:C2     | 1:AA:544:G:N7      | 2.81                     | 0.48              |
| 1:AA:685:G:H2'    | 1:AA:686:U:H6      | 1.76                     | 0.48              |
| 1:AA:784:C:H2'    | 1:AA:785:G:O4'     | 2.13                     | 0.48              |
| 1:AA:874:G:N1     | 1:AA:875:C:C4      | 2.81                     | 0.48              |
| 1:AA:937:A:C2     | 1:AA:1379:G:C6     | 3.00                     | 0.48              |
| 1:AA:949:A:H4'    | 1:AA:1364:U:O4     | 2.13                     | 0.48              |
| 1:AA:973:G:N2     | 1:AA:974:A:H62     | 2.07                     | 0.48              |
| 1:AA:1025:U:H4'   | 1:AA:1025:U:OP1    | 2.13                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1031:G:C6    | 1:AA:1032:A:C6    | 3.01                     | 0.48              |
| 1:AA:1104:G:H2'   | 1:AA:1105:A:O4'   | 2.13                     | 0.48              |
| 1:AA:1227:A:H4'   | 15:AP:115:LYS:HZ1 | 1.78                     | 0.48              |
| 1:AA:1300:G:C2'   | 1:AA:1301:U:OP2   | 2.61                     | 0.48              |
| 1:AA:1342:C:H2'   | 1:AA:1343:G:C8    | 2.48                     | 0.48              |
| 1:AA:1494:G:N3    | 1:AA:1495:U:C4    | 2.81                     | 0.48              |
| 1:AA:1498:U:O2    | 1:AA:1498:U:H2'   | 2.13                     | 0.48              |
| 2:A1:34:U:C6      | 2:A1:34:U:C3'     | 2.96                     | 0.48              |
| 3:AD:50:U:C4      | 3:AD:65:G:N1      | 2.82                     | 0.48              |
| 4:AE:59:GLU:CA    | 4:AE:221:LEU:HD21 | 2.43                     | 0.48              |
| 4:AE:69:LEU:CD2   | 4:AE:91:PRO:CB    | 2.90                     | 0.48              |
| 4:AE:82:ARG:CD    | 4:AE:92:TYR:OH    | 2.54                     | 0.48              |
| 4:AE:102:LEU:CB   | 4:AE:176:GLU:OE1  | 2.52                     | 0.48              |
| 4:AE:169:LYS:HE2  | 4:AE:170:GLU:HA   | 1.95                     | 0.48              |
| 4:AE:178:ARG:HE   | 4:AE:196:LEU:CD1  | 2.11                     | 0.48              |
| 4:AE:181:PHE:HE1  | 10:AK:70:GLN:NE2  | 2.11                     | 0.48              |
| 4:AE:207:ALA:O    | 4:AE:209:ARG:N    | 2.46                     | 0.48              |
| 5:AF:10:PHE:CD1   | 5:AF:178:LEU:HD22 | 2.35                     | 0.48              |
| 5:AF:11:ARG:HG3   | 5:AF:16:ARG:CZ    | 2.43                     | 0.48              |
| 5:AF:25:GLY:N     | 5:AF:28:GLN:NE2   | 2.61                     | 0.48              |
| 6:AG:144:ASP:O    | 6:AG:184:LYS:HA   | 2.13                     | 0.48              |
| 6:AG:193:ASP:O    | 6:AG:194:LEU:HD13 | 2.13                     | 0.48              |
| 7:AH:37:ARG:O     | 7:AH:38:GLN:HG3   | 2.13                     | 0.48              |
| 7:AH:77:PRO:HG2   | 7:AH:78:HIS:CD2   | 2.48                     | 0.48              |
| 9:AJ:10:ARG:CB    | 9:AJ:10:ARG:NH1   | 2.76                     | 0.48              |
| 9:AJ:15:ASP:CB    | 9:AJ:20:ASP:H     | 2.25                     | 0.48              |
| 10:AK:24:THR:O    | 10:AK:24:THR:HG23 | 2.12                     | 0.48              |
| 10:AK:102:ARG:CB  | 10:AK:102:ARG:NH1 | 2.76                     | 0.48              |
| 11:AL:85:LEU:HD11 | 11:AL:92:TYR:CE1  | 2.48                     | 0.48              |
| 11:AL:101:PHE:C   | 11:AL:102:LEU:CD2 | 2.81                     | 0.48              |
| 11:AL:116:LYS:HD3 | 11:AL:116:LYS:N   | 2.27                     | 0.48              |
| 12:AM:60:ARG:CA   | 12:AM:60:ARG:NH1  | 2.76                     | 0.48              |
| 13:AN:42:TRP:CE3  | 13:AN:43:SER:N    | 2.81                     | 0.48              |
| 13:AN:45:GLY:CA   | 13:AN:55:LYS:HB3  | 2.41                     | 0.48              |
| 14:AO:47:LYS:H    | 14:AO:48:PRO:HD3  | 1.76                     | 0.48              |
| 15:AP:15:VAL:CG1  | 15:AP:34:LEU:HD21 | 2.43                     | 0.48              |
| 17:AR:66:LEU:N    | 17:AR:66:LEU:CD2  | 2.75                     | 0.48              |
| 21:AV:63:THR:O    | 21:AV:64:GLU:C    | 2.56                     | 0.48              |
| 22:AW:30:LYS:O    | 22:AW:31:SER:C    | 2.56                     | 0.48              |
| 24:BA:71:A:C3'    | 24:BA:72:U:H5''   | 2.40                     | 0.48              |
| 24:BA:184:C:N3    | 24:BA:213:A:N6    | 2.62                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:250:G:C2'  | 24:BA:251:A:O5'   | 2.61                     | 0.48              |
| 24:BA:285:C:H2'  | 24:BA:286:C:H6    | 1.78                     | 0.48              |
| 24:BA:297:C:C5'  | 45:BX:83:THR:HG21 | 2.43                     | 0.48              |
| 24:BA:307:G:H21  | 24:BA:330:A:N6    | 2.12                     | 0.48              |
| 24:BA:344:G:C8   | 24:BA:344:G:H3'   | 2.48                     | 0.48              |
| 24:BA:350:U:H2'  | 24:BA:351:G:OP1   | 2.13                     | 0.48              |
| 24:BA:401:A:C4   | 24:BA:402:A:C8    | 3.00                     | 0.48              |
| 24:BA:403:U:H4'  | 24:BA:404:C:OP1   | 2.11                     | 0.48              |
| 24:BA:415:A:C2   | 24:BA:416:C:H1'   | 2.47                     | 0.48              |
| 24:BA:476:G:O4'  | 24:BA:505:A:C2    | 2.65                     | 0.48              |
| 24:BA:588:U:O4'  | 29:BF:90:PHE:CD1  | 2.66                     | 0.48              |
| 24:BA:621:A:H8   | 24:BA:622:G:H5'   | 1.76                     | 0.48              |
| 24:BA:675:A:C5'  | 29:BF:67:GLN:NE2  | 2.76                     | 0.48              |
| 24:BA:684:G:N1   | 24:BA:775:G:C5    | 2.81                     | 0.48              |
| 24:BA:685:A:H5'' | 24:BA:686:G:H22   | 1.70                     | 0.48              |
| 24:BA:743:G:N1   | 24:BA:755:C:C4    | 2.81                     | 0.48              |
| 24:BA:764:A:N3   | 27:BD:214:TRP:CD1 | 2.81                     | 0.48              |
| 24:BA:908:C:C2'  | 24:BA:909:A:O5'   | 2.61                     | 0.48              |
| 24:BA:974:G:H1'  | 24:BA:1186:G:C5   | 2.48                     | 0.48              |
| 24:BA:1011:G:H2' | 24:BA:1013:C:H5'' | 1.95                     | 0.48              |
| 24:BA:1011:G:H5' | 24:BA:1012:U:OP2  | 2.13                     | 0.48              |
| 24:BA:1050:A:C2' | 24:BA:1051:G:C5'  | 2.91                     | 0.48              |
| 24:BA:1057:A:H61 | 24:BA:1086:A:H2   | 1.58                     | 0.48              |
| 24:BA:1148:A:N6  | 24:BA:1149:G:O6   | 2.46                     | 0.48              |
| 24:BA:1161:C:O2' | 24:BA:1162:G:H5'  | 2.14                     | 0.48              |
| 24:BA:1189:A:C3' | 24:BA:1190:G:H5'  | 2.43                     | 0.48              |
| 24:BA:1314:C:H2' | 24:BA:1315:C:H6   | 1.78                     | 0.48              |
| 24:BA:1351:C:N4  | 24:BA:1381:G:C6   | 2.81                     | 0.48              |
| 24:BA:1429:G:C3' | 24:BA:1430:C:H6   | 2.23                     | 0.48              |
| 24:BA:1537:C:C2' | 24:BA:1538:G:H5'  | 2.41                     | 0.48              |
| 24:BA:1540:G:C3' | 24:BA:1541:U:H5'  | 2.41                     | 0.48              |
| 24:BA:1542:G:C2' | 24:BA:1543:A:C5   | 2.96                     | 0.48              |
| 24:BA:1718:G:N2  | 24:BA:1742:C:C2   | 2.66                     | 0.48              |
| 24:BA:1747:G:H2' | 24:BA:1748:G:H8   | 1.77                     | 0.48              |
| 24:BA:1853:A:C1' | 24:BA:2234:G:H5'  | 2.44                     | 0.48              |
| 24:BA:1903:G:N3  | 24:BA:1904:G:C8   | 2.81                     | 0.48              |
| 24:BA:1997:G:N1  | 24:BA:1998:G:C5   | 2.81                     | 0.48              |
| 24:BA:2110:G:C5  | 24:BA:2120:G:C8   | 3.00                     | 0.48              |
| 24:BA:2254:C:O2  | 47:BZ:7:LEU:HD11  | 2.13                     | 0.48              |
| 24:BA:2270:G:H2' | 24:BA:2271:G:O4'  | 2.13                     | 0.48              |
| 24:BA:2307:G:N9  | 24:BA:2308:G:H1'  | 2.27                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2352:A:H2    | 47:BZ:33:ALA:O     | 1.96                     | 0.48              |
| 24:BA:2373:G:C5    | 24:BA:2374:C:N4    | 2.81                     | 0.48              |
| 24:BA:2377:A:C2    | 24:BA:2378:A:N7    | 2.81                     | 0.48              |
| 24:BA:2457:U:C2'   | 24:BA:2458:G:H5'   | 2.43                     | 0.48              |
| 24:BA:2573:C:P     | 24:BA:2574:G:OP1   | 2.71                     | 0.48              |
| 24:BA:2576:G:O2'   | 24:BA:2612:C:N4    | 2.46                     | 0.48              |
| 24:BA:2625:G:N1    | 24:BA:2777:G:N2    | 2.61                     | 0.48              |
| 24:BA:2631:G:C6    | 24:BA:2632:A:C8    | 3.01                     | 0.48              |
| 24:BA:2692:C:H1'   | 24:BA:2847:U:O2'   | 2.12                     | 0.48              |
| 24:BA:2740:A:C4    | 24:BA:2741:A:N7    | 2.82                     | 0.48              |
| 24:BA:2831:G:OP2   | 28:BE:57:LYS:HD3   | 2.13                     | 0.48              |
| 24:BA:2858:C:C5'   | 24:BA:2859:G:OP2   | 2.61                     | 0.48              |
| 24:BA:2893:G:H1'   | 24:BA:2894:G:H8    | 1.77                     | 0.48              |
| 24:BA:2897:U:H2'   | 24:BA:2898:U:C6    | 2.48                     | 0.48              |
| 25:BB:48:A:OP1     | 39:BR:92:TYR:CD2   | 2.66                     | 0.48              |
| 26:BC:19:ILE:HG23  | 26:BC:223:ARG:HB3  | 1.95                     | 0.48              |
| 26:BC:52:ARG:HG3   | 26:BC:53:ARG:CG    | 2.42                     | 0.48              |
| 26:BC:194:ARG:HG3  | 26:BC:194:ARG:NH1  | 2.27                     | 0.48              |
| 26:BC:211:SER:HA   | 26:BC:223:ARG:HE   | 1.78                     | 0.48              |
| 27:BD:16:MET:O     | 27:BD:17:THR:O     | 2.30                     | 0.48              |
| 27:BD:38:LYS:HD2   | 27:BD:38:LYS:H     | 1.78                     | 0.48              |
| 27:BD:40:THR:HG21  | 27:BD:43:ARG:HE    | 1.76                     | 0.48              |
| 28:BE:55:ASN:CB    | 28:BE:73:GLU:CD    | 2.86                     | 0.48              |
| 28:BE:60:ASN:O     | 28:BE:63:LEU:N     | 2.46                     | 0.48              |
| 28:BE:108:SER:OG   | 28:BE:163:GLU:O    | 2.31                     | 0.48              |
| 29:BF:101:LEU:HD13 | 29:BF:101:LEU:C    | 2.38                     | 0.48              |
| 29:BF:104:LYS:O    | 29:BF:108:LYS:CE   | 2.57                     | 0.48              |
| 29:BF:110:LEU:HG   | 29:BF:183:VAL:N    | 2.28                     | 0.48              |
| 30:BG:4:ASP:HB3    | 30:BG:104:GLU:CG   | 2.43                     | 0.48              |
| 30:BG:9:ARG:HH11   | 30:BG:9:ARG:CG     | 2.25                     | 0.48              |
| 30:BG:135:LEU:HD13 | 30:BG:137:GLU:H    | 1.77                     | 0.48              |
| 31:BH:13:LYS:HD2   | 31:BH:15:VAL:HA    | 1.95                     | 0.48              |
| 32:BK:45:LYS:O     | 32:BK:46:ALA:C     | 2.55                     | 0.48              |
| 33:BL:131:ALA:HB1  | 33:BL:136:VAL:HG12 | 1.94                     | 0.48              |
| 34:BM:30:ILE:O     | 34:BM:31:ALA:O     | 2.31                     | 0.48              |
| 35:BN:106:LEU:HD12 | 35:BN:107:ARG:CA   | 2.42                     | 0.48              |
| 36:BO:55:ARG:CB    | 36:BO:55:ARG:NH2   | 2.68                     | 0.48              |
| 36:BO:86:LYS:NZ    | 36:BO:91:PHE:CE2   | 2.82                     | 0.48              |
| 36:BO:123:LEU:HD12 | 36:BO:130:PHE:CZ   | 2.48                     | 0.48              |
| 37:BP:11:LYS:HZ3   | 37:BP:73:PRO:HB3   | 1.77                     | 0.48              |
| 37:BP:37:LEU:CD1   | 37:BP:130:LYS:HB2  | 2.37                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 37:BP:59:ARG:O    | 37:BP:60:ARG:HD2  | 2.12                     | 0.48              |
| 37:BP:85:LYS:HE3  | 37:BP:88:GLY:HA3  | 1.95                     | 0.48              |
| 37:BP:134:ARG:C   | 37:BP:134:ARG:NH1 | 2.67                     | 0.48              |
| 38:BQ:61:HIS:CE1  | 38:BQ:64:ARG:NH2  | 2.81                     | 0.48              |
| 39:BR:30:ARG:HD2  | 39:BR:91:PRO:CB   | 2.43                     | 0.48              |
| 40:BS:50:ILE:CG2  | 40:BS:68:TYR:HB2  | 2.44                     | 0.48              |
| 40:BS:85:LYS:HG3  | 40:BS:88:ILE:HG12 | 1.95                     | 0.48              |
| 41:BT:39:LEU:O    | 41:BT:42:ALA:N    | 2.46                     | 0.48              |
| 42:BU:43:GLU:O    | 42:BU:44:LYS:CD   | 2.52                     | 0.48              |
| 42:BU:88:ARG:CG   | 42:BU:89:GLN:N    | 2.76                     | 0.48              |
| 44:BW:47:PHE:O    | 44:BW:48:LYS:O    | 2.31                     | 0.48              |
| 45:BX:2:ARG:C     | 45:BX:4:LYS:N     | 2.69                     | 0.48              |
| 47:BZ:27:GLU:N    | 47:BZ:69:PHE:CZ   | 2.81                     | 0.48              |
| 48:B1:32:PHE:HB2  | 48:B1:33:GLN:NE2  | 2.28                     | 0.48              |
| 49:B2:6:VAL:HA    | 49:B2:55:ARG:O    | 2.12                     | 0.48              |
| 51:B4:58:LEU:HD13 | 51:B4:59:GLU:N    | 2.29                     | 0.48              |
| 52:B5:21:TYR:CD2  | 52:B5:21:TYR:O    | 2.66                     | 0.48              |
| 53:B6:10:ARG:HG2  | 53:B6:14:LYS:HE3  | 1.95                     | 0.48              |
| 53:B6:45:ALA:O    | 53:B6:46:VAL:C    | 2.56                     | 0.48              |
| 54:B7:30:ARG:O    | 54:B7:31:HIS:C    | 2.56                     | 0.48              |
| 55:B8:1:MET:H3    | 55:B8:33:LYS:HB3  | 1.78                     | 0.48              |
| 1:AA:20:U:H5      | 1:AA:916:G:H1     | 1.61                     | 0.48              |
| 1:AA:136:C:H4'    | 18:AS:65:GLN:NE2  | 2.29                     | 0.48              |
| 1:AA:247:G:N2     | 1:AA:282:A:C2     | 2.77                     | 0.48              |
| 1:AA:264:U:O2     | 1:AA:265:G:O4'    | 2.31                     | 0.48              |
| 1:AA:328:C:O2'    | 1:AA:329:A:OP2    | 2.31                     | 0.48              |
| 1:AA:345:C:H5'    | 1:AA:346:G:C4     | 2.48                     | 0.48              |
| 1:AA:392:G:C4'    | 18:AS:12:LYS:HZ3  | 2.26                     | 0.48              |
| 1:AA:467:G:C2     | 1:AA:468:A:C5     | 3.01                     | 0.48              |
| 1:AA:522:C:H5''   | 14:AO:120:TYR:HH  | 1.75                     | 0.48              |
| 1:AA:526:C:N4     | 1:AA:535:A:H2     | 2.07                     | 0.48              |
| 1:AA:552:U:H4'    | 14:AO:87:GLY:O    | 2.13                     | 0.48              |
| 1:AA:572:A:C2     | 1:AA:916:G:N2     | 2.81                     | 0.48              |
| 1:AA:579:G:C4     | 1:AA:580:U:C5     | 3.01                     | 0.48              |
| 1:AA:628:G:C2'    | 1:AA:629:G:H8     | 2.21                     | 0.48              |
| 1:AA:654:G:H1     | 1:AA:754:C:N4     | 2.12                     | 0.48              |
| 1:AA:690:G:H3'    | 1:AA:691:G:C8     | 2.48                     | 0.48              |
| 1:AA:714:G:O2'    | 1:AA:777:A:N6     | 2.46                     | 0.48              |
| 1:AA:818:G:N2     | 1:AA:820:U:C2     | 2.82                     | 0.48              |
| 1:AA:843:U:H3'    | 1:AA:848:C:C4'    | 2.44                     | 0.48              |
| 1:AA:872:A:N1     | 1:AA:874:G:C6     | 2.80                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1376:U:H2'   | 1:AA:1377:A:H8     | 1.75                     | 0.48              |
| 1:AA:1437:C:O2'   | 1:AA:1438:G:H5'    | 2.14                     | 0.48              |
| 1:AA:1492:A:O3'   | 1:AA:1493:A:O4'    | 2.30                     | 0.48              |
| 1:AA:1524:C:H5''  | 13:AN:120:ARG:HH22 | 1.78                     | 0.48              |
| 3:AC:36:A:C6      | 3:AC:37:A:N7       | 2.81                     | 0.48              |
| 3:AD:4:C:O4'      | 24:BA:1851:U:OP1   | 2.31                     | 0.48              |
| 3:AD:4:C:N3       | 3:AD:70:G:N1       | 2.61                     | 0.48              |
| 3:AD:9:A:N6       | 3:AD:23:A:H62      | 1.98                     | 0.48              |
| 3:AD:18:G:H21     | 3:AD:58:A:H5'      | 1.72                     | 0.48              |
| 4:AE:149:LEU:C    | 4:AE:149:LEU:HD23  | 2.38                     | 0.48              |
| 4:AE:213:LEU:HD23 | 4:AE:217:ARG:HD3   | 1.95                     | 0.48              |
| 5:AF:124:ILE:HG23 | 5:AF:130:VAL:CG2   | 2.43                     | 0.48              |
| 5:AF:142:MET:HB3  | 5:AF:170:GLN:CD    | 2.38                     | 0.48              |
| 5:AF:176:HIS:O    | 5:AF:178:LEU:N     | 2.46                     | 0.48              |
| 6:AG:54:TYR:CE2   | 6:AG:58:LEU:HB2    | 2.47                     | 0.48              |
| 6:AG:55:ALA:C     | 6:AG:59:ARG:HG2    | 2.31                     | 0.48              |
| 6:AG:106:TYR:CE2  | 6:AG:113:SER:HA    | 2.48                     | 0.48              |
| 6:AG:200:GLU:C    | 6:AG:204:ILE:HD12  | 2.38                     | 0.48              |
| 7:AH:91:LEU:C     | 7:AH:91:LEU:CD2    | 2.68                     | 0.48              |
| 7:AH:96:PRO:O     | 7:AH:97:GLY:C      | 2.55                     | 0.48              |
| 7:AH:109:ILE:HD13 | 7:AH:135:THR:HG21  | 1.91                     | 0.48              |
| 9:AJ:5:ARG:HH11   | 9:AJ:5:ARG:CB      | 2.26                     | 0.48              |
| 10:AK:15:ASN:HD22 | 10:AK:15:ASN:H     | 1.61                     | 0.48              |
| 10:AK:92:ARG:HG2  | 10:AK:92:ARG:NH1   | 2.24                     | 0.48              |
| 11:AL:50:LEU:HD11 | 11:AL:56:LEU:CA    | 2.23                     | 0.48              |
| 13:AN:29:ILE:HG22 | 13:AN:44:SER:OG    | 2.13                     | 0.48              |
| 13:AN:85:ARG:CZ   | 13:AN:111:ASP:OD2  | 2.61                     | 0.48              |
| 13:AN:110:ASP:OD2 | 20:AU:88:LYS:HD2   | 2.13                     | 0.48              |
| 14:AO:24:VAL:HG13 | 14:AO:26:ALA:H     | 1.77                     | 0.48              |
| 14:AO:28:LYS:CE   | 14:AO:33:ARG:HH12  | 2.19                     | 0.48              |
| 15:AP:2:ALA:O     | 15:AP:8:GLU:O      | 2.31                     | 0.48              |
| 15:AP:81:LEU:HD21 | 15:AP:88:ARG:NH2   | 2.28                     | 0.48              |
| 18:AS:9:PHE:CE1   | 18:AS:18:ARG:HG3   | 2.47                     | 0.48              |
| 24:BA:8:A:H5''    | 34:BM:51:PHE:HE2   | 1.76                     | 0.48              |
| 24:BA:20:C:HO2'   | 24:BA:21:A:H5'     | 1.75                     | 0.48              |
| 24:BA:107:C:H2'   | 24:BA:108:U:C6     | 2.48                     | 0.48              |
| 24:BA:147:U:N3    | 24:BA:148:C:N4     | 2.60                     | 0.48              |
| 24:BA:270(J):G:N1 | 24:BA:270(K):C:C2  | 2.82                     | 0.48              |
| 24:BA:279:C:N4    | 24:BA:359:A:C1'    | 2.67                     | 0.48              |
| 24:BA:389:G:H8    | 24:BA:389:G:OP1    | 1.94                     | 0.48              |
| 24:BA:410:G:C3'   | 24:BA:411:G:C8     | 2.96                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:464:U:C1'   | 53:B6:12:ARG:NH2   | 2.76                     | 0.48              |
| 24:BA:569:U:C5'   | 24:BA:946:G:H1'    | 2.33                     | 0.48              |
| 24:BA:603:A:H5''  | 36:BO:100:LEU:HD21 | 1.96                     | 0.48              |
| 24:BA:631:A:C2    | 24:BA:2416:C:O4'   | 2.66                     | 0.48              |
| 24:BA:720:C:O2'   | 24:BA:721:C:C5'    | 2.61                     | 0.48              |
| 24:BA:742:G:O2'   | 24:BA:743:G:H5'    | 2.13                     | 0.48              |
| 24:BA:800:A:O2'   | 24:BA:801:G:O5'    | 2.31                     | 0.48              |
| 24:BA:850:C:H5''  | 49:B2:18:ASP:CB    | 2.43                     | 0.48              |
| 24:BA:858:U:C2'   | 24:BA:2268:A:C8    | 2.92                     | 0.48              |
| 24:BA:878:A:C2'   | 24:BA:879:G:H8     | 2.26                     | 0.48              |
| 24:BA:885:C:N4    | 24:BA:889:C:H6     | 2.10                     | 0.48              |
| 24:BA:954:G:O2'   | 24:BA:955:C:H5'    | 2.13                     | 0.48              |
| 24:BA:980:A:N6    | 24:BA:1135:C:H4'   | 2.28                     | 0.48              |
| 24:BA:987:G:OP1   | 49:B2:13:ILE:CG2   | 2.57                     | 0.48              |
| 24:BA:1005:C:H2'  | 24:BA:1006:C:C6    | 2.27                     | 0.48              |
| 24:BA:1022:G:C3'  | 24:BA:1025:G:O6    | 2.61                     | 0.48              |
| 24:BA:1024:G:O6   | 24:BA:1134:G:H1'   | 2.14                     | 0.48              |
| 24:BA:1029:A:N6   | 24:BA:1125:G:C2    | 2.81                     | 0.48              |
| 24:BA:1223:C:O2   | 24:BA:1223:C:H2'   | 2.13                     | 0.48              |
| 24:BA:1256:G:O2'  | 24:BA:1257:C:H5'   | 2.13                     | 0.48              |
| 24:BA:1257:C:H2'  | 24:BA:1258:C:C6    | 2.48                     | 0.48              |
| 24:BA:1364:G:P    | 24:BA:1364:G:C8    | 3.06                     | 0.48              |
| 24:BA:1399:C:P    | 44:BW:25:LYS:HZ1   | 2.36                     | 0.48              |
| 24:BA:1426:G:H3'  | 24:BA:1427:A:H5''  | 1.95                     | 0.48              |
| 24:BA:1439:A:N7   | 24:BA:1440:G:N9    | 2.61                     | 0.48              |
| 24:BA:1449:A:OP1  | 24:BA:1543:A:C2    | 2.66                     | 0.48              |
| 24:BA:1451:C:H2'  | 24:BA:1451:C:O2    | 2.13                     | 0.48              |
| 24:BA:1643:G:N2   | 24:BA:1644:C:H1'   | 2.28                     | 0.48              |
| 24:BA:1742:C:C2'  | 24:BA:1743:G:H4'   | 2.38                     | 0.48              |
| 24:BA:1746:G:H3'  | 24:BA:1746:G:P     | 2.54                     | 0.48              |
| 24:BA:1753:G:C8   | 24:BA:1753:G:C3'   | 2.95                     | 0.48              |
| 24:BA:1782:C:C2   | 24:BA:2609:U:C6    | 3.01                     | 0.48              |
| 24:BA:1797:C:N3   | 24:BA:1798:U:O4    | 2.47                     | 0.48              |
| 24:BA:1815:A:N3   | 24:BA:1817:G:C6    | 2.81                     | 0.48              |
| 24:BA:1869:G:N3   | 24:BA:1878:G:O6    | 2.47                     | 0.48              |
| 24:BA:1970:A:HO2' | 24:BA:1971:A:P     | 2.35                     | 0.48              |
| 24:BA:2048:G:N1   | 24:BA:2049:G:C5    | 2.81                     | 0.48              |
| 24:BA:2053:G:O4'  | 28:BE:149:ARG:HA   | 2.13                     | 0.48              |
| 24:BA:2168:G:C2'  | 24:BA:2170:A:OP2   | 2.61                     | 0.48              |
| 24:BA:2199:A:O5'  | 24:BA:2199:A:H8    | 1.89                     | 0.48              |
| 24:BA:2213:U:H3'  | 24:BA:2213:U:C2    | 2.48                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2245:U:C2    | 24:BA:2435:A:C8    | 3.01                     | 0.48              |
| 24:BA:2252:G:N7    | 24:BA:2253:G:C5    | 2.81                     | 0.48              |
| 24:BA:2275:C:O2'   | 24:BA:2276:G:OP2   | 2.25                     | 0.48              |
| 24:BA:2341:G:C2'   | 24:BA:2342:C:C6    | 2.89                     | 0.48              |
| 24:BA:2405:G:C2'   | 24:BA:2406:U:OP2   | 2.60                     | 0.48              |
| 24:BA:2414:G:C2    | 24:BA:2415:G:C8    | 3.01                     | 0.48              |
| 24:BA:2486:G:N2    | 24:BA:2487:G:C4    | 2.81                     | 0.48              |
| 24:BA:2512:C:C6    | 24:BA:2512:C:C3'   | 2.97                     | 0.48              |
| 24:BA:2706:G:H5'   | 24:BA:2852:G:P     | 2.53                     | 0.48              |
| 24:BA:2799:A:H5''  | 24:BA:2801:A:OP2   | 2.14                     | 0.48              |
| 24:BA:2801:A:OP1   | 24:BA:2802:G:P     | 2.71                     | 0.48              |
| 26:BC:32:LEU:HB3   | 26:BC:220:PRO:CG   | 2.24                     | 0.48              |
| 26:BC:47:LEU:HA    | 26:BC:208:PHE:O    | 2.14                     | 0.48              |
| 26:BC:181:PRO:CD   | 26:BC:184:LYS:HD2  | 2.35                     | 0.48              |
| 26:BC:200:LYS:HZ2  | 26:BC:204:ALA:HB3  | 1.76                     | 0.48              |
| 27:BD:21:PHE:O     | 27:BD:205:VAL:HG13 | 2.14                     | 0.48              |
| 27:BD:46:GLN:HE22  | 27:BD:51:VAL:HG23  | 1.78                     | 0.48              |
| 27:BD:127:VAL:HG22 | 27:BD:194:GLY:HA2  | 1.94                     | 0.48              |
| 27:BD:208:LYS:HZ3  | 27:BD:211:ARG:NH2  | 2.10                     | 0.48              |
| 28:BE:47:VAL:HA    | 28:BE:48:GLN:HE22  | 1.76                     | 0.48              |
| 28:BE:149:ARG:HH11 | 28:BE:151:TYR:C    | 2.21                     | 0.48              |
| 29:BF:9:ILE:CG2    | 29:BF:10:PRO:N     | 2.77                     | 0.48              |
| 30:BG:57:ALA:CA    | 30:BG:67:LYS:C     | 2.85                     | 0.48              |
| 32:BK:125:GLU:HA   | 32:BK:143:SER:HA   | 1.95                     | 0.48              |
| 32:BK:132:PRO:HD2  | 32:BK:138:ILE:H    | 1.77                     | 0.48              |
| 33:BL:104:VAL:HG13 | 33:BL:127:ILE:CB   | 2.40                     | 0.48              |
| 34:BM:4:TYR:HB3    | 41:BT:64:ARG:NH2   | 2.28                     | 0.48              |
| 35:BN:99:PHE:HA    | 35:BN:122:LEU:O    | 2.14                     | 0.48              |
| 36:BO:60:MET:SD    | 36:BO:60:MET:N     | 2.86                     | 0.48              |
| 36:BO:116:GLY:HA3  | 36:BO:121:LYS:C    | 2.37                     | 0.48              |
| 37:BP:42:ILE:HD13  | 37:BP:43:THR:O     | 2.13                     | 0.48              |
| 38:BQ:33:ARG:CB    | 38:BQ:113:LEU:HD11 | 2.34                     | 0.48              |
| 38:BQ:54:LEU:H     | 38:BQ:54:LEU:CD1   | 2.27                     | 0.48              |
| 38:BQ:74:LYS:N     | 38:BQ:77:ARG:NH2   | 2.61                     | 0.48              |
| 39:BR:97:ARG:HH21  | 39:BR:97:ARG:CG    | 2.23                     | 0.48              |
| 40:BS:80:SER:HB3   | 40:BS:81:PRO:CD    | 2.40                     | 0.48              |
| 42:BU:20:LEU:CD1   | 42:BU:68:LYS:HZ3   | 2.09                     | 0.48              |
| 43:BV:21:VAL:CG2   | 43:BV:75:TYR:HD2   | 2.25                     | 0.48              |
| 46:BY:45:ASP:HA    | 46:BY:48:PHE:HD1   | 1.79                     | 0.48              |
| 46:BY:49:ARG:C     | 46:BY:51:ALA:H     | 2.21                     | 0.48              |
| 46:BY:59:LEU:HD23  | 46:BY:60:GLU:N     | 2.27                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 49:B2:50:VAL:HG13 | 49:B2:53:LEU:CB   | 2.42                     | 0.48              |
| 50:B3:47:GLN:CA   | 50:B3:52:THR:HG21 | 2.37                     | 0.48              |
| 51:B4:19:ARG:C    | 51:B4:21:SER:H    | 2.21                     | 0.48              |
| 52:B5:17:LYS:HE2  | 52:B5:49:HIS:O    | 2.12                     | 0.48              |
| 54:B7:60:LEU:O    | 54:B7:61:LEU:C    | 2.57                     | 0.48              |
| 54:B7:61:LEU:O    | 54:B7:62:LEU:HD23 | 2.13                     | 0.48              |
| 1:AA:41:G:N3      | 1:AA:42:G:C8      | 2.81                     | 0.48              |
| 1:AA:117:G:O6     | 1:AA:289:G:O4'    | 2.30                     | 0.48              |
| 1:AA:160:A:H1'    | 1:AA:344:A:N7     | 2.29                     | 0.48              |
| 1:AA:342:C:C2     | 1:AA:343:U:C5     | 3.02                     | 0.48              |
| 1:AA:556:C:C2'    | 1:AA:557:G:H5'    | 2.43                     | 0.48              |
| 1:AA:566:G:H4'    | 1:AA:567:G:C5'    | 2.43                     | 0.48              |
| 1:AA:593:G:H2'    | 1:AA:594:G:O4'    | 2.13                     | 0.48              |
| 1:AA:821:G:O6     | 1:AA:880:C:N4     | 2.46                     | 0.48              |
| 1:AA:826:C:C2     | 1:AA:827:U:C5     | 3.01                     | 0.48              |
| 1:AA:1057:G:H2'   | 1:AA:1058:G:O5'   | 2.14                     | 0.48              |
| 1:AA:1067:A:C2    | 1:AA:1068:G:H1'   | 2.47                     | 0.48              |
| 1:AA:1087:G:N2    | 1:AA:1099:G:C4    | 2.82                     | 0.48              |
| 1:AA:1094:G:C2'   | 1:AA:1108:G:H22   | 2.27                     | 0.48              |
| 1:AA:1148:U:O2    | 1:AA:1149:C:O4'   | 2.31                     | 0.48              |
| 1:AA:1148:U:C4'   | 11:AL:16:ARG:HD2  | 2.43                     | 0.48              |
| 1:AA:1158:C:C4    | 1:AA:1160:G:C1'   | 2.90                     | 0.48              |
| 1:AA:1191:A:O5'   | 5:AF:4:LYS:NZ     | 2.46                     | 0.48              |
| 1:AA:1217:C:H2'   | 1:AA:1218:C:C6    | 2.47                     | 0.48              |
| 1:AA:1372:U:H2'   | 1:AA:1373:G:O4'   | 2.13                     | 0.48              |
| 1:AA:1377:A:O2'   | 1:AA:1378:C:P     | 2.71                     | 0.48              |
| 1:AA:1405:G:C2    | 1:AA:1406:U:C5    | 3.01                     | 0.48              |
| 1:AA:1422:G:O2'   | 1:AA:1423:G:H5'   | 2.13                     | 0.48              |
| 1:AA:1492:A:C6    | 14:AO:50:SER:HB2  | 2.48                     | 0.48              |
| 3:AC:18:G:N2      | 3:AC:58:A:C4      | 2.80                     | 0.48              |
| 3:AD:62:C:H5'     | 26:BC:52:ARG:NH1  | 2.28                     | 0.48              |
| 3:AB:18:G:H2'     | 3:AB:57:G:H1      | 1.77                     | 0.48              |
| 3:AB:32:U:H2'     | 3:AB:33:U:C6      | 2.49                     | 0.48              |
| 3:AB:61:C:H2'     | 3:AB:62:C:C5      | 2.48                     | 0.48              |
| 4:AE:131:PRO:O    | 4:AE:134:GLU:CB   | 2.61                     | 0.48              |
| 5:AF:39:ILE:CG2   | 5:AF:40:ARG:N     | 2.72                     | 0.48              |
| 5:AF:39:ILE:O     | 5:AF:40:ARG:C     | 2.54                     | 0.48              |
| 5:AF:98:ASN:C     | 5:AF:99:VAL:CG1   | 2.86                     | 0.48              |
| 6:AG:14:ARG:CZ    | 6:AG:14:ARG:O     | 2.62                     | 0.48              |
| 6:AG:47:ARG:NH2   | 6:AG:48:ALA:O     | 2.46                     | 0.48              |
| 6:AG:54:TYR:O     | 6:AG:56:VAL:N     | 2.46                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 6:AG:79:PHE:HA     | 6:AG:93:PHE:CD1   | 2.49                     | 0.48              |
| 8:AI:34:GLY:HA3    | 8:AI:68:PRO:CG    | 2.44                     | 0.48              |
| 8:AI:53:ALA:O      | 8:AI:55:ASP:OD1   | 2.31                     | 0.48              |
| 8:AI:67:MET:SD     | 8:AI:67:MET:C     | 2.96                     | 0.48              |
| 9:AJ:113:GLU:CB    | 9:AJ:118:VAL:CG1  | 2.91                     | 0.48              |
| 10:AK:95:VAL:HB    | 10:AK:99:GLU:CD   | 2.38                     | 0.48              |
| 10:AK:114:THR:OG1  | 10:AK:119:LEU:CD2 | 2.61                     | 0.48              |
| 11:AL:93:ARG:C     | 11:AL:95:LYS:H    | 2.19                     | 0.48              |
| 12:AM:10:GLY:HA3   | 12:AM:16:LEU:CD2  | 2.42                     | 0.48              |
| 12:AM:49:VAL:HG11  | 16:AQ:45:ARG:HD2  | 1.93                     | 0.48              |
| 12:AM:63:PHE:HA    | 16:AQ:59:ALA:N    | 2.28                     | 0.48              |
| 15:AP:13:LYS:CG    | 15:AP:17:VAL:HG11 | 2.43                     | 0.48              |
| 15:AP:95:GLY:O     | 15:AP:110:ARG:HD2 | 2.13                     | 0.48              |
| 15:AP:121:LYS:O    | 15:AP:122:LYS:HB3 | 2.13                     | 0.48              |
| 19:AT:27:PHE:C     | 19:AT:35:VAL:HG13 | 2.38                     | 0.48              |
| 19:AT:32:TYR:O     | 19:AT:34:LYS:N    | 2.46                     | 0.48              |
| 20:AU:25:THR:HG22  | 20:AU:42:ARG:CZ   | 2.43                     | 0.48              |
| 20:AU:77:GLY:C     | 20:AU:78:LEU:HG   | 2.37                     | 0.48              |
| 21:AV:46:GLY:C     | 21:AV:61:TYR:HE2  | 2.22                     | 0.48              |
| 24:BA:66:C:N4      | 24:BA:67:U:O4     | 2.47                     | 0.48              |
| 24:BA:66:C:C2'     | 24:BA:67:U:O5'    | 2.60                     | 0.48              |
| 24:BA:149:A:H2'    | 24:BA:150:C:C5'   | 2.41                     | 0.48              |
| 24:BA:154:G:C2     | 24:BA:155:C:C4    | 3.02                     | 0.48              |
| 24:BA:199:A:H5'    | 24:BA:200:U:OP2   | 2.13                     | 0.48              |
| 24:BA:218:A:N1     | 24:BA:235:U:H4'   | 2.29                     | 0.48              |
| 24:BA:245:G:H21    | 24:BA:254:G:H1'   | 1.75                     | 0.48              |
| 24:BA:270(C):C:OP1 | 24:BA:365:C:C1'   | 2.61                     | 0.48              |
| 24:BA:377:C:H2'    | 24:BA:378:C:C6    | 2.47                     | 0.48              |
| 24:BA:411:G:N3     | 24:BA:2408:U:C4   | 2.81                     | 0.48              |
| 24:BA:459:U:H3'    | 53:B6:40:TRP:CZ3  | 2.47                     | 0.48              |
| 24:BA:463:G:O3'    | 24:BA:464:U:H5    | 1.95                     | 0.48              |
| 24:BA:500:G:O2'    | 24:BA:501:A:H3'   | 2.14                     | 0.48              |
| 24:BA:546:C:C2     | 24:BA:547:A:C6    | 3.01                     | 0.48              |
| 24:BA:600:G:H22    | 24:BA:604:G:H4'   | 1.76                     | 0.48              |
| 24:BA:656:G:C2'    | 24:BA:657:U:O5'   | 2.60                     | 0.48              |
| 24:BA:671:C:N4     | 24:BA:672:C:H41   | 2.11                     | 0.48              |
| 24:BA:729:G:OP1    | 27:BD:19:ALA:CB   | 2.60                     | 0.48              |
| 24:BA:768:G:H8     | 24:BA:768:G:O5'   | 1.96                     | 0.48              |
| 24:BA:819:A:N7     | 24:BA:973:A:C2    | 2.81                     | 0.48              |
| 24:BA:858:U:H4'    | 24:BA:859:G:OP1   | 2.12                     | 0.48              |
| 24:BA:863:A:C2     | 24:BA:864:G:C5    | 3.00                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:870:A:H2'  | 24:BA:871:U:O4'   | 2.13                     | 0.48              |
| 24:BA:873:G:C5   | 24:BA:874:G:C8    | 3.02                     | 0.48              |
| 24:BA:947:G:C2   | 24:BA:948:G:C8    | 3.01                     | 0.48              |
| 24:BA:1019:U:H6  | 24:BA:1019:U:C5'  | 2.26                     | 0.48              |
| 24:BA:1022:G:C5  | 24:BA:1139:G:N1   | 2.81                     | 0.48              |
| 24:BA:1035:U:O3' | 31:BH:59:ARG:CZ   | 2.62                     | 0.48              |
| 24:BA:1036:G:H5' | 31:BH:59:ARG:HH22 | 1.78                     | 0.48              |
| 24:BA:1071:G:N7  | 24:BA:1072:C:C5   | 2.81                     | 0.48              |
| 24:BA:1264:G:C5  | 24:BA:1265:A:C5   | 3.01                     | 0.48              |
| 24:BA:1277:G:O2' | 38:BQ:24:GLN:NE2  | 2.41                     | 0.48              |
| 24:BA:1287:A:OP1 | 38:BQ:105:ARG:HB2 | 2.14                     | 0.48              |
| 24:BA:1343:G:H2' | 24:BA:1384:A:C2   | 2.48                     | 0.48              |
| 24:BA:1348:G:C6  | 24:BA:1349:A:C6   | 3.01                     | 0.48              |
| 24:BA:1368:G:O6  | 50:B3:2:LYS:CE    | 2.60                     | 0.48              |
| 24:BA:1414:G:N2  | 24:BA:1415:U:C2   | 2.81                     | 0.48              |
| 24:BA:1458:C:C4' | 24:BA:1459:G:C8   | 2.92                     | 0.48              |
| 24:BA:1471:A:N7  | 24:BA:1519:G:C6   | 2.81                     | 0.48              |
| 24:BA:1539:G:N7  | 24:BA:1540:G:C8   | 2.81                     | 0.48              |
| 24:BA:1578:U:C2' | 24:BA:1579:A:O5'  | 2.61                     | 0.48              |
| 24:BA:1678:G:H8  | 24:BA:1678:G:O5'  | 1.96                     | 0.48              |
| 24:BA:1690:A:N1  | 24:BA:1691:C:H1'  | 2.27                     | 0.48              |
| 24:BA:1762:A:H5' | 24:BA:1763:G:OP2  | 2.13                     | 0.48              |
| 24:BA:1831:G:H2' | 24:BA:1832:C:C6   | 2.47                     | 0.48              |
| 24:BA:1834:U:OP1 | 24:BA:1834:U:C4'  | 2.61                     | 0.48              |
| 24:BA:1965:C:H5' | 24:BA:1966:A:H3'  | 1.96                     | 0.48              |
| 24:BA:2016:U:C1' | 51:B4:6:VAL:HG11  | 2.43                     | 0.48              |
| 24:BA:2026:C:N3  | 24:BA:2027:G:C8   | 2.81                     | 0.48              |
| 24:BA:2040:C:H4' | 34:BM:72:TYR:HE2  | 1.79                     | 0.48              |
| 24:BA:2114:A:H8  | 24:BA:2114:A:P    | 2.36                     | 0.48              |
| 24:BA:2132:U:H2' | 24:BA:2134:A:N7   | 2.28                     | 0.48              |
| 24:BA:2244:U:O4' | 24:BA:2434:A:N6   | 2.47                     | 0.48              |
| 24:BA:2258:C:C4  | 24:BA:2426:A:O4'  | 2.66                     | 0.48              |
| 24:BA:2331:G:C2' | 24:BA:2332:U:O4'  | 2.59                     | 0.48              |
| 24:BA:2361:A:OP2 | 54:B7:47:LYS:NZ   | 2.34                     | 0.48              |
| 24:BA:2460:U:H3' | 24:BA:2461:C:C6   | 2.48                     | 0.48              |
| 24:BA:2471:C:H2' | 24:BA:2472:G:O5'  | 2.12                     | 0.48              |
| 24:BA:2472:G:C2  | 24:BA:2475:C:C2   | 3.02                     | 0.48              |
| 24:BA:2487:G:N3  | 24:BA:2488:A:C8   | 2.82                     | 0.48              |
| 24:BA:2507:C:C4  | 24:BA:2508:G:N7   | 2.80                     | 0.48              |
| 24:BA:2562:U:N3  | 24:BA:2563:U:C6   | 2.82                     | 0.48              |
| 24:BA:2690:C:O2' | 24:BA:2691:C:O5'  | 2.30                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2729:G:C6    | 24:BA:2730:C:C4    | 3.00                     | 0.48              |
| 24:BA:2848:G:O5'   | 40:BS:99:LEU:HG    | 2.13                     | 0.48              |
| 25:BB:15:A:C5'     | 25:BB:16:G:O5'     | 2.61                     | 0.48              |
| 27:BD:5:LYS:CA     | 27:BD:28:GLU:HB2   | 2.43                     | 0.48              |
| 27:BD:5:LYS:HA     | 27:BD:29:PRO:HD3   | 1.96                     | 0.48              |
| 27:BD:85:ASP:CB    | 27:BD:87:ASN:HD21  | 2.24                     | 0.48              |
| 27:BD:109:ASP:O    | 27:BD:111:LEU:N    | 2.46                     | 0.48              |
| 27:BD:147:LEU:H    | 27:BD:154:LYS:CG   | 2.27                     | 0.48              |
| 27:BD:166:GLN:O    | 27:BD:167:GLY:O    | 2.31                     | 0.48              |
| 27:BD:219:PRO:HB2  | 27:BD:220:HIS:CD2  | 2.48                     | 0.48              |
| 28:BE:104:VAL:HG22 | 28:BE:198:VAL:HA   | 1.95                     | 0.48              |
| 28:BE:119:ARG:CZ   | 28:BE:155:LYS:HD2  | 2.42                     | 0.48              |
| 28:BE:133:LYS:CD   | 28:BE:137:HIS:CG   | 2.90                     | 0.48              |
| 28:BE:136:ARG:C    | 28:BE:136:ARG:CD   | 2.87                     | 0.48              |
| 29:BF:35:GLU:HA    | 29:BF:38:ARG:HD2   | 1.94                     | 0.48              |
| 30:BG:50:ALA:O     | 30:BG:54:GLU:CD    | 2.56                     | 0.48              |
| 30:BG:59:GLU:O     | 30:BG:60:LEU:C     | 2.56                     | 0.48              |
| 30:BG:68:PRO:HB3   | 30:BG:72:ARG:HH12  | 1.76                     | 0.48              |
| 31:BH:26:VAL:C     | 31:BH:79:VAL:HG11  | 2.39                     | 0.48              |
| 31:BH:131:VAL:O    | 31:BH:131:VAL:HG12 | 2.12                     | 0.48              |
| 33:BL:51:ALA:HA    | 33:BL:80:LYS:HG3   | 1.95                     | 0.48              |
| 33:BL:54:PRO:HG3   | 33:BL:73:PRO:HD3   | 1.94                     | 0.48              |
| 34:BM:33:LEU:HD13  | 34:BM:34:LEU:CG    | 2.35                     | 0.48              |
| 34:BM:42:TRP:CZ3   | 41:BT:71:GLN:NE2   | 2.82                     | 0.48              |
| 35:BN:31:LYS:C     | 35:BN:32:TYR:CD2   | 2.92                     | 0.48              |
| 35:BN:32:TYR:O     | 35:BN:34:THR:OG1   | 2.30                     | 0.48              |
| 35:BN:69:VAL:H     | 35:BN:104:ARG:HH22 | 1.58                     | 0.48              |
| 35:BN:88:ASN:C     | 35:BN:90:GLN:N     | 2.71                     | 0.48              |
| 37:BP:85:LYS:HG3   | 37:BP:88:GLY:H     | 1.77                     | 0.48              |
| 38:BQ:37:THR:O     | 38:BQ:38:VAL:C     | 2.55                     | 0.48              |
| 38:BQ:67:LEU:O     | 38:BQ:67:LEU:HD22  | 2.13                     | 0.48              |
| 39:BR:49:VAL:CG2   | 39:BR:50:SER:N     | 2.76                     | 0.48              |
| 39:BR:49:VAL:CG2   | 39:BR:76:LYS:HZ1   | 2.26                     | 0.48              |
| 39:BR:103:GLU:H    | 39:BR:103:GLU:CD   | 2.21                     | 0.48              |
| 41:BT:43:GLY:C     | 41:BT:45:TYR:N     | 2.68                     | 0.48              |
| 41:BT:58:ARG:HH11  | 41:BT:58:ARG:CG    | 2.25                     | 0.48              |
| 42:BU:15:GLU:OE1   | 42:BU:16:PRO:HD3   | 2.13                     | 0.48              |
| 42:BU:73:SER:C     | 42:BU:74:LYS:HD3   | 2.38                     | 0.48              |
| 42:BU:78:LYS:CA    | 42:BU:83:ARG:O     | 2.61                     | 0.48              |
| 43:BV:24:ILE:HG21  | 43:BV:36:LEU:HB2   | 1.95                     | 0.48              |
| 43:BV:25:ARG:HD3   | 43:BV:74:ALA:C     | 2.38                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 43:BV:36:LEU:HD21 | 43:BV:48:ALA:N    | 2.28                     | 0.48              |
| 44:BW:71:GLY:C    | 44:BW:72:LYS:HG3  | 2.38                     | 0.48              |
| 44:BW:73:ARG:HH11 | 44:BW:73:ARG:CB   | 2.12                     | 0.48              |
| 44:BW:73:ARG:NH1  | 44:BW:74:PRO:O    | 2.44                     | 0.48              |
| 46:BY:2:GLU:C     | 46:BY:3:TYR:CG    | 2.91                     | 0.48              |
| 46:BY:20:ARG:HH11 | 46:BY:20:ARG:CG   | 2.26                     | 0.48              |
| 46:BY:169:GLU:O   | 46:BY:170:THR:HB  | 2.13                     | 0.48              |
| 47:BZ:1:MET:O     | 47:BZ:2:ALA:CB    | 2.61                     | 0.48              |
| 47:BZ:14:ARG:HD3  | 47:BZ:14:ARG:N    | 2.29                     | 0.48              |
| 47:BZ:50:ASN:O    | 47:BZ:81:VAL:HG21 | 2.13                     | 0.48              |
| 48:B1:27:LEU:HD12 | 48:B1:27:LEU:H    | 1.78                     | 0.48              |
| 48:B1:36:ILE:C    | 48:B1:38:GLN:HG3  | 2.39                     | 0.48              |
| 49:B2:11:SER:N    | 49:B2:12:PRO:CD   | 2.76                     | 0.48              |
| 49:B2:23:LEU:HA   | 49:B2:26:LEU:CD2  | 2.43                     | 0.48              |
| 49:B2:38:GLU:O    | 49:B2:40:THR:N    | 2.47                     | 0.48              |
| 53:B6:22:MET:CA   | 53:B6:28:ARG:HG2  | 2.42                     | 0.48              |
| 53:B6:34:ARG:O    | 53:B6:35:ARG:C    | 2.56                     | 0.48              |
| 55:B8:7:VAL:HG21  | 55:B8:36:GLN:HE22 | 1.76                     | 0.48              |
| 1:AA:48:C:C5      | 1:AA:364:A:H2     | 2.32                     | 0.48              |
| 1:AA:68:G:C4'     | 1:AA:171:A:H1'    | 2.44                     | 0.48              |
| 1:AA:73:G:C6      | 1:AA:74:C:N4      | 2.82                     | 0.48              |
| 1:AA:160:A:O4'    | 1:AA:344:A:N7     | 2.47                     | 0.48              |
| 1:AA:294:U:H2'    | 1:AA:295:C:C6     | 2.48                     | 0.48              |
| 1:AA:432:A:C8     | 1:AA:432:A:C3'    | 2.97                     | 0.48              |
| 1:AA:446:G:H2'    | 1:AA:447:G:H8     | 1.79                     | 0.48              |
| 1:AA:529:G:C6     | 14:AO:49:ASN:ND2  | 2.81                     | 0.48              |
| 1:AA:580:U:O4     | 1:AA:761:G:O6     | 2.31                     | 0.48              |
| 1:AA:584:G:C2'    | 1:AA:585:G:O5'    | 2.62                     | 0.48              |
| 1:AA:666:G:H22    | 1:AA:741:G:H1'    | 1.78                     | 0.48              |
| 1:AA:683:G:H2'    | 1:AA:684:A:C8     | 2.48                     | 0.48              |
| 1:AA:842:C:H5'    | 1:AA:848:C:O2     | 2.13                     | 0.48              |
| 1:AA:866:C:H6     | 1:AA:867:G:C1'    | 2.27                     | 0.48              |
| 1:AA:872:A:C4     | 1:AA:874:G:N7     | 2.82                     | 0.48              |
| 1:AA:890:G:O2'    | 1:AA:891:U:O5'    | 2.31                     | 0.48              |
| 1:AA:997:U:OP2    | 1:AA:997:U:C6     | 2.66                     | 0.48              |
| 1:AA:1046:A:H2'   | 1:AA:1046:A:N3    | 2.29                     | 0.48              |
| 1:AA:1109:C:H2'   | 1:AA:1110:A:H8    | 1.78                     | 0.48              |
| 1:AA:1111:A:N1    | 5:AF:177:THR:HA   | 2.28                     | 0.48              |
| 1:AA:1132:C:H2'   | 1:AA:1133:G:C8    | 2.47                     | 0.48              |
| 1:AA:1150:U:C5'   | 1:AA:1280:A:C2    | 2.95                     | 0.48              |
| 1:AA:1155:G:H2'   | 1:AA:1156:G:H8    | 1.78                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:1240:U:H4'    | 1:AA:1241:G:OP2   | 2.12                     | 0.48              |
| 1:AA:1284:C:C6     | 1:AA:1285:A:N7    | 2.81                     | 0.48              |
| 1:AA:1500:A:H2'    | 1:AA:1501:C:H6    | 1.79                     | 0.48              |
| 1:AA:1533:C:N4     | 2:A1:32:U:H3      | 2.12                     | 0.48              |
| 2:A1:37:U:H2'      | 2:A1:38:U:C4      | 2.48                     | 0.48              |
| 4:AE:78:GLN:NE2    | 4:AE:96:ARG:NH1   | 2.57                     | 0.48              |
| 4:AE:92:TYR:HE2    | 4:AE:151:GLY:C    | 2.22                     | 0.48              |
| 4:AE:118:LEU:O     | 4:AE:119:GLU:C    | 2.57                     | 0.48              |
| 4:AE:189:ASP:CB    | 4:AE:205:ASP:HB3  | 2.40                     | 0.48              |
| 5:AF:6:HIS:HA      | 5:AF:7:PRO:HD2    | 1.77                     | 0.48              |
| 5:AF:89:GLU:O      | 5:AF:90:GLU:C     | 2.56                     | 0.48              |
| 5:AF:91:LEU:O      | 5:AF:92:ALA:C     | 2.56                     | 0.48              |
| 5:AF:140:ARG:HB3   | 5:AF:140:ARG:HH11 | 1.75                     | 0.48              |
| 6:AG:62:GLN:HE21   | 6:AG:62:GLN:CA    | 2.26                     | 0.48              |
| 6:AG:64:LEU:O      | 6:AG:67:ILE:HG13  | 2.14                     | 0.48              |
| 6:AG:70:ILE:CD1    | 6:AG:100:ARG:HH21 | 2.18                     | 0.48              |
| 6:AG:118:ARG:HA    | 6:AG:136:PRO:HB3  | 1.95                     | 0.48              |
| 6:AG:120:LEU:CG    | 6:AG:121:VAL:N    | 2.77                     | 0.48              |
| 8:AI:41:GLU:N      | 8:AI:63:TYR:CD1   | 2.81                     | 0.48              |
| 9:AJ:65:ALA:HA     | 9:AJ:128:ALA:N    | 2.28                     | 0.48              |
| 10:AK:36:LEU:HD12  | 10:AK:48:TYR:CD1  | 2.48                     | 0.48              |
| 10:AK:62:TYR:C     | 10:AK:63:LEU:O    | 2.56                     | 0.48              |
| 11:AL:2:GLU:O      | 11:AL:21:PRO:HD2  | 2.13                     | 0.48              |
| 11:AL:42:ARG:O     | 11:AL:43:ALA:C    | 2.53                     | 0.48              |
| 11:AL:79:LEU:HD22  | 11:AL:101:PHE:CD2 | 2.47                     | 0.48              |
| 12:AM:31:GLY:CA    | 12:AM:81:THR:OG1  | 2.62                     | 0.48              |
| 15:AP:24:GLY:CA    | 15:AP:66:LEU:HB2  | 2.19                     | 0.48              |
| 15:AP:29:ARG:HH11  | 15:AP:66:LEU:HD22 | 1.79                     | 0.48              |
| 22:AW:36:LEU:HA    | 22:AW:36:LEU:HD23 | 1.47                     | 0.48              |
| 22:AW:59:ALA:O     | 22:AW:61:SER:N    | 2.46                     | 0.48              |
| 22:AW:84:LEU:C     | 22:AW:84:LEU:HD13 | 2.39                     | 0.48              |
| 22:AW:85:MET:HB2   | 22:AW:104:LEU:CD2 | 2.35                     | 0.48              |
| 24:BA:30:G:OP1     | 41:BT:8:VAL:CG1   | 2.61                     | 0.48              |
| 24:BA:35:G:H21     | 24:BA:450:G:H21   | 1.58                     | 0.48              |
| 24:BA:151:C:N4     | 24:BA:175:G:O6    | 2.43                     | 0.48              |
| 24:BA:179:G:C5'    | 53:B6:32:LYS:HZ3  | 2.22                     | 0.48              |
| 24:BA:270(G):C:H2' | 24:BA:270(H):C:C5 | 2.48                     | 0.48              |
| 24:BA:458:G:H5''   | 53:B6:39:ARG:NE   | 2.29                     | 0.48              |
| 24:BA:583:G:H2'    | 24:BA:584:C:O5'   | 2.14                     | 0.48              |
| 24:BA:624:C:C3'    | 24:BA:624:C:H6    | 2.22                     | 0.48              |
| 24:BA:805:G:N7     | 24:BA:2068:U:OP1  | 2.47                     | 0.48              |

*Continued on next page...*

Continued from previous page...

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:852:G:C5     | 24:BA:926:A:C2     | 3.02                     | 0.48              |
| 24:BA:864:G:C2'    | 24:BA:865:C:H1'    | 2.43                     | 0.48              |
| 24:BA:936:C:C2     | 24:BA:937:U:C5     | 3.02                     | 0.48              |
| 24:BA:957:A:N1     | 24:BA:2459:A:C5'   | 2.77                     | 0.48              |
| 24:BA:1025:G:H8    | 24:BA:1134:G:H1'   | 1.78                     | 0.48              |
| 24:BA:1058:G:C2'   | 33:BL:116:ASN:HB3  | 2.44                     | 0.48              |
| 24:BA:1137:G:O2'   | 34:BM:102:ALA:HA   | 2.13                     | 0.48              |
| 24:BA:1143:A:C2    | 24:BA:1144:G:C4    | 3.01                     | 0.48              |
| 24:BA:1144:G:O2'   | 24:BA:1145:C:H5'   | 2.13                     | 0.48              |
| 24:BA:1188:U:H2'   | 24:BA:1189:A:C5'   | 2.43                     | 0.48              |
| 24:BA:1221:C:C2    | 24:BA:1229:G:C2    | 3.02                     | 0.48              |
| 24:BA:1267:U:C6    | 24:BA:1267:U:C3'   | 2.97                     | 0.48              |
| 24:BA:1296:G:O2'   | 24:BA:1297:C:O5'   | 2.30                     | 0.48              |
| 24:BA:1413:G:N2    | 24:BA:1590:U:H1'   | 2.29                     | 0.48              |
| 24:BA:1426:G:N3    | 24:BA:1573:G:N2    | 2.61                     | 0.48              |
| 24:BA:1524:G:C4    | 24:BA:1525:G:N7    | 2.82                     | 0.48              |
| 24:BA:1558:A:H1'   | 24:BA:1559:G:O6    | 2.13                     | 0.48              |
| 24:BA:1575:C:C4    | 24:BA:1576:U:C4    | 3.02                     | 0.48              |
| 24:BA:1650:G:HO2'  | 24:BA:1651:G:P     | 2.33                     | 0.48              |
| 24:BA:1651:G:H5''  | 24:BA:1652:A:OP1   | 2.13                     | 0.48              |
| 24:BA:1735:C:C2    | 24:BA:1741:C:C5    | 3.00                     | 0.48              |
| 24:BA:1791:A:C3'   | 24:BA:1792:G:H8    | 2.15                     | 0.48              |
| 24:BA:1869:G:O2'   | 24:BA:1871:A:N7    | 2.36                     | 0.48              |
| 24:BA:2056:G:O5'   | 24:BA:2057:A:P     | 2.71                     | 0.48              |
| 24:BA:2126:A:O2'   | 24:BA:2127:G:P     | 2.72                     | 0.48              |
| 24:BA:2350:C:C2'   | 24:BA:2351:G:O5'   | 2.61                     | 0.48              |
| 24:BA:2469:A:H2'   | 24:BA:2470:G:H5'   | 1.95                     | 0.48              |
| 24:BA:2497:A:O2'   | 24:BA:2498:C:C5    | 2.61                     | 0.48              |
| 24:BA:2607:G:C6    | 24:BA:2608:G:C2    | 3.01                     | 0.48              |
| 24:BA:2773:C:H5''  | 28:BE:165:VAL:HG13 | 1.95                     | 0.48              |
| 25:BB:40:U:H3'     | 25:BB:41:U:H5'     | 1.96                     | 0.48              |
| 25:BB:42:C:H2'     | 25:BB:43:C:C6      | 2.48                     | 0.48              |
| 25:BB:61:G:C4      | 25:BB:62:C:C5      | 3.02                     | 0.48              |
| 25:BB:71:C:O2      | 25:BB:72:G:H4'     | 2.13                     | 0.48              |
| 25:BB:105:G:H4'    | 46:BY:32:HIS:ND1   | 2.29                     | 0.48              |
| 26:BC:74:VAL:CG1   | 26:BC:114:VAL:HG22 | 2.43                     | 0.48              |
| 27:BD:92:ILE:CD1   | 27:BD:104:TYR:CD1  | 2.96                     | 0.48              |
| 27:BD:157:ARG:HH11 | 27:BD:178:PRO:CD   | 2.26                     | 0.48              |
| 29:BF:23:ASP:O     | 29:BF:24:LEU:HD23  | 2.13                     | 0.48              |
| 29:BF:40:GLN:O     | 29:BF:41:LEU:C     | 2.55                     | 0.48              |
| 29:BF:163:VAL:HG21 | 29:BF:195:ASP:OD2  | 2.14                     | 0.48              |

Continued on next page...

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 29:BF:169:ASN:ND2 | 29:BF:171:PRO:O    | 2.47                     | 0.48              |
| 30:BG:19:LEU:N    | 30:BG:19:LEU:CD1   | 2.76                     | 0.48              |
| 31:BH:74:ASN:HB2  | 31:BH:138:LYS:HZ3  | 1.75                     | 0.48              |
| 32:BK:111:PRO:O   | 32:BK:112:LYS:C    | 2.56                     | 0.48              |
| 33:BL:10:LEU:CD2  | 33:BL:27:LEU:HD21  | 2.43                     | 0.48              |
| 33:BL:19:PRO:O    | 33:BL:20:ALA:C     | 2.56                     | 0.48              |
| 33:BL:68:VAL:HG21 | 33:BL:70:LYS:NZ    | 2.28                     | 0.48              |
| 34:BM:126:PRO:C   | 34:BM:127:ASP:OD2  | 2.57                     | 0.48              |
| 35:BN:62:VAL:C    | 35:BN:63:VAL:HG22  | 2.35                     | 0.48              |
| 35:BN:64:ARG:NH2  | 35:BN:78:ARG:NH1   | 2.61                     | 0.48              |
| 35:BN:105:GLU:O   | 35:BN:106:LEU:C    | 2.56                     | 0.48              |
| 37:BP:22:LYS:HA   | 37:BP:99:PRO:HD3   | 1.96                     | 0.48              |
| 38:BQ:10:LEU:CB   | 38:BQ:17:ARG:NH1   | 2.76                     | 0.48              |
| 38:BQ:51:LEU:HD23 | 38:BQ:70:LEU:HD11  | 1.92                     | 0.48              |
| 38:BQ:54:LEU:O    | 38:BQ:55:ALA:C     | 2.56                     | 0.48              |
| 38:BQ:96:ARG:NE   | 38:BQ:117:VAL:HG23 | 2.28                     | 0.48              |
| 38:BQ:99:LYS:HA   | 38:BQ:112:ALA:CB   | 2.39                     | 0.48              |
| 39:BR:5:THR:HG22  | 39:BR:6:ALA:N      | 2.29                     | 0.48              |
| 39:BR:19:LYS:HD3  | 39:BR:20:ARG:N     | 2.29                     | 0.48              |
| 39:BR:58:LEU:C    | 39:BR:60:GLY:H     | 2.20                     | 0.48              |
| 40:BS:33:LYS:CA   | 40:BS:46:GLU:O     | 2.35                     | 0.48              |
| 40:BS:85:LYS:HZ2  | 40:BS:85:LYS:CB    | 2.24                     | 0.48              |
| 40:BS:85:LYS:NZ   | 40:BS:85:LYS:N     | 2.57                     | 0.48              |
| 41:BT:61:TRP:H    | 41:BT:61:TRP:CD1   | 2.32                     | 0.48              |
| 41:BT:98:LEU:C    | 41:BT:100:VAL:N    | 2.70                     | 0.48              |
| 42:BU:22:VAL:O    | 42:BU:93:GLU:OE1   | 2.31                     | 0.48              |
| 43:BV:65:LEU:O    | 43:BV:66:GLU:C     | 2.56                     | 0.48              |
| 45:BX:53:PRO:HG2  | 45:BX:55:TYR:O     | 2.12                     | 0.48              |
| 45:BX:84:ARG:HG2  | 45:BX:85:VAL:N     | 2.29                     | 0.48              |
| 46:BY:127:LYS:CA  | 46:BY:164:ALA:HB3  | 2.41                     | 0.48              |
| 46:BY:158:PRO:CB  | 46:BY:159:PRO:CD   | 2.89                     | 0.48              |
| 47:BZ:25:ARG:HD2  | 47:BZ:29:GLN:HE22  | 1.79                     | 0.48              |
| 47:BZ:44:ARG:O    | 47:BZ:77:ARG:HG3   | 2.13                     | 0.48              |
| 49:B2:28:LEU:HA   | 49:B2:33:GLN:OE1   | 2.13                     | 0.48              |
| 51:B4:13:LYS:O    | 51:B4:16:ARG:N     | 2.47                     | 0.48              |
| 52:B5:16:CYS:O    | 52:B5:18:ARG:N     | 2.46                     | 0.48              |
| 54:B7:52:LYS:O    | 54:B7:56:GLU:OE1   | 2.31                     | 0.48              |
| 55:B8:9:ARG:O     | 55:B8:10:ILE:HG23  | 2.14                     | 0.48              |
| 1:AA:22:G:O4'     | 1:AA:885:G:H1'     | 2.14                     | 0.48              |
| 1:AA:166:G:H2'    | 1:AA:167:G:O5'     | 2.13                     | 0.48              |
| 1:AA:246:A:HO2'   | 1:AA:247:G:C1'     | 2.17                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 1:AA:251:G:C5'   | 1:AA:252:U:OP1     | 2.61                     | 0.48              |
| 1:AA:323:U:H5    | 1:AA:324:G:N9      | 2.11                     | 0.48              |
| 1:AA:363:A:C8    | 14:AO:30:ALA:HB1   | 2.48                     | 0.48              |
| 1:AA:375:U:C2'   | 1:AA:376:G:H5'     | 2.43                     | 0.48              |
| 1:AA:430:A:C5    | 1:AA:431:A:C8      | 3.01                     | 0.48              |
| 1:AA:621:A:H2'   | 1:AA:622:A:H8      | 1.77                     | 0.48              |
| 1:AA:643:C:N3    | 1:AA:644:G:N7      | 2.60                     | 0.48              |
| 1:AA:666:G:N1    | 1:AA:741:G:C4      | 2.82                     | 0.48              |
| 1:AA:705:U:C4    | 1:AA:706:A:N7      | 2.81                     | 0.48              |
| 1:AA:739:C:C2'   | 1:AA:740:U:H5'     | 2.43                     | 0.48              |
| 1:AA:786:G:N2    | 1:AA:787:A:H1'     | 2.28                     | 0.48              |
| 1:AA:824:C:C1'   | 10:AK:1:MET:N      | 2.77                     | 0.48              |
| 1:AA:832:C:N3    | 1:AA:833:U:C4      | 2.82                     | 0.48              |
| 1:AA:934:C:N4    | 1:AA:1344:C:C2     | 2.78                     | 0.48              |
| 1:AA:950:U:H3'   | 15:AP:102:ARG:HH22 | 1.77                     | 0.48              |
| 1:AA:1179:A:O3'  | 11:AL:103:THR:OG1  | 2.32                     | 0.48              |
| 1:AA:1317:C:H41  | 16:AQ:18:VAL:HG11  | 1.78                     | 0.48              |
| 1:AA:1321:C:C5   | 1:AA:1322:C:C3'    | 2.97                     | 0.48              |
| 1:AA:1327:C:H5'' | 23:AX:20:LYS:NZ    | 2.28                     | 0.48              |
| 1:AA:1347:G:H4'  | 1:AA:1348:U:C5'    | 2.42                     | 0.48              |
| 1:AA:1410:G:C2   | 1:AA:1411:C:C4     | 3.01                     | 0.48              |
| 1:AA:1493:A:C6   | 3:AB:37:A:H5'      | 2.49                     | 0.48              |
| 2:A1:31:U:N3     | 2:A1:32:U:C4       | 2.81                     | 0.48              |
| 3:AC:72:C:C4     | 3:AC:73:A:N6       | 2.82                     | 0.48              |
| 5:AF:58:GLU:HB2  | 5:AF:65:ALA:CB     | 2.44                     | 0.48              |
| 5:AF:66:VAL:HB   | 5:AF:99:VAL:HG21   | 1.95                     | 0.48              |
| 6:AG:59:ARG:HB3  | 6:AG:63:LYS:NZ     | 2.29                     | 0.48              |
| 6:AG:159:ARG:HD2 | 6:AG:163:GLU:OE2   | 2.12                     | 0.48              |
| 6:AG:187:ARG:HG3 | 6:AG:188:LEU:N     | 2.28                     | 0.48              |
| 7:AH:91:LEU:HA   | 7:AH:119:LEU:O     | 2.14                     | 0.48              |
| 7:AH:153:LYS:HG2 | 7:AH:154:GLY:N     | 2.25                     | 0.48              |
| 9:AJ:27:ILE:HG12 | 9:AJ:43:PHE:CG     | 2.48                     | 0.48              |
| 9:AJ:37:ASN:O    | 9:AJ:39:ALA:N      | 2.47                     | 0.48              |
| 9:AJ:57:GLU:HB3  | 9:AJ:58:PRO:HD2    | 1.95                     | 0.48              |
| 9:AJ:78:ARG:C    | 9:AJ:84:ASN:HA     | 2.25                     | 0.48              |
| 10:AK:21:LYS:O   | 10:AK:63:LEU:HD13  | 2.13                     | 0.48              |
| 10:AK:24:THR:H   | 10:AK:60:ARG:CD    | 2.26                     | 0.48              |
| 11:AL:5:TYR:OH   | 11:AL:16:ARG:HG3   | 2.14                     | 0.48              |
| 11:AL:75:ASP:O   | 11:AL:78:LYS:HB3   | 2.13                     | 0.48              |
| 12:AM:76:ASN:C   | 12:AM:78:ASN:N     | 2.69                     | 0.48              |
| 13:AN:58:PRO:HB3 | 13:AN:90:GLY:HA2   | 1.93                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 14:AO:86:ARG:HH22  | 14:AO:119:LYS:CD   | 2.26                     | 0.48              |
| 16:AQ:3:ARG:O      | 16:AQ:3:ARG:HG3    | 2.13                     | 0.48              |
| 16:AQ:22:THR:HG22  | 16:AQ:33:VAL:HG23  | 1.94                     | 0.48              |
| 19:AT:27:PHE:HB2   | 19:AT:28:PRO:HD2   | 1.95                     | 0.48              |
| 21:AV:16:LEU:O     | 21:AV:17:GLU:C     | 2.55                     | 0.48              |
| 21:AV:30:LEU:HA    | 21:AV:48:THR:C     | 2.38                     | 0.48              |
| 21:AV:30:LEU:HA    | 21:AV:48:THR:O     | 2.14                     | 0.48              |
| 24:BA:30:G:C2'     | 24:BA:31:C:O4'     | 2.54                     | 0.48              |
| 24:BA:225:A:N3     | 24:BA:225:A:H2'    | 2.29                     | 0.48              |
| 24:BA:228:A:C2'    | 24:BA:229:A:H5'    | 2.36                     | 0.48              |
| 24:BA:247:G:N1     | 54:B7:8:LYS:HD2    | 2.28                     | 0.48              |
| 24:BA:270(M):U:C3' | 24:BA:270(N):G:H4' | 2.44                     | 0.48              |
| 24:BA:270(W):G:N7  | 24:BA:270(X):G:N7  | 2.61                     | 0.48              |
| 24:BA:287:C:C2'    | 24:BA:288:C:H5     | 2.15                     | 0.48              |
| 24:BA:322:A:H5'    | 24:BA:341:G:H5'    | 1.93                     | 0.48              |
| 24:BA:332:A:O2'    | 24:BA:333:G:O5'    | 2.31                     | 0.48              |
| 24:BA:371:A:C2     | 24:BA:372:G:C6     | 3.02                     | 0.48              |
| 24:BA:388:G:OP2    | 50:B3:23:GLU:OE2   | 2.31                     | 0.48              |
| 24:BA:462:C:C4     | 24:BA:468:G:N2     | 2.82                     | 0.48              |
| 24:BA:519:U:H5''   | 43:BV:75:TYR:HB2   | 1.96                     | 0.48              |
| 24:BA:645:C:H4'    | 24:BA:646:A:C8     | 2.49                     | 0.48              |
| 24:BA:689:A:C2'    | 24:BA:690:G:O5'    | 2.62                     | 0.48              |
| 24:BA:697:C:C3'    | 24:BA:698:C:H5''   | 2.43                     | 0.48              |
| 24:BA:724:U:H2'    | 24:BA:725:G:O4'    | 2.13                     | 0.48              |
| 24:BA:733:G:N7     | 24:BA:761:A:N6     | 2.61                     | 0.48              |
| 24:BA:740:U:O4'    | 24:BA:1784:A:C6    | 2.67                     | 0.48              |
| 24:BA:814:C:H2'    | 24:BA:815:C:H6     | 1.78                     | 0.48              |
| 24:BA:856:C:C1'    | 47:BZ:69:PHE:CD1   | 2.96                     | 0.48              |
| 24:BA:942:G:C5'    | 36:BO:32:THR:CG2   | 2.91                     | 0.48              |
| 24:BA:1051:G:H5''  | 24:BA:1052:C:OP2   | 2.13                     | 0.48              |
| 24:BA:1058:G:N3    | 33:BL:116:ASN:ND2  | 2.61                     | 0.48              |
| 24:BA:1181:C:N4    | 24:BA:1182:A:N6    | 2.62                     | 0.48              |
| 24:BA:1265:A:C1'   | 24:BA:1267:U:N3    | 2.77                     | 0.48              |
| 24:BA:1391:U:O2    | 24:BA:1391:U:C2'   | 2.61                     | 0.48              |
| 24:BA:1428:C:O2'   | 24:BA:1429:G:P     | 2.72                     | 0.48              |
| 24:BA:1511:A:H3'   | 24:BA:1512:G:H5''  | 1.95                     | 0.48              |
| 24:BA:1540:G:H3'   | 24:BA:1541:U:O4'   | 2.12                     | 0.48              |
| 24:BA:1588:C:C2'   | 24:BA:1589:C:O5'   | 2.62                     | 0.48              |
| 24:BA:1709:U:C5'   | 24:BA:1709:U:H6    | 2.25                     | 0.48              |
| 24:BA:1746:G:O2'   | 24:BA:1747:G:O4'   | 2.22                     | 0.48              |
| 24:BA:1782:C:O5'   | 24:BA:1783:A:OP2   | 2.32                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1837:C:C4    | 24:BA:1899:G:O6   | 2.67                     | 0.48              |
| 24:BA:1954:G:C2'   | 24:BA:1956:U:O4   | 2.62                     | 0.48              |
| 24:BA:1996:C:C2'   | 24:BA:1997:G:H4'  | 2.38                     | 0.48              |
| 24:BA:2051:A:N3    | 24:BA:2614:A:N6   | 2.61                     | 0.48              |
| 24:BA:2057:A:N7    | 24:BA:2058:A:N7   | 2.62                     | 0.48              |
| 24:BA:2072:G:C6    | 24:BA:2073:C:C4   | 3.02                     | 0.48              |
| 24:BA:2286:A:N6    | 52:B5:32:ASN:HA   | 2.29                     | 0.48              |
| 24:BA:2306:C:N3    | 30:BG:42:GLY:O    | 2.46                     | 0.48              |
| 24:BA:2371:G:N2    | 24:BA:2372:G:C4   | 2.82                     | 0.48              |
| 24:BA:2423:U:C6    | 24:BA:2425:A:C5   | 3.02                     | 0.48              |
| 24:BA:2660:A:OP1   | 31:BH:175:LYS:HE3 | 2.13                     | 0.48              |
| 24:BA:2751:G:N3    | 24:BA:2751:G:C2'  | 2.76                     | 0.48              |
| 24:BA:2795:G:O5'   | 24:BA:2799:A:N1   | 2.46                     | 0.48              |
| 24:BA:2822:G:N7    | 38:BQ:4:LEU:CD2   | 2.77                     | 0.48              |
| 24:BA:2848:G:H8    | 40:BS:99:LEU:CD1  | 2.16                     | 0.48              |
| 24:BA:2872:G:C2    | 24:BA:2873:A:N6   | 2.82                     | 0.48              |
| 25:BB:2:C:OP2      | 25:BB:2:C:H6      | 1.97                     | 0.48              |
| 25:BB:99:A:N6      | 25:BB:100:G:C6    | 2.81                     | 0.48              |
| 26:BC:18:LYS:O     | 26:BC:20:TYR:CE1  | 2.66                     | 0.48              |
| 27:BD:149:PRO:C    | 27:BD:151:LYS:H   | 2.21                     | 0.48              |
| 27:BD:224:ALA:O    | 27:BD:226:MET:N   | 2.47                     | 0.48              |
| 27:BD:273:ARG:HD3  | 27:BD:273:ARG:N   | 2.28                     | 0.48              |
| 28:BE:47:VAL:C     | 28:BE:48:GLN:CD   | 2.82                     | 0.48              |
| 28:BE:55:ASN:HA    | 28:BE:73:GLU:OE2  | 2.13                     | 0.48              |
| 28:BE:129:HIS:CD2  | 28:BE:129:HIS:N   | 2.78                     | 0.48              |
| 28:BE:149:ARG:HH11 | 28:BE:151:TYR:CA  | 2.27                     | 0.48              |
| 29:BF:43:LYS:HE3   | 29:BF:98:SER:HB3  | 1.94                     | 0.48              |
| 29:BF:103:LYS:HA   | 29:BF:106:ARG:CD  | 2.42                     | 0.48              |
| 29:BF:182:ASN:ND2  | 29:BF:185:ASP:CG  | 2.67                     | 0.48              |
| 30:BG:16:ARG:HD2   | 30:BG:20:ILE:CD1  | 2.44                     | 0.48              |
| 31:BH:20:ALA:HB1   | 31:BH:21:PRO:CD   | 2.42                     | 0.48              |
| 31:BH:97:ARG:HB3   | 31:BH:97:ARG:CZ   | 2.44                     | 0.48              |
| 31:BH:148:ILE:CG2  | 31:BH:149:ARG:N   | 2.76                     | 0.48              |
| 32:BK:21:VAL:C     | 32:BK:26:ALA:HB2  | 2.39                     | 0.48              |
| 32:BK:69:LYS:HG3   | 32:BK:73:GLU:OE1  | 2.13                     | 0.48              |
| 34:BM:38:HIS:O     | 34:BM:42:TRP:CZ3  | 2.67                     | 0.48              |
| 34:BM:69:GLN:NE2   | 34:BM:69:GLN:N    | 2.61                     | 0.48              |
| 35:BN:122:LEU:HB2  | 40:BS:71:GLY:HA3  | 1.95                     | 0.48              |
| 35:BN:122:LEU:CA   | 40:BS:71:GLY:HA3  | 2.43                     | 0.48              |
| 37:BP:16:ARG:O     | 37:BP:17:LEU:HD12 | 2.13                     | 0.48              |
| 37:BP:99:PRO:O     | 37:BP:100:GLY:O   | 2.32                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 38:BQ:74:LYS:N    | 38:BQ:77:ARG:HH22 | 2.12                     | 0.48              |
| 39:BR:16:ASN:O    | 39:BR:17:ARG:C    | 2.57                     | 0.48              |
| 39:BR:43:GLU:O    | 39:BR:44:LYS:C    | 2.56                     | 0.48              |
| 41:BT:57:PHE:HD2  | 41:BT:61:TRP:HE1  | 1.62                     | 0.48              |
| 43:BV:25:ARG:HA   | 43:BV:71:VAL:HG21 | 1.95                     | 0.48              |
| 43:BV:28:SER:O    | 43:BV:31:GLU:OE1  | 2.32                     | 0.48              |
| 43:BV:49:LYS:O    | 43:BV:50:VAL:C    | 2.56                     | 0.48              |
| 45:BX:7:VAL:HG11  | 45:BX:72:VAL:H    | 1.78                     | 0.48              |
| 45:BX:9:LYS:HD2   | 45:BX:110:GLU:HG3 | 1.96                     | 0.48              |
| 45:BX:105:ALA:C   | 45:BX:107:ASP:H   | 2.20                     | 0.48              |
| 46:BY:40:ASP:O    | 46:BY:44:PHE:HD1  | 1.96                     | 0.48              |
| 46:BY:60:GLU:CG   | 46:BY:69:THR:HG22 | 2.44                     | 0.48              |
| 47:BZ:21:LEU:HD13 | 47:BZ:41:ARG:CG   | 2.39                     | 0.48              |
| 47:BZ:46:LYS:CG   | 47:BZ:78:TYR:CD2  | 2.96                     | 0.48              |
| 47:BZ:77:ARG:C    | 47:BZ:78:TYR:CD1  | 2.91                     | 0.48              |
| 48:B1:32:PHE:HB2  | 48:B1:33:GLN:HE22 | 1.78                     | 0.48              |
| 49:B2:32:GLN:CD   | 49:B2:32:GLN:N    | 2.72                     | 0.48              |
| 50:B3:6:HIS:NE2   | 50:B3:55:ARG:CD   | 2.62                     | 0.48              |
| 51:B4:4:HIS:CG    | 51:B4:5:PRO:CD    | 2.97                     | 0.48              |
| 51:B4:56:LYS:C    | 51:B4:57:VAL:HG13 | 2.38                     | 0.48              |
| 53:B6:46:VAL:O    | 53:B6:47:ARG:C    | 2.56                     | 0.48              |
| 1:AA:60:A:O2'     | 1:AA:61:G:P       | 2.71                     | 0.48              |
| 1:AA:76:G:H2'     | 1:AA:77:C:C6      | 2.48                     | 0.48              |
| 1:AA:173:U:C5'    | 1:AA:197:A:H1'    | 2.43                     | 0.48              |
| 1:AA:333:G:C4'    | 22:AW:16:HIS:HD2  | 2.25                     | 0.48              |
| 1:AA:439:A:H3'    | 1:AA:440:A:C8     | 2.45                     | 0.48              |
| 1:AA:873:A:H2'    | 1:AA:873:A:N3     | 2.28                     | 0.48              |
| 1:AA:878:G:O2'    | 1:AA:879:C:H5'    | 2.13                     | 0.48              |
| 1:AA:922:G:C2     | 1:AA:923:A:C4     | 3.02                     | 0.48              |
| 1:AA:947:G:H2'    | 1:AA:948:C:H6     | 1.78                     | 0.48              |
| 1:AA:972:C:P      | 12:AM:57:LYS:NZ   | 2.86                     | 0.48              |
| 1:AA:996:A:C2     | 1:AA:997:U:C4     | 3.02                     | 0.48              |
| 1:AA:1074:G:O2'   | 1:AA:1075:C:H5'   | 2.14                     | 0.48              |
| 1:AA:1080:A:N7    | 1:AA:1081:G:H1'   | 2.28                     | 0.48              |
| 1:AA:1100:C:H2'   | 4:AE:98:LEU:HD13  | 1.86                     | 0.48              |
| 1:AA:1127:G:O2'   | 1:AA:1148:U:N3    | 2.42                     | 0.48              |
| 1:AA:1158:C:O2    | 1:AA:1158:C:H2'   | 2.12                     | 0.48              |
| 1:AA:1288:A:H1'   | 1:AA:1352:C:O2'   | 2.14                     | 0.48              |
| 1:AA:1325:C:C2    | 1:AA:1326:C:C5    | 3.01                     | 0.48              |
| 1:AA:1358:U:H5''  | 1:AA:1359:C:OP2   | 2.13                     | 0.48              |
| 1:AA:1371:G:OP2   | 11:AL:11:LYS:CE   | 2.62                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1413:A:N6    | 1:AA:1488:G:N1     | 2.62                     | 0.48              |
| 2:A1:41:U:O2'     | 2:A1:42:U:H5'      | 2.14                     | 0.48              |
| 3:AC:19:G:C4      | 3:AC:57:G:N2       | 2.82                     | 0.48              |
| 3:AD:3:C:C2       | 3:AD:4:C:C5        | 3.01                     | 0.48              |
| 3:AB:31:A:C2'     | 3:AB:32:U:H5'      | 2.43                     | 0.48              |
| 4:AE:84:GLU:CD    | 4:AE:233:SER:HB3   | 2.38                     | 0.48              |
| 4:AE:112:VAL:CG1  | 4:AE:149:LEU:HD21  | 2.44                     | 0.48              |
| 5:AF:8:ILE:HG13   | 5:AF:16:ARG:HD2    | 1.95                     | 0.48              |
| 5:AF:40:ARG:C     | 5:AF:43:LEU:HB3    | 2.38                     | 0.48              |
| 6:AG:43:HIS:ND1   | 6:AG:46:LYS:HE3    | 2.29                     | 0.48              |
| 6:AG:104:VAL:HG23 | 6:AG:105:VAL:N     | 2.27                     | 0.48              |
| 6:AG:145:GLU:CG   | 6:AG:184:LYS:HE2   | 2.43                     | 0.48              |
| 9:AJ:102:ARG:O    | 9:AJ:105:VAL:N     | 2.47                     | 0.48              |
| 9:AJ:113:GLU:OE1  | 9:AJ:119:ARG:N     | 2.47                     | 0.48              |
| 9:AJ:149:ARG:O    | 9:AJ:152:ALA:N     | 2.46                     | 0.48              |
| 10:AK:9:MET:CG    | 10:AK:26:VAL:HG11  | 2.41                     | 0.48              |
| 10:AK:40:ALA:HB2  | 10:AK:45:ILE:HG23  | 1.96                     | 0.48              |
| 10:AK:41:ARG:HH11 | 10:AK:41:ARG:CB    | 2.27                     | 0.48              |
| 11:AL:9:ARG:HD2   | 11:AL:14:VAL:CG1   | 2.43                     | 0.48              |
| 12:AM:79:ARG:O    | 12:AM:81:THR:N     | 2.47                     | 0.48              |
| 13:AN:81:ASP:HA   | 13:AN:107:SER:O    | 2.14                     | 0.48              |
| 14:AO:8:ASN:HD22  | 14:AO:8:ASN:N      | 2.09                     | 0.48              |
| 14:AO:68:ALA:HB1  | 14:AO:99:HIS:CA    | 2.43                     | 0.48              |
| 15:AP:102:ARG:HG3 | 15:AP:104:ARG:HB3  | 1.96                     | 0.48              |
| 16:AQ:29:ARG:HB2  | 16:AQ:40:CYS:HB3   | 1.96                     | 0.48              |
| 16:AQ:51:GLY:C    | 16:AQ:53:LEU:N     | 2.62                     | 0.48              |
| 18:AS:19:ILE:HG13 | 18:AS:38:TYR:CA    | 2.40                     | 0.48              |
| 21:AV:22:LEU:HA   | 21:AV:25:LYS:HZ1   | 1.79                     | 0.48              |
| 22:AW:42:GLN:O    | 22:AW:45:GLN:N     | 2.47                     | 0.48              |
| 22:AW:54:LYS:N    | 22:AW:100:ILE:HD11 | 2.28                     | 0.48              |
| 24:BA:9:U:O2      | 24:BA:9:U:C2'      | 2.62                     | 0.48              |
| 24:BA:18:C:O5'    | 24:BA:18:C:C6      | 2.64                     | 0.48              |
| 24:BA:24:G:C6     | 24:BA:25:U:O4      | 2.67                     | 0.48              |
| 24:BA:35:G:O4'    | 24:BA:454:A:C1'    | 2.62                     | 0.48              |
| 24:BA:70:G:H4'    | 24:BA:71:A:H5'     | 1.89                     | 0.48              |
| 24:BA:189:G:N2    | 24:BA:206:U:H5     | 2.12                     | 0.48              |
| 24:BA:247:G:C4'   | 24:BA:386:G:C2     | 2.95                     | 0.48              |
| 24:BA:289:A:C5    | 24:BA:351:G:O6     | 2.65                     | 0.48              |
| 24:BA:318:C:C2    | 24:BA:334:C:N3     | 2.82                     | 0.48              |
| 24:BA:469:G:N1    | 53:B6:40:TRP:NE1   | 2.52                     | 0.48              |
| 24:BA:501:A:N7    | 24:BA:502:A:N6     | 2.61                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:514:A:C2'   | 24:BA:515:A:H5'    | 2.44                     | 0.48              |
| 24:BA:586:A:H61   | 24:BA:810:U:H5'    | 1.78                     | 0.48              |
| 24:BA:600:G:C1'   | 29:BF:105:VAL:HG21 | 2.43                     | 0.48              |
| 24:BA:717:G:N2    | 24:BA:718:A:H1'    | 2.27                     | 0.48              |
| 24:BA:733:G:C5    | 24:BA:761:A:C5     | 3.01                     | 0.48              |
| 24:BA:774:A:C1'   | 24:BA:775:G:C8     | 2.95                     | 0.48              |
| 24:BA:917:A:H2'   | 24:BA:918:A:C5'    | 2.37                     | 0.48              |
| 24:BA:955:C:H5''  | 37:BP:87:LYS:CD    | 2.44                     | 0.48              |
| 24:BA:979:G:C8    | 24:BA:981:A:OP2    | 2.66                     | 0.48              |
| 24:BA:1013:C:H2'  | 24:BA:1014:U:C6    | 2.49                     | 0.48              |
| 24:BA:1050:A:C8   | 24:BA:1051:G:H8    | 2.32                     | 0.48              |
| 24:BA:1225:C:C4   | 24:BA:1226:G:N1    | 2.82                     | 0.48              |
| 24:BA:1236:G:O2'  | 24:BA:1237:A:O4'   | 2.20                     | 0.48              |
| 24:BA:1266:G:C4   | 43:BV:15:ARG:NH1   | 2.82                     | 0.48              |
| 24:BA:1348:G:C2'  | 24:BA:1349:A:O5'   | 2.62                     | 0.48              |
| 24:BA:1633:G:C5   | 24:BA:1635:G:N1    | 2.81                     | 0.48              |
| 24:BA:1658:C:OP1  | 28:BE:134:ILE:CD1  | 2.57                     | 0.48              |
| 24:BA:1697:G:O6   | 24:BA:1698:A:N1    | 2.47                     | 0.48              |
| 24:BA:1761:C:H5'' | 24:BA:1762:A:C2    | 2.49                     | 0.48              |
| 24:BA:1778:U:H2'  | 24:BA:1779:U:C5    | 2.48                     | 0.48              |
| 24:BA:1819:A:H3'  | 27:BD:178:PRO:CB   | 2.29                     | 0.48              |
| 24:BA:1854:A:H1'  | 24:BA:2087:G:H21   | 1.77                     | 0.48              |
| 24:BA:2044:C:C4   | 24:BA:2625:G:C2    | 3.01                     | 0.48              |
| 24:BA:2048:G:C2'  | 24:BA:2049:G:O5'   | 2.61                     | 0.48              |
| 24:BA:2175:C:O2   | 24:BA:2175:C:H2'   | 2.12                     | 0.48              |
| 24:BA:2232:U:C2'  | 24:BA:2233:U:C5'   | 2.92                     | 0.48              |
| 24:BA:2307:G:OP2  | 24:BA:2307:G:O4'   | 2.31                     | 0.48              |
| 24:BA:2476:A:N7   | 24:BA:2477:C:C5    | 2.82                     | 0.48              |
| 24:BA:2497:A:C8   | 24:BA:2497:A:C3'   | 2.96                     | 0.48              |
| 24:BA:2527:C:H2'  | 24:BA:2528:U:H6    | 1.79                     | 0.48              |
| 24:BA:2528:U:C2   | 24:BA:2536:G:N2    | 2.82                     | 0.48              |
| 24:BA:2543:G:N2   | 24:BA:2765:A:N3    | 2.62                     | 0.48              |
| 24:BA:2640:G:C4   | 24:BA:2641:G:C8    | 3.01                     | 0.48              |
| 24:BA:2723:C:HO2' | 38:BQ:2:ARG:HA     | 1.78                     | 0.48              |
| 24:BA:2733:A:H2'  | 24:BA:2734:A:C4'   | 2.43                     | 0.48              |
| 24:BA:2745:C:C1'  | 31:BH:143:GLN:HG2  | 2.42                     | 0.48              |
| 24:BA:2805:G:C3'  | 24:BA:2807:G:C5'   | 2.84                     | 0.48              |
| 24:BA:2864:G:C2   | 24:BA:2865:U:C2    | 3.02                     | 0.48              |
| 25:BB:71:C:C2'    | 25:BB:72:G:C5'     | 2.64                     | 0.48              |
| 25:BB:75:G:N2     | 46:BY:87:ASP:OD1   | 2.46                     | 0.48              |
| 25:BB:85:G:C2     | 25:BB:86:G:C4      | 3.01                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 25:BB:100:G:H2'    | 25:BB:101:A:O4'    | 2.13                     | 0.48              |
| 26:BC:32:LEU:HD13  | 26:BC:220:PRO:HB2  | 1.95                     | 0.48              |
| 26:BC:127:LEU:HB3  | 26:BC:131:LEU:HD11 | 1.96                     | 0.48              |
| 27:BD:80:ALA:O     | 27:BD:81:ALA:CB    | 2.61                     | 0.48              |
| 27:BD:159:ALA:HB1  | 27:BD:198:ASN:O    | 2.14                     | 0.48              |
| 28:BE:4:ILE:O      | 28:BE:27:LEU:HD13  | 2.14                     | 0.48              |
| 28:BE:7:VAL:CG1    | 28:BE:196:VAL:HG23 | 2.32                     | 0.48              |
| 28:BE:8:LYS:CE     | 40:BS:3:ARG:HG3    | 2.44                     | 0.48              |
| 30:BG:1:MET:HB3    | 30:BG:2:PRO:HD2    | 1.95                     | 0.48              |
| 30:BG:36:LYS:HZ3   | 30:BG:38:VAL:HG22  | 1.79                     | 0.48              |
| 30:BG:38:VAL:C     | 30:BG:39:ILE:HD12  | 2.38                     | 0.48              |
| 30:BG:75:LYS:HA    | 30:BG:84:LYS:HG3   | 1.95                     | 0.48              |
| 30:BG:94:LEU:CD1   | 30:BG:94:LEU:N     | 2.76                     | 0.48              |
| 30:BG:102:PHE:HD2  | 30:BG:106:LEU:HD12 | 1.71                     | 0.48              |
| 30:BG:104:GLU:O    | 30:BG:105:LYS:C    | 2.56                     | 0.48              |
| 31:BH:13:LYS:CE    | 31:BH:80:SER:HA    | 2.41                     | 0.48              |
| 31:BH:23:ARG:HH21  | 31:BH:35:VAL:C     | 2.22                     | 0.48              |
| 31:BH:35:VAL:CG2   | 31:BH:75:ALA:CB    | 2.91                     | 0.48              |
| 32:BK:127:VAL:CA   | 32:BK:140:LEU:O    | 2.53                     | 0.48              |
| 33:BL:41:PHE:CE2   | 33:BL:55:VAL:HB    | 2.48                     | 0.48              |
| 34:BM:12:ARG:CD    | 34:BM:50:ASP:OD1   | 2.62                     | 0.48              |
| 34:BM:16:ILE:HG22  | 34:BM:21:LYS:HZ2   | 1.77                     | 0.48              |
| 34:BM:21:LYS:HD3   | 34:BM:26:LEU:HD22  | 1.96                     | 0.48              |
| 34:BM:30:ILE:HG22  | 34:BM:34:LEU:HD11  | 1.96                     | 0.48              |
| 35:BN:39:ILE:CD1   | 35:BN:59:LYS:HE3   | 2.44                     | 0.48              |
| 36:BO:101:VAL:HG23 | 36:BO:101:VAL:O    | 2.12                     | 0.48              |
| 37:BP:112:GLU:HA   | 37:BP:115:MET:HB2  | 1.95                     | 0.48              |
| 40:BS:30:VAL:CG2   | 40:BS:32:TYR:HE2   | 2.24                     | 0.48              |
| 40:BS:64:ARG:C     | 40:BS:65:LYS:O     | 2.56                     | 0.48              |
| 40:BS:67:SER:HA    | 40:BS:75:ILE:HG22  | 1.95                     | 0.48              |
| 40:BS:110:ILE:O    | 40:BS:111:ARG:C    | 2.57                     | 0.48              |
| 41:BT:8:VAL:N      | 41:BT:11:ARG:NH2   | 2.62                     | 0.48              |
| 41:BT:16:LYS:HG2   | 41:BT:17:ILE:N     | 2.26                     | 0.48              |
| 41:BT:47:TYR:O     | 41:BT:48:ALA:C     | 2.56                     | 0.48              |
| 41:BT:47:TYR:CE2   | 42:BU:75:PHE:HB3   | 2.48                     | 0.48              |
| 42:BU:5:VAL:CG1    | 42:BU:37:VAL:CG2   | 2.90                     | 0.48              |
| 42:BU:83:ARG:C     | 42:BU:84:LYS:HG3   | 2.39                     | 0.48              |
| 43:BV:25:ARG:CZ    | 43:BV:74:ALA:O     | 2.62                     | 0.48              |
| 46:BY:42:VAL:C     | 46:BY:46:LYS:NZ    | 2.71                     | 0.48              |
| 46:BY:50:GLN:O     | 46:BY:52:SER:N     | 2.32                     | 0.48              |
| 46:BY:80:ARG:HB2   | 46:BY:81:ARG:H     | 1.37                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 46:BY:127:LYS:CA  | 46:BY:164:ALA:H   | 2.23                     | 0.48              |
| 48:B1:33:GLN:O    | 48:B1:36:ILE:HG22 | 2.13                     | 0.48              |
| 48:B1:38:GLN:H    | 48:B1:41:GLN:HE21 | 1.51                     | 0.48              |
| 50:B3:65:ASP:HA   | 50:B3:68:ARG:HH12 | 1.77                     | 0.48              |
| 50:B3:69:LYS:O    | 50:B3:70:GLY:C    | 2.56                     | 0.48              |
| 51:B4:50:GLY:O    | 51:B4:57:VAL:HG22 | 2.14                     | 0.48              |
| 54:B7:29:LYS:C    | 54:B7:34:TRP:CZ2  | 2.91                     | 0.48              |
| 1:AA:49:U:O4      | 1:AA:362:G:N2     | 2.47                     | 0.48              |
| 1:AA:236:G:C3'    | 1:AA:237:C:C6     | 2.91                     | 0.48              |
| 1:AA:293:G:C4     | 1:AA:294:U:C5     | 3.02                     | 0.48              |
| 1:AA:440:A:N6     | 1:AA:494:U:C6     | 2.80                     | 0.48              |
| 1:AA:536:C:O5'    | 1:AA:536:C:H6     | 1.96                     | 0.48              |
| 1:AA:552:U:C2     | 1:AA:553:A:C8     | 3.02                     | 0.48              |
| 1:AA:601:C:O2'    | 1:AA:602:A:H5'    | 2.14                     | 0.48              |
| 1:AA:642:A:N3     | 10:AK:113:SER:OG  | 2.32                     | 0.48              |
| 1:AA:729:A:N6     | 17:AR:51:HIS:CD2  | 2.82                     | 0.48              |
| 1:AA:1049:U:H1'   | 1:AA:1201:A:H8    | 1.76                     | 0.48              |
| 1:AA:1052:U:OP2   | 1:AA:1200:C:O2    | 2.31                     | 0.48              |
| 1:AA:1129:C:C5'   | 1:AA:1130:A:OP1   | 2.51                     | 0.48              |
| 1:AA:1144:G:N2    | 1:AA:1146:A:N7    | 2.62                     | 0.48              |
| 1:AA:1145:C:O2'   | 1:AA:1146:A:O5'   | 2.32                     | 0.48              |
| 1:AA:1147:C:C2    | 1:AA:1148:U:C5    | 3.02                     | 0.48              |
| 1:AA:1178:G:N2    | 1:AA:1180:A:O5'   | 2.47                     | 0.48              |
| 1:AA:1261:A:H3'   | 1:AA:1262:C:C6    | 2.48                     | 0.48              |
| 1:AA:1261:A:H5'   | 1:AA:1284:C:OP1   | 2.14                     | 0.48              |
| 1:AA:1347:G:H22   | 1:AA:1373:G:H3'   | 1.77                     | 0.48              |
| 1:AA:1388:C:O2'   | 1:AA:1389:C:H5'   | 2.13                     | 0.48              |
| 1:AA:1413:A:N6    | 1:AA:1488:G:C5    | 2.80                     | 0.48              |
| 1:AA:1443:G:P     | 1:AA:1446:A:OP1   | 2.71                     | 0.48              |
| 1:AA:1480:G:H2'   | 1:AA:1481:U:C5'   | 2.43                     | 0.48              |
| 1:AA:1486:G:H2'   | 1:AA:1487:G:O4'   | 2.12                     | 0.48              |
| 3:AC:19:G:N2      | 3:AC:57:G:N3      | 2.62                     | 0.48              |
| 3:AD:19:G:H5'     | 3:AD:20:U:O4      | 2.13                     | 0.48              |
| 5:AF:29:TYR:CD1   | 16:AQ:36:PHE:HZ   | 2.32                     | 0.48              |
| 5:AF:110:ASN:ND2  | 5:AF:144:SER:OG   | 2.46                     | 0.48              |
| 5:AF:114:PRO:O    | 5:AF:117:ALA:HB3  | 2.14                     | 0.48              |
| 6:AG:101:LEU:O    | 6:AG:102:ASP:C    | 2.56                     | 0.48              |
| 6:AG:104:VAL:CG2  | 6:AG:105:VAL:N    | 2.76                     | 0.48              |
| 7:AH:40:ARG:CA    | 7:AH:68:GLU:OE1   | 2.61                     | 0.48              |
| 7:AH:103:GLY:C    | 7:AH:107:ARG:NH1  | 2.71                     | 0.48              |
| 7:AH:105:VAL:HG13 | 7:AH:132:ALA:HA   | 1.96                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 7:AH:121:LYS:CE  | 7:AH:122:GLU:N    | 2.77                     | 0.48              |
| 8:AI:7:ASN:HD21  | 8:AI:62:TRP:CD1   | 2.31                     | 0.48              |
| 8:AI:12:PRO:HG2  | 8:AI:13:ASN:ND2   | 2.28                     | 0.48              |
| 9:AJ:129:GLU:OE1 | 9:AJ:131:LYS:HD3  | 2.14                     | 0.48              |
| 9:AJ:139:GLU:CD  | 9:AJ:139:GLU:N    | 2.72                     | 0.48              |
| 10:AK:3:THR:HB   | 10:AK:4:ASP:OD1   | 2.14                     | 0.48              |
| 10:AK:5:PRO:O    | 10:AK:6:ILE:O     | 2.32                     | 0.48              |
| 10:AK:49:GLU:OE2 | 10:AK:51:VAL:HG23 | 2.14                     | 0.48              |
| 11:AL:10:ARG:NH2 | 11:AL:75:ASP:CG   | 2.72                     | 0.48              |
| 11:AL:82:ALA:CB  | 11:AL:101:PHE:CE1 | 2.97                     | 0.48              |
| 13:AN:60:ALA:O   | 13:AN:63:LEU:N    | 2.47                     | 0.48              |
| 14:AO:24:VAL:CG1 | 14:AO:26:ALA:H    | 2.26                     | 0.48              |
| 14:AO:32:PHE:C   | 14:AO:84:LEU:HD11 | 2.38                     | 0.48              |
| 14:AO:64:TYR:C   | 14:AO:65:GLU:CG   | 2.87                     | 0.48              |
| 14:AO:77:LEU:CD1 | 14:AO:107:ALA:HB2 | 2.39                     | 0.48              |
| 17:AR:62:GLN:HA  | 17:AR:65:ARG:HH12 | 1.77                     | 0.48              |
| 17:AR:77:ARG:C   | 17:AR:77:ARG:CZ   | 2.86                     | 0.48              |
| 19:AT:18:THR:O   | 19:AT:19:VAL:HG13 | 2.13                     | 0.48              |
| 21:AV:68:GLY:O   | 21:AV:69:HIS:ND1  | 2.46                     | 0.48              |
| 22:AW:30:LYS:HB2 | 22:AW:30:LYS:NZ   | 2.29                     | 0.48              |
| 22:AW:76:ALA:O   | 22:AW:77:ALA:C    | 2.56                     | 0.48              |
| 24:BA:3:U:H6     | 24:BA:3:U:O5'     | 1.96                     | 0.48              |
| 24:BA:49:A:N1    | 24:BA:120:U:O4    | 2.46                     | 0.48              |
| 24:BA:76:C:H4'   | 48:B1:54:ARG:NH2  | 2.27                     | 0.48              |
| 24:BA:171:G:N2   | 24:BA:172:C:N3    | 2.62                     | 0.48              |
| 24:BA:219:G:H2'  | 24:BA:220:G:O4'   | 2.14                     | 0.48              |
| 24:BA:230:U:C2'  | 24:BA:231:C:O4'   | 2.62                     | 0.48              |
| 24:BA:236:C:C2'  | 24:BA:237:C:O5'   | 2.62                     | 0.48              |
| 24:BA:270(C):C:P | 24:BA:365:C:HO2'  | 2.34                     | 0.48              |
| 24:BA:301:G:C2'  | 24:BA:302:C:C6    | 2.89                     | 0.48              |
| 24:BA:308:G:C2   | 24:BA:309:G:C1'   | 2.81                     | 0.48              |
| 24:BA:372:G:OP2  | 24:BA:373:U:OP2   | 2.31                     | 0.48              |
| 24:BA:443:A:OP1  | 29:BF:46:ARG:O    | 2.32                     | 0.48              |
| 24:BA:452:G:N1   | 24:BA:458:G:N3    | 2.57                     | 0.48              |
| 24:BA:531:C:C2'  | 24:BA:532:A:OP1   | 2.62                     | 0.48              |
| 24:BA:556:G:H2'  | 24:BA:557:U:O5'   | 2.12                     | 0.48              |
| 24:BA:597:U:C2   | 24:BA:598:G:N7    | 2.82                     | 0.48              |
| 24:BA:628:G:N1   | 24:BA:629:G:C6    | 2.81                     | 0.48              |
| 24:BA:637:A:C2   | 24:BA:651:G:O3'   | 2.67                     | 0.48              |
| 24:BA:649:G:O2'  | 54:B7:17:THR:HG21 | 2.14                     | 0.48              |
| 24:BA:753:C:OP1  | 53:B6:1:MET:HE1   | 2.13                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:892:G:H2'   | 24:BA:893:C:C6     | 2.48                     | 0.48              |
| 24:BA:919:G:H21   | 24:BA:2268:A:H5''  | 1.77                     | 0.48              |
| 24:BA:945:A:N3    | 24:BA:945:A:C2'    | 2.76                     | 0.48              |
| 24:BA:959:A:N6    | 24:BA:960:A:N6     | 2.61                     | 0.48              |
| 24:BA:972:G:OP1   | 24:BA:974(A):C:C3' | 2.61                     | 0.48              |
| 24:BA:988:A:H2    | 24:BA:989:G:N2     | 2.12                     | 0.48              |
| 24:BA:1002:G:H2'  | 24:BA:1003:G:O5'   | 2.13                     | 0.48              |
| 24:BA:1156:A:OP1  | 41:BT:55:ARG:NH2   | 2.45                     | 0.48              |
| 24:BA:1224:G:O6   | 24:BA:1225:C:N3    | 2.46                     | 0.48              |
| 24:BA:1255:U:O2   | 29:BF:72:ARG:HB3   | 2.14                     | 0.48              |
| 24:BA:1263:U:C5'  | 51:B4:10:LYS:HZ2   | 2.27                     | 0.48              |
| 24:BA:1264:G:H5'  | 51:B4:15:ARG:HH11  | 1.79                     | 0.48              |
| 24:BA:1277:G:C2'  | 24:BA:1278:A:H5'   | 2.43                     | 0.48              |
| 24:BA:1314:C:H2'  | 24:BA:1315:C:H5'   | 1.93                     | 0.48              |
| 24:BA:1342:A:H8   | 24:BA:1342:A:P     | 2.37                     | 0.48              |
| 24:BA:1364:G:H5'' | 24:BA:1809:A:N3    | 2.29                     | 0.48              |
| 24:BA:1488:G:C2'  | 24:BA:1489:U:C5'   | 2.77                     | 0.48              |
| 24:BA:1689:A:C6   | 24:BA:1700:A:C2    | 3.02                     | 0.48              |
| 24:BA:1746:G:C2'  | 24:BA:1747:G:O4'   | 2.61                     | 0.48              |
| 24:BA:1781:C:H2'  | 24:BA:1782:C:OP2   | 2.12                     | 0.48              |
| 24:BA:1890:A:H8   | 24:BA:1890:A:O5'   | 1.96                     | 0.48              |
| 24:BA:1901:A:O3'  | 27:BD:244:ARG:NH2  | 2.47                     | 0.48              |
| 24:BA:2021:C:N4   | 41:BT:28:ARG:HH12  | 2.12                     | 0.48              |
| 24:BA:2051:A:N1   | 24:BA:2614:A:C6    | 2.82                     | 0.48              |
| 24:BA:2126:A:C4'  | 24:BA:2127:G:O5'   | 2.62                     | 0.48              |
| 24:BA:2157:G:O2'  | 24:BA:2158:A:OP1   | 2.27                     | 0.48              |
| 24:BA:2255:G:C4   | 24:BA:2256:G:C8    | 3.01                     | 0.48              |
| 24:BA:2389:G:OP1  | 24:BA:2390:U:H5'   | 2.13                     | 0.48              |
| 24:BA:2456:C:C2'  | 24:BA:2457:U:H5'   | 2.44                     | 0.48              |
| 24:BA:2470:G:C2   | 24:BA:2471:C:C5    | 3.01                     | 0.48              |
| 24:BA:2551:C:H2'  | 24:BA:2552:U:O4'   | 2.14                     | 0.48              |
| 24:BA:2596:U:C2'  | 27:BD:242:ARG:NE   | 2.76                     | 0.48              |
| 24:BA:2604:U:H2'  | 24:BA:2605:U:C6    | 2.48                     | 0.48              |
| 24:BA:2718:G:C6   | 24:BA:2719:G:C6    | 3.01                     | 0.48              |
| 24:BA:2728:U:H2'  | 24:BA:2729:G:H8    | 1.79                     | 0.48              |
| 24:BA:2746:U:H5'  | 31:BH:138:LYS:O    | 2.14                     | 0.48              |
| 24:BA:2813:A:O2'  | 24:BA:2814:C:H5'   | 2.14                     | 0.48              |
| 24:BA:2854:G:C2   | 24:BA:2864:G:C5    | 3.02                     | 0.48              |
| 24:BA:2857:G:N1   | 24:BA:2861:G:C6    | 2.82                     | 0.48              |
| 25:BB:73:A:N7     | 25:BB:104:A:C5     | 2.82                     | 0.48              |
| 25:BB:85:G:C2     | 25:BB:86:G:C8      | 3.02                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:9:TYR:CE1    | 27:BD:25:THR:CG2   | 2.96                     | 0.48              |
| 27:BD:60:ARG:CB    | 27:BD:62:TYR:CE2   | 2.96                     | 0.48              |
| 27:BD:149:PRO:HG3  | 27:BD:189:CYS:SG   | 2.54                     | 0.48              |
| 27:BD:183:ARG:NE   | 27:BD:268:ARG:HD2  | 2.29                     | 0.48              |
| 28:BE:8:LYS:NZ     | 40:BS:3:ARG:CG     | 2.77                     | 0.48              |
| 28:BE:27:LEU:O     | 28:BE:28:ALA:C     | 2.56                     | 0.48              |
| 28:BE:48:GLN:NE2   | 28:BE:48:GLN:H     | 2.11                     | 0.48              |
| 28:BE:131:ALA:C    | 28:BE:133:LYS:H    | 2.22                     | 0.48              |
| 28:BE:148:GLY:C    | 28:BE:149:ARG:HG3  | 2.37                     | 0.48              |
| 29:BF:52:LYS:NZ    | 29:BF:88:VAL:HG21  | 2.28                     | 0.48              |
| 29:BF:156:LEU:N    | 29:BF:156:LEU:HD23 | 2.29                     | 0.48              |
| 30:BG:35:GLU:OE1   | 30:BG:36:LYS:HB3   | 2.14                     | 0.48              |
| 30:BG:36:LYS:HZ2   | 30:BG:160:VAL:HG23 | 1.78                     | 0.48              |
| 30:BG:103:LEU:CD2  | 30:BG:176:LEU:HD11 | 2.42                     | 0.48              |
| 30:BG:107:LEU:HD12 | 30:BG:111:LEU:HD22 | 1.94                     | 0.48              |
| 31:BH:33:LEU:HD23  | 31:BH:34:GLU:C     | 2.38                     | 0.48              |
| 31:BH:69:ARG:HB2   | 31:BH:69:ARG:NH2   | 2.27                     | 0.48              |
| 31:BH:137:ASP:O    | 31:BH:141:VAL:HG23 | 2.13                     | 0.48              |
| 32:BK:126:TYR:O    | 32:BK:142:VAL:HG23 | 2.14                     | 0.48              |
| 32:BK:130:TYR:O    | 32:BK:132:PRO:CD   | 2.57                     | 0.48              |
| 34:BM:18:ALA:O     | 34:BM:21:LYS:HB2   | 2.14                     | 0.48              |
| 34:BM:89:LYS:HG2   | 34:BM:90:MET:H     | 1.75                     | 0.48              |
| 34:BM:116:LEU:O    | 34:BM:117:PHE:C    | 2.56                     | 0.48              |
| 35:BN:106:LEU:CD1  | 35:BN:107:ARG:N    | 2.75                     | 0.48              |
| 35:BN:120:GLU:O    | 35:BN:121:VAL:C    | 2.56                     | 0.48              |
| 36:BO:76:LYS:HB3   | 36:BO:113:LYS:O    | 2.13                     | 0.48              |
| 36:BO:127:ALA:HB3  | 36:BO:130:PHE:CE2  | 2.48                     | 0.48              |
| 41:BT:88:ILE:O     | 42:BU:52:VAL:CA    | 2.58                     | 0.48              |
| 41:BT:108:GLU:O    | 41:BT:110:VAL:N    | 2.43                     | 0.48              |
| 42:BU:4:ILE:HD12   | 42:BU:4:ILE:H      | 1.77                     | 0.48              |
| 43:BV:6:ILE:HG12   | 43:BV:104:THR:CA   | 2.29                     | 0.48              |
| 43:BV:11:ARG:HB3   | 43:BV:11:ARG:CZ    | 2.43                     | 0.48              |
| 43:BV:98:LYS:NZ    | 43:BV:98:LYS:C     | 2.71                     | 0.48              |
| 44:BW:26:TYR:C     | 44:BW:28:PHE:CZ    | 2.92                     | 0.48              |
| 44:BW:48:LYS:C     | 44:BW:49:VAL:HG13  | 2.39                     | 0.48              |
| 46:BY:1:MET:HE3    | 46:BY:3:TYR:HD2    | 1.75                     | 0.48              |
| 46:BY:23:LYS:HG3   | 46:BY:39:VAL:C     | 2.39                     | 0.48              |
| 46:BY:30:ASN:HB2   | 46:BY:90:VAL:CG2   | 2.28                     | 0.48              |
| 46:BY:122:ARG:NH2  | 46:BY:169:GLU:OE1  | 2.47                     | 0.48              |
| 47:BZ:27:GLU:CB    | 47:BZ:69:PHE:CE1   | 2.97                     | 0.48              |
| 48:B1:65:GLN:CA    | 48:B1:65:GLN:NE2   | 2.77                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 49:B2:50:VAL:CG2  | 49:B2:53:LEU:HD12 | 2.44                     | 0.48              |
| 52:B5:16:CYS:O    | 52:B5:17:LYS:C    | 2.56                     | 0.48              |
| 53:B6:10:ARG:O    | 53:B6:11:LYS:C    | 2.57                     | 0.48              |
| 53:B6:12:ARG:O    | 53:B6:13:ALA:C    | 2.57                     | 0.48              |
| 54:B7:8:LYS:NZ    | 54:B7:11:LYS:NZ   | 2.61                     | 0.48              |
| 1:AA:87:A:N7      | 1:AA:88:C:C5      | 2.81                     | 0.48              |
| 1:AA:174:C:N3     | 1:AA:175:C:C5     | 2.82                     | 0.48              |
| 1:AA:225:C:O2     | 1:AA:226:G:O4'    | 2.32                     | 0.48              |
| 1:AA:294:U:H2'    | 1:AA:295:C:C5     | 2.49                     | 0.48              |
| 1:AA:383:A:H2'    | 1:AA:384:G:C4'    | 2.44                     | 0.48              |
| 1:AA:515:G:C2     | 1:AA:537:G:C2     | 3.02                     | 0.48              |
| 1:AA:533:A:H3'    | 1:AA:534:U:H5''   | 1.96                     | 0.48              |
| 1:AA:587:G:H1'    | 1:AA:755:G:C2     | 2.41                     | 0.48              |
| 1:AA:656:C:H2'    | 1:AA:657:G:C5'    | 2.44                     | 0.48              |
| 1:AA:658:G:C6     | 1:AA:749:C:N4     | 2.81                     | 0.48              |
| 1:AA:692:U:C2     | 1:AA:694:A:H3'    | 2.48                     | 0.48              |
| 1:AA:738:C:OP1    | 8:AI:4:TYR:OH     | 2.32                     | 0.48              |
| 1:AA:859:A:H2'    | 1:AA:860:A:C4'    | 2.44                     | 0.48              |
| 1:AA:982:U:H1'    | 1:AA:983:A:H62    | 1.78                     | 0.48              |
| 1:AA:1054:C:OP2   | 1:AA:1197:G:OP2   | 2.30                     | 0.48              |
| 1:AA:1065:U:O2'   | 1:AA:1066:C:P     | 2.71                     | 0.48              |
| 1:AA:1181:G:H2'   | 1:AA:1182:G:H5'   | 1.96                     | 0.48              |
| 1:AA:1193:G:O2'   | 1:AA:1194:U:H5'   | 2.13                     | 0.48              |
| 1:AA:1206:G:H2'   | 1:AA:1207:G:C8    | 2.49                     | 0.48              |
| 1:AA:1273:G:C3'   | 1:AA:1274:G:H8    | 2.26                     | 0.48              |
| 1:AA:1299:A:N7    | 1:AA:1301:U:N1    | 2.61                     | 0.48              |
| 1:AA:1323:G:C6    | 1:AA:1324:A:N6    | 2.82                     | 0.48              |
| 1:AA:1521:G:O2'   | 1:AA:1522:U:C5'   | 2.58                     | 0.48              |
| 2:A1:41:U:H2'     | 2:A1:42:U:H6      | 1.78                     | 0.48              |
| 3:AC:41:C:H2'     | 3:AC:42:C:O5'     | 2.13                     | 0.48              |
| 3:AC:67:C:C2      | 3:AC:68:C:C5      | 3.02                     | 0.48              |
| 3:AB:52:G:C6      | 3:AB:63:G:O6      | 2.67                     | 0.48              |
| 3:AB:74:C:N3      | 24:BA:2555:U:C2   | 2.80                     | 0.48              |
| 4:AE:28:PHE:HE1   | 4:AE:31:TYR:C     | 2.22                     | 0.48              |
| 4:AE:36:ARG:HE    | 4:AE:36:ARG:HA    | 1.79                     | 0.48              |
| 4:AE:59:GLU:HB2   | 4:AE:225:ALA:HB2  | 1.94                     | 0.48              |
| 5:AF:5:ILE:CG2    | 12:AM:51:ARG:HH22 | 2.27                     | 0.48              |
| 5:AF:64:VAL:O     | 5:AF:64:VAL:HG12  | 2.13                     | 0.48              |
| 5:AF:116:VAL:HG13 | 5:AF:119:ARG:HD3  | 1.96                     | 0.48              |
| 6:AG:75:PHE:HE1   | 6:AG:97:LEU:CD2   | 2.27                     | 0.48              |
| 6:AG:126:ILE:C    | 6:AG:149:ALA:HB2  | 2.39                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:AG:128:VAL:HB   | 6:AG:132:ARG:HA    | 1.95                     | 0.48              |
| 6:AG:205:GLU:OE1  | 7:AH:100:VAL:HB    | 2.14                     | 0.48              |
| 7:AH:51:VAL:O     | 7:AH:52:PRO:C      | 2.55                     | 0.48              |
| 7:AH:69:VAL:HG12  | 7:AH:76:ILE:HD11   | 1.96                     | 0.48              |
| 8:AI:30:LEU:HD23  | 8:AI:75:LEU:CD1    | 2.43                     | 0.48              |
| 8:AI:41:GLU:N     | 8:AI:63:TYR:HD1    | 2.11                     | 0.48              |
| 10:AK:17:THR:CB   | 10:AK:18:ARG:NH2   | 2.77                     | 0.48              |
| 10:AK:111:ILE:CD1 | 10:AK:136:GLU:HA   | 2.44                     | 0.48              |
| 10:AK:112:LEU:HG  | 10:AK:113:SER:N    | 2.28                     | 0.48              |
| 11:AL:37:PHE:O    | 11:AL:40:LEU:HB2   | 2.12                     | 0.48              |
| 12:AM:51:ARG:HB2  | 12:AM:59:SER:C     | 2.39                     | 0.48              |
| 13:AN:33:THR:HB   | 13:AN:38:ASN:O     | 2.14                     | 0.48              |
| 14:AO:11:VAL:HG22 | 19:AT:32:TYR:CD1   | 2.47                     | 0.48              |
| 15:AP:86:CYS:SG   | 15:AP:89:GLY:HA3   | 2.53                     | 0.48              |
| 16:AQ:48:ALA:O    | 16:AQ:51:GLY:N     | 2.46                     | 0.48              |
| 20:AU:66:LEU:CD1  | 20:AU:67:ALA:H     | 2.22                     | 0.48              |
| 20:AU:81:PHE:O    | 20:AU:82:THR:HB    | 2.14                     | 0.48              |
| 21:AV:51:VAL:CG2  | 21:AV:60:VAL:HG21  | 2.43                     | 0.48              |
| 24:BA:61:G:C2     | 24:BA:62:C:C2      | 3.02                     | 0.48              |
| 24:BA:249:C:H5    | 24:BA:2395:C:OP1   | 1.97                     | 0.48              |
| 24:BA:270(T):G:N3 | 24:BA:270(T):G:H2' | 2.29                     | 0.48              |
| 24:BA:276:A:H2'   | 24:BA:276:A:N3     | 2.28                     | 0.48              |
| 24:BA:299:A:HO2'  | 24:BA:319:C:C2'    | 2.21                     | 0.48              |
| 24:BA:322:A:C4'   | 24:BA:341:G:H5'    | 2.44                     | 0.48              |
| 24:BA:354:G:O2'   | 24:BA:355:G:C5'    | 2.60                     | 0.48              |
| 24:BA:383:U:C2    | 24:BA:385:C:C4     | 3.02                     | 0.48              |
| 24:BA:403:U:C5'   | 24:BA:404:C:OP1    | 2.62                     | 0.48              |
| 24:BA:466:A:N1    | 24:BA:795:C:O2'    | 2.46                     | 0.48              |
| 24:BA:468:G:C8    | 24:BA:469:G:C8     | 3.01                     | 0.48              |
| 24:BA:510:C:P     | 24:BA:512:G:N1     | 2.74                     | 0.48              |
| 24:BA:589:C:O2'   | 24:BA:590:A:H5'    | 2.13                     | 0.48              |
| 24:BA:606:U:OP2   | 24:BA:606:U:C5     | 2.67                     | 0.48              |
| 24:BA:673:C:C5'   | 29:BF:81:PRO:HG2   | 2.44                     | 0.48              |
| 24:BA:685:A:N3    | 24:BA:688:U:N3     | 2.62                     | 0.48              |
| 24:BA:702:G:C2    | 24:BA:731:C:C2     | 3.02                     | 0.48              |
| 24:BA:851:U:H1'   | 49:B2:46:ASN:HB2   | 1.96                     | 0.48              |
| 24:BA:879:G:C2    | 24:BA:880:G:C8     | 3.01                     | 0.48              |
| 24:BA:955:C:H5''  | 37:BP:87:LYS:HD2   | 1.95                     | 0.48              |
| 24:BA:980:A:N3    | 24:BA:2037:G:O2'   | 2.42                     | 0.48              |
| 24:BA:1027:A:C6   | 24:BA:1126:A:N3    | 2.81                     | 0.48              |
| 24:BA:1139:G:OP1  | 34:BM:23:LEU:HB2   | 2.13                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1244:G:C5'  | 36:BO:9:ASN:HB2    | 2.41                     | 0.48              |
| 24:BA:1247:A:O2'  | 24:BA:1248:G:O5'   | 2.30                     | 0.48              |
| 24:BA:1281:G:H2'  | 24:BA:1282:U:C5    | 2.46                     | 0.48              |
| 24:BA:1300:U:H2'  | 24:BA:1626:G:C2    | 2.47                     | 0.48              |
| 24:BA:1316:U:H2'  | 24:BA:1317:A:H8    | 1.78                     | 0.48              |
| 24:BA:1359:A:C4   | 24:BA:1373:A:C2    | 3.02                     | 0.48              |
| 24:BA:1394:U:H5'' | 24:BA:1603:A:O3'   | 2.13                     | 0.48              |
| 24:BA:1408:C:C2   | 24:BA:1409:C:C5    | 3.01                     | 0.48              |
| 24:BA:1456:G:N3   | 24:BA:1457:A:C8    | 2.81                     | 0.48              |
| 24:BA:1525:G:C2'  | 24:BA:1526:G:O5'   | 2.62                     | 0.48              |
| 24:BA:1544:C:C2'  | 24:BA:1545:A:O4'   | 2.62                     | 0.48              |
| 24:BA:1575:C:C4   | 24:BA:1576:U:N3    | 2.82                     | 0.48              |
| 24:BA:1612:C:H4'  | 53:B6:5:TRP:CD1    | 2.49                     | 0.48              |
| 24:BA:1784:A:HO2' | 24:BA:1785:A:H8    | 1.62                     | 0.48              |
| 24:BA:1818:U:C4   | 27:BD:156:ALA:HB2  | 2.49                     | 0.48              |
| 24:BA:1992:G:C2'  | 24:BA:1993:U:H5    | 2.27                     | 0.48              |
| 24:BA:2031:A:N6   | 24:BA:2498:C:H1'   | 2.25                     | 0.48              |
| 24:BA:2133:G:C6   | 24:BA:2157:G:H1'   | 2.49                     | 0.48              |
| 24:BA:2261:C:O5'  | 24:BA:2261:C:C6    | 2.67                     | 0.48              |
| 24:BA:2305:A:H1'  | 30:BG:155:MET:N    | 2.28                     | 0.48              |
| 24:BA:2320:A:C6   | 39:BR:4:LEU:HD13   | 2.48                     | 0.48              |
| 24:BA:2423:U:O2'  | 24:BA:2425:A:C3'   | 2.61                     | 0.48              |
| 24:BA:2707:G:H2'  | 24:BA:2708:G:O5'   | 2.13                     | 0.48              |
| 24:BA:2746:U:C4   | 24:BA:2756:U:C5    | 2.98                     | 0.48              |
| 24:BA:2827:C:H2'  | 24:BA:2828:C:C5'   | 2.43                     | 0.48              |
| 25:BB:48:A:OP1    | 39:BR:92:TYR:CG    | 2.66                     | 0.48              |
| 25:BB:100:G:C6    | 25:BB:101:A:N6     | 2.82                     | 0.48              |
| 26:BC:115:ALA:CB  | 26:BC:123:VAL:HG21 | 2.43                     | 0.48              |
| 26:BC:116:THR:C   | 26:BC:120:MET:HG2  | 2.38                     | 0.48              |
| 26:BC:132:GLY:C   | 26:BC:134:ARG:H    | 2.21                     | 0.48              |
| 27:BD:66:ASP:OD2  | 27:BD:103:ARG:NH1  | 2.45                     | 0.48              |
| 27:BD:123:ALA:HB3 | 27:BD:131:LEU:HD22 | 1.94                     | 0.48              |
| 27:BD:149:PRO:HD3 | 27:BD:186:HIS:CE1  | 2.49                     | 0.48              |
| 27:BD:251:GLY:HA2 | 27:BD:255:LYS:HZ2  | 1.77                     | 0.48              |
| 28:BE:7:VAL:O     | 28:BE:193:GLY:N    | 2.47                     | 0.48              |
| 28:BE:60:ASN:OD1  | 28:BE:61:ARG:N     | 2.47                     | 0.48              |
| 28:BE:69:LYS:O    | 28:BE:70:ALA:O     | 2.32                     | 0.48              |
| 29:BF:22:ALA:HB1  | 29:BF:115:ALA:CB   | 2.43                     | 0.48              |
| 29:BF:46:ARG:NE   | 29:BF:46:ARG:C     | 2.72                     | 0.48              |
| 29:BF:123:LEU:HB2 | 29:BF:193:VAL:HA   | 1.95                     | 0.48              |
| 29:BF:181:LEU:N   | 29:BF:181:LEU:CD1  | 2.76                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 30:BG:103:LEU:C   | 30:BG:103:LEU:HD12 | 2.38                     | 0.48              |
| 31:BH:11:VAL:HG11 | 31:BH:17:VAL:HG11  | 1.94                     | 0.48              |
| 31:BH:38:SER:CB   | 31:BH:41:MET:HG3   | 2.13                     | 0.48              |
| 31:BH:135:GLY:C   | 31:BH:136:ILE:HG22 | 2.39                     | 0.48              |
| 32:BK:24:GLY:O    | 32:BK:27:ARG:CB    | 2.62                     | 0.48              |
| 32:BK:50:ARG:HA   | 32:BK:53:ALA:CB    | 2.44                     | 0.48              |
| 32:BK:87:LYS:HB3  | 32:BK:121:LYS:HE3  | 1.95                     | 0.48              |
| 33:BL:79:ARG:HG2  | 33:BL:136:VAL:HG21 | 1.94                     | 0.48              |
| 34:BM:22:THR:CG2  | 34:BM:61:ARG:NH1   | 2.77                     | 0.48              |
| 34:BM:126:PRO:HB2 | 34:BM:127:ASP:OD2  | 2.13                     | 0.48              |
| 35:BN:6:THR:HA    | 35:BN:7:TYR:CE1    | 2.49                     | 0.48              |
| 35:BN:27:GLY:O    | 35:BN:28:SER:C     | 2.57                     | 0.48              |
| 35:BN:59:LYS:N    | 35:BN:59:LYS:CD    | 2.77                     | 0.48              |
| 35:BN:86:ILE:CG2  | 35:BN:90:GLN:HA    | 2.43                     | 0.48              |
| 36:BO:52:GLU:O    | 36:BO:53:GLY:C     | 2.57                     | 0.48              |
| 36:BO:85:LEU:C    | 36:BO:86:LYS:HG2   | 2.39                     | 0.48              |
| 36:BO:97:PRO:CA   | 36:BO:102:ARG:NE   | 2.75                     | 0.48              |
| 37:BP:130:LYS:CE  | 37:BP:131:ILE:N    | 2.74                     | 0.48              |
| 38:BQ:72:ASP:OD2  | 38:BQ:74:LYS:HB2   | 2.14                     | 0.48              |
| 38:BQ:88:ARG:O    | 38:BQ:89:ASP:HB3   | 2.13                     | 0.48              |
| 39:BR:56:LEU:HB3  | 39:BR:59:LYS:HZ2   | 1.78                     | 0.48              |
| 39:BR:73:LEU:HA   | 39:BR:76:LYS:CD    | 2.42                     | 0.48              |
| 39:BR:107:GLU:O   | 39:BR:108:GLY:C    | 2.56                     | 0.48              |
| 41:BT:72:HIS:CD2  | 41:BT:110:VAL:HG21 | 2.49                     | 0.48              |
| 42:BU:15:GLU:C    | 42:BU:100:ARG:CZ   | 2.87                     | 0.48              |
| 43:BV:13:SER:CB   | 43:BV:16:LYS:HE2   | 2.43                     | 0.48              |
| 45:BX:26:LYS:CE   | 45:BX:36:ALA:HB3   | 2.44                     | 0.48              |
| 46:BY:151:HIS:CD2 | 46:BY:170:THR:HA   | 2.48                     | 0.48              |
| 1:AA:47:C:C5      | 1:AA:365:U:H2'     | 2.49                     | 0.48              |
| 1:AA:102:G:C5     | 1:AA:103:C:C5      | 3.02                     | 0.48              |
| 1:AA:132:C:HO2'   | 1:AA:133:U:H6      | 1.61                     | 0.48              |
| 1:AA:137:C:H1'    | 18:AS:62:VAL:HA    | 1.96                     | 0.48              |
| 1:AA:279:A:H4'    | 1:AA:280:C:O5'     | 2.14                     | 0.48              |
| 1:AA:298:A:N6     | 1:AA:299:G:C2      | 2.82                     | 0.48              |
| 1:AA:355:C:H42    | 1:AA:356:A:N6      | 2.12                     | 0.48              |
| 1:AA:414:A:N7     | 1:AA:430:A:N6      | 2.62                     | 0.48              |
| 1:AA:439:A:C2     | 1:AA:496:A:H1'     | 2.49                     | 0.48              |
| 1:AA:511:C:O2'    | 1:AA:512:U:O5'     | 2.32                     | 0.48              |
| 1:AA:538:G:O2'    | 1:AA:539:A:H5'     | 2.14                     | 0.48              |
| 1:AA:682:G:C6     | 1:AA:709:G:C6      | 3.02                     | 0.48              |
| 1:AA:748:C:O2'    | 1:AA:749:C:H5'     | 2.14                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:754:C:H5'    | 1:AA:755:G:H8     | 1.69                     | 0.48              |
| 1:AA:769:G:O2'    | 1:AA:770:C:H5'    | 2.14                     | 0.48              |
| 1:AA:832:C:C4     | 1:AA:833:U:O4     | 2.66                     | 0.48              |
| 1:AA:922:G:H4'    | 7:AH:20:GLN:CA    | 2.27                     | 0.48              |
| 1:AA:1149:C:O2'   | 1:AA:1280:A:N1    | 2.43                     | 0.48              |
| 1:AA:1171:G:H2'   | 1:AA:1172:C:H6    | 1.78                     | 0.48              |
| 1:AA:1213:A:C5    | 1:AA:1215:G:C6    | 3.01                     | 0.48              |
| 1:AA:1326:C:H2'   | 1:AA:1327:C:C6    | 2.45                     | 0.48              |
| 1:AA:1329:A:H5'   | 15:AP:29:ARG:HE   | 1.72                     | 0.48              |
| 1:AA:1346:A:N6    | 1:AA:1375:A:OP2   | 2.40                     | 0.48              |
| 1:AA:1389:C:C2'   | 1:AA:1390:U:C5'   | 2.88                     | 0.48              |
| 1:AA:1431:C:N4    | 1:AA:1469:G:N1    | 2.56                     | 0.48              |
| 1:AA:1433:A:N1    | 1:AA:1434:A:C2    | 2.82                     | 0.48              |
| 1:AA:1476:G:C4    | 1:AA:1477:C:C5    | 3.02                     | 0.48              |
| 3:AC:3:C:O2'      | 3:AC:4:C:O5'      | 2.31                     | 0.48              |
| 3:AD:24:G:C6      | 3:AD:25:C:C4      | 3.02                     | 0.48              |
| 3:AB:71:G:H21     | 3:AB:72:C:H1'     | 1.76                     | 0.48              |
| 4:AE:76:GLN:O     | 4:AE:77:ALA:CB    | 2.62                     | 0.48              |
| 4:AE:81:VAL:HB    | 4:AE:94:ASN:OD1   | 2.14                     | 0.48              |
| 4:AE:187:LEU:HD23 | 4:AE:201:ILE:O    | 2.14                     | 0.48              |
| 5:AF:36:ASP:HA    | 5:AF:39:ILE:CD1   | 2.40                     | 0.48              |
| 5:AF:182:ILE:CD1  | 5:AF:203:PHE:CD1  | 2.97                     | 0.48              |
| 6:AG:200:GLU:HG3  | 6:AG:201:GLN:NE2  | 2.29                     | 0.48              |
| 7:AH:74:GLY:O     | 7:AH:115:VAL:CG1  | 2.60                     | 0.48              |
| 8:AI:94:GLN:C     | 8:AI:95:GLU:HG3   | 2.39                     | 0.48              |
| 10:AK:37:ARG:CD   | 10:AK:38:ILE:HD13 | 2.34                     | 0.48              |
| 10:AK:40:ALA:O    | 10:AK:41:ARG:C    | 2.57                     | 0.48              |
| 10:AK:122:ARG:O   | 10:AK:125:ARG:HB3 | 2.14                     | 0.48              |
| 11:AL:4:TYR:HB3   | 11:AL:87:GLN:HB2  | 1.95                     | 0.48              |
| 11:AL:27:THR:CG2  | 11:AL:62:TYR:CE1  | 2.97                     | 0.48              |
| 12:AM:3:LYS:N     | 12:AM:3:LYS:CD    | 2.77                     | 0.48              |
| 13:AN:85:ARG:NE   | 13:AN:113:PRO:HD3 | 2.28                     | 0.48              |
| 14:AO:33:ARG:HG2  | 14:AO:60:LEU:CD2  | 2.43                     | 0.48              |
| 15:AP:39:ILE:HG21 | 15:AP:56:LEU:CD1  | 2.44                     | 0.48              |
| 15:AP:66:LEU:O    | 15:AP:70:LEU:HB2  | 2.13                     | 0.48              |
| 15:AP:88:ARG:NH2  | 15:AP:92:HIS:CD2  | 2.81                     | 0.48              |
| 15:AP:92:HIS:CA   | 15:AP:98:VAL:HG21 | 2.44                     | 0.48              |
| 18:AS:10:GLY:HA3  | 18:AS:14:ASN:O    | 2.14                     | 0.48              |
| 19:AT:43:LEU:HD22 | 19:AT:43:LEU:C    | 2.37                     | 0.48              |
| 19:AT:92:ARG:O    | 19:AT:93:GLN:C    | 2.57                     | 0.48              |
| 19:AT:97:SER:C    | 19:AT:98:LEU:HD22 | 2.39                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 21:AV:9:VAL:HG11    | 21:AV:39:THR:HG21  | 1.96                     | 0.48              |
| 21:AV:19:VAL:HG21   | 21:AV:44:MET:HE2   | 1.96                     | 0.48              |
| 21:AV:70:LYS:O      | 21:AV:71:LEU:C     | 2.57                     | 0.48              |
| 22:AW:17:ARG:O      | 22:AW:20:LEU:CB    | 2.59                     | 0.48              |
| 24:BA:86:C:H2'      | 24:BA:87:C:H6      | 1.78                     | 0.48              |
| 24:BA:253:C:C2'     | 24:BA:254:G:C5'    | 2.91                     | 0.48              |
| 24:BA:265:A:H2'     | 24:BA:266:G:C1'    | 2.44                     | 0.48              |
| 24:BA:270(K):C:H5'' | 24:BA:270(L):U:C5  | 2.49                     | 0.48              |
| 24:BA:270(L):U:O2'  | 24:BA:270(M):U:OP1 | 2.32                     | 0.48              |
| 24:BA:425:G:C2      | 24:BA:426:C:C5     | 3.01                     | 0.48              |
| 24:BA:454:A:H3'     | 24:BA:454:A:C8     | 2.49                     | 0.48              |
| 24:BA:532:A:O2'     | 41:BT:28:ARG:HD3   | 2.14                     | 0.48              |
| 24:BA:557:U:O3'     | 34:BM:112:LEU:CD2  | 2.61                     | 0.48              |
| 24:BA:572:A:H61     | 24:BA:2029:G:C1'   | 2.26                     | 0.48              |
| 24:BA:600:G:H4'     | 29:BF:105:VAL:HG13 | 1.96                     | 0.48              |
| 24:BA:613:U:C5      | 24:BA:614:U:O2     | 2.65                     | 0.48              |
| 24:BA:616:A:H1'     | 29:BF:180:GLY:CA   | 2.43                     | 0.48              |
| 24:BA:729:G:OP1     | 27:BD:19:ALA:HB1   | 2.14                     | 0.48              |
| 24:BA:791:C:H5'     | 24:BA:792:G:OP1    | 2.14                     | 0.48              |
| 24:BA:822:U:H2'     | 24:BA:823:G:H8     | 1.79                     | 0.48              |
| 24:BA:837:C:H2'     | 24:BA:838:C:O5'    | 2.14                     | 0.48              |
| 24:BA:889:C:O2'     | 24:BA:890:A:H4'    | 2.14                     | 0.48              |
| 24:BA:936:C:O2'     | 24:BA:937:U:O5'    | 2.32                     | 0.48              |
| 24:BA:1059:G:C5     | 24:BA:1060:U:H1'   | 2.48                     | 0.48              |
| 24:BA:1086:A:N3     | 24:BA:1086:A:C2'   | 2.75                     | 0.48              |
| 24:BA:1091:G:N1     | 24:BA:1101:U:O4    | 2.47                     | 0.48              |
| 24:BA:1152:C:O2'    | 24:BA:1153:C:H5'   | 2.13                     | 0.48              |
| 24:BA:1153:C:N1     | 24:BA:1154:G:N7    | 2.61                     | 0.48              |
| 24:BA:1182:A:OP2    | 24:BA:1182:A:O4'   | 2.32                     | 0.48              |
| 24:BA:1258:C:C2     | 24:BA:1259:G:C8    | 3.02                     | 0.48              |
| 24:BA:1270:C:C4'    | 24:BA:1271:G:H5'   | 2.33                     | 0.48              |
| 24:BA:1298:C:C4'    | 24:BA:1302:A:N6    | 2.76                     | 0.48              |
| 24:BA:1313:U:C2     | 24:BA:1314:C:C5    | 3.02                     | 0.48              |
| 24:BA:1419:A:C5     | 24:BA:1421:G:C6    | 3.01                     | 0.48              |
| 24:BA:1432:C:C2     | 24:BA:1433:U:C2    | 3.02                     | 0.48              |
| 24:BA:1464:C:O2'    | 24:BA:1465:G:H5'   | 2.14                     | 0.48              |
| 24:BA:1528:A:H8     | 24:BA:1529:A:C4    | 2.31                     | 0.48              |
| 24:BA:1569:A:O3'    | 27:BD:39:LYS:HE2   | 2.13                     | 0.48              |
| 24:BA:1607:C:C2'    | 24:BA:1608:A:OP2   | 2.62                     | 0.48              |
| 24:BA:1667:G:O5'    | 35:BN:7:TYR:CD1    | 2.66                     | 0.48              |
| 24:BA:1689:A:C6     | 24:BA:1698:A:H2    | 2.27                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1693:U:O4    | 24:BA:1977:A:C5   | 2.67                     | 0.48              |
| 24:BA:1801:G:C6    | 24:BA:2207:C:O4'  | 2.67                     | 0.48              |
| 24:BA:1926:U:N3    | 24:BA:1929:G:N2   | 2.62                     | 0.48              |
| 24:BA:1927:A:N7    | 24:BA:1928:A:C6   | 2.82                     | 0.48              |
| 24:BA:1947:C:C2'   | 24:BA:1948:G:H5'  | 2.44                     | 0.48              |
| 24:BA:2057:A:C2'   | 24:BA:2058:A:H8   | 2.23                     | 0.48              |
| 24:BA:2081:C:N3    | 24:BA:2082:A:C8   | 2.82                     | 0.48              |
| 24:BA:2287:A:N1    | 24:BA:2346:A:C6   | 2.82                     | 0.48              |
| 24:BA:2289:G:N2    | 24:BA:2344:U:C6   | 2.82                     | 0.48              |
| 24:BA:2305:A:C2'   | 30:BG:154:GLY:CA  | 2.89                     | 0.48              |
| 24:BA:2309:A:C5    | 24:BA:2310:A:C5   | 3.02                     | 0.48              |
| 24:BA:2350:C:O2'   | 24:BA:2351:G:P    | 2.71                     | 0.48              |
| 24:BA:2358:G:C2    | 24:BA:2359:C:C6   | 3.01                     | 0.48              |
| 24:BA:2405:G:H8    | 24:BA:2405:G:O5'  | 1.97                     | 0.48              |
| 24:BA:2472:G:N2    | 24:BA:2477:C:OP1  | 2.33                     | 0.48              |
| 24:BA:2545:G:O2'   | 24:BA:2546:U:H5'  | 2.14                     | 0.48              |
| 24:BA:2612:C:HO2'  | 51:B4:4:HIS:HB3   | 1.78                     | 0.48              |
| 24:BA:2693:A:O2'   | 24:BA:2848:G:C5'  | 2.61                     | 0.48              |
| 24:BA:2746:U:OP1   | 31:BH:142:GLY:HA3 | 2.14                     | 0.48              |
| 24:BA:2816:C:H1'   | 24:BA:2831:G:N2   | 2.29                     | 0.48              |
| 24:BA:2838:G:C5    | 24:BA:2839:G:C8   | 3.02                     | 0.48              |
| 24:BA:2868:A:H2'   | 24:BA:2869:G:O4'  | 2.14                     | 0.48              |
| 25:BB:45:A:C6      | 25:BB:46:A:C4     | 3.02                     | 0.48              |
| 25:BB:57:A:O4'     | 30:BG:29:TRP:CZ3  | 2.67                     | 0.48              |
| 25:BB:83:G:H5'     | 49:B2:52:HIS:CE1  | 2.48                     | 0.48              |
| 26:BC:59:ARG:HB2   | 26:BC:164:ARG:HG2 | 1.96                     | 0.48              |
| 27:BD:6:PHE:O      | 27:BD:28:GLU:OE1  | 2.31                     | 0.48              |
| 27:BD:9:TYR:O      | 27:BD:10:THR:CB   | 2.61                     | 0.48              |
| 27:BD:85:ASP:CB    | 27:BD:87:ASN:ND2  | 2.77                     | 0.48              |
| 27:BD:270:ILE:C    | 27:BD:271:ILE:O   | 2.57                     | 0.48              |
| 28:BE:55:ASN:HA    | 28:BE:58:ARG:NH2  | 2.28                     | 0.48              |
| 28:BE:182:LEU:HD23 | 28:BE:182:LEU:C   | 2.38                     | 0.48              |
| 29:BF:26:ALA:O     | 29:BF:112:MET:SD  | 2.72                     | 0.48              |
| 29:BF:30:PRO:HG2   | 29:BF:31:HIS:H    | 1.78                     | 0.48              |
| 29:BF:34:TRP:O     | 29:BF:38:ARG:HD2  | 2.13                     | 0.48              |
| 30:BG:57:ALA:HA    | 30:BG:67:LYS:CA   | 2.44                     | 0.48              |
| 32:BK:5:LEU:CD2    | 32:BK:17:GLN:O    | 2.62                     | 0.48              |
| 32:BK:5:LEU:HD21   | 32:BK:18:VAL:N    | 2.29                     | 0.48              |
| 32:BK:25:TYR:CD2   | 32:BK:25:TYR:N    | 2.80                     | 0.48              |
| 32:BK:111:PRO:CG   | 32:BK:112:LYS:HD2 | 2.41                     | 0.48              |
| 34:BM:38:HIS:C     | 34:BM:48:MET:HE2  | 2.38                     | 0.48              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 35:BN:64:ARG:HE   | 35:BN:67:LYS:CA    | 2.27                     | 0.48              |
| 36:BO:18:ARG:O    | 36:BO:20:GLY:N     | 2.42                     | 0.48              |
| 36:BO:49:ARG:NH2  | 36:BO:49:ARG:HG2   | 2.20                     | 0.48              |
| 36:BO:49:ARG:HA   | 36:BO:52:GLU:CG    | 2.43                     | 0.48              |
| 37:BP:42:ILE:C    | 37:BP:94:VAL:CG2   | 2.87                     | 0.48              |
| 37:BP:122:GLY:O   | 37:BP:124:LYS:N    | 2.46                     | 0.48              |
| 38:BQ:39:PRO:HA   | 38:BQ:42:LYS:HB2   | 1.94                     | 0.48              |
| 38:BQ:96:ARG:CZ   | 38:BQ:117:VAL:HG23 | 2.44                     | 0.48              |
| 39:BR:9:ARG:HD3   | 39:BR:9:ARG:HA     | 1.51                     | 0.48              |
| 39:BR:24:LEU:H    | 39:BR:86:ALA:HB1   | 1.77                     | 0.48              |
| 39:BR:62:LYS:O    | 39:BR:63:THR:C     | 2.57                     | 0.48              |
| 39:BR:68:GLN:C    | 39:BR:70:GLY:N     | 2.71                     | 0.48              |
| 40:BS:31:SER:C    | 40:BS:32:TYR:CD2   | 2.92                     | 0.48              |
| 40:BS:31:SER:HA   | 40:BS:32:TYR:CE1   | 2.49                     | 0.48              |
| 40:BS:65:LYS:NZ   | 40:BS:75:ILE:HD13  | 2.28                     | 0.48              |
| 41:BT:74:LEU:CG   | 41:BT:78:THR:HG21  | 2.43                     | 0.48              |
| 41:BT:84:LYS:NZ   | 41:BT:90:VAL:HG11  | 2.29                     | 0.48              |
| 41:BT:99:ALA:HB2  | 41:BT:106:PHE:CD1  | 2.48                     | 0.48              |
| 41:BT:112:ARG:O   | 41:BT:115:ALA:N    | 2.47                     | 0.48              |
| 42:BU:15:GLU:CA   | 42:BU:100:ARG:NH1  | 2.72                     | 0.48              |
| 42:BU:20:LEU:CD1  | 42:BU:68:LYS:HG3   | 2.44                     | 0.48              |
| 43:BV:32:ALA:HA   | 43:BV:35:ILE:HG22  | 1.96                     | 0.48              |
| 45:BX:2:ARG:HD2   | 45:BX:3:VAL:CG2    | 2.44                     | 0.48              |
| 46:BY:74:VAL:HG22 | 46:BY:87:ASP:H     | 1.79                     | 0.48              |
| 46:BY:104:PHE:CZ  | 46:BY:120:ILE:CG2  | 2.91                     | 0.48              |
| 47:BZ:9:SER:O     | 47:BZ:10:THR:C     | 2.56                     | 0.48              |
| 47:BZ:40:GLN:O    | 47:BZ:57:PHE:CB    | 2.62                     | 0.48              |
| 47:BZ:76:GLY:O    | 47:BZ:78:TYR:CD1   | 2.67                     | 0.48              |
| 48:B1:22:GLU:O    | 48:B1:25:ARG:HB2   | 2.13                     | 0.48              |
| 50:B3:64:GLY:O    | 50:B3:68:ARG:NH1   | 2.46                     | 0.48              |
| 51:B4:10:LYS:HD2  | 51:B4:15:ARG:CZ    | 2.44                     | 0.48              |
| 52:B5:19:ARG:HH11 | 52:B5:19:ARG:CG    | 1.97                     | 0.48              |
| 52:B5:19:ARG:CD   | 52:B5:19:ARG:N     | 2.75                     | 0.48              |
| 53:B6:9:ARG:O     | 53:B6:10:ARG:O     | 2.32                     | 0.48              |
| 54:B7:16:ILE:CD1  | 54:B7:60:LEU:HD22  | 2.42                     | 0.48              |
| 54:B7:37:SER:O    | 54:B7:41:ILE:HG13  | 2.13                     | 0.48              |
| 55:B8:19:ARG:O    | 55:B8:19:ARG:HG3   | 2.14                     | 0.48              |
| 1:AA:20:U:O4      | 1:AA:21:G:C6       | 2.68                     | 0.47              |
| 1:AA:52:G:C2'     | 1:AA:53:A:O4'      | 2.59                     | 0.47              |
| 1:AA:62:U:C2      | 1:AA:63:C:C5       | 3.02                     | 0.47              |
| 1:AA:73:G:C2      | 1:AA:74:C:C2       | 3.02                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:AA:142:G:N1    | 1:AA:143:A:C5    | 2.82                     | 0.47              |
| 1:AA:152:A:C8    | 1:AA:153:C:C6    | 3.02                     | 0.47              |
| 1:AA:295:C:O2    | 1:AA:296:U:C1'   | 2.62                     | 0.47              |
| 1:AA:428:G:HO2'  | 1:AA:429:U:P     | 2.38                     | 0.47              |
| 1:AA:458:C:H3'   | 1:AA:464:G:C8    | 2.48                     | 0.47              |
| 1:AA:497:U:O2'   | 1:AA:498:A:H5'   | 2.13                     | 0.47              |
| 1:AA:570:G:O3'   | 1:AA:819:A:H2'   | 2.13                     | 0.47              |
| 1:AA:573:A:C2    | 1:AA:574:A:N1    | 2.82                     | 0.47              |
| 1:AA:673:G:C2    | 1:AA:674:G:N1    | 2.82                     | 0.47              |
| 1:AA:687:A:C2    | 1:AA:704:A:C6    | 3.01                     | 0.47              |
| 1:AA:695:A:C2    | 1:AA:696:A:C4    | 3.02                     | 0.47              |
| 1:AA:702:A:N1    | 24:BA:1848:A:C5  | 2.82                     | 0.47              |
| 1:AA:715:A:H4'   | 1:AA:777:A:H61   | 1.79                     | 0.47              |
| 1:AA:752:G:C2'   | 1:AA:753:A:OP2   | 2.61                     | 0.47              |
| 1:AA:830:G:C6    | 1:AA:857:C:C4    | 3.02                     | 0.47              |
| 1:AA:909:A:C2    | 1:AA:910:C:C1'   | 2.97                     | 0.47              |
| 1:AA:938:A:O2'   | 1:AA:1376:U:H4'  | 2.14                     | 0.47              |
| 1:AA:960:U:O2'   | 1:AA:961:U:P     | 2.72                     | 0.47              |
| 1:AA:978:A:N6    | 1:AA:1318:A:H61  | 2.12                     | 0.47              |
| 1:AA:995:C:O2    | 16:AQ:4:LYS:NZ   | 2.47                     | 0.47              |
| 1:AA:1065:U:H2'  | 1:AA:1066:C:OP2  | 2.13                     | 0.47              |
| 1:AA:1105:A:N3   | 1:AA:1106:G:C8   | 2.82                     | 0.47              |
| 1:AA:1371:G:O2'  | 1:AA:1372:U:H5'  | 2.13                     | 0.47              |
| 1:AA:1483:A:H3'  | 1:AA:1484:C:C6   | 2.49                     | 0.47              |
| 1:AA:1490:C:H2'  | 1:AA:1491:G:O4'  | 2.14                     | 0.47              |
| 1:AA:1502:A:C2   | 1:AA:1504:G:C4   | 3.01                     | 0.47              |
| 2:A1:48:U:OP2    | 2:A1:48:U:C6     | 2.64                     | 0.47              |
| 3:AC:21:A:C8     | 3:AC:46:G:O6     | 2.67                     | 0.47              |
| 3:AD:35:A:H2'    | 3:AD:36:A:C8     | 2.49                     | 0.47              |
| 3:AB:74:C:O2'    | 3:AB:75:C:H5'    | 2.14                     | 0.47              |
| 4:AE:126:GLU:O   | 4:AE:127:ILE:C   | 2.57                     | 0.47              |
| 4:AE:193:ASP:OD1 | 4:AE:193:ASP:N   | 2.41                     | 0.47              |
| 5:AF:64:VAL:O    | 5:AF:99:VAL:CG1  | 2.62                     | 0.47              |
| 5:AF:64:VAL:HG12 | 5:AF:66:VAL:HG23 | 1.95                     | 0.47              |
| 5:AF:77:ILE:HG22 | 5:AF:81:GLY:HA2  | 1.95                     | 0.47              |
| 5:AF:108:ASN:C   | 5:AF:110:ASN:H   | 2.22                     | 0.47              |
| 5:AF:148:GLY:HA3 | 5:AF:172:ARG:O   | 2.14                     | 0.47              |
| 6:AG:123:HIS:N   | 6:AG:123:HIS:CD2 | 2.81                     | 0.47              |
| 6:AG:191:ARG:CD  | 6:AG:192:GLU:N   | 2.69                     | 0.47              |
| 7:AH:31:LEU:O    | 7:AH:31:LEU:HD23 | 2.14                     | 0.47              |
| 7:AH:49:PRO:O    | 7:AH:50:GLU:HG2  | 2.14                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 8:AI:6:VAL:HG12   | 8:AI:6:VAL:O      | 2.15                     | 0.47              |
| 8:AI:62:TRP:CD1   | 20:AU:35:ARG:HH22 | 2.32                     | 0.47              |
| 9:AJ:14:PRO:HB3   | 9:AJ:19:GLY:C     | 2.39                     | 0.47              |
| 9:AJ:94:ARG:O     | 9:AJ:97:GLN:HB3   | 2.14                     | 0.47              |
| 9:AJ:106:GLN:NE2  | 9:AJ:109:ASN:ND2  | 2.62                     | 0.47              |
| 9:AJ:113:GLU:OE2  | 9:AJ:119:ARG:CG   | 2.58                     | 0.47              |
| 10:AK:48:TYR:HB3  | 10:AK:61:VAL:HG22 | 1.93                     | 0.47              |
| 10:AK:63:LEU:CG   | 10:AK:65:TYR:HE1  | 2.27                     | 0.47              |
| 11:AL:38:GLN:O    | 11:AL:39:GLY:C    | 2.57                     | 0.47              |
| 12:AM:16:LEU:HB3  | 12:AM:70:ARG:HG3  | 1.96                     | 0.47              |
| 13:AN:102:GLY:O   | 13:AN:104:GLN:O   | 2.31                     | 0.47              |
| 14:AO:42:THR:HA   | 14:AO:55:VAL:HG23 | 1.95                     | 0.47              |
| 15:AP:7:VAL:HG11  | 30:BG:140:ILE:CD1 | 2.41                     | 0.47              |
| 17:AR:8:LYS:HE2   | 17:AR:9:GLN:HE22  | 1.77                     | 0.47              |
| 18:AS:35:LYS:HD2  | 18:AS:35:LYS:C    | 2.38                     | 0.47              |
| 19:AT:59:ILE:HG13 | 19:AT:60:ILE:N    | 2.29                     | 0.47              |
| 20:AU:51:LEU:HA   | 20:AU:52:PRO:HD2  | 1.48                     | 0.47              |
| 20:AU:74:ARG:CA   | 20:AU:79:LEU:HD21 | 2.42                     | 0.47              |
| 21:AV:30:LEU:HD12 | 21:AV:59:PRO:HB3  | 1.95                     | 0.47              |
| 21:AV:68:GLY:O    | 21:AV:69:HIS:CG   | 2.67                     | 0.47              |
| 24:BA:48:G:N2     | 24:BA:177:G:N7    | 2.62                     | 0.47              |
| 24:BA:137(A):G:C6 | 24:BA:138:G:O6    | 2.66                     | 0.47              |
| 24:BA:149:A:C5    | 24:BA:150:C:C5    | 3.01                     | 0.47              |
| 24:BA:279:C:H2'   | 24:BA:280:C:C5    | 2.48                     | 0.47              |
| 24:BA:295:G:N2    | 24:BA:296:C:C2    | 2.82                     | 0.47              |
| 24:BA:307:G:O2'   | 24:BA:309:G:N7    | 2.35                     | 0.47              |
| 24:BA:417:C:O2'   | 24:BA:418:G:H5'   | 2.14                     | 0.47              |
| 24:BA:445:C:H5''  | 41:BT:3:ARG:HG2   | 1.95                     | 0.47              |
| 24:BA:455:C:H5'   | 24:BA:456:C:OP1   | 2.14                     | 0.47              |
| 24:BA:625:G:C6    | 36:BO:100:LEU:HB3 | 2.49                     | 0.47              |
| 24:BA:642:G:C8    | 24:BA:642:G:C3'   | 2.96                     | 0.47              |
| 24:BA:673:C:O4'   | 29:BF:82:ILE:HG21 | 2.14                     | 0.47              |
| 24:BA:721:C:O2'   | 24:BA:722:A:H5'   | 2.14                     | 0.47              |
| 24:BA:740:U:C5    | 24:BA:741:G:N7    | 2.82                     | 0.47              |
| 24:BA:786:C:H2'   | 24:BA:787:U:O4'   | 2.14                     | 0.47              |
| 24:BA:848:G:N2    | 24:BA:933:A:H1'   | 2.22                     | 0.47              |
| 24:BA:917:A:C8    | 24:BA:918:A:H5'   | 2.48                     | 0.47              |
| 24:BA:977:G:C6    | 24:BA:987:G:C5    | 3.02                     | 0.47              |
| 24:BA:1022:G:C6   | 24:BA:1139:G:N1   | 2.82                     | 0.47              |
| 24:BA:1039:G:N2   | 24:BA:1115:G:H22  | 2.11                     | 0.47              |
| 24:BA:1047:G:N1   | 24:BA:1110:G:N7   | 2.62                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1083:U:HO2' | 24:BA:1084:A:H8   | 1.50                     | 0.47              |
| 24:BA:1115:G:N2   | 24:BA:1116:C:O2   | 2.47                     | 0.47              |
| 24:BA:1248:G:O2'  | 24:BA:1249:U:P    | 2.73                     | 0.47              |
| 24:BA:1275:A:O2'  | 24:BA:1276:A:O5'  | 2.17                     | 0.47              |
| 24:BA:1295:C:C2   | 24:BA:1296:G:N7   | 2.83                     | 0.47              |
| 24:BA:1305:C:H2'  | 24:BA:1306:C:H6   | 1.78                     | 0.47              |
| 24:BA:1334:G:C6   | 24:BA:1335:U:C4   | 3.01                     | 0.47              |
| 24:BA:1416:G:H2'  | 24:BA:1417:C:C5   | 2.49                     | 0.47              |
| 24:BA:1467:C:C4'  | 24:BA:1467:C:OP1  | 2.62                     | 0.47              |
| 24:BA:1515:C:H6   | 24:BA:1515:C:P    | 2.37                     | 0.47              |
| 24:BA:1612:C:H1'  | 53:B6:6:GLN:NE2   | 2.29                     | 0.47              |
| 24:BA:1613:G:C2'  | 24:BA:1614:A:OP1  | 2.62                     | 0.47              |
| 24:BA:1656:C:O3'  | 28:BE:136:ARG:NH2 | 2.47                     | 0.47              |
| 24:BA:1703:G:C2'  | 24:BA:1704:G:H5'  | 2.44                     | 0.47              |
| 24:BA:1878:G:C6   | 24:BA:1879:C:C4   | 3.02                     | 0.47              |
| 24:BA:1968:G:H2'  | 24:BA:1969:A:OP2  | 2.14                     | 0.47              |
| 24:BA:2031:A:N6   | 24:BA:2498:C:C6   | 2.80                     | 0.47              |
| 24:BA:2063:C:H2'  | 24:BA:2064:C:O4'  | 2.13                     | 0.47              |
| 24:BA:2065:C:C5   | 24:BA:2066:C:C5   | 3.02                     | 0.47              |
| 24:BA:2093:G:C2'  | 24:BA:2094:G:O5'  | 2.61                     | 0.47              |
| 24:BA:2110:G:H8   | 24:BA:2110:G:OP2  | 1.96                     | 0.47              |
| 24:BA:2320:A:H8   | 24:BA:2320:A:P    | 2.36                     | 0.47              |
| 24:BA:2324:C:C2'  | 24:BA:2325:G:OP1  | 2.61                     | 0.47              |
| 24:BA:2365:G:OP1  | 47:BZ:55:ARG:CG   | 2.62                     | 0.47              |
| 24:BA:2397:G:C2   | 24:BA:2420:C:C2   | 3.02                     | 0.47              |
| 24:BA:2406:U:O5'  | 24:BA:2407:G:OP1  | 2.32                     | 0.47              |
| 24:BA:2465:C:O3'  | 55:B8:5:ALA:HB3   | 2.14                     | 0.47              |
| 24:BA:2484:G:H4'  | 37:BP:46:GLN:HA   | 1.96                     | 0.47              |
| 24:BA:2485:G:O2'  | 24:BA:2486:G:C5'  | 2.62                     | 0.47              |
| 24:BA:2627:G:N2   | 24:BA:2628:C:C6   | 2.81                     | 0.47              |
| 24:BA:2741:A:H2'  | 24:BA:2742:C:H6   | 1.78                     | 0.47              |
| 24:BA:2805:G:C5   | 24:BA:2807:G:C8   | 2.99                     | 0.47              |
| 24:BA:2839:G:C5   | 24:BA:2840:C:C5   | 3.02                     | 0.47              |
| 25:BB:31:C:N4     | 25:BB:32:C:H41    | 2.12                     | 0.47              |
| 25:BB:93:C:H2'    | 25:BB:94:C:C6     | 2.48                     | 0.47              |
| 26:BC:4:GLY:C     | 26:BC:5:LYS:HD2   | 2.39                     | 0.47              |
| 26:BC:89:ALA:HB1  | 26:BC:154:ARG:HA  | 1.95                     | 0.47              |
| 27:BD:23:GLU:OE1  | 27:BD:24:ILE:O    | 2.30                     | 0.47              |
| 27:BD:75:ILE:O    | 27:BD:76:PRO:O    | 2.32                     | 0.47              |
| 28:BE:80:GLU:O    | 28:BE:83:ASP:OD2  | 2.31                     | 0.47              |
| 29:BF:18:ARG:CG   | 29:BF:18:ARG:NH1  | 2.72                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 29:BF:37:VAL:O     | 29:BF:184:TYR:CZ  | 2.66                     | 0.47              |
| 29:BF:125:LEU:HB2  | 29:BF:194:MET:O   | 2.14                     | 0.47              |
| 29:BF:132:VAL:HG23 | 29:BF:135:LYS:HB2 | 1.96                     | 0.47              |
| 29:BF:135:LYS:HD3  | 29:BF:136:THR:N   | 2.29                     | 0.47              |
| 31:BH:9:ILE:O      | 31:BH:50:VAL:O    | 2.32                     | 0.47              |
| 31:BH:149:ARG:NH2  | 31:BH:164:TYR:HD1 | 2.09                     | 0.47              |
| 32:BK:34:GLY:H     | 32:BK:35:LEU:HD22 | 1.78                     | 0.47              |
| 32:BK:58:LEU:HB3   | 32:BK:62:LYS:HE3  | 1.95                     | 0.47              |
| 32:BK:83:ALA:HA    | 32:BK:89:TYR:CZ   | 2.49                     | 0.47              |
| 32:BK:117:GLU:OE1  | 32:BK:117:GLU:N   | 2.43                     | 0.47              |
| 34:BM:7:LYS:HD3    | 34:BM:39:ARG:NH2  | 2.28                     | 0.47              |
| 34:BM:33:LEU:HD11  | 34:BM:52:VAL:CG2  | 2.44                     | 0.47              |
| 34:BM:42:TRP:O     | 34:BM:43:THR:CB   | 2.61                     | 0.47              |
| 36:BO:7:ARG:H      | 36:BO:8:PRO:HD2   | 1.78                     | 0.47              |
| 36:BO:56:SER:OG    | 54:B7:13:ARG:NE   | 2.47                     | 0.47              |
| 37:BP:32:TYR:CB    | 37:BP:105:GLU:O   | 2.53                     | 0.47              |
| 37:BP:120:ILE:O    | 37:BP:124:LYS:HG2 | 2.14                     | 0.47              |
| 38:BQ:33:ARG:NH2   | 51:B4:56:LYS:CE   | 2.77                     | 0.47              |
| 38:BQ:49:ASP:O     | 38:BQ:50:HIS:C    | 2.56                     | 0.47              |
| 38:BQ:71:GLN:O     | 38:BQ:72:ASP:HB2  | 2.14                     | 0.47              |
| 38:BQ:87:TYR:HD1   | 38:BQ:94:TYR:CG   | 2.32                     | 0.47              |
| 39:BR:6:ALA:CA     | 39:BR:9:ARG:HH12  | 2.23                     | 0.47              |
| 39:BR:103:GLU:CA   | 39:BR:106:ARG:HB3 | 2.43                     | 0.47              |
| 40:BS:70:VAL:CB    | 40:BS:74:ARG:HH11 | 2.14                     | 0.47              |
| 40:BS:82:LEU:O     | 40:BS:83:ILE:C    | 2.57                     | 0.47              |
| 41:BT:108:GLU:CA   | 41:BT:111:GLU:HG2 | 2.44                     | 0.47              |
| 42:BU:73:SER:HG    | 42:BU:89:GLN:CB   | 2.22                     | 0.47              |
| 44:BW:35:THR:HG22  | 44:BW:36:LYS:N    | 2.29                     | 0.47              |
| 46:BY:29:TYR:CD2   | 46:BY:89:PHE:CE2  | 3.01                     | 0.47              |
| 47:BZ:72:ARG:HD2   | 47:BZ:75:LEU:HD22 | 1.95                     | 0.47              |
| 49:B2:23:LEU:HD11  | 49:B2:53:LEU:CD1  | 2.40                     | 0.47              |
| 51:B4:31:VAL:HB    | 51:B4:32:PRO:CD   | 2.44                     | 0.47              |
| 53:B6:48:LYS:CG    | 53:B6:49:ARG:N    | 2.45                     | 0.47              |
| 54:B7:4:MET:HB3    | 54:B7:7:HIS:NE2   | 2.27                     | 0.47              |
| 55:B8:13:LYS:HB3   | 55:B8:13:LYS:HZ3  | 1.79                     | 0.47              |
| 55:B8:19:ARG:HG3   | 55:B8:22:ARG:HB2  | 1.96                     | 0.47              |
| 1:AA:13:U:C5'      | 1:AA:13:U:H6      | 2.27                     | 0.47              |
| 1:AA:52:G:C4       | 1:AA:53:A:C8      | 3.02                     | 0.47              |
| 1:AA:57:G:C6       | 1:AA:58:C:C4      | 3.02                     | 0.47              |
| 1:AA:68:G:H21      | 1:AA:152:A:H1'    | 1.78                     | 0.47              |
| 1:AA:108:G:C5      | 22:AW:15:ARG:NE   | 2.83                     | 0.47              |

*Continued on next page...*

Continued from previous page...

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:141:A:C4'     | 1:AA:182:U:H1'    | 2.44                     | 0.47              |
| 1:AA:145:G:C2      | 1:AA:178:C:C2     | 3.01                     | 0.47              |
| 1:AA:186(A):C:C2'  | 1:AA:186(B):C:H5' | 2.44                     | 0.47              |
| 1:AA:230:G:N1      | 1:AA:231:G:C4     | 2.82                     | 0.47              |
| 1:AA:258:G:C4      | 1:AA:259:G:N7     | 2.82                     | 0.47              |
| 1:AA:290:C:H2'     | 1:AA:291:C:C5'    | 2.44                     | 0.47              |
| 1:AA:362:G:H4'     | 14:AO:28:LYS:NZ   | 2.28                     | 0.47              |
| 1:AA:433:C:N4      | 1:AA:434:U:O4     | 2.48                     | 0.47              |
| 1:AA:540:G:N2      | 6:AG:42:GLN:NE2   | 2.56                     | 0.47              |
| 1:AA:541:G:C8      | 1:AA:541:G:OP2    | 2.67                     | 0.47              |
| 1:AA:575:G:O2'     | 1:AA:576:G:H5'    | 2.15                     | 0.47              |
| 1:AA:665:A:C2      | 1:AA:732:C:C4     | 3.02                     | 0.47              |
| 1:AA:729:A:C2'     | 1:AA:730:G:O5'    | 2.62                     | 0.47              |
| 1:AA:812:C:C2'     | 1:AA:813:U:OP2    | 2.62                     | 0.47              |
| 1:AA:904:C:H2'     | 1:AA:905:U:C6     | 2.49                     | 0.47              |
| 1:AA:932:C:O2      | 1:AA:932:C:H2'    | 2.14                     | 0.47              |
| 1:AA:952:U:O2'     | 15:AP:126:LYS:OXT | 2.32                     | 0.47              |
| 1:AA:1006:C:O2     | 1:AA:1006:C:C2'   | 2.61                     | 0.47              |
| 1:AA:1011:G:C2     | 1:AA:1012:U:H1'   | 2.49                     | 0.47              |
| 1:AA:1067:A:H2     | 1:AA:1068:G:C4    | 2.32                     | 0.47              |
| 1:AA:1134:G:H2'    | 1:AA:1135:U:H5'   | 1.94                     | 0.47              |
| 1:AA:1224:G:O6     | 1:AA:1322:C:H4'   | 2.14                     | 0.47              |
| 1:AA:1261:A:H2'    | 1:AA:1261:A:N3    | 2.28                     | 0.47              |
| 1:AA:1323:G:C2     | 1:AA:1324:A:C5    | 3.02                     | 0.47              |
| 1:AA:1483:A:H2     | 24:BA:1960:A:H1'  | 1.78                     | 0.47              |
| 2:A1:17:U:O2'      | 2:A1:18:U:OP1     | 2.29                     | 0.47              |
| 3:AC:30:G:N3       | 3:AC:31:A:H1'     | 2.29                     | 0.47              |
| 3:AD:18:G:H2'      | 3:AD:19:G:O4'     | 2.14                     | 0.47              |
| 4:AE:45:GLN:O      | 4:AE:49:GLU:OE2   | 2.32                     | 0.47              |
| 4:AE:114:ARG:HD3   | 4:AE:114:ARG:C    | 2.39                     | 0.47              |
| 4:AE:153:ARG:O     | 4:AE:154:LEU:C    | 2.57                     | 0.47              |
| 4:AE:178:ARG:CA    | 4:AE:184:VAL:HG21 | 2.40                     | 0.47              |
| 5:AF:18:TRP:CZ2    | 16:AQ:55:GLY:O    | 2.67                     | 0.47              |
| 5:AF:143:GLU:C     | 5:AF:145:GLY:N    | 2.72                     | 0.47              |
| 9:AJ:71:PRO:CA     | 9:AJ:138:LYS:HE3  | 2.43                     | 0.47              |
| 9:AJ:139:GLU:O     | 9:AJ:143:ARG:HG3  | 2.14                     | 0.47              |
| 10:AK:25:ASP:HA    | 10:AK:59:LEU:O    | 2.14                     | 0.47              |
| 10:AK:67:PRO:N     | 10:AK:76:PRO:HB3  | 2.29                     | 0.47              |
| 10:AK:103:VAL:CG1  | 10:AK:108:GLY:HA3 | 2.44                     | 0.47              |
| 13:AN:69:ALA:O     | 13:AN:70:LYS:C    | 2.58                     | 0.47              |
| 13:AN:114:VAL:HG23 | 13:AN:115:PRO:HD2 | 1.96                     | 0.47              |

Continued on next page...

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 14:AO:48:PRO:HG3  | 14:AO:92:ASP:OD1  | 2.14                     | 0.47              |
| 14:AO:53:ARG:CZ   | 14:AO:92:ASP:OD2  | 2.62                     | 0.47              |
| 16:AQ:61:TRP:C    | 16:AQ:61:TRP:CD1  | 2.92                     | 0.47              |
| 17:AR:59:MET:O    | 17:AR:63:ARG:HG2  | 2.15                     | 0.47              |
| 20:AU:17:SER:CB   | 20:AU:54:ARG:NH1  | 2.77                     | 0.47              |
| 20:AU:87:ARG:HH11 | 20:AU:87:ARG:HG2  | 1.79                     | 0.47              |
| 22:AW:86:ARG:CG   | 22:AW:87:LYS:N    | 2.77                     | 0.47              |
| 24:BA:29:U:C2     | 24:BA:30:G:O6     | 2.67                     | 0.47              |
| 24:BA:48:G:H8     | 24:BA:48:G:O5'    | 1.97                     | 0.47              |
| 24:BA:95:G:C2'    | 48:B1:43:HIS:NE2  | 2.72                     | 0.47              |
| 24:BA:108:U:C2    | 24:BA:109:G:C8    | 3.02                     | 0.47              |
| 24:BA:120:U:H1'   | 24:BA:149:A:C4    | 2.49                     | 0.47              |
| 24:BA:253:C:C2'   | 24:BA:254:G:O5'   | 2.62                     | 0.47              |
| 24:BA:271:G:C5    | 24:BA:404:C:N4    | 2.82                     | 0.47              |
| 24:BA:323:G:C2    | 24:BA:333:G:H1'   | 2.49                     | 0.47              |
| 24:BA:393:C:C2'   | 24:BA:394:A:H5'   | 2.43                     | 0.47              |
| 24:BA:410:G:N2    | 24:BA:2407:G:N7   | 2.63                     | 0.47              |
| 24:BA:470:A:N3    | 24:BA:471:A:C1'   | 2.76                     | 0.47              |
| 24:BA:532:A:O3'   | 41:BT:28:ARG:HD2  | 2.15                     | 0.47              |
| 24:BA:548:A:H3'   | 24:BA:549:G:C4'   | 2.43                     | 0.47              |
| 24:BA:661:C:H2'   | 24:BA:662:G:O4'   | 2.14                     | 0.47              |
| 24:BA:705:A:H2    | 24:BA:706:A:C1'   | 2.27                     | 0.47              |
| 24:BA:718:A:C5'   | 24:BA:719:C:C5    | 2.94                     | 0.47              |
| 24:BA:836:G:C4    | 24:BA:837:C:C5    | 3.01                     | 0.47              |
| 24:BA:903:C:O2'   | 46:BY:169:GLU:OE2 | 2.28                     | 0.47              |
| 24:BA:1004:C:H1'  | 24:BA:1010:A:H2'  | 1.96                     | 0.47              |
| 24:BA:1107:G:H2'  | 24:BA:1108:U:C5'  | 2.42                     | 0.47              |
| 24:BA:1139:G:OP1  | 34:BM:63:THR:HG21 | 2.14                     | 0.47              |
| 24:BA:1165:U:O2'  | 24:BA:1166:C:O4'  | 2.32                     | 0.47              |
| 24:BA:1203:G:N1   | 24:BA:1206:G:N1   | 2.59                     | 0.47              |
| 24:BA:1250:G:O3'  | 24:BA:1251:C:C4'  | 2.61                     | 0.47              |
| 24:BA:1267:U:C5   | 24:BA:1268:A:N7   | 2.82                     | 0.47              |
| 24:BA:1270:C:O5'  | 24:BA:1270:C:C6   | 2.67                     | 0.47              |
| 24:BA:1299:G:O3'  | 24:BA:1300:U:C6   | 2.67                     | 0.47              |
| 24:BA:1324:G:O3'  | 24:BA:1325:G:H4'  | 2.14                     | 0.47              |
| 24:BA:1392:A:N6   | 24:BA:1393:A:N6   | 2.62                     | 0.47              |
| 24:BA:1402:C:N4   | 24:BA:1403:C:N4   | 2.62                     | 0.47              |
| 24:BA:1513:C:H5'' | 24:BA:1513:C:H6   | 1.79                     | 0.47              |
| 24:BA:1558:A:C2   | 24:BA:1560:G:N9   | 2.79                     | 0.47              |
| 24:BA:1619:G:N1   | 24:BA:1620:G:C5   | 2.83                     | 0.47              |
| 24:BA:1621:U:H3'  | 24:BA:1621:U:H6   | 1.79                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1656:C:C5'  | 28:BE:136:ARG:NH1 | 2.77                     | 0.47              |
| 24:BA:1684:C:O2   | 24:BA:1685:C:C6   | 2.67                     | 0.47              |
| 24:BA:1689:A:N3   | 24:BA:1690:A:N7   | 2.62                     | 0.47              |
| 24:BA:1725:G:N1   | 24:BA:1726:G:C8   | 2.82                     | 0.47              |
| 24:BA:1729:A:C8   | 24:BA:1730:U:O4'  | 2.68                     | 0.47              |
| 24:BA:1786:A:C5'  | 24:BA:1938:A:H61  | 2.26                     | 0.47              |
| 24:BA:1859:A:H8   | 24:BA:1859:A:O5'  | 1.96                     | 0.47              |
| 24:BA:1936:A:H1'  | 24:BA:1940:U:C2   | 2.49                     | 0.47              |
| 24:BA:1966:A:C2'  | 24:BA:1967:C:OP2  | 2.62                     | 0.47              |
| 24:BA:2020:A:H2'  | 24:BA:2021:C:C5'  | 2.34                     | 0.47              |
| 24:BA:2075:U:O2   | 24:BA:2076:U:O5'  | 2.31                     | 0.47              |
| 24:BA:2163:C:OP1  | 24:BA:2172:U:C5   | 2.67                     | 0.47              |
| 24:BA:2312:U:H2'  | 24:BA:2313:C:H6   | 1.78                     | 0.47              |
| 24:BA:2322:A:O4'  | 24:BA:2322:A:OP1  | 2.31                     | 0.47              |
| 24:BA:2346:A:H2   | 24:BA:2383:G:C2   | 2.32                     | 0.47              |
| 24:BA:2387:U:O5'  | 24:BA:2387:U:H6   | 1.97                     | 0.47              |
| 24:BA:2399:G:C2   | 52:B5:21:TYR:OH   | 2.63                     | 0.47              |
| 24:BA:2406:U:O2'  | 36:BO:67:MET:CG   | 2.62                     | 0.47              |
| 24:BA:2449:U:O4'  | 24:BA:2449:U:P    | 2.72                     | 0.47              |
| 24:BA:2690:C:H6   | 24:BA:2690:C:C3'  | 2.09                     | 0.47              |
| 24:BA:2691:C:O4'  | 24:BA:2872:G:C6   | 2.67                     | 0.47              |
| 24:BA:2748:A:O2'  | 31:BH:63:SER:O    | 2.29                     | 0.47              |
| 24:BA:2827:C:C2'  | 24:BA:2828:C:H5'  | 2.44                     | 0.47              |
| 25:BB:61:G:C2     | 25:BB:62:C:C2     | 3.01                     | 0.47              |
| 26:BC:22:ILE:CD1  | 26:BC:190:ARG:NH2 | 2.76                     | 0.47              |
| 27:BD:33:LEU:CD1  | 27:BD:61:LEU:HD11 | 2.44                     | 0.47              |
| 27:BD:147:LEU:O   | 27:BD:154:LYS:HE3 | 2.13                     | 0.47              |
| 28:BE:40:GLU:C    | 28:BE:41:LYS:CE   | 2.87                     | 0.47              |
| 28:BE:102:VAL:HA  | 28:BE:202:LYS:HZ2 | 1.77                     | 0.47              |
| 28:BE:118:LYS:CA  | 28:BE:118:LYS:CE  | 2.85                     | 0.47              |
| 29:BF:6:VAL:CB    | 29:BF:18:ARG:HD2  | 2.41                     | 0.47              |
| 29:BF:88:VAL:O    | 29:BF:89:VAL:O    | 2.32                     | 0.47              |
| 29:BF:119:ARG:HD3 | 29:BF:120:GLU:OE1 | 2.14                     | 0.47              |
| 29:BF:194:MET:SD  | 29:BF:197:ASP:HB3 | 2.54                     | 0.47              |
| 30:BG:47:LYS:HB3  | 30:BG:72:ARG:CB   | 2.44                     | 0.47              |
| 30:BG:100:TRP:O   | 30:BG:101:ILE:C   | 2.55                     | 0.47              |
| 31:BH:17:VAL:O    | 31:BH:17:VAL:HG13 | 2.14                     | 0.47              |
| 31:BH:101:ARG:HA  | 31:BH:101:ARG:NE  | 2.29                     | 0.47              |
| 32:BK:125:GLU:O   | 32:BK:125:GLU:CD  | 2.57                     | 0.47              |
| 33:BL:17:ALA:O    | 33:BL:38:VAL:CG1  | 2.62                     | 0.47              |
| 34:BM:74:ARG:HG2  | 34:BM:76:SER:CB   | 2.43                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 35:BN:9:GLU:CB    | 35:BN:81:ASP:O    | 2.62                     | 0.47              |
| 35:BN:23:ARG:H    | 35:BN:40:VAL:CG1  | 2.26                     | 0.47              |
| 36:BO:47:ASP:CB   | 36:BO:48:PRO:HD3  | 2.44                     | 0.47              |
| 36:BO:96:THR:CB   | 36:BO:102:ARG:HD3 | 2.44                     | 0.47              |
| 37:BP:63:LYS:NZ   | 37:BP:64:ILE:HG13 | 2.29                     | 0.47              |
| 37:BP:69:PHE:C    | 37:BP:71:ASP:H    | 2.21                     | 0.47              |
| 38:BQ:28:LEU:C    | 38:BQ:28:LEU:CD1  | 2.88                     | 0.47              |
| 38:BQ:50:HIS:O    | 38:BQ:53:HIS:CB   | 2.60                     | 0.47              |
| 39:BR:106:ARG:NH1 | 39:BR:110:LEU:CB  | 2.63                     | 0.47              |
| 41:BT:66:ASN:O    | 41:BT:67:ALA:C    | 2.56                     | 0.47              |
| 41:BT:84:LYS:C    | 41:BT:86:ALA:N    | 2.71                     | 0.47              |
| 41:BT:91:ASP:OD2  | 42:BU:10:LYS:HD3  | 2.14                     | 0.47              |
| 41:BT:93:LYS:CG   | 42:BU:10:LYS:NZ   | 2.68                     | 0.47              |
| 41:BT:108:GLU:C   | 41:BT:111:GLU:HG2 | 2.39                     | 0.47              |
| 43:BV:25:ARG:HA   | 43:BV:71:VAL:CG2  | 2.44                     | 0.47              |
| 43:BV:59:VAL:HA   | 43:BV:63:ASP:O    | 2.14                     | 0.47              |
| 43:BV:88:ARG:CA   | 43:BV:88:ARG:HE   | 2.26                     | 0.47              |
| 44:BW:29:TRP:CD1  | 44:BW:76:ARG:HH21 | 2.31                     | 0.47              |
| 44:BW:72:LYS:O    | 44:BW:73:ARG:CB   | 2.47                     | 0.47              |
| 46:BY:44:PHE:O    | 46:BY:48:PHE:CD1  | 2.67                     | 0.47              |
| 46:BY:57:ILE:HG23 | 46:BY:69:THR:C    | 2.36                     | 0.47              |
| 46:BY:138:GLU:C   | 46:BY:139:VAL:CG2 | 2.87                     | 0.47              |
| 47:BZ:26:TYR:CD1  | 47:BZ:29:GLN:CD   | 2.92                     | 0.47              |
| 48:B1:25:ARG:O    | 48:B1:28:MET:CB   | 2.61                     | 0.47              |
| 49:B2:16:PRO:O    | 49:B2:19:GLN:N    | 2.47                     | 0.47              |
| 49:B2:52:HIS:CG   | 49:B2:53:LEU:N    | 2.82                     | 0.47              |
| 50:B3:14:ILE:HG13 | 50:B3:38:LYS:O    | 2.15                     | 0.47              |
| 50:B3:24:THR:O    | 50:B3:25:TYR:CD2  | 2.66                     | 0.47              |
| 53:B6:43:THR:O    | 53:B6:45:ALA:N    | 2.46                     | 0.47              |
| 1:AA:198:G:C2     | 1:AA:199:G:C8     | 3.03                     | 0.47              |
| 1:AA:208:U:O2     | 1:AA:208:U:H2'    | 2.14                     | 0.47              |
| 1:AA:292:G:OP2    | 1:AA:293:G:N7     | 2.47                     | 0.47              |
| 1:AA:406:G:N2     | 1:AA:437:U:O2     | 2.47                     | 0.47              |
| 1:AA:444:C:O2'    | 1:AA:445:G:H5'    | 2.14                     | 0.47              |
| 1:AA:464:G:N2     | 1:AA:474:G:O6     | 2.47                     | 0.47              |
| 1:AA:520:A:OP2    | 14:AO:51:ALA:CB   | 2.60                     | 0.47              |
| 1:AA:521:G:C6     | 1:AA:529:G:N2     | 2.82                     | 0.47              |
| 1:AA:640:A:H2'    | 1:AA:641:U:H5'    | 1.94                     | 0.47              |
| 1:AA:644:G:H2'    | 1:AA:645:C:H5'    | 1.96                     | 0.47              |
| 1:AA:648:A:C2     | 1:AA:649:G:C8     | 3.03                     | 0.47              |
| 1:AA:718:G:N7     | 1:AA:719:C:N4     | 2.62                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:778:G:C2      | 1:AA:779:C:C6     | 3.02                     | 0.47              |
| 1:AA:849:C:O2'     | 1:AA:850:U:H5'    | 2.14                     | 0.47              |
| 1:AA:862:C:N3      | 1:AA:863:U:H5     | 2.12                     | 0.47              |
| 1:AA:1066:C:C3'    | 1:AA:1067:A:C8    | 2.90                     | 0.47              |
| 1:AA:1151:A:N6     | 1:AA:1152:A:C5    | 2.82                     | 0.47              |
| 1:AA:1165:C:C4     | 1:AA:1166:G:C8    | 3.03                     | 0.47              |
| 1:AA:1212:U:OP2    | 1:AA:1212:U:O4'   | 2.32                     | 0.47              |
| 1:AA:1237:C:C4'    | 1:AA:1334:G:N2    | 2.77                     | 0.47              |
| 1:AA:1368:G:P      | 11:AL:112:LYS:O   | 2.73                     | 0.47              |
| 1:AA:1407:C:O5'    | 1:AA:1407:C:H6    | 1.97                     | 0.47              |
| 1:AA:1409:C:O5'    | 1:AA:1409:C:H6    | 1.96                     | 0.47              |
| 2:A1:10:U:O2'      | 2:A1:12:U:H5      | 1.95                     | 0.47              |
| 2:A1:47:U:H5''     | 2:A1:48:U:OP1     | 2.14                     | 0.47              |
| 3:AC:57:G:OP1      | 30:BG:81:LYS:NZ   | 2.35                     | 0.47              |
| 3:AD:76:A:C2       | 24:BA:2432:A:O4'  | 2.67                     | 0.47              |
| 3:AB:30:G:O6       | 3:AB:41:C:N4      | 2.47                     | 0.47              |
| 4:AE:24:TRP:CZ2    | 4:AE:26:PRO:HA    | 2.49                     | 0.47              |
| 4:AE:92:TYR:CD2    | 4:AE:92:TYR:C     | 2.87                     | 0.47              |
| 4:AE:101:MET:HA    | 4:AE:104:ASN:OD1  | 2.15                     | 0.47              |
| 5:AF:83:ARG:C      | 5:AF:85:ARG:N     | 2.67                     | 0.47              |
| 6:AG:59:ARG:HH22   | 6:AG:66:ARG:NH1   | 2.07                     | 0.47              |
| 6:AG:152:SER:C     | 6:AG:154:ASN:ND2  | 2.72                     | 0.47              |
| 7:AH:82:VAL:HG11   | 7:AH:134:ALA:C    | 2.39                     | 0.47              |
| 8:AI:45:LEU:HD23   | 8:AI:59:TYR:CB    | 2.44                     | 0.47              |
| 9:AJ:72:ARG:HH22   | 9:AJ:138:LYS:NZ   | 1.96                     | 0.47              |
| 10:AK:37:ARG:O     | 10:AK:38:ILE:C    | 2.57                     | 0.47              |
| 10:AK:114:THR:H    | 10:AK:119:LEU:CD2 | 2.26                     | 0.47              |
| 11:AL:113:LYS:HB2  | 11:AL:114:TYR:H   | 1.39                     | 0.47              |
| 12:AM:15:THR:HG21  | 12:AM:93:GLY:O    | 2.14                     | 0.47              |
| 13:AN:80:VAL:N     | 13:AN:104:GLN:NE2 | 2.56                     | 0.47              |
| 13:AN:91:ARG:CD    | 13:AN:95:ILE:HD11 | 2.44                     | 0.47              |
| 14:AO:5:PRO:HB3    | 14:AO:10:LEU:CD1  | 2.40                     | 0.47              |
| 14:AO:34:ARG:N     | 14:AO:84:LEU:HD12 | 2.29                     | 0.47              |
| 14:AO:110:VAL:HG21 | 14:AO:113:ARG:HG3 | 1.95                     | 0.47              |
| 14:AO:126:LYS:HD2  | 14:AO:126:LYS:O   | 2.14                     | 0.47              |
| 15:AP:71:ARG:C     | 15:AP:73:GLU:N    | 2.71                     | 0.47              |
| 15:AP:92:HIS:CE1   | 15:AP:110:ARG:NH2 | 2.83                     | 0.47              |
| 16:AQ:9:LYS:HD3    | 16:AQ:9:LYS:C     | 2.39                     | 0.47              |
| 16:AQ:27:CYS:SG    | 16:AQ:42:ILE:HG13 | 2.54                     | 0.47              |
| 17:AR:81:LEU:O     | 17:AR:85:LEU:HD12 | 2.14                     | 0.47              |
| 18:AS:71:ARG:NH1   | 18:AS:71:ARG:HB2  | 2.29                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 19:AT:5:VAL:CG1   | 19:AT:6:LEU:H     | 2.27                     | 0.47              |
| 19:AT:104:LYS:O   | 19:AT:105:ALA:C   | 2.57                     | 0.47              |
| 20:AU:71:LYS:O    | 20:AU:73:ALA:N    | 2.47                     | 0.47              |
| 21:AV:15:LEU:HD12 | 21:AV:44:MET:CE   | 2.39                     | 0.47              |
| 21:AV:52:TYR:OH   | 21:AV:55:LYS:HA   | 2.13                     | 0.47              |
| 21:AV:78:ARG:O    | 21:AV:79:THR:OG1  | 2.21                     | 0.47              |
| 24:BA:6:A:N3      | 24:BA:7:G:C8      | 2.82                     | 0.47              |
| 24:BA:14:A:H2     | 24:BA:2625:G:O2'  | 1.97                     | 0.47              |
| 24:BA:28:A:N3     | 24:BA:29:U:C4'    | 2.77                     | 0.47              |
| 24:BA:128:C:C4    | 24:BA:129:C:N4    | 2.81                     | 0.47              |
| 24:BA:144:C:H2'   | 24:BA:145:G:C5'   | 2.45                     | 0.47              |
| 24:BA:151:C:C2'   | 24:BA:152:G:C8    | 2.96                     | 0.47              |
| 24:BA:200:U:C4    | 24:BA:201:C:C1'   | 2.96                     | 0.47              |
| 24:BA:282:A:C6    | 24:BA:283:A:H4'   | 2.49                     | 0.47              |
| 24:BA:393:C:O2'   | 24:BA:394:A:H5'   | 2.14                     | 0.47              |
| 24:BA:427:U:O2'   | 24:BA:428:A:C1'   | 2.62                     | 0.47              |
| 24:BA:443:A:C5    | 29:BF:45:ARG:NH2  | 2.82                     | 0.47              |
| 24:BA:468:G:H2'   | 24:BA:469:G:C4'   | 2.43                     | 0.47              |
| 24:BA:569:U:OP1   | 24:BA:945:A:N1    | 2.47                     | 0.47              |
| 24:BA:673:C:N3    | 24:BA:808:G:N2    | 2.62                     | 0.47              |
| 24:BA:730:C:C5'   | 24:BA:761:A:OP1   | 2.63                     | 0.47              |
| 24:BA:740:U:O5'   | 24:BA:1784:A:C2   | 2.67                     | 0.47              |
| 24:BA:781:A:O2'   | 27:BD:222:ARG:CZ  | 2.62                     | 0.47              |
| 24:BA:781:A:O2'   | 27:BD:222:ARG:NH1 | 2.46                     | 0.47              |
| 24:BA:820:A:C2    | 24:BA:943:U:H2'   | 2.48                     | 0.47              |
| 24:BA:900:A:H2'   | 24:BA:901:A:C5'   | 2.44                     | 0.47              |
| 24:BA:903:C:H2'   | 24:BA:904:C:H6    | 1.79                     | 0.47              |
| 24:BA:912:C:C2'   | 24:BA:913:U:H5'   | 2.43                     | 0.47              |
| 24:BA:961:C:N4    | 24:BA:2031:A:H1'  | 2.29                     | 0.47              |
| 24:BA:1022:G:O6   | 34:BM:65:LYS:NZ   | 2.43                     | 0.47              |
| 24:BA:1106:G:H8   | 24:BA:1106:G:O5'  | 1.96                     | 0.47              |
| 24:BA:1169:G:H2'  | 24:BA:1170:G:C1'  | 2.44                     | 0.47              |
| 24:BA:1181:C:H2'  | 24:BA:1182:A:O4'  | 2.14                     | 0.47              |
| 24:BA:1223:C:C2   | 24:BA:1225:C:H5'' | 2.49                     | 0.47              |
| 24:BA:1238:G:N1   | 24:BA:1239:G:C5   | 2.82                     | 0.47              |
| 24:BA:1381:G:O6   | 24:BA:1382:G:C6   | 2.67                     | 0.47              |
| 24:BA:1507:A:N3   | 24:BA:1507:A:C2'  | 2.62                     | 0.47              |
| 24:BA:1676:A:O2'  | 24:BA:1677:A:H5'  | 2.13                     | 0.47              |
| 24:BA:1800:C:C4   | 24:BA:1818:U:C2   | 3.02                     | 0.47              |
| 24:BA:1829:A:H2'  | 24:BA:1829:A:N3   | 2.29                     | 0.47              |
| 24:BA:1913:A:N3   | 24:BA:1916:A:C2   | 2.82                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1936:A:C4   | 24:BA:1945:G:C6    | 3.02                     | 0.47              |
| 24:BA:1970:A:O2'  | 24:BA:1971:A:OP2   | 2.27                     | 0.47              |
| 24:BA:2021:C:O4'  | 24:BA:2021:C:OP1   | 2.32                     | 0.47              |
| 24:BA:2053:G:C2   | 24:BA:2054:A:C8    | 3.02                     | 0.47              |
| 24:BA:2091:U:O2'  | 24:BA:2092:U:OP1   | 2.28                     | 0.47              |
| 24:BA:2115:G:H1   | 24:BA:2118:U:H5''  | 1.77                     | 0.47              |
| 24:BA:2208:U:C3'  | 27:BD:151:LYS:HZ2  | 2.27                     | 0.47              |
| 24:BA:2217:G:C1'  | 27:BD:150:LYS:HZ2  | 2.27                     | 0.47              |
| 24:BA:2371:G:O2'  | 24:BA:2372:G:C1'   | 2.62                     | 0.47              |
| 24:BA:2373:G:HO2' | 24:BA:2374:C:H6    | 1.59                     | 0.47              |
| 24:BA:2380:C:N4   | 24:BA:2381:C:N4    | 2.62                     | 0.47              |
| 24:BA:2416:C:N3   | 24:BA:2417:C:C5    | 2.82                     | 0.47              |
| 24:BA:2458:G:N7   | 24:BA:2490:G:C5    | 2.82                     | 0.47              |
| 24:BA:2471:C:H2'  | 24:BA:2472:G:C5'   | 2.44                     | 0.47              |
| 24:BA:2597:G:C6   | 24:BA:2598:A:C6    | 3.02                     | 0.47              |
| 24:BA:2645:G:O2'  | 24:BA:2732:G:O3'   | 2.29                     | 0.47              |
| 24:BA:2687:U:O2   | 24:BA:2688:U:C6    | 2.60                     | 0.47              |
| 24:BA:2720:U:C3'  | 24:BA:2721:A:C8    | 2.96                     | 0.47              |
| 24:BA:2817:G:C5   | 24:BA:2818:G:N7    | 2.82                     | 0.47              |
| 25:BB:49:C:H2'    | 25:BB:50:G:O4'     | 2.15                     | 0.47              |
| 25:BB:103:U:O2'   | 46:BY:72:ARG:HB2   | 2.15                     | 0.47              |
| 25:BB:116:G:H5'   | 39:BR:53:SER:CB    | 2.44                     | 0.47              |
| 26:BC:68:LEU:HD23 | 26:BC:69:GLY:CA    | 2.44                     | 0.47              |
| 26:BC:68:LEU:HG   | 26:BC:69:GLY:H     | 1.79                     | 0.47              |
| 27:BD:34:VAL:N    | 27:BD:104:TYR:HH   | 2.10                     | 0.47              |
| 27:BD:37:LEU:CD2  | 27:BD:63:ARG:HE    | 2.27                     | 0.47              |
| 27:BD:160:GLY:C   | 27:BD:196:VAL:CG2  | 2.87                     | 0.47              |
| 27:BD:208:LYS:CE  | 27:BD:211:ARG:NE   | 2.78                     | 0.47              |
| 28:BE:71:GLY:C    | 28:BE:72:VAL:HG13  | 2.39                     | 0.47              |
| 28:BE:110:GLY:O   | 38:BQ:4:LEU:HD13   | 2.13                     | 0.47              |
| 29:BF:37:VAL:O    | 29:BF:41:LEU:HG    | 2.14                     | 0.47              |
| 29:BF:44:ARG:O    | 29:BF:45:ARG:O     | 2.32                     | 0.47              |
| 29:BF:162:LEU:HA  | 29:BF:165:ARG:HB3  | 1.95                     | 0.47              |
| 30:BG:41:GLN:NE2  | 30:BG:155:MET:CA   | 2.75                     | 0.47              |
| 30:BG:74:LYS:C    | 30:BG:76:SER:N     | 2.72                     | 0.47              |
| 31:BH:25:LYS:CE   | 31:BH:27:LYS:HZ2   | 2.27                     | 0.47              |
| 31:BH:29:PRO:CD   | 31:BH:30:LYS:H     | 2.27                     | 0.47              |
| 31:BH:102:ALA:HA  | 31:BH:115:VAL:HG12 | 1.94                     | 0.47              |
| 32:BK:4:ILE:HG23  | 32:BK:18:VAL:HG21  | 1.95                     | 0.47              |
| 32:BK:93:THR:C    | 32:BK:95:LYS:N     | 2.71                     | 0.47              |
| 33:BL:10:LEU:CD1  | 33:BL:27:LEU:HD11  | 2.44                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 33:BL:61:ALA:C     | 33:BL:63:ARG:N     | 2.63                     | 0.47              |
| 33:BL:115:LEU:HD12 | 33:BL:118:THR:HA   | 1.95                     | 0.47              |
| 34:BM:26:LEU:O     | 34:BM:30:ILE:CG1   | 2.60                     | 0.47              |
| 34:BM:67:LEU:O     | 34:BM:68:GLU:HG3   | 2.14                     | 0.47              |
| 34:BM:71:ILE:HB    | 34:BM:90:MET:HE2   | 1.95                     | 0.47              |
| 35:BN:1:MET:HG3    | 35:BN:2:ILE:N      | 2.28                     | 0.47              |
| 35:BN:97:ARG:CD    | 35:BN:97:ARG:O     | 2.62                     | 0.47              |
| 36:BO:13:ASN:O     | 36:BO:14:LYS:C     | 2.57                     | 0.47              |
| 37:BP:16:ARG:HG3   | 37:BP:72:LYS:CB    | 2.41                     | 0.47              |
| 37:BP:91:GLU:CD    | 37:BP:91:GLU:N     | 2.72                     | 0.47              |
| 37:BP:99:PRO:HD2   | 37:BP:101:ARG:CZ   | 2.44                     | 0.47              |
| 38:BQ:22:ARG:O     | 38:BQ:26:LYS:HG3   | 2.15                     | 0.47              |
| 38:BQ:96:ARG:HH21  | 38:BQ:117:VAL:HG23 | 1.80                     | 0.47              |
| 39:BR:58:LEU:HD23  | 39:BR:62:LYS:HG3   | 1.95                     | 0.47              |
| 40:BS:30:VAL:HG11  | 40:BS:52:ILE:HD11  | 1.97                     | 0.47              |
| 40:BS:85:LYS:HZ2   | 40:BS:85:LYS:H     | 1.61                     | 0.47              |
| 40:BS:100:TYR:C    | 40:BS:102:ILE:N    | 2.70                     | 0.47              |
| 41:BT:34:LYS:O     | 41:BT:38:THR:OG1   | 2.32                     | 0.47              |
| 41:BT:43:GLY:O     | 41:BT:44:ASN:C     | 2.55                     | 0.47              |
| 41:BT:54:LYS:CA    | 41:BT:54:LYS:CE    | 2.92                     | 0.47              |
| 41:BT:110:VAL:O    | 41:BT:113:ALA:N    | 2.47                     | 0.47              |
| 42:BU:64:HIS:CG    | 42:BU:96:ILE:HG22  | 2.49                     | 0.47              |
| 42:BU:78:LYS:HB2   | 42:BU:83:ARG:O     | 2.14                     | 0.47              |
| 43:BV:13:SER:N     | 43:BV:101:SER:OG   | 2.47                     | 0.47              |
| 43:BV:42:ARG:CG    | 43:BV:43:GLY:H     | 2.26                     | 0.47              |
| 44:BW:35:THR:O     | 44:BW:38:GLU:CB    | 2.62                     | 0.47              |
| 45:BX:72:VAL:HG11  | 45:BX:96:ILE:CG2   | 2.42                     | 0.47              |
| 46:BY:48:PHE:CA    | 46:BY:54:HIS:CE1   | 2.98                     | 0.47              |
| 49:B2:39:ASP:CG    | 49:B2:44:ARG:HD3   | 2.39                     | 0.47              |
| 50:B3:33:VAL:CG1   | 50:B3:35:VAL:CG2   | 2.92                     | 0.47              |
| 53:B6:8:ASN:HD22   | 53:B6:9:ARG:N      | 2.12                     | 0.47              |
| 54:B7:5:LYS:HG2    | 54:B7:7:HIS:HA     | 1.97                     | 0.47              |
| 54:B7:49:VAL:O     | 54:B7:53:PRO:HD3   | 2.14                     | 0.47              |
| 1:AA:44:G:C5       | 1:AA:45:U:C6       | 3.02                     | 0.47              |
| 1:AA:134:A:P       | 1:AA:134:A:H8      | 2.36                     | 0.47              |
| 1:AA:290:C:C6      | 1:AA:290:C:H3'     | 2.49                     | 0.47              |
| 1:AA:321:A:H5''    | 1:AA:1436:U:O4'    | 2.13                     | 0.47              |
| 1:AA:372:C:N4      | 1:AA:389:A:N6      | 2.61                     | 0.47              |
| 1:AA:379:C:C2'     | 1:AA:380:G:H5'     | 2.42                     | 0.47              |
| 1:AA:420:U:HO2'    | 1:AA:421:U:H5      | 1.61                     | 0.47              |
| 1:AA:432:A:C8      | 1:AA:433:C:C5      | 3.02                     | 0.47              |

*Continued on next page...*

Continued from previous page...

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:502:G:O2'    | 1:AA:503:C:H5'    | 2.13                     | 0.47              |
| 1:AA:559:A:C3'    | 1:AA:560:U:H5'    | 2.43                     | 0.47              |
| 1:AA:706:A:C4'    | 13:AN:29:ILE:HD13 | 2.44                     | 0.47              |
| 1:AA:709:G:C4     | 1:AA:710:G:C8     | 3.03                     | 0.47              |
| 1:AA:715:A:H2'    | 1:AA:716:A:O4'    | 2.14                     | 0.47              |
| 1:AA:721:G:H1'    | 1:AA:722:A:N1     | 2.30                     | 0.47              |
| 1:AA:742:G:C2     | 1:AA:743:U:H1'    | 2.49                     | 0.47              |
| 1:AA:761:G:H1'    | 19:AT:103:GLY:O   | 2.13                     | 0.47              |
| 1:AA:862:C:C2     | 1:AA:863:U:C5     | 3.02                     | 0.47              |
| 1:AA:1314:C:OP2   | 21:AV:6:LYS:HA    | 2.14                     | 0.47              |
| 1:AA:1342:C:C5'   | 11:AL:125:TYR:HB2 | 2.44                     | 0.47              |
| 1:AA:1459:C:P     | 22:AW:27:LYS:HZ2  | 2.37                     | 0.47              |
| 3:AC:4:C:C2'      | 3:AC:5:G:O5'      | 2.62                     | 0.47              |
| 3:AC:54:U:C5      | 3:AC:55:U:C4      | 3.02                     | 0.47              |
| 3:AD:14:A:C2      | 3:AD:15:G:N7      | 2.82                     | 0.47              |
| 3:AB:26:A:N6      | 3:AB:44:G:C6      | 2.78                     | 0.47              |
| 4:AE:104:ASN:OD1  | 4:AE:104:ASN:O    | 2.31                     | 0.47              |
| 4:AE:120:ALA:O    | 4:AE:121:LEU:C    | 2.56                     | 0.47              |
| 4:AE:149:LEU:C    | 4:AE:151:GLY:H    | 2.22                     | 0.47              |
| 4:AE:181:PHE:CE1  | 10:AK:70:GLN:NE2  | 2.82                     | 0.47              |
| 5:AF:71:ALA:CA    | 5:AF:105:GLU:HG3  | 2.42                     | 0.47              |
| 5:AF:179:ARG:HG2  | 5:AF:206:GLU:OE1  | 2.13                     | 0.47              |
| 6:AG:14:ARG:HD3   | 6:AG:15:GLU:OE1   | 2.14                     | 0.47              |
| 6:AG:27:TYR:CD2   | 6:AG:27:TYR:O     | 2.68                     | 0.47              |
| 6:AG:32:ALA:O     | 6:AG:37:PRO:HA    | 2.14                     | 0.47              |
| 6:AG:69:GLY:C     | 6:AG:70:ILE:HG12  | 2.39                     | 0.47              |
| 6:AG:102:ASP:HB2  | 6:AG:136:PRO:CA   | 2.44                     | 0.47              |
| 6:AG:121:VAL:HA   | 6:AG:126:ILE:CD1  | 2.36                     | 0.47              |
| 7:AH:94:ALA:HB3   | 7:AH:117:ASP:O    | 2.15                     | 0.47              |
| 7:AH:109:ILE:CG2  | 7:AH:110:LEU:N    | 2.75                     | 0.47              |
| 7:AH:109:ILE:HG12 | 7:AH:139:LEU:HD11 | 1.97                     | 0.47              |
| 7:AH:144:THR:HG22 | 7:AH:146:ALA:CB   | 2.44                     | 0.47              |
| 8:AI:16:GLN:CG    | 8:AI:17:SER:H     | 2.25                     | 0.47              |
| 8:AI:94:GLN:C     | 8:AI:95:GLU:CG    | 2.87                     | 0.47              |
| 9:AJ:15:ASP:OD1   | 9:AJ:18:TYR:N     | 2.47                     | 0.47              |
| 9:AJ:50:ILE:HD13  | 9:AJ:58:PRO:CA    | 2.45                     | 0.47              |
| 9:AJ:123:GLU:OE1  | 9:AJ:134:ALA:CB   | 2.62                     | 0.47              |
| 9:AJ:155:ARG:O    | 9:AJ:156:TRP:HE3  | 1.97                     | 0.47              |
| 10:AK:87:SER:HB2  | 10:AK:91:ARG:O    | 2.14                     | 0.47              |
| 11:AL:10:ARG:HH21 | 11:AL:75:ASP:CG   | 2.22                     | 0.47              |
| 13:AN:44:SER:N    | 13:AN:47:VAL:CG2  | 2.77                     | 0.47              |

Continued on next page...

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 13:AN:85:ARG:HD3  | 13:AN:85:ARG:HA   | 1.56                     | 0.47              |
| 14:AO:24:VAL:HG13 | 14:AO:98:TYR:CZ   | 2.49                     | 0.47              |
| 14:AO:57:LYS:C    | 14:AO:58:VAL:HG23 | 2.39                     | 0.47              |
| 14:AO:102:ARG:HG3 | 14:AO:120:TYR:HA  | 1.97                     | 0.47              |
| 15:AP:37:THR:CG2  | 15:AP:56:LEU:HD22 | 2.45                     | 0.47              |
| 16:AQ:49:HIS:O    | 16:AQ:50:LYS:C    | 2.58                     | 0.47              |
| 18:AS:6:LEU:CG    | 18:AS:17:TYR:HD2  | 2.26                     | 0.47              |
| 18:AS:58:TYR:O    | 18:AS:59:TRP:C    | 2.57                     | 0.47              |
| 19:AT:38:ARG:HE   | 19:AT:38:ARG:HA   | 1.80                     | 0.47              |
| 19:AT:82:MET:C    | 19:AT:85:VAL:HB   | 2.36                     | 0.47              |
| 20:AU:21:LYS:HE2  | 20:AU:23:LYS:HB3  | 1.97                     | 0.47              |
| 22:AW:37:SER:OG   | 22:AW:38:LYS:N    | 2.47                     | 0.47              |
| 22:AW:88:VAL:O    | 22:AW:92:LEU:HG   | 2.14                     | 0.47              |
| 24:BA:60:G:N7     | 24:BA:63:U:C4     | 2.82                     | 0.47              |
| 24:BA:72:U:H1'    | 48:B1:53:ALA:HA   | 1.95                     | 0.47              |
| 24:BA:401:A:C4    | 24:BA:402:A:H8    | 2.32                     | 0.47              |
| 24:BA:419:C:H2'   | 24:BA:420:C:C6    | 2.50                     | 0.47              |
| 24:BA:462:C:C6    | 24:BA:468:G:N2    | 2.82                     | 0.47              |
| 24:BA:543:C:H2'   | 24:BA:544:C:C6    | 2.49                     | 0.47              |
| 24:BA:643:A:O2'   | 24:BA:644:A:P     | 2.73                     | 0.47              |
| 24:BA:653:A:H62   | 24:BA:655:A:C1'   | 2.13                     | 0.47              |
| 24:BA:656:G:C8    | 24:BA:656:G:OP2   | 2.67                     | 0.47              |
| 24:BA:705:A:N6    | 24:BA:727:A:C8    | 2.83                     | 0.47              |
| 24:BA:783:A:H2    | 24:BA:1779:U:C4'  | 2.27                     | 0.47              |
| 24:BA:801:G:O2'   | 24:BA:802:A:P     | 2.73                     | 0.47              |
| 24:BA:860:U:H3'   | 24:BA:860:U:O2    | 2.15                     | 0.47              |
| 24:BA:954:G:C6    | 24:BA:955:C:C2    | 3.02                     | 0.47              |
| 24:BA:1005:C:C5   | 24:BA:1143:A:P    | 3.07                     | 0.47              |
| 24:BA:1152:C:OP1  | 41:BT:81:HIS:ND1  | 2.47                     | 0.47              |
| 24:BA:1256:G:C2'  | 24:BA:1257:C:O5'  | 2.62                     | 0.47              |
| 24:BA:1296:G:C2   | 24:BA:1297:C:C5   | 3.02                     | 0.47              |
| 24:BA:1312:U:H2'  | 24:BA:1313:U:C4'  | 2.41                     | 0.47              |
| 24:BA:1429:G:H2'  | 24:BA:1430:C:O4'  | 2.14                     | 0.47              |
| 24:BA:1513:C:H2'  | 24:BA:1514:U:H5   | 1.79                     | 0.47              |
| 24:BA:1567:A:N1   | 27:BD:85:ASP:HA   | 2.30                     | 0.47              |
| 24:BA:1645:G:OP2  | 24:BA:1645:G:H8   | 1.97                     | 0.47              |
| 24:BA:1664:A:C2'  | 24:BA:1665:A:C8   | 2.92                     | 0.47              |
| 24:BA:1684:C:H2'  | 24:BA:1685:C:H6   | 1.76                     | 0.47              |
| 24:BA:1689:A:H2'  | 24:BA:1690:A:C8   | 2.49                     | 0.47              |
| 24:BA:1757:U:H2'  | 24:BA:1758:G:OP1  | 2.15                     | 0.47              |
| 24:BA:1769:G:H2'  | 24:BA:1770:G:H8   | 1.79                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1802:A:H5'   | 24:BA:1803:A:P     | 2.54                     | 0.47              |
| 24:BA:1857:G:H2'   | 24:BA:1858:G:C8    | 2.49                     | 0.47              |
| 24:BA:1990:C:C4    | 24:BA:1991:U:C4    | 3.03                     | 0.47              |
| 24:BA:2127:G:C5    | 24:BA:2162:G:N1    | 2.82                     | 0.47              |
| 24:BA:2176:A:O2'   | 26:BC:215:THR:HG21 | 2.14                     | 0.47              |
| 24:BA:2247:A:H8    | 24:BA:2247:A:O5'   | 1.97                     | 0.47              |
| 24:BA:2306:C:N4    | 30:BG:45:GLU:HG2   | 2.30                     | 0.47              |
| 24:BA:2310:A:H2    | 30:BG:83:ARG:NH2   | 2.10                     | 0.47              |
| 24:BA:2324:C:O2'   | 24:BA:2325:G:P     | 2.72                     | 0.47              |
| 24:BA:2371:G:H2'   | 24:BA:2372:G:C8    | 2.49                     | 0.47              |
| 24:BA:2402:C:C5'   | 24:BA:2403:C:OP1   | 2.57                     | 0.47              |
| 24:BA:2435:A:C2    | 24:BA:2436:G:N9    | 2.82                     | 0.47              |
| 24:BA:2435:A:H2'   | 24:BA:2436:G:O5'   | 2.14                     | 0.47              |
| 24:BA:2549:G:C2'   | 24:BA:2550:G:H5'   | 2.44                     | 0.47              |
| 24:BA:2682:U:C4    | 28:BE:21:VAL:HG11  | 2.49                     | 0.47              |
| 24:BA:2696:U:H2'   | 24:BA:2697:G:H8    | 1.79                     | 0.47              |
| 24:BA:2751:G:O4'   | 31:BH:6:ARG:NH2    | 2.47                     | 0.47              |
| 24:BA:2795:G:N3    | 24:BA:2795:G:C2'   | 2.72                     | 0.47              |
| 24:BA:2822:G:C8    | 38:BQ:4:LEU:HD21   | 2.49                     | 0.47              |
| 24:BA:2877:G:N2    | 24:BA:2878:U:C2    | 2.82                     | 0.47              |
| 25:BB:8:U:C2       | 25:BB:9:G:H8       | 2.30                     | 0.47              |
| 25:BB:12:C:O5'     | 47:BZ:74:ARG:NE    | 2.46                     | 0.47              |
| 25:BB:37:C:N3      | 25:BB:48:A:O2'     | 2.47                     | 0.47              |
| 26:BC:8:ARG:NH1    | 26:BC:11:LEU:CD2   | 2.78                     | 0.47              |
| 27:BD:18:VAL:HG12  | 27:BD:18:VAL:O     | 2.15                     | 0.47              |
| 27:BD:65:ILE:HG23  | 27:BD:104:TYR:O    | 2.14                     | 0.47              |
| 27:BD:85:ASP:CG    | 27:BD:87:ASN:ND2   | 2.72                     | 0.47              |
| 27:BD:85:ASP:OD2   | 27:BD:88:ARG:NE    | 2.37                     | 0.47              |
| 27:BD:118:VAL:O    | 27:BD:129:ASN:CB   | 2.63                     | 0.47              |
| 27:BD:143:HIS:CA   | 27:BD:145:VAL:HG23 | 2.44                     | 0.47              |
| 27:BD:147:LEU:HD23 | 27:BD:147:LEU:N    | 2.24                     | 0.47              |
| 27:BD:246:PRO:CG   | 27:BD:252:TRP:HA   | 2.44                     | 0.47              |
| 28:BE:8:LYS:HB3    | 28:BE:24:THR:CG2   | 2.43                     | 0.47              |
| 28:BE:53:PRO:HD2   | 28:BE:74:PRO:HA    | 1.97                     | 0.47              |
| 29:BF:12:LEU:O     | 29:BF:14:PRO:N     | 2.48                     | 0.47              |
| 29:BF:106:ARG:HH21 | 29:BF:106:ARG:CB   | 2.27                     | 0.47              |
| 30:BG:14:GLU:O     | 30:BG:17:PRO:HG2   | 2.15                     | 0.47              |
| 30:BG:93:THR:O     | 30:BG:94:LEU:C     | 2.58                     | 0.47              |
| 31:BH:9:ILE:HD13   | 31:BH:73:ALA:HB1   | 1.95                     | 0.47              |
| 31:BH:43:VAL:CG1   | 31:BH:44:VAL:H     | 2.25                     | 0.47              |
| 31:BH:98:LEU:HD22  | 31:BH:100:GLY:C    | 2.39                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 31:BH:98:LEU:HD22 | 31:BH:100:GLY:H   | 1.79                     | 0.47              |
| 32:BK:7:GLU:O     | 32:BK:12:LEU:HA   | 2.13                     | 0.47              |
| 33:BL:19:PRO:HG2  | 33:BL:22:PRO:HG2  | 1.96                     | 0.47              |
| 33:BL:42:ASN:O    | 33:BL:46:ALA:CB   | 2.61                     | 0.47              |
| 33:BL:79:ARG:HG2  | 33:BL:134:MET:HE2 | 1.94                     | 0.47              |
| 34:BM:15:LEU:HD11 | 34:BM:137:LYS:O   | 2.14                     | 0.47              |
| 34:BM:47:ALA:O    | 34:BM:48:MET:O    | 2.33                     | 0.47              |
| 34:BM:104:LYS:O   | 34:BM:106:MET:N   | 2.47                     | 0.47              |
| 35:BN:11:ALA:C    | 35:BN:97:ARG:HH22 | 2.22                     | 0.47              |
| 35:BN:113:LYS:O   | 35:BN:114:ILE:C   | 2.58                     | 0.47              |
| 36:BO:126:VAL:HB  | 36:BO:146:VAL:CB  | 2.43                     | 0.47              |
| 38:BQ:4:LEU:O     | 38:BQ:5:LYS:C     | 2.58                     | 0.47              |
| 38:BQ:90:ARG:HB2  | 38:BQ:94:TYR:CE2  | 2.49                     | 0.47              |
| 41:BT:37:GLU:O    | 41:BT:39:LEU:N    | 2.47                     | 0.47              |
| 41:BT:50:ARG:NH1  | 41:BT:50:ARG:CB   | 2.57                     | 0.47              |
| 44:BW:90:GLU:O    | 44:BW:93:GLU:HG2  | 2.14                     | 0.47              |
| 45:BX:10:GLY:N    | 45:BX:110:GLU:OE2 | 2.48                     | 0.47              |
| 45:BX:15:VAL:HG12 | 45:BX:16:ALA:N    | 2.30                     | 0.47              |
| 46:BY:1:MET:HE3   | 46:BY:2:GLU:O     | 2.15                     | 0.47              |
| 46:BY:95:PRO:HG2  | 46:BY:131:ARG:CD  | 2.44                     | 0.47              |
| 46:BY:102:LEU:HB2 | 46:BY:124:ILE:CA  | 2.41                     | 0.47              |
| 50:B3:28:LYS:CB   | 50:B3:29:PRO:CD   | 2.91                     | 0.47              |
| 50:B3:48:ARG:H    | 50:B3:52:THR:CG2  | 2.27                     | 0.47              |
| 51:B4:45:VAL:HB   | 51:B4:50:GLY:C    | 2.38                     | 0.47              |
| 52:B5:17:LYS:HZ2  | 52:B5:50:ARG:HB2  | 1.76                     | 0.47              |
| 52:B5:19:ARG:CG   | 52:B5:43:CYS:SG   | 3.02                     | 0.47              |
| 54:B7:54:GLU:O    | 54:B7:57:ARG:N    | 2.48                     | 0.47              |
| 55:B8:7:VAL:O     | 55:B8:7:VAL:HG12  | 2.13                     | 0.47              |
| 1:AA:30:U:O2'     | 1:AA:31:G:P       | 2.71                     | 0.47              |
| 1:AA:109:A:N6     | 1:AA:326:G:N1     | 2.62                     | 0.47              |
| 1:AA:122:G:H8     | 1:AA:122:G:O5'    | 1.97                     | 0.47              |
| 1:AA:265:G:N9     | 1:AA:267:C:C5     | 2.83                     | 0.47              |
| 1:AA:276:G:O2'    | 1:AA:277:C:H5'    | 2.14                     | 0.47              |
| 1:AA:303:A:O2'    | 1:AA:304:U:H5'    | 2.15                     | 0.47              |
| 1:AA:393:A:N6     | 1:AA:394:G:O6     | 2.47                     | 0.47              |
| 1:AA:511:C:O2'    | 1:AA:512:U:C6     | 2.52                     | 0.47              |
| 1:AA:551:U:C5'    | 14:AO:119:LYS:NZ  | 2.61                     | 0.47              |
| 1:AA:587:G:N2     | 1:AA:754:C:OP2    | 2.47                     | 0.47              |
| 1:AA:657:G:N2     | 1:AA:750:G:C8     | 2.83                     | 0.47              |
| 1:AA:706:A:H4'    | 13:AN:22:HIS:ND1  | 2.30                     | 0.47              |
| 1:AA:721:G:OP2    | 20:AU:63:GLN:HG2  | 2.15                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:790:A:OP1    | 3:AC:38:A:O2'     | 2.25                     | 0.47              |
| 1:AA:813:U:OP1    | 1:AA:904:C:H5'    | 2.14                     | 0.47              |
| 1:AA:889:A:H4'    | 1:AA:890:G:C5'    | 2.44                     | 0.47              |
| 1:AA:900:A:H62    | 1:AA:901:A:N6     | 2.13                     | 0.47              |
| 1:AA:933:G:H8     | 1:AA:933:G:O5'    | 1.98                     | 0.47              |
| 1:AA:1027:C:OP2   | 1:AA:1028:C:OP2   | 2.32                     | 0.47              |
| 1:AA:1134:G:C6    | 1:AA:1141:C:N4    | 2.82                     | 0.47              |
| 1:AA:1171:G:HO2'  | 1:AA:1172:C:H6    | 1.58                     | 0.47              |
| 1:AA:1214:C:H4'   | 1:AA:1215:G:OP2   | 2.12                     | 0.47              |
| 1:AA:1284:C:N1    | 1:AA:1285:A:N7    | 2.61                     | 0.47              |
| 1:AA:1351:U:C2    | 1:AA:1352:C:C5    | 3.03                     | 0.47              |
| 1:AA:1497:G:H2'   | 1:AA:1498:U:C6    | 2.49                     | 0.47              |
| 1:AA:1506:U:H3'   | 1:AA:1507:A:C5'   | 2.45                     | 0.47              |
| 3:AC:75:C:OP2     | 24:BA:2602:A:H8   | 1.98                     | 0.47              |
| 4:AE:80:ILE:CG2   | 4:AE:81:VAL:N     | 2.78                     | 0.47              |
| 4:AE:136:VAL:C    | 4:AE:139:LYS:HG2  | 2.40                     | 0.47              |
| 4:AE:168:THR:O    | 4:AE:169:LYS:HB2  | 2.15                     | 0.47              |
| 5:AF:6:HIS:CB     | 16:AQ:49:HIS:ND1  | 2.77                     | 0.47              |
| 5:AF:33:LEU:CD2   | 5:AF:36:ASP:OD1   | 2.63                     | 0.47              |
| 5:AF:63:ASN:O     | 5:AF:64:VAL:HB    | 2.15                     | 0.47              |
| 5:AF:84:ILE:CG1   | 5:AF:101:LEU:HD13 | 2.43                     | 0.47              |
| 6:AG:3:ARG:HG3    | 6:AG:118:ARG:NE   | 2.30                     | 0.47              |
| 6:AG:83:SER:N     | 6:AG:89:THR:HG23  | 2.29                     | 0.47              |
| 6:AG:120:LEU:O    | 6:AG:121:VAL:C    | 2.57                     | 0.47              |
| 7:AH:17:ALA:CA    | 7:AH:26:PHE:HD2   | 2.27                     | 0.47              |
| 7:AH:33:VAL:C     | 7:AH:34:VAL:HG22  | 2.38                     | 0.47              |
| 7:AH:37:ARG:HG2   | 7:AH:111:GLU:O    | 2.14                     | 0.47              |
| 7:AH:50:GLU:O     | 7:AH:51:VAL:C     | 2.57                     | 0.47              |
| 8:AI:76:ALA:CB    | 8:AI:80:ARG:CZ    | 2.92                     | 0.47              |
| 9:AJ:15:ASP:HB3   | 9:AJ:19:GLY:N     | 2.30                     | 0.47              |
| 9:AJ:47:CYS:HA    | 9:AJ:50:ILE:CG1   | 2.43                     | 0.47              |
| 9:AJ:94:ARG:HH11  | 9:AJ:94:ARG:C     | 2.22                     | 0.47              |
| 10:AK:6:ILE:HG23  | 10:AK:85:ARG:NH1  | 2.30                     | 0.47              |
| 10:AK:6:ILE:HD12  | 10:AK:85:ARG:CZ   | 2.44                     | 0.47              |
| 12:AM:47:PHE:CE2  | 16:AQ:37:PHE:CZ   | 3.02                     | 0.47              |
| 12:AM:49:VAL:O    | 12:AM:60:ARG:CB   | 2.62                     | 0.47              |
| 13:AN:60:ALA:O    | 13:AN:61:ALA:C    | 2.58                     | 0.47              |
| 13:AN:106:LYS:CG  | 13:AN:107:SER:N   | 2.77                     | 0.47              |
| 14:AO:119:LYS:O   | 14:AO:120:TYR:HB2 | 2.15                     | 0.47              |
| 14:AO:126:LYS:HZ3 | 14:AO:128:ALA:H   | 1.59                     | 0.47              |
| 15:AP:2:ALA:HB3   | 15:AP:4:ILE:CD1   | 2.41                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 15:AP:3:ARG:NE    | 30:BG:140:ILE:HB  | 2.30                     | 0.47              |
| 15:AP:66:LEU:CA   | 15:AP:70:LEU:HB2  | 2.45                     | 0.47              |
| 17:AR:34:LEU:HD12 | 17:AR:38:ARG:NE   | 2.29                     | 0.47              |
| 20:AU:70:ILE:O    | 20:AU:74:ARG:CD   | 2.59                     | 0.47              |
| 20:AU:74:ARG:NH1  | 20:AU:81:PHE:CB   | 2.78                     | 0.47              |
| 20:AU:74:ARG:H    | 20:AU:74:ARG:CD   | 2.28                     | 0.47              |
| 21:AV:71:LEU:O    | 21:AV:72:GLY:C    | 2.54                     | 0.47              |
| 22:AW:98:PRO:O    | 22:AW:99:LEU:O    | 2.32                     | 0.47              |
| 24:BA:7:G:H2'     | 24:BA:8:A:C8      | 2.47                     | 0.47              |
| 24:BA:116:C:C2'   | 24:BA:117:G:O5'   | 2.62                     | 0.47              |
| 24:BA:215:G:C4'   | 24:BA:216:A:H4'   | 2.44                     | 0.47              |
| 24:BA:245:G:C6    | 24:BA:246:C:C5    | 3.03                     | 0.47              |
| 24:BA:295:G:N2    | 24:BA:344:G:C1'   | 2.78                     | 0.47              |
| 24:BA:301:G:C8    | 24:BA:317:G:N2    | 2.83                     | 0.47              |
| 24:BA:364:C:H2'   | 24:BA:365:C:H6    | 1.62                     | 0.47              |
| 24:BA:487:C:H3'   | 24:BA:487:C:H6    | 1.80                     | 0.47              |
| 24:BA:500:G:H2'   | 24:BA:501:A:C3'   | 2.43                     | 0.47              |
| 24:BA:629:G:OP1   | 24:BA:649:G:O2'   | 2.12                     | 0.47              |
| 24:BA:857:C:O2'   | 47:BZ:23:VAL:CB   | 2.63                     | 0.47              |
| 24:BA:894:C:C2    | 24:BA:895:U:C5    | 3.02                     | 0.47              |
| 24:BA:900:A:H8    | 24:BA:901:A:C8    | 2.26                     | 0.47              |
| 24:BA:956:G:P     | 37:BP:87:LYS:HG3  | 2.54                     | 0.47              |
| 24:BA:969:U:N3    | 24:BA:970:C:C6    | 2.82                     | 0.47              |
| 24:BA:994:C:O2    | 24:BA:996:A:C8    | 2.68                     | 0.47              |
| 24:BA:1009:A:N3   | 24:BA:1153:C:O2'  | 2.33                     | 0.47              |
| 24:BA:1044:G:H21  | 24:BA:1111:A:C4'  | 2.26                     | 0.47              |
| 24:BA:1186:G:H2'  | 24:BA:1187:G:O4'  | 2.14                     | 0.47              |
| 24:BA:1259:G:C4   | 24:BA:1260:G:C8   | 3.03                     | 0.47              |
| 24:BA:1294:U:H2'  | 24:BA:1295:C:H5'  | 1.96                     | 0.47              |
| 24:BA:1439:A:C8   | 24:BA:1440:G:C8   | 3.03                     | 0.47              |
| 24:BA:1475:G:C8   | 24:BA:1517:G:N2   | 2.83                     | 0.47              |
| 24:BA:1517:G:H2'  | 24:BA:1518:C:O4'  | 2.14                     | 0.47              |
| 24:BA:1635:G:C8   | 24:BA:1635:G:O5'  | 2.67                     | 0.47              |
| 24:BA:1637:A:C6   | 24:BA:1638:C:C4   | 3.03                     | 0.47              |
| 24:BA:1706:U:N3   | 24:BA:1757:U:H5'' | 2.21                     | 0.47              |
| 24:BA:1774:C:H5   | 24:BA:1775:U:C5   | 2.26                     | 0.47              |
| 24:BA:1809:A:H2'  | 24:BA:1810:A:C5'  | 2.35                     | 0.47              |
| 24:BA:1915:U:OP2  | 24:BA:1915:U:C3'  | 2.62                     | 0.47              |
| 24:BA:1935:G:C2   | 24:BA:1962:C:C2   | 3.02                     | 0.47              |
| 24:BA:1949:G:C8   | 24:BA:1950:G:C8   | 3.03                     | 0.47              |
| 24:BA:2048:G:N2   | 24:BA:2049:G:C4   | 2.82                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2063:C:C3'   | 24:BA:2064:C:C5'   | 2.87                     | 0.47              |
| 24:BA:2088:G:N1    | 24:BA:2089:U:C2    | 2.83                     | 0.47              |
| 24:BA:2095:C:C2'   | 24:BA:2096:U:H5'   | 2.45                     | 0.47              |
| 24:BA:2113:U:H3    | 24:BA:2169:A:H61   | 1.58                     | 0.47              |
| 24:BA:2168:G:N2    | 24:BA:2171:A:C8    | 2.82                     | 0.47              |
| 24:BA:2226:C:C2'   | 24:BA:2227:A:H5'   | 2.44                     | 0.47              |
| 24:BA:2246:G:H2'   | 24:BA:2247:A:N7    | 2.29                     | 0.47              |
| 24:BA:2246:G:N2    | 24:BA:2247:A:C2    | 2.83                     | 0.47              |
| 24:BA:2251:G:C2    | 24:BA:2450:A:H1'   | 2.49                     | 0.47              |
| 24:BA:2278:A:C2    | 24:BA:2279:G:C4    | 3.03                     | 0.47              |
| 24:BA:2285:C:H1'   | 24:BA:2288:A:C5    | 2.49                     | 0.47              |
| 24:BA:2288:A:H5'   | 24:BA:2289:G:OP2   | 2.15                     | 0.47              |
| 24:BA:2367:G:O6    | 24:BA:2382:G:O6    | 2.33                     | 0.47              |
| 24:BA:2482:G:H2'   | 24:BA:2483:C:O4'   | 2.14                     | 0.47              |
| 24:BA:2505:G:O2'   | 24:BA:2506:U:H5''  | 2.14                     | 0.47              |
| 24:BA:2601:C:C2    | 24:BA:2603:G:N7    | 2.82                     | 0.47              |
| 24:BA:2619:C:C5'   | 28:BE:152:LYS:CA   | 2.90                     | 0.47              |
| 24:BA:2824:C:C4    | 24:BA:2825:C:C2    | 3.03                     | 0.47              |
| 24:BA:2839:G:C5    | 24:BA:2840:C:C4    | 3.03                     | 0.47              |
| 25:BB:16:G:C5      | 25:BB:17:C:C5      | 3.02                     | 0.47              |
| 27:BD:54:ARG:HB2   | 27:BD:218:ARG:HD2  | 1.96                     | 0.47              |
| 27:BD:79:VAL:HG12  | 27:BD:81:ALA:N     | 2.28                     | 0.47              |
| 27:BD:117:VAL:HG13 | 27:BD:129:ASN:CA   | 2.45                     | 0.47              |
| 27:BD:136:ILE:HB   | 27:BD:168:ARG:CZ   | 2.42                     | 0.47              |
| 28:BE:8:LYS:HD2    | 28:BE:9:VAL:HG22   | 1.91                     | 0.47              |
| 28:BE:59:VAL:O     | 28:BE:62:PRO:HD2   | 2.14                     | 0.47              |
| 28:BE:102:VAL:CG2  | 28:BE:200:GLU:OE1  | 2.61                     | 0.47              |
| 28:BE:136:ARG:NH2  | 28:BE:137:HIS:HA   | 2.29                     | 0.47              |
| 29:BF:35:GLU:CA    | 29:BF:38:ARG:HD2   | 2.44                     | 0.47              |
| 29:BF:181:LEU:O    | 29:BF:182:ASN:HB3  | 2.13                     | 0.47              |
| 30:BG:35:GLU:HG2   | 30:BG:36:LYS:N     | 2.28                     | 0.47              |
| 31:BH:31:GLY:HA2   | 31:BH:136:ILE:HD11 | 1.96                     | 0.47              |
| 31:BH:105:LEU:CG   | 31:BH:113:VAL:HG11 | 2.44                     | 0.47              |
| 31:BH:156:ALA:C    | 31:BH:157:TYR:CG   | 2.92                     | 0.47              |
| 32:BK:10:GLU:C     | 32:BK:11:ASN:CG    | 2.83                     | 0.47              |
| 32:BK:63:ALA:HB1   | 32:BK:67:ARG:HH21  | 1.78                     | 0.47              |
| 32:BK:117:GLU:H    | 32:BK:117:GLU:CD   | 2.17                     | 0.47              |
| 33:BL:54:PRO:HG3   | 33:BL:72:PRO:HA    | 1.95                     | 0.47              |
| 34:BM:116:LEU:C    | 34:BM:116:LEU:CD2  | 2.86                     | 0.47              |
| 34:BM:139:GLU:C    | 34:BM:140:VAL:HG23 | 2.38                     | 0.47              |
| 35:BN:1:MET:SD     | 35:BN:2:ILE:HG12   | 2.55                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 35:BN:87:ILE:O     | 35:BN:88:ASN:C     | 2.56                     | 0.47              |
| 36:BO:72:PRO:CB    | 36:BO:111:ARG:CB   | 2.74                     | 0.47              |
| 36:BO:84:ASN:C     | 36:BO:85:LEU:HD12  | 2.39                     | 0.47              |
| 36:BO:114:ILE:HD11 | 36:BO:123:LEU:CG   | 2.44                     | 0.47              |
| 37:BP:79:LEU:O     | 37:BP:80:GLU:CB    | 2.63                     | 0.47              |
| 37:BP:115:MET:C    | 37:BP:119:ARG:HG3  | 2.39                     | 0.47              |
| 37:BP:134:ARG:NE   | 37:BP:137:TYR:N    | 2.62                     | 0.47              |
| 38:BQ:28:LEU:HD22  | 38:BQ:34:ILE:HG12  | 1.97                     | 0.47              |
| 38:BQ:102:GLU:OE2  | 38:BQ:102:GLU:HA   | 2.14                     | 0.47              |
| 39:BR:39:ILE:HB    | 39:BR:48:LEU:HB2   | 1.97                     | 0.47              |
| 39:BR:72:ALA:O     | 39:BR:73:LEU:C     | 2.57                     | 0.47              |
| 40:BS:26:ASP:OD2   | 40:BS:100:TYR:CE2  | 2.68                     | 0.47              |
| 42:BU:6:LYS:CE     | 42:BU:10:LYS:HB3   | 2.44                     | 0.47              |
| 42:BU:22:VAL:O     | 42:BU:93:GLU:CB    | 2.62                     | 0.47              |
| 45:BX:29:GLU:CD    | 45:BX:32:PRO:HG2   | 2.37                     | 0.47              |
| 45:BX:49:VAL:N     | 45:BX:56:PRO:HG3   | 2.29                     | 0.47              |
| 45:BX:98:VAL:C     | 45:BX:99:CYS:SG    | 2.96                     | 0.47              |
| 46:BY:111:VAL:C    | 46:BY:113:ALA:N    | 2.72                     | 0.47              |
| 46:BY:138:GLU:C    | 46:BY:139:VAL:HG23 | 2.39                     | 0.47              |
| 46:BY:151:HIS:HB3  | 46:BY:170:THR:CA   | 2.44                     | 0.47              |
| 46:BY:151:HIS:CD2  | 46:BY:170:THR:N    | 2.83                     | 0.47              |
| 47:BZ:27:GLU:HA    | 47:BZ:67:VAL:HG11  | 1.96                     | 0.47              |
| 49:B2:26:LEU:HG    | 49:B2:35:ARG:HH12  | 1.73                     | 0.47              |
| 50:B3:7:PRO:HG2    | 50:B3:60:GLN:CG    | 2.44                     | 0.47              |
| 50:B3:50:VAL:O     | 50:B3:51:ASP:CB    | 2.62                     | 0.47              |
| 51:B4:56:LYS:CG    | 51:B4:57:VAL:HG13  | 2.44                     | 0.47              |
| 54:B7:5:LYS:HE3    | 54:B7:10:ALA:HB3   | 1.96                     | 0.47              |
| 55:B8:1:MET:H1     | 55:B8:33:LYS:HB2   | 1.79                     | 0.47              |
| 1:AA:50:A:C2       | 1:AA:360:A:O2'     | 2.64                     | 0.47              |
| 1:AA:60:A:HO2'     | 1:AA:61:G:P        | 2.37                     | 0.47              |
| 1:AA:115:G:O2'     | 1:AA:116:A:P       | 2.72                     | 0.47              |
| 1:AA:230:G:H5'     | 18:AS:23:ASP:OD2   | 2.14                     | 0.47              |
| 1:AA:237:C:OP1     | 19:AT:40:LYS:CE    | 2.62                     | 0.47              |
| 1:AA:261:U:O4      | 22:AW:79:ARG:NH2   | 2.46                     | 0.47              |
| 1:AA:279:A:C2      | 19:AT:98:LEU:HG    | 2.47                     | 0.47              |
| 1:AA:443:C:C2      | 1:AA:492:G:C2      | 3.02                     | 0.47              |
| 1:AA:524:G:H2'     | 1:AA:525:C:O4'     | 2.15                     | 0.47              |
| 1:AA:575:G:C6      | 1:AA:821:G:N7      | 2.83                     | 0.47              |
| 1:AA:622:A:N3      | 1:AA:623:C:O4'     | 2.48                     | 0.47              |
| 1:AA:627:G:H2'     | 1:AA:628:G:C8      | 2.47                     | 0.47              |
| 1:AA:667:G:H4'     | 17:AR:51:HIS:CG    | 2.49                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:767:A:N6     | 1:AA:813:U:C2      | 2.83                     | 0.47              |
| 1:AA:877:C:H2'    | 1:AA:878:G:C8      | 2.50                     | 0.47              |
| 1:AA:993:G:N1     | 1:AA:1046:A:C6     | 2.83                     | 0.47              |
| 1:AA:997:U:C4     | 1:AA:998:G:N7      | 2.83                     | 0.47              |
| 1:AA:1005:A:C5    | 1:AA:1026:G:N2     | 2.82                     | 0.47              |
| 1:AA:1150:U:H5'   | 1:AA:1280:A:H2     | 1.76                     | 0.47              |
| 1:AA:1161:C:O2    | 1:AA:1162:C:C5     | 2.67                     | 0.47              |
| 1:AA:1275:A:O2'   | 1:AA:1276:G:H5'    | 2.14                     | 0.47              |
| 1:AA:1301:U:O4    | 1:AA:1303:C:C2     | 2.68                     | 0.47              |
| 1:AA:1308:U:H2'   | 1:AA:1309:G:C8     | 2.49                     | 0.47              |
| 1:AA:1327:C:O2'   | 1:AA:1328:C:H5'    | 2.15                     | 0.47              |
| 1:AA:1390:U:C2    | 1:AA:1391:U:C5     | 3.03                     | 0.47              |
| 1:AA:1443:G:O2'   | 1:AA:1447:G:OP1    | 2.33                     | 0.47              |
| 2:A1:22:C:C2'     | 2:A1:23:A:C8       | 2.91                     | 0.47              |
| 2:A1:39:U:O3'     | 2:A1:40:U:C6       | 2.67                     | 0.47              |
| 3:AD:66:U:H2'     | 3:AD:67:C:C6       | 2.49                     | 0.47              |
| 4:AE:15:VAL:O     | 4:AE:16:HIS:CB     | 2.61                     | 0.47              |
| 5:AF:180:ALA:HB1  | 5:AF:203:PHE:HE1   | 1.80                     | 0.47              |
| 6:AG:60:GLU:N     | 6:AG:63:LYS:HZ2    | 2.07                     | 0.47              |
| 6:AG:77:ASN:O     | 6:AG:78:LEU:C      | 2.57                     | 0.47              |
| 6:AG:133:VAL:HG21 | 6:AG:138:TYR:CE1   | 2.50                     | 0.47              |
| 7:AH:144:THR:C    | 7:AH:146:ALA:N     | 2.68                     | 0.47              |
| 9:AJ:95:ARG:O     | 9:AJ:97:GLN:N      | 2.47                     | 0.47              |
| 10:AK:5:PRO:HA    | 10:AK:8:ASP:CB     | 2.42                     | 0.47              |
| 10:AK:14:ARG:HB3  | 10:AK:14:ARG:CZ    | 2.42                     | 0.47              |
| 10:AK:92:ARG:N    | 10:AK:92:ARG:CD    | 2.75                     | 0.47              |
| 10:AK:118:VAL:C   | 10:AK:119:LEU:HD22 | 2.40                     | 0.47              |
| 12:AM:46:ARG:NH1  | 16:AQ:59:ALA:CB    | 2.77                     | 0.47              |
| 12:AM:80:LYS:HD3  | 12:AM:80:LYS:O     | 2.15                     | 0.47              |
| 14:AO:7:ILE:O     | 14:AO:8:ASN:C      | 2.58                     | 0.47              |
| 14:AO:9:GLN:O     | 14:AO:10:LEU:C     | 2.57                     | 0.47              |
| 14:AO:86:ARG:HD3  | 14:AO:101:VAL:HG11 | 1.96                     | 0.47              |
| 14:AO:117:ARG:NH1 | 14:AO:117:ARG:CG   | 2.74                     | 0.47              |
| 15:AP:15:VAL:HG11 | 15:AP:34:LEU:HD21  | 1.96                     | 0.47              |
| 17:AR:33:THR:O    | 17:AR:37:ASN:ND2   | 2.46                     | 0.47              |
| 18:AS:32:TYR:C    | 18:AS:34:GLU:N     | 2.70                     | 0.47              |
| 19:AT:40:LYS:NZ   | 19:AT:42:TYR:HE1   | 2.12                     | 0.47              |
| 21:AV:80:TYR:CE1  | 21:AV:81:ARG:HG3   | 2.49                     | 0.47              |
| 24:BA:195:A:H8    | 24:BA:195:A:O5'    | 1.97                     | 0.47              |
| 24:BA:204:A:C4    | 24:BA:206:U:N3     | 2.83                     | 0.47              |
| 24:BA:226:G:H21   | 24:BA:228:A:N6     | 2.11                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:245:G:C5     | 24:BA:246:C:C5    | 2.96                     | 0.47              |
| 24:BA:262:A:H2'    | 24:BA:263:C:C6    | 2.50                     | 0.47              |
| 24:BA:265:A:H2     | 24:BA:281:G:O5'   | 1.97                     | 0.47              |
| 24:BA:270(W):G:C4  | 24:BA:270(X):G:H8 | 2.32                     | 0.47              |
| 24:BA:298:G:O6     | 24:BA:338:G:O4'   | 2.32                     | 0.47              |
| 24:BA:389:G:OP2    | 50:B3:24:THR:CG2  | 2.58                     | 0.47              |
| 24:BA:514:A:C2     | 24:BA:515:A:C1'   | 2.94                     | 0.47              |
| 24:BA:629:G:C5'    | 24:BA:649:G:N3    | 2.77                     | 0.47              |
| 24:BA:640:C:C2'    | 24:BA:641:C:H5'   | 2.37                     | 0.47              |
| 24:BA:653:A:H5'    | 24:BA:654:A:H4'   | 1.96                     | 0.47              |
| 24:BA:669:G:C5     | 24:BA:801:G:C6    | 3.03                     | 0.47              |
| 24:BA:679:C:O2     | 24:BA:680:G:C8    | 2.67                     | 0.47              |
| 24:BA:783:A:H8     | 27:BD:227:ASN:ND2 | 2.13                     | 0.47              |
| 24:BA:819:A:C2     | 24:BA:820:A:C5    | 3.02                     | 0.47              |
| 24:BA:831:G:N3     | 24:BA:831:G:H2'   | 2.29                     | 0.47              |
| 24:BA:867:C:N3     | 24:BA:912:C:O2'   | 2.45                     | 0.47              |
| 24:BA:882:G:C2     | 24:BA:895:U:C2    | 3.03                     | 0.47              |
| 24:BA:949:C:N3     | 24:BA:950:G:N7    | 2.62                     | 0.47              |
| 24:BA:993:G:C1'    | 42:BU:91:TYR:CE2  | 2.87                     | 0.47              |
| 24:BA:1084:A:C3'   | 24:BA:1085:A:H5'  | 2.45                     | 0.47              |
| 24:BA:1097:U:H2'   | 24:BA:1098:A:O4'  | 2.14                     | 0.47              |
| 24:BA:1228:G:C6    | 24:BA:1229:G:C5   | 3.03                     | 0.47              |
| 24:BA:1326:U:O4    | 24:BA:1648:C:O2'  | 2.31                     | 0.47              |
| 24:BA:1444(A):A:N6 | 24:BA:1461:G:H5'' | 2.29                     | 0.47              |
| 24:BA:1488:G:H3'   | 24:BA:1489:U:H5'  | 1.94                     | 0.47              |
| 24:BA:1540:G:OP1   | 24:BA:1540:G:C4'  | 2.62                     | 0.47              |
| 24:BA:1582:C:N3    | 24:BA:1583:A:N7   | 2.62                     | 0.47              |
| 24:BA:1613:G:H2'   | 24:BA:1617:C:N4   | 2.29                     | 0.47              |
| 24:BA:1637:A:H2'   | 24:BA:1638:C:H6   | 1.78                     | 0.47              |
| 24:BA:1655:A:N6    | 24:BA:2005:A:C2'  | 2.78                     | 0.47              |
| 24:BA:1727:U:C4    | 24:BA:1730:U:C4   | 3.03                     | 0.47              |
| 24:BA:1731:G:N3    | 24:BA:1731:G:H2'  | 2.29                     | 0.47              |
| 24:BA:1799:G:C6    | 24:BA:1819:A:C8   | 3.03                     | 0.47              |
| 24:BA:1819:A:C5    | 27:BD:179:SER:HB3 | 2.49                     | 0.47              |
| 24:BA:1826:G:OP1   | 27:BD:233:HIS:CD2 | 2.68                     | 0.47              |
| 24:BA:1924:C:C2    | 24:BA:1925:C:C6   | 3.01                     | 0.47              |
| 24:BA:1926:U:H2'   | 24:BA:1928:A:OP2  | 2.15                     | 0.47              |
| 24:BA:1936:A:N3    | 24:BA:1940:U:C2   | 2.82                     | 0.47              |
| 24:BA:1952:A:C8    | 24:BA:1953:A:C4   | 3.03                     | 0.47              |
| 24:BA:2070:G:O2'   | 24:BA:2071:A:H5'  | 2.14                     | 0.47              |
| 24:BA:2128:C:N4    | 24:BA:2129:C:C4   | 2.83                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2132:U:C5'   | 24:BA:2133:G:H5'   | 2.42                     | 0.47              |
| 24:BA:2142:C:C2    | 24:BA:2143:C:C5    | 3.02                     | 0.47              |
| 24:BA:2182:G:H2'   | 24:BA:2183:C:H6    | 1.80                     | 0.47              |
| 24:BA:2195:C:O2    | 24:BA:2196:C:H1'   | 2.15                     | 0.47              |
| 24:BA:2286:A:N7    | 52:B5:31:PRO:CD    | 2.77                     | 0.47              |
| 24:BA:2487:G:H2'   | 24:BA:2488:A:O5'   | 2.15                     | 0.47              |
| 24:BA:2528:U:O2    | 24:BA:2536:G:N2    | 2.47                     | 0.47              |
| 24:BA:2582:G:H21   | 24:BA:2583:G:H1'   | 1.68                     | 0.47              |
| 24:BA:2598:A:OP1   | 27:BD:234:GLY:CA   | 2.51                     | 0.47              |
| 24:BA:2626:C:C2'   | 24:BA:2627:G:O4'   | 2.61                     | 0.47              |
| 24:BA:2640:G:H4'   | 34:BM:75:TYR:CZ    | 2.49                     | 0.47              |
| 24:BA:2674:G:C5    | 24:BA:2675:A:N7    | 2.83                     | 0.47              |
| 24:BA:2701:C:C3'   | 24:BA:2702:U:C5'   | 2.80                     | 0.47              |
| 24:BA:2723:C:OP2   | 28:BE:109:LYS:NZ   | 2.46                     | 0.47              |
| 24:BA:2731:G:H22   | 24:BA:2732:G:N2    | 2.12                     | 0.47              |
| 24:BA:2745:C:H2'   | 24:BA:2746:U:H6    | 1.80                     | 0.47              |
| 24:BA:2809:A:O2'   | 24:BA:2811:G:OP2   | 2.25                     | 0.47              |
| 25:BB:118:G:H2'    | 25:BB:119:A:H8     | 1.80                     | 0.47              |
| 26:BC:7:TYR:HE1    | 26:BC:10:LEU:HG    | 1.80                     | 0.47              |
| 26:BC:23:ASP:O     | 26:BC:24:GLU:C     | 2.57                     | 0.47              |
| 26:BC:77:ILE:HD12  | 26:BC:123:VAL:HG11 | 1.92                     | 0.47              |
| 26:BC:190:ARG:O    | 26:BC:191:ALA:C    | 2.57                     | 0.47              |
| 27:BD:9:TYR:CE1    | 27:BD:25:THR:HG21  | 2.48                     | 0.47              |
| 27:BD:23:GLU:O     | 27:BD:204:ILE:HD11 | 2.15                     | 0.47              |
| 27:BD:60:ARG:CA    | 27:BD:62:TYR:CZ    | 2.94                     | 0.47              |
| 27:BD:90:ALA:HA    | 27:BD:91:ARG:HH11  | 1.74                     | 0.47              |
| 27:BD:246:PRO:CG   | 27:BD:252:TRP:CE3  | 2.86                     | 0.47              |
| 28:BE:2:LYS:CE     | 28:BE:83:ASP:HB2   | 2.45                     | 0.47              |
| 28:BE:12:THR:HA    | 28:BE:21:VAL:HG23  | 1.96                     | 0.47              |
| 28:BE:61:ARG:CB    | 28:BE:62:PRO:HD3   | 2.44                     | 0.47              |
| 28:BE:176:ILE:CD1  | 28:BE:179:GLU:N    | 2.78                     | 0.47              |
| 29:BF:39:TRP:HB2   | 29:BF:101:LEU:HG   | 1.95                     | 0.47              |
| 29:BF:137:LYS:HA   | 29:BF:137:LYS:HZ3  | 1.79                     | 0.47              |
| 29:BF:157:VAL:O    | 29:BF:157:VAL:CG2  | 2.62                     | 0.47              |
| 30:BG:80:PHE:CD1   | 30:BG:81:LYS:N     | 2.68                     | 0.47              |
| 30:BG:115:ARG:HH21 | 30:BG:115:ARG:HG3  | 1.80                     | 0.47              |
| 31:BH:23:ARG:NH2   | 31:BH:35:VAL:C     | 2.73                     | 0.47              |
| 31:BH:26:VAL:HG21  | 31:BH:35:VAL:HG21  | 1.97                     | 0.47              |
| 31:BH:155:SER:O    | 31:BH:158:HIS:O    | 2.32                     | 0.47              |
| 32:BK:16:GLY:C     | 32:BK:17:GLN:HG3   | 2.40                     | 0.47              |
| 32:BK:60:GLU:O     | 32:BK:63:ALA:HB3   | 2.15                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 32:BK:76:THR:CG2  | 32:BK:141:LYS:HE2  | 2.45                     | 0.47              |
| 33:BL:35:MET:SD   | 33:BL:35:MET:O     | 2.73                     | 0.47              |
| 33:BL:39:LYS:O    | 33:BL:42:ASN:HB2   | 2.15                     | 0.47              |
| 33:BL:41:PHE:O    | 33:BL:42:ASN:C     | 2.57                     | 0.47              |
| 33:BL:98:ARG:HH11 | 33:BL:139:VAL:HG11 | 1.80                     | 0.47              |
| 35:BN:58:VAL:O    | 35:BN:86:ILE:HB    | 2.14                     | 0.47              |
| 35:BN:64:ARG:NH2  | 35:BN:65:THR:H     | 2.12                     | 0.47              |
| 35:BN:98:VAL:O    | 35:BN:99:PHE:HB2   | 2.14                     | 0.47              |
| 36:BO:7:ARG:N     | 36:BO:8:PRO:CD     | 2.77                     | 0.47              |
| 36:BO:128:HIS:ND1 | 36:BO:128:HIS:N    | 2.63                     | 0.47              |
| 36:BO:130:PHE:C   | 36:BO:134:ALA:HB3  | 2.39                     | 0.47              |
| 37:BP:43:THR:OG1  | 37:BP:46:GLN:N     | 2.48                     | 0.47              |
| 37:BP:44:ALA:O    | 37:BP:48:GLU:OE2   | 2.31                     | 0.47              |
| 37:BP:130:LYS:HE3 | 37:BP:131:ILE:O    | 2.15                     | 0.47              |
| 40:BS:29:ARG:CA   | 40:BS:51:ARG:HA    | 2.40                     | 0.47              |
| 41:BT:33:ARG:NH1  | 41:BT:33:ARG:HB2   | 2.28                     | 0.47              |
| 41:BT:33:ARG:O    | 41:BT:34:LYS:C     | 2.57                     | 0.47              |
| 41:BT:89:GLU:CB   | 42:BU:51:VAL:HB    | 2.43                     | 0.47              |
| 42:BU:40:LEU:HD11 | 42:BU:55:ALA:CA    | 2.41                     | 0.47              |
| 42:BU:61:VAL:O    | 42:BU:99:ILE:O     | 2.32                     | 0.47              |
| 45:BX:67:LEU:HD11 | 45:BX:71:LYS:HE2   | 1.95                     | 0.47              |
| 46:BY:42:VAL:C    | 46:BY:46:LYS:HZ2   | 2.23                     | 0.47              |
| 46:BY:95:PRO:HD2  | 46:BY:130:PRO:CA   | 2.44                     | 0.47              |
| 47:BZ:21:LEU:HD12 | 47:BZ:39:ARG:CB    | 2.39                     | 0.47              |
| 47:BZ:37:LEU:CD2  | 47:BZ:60:PHE:HA    | 2.43                     | 0.47              |
| 48:B1:27:LEU:CG   | 48:B1:48:LEU:HD23  | 2.44                     | 0.47              |
| 49:B2:23:LEU:HD12 | 49:B2:50:VAL:CG2   | 2.45                     | 0.47              |
| 49:B2:28:LEU:N    | 49:B2:28:LEU:CD2   | 2.66                     | 0.47              |
| 53:B6:17:GLY:O    | 53:B6:18:PHE:C     | 2.57                     | 0.47              |
| 53:B6:41:ARG:CG   | 53:B6:42:LEU:N     | 2.74                     | 0.47              |
| 1:AA:14:U:O2      | 1:AA:17:U:H5       | 1.98                     | 0.47              |
| 1:AA:22:G:C4'     | 1:AA:885:G:O4'     | 2.62                     | 0.47              |
| 1:AA:22:G:P       | 1:AA:561:U:O2      | 2.72                     | 0.47              |
| 1:AA:45:U:O2      | 1:AA:398:C:N3      | 2.47                     | 0.47              |
| 1:AA:67:C:OP1     | 1:AA:199:G:H5''    | 2.14                     | 0.47              |
| 1:AA:68:G:H8      | 1:AA:68:G:O5'      | 1.98                     | 0.47              |
| 1:AA:68:G:C2      | 1:AA:69:G:H1'      | 2.49                     | 0.47              |
| 1:AA:92:G:C2      | 1:AA:93:U:C2       | 3.03                     | 0.47              |
| 1:AA:95:G:N2      | 1:AA:96:G:H1'      | 2.29                     | 0.47              |
| 1:AA:113:G:H2'    | 1:AA:114:U:H6      | 1.76                     | 0.47              |
| 1:AA:193:C:O2'    | 1:AA:194:C:H5'     | 2.14                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1          | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|-------------------|--------------------------|-------------------|
| 1:AA:258:G:C5   | 1:AA:259:G:N7     | 2.83                     | 0.47              |
| 1:AA:290:C:C6   | 1:AA:290:C:C3'    | 2.98                     | 0.47              |
| 1:AA:355:C:H2'  | 1:AA:356:A:C8     | 2.50                     | 0.47              |
| 1:AA:408:A:N6   | 1:AA:409:G:O6     | 2.48                     | 0.47              |
| 1:AA:409:G:C4   | 1:AA:410:G:C8     | 3.02                     | 0.47              |
| 1:AA:414:A:H62  | 1:AA:430:A:N6     | 2.12                     | 0.47              |
| 1:AA:443:C:C6   | 1:AA:492:G:N2     | 2.83                     | 0.47              |
| 1:AA:450:G:H5'  | 18:AS:43:LYS:NZ   | 2.30                     | 0.47              |
| 1:AA:528:C:O4'  | 1:AA:535:A:C6     | 2.68                     | 0.47              |
| 1:AA:557:G:O3'  | 1:AA:558:G:O4'    | 2.32                     | 0.47              |
| 1:AA:587:G:N2   | 1:AA:755:G:C4     | 2.82                     | 0.47              |
| 1:AA:611:A:C5   | 1:AA:612:C:C5     | 3.03                     | 0.47              |
| 1:AA:622:A:C2   | 1:AA:623:C:C1'    | 2.98                     | 0.47              |
| 1:AA:625:G:H4'  | 18:AS:16:HIS:CG   | 2.50                     | 0.47              |
| 1:AA:640:A:C2'  | 1:AA:641:U:C5'    | 2.91                     | 0.47              |
| 1:AA:729:A:O2'  | 1:AA:730:G:H5'    | 2.15                     | 0.47              |
| 1:AA:742:G:C2'  | 1:AA:743:U:H5'    | 2.45                     | 0.47              |
| 1:AA:766:A:C8   | 1:AA:814:A:N6     | 2.82                     | 0.47              |
| 1:AA:774:G:C4   | 1:AA:775:G:C8     | 3.02                     | 0.47              |
| 1:AA:783:C:C2'  | 1:AA:784:C:H5'    | 2.42                     | 0.47              |
| 1:AA:792:A:C2   | 1:AA:794:A:N1     | 2.83                     | 0.47              |
| 1:AA:801:U:H2'  | 1:AA:802:A:C8     | 2.50                     | 0.47              |
| 1:AA:818:G:N2   | 1:AA:820:U:C5     | 2.81                     | 0.47              |
| 1:AA:832:C:N3   | 1:AA:855:G:C6     | 2.83                     | 0.47              |
| 1:AA:837:G:N1   | 1:AA:838:G:C5     | 2.83                     | 0.47              |
| 1:AA:873:A:O4'  | 1:AA:873:A:P      | 2.73                     | 0.47              |
| 1:AA:874:G:H2'  | 1:AA:875:C:O5'    | 2.15                     | 0.47              |
| 1:AA:891:U:C5   | 1:AA:906:G:N2     | 2.82                     | 0.47              |
| 1:AA:901:A:N3   | 1:AA:902:G:O4'    | 2.48                     | 0.47              |
| 1:AA:913:A:O2'  | 1:AA:914:A:O5'    | 2.32                     | 0.47              |
| 1:AA:936:C:H2'  | 1:AA:937:A:H5'    | 1.94                     | 0.47              |
| 1:AA:1015:A:N7  | 1:AA:1016:A:N6    | 2.63                     | 0.47              |
| 1:AA:1029:G:C4  | 1:AA:1032(A):G:N1 | 2.82                     | 0.47              |
| 1:AA:1057:G:H5' | 5:AF:196:LEU:HA   | 1.97                     | 0.47              |
| 1:AA:1067:A:H4' | 1:AA:1068:G:O5'   | 2.15                     | 0.47              |
| 1:AA:1086:U:H2' | 1:AA:1087:G:C8    | 2.49                     | 0.47              |
| 1:AA:1117:G:H5' | 1:AA:1118:C:OP2   | 2.14                     | 0.47              |
| 1:AA:1138:G:C2  | 1:AA:1140:C:C5    | 3.02                     | 0.47              |
| 1:AA:1181:G:H2' | 1:AA:1182:G:C4'   | 2.44                     | 0.47              |
| 1:AA:1184:G:N1  | 1:AA:1185:G:C6    | 2.82                     | 0.47              |
| 1:AA:1185:G:H2' | 1:AA:1186:G:C5'   | 2.45                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:AA:1200:C:C5'  | 1:AA:1202:G:OP1   | 2.62                     | 0.47              |
| 1:AA:1202:G:C4   | 16:AQ:42:ILE:CD1  | 2.94                     | 0.47              |
| 1:AA:1215:G:H2'  | 1:AA:1215:G:N3    | 2.28                     | 0.47              |
| 1:AA:1254:C:OP1  | 12:AM:45:ARG:HD2  | 2.15                     | 0.47              |
| 1:AA:1277:C:O2'  | 1:AA:1279:A:H8    | 1.97                     | 0.47              |
| 1:AA:1302:U:C3'  | 1:AA:1303:C:H5'   | 2.45                     | 0.47              |
| 1:AA:1335:C:H5'' | 1:AA:1336:C:H5'   | 1.95                     | 0.47              |
| 1:AA:1361:G:C8   | 1:AA:1361:G:O5'   | 2.68                     | 0.47              |
| 1:AA:1396:A:H4'  | 1:AA:1398:A:O4'   | 2.15                     | 0.47              |
| 1:AA:1403:C:H1'  | 1:AA:1500:A:N1    | 2.29                     | 0.47              |
| 1:AA:1492:A:H2'  | 1:AA:1493:A:C4    | 2.50                     | 0.47              |
| 2:A1:35:U:OP2    | 2:A1:35:U:C5      | 2.67                     | 0.47              |
| 3:AC:74:C:H2'    | 3:AC:75:C:H4'     | 1.97                     | 0.47              |
| 3:AD:19:G:P      | 3:AD:20:U:O4      | 2.72                     | 0.47              |
| 3:AD:36:A:H3'    | 3:AD:37:A:C8      | 2.49                     | 0.47              |
| 3:AD:43:C:H2'    | 3:AD:44:G:H8      | 1.78                     | 0.47              |
| 3:AD:44:G:C6     | 3:AD:45:U:O2      | 2.68                     | 0.47              |
| 3:AB:39:U:C6     | 3:AB:39:U:O5'     | 2.67                     | 0.47              |
| 4:AE:44:LEU:H    | 4:AE:44:LEU:HD23  | 1.79                     | 0.47              |
| 4:AE:61:LEU:O    | 4:AE:64:ARG:HD2   | 2.15                     | 0.47              |
| 4:AE:75:LYS:HZ3  | 4:AE:75:LYS:CA    | 2.15                     | 0.47              |
| 4:AE:95:GLN:HG3  | 4:AE:148:TYR:HB2  | 1.91                     | 0.47              |
| 4:AE:97:TRP:HE3  | 4:AE:172:ILE:HB   | 1.80                     | 0.47              |
| 4:AE:102:LEU:CD2 | 4:AE:176:GLU:CB   | 2.82                     | 0.47              |
| 4:AE:114:ARG:NH1 | 4:AE:141:GLU:HG3  | 2.29                     | 0.47              |
| 4:AE:140:HIS:C   | 4:AE:143:GLU:HB3  | 2.39                     | 0.47              |
| 4:AE:160:ASP:HB3 | 4:AE:182:ILE:CG2  | 2.35                     | 0.47              |
| 5:AF:29:TYR:CG   | 16:AQ:36:PHE:HE1  | 2.32                     | 0.47              |
| 5:AF:59:ARG:CZ   | 5:AF:64:VAL:HA    | 2.42                     | 0.47              |
| 5:AF:150:LYS:NZ  | 5:AF:152:ILE:HG21 | 2.29                     | 0.47              |
| 5:AF:205:GLY:O   | 5:AF:206:GLU:CB   | 2.54                     | 0.47              |
| 6:AG:4:TYR:HE2   | 6:AG:8:VAL:HG22   | 1.80                     | 0.47              |
| 6:AG:78:LEU:HB3  | 6:AG:93:PHE:CE2   | 2.50                     | 0.47              |
| 6:AG:188:LEU:O   | 6:AG:189:PRO:C    | 2.53                     | 0.47              |
| 6:AG:207:TYR:O   | 6:AG:208:SER:C    | 2.57                     | 0.47              |
| 7:AH:19:MET:SD   | 7:AH:24:ARG:HG2   | 2.54                     | 0.47              |
| 7:AH:48:ALA:HB1  | 7:AH:53:LEU:CD1   | 2.40                     | 0.47              |
| 7:AH:55:VAL:C    | 7:AH:57:LYS:N     | 2.71                     | 0.47              |
| 8:AI:89:MET:CB   | 20:AU:76:LEU:HD11 | 2.40                     | 0.47              |
| 9:AJ:15:ASP:HB2  | 9:AJ:23:VAL:CB    | 2.45                     | 0.47              |
| 9:AJ:68:ASN:ND2  | 9:AJ:128:ALA:CA   | 2.78                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 10:AK:40:ALA:HB2  | 10:AK:45:ILE:HD13  | 1.97                     | 0.47              |
| 10:AK:75:ARG:CZ   | 10:AK:75:ARG:CB    | 2.79                     | 0.47              |
| 10:AK:110:ALA:HA  | 10:AK:136:GLU:CB   | 2.40                     | 0.47              |
| 10:AK:114:THR:HB  | 10:AK:129:VAL:HG13 | 1.96                     | 0.47              |
| 10:AK:119:LEU:N   | 10:AK:119:LEU:CD2  | 2.72                     | 0.47              |
| 11:AL:10:ARG:O    | 11:AL:11:LYS:C     | 2.56                     | 0.47              |
| 11:AL:41:VAL:O    | 11:AL:44:VAL:HG22  | 2.13                     | 0.47              |
| 11:AL:108:VAL:O   | 11:AL:108:VAL:HG23 | 2.15                     | 0.47              |
| 12:AM:24:VAL:HG13 | 12:AM:34:VAL:CG1   | 2.44                     | 0.47              |
| 13:AN:31:THR:OG1  | 13:AN:42:TRP:CB    | 2.63                     | 0.47              |
| 13:AN:44:SER:H    | 13:AN:47:VAL:CB    | 2.25                     | 0.47              |
| 13:AN:59:TYR:O    | 13:AN:62:GLN:CD    | 2.58                     | 0.47              |
| 14:AO:78:GLN:O    | 14:AO:79:GLU:C     | 2.55                     | 0.47              |
| 15:AP:10:PRO:CG   | 15:AP:18:ALA:CA    | 2.91                     | 0.47              |
| 15:AP:36:LYS:HB3  | 15:AP:59:TYR:OH    | 2.14                     | 0.47              |
| 15:AP:75:ALA:O    | 15:AP:79:LYS:HB2   | 2.15                     | 0.47              |
| 17:AR:63:ARG:NH2  | 17:AR:87:ILE:HD13  | 2.26                     | 0.47              |
| 18:AS:19:ILE:HB   | 18:AS:36:ILE:O     | 2.15                     | 0.47              |
| 18:AS:21:VAL:CG2  | 18:AS:59:TRP:HE1   | 2.21                     | 0.47              |
| 18:AS:53:VAL:HA   | 18:AS:79:VAL:HG22  | 1.95                     | 0.47              |
| 18:AS:67:THR:HG22 | 18:AS:68:ASP:N     | 2.30                     | 0.47              |
| 19:AT:5:VAL:O     | 19:AT:6:LEU:HB3    | 2.15                     | 0.47              |
| 19:AT:6:LEU:HD12  | 19:AT:6:LEU:O      | 2.15                     | 0.47              |
| 19:AT:29:HIS:ND1  | 19:AT:30:PRO:N     | 2.62                     | 0.47              |
| 19:AT:60:ILE:HD13 | 19:AT:62:SER:CB    | 2.45                     | 0.47              |
| 20:AU:18:ARG:HH22 | 20:AU:21:LYS:HD3   | 1.79                     | 0.47              |
| 20:AU:22:VAL:HG22 | 20:AU:55:ARG:HH12  | 1.80                     | 0.47              |
| 20:AU:60:GLY:C    | 20:AU:64:ARG:NH1   | 2.73                     | 0.47              |
| 21:AV:20:LEU:C    | 21:AV:21:GLU:HG2   | 2.39                     | 0.47              |
| 21:AV:30:LEU:N    | 21:AV:48:THR:O     | 2.48                     | 0.47              |
| 21:AV:50:ALA:HA   | 21:AV:58:VAL:O     | 2.14                     | 0.47              |
| 22:AW:22:ARG:O    | 22:AW:23:ARG:C     | 2.57                     | 0.47              |
| 24:BA:37:C:HO2'   | 29:BF:50:SER:CB    | 2.26                     | 0.47              |
| 24:BA:55:G:N3     | 24:BA:56:A:C8      | 2.83                     | 0.47              |
| 24:BA:65:C:C2     | 24:BA:66:C:H5      | 2.32                     | 0.47              |
| 24:BA:90:U:H5'    | 24:BA:91:A:OP1     | 2.15                     | 0.47              |
| 24:BA:94:G:O2'    | 48:B1:39:LEU:HD22  | 2.14                     | 0.47              |
| 24:BA:122:G:C2    | 24:BA:130:C:C2     | 3.03                     | 0.47              |
| 24:BA:128:C:N4    | 24:BA:129:C:H41    | 2.12                     | 0.47              |
| 24:BA:180:G:OP1   | 53:B6:32:LYS:CD    | 2.62                     | 0.47              |
| 24:BA:191:A:C2    | 24:BA:799:G:N2     | 2.83                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:197:A:H62   | 24:BA:248:G:N2    | 2.00                     | 0.47              |
| 24:BA:246:C:N4    | 24:BA:252:G:N1    | 2.63                     | 0.47              |
| 24:BA:270(K):C:N4 | 24:BA:270(M):U:C6 | 2.83                     | 0.47              |
| 24:BA:270(N):G:C8 | 24:BA:270(O):U:C6 | 3.02                     | 0.47              |
| 24:BA:273:G:C5    | 24:BA:273(A):G:N7 | 2.83                     | 0.47              |
| 24:BA:304:G:O2'   | 24:BA:305:U:H5'   | 2.15                     | 0.47              |
| 24:BA:359:A:O3'   | 24:BA:360:G:C8    | 2.68                     | 0.47              |
| 24:BA:428:A:N3    | 24:BA:428:A:C2'   | 2.78                     | 0.47              |
| 24:BA:443:A:O4'   | 24:BA:1201:C:H4'  | 2.15                     | 0.47              |
| 24:BA:459:U:OP2   | 53:B6:40:TRP:N    | 2.48                     | 0.47              |
| 24:BA:499:U:C6    | 24:BA:503:A:N6    | 2.83                     | 0.47              |
| 24:BA:511:U:OP2   | 24:BA:512:G:C5    | 2.68                     | 0.47              |
| 24:BA:530:G:N2    | 24:BA:2021:C:C2'  | 2.78                     | 0.47              |
| 24:BA:531:C:O2    | 41:BT:28:ARG:NE   | 2.47                     | 0.47              |
| 24:BA:537:C:H2'   | 24:BA:539:G:H8    | 1.79                     | 0.47              |
| 24:BA:566:U:H6    | 24:BA:567:A:C8    | 2.32                     | 0.47              |
| 24:BA:577:G:H2'   | 24:BA:578:A:O4'   | 2.15                     | 0.47              |
| 24:BA:581:C:H5''  | 41:BT:32:PHE:CD2  | 2.50                     | 0.47              |
| 24:BA:601:C:O4'   | 29:BF:104:LYS:NZ  | 2.40                     | 0.47              |
| 24:BA:636:G:H2'   | 36:BO:113:LYS:NZ  | 2.29                     | 0.47              |
| 24:BA:638:G:H2'   | 24:BA:639:U:C4'   | 2.44                     | 0.47              |
| 24:BA:703:U:C3'   | 24:BA:704:G:O4'   | 2.63                     | 0.47              |
| 24:BA:718:A:H3'   | 24:BA:719:C:O4'   | 2.14                     | 0.47              |
| 24:BA:774:A:C5    | 24:BA:775:G:C6    | 3.03                     | 0.47              |
| 24:BA:848:G:C8    | 24:BA:848:G:C3'   | 2.98                     | 0.47              |
| 24:BA:848:G:C8    | 24:BA:848:G:H5''  | 2.50                     | 0.47              |
| 24:BA:932:G:C2'   | 24:BA:933:A:C8    | 2.87                     | 0.47              |
| 24:BA:1096:A:N6   | 33:BL:30:HIS:CB   | 2.78                     | 0.47              |
| 24:BA:1140:C:H2'  | 24:BA:1141:U:OP2  | 2.15                     | 0.47              |
| 24:BA:1174:A:C2   | 24:BA:1176:G:O5'  | 2.67                     | 0.47              |
| 24:BA:1197:G:C4   | 24:BA:1198:U:C6   | 3.03                     | 0.47              |
| 24:BA:1212:G:C8   | 24:BA:1235:G:N1   | 2.83                     | 0.47              |
| 24:BA:1265:A:H1'  | 24:BA:1267:U:N3   | 2.28                     | 0.47              |
| 24:BA:1275:A:N3   | 38:BQ:16:HIS:ND1  | 2.63                     | 0.47              |
| 24:BA:1284:A:C6   | 24:BA:1285:G:N1   | 2.82                     | 0.47              |
| 24:BA:1289:C:N3   | 24:BA:1290:C:C5   | 2.83                     | 0.47              |
| 24:BA:1299:G:N3   | 24:BA:1640:C:H5   | 2.12                     | 0.47              |
| 24:BA:1345:C:C2'  | 24:BA:1346:G:H5'  | 2.44                     | 0.47              |
| 24:BA:1372:U:C6   | 24:BA:1372:U:C3'  | 2.97                     | 0.47              |
| 24:BA:1433:U:H3'  | 24:BA:1433:U:C6   | 2.49                     | 0.47              |
| 24:BA:1477:A:H2   | 24:BA:1516:U:O2   | 1.96                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1566:A:H2   | 27:BD:215:LEU:HD13 | 1.68                     | 0.47              |
| 24:BA:1593:G:C4   | 24:BA:1594:G:C8    | 3.02                     | 0.47              |
| 24:BA:1626:G:H5'  | 24:BA:1627:G:OP1   | 2.15                     | 0.47              |
| 24:BA:1649:G:N2   | 38:BQ:107:ASP:CB   | 2.63                     | 0.47              |
| 24:BA:1684:C:C2   | 24:BA:1685:C:C5    | 3.03                     | 0.47              |
| 24:BA:1755:A:N7   | 40:BS:98:LYS:NZ    | 2.63                     | 0.47              |
| 24:BA:1799:G:O2'  | 24:BA:1800:C:O4'   | 2.31                     | 0.47              |
| 24:BA:1813:G:H4'  | 27:BD:46:GLN:CG    | 2.42                     | 0.47              |
| 24:BA:1853:A:H2   | 24:BA:2087:G:N3    | 2.12                     | 0.47              |
| 24:BA:1903:G:C2   | 24:BA:1904:G:C5    | 3.03                     | 0.47              |
| 24:BA:1941:C:C6   | 24:BA:1965:C:C4    | 3.02                     | 0.47              |
| 24:BA:1949:G:O2'  | 24:BA:1950:G:C5'   | 2.59                     | 0.47              |
| 24:BA:1995:U:O2'  | 35:BN:31:LYS:HE2   | 2.15                     | 0.47              |
| 24:BA:2040:C:N3   | 24:BA:2041:U:C4    | 2.83                     | 0.47              |
| 24:BA:2065:C:O2'  | 24:BA:2449:U:O2    | 2.33                     | 0.47              |
| 24:BA:2081:C:C2'  | 24:BA:2082:A:H5'   | 2.44                     | 0.47              |
| 24:BA:2085:C:O2'  | 24:BA:2086:U:H5'   | 2.13                     | 0.47              |
| 24:BA:2112:G:N3   | 24:BA:2112:G:C2'   | 2.77                     | 0.47              |
| 24:BA:2161:C:C2   | 24:BA:2162:G:C8    | 3.02                     | 0.47              |
| 24:BA:2183:C:C2   | 24:BA:2184:G:C8    | 3.02                     | 0.47              |
| 24:BA:2213:U:H5'  | 24:BA:2215:G:C6    | 2.49                     | 0.47              |
| 24:BA:2213:U:C2   | 24:BA:2213:U:H5''  | 2.50                     | 0.47              |
| 24:BA:2279:G:O2'  | 24:BA:2280:G:O5'   | 2.28                     | 0.47              |
| 24:BA:2298:A:H3'  | 24:BA:2299:G:C8    | 2.49                     | 0.47              |
| 24:BA:2317:C:H2'  | 24:BA:2318:G:C8    | 2.50                     | 0.47              |
| 24:BA:2371:G:O2'  | 24:BA:2372:G:O4'   | 2.31                     | 0.47              |
| 24:BA:2371:G:O2'  | 24:BA:2372:G:H1'   | 2.14                     | 0.47              |
| 24:BA:2400:G:C6   | 24:BA:2401:U:C2    | 3.03                     | 0.47              |
| 24:BA:2404:C:N3   | 24:BA:2414:G:C2    | 2.83                     | 0.47              |
| 24:BA:2437:U:H2'  | 24:BA:2438:U:C5    | 2.49                     | 0.47              |
| 24:BA:2476:A:C2   | 24:BA:2481:G:N2    | 2.78                     | 0.47              |
| 24:BA:2482:G:C5   | 24:BA:2483:C:C5    | 3.02                     | 0.47              |
| 24:BA:2496:C:OP1  | 37:BP:82:ARG:CG    | 2.39                     | 0.47              |
| 24:BA:2553:G:C5'  | 24:BA:2554:U:OP2   | 2.63                     | 0.47              |
| 24:BA:2572:A:H3'  | 28:BE:144:ARG:HH21 | 1.80                     | 0.47              |
| 24:BA:2617:C:C6   | 24:BA:2617:C:OP2   | 2.67                     | 0.47              |
| 24:BA:2619:C:H5'  | 28:BE:151:TYR:O    | 2.13                     | 0.47              |
| 24:BA:2633:G:N1   | 24:BA:2634:G:C5    | 2.83                     | 0.47              |
| 24:BA:2636:U:O2'  | 28:BE:79:ARG:NH2   | 2.48                     | 0.47              |
| 24:BA:2720:U:O4   | 24:BA:2872:G:C5    | 2.67                     | 0.47              |
| 24:BA:2723:C:HO2' | 38:BQ:2:ARG:CA     | 2.28                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2732:G:OP2  | 24:BA:2732:G:C8    | 2.68                     | 0.47              |
| 24:BA:2805:G:H2'  | 24:BA:2807:G:C4'   | 2.44                     | 0.47              |
| 24:BA:2817:G:N2   | 24:BA:2830:G:H1'   | 2.29                     | 0.47              |
| 24:BA:2823:A:O5'  | 24:BA:2824:C:OP2   | 2.32                     | 0.47              |
| 24:BA:2826:A:H2'  | 24:BA:2827:C:O5'   | 2.15                     | 0.47              |
| 24:BA:2876:G:H5'  | 40:BS:1:MET:N      | 2.29                     | 0.47              |
| 24:BA:2877:G:C3'  | 24:BA:2878:U:C6    | 2.94                     | 0.47              |
| 25:BB:2:C:C2'     | 25:BB:3:C:O5'      | 2.63                     | 0.47              |
| 25:BB:5:C:H2'     | 25:BB:6:C:C5       | 2.50                     | 0.47              |
| 25:BB:20:C:H2'    | 25:BB:21:G:O4'     | 2.15                     | 0.47              |
| 25:BB:50:G:H5''   | 39:BR:61:ASN:HA    | 1.97                     | 0.47              |
| 25:BB:58:A:O5'    | 25:BB:58:A:C8      | 2.60                     | 0.47              |
| 25:BB:73:A:N3     | 25:BB:74:U:C6      | 2.83                     | 0.47              |
| 25:BB:85:G:C4     | 25:BB:92:G:C2      | 3.02                     | 0.47              |
| 25:BB:103:U:H6    | 25:BB:103:U:H5''   | 1.79                     | 0.47              |
| 25:BB:114:G:H1'   | 39:BR:38:GLN:HE21  | 1.72                     | 0.47              |
| 26:BC:22:ILE:CG2  | 26:BC:189:ILE:HG21 | 2.43                     | 0.47              |
| 26:BC:46:LYS:CD   | 26:BC:210:ARG:HB2  | 2.43                     | 0.47              |
| 26:BC:49:ILE:CD1  | 26:BC:51:PRO:HD3   | 2.45                     | 0.47              |
| 26:BC:75:LEU:HG   | 26:BC:77:ILE:HG12  | 1.96                     | 0.47              |
| 26:BC:190:ARG:NH1 | 26:BC:190:ARG:HG3  | 2.30                     | 0.47              |
| 27:BD:34:VAL:O    | 27:BD:36:PRO:CD    | 2.62                     | 0.47              |
| 27:BD:55:GLY:H    | 27:BD:218:ARG:HD2  | 1.79                     | 0.47              |
| 27:BD:75:ILE:HD13 | 27:BD:99:ASP:OD1   | 2.15                     | 0.47              |
| 27:BD:85:ASP:C    | 27:BD:87:ASN:N     | 2.66                     | 0.47              |
| 27:BD:144:ALA:O   | 27:BD:145:VAL:C    | 2.57                     | 0.47              |
| 28:BE:38:THR:O    | 28:BE:39:PRO:C     | 2.56                     | 0.47              |
| 28:BE:49:LEU:CD1  | 28:BE:76:ARG:O     | 2.60                     | 0.47              |
| 28:BE:53:PRO:O    | 28:BE:53:PRO:HG2   | 2.15                     | 0.47              |
| 28:BE:81:ILE:CG2  | 28:BE:82:ARG:H     | 2.25                     | 0.47              |
| 28:BE:120:TRP:CD1 | 28:BE:121:ASN:O    | 2.67                     | 0.47              |
| 28:BE:127:ASP:CG  | 28:BE:135:HIS:N    | 2.72                     | 0.47              |
| 28:BE:172:VAL:CA  | 28:BE:184:VAL:HG12 | 2.43                     | 0.47              |
| 31:BH:71:LEU:O    | 31:BH:74:ASN:CB    | 2.61                     | 0.47              |
| 31:BH:73:ALA:O    | 31:BH:76:VAL:CG2   | 2.47                     | 0.47              |
| 31:BH:137:ASP:HB3 | 31:BH:140:LYS:CG   | 2.41                     | 0.47              |
| 33:BL:27:LEU:CB   | 33:BL:32:ALA:HB3   | 2.43                     | 0.47              |
| 34:BM:35:ARG:NH1  | 34:BM:48:MET:CE    | 2.78                     | 0.47              |
| 34:BM:74:ARG:CG   | 34:BM:76:SER:OG    | 2.63                     | 0.47              |
| 34:BM:107:LEU:CB  | 34:BM:117:PHE:CZ   | 2.98                     | 0.47              |
| 34:BM:112:LEU:O   | 34:BM:115:ARG:N    | 2.48                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 35:BN:1:MET:SD    | 35:BN:2:ILE:CG1    | 3.02                     | 0.47              |
| 35:BN:22:ILE:CD1  | 35:BN:40:VAL:HG21  | 2.45                     | 0.47              |
| 35:BN:64:ARG:NH2  | 35:BN:78:ARG:HH11  | 2.12                     | 0.47              |
| 35:BN:107:ARG:C   | 35:BN:109:LYS:N    | 2.65                     | 0.47              |
| 36:BO:16:ARG:HG3  | 36:BO:19:VAL:HG22  | 1.92                     | 0.47              |
| 36:BO:78:PRO:HD2  | 36:BO:115:LEU:O    | 2.14                     | 0.47              |
| 36:BO:80:TYR:CE1  | 36:BO:85:LEU:HD13  | 2.49                     | 0.47              |
| 36:BO:97:PRO:HD3  | 36:BO:102:ARG:NH1  | 2.28                     | 0.47              |
| 37:BP:125:LEU:N   | 37:BP:125:LEU:HD23 | 2.28                     | 0.47              |
| 38:BQ:99:LYS:HD3  | 51:B4:43:HIS:CG    | 2.50                     | 0.47              |
| 38:BQ:103:ARG:HB2 | 38:BQ:108:GLY:O    | 2.14                     | 0.47              |
| 39:BR:79:ALA:O    | 39:BR:81:GLY:N     | 2.47                     | 0.47              |
| 40:BS:54:ARG:H    | 40:BS:64:ARG:CB    | 2.25                     | 0.47              |
| 40:BS:61:PHE:CD1  | 40:BS:81:PRO:HD3   | 2.41                     | 0.47              |
| 40:BS:64:ARG:CZ   | 40:BS:77:PRO:CA    | 2.92                     | 0.47              |
| 40:BS:92:GLY:HA2  | 40:BS:93:ARG:NH2   | 2.29                     | 0.47              |
| 40:BS:107:ASP:HB2 | 40:BS:108:ARG:HH11 | 1.79                     | 0.47              |
| 41:BT:40:PHE:HB3  | 42:BU:78:LYS:CE    | 2.44                     | 0.47              |
| 41:BT:46:ALA:O    | 41:BT:50:ARG:CD    | 2.53                     | 0.47              |
| 41:BT:55:ARG:HA   | 41:BT:58:ARG:NE    | 2.30                     | 0.47              |
| 41:BT:105:VAL:O   | 41:BT:108:GLU:OE2  | 2.32                     | 0.47              |
| 41:BT:114:LYS:HB3 | 41:BT:114:LYS:HE2  | 1.36                     | 0.47              |
| 42:BU:3:ALA:CA    | 42:BU:44:LYS:NZ    | 2.78                     | 0.47              |
| 42:BU:69:LYS:CA   | 42:BU:92:THR:HB    | 2.44                     | 0.47              |
| 42:BU:92:THR:OG1  | 42:BU:93:GLU:N     | 2.47                     | 0.47              |
| 43:BV:1:MET:N     | 43:BV:4:LYS:HD3    | 2.29                     | 0.47              |
| 44:BW:36:LYS:HE3  | 44:BW:56:THR:OG1   | 2.14                     | 0.47              |
| 44:BW:62:LYS:O    | 44:BW:63:LYS:CB    | 2.51                     | 0.47              |
| 45:BX:12:THR:CB   | 45:BX:71:LYS:HA    | 2.45                     | 0.47              |
| 45:BX:32:PRO:CB   | 45:BX:34:LYS:HE3   | 2.44                     | 0.47              |
| 45:BX:84:ARG:C    | 45:BX:84:ARG:CD    | 2.76                     | 0.47              |
| 46:BY:12:GLY:O    | 46:BY:13:GLU:C     | 2.57                     | 0.47              |
| 46:BY:20:ARG:HB2  | 46:BY:20:ARG:NH1   | 2.28                     | 0.47              |
| 46:BY:128:VAL:O   | 46:BY:129:SER:HB2  | 2.14                     | 0.47              |
| 47:BZ:51:VAL:CG1  | 47:BZ:59:LEU:HD22  | 2.45                     | 0.47              |
| 48:B1:29:GLU:C    | 48:B1:33:GLN:OE1   | 2.58                     | 0.47              |
| 51:B4:23:HIS:O    | 51:B4:24:ALA:HB3   | 2.14                     | 0.47              |
| 53:B6:25:PRO:CA   | 53:B6:28:ARG:NE    | 2.76                     | 0.47              |
| 53:B6:41:ARG:HD3  | 53:B6:42:LEU:H     | 1.79                     | 0.47              |
| 54:B7:9:GLY:C     | 54:B7:14:VAL:HG11  | 2.40                     | 0.47              |
| 54:B7:22:VAL:HB   | 54:B7:48:PHE:CZ    | 2.49                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 54:B7:26:LYS:C   | 54:B7:28:GLY:H   | 2.23                     | 0.47              |
| 55:B8:12:ASP:C   | 55:B8:13:LYS:HG3 | 2.40                     | 0.47              |
| 1:AA:84:U:H2'    | 1:AA:85:U:C1'    | 2.44                     | 0.47              |
| 1:AA:152:A:N7    | 1:AA:153:C:C5    | 2.83                     | 0.47              |
| 1:AA:307:C:C4    | 1:AA:308:C:C5    | 2.82                     | 0.47              |
| 1:AA:332:G:H2'   | 1:AA:333:G:C8    | 2.39                     | 0.47              |
| 1:AA:519:C:O2'   | 1:AA:520:A:H5'   | 2.14                     | 0.47              |
| 1:AA:581:G:C6    | 1:AA:758:G:N7    | 2.83                     | 0.47              |
| 1:AA:592:G:O2'   | 1:AA:593:G:H5'   | 2.15                     | 0.47              |
| 1:AA:606:G:H22   | 1:AA:631:G:H2'   | 1.79                     | 0.47              |
| 1:AA:695:A:C4    | 1:AA:696:A:C8    | 3.02                     | 0.47              |
| 1:AA:737:A:H2'   | 1:AA:738:C:H6    | 1.79                     | 0.47              |
| 1:AA:767:A:C6    | 1:AA:768:A:C5    | 3.03                     | 0.47              |
| 1:AA:927:G:O5'   | 1:AA:1503:A:N7   | 2.47                     | 0.47              |
| 1:AA:964:A:C2    | 1:AA:965:A:N7    | 2.83                     | 0.47              |
| 1:AA:1049:U:O2'  | 1:AA:1050:G:OP2  | 2.32                     | 0.47              |
| 1:AA:1119:C:H2'  | 1:AA:1120:G:N7   | 2.27                     | 0.47              |
| 1:AA:1128:C:O4'  | 1:AA:1148:U:O4   | 2.33                     | 0.47              |
| 1:AA:1180:A:O5'  | 1:AA:1180:A:H8   | 1.98                     | 0.47              |
| 1:AA:1228:C:OP1  | 15:AP:115:LYS:CB | 2.63                     | 0.47              |
| 1:AA:1317:C:OP1  | 1:AA:1317:C:C5   | 2.68                     | 0.47              |
| 1:AA:1371:G:H5'' | 11:AL:68:GLY:O   | 2.15                     | 0.47              |
| 1:AA:1426:C:O2'  | 1:AA:1427:U:H5'  | 2.15                     | 0.47              |
| 1:AA:1428:A:N6   | 1:AA:1473:A:N6   | 2.62                     | 0.47              |
| 1:AA:1461:G:O2'  | 1:AA:1462:G:C5'  | 2.62                     | 0.47              |
| 1:AA:1483:A:H2'  | 1:AA:1484:C:O4'  | 2.13                     | 0.47              |
| 2:A1:18:U:C4     | 4:AE:76:GLN:NE2  | 2.82                     | 0.47              |
| 3:AC:15:G:H22    | 3:AC:48:C:N4     | 2.04                     | 0.47              |
| 3:AC:76:A:H2     | 24:BA:2506:U:N3  | 2.12                     | 0.47              |
| 3:AD:48:C:C5     | 3:AD:59:U:C2     | 3.03                     | 0.47              |
| 3:AB:37:A:H2'    | 3:AB:38:A:H5'    | 1.96                     | 0.47              |
| 3:AB:76:A:O2'    | 24:BA:2583:G:N2  | 2.47                     | 0.47              |
| 4:AE:33:TYR:CB   | 4:AE:43:ASP:HB2  | 2.45                     | 0.47              |
| 4:AE:48:MET:HE3  | 4:AE:51:LEU:CD1  | 2.45                     | 0.47              |
| 4:AE:110:GLN:O   | 4:AE:113:HIS:HB3 | 2.15                     | 0.47              |
| 4:AE:186:ALA:O   | 4:AE:201:ILE:CB  | 2.57                     | 0.47              |
| 4:AE:234:PRO:HB2 | 4:AE:238:LEU:CD2 | 2.45                     | 0.47              |
| 5:AF:5:ILE:HD13  | 5:AF:10:PHE:CE2  | 2.49                     | 0.47              |
| 6:AG:61:LYS:CG   | 6:AG:207:TYR:CE1 | 2.92                     | 0.47              |
| 6:AG:79:PHE:CD2  | 6:AG:80:GLU:N    | 2.83                     | 0.47              |
| 6:AG:179:GLU:C   | 6:AG:181:MET:H   | 2.21                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 9:AJ:101:LEU:O      | 9:AJ:102:ARG:C    | 2.58                     | 0.47              |
| 10:AK:14:ARG:CZ     | 10:AK:15:ASN:ND2  | 2.78                     | 0.47              |
| 11:AL:46:ALA:HB1    | 11:AL:77:ILE:CG2  | 2.45                     | 0.47              |
| 12:AM:9:ARG:CB      | 12:AM:9:ARG:NH1   | 2.78                     | 0.47              |
| 13:AN:22:HIS:CD2    | 13:AN:23:ALA:N    | 2.83                     | 0.47              |
| 13:AN:99:GLN:HA     | 13:AN:105:VAL:CG2 | 2.44                     | 0.47              |
| 14:AO:24:VAL:HG13   | 14:AO:98:TYR:OH   | 2.15                     | 0.47              |
| 14:AO:86:ARG:HH22   | 14:AO:119:LYS:HD3 | 1.80                     | 0.47              |
| 14:AO:102:ARG:CZ    | 14:AO:110:VAL:N   | 2.78                     | 0.47              |
| 15:AP:33:ALA:HB2    | 15:AP:64:TRP:CZ3  | 2.49                     | 0.47              |
| 16:AQ:23:ARG:CD     | 16:AQ:30:ALA:HB2  | 2.44                     | 0.47              |
| 17:AR:29:VAL:O      | 17:AR:33:THR:OG1  | 2.25                     | 0.47              |
| 17:AR:65:ARG:O      | 17:AR:66:LEU:C    | 2.57                     | 0.47              |
| 17:AR:76:GLU:C      | 17:AR:78:TYR:N    | 2.72                     | 0.47              |
| 18:AS:4:ILE:HG12    | 18:AS:66:PRO:CA   | 2.44                     | 0.47              |
| 18:AS:32:TYR:O      | 18:AS:33:ILE:C    | 2.57                     | 0.47              |
| 19:AT:43:LEU:HD11   | 19:AT:69:LYS:CB   | 2.45                     | 0.47              |
| 20:AU:31:LEU:HD23   | 20:AU:65:ILE:HG13 | 1.95                     | 0.47              |
| 20:AU:51:LEU:CD1    | 20:AU:51:LEU:H    | 2.28                     | 0.47              |
| 22:AW:11:SER:O      | 22:AW:12:ALA:HB2  | 2.13                     | 0.47              |
| 22:AW:49:ALA:O      | 22:AW:53:LEU:HG   | 2.14                     | 0.47              |
| 24:BA:233:A:C5      | 24:BA:234:C:C5    | 3.03                     | 0.47              |
| 24:BA:253:C:H41     | 54:B7:7:HIS:HD1   | 1.63                     | 0.47              |
| 24:BA:270(X):G:H5'' | 24:BA:273:G:OP1   | 2.14                     | 0.47              |
| 24:BA:323:G:C6      | 24:BA:333:G:C8    | 3.03                     | 0.47              |
| 24:BA:477:A:O2'     | 24:BA:478:A:H5'   | 2.15                     | 0.47              |
| 24:BA:594:U:OP1     | 54:B7:61:LEU:HB3  | 2.14                     | 0.47              |
| 24:BA:666:G:H3'     | 24:BA:666:G:P     | 2.55                     | 0.47              |
| 24:BA:690:G:C6      | 24:BA:691:C:C4    | 3.02                     | 0.47              |
| 24:BA:729:G:H2'     | 24:BA:730:C:C2'   | 2.44                     | 0.47              |
| 24:BA:782:A:C5'     | 24:BA:783:A:OP1   | 2.62                     | 0.47              |
| 24:BA:783:A:O2'     | 24:BA:784:A:H5'   | 2.15                     | 0.47              |
| 24:BA:814:C:C3'     | 24:BA:1224:G:H22  | 2.28                     | 0.47              |
| 24:BA:887:A:H4'     | 24:BA:889:C:H5''  | 1.97                     | 0.47              |
| 24:BA:919:G:H2'     | 24:BA:920:G:O5'   | 2.14                     | 0.47              |
| 24:BA:958:U:O2'     | 24:BA:959:A:O5'   | 2.33                     | 0.47              |
| 24:BA:1001:A:N6     | 24:BA:1002:G:C2   | 2.82                     | 0.47              |
| 24:BA:1031:G:C2     | 24:BA:1032:A:C5   | 3.03                     | 0.47              |
| 24:BA:1111:A:O2'    | 24:BA:1112:G:C1'  | 2.48                     | 0.47              |
| 24:BA:1114:G:H21    | 24:BA:1115:G:H1'  | 1.69                     | 0.47              |
| 24:BA:1168:G:C6     | 24:BA:1169:G:C5   | 3.03                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:1203:G:N2  | 24:BA:1206:G:N1   | 2.63                     | 0.47              |
| 24:BA:1229:G:C2' | 24:BA:1230:C:H5'  | 2.44                     | 0.47              |
| 24:BA:1265:A:C1' | 24:BA:1267:U:C4   | 2.91                     | 0.47              |
| 24:BA:1338:G:N2  | 24:BA:1339:G:H1'  | 2.30                     | 0.47              |
| 24:BA:1385:G:C6  | 24:BA:1386:C:C4   | 3.03                     | 0.47              |
| 24:BA:1453:A:N7  | 38:BQ:73:VAL:CG1  | 2.77                     | 0.47              |
| 24:BA:1530:G:H2' | 24:BA:1531:C:C5   | 2.48                     | 0.47              |
| 24:BA:1543:A:H8  | 24:BA:1544:C:HO2' | 1.59                     | 0.47              |
| 24:BA:1586:A:O2' | 24:BA:1587:A:N7   | 2.45                     | 0.47              |
| 24:BA:1596:A:C6  | 24:BA:1597:A:C6   | 3.03                     | 0.47              |
| 24:BA:1672:C:H3' | 24:BA:1673:U:C5'  | 2.36                     | 0.47              |
| 24:BA:1688:U:N3  | 24:BA:1700:A:C5'  | 2.77                     | 0.47              |
| 24:BA:1709:U:H5' | 24:BA:1709:U:C6   | 2.46                     | 0.47              |
| 24:BA:1826:G:N2  | 24:BA:1827:C:H1'  | 2.29                     | 0.47              |
| 24:BA:1829:A:C6  | 24:BA:1830:C:H1'  | 2.49                     | 0.47              |
| 24:BA:1847:A:N1  | 24:BA:1851:U:O4   | 2.47                     | 0.47              |
| 24:BA:1927:A:C6  | 24:BA:1928:A:N1   | 2.83                     | 0.47              |
| 24:BA:1964:G:H4' | 24:BA:1965:C:OP2  | 2.15                     | 0.47              |
| 24:BA:2000:G:OP2 | 38:BQ:2:ARG:CD    | 2.63                     | 0.47              |
| 24:BA:2062:A:C2' | 24:BA:2063:C:OP1  | 2.63                     | 0.47              |
| 24:BA:2110:G:C2' | 24:BA:2120:G:H5'  | 2.45                     | 0.47              |
| 24:BA:2133:G:O6  | 24:BA:2157:G:C8   | 2.68                     | 0.47              |
| 24:BA:2244:U:O2' | 24:BA:2245:U:O5'  | 2.33                     | 0.47              |
| 24:BA:2298:A:C2' | 24:BA:2299:G:H8   | 2.27                     | 0.47              |
| 24:BA:2312:U:O4' | 30:BG:43:LEU:HD22 | 2.15                     | 0.47              |
| 24:BA:2320:A:C5' | 24:BA:2321:G:C5   | 2.91                     | 0.47              |
| 24:BA:2325:G:N7  | 24:BA:2326:C:C5   | 2.83                     | 0.47              |
| 24:BA:2354:G:H1' | 47:BZ:34:GLY:O    | 2.14                     | 0.47              |
| 24:BA:2394:C:H5' | 54:B7:12:LYS:NZ   | 2.29                     | 0.47              |
| 24:BA:2459:A:C2  | 24:BA:2492:U:O4   | 2.54                     | 0.47              |
| 24:BA:2505:G:C8  | 24:BA:2505:G:H3'  | 2.50                     | 0.47              |
| 24:BA:2535:G:H5' | 24:BA:2536:G:OP2  | 2.15                     | 0.47              |
| 24:BA:2553:G:C2  | 24:BA:2554:U:H1'  | 2.39                     | 0.47              |
| 24:BA:2579:C:O2' | 24:BA:2580:U:H5'  | 2.14                     | 0.47              |
| 24:BA:2674:G:H4' | 35:BN:26:LYS:HZ3  | 1.80                     | 0.47              |
| 24:BA:2688:U:O4  | 24:BA:2719:G:H3'  | 2.15                     | 0.47              |
| 24:BA:2740:A:C6  | 24:BA:2741:A:C6   | 3.03                     | 0.47              |
| 24:BA:2812:G:N2  | 24:BA:2889:C:C2   | 2.83                     | 0.47              |
| 24:BA:2815:C:O2' | 24:BA:2816:C:C5'  | 2.52                     | 0.47              |
| 25:BB:7:G:C6     | 25:BB:8:U:N3      | 2.83                     | 0.47              |
| 25:BB:102:G:C2'  | 46:BY:73:GLN:NE2  | 2.63                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 25:BB:110:G:C6     | 25:BB:111:U:C2     | 3.03                     | 0.47              |
| 26:BC:137:LEU:HD23 | 26:BC:138:PRO:HD2  | 1.95                     | 0.47              |
| 26:BC:175:VAL:HG21 | 26:BC:189:ILE:HG12 | 1.95                     | 0.47              |
| 27:BD:75:ILE:HD13  | 27:BD:99:ASP:CG    | 2.40                     | 0.47              |
| 28:BE:4:ILE:CG1    | 28:BE:27:LEU:HD13  | 2.41                     | 0.47              |
| 28:BE:14:ILE:HD12  | 28:BE:14:ILE:N     | 2.15                     | 0.47              |
| 28:BE:82:ARG:NE    | 28:BE:82:ARG:HA    | 2.30                     | 0.47              |
| 28:BE:91:VAL:O     | 28:BE:92:THR:CB    | 2.61                     | 0.47              |
| 28:BE:97:LYS:HG3   | 28:BE:100:GLU:CG   | 2.45                     | 0.47              |
| 29:BF:38:ARG:O     | 29:BF:42:ALA:HB2   | 2.14                     | 0.47              |
| 29:BF:65:TRP:CE3   | 29:BF:65:TRP:HA    | 2.49                     | 0.47              |
| 31:BH:7:LEU:CD1    | 31:BH:65:HIS:NE2   | 2.73                     | 0.47              |
| 31:BH:13:LYS:CG    | 31:BH:15:VAL:HB    | 2.45                     | 0.47              |
| 32:BK:79:ILE:HA    | 32:BK:80:PRO:HD3   | 1.67                     | 0.47              |
| 33:BL:14:ALA:CB    | 33:BL:53:VAL:CG2   | 2.92                     | 0.47              |
| 34:BM:4:TYR:HE2    | 41:BT:100:VAL:HB   | 1.80                     | 0.47              |
| 35:BN:122:LEU:CA   | 40:BS:74:ARG:NH1   | 2.68                     | 0.47              |
| 36:BO:78:PRO:HG3   | 36:BO:116:GLY:HA2  | 1.96                     | 0.47              |
| 36:BO:117:GLU:CG   | 36:BO:118:GLY:H    | 2.22                     | 0.47              |
| 37:BP:15:GLY:HA2   | 37:BP:73:PRO:HG2   | 1.96                     | 0.47              |
| 37:BP:66:ILE:HG22  | 37:BP:67:ARG:O     | 2.14                     | 0.47              |
| 37:BP:78:PRO:C     | 37:BP:79:LEU:HD23  | 2.38                     | 0.47              |
| 37:BP:109:VAL:HG12 | 37:BP:110:THR:N    | 2.29                     | 0.47              |
| 38:BQ:18:LEU:HB3   | 38:BQ:22:ARG:NH2   | 2.22                     | 0.47              |
| 38:BQ:67:LEU:HD21  | 38:BQ:71:GLN:HA    | 1.97                     | 0.47              |
| 38:BQ:90:ARG:HH22  | 38:BQ:117:VAL:HG13 | 1.78                     | 0.47              |
| 39:BR:106:ARG:HD2  | 39:BR:107:GLU:OE2  | 2.15                     | 0.47              |
| 41:BT:61:TRP:HB3   | 41:BT:65:ILE:HD11  | 1.97                     | 0.47              |
| 41:BT:93:LYS:O     | 42:BU:6:LYS:NZ     | 2.32                     | 0.47              |
| 41:BT:98:LEU:HD13  | 41:BT:101:ARG:HD2  | 1.97                     | 0.47              |
| 42:BU:20:LEU:CD1   | 42:BU:68:LYS:NZ    | 2.73                     | 0.47              |
| 42:BU:78:LYS:HE2   | 42:BU:84:LYS:CG    | 2.45                     | 0.47              |
| 43:BV:8:ARG:NH2    | 43:BV:102:HIS:CE1  | 2.83                     | 0.47              |
| 43:BV:13:SER:OG    | 43:BV:16:LYS:HE3   | 2.14                     | 0.47              |
| 43:BV:85:VAL:HG23  | 43:BV:85:VAL:O     | 2.14                     | 0.47              |
| 45:BX:74:PRO:CD    | 45:BX:76:CYS:O     | 2.63                     | 0.47              |
| 45:BX:75:ILE:O     | 45:BX:75:ILE:CD1   | 2.62                     | 0.47              |
| 46:BY:18:LEU:C     | 46:BY:23:LYS:O     | 2.57                     | 0.47              |
| 46:BY:39:VAL:CG2   | 46:BY:44:PHE:CE2   | 2.87                     | 0.47              |
| 46:BY:118:GLN:CD   | 46:BY:172:ALA:HB1  | 2.40                     | 0.47              |
| 46:BY:152:ALA:HB3  | 46:BY:168:GLU:H    | 1.80                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 47:BZ:49:LYS:HB2  | 47:BZ:80:HIS:ND1  | 2.30                     | 0.47              |
| 47:BZ:74:ARG:C    | 47:BZ:76:GLY:N    | 2.71                     | 0.47              |
| 48:B1:46:ARG:HE   | 48:B1:50:ARG:HH22 | 1.63                     | 0.47              |
| 51:B4:58:LEU:CD2  | 51:B4:59:GLU:N    | 2.67                     | 0.47              |
| 52:B5:22:ALA:O    | 52:B5:23:THR:CB   | 2.61                     | 0.47              |
| 53:B6:31:LEU:C    | 53:B6:35:ARG:CD   | 2.87                     | 0.47              |
| 53:B6:43:THR:CA   | 53:B6:46:VAL:HB   | 2.44                     | 0.47              |
| 53:B6:46:VAL:O    | 53:B6:47:ARG:O    | 2.32                     | 0.47              |
| 54:B7:58:ILE:HD12 | 54:B7:59:LYS:H    | 1.79                     | 0.47              |
| 1:AA:25:C:H4'     | 1:AA:524:G:N2     | 2.30                     | 0.47              |
| 1:AA:29:G:C5'     | 1:AA:296:U:OP1    | 2.59                     | 0.47              |
| 1:AA:59:A:H61     | 1:AA:331:G:H1'    | 1.80                     | 0.47              |
| 1:AA:67:C:O2'     | 1:AA:171:A:H1'    | 2.15                     | 0.47              |
| 1:AA:251:G:N3     | 1:AA:266:G:C6     | 2.83                     | 0.47              |
| 1:AA:285:G:C5     | 1:AA:286:G:N7     | 2.83                     | 0.47              |
| 1:AA:376:G:H4'    | 18:AS:28:ARG:CB   | 2.45                     | 0.47              |
| 1:AA:536:C:O5'    | 1:AA:536:C:C6     | 2.68                     | 0.47              |
| 1:AA:686:U:HO2'   | 1:AA:687:A:P      | 2.37                     | 0.47              |
| 1:AA:697:U:O5'    | 1:AA:697:U:C6     | 2.62                     | 0.47              |
| 1:AA:841:U:OP2    | 1:AA:842:C:N4     | 2.48                     | 0.47              |
| 1:AA:872:A:C6     | 1:AA:874:G:C5     | 3.03                     | 0.47              |
| 1:AA:936:C:C2'    | 1:AA:937:A:C5'    | 2.92                     | 0.47              |
| 1:AA:981:U:C6     | 1:AA:982:U:C5     | 3.03                     | 0.47              |
| 1:AA:1003:G:H2'   | 1:AA:1004:A:H4'   | 1.96                     | 0.47              |
| 1:AA:1085:U:H5''  | 1:AA:1086:U:H5    | 1.78                     | 0.47              |
| 1:AA:1121:U:O5'   | 1:AA:1121:U:C6    | 2.68                     | 0.47              |
| 1:AA:1173:G:C2'   | 1:AA:1174:G:H5''  | 2.45                     | 0.47              |
| 1:AA:1270:C:HO2'  | 1:AA:1313:U:HO2'  | 1.59                     | 0.47              |
| 1:AA:1274:G:H2'   | 1:AA:1275:A:H8    | 1.78                     | 0.47              |
| 1:AA:1340:A:H2'   | 1:AA:1341:U:H6    | 1.80                     | 0.47              |
| 1:AA:1390:U:C4    | 1:AA:1391:U:O4    | 2.68                     | 0.47              |
| 1:AA:1475:G:C2'   | 1:AA:1476:G:O5'   | 2.63                     | 0.47              |
| 1:AA:1476:G:H2'   | 1:AA:1477:C:C5    | 2.50                     | 0.47              |
| 2:A1:46:U:C6      | 2:A1:46:U:C3'     | 2.98                     | 0.47              |
| 3:AC:31:A:C2      | 3:AC:40:C:C4      | 3.03                     | 0.47              |
| 3:AD:5:G:C2       | 3:AD:6:G:C5       | 3.02                     | 0.47              |
| 3:AD:54:U:H4'     | 26:BC:54:SER:OG   | 2.14                     | 0.47              |
| 4:AE:73:THR:HA    | 4:AE:94:ASN:HA    | 1.96                     | 0.47              |
| 4:AE:104:ASN:O    | 4:AE:107:THR:HB   | 2.15                     | 0.47              |
| 4:AE:219:VAL:HA   | 4:AE:222:ILE:CG1  | 2.45                     | 0.47              |
| 5:AF:12:LEU:HD21  | 16:AQ:57:ARG:HG2  | 1.91                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 5:AF:22:TRP:CZ2   | 16:AQ:54:PRO:HG2  | 2.50                     | 0.47              |
| 5:AF:57:ILE:HG23  | 5:AF:66:VAL:HG22  | 1.96                     | 0.47              |
| 5:AF:74:GLY:C     | 5:AF:76:VAL:N     | 2.71                     | 0.47              |
| 5:AF:83:ARG:C     | 5:AF:87:LEU:HG    | 2.40                     | 0.47              |
| 5:AF:152:ILE:O    | 5:AF:199:LYS:O    | 2.33                     | 0.47              |
| 5:AF:186:PHE:CA   | 5:AF:198:VAL:O    | 2.59                     | 0.47              |
| 6:AG:26:CYS:SG    | 6:AG:26:CYS:O     | 2.73                     | 0.47              |
| 6:AG:64:LEU:CD1   | 6:AG:65:ARG:N     | 2.76                     | 0.47              |
| 6:AG:146:ILE:CD1  | 6:AG:146:ILE:C    | 2.88                     | 0.47              |
| 6:AG:151:LYS:CD   | 6:AG:151:LYS:N    | 2.78                     | 0.47              |
| 6:AG:170:VAL:CG1  | 6:AG:174:LEU:HD12 | 2.45                     | 0.47              |
| 7:AH:47:LYS:O     | 7:AH:57:LYS:HE2   | 2.15                     | 0.47              |
| 7:AH:59:GLY:CA    | 7:AH:63:ARG:HH21  | 2.27                     | 0.47              |
| 7:AH:77:PRO:HG2   | 7:AH:78:HIS:H     | 1.79                     | 0.47              |
| 9:AJ:45:ASP:HB2   | 9:AJ:117:ALA:CB   | 2.44                     | 0.47              |
| 9:AJ:75:VAL:CA    | 9:AJ:89:MET:HE1   | 2.30                     | 0.47              |
| 9:AJ:152:ALA:C    | 9:AJ:154:TYR:H    | 2.22                     | 0.47              |
| 11:AL:4:TYR:CG    | 11:AL:88:TYR:HB2  | 2.50                     | 0.47              |
| 12:AM:17:ASP:O    | 12:AM:21:GLN:HB3  | 2.14                     | 0.47              |
| 12:AM:54:PHE:H    | 16:AQ:41:ARG:HH21 | 1.63                     | 0.47              |
| 13:AN:21:ILE:HD11 | 13:AN:82:VAL:CG1  | 2.45                     | 0.47              |
| 15:AP:66:LEU:HA   | 15:AP:70:LEU:HB2  | 1.97                     | 0.47              |
| 15:AP:79:LYS:O    | 15:AP:82:MET:HB2  | 2.14                     | 0.47              |
| 15:AP:96:LEU:C    | 15:AP:110:ARG:HG2 | 2.40                     | 0.47              |
| 17:AR:66:LEU:O    | 17:AR:67:LEU:C    | 2.58                     | 0.47              |
| 19:AT:4:LYS:CG    | 19:AT:5:VAL:N     | 2.77                     | 0.47              |
| 19:AT:75:ARG:NH1  | 19:AT:75:ARG:HG2  | 2.30                     | 0.47              |
| 22:AW:38:LYS:O    | 22:AW:41:ILE:N    | 2.48                     | 0.47              |
| 22:AW:57:ARG:HG2  | 22:AW:57:ARG:HH11 | 1.80                     | 0.47              |
| 24:BA:142:G:H2'   | 24:BA:143:C:C5    | 2.49                     | 0.47              |
| 24:BA:194:G:H2'   | 24:BA:195:A:H8    | 1.76                     | 0.47              |
| 24:BA:242:G:H5''  | 54:B7:4:MET:SD    | 2.55                     | 0.47              |
| 24:BA:291:C:C5    | 24:BA:292:C:C5    | 3.03                     | 0.47              |
| 24:BA:301:G:C8    | 24:BA:334:C:C2    | 3.03                     | 0.47              |
| 24:BA:342:G:H2'   | 24:BA:343:C:O4'   | 2.15                     | 0.47              |
| 24:BA:349:G:H2'   | 24:BA:350:U:C5    | 2.49                     | 0.47              |
| 24:BA:349:G:C6    | 24:BA:350:U:O4    | 2.68                     | 0.47              |
| 24:BA:416:C:C4    | 24:BA:417:C:C4    | 3.03                     | 0.47              |
| 24:BA:451:C:C4    | 24:BA:453:C:H3'   | 2.49                     | 0.47              |
| 24:BA:459:U:OP2   | 53:B6:40:TRP:CG   | 2.68                     | 0.47              |
| 24:BA:467:G:O2'   | 24:BA:468:G:H5'   | 2.14                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:473:G:N2   | 24:BA:474:G:C4    | 2.83                     | 0.47              |
| 24:BA:496:G:C6   | 24:BA:497:A:C5    | 3.03                     | 0.47              |
| 24:BA:570:G:N1   | 24:BA:2498:C:C4'  | 2.59                     | 0.47              |
| 24:BA:585:G:O2'  | 24:BA:586:A:C8    | 2.57                     | 0.47              |
| 24:BA:587:C:HO2' | 24:BA:588:U:P     | 2.38                     | 0.47              |
| 24:BA:587:C:C6   | 24:BA:671:C:H1'   | 2.50                     | 0.47              |
| 24:BA:689:A:C4   | 24:BA:690:G:C8    | 3.02                     | 0.47              |
| 24:BA:746:A:N7   | 24:BA:2612:C:O5'  | 2.48                     | 0.47              |
| 24:BA:763:G:H2'  | 24:BA:764:A:C5'   | 2.44                     | 0.47              |
| 24:BA:827:U:C4   | 24:BA:2430:A:C6   | 3.03                     | 0.47              |
| 24:BA:836:G:C5   | 24:BA:837:C:C4    | 3.03                     | 0.47              |
| 24:BA:857:C:O2'  | 47:BZ:23:VAL:HG11 | 2.15                     | 0.47              |
| 24:BA:865:C:O2   | 24:BA:865:C:C2'   | 2.63                     | 0.47              |
| 24:BA:988:A:C2   | 24:BA:989:G:C2    | 3.02                     | 0.47              |
| 24:BA:1027:A:N6  | 24:BA:1126:A:H1'  | 2.27                     | 0.47              |
| 24:BA:1029:A:O5' | 24:BA:1029:A:C8   | 2.60                     | 0.47              |
| 24:BA:1234:U:H2' | 24:BA:1235:G:O4'  | 2.14                     | 0.47              |
| 24:BA:1339:G:O4' | 24:BA:1393:A:C2   | 2.68                     | 0.47              |
| 24:BA:1351:C:C4  | 24:BA:1381:G:C6   | 3.02                     | 0.47              |
| 24:BA:1424:G:OP2 | 24:BA:1424:G:O4'  | 2.32                     | 0.47              |
| 24:BA:1425:G:C6  | 24:BA:1426:G:O6   | 2.68                     | 0.47              |
| 24:BA:1432:C:N3  | 24:BA:1433:U:O2   | 2.48                     | 0.47              |
| 24:BA:1484:G:C6  | 24:BA:1485:G:C5   | 3.03                     | 0.47              |
| 24:BA:1519:G:H3' | 24:BA:1520:U:C1'  | 2.45                     | 0.47              |
| 24:BA:1589:C:O2' | 24:BA:1590:U:H5'  | 2.15                     | 0.47              |
| 24:BA:1613:G:C8  | 24:BA:1617:C:N4   | 2.82                     | 0.47              |
| 24:BA:1699:G:C2' | 24:BA:1700:A:OP1  | 2.62                     | 0.47              |
| 24:BA:1891:G:C5  | 24:BA:1892:C:C5   | 3.03                     | 0.47              |
| 24:BA:1916:A:O2' | 24:BA:1917:U:C2   | 2.66                     | 0.47              |
| 24:BA:1923:U:H2' | 24:BA:1924:C:C6   | 2.50                     | 0.47              |
| 24:BA:1949:G:N7  | 24:BA:1950:G:N7   | 2.63                     | 0.47              |
| 24:BA:1964:G:C2  | 24:BA:1967:C:H5   | 2.27                     | 0.47              |
| 24:BA:1973:G:C4  | 24:BA:1974:C:C5   | 3.03                     | 0.47              |
| 24:BA:2097:C:H2' | 24:BA:2098:U:C4'  | 2.44                     | 0.47              |
| 24:BA:2127:G:N2  | 24:BA:2128:C:C2   | 2.83                     | 0.47              |
| 24:BA:2325:G:N7  | 24:BA:2326:C:H5   | 2.13                     | 0.47              |
| 24:BA:2346:A:OP2 | 24:BA:2381:C:O2'  | 2.32                     | 0.47              |
| 24:BA:2364:C:N4  | 24:BA:2365:G:C6   | 2.83                     | 0.47              |
| 24:BA:2383:G:C2  | 24:BA:2384:G:C4   | 3.03                     | 0.47              |
| 24:BA:2404:C:C4  | 24:BA:2414:G:C2   | 3.03                     | 0.47              |
| 24:BA:2431:U:C2  | 24:BA:2433:A:OP2  | 2.68                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2450:A:OP1   | 24:BA:2497:A:C8    | 2.67                     | 0.47              |
| 24:BA:2528:U:OP1   | 55:B8:30:PRO:HG2   | 2.15                     | 0.47              |
| 24:BA:2530:A:H2'   | 24:BA:2531:A:H5''  | 1.96                     | 0.47              |
| 24:BA:2601:C:O2    | 24:BA:2603:G:C8    | 2.68                     | 0.47              |
| 24:BA:2616:C:C2'   | 24:BA:2617:C:C6    | 2.97                     | 0.47              |
| 24:BA:2676:C:N3    | 24:BA:2677:G:N7    | 2.63                     | 0.47              |
| 24:BA:2751:G:C1'   | 31:BH:6:ARG:HH22   | 2.28                     | 0.47              |
| 24:BA:2758:A:P     | 24:BA:2759:G:OP2   | 2.73                     | 0.47              |
| 24:BA:2812:G:C4    | 24:BA:2813:A:N7    | 2.83                     | 0.47              |
| 24:BA:2850:A:OP2   | 24:BA:2866:U:C5    | 2.68                     | 0.47              |
| 25:BB:87:G:N2      | 25:BB:89:G:C8      | 2.82                     | 0.47              |
| 26:BC:54:SER:CB    | 26:BC:57:ASN:HD22  | 2.28                     | 0.47              |
| 26:BC:56:GLN:NE2   | 26:BC:203:GLY:O    | 2.47                     | 0.47              |
| 27:BD:42:GLY:HA2   | 27:BD:60:ARG:NH2   | 2.26                     | 0.47              |
| 27:BD:148:GLU:OE1  | 27:BD:154:LYS:NZ   | 2.48                     | 0.47              |
| 28:BE:8:LYS:HG3    | 28:BE:24:THR:HG21  | 1.97                     | 0.47              |
| 28:BE:21:VAL:O     | 28:BE:185:LYS:HB2  | 2.15                     | 0.47              |
| 28:BE:104:VAL:HG22 | 28:BE:198:VAL:CB   | 2.44                     | 0.47              |
| 29:BF:6:VAL:HB     | 29:BF:18:ARG:CD    | 2.40                     | 0.47              |
| 29:BF:116:ASP:HA   | 29:BF:119:ARG:HD2  | 1.96                     | 0.47              |
| 29:BF:124:LEU:CD2  | 29:BF:197:ASP:OD2  | 2.63                     | 0.47              |
| 29:BF:135:LYS:HB3  | 29:BF:138:GLU:OE2  | 2.15                     | 0.47              |
| 29:BF:154:VAL:HG23 | 29:BF:156:LEU:CD2  | 2.45                     | 0.47              |
| 29:BF:194:MET:HE1  | 29:BF:197:ASP:N    | 2.30                     | 0.47              |
| 30:BG:9:ARG:CG     | 30:BG:13:GLU:OE2   | 2.62                     | 0.47              |
| 30:BG:26:GLN:CD    | 30:BG:29:TRP:CE3   | 2.91                     | 0.47              |
| 30:BG:107:LEU:HD21 | 30:BG:173:LEU:HD21 | 1.95                     | 0.47              |
| 30:BG:139:LEU:C    | 30:BG:142:PRO:HD3  | 2.40                     | 0.47              |
| 31:BH:94:TYR:CD2   | 31:BH:95:ARG:N     | 2.82                     | 0.47              |
| 31:BH:163:TYR:CD1  | 31:BH:163:TYR:N    | 2.83                     | 0.47              |
| 33:BL:61:ALA:O     | 33:BL:62:ASP:CB    | 2.63                     | 0.47              |
| 33:BL:81:ALA:CB    | 33:BL:107:ILE:HD13 | 2.45                     | 0.47              |
| 34:BM:42:TRP:HE1   | 41:BT:64:ARG:CG    | 2.27                     | 0.47              |
| 34:BM:107:LEU:HD13 | 34:BM:117:PHE:CD1  | 2.50                     | 0.47              |
| 34:BM:134:ARG:N    | 34:BM:135:PRO:CD   | 2.78                     | 0.47              |
| 35:BN:8:LEU:HD13   | 35:BN:82:ASN:HA    | 1.95                     | 0.47              |
| 35:BN:14:THR:OG1   | 35:BN:16:ALA:C     | 2.58                     | 0.47              |
| 35:BN:70:LYS:HD3   | 35:BN:107:ARG:HH12 | 1.76                     | 0.47              |
| 35:BN:70:LYS:CB    | 35:BN:72:PRO:HD2   | 2.43                     | 0.47              |
| 36:BO:59:LEU:HD23  | 54:B7:25:MET:HE2   | 1.97                     | 0.47              |
| 37:BP:68:ILE:CD1   | 37:BP:97:VAL:HG13  | 2.45                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 39:BR:59:LYS:H     | 39:BR:59:LYS:CD    | 2.28                     | 0.47              |
| 39:BR:75:GLU:O     | 39:BR:78:LEU:HD12  | 2.15                     | 0.47              |
| 39:BR:92:TYR:CE1   | 39:BR:93:LYS:HB3   | 2.49                     | 0.47              |
| 40:BS:17:THR:HG21  | 40:BS:22:PHE:CZ    | 2.50                     | 0.47              |
| 41:BT:32:PHE:O     | 41:BT:36:ARG:HG2   | 2.14                     | 0.47              |
| 41:BT:48:ALA:C     | 41:BT:52:ARG:NE    | 2.73                     | 0.47              |
| 41:BT:96:ALA:O     | 41:BT:99:ALA:N     | 2.48                     | 0.47              |
| 42:BU:8:GLY:HA3    | 42:BU:24:LYS:NZ    | 2.30                     | 0.47              |
| 42:BU:67:GLY:CA    | 42:BU:94:LEU:HA    | 2.45                     | 0.47              |
| 43:BV:58:ALA:CB    | 43:BV:69:LEU:HD21  | 2.45                     | 0.47              |
| 44:BW:5:TYR:HB3    | 48:B1:24:LYS:CD    | 2.40                     | 0.47              |
| 45:BX:84:ARG:HB2   | 45:BX:92:ASN:O     | 2.15                     | 0.47              |
| 46:BY:15:PRO:O     | 46:BY:19:ARG:HD2   | 2.14                     | 0.47              |
| 46:BY:79:ARG:C     | 46:BY:80:ARG:CD    | 2.82                     | 0.47              |
| 46:BY:100:VAL:HG23 | 46:BY:102:LEU:HD23 | 1.96                     | 0.47              |
| 47:BZ:29:GLN:OE1   | 47:BZ:67:VAL:HG21  | 2.15                     | 0.47              |
| 49:B2:6:VAL:CG2    | 49:B2:35:ARG:NH2   | 2.77                     | 0.47              |
| 49:B2:8:LEU:CB     | 49:B2:33:GLN:HB3   | 2.44                     | 0.47              |
| 50:B3:58:ARG:H     | 50:B3:61:ARG:HH12  | 1.63                     | 0.47              |
| 50:B3:70:GLY:O     | 50:B3:71:ARG:CB    | 2.63                     | 0.47              |
| 52:B5:7:ILE:HG23   | 52:B5:8:LYS:H      | 1.79                     | 0.47              |
| 52:B5:14:THR:CB    | 52:B5:51:GLU:HA    | 2.30                     | 0.47              |
| 52:B5:17:LYS:HG2   | 52:B5:19:ARG:HE    | 1.79                     | 0.47              |
| 54:B7:3:LYS:HE2    | 54:B7:59:LYS:HE2   | 1.97                     | 0.47              |
| 1:AA:112:G:C2      | 1:AA:113:G:C8      | 3.03                     | 0.47              |
| 1:AA:135:C:O2      | 18:AS:1:MET:HG2    | 2.14                     | 0.47              |
| 1:AA:141:A:H2'     | 1:AA:142:G:O4'     | 2.14                     | 0.47              |
| 1:AA:155:C:H2'     | 1:AA:156:G:O4'     | 2.15                     | 0.47              |
| 1:AA:161:A:C6      | 1:AA:162:A:C6      | 3.03                     | 0.47              |
| 1:AA:261:U:H5''    | 1:AA:262:A:OP2     | 2.15                     | 0.47              |
| 1:AA:376:G:OP1     | 18:AS:6:LEU:CD1    | 2.62                     | 0.47              |
| 1:AA:392:G:C5'     | 18:AS:12:LYS:HZ3   | 2.27                     | 0.47              |
| 1:AA:485:G:HO2'    | 1:AA:486:U:H6      | 1.60                     | 0.47              |
| 1:AA:541:G:OP2     | 1:AA:541:G:H8      | 1.97                     | 0.47              |
| 1:AA:544:G:C4      | 1:AA:545:C:C5      | 3.03                     | 0.47              |
| 1:AA:588:G:N3      | 1:AA:588:G:H2'     | 2.28                     | 0.47              |
| 1:AA:691:G:O6      | 13:AN:26:ASN:O     | 2.33                     | 0.47              |
| 1:AA:748:C:H1'     | 1:AA:749:C:C5      | 2.50                     | 0.47              |
| 1:AA:815:A:C6      | 1:AA:1529:G:C2     | 3.03                     | 0.47              |
| 1:AA:896:C:N3      | 1:AA:897:C:C5      | 2.83                     | 0.47              |
| 1:AA:908:A:C2      | 1:AA:909:A:C8      | 3.03                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:914:A:H2'     | 1:AA:915:A:N7     | 2.30                     | 0.47              |
| 1:AA:977:A:N3      | 1:AA:977:A:H2'    | 2.30                     | 0.47              |
| 1:AA:994:A:N7      | 1:AA:1216:G:C4'   | 2.69                     | 0.47              |
| 1:AA:1054:C:P      | 1:AA:1197:G:P     | 3.13                     | 0.47              |
| 1:AA:1124:G:N2     | 1:AA:1127:G:C4    | 2.83                     | 0.47              |
| 1:AA:1124:G:H2'    | 1:AA:1126:U:O4    | 2.15                     | 0.47              |
| 1:AA:1142:G:O2'    | 1:AA:1143:G:C5'   | 2.61                     | 0.47              |
| 1:AA:1224:G:O6     | 1:AA:1322:C:C4'   | 2.63                     | 0.47              |
| 1:AA:1272:G:H2'    | 1:AA:1273:G:C8    | 2.49                     | 0.47              |
| 1:AA:1392:G:O2'    | 1:AA:1393:U:H5'   | 2.15                     | 0.47              |
| 1:AA:1407:C:C2'    | 1:AA:1408:A:C5'   | 2.86                     | 0.47              |
| 1:AA:1507:A:C2'    | 1:AA:1508:G:C5'   | 2.92                     | 0.47              |
| 2:A1:31:U:H2'      | 2:A1:32:U:C6      | 2.50                     | 0.47              |
| 3:AD:16:U:H6       | 3:AD:16:U:O5'     | 1.97                     | 0.47              |
| 3:AD:27:G:H2'      | 3:AD:28:G:C8      | 2.49                     | 0.47              |
| 3:AB:38:A:H2'      | 3:AB:39:U:C6      | 2.48                     | 0.47              |
| 4:AE:55:PHE:O      | 4:AE:58:ILE:CB    | 2.63                     | 0.47              |
| 4:AE:125:PRO:C     | 4:AE:127:ILE:HG13 | 2.40                     | 0.47              |
| 4:AE:160:ASP:O     | 4:AE:161:ALA:HB2  | 2.15                     | 0.47              |
| 4:AE:167:PRO:C     | 4:AE:169:LYS:N    | 2.72                     | 0.47              |
| 4:AE:207:ALA:O     | 4:AE:208:ILE:C    | 2.58                     | 0.47              |
| 4:AE:216:SER:O     | 4:AE:220:ASP:OD1  | 2.33                     | 0.47              |
| 4:AE:223:ILE:HA    | 4:AE:226:ARG:HD2  | 1.97                     | 0.47              |
| 5:AF:88:ARG:N      | 5:AF:101:LEU:HD12 | 2.30                     | 0.47              |
| 5:AF:120:VAL:HG21  | 5:AF:137:ALA:HB2  | 1.96                     | 0.47              |
| 6:AG:38:TYR:CZ     | 6:AG:45:GLN:NE2   | 2.83                     | 0.47              |
| 6:AG:63:LYS:CG     | 6:AG:64:LEU:N     | 2.77                     | 0.47              |
| 6:AG:96:LEU:O      | 6:AG:97:LEU:C     | 2.58                     | 0.47              |
| 7:AH:76:ILE:CG2    | 7:AH:142:LEU:HD13 | 2.44                     | 0.47              |
| 7:AH:129:ILE:O     | 7:AH:132:ALA:HB3  | 2.15                     | 0.47              |
| 8:AI:33:TYR:CZ     | 8:AI:75:LEU:HA    | 2.49                     | 0.47              |
| 10:AK:101:PRO:O    | 10:AK:102:ARG:HG3 | 2.14                     | 0.47              |
| 10:AK:104:ARG:C    | 10:AK:106:GLY:N   | 2.73                     | 0.47              |
| 10:AK:109:ILE:HG12 | 10:AK:137:VAL:C   | 2.40                     | 0.47              |
| 10:AK:114:THR:HA   | 10:AK:130:GLY:O   | 2.15                     | 0.47              |
| 10:AK:126:LYS:NZ   | 10:AK:127:LEU:CD2 | 2.73                     | 0.47              |
| 11:AL:17:VAL:CG2   | 11:AL:77:ILE:HG23 | 2.44                     | 0.47              |
| 11:AL:121:ARG:HH11 | 11:AL:121:ARG:CG  | 2.26                     | 0.47              |
| 12:AM:52:GLY:O     | 12:AM:53:PRO:C    | 2.57                     | 0.47              |
| 13:AN:121:PRO:HB2  | 13:AN:125:PHE:CD1 | 2.49                     | 0.47              |
| 14:AO:115:LYS:O    | 14:AO:116:SER:O   | 2.33                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 14:AO:125:PRO:O     | 14:AO:127:GLU:N   | 2.46                     | 0.47              |
| 15:AP:78:ILE:O      | 15:AP:81:LEU:HD13 | 2.15                     | 0.47              |
| 15:AP:78:ILE:C      | 15:AP:81:LEU:HD13 | 2.39                     | 0.47              |
| 16:AQ:36:PHE:CE2    | 16:AQ:37:PHE:CE1  | 3.03                     | 0.47              |
| 17:AR:18:PHE:CD1    | 17:AR:18:PHE:O    | 2.68                     | 0.47              |
| 17:AR:75:PRO:HA     | 17:AR:78:TYR:CD1  | 2.49                     | 0.47              |
| 19:AT:18:THR:CG2    | 19:AT:43:LEU:HD21 | 2.30                     | 0.47              |
| 20:AU:46:GLU:CB     | 20:AU:85:LEU:HD13 | 2.27                     | 0.47              |
| 22:AW:14:LYS:O      | 22:AW:18:GLN:HG3  | 2.15                     | 0.47              |
| 22:AW:43:LEU:HB2    | 22:AW:55:ILE:CD1  | 2.44                     | 0.47              |
| 22:AW:99:LEU:H      | 22:AW:99:LEU:HD23 | 1.80                     | 0.47              |
| 24:BA:64:A:N3       | 44:BW:66:LEU:CD2  | 2.71                     | 0.47              |
| 24:BA:187:G:C2'     | 24:BA:1365:A:C2   | 2.95                     | 0.47              |
| 24:BA:197:A:H5''    | 24:BA:2068:U:O4   | 2.14                     | 0.47              |
| 24:BA:260:G:O4'     | 24:BA:621:A:O4'   | 2.31                     | 0.47              |
| 24:BA:342:G:H8      | 24:BA:342:G:OP2   | 1.98                     | 0.47              |
| 24:BA:364:C:C2      | 24:BA:365:C:C5    | 3.03                     | 0.47              |
| 24:BA:448:U:O4      | 24:BA:583:G:C1'   | 2.60                     | 0.47              |
| 24:BA:548:A:H61     | 24:BA:549:G:H21   | 1.62                     | 0.47              |
| 24:BA:616:A:O3'     | 24:BA:617:G:O4'   | 2.32                     | 0.47              |
| 24:BA:675:A:N6      | 24:BA:804:A:C4    | 2.83                     | 0.47              |
| 24:BA:695:G:C5      | 24:BA:768:G:C6    | 3.03                     | 0.47              |
| 24:BA:723:G:C2      | 24:BA:724:U:H1'   | 2.50                     | 0.47              |
| 24:BA:885:C:C5      | 24:BA:887:A:N3    | 2.82                     | 0.47              |
| 24:BA:979:G:N7      | 24:BA:981:A:OP2   | 2.47                     | 0.47              |
| 24:BA:1030:G:C2     | 24:BA:1031:G:C4   | 3.02                     | 0.47              |
| 24:BA:1077:A:N7     | 24:BA:1078:U:N3   | 2.63                     | 0.47              |
| 24:BA:1142(A):A:H3' | 24:BA:1143:A:H5'  | 1.94                     | 0.47              |
| 24:BA:1343:G:C2     | 24:BA:1405:U:C2   | 3.03                     | 0.47              |
| 24:BA:1350:C:C2'    | 24:BA:1351:C:O5'  | 2.63                     | 0.47              |
| 24:BA:1417:C:H1'    | 24:BA:1587:A:N3   | 2.30                     | 0.47              |
| 24:BA:1448:G:C2'    | 24:BA:1449:A:H8   | 2.27                     | 0.47              |
| 24:BA:1449:A:C1'    | 24:BA:1529:A:C6   | 2.98                     | 0.47              |
| 24:BA:1488:G:H3'    | 24:BA:1489:U:C5'  | 2.44                     | 0.47              |
| 24:BA:1493:C:N4     | 24:BA:1499:C:C2   | 2.82                     | 0.47              |
| 24:BA:1511:A:C3'    | 24:BA:1511:A:C8   | 2.98                     | 0.47              |
| 24:BA:1613:G:H1'    | 53:B6:3:ARG:NE    | 2.30                     | 0.47              |
| 24:BA:1679:U:N3     | 24:BA:1764:G:H5'' | 2.29                     | 0.47              |
| 24:BA:1727:U:C5     | 24:BA:1730:U:O4   | 2.68                     | 0.47              |
| 24:BA:1741:C:H2'    | 24:BA:1742:C:C1'  | 2.44                     | 0.47              |
| 24:BA:1753:G:N2     | 24:BA:1756:G:N3   | 2.63                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1878:G:C5   | 24:BA:1879:C:C5    | 3.03                     | 0.47              |
| 24:BA:1906:G:C1'  | 24:BA:1929:G:C8    | 2.98                     | 0.47              |
| 24:BA:1953:A:N6   | 24:BA:2550:G:C5'   | 2.78                     | 0.47              |
| 24:BA:1954:G:O2'  | 24:BA:1955:U:C5'   | 2.56                     | 0.47              |
| 24:BA:1958:C:H2'  | 24:BA:1959:G:O5'   | 2.14                     | 0.47              |
| 24:BA:2011:U:H3'  | 24:BA:2012:G:H8    | 1.80                     | 0.47              |
| 24:BA:2040:C:H4'  | 34:BM:72:TYR:CE2   | 2.50                     | 0.47              |
| 24:BA:2067:G:C2   | 24:BA:2069:G:N9    | 2.83                     | 0.47              |
| 24:BA:2071:A:C2   | 24:BA:2441:C:C4    | 3.03                     | 0.47              |
| 24:BA:2077:A:H1'  | 24:BA:2435:A:O4'   | 2.15                     | 0.47              |
| 24:BA:2077:A:O2'  | 24:BA:2434:A:H4'   | 2.15                     | 0.47              |
| 24:BA:2324:C:O2'  | 24:BA:2325:G:OP1   | 2.31                     | 0.47              |
| 24:BA:2505:G:H3'  | 24:BA:2505:G:H8    | 1.78                     | 0.47              |
| 24:BA:2539:C:H1'  | 55:B8:2:LYS:HZ2    | 1.80                     | 0.47              |
| 24:BA:2585:U:C2'  | 24:BA:2586:C:OP2   | 2.62                     | 0.47              |
| 24:BA:2638:G:O2'  | 24:BA:2639:A:C8    | 2.65                     | 0.47              |
| 24:BA:2642:G:C6   | 24:BA:2643:G:C5    | 3.03                     | 0.47              |
| 24:BA:2685:G:P    | 35:BN:67:LYS:HD2   | 2.55                     | 0.47              |
| 24:BA:2734:A:H3'  | 24:BA:2735:G:O4'   | 2.13                     | 0.47              |
| 24:BA:2748:A:C2   | 31:BH:67:LEU:HD11  | 2.50                     | 0.47              |
| 24:BA:2750:A:C8   | 24:BA:2753:A:N6    | 2.83                     | 0.47              |
| 25:BB:81:G:O6     | 25:BB:96:G:O6      | 2.33                     | 0.47              |
| 26:BC:116:THR:C   | 26:BC:118:ASP:H    | 2.23                     | 0.47              |
| 27:BD:16:MET:O    | 27:BD:17:THR:C     | 2.57                     | 0.47              |
| 27:BD:62:TYR:N    | 27:BD:63:ARG:HH22  | 2.13                     | 0.47              |
| 27:BD:91:ARG:NH1  | 27:BD:198:ASN:ND2  | 2.63                     | 0.47              |
| 27:BD:101:GLU:OE1 | 27:BD:102:LYS:O    | 2.33                     | 0.47              |
| 27:BD:168:ARG:HA  | 27:BD:174:ILE:HD12 | 1.97                     | 0.47              |
| 28:BE:49:LEU:CD1  | 28:BE:51:PHE:H     | 2.26                     | 0.47              |
| 29:BF:75:HIS:NE2  | 29:BF:77:ASP:O     | 2.48                     | 0.47              |
| 29:BF:145:GLU:C   | 29:BF:147:GLY:N    | 2.73                     | 0.47              |
| 29:BF:168:ARG:H   | 29:BF:168:ARG:HG3  | 1.36                     | 0.47              |
| 30:BG:94:LEU:HD13 | 30:BG:94:LEU:H     | 1.80                     | 0.47              |
| 30:BG:102:PHE:C   | 30:BG:104:GLU:N    | 2.68                     | 0.47              |
| 32:BK:6:LEU:C     | 32:BK:6:LEU:CD2    | 2.88                     | 0.47              |
| 32:BK:50:ARG:C    | 32:BK:53:ALA:HB3   | 2.40                     | 0.47              |
| 33:BL:79:ARG:CD   | 33:BL:134:MET:HG3  | 2.36                     | 0.47              |
| 33:BL:111:LYS:O   | 33:BL:113:PRO:CD   | 2.63                     | 0.47              |
| 33:BL:129:GLY:HA2 | 33:BL:132:ARG:NH2  | 2.29                     | 0.47              |
| 34:BM:87:LEU:CD2  | 34:BM:88:GLU:CD    | 2.88                     | 0.47              |
| 35:BN:9:GLU:O     | 35:BN:82:ASN:CA    | 2.62                     | 0.47              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 35:BN:21:CYS:CA   | 35:BN:40:VAL:O    | 2.62                     | 0.47              |
| 35:BN:63:VAL:CG2  | 35:BN:81:ASP:CA   | 2.90                     | 0.47              |
| 35:BN:68:GLU:HB2  | 35:BN:104:ARG:CD  | 2.44                     | 0.47              |
| 35:BN:106:LEU:CB  | 40:BS:39:ARG:HH22 | 2.08                     | 0.47              |
| 36:BO:70:GLN:O    | 36:BO:71:VAL:CG2  | 2.63                     | 0.47              |
| 36:BO:95:VAL:O    | 36:BO:95:VAL:HG12 | 2.15                     | 0.47              |
| 38:BQ:60:LEU:HD23 | 38:BQ:60:LEU:N    | 2.30                     | 0.47              |
| 39:BR:13:ARG:O    | 39:BR:16:ASN:OD1  | 2.32                     | 0.47              |
| 39:BR:58:LEU:C    | 39:BR:60:GLY:N    | 2.72                     | 0.47              |
| 39:BR:106:ARG:HD3 | 39:BR:107:GLU:OE2 | 2.15                     | 0.47              |
| 40:BS:76:PHE:CE2  | 40:BS:78:LEU:HD12 | 2.49                     | 0.47              |
| 41:BT:36:ARG:O    | 41:BT:40:PHE:HD1  | 1.98                     | 0.47              |
| 42:BU:32:THR:HA   | 42:BU:64:HIS:C    | 2.26                     | 0.47              |
| 42:BU:37:VAL:HG13 | 42:BU:37:VAL:O    | 2.15                     | 0.47              |
| 42:BU:38:LEU:O    | 42:BU:39:LEU:O    | 2.33                     | 0.47              |
| 42:BU:99:ILE:O    | 42:BU:100:ARG:O   | 2.33                     | 0.47              |
| 45:BX:21:LYS:HD2  | 45:BX:23:ARG:HH22 | 1.80                     | 0.47              |
| 45:BX:41:GLY:C    | 45:BX:42:VAL:HG22 | 2.40                     | 0.47              |
| 45:BX:83:THR:HG21 | 45:BX:84:ARG:NH1  | 2.29                     | 0.47              |
| 45:BX:85:VAL:O    | 45:BX:87:LYS:N    | 2.47                     | 0.47              |
| 46:BY:1:MET:SD    | 46:BY:2:GLU:N     | 2.88                     | 0.47              |
| 49:B2:48:GLU:CG   | 49:B2:49:LYS:N    | 2.78                     | 0.47              |
| 50:B3:58:ARG:C    | 50:B3:62:ARG:CZ   | 2.88                     | 0.47              |
| 52:B5:19:ARG:NH1  | 52:B5:19:ARG:O    | 2.47                     | 0.47              |
| 54:B7:39:LYS:HB3  | 54:B7:39:LYS:NZ   | 2.15                     | 0.47              |
| 1:AA:19:C:C2      | 1:AA:20:U:C5      | 3.03                     | 0.46              |
| 1:AA:51:A:N1      | 1:AA:116:A:C4     | 2.83                     | 0.46              |
| 1:AA:68:G:H5'     | 1:AA:171:A:C1'    | 2.45                     | 0.46              |
| 1:AA:209:U:OP2    | 1:AA:209:U:C6     | 2.68                     | 0.46              |
| 1:AA:311:C:HO2'   | 1:AA:312:C:H5'    | 1.79                     | 0.46              |
| 1:AA:586:C:P      | 19:AT:34:LYS:NZ   | 2.89                     | 0.46              |
| 1:AA:593:G:C6     | 1:AA:647:C:N3     | 2.83                     | 0.46              |
| 1:AA:666:G:N2     | 1:AA:741:G:H1'    | 2.30                     | 0.46              |
| 1:AA:686:U:O2'    | 1:AA:687:A:P      | 2.73                     | 0.46              |
| 1:AA:763:G:N3     | 1:AA:764:C:C6     | 2.83                     | 0.46              |
| 1:AA:817:C:C5     | 1:AA:819:A:O4'    | 2.68                     | 0.46              |
| 1:AA:954:G:H21    | 1:AA:1227:A:H62   | 1.62                     | 0.46              |
| 1:AA:966:G:N2     | 3:AC:34:G:H5'     | 2.30                     | 0.46              |
| 1:AA:978:A:C8     | 1:AA:978:A:C3'    | 2.98                     | 0.46              |
| 1:AA:993:G:O6     | 1:AA:1046:A:N6    | 2.48                     | 0.46              |
| 1:AA:1061:G:H2'   | 1:AA:1062:U:O4'   | 2.15                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1067:A:O2'   | 1:AA:1068:G:O5'    | 2.33                     | 0.46              |
| 1:AA:1134:G:N2    | 1:AA:1136:U:C4     | 2.84                     | 0.46              |
| 1:AA:1148:U:H5'   | 11:AL:16:ARG:HG3   | 1.96                     | 0.46              |
| 1:AA:1164:G:N1    | 1:AA:1165:C:C2     | 2.82                     | 0.46              |
| 1:AA:1240:U:C2    | 9:AJ:32:ARG:NE     | 2.83                     | 0.46              |
| 1:AA:1305:G:C2    | 1:AA:1331:G:C2     | 3.03                     | 0.46              |
| 1:AA:1320:C:C6    | 21:AV:37:ARG:NH1   | 2.83                     | 0.46              |
| 1:AA:1354:C:O5'   | 1:AA:1354:C:H6     | 1.98                     | 0.46              |
| 1:AA:1433:A:H62   | 1:AA:1467:G:H21    | 0.82                     | 0.46              |
| 1:AA:1483:A:H3'   | 1:AA:1484:C:H6     | 1.80                     | 0.46              |
| 1:AA:1486:G:C6    | 1:AA:1487:G:C5     | 3.02                     | 0.46              |
| 2:A1:6:U:C2'      | 2:A1:7:U:C5        | 2.88                     | 0.46              |
| 3:AC:28:G:C4      | 3:AC:29:G:N7       | 2.84                     | 0.46              |
| 3:AC:41:C:OP2     | 3:AC:41:C:H3'      | 2.15                     | 0.46              |
| 3:AC:63:G:H2'     | 3:AC:64:A:O4'      | 2.15                     | 0.46              |
| 3:AD:32:U:HO2'    | 9:AJ:77:SER:CB     | 2.28                     | 0.46              |
| 3:AB:58:A:H5''    | 3:AB:59:U:OP1      | 2.15                     | 0.46              |
| 3:AB:63:G:C4'     | 24:BA:2482:G:HO2'  | 2.20                     | 0.46              |
| 3:AB:66:U:C4      | 3:AB:67:C:C5       | 3.03                     | 0.46              |
| 4:AE:49:GLU:O     | 4:AE:50:GLU:C      | 2.56                     | 0.46              |
| 4:AE:71:VAL:HG21  | 4:AE:93:VAL:HB     | 1.96                     | 0.46              |
| 4:AE:118:LEU:HD12 | 4:AE:145:LEU:HD23  | 1.97                     | 0.46              |
| 4:AE:187:LEU:C    | 4:AE:187:LEU:CD1   | 2.81                     | 0.46              |
| 4:AE:189:ASP:HB2  | 4:AE:205:ASP:CG    | 2.40                     | 0.46              |
| 5:AF:186:PHE:CD1  | 5:AF:186:PHE:C     | 2.90                     | 0.46              |
| 6:AG:73:ARG:O     | 6:AG:74:GLN:C      | 2.58                     | 0.46              |
| 7:AH:151:LEU:HA   | 7:AH:151:LEU:HD23  | 1.59                     | 0.46              |
| 8:AI:70:ASP:O     | 8:AI:73:ASN:ND2    | 2.48                     | 0.46              |
| 9:AJ:15:ASP:OD2   | 9:AJ:23:VAL:HG11   | 2.12                     | 0.46              |
| 9:AJ:50:ILE:C     | 9:AJ:54:THR:HG23   | 2.39                     | 0.46              |
| 9:AJ:129:GLU:HB3  | 9:AJ:131:LYS:HE2   | 1.97                     | 0.46              |
| 10:AK:6:ILE:CG2   | 10:AK:85:ARG:NH1   | 2.78                     | 0.46              |
| 10:AK:67:PRO:C    | 10:AK:68:ARG:O     | 2.56                     | 0.46              |
| 10:AK:120:THR:OG1 | 10:AK:122:ARG:NH1  | 2.45                     | 0.46              |
| 11:AL:22:GLY:O    | 11:AL:58:HIS:O     | 2.33                     | 0.46              |
| 11:AL:53:VAL:HG21 | 11:AL:92:TYR:CD1   | 2.48                     | 0.46              |
| 11:AL:97:LYS:HD2  | 11:AL:102:LEU:HD22 | 1.98                     | 0.46              |
| 12:AM:60:ARG:O    | 12:AM:61:GLU:HB2   | 2.15                     | 0.46              |
| 13:AN:101:SER:O   | 13:AN:102:GLY:C    | 2.57                     | 0.46              |
| 14:AO:36:VAL:O    | 14:AO:36:VAL:HG13  | 2.14                     | 0.46              |
| 14:AO:121:GLY:O   | 14:AO:122:THR:OG1  | 2.29                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 15:AP:14:ARG:HA    | 15:AP:45:VAL:N     | 2.26                     | 0.46              |
| 17:AR:3:ILE:H      | 17:AR:3:ILE:CD1    | 2.24                     | 0.46              |
| 20:AU:43:PHE:CD2   | 20:AU:56:THR:HG22  | 2.50                     | 0.46              |
| 21:AV:10:PHE:O     | 21:AV:39:THR:HB    | 2.15                     | 0.46              |
| 21:AV:30:LEU:HD12  | 21:AV:59:PRO:CB    | 2.45                     | 0.46              |
| 21:AV:77:THR:C     | 21:AV:78:ARG:HG2   | 2.40                     | 0.46              |
| 22:AW:51:GLU:CA    | 22:AW:54:LYS:CE    | 2.92                     | 0.46              |
| 24:BA:96:G:H4'     | 48:B1:43:HIS:NE2   | 2.29                     | 0.46              |
| 24:BA:199:A:C6     | 24:BA:2433:A:N3    | 2.83                     | 0.46              |
| 24:BA:221:A:C2'    | 24:BA:222:A:OP2    | 2.63                     | 0.46              |
| 24:BA:233:A:C5     | 24:BA:234:C:C6     | 3.03                     | 0.46              |
| 24:BA:270(Q):C:H2' | 24:BA:270(R):G:C8  | 2.46                     | 0.46              |
| 24:BA:273(E):U:C2  | 24:BA:363(B):G:C2  | 3.03                     | 0.46              |
| 24:BA:280:C:H3'    | 24:BA:282:A:P      | 2.55                     | 0.46              |
| 24:BA:400:G:H3'    | 24:BA:400:G:H8     | 1.78                     | 0.46              |
| 24:BA:466:A:C2     | 24:BA:796:C:O4'    | 2.68                     | 0.46              |
| 24:BA:473:G:N1     | 24:BA:474:G:C6     | 2.83                     | 0.46              |
| 24:BA:532:A:N6     | 41:BT:45:TYR:OH    | 2.25                     | 0.46              |
| 24:BA:539:G:C2     | 24:BA:540:G:C5     | 3.03                     | 0.46              |
| 24:BA:730:C:O2     | 24:BA:731:C:C5     | 2.68                     | 0.46              |
| 24:BA:782:A:H4'    | 24:BA:783:A:N7     | 2.30                     | 0.46              |
| 24:BA:812:C:C2     | 24:BA:813:U:C5     | 3.03                     | 0.46              |
| 24:BA:822:U:OP2    | 24:BA:945:A:C3'    | 2.63                     | 0.46              |
| 24:BA:853:G:O2'    | 24:BA:854:G:O4'    | 2.26                     | 0.46              |
| 24:BA:906:G:N2     | 24:BA:907:U:C2     | 2.83                     | 0.46              |
| 24:BA:963:U:H2'    | 24:BA:964:C:O5'    | 2.15                     | 0.46              |
| 24:BA:976:C:C4'    | 24:BA:1156:A:N7    | 2.78                     | 0.46              |
| 24:BA:1024:G:C4'   | 24:BA:1025:G:H5''  | 2.43                     | 0.46              |
| 24:BA:1141:U:H5'   | 24:BA:1142(A):A:N6 | 2.30                     | 0.46              |
| 24:BA:1167:U:C2    | 24:BA:1183:G:N2    | 2.83                     | 0.46              |
| 24:BA:1268:A:N6    | 24:BA:2013:A:N7    | 2.63                     | 0.46              |
| 24:BA:1339:G:H1'   | 24:BA:1393:A:C2    | 2.50                     | 0.46              |
| 24:BA:1359:A:N6    | 24:BA:1360:A:C5    | 2.83                     | 0.46              |
| 24:BA:1366:A:H5'   | 50:B3:1:MET:N      | 2.25                     | 0.46              |
| 24:BA:1434:A:N1    | 24:BA:1435:G:C4    | 2.83                     | 0.46              |
| 24:BA:1631:A:C6    | 24:BA:1632:A:N1    | 2.83                     | 0.46              |
| 24:BA:1658:C:H2'   | 24:BA:1658:C:O2    | 2.15                     | 0.46              |
| 24:BA:1831:G:C6    | 24:BA:1975:G:C6    | 3.02                     | 0.46              |
| 24:BA:1919:A:C8    | 24:BA:1919:A:P     | 3.08                     | 0.46              |
| 24:BA:2013:A:C6    | 24:BA:2014:A:C6    | 3.03                     | 0.46              |
| 24:BA:2015:A:H8    | 24:BA:2016:U:C5    | 2.33                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2092:U:H2'  | 24:BA:2092:U:O2    | 2.15                     | 0.46              |
| 24:BA:2101:G:O2'  | 24:BA:2102:U:H5'   | 2.16                     | 0.46              |
| 24:BA:2117:A:N6   | 24:BA:2171:A:C6    | 2.84                     | 0.46              |
| 24:BA:2194:G:C2'  | 24:BA:2195:C:H5    | 2.28                     | 0.46              |
| 24:BA:2198:A:C6   | 32:BK:29:TYR:HB3   | 2.51                     | 0.46              |
| 24:BA:2199:A:C2   | 24:BA:2225:A:C2    | 3.03                     | 0.46              |
| 24:BA:2257:U:OP1  | 47:BZ:11:ARG:CZ    | 2.63                     | 0.46              |
| 24:BA:2327:A:C4   | 24:BA:2328:A:C8    | 3.03                     | 0.46              |
| 24:BA:2392:A:C2'  | 24:BA:2393:A:C5'   | 2.93                     | 0.46              |
| 24:BA:2420:C:OP2  | 54:B7:33:ASN:O     | 2.33                     | 0.46              |
| 24:BA:2439:A:C4'  | 24:BA:2440:C:O5'   | 2.63                     | 0.46              |
| 24:BA:2443:C:C2   | 24:BA:2444:G:N7    | 2.83                     | 0.46              |
| 24:BA:2607:G:N1   | 24:BA:2608:G:N3    | 2.62                     | 0.46              |
| 24:BA:2630:G:C5   | 24:BA:2894:G:C6    | 3.03                     | 0.46              |
| 24:BA:2685:G:H8   | 24:BA:2685:G:OP2   | 1.98                     | 0.46              |
| 24:BA:2838:G:C6   | 24:BA:2839:G:N7    | 2.82                     | 0.46              |
| 24:BA:2899:G:C6   | 24:BA:2900:A:N7    | 2.83                     | 0.46              |
| 25:BB:15:A:N3     | 25:BB:109:G:H1'    | 2.30                     | 0.46              |
| 25:BB:88:C:O5'    | 25:BB:88:C:H6      | 1.97                     | 0.46              |
| 26:BC:49:ILE:CG1  | 26:BC:51:PRO:HD3   | 2.45                     | 0.46              |
| 26:BC:124:GLY:O   | 26:BC:128:GLY:HA3  | 2.15                     | 0.46              |
| 27:BD:27:THR:HG22 | 27:BD:29:PRO:HD3   | 1.90                     | 0.46              |
| 27:BD:159:ALA:HA  | 27:BD:196:VAL:CG1  | 2.44                     | 0.46              |
| 29:BF:7:TYR:HD2   | 29:BF:119:ARG:HB3  | 1.78                     | 0.46              |
| 30:BG:59:GLU:CB   | 30:BG:152:LEU:HD13 | 2.45                     | 0.46              |
| 30:BG:123:ASN:ND2 | 30:BG:126:ASP:OD2  | 2.47                     | 0.46              |
| 30:BG:125:PHE:O   | 30:BG:126:ASP:CB   | 2.61                     | 0.46              |
| 31:BH:24:VAL:HG21 | 31:BH:72:ILE:HD13  | 1.97                     | 0.46              |
| 31:BH:54:ARG:HB3  | 31:BH:54:ARG:HH21  | 1.80                     | 0.46              |
| 32:BK:22:LYS:HB2  | 32:BK:25:TYR:CG    | 2.50                     | 0.46              |
| 33:BL:71:THR:CB   | 33:BL:114:ASP:HB3  | 2.45                     | 0.46              |
| 33:BL:113:PRO:O   | 33:BL:115:LEU:N    | 2.41                     | 0.46              |
| 34:BM:7:LYS:HD2   | 34:BM:10:GLU:HB2   | 1.97                     | 0.46              |
| 34:BM:53:VAL:HG13 | 34:BM:121:LYS:O    | 2.15                     | 0.46              |
| 34:BM:86:PRO:HD2  | 34:BM:89:LYS:CD    | 2.44                     | 0.46              |
| 35:BN:23:ARG:HH11 | 35:BN:23:ARG:CG    | 2.28                     | 0.46              |
| 35:BN:61:VAL:HG12 | 35:BN:61:VAL:O     | 2.15                     | 0.46              |
| 35:BN:86:ILE:HG23 | 35:BN:90:GLN:C     | 2.39                     | 0.46              |
| 37:BP:54:MET:O    | 37:BP:55:VAL:C     | 2.57                     | 0.46              |
| 37:BP:77:LYS:O    | 37:BP:78:PRO:C     | 2.58                     | 0.46              |
| 39:BR:20:ARG:NH2  | 39:BR:20:ARG:CB    | 2.58                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 39:BR:57:LYS:HZ3  | 39:BR:62:LYS:CG    | 2.26                     | 0.46              |
| 39:BR:100:ALA:O   | 39:BR:101:LEU:C    | 2.56                     | 0.46              |
| 40:BS:104:ASN:HA  | 40:BS:108:ARG:NH1  | 2.29                     | 0.46              |
| 41:BT:54:LYS:HA   | 41:BT:54:LYS:CE    | 2.45                     | 0.46              |
| 41:BT:88:ILE:CB   | 42:BU:52:VAL:HG22  | 2.45                     | 0.46              |
| 42:BU:5:VAL:HG11  | 42:BU:37:VAL:CG2   | 2.45                     | 0.46              |
| 42:BU:28:GLU:HB3  | 42:BU:94:LEU:CD1   | 2.25                     | 0.46              |
| 42:BU:69:LYS:HE2  | 42:BU:70:ILE:HG13  | 1.97                     | 0.46              |
| 45:BX:38:ILE:CG2  | 45:BX:60:PHE:HZ    | 2.27                     | 0.46              |
| 46:BY:36:LYS:HB3  | 46:BY:38:TYR:CE2   | 2.50                     | 0.46              |
| 46:BY:59:LEU:HD11 | 46:BY:66:SER:OG    | 2.15                     | 0.46              |
| 46:BY:149:SER:O   | 46:BY:150:LEU:HD23 | 2.16                     | 0.46              |
| 48:B1:33:GLN:NE2  | 48:B1:33:GLN:H     | 2.11                     | 0.46              |
| 48:B1:54:ARG:CG   | 48:B1:54:ARG:NH2   | 2.78                     | 0.46              |
| 53:B6:10:ARG:O    | 53:B6:14:LYS:HG3   | 2.15                     | 0.46              |
| 53:B6:21:ARG:HG2  | 53:B6:31:LEU:CG    | 2.44                     | 0.46              |
| 1:AA:20:U:H5      | 1:AA:916:G:N1      | 2.12                     | 0.46              |
| 1:AA:47:C:O2'     | 1:AA:48:C:O5'      | 2.33                     | 0.46              |
| 1:AA:47:C:C5      | 1:AA:365:U:C2      | 3.03                     | 0.46              |
| 1:AA:81:G:H5''    | 1:AA:82:U:OP2      | 2.16                     | 0.46              |
| 1:AA:148:G:C2     | 1:AA:175:C:C4      | 3.03                     | 0.46              |
| 1:AA:150:C:O2     | 1:AA:151:A:C8      | 2.68                     | 0.46              |
| 1:AA:175:C:H2'    | 1:AA:176:C:H6      | 1.80                     | 0.46              |
| 1:AA:184:G:O4'    | 1:AA:224:C:H4'     | 2.14                     | 0.46              |
| 1:AA:292:G:H3'    | 1:AA:293:G:H8      | 1.79                     | 0.46              |
| 1:AA:293:G:H5'    | 1:AA:609:A:N1      | 2.30                     | 0.46              |
| 1:AA:352:C:H4'    | 1:AA:354:G:OP1     | 2.15                     | 0.46              |
| 1:AA:362:G:C8     | 14:AO:34:ARG:NH2   | 2.65                     | 0.46              |
| 1:AA:375:U:O3'    | 18:AS:6:LEU:HD11   | 2.15                     | 0.46              |
| 1:AA:551:U:C5'    | 14:AO:119:LYS:HZ3  | 2.23                     | 0.46              |
| 1:AA:571:U:H4'    | 1:AA:572:A:OP2     | 2.16                     | 0.46              |
| 1:AA:573:A:N1     | 1:AA:574:A:C6      | 2.83                     | 0.46              |
| 1:AA:728:A:N6     | 1:AA:729:A:C6      | 2.83                     | 0.46              |
| 1:AA:817:C:H1'    | 1:AA:819:A:C5'     | 2.46                     | 0.46              |
| 1:AA:901:A:H2'    | 1:AA:902:G:O5'     | 2.15                     | 0.46              |
| 1:AA:929:G:C6     | 1:AA:930:C:C4      | 3.03                     | 0.46              |
| 1:AA:1034:G:H2'   | 1:AA:1035:A:H8     | 1.81                     | 0.46              |
| 1:AA:1075:C:C4'   | 1:AA:1101:A:N6     | 2.71                     | 0.46              |
| 1:AA:1104:G:H4'   | 4:AE:111:ARG:NH2   | 2.30                     | 0.46              |
| 1:AA:1133:G:C6    | 1:AA:1142:G:C6     | 3.03                     | 0.46              |
| 1:AA:1189:C:O5'   | 1:AA:1189:C:H6     | 1.99                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:1193:G:C8     | 1:AA:1193:G:C3'   | 2.98                     | 0.46              |
| 1:AA:1323:G:H4'    | 1:AA:1362(A):C:N4 | 2.29                     | 0.46              |
| 1:AA:1342:C:C4'    | 11:AL:125:TYR:HB2 | 2.37                     | 0.46              |
| 1:AA:1382:C:H2'    | 1:AA:1383:C:C5    | 2.50                     | 0.46              |
| 1:AA:1402:C:C5     | 1:AA:1403:C:C5    | 3.03                     | 0.46              |
| 2:A1:8:U:H5'       | 4:AE:19:HIS:CE1   | 2.50                     | 0.46              |
| 3:AC:69:G:H2'      | 3:AC:70:G:H8      | 1.80                     | 0.46              |
| 3:AD:76:A:P        | 24:BA:2421:G:N2   | 2.86                     | 0.46              |
| 3:AD:76:A:C2       | 24:BA:2432:A:O5'  | 2.68                     | 0.46              |
| 4:AE:32:ILE:HG22   | 4:AE:32:ILE:O     | 2.14                     | 0.46              |
| 4:AE:73:THR:CG2    | 4:AE:95:GLN:O     | 2.59                     | 0.46              |
| 4:AE:230:VAL:HG12  | 4:AE:231:GLU:N    | 2.29                     | 0.46              |
| 5:AF:8:ILE:CD1     | 5:AF:16:ARG:HD2   | 2.44                     | 0.46              |
| 5:AF:35:GLU:CD     | 5:AF:95:THR:HG21  | 2.40                     | 0.46              |
| 5:AF:194:GLY:O     | 5:AF:196:LEU:HD23 | 2.15                     | 0.46              |
| 6:AG:17:VAL:O      | 6:AG:19:LEU:CD2   | 2.63                     | 0.46              |
| 6:AG:145:GLU:CB    | 6:AG:184:LYS:HG2  | 2.36                     | 0.46              |
| 6:AG:149:ALA:O     | 6:AG:150:GLU:C    | 2.58                     | 0.46              |
| 8:AI:1:MET:CA      | 8:AI:67:MET:O     | 2.64                     | 0.46              |
| 8:AI:24:GLU:O      | 8:AI:27:GLN:N     | 2.49                     | 0.46              |
| 9:AJ:38:LEU:CA     | 9:AJ:41:ARG:HB2   | 2.45                     | 0.46              |
| 9:AJ:106:GLN:HE21  | 9:AJ:106:GLN:N    | 2.12                     | 0.46              |
| 9:AJ:143:ARG:O     | 9:AJ:145:ALA:O    | 2.33                     | 0.46              |
| 10:AK:33:GLU:CD    | 10:AK:59:LEU:HD21 | 2.40                     | 0.46              |
| 10:AK:54:ASP:O     | 10:AK:56:LYS:CD   | 2.62                     | 0.46              |
| 10:AK:82:HIS:CD2   | 10:AK:138:TRP:NE1 | 2.83                     | 0.46              |
| 13:AN:28:THR:CG2   | 13:AN:29:ILE:H    | 2.28                     | 0.46              |
| 13:AN:32:ILE:HD13  | 13:AN:72:ALA:HA   | 1.97                     | 0.46              |
| 13:AN:34:ASP:CG    | 13:AN:36:ASP:H    | 2.22                     | 0.46              |
| 15:AP:20:THR:CG2   | 15:AP:20:THR:O    | 2.64                     | 0.46              |
| 15:AP:20:THR:O     | 15:AP:25:ILE:O    | 2.34                     | 0.46              |
| 15:AP:108:ARG:HH12 | 15:AP:111:LYS:HB3 | 1.73                     | 0.46              |
| 18:AS:71:ARG:NH1   | 18:AS:71:ARG:CB   | 2.78                     | 0.46              |
| 19:AT:43:LEU:CD2   | 19:AT:44:ALA:N    | 2.61                     | 0.46              |
| 22:AW:25:ARG:HH11  | 22:AW:25:ARG:CG   | 2.26                     | 0.46              |
| 22:AW:38:LYS:HA    | 22:AW:41:ILE:HD12 | 1.97                     | 0.46              |
| 22:AW:60:GLU:OE1   | 22:AW:81:LYS:HD3  | 2.15                     | 0.46              |
| 23:AX:15:ARG:HB3   | 23:AX:17:THR:HG23 | 1.97                     | 0.46              |
| 24:BA:29:U:O4      | 24:BA:447:A:H5''  | 2.14                     | 0.46              |
| 24:BA:37:C:O2'     | 29:BF:50:SER:HA   | 2.14                     | 0.46              |
| 24:BA:46:C:OP2     | 24:BA:215:G:C3'   | 2.55                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:64:A:H4'    | 44:BW:73:ARG:H     | 1.79                     | 0.46              |
| 24:BA:122:G:N2    | 24:BA:130:C:H1'    | 2.31                     | 0.46              |
| 24:BA:237:C:N3    | 24:BA:238:C:C5     | 2.84                     | 0.46              |
| 24:BA:270(R):G:C2 | 24:BA:270(S):G:C4  | 3.03                     | 0.46              |
| 24:BA:270(Z):U:O2 | 24:BA:271(B):G:OP1 | 2.32                     | 0.46              |
| 24:BA:278:A:N7    | 24:BA:359:A:H2     | 2.12                     | 0.46              |
| 24:BA:294:A:N6    | 24:BA:345:A:C6     | 2.83                     | 0.46              |
| 24:BA:397:G:HO2'  | 24:BA:2231:C:H1'   | 1.79                     | 0.46              |
| 24:BA:416:C:C5    | 24:BA:417:C:C4     | 3.03                     | 0.46              |
| 24:BA:515:A:H5'   | 41:BT:32:PHE:CZ    | 2.50                     | 0.46              |
| 24:BA:553:U:H2'   | 24:BA:554:U:C1'    | 2.45                     | 0.46              |
| 24:BA:569:U:OP1   | 24:BA:945:A:C6     | 2.68                     | 0.46              |
| 24:BA:629:G:H5'   | 24:BA:649:G:N2     | 2.31                     | 0.46              |
| 24:BA:638:G:O6    | 24:BA:639:U:N3     | 2.48                     | 0.46              |
| 24:BA:666:G:H2'   | 24:BA:667:U:H6     | 1.79                     | 0.46              |
| 24:BA:714:U:H6    | 24:BA:714:U:P      | 2.38                     | 0.46              |
| 24:BA:729:G:O2'   | 24:BA:730:C:O3'    | 2.30                     | 0.46              |
| 24:BA:813:U:OP2   | 36:BO:26:GLY:CA    | 2.57                     | 0.46              |
| 24:BA:858:U:H2'   | 24:BA:2268:A:N7    | 2.30                     | 0.46              |
| 24:BA:918:A:H2    | 24:BA:919:G:C8     | 2.33                     | 0.46              |
| 24:BA:952:G:C6    | 24:BA:966:G:N1     | 2.83                     | 0.46              |
| 24:BA:1024:G:N1   | 24:BA:1025:G:N7    | 2.63                     | 0.46              |
| 24:BA:1065:U:N3   | 24:BA:1066:U:O4'   | 2.48                     | 0.46              |
| 24:BA:1256:G:H2'  | 24:BA:1257:C:O5'   | 2.16                     | 0.46              |
| 24:BA:1542:G:C1'  | 24:BA:1543:A:C5    | 2.98                     | 0.46              |
| 24:BA:1654:A:N1   | 24:BA:1655:A:C8    | 2.84                     | 0.46              |
| 24:BA:1683:C:C2'  | 24:BA:1684:C:O5'   | 2.63                     | 0.46              |
| 24:BA:1690:A:H2'  | 24:BA:1691:C:C5'   | 2.44                     | 0.46              |
| 24:BA:1754:C:OP1  | 40:BS:98:LYS:HD2   | 2.15                     | 0.46              |
| 24:BA:1789:A:H2'  | 24:BA:1789:A:N3    | 2.30                     | 0.46              |
| 24:BA:1803:A:H5'' | 27:BD:257:LEU:HB3  | 1.97                     | 0.46              |
| 24:BA:1914:C:C2   | 24:BA:1915:U:H5    | 2.34                     | 0.46              |
| 24:BA:1936:A:N9   | 24:BA:1940:U:N3    | 2.64                     | 0.46              |
| 24:BA:2010:G:P    | 43:BV:41:LYS:HZ3   | 2.38                     | 0.46              |
| 24:BA:2033:A:H8   | 24:BA:2033:A:O5'   | 1.99                     | 0.46              |
| 24:BA:2046:G:H2'  | 24:BA:2047:U:H5    | 1.78                     | 0.46              |
| 24:BA:2334:G:H22  | 25:BB:12:C:N4      | 2.03                     | 0.46              |
| 24:BA:2353:G:O2'  | 47:BZ:33:ALA:O     | 2.32                     | 0.46              |
| 24:BA:2377:A:H2'  | 24:BA:2378:A:N7    | 2.30                     | 0.46              |
| 24:BA:2562:U:H2'  | 24:BA:2563:U:C5'   | 2.45                     | 0.46              |
| 24:BA:2583:G:H5'' | 24:BA:2584:U:OP2   | 2.15                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2619:C:H5'' | 28:BE:152:LYS:CA   | 2.45                     | 0.46              |
| 24:BA:2665:A:H8   | 24:BA:2665:A:C3'   | 2.09                     | 0.46              |
| 24:BA:2705:A:H8   | 24:BA:2705:A:O5'   | 1.98                     | 0.46              |
| 24:BA:2756:U:C4   | 24:BA:2758:A:C6    | 3.00                     | 0.46              |
| 24:BA:2780:G:N2   | 34:BM:97:ARG:CZ    | 2.77                     | 0.46              |
| 24:BA:2786:U:H4'  | 28:BE:64:LYS:C     | 2.39                     | 0.46              |
| 24:BA:2826:A:C5   | 24:BA:2827:C:C5    | 3.03                     | 0.46              |
| 25:BB:27:C:N4     | 25:BB:56:G:C6      | 2.74                     | 0.46              |
| 26:BC:113:VAL:O   | 26:BC:144:THR:HG22 | 2.15                     | 0.46              |
| 26:BC:201:PRO:C   | 26:BC:203:GLY:H    | 2.22                     | 0.46              |
| 28:BE:52:LEU:CA   | 28:BE:74:PRO:HA    | 2.29                     | 0.46              |
| 28:BE:53:PRO:HG2  | 28:BE:75:VAL:HG13  | 1.97                     | 0.46              |
| 28:BE:100:GLU:C   | 28:BE:172:VAL:HG13 | 2.39                     | 0.46              |
| 28:BE:125:GLY:H   | 28:BE:136:ARG:CA   | 2.24                     | 0.46              |
| 29:BF:9:ILE:HG22  | 29:BF:10:PRO:N     | 2.28                     | 0.46              |
| 29:BF:63:LYS:C    | 29:BF:64:ILE:CG2   | 2.88                     | 0.46              |
| 30:BG:3:LEU:HD22  | 30:BG:4:ASP:OD2    | 2.14                     | 0.46              |
| 30:BG:36:LYS:HZ3  | 30:BG:38:VAL:HG13  | 1.78                     | 0.46              |
| 30:BG:101:ILE:O   | 30:BG:101:ILE:CD1  | 2.52                     | 0.46              |
| 30:BG:174:GLU:OE2 | 30:BG:175:LEU:CG   | 2.61                     | 0.46              |
| 31:BH:101:ARG:HA  | 31:BH:101:ARG:HE   | 1.80                     | 0.46              |
| 33:BL:10:LEU:HD22 | 33:BL:57:ILE:HG12  | 1.94                     | 0.46              |
| 33:BL:39:LYS:O    | 33:BL:40:ALA:C     | 2.58                     | 0.46              |
| 33:BL:112:MET:HE1 | 33:BL:118:THR:CB   | 2.45                     | 0.46              |
| 35:BN:52:VAL:O    | 35:BN:53:LYS:CB    | 2.64                     | 0.46              |
| 35:BN:70:LYS:HE2  | 35:BN:104:ARG:HG2  | 1.96                     | 0.46              |
| 36:BO:33:ARG:O    | 36:BO:35:HIS:N     | 2.48                     | 0.46              |
| 38:BQ:61:HIS:CE1  | 38:BQ:64:ARG:HE    | 2.33                     | 0.46              |
| 39:BR:82:ILE:HG13 | 39:BR:84:GLN:HE22  | 1.80                     | 0.46              |
| 40:BS:29:ARG:HG2  | 40:BS:51:ARG:CB    | 2.44                     | 0.46              |
| 40:BS:48:ILE:CG2  | 40:BS:50:ILE:HD11  | 2.46                     | 0.46              |
| 40:BS:50:ILE:HG22 | 40:BS:67:SER:C     | 2.41                     | 0.46              |
| 40:BS:54:ARG:CA   | 40:BS:64:ARG:HB2   | 2.44                     | 0.46              |
| 40:BS:87:ASP:O    | 40:BS:88:ILE:HG13  | 2.14                     | 0.46              |
| 41:BT:32:PHE:O    | 41:BT:35:ALA:CB    | 2.59                     | 0.46              |
| 41:BT:33:ARG:O    | 41:BT:35:ALA:N     | 2.48                     | 0.46              |
| 43:BV:24:ILE:CG2  | 43:BV:35:ILE:HG23  | 2.45                     | 0.46              |
| 44:BW:49:VAL:HG23 | 44:BW:50:LYS:N     | 2.29                     | 0.46              |
| 46:BY:77:ASP:HB3  | 46:BY:81:ARG:O     | 2.15                     | 0.46              |
| 47:BZ:40:GLN:HE21 | 47:BZ:57:PHE:HB3   | 1.80                     | 0.46              |
| 48:B1:6:GLU:O     | 48:B1:9:ARG:N      | 2.48                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1          | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|-------------------|--------------------------|-------------------|
| 48:B1:17:GLU:O  | 48:B1:21:ARG:HG2  | 2.14                     | 0.46              |
| 50:B3:7:PRO:O   | 50:B3:8:LYS:CB    | 2.63                     | 0.46              |
| 50:B3:64:GLY:O  | 50:B3:65:ASP:C    | 2.56                     | 0.46              |
| 50:B3:64:GLY:O  | 50:B3:67:TYR:HB2  | 2.14                     | 0.46              |
| 54:B7:26:LYS:CE | 54:B7:45:GLY:H    | 2.28                     | 0.46              |
| 1:AA:20:U:C6    | 1:AA:916:G:N2     | 2.83                     | 0.46              |
| 1:AA:34:C:H2'   | 1:AA:35:G:C8      | 2.43                     | 0.46              |
| 1:AA:37:U:P     | 14:AO:123:LYS:HB3 | 2.53                     | 0.46              |
| 1:AA:59:A:H1'   | 1:AA:354:G:C2     | 2.50                     | 0.46              |
| 1:AA:89:U:C2    | 1:AA:90:C:C5      | 3.03                     | 0.46              |
| 1:AA:141:A:O2'  | 1:AA:182:U:C6     | 2.58                     | 0.46              |
| 1:AA:322:C:O2'  | 1:AA:323:U:C5'    | 2.56                     | 0.46              |
| 1:AA:342:C:O2'  | 1:AA:343:U:H5'    | 2.16                     | 0.46              |
| 1:AA:390:C:C2'  | 1:AA:391:G:O5'    | 2.64                     | 0.46              |
| 1:AA:424:G:C2   | 1:AA:425:G:C8     | 3.04                     | 0.46              |
| 1:AA:494:U:H2'  | 1:AA:495:A:H5'    | 1.96                     | 0.46              |
| 1:AA:600:C:N3   | 1:AA:601:C:C5     | 2.83                     | 0.46              |
| 1:AA:706:A:H4'  | 13:AN:29:ILE:HD11 | 1.98                     | 0.46              |
| 1:AA:734:G:H8   | 1:AA:734:G:OP1    | 1.99                     | 0.46              |
| 1:AA:945:G:C6   | 1:AA:1337:G:C5    | 3.03                     | 0.46              |
| 1:AA:1072:G:C6  | 1:AA:1104:G:N1    | 2.84                     | 0.46              |
| 1:AA:1284:C:N3  | 1:AA:1285:A:C6    | 2.83                     | 0.46              |
| 1:AA:1305:G:C5' | 23:AX:4:GLY:C     | 2.88                     | 0.46              |
| 1:AA:1381:U:H2' | 1:AA:1381:U:O2    | 2.14                     | 0.46              |
| 1:AA:1468:A:C2' | 1:AA:1469:G:O5'   | 2.63                     | 0.46              |
| 1:AA:1479:C:H2' | 1:AA:1480:G:C8    | 2.50                     | 0.46              |
| 1:AA:1480:G:H2' | 1:AA:1481:U:O5'   | 2.14                     | 0.46              |
| 1:AA:1486:G:C2  | 1:AA:1487:G:C4    | 3.02                     | 0.46              |
| 1:AA:1508:G:O2' | 1:AA:1509:C:C5'   | 2.63                     | 0.46              |
| 3:AC:14:A:C5    | 3:AC:15:G:N7      | 2.83                     | 0.46              |
| 3:AD:76:A:C2'   | 24:BA:2432:A:H4'  | 2.45                     | 0.46              |
| 3:AB:53:G:H4'   | 24:BA:2470:G:H5'' | 1.94                     | 0.46              |
| 4:AE:46:LYS:O   | 4:AE:47:THR:C     | 2.58                     | 0.46              |
| 4:AE:115:LEU:CB | 4:AE:145:LEU:HG   | 2.44                     | 0.46              |
| 4:AE:131:PRO:C  | 4:AE:133:LYS:N    | 2.64                     | 0.46              |
| 4:AE:139:LYS:CG | 4:AE:140:HIS:H    | 2.23                     | 0.46              |
| 5:AF:122:GLU:O  | 5:AF:125:GLU:N    | 2.48                     | 0.46              |
| 5:AF:190:ARG:CA | 5:AF:190:ARG:NE   | 2.73                     | 0.46              |
| 6:AG:20:TYR:HA  | 6:AG:31:CYS:SG    | 2.55                     | 0.46              |
| 6:AG:77:ASN:HA  | 6:AG:80:GLU:OE2   | 2.16                     | 0.46              |
| 6:AG:149:ALA:O  | 6:AG:150:GLU:O    | 2.34                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 7:AH:48:ALA:HB3    | 7:AH:54:ALA:N     | 2.30                     | 0.46              |
| 7:AH:84:PHE:HZ     | 7:AH:133:TYR:HB3  | 1.68                     | 0.46              |
| 7:AH:102:ALA:O     | 7:AH:107:ARG:NH2  | 2.48                     | 0.46              |
| 7:AH:133:TYR:HA    | 7:AH:136:MET:HG2  | 1.96                     | 0.46              |
| 7:AH:149:GLU:HA    | 7:AH:149:GLU:OE2  | 2.15                     | 0.46              |
| 8:AI:19:LEU:HD11   | 8:AI:23:LYS:HZ2   | 1.80                     | 0.46              |
| 8:AI:21:LEU:O      | 8:AI:25:ILE:HG13  | 2.15                     | 0.46              |
| 8:AI:54:LYS:HD2    | 8:AI:54:LYS:N     | 2.31                     | 0.46              |
| 8:AI:59:TYR:C      | 8:AI:60:PHE:CD1   | 2.93                     | 0.46              |
| 10:AK:19:VAL:O     | 10:AK:20:TYR:CB   | 2.63                     | 0.46              |
| 10:AK:65:TYR:HE2   | 10:AK:78:GLN:CD   | 2.24                     | 0.46              |
| 11:AL:37:PHE:HB3   | 11:AL:40:LEU:HB2  | 1.96                     | 0.46              |
| 11:AL:70:LYS:O     | 11:AL:71:SER:C    | 2.56                     | 0.46              |
| 12:AM:24:VAL:CG2   | 12:AM:34:VAL:HG11 | 2.42                     | 0.46              |
| 12:AM:54:PHE:O     | 12:AM:55:LYS:C    | 2.58                     | 0.46              |
| 13:AN:87:THR:CG2   | 13:AN:91:ARG:HH12 | 2.24                     | 0.46              |
| 14:AO:23:LYS:HA    | 14:AO:23:LYS:CE   | 2.21                     | 0.46              |
| 14:AO:82:VAL:CG1   | 14:AO:83:VAL:H    | 2.22                     | 0.46              |
| 15:AP:69:GLU:C     | 15:AP:69:GLU:OE1  | 2.58                     | 0.46              |
| 15:AP:121:LYS:O    | 15:AP:122:LYS:CB  | 2.63                     | 0.46              |
| 17:AR:56:LEU:O     | 17:AR:59:MET:HB3  | 2.14                     | 0.46              |
| 18:AS:51:VAL:HG22  | 18:AS:73:LEU:HD11 | 1.96                     | 0.46              |
| 20:AU:41:LYS:C     | 20:AU:43:PHE:H    | 2.22                     | 0.46              |
| 21:AV:18:LYS:HG2   | 21:AV:31:ILE:HG21 | 1.96                     | 0.46              |
| 22:AW:23:ARG:NH2   | 22:AW:24:LEU:HD23 | 2.31                     | 0.46              |
| 22:AW:96:GLY:O     | 22:AW:97:ALA:HB3  | 2.15                     | 0.46              |
| 24:BA:151:C:N3     | 24:BA:175:G:N1    | 2.63                     | 0.46              |
| 24:BA:200:U:C3'    | 24:BA:201:C:H5'   | 2.46                     | 0.46              |
| 24:BA:224:G:N7     | 24:BA:420:C:H4'   | 2.30                     | 0.46              |
| 24:BA:236:C:C2     | 24:BA:237:C:C5    | 3.03                     | 0.46              |
| 24:BA:270(H):C:C2  | 24:BA:270(I):G:C8 | 3.03                     | 0.46              |
| 24:BA:270(X):G:C4' | 24:BA:273:G:H5'   | 2.44                     | 0.46              |
| 24:BA:273:G:C4     | 24:BA:273(A):G:N7 | 2.83                     | 0.46              |
| 24:BA:278:A:O2'    | 24:BA:279:C:C1'   | 2.63                     | 0.46              |
| 24:BA:364:C:N3     | 24:BA:365:C:N4    | 2.62                     | 0.46              |
| 24:BA:380:U:O2'    | 24:BA:381:G:H5'   | 2.16                     | 0.46              |
| 24:BA:468:G:H2'    | 24:BA:469:G:C5'   | 2.45                     | 0.46              |
| 24:BA:469:G:N1     | 53:B6:40:TRP:CZ2  | 2.83                     | 0.46              |
| 24:BA:495:G:H2'    | 24:BA:496:G:O5'   | 2.15                     | 0.46              |
| 24:BA:531:C:C5'    | 24:BA:532:A:N3    | 2.77                     | 0.46              |
| 24:BA:531:C:C4'    | 24:BA:532:A:N3    | 2.79                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:663:G:C2'   | 24:BA:940:G:H4'   | 2.43                     | 0.46              |
| 24:BA:669:G:C6    | 24:BA:801:G:C6    | 3.03                     | 0.46              |
| 24:BA:696:G:HO2'  | 24:BA:697:C:H5'   | 1.79                     | 0.46              |
| 24:BA:748:G:P     | 43:BV:88:ARG:NE   | 2.88                     | 0.46              |
| 24:BA:776:G:HO2'  | 24:BA:777:A:P     | 2.36                     | 0.46              |
| 24:BA:818:G:H21   | 24:BA:1189:A:H62  | 1.63                     | 0.46              |
| 24:BA:997:G:C2    | 24:BA:998:C:C4    | 3.03                     | 0.46              |
| 24:BA:997:G:C2    | 24:BA:998:C:C5    | 3.03                     | 0.46              |
| 24:BA:1021:A:O2'  | 24:BA:1123:C:H5'' | 2.16                     | 0.46              |
| 24:BA:1026:U:H2'  | 24:BA:1027:A:O5'  | 2.16                     | 0.46              |
| 24:BA:1044:G:C4'  | 24:BA:1047:G:O2'  | 2.64                     | 0.46              |
| 24:BA:1058:G:C2   | 24:BA:1059:G:C8   | 3.03                     | 0.46              |
| 24:BA:1062:G:N2   | 33:BL:91:PRO:CG   | 2.73                     | 0.46              |
| 24:BA:1216:G:OP1  | 41:BT:11:ARG:HD2  | 2.14                     | 0.46              |
| 24:BA:1228:G:N1   | 24:BA:1229:G:C5   | 2.84                     | 0.46              |
| 24:BA:1360:A:H2'  | 24:BA:1361:G:O4'  | 2.15                     | 0.46              |
| 24:BA:1366:A:H5'' | 50:B3:1:MET:H2    | 1.81                     | 0.46              |
| 24:BA:1378:A:C2   | 24:BA:1380:G:H1'  | 2.51                     | 0.46              |
| 24:BA:1381:G:C6   | 24:BA:1382:G:C6   | 3.04                     | 0.46              |
| 24:BA:1559:G:C2   | 24:BA:1560:G:O5'  | 2.69                     | 0.46              |
| 24:BA:1583:A:HO2' | 24:BA:1585:C:H6   | 1.61                     | 0.46              |
| 24:BA:1650:G:C2   | 24:BA:1651:G:C1'  | 2.98                     | 0.46              |
| 24:BA:1695:G:C1'  | 27:BD:15:PHE:HB3  | 2.45                     | 0.46              |
| 24:BA:1743:G:C5   | 24:BA:1746:G:C8   | 3.04                     | 0.46              |
| 24:BA:1754:C:N3   | 24:BA:1755:A:C4   | 2.83                     | 0.46              |
| 24:BA:1811:G:H2'  | 24:BA:1812:A:C8   | 2.50                     | 0.46              |
| 24:BA:1816:G:O3'  | 24:BA:1817:G:C8   | 2.68                     | 0.46              |
| 24:BA:1842:G:C4   | 24:BA:1843:C:C6   | 3.04                     | 0.46              |
| 24:BA:2004:G:H2'  | 24:BA:2005:A:H8   | 1.80                     | 0.46              |
| 24:BA:2010:G:P    | 43:BV:41:LYS:NZ   | 2.88                     | 0.46              |
| 24:BA:2087:G:C8   | 24:BA:2087:G:H5'' | 2.50                     | 0.46              |
| 24:BA:2199:A:OP2  | 24:BA:2205:C:C5   | 2.67                     | 0.46              |
| 24:BA:2242:G:C6   | 24:BA:2243:U:C4   | 3.04                     | 0.46              |
| 24:BA:2250:G:O2'  | 24:BA:2496:C:C5'  | 2.63                     | 0.46              |
| 24:BA:2253:G:C2'  | 24:BA:2254:C:O5'  | 2.64                     | 0.46              |
| 24:BA:2254:C:C2'  | 24:BA:2255:G:C5'  | 2.78                     | 0.46              |
| 24:BA:2289:G:H2'  | 24:BA:2289:G:N3   | 2.30                     | 0.46              |
| 24:BA:2350:C:O2'  | 24:BA:2351:G:OP1  | 2.32                     | 0.46              |
| 24:BA:2377:A:C4   | 24:BA:2378:A:N7   | 2.83                     | 0.46              |
| 24:BA:2693:A:O2'  | 24:BA:2848:G:H5'' | 2.16                     | 0.46              |
| 24:BA:2696:U:O2'  | 24:BA:2697:G:C5'  | 2.63                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2781:A:H3'   | 24:BA:2781:A:H8    | 1.70                     | 0.46              |
| 24:BA:2781:A:H2'   | 24:BA:2782:G:C4'   | 2.46                     | 0.46              |
| 24:BA:2817:G:C4    | 24:BA:2818:G:C8    | 3.04                     | 0.46              |
| 24:BA:2851:A:H2'   | 24:BA:2852:G:O5'   | 2.15                     | 0.46              |
| 24:BA:2857:G:O5'   | 24:BA:2857:G:H8    | 1.97                     | 0.46              |
| 24:BA:2898:U:C2    | 24:BA:2899:G:C8    | 3.04                     | 0.46              |
| 25:BB:32:C:O2      | 25:BB:33:G:C8      | 2.69                     | 0.46              |
| 25:BB:55:U:C2'     | 25:BB:56:G:C5'     | 2.93                     | 0.46              |
| 26:BC:21:THR:HG22  | 26:BC:225:ASN:HB3  | 1.96                     | 0.46              |
| 26:BC:61:THR:HG21  | 26:BC:160:ARG:CZ   | 2.45                     | 0.46              |
| 26:BC:68:LEU:CG    | 26:BC:69:GLY:N     | 2.78                     | 0.46              |
| 26:BC:74:VAL:CG2   | 26:BC:112:ALA:HB3  | 2.34                     | 0.46              |
| 26:BC:75:LEU:CD2   | 26:BC:77:ILE:HD11  | 2.32                     | 0.46              |
| 26:BC:103:ILE:HG22 | 26:BC:130:ILE:HG21 | 1.97                     | 0.46              |
| 27:BD:119:ALA:CB   | 27:BD:130:ALA:O    | 2.57                     | 0.46              |
| 27:BD:177:LEU:CD2  | 27:BD:181:GLU:C    | 2.88                     | 0.46              |
| 27:BD:259:THR:HG22 | 27:BD:260:ARG:H    | 1.81                     | 0.46              |
| 28:BE:50:GLY:O     | 28:BE:76:ARG:NE    | 2.39                     | 0.46              |
| 29:BF:51:THR:O     | 29:BF:52:LYS:CG    | 2.63                     | 0.46              |
| 29:BF:200:GLU:O    | 29:BF:203:GLN:N    | 2.48                     | 0.46              |
| 30:BG:113:ARG:O    | 30:BG:114:ILE:CB   | 2.63                     | 0.46              |
| 31:BH:45:VAL:HG13  | 31:BH:50:VAL:CG1   | 2.44                     | 0.46              |
| 31:BH:88:LEU:C     | 31:BH:88:LEU:CD2   | 2.85                     | 0.46              |
| 31:BH:89:ILE:CD1   | 31:BH:90:LYS:N     | 2.76                     | 0.46              |
| 32:BK:33:ARG:HB3   | 32:BK:35:LEU:CD2   | 2.45                     | 0.46              |
| 34:BM:31:ALA:O     | 34:BM:34:LEU:N     | 2.48                     | 0.46              |
| 35:BN:68:GLU:HA    | 35:BN:104:ARG:HH12 | 1.73                     | 0.46              |
| 36:BO:52:GLU:O     | 36:BO:55:ARG:CB    | 2.63                     | 0.46              |
| 37:BP:63:LYS:O     | 37:BP:107:ALA:HA   | 2.15                     | 0.46              |
| 37:BP:85:LYS:HZ2   | 47:BZ:10:THR:CB    | 2.29                     | 0.46              |
| 38:BQ:17:ARG:HG3   | 38:BQ:18:LEU:HD22  | 1.95                     | 0.46              |
| 39:BR:62:LYS:CB    | 39:BR:65:VAL:H     | 2.19                     | 0.46              |
| 39:BR:73:LEU:CA    | 39:BR:76:LYS:HD2   | 2.44                     | 0.46              |
| 40:BS:59:THR:C     | 40:BS:61:PHE:CE1   | 2.93                     | 0.46              |
| 40:BS:71:GLY:N     | 40:BS:74:ARG:HH12  | 2.12                     | 0.46              |
| 41:BT:61:TRP:O     | 41:BT:65:ILE:CG1   | 2.62                     | 0.46              |
| 41:BT:61:TRP:CZ3   | 41:BT:93:LYS:HA    | 2.51                     | 0.46              |
| 43:BV:25:ARG:NH2   | 43:BV:74:ALA:O     | 2.48                     | 0.46              |
| 43:BV:86:LEU:HB3   | 43:BV:87:PRO:CD    | 2.44                     | 0.46              |
| 45:BX:37:VAL:O     | 45:BX:37:VAL:HG22  | 2.15                     | 0.46              |
| 46:BY:19:ARG:HH21  | 46:BY:84:GLU:HA    | 1.80                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 46:BY:27:VAL:HG22 | 46:BY:85:HIS:CE1  | 2.35                     | 0.46              |
| 48:B1:14:VAL:C    | 48:B1:17:GLU:HB2  | 2.39                     | 0.46              |
| 48:B1:22:GLU:OE1  | 48:B1:22:GLU:CA   | 2.63                     | 0.46              |
| 48:B1:33:GLN:HA   | 48:B1:36:ILE:HG22 | 1.97                     | 0.46              |
| 48:B1:45:ILE:HD12 | 48:B1:46:ARG:N    | 2.30                     | 0.46              |
| 50:B3:7:PRO:HD3   | 50:B3:56:VAL:HG12 | 1.92                     | 0.46              |
| 50:B3:54:GLY:O    | 50:B3:55:ARG:HB3  | 2.16                     | 0.46              |
| 51:B4:51:TYR:CD1  | 51:B4:55:ARG:CD   | 2.96                     | 0.46              |
| 52:B5:19:ARG:HD3  | 52:B5:19:ARG:N    | 2.13                     | 0.46              |
| 53:B6:34:ARG:HH12 | 53:B6:42:LEU:HG   | 1.81                     | 0.46              |
| 1:AA:9:G:C8       | 7:AH:126:ARG:NH1  | 2.84                     | 0.46              |
| 1:AA:20:U:H5'     | 1:AA:572:A:C6     | 2.49                     | 0.46              |
| 1:AA:87:A:C8      | 1:AA:88:C:N1      | 2.84                     | 0.46              |
| 1:AA:88:C:O2'     | 1:AA:89:U:P       | 2.74                     | 0.46              |
| 1:AA:133:U:C4'    | 1:AA:134:A:OP1    | 2.64                     | 0.46              |
| 1:AA:185:A:C6     | 1:AA:186:C:N4     | 2.84                     | 0.46              |
| 1:AA:410:G:N3     | 1:AA:432:A:C6     | 2.83                     | 0.46              |
| 1:AA:517:G:N7     | 1:AA:531:U:C2     | 2.83                     | 0.46              |
| 1:AA:553:A:H2'    | 1:AA:554:C:C1'    | 2.46                     | 0.46              |
| 1:AA:578:C:C2'    | 1:AA:728:A:N3     | 2.78                     | 0.46              |
| 1:AA:625:G:H2'    | 1:AA:626:U:H6     | 1.80                     | 0.46              |
| 1:AA:714:G:C1'    | 1:AA:777:A:N7     | 2.77                     | 0.46              |
| 1:AA:766:A:C2     | 1:AA:767:A:C4     | 3.03                     | 0.46              |
| 1:AA:791:G:C8     | 1:AA:792:A:C8     | 3.03                     | 0.46              |
| 1:AA:802:A:H2'    | 1:AA:803:G:O4'    | 2.15                     | 0.46              |
| 1:AA:902:G:C2'    | 1:AA:903:G:H5'    | 2.43                     | 0.46              |
| 1:AA:949:A:O2'    | 1:AA:1364:U:N3    | 2.46                     | 0.46              |
| 1:AA:998:G:C6     | 1:AA:1044:A:C6    | 3.03                     | 0.46              |
| 1:AA:1055:A:H2'   | 1:AA:1056:U:O5'   | 2.16                     | 0.46              |
| 1:AA:1079:G:N2    | 1:AA:1080:A:N1    | 2.62                     | 0.46              |
| 1:AA:1095:U:N3    | 1:AA:1096:C:C5    | 2.83                     | 0.46              |
| 1:AA:1192:C:C5    | 1:AA:1193:G:N7    | 2.83                     | 0.46              |
| 1:AA:1206:G:C2    | 1:AA:1207:G:C4    | 3.03                     | 0.46              |
| 1:AA:1224:G:C6    | 1:AA:1322:C:H4'   | 2.51                     | 0.46              |
| 1:AA:1268:A:C2    | 1:AA:1327:C:H1'   | 2.50                     | 0.46              |
| 1:AA:1269:A:H2'   | 1:AA:1270:C:O4'   | 2.15                     | 0.46              |
| 1:AA:1497:G:H2'   | 1:AA:1498:U:H6    | 1.80                     | 0.46              |
| 1:AA:1532:U:O5'   | 1:AA:1532:U:H6    | 1.98                     | 0.46              |
| 3:AC:38:A:C8      | 3:AC:39:U:C5      | 3.03                     | 0.46              |
| 3:AD:40:C:H3'     | 3:AD:41:C:C5'     | 2.45                     | 0.46              |
| 3:AB:74:C:O3'     | 3:AB:74:C:OP1     | 2.33                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 4:AE:32:ILE:HD11  | 4:AE:40:HIS:CD2    | 2.39                     | 0.46              |
| 4:AE:50:GLU:HG3   | 4:AE:200:ILE:C     | 2.32                     | 0.46              |
| 4:AE:69:LEU:CD1   | 4:AE:69:LEU:C      | 2.87                     | 0.46              |
| 5:AF:11:ARG:HE    | 5:AF:11:ARG:N      | 2.13                     | 0.46              |
| 5:AF:19:GLU:CD    | 5:AF:19:GLU:N      | 2.74                     | 0.46              |
| 5:AF:29:TYR:CD1   | 16:AQ:36:PHE:CE1   | 3.03                     | 0.46              |
| 6:AG:60:GLU:OE1   | 6:AG:202:LEU:HD12  | 2.15                     | 0.46              |
| 6:AG:110:PHE:HZ   | 6:AG:147:ALA:HB1   | 1.80                     | 0.46              |
| 6:AG:175:SER:OG   | 6:AG:184:LYS:O     | 2.27                     | 0.46              |
| 7:AH:98:THR:HB    | 7:AH:117:ASP:HA    | 1.97                     | 0.46              |
| 8:AI:3:ARG:O      | 8:AI:93:SER:OG     | 2.32                     | 0.46              |
| 8:AI:4:TYR:HD1    | 8:AI:90:VAL:HG22   | 1.80                     | 0.46              |
| 8:AI:4:TYR:CD1    | 8:AI:90:VAL:HG22   | 2.51                     | 0.46              |
| 8:AI:56:PRO:HG2   | 8:AI:57:GLN:OE1    | 2.15                     | 0.46              |
| 10:AK:20:TYR:CE2  | 10:AK:75:ARG:HD2   | 2.51                     | 0.46              |
| 10:AK:111:ILE:N   | 10:AK:111:ILE:CD1  | 2.59                     | 0.46              |
| 11:AL:49:PRO:HB2  | 11:AL:82:ALA:CA    | 2.46                     | 0.46              |
| 11:AL:101:PHE:O   | 11:AL:102:LEU:HD23 | 2.16                     | 0.46              |
| 11:AL:114:TYR:O   | 11:AL:116:LYS:NZ   | 2.47                     | 0.46              |
| 12:AM:9:ARG:O     | 12:AM:9:ARG:HG3    | 2.14                     | 0.46              |
| 12:AM:40:LEU:CB   | 12:AM:69:ASN:HB2   | 2.46                     | 0.46              |
| 12:AM:74:ILE:HD11 | 12:AM:85:LEU:HD21  | 1.96                     | 0.46              |
| 13:AN:32:ILE:O    | 13:AN:39:PRO:HB2   | 2.16                     | 0.46              |
| 13:AN:42:TRP:CE3  | 13:AN:42:TRP:C     | 2.93                     | 0.46              |
| 14:AO:83:VAL:C    | 14:AO:104:VAL:CG1  | 2.88                     | 0.46              |
| 15:AP:3:ARG:CG    | 15:AP:7:VAL:HG12   | 2.44                     | 0.46              |
| 15:AP:7:VAL:CG1   | 30:BG:140:ILE:CG2  | 2.89                     | 0.46              |
| 15:AP:13:LYS:HD3  | 15:AP:17:VAL:HG11  | 1.96                     | 0.46              |
| 15:AP:81:LEU:CD1  | 15:AP:88:ARG:HH22  | 2.21                     | 0.46              |
| 17:AR:36:ILE:CG1  | 17:AR:59:MET:HE1   | 2.42                     | 0.46              |
| 18:AS:56:ALA:HB1  | 18:AS:74:LEU:CD1   | 2.45                     | 0.46              |
| 19:AT:91:ARG:HG2  | 19:AT:92:ARG:N     | 2.29                     | 0.46              |
| 20:AU:22:VAL:O    | 20:AU:24:ALA:N     | 2.48                     | 0.46              |
| 21:AV:62:ILE:HD11 | 21:AV:67:VAL:CB    | 2.44                     | 0.46              |
| 23:AX:3:LYS:NZ    | 23:AX:13:ILE:HG21  | 2.31                     | 0.46              |
| 24:BA:28:A:C2     | 24:BA:29:U:H4'     | 2.50                     | 0.46              |
| 24:BA:54:G:N2     | 24:BA:55:G:H1'     | 2.31                     | 0.46              |
| 24:BA:117:G:C5    | 24:BA:119:A:N6     | 2.84                     | 0.46              |
| 24:BA:196:A:N3    | 24:BA:2068:U:H5    | 2.12                     | 0.46              |
| 24:BA:297:C:C3'   | 24:BA:298:G:C8     | 2.98                     | 0.46              |
| 24:BA:403:U:C4'   | 24:BA:404:C:OP1    | 2.62                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:436:C:H2'   | 24:BA:436:C:O2     | 2.15                     | 0.46              |
| 24:BA:442:G:O4'   | 29:BF:46:ARG:HD2   | 2.16                     | 0.46              |
| 24:BA:464:U:C4    | 24:BA:465:G:O6     | 2.68                     | 0.46              |
| 24:BA:570:G:H2'   | 24:BA:2030:A:C6    | 2.50                     | 0.46              |
| 24:BA:588:U:H2'   | 24:BA:589:C:H6     | 1.81                     | 0.46              |
| 24:BA:592:G:O2'   | 54:B7:2:PRO:CA     | 2.49                     | 0.46              |
| 24:BA:609:A:H61   | 24:BA:619:G:H21    | 1.63                     | 0.46              |
| 24:BA:620:G:C5'   | 24:BA:621:A:OP1    | 2.59                     | 0.46              |
| 24:BA:624:C:C5'   | 24:BA:624:C:H6     | 2.29                     | 0.46              |
| 24:BA:661:C:C5'   | 36:BO:15:ARG:HH11  | 2.26                     | 0.46              |
| 24:BA:662:G:H5''  | 36:BO:19:VAL:CG1   | 2.40                     | 0.46              |
| 24:BA:700:G:H4'   | 24:BA:1633:G:H4'   | 1.95                     | 0.46              |
| 24:BA:739:G:O3'   | 24:BA:1784:A:C2    | 2.68                     | 0.46              |
| 24:BA:775:G:C1'   | 24:BA:777:A:C2     | 2.98                     | 0.46              |
| 24:BA:790:C:H6    | 24:BA:790:C:H3'    | 1.79                     | 0.46              |
| 24:BA:814:C:C2'   | 24:BA:1224:G:H22   | 2.29                     | 0.46              |
| 24:BA:815:C:O2'   | 24:BA:816:C:C5'    | 2.62                     | 0.46              |
| 24:BA:1023:U:O4   | 24:BA:1024:G:H1'   | 2.14                     | 0.46              |
| 24:BA:1060:U:OP2  | 33:BL:73:PRO:HG3   | 2.15                     | 0.46              |
| 24:BA:1062:G:H21  | 33:BL:91:PRO:HG3   | 1.75                     | 0.46              |
| 24:BA:1182:A:H2'  | 24:BA:1182:A:N3    | 2.30                     | 0.46              |
| 24:BA:1227:A:C8   | 24:BA:1227:A:C3'   | 2.97                     | 0.46              |
| 24:BA:1334:G:C2'  | 24:BA:1335:U:O5'   | 2.62                     | 0.46              |
| 24:BA:1338:G:C2'  | 24:BA:1339:G:H5'   | 2.45                     | 0.46              |
| 24:BA:1343:G:O6   | 24:BA:1404:C:C4    | 2.68                     | 0.46              |
| 24:BA:1358:G:O2'  | 24:BA:1373:A:N6    | 2.40                     | 0.46              |
| 24:BA:1422:G:C4   | 24:BA:1423:G:C8    | 3.03                     | 0.46              |
| 24:BA:1529:A:H3'  | 24:BA:1530:G:C8    | 2.46                     | 0.46              |
| 24:BA:1542:G:H1'  | 24:BA:1543:A:C5    | 2.43                     | 0.46              |
| 24:BA:1661:G:C2   | 24:BA:2000:G:C4    | 3.04                     | 0.46              |
| 24:BA:1665:A:C2   | 24:BA:1666:G:C4    | 3.03                     | 0.46              |
| 24:BA:1666:G:H5'' | 24:BA:1667:G:OP2   | 2.15                     | 0.46              |
| 24:BA:1796:U:H2'  | 24:BA:1797:C:H6    | 1.80                     | 0.46              |
| 24:BA:1844:C:N3   | 24:BA:1845:G:N7    | 2.62                     | 0.46              |
| 24:BA:1892:C:N3   | 24:BA:1893:C:C5    | 2.83                     | 0.46              |
| 24:BA:1935:G:H4'  | 24:BA:1937:A:C2    | 2.51                     | 0.46              |
| 24:BA:1936:A:O4'  | 24:BA:1940:U:O4    | 2.32                     | 0.46              |
| 24:BA:1964:G:C5   | 24:BA:1967:C:H5    | 2.34                     | 0.46              |
| 24:BA:2072:G:C5   | 24:BA:2073:C:C5    | 3.04                     | 0.46              |
| 24:BA:2286:A:C1'  | 52:B5:37:ARG:HH21  | 2.27                     | 0.46              |
| 24:BA:2304:G:P    | 30:BG:132:ASN:HD21 | 2.38                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:2366:A:H3'   | 24:BA:2367:G:H8   | 1.80                     | 0.46              |
| 24:BA:2425:A:OP1   | 24:BA:2427:C:O4'  | 2.34                     | 0.46              |
| 24:BA:2459:A:H3'   | 24:BA:2460:U:C6   | 2.50                     | 0.46              |
| 24:BA:2552:U:H3'   | 24:BA:2554:U:OP2  | 2.16                     | 0.46              |
| 24:BA:2554:U:C5    | 24:BA:2556:C:C4   | 3.03                     | 0.46              |
| 24:BA:2558:C:H2'   | 24:BA:2559:C:O5'  | 2.15                     | 0.46              |
| 24:BA:2606:C:N3    | 24:BA:2607:G:N7   | 2.63                     | 0.46              |
| 24:BA:2637:U:O5'   | 28:BE:81:ILE:HD11 | 2.15                     | 0.46              |
| 24:BA:2710:C:H2'   | 24:BA:2711:A:H5'' | 1.98                     | 0.46              |
| 24:BA:2813:A:N1    | 24:BA:2888:C:N3   | 2.63                     | 0.46              |
| 24:BA:2858:C:H5''  | 24:BA:2859:G:N7   | 2.30                     | 0.46              |
| 25:BB:6:C:O2'      | 25:BB:7:G:O5'     | 2.26                     | 0.46              |
| 26:BC:59:ARG:HH11  | 26:BC:59:ARG:HB2  | 1.81                     | 0.46              |
| 27:BD:120:GLY:H    | 27:BD:131:LEU:CD1 | 2.29                     | 0.46              |
| 27:BD:174:ILE:HD11 | 27:BD:184:LYS:HE3 | 1.93                     | 0.46              |
| 27:BD:256:GLY:O    | 27:BD:257:LEU:CG  | 2.64                     | 0.46              |
| 28:BE:36:ARG:CB    | 28:BE:41:LYS:HB2  | 2.44                     | 0.46              |
| 28:BE:92:THR:O     | 28:BE:92:THR:CG2  | 2.63                     | 0.46              |
| 28:BE:97:LYS:CG    | 28:BE:100:GLU:CD  | 2.87                     | 0.46              |
| 28:BE:113:PHE:HB3  | 28:BE:158:GLY:HA2 | 1.97                     | 0.46              |
| 29:BF:18:ARG:CG    | 29:BF:19:GLU:N    | 2.78                     | 0.46              |
| 29:BF:35:GLU:HA    | 29:BF:38:ARG:CD   | 2.44                     | 0.46              |
| 29:BF:74:ARG:NH1   | 29:BF:75:HIS:C    | 2.73                     | 0.46              |
| 29:BF:140:LEU:O    | 29:BF:141:ALA:C   | 2.58                     | 0.46              |
| 30:BG:12:TYR:O     | 30:BG:13:GLU:C    | 2.56                     | 0.46              |
| 30:BG:13:GLU:O     | 30:BG:17:PRO:CD   | 2.63                     | 0.46              |
| 30:BG:49:ASP:H     | 30:BG:53:LEU:HD13 | 1.80                     | 0.46              |
| 30:BG:118:ARG:HG2  | 30:BG:119:GLY:H   | 1.76                     | 0.46              |
| 30:BG:142:PRO:HG2  | 30:BG:143:GLU:HG2 | 1.98                     | 0.46              |
| 30:BG:144:ILE:HG23 | 30:BG:145:THR:N   | 2.30                     | 0.46              |
| 30:BG:163:ALA:O    | 30:BG:164:GLU:C   | 2.57                     | 0.46              |
| 31:BH:97:ARG:CB    | 31:BH:104:GLU:HG3 | 2.38                     | 0.46              |
| 32:BK:31:LEU:CD2   | 32:BK:36:ALA:HB3  | 2.45                     | 0.46              |
| 32:BK:79:ILE:O     | 32:BK:144:VAL:CA  | 2.54                     | 0.46              |
| 33:BL:60:TYR:CG    | 33:BL:67:PHE:HE1  | 2.33                     | 0.46              |
| 34:BM:6:PRO:CB     | 34:BM:41:ASP:HB3  | 2.45                     | 0.46              |
| 34:BM:25:ARG:HH21  | 34:BM:26:LEU:HB2  | 1.80                     | 0.46              |
| 34:BM:109:LYS:CE   | 34:BM:111:PRO:HD2 | 2.46                     | 0.46              |
| 35:BN:28:SER:O     | 35:BN:29:ASN:CB   | 2.64                     | 0.46              |
| 35:BN:39:ILE:CB    | 35:BN:59:LYS:HZ1  | 2.27                     | 0.46              |
| 35:BN:40:VAL:HG22  | 35:BN:41:ALA:N    | 2.30                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 36:BO:79:ARG:HE   | 36:BO:83:VAL:CG1   | 2.29                     | 0.46              |
| 37:BP:16:ARG:O    | 37:BP:17:LEU:CD1   | 2.64                     | 0.46              |
| 37:BP:87:LYS:O    | 37:BP:88:GLY:O     | 2.33                     | 0.46              |
| 37:BP:90:VAL:CA   | 37:BP:91:GLU:OE2   | 2.64                     | 0.46              |
| 38:BQ:87:TYR:O    | 38:BQ:89:ASP:OD1   | 2.33                     | 0.46              |
| 38:BQ:103:ARG:HB2 | 38:BQ:108:GLY:HA2  | 1.97                     | 0.46              |
| 38:BQ:113:LEU:C   | 38:BQ:114:VAL:HG23 | 2.41                     | 0.46              |
| 39:BR:58:LEU:O    | 39:BR:65:VAL:CG1   | 2.60                     | 0.46              |
| 39:BR:59:LYS:H    | 39:BR:59:LYS:CE    | 2.28                     | 0.46              |
| 42:BU:5:VAL:HG13  | 42:BU:38:LEU:C     | 2.40                     | 0.46              |
| 44:BW:65:ARG:HA   | 44:BW:70:LEU:CG    | 2.46                     | 0.46              |
| 45:BX:22:GLY:HA3  | 45:BX:73:ARG:CZ    | 2.38                     | 0.46              |
| 47:BZ:21:LEU:HD11 | 47:BZ:40:GLN:C     | 2.41                     | 0.46              |
| 48:B1:29:GLU:O    | 48:B1:33:GLN:OE1   | 2.33                     | 0.46              |
| 49:B2:8:LEU:HD12  | 49:B2:31:LEU:C     | 2.40                     | 0.46              |
| 49:B2:29:ARG:C    | 49:B2:30:ARG:HD2   | 2.40                     | 0.46              |
| 49:B2:52:HIS:ND1  | 49:B2:53:LEU:HG    | 2.29                     | 0.46              |
| 50:B3:25:TYR:CD2  | 50:B3:25:TYR:N     | 2.79                     | 0.46              |
| 50:B3:38:LYS:HG2  | 50:B3:39:CYS:N     | 2.25                     | 0.46              |
| 53:B6:1:MET:O     | 53:B6:2:LYS:C      | 2.58                     | 0.46              |
| 55:B8:2:LYS:HB3   | 55:B8:35:ARG:O     | 2.15                     | 0.46              |
| 55:B8:10:ILE:CD1  | 55:B8:14:CYS:SG    | 3.03                     | 0.46              |
| 1:AA:89:U:O5'     | 1:AA:89:U:H6       | 1.99                     | 0.46              |
| 1:AA:209:U:H5''   | 1:AA:210:U:OP1     | 2.15                     | 0.46              |
| 1:AA:295:C:C2     | 1:AA:296:U:C6      | 3.03                     | 0.46              |
| 1:AA:332:G:O2'    | 1:AA:333:G:C5'     | 2.63                     | 0.46              |
| 1:AA:517:G:C4     | 1:AA:531:U:O4'     | 2.68                     | 0.46              |
| 1:AA:594:G:C5     | 1:AA:595:G:N2      | 2.80                     | 0.46              |
| 1:AA:614:A:H2'    | 1:AA:615:C:C6      | 2.50                     | 0.46              |
| 1:AA:623:C:H2'    | 1:AA:624:C:H6      | 1.79                     | 0.46              |
| 1:AA:629:G:N3     | 1:AA:630:G:C8      | 2.84                     | 0.46              |
| 1:AA:667:G:H5'    | 17:AR:51:HIS:CD2   | 2.51                     | 0.46              |
| 1:AA:696:A:C2'    | 1:AA:697:U:H5'     | 2.44                     | 0.46              |
| 1:AA:711:G:C2'    | 1:AA:712:A:O5'     | 2.63                     | 0.46              |
| 1:AA:728:A:C6     | 1:AA:729:A:C5      | 3.03                     | 0.46              |
| 1:AA:885:G:C2     | 1:AA:913:A:C2      | 3.03                     | 0.46              |
| 1:AA:947:G:C4     | 1:AA:948:C:C6      | 3.04                     | 0.46              |
| 1:AA:965:A:O2'    | 1:AA:966:G:P       | 2.74                     | 0.46              |
| 1:AA:968:A:O4'    | 1:AA:968:A:OP1     | 2.33                     | 0.46              |
| 1:AA:1084:G:O2'   | 1:AA:1085:U:OP1    | 2.32                     | 0.46              |
| 1:AA:1188:A:C2    | 1:AA:1189:C:C2     | 3.03                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1188:A:H3'   | 1:AA:1189:C:H5     | 1.80                     | 0.46              |
| 1:AA:1189:C:OP2   | 1:AA:1189:C:C6     | 2.68                     | 0.46              |
| 1:AA:1308:U:C6    | 15:AP:99:ARG:NH1   | 2.77                     | 0.46              |
| 1:AA:1313:U:O4    | 21:AV:4:SER:OG     | 2.23                     | 0.46              |
| 1:AA:1443:G:C5'   | 1:AA:1446:A:H5'    | 2.39                     | 0.46              |
| 1:AA:1533:C:H2'   | 1:AA:1534:A:H8     | 1.80                     | 0.46              |
| 2:A1:30:U:C4      | 2:A1:31:U:C4       | 3.04                     | 0.46              |
| 3:AC:19:G:H1'     | 3:AC:57:G:H21      | 1.80                     | 0.46              |
| 3:AC:70:G:N3      | 3:AC:71:G:C8       | 2.84                     | 0.46              |
| 3:AD:63:G:H5'     | 26:BC:53:ARG:CZ    | 2.46                     | 0.46              |
| 4:AE:23:ARG:HB2   | 4:AE:23:ARG:CZ     | 2.45                     | 0.46              |
| 4:AE:57:PHE:CD1   | 4:AE:199:TYR:HE1   | 2.32                     | 0.46              |
| 4:AE:173:ALA:C    | 4:AE:176:GLU:HB2   | 2.40                     | 0.46              |
| 5:AF:23:TYR:CE1   | 12:AM:10:GLY:C     | 2.94                     | 0.46              |
| 5:AF:31:HIS:HA    | 5:AF:34:LEU:HB3    | 1.97                     | 0.46              |
| 5:AF:119:ARG:C    | 5:AF:121:ALA:N     | 2.70                     | 0.46              |
| 5:AF:132:ARG:O    | 5:AF:135:LYS:HB2   | 2.16                     | 0.46              |
| 5:AF:134:ILE:N    | 5:AF:134:ILE:CD1   | 2.79                     | 0.46              |
| 6:AG:88:VAL:HG12  | 6:AG:91:SER:H      | 1.80                     | 0.46              |
| 7:AH:33:VAL:C     | 7:AH:34:VAL:CG2    | 2.87                     | 0.46              |
| 7:AH:36:ASP:OD1   | 7:AH:38:GLN:HB2    | 2.16                     | 0.46              |
| 7:AH:41:VAL:O     | 7:AH:67:VAL:O      | 2.33                     | 0.46              |
| 7:AH:61:TYR:CA    | 7:AH:64:ARG:HG2    | 2.46                     | 0.46              |
| 7:AH:78:HIS:ND1   | 10:AK:107:LEU:CD1  | 2.64                     | 0.46              |
| 7:AH:121:LYS:HB3  | 7:AH:121:LYS:HE3   | 1.74                     | 0.46              |
| 7:AH:151:LEU:HD11 | 10:AK:67:PRO:HG2   | 1.98                     | 0.46              |
| 8:AI:46:ARG:HG2   | 8:AI:47:ARG:N      | 2.29                     | 0.46              |
| 8:AI:96:PRO:O     | 8:AI:97:PHE:CB     | 2.60                     | 0.46              |
| 9:AJ:29:LYS:HD2   | 9:AJ:102:ARG:HA    | 1.98                     | 0.46              |
| 9:AJ:94:ARG:NH1   | 9:AJ:98:SER:OG     | 2.49                     | 0.46              |
| 9:AJ:143:ARG:O    | 9:AJ:144:MET:C     | 2.59                     | 0.46              |
| 10:AK:10:LEU:O    | 10:AK:83:ILE:HD13  | 2.14                     | 0.46              |
| 10:AK:54:ASP:C    | 10:AK:56:LYS:N     | 2.74                     | 0.46              |
| 10:AK:104:ARG:CD  | 10:AK:107:LEU:HD11 | 2.46                     | 0.46              |
| 11:AL:16:ARG:CG   | 11:AL:18:PHE:CE1   | 2.89                     | 0.46              |
| 12:AM:9:ARG:NH1   | 12:AM:9:ARG:HB3    | 2.30                     | 0.46              |
| 16:AQ:34:TYR:CZ   | 16:AQ:44:LEU:HD22  | 2.51                     | 0.46              |
| 16:AQ:35:ARG:O    | 16:AQ:38:GLY:N     | 2.48                     | 0.46              |
| 17:AR:18:PHE:O    | 17:AR:20:GLY:N     | 2.48                     | 0.46              |
| 18:AS:4:ILE:HA    | 18:AS:20:VAL:O     | 2.16                     | 0.46              |
| 18:AS:71:ARG:HB2  | 18:AS:71:ARG:CZ    | 2.46                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 19:AT:28:PRO:CB   | 19:AT:33:GLY:O     | 2.59                     | 0.46              |
| 19:AT:29:HIS:ND1  | 19:AT:32:TYR:N     | 2.63                     | 0.46              |
| 19:AT:86:GLU:O    | 19:AT:87:LYS:C     | 2.56                     | 0.46              |
| 20:AU:22:VAL:C    | 20:AU:24:ALA:N     | 2.71                     | 0.46              |
| 20:AU:23:LYS:HD2  | 20:AU:57:GLY:O     | 2.15                     | 0.46              |
| 20:AU:25:THR:HG22 | 20:AU:42:ARG:NH2   | 2.31                     | 0.46              |
| 20:AU:80:PRO:O    | 20:AU:81:PHE:CD1   | 2.69                     | 0.46              |
| 21:AV:37:ARG:HA   | 21:AV:37:ARG:HD3   | 1.43                     | 0.46              |
| 21:AV:51:VAL:HB   | 21:AV:75:ALA:HB2   | 1.97                     | 0.46              |
| 24:BA:47:C:C2     | 24:BA:179:G:C2     | 3.03                     | 0.46              |
| 24:BA:179:G:C4    | 24:BA:180:G:C8     | 3.03                     | 0.46              |
| 24:BA:182:A:C2    | 24:BA:183:C:N3     | 2.83                     | 0.46              |
| 24:BA:215:G:C4'   | 24:BA:216:A:O5'    | 2.40                     | 0.46              |
| 24:BA:215:G:C1'   | 24:BA:216:A:H4'    | 2.46                     | 0.46              |
| 24:BA:215:G:O2'   | 24:BA:216:A:OP2    | 2.30                     | 0.46              |
| 24:BA:221:A:N3    | 24:BA:233:A:H1'    | 2.30                     | 0.46              |
| 24:BA:371:A:H5''  | 24:BA:423:A:C5     | 2.46                     | 0.46              |
| 24:BA:375:C:O2    | 24:BA:375:C:C2'    | 2.62                     | 0.46              |
| 24:BA:378:C:H2'   | 24:BA:379:G:H8     | 1.81                     | 0.46              |
| 24:BA:380:U:H4'   | 50:B3:16:CYS:HB3   | 1.97                     | 0.46              |
| 24:BA:387:U:H2'   | 24:BA:387:U:O2     | 2.14                     | 0.46              |
| 24:BA:457:A:C2    | 24:BA:470:A:C5'    | 2.99                     | 0.46              |
| 24:BA:496:G:O6    | 24:BA:497:A:C6     | 2.69                     | 0.46              |
| 24:BA:518:G:C4'   | 43:BV:18:ARG:NH1   | 2.76                     | 0.46              |
| 24:BA:563:G:N2    | 24:BA:578:A:C2     | 2.69                     | 0.46              |
| 24:BA:598:G:O2'   | 36:BO:14:LYS:HE3   | 2.15                     | 0.46              |
| 24:BA:637:A:OP2   | 36:BO:131:SER:HB3  | 2.16                     | 0.46              |
| 24:BA:746:A:HO2'  | 24:BA:747:U:P      | 2.21                     | 0.46              |
| 24:BA:764:A:N3    | 27:BD:214:TRP:HD1  | 2.12                     | 0.46              |
| 24:BA:783:A:C2'   | 24:BA:784:A:C5'    | 2.92                     | 0.46              |
| 24:BA:819:A:N3    | 24:BA:943:U:O2     | 2.49                     | 0.46              |
| 24:BA:831:G:H5'   | 36:BO:35:HIS:HB3   | 1.97                     | 0.46              |
| 24:BA:872:A:O2'   | 37:BP:66:ILE:CB    | 2.64                     | 0.46              |
| 24:BA:923:C:O4'   | 47:BZ:26:TYR:CB    | 2.62                     | 0.46              |
| 24:BA:966:G:C2'   | 24:BA:2267:A:N6    | 2.78                     | 0.46              |
| 24:BA:974:G:C8    | 24:BA:974(A):C:O4' | 2.69                     | 0.46              |
| 24:BA:1036:G:H5'  | 31:BH:59:ARG:NH2   | 2.31                     | 0.46              |
| 24:BA:1042:G:N2   | 24:BA:1114:G:C4    | 2.78                     | 0.46              |
| 24:BA:1056:G:C2   | 24:BA:1102:C:C5    | 3.03                     | 0.46              |
| 24:BA:1068:G:N1   | 24:BA:1073:A:C2    | 2.84                     | 0.46              |
| 24:BA:1081:U:H5'' | 33:BL:122:ALA:CA   | 2.36                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1094:U:O2    | 24:BA:1097:U:H5    | 1.99                     | 0.46              |
| 24:BA:1213:A:C2    | 24:BA:1237:A:H1'   | 2.50                     | 0.46              |
| 24:BA:1238:G:N2    | 24:BA:1239:G:C4    | 2.83                     | 0.46              |
| 24:BA:1241:A:C3'   | 24:BA:1241:A:C4    | 2.98                     | 0.46              |
| 24:BA:1364:G:OP1   | 50:B3:2:LYS:O      | 2.34                     | 0.46              |
| 24:BA:1366:A:H5''  | 50:B3:1:MET:N      | 2.31                     | 0.46              |
| 24:BA:1373:A:N7    | 24:BA:1374:G:C5    | 2.84                     | 0.46              |
| 24:BA:1469:A:H3'   | 24:BA:1469:A:C8    | 2.50                     | 0.46              |
| 24:BA:1515:C:C6    | 24:BA:1515:C:P     | 3.08                     | 0.46              |
| 24:BA:1518:C:N3    | 24:BA:1519:G:H1'   | 2.30                     | 0.46              |
| 24:BA:1641:A:N7    | 24:BA:1642:G:C5    | 2.84                     | 0.46              |
| 24:BA:1707:G:N3    | 24:BA:1708:C:C6    | 2.84                     | 0.46              |
| 24:BA:1727:U:H2'   | 24:BA:1728:G:OP1   | 2.15                     | 0.46              |
| 24:BA:1731:G:N3    | 24:BA:1732:A:OP2   | 2.49                     | 0.46              |
| 24:BA:1741:C:O3'   | 24:BA:1742:C:O4'   | 2.33                     | 0.46              |
| 24:BA:1767:C:C4    | 24:BA:1768:U:C4    | 3.04                     | 0.46              |
| 24:BA:1882:C:C2    | 24:BA:1883:G:H1'   | 2.49                     | 0.46              |
| 24:BA:1890:A:C3'   | 24:BA:1891:G:H8    | 2.25                     | 0.46              |
| 24:BA:2249:U:C2'   | 24:BA:2250:G:OP1   | 2.63                     | 0.46              |
| 24:BA:2259:G:H4'   | 24:BA:2427:C:H2'   | 1.97                     | 0.46              |
| 24:BA:2268:A:H3'   | 24:BA:2269:A:C5'   | 2.46                     | 0.46              |
| 24:BA:2464:C:N3    | 24:BA:2465:C:C5    | 2.84                     | 0.46              |
| 24:BA:2503:A:O2'   | 24:BA:2504:U:P     | 2.73                     | 0.46              |
| 24:BA:2527:C:OP1   | 55:B8:30:PRO:HB3   | 2.16                     | 0.46              |
| 24:BA:2553:G:C8    | 24:BA:2583:G:H4'   | 2.45                     | 0.46              |
| 24:BA:2559:C:H2'   | 24:BA:2560:C:H6    | 1.79                     | 0.46              |
| 24:BA:2645:G:OP2   | 24:BA:2645:G:O4'   | 2.33                     | 0.46              |
| 24:BA:2734:A:N6    | 24:BA:2735:G:N2    | 2.64                     | 0.46              |
| 24:BA:2745:C:N3    | 24:BA:2746:U:C5    | 2.83                     | 0.46              |
| 24:BA:2768:C:C2'   | 24:BA:2769:C:H5'   | 2.45                     | 0.46              |
| 25:BB:82:G:C4      | 25:BB:83:G:N7      | 2.84                     | 0.46              |
| 26:BC:117:PRO:HD3  | 26:BC:146:GLY:O    | 2.13                     | 0.46              |
| 26:BC:160:ARG:O    | 26:BC:161:ILE:HG13 | 2.14                     | 0.46              |
| 26:BC:190:ARG:O    | 26:BC:193:ILE:HB   | 2.14                     | 0.46              |
| 27:BD:109:ASP:N    | 27:BD:196:VAL:O    | 2.49                     | 0.46              |
| 27:BD:117:VAL:C    | 27:BD:118:VAL:HG22 | 2.39                     | 0.46              |
| 27:BD:177:LEU:HD23 | 27:BD:177:LEU:N    | 2.22                     | 0.46              |
| 27:BD:183:ARG:NH2  | 27:BD:268:ARG:HH11 | 2.13                     | 0.46              |
| 28:BE:34:VAL:CG1   | 28:BE:36:ARG:NH2   | 2.79                     | 0.46              |
| 28:BE:128:SER:O    | 28:BE:129:HIS:C    | 2.56                     | 0.46              |
| 28:BE:199:ARG:O    | 28:BE:200:GLU:OE1  | 2.33                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 29:BF:157:VAL:O    | 29:BF:158:THR:CB   | 2.63                     | 0.46              |
| 29:BF:169:ASN:HD22 | 29:BF:173:VAL:HG12 | 1.80                     | 0.46              |
| 30:BG:116:ASP:CB   | 30:BG:118:ARG:NH2  | 2.76                     | 0.46              |
| 30:BG:167:GLU:OE1  | 30:BG:167:GLU:N    | 2.44                     | 0.46              |
| 30:BG:176:LEU:HD13 | 30:BG:176:LEU:C    | 2.40                     | 0.46              |
| 31:BH:97:ARG:NH2   | 31:BH:97:ARG:CB    | 2.79                     | 0.46              |
| 31:BH:103:LEU:H    | 31:BH:115:VAL:H    | 1.62                     | 0.46              |
| 33:BL:23:VAL:O     | 33:BL:34:ILE:HG12  | 2.15                     | 0.46              |
| 34:BM:12:ARG:HD3   | 34:BM:50:ASP:OD1   | 2.15                     | 0.46              |
| 34:BM:103:VAL:HG23 | 34:BM:117:PHE:HE2  | 1.80                     | 0.46              |
| 34:BM:115:ARG:HA   | 34:BM:118:LYS:HE3  | 1.96                     | 0.46              |
| 35:BN:80:ASP:OD2   | 35:BN:82:ASN:ND2   | 2.48                     | 0.46              |
| 36:BO:27:HIS:HB3   | 36:BO:28:GLY:H     | 1.63                     | 0.46              |
| 36:BO:122:PRO:CA   | 36:BO:134:ALA:HA   | 2.45                     | 0.46              |
| 36:BO:131:SER:O    | 36:BO:135:LEU:CD1  | 2.64                     | 0.46              |
| 37:BP:34:LEU:CD1   | 37:BP:67:ARG:NH2   | 2.72                     | 0.46              |
| 37:BP:48:GLU:O     | 37:BP:49:ALA:C     | 2.57                     | 0.46              |
| 37:BP:56:ARG:NH1   | 37:BP:57:HIS:HA    | 2.30                     | 0.46              |
| 37:BP:97:VAL:CA    | 37:BP:98:LYS:HE2   | 2.45                     | 0.46              |
| 38:BQ:27:SER:O     | 38:BQ:30:THR:HB    | 2.15                     | 0.46              |
| 38:BQ:55:ALA:HB1   | 38:BQ:79:LEU:HD21  | 1.94                     | 0.46              |
| 38:BQ:93:GLY:C     | 38:BQ:95:THR:N     | 2.68                     | 0.46              |
| 38:BQ:102:GLU:CD   | 38:BQ:103:ARG:N    | 2.62                     | 0.46              |
| 39:BR:35:ILE:HG13  | 39:BR:36:TYR:N     | 2.31                     | 0.46              |
| 40:BS:38:ASN:O     | 40:BS:39:ARG:O     | 2.33                     | 0.46              |
| 41:BT:31:SER:OG    | 41:BT:35:ALA:CA    | 2.64                     | 0.46              |
| 41:BT:66:ASN:HA    | 41:BT:76:TYR:CE1   | 2.51                     | 0.46              |
| 43:BV:18:ARG:HH21  | 43:BV:18:ARG:CG    | 2.28                     | 0.46              |
| 43:BV:28:SER:C     | 43:BV:31:GLU:OE1   | 2.59                     | 0.46              |
| 45:BX:2:ARG:HE     | 45:BX:4:LYS:H      | 1.64                     | 0.46              |
| 46:BY:10:ARG:NH2   | 46:BY:35:ARG:HG3   | 2.30                     | 0.46              |
| 47:BZ:74:ARG:HD2   | 47:BZ:75:LEU:HD12  | 1.97                     | 0.46              |
| 49:B2:40:THR:C     | 49:B2:42:ALA:N     | 2.72                     | 0.46              |
| 50:B3:57:GLU:N     | 50:B3:61:ARG:CZ    | 2.78                     | 0.46              |
| 52:B5:19:ARG:NH1   | 52:B5:19:ARG:CG    | 2.58                     | 0.46              |
| 53:B6:24:THR:C     | 53:B6:28:ARG:HE    | 2.24                     | 0.46              |
| 55:B8:10:ILE:HD12  | 55:B8:14:CYS:HB3   | 1.97                     | 0.46              |
| 1:AA:120:A:C8      | 1:AA:122:G:C5      | 3.04                     | 0.46              |
| 1:AA:186(B):C:C2   | 1:AA:186(C):G:C8   | 3.03                     | 0.46              |
| 1:AA:227:G:C6      | 1:AA:228:A:C6      | 3.03                     | 0.46              |
| 1:AA:237:C:C5'     | 19:AT:25:ARG:CZ    | 2.86                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:AA:323:U:O2    | 1:AA:329:A:N6     | 2.49                     | 0.46              |
| 1:AA:452:A:C6    | 1:AA:453:A:C6     | 3.03                     | 0.46              |
| 1:AA:495:A:H4'   | 1:AA:496:A:OP1    | 2.15                     | 0.46              |
| 1:AA:518:C:C5    | 1:AA:530:G:N7     | 2.83                     | 0.46              |
| 1:AA:625:G:H2'   | 1:AA:626:U:C6     | 2.50                     | 0.46              |
| 1:AA:644:G:C5    | 1:AA:645:C:C5     | 3.04                     | 0.46              |
| 1:AA:745:C:N4    | 1:AA:746:A:H62    | 2.13                     | 0.46              |
| 1:AA:811:C:C6    | 1:AA:811:C:C3'    | 2.98                     | 0.46              |
| 1:AA:824:C:C1'   | 10:AK:1:MET:H1    | 2.28                     | 0.46              |
| 1:AA:854:G:H3'   | 1:AA:871:U:C4     | 2.48                     | 0.46              |
| 1:AA:867:G:N3    | 1:AA:868:C:C5     | 2.83                     | 0.46              |
| 1:AA:880:C:P     | 14:AO:9:GLN:HE21  | 2.38                     | 0.46              |
| 1:AA:933:G:OP2   | 9:AJ:3:ARG:HG2    | 2.15                     | 0.46              |
| 1:AA:938:A:C6    | 1:AA:939:G:C5     | 3.03                     | 0.46              |
| 1:AA:958:A:H2'   | 1:AA:959:A:O4'    | 2.16                     | 0.46              |
| 1:AA:1029:G:C4   | 1:AA:1032(A):G:C6 | 3.03                     | 0.46              |
| 1:AA:1055:A:HO2' | 1:AA:1056:U:P     | 2.37                     | 0.46              |
| 1:AA:1058:G:N2   | 12:AM:53:PRO:HG3  | 2.31                     | 0.46              |
| 1:AA:1289:A:C2   | 1:AA:1372:U:H4'   | 2.51                     | 0.46              |
| 1:AA:1363:A:H5'' | 1:AA:1364:U:C6    | 2.51                     | 0.46              |
| 1:AA:1405:G:N3   | 1:AA:1406:U:C5    | 2.84                     | 0.46              |
| 1:AA:1464:G:HO2' | 1:AA:1465:C:H6    | 1.63                     | 0.46              |
| 1:AA:1517:G:C2   | 1:AA:1518:A:C4    | 3.03                     | 0.46              |
| 2:A1:13:U:H3'    | 2:A1:14:U:C6      | 2.51                     | 0.46              |
| 3:AC:47:U:O4     | 3:AC:49:C:C4'     | 2.60                     | 0.46              |
| 3:AC:66:U:C3'    | 3:AC:67:C:C6      | 2.96                     | 0.46              |
| 3:AB:9:A:N3      | 3:AB:46:G:C2      | 2.84                     | 0.46              |
| 5:AF:40:ARG:NE   | 16:AQ:52:GLN:NE2  | 2.64                     | 0.46              |
| 5:AF:59:ARG:NE   | 5:AF:64:VAL:CA    | 2.64                     | 0.46              |
| 6:AG:33:MET:HE3  | 6:AG:33:MET:H     | 1.80                     | 0.46              |
| 6:AG:130:GLY:HA3 | 6:AG:131:ARG:NH1  | 2.31                     | 0.46              |
| 6:AG:145:GLU:N   | 6:AG:184:LYS:HE2  | 2.30                     | 0.46              |
| 6:AG:195:ALA:O   | 6:AG:196:LEU:O    | 2.33                     | 0.46              |
| 7:AH:39:GLY:C    | 7:AH:68:GLU:OE2   | 2.59                     | 0.46              |
| 8:AI:11:ASN:HB2  | 8:AI:84:ASN:HB3   | 1.97                     | 0.46              |
| 8:AI:12:PRO:O    | 8:AI:14:LEU:N     | 2.48                     | 0.46              |
| 8:AI:19:LEU:HD11 | 8:AI:23:LYS:NZ    | 2.31                     | 0.46              |
| 8:AI:65:VAL:O    | 8:AI:67:MET:CE    | 2.63                     | 0.46              |
| 9:AJ:111:ARG:HD3 | 9:AJ:122:HIS:CB   | 2.46                     | 0.46              |
| 9:AJ:153:HIS:CE1 | 13:AN:58:PRO:HD2  | 2.42                     | 0.46              |
| 10:AK:6:ILE:CD1  | 10:AK:85:ARG:CZ   | 2.93                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 10:AK:15:ASN:N     | 10:AK:15:ASN:HD22  | 2.13                     | 0.46              |
| 10:AK:37:ARG:CD    | 10:AK:41:ARG:HG3   | 2.19                     | 0.46              |
| 10:AK:70:GLN:HE21  | 10:AK:71:GLY:H     | 1.47                     | 0.46              |
| 10:AK:84:ARG:C     | 10:AK:135:CYS:SG   | 2.98                     | 0.46              |
| 10:AK:109:ILE:HG13 | 10:AK:109:ILE:O    | 2.14                     | 0.46              |
| 11:AL:50:LEU:HD21  | 11:AL:55:ALA:O     | 2.15                     | 0.46              |
| 14:AO:34:ARG:HD3   | 14:AO:105:TYR:CZ   | 2.51                     | 0.46              |
| 14:AO:92:ASP:CA    | 14:AO:93:LEU:HD23  | 2.45                     | 0.46              |
| 15:AP:20:THR:HA    | 15:AP:25:ILE:C     | 2.40                     | 0.46              |
| 15:AP:73:GLU:O     | 15:AP:75:ALA:N     | 2.49                     | 0.46              |
| 18:AS:26:ARG:CD    | 18:AS:31:LYS:HZ3   | 2.28                     | 0.46              |
| 18:AS:53:VAL:HA    | 18:AS:79:VAL:CG2   | 2.45                     | 0.46              |
| 18:AS:74:LEU:CD2   | 18:AS:79:VAL:HG21  | 2.43                     | 0.46              |
| 19:AT:88:TYR:CD2   | 19:AT:92:ARG:HD2   | 2.51                     | 0.46              |
| 21:AV:24:ALA:O     | 21:AV:26:GLY:N     | 2.49                     | 0.46              |
| 21:AV:58:VAL:HG23  | 21:AV:60:VAL:CG2   | 2.44                     | 0.46              |
| 22:AW:50:GLU:CB    | 22:AW:99:LEU:HD12  | 2.46                     | 0.46              |
| 24:BA:87:C:H5''    | 24:BA:88:G:O5'     | 2.15                     | 0.46              |
| 24:BA:95:G:OP1     | 48:B1:39:LEU:HD13  | 2.14                     | 0.46              |
| 24:BA:209:C:C5'    | 24:BA:681:G:H4'    | 2.41                     | 0.46              |
| 24:BA:218:A:H2'    | 24:BA:219:G:O4'    | 2.16                     | 0.46              |
| 24:BA:243:U:OP2    | 54:B7:7:HIS:NE2    | 2.48                     | 0.46              |
| 24:BA:273(E):U:N3  | 24:BA:273(F):C:H1' | 2.30                     | 0.46              |
| 24:BA:284:U:H3'    | 24:BA:284:U:P      | 2.56                     | 0.46              |
| 24:BA:295:G:H1'    | 24:BA:345:A:C2     | 2.50                     | 0.46              |
| 24:BA:307:G:H2'    | 24:BA:309:G:H8     | 1.79                     | 0.46              |
| 24:BA:341:G:C2'    | 24:BA:342:G:O4'    | 2.63                     | 0.46              |
| 24:BA:465:G:C6     | 24:BA:466:A:C6     | 3.04                     | 0.46              |
| 24:BA:467:G:P      | 53:B6:33:ARG:NH1   | 2.88                     | 0.46              |
| 24:BA:470:A:O2'    | 24:BA:471:A:P      | 2.73                     | 0.46              |
| 24:BA:479:A:N3     | 24:BA:480:A:C5     | 2.84                     | 0.46              |
| 24:BA:578:A:C3'    | 24:BA:579:G:H5''   | 2.46                     | 0.46              |
| 24:BA:580:C:N4     | 24:BA:581:C:N4     | 2.63                     | 0.46              |
| 24:BA:612:G:H2'    | 24:BA:615:G:C4     | 2.51                     | 0.46              |
| 24:BA:653:A:C3'    | 24:BA:654:A:H4'    | 2.45                     | 0.46              |
| 24:BA:757:U:C2'    | 24:BA:758:C:O5'    | 2.64                     | 0.46              |
| 24:BA:799:G:H8     | 24:BA:799:G:OP2    | 1.97                     | 0.46              |
| 24:BA:800:A:C5     | 24:BA:802:A:O4'    | 2.69                     | 0.46              |
| 24:BA:823:G:H3'    | 24:BA:824:A:C8     | 2.43                     | 0.46              |
| 24:BA:833:U:H2'    | 24:BA:834:C:H6     | 1.80                     | 0.46              |
| 24:BA:889:C:H2'    | 24:BA:890:A:C1'    | 2.45                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 24:BA:933:A:N3      | 24:BA:934:G:C8     | 2.84                     | 0.46              |
| 24:BA:945:A:H2'     | 24:BA:946:G:H5''   | 1.98                     | 0.46              |
| 24:BA:962:G:H21     | 24:BA:2250:G:N2    | 2.12                     | 0.46              |
| 24:BA:974:G:C3'     | 24:BA:974(A):C:C5' | 2.85                     | 0.46              |
| 24:BA:1119:C:H2'    | 24:BA:1119:C:O2    | 2.13                     | 0.46              |
| 24:BA:1213:A:OP2    | 24:BA:1235:G:N2    | 2.48                     | 0.46              |
| 24:BA:1313:U:O2     | 24:BA:1314:C:C5    | 2.69                     | 0.46              |
| 24:BA:1363:C:O2'    | 24:BA:1809:A:N7    | 2.38                     | 0.46              |
| 24:BA:1405:U:C2     | 24:BA:1406:U:C5    | 3.04                     | 0.46              |
| 24:BA:1420:U:O2'    | 24:BA:1421:G:P     | 2.73                     | 0.46              |
| 24:BA:1444(A):A:H5' | 24:BA:1445:C:C6    | 2.51                     | 0.46              |
| 24:BA:1449:A:H4'    | 24:BA:1542:G:H21   | 1.80                     | 0.46              |
| 24:BA:1464:C:O2'    | 24:BA:1465:G:C5'   | 2.64                     | 0.46              |
| 24:BA:1570:A:C6     | 24:BA:1571:A:N7    | 2.83                     | 0.46              |
| 24:BA:1655:A:H4'    | 28:BE:114:ALA:HA   | 1.96                     | 0.46              |
| 24:BA:1680:U:O2     | 24:BA:1764:G:O5'   | 2.33                     | 0.46              |
| 24:BA:1712:C:H3'    | 24:BA:1716:U:C5    | 2.50                     | 0.46              |
| 24:BA:1785:A:OP2    | 24:BA:1785:A:C8    | 2.63                     | 0.46              |
| 24:BA:1813:G:O3'    | 27:BD:46:GLN:HG2   | 2.16                     | 0.46              |
| 24:BA:1889:A:C2     | 24:BA:1890:A:C5    | 3.03                     | 0.46              |
| 24:BA:1891:G:H3'    | 24:BA:1892:C:H6    | 1.79                     | 0.46              |
| 24:BA:1992:G:N2     | 24:BA:1995:U:C5    | 2.83                     | 0.46              |
| 24:BA:2125:G:OP1    | 26:BC:40:THR:CG2   | 2.63                     | 0.46              |
| 24:BA:2186:G:N2     | 24:BA:2187:G:C5    | 2.84                     | 0.46              |
| 24:BA:2230:G:C2     | 24:BA:2231:C:C2    | 3.03                     | 0.46              |
| 24:BA:2287:A:C2     | 52:B5:37:ARG:NH2   | 2.84                     | 0.46              |
| 24:BA:2343:C:H4'    | 24:BA:2373:G:O3'   | 2.15                     | 0.46              |
| 24:BA:2349:G:C3'    | 24:BA:2350:C:C5'   | 2.90                     | 0.46              |
| 24:BA:2459:A:C2     | 24:BA:2492:U:C4    | 3.02                     | 0.46              |
| 24:BA:2462:U:O4     | 24:BA:2463:C:N4    | 2.49                     | 0.46              |
| 24:BA:2478:A:C5     | 24:BA:2479:G:C8    | 3.04                     | 0.46              |
| 24:BA:2521:C:C2     | 24:BA:2545:G:N2    | 2.84                     | 0.46              |
| 24:BA:2553:G:N3     | 24:BA:2553:G:H2'   | 2.31                     | 0.46              |
| 24:BA:2588:G:O6     | 24:BA:2589:A:C6    | 2.68                     | 0.46              |
| 24:BA:2689:U:O2     | 24:BA:2713:A:N7    | 2.49                     | 0.46              |
| 24:BA:2690:C:O2'    | 24:BA:2691:C:C5'   | 2.63                     | 0.46              |
| 24:BA:2703:C:C5     | 24:BA:2704:C:N4    | 2.84                     | 0.46              |
| 24:BA:2748:A:N1     | 24:BA:2756:U:O2    | 2.49                     | 0.46              |
| 24:BA:2834:G:C8     | 24:BA:2834:G:C3'   | 2.99                     | 0.46              |
| 24:BA:2884:U:O2'    | 24:BA:2885:C:H5'   | 2.15                     | 0.46              |
| 24:BA:2893:G:P      | 24:BA:2893:G:O4'   | 2.73                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 25:BB:8:U:O2'     | 25:BB:9:G:O4'     | 2.27                     | 0.46              |
| 25:BB:42:C:C4     | 30:BG:93:THR:HB   | 2.50                     | 0.46              |
| 25:BB:46:A:O2'    | 25:BB:47:C:H5'    | 2.16                     | 0.46              |
| 25:BB:48:A:OP1    | 39:BR:92:TYR:CB   | 2.63                     | 0.46              |
| 25:BB:56:G:O2'    | 25:BB:57:A:H5'    | 2.15                     | 0.46              |
| 25:BB:83:G:H21    | 25:BB:84:C:C1'    | 2.29                     | 0.46              |
| 25:BB:99:A:H2'    | 25:BB:100:G:O5'   | 2.16                     | 0.46              |
| 25:BB:104:A:C3'   | 25:BB:105:G:O4'   | 2.63                     | 0.46              |
| 26:BC:123:VAL:CG1 | 26:BC:138:PRO:HG2 | 2.41                     | 0.46              |
| 27:BD:7:LYS:HB2   | 27:BD:27:THR:HA   | 1.97                     | 0.46              |
| 27:BD:84:TYR:HA   | 27:BD:92:ILE:HG23 | 1.96                     | 0.46              |
| 27:BD:247:ALA:O   | 27:BD:250:TRP:HB2 | 2.16                     | 0.46              |
| 28:BE:32:PRO:HG3  | 28:BE:88:GLY:HA2  | 1.97                     | 0.46              |
| 28:BE:51:PHE:HE1  | 28:BE:75:VAL:H    | 1.64                     | 0.46              |
| 28:BE:54:GLN:OE1  | 28:BE:56:PRO:HD2  | 2.15                     | 0.46              |
| 28:BE:55:ASN:O    | 28:BE:56:PRO:C    | 2.56                     | 0.46              |
| 29:BF:57:VAL:O    | 29:BF:60:SER:OG   | 2.29                     | 0.46              |
| 29:BF:135:LYS:HE3 | 29:BF:136:THR:OG1 | 2.16                     | 0.46              |
| 30:BG:47:LYS:CB   | 30:BG:53:LEU:HD11 | 2.35                     | 0.46              |
| 30:BG:57:ALA:CA   | 30:BG:68:PRO:CD   | 2.83                     | 0.46              |
| 30:BG:107:LEU:HG  | 30:BG:177:GLY:O   | 2.16                     | 0.46              |
| 30:BG:124:SER:OG  | 30:BG:132:ASN:O   | 2.32                     | 0.46              |
| 31:BH:9:ILE:CD1   | 31:BH:69:ARG:HH22 | 2.28                     | 0.46              |
| 31:BH:42:ARG:O    | 31:BH:43:VAL:HG23 | 2.16                     | 0.46              |
| 31:BH:93:GLY:O    | 31:BH:107:VAL:CG2 | 2.63                     | 0.46              |
| 31:BH:132:ARG:HD3 | 31:BH:132:ARG:H   | 1.78                     | 0.46              |
| 31:BH:171:LEU:C   | 31:BH:172:LYS:HZ2 | 2.24                     | 0.46              |
| 32:BK:88:ILE:HD12 | 32:BK:88:ILE:N    | 2.31                     | 0.46              |
| 33:BL:108:ALA:O   | 33:BL:109:LYS:C   | 2.58                     | 0.46              |
| 34:BM:17:ASP:O    | 34:BM:18:ALA:CB   | 2.64                     | 0.46              |
| 34:BM:58:ASP:OD1  | 34:BM:59:LYS:HE3  | 2.15                     | 0.46              |
| 34:BM:67:LEU:CA   | 34:BM:70:LYS:HZ1  | 2.29                     | 0.46              |
| 34:BM:127:ASP:O   | 34:BM:130:HIS:HB2 | 2.14                     | 0.46              |
| 35:BN:106:LEU:CG  | 35:BN:107:ARG:N   | 2.78                     | 0.46              |
| 36:BO:54:GLY:O    | 54:B7:12:LYS:CE   | 2.64                     | 0.46              |
| 36:BO:85:LEU:O    | 36:BO:86:LYS:HE2  | 2.16                     | 0.46              |
| 36:BO:130:PHE:O   | 36:BO:131:SER:C   | 2.59                     | 0.46              |
| 37:BP:49:ALA:O    | 37:BP:52:VAL:HB   | 2.16                     | 0.46              |
| 38:BQ:72:ASP:OD2  | 38:BQ:74:LYS:NZ   | 2.38                     | 0.46              |
| 39:BR:49:VAL:HG22 | 39:BR:50:SER:N    | 2.31                     | 0.46              |
| 39:BR:70:GLY:CA   | 39:BR:73:LEU:HD22 | 2.42                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 40:BS:28:VAL:HG23 | 40:BS:94:ALA:N    | 2.30                     | 0.46              |
| 41:BT:67:ALA:C    | 41:BT:71:GLN:CD   | 2.83                     | 0.46              |
| 42:BU:93:GLU:O    | 42:BU:95:LEU:HD23 | 2.16                     | 0.46              |
| 43:BV:16:LYS:O    | 43:BV:19:LEU:HB2  | 2.15                     | 0.46              |
| 43:BV:25:ARG:O    | 43:BV:71:VAL:CG1  | 2.64                     | 0.46              |
| 43:BV:28:SER:N    | 43:BV:31:GLU:OE2  | 2.30                     | 0.46              |
| 43:BV:34:ASN:HA   | 43:BV:37:ARG:CG   | 2.45                     | 0.46              |
| 43:BV:78:GLU:CG   | 43:BV:99:ARG:HB3  | 2.42                     | 0.46              |
| 43:BV:94:ASP:OD2  | 43:BV:94:ASP:N    | 2.49                     | 0.46              |
| 44:BW:21:PHE:HE2  | 44:BW:27:THR:HG1  | 1.59                     | 0.46              |
| 44:BW:29:TRP:CH2  | 44:BW:78:LYS:HE3  | 2.50                     | 0.46              |
| 44:BW:89:ILE:O    | 44:BW:93:GLU:HG2  | 2.15                     | 0.46              |
| 45:BX:21:LYS:HD2  | 45:BX:23:ARG:NH2  | 2.30                     | 0.46              |
| 45:BX:27:VAL:O    | 45:BX:35:TYR:HA   | 2.16                     | 0.46              |
| 46:BY:47:VAL:O    | 46:BY:50:GLN:HB2  | 2.15                     | 0.46              |
| 46:BY:61:LEU:HD23 | 46:BY:66:SER:HA   | 1.98                     | 0.46              |
| 47:BZ:21:LEU:HA   | 47:BZ:39:ARG:HB2  | 1.96                     | 0.46              |
| 51:B4:37:LYS:HB2  | 51:B4:38:ALA:H    | 1.41                     | 0.46              |
| 52:B5:19:ARG:O    | 52:B5:20:ASN:CG   | 2.59                     | 0.46              |
| 54:B7:31:HIS:O    | 54:B7:32:LEU:HG   | 2.16                     | 0.46              |
| 1:AA:25:C:H4'     | 1:AA:524:G:H21    | 1.80                     | 0.46              |
| 1:AA:186(C):G:C6  | 1:AA:191(E):G:C6  | 3.03                     | 0.46              |
| 1:AA:217:C:N4     | 1:AA:218:C:N4     | 2.64                     | 0.46              |
| 1:AA:267:C:C2     | 1:AA:268:C:C5     | 3.04                     | 0.46              |
| 1:AA:298:A:H3'    | 1:AA:299:G:H8     | 1.80                     | 0.46              |
| 1:AA:322:C:C2'    | 1:AA:323:U:H5'    | 2.46                     | 0.46              |
| 1:AA:395:C:C2     | 1:AA:396:G:N7     | 2.83                     | 0.46              |
| 1:AA:474:G:H8     | 1:AA:474:G:OP2    | 1.97                     | 0.46              |
| 1:AA:520:A:C8     | 1:AA:521:G:H5''   | 2.48                     | 0.46              |
| 1:AA:564:C:H2'    | 1:AA:565:U:O4'    | 2.16                     | 0.46              |
| 1:AA:569:C:C1'    | 1:AA:574:A:C2     | 2.99                     | 0.46              |
| 1:AA:588:G:H1'    | 1:AA:753:A:C6     | 2.49                     | 0.46              |
| 1:AA:589:C:N4     | 1:AA:590:C:H41    | 2.14                     | 0.46              |
| 1:AA:670:G:C6     | 1:AA:671:G:C8     | 3.03                     | 0.46              |
| 1:AA:717:C:O2'    | 1:AA:718:G:OP2    | 2.33                     | 0.46              |
| 1:AA:779:C:H2'    | 1:AA:780:A:O4'    | 2.15                     | 0.46              |
| 1:AA:812:C:C4'    | 1:AA:813:U:H6     | 2.28                     | 0.46              |
| 1:AA:817:C:C6     | 1:AA:819:A:C4'    | 2.98                     | 0.46              |
| 1:AA:946:A:C3'    | 1:AA:947:G:H8     | 2.29                     | 0.46              |
| 1:AA:956:U:O2     | 1:AA:960:U:O4     | 2.34                     | 0.46              |
| 1:AA:1171:G:O2'   | 1:AA:1172:C:H6    | 1.99                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:1176:A:N6     | 1:AA:1177:G:N1    | 2.63                     | 0.46              |
| 1:AA:1183:A:H2'    | 1:AA:1184:G:OP1   | 2.15                     | 0.46              |
| 1:AA:1276:G:H1'    | 1:AA:1282:C:O2'   | 2.15                     | 0.46              |
| 1:AA:1506:U:C5'    | 1:AA:1507:A:OP2   | 2.59                     | 0.46              |
| 3:AC:42:C:H2'      | 3:AC:43:C:O4'     | 2.15                     | 0.46              |
| 3:AD:21:A:C6       | 3:AD:46:G:N2      | 2.79                     | 0.46              |
| 3:AB:52:G:H2'      | 3:AB:53:G:N9      | 2.31                     | 0.46              |
| 4:AE:46:LYS:NZ     | 4:AE:49:GLU:HG2   | 2.31                     | 0.46              |
| 4:AE:115:LEU:HD23  | 4:AE:149:LEU:HD13 | 1.94                     | 0.46              |
| 4:AE:217:ARG:HA    | 4:AE:220:ASP:CG   | 2.39                     | 0.46              |
| 5:AF:18:TRP:HZ2    | 16:AQ:57:ARG:HB2  | 1.80                     | 0.46              |
| 5:AF:50:ALA:HB1    | 5:AF:72:LYS:HB2   | 1.96                     | 0.46              |
| 6:AG:3:ARG:NH1     | 6:AG:118:ARG:CZ   | 2.78                     | 0.46              |
| 6:AG:98:GLU:HG2    | 6:AG:173:TRP:HE1  | 1.80                     | 0.46              |
| 9:AJ:42:ILE:HD13   | 9:AJ:116:ALA:HB1  | 1.98                     | 0.46              |
| 9:AJ:50:ILE:HD13   | 9:AJ:58:PRO:CB    | 2.46                     | 0.46              |
| 9:AJ:149:ARG:O     | 9:AJ:151:TYR:N    | 2.49                     | 0.46              |
| 10:AK:51:VAL:HG21  | 10:AK:60:ARG:HE   | 1.81                     | 0.46              |
| 10:AK:79:VAL:HG12  | 10:AK:80:ILE:N    | 2.31                     | 0.46              |
| 11:AL:5:TYR:HD2    | 11:AL:6:GLY:H     | 1.62                     | 0.46              |
| 11:AL:113:LYS:C    | 11:AL:115:GLY:H   | 2.21                     | 0.46              |
| 12:AM:60:ARG:NH1   | 12:AM:60:ARG:CB   | 2.79                     | 0.46              |
| 13:AN:23:ALA:HB1   | 13:AN:88:GLY:CA   | 2.45                     | 0.46              |
| 14:AO:126:LYS:NZ   | 14:AO:128:ALA:N   | 2.57                     | 0.46              |
| 15:AP:3:ARG:NH2    | 30:BG:139:LEU:O   | 2.49                     | 0.46              |
| 15:AP:24:GLY:C     | 15:AP:25:ILE:HG12 | 2.41                     | 0.46              |
| 17:AR:18:PHE:C     | 17:AR:20:GLY:H    | 2.23                     | 0.46              |
| 17:AR:71:GLN:O     | 17:AR:72:ARG:C    | 2.57                     | 0.46              |
| 18:AS:39:TYR:HH    | 18:AS:41:PRO:HG3  | 1.81                     | 0.46              |
| 19:AT:87:LYS:HA    | 19:AT:87:LYS:HD2  | 1.54                     | 0.46              |
| 20:AU:33:ASP:O     | 20:AU:69:THR:HG23 | 2.15                     | 0.46              |
| 20:AU:53:ARG:C     | 20:AU:55:ARG:H    | 2.23                     | 0.46              |
| 24:BA:107:C:H2'    | 24:BA:108:U:H6    | 1.80                     | 0.46              |
| 24:BA:120:U:H2'    | 24:BA:121:G:OP2   | 2.14                     | 0.46              |
| 24:BA:188:G:H2'    | 24:BA:189:G:C8    | 2.49                     | 0.46              |
| 24:BA:188:G:C8     | 24:BA:189:G:C8    | 3.04                     | 0.46              |
| 24:BA:251:A:HO2'   | 24:BA:252:G:P     | 2.38                     | 0.46              |
| 24:BA:270(C):C:C2' | 24:BA:270(D):C:H6 | 2.02                     | 0.46              |
| 24:BA:297:C:C5'    | 45:BX:83:THR:CG2  | 2.93                     | 0.46              |
| 24:BA:304:G:H2'    | 24:BA:305:U:O4'   | 2.16                     | 0.46              |
| 24:BA:311:A:H62    | 24:BA:329:G:C5'   | 2.28                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:319:C:C4    | 24:BA:320:A:C6    | 3.04                     | 0.46              |
| 24:BA:333:G:C2    | 24:BA:334:C:C6    | 3.04                     | 0.46              |
| 24:BA:345:A:H4'   | 24:BA:345:A:OP1   | 2.14                     | 0.46              |
| 24:BA:443:A:H61   | 29:BF:41:LEU:HD12 | 1.76                     | 0.46              |
| 24:BA:449:A:O2'   | 24:BA:450:G:C5'   | 2.62                     | 0.46              |
| 24:BA:483:A:H1'   | 45:BX:45:VAL:O    | 2.15                     | 0.46              |
| 24:BA:493:G:O2'   | 43:BV:7:ALA:HB1   | 2.15                     | 0.46              |
| 24:BA:582:G:C6    | 24:BA:583:G:O6    | 2.69                     | 0.46              |
| 24:BA:621:A:C8    | 24:BA:622:G:C5'   | 2.99                     | 0.46              |
| 24:BA:657:U:C2    | 24:BA:658:C:C5    | 3.04                     | 0.46              |
| 24:BA:658:C:H2'   | 24:BA:659:C:C6    | 2.51                     | 0.46              |
| 24:BA:704:G:N3    | 24:BA:704:G:C2'   | 2.78                     | 0.46              |
| 24:BA:729:G:C6    | 24:BA:730:C:C2    | 3.03                     | 0.46              |
| 24:BA:837:C:O5'   | 24:BA:837:C:H6    | 1.99                     | 0.46              |
| 24:BA:848:G:H5''  | 24:BA:848:G:H8    | 1.80                     | 0.46              |
| 24:BA:869:G:C3'   | 24:BA:870:A:H5''  | 2.43                     | 0.46              |
| 24:BA:950:G:C5    | 24:BA:951:C:C5    | 3.04                     | 0.46              |
| 24:BA:1014:U:C2'  | 24:BA:1015:G:C5'  | 2.92                     | 0.46              |
| 24:BA:1071:G:C3'  | 24:BA:1072:C:H5'  | 2.46                     | 0.46              |
| 24:BA:1213:A:H3'  | 24:BA:1214:A:H8   | 1.81                     | 0.46              |
| 24:BA:1216:G:N2   | 24:BA:1234:U:H1'  | 2.31                     | 0.46              |
| 24:BA:1268:A:OP2  | 24:BA:2006:C:OP2  | 2.33                     | 0.46              |
| 24:BA:1350:C:H2'  | 24:BA:1351:C:O5'  | 2.15                     | 0.46              |
| 24:BA:1360:A:H2'  | 24:BA:1361:G:H5'  | 1.98                     | 0.46              |
| 24:BA:1364:G:P    | 24:BA:1809:A:N6   | 2.89                     | 0.46              |
| 24:BA:1417:C:C2'  | 24:BA:1418:G:O5'  | 2.63                     | 0.46              |
| 24:BA:1438:U:H6   | 24:BA:1438:U:OP2  | 1.98                     | 0.46              |
| 24:BA:1491:G:C4   | 24:BA:1492:G:O2'  | 2.61                     | 0.46              |
| 24:BA:1608:A:C2   | 24:BA:1611:C:C5   | 3.04                     | 0.46              |
| 24:BA:1620:G:O2'  | 24:BA:1621:U:C5'  | 2.63                     | 0.46              |
| 24:BA:1631:A:C2'  | 24:BA:1632:A:O5'  | 2.64                     | 0.46              |
| 24:BA:1638:C:H5'' | 24:BA:2710:C:O2'  | 2.16                     | 0.46              |
| 24:BA:1650:G:O2'  | 24:BA:1651:G:C5'  | 2.63                     | 0.46              |
| 24:BA:1669:A:N3   | 24:BA:1669:A:C2'  | 2.77                     | 0.46              |
| 24:BA:1672:C:C2'  | 24:BA:1673:U:OP1  | 2.64                     | 0.46              |
| 24:BA:1683:C:O5'  | 24:BA:1683:C:C6   | 2.68                     | 0.46              |
| 24:BA:1689:A:C5   | 24:BA:1700:A:C6   | 3.04                     | 0.46              |
| 24:BA:1697:G:H8   | 24:BA:1698:A:H5'' | 1.75                     | 0.46              |
| 24:BA:1829:A:C2   | 24:BA:1830:C:O4'  | 2.68                     | 0.46              |
| 24:BA:1847:A:N6   | 24:BA:1890:A:OP2  | 2.48                     | 0.46              |
| 24:BA:1929:G:H5'' | 24:BA:1930:G:OP1  | 2.16                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1931:U:C5   | 24:BA:1969:A:N6    | 2.82                     | 0.46              |
| 24:BA:2009:G:N1   | 24:BA:2010:G:N7    | 2.64                     | 0.46              |
| 24:BA:2010:G:C5   | 24:BA:2011:U:C6    | 3.04                     | 0.46              |
| 24:BA:2032:G:O2'  | 28:BE:145:LYS:HD2  | 2.16                     | 0.46              |
| 24:BA:2046:G:P    | 51:B4:18:ALA:HB1   | 2.56                     | 0.46              |
| 24:BA:2094:G:C6   | 24:BA:2196:C:C4    | 3.04                     | 0.46              |
| 24:BA:2106:G:H2'  | 24:BA:2107:C:O4'   | 2.15                     | 0.46              |
| 24:BA:2134:A:C2   | 24:BA:2134:A:OP1   | 2.68                     | 0.46              |
| 24:BA:2157:G:OP2  | 24:BA:2157:G:C2    | 2.69                     | 0.46              |
| 24:BA:2259:G:C4'  | 24:BA:2427:C:H2'   | 2.46                     | 0.46              |
| 24:BA:2285:C:C6   | 24:BA:2285:C:C3'   | 2.99                     | 0.46              |
| 24:BA:2286:A:C8   | 24:BA:2286:A:C3'   | 2.91                     | 0.46              |
| 24:BA:2287:A:H2   | 52:B5:37:ARG:HH22  | 1.62                     | 0.46              |
| 24:BA:2323:G:C4   | 24:BA:2324:C:C5    | 3.03                     | 0.46              |
| 24:BA:2345:G:N2   | 24:BA:2381:C:H2'   | 2.30                     | 0.46              |
| 24:BA:2346:A:H1'  | 24:BA:2383:G:N7    | 2.26                     | 0.46              |
| 24:BA:2433:A:N3   | 24:BA:2433:A:C2'   | 2.76                     | 0.46              |
| 24:BA:2734:A:N6   | 24:BA:2735:G:C2    | 2.83                     | 0.46              |
| 24:BA:2766:G:N3   | 24:BA:2767:C:C6    | 2.84                     | 0.46              |
| 24:BA:2846:G:N3   | 24:BA:2846:G:H2'   | 2.31                     | 0.46              |
| 24:BA:2884:U:H2'  | 24:BA:2885:C:C5'   | 2.46                     | 0.46              |
| 25:BB:7:G:C5'     | 39:BR:29:PHE:CE2   | 2.99                     | 0.46              |
| 25:BB:81:G:O6     | 25:BB:96:G:C6      | 2.68                     | 0.46              |
| 26:BC:26:ALA:HB1  | 26:BC:185:LEU:HD12 | 1.97                     | 0.46              |
| 26:BC:87:GLU:HG3  | 26:BC:94:VAL:HG11  | 1.97                     | 0.46              |
| 26:BC:120:MET:CA  | 26:BC:120:MET:HE3  | 2.46                     | 0.46              |
| 27:BD:72:LYS:HZ2  | 27:BD:75:ILE:HD12  | 1.80                     | 0.46              |
| 27:BD:95:LEU:CD2  | 27:BD:96:HIS:N     | 2.70                     | 0.46              |
| 27:BD:131:LEU:HA  | 27:BD:131:LEU:HD12 | 1.68                     | 0.46              |
| 27:BD:143:HIS:NE2 | 27:BD:192:THR:HG22 | 2.30                     | 0.46              |
| 27:BD:177:LEU:CD2 | 27:BD:181:GLU:O    | 2.60                     | 0.46              |
| 28:BE:66:HIS:CE1  | 28:BE:70:ALA:HA    | 2.50                     | 0.46              |
| 29:BF:37:VAL:O    | 29:BF:41:LEU:CG    | 2.64                     | 0.46              |
| 29:BF:146:ALA:CB  | 29:BF:148:LEU:HD23 | 2.45                     | 0.46              |
| 30:BG:151:ALA:HB1 | 30:BG:152:LEU:HG   | 1.97                     | 0.46              |
| 30:BG:165:THR:HB  | 30:BG:168:GLU:OE2  | 2.15                     | 0.46              |
| 31:BH:85:LYS:O    | 31:BH:133:VAL:O    | 2.33                     | 0.46              |
| 31:BH:93:GLY:O    | 31:BH:107:VAL:HB   | 2.15                     | 0.46              |
| 34:BM:43:THR:O    | 34:BM:44:PRO:C     | 2.58                     | 0.46              |
| 35:BN:72:PRO:HG3  | 35:BN:107:ARG:HH22 | 1.81                     | 0.46              |
| 35:BN:78:ARG:CZ   | 35:BN:78:ARG:N     | 2.78                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 36:BO:23:PRO:CB   | 36:BO:28:GLY:HA2   | 2.25                     | 0.46              |
| 36:BO:49:ARG:HD3  | 54:B7:52:LYS:HE3   | 1.97                     | 0.46              |
| 36:BO:71:VAL:N    | 36:BO:72:PRO:HD3   | 2.31                     | 0.46              |
| 37:BP:54:MET:SD   | 37:BP:121:ALA:CB   | 3.02                     | 0.46              |
| 37:BP:54:MET:HB3  | 37:BP:58:PHE:CE2   | 2.47                     | 0.46              |
| 37:BP:136:ALA:CB  | 46:BY:76:LEU:HD13  | 2.46                     | 0.46              |
| 38:BQ:52:ILE:O    | 38:BQ:56:LYS:CG    | 2.63                     | 0.46              |
| 38:BQ:75:LEU:HD23 | 38:BQ:78:LYS:HB3   | 1.98                     | 0.46              |
| 38:BQ:88:ARG:C    | 38:BQ:89:ASP:CG    | 2.80                     | 0.46              |
| 38:BQ:118:GLU:OE2 | 38:BQ:118:GLU:HA   | 2.15                     | 0.46              |
| 39:BR:95:HIS:C    | 39:BR:99:LYS:HB2   | 2.40                     | 0.46              |
| 40:BS:53:ARG:NH2  | 40:BS:101:PHE:H    | 2.14                     | 0.46              |
| 40:BS:108:ARG:O   | 40:BS:110:ILE:HG13 | 2.16                     | 0.46              |
| 41:BT:55:ARG:H    | 41:BT:55:ARG:CD    | 2.16                     | 0.46              |
| 41:BT:80:ILE:HA   | 41:BT:83:LEU:CD1   | 2.45                     | 0.46              |
| 41:BT:89:GLU:O    | 41:BT:90:VAL:HG22  | 2.16                     | 0.46              |
| 42:BU:31:ALA:O    | 42:BU:32:THR:C     | 2.59                     | 0.46              |
| 43:BV:16:LYS:H    | 43:BV:16:LYS:CE    | 2.28                     | 0.46              |
| 46:BY:128:VAL:CG2 | 46:BY:164:ALA:HB2  | 2.45                     | 0.46              |
| 46:BY:130:PRO:O   | 46:BY:132:ASN:N    | 2.49                     | 0.46              |
| 46:BY:153:SER:H   | 46:BY:168:GLU:HB2  | 1.79                     | 0.46              |
| 47:BZ:72:ARG:O    | 47:BZ:73:GLY:O     | 2.34                     | 0.46              |
| 48:B1:45:ILE:CD1  | 48:B1:46:ARG:N     | 2.78                     | 0.46              |
| 50:B3:10:VAL:O    | 50:B3:10:VAL:CG1   | 2.63                     | 0.46              |
| 50:B3:56:VAL:O    | 50:B3:57:GLU:HG2   | 2.16                     | 0.46              |
| 54:B7:30:ARG:HG2  | 54:B7:31:HIS:N     | 2.24                     | 0.46              |
| 1:AA:43:C:O5'     | 18:AS:12:LYS:HG2   | 2.15                     | 0.46              |
| 1:AA:73:G:C4      | 1:AA:74:C:C5       | 3.03                     | 0.46              |
| 1:AA:97:U:H2'     | 1:AA:99:C:C6       | 2.51                     | 0.46              |
| 1:AA:110:C:C2'    | 1:AA:111:G:C5'     | 2.94                     | 0.46              |
| 1:AA:131:C:C4     | 1:AA:232:G:N2      | 2.84                     | 0.46              |
| 1:AA:142:G:O2'    | 1:AA:196:A:C2      | 2.64                     | 0.46              |
| 1:AA:196:A:H1'    | 1:AA:222:U:O4'     | 2.15                     | 0.46              |
| 1:AA:265:G:H5'    | 19:AT:64:PRO:C     | 2.40                     | 0.46              |
| 1:AA:278:G:C4     | 19:AT:95:TYR:CE2   | 3.04                     | 0.46              |
| 1:AA:377:G:OP1    | 18:AS:3:LYS:HD2    | 2.15                     | 0.46              |
| 1:AA:501:C:OP2    | 14:AO:124:LYS:HD2  | 2.16                     | 0.46              |
| 1:AA:560:U:C2'    | 1:AA:561:U:OP2     | 2.63                     | 0.46              |
| 1:AA:563:A:C2     | 1:AA:567:G:C5      | 3.04                     | 0.46              |
| 1:AA:590:C:OP1    | 10:AK:29:SER:CB    | 2.62                     | 0.46              |
| 1:AA:597:G:C8     | 1:AA:644:G:N2      | 2.83                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:643:C:O2'    | 10:AK:132:GLU:CD  | 2.58                     | 0.46              |
| 1:AA:771:G:O6     | 1:AA:809:G:C6     | 2.69                     | 0.46              |
| 1:AA:834:C:N4     | 1:AA:853:G:O6     | 2.49                     | 0.46              |
| 1:AA:864:A:H8     | 1:AA:864:A:O5'    | 1.99                     | 0.46              |
| 1:AA:873:A:C5'    | 1:AA:874:G:OP2    | 2.60                     | 0.46              |
| 1:AA:924:C:H5'    | 1:AA:1399:C:OP1   | 2.16                     | 0.46              |
| 1:AA:977:A:N6     | 1:AA:1224:G:P     | 2.88                     | 0.46              |
| 1:AA:1048:G:HO2'  | 1:AA:1050:G:P     | 2.38                     | 0.46              |
| 1:AA:1058:G:H21   | 12:AM:53:PRO:HG3  | 1.81                     | 0.46              |
| 1:AA:1092:A:N7    | 1:AA:1183:A:N7    | 2.63                     | 0.46              |
| 1:AA:1240:U:N1    | 9:AJ:32:ARG:NH2   | 2.63                     | 0.46              |
| 1:AA:1256:A:C6    | 1:AA:1278:U:O2'   | 2.64                     | 0.46              |
| 1:AA:1259:C:C2    | 1:AA:1283:G:H1'   | 2.49                     | 0.46              |
| 1:AA:1319:A:H61   | 1:AA:1361:G:H1'   | 1.80                     | 0.46              |
| 1:AA:1361:G:C8    | 1:AA:1361:G:C3'   | 2.99                     | 0.46              |
| 1:AA:1374:A:H2'   | 1:AA:1375:A:O5'   | 2.16                     | 0.46              |
| 1:AA:1399:C:HO2'  | 1:AA:1400:C:P     | 2.38                     | 0.46              |
| 1:AA:1453:G:O2'   | 1:AA:1454:G:H5'   | 2.16                     | 0.46              |
| 1:AA:1459:C:P     | 22:AW:27:LYS:NZ   | 2.89                     | 0.46              |
| 4:AE:18:GLY:HA2   | 4:AE:41:ILE:HG23  | 1.96                     | 0.46              |
| 4:AE:20:GLU:CG    | 4:AE:189:ASP:OD2  | 2.64                     | 0.46              |
| 4:AE:32:ILE:O     | 4:AE:32:ILE:CG2   | 2.61                     | 0.46              |
| 4:AE:88:ALA:HA    | 4:AE:222:ILE:CD1  | 2.46                     | 0.46              |
| 4:AE:218:ALA:C    | 4:AE:220:ASP:N    | 2.71                     | 0.46              |
| 5:AF:33:LEU:HD11  | 16:AQ:53:LEU:CA   | 2.28                     | 0.46              |
| 5:AF:47:LEU:O     | 5:AF:52:LEU:HD13  | 2.16                     | 0.46              |
| 5:AF:84:ILE:HG13  | 5:AF:101:LEU:CG   | 2.46                     | 0.46              |
| 6:AG:179:GLU:C    | 6:AG:181:MET:N    | 2.72                     | 0.46              |
| 6:AG:191:ARG:HB3  | 6:AG:192:GLU:OE1  | 2.16                     | 0.46              |
| 7:AH:9:LYS:HD2    | 7:AH:112:LEU:HD23 | 1.96                     | 0.46              |
| 8:AI:65:VAL:HG23  | 8:AI:66:GLU:C     | 2.40                     | 0.46              |
| 9:AJ:69:VAL:HG13  | 9:AJ:135:VAL:N    | 2.30                     | 0.46              |
| 9:AJ:75:VAL:HG22  | 9:AJ:88:PRO:HA    | 1.95                     | 0.46              |
| 10:AK:18:ARG:H    | 10:AK:18:ARG:HD2  | 1.81                     | 0.46              |
| 10:AK:39:LEU:C    | 10:AK:39:LEU:CD1  | 2.88                     | 0.46              |
| 10:AK:49:GLU:OE1  | 10:AK:49:GLU:C    | 2.59                     | 0.46              |
| 10:AK:137:VAL:CG1 | 10:AK:138:TRP:N   | 2.79                     | 0.46              |
| 13:AN:21:ILE:HG12 | 13:AN:83:ILE:O    | 2.15                     | 0.46              |
| 13:AN:42:TRP:HE3  | 13:AN:42:TRP:C    | 2.24                     | 0.46              |
| 14:AO:26:ALA:HA   | 14:AO:98:TYR:HE2  | 1.80                     | 0.46              |
| 14:AO:85:ILE:HD12 | 14:AO:99:HIS:O    | 2.15                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 15:AP:15:VAL:CG1   | 15:AP:39:ILE:HD12  | 2.43                     | 0.46              |
| 15:AP:25:ILE:HG12  | 15:AP:66:LEU:CD1   | 2.46                     | 0.46              |
| 15:AP:102:ARG:C    | 15:AP:104:ARG:N    | 2.71                     | 0.46              |
| 15:AP:104:ARG:CD   | 15:AP:105:THR:HG23 | 2.46                     | 0.46              |
| 18:AS:19:ILE:O     | 18:AS:36:ILE:HG13  | 2.15                     | 0.46              |
| 22:AW:33:ILE:CD1   | 22:AW:63:ILE:HA    | 2.24                     | 0.46              |
| 22:AW:86:ARG:O     | 22:AW:90:GLN:OE1   | 2.34                     | 0.46              |
| 24:BA:21:A:O2'     | 24:BA:22:C:H5'     | 2.16                     | 0.46              |
| 24:BA:82:G:N2      | 24:BA:103:A:OP2    | 2.47                     | 0.46              |
| 24:BA:193:U:C4'    | 24:BA:803:U:H5'    | 2.46                     | 0.46              |
| 24:BA:250:G:OP1    | 54:B7:12:LYS:NZ    | 2.35                     | 0.46              |
| 24:BA:269:U:C2     | 24:BA:424:G:N1     | 2.84                     | 0.46              |
| 24:BA:270:A:O2'    | 24:BA:270(A):A:OP1 | 2.32                     | 0.46              |
| 24:BA:270(N):G:H3' | 24:BA:270(O):U:C5  | 2.50                     | 0.46              |
| 24:BA:298:G:H8     | 24:BA:298:G:P      | 2.38                     | 0.46              |
| 24:BA:304:G:N2     | 24:BA:305:U:H1'    | 2.30                     | 0.46              |
| 24:BA:324:A:H2     | 24:BA:325:G:C1'    | 2.28                     | 0.46              |
| 24:BA:417:C:O5'    | 24:BA:417:C:H6     | 1.98                     | 0.46              |
| 24:BA:449:A:H4'    | 29:BF:52:LYS:HZ2   | 1.79                     | 0.46              |
| 24:BA:465:G:H21    | 24:BA:683:C:C2'    | 2.27                     | 0.46              |
| 24:BA:640:C:H42    | 24:BA:647:G:H1     | 1.58                     | 0.46              |
| 24:BA:659:C:C5'    | 29:BF:102:PRO:HD3  | 2.45                     | 0.46              |
| 24:BA:885:C:H5     | 24:BA:887:A:N3     | 2.14                     | 0.46              |
| 24:BA:915:C:O2'    | 24:BA:916:G:H5'    | 2.16                     | 0.46              |
| 24:BA:986:C:H3'    | 24:BA:986:C:C6     | 2.51                     | 0.46              |
| 24:BA:1080:C:O2'   | 33:BL:126:MET:N    | 2.48                     | 0.46              |
| 24:BA:1110:G:O3'   | 24:BA:1111:A:C8    | 2.69                     | 0.46              |
| 24:BA:1130:U:O2'   | 24:BA:1131:G:P     | 2.73                     | 0.46              |
| 24:BA:1232:G:C2    | 24:BA:1233:C:C6    | 3.04                     | 0.46              |
| 24:BA:1264:G:C3'   | 24:BA:1264:G:C8    | 2.99                     | 0.46              |
| 24:BA:1352:U:O2'   | 24:BA:1353:A:C5'   | 2.61                     | 0.46              |
| 24:BA:1361:G:O2'   | 24:BA:1362:C:H5'   | 2.16                     | 0.46              |
| 24:BA:1433:U:C6    | 24:BA:1433:U:C3'   | 2.98                     | 0.46              |
| 24:BA:1449:A:H1'   | 24:BA:1529:A:C5    | 2.50                     | 0.46              |
| 24:BA:1496:A:C4    | 24:BA:1577:C:O2'   | 2.69                     | 0.46              |
| 24:BA:1522:G:H3'   | 24:BA:1522:G:H8    | 1.80                     | 0.46              |
| 24:BA:1591:G:C6    | 24:BA:1592:C:C4    | 3.03                     | 0.46              |
| 24:BA:1667:G:N3    | 24:BA:1667:G:C2'   | 2.64                     | 0.46              |
| 24:BA:1725:G:C2    | 24:BA:1726:G:C8    | 3.04                     | 0.46              |
| 24:BA:1767:C:O2'   | 24:BA:1768:U:H5'   | 2.16                     | 0.46              |
| 24:BA:1794:U:O4'   | 24:BA:1900:A:C5    | 2.69                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1799:G:C8   | 27:BD:183:ARG:NH2  | 2.80                     | 0.46              |
| 24:BA:1858:G:O2'  | 24:BA:1859:A:O5'   | 2.34                     | 0.46              |
| 24:BA:1883:G:H5'' | 24:BA:1884:A:OP1   | 2.15                     | 0.46              |
| 24:BA:1953:A:N6   | 24:BA:2550:G:C4'   | 2.77                     | 0.46              |
| 24:BA:1958:C:O2'  | 24:BA:1959:G:C5'   | 2.58                     | 0.46              |
| 24:BA:2027:G:C1'  | 24:BA:2037:G:H22   | 2.23                     | 0.46              |
| 24:BA:2114:A:H2'  | 24:BA:2115:G:C4'   | 2.46                     | 0.46              |
| 24:BA:2128:C:C4   | 24:BA:2129:C:C5    | 3.03                     | 0.46              |
| 24:BA:2232:U:C2'  | 24:BA:2233:U:O5'   | 2.64                     | 0.46              |
| 24:BA:2264:C:H2'  | 24:BA:2265:U:O5'   | 2.15                     | 0.46              |
| 24:BA:2345:G:H21  | 24:BA:2381:C:H3'   | 1.79                     | 0.46              |
| 24:BA:2374:C:N4   | 24:BA:2375:G:O6    | 2.49                     | 0.46              |
| 24:BA:2390:U:O2'  | 24:BA:2391:G:C5'   | 2.58                     | 0.46              |
| 24:BA:2393:A:C5'  | 36:BO:56:SER:H     | 2.28                     | 0.46              |
| 24:BA:2450:A:C2   | 24:BA:2451:A:C1'   | 2.98                     | 0.46              |
| 24:BA:2630:G:H21  | 24:BA:2892:A:H1'   | 1.81                     | 0.46              |
| 24:BA:2690:C:O2'  | 24:BA:2691:C:H5'   | 2.16                     | 0.46              |
| 24:BA:2691:C:C4'  | 24:BA:2872:G:N7    | 2.78                     | 0.46              |
| 24:BA:2691:C:N4   | 24:BA:2719:G:N2    | 2.64                     | 0.46              |
| 24:BA:2752:C:OP1  | 24:BA:2752:C:C6    | 2.69                     | 0.46              |
| 24:BA:2811:G:N1   | 24:BA:2891:G:N3    | 2.64                     | 0.46              |
| 24:BA:2815:C:O2'  | 51:B4:42:PRO:HB3   | 2.16                     | 0.46              |
| 24:BA:2825:C:N3   | 24:BA:2826:A:C5    | 2.84                     | 0.46              |
| 24:BA:2826:A:H2'  | 24:BA:2827:C:C5'   | 2.46                     | 0.46              |
| 25:BB:32:C:O2     | 25:BB:32:C:C2'     | 2.60                     | 0.46              |
| 25:BB:52:A:OP1    | 25:BB:52:A:H4'     | 2.15                     | 0.46              |
| 25:BB:113:C:H2'   | 25:BB:114:G:C8     | 2.50                     | 0.46              |
| 27:BD:55:GLY:HA2  | 27:BD:218:ARG:HD3  | 1.96                     | 0.46              |
| 27:BD:68:LYS:HB3  | 27:BD:70:TRP:CE2   | 2.48                     | 0.46              |
| 27:BD:91:ARG:HH22 | 27:BD:198:ASN:CG   | 2.24                     | 0.46              |
| 27:BD:171:ASP:O   | 27:BD:186:HIS:CB   | 2.64                     | 0.46              |
| 28:BE:5:LEU:HG    | 28:BE:25:VAL:CG1   | 2.44                     | 0.46              |
| 28:BE:38:THR:HG22 | 28:BE:39:PRO:CD    | 2.46                     | 0.46              |
| 28:BE:53:PRO:HG2  | 28:BE:75:VAL:CG1   | 2.45                     | 0.46              |
| 28:BE:95:ILE:HG22 | 28:BE:96:PHE:N     | 2.31                     | 0.46              |
| 30:BG:30:GLU:HG2  | 30:BG:33:ARG:CG    | 2.46                     | 0.46              |
| 30:BG:39:ILE:CD1  | 30:BG:92:VAL:O     | 2.64                     | 0.46              |
| 30:BG:107:LEU:CD1 | 30:BG:111:LEU:HD13 | 2.40                     | 0.46              |
| 31:BH:97:ARG:O    | 31:BH:104:GLU:CG   | 2.64                     | 0.46              |
| 31:BH:101:ARG:HB3 | 31:BH:117:PRO:CD   | 2.45                     | 0.46              |
| 31:BH:137:ASP:HB3 | 31:BH:140:LYS:CE   | 2.46                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 31:BH:154:PRO:O    | 31:BH:155:SER:CB   | 2.54                     | 0.46              |
| 33:BL:10:LEU:HD23  | 33:BL:55:VAL:O     | 2.15                     | 0.46              |
| 33:BL:78:ILE:HD13  | 33:BL:131:ALA:CA   | 2.45                     | 0.46              |
| 34:BM:72:TYR:HD2   | 34:BM:72:TYR:O     | 1.99                     | 0.46              |
| 34:BM:134:ARG:N    | 34:BM:135:PRO:HD2  | 2.31                     | 0.46              |
| 35:BN:8:LEU:HD11   | 35:BN:82:ASN:CA    | 2.43                     | 0.46              |
| 35:BN:122:LEU:HA   | 40:BS:71:GLY:HA3   | 1.97                     | 0.46              |
| 36:BO:131:SER:N    | 36:BO:134:ALA:CB   | 2.79                     | 0.46              |
| 37:BP:42:ILE:CD1   | 37:BP:46:GLN:NE2   | 2.78                     | 0.46              |
| 37:BP:46:GLN:HG2   | 37:BP:125:LEU:HD22 | 1.97                     | 0.46              |
| 37:BP:77:LYS:HG3   | 37:BP:88:GLY:O     | 2.15                     | 0.46              |
| 38:BQ:75:LEU:HD23  | 38:BQ:78:LYS:CG    | 2.45                     | 0.46              |
| 38:BQ:84:ALA:HB3   | 38:BQ:85:PRO:HD3   | 1.98                     | 0.46              |
| 39:BR:36:TYR:HD1   | 39:BR:51:ALA:HB3   | 1.81                     | 0.46              |
| 39:BR:77:ALA:CA    | 39:BR:80:LEU:HB2   | 2.46                     | 0.46              |
| 40:BS:51:ARG:NH1   | 40:BS:114:LEU:CD1  | 2.76                     | 0.46              |
| 40:BS:104:ASN:C    | 40:BS:108:ARG:HH12 | 2.24                     | 0.46              |
| 44:BW:6:ASP:OD1    | 44:BW:7:VAL:N      | 2.49                     | 0.46              |
| 44:BW:84:ALA:N     | 44:BW:85:PRO:CD    | 2.78                     | 0.46              |
| 46:BY:17:ALA:HA    | 46:BY:20:ARG:HH21  | 1.80                     | 0.46              |
| 46:BY:17:ALA:O     | 46:BY:20:ARG:HB3   | 2.16                     | 0.46              |
| 46:BY:102:LEU:HA   | 46:BY:137:ILE:O    | 2.15                     | 0.46              |
| 46:BY:110:GLY:HA2  | 46:BY:144:LEU:CB   | 2.44                     | 0.46              |
| 46:BY:118:GLN:HE22 | 46:BY:119:GLU:C    | 2.22                     | 0.46              |
| 48:B1:6:GLU:O      | 48:B1:10:LYS:HE2   | 2.15                     | 0.46              |
| 48:B1:19:LEU:HD22  | 48:B1:23:LYS:HG3   | 1.98                     | 0.46              |
| 48:B1:36:ILE:O     | 48:B1:37:GLY:C     | 2.59                     | 0.46              |
| 49:B2:7:LYS:HB3    | 49:B2:55:ARG:CB    | 2.43                     | 0.46              |
| 51:B4:20:ARG:C     | 51:B4:23:HIS:HB2   | 2.33                     | 0.46              |
| 52:B5:25:LYS:HE2   | 54:B7:35:GLN:CB    | 2.42                     | 0.46              |
| 52:B5:51:GLU:O     | 52:B5:52:VAL:C     | 2.59                     | 0.46              |
| 55:B8:19:ARG:HG2   | 55:B8:24:TYR:HB2   | 1.98                     | 0.46              |
| 1:AA:104:G:N1      | 1:AA:105:G:C5      | 2.83                     | 0.46              |
| 1:AA:184:G:H4'     | 1:AA:224:C:O3'     | 2.16                     | 0.46              |
| 1:AA:251:G:H1      | 1:AA:271:C:H41     | 1.64                     | 0.46              |
| 1:AA:258:G:N1      | 1:AA:259:G:C5      | 2.84                     | 0.46              |
| 1:AA:299:G:C5      | 1:AA:300:A:N6      | 2.84                     | 0.46              |
| 1:AA:305:G:O2'     | 1:AA:306:G:OP2     | 2.33                     | 0.46              |
| 1:AA:408:A:H5'     | 6:AG:116:GLN:HE21  | 1.81                     | 0.46              |
| 1:AA:438:G:C5'     | 6:AG:123:HIS:HB3   | 2.45                     | 0.46              |
| 1:AA:498:A:C4'     | 1:AA:500:G:OP1     | 2.61                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:586:C:H1'    | 1:AA:878:G:O2'     | 2.16                     | 0.46              |
| 1:AA:624:C:H4'    | 18:AS:10:GLY:C     | 2.41                     | 0.46              |
| 1:AA:682:G:C2     | 1:AA:683:G:C8      | 3.04                     | 0.46              |
| 1:AA:688:G:H2'    | 1:AA:689:C:O4'     | 2.16                     | 0.46              |
| 1:AA:695:A:C2     | 1:AA:696:A:N9      | 2.84                     | 0.46              |
| 1:AA:706:A:C2     | 1:AA:707:C:N1      | 2.84                     | 0.46              |
| 1:AA:729:A:N6     | 17:AR:51:HIS:NE2   | 2.64                     | 0.46              |
| 1:AA:739:C:H2'    | 1:AA:740:U:O5'     | 2.16                     | 0.46              |
| 1:AA:931:C:H2'    | 1:AA:932:C:C6      | 2.51                     | 0.46              |
| 1:AA:942:G:N2     | 11:AL:124:GLN:CD   | 2.74                     | 0.46              |
| 1:AA:1053:G:H2'   | 1:AA:1199:U:H5     | 1.80                     | 0.46              |
| 1:AA:1062:U:N3    | 1:AA:1063:C:N4     | 2.63                     | 0.46              |
| 1:AA:1131:G:OP1   | 11:AL:20:ARG:NH1   | 2.49                     | 0.46              |
| 1:AA:1152:A:C6    | 1:AA:1153:C:C4     | 3.04                     | 0.46              |
| 1:AA:1332:A:H3'   | 1:AA:1333:A:C8     | 2.51                     | 0.46              |
| 1:AA:1358:U:OP1   | 16:AQ:34:TYR:CA    | 2.63                     | 0.46              |
| 1:AA:1407:C:N3    | 1:AA:1495:U:O4     | 2.49                     | 0.46              |
| 3:AC:4:C:H2'      | 3:AC:5:G:O5'       | 2.15                     | 0.46              |
| 3:AB:18:G:HO2'    | 3:AB:57:G:N2       | 2.13                     | 0.46              |
| 4:AE:80:ILE:CG1   | 4:AE:212:GLN:HG2   | 2.45                     | 0.46              |
| 5:AF:5:ILE:CD1    | 5:AF:10:PHE:CE2    | 2.99                     | 0.46              |
| 5:AF:121:ALA:O    | 5:AF:122:GLU:C     | 2.57                     | 0.46              |
| 6:AG:11:LEU:O     | 6:AG:12:CYS:C      | 2.59                     | 0.46              |
| 6:AG:29:PRO:O     | 6:AG:30:LYS:CB     | 2.64                     | 0.46              |
| 6:AG:100:ARG:HH11 | 6:AG:100:ARG:HG2   | 1.81                     | 0.46              |
| 6:AG:112:VAL:HG22 | 6:AG:161:ASN:HD21  | 1.81                     | 0.46              |
| 6:AG:173:TRP:CD1  | 6:AG:185:PHE:CE2   | 3.02                     | 0.46              |
| 7:AH:40:ARG:HB2   | 7:AH:68:GLU:OE1    | 2.14                     | 0.46              |
| 8:AI:82:ARG:O     | 8:AI:83:ASP:C      | 2.59                     | 0.46              |
| 8:AI:97:PHE:O     | 20:AU:30:ASP:HA    | 2.16                     | 0.46              |
| 9:AJ:15:ASP:OD2   | 9:AJ:16:LEU:N      | 2.49                     | 0.46              |
| 10:AK:46:LYS:HG3  | 10:AK:64:LYS:HB2   | 1.97                     | 0.46              |
| 10:AK:49:GLU:OE2  | 10:AK:60:ARG:HB3   | 2.16                     | 0.46              |
| 10:AK:63:LEU:HB2  | 10:AK:65:TYR:HE1   | 1.79                     | 0.46              |
| 10:AK:114:THR:H   | 10:AK:119:LEU:HD23 | 1.81                     | 0.46              |
| 11:AL:31:GLN:HB3  | 11:AL:35:GLU:OE2   | 2.15                     | 0.46              |
| 11:AL:89:ASN:C    | 11:AL:91:ASP:H     | 2.23                     | 0.46              |
| 12:AM:16:LEU:HD13 | 12:AM:94:VAL:HG21  | 1.98                     | 0.46              |
| 12:AM:47:PHE:HZ   | 12:AM:65:LEU:HB2   | 1.80                     | 0.46              |
| 13:AN:34:ASP:CB   | 13:AN:35:PRO:CD    | 2.94                     | 0.46              |
| 13:AN:103:LEU:O   | 13:AN:104:GLN:CB   | 2.63                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 14:AO:111:LYS:O  | 14:AO:112:ASP:C   | 2.57                     | 0.46              |
| 15:AP:73:GLU:OE2 | 15:AP:77:ASN:HB3  | 2.16                     | 0.46              |
| 15:AP:97:PRO:CB  | 15:AP:101:GLN:CB  | 2.94                     | 0.46              |
| 17:AR:6:GLU:O    | 17:AR:8:LYS:N     | 2.49                     | 0.46              |
| 17:AR:35:ARG:NH2 | 17:AR:59:MET:HE2  | 2.31                     | 0.46              |
| 17:AR:40:SER:O   | 17:AR:41:GLU:C    | 2.58                     | 0.46              |
| 19:AT:50:LYS:HB3 | 19:AT:51:TYR:CD1  | 2.51                     | 0.46              |
| 24:BA:6:A:C2     | 24:BA:7:G:C8      | 3.04                     | 0.46              |
| 24:BA:19:C:C2    | 24:BA:20:C:C5     | 3.04                     | 0.46              |
| 24:BA:141:A:N3   | 24:BA:1596:A:O2'  | 2.40                     | 0.46              |
| 24:BA:297:C:H5'' | 45:BX:83:THR:CG2  | 2.46                     | 0.46              |
| 24:BA:307:G:N1   | 24:BA:309:G:H5''  | 2.30                     | 0.46              |
| 24:BA:319:C:H2'  | 24:BA:320:A:H8    | 1.71                     | 0.46              |
| 24:BA:326:G:N3   | 24:BA:327:G:C8    | 2.84                     | 0.46              |
| 24:BA:416:C:C2   | 24:BA:2407:G:O6   | 2.69                     | 0.46              |
| 24:BA:458:G:N7   | 53:B6:38:GLY:CA   | 2.79                     | 0.46              |
| 24:BA:459:U:H5   | 24:BA:469:G:C2    | 2.33                     | 0.46              |
| 24:BA:485:C:C4   | 24:BA:486:C:C5    | 3.03                     | 0.46              |
| 24:BA:489:G:N2   | 24:BA:491:G:H1'   | 2.30                     | 0.46              |
| 24:BA:531:C:H3'  | 24:BA:532:A:C1'   | 2.45                     | 0.46              |
| 24:BA:533:G:C6   | 24:BA:534:U:C2    | 3.04                     | 0.46              |
| 24:BA:586:A:C2   | 24:BA:810:U:O4'   | 2.69                     | 0.46              |
| 24:BA:603:A:N6   | 24:BA:625:G:C8    | 2.84                     | 0.46              |
| 24:BA:607:U:H5   | 24:BA:620:G:H21   | 1.64                     | 0.46              |
| 24:BA:743:G:H2'  | 24:BA:744:G:H8    | 1.79                     | 0.46              |
| 24:BA:799:G:OP1  | 24:BA:800:A:H3'   | 2.15                     | 0.46              |
| 24:BA:959:A:C6   | 24:BA:960:A:C6    | 3.03                     | 0.46              |
| 24:BA:997:G:H5'' | 41:BT:92:ARG:CZ   | 2.44                     | 0.46              |
| 24:BA:1069:A:C2  | 24:BA:1073:A:OP2  | 2.68                     | 0.46              |
| 24:BA:1076:C:H4' | 33:BL:93:ARG:HH21 | 1.77                     | 0.46              |
| 24:BA:1184:G:P   | 49:B2:30:ARG:HH11 | 2.39                     | 0.46              |
| 24:BA:1229:G:C5  | 24:BA:1230:C:C2   | 3.03                     | 0.46              |
| 24:BA:1237:A:O2' | 24:BA:1238:G:C4'  | 2.62                     | 0.46              |
| 24:BA:1308:A:N6  | 24:BA:1606:G:H1'  | 2.31                     | 0.46              |
| 24:BA:1322:A:H2' | 24:BA:1323:U:C5'  | 2.45                     | 0.46              |
| 24:BA:1382:G:C4  | 24:BA:1383:C:C5   | 3.03                     | 0.46              |
| 24:BA:1429:G:H1' | 24:BA:1568:G:C2   | 2.51                     | 0.46              |
| 24:BA:1523:U:N3  | 24:BA:1524:G:C8   | 2.84                     | 0.46              |
| 24:BA:1560:G:C4  | 24:BA:1561:G:C8   | 3.04                     | 0.46              |
| 24:BA:1704:G:C2' | 24:BA:1705:G:O5'  | 2.63                     | 0.46              |
| 24:BA:1850:G:C6  | 24:BA:1851:U:C4   | 3.04                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 24:BA:1889:A:O4' | 24:BA:2087:G:C4'   | 2.62                     | 0.46              |
| 24:BA:1892:C:N4  | 24:BA:1893:C:H41   | 2.13                     | 0.46              |
| 24:BA:1907:G:O2' | 24:BA:1908:C:H5'   | 2.15                     | 0.46              |
| 24:BA:1914:C:P   | 24:BA:1916:A:C6    | 3.09                     | 0.46              |
| 24:BA:1917:U:C6  | 24:BA:1918:A:N9    | 2.84                     | 0.46              |
| 24:BA:1939:U:O2' | 24:BA:2592:G:H1'   | 2.15                     | 0.46              |
| 24:BA:1996:C:OP2 | 35:BN:31:LYS:NZ    | 2.49                     | 0.46              |
| 24:BA:2033:A:C6  | 24:BA:2036:C:N4    | 2.83                     | 0.46              |
| 24:BA:2041:U:O2' | 24:BA:2042:A:O4'   | 2.21                     | 0.46              |
| 24:BA:2072:G:C4  | 24:BA:2073:C:H5    | 2.27                     | 0.46              |
| 24:BA:2103:C:C2' | 24:BA:2104:G:H8    | 2.13                     | 0.46              |
| 24:BA:2199:A:C5  | 24:BA:2205:C:C5    | 3.04                     | 0.46              |
| 24:BA:2378:A:N3  | 24:BA:2378:A:C2'   | 2.77                     | 0.46              |
| 24:BA:2401:U:H2' | 24:BA:2402:C:O4'   | 2.15                     | 0.46              |
| 24:BA:2407:G:H3' | 24:BA:2408:U:C5    | 2.51                     | 0.46              |
| 24:BA:2516:G:N9  | 24:BA:2569:G:N2    | 2.64                     | 0.46              |
| 24:BA:2519:U:C2  | 24:BA:2542:A:N1    | 2.83                     | 0.46              |
| 24:BA:2532:G:H2' | 24:BA:2533:A:C8    | 2.51                     | 0.46              |
| 24:BA:2586:C:H3' | 24:BA:2586:C:C6    | 2.51                     | 0.46              |
| 24:BA:2586:C:O2' | 24:BA:2587:A:H5'   | 2.16                     | 0.46              |
| 24:BA:2599:G:H2' | 24:BA:2600:A:O4'   | 2.16                     | 0.46              |
| 24:BA:2630:G:C8  | 24:BA:2894:G:C6    | 3.04                     | 0.46              |
| 24:BA:2721:A:C3' | 24:BA:2722:G:H8    | 2.28                     | 0.46              |
| 24:BA:2851:A:C2' | 24:BA:2852:G:O5'   | 2.64                     | 0.46              |
| 24:BA:2888:C:O2' | 24:BA:2889:C:O4'   | 2.24                     | 0.46              |
| 25:BB:27:C:H41   | 25:BB:56:G:H1      | 1.53                     | 0.46              |
| 25:BB:68:C:H2'   | 25:BB:69:G:C8      | 2.50                     | 0.46              |
| 25:BB:75:G:N3    | 46:BY:85:HIS:CE1   | 2.84                     | 0.46              |
| 25:BB:77:U:C2'   | 25:BB:78:A:H8      | 2.24                     | 0.46              |
| 26:BC:64:LEU:CB  | 26:BC:188:ASN:ND2  | 2.73                     | 0.46              |
| 27:BD:129:ASN:O  | 27:BD:193:VAL:HG23 | 2.15                     | 0.46              |
| 27:BD:148:GLU:C  | 27:BD:149:PRO:O    | 2.59                     | 0.46              |
| 27:BD:216:GLY:O  | 27:BD:217:ARG:CB   | 2.42                     | 0.46              |
| 27:BD:270:ILE:C  | 27:BD:271:ILE:HG13 | 2.40                     | 0.46              |
| 28:BE:8:LYS:CE   | 28:BE:8:LYS:C      | 2.88                     | 0.46              |
| 28:BE:201:THR:O  | 28:BE:202:LYS:CB   | 2.63                     | 0.46              |
| 29:BF:200:GLU:O  | 29:BF:204:ASN:OD1  | 2.33                     | 0.46              |
| 29:BF:205:ARG:O  | 29:BF:206:ILE:C    | 2.59                     | 0.46              |
| 30:BG:29:TRP:HB2 | 30:BG:31:VAL:HG23  | 1.97                     | 0.46              |
| 30:BG:54:GLU:CD  | 30:BG:70:VAL:HG22  | 2.41                     | 0.46              |
| 30:BG:77:ILE:C   | 30:BG:83:ARG:NE    | 2.73                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 31:BH:6:ARG:O      | 31:BH:65:HIS:CD2  | 2.68                     | 0.46              |
| 31:BH:80:SER:OG    | 31:BH:81:GLU:OE2  | 2.33                     | 0.46              |
| 32:BK:7:GLU:H      | 32:BK:8:PRO:HD3   | 1.79                     | 0.46              |
| 32:BK:78:THR:C     | 32:BK:79:ILE:CD1  | 2.86                     | 0.46              |
| 32:BK:79:ILE:N     | 32:BK:79:ILE:CD1  | 2.67                     | 0.46              |
| 34:BM:113:GLY:O    | 34:BM:116:LEU:N   | 2.48                     | 0.46              |
| 35:BN:31:LYS:O     | 35:BN:32:TYR:CG   | 2.68                     | 0.46              |
| 36:BO:97:PRO:HA    | 36:BO:102:ARG:CZ  | 2.46                     | 0.46              |
| 36:BO:108:LYS:HD3  | 36:BO:109:GLY:N   | 2.20                     | 0.46              |
| 36:BO:138:LEU:HD11 | 36:BO:145:PRO:HG3 | 1.97                     | 0.46              |
| 37:BP:8:LYS:NZ     | 37:BP:93:TYR:CD2  | 2.67                     | 0.46              |
| 37:BP:54:MET:HE1   | 37:BP:118:LEU:N   | 2.31                     | 0.46              |
| 37:BP:67:ARG:NH2   | 37:BP:103:MET:O   | 2.49                     | 0.46              |
| 37:BP:99:PRO:CD    | 37:BP:101:ARG:NE  | 2.78                     | 0.46              |
| 37:BP:119:ARG:O    | 37:BP:123:HIS:HB3 | 2.15                     | 0.46              |
| 38:BQ:66:VAL:O     | 38:BQ:67:LEU:C    | 2.53                     | 0.46              |
| 39:BR:9:ARG:NH1    | 39:BR:9:ARG:N     | 2.53                     | 0.46              |
| 40:BS:96:ARG:NE    | 40:BS:117:ASP:HB3 | 2.31                     | 0.46              |
| 42:BU:1:MET:HB3    | 42:BU:15:GLU:HG2  | 1.98                     | 0.46              |
| 42:BU:14:VAL:CG1   | 42:BU:15:GLU:H    | 2.08                     | 0.46              |
| 45:BX:37:VAL:HG22  | 45:BX:39:VAL:HG21 | 1.97                     | 0.46              |
| 45:BX:42:VAL:N     | 45:BX:61:ILE:CB   | 2.68                     | 0.46              |
| 45:BX:47:LYS:HB3   | 45:BX:49:VAL:HG13 | 1.96                     | 0.46              |
| 46:BY:2:GLU:OE2    | 46:BY:58:VAL:CG2  | 2.64                     | 0.46              |
| 46:BY:127:LYS:HD2  | 46:BY:163:LEU:C   | 2.40                     | 0.46              |
| 47:BZ:50:ASN:CB    | 47:BZ:63:VAL:HG22 | 2.46                     | 0.46              |
| 48:B1:23:LYS:HB3   | 48:B1:23:LYS:NZ   | 2.30                     | 0.46              |
| 49:B2:6:VAL:CB     | 49:B2:35:ARG:HH21 | 2.29                     | 0.46              |
| 49:B2:29:ARG:HB2   | 49:B2:30:ARG:HH21 | 1.72                     | 0.46              |
| 50:B3:38:LYS:HG2   | 50:B3:40:HIS:CE1  | 2.51                     | 0.46              |
| 50:B3:42:PHE:O     | 50:B3:61:ARG:NH2  | 2.48                     | 0.46              |
| 50:B3:58:ARG:CG    | 50:B3:62:ARG:NH2  | 2.79                     | 0.46              |
| 50:B3:62:ARG:HA    | 50:B3:65:ASP:OD1  | 2.16                     | 0.46              |
| 52:B5:50:ARG:O     | 52:B5:51:GLU:HB3  | 2.15                     | 0.46              |
| 1:AA:18:C:N4       | 1:AA:918:A:N6     | 2.64                     | 0.46              |
| 1:AA:191:G:N3      | 22:AW:105:SER:HB3 | 2.31                     | 0.46              |
| 1:AA:244:U:HO2'    | 1:AA:245:C:P      | 2.36                     | 0.46              |
| 1:AA:310:G:H2'     | 1:AA:311:C:C5     | 2.49                     | 0.46              |
| 1:AA:659:U:C2      | 1:AA:660:G:N7     | 2.84                     | 0.46              |
| 1:AA:692:U:O2      | 1:AA:694:A:H8     | 1.99                     | 0.46              |
| 1:AA:883:C:H5'     | 1:AA:884:U:OP2    | 2.16                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:AA:955:U:H2'   | 1:AA:956:U:C6     | 2.51                     | 0.46              |
| 1:AA:991:U:N3    | 1:AA:1212:U:O2    | 2.49                     | 0.46              |
| 1:AA:1026:G:C8   | 1:AA:1027:C:C5    | 3.04                     | 0.46              |
| 1:AA:1111:A:C6   | 1:AA:1112:C:N4    | 2.84                     | 0.46              |
| 1:AA:1132:C:C2   | 1:AA:1133:G:C8    | 3.03                     | 0.46              |
| 1:AA:1163:C:H2'  | 1:AA:1164:G:C5'   | 2.46                     | 0.46              |
| 1:AA:1170:A:N7   | 1:AA:1171:G:C5    | 2.84                     | 0.46              |
| 1:AA:1180:A:C2'  | 1:AA:1181:G:C5'   | 2.86                     | 0.46              |
| 1:AA:1182:G:H4'  | 1:AA:1183:A:C5'   | 2.45                     | 0.46              |
| 1:AA:1210:C:H2'  | 1:AA:1211:U:C6    | 2.51                     | 0.46              |
| 1:AA:1239:A:H4'  | 1:AA:1240:U:O5'   | 2.15                     | 0.46              |
| 1:AA:1250:A:C8   | 1:AA:1251:A:N7    | 2.85                     | 0.46              |
| 1:AA:1277:C:H2'  | 1:AA:1279:A:H8    | 1.80                     | 0.46              |
| 1:AA:1284:C:C4   | 1:AA:1285:A:C5    | 3.04                     | 0.46              |
| 1:AA:1305:G:N2   | 1:AA:1331:G:N3    | 2.63                     | 0.46              |
| 1:AA:1309:G:O6   | 1:AA:1329:A:C6    | 2.69                     | 0.46              |
| 1:AA:1363:A:N3   | 1:AA:1365:G:N1    | 2.63                     | 0.46              |
| 1:AA:1422:G:C2   | 1:AA:1423:G:N7    | 2.84                     | 0.46              |
| 2:A1:52:U:C5'    | 6:AG:50:ARG:HB2   | 2.45                     | 0.46              |
| 3:AC:36:A:N1     | 3:AC:37:A:C5      | 2.84                     | 0.46              |
| 3:AD:64:A:C4     | 3:AD:65:G:C8      | 3.04                     | 0.46              |
| 4:AE:76:GLN:HG3  | 4:AE:206:ASP:OD2  | 2.16                     | 0.46              |
| 6:AG:72:GLU:O    | 6:AG:75:PHE:HB3   | 2.15                     | 0.46              |
| 6:AG:177:ASP:C   | 6:AG:179:GLU:H    | 2.22                     | 0.46              |
| 7:AH:6:PHE:HZ    | 7:AH:66:MET:SD    | 2.39                     | 0.46              |
| 7:AH:9:LYS:HB3   | 7:AH:108:ALA:HB1  | 1.97                     | 0.46              |
| 7:AH:59:GLY:C    | 7:AH:63:ARG:NH2   | 2.70                     | 0.46              |
| 8:AI:46:ARG:HH12 | 20:AU:37:VAL:HG22 | 1.81                     | 0.46              |
| 8:AI:69:GLU:O    | 8:AI:72:VAL:HG22  | 2.16                     | 0.46              |
| 9:AJ:57:GLU:CB   | 9:AJ:58:PRO:HD2   | 2.47                     | 0.46              |
| 9:AJ:69:VAL:C    | 9:AJ:100:ALA:HB1  | 2.41                     | 0.46              |
| 9:AJ:76:ARG:HH11 | 9:AJ:89:MET:CG    | 2.28                     | 0.46              |
| 9:AJ:111:ARG:HD3 | 9:AJ:122:HIS:HB3  | 1.98                     | 0.46              |
| 13:AN:42:TRP:HZ3 | 13:AN:47:VAL:CG2  | 2.29                     | 0.46              |
| 14:AO:64:TYR:O   | 14:AO:65:GLU:HG3  | 2.16                     | 0.46              |
| 14:AO:88:GLY:C   | 14:AO:89:ARG:O    | 2.59                     | 0.46              |
| 14:AO:110:VAL:HB | 14:AO:113:ARG:HG3 | 1.98                     | 0.46              |
| 15:AP:3:ARG:HG3  | 15:AP:7:VAL:HA    | 1.97                     | 0.46              |
| 15:AP:19:LEU:C   | 15:AP:25:ILE:CG2  | 2.89                     | 0.46              |
| 16:AQ:9:LYS:HD3  | 16:AQ:9:LYS:O     | 2.16                     | 0.46              |
| 17:AR:36:ILE:CG1 | 17:AR:60:VAL:HG22 | 2.46                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 20:AU:53:ARG:CA    | 20:AU:63:GLN:HE21 | 2.25                     | 0.46              |
| 22:AW:81:LYS:O     | 22:AW:84:LEU:N    | 2.49                     | 0.46              |
| 23:AX:24:ARG:O     | 23:AX:25:LYS:CB   | 2.60                     | 0.46              |
| 24:BA:6:A:C2       | 24:BA:7:G:C5      | 3.04                     | 0.46              |
| 24:BA:35:G:C5      | 24:BA:454:A:H2    | 2.34                     | 0.46              |
| 24:BA:52:A:C4      | 24:BA:53:A:N7     | 2.83                     | 0.46              |
| 24:BA:119:A:O2'    | 24:BA:120:U:C5'   | 2.64                     | 0.46              |
| 24:BA:215:G:O2'    | 24:BA:216:A:H5''  | 2.15                     | 0.46              |
| 24:BA:218:A:N6     | 24:BA:219:G:N2    | 2.64                     | 0.46              |
| 24:BA:223:A:H2     | 24:BA:407:G:N3    | 2.14                     | 0.46              |
| 24:BA:270(P):C:O5' | 24:BA:270(P):C:H6 | 1.99                     | 0.46              |
| 24:BA:389:G:C8     | 24:BA:389:G:OP1   | 2.69                     | 0.46              |
| 24:BA:427:U:O2'    | 24:BA:428:A:H1'   | 2.16                     | 0.46              |
| 24:BA:500:G:C2'    | 24:BA:501:A:H3'   | 2.46                     | 0.46              |
| 24:BA:529:A:OP1    | 24:BA:529:A:H4'   | 2.16                     | 0.46              |
| 24:BA:588:U:H1'    | 29:BF:90:PHE:CG   | 2.51                     | 0.46              |
| 24:BA:590:A:C2     | 24:BA:591:C:C2    | 3.04                     | 0.46              |
| 24:BA:648:G:C2     | 24:BA:649:G:C8    | 3.04                     | 0.46              |
| 24:BA:774:A:C5'    | 24:BA:778:G:O4'   | 2.64                     | 0.46              |
| 24:BA:802:A:C6     | 24:BA:803:U:C2    | 3.04                     | 0.46              |
| 24:BA:820:A:H2     | 24:BA:944:G:OP1   | 1.98                     | 0.46              |
| 24:BA:1036:G:P     | 31:BH:59:ARG:NH2  | 2.89                     | 0.46              |
| 24:BA:1051:G:C4'   | 24:BA:2752:C:H1'  | 2.41                     | 0.46              |
| 24:BA:1128:A:O2'   | 24:BA:1129:A:C5'  | 2.64                     | 0.46              |
| 24:BA:1144:G:C2'   | 24:BA:1145:C:H6   | 2.20                     | 0.46              |
| 24:BA:1203:G:C5    | 24:BA:1240:U:C4   | 3.04                     | 0.46              |
| 24:BA:1225:C:OP1   | 42:BU:88:ARG:HB3  | 2.16                     | 0.46              |
| 24:BA:1243:G:N1    | 24:BA:1244:G:C4   | 2.84                     | 0.46              |
| 24:BA:1364:G:C2    | 24:BA:1367:A:OP2  | 2.69                     | 0.46              |
| 24:BA:1419:A:O4'   | 24:BA:1419:A:OP2  | 2.34                     | 0.46              |
| 24:BA:1525:G:H2'   | 24:BA:1526:G:O5'  | 2.16                     | 0.46              |
| 24:BA:1527:G:C2'   | 24:BA:1528:A:O4'  | 2.60                     | 0.46              |
| 24:BA:1583:A:H4'   | 24:BA:1583:A:OP1  | 2.15                     | 0.46              |
| 24:BA:1655:A:H3'   | 24:BA:1656:C:C6   | 2.51                     | 0.46              |
| 24:BA:1657:C:C4    | 24:BA:1658:C:C5   | 3.04                     | 0.46              |
| 24:BA:1684:C:N4    | 24:BA:1705:G:N1   | 2.64                     | 0.46              |
| 24:BA:1799:G:O2'   | 24:BA:1800:C:C4'  | 2.63                     | 0.46              |
| 24:BA:1831:G:C6    | 24:BA:1832:C:C4   | 3.04                     | 0.46              |
| 24:BA:1899:G:H22   | 24:BA:1902:C:H41  | 1.62                     | 0.46              |
| 24:BA:2182:G:N2    | 24:BA:2183:C:C2   | 2.84                     | 0.46              |
| 24:BA:2227:A:C5'   | 27:BD:260:ARG:CD  | 2.91                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2230:G:C6    | 24:BA:2231:C:C4    | 3.04                     | 0.46              |
| 24:BA:2236:C:C4    | 24:BA:2237:G:C4    | 3.04                     | 0.46              |
| 24:BA:2285:C:O4'   | 24:BA:2288:A:C6    | 2.69                     | 0.46              |
| 24:BA:2285:C:C4'   | 24:BA:2288:A:C6    | 2.98                     | 0.46              |
| 24:BA:2386:C:O2    | 24:BA:2386:C:H2'   | 2.16                     | 0.46              |
| 24:BA:2459:A:C6    | 24:BA:2493:U:C4    | 3.04                     | 0.46              |
| 24:BA:2589:A:OP1   | 27:BD:226:MET:HG3  | 2.16                     | 0.46              |
| 24:BA:2633:G:C6    | 24:BA:2634:G:N7    | 2.84                     | 0.46              |
| 24:BA:2635:C:H5''  | 28:BE:78:LEU:HD13  | 1.97                     | 0.46              |
| 24:BA:2637:U:C5'   | 28:BE:81:ILE:CD1   | 2.79                     | 0.46              |
| 24:BA:2692:C:C2'   | 24:BA:2847:U:O2'   | 2.64                     | 0.46              |
| 24:BA:2717:G:C4    | 24:BA:2718:G:C8    | 3.04                     | 0.46              |
| 24:BA:2723:C:O2'   | 24:BA:2724:C:H5'   | 2.16                     | 0.46              |
| 24:BA:2811:G:H2'   | 24:BA:2812:G:O4'   | 2.15                     | 0.46              |
| 24:BA:2820:A:H4'   | 38:BQ:4:LEU:CD2    | 2.46                     | 0.46              |
| 24:BA:2863:C:O2    | 24:BA:2864:G:C8    | 2.69                     | 0.46              |
| 25:BB:50:G:P       | 39:BR:63:THR:OG1   | 2.74                     | 0.46              |
| 26:BC:102:LYS:HE3  | 26:BC:107:TRP:CB   | 2.46                     | 0.46              |
| 26:BC:167:LYS:CG   | 26:BC:168:THR:N    | 2.75                     | 0.46              |
| 26:BC:200:LYS:NZ   | 26:BC:204:ALA:CB   | 2.77                     | 0.46              |
| 27:BD:54:ARG:HA    | 27:BD:220:HIS:H    | 1.81                     | 0.46              |
| 27:BD:63:ARG:N     | 27:BD:63:ARG:CZ    | 2.79                     | 0.46              |
| 28:BE:59:VAL:HB    | 28:BE:62:PRO:HG2   | 1.97                     | 0.46              |
| 29:BF:31:HIS:CE1   | 36:BO:14:LYS:HE3   | 2.51                     | 0.46              |
| 29:BF:37:VAL:HG12  | 29:BF:41:LEU:CD2   | 2.40                     | 0.46              |
| 29:BF:110:LEU:HD21 | 29:BF:186:ILE:HD11 | 1.95                     | 0.46              |
| 29:BF:123:LEU:CG   | 29:BF:191:ARG:HD3  | 2.45                     | 0.46              |
| 30:BG:68:PRO:CG    | 30:BG:90:LEU:HD21  | 2.43                     | 0.46              |
| 30:BG:123:ASN:HB2  | 30:BG:126:ASP:CB   | 2.45                     | 0.46              |
| 31:BH:149:ARG:HE   | 31:BH:149:ARG:HB2  | 1.53                     | 0.46              |
| 32:BK:86:THR:C     | 32:BK:122:GLU:O    | 2.58                     | 0.46              |
| 35:BN:78:ARG:HE    | 35:BN:78:ARG:HB3   | 1.53                     | 0.46              |
| 36:BO:56:SER:O     | 54:B7:13:ARG:NH1   | 2.49                     | 0.46              |
| 36:BO:57:THR:O     | 36:BO:58:THR:CB    | 2.63                     | 0.46              |
| 36:BO:119:GLU:C    | 36:BO:120:ALA:O    | 2.57                     | 0.46              |
| 36:BO:127:ALA:HB3  | 36:BO:130:PHE:HE2  | 1.80                     | 0.46              |
| 37:BP:59:ARG:HA    | 37:BP:60:ARG:NE    | 2.31                     | 0.46              |
| 37:BP:72:LYS:HE2   | 37:BP:96:VAL:CG2   | 2.46                     | 0.46              |
| 37:BP:75:THR:HG23  | 37:BP:89:ASN:O     | 2.16                     | 0.46              |
| 37:BP:96:VAL:C     | 37:BP:98:LYS:HZ1   | 2.23                     | 0.46              |
| 37:BP:121:ALA:C    | 37:BP:125:LEU:HG   | 2.37                     | 0.46              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 38:BQ:20:LEU:O     | 38:BQ:22:ARG:N     | 2.49                     | 0.46              |
| 38:BQ:116:LEU:HD12 | 38:BQ:118:GLU:HG2  | 1.97                     | 0.46              |
| 40:BS:54:ARG:O     | 40:BS:55:ASN:OD1   | 2.34                     | 0.46              |
| 40:BS:56:GLY:C     | 40:BS:57:PHE:HD2   | 2.24                     | 0.46              |
| 42:BU:16:PRO:HD3   | 42:BU:100:ARG:HH11 | 1.76                     | 0.46              |
| 43:BV:20:VAL:CG2   | 43:BV:47:VAL:HG11  | 2.46                     | 0.46              |
| 43:BV:45:TYR:O     | 43:BV:46:PHE:C     | 2.55                     | 0.46              |
| 43:BV:75:TYR:O     | 43:BV:104:THR:C    | 2.58                     | 0.46              |
| 44:BW:4:ALA:C      | 48:B1:21:ARG:NH2   | 2.74                     | 0.46              |
| 44:BW:53:LYS:O     | 44:BW:81:VAL:HA    | 2.16                     | 0.46              |
| 46:BY:39:VAL:HA    | 46:BY:44:PHE:CE1   | 2.50                     | 0.46              |
| 46:BY:63:ASP:CG    | 46:BY:64:GLY:H     | 2.24                     | 0.46              |
| 47:BZ:74:ARG:HH11  | 47:BZ:75:LEU:CD1   | 2.29                     | 0.46              |
| 51:B4:19:ARG:O     | 51:B4:20:ARG:C     | 2.58                     | 0.46              |
| 51:B4:51:TYR:HD1   | 51:B4:55:ARG:H     | 1.62                     | 0.46              |
| 52:B5:20:ASN:HD21  | 52:B5:42:TRP:HD1   | 1.61                     | 0.46              |
| 54:B7:3:LYS:HZ3    | 54:B7:59:LYS:HE3   | 1.81                     | 0.46              |
| 55:B8:1:MET:N      | 55:B8:33:LYS:CB    | 2.79                     | 0.46              |
| 1:AA:15:G:N3       | 1:AA:15:G:H2'      | 2.31                     | 0.45              |
| 1:AA:41:G:C2'      | 1:AA:42:G:C8       | 2.87                     | 0.45              |
| 1:AA:46:G:H2'      | 1:AA:366:C:N4      | 2.30                     | 0.45              |
| 1:AA:62:U:H5''     | 1:AA:385:C:O2'     | 2.16                     | 0.45              |
| 1:AA:101:A:C5      | 1:AA:102:G:N7      | 2.84                     | 0.45              |
| 1:AA:307:C:C5'     | 1:AA:308:C:OP2     | 2.64                     | 0.45              |
| 1:AA:319:G:H2'     | 1:AA:320:C:C5'     | 2.46                     | 0.45              |
| 1:AA:320:C:O2'     | 1:AA:321:A:C5'     | 2.65                     | 0.45              |
| 1:AA:404:U:H5'     | 6:AG:122:ARG:CD    | 2.45                     | 0.45              |
| 1:AA:515:G:H3'     | 1:AA:516:U:C6      | 2.51                     | 0.45              |
| 1:AA:564:C:C4      | 1:AA:565:U:C4      | 3.03                     | 0.45              |
| 1:AA:687:A:H2'     | 1:AA:701:C:N4      | 2.30                     | 0.45              |
| 1:AA:689:C:OP2     | 13:AN:55:LYS:NZ    | 2.49                     | 0.45              |
| 1:AA:737:A:OP1     | 8:AI:92:LYS:N      | 2.41                     | 0.45              |
| 1:AA:737:A:H2'     | 1:AA:738:C:C6      | 2.51                     | 0.45              |
| 1:AA:880:C:O2'     | 1:AA:881:G:H5'     | 2.16                     | 0.45              |
| 1:AA:888:G:H3'     | 1:AA:889:A:C8      | 2.50                     | 0.45              |
| 1:AA:917:G:H2'     | 1:AA:918:A:H8      | 1.81                     | 0.45              |
| 1:AA:999:U:O5'     | 1:AA:999:U:H6      | 1.99                     | 0.45              |
| 1:AA:1047:G:O2'    | 1:AA:1048:G:H5'    | 2.16                     | 0.45              |
| 1:AA:1060:C:C4'    | 12:AM:52:GLY:HA2   | 2.45                     | 0.45              |
| 1:AA:1084:G:N3     | 1:AA:1085:U:H5     | 2.14                     | 0.45              |
| 1:AA:1118:C:O4'    | 1:AA:1179:A:H1'    | 2.16                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1210:C:H4'   | 1:AA:1214:C:H42   | 1.81                     | 0.45              |
| 1:AA:1220:G:O2'   | 1:AA:1221:G:H5'   | 2.16                     | 0.45              |
| 1:AA:1307:U:C4    | 1:AA:1308:U:C5    | 3.04                     | 0.45              |
| 1:AA:1341:U:O2'   | 11:AL:126:SER:O   | 2.29                     | 0.45              |
| 1:AA:1357:A:C5    | 1:AA:1358:U:O4    | 2.67                     | 0.45              |
| 1:AA:1405:G:H1'   | 1:AA:1518:A:O2'   | 2.15                     | 0.45              |
| 1:AA:1432:G:OP2   | 40:BS:112:ARG:HB2 | 2.16                     | 0.45              |
| 1:AA:1435:G:N1    | 1:AA:1436:U:O4    | 2.49                     | 0.45              |
| 1:AA:1449:C:C2'   | 1:AA:1450:U:O5'   | 2.62                     | 0.45              |
| 1:AA:1513:A:C2    | 1:AA:1523:G:C6    | 3.03                     | 0.45              |
| 1:AA:1517:G:N1    | 1:AA:1518:A:N3    | 2.64                     | 0.45              |
| 2:A1:4:U:H6       | 2:A1:4:U:O5'      | 1.99                     | 0.45              |
| 2:A1:52:U:O2'     | 6:AG:51:PRO:HD3   | 2.16                     | 0.45              |
| 3:AD:55:U:H3'     | 3:AD:55:U:C6      | 2.51                     | 0.45              |
| 3:AD:55:U:O3'     | 3:AD:57:G:N7      | 2.48                     | 0.45              |
| 3:AD:63:G:H5'     | 26:BC:53:ARG:HE   | 1.81                     | 0.45              |
| 4:AE:15:VAL:HG21  | 4:AE:209:ARG:CB   | 2.42                     | 0.45              |
| 4:AE:32:ILE:HD12  | 4:AE:190:THR:CG2  | 2.46                     | 0.45              |
| 4:AE:73:THR:HG22  | 4:AE:95:GLN:N     | 2.31                     | 0.45              |
| 4:AE:83:MET:HB2   | 4:AE:234:PRO:CG   | 2.45                     | 0.45              |
| 4:AE:144:ARG:O    | 4:AE:145:LEU:C    | 2.60                     | 0.45              |
| 4:AE:157:ARG:HG2  | 4:AE:158:LEU:HD21 | 1.98                     | 0.45              |
| 4:AE:164:VAL:CG2  | 4:AE:165:VAL:N    | 2.77                     | 0.45              |
| 4:AE:168:THR:HG21 | 4:AE:192:SER:HA   | 1.96                     | 0.45              |
| 5:AF:30:ARG:NH1   | 5:AF:31:HIS:HB2   | 2.31                     | 0.45              |
| 5:AF:150:LYS:HD3  | 5:AF:150:LYS:C    | 2.40                     | 0.45              |
| 5:AF:185:GLY:O    | 5:AF:199:LYS:HA   | 2.16                     | 0.45              |
| 6:AG:61:LYS:HA    | 6:AG:203:VAL:CG1  | 2.46                     | 0.45              |
| 6:AG:61:LYS:HG2   | 6:AG:203:VAL:HG13 | 1.97                     | 0.45              |
| 6:AG:85:LYS:O     | 6:AG:86:LYS:O     | 2.34                     | 0.45              |
| 6:AG:165:MET:SD   | 6:AG:168:ARG:NH1  | 2.89                     | 0.45              |
| 6:AG:177:ASP:C    | 6:AG:179:GLU:N    | 2.74                     | 0.45              |
| 7:AH:41:VAL:HG21  | 7:AH:113:ALA:CB   | 2.45                     | 0.45              |
| 7:AH:61:TYR:O     | 7:AH:62:ALA:C     | 2.59                     | 0.45              |
| 8:AI:2:ARG:O      | 8:AI:67:MET:CE    | 2.64                     | 0.45              |
| 9:AJ:17:VAL:O     | 9:AJ:18:TYR:CD1   | 2.69                     | 0.45              |
| 9:AJ:29:LYS:NZ    | 9:AJ:98:SER:O     | 2.48                     | 0.45              |
| 10:AK:6:ILE:HD11  | 10:AK:85:ARG:HD3  | 1.98                     | 0.45              |
| 10:AK:9:MET:HE2   | 10:AK:13:ILE:HD11 | 1.98                     | 0.45              |
| 10:AK:49:GLU:CD   | 10:AK:60:ARG:HB3  | 2.40                     | 0.45              |
| 11:AL:6:GLY:HA3   | 11:AL:84:ALA:N    | 2.32                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 12:AM:8:LEU:HG    | 12:AM:19:SER:HB3   | 1.98                     | 0.45              |
| 13:AN:85:ARG:HD3  | 13:AN:112:THR:H    | 1.80                     | 0.45              |
| 14:AO:103:GLY:CA  | 14:AO:107:ALA:O    | 2.64                     | 0.45              |
| 15:AP:59:TYR:CG   | 15:AP:60:VAL:N     | 2.84                     | 0.45              |
| 16:AQ:29:ARG:HD2  | 16:AQ:42:ILE:HD11  | 1.98                     | 0.45              |
| 17:AR:75:PRO:HA   | 17:AR:78:TYR:CG    | 2.50                     | 0.45              |
| 18:AS:19:ILE:HD11 | 18:AS:39:TYR:HB3   | 1.97                     | 0.45              |
| 18:AS:34:GLU:OE1  | 18:AS:35:LYS:O     | 2.33                     | 0.45              |
| 19:AT:34:LYS:HD2  | 19:AT:35:VAL:N     | 2.30                     | 0.45              |
| 24:BA:91:A:H3'    | 24:BA:92:G:H8      | 1.75                     | 0.45              |
| 24:BA:172:C:C4    | 24:BA:173:G:N7     | 2.84                     | 0.45              |
| 24:BA:270(A):A:C8 | 24:BA:370:G:O4'    | 2.65                     | 0.45              |
| 24:BA:332:A:C4    | 24:BA:335:C:C5     | 3.04                     | 0.45              |
| 24:BA:395:U:OP2   | 24:BA:395:U:H6     | 1.99                     | 0.45              |
| 24:BA:446:G:C8    | 41:BT:3:ARG:NH2    | 2.83                     | 0.45              |
| 24:BA:447:A:C8    | 24:BA:454:A:N6     | 2.84                     | 0.45              |
| 24:BA:463:G:O2'   | 24:BA:464:U:C5     | 2.67                     | 0.45              |
| 24:BA:492:A:H2'   | 24:BA:492:A:N3     | 2.30                     | 0.45              |
| 24:BA:533:G:H5'   | 41:BT:24:TYR:CD2   | 2.51                     | 0.45              |
| 24:BA:535:C:H4'   | 41:BT:53:ARG:CD    | 2.32                     | 0.45              |
| 24:BA:546:C:H2'   | 24:BA:547:A:C4     | 2.51                     | 0.45              |
| 24:BA:656:G:O2'   | 24:BA:657:U:C5'    | 2.63                     | 0.45              |
| 24:BA:658:C:C2    | 24:BA:659:C:C5     | 3.04                     | 0.45              |
| 24:BA:727:A:O2'   | 24:BA:728:G:OP1    | 2.24                     | 0.45              |
| 24:BA:756:C:C4    | 24:BA:757:U:C6     | 3.04                     | 0.45              |
| 24:BA:930:U:H6    | 24:BA:930:U:H3'    | 1.80                     | 0.45              |
| 24:BA:1000:A:C5   | 24:BA:1001:A:C2    | 3.04                     | 0.45              |
| 24:BA:1071:G:N2   | 24:BA:1090:U:C4    | 2.83                     | 0.45              |
| 24:BA:1122:G:N2   | 24:BA:1123:C:C6    | 2.84                     | 0.45              |
| 24:BA:1137:G:H2'  | 24:BA:1138:G:O4'   | 2.15                     | 0.45              |
| 24:BA:1144:G:C2'  | 24:BA:1145:C:C6    | 2.83                     | 0.45              |
| 24:BA:1174:A:N6   | 24:BA:1177:A:C5    | 2.82                     | 0.45              |
| 24:BA:1191:G:C6   | 24:BA:1192:G:C5    | 3.04                     | 0.45              |
| 24:BA:1192:G:OP1  | 36:BO:18:ARG:NH1   | 2.48                     | 0.45              |
| 24:BA:1221:C:N4   | 24:BA:1229:G:O6    | 2.49                     | 0.45              |
| 24:BA:1221:C:C2'  | 24:BA:1222:C:O5'   | 2.63                     | 0.45              |
| 24:BA:1342:A:C8   | 24:BA:1601:G:O6    | 2.69                     | 0.45              |
| 24:BA:1343:G:N2   | 24:BA:1405:U:C6    | 2.85                     | 0.45              |
| 24:BA:1397:U:O2   | 24:BA:1397:U:H2'   | 2.15                     | 0.45              |
| 24:BA:1434:A:C2   | 24:BA:1435:G:C8    | 3.04                     | 0.45              |
| 24:BA:1449:A:C2   | 24:BA:1449(A):G:C4 | 3.05                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1466:G:O4'   | 24:BA:1545(A):A:H2 | 1.97                     | 0.45              |
| 24:BA:1534:G:H1'   | 24:BA:1536:A:H62   | 1.80                     | 0.45              |
| 24:BA:1534:G:N3    | 24:BA:1536:A:N7    | 2.63                     | 0.45              |
| 24:BA:1630:G:N1    | 24:BA:1637:A:C6    | 2.84                     | 0.45              |
| 24:BA:1658:C:OP1   | 28:BE:134:ILE:CG1  | 2.64                     | 0.45              |
| 24:BA:1746:G:OP2   | 24:BA:1746:G:C3'   | 2.60                     | 0.45              |
| 24:BA:1791:A:H2'   | 24:BA:1792:G:O4'   | 2.16                     | 0.45              |
| 24:BA:1799:G:H1    | 27:BD:157:ARG:CZ   | 2.28                     | 0.45              |
| 24:BA:1826:G:C6    | 24:BA:1827:C:C5    | 3.04                     | 0.45              |
| 24:BA:1850:G:C5    | 24:BA:1851:U:C5    | 3.04                     | 0.45              |
| 24:BA:1853:A:C2    | 24:BA:2087:G:N3    | 2.84                     | 0.45              |
| 24:BA:1904:G:O2'   | 24:BA:1905:C:H5'   | 2.16                     | 0.45              |
| 24:BA:1927:A:H2'   | 24:BA:1928:A:O4'   | 2.16                     | 0.45              |
| 24:BA:1953:A:O2'   | 24:BA:2559:C:O2'   | 2.22                     | 0.45              |
| 24:BA:1964:G:C6    | 24:BA:1967:C:N4    | 2.78                     | 0.45              |
| 24:BA:1980:G:C6    | 24:BA:1982:C:C4    | 3.04                     | 0.45              |
| 24:BA:2014:A:C2    | 24:BA:2613:U:C2    | 3.05                     | 0.45              |
| 24:BA:2136:C:N3    | 24:BA:2137:C:C5    | 2.83                     | 0.45              |
| 24:BA:2197:U:O2'   | 24:BA:2198:A:N3    | 2.37                     | 0.45              |
| 24:BA:2227:A:H5''  | 27:BD:260:ARG:HB3  | 1.97                     | 0.45              |
| 24:BA:2249:U:O4    | 24:BA:2253:G:OP2   | 2.34                     | 0.45              |
| 24:BA:2278:A:H62   | 47:BZ:14:ARG:CB    | 2.23                     | 0.45              |
| 24:BA:2278:A:C6    | 24:BA:2279:G:C5    | 3.04                     | 0.45              |
| 24:BA:2305:A:C3'   | 24:BA:2306:C:C5'   | 2.94                     | 0.45              |
| 24:BA:2356:C:C2'   | 24:BA:2357:U:O5'   | 2.64                     | 0.45              |
| 24:BA:2415:G:C4    | 24:BA:2416:C:C5    | 3.04                     | 0.45              |
| 24:BA:2548:G:C6    | 24:BA:2549:G:C5    | 3.04                     | 0.45              |
| 24:BA:2825:C:N4    | 24:BA:2826:A:H62   | 2.15                     | 0.45              |
| 24:BA:2887:U:C2    | 24:BA:2888:C:C6    | 3.04                     | 0.45              |
| 25:BB:71:C:O2      | 25:BB:72:G:C4'     | 2.64                     | 0.45              |
| 25:BB:100:G:C4     | 25:BB:101:A:C8     | 3.04                     | 0.45              |
| 26:BC:22:ILE:HD12  | 26:BC:190:ARG:HH22 | 1.80                     | 0.45              |
| 26:BC:108:MET:CE   | 26:BC:131:LEU:HA   | 2.44                     | 0.45              |
| 27:BD:262:ARG:O    | 27:BD:263:ARG:C    | 2.58                     | 0.45              |
| 28:BE:119:ARG:HE   | 28:BE:120:TRP:HB3  | 1.81                     | 0.45              |
| 28:BE:176:ILE:O    | 28:BE:176:ILE:CG2  | 2.64                     | 0.45              |
| 28:BE:178:GLU:O    | 28:BE:179:GLU:C    | 2.59                     | 0.45              |
| 28:BE:198:VAL:HG12 | 28:BE:199:ARG:N    | 2.28                     | 0.45              |
| 29:BF:119:ARG:HB2  | 29:BF:119:ARG:CZ   | 2.40                     | 0.45              |
| 29:BF:192:LEU:C    | 29:BF:192:LEU:CD1  | 2.87                     | 0.45              |
| 30:BG:9:ARG:HD2    | 30:BG:10:LYS:HZ3   | 1.77                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 30:BG:105:LYS:O    | 30:BG:109:VAL:CG2  | 2.53                     | 0.45              |
| 31:BH:7:LEU:HA     | 31:BH:52:VAL:CG1   | 2.46                     | 0.45              |
| 31:BH:8:PRO:N      | 31:BH:51:ARG:NH2   | 2.64                     | 0.45              |
| 31:BH:97:ARG:NH1   | 31:BH:104:GLU:OE2  | 2.49                     | 0.45              |
| 31:BH:167:GLU:C    | 31:BH:169:VAL:N    | 2.74                     | 0.45              |
| 32:BK:114:LEU:HD13 | 32:BK:130:TYR:CD2  | 2.51                     | 0.45              |
| 32:BK:139:GLN:O    | 32:BK:140:LEU:HG   | 2.16                     | 0.45              |
| 33:BL:8:VAL:HG23   | 33:BL:31:GLY:O     | 2.16                     | 0.45              |
| 34:BM:13:TRP:CD2   | 34:BM:51:PHE:HB2   | 2.50                     | 0.45              |
| 34:BM:15:LEU:CG    | 34:BM:138:LEU:O    | 2.48                     | 0.45              |
| 34:BM:77:GLY:C     | 34:BM:78:TYR:O     | 2.55                     | 0.45              |
| 35:BN:37:ASP:H     | 35:BN:61:VAL:CG2   | 2.29                     | 0.45              |
| 35:BN:56:ASP:OD1   | 35:BN:56:ASP:O     | 2.34                     | 0.45              |
| 35:BN:63:VAL:HB    | 35:BN:78:ARG:HG2   | 1.98                     | 0.45              |
| 35:BN:68:GLU:CA    | 35:BN:104:ARG:NH1  | 2.65                     | 0.45              |
| 36:BO:35:HIS:O     | 36:BO:36:LYS:NZ    | 2.49                     | 0.45              |
| 36:BO:114:ILE:CG1  | 36:BO:123:LEU:HB2  | 2.46                     | 0.45              |
| 36:BO:124:LYS:NZ   | 36:BO:141:ALA:HB1  | 2.31                     | 0.45              |
| 38:BQ:90:ARG:HB2   | 38:BQ:94:TYR:HE2   | 1.82                     | 0.45              |
| 39:BR:98:VAL:O     | 39:BR:99:LYS:C     | 2.58                     | 0.45              |
| 41:BT:33:ARG:O     | 41:BT:36:ARG:HG3   | 2.16                     | 0.45              |
| 41:BT:80:ILE:C     | 41:BT:82:GLY:N     | 2.72                     | 0.45              |
| 43:BV:5:ALA:HB3    | 43:BV:105:VAL:HG13 | 1.98                     | 0.45              |
| 44:BW:31:HIS:O     | 44:BW:32:PRO:C     | 2.59                     | 0.45              |
| 44:BW:47:PHE:O     | 44:BW:48:LYS:C     | 2.59                     | 0.45              |
| 45:BX:85:VAL:O     | 45:BX:85:VAL:HG12  | 2.16                     | 0.45              |
| 45:BX:86:ARG:HA    | 45:BX:91:GLU:HB3   | 1.98                     | 0.45              |
| 46:BY:43:GLU:HA    | 46:BY:46:LYS:NZ    | 2.31                     | 0.45              |
| 46:BY:80:ARG:HD2   | 46:BY:80:ARG:N     | 2.31                     | 0.45              |
| 48:B1:28:MET:O     | 48:B1:32:PHE:CD1   | 2.69                     | 0.45              |
| 49:B2:40:THR:O     | 49:B2:44:ARG:CG    | 2.64                     | 0.45              |
| 50:B3:6:HIS:CE1    | 50:B3:55:ARG:CD    | 2.99                     | 0.45              |
| 1:AA:19:C:O2       | 1:AA:572:A:C2      | 2.62                     | 0.45              |
| 1:AA:39:G:N7       | 1:AA:547:A:C8      | 2.85                     | 0.45              |
| 1:AA:80:G:C3'      | 1:AA:81:G:H8       | 2.29                     | 0.45              |
| 1:AA:225:C:C2'     | 1:AA:226:G:O5'     | 2.64                     | 0.45              |
| 1:AA:260:G:C4      | 1:AA:261:U:N3      | 2.84                     | 0.45              |
| 1:AA:301:G:C2      | 1:AA:302:G:N9      | 2.85                     | 0.45              |
| 1:AA:440:A:C8      | 1:AA:442:C:C5      | 3.04                     | 0.45              |
| 1:AA:674:G:O2'     | 1:AA:675:A:H5'     | 2.16                     | 0.45              |
| 1:AA:689:C:O3'     | 1:AA:705:U:O2'     | 2.32                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:706:A:C2'    | 1:AA:707:C:O5'    | 2.64                     | 0.45              |
| 1:AA:774:G:H3'    | 1:AA:775:G:H8     | 1.81                     | 0.45              |
| 1:AA:800:G:H8     | 1:AA:800:G:P      | 2.39                     | 0.45              |
| 1:AA:814:A:O2'    | 1:AA:815:A:H5'    | 2.16                     | 0.45              |
| 1:AA:830:G:C6     | 1:AA:831:U:C5     | 3.04                     | 0.45              |
| 1:AA:888:G:C2     | 1:AA:909:A:N6     | 2.80                     | 0.45              |
| 1:AA:928:G:H4'    | 1:AA:1532:U:H5''  | 1.97                     | 0.45              |
| 1:AA:961:U:C2'    | 1:AA:962:C:C5'    | 2.94                     | 0.45              |
| 1:AA:1027:C:N3    | 1:AA:1028:C:C5    | 2.84                     | 0.45              |
| 1:AA:1084:G:HO2'  | 1:AA:1085:U:P     | 2.39                     | 0.45              |
| 1:AA:1099:G:N7    | 1:AA:1100:C:C5    | 2.85                     | 0.45              |
| 1:AA:1205:U:O2'   | 5:AF:194:GLY:CA   | 2.64                     | 0.45              |
| 1:AA:1250:A:H4'   | 11:AL:68:GLY:N    | 2.31                     | 0.45              |
| 1:AA:1265:G:C6    | 1:AA:1271:G:C6    | 3.03                     | 0.45              |
| 1:AA:1319:A:N1    | 1:AA:1361:G:N2    | 2.63                     | 0.45              |
| 3:AC:29:G:O2'     | 3:AC:30:G:H5'     | 2.17                     | 0.45              |
| 3:AD:18:G:O6      | 3:AD:57:G:N1      | 2.49                     | 0.45              |
| 3:AB:25:C:H2'     | 3:AB:25:C:O2      | 2.17                     | 0.45              |
| 3:AB:58:A:C6      | 3:AB:61:C:H1'     | 2.50                     | 0.45              |
| 4:AE:50:GLU:CG    | 4:AE:200:ILE:HB   | 2.47                     | 0.45              |
| 4:AE:52:GLU:CD    | 4:AE:53:ARG:N     | 2.74                     | 0.45              |
| 4:AE:122:PHE:O    | 4:AE:123:ALA:C    | 2.59                     | 0.45              |
| 6:AG:19:LEU:C     | 6:AG:21:LEU:H     | 2.18                     | 0.45              |
| 6:AG:31:CYS:O     | 6:AG:33:MET:CE    | 2.59                     | 0.45              |
| 7:AH:55:VAL:O     | 7:AH:56:GLN:C     | 2.56                     | 0.45              |
| 7:AH:59:GLY:O     | 7:AH:62:ALA:N     | 2.50                     | 0.45              |
| 8:AI:2:ARG:C      | 8:AI:67:MET:SD    | 3.00                     | 0.45              |
| 8:AI:50:TYR:CE1   | 20:AU:81:PHE:CZ   | 3.04                     | 0.45              |
| 9:AJ:22:LEU:HG    | 9:AJ:63:LYS:HZ2   | 1.82                     | 0.45              |
| 9:AJ:47:CYS:O     | 9:AJ:50:ILE:HB    | 2.17                     | 0.45              |
| 10:AK:49:GLU:O    | 10:AK:59:LEU:HD23 | 2.17                     | 0.45              |
| 11:AL:26:VAL:HG13 | 11:AL:63:ILE:HD13 | 1.98                     | 0.45              |
| 12:AM:36:GLY:O    | 12:AM:38:ILE:N    | 2.49                     | 0.45              |
| 14:AO:26:ALA:HA   | 14:AO:98:TYR:CE2  | 2.51                     | 0.45              |
| 14:AO:69:TYR:HB3  | 14:AO:99:HIS:HB3  | 1.96                     | 0.45              |
| 14:AO:85:ILE:HD11 | 14:AO:99:HIS:H    | 1.73                     | 0.45              |
| 14:AO:126:LYS:CD  | 14:AO:128:ALA:HB3 | 2.45                     | 0.45              |
| 15:AP:81:LEU:O    | 15:AP:84:ILE:CG1  | 2.64                     | 0.45              |
| 16:AQ:4:LYS:HA    | 16:AQ:7:ILE:HD11  | 1.98                     | 0.45              |
| 17:AR:41:GLU:O    | 17:AR:44:LYS:HB2  | 2.15                     | 0.45              |
| 17:AR:71:GLN:HA   | 17:AR:75:PRO:HB3  | 1.99                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 18:AS:21:VAL:HG21 | 18:AS:59:TRP:CE2  | 2.47                     | 0.45              |
| 19:AT:59:ILE:HD11 | 19:AT:71:PHE:CA   | 2.45                     | 0.45              |
| 20:AU:31:LEU:N    | 20:AU:31:LEU:CD1  | 2.79                     | 0.45              |
| 24:BA:111:A:H4'   | 48:B1:60:ASN:CG   | 2.41                     | 0.45              |
| 24:BA:111:A:C2    | 24:BA:112:U:C4    | 3.05                     | 0.45              |
| 24:BA:242:G:C8    | 54:B7:4:MET:HG2   | 2.46                     | 0.45              |
| 24:BA:242:G:C2'   | 24:BA:254:G:N1    | 2.78                     | 0.45              |
| 24:BA:270(S):G:C2 | 24:BA:270(T):G:C8 | 3.04                     | 0.45              |
| 24:BA:287:C:C3'   | 24:BA:288:C:C5    | 2.98                     | 0.45              |
| 24:BA:297:C:H2'   | 24:BA:298:G:C8    | 2.52                     | 0.45              |
| 24:BA:458:G:O2'   | 24:BA:469:G:N1    | 2.47                     | 0.45              |
| 24:BA:459:U:C2'   | 24:BA:460:A:O5'   | 2.64                     | 0.45              |
| 24:BA:579:G:O2'   | 24:BA:2019:A:OP1  | 2.34                     | 0.45              |
| 24:BA:627:A:H2'   | 24:BA:628:G:C1'   | 2.42                     | 0.45              |
| 24:BA:675:A:N7    | 24:BA:804:A:N1    | 2.64                     | 0.45              |
| 24:BA:858:U:O3'   | 24:BA:859:G:O4'   | 2.34                     | 0.45              |
| 24:BA:996:A:N3    | 24:BA:997:G:N7    | 2.64                     | 0.45              |
| 24:BA:997:G:H5''  | 41:BT:92:ARG:CD   | 2.44                     | 0.45              |
| 24:BA:1178:C:N3   | 24:BA:1179:C:N4   | 2.63                     | 0.45              |
| 24:BA:1223:C:C5   | 24:BA:1227:A:N6   | 2.83                     | 0.45              |
| 24:BA:1301:A:C2'  | 24:BA:1302:A:O5'  | 2.64                     | 0.45              |
| 24:BA:1473:G:O6   | 24:BA:1519:G:C4   | 2.69                     | 0.45              |
| 24:BA:1491:G:N2   | 24:BA:1493:C:H41  | 2.13                     | 0.45              |
| 24:BA:1546:C:H6   | 24:BA:1546:C:O5'  | 1.99                     | 0.45              |
| 24:BA:1651:G:O2'  | 24:BA:1652:A:C1'  | 2.64                     | 0.45              |
| 24:BA:1661:G:C6   | 24:BA:1662:C:N4   | 2.84                     | 0.45              |
| 24:BA:1703:G:N2   | 24:BA:1704:G:C1'  | 2.78                     | 0.45              |
| 24:BA:1793:C:N4   | 24:BA:1794:U:O4   | 2.49                     | 0.45              |
| 24:BA:1835:G:N3   | 24:BA:1931:U:C2   | 2.85                     | 0.45              |
| 24:BA:1907:G:C5   | 24:BA:1908:C:C5   | 3.04                     | 0.45              |
| 24:BA:1991:U:C6   | 24:BA:1991:U:C3'  | 2.99                     | 0.45              |
| 24:BA:2016:U:C1'  | 51:B4:6:VAL:CG1   | 2.94                     | 0.45              |
| 24:BA:2082:A:H2'  | 24:BA:2082:A:N3   | 2.31                     | 0.45              |
| 24:BA:2191:G:N2   | 24:BA:2192:G:C4   | 2.83                     | 0.45              |
| 24:BA:2225:A:C4'  | 24:BA:2226:C:H6   | 2.29                     | 0.45              |
| 24:BA:2275:C:O2'  | 37:BP:84:GLY:O    | 2.33                     | 0.45              |
| 24:BA:2286:A:N6   | 52:B5:32:ASN:CA   | 2.78                     | 0.45              |
| 24:BA:2289:G:H5'  | 24:BA:2384:G:C1'  | 2.39                     | 0.45              |
| 24:BA:2319:G:C4'  | 24:BA:2320:A:OP1  | 2.44                     | 0.45              |
| 24:BA:2325:G:C5   | 24:BA:2326:C:C5   | 3.03                     | 0.45              |
| 24:BA:2345:G:N2   | 24:BA:2382:G:OP2  | 2.49                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2400:G:C2   | 24:BA:2417:C:C4    | 3.05                     | 0.45              |
| 24:BA:2459:A:N7   | 24:BA:2493:U:O4    | 2.49                     | 0.45              |
| 24:BA:2468:G:H5'  | 37:BP:120:ILE:HD11 | 1.99                     | 0.45              |
| 24:BA:2500:U:C5'  | 24:BA:2500:U:H6    | 2.29                     | 0.45              |
| 24:BA:2516:G:C6   | 24:BA:2517:C:N4    | 2.84                     | 0.45              |
| 24:BA:2550:G:N1   | 24:BA:2559:C:N3    | 2.65                     | 0.45              |
| 24:BA:2573:C:C6   | 24:BA:2573:C:C3'   | 2.99                     | 0.45              |
| 24:BA:2776:A:H1'  | 24:BA:2778:A:H5''  | 1.98                     | 0.45              |
| 24:BA:2808:U:O2'  | 24:BA:2810:A:O5'   | 2.28                     | 0.45              |
| 26:BC:8:ARG:NE    | 26:BC:12:GLU:OE2   | 2.49                     | 0.45              |
| 26:BC:61:THR:HA   | 26:BC:163:PHE:CE2  | 2.51                     | 0.45              |
| 26:BC:97:GLU:CG   | 26:BC:100:ILE:HD12 | 2.46                     | 0.45              |
| 28:BE:8:LYS:HD3   | 28:BE:8:LYS:C      | 2.42                     | 0.45              |
| 28:BE:50:GLY:CA   | 28:BE:76:ARG:NE    | 2.79                     | 0.45              |
| 28:BE:171:GLU:CD  | 28:BE:173:VAL:H    | 2.24                     | 0.45              |
| 29:BF:7:TYR:N     | 29:BF:20:LEU:HD22  | 2.29                     | 0.45              |
| 29:BF:35:GLU:N    | 29:BF:38:ARG:HD2   | 2.31                     | 0.45              |
| 29:BF:39:TRP:CG   | 29:BF:101:LEU:HG   | 2.52                     | 0.45              |
| 29:BF:43:LYS:HE3  | 29:BF:99:TYR:H     | 1.81                     | 0.45              |
| 29:BF:133:ASN:CG  | 29:BF:162:LEU:CD1  | 2.89                     | 0.45              |
| 29:BF:160:ASN:O   | 29:BF:163:VAL:CB   | 2.49                     | 0.45              |
| 29:BF:170:LEU:HB3 | 29:BF:171:PRO:HD3  | 1.98                     | 0.45              |
| 30:BG:72:ARG:O    | 30:BG:73:ALA:HB2   | 2.16                     | 0.45              |
| 30:BG:77:ILE:O    | 30:BG:78:SER:O     | 2.33                     | 0.45              |
| 30:BG:92:VAL:HG12 | 30:BG:92:VAL:O     | 2.15                     | 0.45              |
| 30:BG:113:ARG:O   | 30:BG:114:ILE:CG2  | 2.62                     | 0.45              |
| 30:BG:124:SER:HG  | 30:BG:133:LEU:HD23 | 1.78                     | 0.45              |
| 31:BH:11:VAL:HG11 | 31:BH:17:VAL:CG2   | 2.46                     | 0.45              |
| 31:BH:119:GLU:H   | 31:BH:121:ILE:HG22 | 1.81                     | 0.45              |
| 32:BK:8:PRO:N     | 32:BK:14:ASP:HA    | 2.30                     | 0.45              |
| 32:BK:100:ALA:O   | 32:BK:101:LEU:C    | 2.57                     | 0.45              |
| 32:BK:114:LEU:H   | 32:BK:131:LYS:HZ1  | 1.63                     | 0.45              |
| 33:BL:106:GLU:HA  | 33:BL:109:LYS:CD   | 2.47                     | 0.45              |
| 34:BM:15:LEU:HD21 | 34:BM:137:LYS:HB3  | 1.94                     | 0.45              |
| 34:BM:23:LEU:HB2  | 34:BM:24:GLY:H     | 1.44                     | 0.45              |
| 34:BM:91:LEU:HA   | 34:BM:95:PRO:N     | 2.32                     | 0.45              |
| 35:BN:18:LYS:NZ   | 35:BN:44:LYS:CD    | 2.79                     | 0.45              |
| 35:BN:34:THR:O    | 35:BN:37:ASP:HB2   | 2.16                     | 0.45              |
| 35:BN:37:ASP:C    | 35:BN:61:VAL:HG23  | 2.41                     | 0.45              |
| 35:BN:78:ARG:N    | 35:BN:78:ARG:NE    | 2.65                     | 0.45              |
| 36:BO:70:GLN:C    | 36:BO:71:VAL:HG23  | 2.40                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 36:BO:125:VAL:O    | 36:BO:130:PHE:HZ  | 1.98                     | 0.45              |
| 37:BP:62:GLY:N     | 46:BY:177:PRO:HA  | 2.31                     | 0.45              |
| 38:BQ:5:LYS:CA     | 38:BQ:5:LYS:CE    | 2.92                     | 0.45              |
| 38:BQ:67:LEU:C     | 38:BQ:69:ASP:N    | 2.71                     | 0.45              |
| 39:BR:9:ARG:CA     | 39:BR:12:PHE:CD2  | 2.99                     | 0.45              |
| 39:BR:81:GLY:C     | 39:BR:82:ILE:HG12 | 2.40                     | 0.45              |
| 39:BR:101:LEU:HD13 | 39:BR:101:LEU:C   | 2.41                     | 0.45              |
| 41:BT:27:LEU:HD11  | 51:B4:12:SER:HB2  | 1.98                     | 0.45              |
| 41:BT:104:GLN:O    | 41:BT:105:VAL:C   | 2.59                     | 0.45              |
| 41:BT:112:ARG:O    | 41:BT:113:ALA:C   | 2.60                     | 0.45              |
| 42:BU:40:LEU:N     | 42:BU:54:GLY:CA   | 2.79                     | 0.45              |
| 42:BU:56:SER:O     | 42:BU:57:VAL:HG23 | 2.16                     | 0.45              |
| 42:BU:79:VAL:CG1   | 42:BU:81:TYR:HD1  | 2.29                     | 0.45              |
| 43:BV:10:VAL:CG2   | 43:BV:12:ILE:HD11 | 2.46                     | 0.45              |
| 43:BV:98:LYS:C     | 43:BV:98:LYS:HE2  | 2.42                     | 0.45              |
| 45:BX:74:PRO:HD2   | 45:BX:76:CYS:O    | 2.15                     | 0.45              |
| 45:BX:81:LYS:CG    | 45:BX:96:ILE:HG23 | 2.38                     | 0.45              |
| 46:BY:59:LEU:C     | 46:BY:59:LEU:CD2  | 2.89                     | 0.45              |
| 48:B1:1:MET:H1     | 48:B1:2:ARG:HH12  | 1.65                     | 0.45              |
| 49:B2:51:ALA:O     | 49:B2:52:HIS:C    | 2.58                     | 0.45              |
| 49:B2:55:ARG:CZ    | 49:B2:55:ARG:CA   | 2.90                     | 0.45              |
| 50:B3:49:PHE:N     | 50:B3:49:PHE:CD1  | 2.84                     | 0.45              |
| 52:B5:16:CYS:HB3   | 52:B5:49:HIS:CE1  | 2.51                     | 0.45              |
| 52:B5:33:LYS:HZ3   | 52:B5:34:LEU:HD23 | 1.81                     | 0.45              |
| 55:B8:20:HIS:ND1   | 55:B8:20:HIS:N    | 2.65                     | 0.45              |
| 1:AA:27:G:H8       | 1:AA:27:G:OP2     | 1.98                     | 0.45              |
| 1:AA:134:A:H2'     | 1:AA:135:C:O5'    | 2.16                     | 0.45              |
| 1:AA:255:G:C1'     | 19:AT:16:GLN:HB2  | 2.46                     | 0.45              |
| 1:AA:307:C:N4      | 1:AA:308:C:N4     | 2.58                     | 0.45              |
| 1:AA:415:A:H2'     | 1:AA:416:G:O4'    | 2.16                     | 0.45              |
| 1:AA:416:G:O6      | 1:AA:428:G:O6     | 2.34                     | 0.45              |
| 1:AA:450:G:OP1     | 1:AA:452:A:P      | 2.74                     | 0.45              |
| 1:AA:483:C:C6      | 1:AA:483:C:C3'    | 3.00                     | 0.45              |
| 1:AA:540:G:H21     | 6:AG:42:GLN:CD    | 2.25                     | 0.45              |
| 1:AA:752:G:O2'     | 1:AA:753:A:P      | 2.75                     | 0.45              |
| 1:AA:918:A:O2'     | 1:AA:919:A:P      | 2.74                     | 0.45              |
| 1:AA:951:G:O2'     | 1:AA:970:C:O2'    | 2.31                     | 0.45              |
| 1:AA:1018:C:H2'    | 1:AA:1019:C:O4'   | 2.16                     | 0.45              |
| 1:AA:1055:A:O2'    | 1:AA:1056:U:OP1   | 2.26                     | 0.45              |
| 1:AA:1068:G:O6     | 1:AA:1108:G:N3    | 2.49                     | 0.45              |
| 1:AA:1114:C:O2'    | 16:AQ:60:SER:CB   | 2.65                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1118:C:O4'   | 1:AA:1179:A:C1'   | 2.65                     | 0.45              |
| 1:AA:1176:A:C6    | 1:AA:1177:G:C6    | 3.04                     | 0.45              |
| 1:AA:1186:G:H4'   | 11:AL:110:GLU:HG3 | 1.99                     | 0.45              |
| 1:AA:1188:A:H2'   | 1:AA:1188:A:N3    | 2.30                     | 0.45              |
| 1:AA:1191:A:N3    | 1:AA:1191:A:C2'   | 2.79                     | 0.45              |
| 1:AA:1287:A:N6    | 1:AA:1371:G:C4'   | 2.77                     | 0.45              |
| 1:AA:1317:C:C2    | 16:AQ:16:PHE:CZ   | 3.04                     | 0.45              |
| 1:AA:1409:C:H2'   | 1:AA:1410:G:H8    | 1.81                     | 0.45              |
| 1:AA:1429:C:H2'   | 1:AA:1430:C:C5    | 2.50                     | 0.45              |
| 1:AA:1466:C:C2'   | 1:AA:1467:G:C8    | 2.98                     | 0.45              |
| 1:AA:1523:G:C6    | 1:AA:1524:C:C4    | 3.04                     | 0.45              |
| 1:AA:1537:U:H2'   | 1:AA:1538:C:H6    | 1.81                     | 0.45              |
| 3:AC:46:G:OP2     | 3:AC:46:G:H8      | 1.98                     | 0.45              |
| 3:AC:53:G:C2      | 3:AC:62:C:N3      | 2.84                     | 0.45              |
| 3:AC:74:C:H2'     | 3:AC:75:C:C4'     | 2.47                     | 0.45              |
| 3:AD:28:G:H2'     | 3:AD:29:G:C8      | 2.35                     | 0.45              |
| 4:AE:143:GLU:CD   | 4:AE:144:ARG:N    | 2.75                     | 0.45              |
| 4:AE:186:ALA:O    | 4:AE:201:ILE:CD1  | 2.64                     | 0.45              |
| 4:AE:223:ILE:HA   | 4:AE:226:ARG:CD   | 2.46                     | 0.45              |
| 5:AF:182:ILE:CD1  | 5:AF:203:PHE:HD1  | 2.29                     | 0.45              |
| 6:AG:13:ARG:CA    | 6:AG:32:ALA:HB2   | 2.47                     | 0.45              |
| 6:AG:30:LYS:HZ3   | 6:AG:35:ARG:HD2   | 1.80                     | 0.45              |
| 6:AG:121:VAL:HG11 | 6:AG:136:PRO:CA   | 2.45                     | 0.45              |
| 7:AH:43:LEU:HB3   | 7:AH:136:MET:HE1  | 1.98                     | 0.45              |
| 9:AJ:20:ASP:OD1   | 9:AJ:23:VAL:HG23  | 2.17                     | 0.45              |
| 9:AJ:38:LEU:O     | 9:AJ:42:ILE:HG13  | 2.16                     | 0.45              |
| 10:AK:28:ALA:HA   | 10:AK:59:LEU:HD12 | 1.98                     | 0.45              |
| 11:AL:7:THR:HG21  | 11:AL:9:ARG:NH1   | 2.30                     | 0.45              |
| 11:AL:75:ASP:O    | 11:AL:78:LYS:N    | 2.50                     | 0.45              |
| 14:AO:26:ALA:C    | 14:AO:27:LEU:O    | 2.52                     | 0.45              |
| 14:AO:48:PRO:CD   | 14:AO:49:ASN:H    | 2.29                     | 0.45              |
| 14:AO:86:ARG:HD3  | 14:AO:101:VAL:CG1 | 2.47                     | 0.45              |
| 17:AR:21:ASP:OD2  | 17:AR:24:SER:HB3  | 2.17                     | 0.45              |
| 19:AT:101:ARG:HG2 | 19:AT:102:GLY:H   | 1.82                     | 0.45              |
| 21:AV:36:ARG:HB2  | 21:AV:71:LEU:CB   | 2.45                     | 0.45              |
| 22:AW:40:ALA:HB2  | 22:AW:55:ILE:HG22 | 1.95                     | 0.45              |
| 22:AW:63:ILE:HG23 | 22:AW:72:LEU:CD1  | 2.47                     | 0.45              |
| 24:BA:25:U:C2     | 24:BA:26:G:N7     | 2.84                     | 0.45              |
| 24:BA:58:G:H2'    | 24:BA:73:A:C2     | 2.44                     | 0.45              |
| 24:BA:163:U:C5    | 24:BA:171:G:H1'   | 2.51                     | 0.45              |
| 24:BA:174:C:C4    | 24:BA:175:G:N7    | 2.85                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:199:A:N1     | 24:BA:2433:A:N3    | 2.63                     | 0.45              |
| 24:BA:249:C:C2'    | 24:BA:250:G:OP2    | 2.65                     | 0.45              |
| 24:BA:270(M):U:O3' | 24:BA:270(N):G:H4' | 2.16                     | 0.45              |
| 24:BA:273(E):U:N1  | 24:BA:363(B):G:N2  | 2.63                     | 0.45              |
| 24:BA:281:G:H2'    | 24:BA:282:A:OP2    | 2.16                     | 0.45              |
| 24:BA:311:A:H2     | 24:BA:331:A:H5''   | 1.80                     | 0.45              |
| 24:BA:363(B):G:O2' | 24:BA:363(C):G:O5' | 2.31                     | 0.45              |
| 24:BA:450:G:H3'    | 24:BA:451:C:C5'    | 2.47                     | 0.45              |
| 24:BA:489:G:C4     | 24:BA:491:G:C8     | 3.04                     | 0.45              |
| 24:BA:511:U:C5     | 24:BA:512:G:C4     | 3.03                     | 0.45              |
| 24:BA:596:G:C6     | 24:BA:597:U:N3     | 2.85                     | 0.45              |
| 24:BA:610:C:H2'    | 24:BA:611:C:H6     | 1.80                     | 0.45              |
| 24:BA:668:G:C6     | 24:BA:670:A:C5     | 3.04                     | 0.45              |
| 24:BA:699:A:N6     | 24:BA:734:A:C8     | 2.85                     | 0.45              |
| 24:BA:749:C:C2     | 24:BA:1618:A:C5    | 3.04                     | 0.45              |
| 24:BA:826:U:N3     | 24:BA:828:U:H6     | 2.15                     | 0.45              |
| 24:BA:972:G:C8     | 24:BA:973:A:C8     | 3.04                     | 0.45              |
| 24:BA:994:C:H5''   | 24:BA:995:C:OP1    | 2.17                     | 0.45              |
| 24:BA:1194:A:C6    | 24:BA:1195:G:C5    | 3.05                     | 0.45              |
| 24:BA:1202:C:N4    | 24:BA:1241:A:N7    | 2.65                     | 0.45              |
| 24:BA:1361:G:C4    | 24:BA:1362:C:C5    | 3.04                     | 0.45              |
| 24:BA:1410:G:C2    | 24:BA:1593:G:C2    | 3.04                     | 0.45              |
| 24:BA:1453:A:C8    | 38:BQ:73:VAL:HG11  | 2.51                     | 0.45              |
| 24:BA:1556:C:O2'   | 24:BA:1557:C:H5'   | 2.16                     | 0.45              |
| 24:BA:1657:C:C2'   | 24:BA:1658:C:O4'   | 2.62                     | 0.45              |
| 24:BA:1667:G:O3'   | 35:BN:7:TYR:CZ     | 2.68                     | 0.45              |
| 24:BA:1827:C:H5'   | 24:BA:1971:A:H4'   | 1.97                     | 0.45              |
| 24:BA:1999:C:O2'   | 24:BA:2000:G:H5'   | 2.17                     | 0.45              |
| 24:BA:2073:C:C3'   | 24:BA:2074:U:H5'   | 2.46                     | 0.45              |
| 24:BA:2129:C:OP2   | 26:BC:6:ARG:HG2    | 2.17                     | 0.45              |
| 24:BA:2129:C:P     | 26:BC:6:ARG:HG3    | 2.56                     | 0.45              |
| 24:BA:2150:U:C2    | 24:BA:2151:G:C8    | 3.05                     | 0.45              |
| 24:BA:2183:C:O2    | 24:BA:2183:C:C2'   | 2.64                     | 0.45              |
| 24:BA:2218:G:C4    | 24:BA:2219:G:C8    | 3.04                     | 0.45              |
| 24:BA:2246:G:N3    | 24:BA:2247:A:C8    | 2.84                     | 0.45              |
| 24:BA:2345:G:N2    | 24:BA:2381:C:H3'   | 2.31                     | 0.45              |
| 24:BA:2346:A:H5'   | 24:BA:2383:G:C4'   | 2.46                     | 0.45              |
| 24:BA:2414:G:N1    | 24:BA:2415:G:N7    | 2.65                     | 0.45              |
| 24:BA:2432:A:N7    | 24:BA:2433:A:C6    | 2.85                     | 0.45              |
| 24:BA:2491:U:H6    | 24:BA:2492:U:P     | 2.33                     | 0.45              |
| 24:BA:2494:G:O2'   | 37:BP:81:VAL:O     | 2.24                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2510:C:H5''  | 24:BA:2511:U:OP2   | 2.17                     | 0.45              |
| 24:BA:2629:A:N6    | 24:BA:2895:U:O2    | 2.50                     | 0.45              |
| 24:BA:2633:G:H8    | 24:BA:2633:G:O5'   | 1.98                     | 0.45              |
| 24:BA:2659:G:C1'   | 24:BA:2661:G:OP2   | 2.64                     | 0.45              |
| 24:BA:2689:U:H4'   | 24:BA:2690:C:O5'   | 2.17                     | 0.45              |
| 24:BA:2820:A:OP1   | 38:BQ:5:LYS:HG2    | 2.16                     | 0.45              |
| 24:BA:2876:G:N3    | 24:BA:2877:G:C8    | 2.84                     | 0.45              |
| 24:BA:2892:A:H2'   | 24:BA:2893:G:C1'   | 2.45                     | 0.45              |
| 25:BB:24:G:C5'     | 25:BB:25:A:H5'     | 2.45                     | 0.45              |
| 25:BB:30:C:C5      | 25:BB:31:C:C6      | 3.05                     | 0.45              |
| 25:BB:37:C:O2      | 25:BB:49:C:H5'     | 2.16                     | 0.45              |
| 25:BB:99:A:C2      | 25:BB:100:G:N9     | 2.85                     | 0.45              |
| 26:BC:87:GLU:HG3   | 26:BC:94:VAL:CB    | 2.46                     | 0.45              |
| 26:BC:93:TYR:CD1   | 26:BC:107:TRP:HZ2  | 2.34                     | 0.45              |
| 26:BC:189:ILE:HD13 | 26:BC:224:ILE:HD13 | 1.96                     | 0.45              |
| 26:BC:199:HIS:O    | 26:BC:200:LYS:C    | 2.59                     | 0.45              |
| 27:BD:106:ILE:HD12 | 27:BD:192:THR:HG23 | 1.93                     | 0.45              |
| 28:BE:27:LEU:HD13  | 28:BE:76:ARG:HH12  | 1.81                     | 0.45              |
| 28:BE:163:GLU:OE1  | 28:BE:163:GLU:N    | 2.50                     | 0.45              |
| 29:BF:34:TRP:CD1   | 36:BO:8:PRO:O      | 2.69                     | 0.45              |
| 29:BF:118:ALA:C    | 29:BF:122:LYS:HB2  | 2.41                     | 0.45              |
| 30:BG:18:GLU:HB3   | 30:BG:19:LEU:HD12  | 1.98                     | 0.45              |
| 30:BG:103:LEU:HD11 | 30:BG:107:LEU:HD23 | 1.98                     | 0.45              |
| 30:BG:125:PHE:HD1  | 30:BG:131:TYR:C    | 2.23                     | 0.45              |
| 30:BG:128:ARG:NH1  | 30:BG:162:THR:HA   | 2.28                     | 0.45              |
| 31:BH:42:ARG:NE    | 31:BH:42:ARG:CA    | 2.71                     | 0.45              |
| 32:BK:33:ARG:HB3   | 32:BK:35:LEU:HD21  | 1.97                     | 0.45              |
| 33:BL:67:PHE:CD2   | 33:BL:68:VAL:HG22  | 2.50                     | 0.45              |
| 33:BL:117:THR:O    | 33:BL:118:THR:CB   | 2.64                     | 0.45              |
| 34:BM:23:LEU:HD23  | 34:BM:61:ARG:O     | 2.12                     | 0.45              |
| 34:BM:99:LEU:CD1   | 34:BM:103:VAL:HG11 | 2.46                     | 0.45              |
| 34:BM:109:LYS:HE3  | 34:BM:111:PRO:CD   | 2.46                     | 0.45              |
| 35:BN:59:LYS:CB    | 35:BN:85:VAL:HA    | 2.46                     | 0.45              |
| 35:BN:112:MET:HA   | 35:BN:115:VAL:HG23 | 1.98                     | 0.45              |
| 37:BP:126:PRO:HD2  | 37:BP:127:ILE:HD11 | 1.98                     | 0.45              |
| 38:BQ:72:ASP:C     | 38:BQ:76:VAL:HG23  | 2.42                     | 0.45              |
| 39:BR:39:ILE:HD11  | 39:BR:76:LYS:CE    | 2.46                     | 0.45              |
| 39:BR:49:VAL:HG21  | 39:BR:80:LEU:CG    | 2.47                     | 0.45              |
| 39:BR:70:GLY:C     | 39:BR:72:ALA:N     | 2.68                     | 0.45              |
| 40:BS:7:ILE:O      | 40:BS:10:VAL:N     | 2.49                     | 0.45              |
| 40:BS:58:ASN:CA    | 40:BS:61:PHE:CE2   | 2.99                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 40:BS:72:VAL:HG12  | 40:BS:73:GLU:N     | 2.31                     | 0.45              |
| 40:BS:111:ARG:HA   | 40:BS:114:LEU:CG   | 2.47                     | 0.45              |
| 40:BS:114:LEU:O    | 40:BS:115:ARG:C    | 2.59                     | 0.45              |
| 41:BT:11:ARG:CG    | 41:BT:12:ARG:N     | 2.80                     | 0.45              |
| 41:BT:88:ILE:N     | 42:BU:52:VAL:CG2   | 2.71                     | 0.45              |
| 44:BW:83:VAL:HG21  | 44:BW:86:GLY:HA2   | 1.97                     | 0.45              |
| 45:BX:31:LEU:CB    | 45:BX:32:PRO:CD    | 2.88                     | 0.45              |
| 45:BX:49:VAL:HG23  | 45:BX:52:SER:H     | 1.82                     | 0.45              |
| 45:BX:54:LYS:O     | 45:BX:56:PRO:HD3   | 2.16                     | 0.45              |
| 46:BY:45:ASP:O     | 46:BY:47:VAL:N     | 2.49                     | 0.45              |
| 46:BY:66:SER:O     | 46:BY:67:LEU:HD23  | 2.17                     | 0.45              |
| 46:BY:111:VAL:C    | 46:BY:113:ALA:H    | 2.22                     | 0.45              |
| 46:BY:138:GLU:O    | 46:BY:139:VAL:HG22 | 2.16                     | 0.45              |
| 46:BY:163:LEU:HD12 | 46:BY:163:LEU:N    | 2.30                     | 0.45              |
| 49:B2:15:TYR:O     | 49:B2:20:LYS:HD2   | 2.16                     | 0.45              |
| 49:B2:23:LEU:HD12  | 49:B2:50:VAL:HG21  | 1.97                     | 0.45              |
| 49:B2:42:ALA:O     | 49:B2:43:ILE:C     | 2.59                     | 0.45              |
| 50:B3:59:PHE:O     | 50:B3:61:ARG:N     | 2.49                     | 0.45              |
| 51:B4:34:PRO:CG    | 51:B4:40:LYS:HZ1   | 2.29                     | 0.45              |
| 52:B5:27:LYS:CE    | 52:B5:29:ASN:HD21  | 2.29                     | 0.45              |
| 53:B6:8:ASN:CG     | 53:B6:10:ARG:HB2   | 2.41                     | 0.45              |
| 54:B7:38:GLY:C     | 54:B7:41:ILE:HG12  | 2.41                     | 0.45              |
| 54:B7:53:PRO:C     | 54:B7:56:GLU:OE2   | 2.59                     | 0.45              |
| 1:AA:50:A:N1       | 1:AA:361:G:O4'     | 2.50                     | 0.45              |
| 1:AA:99:C:H2'      | 1:AA:101:A:C8      | 2.52                     | 0.45              |
| 1:AA:102:G:N3      | 1:AA:151:A:H2      | 2.14                     | 0.45              |
| 1:AA:136:C:H4'     | 18:AS:65:GLN:OE1   | 2.16                     | 0.45              |
| 1:AA:151:A:O2'     | 1:AA:152:A:H5'     | 2.16                     | 0.45              |
| 1:AA:251:G:O4'     | 1:AA:252:U:C5      | 2.70                     | 0.45              |
| 1:AA:261:U:H5      | 22:AW:79:ARG:NH1   | 2.15                     | 0.45              |
| 1:AA:299:G:C2      | 1:AA:300:A:C6      | 3.05                     | 0.45              |
| 1:AA:539:A:C6      | 1:AA:540:G:C6      | 3.04                     | 0.45              |
| 1:AA:564:C:OP1     | 14:AO:15:ARG:NE    | 2.50                     | 0.45              |
| 1:AA:710:G:C2      | 1:AA:711:G:C8      | 3.04                     | 0.45              |
| 1:AA:737:A:O2'     | 1:AA:738:C:C5'     | 2.65                     | 0.45              |
| 1:AA:750:G:O2'     | 17:AR:23:GLY:O     | 2.35                     | 0.45              |
| 1:AA:791:G:N2      | 1:AA:1497:G:H4'    | 2.31                     | 0.45              |
| 1:AA:833:U:C2'     | 1:AA:834:C:H6      | 2.30                     | 0.45              |
| 1:AA:902:G:H2'     | 1:AA:903:G:C8      | 2.50                     | 0.45              |
| 1:AA:934:C:N4      | 1:AA:939:G:N1      | 2.64                     | 0.45              |
| 1:AA:942:G:H21     | 11:AL:124:GLN:CD   | 2.23                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:AA:966:G:O2'   | 1:AA:967:C:O5'    | 2.34                     | 0.45              |
| 1:AA:1003:G:O5'  | 1:AA:1003:G:C8    | 2.67                     | 0.45              |
| 1:AA:1048:G:OP1  | 16:AQ:3:ARG:HD2   | 2.17                     | 0.45              |
| 1:AA:1061:G:N2   | 1:AA:1197:G:C4    | 2.83                     | 0.45              |
| 1:AA:1076:C:C2   | 1:AA:1077:G:C8    | 3.04                     | 0.45              |
| 1:AA:1082:G:O2'  | 1:AA:1083:U:H5'   | 2.16                     | 0.45              |
| 1:AA:1231:G:H2'  | 1:AA:1232:U:C6    | 2.50                     | 0.45              |
| 1:AA:1343:G:H5'  | 11:AL:124:GLN:HA  | 1.97                     | 0.45              |
| 1:AA:1353:G:OP2  | 23:AX:3:LYS:NZ    | 2.47                     | 0.45              |
| 1:AA:1401:G:C2'  | 1:AA:1402:C:H5'   | 2.46                     | 0.45              |
| 1:AA:1477:C:N4   | 1:AA:1478:C:N4    | 2.64                     | 0.45              |
| 1:AA:1496:C:O5'  | 1:AA:1496:C:H6    | 2.00                     | 0.45              |
| 2:A1:29:G:C3'    | 2:A1:30:U:C5'     | 2.92                     | 0.45              |
| 2:A1:35:U:OP2    | 2:A1:35:U:H5      | 2.00                     | 0.45              |
| 3:AC:9:A:H4'     | 3:AC:10:G:OP2     | 2.16                     | 0.45              |
| 3:AC:19:G:H5''   | 3:AC:20:U:O4      | 2.16                     | 0.45              |
| 3:AC:34:G:OP1    | 3:AC:34:G:H8      | 2.00                     | 0.45              |
| 3:AD:39:U:H2'    | 3:AD:40:C:H6      | 1.74                     | 0.45              |
| 4:AE:28:PHE:HE1  | 4:AE:31:TYR:O     | 1.99                     | 0.45              |
| 4:AE:56:ARG:NH1  | 4:AE:56:ARG:CB    | 2.54                     | 0.45              |
| 4:AE:109:SER:O   | 4:AE:111:ARG:N    | 2.49                     | 0.45              |
| 4:AE:115:LEU:HB2 | 4:AE:145:LEU:HD21 | 1.97                     | 0.45              |
| 5:AF:15:THR:CB   | 5:AF:181:ASN:HA   | 2.46                     | 0.45              |
| 5:AF:21:ARG:HB2  | 5:AF:58:GLU:CG    | 2.40                     | 0.45              |
| 5:AF:30:ARG:HG2  | 5:AF:30:ARG:HH11  | 1.81                     | 0.45              |
| 5:AF:186:PHE:CD1 | 5:AF:187:ALA:N    | 2.85                     | 0.45              |
| 6:AG:187:ARG:CG  | 6:AG:188:LEU:N    | 2.79                     | 0.45              |
| 7:AH:5:ASP:HB3   | 7:AH:6:PHE:H      | 1.61                     | 0.45              |
| 7:AH:79:GLU:HA   | 7:AH:91:LEU:HD23  | 1.98                     | 0.45              |
| 7:AH:107:ARG:HB2 | 7:AH:107:ARG:NH1  | 2.29                     | 0.45              |
| 9:AJ:5:ARG:HB3   | 9:AJ:5:ARG:CZ     | 2.45                     | 0.45              |
| 10:AK:75:ARG:HA  | 10:AK:76:PRO:HD3  | 1.70                     | 0.45              |
| 11:AL:46:ALA:HB1 | 11:AL:77:ILE:HG22 | 1.97                     | 0.45              |
| 12:AM:26:ALA:O   | 12:AM:84:GLN:CD   | 2.59                     | 0.45              |
| 12:AM:33:GLN:O   | 12:AM:34:VAL:HB   | 2.17                     | 0.45              |
| 12:AM:70:ARG:HD3 | 12:AM:70:ARG:HA   | 1.79                     | 0.45              |
| 13:AN:73:MET:C   | 13:AN:75:TYR:N    | 2.74                     | 0.45              |
| 14:AO:79:GLU:H   | 14:AO:79:GLU:HG3  | 1.60                     | 0.45              |
| 14:AO:88:GLY:O   | 14:AO:99:HIS:CD2  | 2.70                     | 0.45              |
| 15:AP:91:ARG:C   | 15:AP:98:VAL:HG22 | 2.41                     | 0.45              |
| 16:AQ:23:ARG:CA  | 16:AQ:33:VAL:HG21 | 2.46                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 18:AS:1:MET:CB    | 18:AS:3:LYS:HZ1  | 2.29                     | 0.45              |
| 18:AS:29:ASP:O    | 18:AS:30:GLY:O   | 2.35                     | 0.45              |
| 19:AT:87:LYS:C    | 19:AT:91:ARG:HE  | 2.24                     | 0.45              |
| 22:AW:47:GLY:O    | 22:AW:49:ALA:N   | 2.45                     | 0.45              |
| 24:BA:22:C:H2'    | 24:BA:23:G:O5'   | 2.17                     | 0.45              |
| 24:BA:48:G:C2     | 24:BA:178:G:C6   | 3.05                     | 0.45              |
| 24:BA:107:C:C5'   | 24:BA:293:U:O4'  | 2.65                     | 0.45              |
| 24:BA:131:G:C2    | 24:BA:132:G:N7   | 2.84                     | 0.45              |
| 24:BA:154:G:H1    | 24:BA:173:G:H1   | 1.61                     | 0.45              |
| 24:BA:182:A:O2'   | 24:BA:183:C:C5'  | 2.64                     | 0.45              |
| 24:BA:223:A:C2    | 24:BA:407:G:N3   | 2.85                     | 0.45              |
| 24:BA:280:C:C5    | 24:BA:283:A:N7   | 2.84                     | 0.45              |
| 24:BA:308:G:N2    | 24:BA:309:G:O2'  | 2.50                     | 0.45              |
| 24:BA:323:G:OP2   | 24:BA:340:A:N1   | 2.49                     | 0.45              |
| 24:BA:348:G:H2'   | 24:BA:349:G:C8   | 2.48                     | 0.45              |
| 24:BA:383:U:O2    | 24:BA:385:C:N4   | 2.43                     | 0.45              |
| 24:BA:416:C:C6    | 24:BA:416:C:C3'  | 2.99                     | 0.45              |
| 24:BA:564:C:OP1   | 42:BU:80:GLN:HB3 | 2.16                     | 0.45              |
| 24:BA:573:G:H2'   | 24:BA:574:C:H3'  | 1.97                     | 0.45              |
| 24:BA:662:G:H2'   | 24:BA:663:G:C8   | 2.51                     | 0.45              |
| 24:BA:686:G:O6    | 53:B6:12:ARG:NE  | 2.50                     | 0.45              |
| 24:BA:692:C:HO2'  | 24:BA:693:C:H5'  | 1.82                     | 0.45              |
| 24:BA:727:A:H61   | 24:BA:729:G:H1   | 1.63                     | 0.45              |
| 24:BA:836:G:C5    | 24:BA:837:C:C5   | 3.05                     | 0.45              |
| 24:BA:856:C:O4'   | 47:BZ:69:PHE:HD1 | 1.99                     | 0.45              |
| 24:BA:955:C:N4    | 24:BA:956:G:C2   | 2.85                     | 0.45              |
| 24:BA:1069:A:N7   | 24:BA:1073:A:N7  | 2.65                     | 0.45              |
| 24:BA:1101:U:H2'  | 24:BA:1101:U:O2  | 2.16                     | 0.45              |
| 24:BA:1128:A:N1   | 24:BA:1129:A:C6  | 2.84                     | 0.45              |
| 24:BA:1131:G:C2   | 24:BA:1132:A:C5  | 3.05                     | 0.45              |
| 24:BA:1139:G:H5'  | 34:BM:24:GLY:HA3 | 1.98                     | 0.45              |
| 24:BA:1210:A:H5'' | 24:BA:1211:U:O5' | 2.16                     | 0.45              |
| 24:BA:1264:G:C6   | 24:BA:1265:A:C6  | 3.03                     | 0.45              |
| 24:BA:1325:G:H21  | 43:BV:86:LEU:CD1 | 2.18                     | 0.45              |
| 24:BA:1339:G:C1'  | 24:BA:1393:A:C2  | 2.99                     | 0.45              |
| 24:BA:1342:A:C8   | 24:BA:1342:A:O5' | 2.69                     | 0.45              |
| 24:BA:1511:A:C2'  | 24:BA:1512:G:C5' | 2.88                     | 0.45              |
| 24:BA:1529:A:H2'  | 24:BA:1530:G:O4' | 2.17                     | 0.45              |
| 24:BA:1781:C:C2'  | 24:BA:1782:C:OP2 | 2.65                     | 0.45              |
| 24:BA:1783:A:C5'  | 24:BA:1784:A:OP1 | 2.57                     | 0.45              |
| 24:BA:1799:G:C5   | 24:BA:1819:A:N7  | 2.84                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1804:C:C2'   | 24:BA:1805:U:O5'   | 2.64                     | 0.45              |
| 24:BA:1819:A:HO2'  | 24:BA:1820:U:C5'   | 2.29                     | 0.45              |
| 24:BA:1829:A:N3    | 24:BA:1830:C:O4'   | 2.50                     | 0.45              |
| 24:BA:2025:C:C2    | 24:BA:2026:C:C5    | 3.04                     | 0.45              |
| 24:BA:2027:G:N2    | 24:BA:2028:U:H1'   | 2.32                     | 0.45              |
| 24:BA:2032:G:H22   | 24:BA:2499:C:N4    | 2.14                     | 0.45              |
| 24:BA:2052:G:C8    | 28:BE:150:VAL:HG23 | 2.52                     | 0.45              |
| 24:BA:2092:U:OP1   | 24:BA:2199:A:O2'   | 2.30                     | 0.45              |
| 24:BA:2175:C:N3    | 24:BA:2176:A:N7    | 2.64                     | 0.45              |
| 24:BA:2194:G:C3'   | 24:BA:2195:C:H5    | 2.30                     | 0.45              |
| 24:BA:2198:A:H2    | 24:BA:2225:A:H62   | 1.64                     | 0.45              |
| 24:BA:2205:C:H2'   | 24:BA:2206:C:C6    | 2.52                     | 0.45              |
| 24:BA:2239:G:C3'   | 24:BA:2240:C:C5'   | 2.87                     | 0.45              |
| 24:BA:2244:U:H2'   | 24:BA:2244:U:O2    | 2.16                     | 0.45              |
| 24:BA:2260:C:H2'   | 24:BA:2261:C:H6    | 1.80                     | 0.45              |
| 24:BA:2309:A:N6    | 30:BG:80:PHE:CE1   | 2.85                     | 0.45              |
| 24:BA:2323:G:N2    | 24:BA:2324:C:N3    | 2.64                     | 0.45              |
| 24:BA:2431:U:OP2   | 24:BA:2432:A:P     | 2.75                     | 0.45              |
| 24:BA:2439:A:H2'   | 24:BA:2439:A:N3    | 2.32                     | 0.45              |
| 24:BA:2482:G:N7    | 24:BA:2483:C:C5    | 2.84                     | 0.45              |
| 24:BA:2484:G:O2'   | 24:BA:2485:G:H5'   | 2.17                     | 0.45              |
| 24:BA:2533:A:H5''  | 24:BA:2665:A:C5'   | 2.36                     | 0.45              |
| 24:BA:2553:G:N7    | 24:BA:2583:G:C4'   | 2.67                     | 0.45              |
| 24:BA:2588:G:C6    | 24:BA:2607:G:O6    | 2.70                     | 0.45              |
| 24:BA:2606:C:C2    | 24:BA:2607:G:N7    | 2.85                     | 0.45              |
| 24:BA:2745:C:N4    | 24:BA:2746:U:O4    | 2.49                     | 0.45              |
| 24:BA:2756:U:O2'   | 24:BA:2757:A:H5''  | 2.16                     | 0.45              |
| 24:BA:2776:A:N7    | 24:BA:2781:A:C6    | 2.84                     | 0.45              |
| 24:BA:2834:G:C4    | 24:BA:2879:C:N4    | 2.85                     | 0.45              |
| 24:BA:2836:U:C6    | 24:BA:2883:A:N6    | 2.84                     | 0.45              |
| 24:BA:2848:G:C8    | 40:BS:99:LEU:HD13  | 2.47                     | 0.45              |
| 25:BB:49:C:C2      | 25:BB:50:G:C8      | 3.05                     | 0.45              |
| 25:BB:104:A:H3'    | 25:BB:105:G:O4'    | 2.16                     | 0.45              |
| 26:BC:114:VAL:HG23 | 26:BC:114:VAL:O    | 2.17                     | 0.45              |
| 27:BD:61:LEU:HB3   | 27:BD:62:TYR:H     | 1.44                     | 0.45              |
| 27:BD:89:SER:OG    | 27:BD:158:ALA:CB   | 2.56                     | 0.45              |
| 27:BD:181:GLU:CG   | 27:BD:268:ARG:NE   | 2.79                     | 0.45              |
| 27:BD:208:LYS:HE2  | 27:BD:211:ARG:HG2  | 1.98                     | 0.45              |
| 27:BD:257:LEU:HD23 | 27:BD:257:LEU:HA   | 1.61                     | 0.45              |
| 27:BD:260:ARG:HH11 | 27:BD:260:ARG:HG3  | 1.78                     | 0.45              |
| 28:BE:8:LYS:HD3    | 28:BE:9:VAL:CB     | 2.47                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 28:BE:15:PHE:O    | 28:BE:16:ARG:O     | 2.33                     | 0.45              |
| 28:BE:103:ASP:HA  | 28:BE:170:LEU:HD21 | 1.98                     | 0.45              |
| 29:BF:80:ALA:O    | 29:BF:83:PHE:HD2   | 2.00                     | 0.45              |
| 30:BG:42:GLY:O    | 30:BG:43:LEU:O     | 2.34                     | 0.45              |
| 30:BG:44:GLY:HA3  | 30:BG:88:ILE:CG2   | 2.46                     | 0.45              |
| 30:BG:56:ALA:O    | 30:BG:68:PRO:HD2   | 2.17                     | 0.45              |
| 30:BG:95:ARG:O    | 30:BG:95:ARG:HG3   | 2.16                     | 0.45              |
| 31:BH:6:ARG:C     | 31:BH:69:ARG:NE    | 2.70                     | 0.45              |
| 31:BH:20:ALA:HB3  | 31:BH:21:PRO:CD    | 2.46                     | 0.45              |
| 31:BH:60:ARG:HD2  | 31:BH:61:HIS:CD2   | 2.52                     | 0.45              |
| 31:BH:85:LYS:N    | 31:BH:133:VAL:O    | 2.49                     | 0.45              |
| 31:BH:105:LEU:CD1 | 31:BH:113:VAL:HG11 | 2.45                     | 0.45              |
| 32:BK:4:ILE:HD11  | 32:BK:39:ALA:HA    | 1.97                     | 0.45              |
| 32:BK:58:LEU:HA   | 32:BK:61:ARG:HG3   | 1.99                     | 0.45              |
| 33:BL:72:PRO:CD   | 33:BL:111:LYS:HE3  | 2.46                     | 0.45              |
| 33:BL:117:THR:O   | 33:BL:118:THR:CG2  | 2.64                     | 0.45              |
| 33:BL:131:ALA:C   | 33:BL:136:VAL:O    | 2.60                     | 0.45              |
| 34:BM:23:LEU:HD23 | 34:BM:23:LEU:H     | 1.82                     | 0.45              |
| 34:BM:34:LEU:HD21 | 34:BM:120:LEU:CD1  | 2.46                     | 0.45              |
| 35:BN:18:LYS:CE   | 35:BN:44:LYS:CD    | 2.82                     | 0.45              |
| 35:BN:47:ILE:HD12 | 35:BN:52:VAL:HG13  | 1.95                     | 0.45              |
| 35:BN:122:LEU:HA  | 40:BS:71:GLY:CA    | 2.47                     | 0.45              |
| 36:BO:18:ARG:C    | 36:BO:20:GLY:N     | 2.74                     | 0.45              |
| 36:BO:123:LEU:H   | 36:BO:138:LEU:HB2  | 1.82                     | 0.45              |
| 37:BP:12:GLN:O    | 37:BP:12:GLN:CD    | 2.59                     | 0.45              |
| 37:BP:25:ASP:C    | 37:BP:26:TYR:CD2   | 2.95                     | 0.45              |
| 37:BP:27:VAL:HG12 | 37:BP:102:VAL:HG21 | 1.99                     | 0.45              |
| 37:BP:51:ARG:HD3  | 37:BP:52:VAL:HG23  | 1.97                     | 0.45              |
| 38:BQ:3:HIS:ND1   | 38:BQ:3:HIS:C      | 2.74                     | 0.45              |
| 39:BR:57:LYS:NZ   | 39:BR:62:LYS:CG    | 2.79                     | 0.45              |
| 39:BR:94:TYR:C    | 39:BR:99:LYS:CB    | 2.88                     | 0.45              |
| 39:BR:99:LYS:O    | 39:BR:103:GLU:CD   | 2.59                     | 0.45              |
| 41:BT:30:LYS:H    | 41:BT:30:LYS:CD    | 2.27                     | 0.45              |
| 41:BT:49:HIS:CA   | 41:BT:52:ARG:CZ    | 2.85                     | 0.45              |
| 41:BT:52:ARG:CB   | 41:BT:55:ARG:HD3   | 2.46                     | 0.45              |
| 42:BU:5:VAL:O     | 42:BU:6:LYS:HB2    | 2.17                     | 0.45              |
| 43:BV:14:PRO:O    | 43:BV:16:LYS:NZ    | 2.49                     | 0.45              |
| 43:BV:98:LYS:CE   | 43:BV:98:LYS:C     | 2.89                     | 0.45              |
| 44:BW:18:TYR:CZ   | 44:BW:96:ILE:HG12  | 2.51                     | 0.45              |
| 44:BW:84:ALA:H    | 44:BW:85:PRO:CD    | 2.29                     | 0.45              |
| 46:BY:145:GLU:OE2 | 46:BY:180:VAL:HG11 | 2.17                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 47:BZ:32:ARG:O   | 47:BZ:35:ASN:CB   | 2.58                     | 0.45              |
| 48:B1:20:VAL:HB  | 48:B1:55:LEU:HD23 | 1.98                     | 0.45              |
| 49:B2:23:LEU:CA  | 49:B2:28:LEU:CD1  | 2.90                     | 0.45              |
| 49:B2:30:ARG:O   | 49:B2:32:GLN:N    | 2.49                     | 0.45              |
| 49:B2:40:THR:N   | 49:B2:44:ARG:HG3  | 2.31                     | 0.45              |
| 50:B3:40:HIS:HB3 | 50:B3:41:PRO:HD2  | 1.95                     | 0.45              |
| 50:B3:48:ARG:H   | 50:B3:52:THR:HG1  | 1.63                     | 0.45              |
| 51:B4:34:PRO:CD  | 51:B4:40:LYS:HD2  | 2.29                     | 0.45              |
| 54:B7:23:VAL:HA  | 54:B7:47:LYS:O    | 2.16                     | 0.45              |
| 54:B7:26:LYS:CD  | 54:B7:45:GLY:H    | 2.29                     | 0.45              |
| 1:AA:18:C:N4     | 1:AA:918:A:H61    | 2.13                     | 0.45              |
| 1:AA:61:G:C8     | 1:AA:62:U:C5      | 3.05                     | 0.45              |
| 1:AA:164:U:C2'   | 1:AA:165:C:C6     | 2.99                     | 0.45              |
| 1:AA:183:G:H2'   | 1:AA:184:G:O4'    | 2.17                     | 0.45              |
| 1:AA:275:G:C2    | 1:AA:276:G:C8     | 3.04                     | 0.45              |
| 1:AA:282:A:H2'   | 1:AA:282:A:N3     | 2.29                     | 0.45              |
| 1:AA:321:A:H2'   | 1:AA:322:C:H6     | 1.81                     | 0.45              |
| 1:AA:343:U:C2'   | 1:AA:344:A:O5'    | 2.64                     | 0.45              |
| 1:AA:425:G:C2    | 1:AA:426:G:C8     | 3.05                     | 0.45              |
| 1:AA:468:A:N6    | 1:AA:474:G:C6     | 2.84                     | 0.45              |
| 1:AA:523:A:O2'   | 1:AA:525:C:H5     | 1.98                     | 0.45              |
| 1:AA:571:U:H5'   | 1:AA:572:A:OP2    | 2.17                     | 0.45              |
| 1:AA:640:A:C5    | 1:AA:641:U:C6     | 3.04                     | 0.45              |
| 1:AA:714:G:H1'   | 1:AA:777:A:C5     | 2.51                     | 0.45              |
| 1:AA:792:A:O2'   | 1:AA:793:U:H5''   | 2.16                     | 0.45              |
| 1:AA:954:G:H2'   | 1:AA:955:U:H6     | 1.80                     | 0.45              |
| 1:AA:995:C:C2'   | 16:AQ:4:LYS:HE2   | 2.46                     | 0.45              |
| 1:AA:1108:G:N7   | 1:AA:1109:C:C5    | 2.85                     | 0.45              |
| 1:AA:1181:G:O3'  | 1:AA:1184:G:C5'   | 2.65                     | 0.45              |
| 1:AA:1213:A:N6   | 1:AA:1215:G:N2    | 2.65                     | 0.45              |
| 1:AA:1251:A:H4'  | 1:AA:1370:G:H4'   | 1.99                     | 0.45              |
| 1:AA:1263:C:H2'  | 1:AA:1264:C:C5    | 2.50                     | 0.45              |
| 1:AA:1296:C:C5   | 1:AA:1297:C:N4    | 2.84                     | 0.45              |
| 1:AA:1305:G:OP1  | 23:AX:2:GLY:N     | 2.50                     | 0.45              |
| 1:AA:1316:G:C4   | 1:AA:1318:A:OP2   | 2.70                     | 0.45              |
| 1:AA:1343:G:C5   | 1:AA:1344:C:C4    | 3.04                     | 0.45              |
| 1:AA:1477:C:C4   | 1:AA:1478:C:C5    | 3.03                     | 0.45              |
| 1:AA:1484:C:H2'  | 1:AA:1485:U:C5'   | 2.47                     | 0.45              |
| 1:AA:1533:C:H2'  | 1:AA:1534:A:O5'   | 2.15                     | 0.45              |
| 3:AD:47:U:H2'    | 3:AD:47:U:O2      | 2.16                     | 0.45              |
| 4:AE:58:ILE:HB   | 4:AE:221:LEU:HG   | 1.98                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 5:AF:8:ILE:O       | 5:AF:9:GLY:C      | 2.59                     | 0.45              |
| 5:AF:172:ARG:CZ    | 5:AF:172:ARG:CB   | 2.93                     | 0.45              |
| 6:AG:114:ARG:CG    | 6:AG:114:ARG:NH1  | 2.76                     | 0.45              |
| 6:AG:119:GLN:CG    | 6:AG:123:HIS:CE1  | 3.00                     | 0.45              |
| 7:AH:35:GLY:N      | 7:AH:112:LEU:CD1  | 2.79                     | 0.45              |
| 7:AH:61:TYR:O      | 7:AH:65:ASN:N     | 2.38                     | 0.45              |
| 7:AH:145:LYS:HA    | 7:AH:148:VAL:HG21 | 1.94                     | 0.45              |
| 8:AI:47:ARG:HA     | 8:AI:57:GLN:HA    | 1.97                     | 0.45              |
| 9:AJ:147:ALA:C     | 9:AJ:149:ARG:N    | 2.74                     | 0.45              |
| 10:AK:6:ILE:HD12   | 10:AK:85:ARG:NH1  | 2.31                     | 0.45              |
| 10:AK:19:VAL:CG1   | 10:AK:21:LYS:HE3  | 2.46                     | 0.45              |
| 10:AK:68:ARG:O     | 10:AK:69:ARG:HB3  | 2.16                     | 0.45              |
| 10:AK:102:ARG:HE   | 10:AK:105:ARG:HD2 | 1.81                     | 0.45              |
| 10:AK:110:ALA:HB3  | 10:AK:121:ASP:OD1 | 2.16                     | 0.45              |
| 10:AK:137:VAL:HG12 | 10:AK:138:TRP:H   | 1.82                     | 0.45              |
| 11:AL:49:PRO:CB    | 11:AL:82:ALA:HB2  | 2.42                     | 0.45              |
| 11:AL:119:ALA:O    | 11:AL:120:ARG:CB  | 2.64                     | 0.45              |
| 13:AN:13:GLN:CD    | 13:AN:76:GLY:H    | 2.23                     | 0.45              |
| 13:AN:84:VAL:CG2   | 20:AU:88:LYS:NZ   | 2.80                     | 0.45              |
| 14:AO:36:VAL:HA    | 14:AO:82:VAL:HA   | 1.99                     | 0.45              |
| 15:AP:40:ASN:HB3   | 15:AP:43:THR:HG23 | 1.98                     | 0.45              |
| 15:AP:48:LEU:HD13  | 15:AP:53:VAL:CG2  | 2.40                     | 0.45              |
| 15:AP:58:GLU:C     | 15:AP:61:GLU:HB2  | 2.41                     | 0.45              |
| 16:AQ:45:ARG:HG3   | 16:AQ:46:GLU:N    | 2.31                     | 0.45              |
| 17:AR:60:VAL:HA    | 17:AR:63:ARG:CG   | 2.47                     | 0.45              |
| 17:AR:65:ARG:CZ    | 17:AR:65:ARG:HB3  | 2.46                     | 0.45              |
| 17:AR:79:ARG:HB3   | 17:AR:79:ARG:NH1  | 2.31                     | 0.45              |
| 18:AS:19:ILE:HD11  | 18:AS:38:TYR:C    | 2.42                     | 0.45              |
| 19:AT:67:LYS:C     | 19:AT:69:LYS:H    | 2.23                     | 0.45              |
| 21:AV:18:LYS:CE    | 21:AV:22:LEU:HD12 | 2.46                     | 0.45              |
| 22:AW:43:LEU:HD23  | 22:AW:43:LEU:HA   | 1.73                     | 0.45              |
| 24:BA:14:A:C8      | 24:BA:15:G:C8     | 3.05                     | 0.45              |
| 24:BA:50:U:C6      | 24:BA:50:U:C3'    | 2.99                     | 0.45              |
| 24:BA:76:C:C2'     | 24:BA:76:C:O2     | 2.64                     | 0.45              |
| 24:BA:85:G:P       | 45:BX:28:LYS:HE3  | 2.57                     | 0.45              |
| 24:BA:172:C:C5     | 24:BA:173:G:N7    | 2.84                     | 0.45              |
| 24:BA:236:C:C4'    | 24:BA:431:U:H1'   | 2.46                     | 0.45              |
| 24:BA:270:A:C5     | 24:BA:270(A):A:C8 | 3.05                     | 0.45              |
| 24:BA:285:C:C4     | 24:BA:286:C:N4    | 2.84                     | 0.45              |
| 24:BA:317:G:C2     | 24:BA:318:C:C6    | 3.05                     | 0.45              |
| 24:BA:365:C:C2     | 24:BA:366:C:C5    | 3.05                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 24:BA:447:A:O2'  | 24:BA:448:U:H5'    | 2.17                     | 0.45              |
| 24:BA:457:A:H4'  | 24:BA:459:U:O2     | 2.17                     | 0.45              |
| 24:BA:481:G:N2   | 24:BA:507:A:C4     | 2.85                     | 0.45              |
| 24:BA:507:A:H4'  | 24:BA:509:C:C6     | 2.51                     | 0.45              |
| 24:BA:519:U:C4'  | 43:BV:75:TYR:HB2   | 2.47                     | 0.45              |
| 24:BA:539:G:C2   | 24:BA:540:G:N7     | 2.84                     | 0.45              |
| 24:BA:565:C:O2'  | 24:BA:1253:A:C2    | 2.70                     | 0.45              |
| 24:BA:573:G:C2'  | 24:BA:574:C:H5''   | 2.46                     | 0.45              |
| 24:BA:624:C:OP2  | 36:BO:105:LEU:HD22 | 2.16                     | 0.45              |
| 24:BA:672:C:O2   | 24:BA:673:C:C5     | 2.70                     | 0.45              |
| 24:BA:674:G:O3'  | 29:BF:74:ARG:NH2   | 2.50                     | 0.45              |
| 24:BA:705:A:N7   | 24:BA:727:A:N7     | 2.64                     | 0.45              |
| 24:BA:744:G:H2'  | 24:BA:745:G:H8     | 1.78                     | 0.45              |
| 24:BA:749:C:C5   | 24:BA:1618:A:N6    | 2.85                     | 0.45              |
| 24:BA:806:C:H2'  | 24:BA:807:U:C5     | 2.51                     | 0.45              |
| 24:BA:835:A:N6   | 24:BA:836:G:C6     | 2.85                     | 0.45              |
| 24:BA:909:A:O2'  | 24:BA:911:A:OP2    | 2.28                     | 0.45              |
| 24:BA:955:C:OP1  | 37:BP:17:LEU:HG    | 2.15                     | 0.45              |
| 24:BA:974:G:H5'  | 24:BA:1187:G:O2'   | 2.17                     | 0.45              |
| 24:BA:1076:C:H1' | 33:BL:90:LYS:HE2   | 1.98                     | 0.45              |
| 24:BA:1196:C:H1' | 24:BA:1226:G:H1'   | 1.98                     | 0.45              |
| 24:BA:1203:G:N7  | 24:BA:1240:U:C4    | 2.85                     | 0.45              |
| 24:BA:1231:G:H2' | 24:BA:1232:G:H8    | 1.82                     | 0.45              |
| 24:BA:1263:U:C3' | 51:B4:10:LYS:HD3   | 2.46                     | 0.45              |
| 24:BA:1275:A:N7  | 24:BA:1296:G:C1'   | 2.76                     | 0.45              |
| 24:BA:1298:C:OP2 | 24:BA:1639:U:OP2   | 2.35                     | 0.45              |
| 24:BA:1363:C:C2  | 24:BA:1369:G:C6    | 3.04                     | 0.45              |
| 24:BA:1388:G:C4  | 24:BA:1389:G:C8    | 3.05                     | 0.45              |
| 24:BA:1407:C:OP2 | 24:BA:1407:C:H3'   | 2.16                     | 0.45              |
| 24:BA:1416:G:N2  | 24:BA:1581:G:C6    | 2.81                     | 0.45              |
| 24:BA:1438:U:N3  | 24:BA:1553:A:N6    | 2.61                     | 0.45              |
| 24:BA:1459:G:N3  | 24:BA:1459:G:H2'   | 2.32                     | 0.45              |
| 24:BA:1471:A:OP2 | 24:BA:1472:A:C2    | 2.66                     | 0.45              |
| 24:BA:1536:A:C2  | 24:BA:1537:C:C2    | 3.05                     | 0.45              |
| 24:BA:1670:C:H2' | 24:BA:1671:U:C5'   | 2.46                     | 0.45              |
| 24:BA:1686:C:H2' | 24:BA:1686:C:O2    | 2.15                     | 0.45              |
| 24:BA:1686:C:N4  | 24:BA:1703:G:O6    | 2.49                     | 0.45              |
| 24:BA:1789:A:H4' | 27:BD:222:ARG:NH1  | 2.31                     | 0.45              |
| 24:BA:1919:A:H2' | 24:BA:1920:C:H5'   | 1.98                     | 0.45              |
| 24:BA:1957:C:C2' | 24:BA:1958:C:O5'   | 2.65                     | 0.45              |
| 24:BA:2040:C:N3  | 24:BA:2041:U:C5    | 2.85                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2051:A:N3    | 24:BA:2052:G:N7    | 2.65                     | 0.45              |
| 24:BA:2080:G:O2'   | 24:BA:2081:C:C5'   | 2.64                     | 0.45              |
| 24:BA:2121:G:C1'   | 26:BC:167:LYS:HZ3  | 2.22                     | 0.45              |
| 24:BA:2208:U:C2    | 24:BA:2217:G:C6    | 3.05                     | 0.45              |
| 24:BA:2226:C:N3    | 27:BD:262:ARG:NH2  | 2.64                     | 0.45              |
| 24:BA:2482:G:C2    | 24:BA:2483:C:C1'   | 3.00                     | 0.45              |
| 24:BA:2532:G:C8    | 24:BA:2533:A:N7    | 2.85                     | 0.45              |
| 24:BA:2572:A:C5'   | 24:BA:2573:C:OP1   | 2.65                     | 0.45              |
| 24:BA:2582:G:C8    | 24:BA:2582:G:C5'   | 2.98                     | 0.45              |
| 24:BA:2729:G:H2'   | 24:BA:2730:C:H5'   | 1.97                     | 0.45              |
| 24:BA:2822:G:H5''  | 28:BE:159:HIS:CE1  | 2.52                     | 0.45              |
| 25:BB:9:G:C2       | 25:BB:10:C:C5      | 3.04                     | 0.45              |
| 25:BB:43:C:C2      | 25:BB:45:A:C8      | 3.05                     | 0.45              |
| 25:BB:66:A:H2      | 25:BB:108:C:C6     | 2.33                     | 0.45              |
| 26:BC:25:ALA:O     | 26:BC:26:ALA:C     | 2.57                     | 0.45              |
| 26:BC:68:LEU:HD23  | 26:BC:68:LEU:C     | 2.41                     | 0.45              |
| 26:BC:75:LEU:HD21  | 26:BC:99:ILE:CG2   | 2.45                     | 0.45              |
| 26:BC:99:ILE:HG12  | 26:BC:107:TRP:CZ3  | 2.51                     | 0.45              |
| 26:BC:222:VAL:HG13 | 26:BC:223:ARG:O    | 2.17                     | 0.45              |
| 27:BD:117:VAL:CG1  | 27:BD:129:ASN:N    | 2.79                     | 0.45              |
| 27:BD:118:VAL:O    | 27:BD:119:ALA:CB   | 2.64                     | 0.45              |
| 27:BD:160:GLY:N    | 27:BD:196:VAL:HG21 | 2.32                     | 0.45              |
| 28:BE:100:GLU:N    | 28:BE:172:VAL:HG21 | 2.23                     | 0.45              |
| 29:BF:131:GLY:O    | 29:BF:134:GLY:N    | 2.49                     | 0.45              |
| 30:BG:21:ARG:NH1   | 30:BG:27:ASN:HA    | 2.31                     | 0.45              |
| 30:BG:172:LEU:HD12 | 30:BG:172:LEU:C    | 2.41                     | 0.45              |
| 31:BH:45:VAL:O     | 31:BH:46:GLU:OE1   | 2.34                     | 0.45              |
| 31:BH:105:LEU:HB2  | 31:BH:113:VAL:CG1  | 2.33                     | 0.45              |
| 31:BH:156:ALA:O    | 31:BH:157:TYR:CB   | 2.65                     | 0.45              |
| 33:BL:27:LEU:HD11  | 33:BL:57:ILE:CD1   | 2.35                     | 0.45              |
| 33:BL:103:GLN:O    | 33:BL:106:GLU:HG3  | 2.16                     | 0.45              |
| 34:BM:14:VAL:CG1   | 34:BM:138:LEU:HB3  | 2.29                     | 0.45              |
| 34:BM:23:LEU:CG    | 34:BM:63:THR:HG23  | 2.46                     | 0.45              |
| 35:BN:9:GLU:C      | 35:BN:82:ASN:HB3   | 2.42                     | 0.45              |
| 36:BO:36:LYS:HD3   | 36:BO:36:LYS:HA    | 1.51                     | 0.45              |
| 36:BO:46:LYS:NZ    | 36:BO:50:ARG:HH11  | 2.14                     | 0.45              |
| 36:BO:137:LYS:CE   | 36:BO:137:LYS:CA   | 2.92                     | 0.45              |
| 37:BP:38:GLU:N     | 37:BP:39:PRO:CD    | 2.76                     | 0.45              |
| 37:BP:59:ARG:NH2   | 46:BY:177:PRO:CB   | 2.78                     | 0.45              |
| 40:BS:38:ASN:O     | 40:BS:39:ARG:HG2   | 2.17                     | 0.45              |
| 40:BS:62:THR:HG22  | 40:BS:79:HIS:N     | 2.28                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 41:BT:36:ARG:O   | 41:BT:39:LEU:HB2  | 2.17                     | 0.45              |
| 43:BV:6:ILE:HD11 | 43:BV:104:THR:HA  | 1.97                     | 0.45              |
| 43:BV:78:GLU:OE2 | 43:BV:99:ARG:C    | 2.60                     | 0.45              |
| 44:BW:27:THR:C   | 44:BW:28:PHE:CG   | 2.91                     | 0.45              |
| 44:BW:29:TRP:CG  | 44:BW:76:ARG:HE   | 2.34                     | 0.45              |
| 46:BY:44:PHE:O   | 46:BY:47:VAL:HB   | 2.16                     | 0.45              |
| 47:BZ:37:LEU:HG  | 47:BZ:38:VAL:H    | 1.81                     | 0.45              |
| 47:BZ:40:GLN:OE1 | 47:BZ:44:ARG:N    | 2.50                     | 0.45              |
| 48:B1:64:ARG:HA  | 48:B1:64:ARG:HD3  | 1.67                     | 0.45              |
| 49:B2:17:LYS:O   | 49:B2:18:ASP:C    | 2.59                     | 0.45              |
| 49:B2:41:PRO:HA  | 49:B2:44:ARG:CZ   | 2.47                     | 0.45              |
| 51:B4:4:HIS:CD2  | 51:B4:4:HIS:O     | 2.69                     | 0.45              |
| 51:B4:15:ARG:O   | 51:B4:17:ASP:N    | 2.50                     | 0.45              |
| 54:B7:22:VAL:O   | 54:B7:23:VAL:HG23 | 2.15                     | 0.45              |
| 54:B7:38:GLY:C   | 54:B7:40:GLU:N    | 2.72                     | 0.45              |
| 54:B7:52:LYS:HB2 | 54:B7:52:LYS:NZ   | 2.31                     | 0.45              |
| 1:AA:141:A:O4'   | 1:AA:182:U:H1'    | 2.17                     | 0.45              |
| 1:AA:278:G:N2    | 1:AA:279:A:H62    | 2.15                     | 0.45              |
| 1:AA:322:C:N3    | 1:AA:323:U:O2     | 2.49                     | 0.45              |
| 1:AA:407:G:C2    | 1:AA:436:C:O2     | 2.70                     | 0.45              |
| 1:AA:456:C:C2    | 1:AA:477:G:C2     | 3.05                     | 0.45              |
| 1:AA:513:C:N3    | 1:AA:514:C:C5     | 2.84                     | 0.45              |
| 1:AA:577:G:N2    | 1:AA:578:C:C1'    | 2.79                     | 0.45              |
| 1:AA:637:G:C6    | 1:AA:638:G:N7     | 2.85                     | 0.45              |
| 1:AA:723:U:O4'   | 2:A1:29:G:O2'     | 2.22                     | 0.45              |
| 1:AA:747:C:O5'   | 1:AA:747:C:H6     | 1.99                     | 0.45              |
| 1:AA:747:C:H2'   | 1:AA:748:C:O4'    | 2.17                     | 0.45              |
| 1:AA:776:G:O6    | 27:BD:276:LYS:OXT | 2.34                     | 0.45              |
| 1:AA:787:A:C2'   | 1:AA:788:U:H5'    | 2.35                     | 0.45              |
| 1:AA:829:G:N2    | 1:AA:858:G:O2'    | 2.49                     | 0.45              |
| 1:AA:873:A:C4'   | 1:AA:874:G:OP2    | 2.65                     | 0.45              |
| 1:AA:938:A:O2'   | 1:AA:939:G:C5'    | 2.58                     | 0.45              |
| 1:AA:953:G:C2'   | 1:AA:954:G:O5'    | 2.65                     | 0.45              |
| 1:AA:976:G:C4    | 1:AA:1363:A:N6    | 2.84                     | 0.45              |
| 1:AA:1079:G:N2   | 1:AA:1080:A:C2    | 2.84                     | 0.45              |
| 1:AA:1107:C:P    | 5:AF:172:ARG:NH1  | 2.89                     | 0.45              |
| 1:AA:1126:U:O4'  | 1:AA:1126:U:OP1   | 2.35                     | 0.45              |
| 1:AA:1213:A:H2'  | 1:AA:1215:G:N7    | 2.31                     | 0.45              |
| 1:AA:1239:A:H8   | 1:AA:1241:G:H1'   | 1.82                     | 0.45              |
| 1:AA:1342:C:O2'  | 1:AA:1343:G:H5'   | 2.16                     | 0.45              |
| 1:AA:1468:A:C8   | 1:AA:1469:G:H8    | 2.33                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:1476:G:C6     | 1:AA:1477:C:N4    | 2.85                     | 0.45              |
| 1:AA:1509:C:O2'    | 1:AA:1510:U:C5'   | 2.56                     | 0.45              |
| 3:AC:3:C:C2'       | 3:AC:4:C:O5'      | 2.65                     | 0.45              |
| 3:AC:59:U:C4       | 3:AC:60:U:C4      | 3.04                     | 0.45              |
| 3:AB:74:C:H5       | 24:BA:2556:C:N1   | 2.13                     | 0.45              |
| 3:AB:76:A:H4'      | 24:BA:2507:C:C5'  | 2.46                     | 0.45              |
| 4:AE:46:LYS:CE     | 4:AE:49:GLU:HG2   | 2.47                     | 0.45              |
| 5:AF:73:PRO:HD3    | 5:AF:105:GLU:CD   | 2.41                     | 0.45              |
| 5:AF:119:ARG:O     | 5:AF:120:VAL:C    | 2.60                     | 0.45              |
| 6:AG:98:GLU:O      | 6:AG:103:ASN:CB   | 2.63                     | 0.45              |
| 6:AG:125:HIS:CB    | 6:AG:152:SER:HB2  | 2.36                     | 0.45              |
| 6:AG:196:LEU:HA    | 6:AG:197:PRO:HD2  | 1.86                     | 0.45              |
| 9:AJ:21:VAL:HG23   | 9:AJ:22:LEU:HD22  | 1.99                     | 0.45              |
| 9:AJ:26:PHE:CD2    | 9:AJ:62:PHE:HE1   | 2.34                     | 0.45              |
| 10:AK:88:LYS:O     | 10:AK:90:GLY:N    | 2.50                     | 0.45              |
| 10:AK:111:ILE:HD12 | 10:AK:111:ILE:H   | 1.76                     | 0.45              |
| 10:AK:126:LYS:NZ   | 10:AK:127:LEU:CB  | 2.78                     | 0.45              |
| 11:AL:63:ILE:N     | 11:AL:63:ILE:CD1  | 2.64                     | 0.45              |
| 11:AL:101:PHE:O    | 11:AL:102:LEU:CD2 | 2.65                     | 0.45              |
| 12:AM:55:LYS:O     | 12:AM:55:LYS:CG   | 2.65                     | 0.45              |
| 13:AN:73:MET:HE2   | 13:AN:103:LEU:CD2 | 2.42                     | 0.45              |
| 13:AN:85:ARG:CD    | 13:AN:113:PRO:HD2 | 2.46                     | 0.45              |
| 14:AO:34:ARG:O     | 14:AO:60:LEU:HB2  | 2.17                     | 0.45              |
| 14:AO:41:ARG:C     | 14:AO:42:THR:HG22 | 2.41                     | 0.45              |
| 14:AO:126:LYS:HD2  | 14:AO:126:LYS:C   | 2.41                     | 0.45              |
| 17:AR:60:VAL:O     | 17:AR:63:ARG:CG   | 2.49                     | 0.45              |
| 18:AS:66:PRO:HG2   | 18:AS:71:ARG:NH1  | 2.32                     | 0.45              |
| 19:AT:7:THR:HG22   | 19:AT:56:VAL:CG1  | 2.47                     | 0.45              |
| 19:AT:75:ARG:NH1   | 19:AT:76:LEU:O    | 2.48                     | 0.45              |
| 20:AU:43:PHE:O     | 20:AU:51:LEU:CD1  | 2.52                     | 0.45              |
| 22:AW:40:ALA:O     | 22:AW:43:LEU:N    | 2.49                     | 0.45              |
| 24:BA:28:A:O2'     | 24:BA:583:G:H5'   | 2.16                     | 0.45              |
| 24:BA:75:G:O3'     | 48:B1:50:ARG:NE   | 2.41                     | 0.45              |
| 24:BA:119:A:O2'    | 24:BA:120:U:O5'   | 2.35                     | 0.45              |
| 24:BA:147:U:C4     | 24:BA:148:C:N4    | 2.85                     | 0.45              |
| 24:BA:182:A:H1'    | 24:BA:433:C:O2'   | 2.17                     | 0.45              |
| 24:BA:270(B):A:C1' | 24:BA:270(C):C:C5 | 2.92                     | 0.45              |
| 24:BA:303:U:O5'    | 24:BA:303:U:H6    | 2.00                     | 0.45              |
| 24:BA:366:C:H6     | 24:BA:366:C:O5'   | 2.00                     | 0.45              |
| 24:BA:371:A:C8     | 24:BA:424:G:OP1   | 2.70                     | 0.45              |
| 24:BA:386:G:N3     | 24:BA:386:G:C2'   | 2.72                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 24:BA:416:C:N4   | 24:BA:417:C:N4     | 2.64                     | 0.45              |
| 24:BA:499:U:H2'  | 24:BA:500:G:O4'    | 2.17                     | 0.45              |
| 24:BA:624:C:C6   | 24:BA:624:C:C4'    | 3.00                     | 0.45              |
| 24:BA:804:A:OP2  | 36:BO:39:LYS:HB3   | 2.17                     | 0.45              |
| 24:BA:811:U:H6   | 24:BA:811:U:C3'    | 2.28                     | 0.45              |
| 24:BA:817:C:H3'  | 24:BA:818:G:C8     | 2.51                     | 0.45              |
| 24:BA:862:G:H21  | 25:BB:99:A:H2      | 1.62                     | 0.45              |
| 24:BA:960:A:C8   | 24:BA:960:A:O5'    | 2.70                     | 0.45              |
| 24:BA:974:G:C2'  | 24:BA:1186:G:C4    | 3.00                     | 0.45              |
| 24:BA:995:C:P    | 41:BT:53:ARG:HH22  | 2.39                     | 0.45              |
| 24:BA:996:A:N6   | 24:BA:1160:G:N1    | 2.65                     | 0.45              |
| 24:BA:1006:C:C6  | 24:BA:1137:G:N2    | 2.85                     | 0.45              |
| 24:BA:1128:A:N3  | 24:BA:1128:A:C2'   | 2.78                     | 0.45              |
| 24:BA:1342:A:N9  | 24:BA:1345:C:N4    | 2.64                     | 0.45              |
| 24:BA:1464:C:H2' | 24:BA:1465:G:C8    | 2.44                     | 0.45              |
| 24:BA:1483:G:C4  | 24:BA:1507:A:C2    | 3.04                     | 0.45              |
| 24:BA:1509:C:OP1 | 24:BA:1510:A:C8    | 2.57                     | 0.45              |
| 24:BA:1522:G:H2' | 24:BA:1523:U:C6    | 2.51                     | 0.45              |
| 24:BA:1566:A:N3  | 27:BD:215:LEU:HD22 | 2.31                     | 0.45              |
| 24:BA:1615:C:N4  | 24:BA:1617:C:O2    | 2.50                     | 0.45              |
| 24:BA:1638:C:OP1 | 24:BA:2710:C:O2'   | 2.33                     | 0.45              |
| 24:BA:1681:G:H1' | 24:BA:1763:G:H5'   | 1.99                     | 0.45              |
| 24:BA:1691:C:O2  | 24:BA:1691:C:H2'   | 2.15                     | 0.45              |
| 24:BA:1743:G:C4  | 24:BA:1746:G:C8    | 3.04                     | 0.45              |
| 24:BA:1808:U:C2  | 24:BA:1810:A:C2    | 3.05                     | 0.45              |
| 24:BA:1870:C:O2  | 24:BA:1870:C:C2'   | 2.62                     | 0.45              |
| 24:BA:1958:C:C2' | 24:BA:1959:G:O5'   | 2.64                     | 0.45              |
| 24:BA:2016:U:O4' | 51:B4:6:VAL:CG1    | 2.61                     | 0.45              |
| 24:BA:2016:U:H1' | 51:B4:6:VAL:HG13   | 1.98                     | 0.45              |
| 24:BA:2060:A:OP2 | 29:BF:72:ARG:HA    | 2.16                     | 0.45              |
| 24:BA:2135:A:O5' | 24:BA:2136:C:C5    | 2.70                     | 0.45              |
| 24:BA:2210:G:C6  | 27:BD:70:TRP:CE2   | 3.05                     | 0.45              |
| 24:BA:2263:C:H2' | 24:BA:2264:C:H5'   | 1.98                     | 0.45              |
| 24:BA:2284:C:O2' | 24:BA:2325:G:C2    | 2.70                     | 0.45              |
| 24:BA:2363:C:O2' | 24:BA:2364:C:H5'   | 2.16                     | 0.45              |
| 24:BA:2394:C:O2  | 24:BA:2394:C:C2'   | 2.64                     | 0.45              |
| 24:BA:2395:C:C5  | 24:BA:2396:G:N7    | 2.84                     | 0.45              |
| 24:BA:2397:G:H2' | 24:BA:2398:U:C6    | 2.51                     | 0.45              |
| 24:BA:2464:C:C2  | 24:BA:2465:C:C6    | 3.05                     | 0.45              |
| 24:BA:2547:U:C6  | 24:BA:2566:A:C2    | 3.05                     | 0.45              |
| 24:BA:2550:G:N2  | 24:BA:2559:C:N1    | 2.65                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2742:C:O2    | 24:BA:2742:C:C2'   | 2.64                     | 0.45              |
| 24:BA:2780:G:H2'   | 24:BA:2781:A:H5''  | 1.96                     | 0.45              |
| 24:BA:2787:C:C5'   | 28:BE:64:LYS:HB2   | 2.46                     | 0.45              |
| 24:BA:2788:C:O5'   | 24:BA:2788:C:H6    | 1.99                     | 0.45              |
| 24:BA:2866:U:O2    | 24:BA:2868:A:H1'   | 2.16                     | 0.45              |
| 26:BC:73:ARG:HB3   | 26:BC:93:TYR:CE2   | 2.52                     | 0.45              |
| 26:BC:148:ASN:HB2  | 26:BC:151:GLU:CD   | 2.41                     | 0.45              |
| 26:BC:175:VAL:C    | 26:BC:188:ASN:HB3  | 2.42                     | 0.45              |
| 27:BD:39:LYS:HB3   | 27:BD:62:TYR:HD2   | 1.81                     | 0.45              |
| 27:BD:145:VAL:HG13 | 27:BD:190:TYR:O    | 2.16                     | 0.45              |
| 27:BD:252:TRP:HB3  | 27:BD:253:GLN:H    | 1.41                     | 0.45              |
| 27:BD:268:ARG:HG2  | 27:BD:269:PHE:N    | 2.31                     | 0.45              |
| 28:BE:2:LYS:CD     | 28:BE:83:ASP:CB    | 2.94                     | 0.45              |
| 28:BE:125:GLY:C    | 28:BE:135:HIS:O    | 2.60                     | 0.45              |
| 28:BE:187:ALA:O    | 28:BE:189:PRO:N    | 2.49                     | 0.45              |
| 29:BF:7:TYR:OH     | 29:BF:23:ASP:O     | 2.34                     | 0.45              |
| 29:BF:12:LEU:HD22  | 29:BF:142:TRP:CZ3  | 2.50                     | 0.45              |
| 29:BF:77:ASP:O     | 29:BF:77:ASP:CG    | 2.60                     | 0.45              |
| 29:BF:123:LEU:CD1  | 29:BF:193:VAL:HG22 | 2.27                     | 0.45              |
| 30:BG:153:ARG:C    | 30:BG:155:MET:SD   | 3.00                     | 0.45              |
| 31:BH:7:LEU:HD12   | 31:BH:51:ARG:HD2   | 1.98                     | 0.45              |
| 31:BH:77:LYS:HE3   | 31:BH:77:LYS:HB3   | 1.69                     | 0.45              |
| 31:BH:117:PRO:HB2  | 31:BH:121:ILE:HG23 | 1.98                     | 0.45              |
| 31:BH:151:ILE:O    | 31:BH:152:ARG:O    | 2.34                     | 0.45              |
| 32:BK:37:VAL:HG12  | 32:BK:43:ASN:OD1   | 2.17                     | 0.45              |
| 33:BL:24:GLY:HA2   | 33:BL:34:ILE:CD1   | 2.46                     | 0.45              |
| 34:BM:16:ILE:N     | 34:BM:16:ILE:CD1   | 2.71                     | 0.45              |
| 34:BM:36:GLY:HA2   | 34:BM:47:ALA:C     | 2.41                     | 0.45              |
| 34:BM:53:VAL:HG22  | 34:BM:121:LYS:HB2  | 1.99                     | 0.45              |
| 34:BM:117:PHE:CA   | 34:BM:120:LEU:HB3  | 2.43                     | 0.45              |
| 34:BM:128:HIS:O    | 34:BM:131:GLN:N    | 2.50                     | 0.45              |
| 35:BN:11:ALA:HB3   | 35:BN:97:ARG:NH2   | 2.28                     | 0.45              |
| 35:BN:12:ASP:C     | 35:BN:94:ARG:HB3   | 2.42                     | 0.45              |
| 35:BN:38:VAL:HG12  | 35:BN:59:LYS:O     | 2.17                     | 0.45              |
| 35:BN:47:ILE:O     | 35:BN:47:ILE:HG12  | 2.16                     | 0.45              |
| 35:BN:97:ARG:NH1   | 35:BN:98:VAL:O     | 2.42                     | 0.45              |
| 35:BN:106:LEU:C    | 35:BN:106:LEU:CD1  | 2.87                     | 0.45              |
| 36:BO:52:GLU:N     | 36:BO:55:ARG:HG3   | 2.31                     | 0.45              |
| 36:BO:72:PRO:O     | 36:BO:111:ARG:CZ   | 2.64                     | 0.45              |
| 36:BO:96:THR:O     | 36:BO:97:PRO:C     | 2.58                     | 0.45              |
| 37:BP:48:GLU:HA    | 37:BP:51:ARG:HG3   | 1.98                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 38:BQ:13:HIS:CD2   | 38:BQ:15:SER:HG   | 2.35                     | 0.45              |
| 39:BR:14:VAL:O     | 39:BR:15:ARG:C    | 2.60                     | 0.45              |
| 39:BR:17:ARG:HA    | 39:BR:20:ARG:HG3  | 1.99                     | 0.45              |
| 41:BT:98:LEU:HA    | 41:BT:101:ARG:CG  | 2.45                     | 0.45              |
| 41:BT:102:GLU:HA   | 41:BT:103:PRO:HD2 | 1.56                     | 0.45              |
| 43:BV:34:ASN:CA    | 43:BV:37:ARG:HE   | 2.16                     | 0.45              |
| 44:BW:6:ASP:CG     | 44:BW:7:VAL:N     | 2.75                     | 0.45              |
| 44:BW:65:ARG:H     | 44:BW:65:ARG:HG2  | 1.45                     | 0.45              |
| 46:BY:119:GLU:HG3  | 46:BY:119:GLU:O   | 2.15                     | 0.45              |
| 46:BY:125:LEU:HD22 | 46:BY:127:LYS:HE2 | 1.97                     | 0.45              |
| 47:BZ:50:ASN:HB2   | 47:BZ:81:VAL:HG23 | 1.98                     | 0.45              |
| 48:B1:22:GLU:N     | 48:B1:22:GLU:CD   | 2.74                     | 0.45              |
| 1:AA:87:A:C8       | 1:AA:88:C:C2      | 3.05                     | 0.45              |
| 1:AA:448:A:OP2     | 1:AA:485:G:N2     | 2.50                     | 0.45              |
| 1:AA:509:A:C6      | 1:AA:510:A:N1     | 2.85                     | 0.45              |
| 1:AA:524:G:O2'     | 1:AA:525:C:C5'    | 2.64                     | 0.45              |
| 1:AA:544:G:C2      | 1:AA:545:C:C2     | 3.05                     | 0.45              |
| 1:AA:665:A:O4'     | 1:AA:733:A:H1'    | 2.16                     | 0.45              |
| 1:AA:755:G:O2'     | 10:AK:1:MET:HE2   | 2.16                     | 0.45              |
| 1:AA:767:A:H2'     | 1:AA:768:A:H5'    | 1.99                     | 0.45              |
| 1:AA:781:A:N7      | 1:AA:802:A:N1     | 2.64                     | 0.45              |
| 1:AA:920:U:H2'     | 1:AA:921:U:C6     | 2.50                     | 0.45              |
| 1:AA:941:G:H2'     | 1:AA:942:G:O5'    | 2.15                     | 0.45              |
| 1:AA:956:U:C2      | 1:AA:960:U:O4     | 2.70                     | 0.45              |
| 1:AA:981:U:H6      | 1:AA:981:U:C3'    | 2.26                     | 0.45              |
| 1:AA:991:U:O2'     | 1:AA:993:G:C8     | 2.69                     | 0.45              |
| 1:AA:1002:G:N3     | 1:AA:1002:G:H2'   | 2.31                     | 0.45              |
| 1:AA:1101:A:O2'    | 1:AA:1102:A:OP2   | 2.35                     | 0.45              |
| 1:AA:1145:C:O2'    | 1:AA:1146:A:P     | 2.74                     | 0.45              |
| 1:AA:1225:A:H2'    | 1:AA:1225:A:N3    | 2.32                     | 0.45              |
| 1:AA:1228:C:O3'    | 15:AP:116:THR:HA  | 2.17                     | 0.45              |
| 1:AA:1286:A:C5'    | 23:AX:25:LYS:HG2  | 2.25                     | 0.45              |
| 1:AA:1338:G:H2'    | 1:AA:1339:A:H8    | 1.76                     | 0.45              |
| 1:AA:1466:C:H2'    | 1:AA:1467:G:N9    | 2.30                     | 0.45              |
| 1:AA:1466:C:H3'    | 1:AA:1467:G:H8    | 1.80                     | 0.45              |
| 1:AA:1466:C:C3'    | 1:AA:1467:G:H8    | 2.30                     | 0.45              |
| 1:AA:1488:G:N3     | 1:AA:1489:G:C8    | 2.84                     | 0.45              |
| 2:A1:26:G:C6       | 2:A1:27:A:N6      | 2.85                     | 0.45              |
| 3:AD:5:G:N2        | 3:AD:6:G:C5       | 2.85                     | 0.45              |
| 3:AD:76:A:H3'      | 24:BA:2432:A:C4'  | 2.39                     | 0.45              |
| 3:AB:62:C:C2       | 3:AB:63:G:N7      | 2.84                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:AE:102:LEU:HD23 | 4:AE:176:GLU:HB3  | 1.95                     | 0.45              |
| 4:AE:179:LYS:HG2  | 10:AK:72:PRO:HA   | 1.98                     | 0.45              |
| 5:AF:70:VAL:HG12  | 5:AF:72:LYS:H     | 1.82                     | 0.45              |
| 5:AF:123:GLN:HB3  | 5:AF:128:PHE:CZ   | 2.52                     | 0.45              |
| 5:AF:123:GLN:O    | 5:AF:124:ILE:C    | 2.60                     | 0.45              |
| 5:AF:157:ILE:HG13 | 5:AF:164:ARG:CD   | 2.46                     | 0.45              |
| 6:AG:80:GLU:O     | 6:AG:83:SER:OG    | 2.34                     | 0.45              |
| 6:AG:126:ILE:O    | 6:AG:132:ARG:HB3  | 2.17                     | 0.45              |
| 6:AG:145:GLU:HB3  | 6:AG:184:LYS:CG   | 2.38                     | 0.45              |
| 7:AH:20:GLN:NE2   | 7:AH:21:ALA:HB3   | 2.29                     | 0.45              |
| 7:AH:110:LEU:O    | 7:AH:111:GLU:C    | 2.59                     | 0.45              |
| 8:AI:97:PHE:CE2   | 20:AU:62:GLU:OE2  | 2.69                     | 0.45              |
| 9:AJ:17:VAL:HG21  | 9:AJ:44:TYR:CZ    | 2.50                     | 0.45              |
| 9:AJ:26:PHE:CD1   | 9:AJ:26:PHE:C     | 2.92                     | 0.45              |
| 9:AJ:29:LYS:HE3   | 9:AJ:101:LEU:CD1  | 2.39                     | 0.45              |
| 9:AJ:37:ASN:OD1   | 9:AJ:38:LEU:HD13  | 2.17                     | 0.45              |
| 9:AJ:42:ILE:HG21  | 9:AJ:116:ALA:HB1  | 1.98                     | 0.45              |
| 9:AJ:69:VAL:HG13  | 9:AJ:135:VAL:CA   | 2.47                     | 0.45              |
| 12:AM:34:VAL:CA   | 12:AM:74:ILE:HG12 | 2.40                     | 0.45              |
| 12:AM:49:VAL:HG22 | 16:AQ:41:ARG:HB2  | 1.97                     | 0.45              |
| 13:AN:26:ASN:O    | 13:AN:27:ASN:CB   | 2.65                     | 0.45              |
| 15:AP:17:VAL:HG12 | 15:AP:21:TYR:CZ   | 2.52                     | 0.45              |
| 17:AR:62:GLN:CA   | 17:AR:65:ARG:HH12 | 2.30                     | 0.45              |
| 20:AU:42:ARG:C    | 20:AU:43:PHE:CD1  | 2.95                     | 0.45              |
| 21:AV:15:LEU:HG   | 21:AV:16:LEU:N    | 2.26                     | 0.45              |
| 21:AV:68:GLY:C    | 21:AV:69:HIS:CG   | 2.95                     | 0.45              |
| 22:AW:24:LEU:O    | 22:AW:25:ARG:C    | 2.58                     | 0.45              |
| 24:BA:87:C:O2'    | 48:B1:46:ARG:NH2  | 2.50                     | 0.45              |
| 24:BA:93:C:H2'    | 24:BA:94:G:H8     | 1.80                     | 0.45              |
| 24:BA:218:A:H2'   | 24:BA:219:G:C8    | 2.51                     | 0.45              |
| 24:BA:295:G:C2'   | 24:BA:296:C:H5'   | 2.47                     | 0.45              |
| 24:BA:323:G:C8    | 29:BF:170:LEU:HB2 | 2.51                     | 0.45              |
| 24:BA:479:A:O2'   | 24:BA:480:A:C8    | 2.69                     | 0.45              |
| 24:BA:625:G:O2'   | 24:BA:656:G:O3'   | 2.30                     | 0.45              |
| 24:BA:688:U:H5'   | 24:BA:1780:A:N6   | 2.32                     | 0.45              |
| 24:BA:705:A:H62   | 24:BA:727:A:H8    | 1.62                     | 0.45              |
| 24:BA:728:G:H21   | 24:BA:730:C:H5''  | 1.81                     | 0.45              |
| 24:BA:814:C:O3'   | 24:BA:1224:G:N2   | 2.50                     | 0.45              |
| 24:BA:851:U:OP1   | 49:B2:49:LYS:NZ   | 2.41                     | 0.45              |
| 24:BA:1048:A:OP2  | 24:BA:1110:G:N1   | 2.44                     | 0.45              |
| 24:BA:1120:G:C4   | 24:BA:1121:C:C5   | 3.05                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1184:G:C5   | 24:BA:1185:C:C5    | 3.05                     | 0.45              |
| 24:BA:1260:G:N2   | 24:BA:1261:C:C2    | 2.85                     | 0.45              |
| 24:BA:1419:A:O4'  | 24:BA:1419:A:P     | 2.74                     | 0.45              |
| 24:BA:1570:A:N1   | 24:BA:1571:A:N7    | 2.64                     | 0.45              |
| 24:BA:1635:G:H8   | 24:BA:1635:G:C5'   | 2.30                     | 0.45              |
| 24:BA:1641:A:N6   | 24:BA:1642:G:N3    | 2.65                     | 0.45              |
| 24:BA:1698:A:O2'  | 24:BA:1699:G:H3'   | 2.16                     | 0.45              |
| 24:BA:1700:A:H2'  | 24:BA:1701:A:O4'   | 2.16                     | 0.45              |
| 24:BA:1759:A:H8   | 24:BA:1759:A:O5'   | 1.99                     | 0.45              |
| 24:BA:1801:G:O6   | 24:BA:2207:C:H1'   | 2.16                     | 0.45              |
| 24:BA:1837:C:N3   | 24:BA:1899:G:O6    | 2.49                     | 0.45              |
| 24:BA:1955:U:C2'  | 24:BA:1955:U:O2    | 2.65                     | 0.45              |
| 24:BA:2046:G:H2'  | 24:BA:2047:U:C6    | 2.51                     | 0.45              |
| 24:BA:2097:C:N4   | 24:BA:2193:G:C6    | 2.84                     | 0.45              |
| 24:BA:2127:G:O3'  | 26:BC:36:LYS:HB2   | 2.15                     | 0.45              |
| 24:BA:2150:U:N3   | 24:BA:2151:G:N7    | 2.64                     | 0.45              |
| 24:BA:2171:A:O2'  | 24:BA:2172:U:O4'   | 2.34                     | 0.45              |
| 24:BA:2177:C:O2'  | 24:BA:2178:C:H5'   | 2.17                     | 0.45              |
| 24:BA:2224:G:H4'  | 27:BD:262:ARG:HH21 | 1.81                     | 0.45              |
| 24:BA:2261:C:O4'  | 24:BA:2388:A:H1'   | 2.17                     | 0.45              |
| 24:BA:2277:G:C5   | 24:BA:2278:A:C8    | 3.05                     | 0.45              |
| 24:BA:2325:G:C8   | 24:BA:2326:C:C5    | 3.05                     | 0.45              |
| 24:BA:2352:A:C8   | 24:BA:2366:A:C6    | 3.04                     | 0.45              |
| 24:BA:2355:C:C5   | 24:BA:2356:C:C5    | 3.05                     | 0.45              |
| 24:BA:2427:C:H3'  | 24:BA:2427:C:H6    | 1.82                     | 0.45              |
| 24:BA:2543:G:C2   | 24:BA:2765:A:N1    | 2.83                     | 0.45              |
| 24:BA:2591:C:C2   | 24:BA:2592:G:C8    | 3.04                     | 0.45              |
| 24:BA:2682:U:O2'  | 24:BA:2683:C:H5'   | 2.16                     | 0.45              |
| 24:BA:2712:U:HO2' | 24:BA:2712(A):A:P  | 2.40                     | 0.45              |
| 24:BA:2733:A:C2   | 28:BE:204:ALA:HB2  | 2.52                     | 0.45              |
| 24:BA:2745:C:C2   | 24:BA:2746:U:C5    | 3.04                     | 0.45              |
| 24:BA:2759:G:C2   | 24:BA:2760:C:C6    | 3.04                     | 0.45              |
| 24:BA:2773:C:C5'  | 28:BE:165:VAL:HG13 | 2.46                     | 0.45              |
| 24:BA:2848:G:N2   | 24:BA:2849:U:C2    | 2.85                     | 0.45              |
| 24:BA:2866:U:O2   | 24:BA:2868:A:O2'   | 2.30                     | 0.45              |
| 25:BB:6:C:C2'     | 25:BB:7:G:O5'      | 2.65                     | 0.45              |
| 25:BB:29:A:OP1    | 39:BR:34:HIS:CE1   | 2.69                     | 0.45              |
| 26:BC:104:LEU:HA  | 26:BC:130:ILE:HG12 | 1.99                     | 0.45              |
| 26:BC:200:LYS:HZ1 | 26:BC:204:ALA:HB3  | 1.81                     | 0.45              |
| 27:BD:131:LEU:C   | 27:BD:190:TYR:CE2  | 2.94                     | 0.45              |
| 27:BD:173:VAL:O   | 27:BD:184:LYS:HA   | 2.17                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 28:BE:27:LEU:CD1   | 28:BE:30:PRO:HD3   | 2.31                     | 0.45              |
| 28:BE:52:LEU:HA    | 28:BE:74:PRO:CB    | 2.46                     | 0.45              |
| 28:BE:76:ARG:O     | 28:BE:76:ARG:HG3   | 2.17                     | 0.45              |
| 28:BE:101:ARG:HD2  | 28:BE:170:LEU:O    | 2.17                     | 0.45              |
| 28:BE:103:ASP:HA   | 28:BE:170:LEU:CD2  | 2.47                     | 0.45              |
| 28:BE:195:LEU:HA   | 28:BE:195:LEU:HD22 | 1.38                     | 0.45              |
| 29:BF:194:MET:SD   | 29:BF:197:ASP:CB   | 3.05                     | 0.45              |
| 30:BG:22:ARG:CG    | 30:BG:23:PHE:N     | 2.80                     | 0.45              |
| 30:BG:90:LEU:HD13  | 30:BG:90:LEU:C     | 2.41                     | 0.45              |
| 32:BK:96:ASP:CA    | 32:BK:99:GLU:OE1   | 2.50                     | 0.45              |
| 34:BM:127:ASP:H    | 34:BM:129:PRO:CD   | 2.19                     | 0.45              |
| 35:BN:47:ILE:CD1   | 35:BN:49:ARG:O     | 2.64                     | 0.45              |
| 36:BO:58:THR:CG2   | 36:BO:60:MET:HG2   | 2.46                     | 0.45              |
| 37:BP:27:VAL:HG13  | 37:BP:102:VAL:HG21 | 1.98                     | 0.45              |
| 37:BP:36:ALA:HB3   | 37:BP:101:ARG:H    | 1.82                     | 0.45              |
| 37:BP:37:LEU:H     | 37:BP:39:PRO:HD3   | 1.82                     | 0.45              |
| 37:BP:134:ARG:HH11 | 37:BP:134:ARG:CG   | 2.26                     | 0.45              |
| 38:BQ:10:LEU:HD22  | 38:BQ:43:GLU:HG2   | 1.99                     | 0.45              |
| 38:BQ:63:ARG:NH1   | 38:BQ:63:ARG:HG2   | 2.32                     | 0.45              |
| 38:BQ:87:TYR:N     | 38:BQ:87:TYR:HD2   | 2.15                     | 0.45              |
| 38:BQ:87:TYR:N     | 38:BQ:87:TYR:CD2   | 2.83                     | 0.45              |
| 38:BQ:98:LEU:CD2   | 38:BQ:99:LYS:NZ    | 2.77                     | 0.45              |
| 39:BR:10:ARG:O     | 39:BR:11:LYS:C     | 2.60                     | 0.45              |
| 39:BR:67:ARG:HD3   | 39:BR:103:GLU:HB2  | 1.99                     | 0.45              |
| 39:BR:77:ALA:O     | 39:BR:79:ALA:N     | 2.50                     | 0.45              |
| 39:BR:92:TYR:CD2   | 39:BR:93:LYS:N     | 2.85                     | 0.45              |
| 40:BS:37:GLY:CA    | 40:BS:42:ILE:O     | 2.64                     | 0.45              |
| 41:BT:69:CYS:O     | 41:BT:72:HIS:HB2   | 2.16                     | 0.45              |
| 42:BU:40:LEU:HB3   | 42:BU:51:VAL:CG1   | 2.47                     | 0.45              |
| 42:BU:42:GLY:O     | 42:BU:49:THR:O     | 2.34                     | 0.45              |
| 43:BV:25:ARG:CA    | 43:BV:71:VAL:HG11  | 2.42                     | 0.45              |
| 45:BX:53:PRO:HG2   | 45:BX:56:PRO:HA    | 1.99                     | 0.45              |
| 46:BY:17:ALA:O     | 46:BY:18:LEU:C     | 2.60                     | 0.45              |
| 46:BY:111:VAL:HA   | 46:BY:116:VAL:O    | 2.15                     | 0.45              |
| 47:BZ:72:ARG:O     | 47:BZ:75:LEU:CD1   | 2.65                     | 0.45              |
| 47:BZ:75:LEU:HB2   | 47:BZ:78:TYR:CE1   | 2.52                     | 0.45              |
| 53:B6:11:LYS:CE    | 53:B6:15:THR:HG21  | 2.47                     | 0.45              |
| 53:B6:18:PHE:O     | 53:B6:19:ARG:C     | 2.59                     | 0.45              |
| 1:AA:92:G:N2       | 1:AA:93:U:H1'      | 2.31                     | 0.45              |
| 1:AA:144:G:C6      | 1:AA:179:A:C6      | 3.04                     | 0.45              |
| 1:AA:152:A:OP2     | 1:AA:153:C:H5      | 1.99                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:181:G:H2'    | 1:AA:182:U:OP2    | 2.17                     | 0.45              |
| 1:AA:195:A:H1'    | 1:AA:223:U:H5'    | 1.99                     | 0.45              |
| 1:AA:195:A:P      | 22:AW:68:LYS:HZ1  | 2.40                     | 0.45              |
| 1:AA:246:A:C2     | 1:AA:282:A:C5     | 3.04                     | 0.45              |
| 1:AA:251:G:C4'    | 1:AA:252:U:OP1    | 2.65                     | 0.45              |
| 1:AA:273:A:C2     | 1:AA:274:A:C1'    | 2.91                     | 0.45              |
| 1:AA:292:G:C4     | 1:AA:309:G:N2     | 2.84                     | 0.45              |
| 1:AA:307:C:N3     | 1:AA:308:C:H5     | 2.14                     | 0.45              |
| 1:AA:416:G:C2     | 1:AA:417:C:C2     | 3.05                     | 0.45              |
| 1:AA:588:G:C4     | 1:AA:753:A:C5     | 3.05                     | 0.45              |
| 1:AA:619:U:H1'    | 6:AG:133:VAL:HG22 | 1.99                     | 0.45              |
| 1:AA:622:A:C2     | 1:AA:623:C:O4'    | 2.70                     | 0.45              |
| 1:AA:722:A:H5'    | 1:AA:723:U:O4     | 2.16                     | 0.45              |
| 1:AA:812:C:C4'    | 1:AA:813:U:C6     | 3.00                     | 0.45              |
| 1:AA:890:G:O2'    | 1:AA:891:U:H6     | 1.98                     | 0.45              |
| 1:AA:895:G:N2     | 1:AA:896:C:C2     | 2.85                     | 0.45              |
| 1:AA:976:G:C6     | 1:AA:1362:C:N4    | 2.85                     | 0.45              |
| 1:AA:1001:G:C5    | 1:AA:1002:G:H1'   | 2.51                     | 0.45              |
| 1:AA:1083:U:H3'   | 1:AA:1084:G:C8    | 2.52                     | 0.45              |
| 1:AA:1108:G:C5    | 1:AA:1109:C:C4    | 3.05                     | 0.45              |
| 1:AA:1252:A:C6    | 1:AA:1253:G:C5    | 3.05                     | 0.45              |
| 1:AA:1254:C:OP1   | 12:AM:45:ARG:NE   | 2.50                     | 0.45              |
| 1:AA:1386:G:N1    | 1:AA:1387:G:C5    | 2.85                     | 0.45              |
| 1:AA:1392:G:C2'   | 1:AA:1393:U:O5'   | 2.65                     | 0.45              |
| 1:AA:1424:C:H2'   | 1:AA:1425:U:C6    | 2.52                     | 0.45              |
| 1:AA:1433:A:O2'   | 1:AA:1434:A:H5'   | 2.16                     | 0.45              |
| 1:AA:1480:G:C2'   | 1:AA:1481:U:C5'   | 2.95                     | 0.45              |
| 2:A1:30:U:H3'     | 2:A1:31:U:C6      | 2.51                     | 0.45              |
| 3:AC:57:G:H4'     | 30:BG:82:LEU:CD2  | 2.47                     | 0.45              |
| 4:AE:7:VAL:CG2    | 4:AE:8:LYS:H      | 2.21                     | 0.45              |
| 4:AE:31:TYR:CZ    | 4:AE:200:ILE:HG21 | 2.51                     | 0.45              |
| 4:AE:184:VAL:N    | 4:AE:198:ASP:CG   | 2.70                     | 0.45              |
| 5:AF:122:GLU:HA   | 5:AF:125:GLU:OE2  | 2.17                     | 0.45              |
| 5:AF:172:ARG:HB3  | 5:AF:172:ARG:NH1  | 2.31                     | 0.45              |
| 6:AG:30:LYS:N     | 6:AG:34:GLU:CB    | 2.72                     | 0.45              |
| 6:AG:30:LYS:HA    | 6:AG:35:ARG:HG2   | 1.98                     | 0.45              |
| 6:AG:140:VAL:HG12 | 6:AG:185:PHE:HD1  | 1.81                     | 0.45              |
| 7:AH:41:VAL:CG2   | 7:AH:113:ALA:HA   | 2.47                     | 0.45              |
| 8:AI:16:GLN:O     | 8:AI:19:LEU:HB3   | 2.17                     | 0.45              |
| 8:AI:23:LYS:HA    | 8:AI:26:ILE:HG13  | 1.98                     | 0.45              |
| 8:AI:79:LEU:CD2   | 8:AI:79:LEU:N     | 2.76                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 9:AJ:129:GLU:HB2  | 9:AJ:131:LYS:HE2  | 1.99                     | 0.45              |
| 11:AL:99:LEU:N    | 11:AL:99:LEU:CD2  | 2.80                     | 0.45              |
| 11:AL:113:LYS:HD2 | 11:AL:113:LYS:H   | 1.81                     | 0.45              |
| 12:AM:4:ILE:HD13  | 12:AM:98:ILE:CG2  | 2.47                     | 0.45              |
| 13:AN:34:ASP:HB2  | 13:AN:35:PRO:CD   | 2.47                     | 0.45              |
| 13:AN:57:THR:O    | 13:AN:58:PRO:C    | 2.58                     | 0.45              |
| 13:AN:79:SER:HA   | 13:AN:104:GLN:NE2 | 2.31                     | 0.45              |
| 13:AN:81:ASP:OD1  | 13:AN:106:LYS:CD  | 2.64                     | 0.45              |
| 14:AO:21:LYS:O    | 14:AO:22:SER:C    | 2.60                     | 0.45              |
| 15:AP:20:THR:O    | 15:AP:20:THR:HG22 | 2.15                     | 0.45              |
| 15:AP:52:GLU:CB   | 15:AP:55:ARG:CZ   | 2.94                     | 0.45              |
| 15:AP:87:TYR:HD1  | 21:AV:73:GLU:HB3  | 1.81                     | 0.45              |
| 16:AQ:35:ARG:C    | 16:AQ:37:PHE:H    | 2.23                     | 0.45              |
| 17:AR:27:VAL:HG12 | 17:AR:31:LEU:CD2  | 2.47                     | 0.45              |
| 18:AS:67:THR:CB   | 18:AS:70:ALA:HB2  | 2.43                     | 0.45              |
| 20:AU:58:LEU:HB3  | 20:AU:62:GLU:CG   | 2.43                     | 0.45              |
| 20:AU:78:LEU:O    | 20:AU:79:LEU:CB   | 2.64                     | 0.45              |
| 24:BA:30:G:H2'    | 24:BA:31:C:C6     | 2.51                     | 0.45              |
| 24:BA:110:G:H2'   | 24:BA:110:G:N3    | 2.32                     | 0.45              |
| 24:BA:194:G:C2    | 24:BA:195:A:C4    | 3.05                     | 0.45              |
| 24:BA:217:G:C2'   | 24:BA:218:A:O5'   | 2.65                     | 0.45              |
| 24:BA:244:A:C2    | 24:BA:255:A:C2    | 3.05                     | 0.45              |
| 24:BA:308:G:N1    | 24:BA:309:G:C4    | 2.85                     | 0.45              |
| 24:BA:354:G:O2'   | 24:BA:355:G:O4'   | 2.31                     | 0.45              |
| 24:BA:536:A:C6    | 24:BA:558:G:C6    | 3.05                     | 0.45              |
| 24:BA:620:G:O4'   | 24:BA:620:G:OP2   | 2.35                     | 0.45              |
| 24:BA:692:C:C2'   | 24:BA:693:C:O5'   | 2.65                     | 0.45              |
| 24:BA:693:C:H2'   | 24:BA:694:U:O5'   | 2.16                     | 0.45              |
| 24:BA:775:G:H5'   | 24:BA:777:A:N9    | 2.31                     | 0.45              |
| 24:BA:840:C:H6    | 24:BA:840:C:O5'   | 1.99                     | 0.45              |
| 24:BA:930:U:C2'   | 24:BA:931:G:OP2   | 2.64                     | 0.45              |
| 24:BA:949:C:H2'   | 24:BA:950:G:C8    | 2.34                     | 0.45              |
| 24:BA:1005:C:O4'  | 24:BA:1012:U:O2   | 2.34                     | 0.45              |
| 24:BA:1104:C:H2'  | 24:BA:1105:U:H6   | 1.80                     | 0.45              |
| 24:BA:1137:G:O2'  | 34:BM:102:ALA:O   | 2.35                     | 0.45              |
| 24:BA:1154:G:OP1  | 41:BT:58:ARG:HD3  | 2.16                     | 0.45              |
| 24:BA:1165:U:C2   | 24:BA:1166:C:C5   | 3.05                     | 0.45              |
| 24:BA:1203:G:C2   | 24:BA:1206:G:N1   | 2.84                     | 0.45              |
| 24:BA:1287:A:H8   | 38:BQ:104:ARG:NH1 | 2.13                     | 0.45              |
| 24:BA:1303:G:N7   | 24:BA:1304:C:N4   | 2.64                     | 0.45              |
| 24:BA:1321:A:N6   | 24:BA:1322:A:C2   | 2.82                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1378:A:C2   | 24:BA:1380:G:N9    | 2.85                     | 0.45              |
| 24:BA:1407:C:H6   | 24:BA:1407:C:OP2   | 1.97                     | 0.45              |
| 24:BA:1472:A:HO2' | 24:BA:1473:G:H8    | 1.62                     | 0.45              |
| 24:BA:1574:C:C4   | 24:BA:1575:C:C4    | 3.04                     | 0.45              |
| 24:BA:1685:C:C2'  | 24:BA:1686:C:O5'   | 2.63                     | 0.45              |
| 24:BA:1690:A:N6   | 24:BA:1697:G:C2    | 2.85                     | 0.45              |
| 24:BA:1790:C:O3'  | 27:BD:209:ALA:HB1  | 2.16                     | 0.45              |
| 24:BA:1842:G:N1   | 24:BA:1901:A:C6    | 2.85                     | 0.45              |
| 24:BA:1869:G:C4   | 24:BA:1878:G:O6    | 2.70                     | 0.45              |
| 24:BA:1935:G:H3'  | 24:BA:1962:C:N4    | 2.26                     | 0.45              |
| 24:BA:1970:A:C5   | 24:BA:1972:A:C5    | 3.05                     | 0.45              |
| 24:BA:1992:G:C4'  | 24:BA:1993:U:C5    | 2.99                     | 0.45              |
| 24:BA:2216:G:H21  | 27:BD:150:LYS:CD   | 2.30                     | 0.45              |
| 24:BA:2258:C:N4   | 24:BA:2426:A:O4'   | 2.50                     | 0.45              |
| 24:BA:2414:G:C2   | 24:BA:2415:G:N7    | 2.85                     | 0.45              |
| 24:BA:2457:U:H2'  | 24:BA:2458:G:C4'   | 2.46                     | 0.45              |
| 24:BA:2473:U:OP1  | 24:BA:2474:C:N4    | 2.41                     | 0.45              |
| 24:BA:2479:G:OP1  | 24:BA:2537:U:O2'   | 2.32                     | 0.45              |
| 24:BA:2524:G:C4   | 24:BA:2525:G:H1'   | 2.52                     | 0.45              |
| 24:BA:2625:G:H2'  | 24:BA:2626:C:O5'   | 2.17                     | 0.45              |
| 24:BA:2638:G:H2'  | 24:BA:2639:A:N7    | 2.31                     | 0.45              |
| 24:BA:2642:G:H2'  | 24:BA:2643:G:C8    | 2.50                     | 0.45              |
| 24:BA:2720:U:C2'  | 24:BA:2721:A:C8    | 2.98                     | 0.45              |
| 24:BA:2776:A:H5'' | 24:BA:2777:G:OP1   | 2.17                     | 0.45              |
| 24:BA:2820:A:OP1  | 38:BQ:5:LYS:HE2    | 2.17                     | 0.45              |
| 24:BA:2851:A:N1   | 24:BA:2852:G:C2    | 2.85                     | 0.45              |
| 24:BA:2851:A:N1   | 24:BA:2852:G:C4    | 2.85                     | 0.45              |
| 24:BA:2887:U:O2'  | 24:BA:2888:C:H5'   | 2.17                     | 0.45              |
| 25:BB:3:C:O2'     | 25:BB:4:C:H5'      | 2.16                     | 0.45              |
| 26:BC:22:ILE:CG1  | 26:BC:189:ILE:HG21 | 2.47                     | 0.45              |
| 26:BC:43:VAL:HG21 | 26:BC:175:VAL:HG21 | 1.98                     | 0.45              |
| 26:BC:44:HIS:CD2  | 26:BC:215:THR:HG21 | 2.52                     | 0.45              |
| 26:BC:76:ALA:CA   | 26:BC:149:ILE:HD11 | 2.46                     | 0.45              |
| 26:BC:78:ALA:HA   | 26:BC:119:VAL:HG22 | 1.98                     | 0.45              |
| 26:BC:160:ARG:C   | 26:BC:161:ILE:HG23 | 2.42                     | 0.45              |
| 27:BD:21:PHE:C    | 27:BD:205:VAL:HG13 | 2.41                     | 0.45              |
| 27:BD:33:LEU:HD11 | 27:BD:61:LEU:HD11  | 1.98                     | 0.45              |
| 27:BD:61:LEU:O    | 27:BD:62:TYR:HB2   | 2.16                     | 0.45              |
| 27:BD:107:ALA:O   | 27:BD:108:PRO:O    | 2.35                     | 0.45              |
| 27:BD:181:GLU:OE2 | 27:BD:272:ALA:HA   | 2.15                     | 0.45              |
| 27:BD:261:LYS:C   | 27:BD:263:ARG:H    | 2.23                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 28:BE:55:ASN:C    | 28:BE:57:LYS:H     | 2.24                     | 0.45              |
| 28:BE:146:THR:CB  | 28:BE:147:PRO:CD   | 2.78                     | 0.45              |
| 28:BE:148:GLY:C   | 28:BE:149:ARG:CG   | 2.90                     | 0.45              |
| 29:BF:21:ALA:O    | 29:BF:22:ALA:HB3   | 2.16                     | 0.45              |
| 29:BF:34:TRP:HB3  | 29:BF:38:ARG:NE    | 2.27                     | 0.45              |
| 29:BF:34:TRP:CG   | 36:BO:8:PRO:HB2    | 2.51                     | 0.45              |
| 29:BF:142:TRP:O   | 29:BF:145:GLU:N    | 2.49                     | 0.45              |
| 30:BG:115:ARG:C   | 30:BG:117:PHE:H    | 2.25                     | 0.45              |
| 30:BG:138:GLN:C   | 30:BG:140:ILE:N    | 2.73                     | 0.45              |
| 31:BH:11:VAL:HB   | 31:BH:50:VAL:HG22  | 1.97                     | 0.45              |
| 31:BH:11:VAL:HG11 | 31:BH:45:VAL:HG11  | 1.98                     | 0.45              |
| 31:BH:85:LYS:NZ   | 31:BH:141:VAL:C    | 2.75                     | 0.45              |
| 32:BK:9:LEU:CG    | 32:BK:17:GLN:NE2   | 2.79                     | 0.45              |
| 32:BK:97:ILE:HG22 | 32:BK:101:LEU:HD22 | 1.99                     | 0.45              |
| 33:BL:98:ARG:HD3  | 33:BL:139:VAL:HG11 | 1.98                     | 0.45              |
| 34:BM:19:GLU:HG3  | 34:BM:59:LYS:HB2   | 1.99                     | 0.45              |
| 34:BM:34:LEU:HD22 | 34:BM:116:LEU:CD2  | 2.47                     | 0.45              |
| 34:BM:69:GLN:NE2  | 34:BM:69:GLN:H     | 2.14                     | 0.45              |
| 35:BN:52:VAL:O    | 35:BN:53:LYS:CG    | 2.65                     | 0.45              |
| 36:BO:76:LYS:HB2  | 36:BO:101:VAL:HG21 | 1.99                     | 0.45              |
| 37:BP:7:MET:O     | 37:BP:69:PHE:CZ    | 2.70                     | 0.45              |
| 37:BP:32:TYR:N    | 37:BP:32:TYR:CD1   | 2.85                     | 0.45              |
| 38:BQ:28:LEU:C    | 38:BQ:30:THR:N     | 2.75                     | 0.45              |
| 38:BQ:36:THR:OG1  | 38:BQ:40:LYS:HB3   | 2.17                     | 0.45              |
| 40:BS:30:VAL:CG2  | 40:BS:89:VAL:O     | 2.54                     | 0.45              |
| 40:BS:40:THR:O    | 40:BS:42:ILE:N     | 2.50                     | 0.45              |
| 40:BS:70:VAL:HB   | 40:BS:74:ARG:CD    | 2.44                     | 0.45              |
| 40:BS:87:ASP:OD2  | 40:BS:88:ILE:N     | 2.49                     | 0.45              |
| 40:BS:105:LEU:HG  | 40:BS:106:SER:H    | 1.82                     | 0.45              |
| 41:BT:36:ARG:O    | 41:BT:37:GLU:C     | 2.59                     | 0.45              |
| 41:BT:67:ALA:HA   | 41:BT:70:ARG:NH2   | 2.11                     | 0.45              |
| 41:BT:89:GLU:C    | 41:BT:90:VAL:CG2   | 2.90                     | 0.45              |
| 42:BU:4:ILE:HD11  | 42:BU:43:GLU:OE1   | 2.17                     | 0.45              |
| 42:BU:40:LEU:CB   | 42:BU:51:VAL:HG13  | 2.47                     | 0.45              |
| 42:BU:48:GLY:O    | 42:BU:49:THR:HG23  | 2.17                     | 0.45              |
| 43:BV:34:ASN:ND2  | 43:BV:34:ASN:H     | 2.15                     | 0.45              |
| 43:BV:81:ALA:HB3  | 43:BV:97:LYS:HB2   | 1.98                     | 0.45              |
| 43:BV:85:VAL:HG12 | 43:BV:95:ILE:CG2   | 2.46                     | 0.45              |
| 45:BX:50:ARG:HG3  | 45:BX:54:LYS:CB    | 2.40                     | 0.45              |
| 48:B1:48:LEU:CD1  | 48:B1:51:GLN:HE22  | 2.29                     | 0.45              |
| 50:B3:65:ASP:OD2  | 50:B3:69:LYS:CE    | 2.64                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 51:B4:9:LYS:HD2   | 51:B4:9:LYS:H     | 1.78                     | 0.45              |
| 52:B5:17:LYS:HZ3  | 52:B5:50:ARG:HB2  | 1.80                     | 0.45              |
| 53:B6:33:ARG:O    | 53:B6:37:LYS:CG   | 2.65                     | 0.45              |
| 1:AA:50:A:N3      | 1:AA:360:A:N3     | 2.65                     | 0.45              |
| 1:AA:81:G:O6      | 1:AA:82:U:O4      | 2.35                     | 0.45              |
| 1:AA:110:C:H2'    | 1:AA:111:G:H8     | 1.82                     | 0.45              |
| 1:AA:152:A:C8     | 1:AA:153:C:C5     | 3.05                     | 0.45              |
| 1:AA:189:U:H3     | 19:AT:63:ARG:CB   | 2.30                     | 0.45              |
| 1:AA:392:G:N2     | 1:AA:393:A:H1'    | 2.32                     | 0.45              |
| 1:AA:440:A:H2'    | 1:AA:442:C:O4'    | 2.17                     | 0.45              |
| 1:AA:474:G:OP1    | 18:AS:80:PHE:C    | 2.60                     | 0.45              |
| 1:AA:690:G:H2'    | 1:AA:691:G:O5'    | 2.17                     | 0.45              |
| 1:AA:692:U:C4     | 13:AN:26:ASN:ND2  | 2.84                     | 0.45              |
| 1:AA:789:U:H6     | 1:AA:789:U:C3'    | 2.26                     | 0.45              |
| 1:AA:986:A:H2'    | 1:AA:987:G:H8     | 1.81                     | 0.45              |
| 1:AA:995:C:O2     | 16:AQ:4:LYS:CE    | 2.65                     | 0.45              |
| 1:AA:1163:C:N4    | 1:AA:1174:G:C6    | 2.85                     | 0.45              |
| 1:AA:1227:A:OP1   | 21:AV:80:TYR:HE2  | 1.95                     | 0.45              |
| 1:AA:1321:C:H6    | 1:AA:1321:C:H3'   | 1.82                     | 0.45              |
| 1:AA:1365:G:C2    | 1:AA:1366:C:C6    | 3.05                     | 0.45              |
| 1:AA:1399:C:O2    | 1:AA:1401:G:N7    | 2.50                     | 0.45              |
| 1:AA:1438:G:N2    | 1:AA:1464:G:H1'   | 2.32                     | 0.45              |
| 1:AA:1453:G:C2'   | 1:AA:1454:G:H5'   | 2.46                     | 0.45              |
| 1:AA:1470:G:C6    | 1:AA:1471:G:C5    | 3.05                     | 0.45              |
| 1:AA:1519:A:H8    | 1:AA:1519:A:O5'   | 1.99                     | 0.45              |
| 3:AD:48:C:O2'     | 3:AD:49:C:P       | 2.74                     | 0.45              |
| 3:AD:66:U:N3      | 3:AD:67:C:C4      | 2.85                     | 0.45              |
| 3:AB:18:G:H22     | 3:AB:55:U:H1'     | 1.82                     | 0.45              |
| 4:AE:15:VAL:C     | 4:AE:16:HIS:ND1   | 2.75                     | 0.45              |
| 4:AE:51:LEU:N     | 4:AE:51:LEU:HD23  | 2.32                     | 0.45              |
| 4:AE:119:GLU:CA   | 4:AE:142:LEU:CD1  | 2.95                     | 0.45              |
| 4:AE:171:ALA:C    | 4:AE:174:VAL:HB   | 2.42                     | 0.45              |
| 4:AE:185:ILE:O    | 4:AE:185:ILE:HG12 | 2.17                     | 0.45              |
| 5:AF:85:ARG:HH21  | 5:AF:89:GLU:CA    | 2.28                     | 0.45              |
| 5:AF:116:VAL:HG21 | 5:AF:141:VAL:HG22 | 1.97                     | 0.45              |
| 5:AF:155:GLY:O    | 5:AF:196:LEU:CB   | 2.64                     | 0.45              |
| 6:AG:106:TYR:CD2  | 6:AG:114:ARG:HG2  | 2.44                     | 0.45              |
| 6:AG:139:ARG:CG   | 6:AG:140:VAL:H    | 2.29                     | 0.45              |
| 6:AG:194:LEU:O    | 6:AG:195:ALA:O    | 2.35                     | 0.45              |
| 7:AH:110:LEU:HD23 | 7:AH:110:LEU:N    | 2.32                     | 0.45              |
| 7:AH:112:LEU:O    | 7:AH:114:GLY:N    | 2.49                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 8:AI:21:LEU:O      | 8:AI:24:GLU:HG3    | 2.17                     | 0.45              |
| 9:AJ:126:ASP:O     | 9:AJ:131:LYS:CG    | 2.64                     | 0.45              |
| 10:AK:26:VAL:O     | 10:AK:58:TYR:CD1   | 2.70                     | 0.45              |
| 10:AK:81:HIS:HD2   | 10:AK:138:TRP:C    | 2.25                     | 0.45              |
| 11:AL:43:ALA:C     | 11:AL:45:ALA:H     | 2.25                     | 0.45              |
| 11:AL:71:SER:O     | 11:AL:74:ILE:N     | 2.50                     | 0.45              |
| 12:AM:22:LYS:CE    | 12:AM:90:LEU:HD12  | 2.45                     | 0.45              |
| 13:AN:32:ILE:O     | 13:AN:40:ILE:HD13  | 2.17                     | 0.45              |
| 13:AN:86:GLY:H     | 13:AN:112:THR:HG23 | 1.82                     | 0.45              |
| 13:AN:108:ILE:HB   | 20:AU:88:LYS:OXT   | 2.17                     | 0.45              |
| 14:AO:24:VAL:CG1   | 14:AO:98:TYR:CE2   | 3.00                     | 0.45              |
| 15:AP:22:ILE:CB    | 15:AP:25:ILE:HD12  | 2.47                     | 0.45              |
| 17:AR:35:ARG:O     | 17:AR:36:ILE:C     | 2.58                     | 0.45              |
| 19:AT:65:ILE:HG23  | 19:AT:69:LYS:CD    | 2.41                     | 0.45              |
| 20:AU:17:SER:HB2   | 20:AU:54:ARG:HH12  | 1.81                     | 0.45              |
| 20:AU:22:VAL:CG2   | 20:AU:55:ARG:O     | 2.65                     | 0.45              |
| 20:AU:37:VAL:CG1   | 20:AU:41:LYS:HZ2   | 2.29                     | 0.45              |
| 22:AW:31:SER:O     | 22:AW:34:LYS:HB2   | 2.17                     | 0.45              |
| 23:AX:3:LYS:O      | 23:AX:14:TRP:HE3   | 1.98                     | 0.45              |
| 24:BA:18:C:N3      | 24:BA:19:C:C5      | 2.85                     | 0.45              |
| 24:BA:111:A:C2'    | 24:BA:112:U:C6     | 2.94                     | 0.45              |
| 24:BA:193:U:O2'    | 24:BA:194:G:H5'    | 2.17                     | 0.45              |
| 24:BA:253:C:O2     | 24:BA:254:G:O4'    | 2.35                     | 0.45              |
| 24:BA:271(B):G:C3' | 24:BA:271(C):U:H5' | 2.46                     | 0.45              |
| 24:BA:271(C):U:O4  | 24:BA:421:U:N3     | 2.50                     | 0.45              |
| 24:BA:285:C:N3     | 24:BA:357:A:C2     | 2.85                     | 0.45              |
| 24:BA:513:A:C2'    | 24:BA:514:A:H5'    | 2.47                     | 0.45              |
| 24:BA:566:U:H3'    | 42:BU:82:ARG:HH12  | 1.81                     | 0.45              |
| 24:BA:566:U:C5     | 24:BA:567:A:C5     | 3.05                     | 0.45              |
| 24:BA:585:G:H22    | 24:BA:1253:A:P     | 2.39                     | 0.45              |
| 24:BA:618:G:H2'    | 24:BA:618(A):C:N1  | 2.31                     | 0.45              |
| 24:BA:637:A:OP1    | 36:BO:133:SER:HB3  | 2.16                     | 0.45              |
| 24:BA:703:U:C5     | 24:BA:704:G:C5     | 3.05                     | 0.45              |
| 24:BA:768:G:C4     | 24:BA:769:G:C8     | 3.05                     | 0.45              |
| 24:BA:778:G:C6     | 24:BA:779:U:N3     | 2.85                     | 0.45              |
| 24:BA:779:U:O4     | 24:BA:780:G:N1     | 2.50                     | 0.45              |
| 24:BA:815:C:H2'    | 24:BA:816:C:H6     | 1.82                     | 0.45              |
| 24:BA:829:A:OP1    | 24:BA:831:G:H1'    | 2.16                     | 0.45              |
| 24:BA:975:G:C2     | 24:BA:976:C:C6     | 2.99                     | 0.45              |
| 24:BA:983:A:C2     | 24:BA:984:A:N1     | 2.85                     | 0.45              |
| 24:BA:983:A:C2'    | 24:BA:984:A:C8     | 2.97                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|---------------------|--------------------------|-------------------|
| 24:BA:1055:G:C2   | 24:BA:1084:A:C2     | 3.05                     | 0.45              |
| 24:BA:1056:G:N1   | 24:BA:1102:C:C5     | 2.84                     | 0.45              |
| 24:BA:1119:C:O2   | 24:BA:1119:C:C2'    | 2.64                     | 0.45              |
| 24:BA:1263:U:C4'  | 51:B4:10:LYS:HZ2    | 2.30                     | 0.45              |
| 24:BA:1267:U:HO2' | 24:BA:1268:A:P      | 2.37                     | 0.45              |
| 24:BA:1326:U:C6   | 24:BA:2010:G:N2     | 2.77                     | 0.45              |
| 24:BA:1343:G:C6   | 24:BA:1404:C:N3     | 2.85                     | 0.45              |
| 24:BA:1355:G:H22  | 24:BA:1377:G:C1'    | 2.25                     | 0.45              |
| 24:BA:1388:G:N3   | 24:BA:1389:G:C8     | 2.85                     | 0.45              |
| 24:BA:1417:C:H2'  | 24:BA:1418:G:O5'    | 2.17                     | 0.45              |
| 24:BA:1449:A:H2   | 24:BA:1449(A):G:H1' | 1.80                     | 0.45              |
| 24:BA:1563:G:C6   | 24:BA:1564:C:C4     | 3.05                     | 0.45              |
| 24:BA:1631:A:OP1  | 24:BA:1631:A:C8     | 2.70                     | 0.45              |
| 24:BA:1635:G:H2'  | 24:BA:1636:C:H6     | 1.81                     | 0.45              |
| 24:BA:1680:U:O2'  | 24:BA:1763:G:C8     | 2.70                     | 0.45              |
| 24:BA:1761:C:H6   | 24:BA:1761:C:H3'    | 1.82                     | 0.45              |
| 24:BA:1781:C:O2'  | 24:BA:2609:U:O4     | 2.16                     | 0.45              |
| 24:BA:1912:A:C6   | 24:BA:1919:A:C4     | 3.05                     | 0.45              |
| 24:BA:1996:C:C6   | 24:BA:1996:C:C3'    | 3.00                     | 0.45              |
| 24:BA:2024:G:C6   | 24:BA:2025:C:C5     | 3.05                     | 0.45              |
| 24:BA:2051:A:C2   | 24:BA:2614:A:N6     | 2.85                     | 0.45              |
| 24:BA:2056:G:O5'  | 24:BA:2057:A:OP1    | 2.34                     | 0.45              |
| 24:BA:2076:U:C5'  | 24:BA:2077:A:OP2    | 2.65                     | 0.45              |
| 24:BA:2089:U:C2   | 24:BA:2090:G:N7     | 2.85                     | 0.45              |
| 24:BA:2133:G:N3   | 24:BA:2133:G:H2'    | 2.32                     | 0.45              |
| 24:BA:2278:A:C5   | 47:BZ:14:ARG:HB3    | 2.51                     | 0.45              |
| 24:BA:2345:G:OP1  | 52:B5:39:TYR:O      | 2.35                     | 0.45              |
| 24:BA:2445:G:C2   | 24:BA:2446:G:C5     | 3.05                     | 0.45              |
| 24:BA:2626:C:C6   | 24:BA:2626:C:H3'    | 2.52                     | 0.45              |
| 24:BA:2706:G:C2'  | 24:BA:2707:G:O5'    | 2.65                     | 0.45              |
| 24:BA:2717:G:C4   | 24:BA:2718:G:N7     | 2.85                     | 0.45              |
| 24:BA:2830:G:H5'  | 28:BE:57:LYS:HE3    | 1.99                     | 0.45              |
| 24:BA:2880:C:H2'  | 24:BA:2881:C:H6     | 1.81                     | 0.45              |
| 24:BA:2896:C:H2'  | 24:BA:2897:U:O5'    | 2.17                     | 0.45              |
| 25:BB:33:G:H2'    | 25:BB:33:G:N3       | 2.31                     | 0.45              |
| 25:BB:44:G:C2     | 25:BB:48:A:H1'      | 2.51                     | 0.45              |
| 27:BD:57:GLY:O    | 27:BD:58:HIS:HB2    | 2.17                     | 0.45              |
| 27:BD:84:TYR:CD1  | 27:BD:91:ARG:HD2    | 2.52                     | 0.45              |
| 28:BE:48:GLN:C    | 28:BE:77:ILE:HG13   | 2.42                     | 0.45              |
| 28:BE:101:ARG:NH2 | 28:BE:171:GLU:CG    | 2.79                     | 0.45              |
| 28:BE:105:THR:OG1 | 28:BE:165:VAL:C     | 2.58                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 30:BG:39:ILE:HA    | 30:BG:157:ILE:HA   | 1.98                     | 0.45              |
| 30:BG:139:LEU:O    | 30:BG:142:PRO:HD3  | 2.17                     | 0.45              |
| 31:BH:46:GLU:O     | 31:BH:47:GLU:HB2   | 2.17                     | 0.45              |
| 31:BH:58:GLU:O     | 31:BH:62:LYS:HG2   | 2.17                     | 0.45              |
| 31:BH:111:HIS:O    | 31:BH:113:VAL:N    | 2.50                     | 0.45              |
| 32:BK:28:ASN:O     | 32:BK:28:ASN:OD1   | 2.34                     | 0.45              |
| 32:BK:87:LYS:CE    | 32:BK:122:GLU:OE2  | 2.57                     | 0.45              |
| 32:BK:118:LYS:HG3  | 32:BK:119:PRO:HD2  | 1.98                     | 0.45              |
| 33:BL:120:LEU:HD23 | 33:BL:120:LEU:N    | 2.31                     | 0.45              |
| 34:BM:7:LYS:CE     | 34:BM:8:GLN:H      | 2.27                     | 0.45              |
| 34:BM:22:THR:HG21  | 34:BM:61:ARG:NH1   | 2.31                     | 0.45              |
| 34:BM:139:GLU:O    | 34:BM:140:VAL:HG22 | 2.13                     | 0.45              |
| 34:BM:139:GLU:C    | 34:BM:139:GLU:CD   | 2.85                     | 0.45              |
| 35:BN:13:ASN:O     | 35:BN:13:ASN:CG    | 2.60                     | 0.45              |
| 35:BN:69:VAL:C     | 35:BN:104:ARG:HH21 | 2.24                     | 0.45              |
| 36:BO:58:THR:HG22  | 36:BO:59:LEU:N     | 2.32                     | 0.45              |
| 36:BO:96:THR:O     | 36:BO:102:ARG:CD   | 2.63                     | 0.45              |
| 37:BP:75:THR:HG21  | 37:BP:89:ASN:O     | 2.17                     | 0.45              |
| 37:BP:131:ILE:C    | 37:BP:132:VAL:HG13 | 2.42                     | 0.45              |
| 38:BQ:5:LYS:C      | 38:BQ:5:LYS:CE     | 2.90                     | 0.45              |
| 38:BQ:35:THR:HG22  | 38:BQ:113:LEU:CD2  | 2.47                     | 0.45              |
| 38:BQ:65:LEU:HD23  | 38:BQ:65:LEU:O     | 2.16                     | 0.45              |
| 39:BR:3:ARG:CG     | 39:BR:3:ARG:HH11   | 2.29                     | 0.45              |
| 40:BS:39:ARG:HE    | 40:BS:39:ARG:HB3   | 1.60                     | 0.45              |
| 40:BS:79:HIS:HB2   | 40:BS:82:LEU:CB    | 2.42                     | 0.45              |
| 41:BT:61:TRP:CD1   | 41:BT:61:TRP:N     | 2.85                     | 0.45              |
| 42:BU:1:MET:N      | 42:BU:45:THR:OG1   | 2.50                     | 0.45              |
| 43:BV:21:VAL:CG1   | 43:BV:75:TYR:CD2   | 2.99                     | 0.45              |
| 43:BV:70:TYR:CE1   | 43:BV:72:LYS:HB2   | 2.52                     | 0.45              |
| 45:BX:1:MET:HG2    | 45:BX:67:LEU:HD22  | 1.98                     | 0.45              |
| 45:BX:26:LYS:NZ    | 45:BX:36:ALA:HB3   | 2.32                     | 0.45              |
| 45:BX:38:ILE:HG22  | 45:BX:38:ILE:O     | 2.17                     | 0.45              |
| 45:BX:46:LYS:HB2   | 45:BX:57:GLN:N     | 2.31                     | 0.45              |
| 45:BX:71:LYS:HD2   | 45:BX:71:LYS:N     | 2.19                     | 0.45              |
| 47:BZ:46:LYS:HE2   | 47:BZ:77:ARG:H     | 1.82                     | 0.45              |
| 48:B1:51:GLN:C     | 48:B1:55:LEU:HD13  | 2.41                     | 0.45              |
| 50:B3:31:ILE:O     | 50:B3:31:ILE:HG12  | 2.17                     | 0.45              |
| 52:B5:7:ILE:CG2    | 52:B5:8:LYS:H      | 2.28                     | 0.45              |
| 52:B5:39:TYR:O     | 52:B5:39:TYR:CG    | 2.70                     | 0.45              |
| 54:B7:19:SER:HG    | 54:B7:21:LYS:HZ1   | 1.65                     | 0.45              |
| 54:B7:26:LYS:O     | 54:B7:47:LYS:HE3   | 2.17                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 54:B7:29:LYS:HB3  | 54:B7:34:TRP:HH2   | 1.70                     | 0.45              |
| 54:B7:62:LEU:CB   | 54:B7:63:PRO:HD3   | 2.46                     | 0.45              |
| 1:AA:47:C:C5      | 1:AA:365:U:O2      | 2.70                     | 0.45              |
| 1:AA:266:G:C2'    | 1:AA:267:C:OP2     | 2.65                     | 0.45              |
| 1:AA:318:G:O2'    | 1:AA:319:G:H5'     | 2.17                     | 0.45              |
| 1:AA:538:G:OP1    | 14:AO:114:LYS:HB2  | 2.16                     | 0.45              |
| 1:AA:538:G:OP2    | 14:AO:115:LYS:HB2  | 2.17                     | 0.45              |
| 1:AA:676:A:C4'    | 13:AN:114:VAL:O    | 2.65                     | 0.45              |
| 1:AA:689:C:C6     | 1:AA:690:G:C8      | 3.05                     | 0.45              |
| 1:AA:702:A:C6     | 24:BA:1848:A:C2    | 3.05                     | 0.45              |
| 1:AA:779:C:N4     | 1:AA:780:A:C2      | 2.85                     | 0.45              |
| 1:AA:897:C:C2'    | 1:AA:898:G:O5'     | 2.65                     | 0.45              |
| 1:AA:963:G:N1     | 1:AA:973:G:C6      | 2.85                     | 0.45              |
| 1:AA:1056:U:O2    | 5:AF:195:VAL:CG2   | 2.62                     | 0.45              |
| 1:AA:1057:G:C4    | 1:AA:1058:G:C8     | 3.05                     | 0.45              |
| 1:AA:1228:C:O5'   | 15:AP:115:LYS:O    | 2.35                     | 0.45              |
| 1:AA:1236:A:H5''  | 1:AA:1305:G:OP1    | 2.17                     | 0.45              |
| 1:AA:1308:U:H2'   | 1:AA:1309:G:H8     | 1.82                     | 0.45              |
| 1:AA:1310:G:C2    | 1:AA:1328:C:C2     | 3.04                     | 0.45              |
| 2:A1:13:U:H3'     | 2:A1:14:U:C5       | 2.52                     | 0.45              |
| 3:AD:30:G:H2'     | 3:AD:31:A:C8       | 2.52                     | 0.45              |
| 3:AB:51:U:C2'     | 24:BA:2471:C:H4'   | 2.47                     | 0.45              |
| 3:AB:52:G:C4'     | 24:BA:2471:C:OP1   | 2.49                     | 0.45              |
| 4:AE:42:ILE:HD12  | 4:AE:202:PRO:HB2   | 1.90                     | 0.45              |
| 5:AF:10:PHE:C     | 5:AF:11:ARG:NE     | 2.75                     | 0.45              |
| 5:AF:187:ALA:HB3  | 5:AF:198:VAL:HG21  | 1.98                     | 0.45              |
| 6:AG:15:GLU:OE2   | 6:AG:63:LYS:HE3    | 2.17                     | 0.45              |
| 6:AG:198:VAL:HG23 | 6:AG:199:ASN:N     | 2.25                     | 0.45              |
| 8:AI:41:GLU:O     | 8:AI:42:GLU:HB3    | 2.16                     | 0.45              |
| 9:AJ:51:GLN:NE2   | 9:AJ:58:PRO:HD3    | 2.31                     | 0.45              |
| 9:AJ:71:PRO:HG2   | 9:AJ:96:GLN:HA     | 1.98                     | 0.45              |
| 10:AK:63:LEU:CD2  | 10:AK:63:LEU:N     | 2.80                     | 0.45              |
| 10:AK:103:VAL:O   | 10:AK:104:ARG:C    | 2.59                     | 0.45              |
| 10:AK:114:THR:CG2 | 10:AK:119:LEU:HD23 | 2.41                     | 0.45              |
| 11:AL:19:LEU:HD22 | 11:AL:20:ARG:N     | 2.32                     | 0.45              |
| 12:AM:55:LYS:O    | 12:AM:55:LYS:HG3   | 2.16                     | 0.45              |
| 13:AN:23:ALA:CB   | 13:AN:28:THR:CG2   | 2.95                     | 0.45              |
| 15:AP:48:LEU:HD22 | 15:AP:49:THR:O     | 2.17                     | 0.45              |
| 15:AP:122:LYS:O   | 15:AP:123:ALA:HB2  | 2.17                     | 0.45              |
| 16:AQ:45:ARG:NH1  | 16:AQ:45:ARG:CG    | 2.72                     | 0.45              |
| 17:AR:66:LEU:H    | 17:AR:66:LEU:CD2   | 2.29                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 17:AR:69:TYR:O     | 17:AR:72:ARG:N     | 2.50                     | 0.45              |
| 18:AS:8:ARG:HH12   | 18:AS:11:SER:CA    | 2.28                     | 0.45              |
| 18:AS:34:GLU:OE2   | 18:AS:35:LYS:N     | 2.50                     | 0.45              |
| 19:AT:97:SER:CB    | 19:AT:104:LYS:H    | 2.30                     | 0.45              |
| 19:AT:100:LYS:C    | 19:AT:101:ARG:HD2  | 2.42                     | 0.45              |
| 20:AU:67:ALA:HA    | 20:AU:70:ILE:CG1   | 2.46                     | 0.45              |
| 21:AV:25:LYS:HD2   | 21:AV:25:LYS:O     | 2.17                     | 0.45              |
| 21:AV:45:VAL:HG22  | 21:AV:67:VAL:CG2   | 2.37                     | 0.45              |
| 21:AV:52:TYR:CZ    | 21:AV:54:GLY:C     | 2.95                     | 0.45              |
| 23:AX:6:ARG:HG3    | 23:AX:7:ARG:H      | 1.82                     | 0.45              |
| 24:BA:211:A:O2'    | 24:BA:212:G:H5'    | 2.17                     | 0.45              |
| 24:BA:237:C:O2'    | 24:BA:608:A:H4'    | 2.17                     | 0.45              |
| 24:BA:251:A:H2'    | 24:BA:252:G:C5'    | 2.46                     | 0.45              |
| 24:BA:270(A):A:N6  | 24:BA:270(Z):U:O5' | 2.50                     | 0.45              |
| 24:BA:270(B):A:C1' | 24:BA:270(C):C:H5  | 2.30                     | 0.45              |
| 24:BA:270(C):C:OP1 | 24:BA:365:C:O2     | 2.35                     | 0.45              |
| 24:BA:324:A:C2     | 24:BA:325:G:C4     | 3.05                     | 0.45              |
| 24:BA:324:A:H2     | 24:BA:325:G:H1'    | 1.82                     | 0.45              |
| 24:BA:371:A:C5     | 24:BA:424:G:O4'    | 2.69                     | 0.45              |
| 24:BA:449:A:OP2    | 29:BF:85:GLY:HA2   | 2.16                     | 0.45              |
| 24:BA:470:A:H2'    | 24:BA:471:A:O5'    | 2.17                     | 0.45              |
| 24:BA:479:A:HO2'   | 24:BA:480:A:H3'    | 1.82                     | 0.45              |
| 24:BA:493:G:O2'    | 24:BA:494:G:H5'    | 2.17                     | 0.45              |
| 24:BA:499:U:O4     | 24:BA:500:G:N2     | 2.50                     | 0.45              |
| 24:BA:523:C:H2'    | 24:BA:524:U:C5'    | 2.47                     | 0.45              |
| 24:BA:583:G:C5     | 24:BA:584:C:C5     | 3.05                     | 0.45              |
| 24:BA:611:C:O2     | 24:BA:612:G:H1'    | 2.16                     | 0.45              |
| 24:BA:649:G:C2     | 24:BA:650:C:H1'    | 2.52                     | 0.45              |
| 24:BA:733:G:O6     | 24:BA:761:A:N9     | 2.50                     | 0.45              |
| 24:BA:762:U:H1'    | 24:BA:763:G:C4     | 2.51                     | 0.45              |
| 24:BA:803:U:H2'    | 24:BA:804:A:O4'    | 2.17                     | 0.45              |
| 24:BA:848:G:H1'    | 24:BA:934:G:O4'    | 2.17                     | 0.45              |
| 24:BA:972:G:H5''   | 24:BA:974:G:P      | 2.56                     | 0.45              |
| 24:BA:1009:A:H4'   | 41:BT:62:ILE:CG2   | 2.43                     | 0.45              |
| 24:BA:1048:A:H2'   | 24:BA:1048:A:N3    | 2.32                     | 0.45              |
| 24:BA:1049:C:N3    | 24:BA:1050:A:C6    | 2.85                     | 0.45              |
| 24:BA:1122:G:N2    | 24:BA:1123:C:N1    | 2.64                     | 0.45              |
| 24:BA:1155:A:H3'   | 24:BA:1155:A:P     | 2.57                     | 0.45              |
| 24:BA:1161:C:H2'   | 24:BA:1162:G:O4'   | 2.16                     | 0.45              |
| 24:BA:1161:C:O4'   | 42:BU:8:GLY:HA3    | 2.17                     | 0.45              |
| 24:BA:1312:U:C6    | 44:BW:62:LYS:HG3   | 2.52                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|--------------------|--------------------------|-------------------|
| 24:BA:1444(A):A:H2' | 24:BA:1460:A:O2'   | 2.17                     | 0.45              |
| 24:BA:1451:C:C5'    | 24:BA:1453:A:H4'   | 2.46                     | 0.45              |
| 24:BA:1518:C:C4     | 24:BA:1519:G:C8    | 3.05                     | 0.45              |
| 24:BA:1596:A:C6     | 24:BA:1597:A:C5    | 3.05                     | 0.45              |
| 24:BA:1635:G:H2'    | 24:BA:1636:C:O4'   | 2.17                     | 0.45              |
| 24:BA:1636:C:O3'    | 24:BA:1760:A:O2'   | 2.34                     | 0.45              |
| 24:BA:1704:G:N1     | 24:BA:1705:G:C4    | 2.84                     | 0.45              |
| 24:BA:1784:A:C1'    | 24:BA:1785:A:C8    | 3.00                     | 0.45              |
| 24:BA:1806:C:H2'    | 24:BA:1807:G:C5'   | 2.47                     | 0.45              |
| 24:BA:1932:A:H3'    | 24:BA:1933:G:H8    | 1.81                     | 0.45              |
| 24:BA:2051:A:C5     | 24:BA:2614:A:N6    | 2.85                     | 0.45              |
| 24:BA:2227:A:H2'    | 24:BA:2228:G:O5'   | 2.16                     | 0.45              |
| 24:BA:2232:U:H2'    | 24:BA:2233:U:H5'   | 1.99                     | 0.45              |
| 24:BA:2257:U:C5'    | 47:BZ:11:ARG:HD3   | 2.46                     | 0.45              |
| 24:BA:2306:C:N4     | 30:BG:43:LEU:HB3   | 2.32                     | 0.45              |
| 24:BA:2399:G:N3     | 52:B5:21:TYR:HE1   | 2.15                     | 0.45              |
| 24:BA:2520:C:C5     | 24:BA:2567:G:N9    | 2.85                     | 0.45              |
| 24:BA:2689:U:H5'    | 24:BA:2690:C:H5'   | 1.98                     | 0.45              |
| 24:BA:2783:G:C6     | 24:BA:2784:C:C4    | 3.05                     | 0.45              |
| 24:BA:2876:G:C4'    | 40:BS:1:MET:N      | 2.69                     | 0.45              |
| 25:BB:77:U:H5'      | 46:BY:84:GLU:HB3   | 1.99                     | 0.45              |
| 25:BB:116:G:H5'     | 39:BR:53:SER:HA    | 1.99                     | 0.45              |
| 26:BC:223:ARG:CG    | 26:BC:224:ILE:N    | 2.80                     | 0.45              |
| 27:BD:33:LEU:C      | 27:BD:34:VAL:CG1   | 2.90                     | 0.45              |
| 27:BD:146:GLU:OE2   | 27:BD:150:LYS:N    | 2.50                     | 0.45              |
| 27:BD:174:ILE:HD12  | 27:BD:174:ILE:H    | 1.79                     | 0.45              |
| 27:BD:208:LYS:NZ    | 27:BD:211:ARG:CZ   | 2.80                     | 0.45              |
| 28:BE:105:THR:HG21  | 28:BE:199:ARG:NH2  | 2.32                     | 0.45              |
| 29:BF:8:GLN:HB3     | 29:BF:18:ARG:CB    | 2.47                     | 0.45              |
| 29:BF:32:LEU:HD21   | 29:BF:105:VAL:CG1  | 2.47                     | 0.45              |
| 29:BF:133:ASN:CB    | 29:BF:162:LEU:HD13 | 2.47                     | 0.45              |
| 30:BG:36:LYS:CA     | 30:BG:95:ARG:O     | 2.64                     | 0.45              |
| 30:BG:96:ARG:NH1    | 30:BG:96:ARG:HB2   | 2.32                     | 0.45              |
| 31:BH:25:LYS:HE3    | 31:BH:34:GLU:OE2   | 2.16                     | 0.45              |
| 31:BH:43:VAL:HG13   | 31:BH:44:VAL:H     | 1.82                     | 0.45              |
| 31:BH:76:VAL:CA     | 31:BH:79:VAL:HG22  | 2.45                     | 0.45              |
| 31:BH:98:LEU:HD23   | 31:BH:98:LEU:C     | 2.42                     | 0.45              |
| 31:BH:102:ALA:HA    | 31:BH:115:VAL:C    | 2.42                     | 0.45              |
| 31:BH:149:ARG:HH12  | 31:BH:164:TYR:HB3  | 1.81                     | 0.45              |
| 32:BK:87:LYS:HE2    | 32:BK:121:LYS:CG   | 2.23                     | 0.45              |
| 32:BK:99:GLU:CD     | 32:BK:99:GLU:H     | 2.25                     | 0.45              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 33:BL:7:VAL:CG2   | 33:BL:56:GLU:OE1   | 2.65                     | 0.45              |
| 33:BL:127:ILE:O   | 33:BL:131:ALA:HB2  | 2.17                     | 0.45              |
| 35:BN:63:VAL:HG21 | 35:BN:81:ASP:CA    | 2.47                     | 0.45              |
| 36:BO:46:LYS:CB   | 36:BO:49:ARG:NH1   | 2.78                     | 0.45              |
| 36:BO:78:PRO:O    | 36:BO:81:GLN:HB2   | 2.17                     | 0.45              |
| 36:BO:97:PRO:HB3  | 36:BO:102:ARG:HH11 | 1.80                     | 0.45              |
| 36:BO:102:ARG:O   | 36:BO:108:LYS:HB2  | 2.18                     | 0.45              |
| 37:BP:64:ILE:HA   | 37:BP:106:VAL:C    | 2.42                     | 0.45              |
| 37:BP:74:TYR:CD2  | 37:BP:92:GLY:O     | 2.70                     | 0.45              |
| 37:BP:130:LYS:HE3 | 37:BP:131:ILE:CA   | 2.47                     | 0.45              |
| 37:BP:131:ILE:CG2 | 37:BP:132:VAL:N    | 2.80                     | 0.45              |
| 39:BR:93:LYS:CG   | 39:BR:94:TYR:N     | 2.80                     | 0.45              |
| 41:BT:86:ALA:HB3  | 41:BT:90:VAL:HG22  | 1.99                     | 0.45              |
| 41:BT:89:GLU:HB2  | 42:BU:51:VAL:HB    | 1.98                     | 0.45              |
| 41:BT:98:LEU:HA   | 41:BT:98:LEU:HD13  | 1.84                     | 0.45              |
| 43:BV:24:ILE:CD1  | 43:BV:36:LEU:HD13  | 2.44                     | 0.45              |
| 44:BW:20:GLY:C    | 44:BW:25:LYS:O     | 2.60                     | 0.45              |
| 45:BX:14:LEU:HD22 | 45:BX:19:LYS:CB    | 2.39                     | 0.45              |
| 45:BX:65:ALA:O    | 45:BX:66:PRO:O     | 2.35                     | 0.45              |
| 46:BY:18:LEU:HD22 | 46:BY:23:LYS:HG2   | 1.97                     | 0.45              |
| 47:BZ:64:ASP:HB3  | 47:BZ:84:LEU:CD1   | 2.27                     | 0.45              |
| 48:B1:19:LEU:HD11 | 48:B1:23:LYS:HD3   | 1.99                     | 0.45              |
| 51:B4:10:LYS:HE3  | 51:B4:15:ARG:NH1   | 2.30                     | 0.45              |
| 54:B7:22:VAL:O    | 54:B7:48:PHE:CD1   | 2.69                     | 0.45              |
| 55:B8:29:ASN:HA   | 55:B8:30:PRO:HD2   | 1.84                     | 0.45              |
| 1:AA:8:A:C5'      | 7:AH:120:THR:O     | 2.65                     | 0.44              |
| 1:AA:19:C:N3      | 1:AA:20:U:H5       | 2.14                     | 0.44              |
| 1:AA:88:C:O2'     | 1:AA:89:U:O5'      | 2.35                     | 0.44              |
| 1:AA:113:G:O4'    | 1:AA:354:G:H5''    | 2.17                     | 0.44              |
| 1:AA:133:U:O3'    | 1:AA:134:A:C8      | 2.70                     | 0.44              |
| 1:AA:186(B):C:N3  | 1:AA:186(C):G:C8   | 2.84                     | 0.44              |
| 1:AA:186(D):C:C2  | 1:AA:186(E):C:C5   | 3.05                     | 0.44              |
| 1:AA:242:C:C2'    | 1:AA:243:A:O5'     | 2.65                     | 0.44              |
| 1:AA:246:A:HO2'   | 1:AA:247:G:C4'     | 2.24                     | 0.44              |
| 1:AA:363:A:N1     | 1:AA:364:A:C2      | 2.85                     | 0.44              |
| 1:AA:393:A:C5     | 1:AA:394:G:N7      | 2.85                     | 0.44              |
| 1:AA:530:G:H5'    | 1:AA:531:U:H5''    | 1.99                     | 0.44              |
| 1:AA:563:A:C2     | 1:AA:567:G:C4      | 3.05                     | 0.44              |
| 1:AA:568:G:H2'    | 1:AA:569:C:C6      | 2.52                     | 0.44              |
| 1:AA:597:G:C4     | 1:AA:644:G:C2      | 3.06                     | 0.44              |
| 1:AA:664:G:OP1    | 20:AU:64:ARG:NE    | 2.25                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:721:G:H1'    | 1:AA:722:A:C2     | 2.52                     | 0.44              |
| 1:AA:754:C:O2     | 1:AA:754:C:C2'    | 2.64                     | 0.44              |
| 1:AA:819:A:N3     | 1:AA:1529:G:O6    | 2.50                     | 0.44              |
| 1:AA:828:A:C5'    | 1:AA:859:A:N1     | 2.80                     | 0.44              |
| 1:AA:953:G:O3'    | 15:AP:124:PRO:O   | 2.36                     | 0.44              |
| 1:AA:988:G:N1     | 1:AA:989:C:C2     | 2.85                     | 0.44              |
| 1:AA:1068:G:N2    | 1:AA:1191:A:C2    | 2.85                     | 0.44              |
| 1:AA:1236:A:H2'   | 1:AA:1237:C:C6    | 2.53                     | 0.44              |
| 1:AA:1267:C:N4    | 1:AA:1268:A:N1    | 2.62                     | 0.44              |
| 1:AA:1315:U:O2'   | 1:AA:1360:A:C1'   | 2.64                     | 0.44              |
| 1:AA:1319:A:OP2   | 21:AV:5:LEU:HD13  | 2.17                     | 0.44              |
| 1:AA:1333:A:O5'   | 1:AA:1333:A:C8    | 2.64                     | 0.44              |
| 1:AA:1336:C:C2'   | 1:AA:1337:G:OP2   | 2.65                     | 0.44              |
| 1:AA:1349:A:O2'   | 1:AA:1350:A:H5'   | 2.17                     | 0.44              |
| 1:AA:1402:C:H2'   | 1:AA:1403:C:O5'   | 2.18                     | 0.44              |
| 1:AA:1412:C:C2    | 1:AA:1413:A:C8    | 3.05                     | 0.44              |
| 1:AA:1446:A:N3    | 1:AA:1446:A:O4'   | 2.50                     | 0.44              |
| 1:AA:1495:U:C2'   | 1:AA:1496:C:O5'   | 2.65                     | 0.44              |
| 1:AA:1511:G:C6    | 1:AA:1512:U:C4    | 3.06                     | 0.44              |
| 2:A1:46:U:C2      | 3:AB:34:G:C2      | 3.05                     | 0.44              |
| 3:AD:16:U:H4'     | 3:AD:18:G:O5'     | 2.17                     | 0.44              |
| 3:AD:50:U:C4      | 3:AD:65:G:C6      | 3.05                     | 0.44              |
| 3:AD:73:A:N3      | 3:AD:73:A:H2'     | 2.32                     | 0.44              |
| 4:AE:28:PHE:HA    | 4:AE:194:PRO:HG2  | 1.99                     | 0.44              |
| 4:AE:49:GLU:HA    | 4:AE:52:GLU:OE2   | 2.17                     | 0.44              |
| 4:AE:115:LEU:HA   | 4:AE:145:LEU:HD23 | 1.99                     | 0.44              |
| 4:AE:181:PHE:CE1  | 10:AK:71:GLY:HA3  | 2.52                     | 0.44              |
| 5:AF:28:GLN:CA    | 5:AF:30:ARG:CZ    | 2.95                     | 0.44              |
| 5:AF:130:VAL:O    | 5:AF:134:ILE:HD13 | 2.17                     | 0.44              |
| 5:AF:138:VAL:HG13 | 5:AF:149:ALA:HB1  | 1.99                     | 0.44              |
| 6:AG:80:GLU:O     | 6:AG:83:SER:CB    | 2.66                     | 0.44              |
| 7:AH:10:MET:O     | 7:AH:10:MET:SD    | 2.75                     | 0.44              |
| 7:AH:12:LEU:HD12  | 7:AH:31:LEU:N     | 2.32                     | 0.44              |
| 7:AH:105:VAL:HG12 | 7:AH:106:PRO:HD3  | 1.99                     | 0.44              |
| 7:AH:144:THR:O    | 7:AH:145:LYS:C    | 2.60                     | 0.44              |
| 9:AJ:64:GLN:HB3   | 9:AJ:128:ALA:CB   | 2.45                     | 0.44              |
| 10:AK:10:LEU:CD2  | 10:AK:135:CYS:SG  | 3.04                     | 0.44              |
| 10:AK:44:PHE:O    | 10:AK:64:LYS:HD3  | 2.17                     | 0.44              |
| 10:AK:113:SER:O   | 10:AK:131:GLY:CA  | 2.65                     | 0.44              |
| 11:AL:33:PHE:C    | 11:AL:35:GLU:H    | 2.25                     | 0.44              |
| 13:AN:31:THR:HG23 | 13:AN:42:TRP:HB3  | 1.98                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 13:AN:43:SER:HA    | 13:AN:47:VAL:HG11  | 1.99                     | 0.44              |
| 13:AN:66:LEU:HB2   | 13:AN:70:LYS:HZ2   | 1.81                     | 0.44              |
| 13:AN:100:ALA:O    | 13:AN:102:GLY:N    | 2.50                     | 0.44              |
| 14:AO:55:VAL:O     | 14:AO:70:ILE:HD11  | 2.16                     | 0.44              |
| 14:AO:85:ILE:CG1   | 14:AO:98:TYR:HB3   | 2.47                     | 0.44              |
| 15:AP:17:VAL:HG12  | 15:AP:21:TYR:OH    | 2.17                     | 0.44              |
| 18:AS:8:ARG:NH1    | 18:AS:14:ASN:O     | 2.50                     | 0.44              |
| 19:AT:7:THR:CG2    | 19:AT:56:VAL:CG1   | 2.85                     | 0.44              |
| 19:AT:61:GLU:CA    | 19:AT:71:PHE:CE2   | 2.97                     | 0.44              |
| 19:AT:86:GLU:O     | 19:AT:89:LEU:N     | 2.50                     | 0.44              |
| 21:AV:50:ALA:HB1   | 21:AV:57:HIS:CB    | 2.46                     | 0.44              |
| 22:AW:23:ARG:CD    | 22:AW:24:LEU:N     | 2.78                     | 0.44              |
| 24:BA:76:C:C5      | 24:BA:76:C:OP2     | 2.70                     | 0.44              |
| 24:BA:191:A:N3     | 24:BA:192:C:H1'    | 2.32                     | 0.44              |
| 24:BA:233:A:C2'    | 24:BA:234:C:O5'    | 2.64                     | 0.44              |
| 24:BA:278:A:H2'    | 24:BA:279:C:C6     | 2.52                     | 0.44              |
| 24:BA:322:A:O5'    | 24:BA:341:G:H5'    | 2.17                     | 0.44              |
| 24:BA:348:G:C4     | 24:BA:349:G:N7     | 2.85                     | 0.44              |
| 24:BA:398:G:N2     | 24:BA:399:G:H1'    | 2.33                     | 0.44              |
| 24:BA:422:A:C2'    | 24:BA:423:A:O5'    | 2.65                     | 0.44              |
| 24:BA:446:G:OP1    | 41:BT:3:ARG:HD3    | 2.17                     | 0.44              |
| 24:BA:597:U:H2'    | 24:BA:598:G:C8     | 2.51                     | 0.44              |
| 24:BA:609:A:N6     | 24:BA:609(A):G:O6  | 2.49                     | 0.44              |
| 24:BA:614:U:C5'    | 24:BA:615:G:OP2    | 2.64                     | 0.44              |
| 24:BA:618(A):C:OP2 | 29:BF:107:LYS:NZ   | 2.49                     | 0.44              |
| 24:BA:702:G:C2'    | 24:BA:703:U:C5'    | 2.94                     | 0.44              |
| 24:BA:785:G:N3     | 24:BA:786:C:C6     | 2.85                     | 0.44              |
| 24:BA:813:U:H2'    | 24:BA:814:C:C6     | 2.51                     | 0.44              |
| 24:BA:813:U:H2'    | 24:BA:814:C:H6     | 1.82                     | 0.44              |
| 24:BA:890:A:H5'    | 24:BA:892:G:H5''   | 2.00                     | 0.44              |
| 24:BA:945:A:H3'    | 24:BA:946:G:C5'    | 2.47                     | 0.44              |
| 24:BA:1024:G:P     | 24:BA:1025:G:H3'   | 2.58                     | 0.44              |
| 24:BA:1040:C:OP2   | 24:BA:1040:C:H6    | 1.99                     | 0.44              |
| 24:BA:1044:G:O4'   | 24:BA:1047:G:O2'   | 2.33                     | 0.44              |
| 24:BA:1053:C:C4    | 24:BA:1054:A:C6    | 3.05                     | 0.44              |
| 24:BA:1142:U:C6    | 24:BA:1142(A):A:C8 | 2.84                     | 0.44              |
| 24:BA:1182:A:H3'   | 24:BA:1183:G:C3'   | 2.28                     | 0.44              |
| 24:BA:1196:C:C2    | 24:BA:1197:G:C8    | 3.05                     | 0.44              |
| 24:BA:1198:U:C2    | 24:BA:1199:U:C5    | 3.05                     | 0.44              |
| 24:BA:1284:A:O2'   | 24:BA:1285:G:H5'   | 2.17                     | 0.44              |
| 24:BA:1309:G:H5''  | 53:B6:9:ARG:H      | 1.81                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1332:G:C4    | 24:BA:1609:A:C6   | 3.05                     | 0.44              |
| 24:BA:1444(A):A:C8 | 24:BA:1460:A:C2'  | 3.00                     | 0.44              |
| 24:BA:1621:U:C6    | 24:BA:1621:U:C3'  | 2.99                     | 0.44              |
| 24:BA:1668:A:O2'   | 24:BA:1669:A:C4   | 2.63                     | 0.44              |
| 24:BA:1798:U:N3    | 24:BA:1819:A:C2   | 2.84                     | 0.44              |
| 24:BA:1992:G:O2'   | 24:BA:1993:U:H5   | 2.00                     | 0.44              |
| 24:BA:2049:G:O2'   | 24:BA:2050:C:P    | 2.75                     | 0.44              |
| 24:BA:2090:G:C6    | 24:BA:2230:G:C6   | 3.05                     | 0.44              |
| 24:BA:2104:G:H2'   | 24:BA:2104:G:N3   | 2.33                     | 0.44              |
| 24:BA:2119:A:C6    | 24:BA:2170:A:C6   | 3.06                     | 0.44              |
| 24:BA:2306:C:N4    | 24:BA:2311:A:C2   | 2.83                     | 0.44              |
| 24:BA:2309:A:N6    | 30:BG:80:PHE:CZ   | 2.85                     | 0.44              |
| 24:BA:2309:A:C4    | 24:BA:2310:A:C8   | 3.05                     | 0.44              |
| 24:BA:2383:G:N2    | 24:BA:2384:G:C4   | 2.86                     | 0.44              |
| 24:BA:2392:A:N6    | 24:BA:2393:A:C6   | 2.85                     | 0.44              |
| 24:BA:2457:U:O4    | 24:BA:2458:G:N2   | 2.50                     | 0.44              |
| 24:BA:2507:C:C1'   | 24:BA:2583:G:N2   | 2.80                     | 0.44              |
| 24:BA:2593:U:O4    | 27:BD:239:ARG:CZ  | 2.65                     | 0.44              |
| 24:BA:2624:G:C3'   | 24:BA:2625:G:H5'' | 2.47                     | 0.44              |
| 24:BA:2694:G:H2'   | 24:BA:2695:C:O5'  | 2.16                     | 0.44              |
| 24:BA:2695:C:O2    | 24:BA:2696:U:C5   | 2.70                     | 0.44              |
| 24:BA:2715:C:C2    | 24:BA:2716:U:C5   | 3.05                     | 0.44              |
| 24:BA:2849:U:H3    | 24:BA:2867:G:H1'  | 1.82                     | 0.44              |
| 24:BA:2897:U:H2'   | 24:BA:2898:U:H6   | 1.82                     | 0.44              |
| 25:BB:46:A:H2'     | 25:BB:47:C:O4'    | 2.17                     | 0.44              |
| 26:BC:38:ASP:O     | 26:BC:39:GLU:C    | 2.60                     | 0.44              |
| 27:BD:54:ARG:C     | 27:BD:219:PRO:CG  | 2.89                     | 0.44              |
| 27:BD:57:GLY:N     | 27:BD:217:ARG:CD  | 2.73                     | 0.44              |
| 27:BD:63:ARG:NH1   | 27:BD:87:ASN:ND2  | 2.56                     | 0.44              |
| 27:BD:173:VAL:O    | 27:BD:184:LYS:CG  | 2.65                     | 0.44              |
| 27:BD:183:ARG:CZ   | 27:BD:268:ARG:HD2 | 2.46                     | 0.44              |
| 28:BE:13:ARG:CZ    | 28:BE:21:VAL:N    | 2.80                     | 0.44              |
| 28:BE:33:VAL:CG2   | 28:BE:34:VAL:N    | 2.80                     | 0.44              |
| 28:BE:59:VAL:HG12  | 28:BE:61:ARG:N    | 2.32                     | 0.44              |
| 28:BE:97:LYS:O     | 28:BE:100:GLU:OE1 | 2.35                     | 0.44              |
| 28:BE:128:SER:OG   | 28:BE:129:HIS:CD2 | 2.67                     | 0.44              |
| 28:BE:172:VAL:O    | 28:BE:174:ASP:N   | 2.50                     | 0.44              |
| 28:BE:195:LEU:HD13 | 28:BE:196:VAL:CA  | 2.42                     | 0.44              |
| 29:BF:34:TRP:HB3   | 29:BF:38:ARG:NH2  | 2.31                     | 0.44              |
| 29:BF:142:TRP:O    | 29:BF:143:ALA:C   | 2.58                     | 0.44              |
| 30:BG:77:ILE:C     | 30:BG:83:ARG:HE   | 2.23                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 30:BG:78:SER:CB    | 30:BG:82:LEU:HB3   | 2.45                     | 0.44              |
| 30:BG:110:ALA:O    | 30:BG:111:LEU:C    | 2.60                     | 0.44              |
| 30:BG:153:ARG:N    | 30:BG:155:MET:HE1  | 2.32                     | 0.44              |
| 31:BH:10:PRO:O     | 31:BH:12:PRO:HD2   | 2.17                     | 0.44              |
| 31:BH:159:GLU:OE2  | 31:BH:163:TYR:CE1  | 2.70                     | 0.44              |
| 32:BK:97:ILE:HG22  | 32:BK:101:LEU:CD2  | 2.47                     | 0.44              |
| 33:BL:10:LEU:HB2   | 33:BL:12:LEU:HD21  | 1.99                     | 0.44              |
| 33:BL:37:PHE:HE2   | 33:BL:65:PHE:CB    | 2.28                     | 0.44              |
| 34:BM:16:ILE:O     | 34:BM:54:VAL:CG2   | 2.64                     | 0.44              |
| 34:BM:39:ARG:HG2   | 34:BM:40:PRO:N     | 2.32                     | 0.44              |
| 34:BM:86:PRO:CD    | 34:BM:89:LYS:HD2   | 2.43                     | 0.44              |
| 34:BM:90:MET:HB3   | 34:BM:91:LEU:HD23  | 1.99                     | 0.44              |
| 34:BM:99:LEU:O     | 34:BM:103:VAL:HG13 | 2.17                     | 0.44              |
| 36:BO:16:ARG:CG    | 36:BO:19:VAL:CG2   | 2.92                     | 0.44              |
| 36:BO:23:PRO:HB3   | 36:BO:29:LYS:H     | 1.74                     | 0.44              |
| 36:BO:74:GLU:HB2   | 36:BO:107:LYS:CD   | 2.47                     | 0.44              |
| 36:BO:96:THR:HB    | 36:BO:99:LEU:CB    | 2.47                     | 0.44              |
| 36:BO:117:GLU:O    | 36:BO:121:LYS:CG   | 2.58                     | 0.44              |
| 37:BP:75:THR:CG2   | 37:BP:77:LYS:CD    | 2.94                     | 0.44              |
| 37:BP:85:LYS:HD2   | 47:BZ:10:THR:OG1   | 2.16                     | 0.44              |
| 37:BP:86:GLY:C     | 37:BP:88:GLY:H     | 2.26                     | 0.44              |
| 38:BQ:22:ARG:CD    | 38:BQ:69:ASP:O     | 2.65                     | 0.44              |
| 38:BQ:96:ARG:HG3   | 38:BQ:98:LEU:HD11  | 1.96                     | 0.44              |
| 39:BR:18:ILE:O     | 39:BR:19:LYS:C     | 2.57                     | 0.44              |
| 41:BT:89:GLU:CD    | 42:BU:52:VAL:CB    | 2.89                     | 0.44              |
| 41:BT:98:LEU:HD12  | 41:BT:105:VAL:HG11 | 1.99                     | 0.44              |
| 41:BT:105:VAL:HG12 | 41:BT:106:PHE:N    | 2.32                     | 0.44              |
| 43:BV:7:ALA:N      | 43:BV:103:ILE:CD1  | 2.80                     | 0.44              |
| 43:BV:20:VAL:HG21  | 43:BV:47:VAL:HG21  | 1.99                     | 0.44              |
| 43:BV:86:LEU:C     | 43:BV:94:ASP:OD1   | 2.60                     | 0.44              |
| 44:BW:3:THR:N      | 44:BW:5:TYR:CE2    | 2.85                     | 0.44              |
| 44:BW:4:ALA:HB3    | 48:B1:21:ARG:CZ    | 2.47                     | 0.44              |
| 46:BY:25:PRO:O     | 46:BY:85:HIS:HD2   | 2.00                     | 0.44              |
| 47:BZ:33:ALA:HA    | 47:BZ:61:ALA:C     | 2.43                     | 0.44              |
| 47:BZ:72:ARG:O     | 47:BZ:75:LEU:HD13  | 2.17                     | 0.44              |
| 48:B1:16:LEU:O     | 48:B1:16:LEU:HD12  | 2.18                     | 0.44              |
| 48:B1:36:ILE:CG2   | 48:B1:37:GLY:H     | 2.17                     | 0.44              |
| 48:B1:37:GLY:O     | 48:B1:38:GLN:HB2   | 2.17                     | 0.44              |
| 49:B2:41:PRO:HA    | 49:B2:44:ARG:NE    | 2.32                     | 0.44              |
| 50:B3:6:HIS:CB     | 50:B3:7:PRO:HD3    | 2.46                     | 0.44              |
| 50:B3:20:ASN:CB    | 50:B3:30:GLU:OE2   | 2.64                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 50:B3:35:VAL:CG1  | 50:B3:36:CYS:N    | 2.79                     | 0.44              |
| 50:B3:57:GLU:H    | 50:B3:61:ARG:HG2  | 1.82                     | 0.44              |
| 52:B5:12:GLU:C    | 52:B5:13:CYS:SG   | 2.97                     | 0.44              |
| 52:B5:20:ASN:HD22 | 52:B5:43:CYS:H    | 1.62                     | 0.44              |
| 52:B5:49:HIS:HB3  | 52:B5:50:ARG:H    | 1.61                     | 0.44              |
| 54:B7:44:LYS:CE   | 54:B7:44:LYS:HA   | 2.46                     | 0.44              |
| 54:B7:51:ALA:O    | 54:B7:54:GLU:CD   | 2.60                     | 0.44              |
| 1:AA:26:A:N6      | 1:AA:558:G:H1'    | 2.32                     | 0.44              |
| 1:AA:119:A:N6     | 1:AA:287:U:C2     | 2.78                     | 0.44              |
| 1:AA:230:G:OP1    | 18:AS:33:ILE:HG12 | 2.18                     | 0.44              |
| 1:AA:321:A:C4     | 1:AA:322:C:C5     | 3.06                     | 0.44              |
| 1:AA:483:C:O5'    | 1:AA:483:C:C6     | 2.69                     | 0.44              |
| 1:AA:517:G:C8     | 1:AA:531:U:C6     | 3.06                     | 0.44              |
| 1:AA:557:G:H3'    | 1:AA:558:G:H8     | 1.74                     | 0.44              |
| 1:AA:563:A:O2'    | 1:AA:566:G:H2'    | 2.17                     | 0.44              |
| 1:AA:576:G:C8     | 1:AA:881:G:O2'    | 2.68                     | 0.44              |
| 1:AA:579:G:H2'    | 1:AA:580:U:H6     | 1.82                     | 0.44              |
| 1:AA:632:A:H2'    | 1:AA:633:G:O4'    | 2.16                     | 0.44              |
| 1:AA:696:A:C2     | 1:AA:697:U:C1'    | 3.00                     | 0.44              |
| 1:AA:720:C:C4     | 1:AA:721:G:H2'    | 2.51                     | 0.44              |
| 1:AA:836:G:N1     | 1:AA:837:G:C5     | 2.85                     | 0.44              |
| 1:AA:872:A:HO2'   | 1:AA:873:A:P      | 2.40                     | 0.44              |
| 1:AA:878:G:OP1    | 10:AK:88:LYS:HB2  | 2.17                     | 0.44              |
| 1:AA:1034:G:C2    | 1:AA:1035:A:N7    | 2.85                     | 0.44              |
| 1:AA:1068:G:N2    | 1:AA:1191:A:N3    | 2.50                     | 0.44              |
| 1:AA:1203:C:H2'   | 1:AA:1204:A:C8    | 2.51                     | 0.44              |
| 1:AA:1241:G:O2'   | 1:AA:1242:C:C5'   | 2.65                     | 0.44              |
| 1:AA:1252:A:N6    | 1:AA:1253:G:C6    | 2.85                     | 0.44              |
| 1:AA:1309:G:C6    | 1:AA:1329:A:C6    | 3.05                     | 0.44              |
| 1:AA:1320:C:N3    | 21:AV:72:GLY:HA3  | 2.31                     | 0.44              |
| 1:AA:1339:A:H2    | 3:AC:31:A:HO2'    | 1.58                     | 0.44              |
| 1:AA:1350:A:C5    | 1:AA:1351:U:C5    | 3.06                     | 0.44              |
| 1:AA:1382:C:C4    | 1:AA:1383:C:N4    | 2.83                     | 0.44              |
| 1:AA:1419:G:O2'   | 1:AA:1420:C:O5'   | 2.34                     | 0.44              |
| 1:AA:1465:C:C2    | 1:AA:1466:C:C6    | 3.06                     | 0.44              |
| 1:AA:1506:U:H3'   | 1:AA:1507:A:H5'   | 1.99                     | 0.44              |
| 3:AC:17:C:OP2     | 3:AC:17:C:H4'     | 2.16                     | 0.44              |
| 3:AC:20:U:O4'     | 3:AC:20:U:OP1     | 2.35                     | 0.44              |
| 3:AC:31:A:C5'     | 3:AC:32:U:OP2     | 2.62                     | 0.44              |
| 3:AB:52:G:H4'     | 24:BA:2471:C:C5'  | 2.46                     | 0.44              |
| 4:AE:28:PHE:CE1   | 4:AE:31:TYR:C     | 2.95                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:AE:80:ILE:HG13  | 4:AE:239:VAL:HG21 | 2.00                     | 0.44              |
| 4:AE:87:ARG:O     | 4:AE:88:ALA:C     | 2.61                     | 0.44              |
| 4:AE:87:ARG:CZ    | 4:AE:87:ARG:HB3   | 2.46                     | 0.44              |
| 5:AF:96:GLY:O     | 5:AF:98:ASN:N     | 2.49                     | 0.44              |
| 6:AG:39:PRO:HG2   | 6:AG:44:GLY:O     | 2.17                     | 0.44              |
| 7:AH:23:GLY:HA3   | 7:AH:25:ARG:CZ    | 2.45                     | 0.44              |
| 7:AH:71:LEU:HD11  | 7:AH:74:GLY:CA    | 2.37                     | 0.44              |
| 7:AH:91:LEU:HD12  | 7:AH:118:ILE:HG21 | 1.97                     | 0.44              |
| 8:AI:95:GLU:N     | 8:AI:96:PRO:CD    | 2.64                     | 0.44              |
| 8:AI:100:ASN:CG   | 20:AU:27:GLY:HA2  | 2.42                     | 0.44              |
| 9:AJ:69:VAL:HG13  | 9:AJ:135:VAL:HA   | 1.98                     | 0.44              |
| 9:AJ:146:GLU:HG2  | 9:AJ:149:ARG:HD2  | 1.99                     | 0.44              |
| 10:AK:6:ILE:CG2   | 10:AK:7:ALA:N     | 2.59                     | 0.44              |
| 10:AK:26:VAL:CG2  | 10:AK:27:PRO:CD   | 2.87                     | 0.44              |
| 10:AK:44:PHE:HA   | 10:AK:79:VAL:CG1  | 2.47                     | 0.44              |
| 13:AN:84:VAL:HG11 | 20:AU:88:LYS:HE2  | 1.98                     | 0.44              |
| 15:AP:13:LYS:HD3  | 15:AP:17:VAL:CG1  | 2.46                     | 0.44              |
| 16:AQ:40:CYS:C    | 16:AQ:42:ILE:N    | 2.74                     | 0.44              |
| 19:AT:7:THR:OG1   | 19:AT:57:VAL:C    | 2.60                     | 0.44              |
| 20:AU:86:VAL:O    | 20:AU:87:ARG:CB   | 2.59                     | 0.44              |
| 21:AV:36:ARG:HA   | 21:AV:71:LEU:HD13 | 1.97                     | 0.44              |
| 22:AW:13:LEU:N    | 22:AW:13:LEU:CD1  | 2.57                     | 0.44              |
| 22:AW:94:ALA:O    | 22:AW:95:ALA:HB3  | 2.17                     | 0.44              |
| 24:BA:173:G:N2    | 24:BA:174:C:N1    | 2.66                     | 0.44              |
| 24:BA:196:A:H3'   | 24:BA:197:A:C5'   | 2.43                     | 0.44              |
| 24:BA:228:A:N6    | 24:BA:230:U:C2    | 2.86                     | 0.44              |
| 24:BA:270(C):C:P  | 24:BA:365:C:H1'   | 2.58                     | 0.44              |
| 24:BA:297:C:H3'   | 24:BA:298:G:N7    | 2.31                     | 0.44              |
| 24:BA:325:G:H3'   | 24:BA:325:G:C8    | 2.53                     | 0.44              |
| 24:BA:332:A:C2'   | 24:BA:334:C:OP2   | 2.65                     | 0.44              |
| 24:BA:370:G:C2'   | 24:BA:371:A:O5'   | 2.65                     | 0.44              |
| 24:BA:447:A:C6    | 24:BA:473:G:C1'   | 3.00                     | 0.44              |
| 24:BA:456:C:N4    | 44:BW:68:ARG:HB3  | 2.32                     | 0.44              |
| 24:BA:539:G:H8    | 24:BA:539:G:O5'   | 2.00                     | 0.44              |
| 24:BA:542:C:C4    | 24:BA:552:G:N1    | 2.85                     | 0.44              |
| 24:BA:601:C:O2    | 24:BA:601:C:C2'   | 2.61                     | 0.44              |
| 24:BA:617:G:N7    | 24:BA:618:G:N7    | 2.64                     | 0.44              |
| 24:BA:660:G:C6    | 24:BA:661:C:C4    | 3.05                     | 0.44              |
| 24:BA:727:A:H2'   | 24:BA:728:G:C5'   | 2.43                     | 0.44              |
| 24:BA:748:G:H5'   | 43:BV:88:ARG:CZ   | 2.47                     | 0.44              |
| 24:BA:850:C:O2    | 24:BA:851:U:C6    | 2.70                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:919:G:C4    | 24:BA:920:G:N7    | 2.86                     | 0.44              |
| 24:BA:1022:G:C6   | 24:BA:1139:G:C6   | 3.05                     | 0.44              |
| 24:BA:1203:G:O6   | 24:BA:1240:U:C2'  | 2.62                     | 0.44              |
| 24:BA:1207:C:N3   | 24:BA:1208:C:C4   | 2.86                     | 0.44              |
| 24:BA:1228:G:H5'  | 24:BA:1228:G:C8   | 2.52                     | 0.44              |
| 24:BA:1267:U:C4   | 24:BA:2012:G:N2   | 2.86                     | 0.44              |
| 24:BA:1353:A:C2'  | 24:BA:1354:A:O4'  | 2.65                     | 0.44              |
| 24:BA:1385:G:C6   | 24:BA:1386:C:N4   | 2.85                     | 0.44              |
| 24:BA:1432:C:N3   | 24:BA:1433:U:C2   | 2.85                     | 0.44              |
| 24:BA:1449:A:O4'  | 24:BA:1529:A:C6   | 2.70                     | 0.44              |
| 24:BA:1477:A:C2   | 24:BA:1516:U:O2   | 2.70                     | 0.44              |
| 24:BA:1491:G:C2   | 24:BA:1493:C:N4   | 2.78                     | 0.44              |
| 24:BA:1662:C:N3   | 24:BA:1663:C:C4   | 2.85                     | 0.44              |
| 24:BA:1899:G:N2   | 24:BA:1901:A:C6   | 2.85                     | 0.44              |
| 24:BA:1947:C:N3   | 24:BA:1948:G:N7   | 2.64                     | 0.44              |
| 24:BA:2011:U:C3'  | 24:BA:2012:G:H8   | 2.30                     | 0.44              |
| 24:BA:2084:C:O2'  | 24:BA:2085:C:H5'  | 2.17                     | 0.44              |
| 24:BA:2111:C:N4   | 24:BA:2144:U:O2'  | 2.45                     | 0.44              |
| 24:BA:2182:G:C6   | 24:BA:2183:C:C4   | 3.04                     | 0.44              |
| 24:BA:2210:G:HO2' | 24:BA:2211:G:P    | 2.40                     | 0.44              |
| 24:BA:2356:C:H2'  | 24:BA:2357:U:O5'  | 2.18                     | 0.44              |
| 24:BA:2526:G:O2'  | 55:B8:35:ARG:NH2  | 2.49                     | 0.44              |
| 24:BA:2568:C:O5'  | 24:BA:2568:C:H6   | 2.00                     | 0.44              |
| 24:BA:2642:G:C2   | 24:BA:2773:C:C2   | 3.05                     | 0.44              |
| 24:BA:2657:A:N7   | 24:BA:2658:C:C5   | 2.85                     | 0.44              |
| 24:BA:2661:G:C4   | 24:BA:2662:A:C8   | 3.05                     | 0.44              |
| 24:BA:2681:C:C2'  | 24:BA:2682:U:H5'  | 2.45                     | 0.44              |
| 24:BA:2687:U:O2   | 24:BA:2688:U:O4'  | 2.35                     | 0.44              |
| 24:BA:2710:C:H2'  | 24:BA:2711:A:C5'  | 2.47                     | 0.44              |
| 24:BA:2726:U:O2'  | 24:BA:2727:G:OP1  | 2.29                     | 0.44              |
| 24:BA:2787:C:H4'  | 28:BE:60:ASN:OD1  | 2.17                     | 0.44              |
| 24:BA:2820:A:OP1  | 38:BQ:5:LYS:CE    | 2.65                     | 0.44              |
| 24:BA:2825:C:C2   | 24:BA:2826:A:C8   | 3.05                     | 0.44              |
| 24:BA:2839:G:H2'  | 24:BA:2840:C:O4'  | 2.17                     | 0.44              |
| 24:BA:2839:G:C6   | 24:BA:2840:C:C4   | 3.05                     | 0.44              |
| 25:BB:21:G:C2     | 25:BB:63:G:C6     | 3.04                     | 0.44              |
| 27:BD:54:ARG:CA   | 27:BD:219:PRO:CG  | 2.90                     | 0.44              |
| 28:BE:66:HIS:O    | 28:BE:68:ALA:N    | 2.50                     | 0.44              |
| 28:BE:178:GLU:HB3 | 28:BE:179:GLU:OE2 | 2.17                     | 0.44              |
| 29:BF:12:LEU:HD22 | 29:BF:128:ALA:HA  | 1.98                     | 0.44              |
| 29:BF:122:LYS:HD3 | 29:BF:122:LYS:C   | 2.42                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 30:BG:50:ALA:HA   | 30:BG:70:VAL:HG22 | 2.00                     | 0.44              |
| 30:BG:157:ILE:CG1 | 30:BG:158:ALA:N   | 2.79                     | 0.44              |
| 31:BH:75:ALA:O    | 31:BH:79:VAL:HG13 | 2.17                     | 0.44              |
| 32:BK:81:VAL:CG1  | 32:BK:88:ILE:HG12 | 2.47                     | 0.44              |
| 32:BK:114:LEU:O   | 32:BK:131:LYS:HE3 | 2.17                     | 0.44              |
| 33:BL:27:LEU:CA   | 33:BL:32:ALA:HB3  | 2.47                     | 0.44              |
| 33:BL:47:ASN:OD1  | 33:BL:47:ASN:O    | 2.34                     | 0.44              |
| 34:BM:38:HIS:O    | 34:BM:42:TRP:HZ3  | 2.00                     | 0.44              |
| 34:BM:89:LYS:O    | 34:BM:92:ALA:HB3  | 2.17                     | 0.44              |
| 34:BM:109:LYS:HE3 | 34:BM:111:PRO:HD2 | 1.99                     | 0.44              |
| 36:BO:77:ARG:HA   | 36:BO:78:PRO:HD2  | 1.90                     | 0.44              |
| 36:BO:128:HIS:CG  | 36:BO:129:ALA:N   | 2.74                     | 0.44              |
| 37:BP:37:LEU:HD12 | 37:BP:129:THR:C   | 2.41                     | 0.44              |
| 37:BP:61:GLY:C    | 46:BY:177:PRO:O   | 2.60                     | 0.44              |
| 37:BP:67:ARG:NH2  | 37:BP:103:MET:CB  | 2.78                     | 0.44              |
| 38:BQ:63:ARG:HH12 | 38:BQ:80:PHE:HB3  | 1.82                     | 0.44              |
| 38:BQ:87:TYR:O    | 38:BQ:88:ARG:C    | 2.60                     | 0.44              |
| 40:BS:8:LYS:C     | 40:BS:11:GLU:OE1  | 2.60                     | 0.44              |
| 40:BS:64:ARG:NH1  | 40:BS:78:LEU:N    | 2.65                     | 0.44              |
| 40:BS:93:ARG:CG   | 40:BS:95:ARG:NH1  | 2.80                     | 0.44              |
| 41:BT:66:ASN:C    | 41:BT:70:ARG:NE   | 2.73                     | 0.44              |
| 43:BV:10:VAL:CB   | 43:BV:12:ILE:HD11 | 2.45                     | 0.44              |
| 43:BV:11:ARG:O    | 43:BV:11:ARG:CG   | 2.62                     | 0.44              |
| 43:BV:18:ARG:CD   | 43:BV:76:VAL:H    | 2.29                     | 0.44              |
| 43:BV:23:LEU:HG   | 51:B4:25:LEU:HG   | 1.99                     | 0.44              |
| 43:BV:79:GLY:HA3  | 43:BV:102:HIS:CE1 | 2.52                     | 0.44              |
| 44:BW:50:LYS:NZ   | 44:BW:87:GLN:H    | 2.15                     | 0.44              |
| 46:BY:2:GLU:OE1   | 46:BY:58:VAL:C    | 2.61                     | 0.44              |
| 46:BY:6:LYS:HA    | 46:BY:37:VAL:HG13 | 1.97                     | 0.44              |
| 46:BY:18:LEU:CB   | 46:BY:23:LYS:O    | 2.61                     | 0.44              |
| 46:BY:51:ALA:O    | 46:BY:53:ILE:C    | 2.60                     | 0.44              |
| 48:B1:24:LYS:HG2  | 48:B1:52:ILE:HD13 | 1.98                     | 0.44              |
| 49:B2:17:LYS:HA   | 49:B2:20:LYS:CD   | 2.47                     | 0.44              |
| 49:B2:45:GLY:O    | 49:B2:48:GLU:CG   | 2.50                     | 0.44              |
| 50:B3:29:PRO:O    | 50:B3:31:ILE:CD1  | 2.65                     | 0.44              |
| 1:AA:46:G:N3      | 1:AA:396:G:N1     | 2.66                     | 0.44              |
| 1:AA:89:U:N3      | 1:AA:90:C:C4      | 2.85                     | 0.44              |
| 1:AA:110:C:H6     | 1:AA:110:C:P      | 2.40                     | 0.44              |
| 1:AA:122:G:C2     | 1:AA:123:C:C1'    | 3.00                     | 0.44              |
| 1:AA:131:C:C4     | 1:AA:232:G:N1     | 2.85                     | 0.44              |
| 1:AA:251:G:O4'    | 1:AA:252:U:H5     | 2.00                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:AA:279:A:H5'   | 1:AA:280:C:C3'    | 2.33                     | 0.44              |
| 1:AA:483:C:OP2   | 1:AA:483:C:C6     | 2.71                     | 0.44              |
| 1:AA:580:U:C5'   | 17:AR:58:MET:HG2  | 2.48                     | 0.44              |
| 1:AA:617:G:H4'   | 18:AS:44:THR:HG1  | 1.81                     | 0.44              |
| 1:AA:644:G:H2'   | 1:AA:645:C:C5'    | 2.48                     | 0.44              |
| 1:AA:692:U:C2    | 1:AA:694:A:OP2    | 2.71                     | 0.44              |
| 1:AA:701:C:H1'   | 1:AA:703:G:C6     | 2.53                     | 0.44              |
| 1:AA:706:A:H2'   | 1:AA:707:C:O5'    | 2.17                     | 0.44              |
| 1:AA:718:G:C4    | 13:AN:116:HIS:NE2 | 2.84                     | 0.44              |
| 1:AA:729:A:H62   | 17:AR:51:HIS:CD2  | 2.36                     | 0.44              |
| 1:AA:828:A:C8    | 1:AA:829:G:N9     | 2.85                     | 0.44              |
| 1:AA:867:G:C2    | 1:AA:868:C:C4     | 3.06                     | 0.44              |
| 1:AA:943:U:O5'   | 1:AA:943:U:H6     | 2.00                     | 0.44              |
| 1:AA:965:A:N7    | 1:AA:969:A:N3     | 2.66                     | 0.44              |
| 1:AA:1000:A:N6   | 1:AA:1001:G:O6    | 2.50                     | 0.44              |
| 1:AA:1025:U:O2   | 1:AA:1026:G:O6    | 2.36                     | 0.44              |
| 1:AA:1068:G:O2'  | 1:AA:1069:C:C5'   | 2.55                     | 0.44              |
| 1:AA:1111:A:N1   | 5:AF:177:THR:HB   | 2.33                     | 0.44              |
| 1:AA:1148:U:O2   | 1:AA:1149:C:C1'   | 2.66                     | 0.44              |
| 1:AA:1152:A:N1   | 1:AA:1153:C:C4    | 2.86                     | 0.44              |
| 1:AA:1268:A:C2'  | 1:AA:1269:A:O5'   | 2.65                     | 0.44              |
| 1:AA:1477:C:H2'  | 1:AA:1478:C:O4'   | 2.17                     | 0.44              |
| 3:AC:57:G:O4'    | 30:BG:82:LEU:HD22 | 2.17                     | 0.44              |
| 3:AC:72:C:C2'    | 3:AC:73:A:C8      | 2.95                     | 0.44              |
| 3:AD:7:A:H2'     | 3:AD:8:U:OP1      | 2.18                     | 0.44              |
| 3:AD:18:G:H2'    | 3:AD:19:G:C5'     | 2.46                     | 0.44              |
| 3:AD:43:C:H2'    | 3:AD:44:G:C8      | 2.52                     | 0.44              |
| 3:AD:48:C:C4     | 3:AD:59:U:C2      | 3.06                     | 0.44              |
| 3:AB:16:U:H4'    | 3:AB:60:U:O2'     | 2.17                     | 0.44              |
| 3:AB:75:C:C4     | 3:AB:76:A:H2      | 2.34                     | 0.44              |
| 4:AE:132:LYS:HB3 | 4:AE:132:LYS:NZ   | 2.29                     | 0.44              |
| 4:AE:140:HIS:HA  | 4:AE:143:GLU:HB3  | 1.99                     | 0.44              |
| 4:AE:171:ALA:N   | 4:AE:174:VAL:HG23 | 2.32                     | 0.44              |
| 5:AF:5:ILE:HG22  | 12:AM:51:ARG:HH22 | 1.83                     | 0.44              |
| 5:AF:29:TYR:CE2  | 16:AQ:54:PRO:HB2  | 2.51                     | 0.44              |
| 5:AF:62:ASP:O    | 5:AF:63:ASN:CG    | 2.60                     | 0.44              |
| 6:AG:120:LEU:HG  | 6:AG:121:VAL:H    | 1.82                     | 0.44              |
| 6:AG:135:LEU:HB2 | 6:AG:138:TYR:HB2  | 1.99                     | 0.44              |
| 7:AH:82:VAL:HB   | 7:AH:138:ALA:HB2  | 2.00                     | 0.44              |
| 8:AI:30:LEU:CB   | 8:AI:35:ALA:HB3   | 2.44                     | 0.44              |
| 8:AI:41:GLU:CB   | 8:AI:62:TRP:HE3   | 2.26                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 9:AJ:31:MET:C      | 9:AJ:32:ARG:HG2    | 2.42                     | 0.44              |
| 9:AJ:77:SER:HA     | 9:AJ:85:TYR:O      | 2.17                     | 0.44              |
| 9:AJ:126:ASP:CA    | 9:AJ:131:LYS:HG3   | 2.47                     | 0.44              |
| 10:AK:32:LYS:O     | 10:AK:33:GLU:C     | 2.60                     | 0.44              |
| 11:AL:10:ARG:NE    | 11:AL:75:ASP:OD2   | 2.51                     | 0.44              |
| 11:AL:50:LEU:HD21  | 11:AL:56:LEU:HB2   | 1.99                     | 0.44              |
| 12:AM:5:ARG:HH11   | 12:AM:5:ARG:CG     | 2.30                     | 0.44              |
| 12:AM:6:ILE:CD1    | 12:AM:73:ASP:H     | 2.30                     | 0.44              |
| 12:AM:33:GLN:O     | 12:AM:34:VAL:CB    | 2.64                     | 0.44              |
| 13:AN:85:ARG:NH1   | 13:AN:85:ARG:CG    | 2.79                     | 0.44              |
| 13:AN:87:THR:HA    | 13:AN:91:ARG:HH12  | 1.77                     | 0.44              |
| 16:AQ:34:TYR:OH    | 16:AQ:41:ARG:CA    | 2.65                     | 0.44              |
| 17:AR:21:ASP:C     | 17:AR:23:GLY:H     | 2.25                     | 0.44              |
| 17:AR:24:SER:O     | 17:AR:28:GLN:HG2   | 2.17                     | 0.44              |
| 20:AU:52:PRO:CG    | 20:AU:54:ARG:HB3   | 2.45                     | 0.44              |
| 21:AV:37:ARG:HH11  | 21:AV:70:LYS:HD3   | 1.82                     | 0.44              |
| 22:AW:76:ALA:C     | 22:AW:78:ALA:N     | 2.74                     | 0.44              |
| 24:BA:4:C:C2       | 24:BA:5:A:N7       | 2.85                     | 0.44              |
| 24:BA:20:C:H2'     | 24:BA:21:A:H8      | 1.82                     | 0.44              |
| 24:BA:28:A:C2      | 24:BA:29:U:C4'     | 3.01                     | 0.44              |
| 24:BA:60:G:HO2'    | 24:BA:61:G:P       | 2.39                     | 0.44              |
| 24:BA:84:A:H5'     | 24:BA:85:G:OP1     | 2.17                     | 0.44              |
| 24:BA:125:G:N2     | 53:B6:10:ARG:CA    | 2.68                     | 0.44              |
| 24:BA:147:U:H2'    | 24:BA:148:C:C5     | 2.51                     | 0.44              |
| 24:BA:188:G:H5'    | 24:BA:1365:A:N3    | 2.32                     | 0.44              |
| 24:BA:239:U:C2'    | 24:BA:240:G:O4'    | 2.63                     | 0.44              |
| 24:BA:270(C):C:O2' | 24:BA:270(D):C:C5' | 2.62                     | 0.44              |
| 24:BA:390:A:H3'    | 24:BA:390:A:P      | 2.57                     | 0.44              |
| 24:BA:562:U:O2     | 24:BA:572:A:O4'    | 2.35                     | 0.44              |
| 24:BA:581:C:O3'    | 41:BT:32:PHE:CE2   | 2.70                     | 0.44              |
| 24:BA:612:G:C4'    | 24:BA:616:A:N1     | 2.80                     | 0.44              |
| 24:BA:625:G:N1     | 24:BA:626:U:H1'    | 2.32                     | 0.44              |
| 24:BA:633:A:H3'    | 24:BA:634:C:O4'    | 2.18                     | 0.44              |
| 24:BA:669:G:C4     | 24:BA:801:G:N1     | 2.86                     | 0.44              |
| 24:BA:675:A:H5''   | 29:BF:67:GLN:NE2   | 2.32                     | 0.44              |
| 24:BA:729:G:C5     | 24:BA:730:C:N1     | 2.85                     | 0.44              |
| 24:BA:735:A:C8     | 24:BA:735:A:H3'    | 2.52                     | 0.44              |
| 24:BA:763:G:C5     | 24:BA:765:G:C8     | 3.05                     | 0.44              |
| 24:BA:811:U:O4     | 36:BO:23:PRO:CD    | 2.65                     | 0.44              |
| 24:BA:813:U:C5     | 36:BO:25:SER:HB3   | 2.53                     | 0.44              |
| 24:BA:874:G:C2     | 24:BA:875:G:C8     | 3.06                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:902:C:N4   | 24:BA:903:C:N4    | 2.66                     | 0.44              |
| 24:BA:915:C:C2'  | 24:BA:916:G:H8    | 2.28                     | 0.44              |
| 24:BA:943:U:C2'  | 24:BA:944:G:OP1   | 2.65                     | 0.44              |
| 24:BA:1129:A:N7  | 24:BA:2570:G:O2'  | 2.30                     | 0.44              |
| 24:BA:1144:G:C5  | 24:BA:1145:C:N4   | 2.85                     | 0.44              |
| 24:BA:1151:G:H2' | 24:BA:1152:C:H6   | 1.76                     | 0.44              |
| 24:BA:1294:U:C2' | 24:BA:1295:C:H5'  | 2.48                     | 0.44              |
| 24:BA:1316:U:H2' | 24:BA:1317:A:C8   | 2.53                     | 0.44              |
| 24:BA:1323:U:C2' | 24:BA:1324:G:OP1  | 2.65                     | 0.44              |
| 24:BA:1359:A:C8  | 24:BA:1359:A:C4'  | 3.00                     | 0.44              |
| 24:BA:1471:A:N7  | 24:BA:1521:G:C2   | 2.86                     | 0.44              |
| 24:BA:1552:G:N3  | 24:BA:1552:G:H2'  | 2.32                     | 0.44              |
| 24:BA:1581:G:C2' | 24:BA:1582:C:H5'  | 2.47                     | 0.44              |
| 24:BA:1638:C:C5' | 24:BA:2710:C:H1'  | 2.47                     | 0.44              |
| 24:BA:1660:C:C2' | 24:BA:1661:G:O5'  | 2.65                     | 0.44              |
| 24:BA:1697:G:H3' | 24:BA:1697:G:C8   | 2.52                     | 0.44              |
| 24:BA:1754:C:C4  | 24:BA:1755:A:C5   | 3.05                     | 0.44              |
| 24:BA:1784:A:C1' | 24:BA:1785:A:N7   | 2.80                     | 0.44              |
| 24:BA:1816:G:OP1 | 27:BD:43:ARG:NH2  | 2.51                     | 0.44              |
| 24:BA:1819:A:O2' | 24:BA:1820:U:O5'  | 2.35                     | 0.44              |
| 24:BA:1855:G:C6  | 24:BA:1856:G:N7   | 2.85                     | 0.44              |
| 24:BA:1974:C:C2  | 24:BA:1975:G:C8   | 3.06                     | 0.44              |
| 24:BA:1977:A:H2  | 24:BA:1978:A:H1'  | 1.82                     | 0.44              |
| 24:BA:2114:A:H2' | 24:BA:2115:G:O4'  | 2.17                     | 0.44              |
| 24:BA:2115:G:H2' | 24:BA:2117:A:C5   | 2.46                     | 0.44              |
| 24:BA:2121:G:O2' | 26:BC:167:LYS:HG2 | 2.17                     | 0.44              |
| 24:BA:2125:G:N2  | 24:BA:2172:U:C5'  | 2.80                     | 0.44              |
| 24:BA:2199:A:C2  | 24:BA:2205:C:N1   | 2.86                     | 0.44              |
| 24:BA:2259:G:H2' | 24:BA:2260:C:H6   | 1.82                     | 0.44              |
| 24:BA:2307:G:O2' | 24:BA:2311:A:N7   | 2.50                     | 0.44              |
| 24:BA:2331:G:H4' | 47:BZ:42:GLY:C    | 2.41                     | 0.44              |
| 24:BA:2397:G:O2' | 24:BA:2398:U:H5'  | 2.18                     | 0.44              |
| 24:BA:2407:G:H2' | 24:BA:2407:G:N3   | 2.31                     | 0.44              |
| 24:BA:2655:G:N3  | 24:BA:2664:G:O6   | 2.51                     | 0.44              |
| 24:BA:2718:G:C2  | 24:BA:2719:G:C4   | 3.05                     | 0.44              |
| 24:BA:2820:A:N7  | 28:BE:191:PRO:HB3 | 2.33                     | 0.44              |
| 24:BA:2876:G:C2  | 24:BA:2877:G:C5   | 3.06                     | 0.44              |
| 25:BB:33:G:C2'   | 25:BB:34:U:H6     | 2.27                     | 0.44              |
| 26:BC:28:LEU:O   | 26:BC:32:LEU:CG   | 2.66                     | 0.44              |
| 26:BC:46:LYS:HE2 | 26:BC:210:ARG:HE  | 1.82                     | 0.44              |
| 26:BC:87:GLU:HA  | 26:BC:91:ALA:HB3  | 1.99                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 26:BC:103:ILE:HD13 | 26:BC:127:LEU:HD11 | 1.99                     | 0.44              |
| 27:BD:49:ILE:HD12  | 27:BD:49:ILE:N     | 2.31                     | 0.44              |
| 27:BD:198:ASN:HD21 | 27:BD:201:HIS:HB2  | 1.83                     | 0.44              |
| 27:BD:199:ALA:O    | 27:BD:202:LYS:CB   | 2.60                     | 0.44              |
| 28:BE:51:PHE:CD1   | 28:BE:76:ARG:CG    | 2.98                     | 0.44              |
| 28:BE:91:VAL:HG23  | 28:BE:180:ASN:ND2  | 2.31                     | 0.44              |
| 28:BE:115:GLY:C    | 28:BE:117:MET:H    | 2.25                     | 0.44              |
| 29:BF:11:VAL:CG2   | 29:BF:126:VAL:HG12 | 2.47                     | 0.44              |
| 29:BF:109:GLY:O    | 29:BF:112:MET:N    | 2.50                     | 0.44              |
| 29:BF:137:LYS:HB3  | 29:BF:137:LYS:HZ2  | 1.82                     | 0.44              |
| 30:BG:55:LYS:HG3   | 30:BG:148:MET:CG   | 2.46                     | 0.44              |
| 30:BG:114:ILE:O    | 30:BG:115:ARG:C    | 2.60                     | 0.44              |
| 30:BG:144:ILE:HG23 | 30:BG:145:THR:O    | 2.16                     | 0.44              |
| 31:BH:19:VAL:HG12  | 31:BH:24:VAL:CG1   | 2.37                     | 0.44              |
| 31:BH:140:LYS:O    | 31:BH:143:GLN:HB2  | 2.17                     | 0.44              |
| 32:BK:32:PRO:CD    | 32:BK:33:ARG:HG2   | 2.42                     | 0.44              |
| 32:BK:43:ASN:N     | 32:BK:43:ASN:ND2   | 2.61                     | 0.44              |
| 32:BK:50:ARG:HA    | 32:BK:53:ALA:HB3   | 2.00                     | 0.44              |
| 32:BK:76:THR:CA    | 32:BK:77:LEU:HD23  | 2.46                     | 0.44              |
| 33:BL:17:ALA:O     | 33:BL:18:THR:CG2   | 2.63                     | 0.44              |
| 34:BM:34:LEU:CD2   | 34:BM:120:LEU:HD13 | 2.46                     | 0.44              |
| 34:BM:95:PRO:HG2   | 34:BM:96:GLU:N     | 2.33                     | 0.44              |
| 36:BO:99:LEU:HD22  | 36:BO:101:VAL:CG1  | 2.45                     | 0.44              |
| 37:BP:64:ILE:CG2   | 37:BP:106:VAL:O    | 2.65                     | 0.44              |
| 37:BP:113:GLN:O    | 37:BP:114:ALA:C    | 2.61                     | 0.44              |
| 38:BQ:26:LYS:NZ    | 38:BQ:70:LEU:O     | 2.32                     | 0.44              |
| 38:BQ:66:VAL:O     | 38:BQ:69:ASP:N     | 2.50                     | 0.44              |
| 39:BR:40:ILE:HD12  | 39:BR:40:ILE:N     | 2.32                     | 0.44              |
| 39:BR:58:LEU:O     | 39:BR:60:GLY:N     | 2.50                     | 0.44              |
| 40:BS:11:GLU:C     | 40:BS:13:ARG:N     | 2.71                     | 0.44              |
| 40:BS:28:VAL:HG22  | 40:BS:93:ARG:CA    | 2.46                     | 0.44              |
| 41:BT:17:ILE:HD13  | 41:BT:20:LEU:HD11  | 1.99                     | 0.44              |
| 41:BT:93:LYS:HA    | 41:BT:93:LYS:CE    | 2.43                     | 0.44              |
| 42:BU:20:LEU:HD13  | 42:BU:95:LEU:CD1   | 2.47                     | 0.44              |
| 42:BU:30:GLY:C     | 42:BU:31:ALA:O     | 2.61                     | 0.44              |
| 43:BV:4:LYS:H      | 43:BV:4:LYS:HG2    | 1.39                     | 0.44              |
| 43:BV:47:VAL:O     | 43:BV:48:ALA:C     | 2.60                     | 0.44              |
| 45:BX:86:ARG:CA    | 45:BX:91:GLU:HB3   | 2.47                     | 0.44              |
| 46:BY:6:LYS:CD     | 46:BY:35:ARG:HD3   | 2.44                     | 0.44              |
| 46:BY:14:LYS:CD    | 46:BY:14:LYS:N     | 2.80                     | 0.44              |
| 46:BY:31:ARG:NH1   | 46:BY:31:ARG:HG2   | 2.32                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 52:B5:10:LEU:HD12 | 52:B5:28:ARG:HH21 | 1.82                     | 0.44              |
| 54:B7:5:LYS:HA    | 54:B7:59:LYS:C    | 2.42                     | 0.44              |
| 54:B7:6:THR:HG23  | 54:B7:9:GLY:N     | 2.33                     | 0.44              |
| 1:AA:104:G:H5'    | 1:AA:172:A:N1     | 2.32                     | 0.44              |
| 1:AA:210:U:H5'    | 1:AA:216:G:OP1    | 2.17                     | 0.44              |
| 1:AA:251:G:H4'    | 1:AA:252:U:OP1    | 2.17                     | 0.44              |
| 1:AA:258:G:H2'    | 1:AA:259:G:C8     | 2.52                     | 0.44              |
| 1:AA:370:C:C2'    | 1:AA:371:G:H5'    | 2.46                     | 0.44              |
| 1:AA:397:A:H2'    | 1:AA:399:G:OP2    | 2.17                     | 0.44              |
| 1:AA:399:G:C6     | 1:AA:400:C:C4     | 3.05                     | 0.44              |
| 1:AA:411:A:C6     | 1:AA:429:U:C4     | 3.06                     | 0.44              |
| 1:AA:414:A:C4     | 1:AA:415:A:C8     | 3.06                     | 0.44              |
| 1:AA:529:G:O6     | 14:AO:49:ASN:CG   | 2.60                     | 0.44              |
| 1:AA:548:G:H2'    | 1:AA:549:C:O5'    | 2.18                     | 0.44              |
| 1:AA:689:C:H2'    | 1:AA:689:C:O2     | 2.16                     | 0.44              |
| 1:AA:737:A:C2'    | 1:AA:738:C:O5'    | 2.66                     | 0.44              |
| 1:AA:750:G:C2'    | 17:AR:23:GLY:O    | 2.66                     | 0.44              |
| 1:AA:779:C:O2'    | 1:AA:780:A:H5'    | 2.18                     | 0.44              |
| 1:AA:791:G:C5     | 1:AA:792:A:N7     | 2.85                     | 0.44              |
| 1:AA:872:A:O2'    | 1:AA:873:A:C5'    | 2.58                     | 0.44              |
| 1:AA:880:C:P      | 14:AO:9:GLN:NE2   | 2.91                     | 0.44              |
| 1:AA:935:A:C6     | 1:AA:936:C:N4     | 2.85                     | 0.44              |
| 1:AA:942:G:C2     | 1:AA:943:U:C6     | 3.05                     | 0.44              |
| 1:AA:962:C:C4     | 1:AA:963:G:N7     | 2.85                     | 0.44              |
| 1:AA:1142:G:H2'   | 1:AA:1143:G:C8    | 2.41                     | 0.44              |
| 1:AA:1227:A:C8    | 1:AA:1228:C:C6    | 3.06                     | 0.44              |
| 1:AA:1329:A:C5'   | 15:AP:29:ARG:CZ   | 2.94                     | 0.44              |
| 1:AA:1352:C:H1'   | 1:AA:1371:G:N2    | 2.32                     | 0.44              |
| 1:AA:1362:C:O2'   | 1:AA:1362(A):C:C6 | 2.71                     | 0.44              |
| 1:AA:1394:A:C3'   | 1:AA:1395:C:H5'   | 2.47                     | 0.44              |
| 1:AA:1395:C:H2'   | 1:AA:1396:A:C8    | 2.50                     | 0.44              |
| 1:AA:1451:A:H5''  | 1:AA:1452:C:C5    | 2.50                     | 0.44              |
| 3:AD:4:C:H2'      | 3:AD:5:G:O4'      | 2.17                     | 0.44              |
| 3:AB:76:A:P       | 24:BA:2573:C:N3   | 2.90                     | 0.44              |
| 4:AE:61:LEU:CA    | 4:AE:64:ARG:HH11  | 2.31                     | 0.44              |
| 5:AF:6:HIS:CD2    | 16:AQ:49:HIS:ND1  | 2.85                     | 0.44              |
| 6:AG:31:CYS:C     | 6:AG:33:MET:HG2   | 2.42                     | 0.44              |
| 6:AG:107:ARG:HD2  | 6:AG:173:TRP:CZ2  | 2.52                     | 0.44              |
| 6:AG:145:GLU:C    | 6:AG:146:ILE:HG13 | 2.42                     | 0.44              |
| 6:AG:198:VAL:CG2  | 6:AG:199:ASN:H    | 2.14                     | 0.44              |
| 7:AH:91:LEU:CD1   | 7:AH:118:ILE:HG23 | 2.47                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 8:AI:14:LEU:O     | 8:AI:15:ASP:HB3    | 2.17                     | 0.44              |
| 9:AJ:6:ARG:O      | 9:AJ:7:ALA:HB3     | 2.17                     | 0.44              |
| 9:AJ:14:PRO:HG3   | 9:AJ:21:VAL:HG13   | 1.99                     | 0.44              |
| 10:AK:9:MET:SD    | 10:AK:32:LYS:HB2   | 2.57                     | 0.44              |
| 10:AK:30:ARG:O    | 10:AK:31:PHE:C     | 2.60                     | 0.44              |
| 11:AL:27:THR:HA   | 11:AL:31:GLN:O     | 2.17                     | 0.44              |
| 11:AL:47:LEU:CD1  | 11:AL:51:ARG:HH12  | 2.30                     | 0.44              |
| 11:AL:96:LEU:O    | 11:AL:100:GLY:CA   | 2.62                     | 0.44              |
| 12:AM:22:LYS:HZ2  | 12:AM:90:LEU:CD1   | 2.26                     | 0.44              |
| 13:AN:42:TRP:CZ3  | 13:AN:47:VAL:HG21  | 2.52                     | 0.44              |
| 14:AO:41:ARG:HG2  | 14:AO:42:THR:HG22  | 2.00                     | 0.44              |
| 14:AO:60:LEU:CD2  | 14:AO:64:TYR:HB3   | 2.46                     | 0.44              |
| 15:AP:39:ILE:HG21 | 15:AP:56:LEU:HD13  | 1.99                     | 0.44              |
| 15:AP:54:VAL:O    | 15:AP:58:GLU:HG3   | 2.16                     | 0.44              |
| 15:AP:98:VAL:HB   | 15:AP:110:ARG:HH21 | 1.82                     | 0.44              |
| 16:AQ:12:ARG:C    | 16:AQ:14:PRO:N     | 2.75                     | 0.44              |
| 18:AS:10:GLY:CA   | 18:AS:14:ASN:ND2   | 2.81                     | 0.44              |
| 20:AU:21:LYS:C    | 20:AU:55:ARG:HH12  | 2.26                     | 0.44              |
| 20:AU:21:LYS:C    | 20:AU:55:ARG:NH1   | 2.76                     | 0.44              |
| 20:AU:74:ARG:O    | 20:AU:77:GLY:HA2   | 2.17                     | 0.44              |
| 21:AV:21:GLU:O    | 21:AV:24:ALA:HB2   | 2.17                     | 0.44              |
| 21:AV:38:SER:OG   | 21:AV:39:THR:N     | 2.50                     | 0.44              |
| 22:AW:57:ARG:CZ   | 22:AW:100:ILE:HD12 | 2.47                     | 0.44              |
| 24:BA:30:G:H2'    | 24:BA:31:C:H6      | 1.82                     | 0.44              |
| 24:BA:64:A:C2     | 24:BA:65:C:C1'     | 3.00                     | 0.44              |
| 24:BA:87:C:H1'    | 48:B1:46:ARG:HH22  | 1.81                     | 0.44              |
| 24:BA:120:U:O2    | 24:BA:149:A:C2     | 2.70                     | 0.44              |
| 24:BA:140:A:H2    | 24:BA:1408:C:C2    | 2.35                     | 0.44              |
| 24:BA:246:C:H2'   | 24:BA:247:G:C8     | 2.52                     | 0.44              |
| 24:BA:252:G:H2'   | 24:BA:253:C:H6     | 1.81                     | 0.44              |
| 24:BA:270(C):C:P  | 24:BA:365:C:O2'    | 2.75                     | 0.44              |
| 24:BA:270(E):G:C2 | 24:BA:270(V):G:N2  | 2.85                     | 0.44              |
| 24:BA:288:C:O5'   | 24:BA:288:C:H6     | 2.01                     | 0.44              |
| 24:BA:298:G:H1    | 24:BA:338:G:H4'    | 1.82                     | 0.44              |
| 24:BA:310:A:C8    | 24:BA:312:G:C6     | 3.05                     | 0.44              |
| 24:BA:322:A:OP1   | 29:BF:168:ARG:HG2  | 2.18                     | 0.44              |
| 24:BA:487:C:N4    | 24:BA:488:G:C5     | 2.86                     | 0.44              |
| 24:BA:495:G:C2'   | 24:BA:496:G:O5'    | 2.66                     | 0.44              |
| 24:BA:528:A:H2'   | 24:BA:529:A:OP1    | 2.17                     | 0.44              |
| 24:BA:545:G:C1'   | 24:BA:549:G:N2     | 2.66                     | 0.44              |
| 24:BA:557:U:H6    | 24:BA:557:U:O5'    | 2.00                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 24:BA:590:A:C6   | 24:BA:591:C:C4     | 3.05                     | 0.44              |
| 24:BA:709:U:O5'  | 24:BA:709:U:H6     | 2.01                     | 0.44              |
| 24:BA:734:A:C2   | 24:BA:735:A:C1'    | 3.01                     | 0.44              |
| 24:BA:783:A:C6   | 24:BA:785:G:O4'    | 2.71                     | 0.44              |
| 24:BA:820:A:OP2  | 24:BA:973:A:N6     | 2.50                     | 0.44              |
| 24:BA:833:U:H2'  | 24:BA:834:C:O5'    | 2.18                     | 0.44              |
| 24:BA:889:C:H1'  | 24:BA:892:G:C8     | 2.52                     | 0.44              |
| 24:BA:931:G:N3   | 49:B2:24:LYS:CE    | 2.80                     | 0.44              |
| 24:BA:1065:U:H2' | 24:BA:1066:U:H5''  | 1.99                     | 0.44              |
| 24:BA:1076:C:O2  | 33:BL:91:PRO:HD2   | 2.17                     | 0.44              |
| 24:BA:1106:G:OP2 | 24:BA:1106:G:N7    | 2.51                     | 0.44              |
| 24:BA:1210:A:H4' | 24:BA:1211:U:O5'   | 2.14                     | 0.44              |
| 24:BA:1263:U:C5  | 24:BA:1264:G:N1    | 2.85                     | 0.44              |
| 24:BA:1292:U:H2' | 24:BA:1293:C:H6    | 1.82                     | 0.44              |
| 24:BA:1342:A:C2  | 24:BA:1397:U:C6    | 3.06                     | 0.44              |
| 24:BA:1356:G:C4  | 24:BA:1357:U:C6    | 3.06                     | 0.44              |
| 24:BA:1360:A:H61 | 24:BA:1371:G:H1'   | 1.79                     | 0.44              |
| 24:BA:1378:A:C2  | 24:BA:1380:G:C1'   | 3.00                     | 0.44              |
| 24:BA:1414:G:N1  | 24:BA:1415:U:C4    | 2.86                     | 0.44              |
| 24:BA:1419:A:OP2 | 24:BA:1419:A:C4'   | 2.66                     | 0.44              |
| 24:BA:1427:A:H1' | 24:BA:1428:C:C4    | 2.52                     | 0.44              |
| 24:BA:1429:G:C8  | 24:BA:1430:C:C5    | 3.05                     | 0.44              |
| 24:BA:1534:G:O2' | 24:BA:1536:A:N6    | 2.50                     | 0.44              |
| 24:BA:1579:A:H61 | 24:BA:1581:G:N2    | 2.01                     | 0.44              |
| 24:BA:1609:A:N6  | 24:BA:1616:A:H2    | 2.04                     | 0.44              |
| 24:BA:1661:G:C4  | 24:BA:2000:G:C2    | 3.06                     | 0.44              |
| 24:BA:1691:C:H2' | 24:BA:1692:U:H5'   | 1.97                     | 0.44              |
| 24:BA:1702:G:C2' | 24:BA:1703:G:C5'   | 2.79                     | 0.44              |
| 24:BA:1786:A:C2' | 24:BA:1787:A:H5'   | 2.46                     | 0.44              |
| 24:BA:1809:A:H61 | 50:B3:3:GLU:HB2    | 1.83                     | 0.44              |
| 24:BA:1814:G:N2  | 24:BA:1815:A:N6    | 2.65                     | 0.44              |
| 24:BA:1819:A:N3  | 24:BA:1821:A:N1    | 2.64                     | 0.44              |
| 24:BA:1926:U:N3  | 24:BA:1929:G:C2    | 2.85                     | 0.44              |
| 24:BA:1940:U:H5' | 24:BA:1941:C:OP1   | 2.17                     | 0.44              |
| 24:BA:2000:G:C6  | 24:BA:2001:A:N6    | 2.84                     | 0.44              |
| 24:BA:2023:G:C4  | 24:BA:2024:G:N7    | 2.85                     | 0.44              |
| 24:BA:2070:G:C2  | 24:BA:2071:A:C4    | 3.06                     | 0.44              |
| 24:BA:2124:G:N3  | 26:BC:217:THR:HG23 | 2.31                     | 0.44              |
| 24:BA:2168:G:N2  | 24:BA:2170:A:H2'   | 2.32                     | 0.44              |
| 24:BA:2239:G:N3  | 24:BA:2239:G:H2'   | 2.32                     | 0.44              |
| 24:BA:2276:G:N2  | 24:BA:2277:G:C4    | 2.85                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:2302:G:C2    | 24:BA:2303:G:N9   | 2.85                     | 0.44              |
| 24:BA:2335:A:N7    | 24:BA:2337:G:C6   | 2.85                     | 0.44              |
| 24:BA:2348:U:C2'   | 24:BA:2349:G:O5'  | 2.65                     | 0.44              |
| 24:BA:2369:A:N6    | 24:BA:2382:G:H22  | 2.16                     | 0.44              |
| 24:BA:2373:G:C2    | 24:BA:2374:C:N3   | 2.85                     | 0.44              |
| 24:BA:2373:G:OP2   | 24:BA:2373:G:C8   | 2.68                     | 0.44              |
| 24:BA:2447:G:O2'   | 24:BA:2448:A:P    | 2.74                     | 0.44              |
| 24:BA:2471:C:H2'   | 24:BA:2472:G:H5'  | 1.99                     | 0.44              |
| 24:BA:2472:G:H1'   | 24:BA:2478:A:N6   | 2.32                     | 0.44              |
| 24:BA:2484:G:C4    | 37:BP:124:LYS:HE2 | 2.52                     | 0.44              |
| 24:BA:2554:U:H5    | 24:BA:2556:C:C4   | 2.36                     | 0.44              |
| 24:BA:2599:G:C2'   | 24:BA:2600:A:H5'  | 2.46                     | 0.44              |
| 24:BA:2623:G:H22   | 51:B4:22:HIS:CE1  | 2.22                     | 0.44              |
| 24:BA:2675:A:OP1   | 35:BN:32:TYR:HE2  | 2.00                     | 0.44              |
| 25:BB:6:C:C4       | 25:BB:115:G:N2    | 2.86                     | 0.44              |
| 25:BB:111:U:O2     | 25:BB:112:G:C8    | 2.71                     | 0.44              |
| 26:BC:11:LEU:HD12  | 26:BC:14:VAL:HB   | 1.98                     | 0.44              |
| 26:BC:117:PRO:HD2  | 26:BC:147:PHE:CG  | 2.52                     | 0.44              |
| 27:BD:42:GLY:HA3   | 27:BD:60:ARG:HH22 | 1.79                     | 0.44              |
| 27:BD:55:GLY:H     | 27:BD:218:ARG:HA  | 1.83                     | 0.44              |
| 27:BD:62:TYR:C     | 27:BD:63:ARG:NH2  | 2.75                     | 0.44              |
| 28:BE:97:LYS:HG3   | 28:BE:100:GLU:HG3 | 1.99                     | 0.44              |
| 28:BE:176:ILE:HA   | 28:BE:177:PRO:HD2 | 1.76                     | 0.44              |
| 29:BF:65:TRP:O     | 29:BF:67:GLN:N    | 2.51                     | 0.44              |
| 29:BF:75:HIS:CE1   | 29:BF:80:ALA:CB   | 3.01                     | 0.44              |
| 29:BF:95:ARG:HE    | 29:BF:96:ASP:H    | 1.66                     | 0.44              |
| 29:BF:169:ASN:OD1  | 29:BF:171:PRO:HG2 | 2.18                     | 0.44              |
| 30:BG:2:PRO:HA     | 30:BG:5:VAL:HG21  | 2.00                     | 0.44              |
| 30:BG:27:ASN:HB3   | 30:BG:29:TRP:CZ2  | 2.52                     | 0.44              |
| 30:BG:37:VAL:CB    | 30:BG:99:MET:SD   | 3.03                     | 0.44              |
| 30:BG:71:THR:O     | 30:BG:71:THR:CG2  | 2.58                     | 0.44              |
| 31:BH:27:LYS:HZ2   | 31:BH:32:GLU:HB2  | 1.82                     | 0.44              |
| 31:BH:74:ASN:O     | 31:BH:76:VAL:N    | 2.50                     | 0.44              |
| 31:BH:104:GLU:C    | 31:BH:105:LEU:CG  | 2.89                     | 0.44              |
| 32:BK:5:LEU:N      | 32:BK:5:LEU:CD2   | 2.77                     | 0.44              |
| 32:BK:87:LYS:HG2   | 32:BK:121:LYS:O   | 2.17                     | 0.44              |
| 32:BK:115:ALA:HB1  | 32:BK:128:LEU:CD2 | 2.43                     | 0.44              |
| 33:BL:104:VAL:HG12 | 33:BL:124:ALA:CA  | 2.48                     | 0.44              |
| 34:BM:82:LEU:N     | 34:BM:82:LEU:HD23 | 2.32                     | 0.44              |
| 34:BM:102:ALA:O    | 34:BM:105:GLY:N   | 2.50                     | 0.44              |
| 34:BM:139:GLU:CD   | 34:BM:140:VAL:N   | 2.76                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 36:BO:46:LYS:HZ1  | 36:BO:50:ARG:HH11 | 1.63                     | 0.44              |
| 36:BO:113:LYS:CG  | 36:BO:114:ILE:N   | 2.80                     | 0.44              |
| 37:BP:16:ARG:HD3  | 37:BP:16:ARG:N    | 2.28                     | 0.44              |
| 37:BP:22:LYS:NZ   | 37:BP:23:GLY:C    | 2.75                     | 0.44              |
| 38:BQ:17:ARG:HG3  | 38:BQ:18:LEU:CD2  | 2.47                     | 0.44              |
| 38:BQ:71:GLN:O    | 38:BQ:72:ASP:CB   | 2.65                     | 0.44              |
| 40:BS:25:GLY:O    | 40:BS:100:TYR:OH  | 2.36                     | 0.44              |
| 40:BS:28:VAL:HG13 | 40:BS:92:GLY:O    | 2.17                     | 0.44              |
| 40:BS:71:GLY:N    | 40:BS:74:ARG:HH11 | 2.16                     | 0.44              |
| 40:BS:108:ARG:H   | 40:BS:108:ARG:NH1 | 2.11                     | 0.44              |
| 43:BV:12:ILE:HD13 | 43:BV:12:ILE:H    | 1.82                     | 0.44              |
| 43:BV:24:ILE:O    | 43:BV:32:ALA:HB2  | 2.17                     | 0.44              |
| 45:BX:49:VAL:CB   | 45:BX:51:VAL:H    | 2.29                     | 0.44              |
| 47:BZ:23:VAL:CG2  | 47:BZ:44:ARG:HH12 | 2.30                     | 0.44              |
| 48:B1:11:LEU:N    | 48:B1:11:LEU:CD1  | 2.81                     | 0.44              |
| 50:B3:42:PHE:N    | 50:B3:58:ARG:HG3  | 2.31                     | 0.44              |
| 51:B4:25:LEU:O    | 51:B4:25:LEU:CG   | 2.57                     | 0.44              |
| 51:B4:35:GLU:HB3  | 51:B4:49:CYS:HB2  | 1.96                     | 0.44              |
| 51:B4:46:CYS:O    | 51:B4:48:GLU:N    | 2.41                     | 0.44              |
| 54:B7:34:TRP:HA   | 54:B7:36:LYS:HB2  | 2.00                     | 0.44              |
| 54:B7:39:LYS:NZ   | 54:B7:39:LYS:N    | 2.66                     | 0.44              |
| 1:AA:37:U:OP1     | 14:AO:123:LYS:HE3 | 2.18                     | 0.44              |
| 1:AA:148:G:O2'    | 1:AA:149:A:H5'    | 2.17                     | 0.44              |
| 1:AA:179:A:H2'    | 1:AA:179:A:N3     | 2.32                     | 0.44              |
| 1:AA:189:U:H2'    | 19:AT:63:ARG:HH22 | 1.82                     | 0.44              |
| 1:AA:194:C:O3'    | 22:AW:68:LYS:NZ   | 2.50                     | 0.44              |
| 1:AA:254:G:C1'    | 19:AT:15:MET:HG2  | 2.48                     | 0.44              |
| 1:AA:279:A:OP2    | 19:AT:95:TYR:OH   | 2.32                     | 0.44              |
| 1:AA:280:C:O2     | 19:AT:39:SER:HB3  | 2.18                     | 0.44              |
| 1:AA:285:G:C6     | 1:AA:286:G:C5     | 3.06                     | 0.44              |
| 1:AA:285:G:C6     | 1:AA:286:G:N7     | 2.86                     | 0.44              |
| 1:AA:414:A:C6     | 1:AA:431:A:C2     | 3.06                     | 0.44              |
| 1:AA:428:G:O2'    | 1:AA:429:U:OP2    | 2.30                     | 0.44              |
| 1:AA:518:C:C6     | 1:AA:530:G:C4     | 3.05                     | 0.44              |
| 1:AA:520:A:H3'    | 1:AA:520:A:H8     | 1.82                     | 0.44              |
| 1:AA:540:G:C5     | 1:AA:541:G:N7     | 2.86                     | 0.44              |
| 1:AA:567:G:N2     | 1:AA:568:G:H1'    | 2.33                     | 0.44              |
| 1:AA:568:G:C2     | 1:AA:574:A:H2     | 2.35                     | 0.44              |
| 1:AA:582:U:OP2    | 1:AA:758:G:N2     | 2.51                     | 0.44              |
| 1:AA:622:A:C4     | 1:AA:623:C:C6     | 3.04                     | 0.44              |
| 1:AA:664:G:N3     | 1:AA:726:C:H4'    | 2.32                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:779:C:N3     | 1:AA:780:A:N3     | 2.64                     | 0.44              |
| 1:AA:857:C:H2'    | 1:AA:858:G:C5'    | 2.46                     | 0.44              |
| 1:AA:975:A:O2'    | 1:AA:976:G:P      | 2.76                     | 0.44              |
| 1:AA:1074:G:C2'   | 1:AA:1075:C:H5'   | 2.47                     | 0.44              |
| 1:AA:1133:G:C8    | 1:AA:1133:G:H3'   | 2.52                     | 0.44              |
| 1:AA:1151:A:N7    | 1:AA:1152:A:C8    | 2.86                     | 0.44              |
| 1:AA:1187:G:C2'   | 1:AA:1188:A:H8    | 2.31                     | 0.44              |
| 1:AA:1242:C:N3    | 1:AA:1243:C:C5    | 2.85                     | 0.44              |
| 1:AA:1315:U:H1'   | 1:AA:1360:A:N3    | 2.33                     | 0.44              |
| 1:AA:1319:A:H5'   | 21:AV:5:LEU:HD21  | 1.99                     | 0.44              |
| 1:AA:1343:G:C2    | 1:AA:1344:C:C2    | 3.06                     | 0.44              |
| 1:AA:1480:G:C6    | 1:AA:1481:U:C2    | 3.05                     | 0.44              |
| 1:AA:1519:A:C3'   | 1:AA:1520:G:H5'   | 2.47                     | 0.44              |
| 3:AC:38:A:N7      | 3:AC:39:U:C5      | 2.86                     | 0.44              |
| 4:AE:153:ARG:O    | 4:AE:153:ARG:CZ   | 2.65                     | 0.44              |
| 4:AE:167:PRO:O    | 4:AE:174:VAL:HG21 | 2.17                     | 0.44              |
| 4:AE:189:ASP:CB   | 4:AE:205:ASP:CG   | 2.90                     | 0.44              |
| 5:AF:38:ARG:NH1   | 5:AF:38:ARG:CB    | 2.58                     | 0.44              |
| 6:AG:30:LYS:HG2   | 6:AG:35:ARG:HG3   | 2.00                     | 0.44              |
| 6:AG:67:ILE:CD1   | 6:AG:68:TYR:CD1   | 3.00                     | 0.44              |
| 6:AG:83:SER:N     | 6:AG:89:THR:CG2   | 2.80                     | 0.44              |
| 6:AG:129:ASN:HD21 | 6:AG:145:GLU:HG2  | 1.82                     | 0.44              |
| 6:AG:155:LEU:O    | 6:AG:158:ILE:N    | 2.51                     | 0.44              |
| 6:AG:176:LEU:H    | 6:AG:176:LEU:HD23 | 1.81                     | 0.44              |
| 7:AH:7:GLU:OE1    | 7:AH:37:ARG:NH2   | 2.50                     | 0.44              |
| 7:AH:52:PRO:O     | 7:AH:55:VAL:N     | 2.50                     | 0.44              |
| 7:AH:84:PHE:CG    | 7:AH:134:ALA:CA   | 3.00                     | 0.44              |
| 7:AH:112:LEU:HD22 | 7:AH:112:LEU:HA   | 1.79                     | 0.44              |
| 8:AI:2:ARG:O      | 8:AI:67:MET:HE1   | 2.17                     | 0.44              |
| 10:AK:101:PRO:HG2 | 10:AK:102:ARG:N   | 2.32                     | 0.44              |
| 12:AM:40:LEU:HD23 | 12:AM:40:LEU:HA   | 1.87                     | 0.44              |
| 12:AM:40:LEU:O    | 12:AM:42:THR:N    | 2.51                     | 0.44              |
| 13:AN:90:GLY:O    | 13:AN:91:ARG:C    | 2.58                     | 0.44              |
| 14:AO:65:GLU:C    | 14:AO:66:VAL:HG22 | 2.42                     | 0.44              |
| 14:AO:78:GLN:CD   | 14:AO:78:GLN:N    | 2.76                     | 0.44              |
| 14:AO:82:VAL:O    | 14:AO:83:VAL:CB   | 2.65                     | 0.44              |
| 14:AO:113:ARG:NH2 | 14:AO:116:SER:O   | 2.42                     | 0.44              |
| 18:AS:8:ARG:NH1   | 18:AS:11:SER:O    | 2.51                     | 0.44              |
| 19:AT:45:HIS:CE1  | 19:AT:46:ASP:C    | 2.96                     | 0.44              |
| 21:AV:18:LYS:HE2  | 21:AV:22:LEU:HD12 | 1.99                     | 0.44              |
| 21:AV:32:LYS:HB3  | 21:AV:50:ALA:HB3  | 1.99                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 22:AW:10:LEU:HD12 | 22:AW:11:SER:N     | 2.32                     | 0.44              |
| 24:BA:67:U:C5'    | 24:BA:67:U:H6      | 2.30                     | 0.44              |
| 24:BA:72:U:O4     | 24:BA:112:U:C1'    | 2.59                     | 0.44              |
| 24:BA:117:G:C2    | 24:BA:119:A:N6     | 2.85                     | 0.44              |
| 24:BA:266:G:C5    | 24:BA:267:C:C6     | 3.06                     | 0.44              |
| 24:BA:276:A:O4'   | 24:BA:276:A:OP2    | 2.35                     | 0.44              |
| 24:BA:344:G:C2    | 24:BA:345:A:C6     | 3.06                     | 0.44              |
| 24:BA:424:G:N3    | 24:BA:425:G:C8     | 2.85                     | 0.44              |
| 24:BA:568:U:C2'   | 24:BA:570:G:N7     | 2.80                     | 0.44              |
| 24:BA:629:G:OP1   | 54:B7:17:THR:HG22  | 2.17                     | 0.44              |
| 24:BA:689:A:H2'   | 24:BA:690:G:H5''   | 1.99                     | 0.44              |
| 24:BA:830:G:O6    | 24:BA:2446:G:H1'   | 2.17                     | 0.44              |
| 24:BA:861:A:H2'   | 24:BA:862:G:C5'    | 2.41                     | 0.44              |
| 24:BA:943:U:H2'   | 24:BA:944:G:OP1    | 2.18                     | 0.44              |
| 24:BA:971:C:N4    | 24:BA:972:G:N2     | 2.66                     | 0.44              |
| 24:BA:973:A:H3'   | 24:BA:973:A:C8     | 2.53                     | 0.44              |
| 24:BA:1027:A:N1   | 24:BA:1126:A:C4    | 2.85                     | 0.44              |
| 24:BA:1213:A:C4   | 24:BA:1214:A:C8    | 3.06                     | 0.44              |
| 24:BA:1264:G:N7   | 24:BA:1265:A:C5    | 2.85                     | 0.44              |
| 24:BA:1287:A:H8   | 38:BQ:104:ARG:HH11 | 1.65                     | 0.44              |
| 24:BA:1299:G:OP1  | 24:BA:1300:U:H5'   | 2.18                     | 0.44              |
| 24:BA:1304:C:H2'  | 24:BA:1305:C:C5'   | 2.47                     | 0.44              |
| 24:BA:1458:C:H4'  | 24:BA:1459:G:C4    | 2.52                     | 0.44              |
| 24:BA:1475:G:H22  | 24:BA:1477:A:N6    | 2.08                     | 0.44              |
| 24:BA:1568:G:P    | 27:BD:61:LEU:CG    | 3.06                     | 0.44              |
| 24:BA:1593:G:H2'  | 24:BA:1594:G:O4'   | 2.18                     | 0.44              |
| 24:BA:1604:C:O2   | 24:BA:1604:C:C2'   | 2.66                     | 0.44              |
| 24:BA:1615:C:O2   | 43:BV:87:PRO:HG3   | 2.17                     | 0.44              |
| 24:BA:1672:C:C3'  | 24:BA:1673:U:C5'   | 2.92                     | 0.44              |
| 24:BA:1709:U:C4   | 24:BA:1710:C:N4    | 2.86                     | 0.44              |
| 24:BA:1790:C:H1'  | 27:BD:213:ARG:NH2  | 2.33                     | 0.44              |
| 24:BA:1795:C:H6   | 24:BA:1795:C:O5'   | 2.01                     | 0.44              |
| 24:BA:1807:G:N2   | 24:BA:1809:A:OP2   | 2.50                     | 0.44              |
| 24:BA:1977:A:C2   | 24:BA:1978:A:C1'   | 3.01                     | 0.44              |
| 24:BA:1982:C:N4   | 24:BA:1983:C:H41   | 2.15                     | 0.44              |
| 24:BA:2046:G:C6   | 24:BA:2623:G:C6    | 3.06                     | 0.44              |
| 24:BA:2084:C:C2   | 24:BA:2085:C:C5    | 3.05                     | 0.44              |
| 24:BA:2091:U:O4   | 24:BA:2092:U:C5    | 2.70                     | 0.44              |
| 24:BA:2091:U:C5'  | 24:BA:2093:G:OP1   | 2.65                     | 0.44              |
| 24:BA:2227:A:C4'  | 27:BD:262:ARG:HD2  | 2.48                     | 0.44              |
| 24:BA:2286:A:N7   | 52:B5:31:PRO:N     | 2.66                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2331:G:H3'  | 24:BA:2332:U:C6    | 2.51                     | 0.44              |
| 24:BA:2352:A:N1   | 47:BZ:34:GLY:CA    | 2.80                     | 0.44              |
| 24:BA:2424:C:O2   | 24:BA:2424:C:C2'   | 2.65                     | 0.44              |
| 24:BA:2450:A:H2   | 24:BA:2451:A:H1'   | 1.82                     | 0.44              |
| 24:BA:2514:U:O5'  | 24:BA:2514:U:H6    | 1.99                     | 0.44              |
| 24:BA:2547:U:C6   | 24:BA:2547:U:H5''  | 2.52                     | 0.44              |
| 24:BA:2676:C:H2'  | 24:BA:2677:G:H8    | 1.83                     | 0.44              |
| 24:BA:2720:U:O2   | 24:BA:2720:U:C2'   | 2.53                     | 0.44              |
| 24:BA:2726:U:H4'  | 24:BA:2727:G:OP1   | 2.16                     | 0.44              |
| 24:BA:2770:G:O5'  | 24:BA:2770:G:C8    | 2.67                     | 0.44              |
| 24:BA:2816:C:C2   | 24:BA:2831:G:C2    | 3.06                     | 0.44              |
| 24:BA:2833:G:N2   | 28:BE:56:PRO:HB3   | 2.33                     | 0.44              |
| 24:BA:2882:A:C4'  | 38:BQ:98:LEU:HD21  | 2.48                     | 0.44              |
| 26:BC:10:LEU:CD1  | 26:BC:32:LEU:O     | 2.64                     | 0.44              |
| 26:BC:59:ARG:O    | 26:BC:199:HIS:CD2  | 2.71                     | 0.44              |
| 26:BC:74:VAL:HG13 | 26:BC:112:ALA:O    | 2.17                     | 0.44              |
| 27:BD:55:GLY:N    | 27:BD:218:ARG:HH11 | 2.16                     | 0.44              |
| 27:BD:58:HIS:O    | 27:BD:59:LYS:HE2   | 2.16                     | 0.44              |
| 27:BD:132:PRO:HB2 | 27:BD:134:ARG:HD2  | 1.99                     | 0.44              |
| 27:BD:182:LEU:H   | 27:BD:270:ILE:HG13 | 1.83                     | 0.44              |
| 27:BD:226:MET:HE1 | 27:BD:237:GLU:C    | 2.42                     | 0.44              |
| 27:BD:246:PRO:HB2 | 27:BD:250:TRP:CD1  | 2.52                     | 0.44              |
| 28:BE:11:MET:C    | 28:BE:21:VAL:HG23  | 2.40                     | 0.44              |
| 28:BE:99:GLY:N    | 28:BE:172:VAL:CG2  | 2.80                     | 0.44              |
| 28:BE:115:GLY:O   | 28:BE:116:VAL:C    | 2.60                     | 0.44              |
| 28:BE:186:GLY:C   | 28:BE:188:VAL:N    | 2.72                     | 0.44              |
| 29:BF:104:LYS:C   | 29:BF:108:LYS:HZ1  | 2.26                     | 0.44              |
| 30:BG:9:ARG:O     | 30:BG:13:GLU:CD    | 2.61                     | 0.44              |
| 30:BG:68:PRO:CG   | 30:BG:72:ARG:NH1   | 2.77                     | 0.44              |
| 31:BH:18:GLU:CD   | 31:BH:25:LYS:HB3   | 2.40                     | 0.44              |
| 31:BH:42:ARG:HB2  | 31:BH:53:GLU:HG3   | 1.98                     | 0.44              |
| 31:BH:54:ARG:NH1  | 31:BH:57:ASP:CB    | 2.81                     | 0.44              |
| 32:BK:134:PRO:C   | 32:BK:135:GLU:CD   | 2.85                     | 0.44              |
| 33:BL:11:GLN:NE2  | 33:BL:73:PRO:CG    | 2.76                     | 0.44              |
| 33:BL:18:THR:N    | 33:BL:38:VAL:HG22  | 2.32                     | 0.44              |
| 33:BL:102:GLU:O   | 33:BL:106:GLU:CG   | 2.62                     | 0.44              |
| 33:BL:105:LEU:CD2 | 33:BL:124:ALA:CB   | 2.93                     | 0.44              |
| 34:BM:27:ALA:C    | 34:BM:29:LYS:N     | 2.74                     | 0.44              |
| 35:BN:8:LEU:HD21  | 35:BN:81:ASP:HB3   | 2.00                     | 0.44              |
| 35:BN:22:ILE:HB   | 35:BN:23:ARG:CD    | 2.48                     | 0.44              |
| 35:BN:63:VAL:CG2  | 35:BN:82:ASN:N     | 2.79                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 35:BN:77:ILE:O    | 40:BS:75:ILE:CD1  | 2.66                     | 0.44              |
| 35:BN:89:ASN:O    | 35:BN:90:GLN:CB   | 2.64                     | 0.44              |
| 36:BO:28:GLY:O    | 36:BO:29:LYS:CG   | 2.62                     | 0.44              |
| 36:BO:40:SER:O    | 36:BO:42:SER:N    | 2.50                     | 0.44              |
| 36:BO:91:PHE:HE2  | 36:BO:96:THR:HG22 | 1.80                     | 0.44              |
| 37:BP:68:ILE:HG21 | 37:BP:95:ALA:HB2  | 2.00                     | 0.44              |
| 37:BP:86:GLY:C    | 37:BP:88:GLY:N    | 2.70                     | 0.44              |
| 39:BR:32:LEU:C    | 39:BR:34:HIS:N    | 2.74                     | 0.44              |
| 39:BR:57:LYS:CD   | 39:BR:65:VAL:HA   | 2.46                     | 0.44              |
| 39:BR:75:GLU:O    | 39:BR:78:LEU:CD1  | 2.65                     | 0.44              |
| 41:BT:68:ALA:HA   | 41:BT:71:GLN:OE1  | 2.17                     | 0.44              |
| 42:BU:16:PRO:CD   | 42:BU:100:ARG:NH1 | 2.78                     | 0.44              |
| 42:BU:33:VAL:HG12 | 42:BU:34:GLU:H    | 1.82                     | 0.44              |
| 42:BU:48:GLY:C    | 42:BU:49:THR:OG1  | 2.60                     | 0.44              |
| 43:BV:47:VAL:O    | 43:BV:51:LEU:CD1  | 2.57                     | 0.44              |
| 45:BX:24:VAL:HG23 | 45:BX:38:ILE:HD12 | 2.00                     | 0.44              |
| 45:BX:72:VAL:O    | 45:BX:77:PRO:O    | 2.36                     | 0.44              |
| 45:BX:76:CYS:N    | 45:BX:100:ALA:HB3 | 2.33                     | 0.44              |
| 46:BY:168:GLU:OE1 | 46:BY:168:GLU:C   | 2.61                     | 0.44              |
| 47:BZ:52:GLY:O    | 47:BZ:60:PHE:CD2  | 2.71                     | 0.44              |
| 47:BZ:74:ARG:HH11 | 47:BZ:75:LEU:HD11 | 1.82                     | 0.44              |
| 48:B1:15:GLU:C    | 48:B1:17:GLU:N    | 2.75                     | 0.44              |
| 48:B1:60:ASN:O    | 48:B1:61:GLU:C    | 2.61                     | 0.44              |
| 50:B3:7:PRO:HG2   | 50:B3:60:GLN:HB2  | 1.98                     | 0.44              |
| 50:B3:41:PRO:CA   | 50:B3:58:ARG:HD2  | 2.47                     | 0.44              |
| 52:B5:17:LYS:CE   | 52:B5:48:VAL:HG11 | 2.47                     | 0.44              |
| 54:B7:5:LYS:HG2   | 54:B7:7:HIS:CA    | 2.48                     | 0.44              |
| 1:AA:22:G:OP1     | 1:AA:561:U:O2     | 2.35                     | 0.44              |
| 1:AA:24:U:C4      | 1:AA:25:C:C5      | 3.05                     | 0.44              |
| 1:AA:151:A:C6     | 1:AA:152:A:C2     | 3.05                     | 0.44              |
| 1:AA:169:C:C6     | 1:AA:170:U:H5     | 2.35                     | 0.44              |
| 1:AA:185:A:C4     | 1:AA:186:C:C5     | 3.06                     | 0.44              |
| 1:AA:270:A:C5     | 1:AA:271:C:C5     | 3.06                     | 0.44              |
| 1:AA:292:G:C2     | 1:AA:309:G:N3     | 2.86                     | 0.44              |
| 1:AA:311:C:O2'    | 1:AA:312:C:H5'    | 2.17                     | 0.44              |
| 1:AA:314:C:H2'    | 1:AA:315:A:C8     | 2.53                     | 0.44              |
| 1:AA:377:G:OP1    | 18:AS:5:ARG:NH1   | 2.51                     | 0.44              |
| 1:AA:409:G:N2     | 1:AA:410:G:O4'    | 2.50                     | 0.44              |
| 1:AA:489:C:O2'    | 1:AA:490:G:C5'    | 2.65                     | 0.44              |
| 1:AA:568:G:N3     | 1:AA:574:A:H2     | 2.16                     | 0.44              |
| 1:AA:625:G:C4     | 1:AA:626:U:C5     | 3.06                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:723:U:O5'     | 1:AA:723:U:C6     | 2.71                     | 0.44              |
| 1:AA:960:U:H5'     | 1:AA:960:U:C6     | 2.53                     | 0.44              |
| 1:AA:1003:G:OP2    | 1:AA:1003:G:C8    | 2.70                     | 0.44              |
| 1:AA:1065:U:H5     | 1:AA:1190:G:N3    | 2.14                     | 0.44              |
| 1:AA:1068:G:C8     | 1:AA:1094:G:C8    | 3.04                     | 0.44              |
| 1:AA:1085:U:O4'    | 1:AA:1094:G:C2    | 2.70                     | 0.44              |
| 1:AA:1171:G:C2'    | 1:AA:1172:C:H6    | 2.31                     | 0.44              |
| 1:AA:1241:G:C8     | 1:AA:1241:G:OP2   | 2.69                     | 0.44              |
| 1:AA:1250:A:H2'    | 1:AA:1251:A:C8    | 2.53                     | 0.44              |
| 1:AA:1347:G:O2'    | 1:AA:1348:U:P     | 2.75                     | 0.44              |
| 1:AA:1368:G:O2'    | 1:AA:1369:C:H5'   | 2.17                     | 0.44              |
| 1:AA:1396:A:H2'    | 1:AA:1397:C:OP2   | 2.17                     | 0.44              |
| 1:AA:1424:C:C2'    | 1:AA:1425:U:O5'   | 2.66                     | 0.44              |
| 1:AA:1454:G:C4     | 1:AA:1455:G:C8    | 3.05                     | 0.44              |
| 1:AA:1480:G:O2'    | 1:AA:1481:U:C5'   | 2.61                     | 0.44              |
| 1:AA:1504:G:O4'    | 1:AA:1505:G:C6    | 2.70                     | 0.44              |
| 1:AA:1520:G:C2'    | 1:AA:1521:G:C8    | 2.95                     | 0.44              |
| 3:AC:74:C:H5''     | 24:BA:2602:A:H2'  | 2.00                     | 0.44              |
| 3:AD:4:C:C4        | 3:AD:70:G:N1      | 2.85                     | 0.44              |
| 3:AD:64:A:C2       | 3:AD:65:G:C8      | 3.05                     | 0.44              |
| 3:AB:75:C:N4       | 24:BA:2554:U:O2   | 2.50                     | 0.44              |
| 4:AE:101:MET:HB3   | 4:AE:105:PHE:CD1  | 2.53                     | 0.44              |
| 4:AE:145:LEU:O     | 4:AE:149:LEU:HB3  | 2.14                     | 0.44              |
| 4:AE:157:ARG:HG2   | 4:AE:158:LEU:HD23 | 1.98                     | 0.44              |
| 5:AF:126:ARG:C     | 5:AF:127:ARG:HG3  | 2.42                     | 0.44              |
| 5:AF:164:ARG:HG2   | 5:AF:165:THR:N    | 2.32                     | 0.44              |
| 5:AF:190:ARG:O     | 5:AF:191:THR:O    | 2.36                     | 0.44              |
| 6:AG:92:VAL:O      | 6:AG:96:LEU:HG    | 2.17                     | 0.44              |
| 8:AI:96:PRO:N      | 20:AU:32:ARG:HG3  | 2.32                     | 0.44              |
| 9:AJ:6:ARG:CZ      | 9:AJ:6:ARG:H      | 2.29                     | 0.44              |
| 9:AJ:11:GLN:NE2    | 9:AJ:12:LEU:HD12  | 2.33                     | 0.44              |
| 9:AJ:129:GLU:HB3   | 9:AJ:131:LYS:HG2  | 1.99                     | 0.44              |
| 10:AK:48:TYR:CA    | 10:AK:61:VAL:HG22 | 2.47                     | 0.44              |
| 11:AL:36:TYR:HD2   | 11:AL:37:PHE:HE2  | 1.66                     | 0.44              |
| 11:AL:105:ASP:OD1  | 11:AL:107:ARG:NH2 | 2.50                     | 0.44              |
| 13:AN:48:ILE:HD11  | 13:AN:64:ALA:HA   | 1.98                     | 0.44              |
| 13:AN:66:LEU:CB    | 13:AN:70:LYS:NZ   | 2.79                     | 0.44              |
| 14:AO:36:VAL:O     | 14:AO:59:ARG:O    | 2.36                     | 0.44              |
| 14:AO:102:ARG:HH11 | 14:AO:110:VAL:CG1 | 2.31                     | 0.44              |
| 15:AP:48:LEU:CD2   | 15:AP:48:LEU:C    | 2.89                     | 0.44              |
| 15:AP:55:ARG:HH21  | 15:AP:56:LEU:CD1  | 2.30                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 15:AP:91:ARG:HB3   | 15:AP:98:VAL:HG13  | 1.98                     | 0.44              |
| 16:AQ:26:ARG:HE    | 16:AQ:43:CYS:HA    | 1.82                     | 0.44              |
| 17:AR:39:LEU:HD22  | 17:AR:56:LEU:CD2   | 2.42                     | 0.44              |
| 19:AT:5:VAL:CB     | 19:AT:59:ILE:O     | 2.66                     | 0.44              |
| 19:AT:22:LEU:CD1   | 19:AT:41:LYS:HA    | 2.48                     | 0.44              |
| 20:AU:62:GLU:HB3   | 20:AU:66:LEU:HD23  | 2.00                     | 0.44              |
| 24:BA:10:G:N1      | 24:BA:2629:A:N3    | 2.66                     | 0.44              |
| 24:BA:70:G:C3'     | 24:BA:71:A:H5'     | 2.48                     | 0.44              |
| 24:BA:71:A:C2'     | 24:BA:72:U:OP2     | 2.65                     | 0.44              |
| 24:BA:105:C:H2'    | 24:BA:106:C:H6     | 1.83                     | 0.44              |
| 24:BA:126:A:OP1    | 53:B6:17:GLY:HA3   | 2.17                     | 0.44              |
| 24:BA:219:G:H2'    | 24:BA:220:G:H5'    | 1.99                     | 0.44              |
| 24:BA:233:A:N7     | 24:BA:234:C:C5     | 2.86                     | 0.44              |
| 24:BA:266:G:C2     | 24:BA:267:C:H1'    | 2.52                     | 0.44              |
| 24:BA:270(M):U:O3' | 24:BA:270(N):G:C4' | 2.66                     | 0.44              |
| 24:BA:270(V):G:C4  | 24:BA:270(W):G:N7  | 2.85                     | 0.44              |
| 24:BA:449:A:OP2    | 29:BF:85:GLY:CA    | 2.66                     | 0.44              |
| 24:BA:458:G:H2'    | 53:B6:40:TRP:CD1   | 2.53                     | 0.44              |
| 24:BA:566:U:O2'    | 24:BA:808:G:OP1    | 2.35                     | 0.44              |
| 24:BA:687:C:C1'    | 24:BA:788:A:O4'    | 2.66                     | 0.44              |
| 24:BA:747:U:O2     | 24:BA:2613:U:C4    | 2.71                     | 0.44              |
| 24:BA:771:G:C2     | 24:BA:772:C:C5     | 3.05                     | 0.44              |
| 24:BA:824:A:C5     | 24:BA:825:C:N4     | 2.86                     | 0.44              |
| 24:BA:885:C:N4     | 24:BA:892:G:C5     | 2.86                     | 0.44              |
| 24:BA:1003:G:O2'   | 24:BA:1010:A:N1    | 2.43                     | 0.44              |
| 24:BA:1023:U:O2    | 24:BA:1024:G:H4'   | 2.17                     | 0.44              |
| 24:BA:1128:A:O4'   | 24:BA:1128:A:OP2   | 2.35                     | 0.44              |
| 24:BA:1183:G:O2'   | 24:BA:1184:G:P     | 2.76                     | 0.44              |
| 24:BA:1190:G:O2'   | 24:BA:1191:G:H5'   | 2.17                     | 0.44              |
| 24:BA:1212:G:C8    | 24:BA:1212:G:C3'   | 2.99                     | 0.44              |
| 24:BA:1268:A:OP1   | 24:BA:2006:C:OP1   | 2.36                     | 0.44              |
| 24:BA:1372:U:C4    | 24:BA:1373:A:N7    | 2.85                     | 0.44              |
| 24:BA:1388:G:N1    | 24:BA:1400:G:C2    | 2.85                     | 0.44              |
| 24:BA:1454:U:C5'   | 24:BA:1455:G:OP2   | 2.56                     | 0.44              |
| 24:BA:1473:G:O2'   | 24:BA:1474:C:O4'   | 2.35                     | 0.44              |
| 24:BA:1522:G:C8    | 24:BA:1522:G:C3'   | 3.01                     | 0.44              |
| 24:BA:1630:G:C8    | 24:BA:1630(A):C:H5 | 2.35                     | 0.44              |
| 24:BA:1691:C:H2'   | 24:BA:1692:U:C5'   | 2.48                     | 0.44              |
| 24:BA:1707:G:H2'   | 24:BA:1708:C:O4'   | 2.17                     | 0.44              |
| 24:BA:1778:U:H3'   | 24:BA:1779:U:C5    | 2.52                     | 0.44              |
| 24:BA:1864:U:OP1   | 24:BA:2410:G:O2'   | 2.36                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1933:G:O6    | 24:BA:1968:G:C2    | 2.68                     | 0.44              |
| 24:BA:1995:U:C6    | 24:BA:1995:U:C3'   | 3.01                     | 0.44              |
| 24:BA:2007:C:H2'   | 24:BA:2008:C:O5'   | 2.18                     | 0.44              |
| 24:BA:2040:C:N4    | 24:BA:2041:U:O4    | 2.50                     | 0.44              |
| 24:BA:2046:G:C2    | 24:BA:2047:U:C4    | 3.06                     | 0.44              |
| 24:BA:2174:C:O2'   | 26:BC:218:MET:HG3  | 2.17                     | 0.44              |
| 24:BA:2177:C:N3    | 24:BA:2178:C:C5    | 2.86                     | 0.44              |
| 24:BA:2208:U:C4'   | 27:BD:151:LYS:NZ   | 2.76                     | 0.44              |
| 24:BA:2268:A:C3'   | 24:BA:2269:A:H5''  | 2.48                     | 0.44              |
| 24:BA:2296:U:C4    | 39:BR:5:THR:HG23   | 2.53                     | 0.44              |
| 24:BA:2298:A:H2'   | 24:BA:2299:G:H8    | 1.82                     | 0.44              |
| 24:BA:2373:G:H2'   | 24:BA:2374:C:H5    | 1.82                     | 0.44              |
| 24:BA:2373:G:C4    | 24:BA:2374:C:C4    | 3.06                     | 0.44              |
| 24:BA:2472:G:H22   | 24:BA:2477:C:P     | 2.38                     | 0.44              |
| 24:BA:2496:C:C6    | 24:BA:2497:A:C2    | 3.05                     | 0.44              |
| 24:BA:2532:G:C5    | 24:BA:2533:A:C5    | 3.06                     | 0.44              |
| 24:BA:2533:A:C2'   | 24:BA:2534:A:H8    | 2.28                     | 0.44              |
| 24:BA:2546:U:O4'   | 24:BA:2565:A:C2    | 2.68                     | 0.44              |
| 24:BA:2547:U:H5''  | 24:BA:2547:U:H6    | 1.81                     | 0.44              |
| 24:BA:2573:C:OP1   | 24:BA:2574:G:OP1   | 2.35                     | 0.44              |
| 24:BA:2596:U:C3'   | 27:BD:242:ARG:CZ   | 2.96                     | 0.44              |
| 24:BA:2681:C:H5    | 24:BA:2727:G:N2    | 2.15                     | 0.44              |
| 24:BA:2706:G:N1    | 24:BA:2707:G:C5    | 2.86                     | 0.44              |
| 24:BA:2737:G:C6    | 24:BA:2738:A:N7    | 2.86                     | 0.44              |
| 24:BA:2749:A:N7    | 24:BA:2750:A:N7    | 2.66                     | 0.44              |
| 24:BA:2776:A:N7    | 24:BA:2781:A:N7    | 2.65                     | 0.44              |
| 24:BA:2776:A:C5    | 24:BA:2781:A:N7    | 2.85                     | 0.44              |
| 24:BA:2827:C:H2'   | 24:BA:2828:C:H5'   | 2.00                     | 0.44              |
| 24:BA:2879:C:C5'   | 24:BA:2880:C:OP1   | 2.64                     | 0.44              |
| 25:BB:71:C:C2'     | 25:BB:71:C:O2      | 2.63                     | 0.44              |
| 25:BB:87:G:N1      | 25:BB:90:C:N4      | 2.66                     | 0.44              |
| 26:BC:22:ILE:HD12  | 26:BC:190:ARG:CZ   | 2.48                     | 0.44              |
| 26:BC:104:LEU:HD21 | 26:BC:126:LYS:C    | 2.42                     | 0.44              |
| 27:BD:161:THR:N    | 27:BD:196:VAL:HG21 | 2.32                     | 0.44              |
| 28:BE:49:LEU:CD2   | 28:BE:76:ARG:C     | 2.75                     | 0.44              |
| 28:BE:116:VAL:O    | 28:BE:120:TRP:HD1  | 1.95                     | 0.44              |
| 28:BE:118:LYS:HZ1  | 28:BE:119:ARG:C    | 2.25                     | 0.44              |
| 29:BF:96:ASP:OD1   | 29:BF:97:TYR:N     | 2.51                     | 0.44              |
| 30:BG:104:GLU:CG   | 30:BG:105:LYS:N    | 2.68                     | 0.44              |
| 30:BG:138:GLN:HG2  | 30:BG:139:LEU:N    | 2.33                     | 0.44              |
| 31:BH:42:ARG:HB2   | 31:BH:53:GLU:CG    | 2.47                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 31:BH:135:GLY:HA3  | 31:BH:141:VAL:CG2  | 2.47                     | 0.44              |
| 31:BH:149:ARG:NH2  | 31:BH:164:TYR:CD1  | 2.85                     | 0.44              |
| 32:BK:47:LEU:HG    | 32:BK:51:ILE:CD1   | 2.48                     | 0.44              |
| 32:BK:70:LYS:HB2   | 32:BK:70:LYS:HE2   | 1.47                     | 0.44              |
| 32:BK:77:LEU:HG    | 32:BK:141:LYS:C    | 2.41                     | 0.44              |
| 34:BM:21:LYS:HB3   | 34:BM:25:ARG:NH2   | 2.33                     | 0.44              |
| 34:BM:58:ASP:CG    | 34:BM:59:LYS:H     | 2.24                     | 0.44              |
| 34:BM:136:GLU:C    | 34:BM:136:GLU:OE1  | 2.61                     | 0.44              |
| 35:BN:25:LEU:HB2   | 35:BN:39:ILE:HA    | 2.00                     | 0.44              |
| 36:BO:85:LEU:HD23  | 36:BO:98:GLU:CD    | 2.43                     | 0.44              |
| 36:BO:122:PRO:CG   | 36:BO:138:LEU:HA   | 2.48                     | 0.44              |
| 37:BP:42:ILE:O     | 37:BP:47:ILE:HD11  | 2.18                     | 0.44              |
| 37:BP:134:ARG:HH21 | 37:BP:137:TYR:N    | 2.14                     | 0.44              |
| 38:BQ:6:SER:CB     | 38:BQ:9:LYS:HE2    | 2.46                     | 0.44              |
| 39:BR:10:ARG:O     | 39:BR:14:VAL:HG23  | 2.17                     | 0.44              |
| 39:BR:19:LYS:C     | 39:BR:19:LYS:CD    | 2.91                     | 0.44              |
| 41:BT:106:PHE:O    | 41:BT:110:VAL:HG23 | 2.17                     | 0.44              |
| 42:BU:6:LYS:HG2    | 42:BU:12:TYR:CA    | 2.47                     | 0.44              |
| 42:BU:59:ALA:C     | 42:BU:60:GLU:OE2   | 2.61                     | 0.44              |
| 42:BU:62:LEU:HB3   | 42:BU:97:LYS:O     | 2.17                     | 0.44              |
| 43:BV:33:ARG:HH11  | 43:BV:36:LEU:CB    | 2.26                     | 0.44              |
| 43:BV:70:TYR:CD1   | 43:BV:70:TYR:C     | 2.92                     | 0.44              |
| 43:BV:70:TYR:CD1   | 43:BV:71:VAL:O     | 2.71                     | 0.44              |
| 44:BW:12:VAL:HA    | 44:BW:29:TRP:NE1   | 2.33                     | 0.44              |
| 45:BX:14:LEU:N     | 45:BX:14:LEU:CD1   | 2.80                     | 0.44              |
| 45:BX:37:VAL:C     | 45:BX:39:VAL:HG23  | 2.43                     | 0.44              |
| 46:BY:1:MET:CE     | 46:BY:59:LEU:HD22  | 2.46                     | 0.44              |
| 46:BY:11:GLU:N     | 46:BY:36:LYS:HZ2   | 2.16                     | 0.44              |
| 46:BY:63:ASP:OD1   | 46:BY:65:GLN:N     | 2.50                     | 0.44              |
| 46:BY:75:ASN:O     | 46:BY:84:GLU:N     | 2.45                     | 0.44              |
| 46:BY:112:ARG:HG3  | 46:BY:112:ARG:HH11 | 1.83                     | 0.44              |
| 46:BY:130:PRO:O    | 46:BY:131:ARG:C    | 2.60                     | 0.44              |
| 46:BY:169:GLU:O    | 46:BY:170:THR:CB   | 2.66                     | 0.44              |
| 48:B1:24:LYS:O     | 48:B1:25:ARG:C     | 2.60                     | 0.44              |
| 49:B2:55:ARG:NH2   | 49:B2:55:ARG:CG    | 2.81                     | 0.44              |
| 50:B3:5:ILE:HD12   | 50:B3:8:LYS:O      | 2.16                     | 0.44              |
| 50:B3:57:GLU:N     | 50:B3:61:ARG:CG    | 2.81                     | 0.44              |
| 50:B3:66:SER:O     | 50:B3:69:LYS:CB    | 2.56                     | 0.44              |
| 52:B5:33:LYS:HE2   | 52:B5:33:LYS:C     | 2.41                     | 0.44              |
| 52:B5:46:HIS:O     | 52:B5:47:THR:OG1   | 2.35                     | 0.44              |
| 54:B7:16:ILE:HG23  | 54:B7:22:VAL:HG22  | 1.96                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 54:B7:16:ILE:HA   | 54:B7:21:LYS:O    | 2.18                     | 0.44              |
| 1:AA:20:U:O4'     | 1:AA:572:A:C6     | 2.70                     | 0.44              |
| 1:AA:27:G:OP2     | 1:AA:27:G:C8      | 2.70                     | 0.44              |
| 1:AA:38:G:N3      | 1:AA:397:A:C6     | 2.86                     | 0.44              |
| 1:AA:95:G:H2'     | 1:AA:96:G:H5'     | 1.98                     | 0.44              |
| 1:AA:108:G:C5'    | 1:AA:109:A:H5''   | 2.36                     | 0.44              |
| 1:AA:124:G:C6     | 1:AA:125:U:N3     | 2.86                     | 0.44              |
| 1:AA:194:C:O3'    | 22:AW:65:LYS:NZ   | 2.50                     | 0.44              |
| 1:AA:307:C:O2     | 1:AA:307:C:C2'    | 2.65                     | 0.44              |
| 1:AA:380:G:C6     | 1:AA:384:G:O6     | 2.71                     | 0.44              |
| 1:AA:544:G:C6     | 1:AA:545:C:N4     | 2.86                     | 0.44              |
| 1:AA:581:G:O6     | 1:AA:758:G:C8     | 2.71                     | 0.44              |
| 1:AA:593:G:N1     | 1:AA:647:C:C2     | 2.86                     | 0.44              |
| 1:AA:621:A:N6     | 1:AA:622:A:N6     | 2.65                     | 0.44              |
| 1:AA:655:A:C6     | 1:AA:656:C:C4     | 3.06                     | 0.44              |
| 1:AA:674:G:H4'    | 20:AU:81:PHE:HZ   | 1.82                     | 0.44              |
| 1:AA:679:C:H6     | 1:AA:679:C:O5'    | 2.00                     | 0.44              |
| 1:AA:715:A:C4'    | 1:AA:777:A:N6     | 2.81                     | 0.44              |
| 1:AA:824:C:H4'    | 10:AK:1:MET:HA    | 2.00                     | 0.44              |
| 1:AA:951:G:C2     | 1:AA:952:U:C2     | 3.06                     | 0.44              |
| 1:AA:1224:G:N2    | 1:AA:1362(A):C:C4 | 2.81                     | 0.44              |
| 1:AA:1315:U:O2    | 1:AA:1360:A:H2    | 2.00                     | 0.44              |
| 1:AA:1376:U:OP1   | 9:AJ:98:SER:CB    | 2.66                     | 0.44              |
| 1:AA:1390:U:N3    | 1:AA:1391:U:C4    | 2.86                     | 0.44              |
| 1:AA:1402:C:H2'   | 1:AA:1403:C:C6    | 2.45                     | 0.44              |
| 1:AA:1403:C:C1'   | 1:AA:1500:A:H61   | 2.14                     | 0.44              |
| 1:AA:1423:G:C2    | 1:AA:1424:C:C2    | 3.05                     | 0.44              |
| 1:AA:1434:A:N7    | 1:AA:1435:G:C5    | 2.85                     | 0.44              |
| 1:AA:1434:A:N7    | 1:AA:1435:G:N7    | 2.66                     | 0.44              |
| 1:AA:1483:A:H2'   | 1:AA:1484:C:O5'   | 2.18                     | 0.44              |
| 2:A1:18:U:O4      | 4:AE:76:GLN:NE2   | 2.50                     | 0.44              |
| 3:AC:4:C:O2'      | 3:AC:5:G:C5'      | 2.65                     | 0.44              |
| 3:AC:13:C:H2'     | 3:AC:14:A:O5'     | 2.18                     | 0.44              |
| 3:AD:56:C:C3'     | 3:AD:57:G:C8      | 2.99                     | 0.44              |
| 4:AE:23:ARG:O     | 4:AE:24:TRP:CD1   | 2.70                     | 0.44              |
| 4:AE:54:THR:CG2   | 4:AE:199:TYR:HB3  | 2.48                     | 0.44              |
| 4:AE:165:VAL:HG23 | 4:AE:166:ASP:N    | 2.21                     | 0.44              |
| 4:AE:207:ALA:O    | 4:AE:210:SER:N    | 2.50                     | 0.44              |
| 5:AF:29:TYR:CB    | 16:AQ:36:PHE:HE1  | 2.30                     | 0.44              |
| 5:AF:138:VAL:O    | 5:AF:170:GLN:NE2  | 2.51                     | 0.44              |
| 7:AH:39:GLY:O     | 7:AH:68:GLU:OE2   | 2.36                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 7:AH:111:GLU:HG3   | 7:AH:111:GLU:H     | 1.56                     | 0.44              |
| 8:AI:66:GLU:C      | 8:AI:67:MET:HE3    | 2.42                     | 0.44              |
| 9:AJ:74:GLU:HA     | 9:AJ:145:ALA:HB3   | 1.98                     | 0.44              |
| 9:AJ:113:GLU:HB3   | 9:AJ:118:VAL:HG11  | 1.98                     | 0.44              |
| 10:AK:32:LYS:NZ    | 10:AK:32:LYS:H     | 2.13                     | 0.44              |
| 10:AK:112:LEU:CD1  | 10:AK:133:LEU:HD23 | 2.48                     | 0.44              |
| 10:AK:112:LEU:HD23 | 10:AK:112:LEU:C    | 2.43                     | 0.44              |
| 11:AL:11:LYS:HA    | 11:AL:108:VAL:HG11 | 1.98                     | 0.44              |
| 13:AN:65:ALA:O     | 13:AN:68:ALA:HB3   | 2.18                     | 0.44              |
| 13:AN:95:ILE:O     | 13:AN:99:GLN:HG3   | 2.17                     | 0.44              |
| 15:AP:14:ARG:CB    | 15:AP:44:ARG:HD2   | 2.46                     | 0.44              |
| 16:AQ:26:ARG:HB2   | 16:AQ:39:LEU:HD22  | 1.99                     | 0.44              |
| 16:AQ:35:ARG:O     | 16:AQ:36:PHE:C     | 2.61                     | 0.44              |
| 17:AR:42:HIS:ND1   | 17:AR:43:LEU:N     | 2.66                     | 0.44              |
| 17:AR:79:ARG:O     | 17:AR:80:ALA:C     | 2.57                     | 0.44              |
| 18:AS:19:ILE:HG22  | 18:AS:36:ILE:O     | 2.17                     | 0.44              |
| 19:AT:10:VAL:CG1   | 19:AT:54:GLY:N     | 2.74                     | 0.44              |
| 19:AT:63:ARG:O     | 19:AT:65:ILE:HG22  | 2.17                     | 0.44              |
| 21:AV:30:LEU:CD1   | 21:AV:50:ALA:HB2   | 2.47                     | 0.44              |
| 21:AV:30:LEU:CD2   | 21:AV:50:ALA:HB2   | 2.47                     | 0.44              |
| 24:BA:55:G:H2'     | 24:BA:56:A:C8      | 2.53                     | 0.44              |
| 24:BA:104:U:C2'    | 24:BA:105:C:O4'    | 2.47                     | 0.44              |
| 24:BA:118:A:O2'    | 24:BA:178:G:C5'    | 2.63                     | 0.44              |
| 24:BA:118:A:H1'    | 24:BA:178:G:C4'    | 2.48                     | 0.44              |
| 24:BA:224:G:N7     | 24:BA:420:C:H5'    | 2.33                     | 0.44              |
| 24:BA:261:G:C2'    | 24:BA:262:A:H5'    | 2.47                     | 0.44              |
| 24:BA:298:G:H1     | 24:BA:338:G:C2'    | 2.31                     | 0.44              |
| 24:BA:356:G:C3'    | 24:BA:357:A:C8     | 3.00                     | 0.44              |
| 24:BA:572:A:C8     | 24:BA:573:G:C5     | 3.06                     | 0.44              |
| 24:BA:627:A:H8     | 36:BO:75:ILE:CG2   | 2.31                     | 0.44              |
| 24:BA:693:C:C2'    | 24:BA:694:U:O5'    | 2.66                     | 0.44              |
| 24:BA:730:C:OP2    | 27:BD:211:ARG:NH2  | 2.50                     | 0.44              |
| 24:BA:731:C:H2'    | 24:BA:732:C:H5'    | 2.00                     | 0.44              |
| 24:BA:999:U:O2     | 24:BA:1157:G:N2    | 2.50                     | 0.44              |
| 24:BA:1000:A:C6    | 24:BA:1001:A:C2    | 3.05                     | 0.44              |
| 24:BA:1102:C:O2'   | 24:BA:1103:A:H8    | 2.01                     | 0.44              |
| 24:BA:1171:G:C8    | 24:BA:1173:G:H4'   | 2.52                     | 0.44              |
| 24:BA:1176:G:H3'   | 24:BA:1177:A:O4'   | 2.18                     | 0.44              |
| 24:BA:1255:U:O2    | 24:BA:1255:U:H2'   | 2.17                     | 0.44              |
| 24:BA:1323:U:O4    | 24:BA:1324:G:O6    | 2.36                     | 0.44              |
| 24:BA:1348:G:C6    | 24:BA:1599:C:N3    | 2.86                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1429:G:H2'  | 24:BA:1430:C:C6    | 2.52                     | 0.44              |
| 24:BA:1440:G:C5   | 24:BA:1441:G:N7    | 2.86                     | 0.44              |
| 24:BA:1442:G:N1   | 24:BA:1443:G:C6    | 2.86                     | 0.44              |
| 24:BA:1483:G:N3   | 24:BA:1483:G:C2'   | 2.78                     | 0.44              |
| 24:BA:1630:G:H2'  | 24:BA:1630(A):C:C6 | 2.48                     | 0.44              |
| 24:BA:1660:C:O2'  | 24:BA:1661:G:C5'   | 2.65                     | 0.44              |
| 24:BA:1685:C:O2'  | 24:BA:1686:C:C5'   | 2.60                     | 0.44              |
| 24:BA:1910:G:C6   | 24:BA:1911:U:C4    | 3.06                     | 0.44              |
| 24:BA:1949:G:N7   | 24:BA:1950:G:C8    | 2.86                     | 0.44              |
| 24:BA:1980:G:C5   | 24:BA:1982:C:C4    | 3.05                     | 0.44              |
| 24:BA:2026:C:C2'  | 24:BA:2027:G:C5'   | 2.96                     | 0.44              |
| 24:BA:2142:C:N4   | 24:BA:2143:C:N4    | 2.66                     | 0.44              |
| 24:BA:2146:C:P    | 24:BA:2147:G:OP2   | 2.75                     | 0.44              |
| 24:BA:2267:A:N1   | 24:BA:2272:U:O4    | 2.51                     | 0.44              |
| 24:BA:2281:C:HO2' | 24:BA:2282:G:C5'   | 2.30                     | 0.44              |
| 24:BA:2295:C:OP1  | 39:BR:9:ARG:HD2    | 2.18                     | 0.44              |
| 24:BA:2303:G:N1   | 24:BA:2304:G:C5    | 2.86                     | 0.44              |
| 24:BA:2309:A:C6   | 24:BA:2310:A:C4    | 3.06                     | 0.44              |
| 24:BA:2376:A:C2   | 24:BA:2377:A:N3    | 2.85                     | 0.44              |
| 24:BA:2450:A:C2   | 24:BA:2451:A:N3    | 2.85                     | 0.44              |
| 24:BA:2466:C:O2'  | 24:BA:2467:C:H5'   | 2.17                     | 0.44              |
| 24:BA:2513:G:H2'  | 24:BA:2514:U:C5    | 2.50                     | 0.44              |
| 24:BA:2519:U:O2   | 24:BA:2519:U:C2'   | 2.63                     | 0.44              |
| 24:BA:2607:G:N3   | 24:BA:2608:G:O4'   | 2.51                     | 0.44              |
| 24:BA:2610:C:O2'  | 24:BA:2611:U:OP2   | 2.24                     | 0.44              |
| 24:BA:2734:A:C2   | 28:BE:203:LYS:HD2  | 2.52                     | 0.44              |
| 24:BA:2774:C:O2   | 24:BA:2774:C:H2'   | 2.17                     | 0.44              |
| 24:BA:2830:G:H5'  | 28:BE:57:LYS:HZ2   | 1.81                     | 0.44              |
| 25:BB:12:C:N4     | 47:BZ:74:ARG:O     | 2.51                     | 0.44              |
| 25:BB:73:A:C5     | 25:BB:104:A:C4     | 3.06                     | 0.44              |
| 25:BB:75:G:N2     | 46:BY:85:HIS:CE1   | 2.86                     | 0.44              |
| 25:BB:106:G:C4    | 25:BB:107:U:C5     | 3.06                     | 0.44              |
| 26:BC:19:ILE:CD1  | 26:BC:223:ARG:HH11 | 2.31                     | 0.44              |
| 26:BC:26:ALA:O    | 26:BC:30:LYS:CG    | 2.65                     | 0.44              |
| 26:BC:78:ALA:C    | 26:BC:119:VAL:HG11 | 2.42                     | 0.44              |
| 27:BD:137:PRO:HG2 | 27:BD:140:THR:HG21 | 1.99                     | 0.44              |
| 27:BD:234:GLY:CA  | 27:BD:241:PRO:HG2  | 2.48                     | 0.44              |
| 28:BE:5:LEU:HD23  | 28:BE:7:VAL:CA     | 2.48                     | 0.44              |
| 28:BE:9:VAL:HG13  | 40:BS:3:ARG:HG2    | 1.99                     | 0.44              |
| 28:BE:19:ARG:HB3  | 35:BN:73:ASP:OD2   | 2.18                     | 0.44              |
| 28:BE:37:ARG:N    | 28:BE:40:GLU:HB2   | 2.33                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 28:BE:111:ARG:HB2  | 28:BE:161:GLY:HA3  | 1.98                     | 0.44              |
| 28:BE:178:GLU:H    | 28:BE:178:GLU:CD   | 2.17                     | 0.44              |
| 29:BF:119:ARG:NH2  | 29:BF:119:ARG:CB   | 2.60                     | 0.44              |
| 29:BF:140:LEU:HD22 | 29:BF:140:LEU:C    | 2.43                     | 0.44              |
| 29:BF:176:LEU:CD1  | 29:BF:178:PRO:HD2  | 2.47                     | 0.44              |
| 30:BG:33:ARG:HH22  | 30:BG:34:LEU:CA    | 2.31                     | 0.44              |
| 30:BG:56:ALA:HA    | 30:BG:59:GLU:CG    | 2.48                     | 0.44              |
| 30:BG:59:GLU:O     | 30:BG:63:ILE:HB    | 2.18                     | 0.44              |
| 30:BG:82:LEU:C     | 30:BG:83:ARG:HD2   | 2.43                     | 0.44              |
| 31:BH:90:LYS:NZ    | 31:BH:163:TYR:CD1  | 2.81                     | 0.44              |
| 31:BH:95:ARG:O     | 31:BH:105:LEU:HA   | 2.18                     | 0.44              |
| 31:BH:124:GLU:O    | 31:BH:131:VAL:HG22 | 2.17                     | 0.44              |
| 31:BH:124:GLU:HB3  | 31:BH:132:ARG:NH1  | 2.32                     | 0.44              |
| 31:BH:144:VAL:O    | 31:BH:145:ALA:C    | 2.60                     | 0.44              |
| 31:BH:153:LYS:O    | 31:BH:161:GLY:HA3  | 2.18                     | 0.44              |
| 32:BK:6:LEU:HD13   | 32:BK:7:GLU:OE2    | 2.16                     | 0.44              |
| 32:BK:9:LEU:HD23   | 32:BK:9:LEU:O      | 2.18                     | 0.44              |
| 35:BN:22:ILE:HD12  | 35:BN:40:VAL:HG11  | 1.99                     | 0.44              |
| 35:BN:31:LYS:CB    | 35:BN:32:TYR:CE2   | 3.01                     | 0.44              |
| 35:BN:70:LYS:HE2   | 35:BN:103:ALA:HB3  | 1.99                     | 0.44              |
| 35:BN:99:PHE:C     | 35:BN:118:ALA:HB1  | 2.43                     | 0.44              |
| 36:BO:55:ARG:CA    | 36:BO:55:ARG:NH2   | 2.79                     | 0.44              |
| 36:BO:88:LEU:HG    | 36:BO:124:LYS:CE   | 2.46                     | 0.44              |
| 36:BO:122:PRO:HB2  | 36:BO:123:LEU:H    | 1.53                     | 0.44              |
| 37:BP:51:ARG:HG2   | 37:BP:51:ARG:HH11  | 1.83                     | 0.44              |
| 37:BP:139:GLU:OE1  | 37:BP:140:ALA:O    | 2.36                     | 0.44              |
| 38:BQ:34:ILE:O     | 38:BQ:113:LEU:HD22 | 2.17                     | 0.44              |
| 38:BQ:57:ARG:CG    | 38:BQ:57:ARG:HH11  | 2.31                     | 0.44              |
| 39:BR:11:LYS:HA    | 39:BR:14:VAL:CB    | 2.47                     | 0.44              |
| 39:BR:62:LYS:CB    | 39:BR:65:VAL:CG1   | 2.88                     | 0.44              |
| 39:BR:97:ARG:NH2   | 39:BR:97:ARG:CG    | 2.79                     | 0.44              |
| 40:BS:28:VAL:CG2   | 40:BS:94:ALA:N     | 2.81                     | 0.44              |
| 40:BS:50:ILE:HG23  | 40:BS:68:TYR:CB    | 2.48                     | 0.44              |
| 42:BU:5:VAL:CG2    | 42:BU:39:LEU:HD22  | 2.48                     | 0.44              |
| 42:BU:83:ARG:HD3   | 42:BU:84:LYS:CA    | 2.46                     | 0.44              |
| 43:BV:19:LEU:CD2   | 51:B4:25:LEU:HD22  | 2.47                     | 0.44              |
| 43:BV:33:ARG:HH12  | 43:BV:48:ALA:CB    | 2.22                     | 0.44              |
| 44:BW:89:ILE:O     | 44:BW:90:GLU:C     | 2.61                     | 0.44              |
| 46:BY:9:TYR:HB2    | 46:BY:14:LYS:HG3   | 1.98                     | 0.44              |
| 47:BZ:50:ASN:HB2   | 47:BZ:81:VAL:CB    | 2.46                     | 0.44              |
| 48:B1:6:GLU:OE1    | 48:B1:6:GLU:CA     | 2.65                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 48:B1:42:ASN:O    | 48:B1:45:ILE:CG1  | 2.63                     | 0.44              |
| 49:B2:5:LYS:C     | 49:B2:5:LYS:HD2   | 2.42                     | 0.44              |
| 49:B2:10:LYS:NZ   | 49:B2:12:PRO:CD   | 2.79                     | 0.44              |
| 50:B3:5:ILE:HG13  | 50:B3:10:VAL:H    | 1.82                     | 0.44              |
| 51:B4:10:LYS:HE2  | 51:B4:10:LYS:HB3  | 1.81                     | 0.44              |
| 53:B6:42:LEU:O    | 53:B6:43:THR:C    | 2.61                     | 0.44              |
| 54:B7:58:ILE:HD12 | 54:B7:59:LYS:N    | 2.33                     | 0.44              |
| 1:AA:22:G:O4'     | 1:AA:885:G:C1'    | 2.65                     | 0.44              |
| 1:AA:44:G:C6      | 1:AA:399:G:C6     | 3.06                     | 0.44              |
| 1:AA:74:C:N3      | 1:AA:75:C:C5      | 2.86                     | 0.44              |
| 1:AA:108:G:C5     | 22:AW:15:ARG:CZ   | 3.01                     | 0.44              |
| 1:AA:139:G:N2     | 1:AA:225:C:C2     | 2.86                     | 0.44              |
| 1:AA:160:A:C1'    | 1:AA:344:A:H62    | 2.31                     | 0.44              |
| 1:AA:166:G:O2'    | 1:AA:167:G:C5'    | 2.60                     | 0.44              |
| 1:AA:282:A:C5     | 1:AA:283:C:C5     | 3.06                     | 0.44              |
| 1:AA:344:A:H5''   | 1:AA:345:C:H5     | 1.78                     | 0.44              |
| 1:AA:394:G:C5     | 1:AA:395:C:C5     | 3.06                     | 0.44              |
| 1:AA:665:A:C8     | 1:AA:725:G:C2     | 3.06                     | 0.44              |
| 1:AA:754:C:O5'    | 17:AR:72:ARG:NH2  | 2.50                     | 0.44              |
| 1:AA:760:G:C2     | 19:AT:104:LYS:O   | 2.70                     | 0.44              |
| 1:AA:780:A:C2     | 1:AA:803:G:C6     | 3.04                     | 0.44              |
| 1:AA:830:G:C5     | 1:AA:831:U:C5     | 3.06                     | 0.44              |
| 1:AA:833:U:HO2'   | 1:AA:834:C:C5'    | 2.31                     | 0.44              |
| 1:AA:865:A:C8     | 1:AA:865:A:OP2    | 2.71                     | 0.44              |
| 1:AA:894:G:C6     | 1:AA:895:G:C5     | 3.06                     | 0.44              |
| 1:AA:973:G:C2     | 1:AA:974:A:N7     | 2.86                     | 0.44              |
| 1:AA:1011:G:N1    | 1:AA:1012:U:H1'   | 2.33                     | 0.44              |
| 1:AA:1102:A:C2'   | 1:AA:1103:C:O5'   | 2.65                     | 0.44              |
| 1:AA:1104:G:H4'   | 4:AE:111:ARG:HH21 | 1.83                     | 0.44              |
| 1:AA:1201:A:HO2'  | 1:AA:1202:G:H5''  | 1.82                     | 0.44              |
| 1:AA:1230:C:O2    | 15:AP:126:LYS:HG2 | 2.17                     | 0.44              |
| 1:AA:1241:G:C4    | 1:AA:1242:C:C5    | 3.06                     | 0.44              |
| 1:AA:1301:U:O4    | 1:AA:1303:C:H1'   | 2.18                     | 0.44              |
| 1:AA:1315:U:O2'   | 1:AA:1360:A:N9    | 2.50                     | 0.44              |
| 1:AA:1342:C:O2'   | 11:AL:124:GLN:CA  | 2.66                     | 0.44              |
| 1:AA:1401:G:O2'   | 1:AA:1402:C:H5'   | 2.17                     | 0.44              |
| 1:AA:1411:C:H2'   | 1:AA:1412:C:C6    | 2.50                     | 0.44              |
| 1:AA:1418:A:N1    | 1:AA:1483:A:N1    | 2.66                     | 0.44              |
| 1:AA:1435:G:H2'   | 1:AA:1436:U:H5    | 1.76                     | 0.44              |
| 1:AA:1498:U:O2'   | 1:AA:1499:A:C5'   | 2.65                     | 0.44              |
| 2:A1:46:U:O2      | 3:AB:34:G:C2      | 2.70                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:AC:4:C:C2       | 3:AC:5:G:C8       | 3.06                     | 0.44              |
| 3:AC:9:A:C4'      | 3:AC:10:G:OP2     | 2.66                     | 0.44              |
| 3:AD:62:C:O5'     | 3:AD:62:C:H6      | 2.01                     | 0.44              |
| 3:AB:52:G:N1      | 3:AB:63:G:C6      | 2.86                     | 0.44              |
| 4:AE:28:PHE:HA    | 4:AE:194:PRO:CG   | 2.48                     | 0.44              |
| 4:AE:53:ARG:NE    | 4:AE:199:TYR:CE2  | 2.82                     | 0.44              |
| 4:AE:72:GLY:HA2   | 4:AE:165:VAL:HG21 | 1.96                     | 0.44              |
| 4:AE:106:LYS:O    | 4:AE:110:GLN:OE1  | 2.36                     | 0.44              |
| 5:AF:10:PHE:O     | 5:AF:178:LEU:HD22 | 2.17                     | 0.44              |
| 5:AF:23:TYR:CG    | 12:AM:11:PHE:HB2  | 2.53                     | 0.44              |
| 5:AF:82:GLU:OE1   | 5:AF:83:ARG:N     | 2.51                     | 0.44              |
| 5:AF:159:GLY:O    | 5:AF:160:ALA:O    | 2.36                     | 0.44              |
| 6:AG:85:LYS:HB3   | 6:AG:85:LYS:HZ3   | 1.79                     | 0.44              |
| 6:AG:190:ASP:H    | 6:AG:193:ASP:CG   | 2.25                     | 0.44              |
| 8:AI:11:ASN:OD1   | 8:AI:11:ASN:C     | 2.61                     | 0.44              |
| 8:AI:24:GLU:O     | 8:AI:25:ILE:C     | 2.60                     | 0.44              |
| 8:AI:60:PHE:CZ    | 20:AU:78:LEU:HD21 | 2.52                     | 0.44              |
| 8:AI:98:LEU:HD23  | 20:AU:28:GLU:HA   | 2.00                     | 0.44              |
| 9:AJ:74:GLU:CA    | 9:AJ:145:ALA:HB1  | 2.46                     | 0.44              |
| 9:AJ:126:ASP:O    | 9:AJ:131:LYS:HG3  | 2.17                     | 0.44              |
| 10:AK:22:GLU:CB   | 10:AK:63:LEU:HD22 | 2.47                     | 0.44              |
| 10:AK:100:ILE:CG2 | 10:AK:121:ASP:HA  | 2.48                     | 0.44              |
| 10:AK:107:LEU:N   | 10:AK:107:LEU:CD2 | 2.78                     | 0.44              |
| 11:AL:72:GLY:HA2  | 11:AL:75:ASP:OD2  | 2.18                     | 0.44              |
| 11:AL:89:ASN:O    | 11:AL:91:ASP:N    | 2.50                     | 0.44              |
| 12:AM:30:SER:CA   | 12:AM:80:LYS:HG3  | 2.48                     | 0.44              |
| 12:AM:40:LEU:HD12 | 12:AM:69:ASN:HB3  | 1.99                     | 0.44              |
| 12:AM:71:LEU:O    | 12:AM:72:VAL:C    | 2.61                     | 0.44              |
| 13:AN:18:ARG:HB3  | 13:AN:83:ILE:CD1  | 2.48                     | 0.44              |
| 14:AO:33:ARG:HG3  | 14:AO:60:LEU:HD23 | 2.00                     | 0.44              |
| 14:AO:53:ARG:NH1  | 14:AO:93:LEU:HD22 | 2.32                     | 0.44              |
| 15:AP:98:VAL:HG23 | 15:AP:110:ARG:NH2 | 2.24                     | 0.44              |
| 16:AQ:29:ARG:HD3  | 16:AQ:40:CYS:HB3  | 2.00                     | 0.44              |
| 17:AR:39:LEU:CD2  | 17:AR:39:LEU:C    | 2.89                     | 0.44              |
| 17:AR:67:LEU:O    | 17:AR:70:LEU:CB   | 2.60                     | 0.44              |
| 17:AR:77:ARG:HH12 | 17:AR:81:LEU:CA   | 2.28                     | 0.44              |
| 18:AS:82:GLN:O    | 18:AS:83:GLU:C    | 2.60                     | 0.44              |
| 19:AT:62:SER:HB2  | 19:AT:63:ARG:H    | 1.65                     | 0.44              |
| 19:AT:81:ARG:CG   | 19:AT:84:LEU:HD11 | 2.47                     | 0.44              |
| 22:AW:50:GLU:HB2  | 22:AW:99:LEU:HD12 | 1.99                     | 0.44              |
| 24:BA:25:U:O2     | 24:BA:25:U:C2'    | 2.66                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:28:A:H2'   | 24:BA:29:U:C5'    | 2.45                     | 0.44              |
| 24:BA:35:G:N9    | 24:BA:454:A:N3    | 2.65                     | 0.44              |
| 24:BA:71:A:O2'   | 44:BW:5:TYR:CE2   | 2.67                     | 0.44              |
| 24:BA:78:A:C2    | 24:BA:109:G:C2    | 3.05                     | 0.44              |
| 24:BA:95:G:O2'   | 48:B1:42:ASN:CB   | 2.64                     | 0.44              |
| 24:BA:118:A:H1'  | 24:BA:178:G:H4'   | 2.00                     | 0.44              |
| 24:BA:144:C:C2   | 24:BA:145:G:C8    | 3.06                     | 0.44              |
| 24:BA:242:G:C3'  | 54:B7:4:MET:SD    | 3.02                     | 0.44              |
| 24:BA:250:G:O2'  | 24:BA:251:A:O5'   | 2.36                     | 0.44              |
| 24:BA:300:A:HO2' | 24:BA:318:C:H1'   | 1.83                     | 0.44              |
| 24:BA:301:G:H5'' | 24:BA:335:C:OP1   | 2.18                     | 0.44              |
| 24:BA:389:G:P    | 50:B3:24:THR:HG23 | 2.57                     | 0.44              |
| 24:BA:411:G:C2   | 24:BA:2407:G:C6   | 3.05                     | 0.44              |
| 24:BA:414:C:H2'  | 24:BA:415:A:H8    | 1.82                     | 0.44              |
| 24:BA:480:A:H3'  | 24:BA:481:G:H5''  | 1.99                     | 0.44              |
| 24:BA:487:C:C6   | 24:BA:487:C:O5'   | 2.70                     | 0.44              |
| 24:BA:514:A:O2'  | 24:BA:515:A:H5'   | 2.17                     | 0.44              |
| 24:BA:523:C:H2'  | 24:BA:524:U:O4'   | 2.18                     | 0.44              |
| 24:BA:543:C:O2   | 24:BA:544:C:C5    | 2.71                     | 0.44              |
| 24:BA:659:C:H4'  | 29:BF:102:PRO:HD3 | 2.00                     | 0.44              |
| 24:BA:675:A:C5   | 24:BA:676:A:N1    | 2.86                     | 0.44              |
| 24:BA:687:C:H2'  | 24:BA:688:U:C6    | 2.52                     | 0.44              |
| 24:BA:943:U:OP2  | 36:BO:32:THR:C    | 2.61                     | 0.44              |
| 24:BA:944:G:H2'  | 24:BA:944:G:N3    | 2.32                     | 0.44              |
| 24:BA:958:U:HO2' | 24:BA:959:A:P     | 2.40                     | 0.44              |
| 24:BA:1024:G:N7  | 24:BA:1134:G:H1'  | 2.33                     | 0.44              |
| 24:BA:1025:G:H8  | 24:BA:1134:G:C1'  | 2.31                     | 0.44              |
| 24:BA:1090:U:C4  | 24:BA:1103:A:N1   | 2.86                     | 0.44              |
| 24:BA:1171:G:O4' | 24:BA:1171:G:P    | 2.76                     | 0.44              |
| 24:BA:1260:G:N3  | 24:BA:1260:G:H2'  | 2.33                     | 0.44              |
| 24:BA:1284:A:C2  | 24:BA:1285:G:C2   | 3.05                     | 0.44              |
| 24:BA:1314:C:C2  | 24:BA:1315:C:C6   | 3.05                     | 0.44              |
| 24:BA:1314:C:C2  | 24:BA:1339:G:C2   | 3.05                     | 0.44              |
| 24:BA:1314:C:C4  | 24:BA:1315:C:N4   | 2.86                     | 0.44              |
| 24:BA:1435:G:C4  | 24:BA:1436:G:C8   | 3.06                     | 0.44              |
| 24:BA:1464:C:C2  | 24:BA:1465:G:C8   | 3.05                     | 0.44              |
| 24:BA:1477:A:H2  | 24:BA:1516:U:C2   | 2.35                     | 0.44              |
| 24:BA:1518:C:N3  | 24:BA:1519:G:C1'  | 2.81                     | 0.44              |
| 24:BA:1537:C:O5' | 24:BA:1537:C:H6   | 2.01                     | 0.44              |
| 24:BA:1608:A:C8  | 24:BA:1611:C:N4   | 2.86                     | 0.44              |
| 24:BA:1652:A:OP1 | 38:BQ:39:PRO:HG2  | 2.18                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1665:A:H8    | 24:BA:2726:U:H3    | 1.54                     | 0.44              |
| 24:BA:1741:C:C2'   | 24:BA:1742:C:O4'   | 2.66                     | 0.44              |
| 24:BA:1769:G:C2    | 24:BA:1984:G:C5    | 3.06                     | 0.44              |
| 24:BA:1818:U:C4    | 27:BD:156:ALA:HB3  | 2.53                     | 0.44              |
| 24:BA:2009:G:O3'   | 43:BV:41:LYS:HG2   | 2.17                     | 0.44              |
| 24:BA:2020:A:OP2   | 41:BT:27:LEU:CD2   | 2.65                     | 0.44              |
| 24:BA:2020:A:C8    | 51:B4:9:LYS:NZ     | 2.86                     | 0.44              |
| 24:BA:2082:A:C2    | 24:BA:2083:G:C4    | 3.06                     | 0.44              |
| 24:BA:2094:G:C2    | 24:BA:2196:C:N3    | 2.86                     | 0.44              |
| 24:BA:2180:U:H2'   | 24:BA:2181:G:O4'   | 2.18                     | 0.44              |
| 24:BA:2181:G:N2    | 24:BA:2182:G:C4    | 2.85                     | 0.44              |
| 24:BA:2266:A:C4    | 24:BA:2272:U:C5    | 3.06                     | 0.44              |
| 24:BA:2312:U:C5'   | 30:BG:43:LEU:HD21  | 2.43                     | 0.44              |
| 24:BA:2431:U:O2    | 24:BA:2433:A:N3    | 2.51                     | 0.44              |
| 24:BA:2444:G:N1    | 24:BA:2445:G:C6    | 2.85                     | 0.44              |
| 24:BA:2458:G:HO2'  | 24:BA:2459:A:C5'   | 2.31                     | 0.44              |
| 24:BA:2487:G:C2'   | 24:BA:2488:A:O5'   | 2.65                     | 0.44              |
| 24:BA:2530:A:C3'   | 24:BA:2531:A:C5'   | 2.90                     | 0.44              |
| 24:BA:2630:G:C4    | 24:BA:2894:G:C5    | 3.06                     | 0.44              |
| 24:BA:2690:C:C4    | 38:BQ:14:SER:HB2   | 2.53                     | 0.44              |
| 24:BA:2692:C:O2'   | 24:BA:2847:U:O2'   | 2.14                     | 0.44              |
| 24:BA:2748:A:C5    | 24:BA:2757:A:N6    | 2.86                     | 0.44              |
| 24:BA:2823:A:OP2   | 28:BE:113:PHE:CZ   | 2.71                     | 0.44              |
| 24:BA:2832:U:O2    | 24:BA:2832:U:H2'   | 2.18                     | 0.44              |
| 24:BA:2848:G:O2'   | 24:BA:2849:U:O5'   | 2.34                     | 0.44              |
| 24:BA:2875:C:O5'   | 24:BA:2875:C:H6    | 2.01                     | 0.44              |
| 24:BA:2880:C:C6    | 38:BQ:91:GLN:HB3   | 2.52                     | 0.44              |
| 26:BC:13:LYS:CB    | 26:BC:32:LEU:HD23  | 2.48                     | 0.44              |
| 26:BC:64:LEU:CB    | 26:BC:188:ASN:HD21 | 2.30                     | 0.44              |
| 26:BC:73:ARG:CG    | 26:BC:93:TYR:HE2   | 2.30                     | 0.44              |
| 26:BC:103:ILE:HD13 | 26:BC:110:PHE:HZ   | 1.83                     | 0.44              |
| 27:BD:70:TRP:O     | 27:BD:73:VAL:HG22  | 2.18                     | 0.44              |
| 27:BD:252:TRP:HE3  | 27:BD:252:TRP:HA   | 1.80                     | 0.44              |
| 27:BD:264:LYS:HB2  | 27:BD:265:PRO:CD   | 2.47                     | 0.44              |
| 29:BF:31:HIS:CE1   | 36:BO:11:GLY:HA3   | 2.52                     | 0.44              |
| 29:BF:37:VAL:O     | 29:BF:41:LEU:CD2   | 2.66                     | 0.44              |
| 29:BF:118:ALA:HA   | 29:BF:122:LYS:HZ3  | 1.83                     | 0.44              |
| 30:BG:63:ILE:HD12  | 30:BG:63:ILE:HA    | 1.92                     | 0.44              |
| 30:BG:135:LEU:CD2  | 30:BG:137:GLU:N    | 2.80                     | 0.44              |
| 31:BH:7:LEU:CA     | 31:BH:52:VAL:CG1   | 2.95                     | 0.44              |
| 31:BH:7:LEU:CD2    | 31:BH:65:HIS:NE2   | 2.78                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 31:BH:15:VAL:CG2   | 31:BH:16:SER:N     | 2.81                     | 0.44              |
| 31:BH:75:ALA:O     | 31:BH:79:VAL:HG22  | 2.18                     | 0.44              |
| 32:BK:10:GLU:O     | 32:BK:11:ASN:OD1   | 2.35                     | 0.44              |
| 33:BL:17:ALA:C     | 33:BL:38:VAL:CG1   | 2.91                     | 0.44              |
| 33:BL:76:TYR:O     | 33:BL:80:LYS:CD    | 2.49                     | 0.44              |
| 33:BL:98:ARG:HA    | 33:BL:137:GLU:O    | 2.17                     | 0.44              |
| 33:BL:104:VAL:HG22 | 33:BL:127:ILE:CG2  | 2.48                     | 0.44              |
| 34:BM:2:LYS:HB3    | 34:BM:2:LYS:HE2    | 1.83                     | 0.44              |
| 34:BM:15:LEU:CD2   | 34:BM:137:LYS:C    | 2.86                     | 0.44              |
| 34:BM:19:GLU:HB2   | 34:BM:56:ASN:HB2   | 1.97                     | 0.44              |
| 34:BM:69:GLN:HE22  | 34:BM:87:LEU:CD2   | 2.02                     | 0.44              |
| 34:BM:86:PRO:O     | 34:BM:87:LEU:C     | 2.61                     | 0.44              |
| 34:BM:96:GLU:O     | 34:BM:99:LEU:CG    | 2.50                     | 0.44              |
| 34:BM:136:GLU:O    | 34:BM:137:LYS:CG   | 2.66                     | 0.44              |
| 35:BN:59:LYS:HB3   | 35:BN:86:ILE:H     | 1.83                     | 0.44              |
| 35:BN:75:SER:O     | 40:BS:77:PRO:HG2   | 2.18                     | 0.44              |
| 35:BN:105:GLU:O    | 35:BN:107:ARG:N    | 2.51                     | 0.44              |
| 35:BN:106:LEU:HD12 | 35:BN:107:ARG:HA   | 2.00                     | 0.44              |
| 35:BN:106:LEU:CD2  | 40:BS:38:ASN:ND2   | 2.81                     | 0.44              |
| 37:BP:25:ASP:CA    | 37:BP:102:VAL:HG12 | 2.48                     | 0.44              |
| 37:BP:116:GLU:HA   | 37:BP:119:ARG:HD3  | 1.99                     | 0.44              |
| 37:BP:130:LYS:HZ1  | 37:BP:132:VAL:CG2  | 2.31                     | 0.44              |
| 38:BQ:72:ASP:CG    | 38:BQ:74:LYS:HZ2   | 2.23                     | 0.44              |
| 39:BR:49:VAL:HG11  | 39:BR:80:LEU:CG    | 2.32                     | 0.44              |
| 39:BR:70:GLY:HA3   | 39:BR:104:GLY:HA3  | 1.99                     | 0.44              |
| 40:BS:23:ARG:HH21  | 40:BS:90:GLN:N     | 2.16                     | 0.44              |
| 40:BS:26:ASP:O     | 40:BS:52:ILE:HG22  | 2.17                     | 0.44              |
| 40:BS:61:PHE:HD1   | 40:BS:81:PRO:CD    | 2.24                     | 0.44              |
| 41:BT:24:TYR:O     | 41:BT:29:SER:HB3   | 2.17                     | 0.44              |
| 41:BT:47:TYR:HE2   | 42:BU:75:PHE:C     | 2.25                     | 0.44              |
| 41:BT:55:ARG:CG    | 41:BT:55:ARG:NH1   | 2.63                     | 0.44              |
| 41:BT:65:ILE:C     | 41:BT:67:ALA:N     | 2.71                     | 0.44              |
| 41:BT:89:GLU:O     | 41:BT:90:VAL:HG23  | 2.18                     | 0.44              |
| 42:BU:33:VAL:CG1   | 42:BU:34:GLU:H     | 2.31                     | 0.44              |
| 42:BU:69:LYS:HE2   | 42:BU:70:ILE:CG1   | 2.48                     | 0.44              |
| 43:BV:13:SER:OG    | 43:BV:16:LYS:CE    | 2.65                     | 0.44              |
| 43:BV:13:SER:O     | 43:BV:17:VAL:CG2   | 2.65                     | 0.44              |
| 44:BW:28:PHE:CD2   | 44:BW:28:PHE:N     | 2.83                     | 0.44              |
| 44:BW:29:TRP:HB2   | 44:BW:76:ARG:HH21  | 1.82                     | 0.44              |
| 44:BW:36:LYS:HE3   | 44:BW:56:THR:CG2   | 2.47                     | 0.44              |
| 45:BX:72:VAL:HG23  | 45:BX:81:LYS:HE2   | 1.97                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 45:BX:74:PRO:CG   | 45:BX:100:ALA:HB3 | 2.45                     | 0.44              |
| 46:BY:55:HIS:HB3  | 46:BY:101:PRO:CD  | 2.47                     | 0.44              |
| 46:BY:114:GLY:N   | 46:BY:145:GLU:OE2 | 2.50                     | 0.44              |
| 46:BY:122:ARG:HG2 | 46:BY:170:THR:C   | 2.43                     | 0.44              |
| 50:B3:59:PHE:HA   | 50:B3:62:ARG:NE   | 2.33                     | 0.44              |
| 51:B4:12:SER:HB3  | 51:B4:14:ALA:CB   | 2.47                     | 0.44              |
| 51:B4:54:GLY:O    | 51:B4:55:ARG:C    | 2.61                     | 0.44              |
| 52:B5:13:CYS:HA   | 52:B5:23:THR:O    | 2.18                     | 0.44              |
| 53:B6:21:ARG:CB   | 53:B6:31:LEU:HD21 | 2.47                     | 0.44              |
| 54:B7:8:LYS:HZ3   | 54:B7:11:LYS:NZ   | 2.15                     | 0.44              |
| 54:B7:31:HIS:O    | 54:B7:32:LEU:CD2  | 2.65                     | 0.44              |
| 1:AA:93:U:H2'     | 1:AA:95:G:N7      | 2.31                     | 0.44              |
| 1:AA:119:A:H62    | 1:AA:287:U:H3     | 1.66                     | 0.44              |
| 1:AA:142:G:H2'    | 1:AA:142:G:N3     | 2.32                     | 0.44              |
| 1:AA:152:A:C8     | 1:AA:152:A:C3'    | 3.00                     | 0.44              |
| 1:AA:166:G:C2'    | 1:AA:167:G:O5'    | 2.66                     | 0.44              |
| 1:AA:186(A):C:C4' | 22:AW:85:MET:HG3  | 2.47                     | 0.44              |
| 1:AA:187:C:N3     | 1:AA:188:U:O2     | 2.51                     | 0.44              |
| 1:AA:245:C:N3     | 1:AA:284:G:C6     | 2.85                     | 0.44              |
| 1:AA:270:A:C8     | 1:AA:270:A:OP2    | 2.69                     | 0.44              |
| 1:AA:298:A:C2     | 1:AA:299:G:H1'    | 2.53                     | 0.44              |
| 1:AA:352:C:H6     | 1:AA:352:C:P      | 2.40                     | 0.44              |
| 1:AA:355:C:C2     | 1:AA:356:A:C8     | 3.06                     | 0.44              |
| 1:AA:398:C:H2'    | 1:AA:399:G:H8     | 1.82                     | 0.44              |
| 1:AA:420:U:H1'    | 1:AA:424:G:N2     | 2.32                     | 0.44              |
| 1:AA:535:A:C4'    | 1:AA:536:C:OP2    | 2.63                     | 0.44              |
| 1:AA:581:G:O6     | 1:AA:758:G:N7     | 2.51                     | 0.44              |
| 1:AA:597:G:C2'    | 1:AA:598:U:C5'    | 2.94                     | 0.44              |
| 1:AA:645:C:O2'    | 1:AA:646:U:H5'    | 2.18                     | 0.44              |
| 1:AA:718:G:C4'    | 13:AN:117:ASN:ND2 | 2.81                     | 0.44              |
| 1:AA:818:G:H3'    | 1:AA:820:U:OP2    | 2.17                     | 0.44              |
| 1:AA:907:A:N3     | 1:AA:908:A:C8     | 2.86                     | 0.44              |
| 1:AA:926:G:C4     | 1:AA:1505:G:C2    | 3.05                     | 0.44              |
| 1:AA:938:A:C2'    | 1:AA:939:G:O5'    | 2.66                     | 0.44              |
| 1:AA:1142:G:C4    | 1:AA:1143:G:C8    | 3.06                     | 0.44              |
| 1:AA:1166:G:N3    | 1:AA:1171:G:O6    | 2.50                     | 0.44              |
| 1:AA:1225:A:H5'   | 21:AV:78:ARG:NH1  | 2.32                     | 0.44              |
| 1:AA:1389:C:H2'   | 1:AA:1390:U:C4'   | 2.47                     | 0.44              |
| 1:AA:1431:C:O2    | 1:AA:1432:G:C1'   | 2.66                     | 0.44              |
| 2:A1:37:U:H2'     | 2:A1:38:U:C5      | 2.53                     | 0.44              |
| 3:AC:29:G:C6      | 3:AC:42:C:N3      | 2.86                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:AD:67:C:C4      | 3:AD:68:C:C5      | 3.06                     | 0.44              |
| 3:AB:12:U:C5'     | 24:BA:1915:U:H5'  | 2.47                     | 0.44              |
| 3:AB:52:G:H1'     | 24:BA:2470:G:O2'  | 2.17                     | 0.44              |
| 3:AB:63:G:C1'     | 24:BA:2482:G:C4'  | 2.91                     | 0.44              |
| 4:AE:8:LYS:HB3    | 4:AE:9:GLU:H      | 1.61                     | 0.44              |
| 4:AE:28:PHE:O     | 4:AE:29:ALA:C     | 2.61                     | 0.44              |
| 4:AE:152:PHE:HZ   | 4:AE:155:LEU:O    | 2.01                     | 0.44              |
| 4:AE:208:ILE:O    | 4:AE:211:ILE:HB   | 2.18                     | 0.44              |
| 5:AF:23:TYR:CD1   | 12:AM:11:PHE:N    | 2.86                     | 0.44              |
| 5:AF:147:LYS:HB2  | 5:AF:203:PHE:HD2  | 1.83                     | 0.44              |
| 6:AG:76:ARG:O     | 6:AG:80:GLU:HG3   | 2.18                     | 0.44              |
| 6:AG:130:GLY:C    | 6:AG:131:ARG:HH11 | 2.26                     | 0.44              |
| 6:AG:144:ASP:C    | 6:AG:184:LYS:CD   | 2.90                     | 0.44              |
| 6:AG:165:MET:CG   | 6:AG:166:LYS:N    | 2.81                     | 0.44              |
| 8:AI:9:VAL:HA     | 8:AI:10:LEU:HD23  | 2.00                     | 0.44              |
| 8:AI:81:ILE:CG2   | 8:AI:82:ARG:N     | 2.56                     | 0.44              |
| 9:AJ:65:ALA:HA    | 9:AJ:68:ASN:HD22  | 1.83                     | 0.44              |
| 9:AJ:106:GLN:O    | 9:AJ:107:ALA:C    | 2.60                     | 0.44              |
| 9:AJ:138:LYS:O    | 9:AJ:139:GLU:C    | 2.60                     | 0.44              |
| 11:AL:50:LEU:CD1  | 11:AL:56:LEU:HG   | 2.41                     | 0.44              |
| 13:AN:99:GLN:O    | 13:AN:102:GLY:HA2 | 2.18                     | 0.44              |
| 14:AO:78:GLN:N    | 14:AO:81:SER:OG   | 2.51                     | 0.44              |
| 14:AO:92:ASP:C    | 14:AO:93:LEU:CD2  | 2.83                     | 0.44              |
| 14:AO:102:ARG:NE  | 14:AO:109:GLY:HA2 | 2.33                     | 0.44              |
| 17:AR:27:VAL:O    | 17:AR:31:LEU:HD13 | 2.18                     | 0.44              |
| 18:AS:8:ARG:HD3   | 18:AS:15:PRO:CB   | 2.47                     | 0.44              |
| 18:AS:30:GLY:O    | 18:AS:31:LYS:C    | 2.58                     | 0.44              |
| 19:AT:15:MET:H    | 19:AT:15:MET:CE   | 2.30                     | 0.44              |
| 19:AT:18:THR:HG22 | 19:AT:43:LEU:CD2  | 2.31                     | 0.44              |
| 21:AV:47:HIS:H    | 21:AV:62:ILE:HG23 | 1.82                     | 0.44              |
| 22:AW:59:ALA:C    | 22:AW:61:SER:N    | 2.72                     | 0.44              |
| 22:AW:88:VAL:O    | 22:AW:92:LEU:CG   | 2.66                     | 0.44              |
| 24:BA:35:G:H21    | 24:BA:450:G:N2    | 2.16                     | 0.44              |
| 24:BA:145:G:C2    | 24:BA:146:G:C4    | 3.06                     | 0.44              |
| 24:BA:197:A:C6    | 24:BA:2430:A:N7   | 2.86                     | 0.44              |
| 24:BA:292:C:H3'   | 24:BA:293:U:C2    | 2.51                     | 0.44              |
| 24:BA:378:C:O2'   | 24:BA:379:G:C5'   | 2.63                     | 0.44              |
| 24:BA:447:A:O2'   | 24:BA:448:U:C5'   | 2.66                     | 0.44              |
| 24:BA:462:C:H42   | 24:BA:467:G:H1    | 1.65                     | 0.44              |
| 24:BA:463:G:O3'   | 24:BA:464:U:C5    | 2.71                     | 0.44              |
| 24:BA:499:U:C2'   | 24:BA:500:G:H5'   | 2.48                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:508:G:H4'  | 24:BA:509:C:O5'   | 2.18                     | 0.44              |
| 24:BA:563:G:C6   | 24:BA:2018:G:C6   | 3.06                     | 0.44              |
| 24:BA:588:U:H1'  | 29:BF:90:PHE:CD1  | 2.52                     | 0.44              |
| 24:BA:609:A:N6   | 24:BA:619:G:N2    | 2.61                     | 0.44              |
| 24:BA:649:G:O2'  | 54:B7:17:THR:CG2  | 2.66                     | 0.44              |
| 24:BA:687:C:O5'  | 24:BA:688:U:OP2   | 2.35                     | 0.44              |
| 24:BA:718:A:C5'  | 24:BA:719:C:OP2   | 2.66                     | 0.44              |
| 24:BA:814:C:C4'  | 24:BA:1224:G:H22  | 2.30                     | 0.44              |
| 24:BA:819:A:C2'  | 24:BA:820:A:O4'   | 2.65                     | 0.44              |
| 24:BA:850:C:O2'  | 49:B2:22:ALA:HB2  | 2.18                     | 0.44              |
| 24:BA:872:A:N3   | 24:BA:872:A:H2'   | 2.33                     | 0.44              |
| 24:BA:923:C:H4'  | 47:BZ:26:TYR:CD1  | 2.53                     | 0.44              |
| 24:BA:968:G:C6   | 24:BA:969:U:C4    | 3.06                     | 0.44              |
| 24:BA:971:C:O2   | 24:BA:972:G:H1'   | 2.17                     | 0.44              |
| 24:BA:986:C:O5'  | 24:BA:986:C:C6    | 2.67                     | 0.44              |
| 24:BA:997:G:O3'  | 41:BT:92:ARG:NH1  | 2.50                     | 0.44              |
| 24:BA:1011:G:O2' | 24:BA:1013:C:H4'  | 2.18                     | 0.44              |
| 24:BA:1020:A:H2  | 24:BA:1140:C:C2'  | 2.30                     | 0.44              |
| 24:BA:1048:A:OP2 | 24:BA:1110:G:N2   | 2.50                     | 0.44              |
| 24:BA:1057:A:C8  | 24:BA:1084:A:N6   | 2.86                     | 0.44              |
| 24:BA:1106:G:N1  | 24:BA:1107:G:C2   | 2.86                     | 0.44              |
| 24:BA:1124:C:H2' | 24:BA:1125:G:O4'  | 2.18                     | 0.44              |
| 24:BA:1266:G:C2' | 24:BA:1267:U:OP2  | 2.65                     | 0.44              |
| 24:BA:1312:U:O3' | 44:BW:63:LYS:HD2  | 2.18                     | 0.44              |
| 24:BA:1334:G:C5' | 44:BW:65:ARG:NH1  | 2.73                     | 0.44              |
| 24:BA:1350:C:O2' | 24:BA:1351:C:C5'  | 2.62                     | 0.44              |
| 24:BA:1591:G:N1  | 24:BA:1592:C:C4   | 2.86                     | 0.44              |
| 24:BA:1596:A:N6  | 24:BA:1597:A:N1   | 2.65                     | 0.44              |
| 24:BA:1620:G:C6  | 24:BA:1621:U:C4   | 3.06                     | 0.44              |
| 24:BA:1753:G:C6  | 24:BA:1756:G:C6   | 3.06                     | 0.44              |
| 24:BA:1769:G:C6  | 24:BA:1984:G:O6   | 2.71                     | 0.44              |
| 24:BA:1777:U:H6  | 24:BA:1777:U:O5'  | 2.00                     | 0.44              |
| 24:BA:1784:A:H2' | 24:BA:1981:A:C8   | 2.53                     | 0.44              |
| 24:BA:1789:A:H4' | 27:BD:222:ARG:NE  | 2.33                     | 0.44              |
| 24:BA:1825:A:OP1 | 27:BD:247:ALA:HB2 | 2.16                     | 0.44              |
| 24:BA:2026:C:H2' | 24:BA:2027:G:C5'  | 2.48                     | 0.44              |
| 24:BA:2092:U:P   | 24:BA:2199:A:H1'  | 2.57                     | 0.44              |
| 24:BA:2122:U:H1' | 26:BC:166:ASP:OD2 | 2.18                     | 0.44              |
| 24:BA:2135:A:C2' | 24:BA:2136:C:OP2  | 2.66                     | 0.44              |
| 24:BA:2199:A:C2  | 24:BA:2205:C:C6   | 3.06                     | 0.44              |
| 24:BA:2334:G:OP2 | 39:BR:8:GLU:OE2   | 2.35                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:2414:G:C6   | 24:BA:2415:G:N7   | 2.86                     | 0.44              |
| 24:BA:2543:G:H2'  | 24:BA:2544:G:C8   | 2.53                     | 0.44              |
| 24:BA:2562:U:O2'  | 35:BN:23:ARG:NH2  | 2.51                     | 0.44              |
| 24:BA:2634:G:O2'  | 24:BA:2635:C:O5'  | 2.35                     | 0.44              |
| 24:BA:2695:C:O2'  | 24:BA:2696:U:H6   | 2.00                     | 0.44              |
| 24:BA:2719:G:C8   | 24:BA:2719:G:O5'  | 2.70                     | 0.44              |
| 24:BA:2741:A:H5'' | 55:B8:22:ARG:HH12 | 1.83                     | 0.44              |
| 24:BA:2786:U:N3   | 24:BA:2787:C:C5   | 2.85                     | 0.44              |
| 24:BA:2847:U:C5'  | 40:BS:99:LEU:HD12 | 2.48                     | 0.44              |
| 25:BB:65:C:C4     | 25:BB:108:C:C4    | 3.06                     | 0.44              |
| 26:BC:45:ALA:CB   | 26:BC:211:SER:O   | 2.65                     | 0.44              |
| 26:BC:224:ILE:O   | 26:BC:226:PRO:HD3 | 2.18                     | 0.44              |
| 27:BD:68:LYS:HG2  | 27:BD:70:TRP:HZ2  | 1.82                     | 0.44              |
| 28:BE:115:GLY:O   | 28:BE:118:LYS:N   | 2.50                     | 0.44              |
| 28:BE:119:ARG:HE  | 28:BE:119:ARG:C   | 2.25                     | 0.44              |
| 29:BF:11:VAL:HG12 | 29:BF:13:SER:H    | 1.83                     | 0.44              |
| 29:BF:34:TRP:HA   | 29:BF:34:TRP:HE3  | 1.77                     | 0.44              |
| 29:BF:38:ARG:O    | 29:BF:41:LEU:HG   | 2.18                     | 0.44              |
| 30:BG:131:TYR:CE2 | 30:BG:132:ASN:HA  | 2.53                     | 0.44              |
| 30:BG:131:TYR:CD2 | 30:BG:158:ALA:CB  | 3.01                     | 0.44              |
| 31:BH:33:LEU:C    | 31:BH:33:LEU:HD23 | 2.42                     | 0.44              |
| 31:BH:94:TYR:OH   | 31:BH:128:PRO:CG  | 2.62                     | 0.44              |
| 33:BL:20:ALA:O    | 33:BL:25:PRO:HD2  | 2.17                     | 0.44              |
| 33:BL:79:ARG:CD   | 33:BL:134:MET:SD  | 2.97                     | 0.44              |
| 34:BM:4:TYR:CZ    | 41:BT:101:ARG:NH1 | 2.86                     | 0.44              |
| 34:BM:24:GLY:O    | 34:BM:25:ARG:C    | 2.60                     | 0.44              |
| 34:BM:70:LYS:CA   | 34:BM:85:ILE:O    | 2.62                     | 0.44              |
| 34:BM:74:ARG:HH11 | 34:BM:76:SER:HB2  | 1.82                     | 0.44              |
| 34:BM:78:TYR:C    | 34:BM:80:GLY:N    | 2.75                     | 0.44              |
| 35:BN:111:PHE:CD1 | 35:BN:111:PHE:C   | 2.96                     | 0.44              |
| 36:BO:23:PRO:HB2  | 36:BO:29:LYS:N    | 2.28                     | 0.44              |
| 37:BP:68:ILE:CG2  | 37:BP:95:ALA:HB2  | 2.48                     | 0.44              |
| 37:BP:75:THR:HG22 | 37:BP:77:LYS:CA   | 2.47                     | 0.44              |
| 37:BP:75:THR:O    | 37:BP:77:LYS:NZ   | 2.44                     | 0.44              |
| 37:BP:76:LYS:NZ   | 37:BP:78:PRO:O    | 2.51                     | 0.44              |
| 38:BQ:45:ARG:HA   | 38:BQ:95:THR:HG21 | 1.99                     | 0.44              |
| 39:BR:41:ASP:OD2  | 39:BR:42:ASP:O    | 2.36                     | 0.44              |
| 39:BR:66:ALA:C    | 39:BR:68:GLN:N    | 2.72                     | 0.44              |
| 40:BS:80:SER:CB   | 40:BS:81:PRO:HD3  | 2.45                     | 0.44              |
| 41:BT:31:SER:O    | 41:BT:33:ARG:N    | 2.51                     | 0.44              |
| 41:BT:61:TRP:O    | 41:BT:65:ILE:CD1  | 2.66                     | 0.44              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 42:BU:13:ARG:C    | 42:BU:14:VAL:HG23 | 2.42                     | 0.44              |
| 42:BU:35:LEU:O    | 42:BU:61:VAL:CG1  | 2.64                     | 0.44              |
| 43:BV:20:VAL:O    | 43:BV:24:ILE:HG12 | 2.18                     | 0.44              |
| 44:BW:36:LYS:HD3  | 44:BW:39:ILE:CD1  | 2.45                     | 0.44              |
| 45:BX:13:VAL:HA   | 45:BX:73:ARG:HH11 | 1.83                     | 0.44              |
| 46:BY:41:LEU:CA   | 46:BY:44:PHE:HB2  | 2.48                     | 0.44              |
| 46:BY:47:VAL:O    | 46:BY:50:GLN:N    | 2.50                     | 0.44              |
| 46:BY:70:LEU:O    | 46:BY:88:PHE:CA   | 2.64                     | 0.44              |
| 47:BZ:47:PRO:CG   | 47:BZ:53:MET:HB2  | 2.44                     | 0.44              |
| 47:BZ:60:PHE:C    | 47:BZ:60:PHE:CD1  | 2.96                     | 0.44              |
| 48:B1:50:ARG:HB2  | 48:B1:54:ARG:NH1  | 2.33                     | 0.44              |
| 49:B2:2:PRO:HD2   | 49:B2:39:ASP:HB3  | 2.00                     | 0.44              |
| 49:B2:7:LYS:O     | 49:B2:54:VAL:CG2  | 2.59                     | 0.44              |
| 50:B3:6:HIS:CG    | 50:B3:56:VAL:HA   | 2.53                     | 0.44              |
| 52:B5:17:LYS:C    | 52:B5:19:ARG:H    | 2.26                     | 0.44              |
| 53:B6:19:ARG:HH11 | 53:B6:19:ARG:HG2  | 1.82                     | 0.44              |
| 1:AA:20:U:C2'     | 1:AA:20:U:O2      | 2.65                     | 0.43              |
| 1:AA:57:G:O6      | 1:AA:356:A:N6     | 2.51                     | 0.43              |
| 1:AA:66:G:N1      | 1:AA:67:C:C4      | 2.86                     | 0.43              |
| 1:AA:112:G:H2'    | 1:AA:112:G:N3     | 2.32                     | 0.43              |
| 1:AA:129(A):G:C8  | 1:AA:189:U:OP1    | 2.71                     | 0.43              |
| 1:AA:133:U:H5'    | 1:AA:134:A:OP1    | 2.17                     | 0.43              |
| 1:AA:250:A:O2'    | 1:AA:251:G:P      | 2.76                     | 0.43              |
| 1:AA:261:U:O4     | 1:AA:264:U:OP2    | 2.36                     | 0.43              |
| 1:AA:270:A:C4     | 1:AA:271:C:C5     | 3.06                     | 0.43              |
| 1:AA:421:U:C2     | 5:AF:127:ARG:CZ   | 3.01                     | 0.43              |
| 1:AA:594:G:C3'    | 1:AA:595:G:O4'    | 2.65                     | 0.43              |
| 1:AA:666:G:H4'    | 1:AA:731:G:N2     | 2.33                     | 0.43              |
| 1:AA:675:A:C2'    | 1:AA:676:A:H8     | 2.31                     | 0.43              |
| 1:AA:679:C:O2'    | 1:AA:680:C:C5'    | 2.65                     | 0.43              |
| 1:AA:712:A:C6     | 1:AA:713:G:C6     | 3.06                     | 0.43              |
| 1:AA:734:G:H2'    | 1:AA:735:C:C5     | 2.50                     | 0.43              |
| 1:AA:736:C:H5''   | 20:AU:72:ARG:CZ   | 2.44                     | 0.43              |
| 1:AA:787:A:H2'    | 1:AA:787:A:N3     | 2.33                     | 0.43              |
| 1:AA:832:C:H2'    | 1:AA:833:U:C5     | 2.53                     | 0.43              |
| 1:AA:977:A:O2'    | 1:AA:979:C:P      | 2.75                     | 0.43              |
| 1:AA:1029:G:O4'   | 1:AA:1032(A):G:N2 | 2.51                     | 0.43              |
| 1:AA:1148:U:H6    | 11:AL:16:ARG:CZ   | 2.30                     | 0.43              |
| 1:AA:1228:C:H4'   | 15:AP:115:LYS:O   | 2.17                     | 0.43              |
| 1:AA:1236:A:C4'   | 1:AA:1304:G:H4'   | 2.28                     | 0.43              |
| 1:AA:1242:C:O3'   | 23:AX:10:ARG:NH1  | 2.50                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1298:C:N1    | 9:AJ:114:ARG:NH1  | 2.66                     | 0.43              |
| 1:AA:1408:A:C2    | 1:AA:1494:G:O2'   | 2.60                     | 0.43              |
| 3:AC:21:A:H61     | 3:AC:46:G:N2      | 2.12                     | 0.43              |
| 3:AD:41:C:C4      | 3:AD:42:C:C5      | 3.06                     | 0.43              |
| 4:AE:104:ASN:OD1  | 4:AE:104:ASN:C    | 2.61                     | 0.43              |
| 4:AE:111:ARG:O    | 4:AE:114:ARG:HG3  | 2.18                     | 0.43              |
| 4:AE:146:GLN:NE2  | 4:AE:150:SER:CB   | 2.72                     | 0.43              |
| 5:AF:8:ILE:CG2    | 16:AQ:49:HIS:O    | 2.66                     | 0.43              |
| 5:AF:67:THR:HG23  | 5:AF:102:ASN:HB3  | 1.99                     | 0.43              |
| 5:AF:138:VAL:HG13 | 5:AF:149:ALA:CB   | 2.48                     | 0.43              |
| 5:AF:195:VAL:C    | 5:AF:196:LEU:HD23 | 2.43                     | 0.43              |
| 6:AG:112:VAL:CG2  | 6:AG:161:ASN:ND2  | 2.78                     | 0.43              |
| 6:AG:166:LYS:CD   | 6:AG:178:VAL:HG12 | 2.48                     | 0.43              |
| 6:AG:190:ASP:O    | 6:AG:193:ASP:CG   | 2.61                     | 0.43              |
| 7:AH:79:GLU:O     | 10:AK:104:ARG:NH1 | 2.50                     | 0.43              |
| 7:AH:105:VAL:CG1  | 7:AH:132:ALA:HA   | 2.48                     | 0.43              |
| 7:AH:127:ASN:OD1  | 7:AH:127:ASN:C    | 2.61                     | 0.43              |
| 8:AI:12:PRO:HB3   | 8:AI:58:GLY:CA    | 2.23                     | 0.43              |
| 8:AI:36:ARG:HB2   | 8:AI:36:ARG:HH11  | 1.81                     | 0.43              |
| 8:AI:49:ALA:HB3   | 20:AU:79:LEU:C    | 2.43                     | 0.43              |
| 9:AJ:90:GLU:O     | 9:AJ:92:SER:N     | 2.50                     | 0.43              |
| 9:AJ:150:ALA:HA   | 13:AN:59:TYR:CB   | 2.48                     | 0.43              |
| 10:AK:45:ILE:HG13 | 10:AK:47:GLY:N    | 2.32                     | 0.43              |
| 10:AK:72:PRO:O    | 10:AK:73:ASP:CB   | 2.66                     | 0.43              |
| 12:AM:43:ARG:HG3  | 12:AM:44:VAL:N    | 2.33                     | 0.43              |
| 13:AN:110:ASP:HB2 | 20:AU:88:LYS:HB3  | 1.95                     | 0.43              |
| 14:AO:11:VAL:O    | 14:AO:11:VAL:HG12 | 2.18                     | 0.43              |
| 14:AO:34:ARG:CA   | 14:AO:84:LEU:HD12 | 2.48                     | 0.43              |
| 14:AO:41:ARG:CB   | 14:AO:41:ARG:CZ   | 2.95                     | 0.43              |
| 15:AP:56:LEU:C    | 15:AP:59:TYR:HB3  | 2.38                     | 0.43              |
| 15:AP:68:GLY:O    | 15:AP:71:ARG:HB2  | 2.18                     | 0.43              |
| 15:AP:94:ARG:NH2  | 24:BA:887:A:OP2   | 2.51                     | 0.43              |
| 16:AQ:13:THR:HG22 | 16:AQ:13:THR:O    | 2.17                     | 0.43              |
| 17:AR:18:PHE:CE1  | 17:AR:21:ASP:HB2  | 2.53                     | 0.43              |
| 18:AS:8:ARG:C     | 18:AS:9:PHE:CD2   | 2.84                     | 0.43              |
| 18:AS:38:TYR:CE1  | 18:AS:50:LYS:HB3  | 2.53                     | 0.43              |
| 18:AS:59:TRP:O    | 18:AS:61:SER:N    | 2.51                     | 0.43              |
| 20:AU:69:THR:HA   | 20:AU:72:ARG:CG   | 2.42                     | 0.43              |
| 22:AW:99:LEU:HD23 | 22:AW:99:LEU:N    | 2.33                     | 0.43              |
| 24:BA:30:G:N7     | 24:BA:31:C:C5     | 2.86                     | 0.43              |
| 24:BA:110:G:O6    | 24:BA:111:A:N6    | 2.51                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:116:C:H4'  | 24:BA:127:A:H4'   | 1.99                     | 0.43              |
| 24:BA:138:G:H21  | 24:BA:140:A:H62   | 1.64                     | 0.43              |
| 24:BA:268:C:C2   | 24:BA:269:U:C5    | 3.06                     | 0.43              |
| 24:BA:351:G:C2'  | 24:BA:352:G:OP2   | 2.66                     | 0.43              |
| 24:BA:411:G:C2   | 24:BA:2407:G:N7   | 2.86                     | 0.43              |
| 24:BA:419:C:C4   | 24:BA:420:C:C4    | 3.06                     | 0.43              |
| 24:BA:423:A:H3'  | 24:BA:423:A:OP2   | 2.17                     | 0.43              |
| 24:BA:447:A:HO2' | 24:BA:448:U:C5'   | 2.30                     | 0.43              |
| 24:BA:454:A:C8   | 24:BA:454:A:C3'   | 3.01                     | 0.43              |
| 24:BA:481:G:C2'  | 24:BA:507:A:N6    | 2.81                     | 0.43              |
| 24:BA:507:A:H5'  | 24:BA:509:C:O4'   | 2.18                     | 0.43              |
| 24:BA:520:G:P    | 43:BV:25:ARG:HH12 | 2.41                     | 0.43              |
| 24:BA:535:C:O2'  | 41:BT:53:ARG:HD2  | 2.18                     | 0.43              |
| 24:BA:535:C:C4'  | 41:BT:49:HIS:HB3  | 2.48                     | 0.43              |
| 24:BA:566:U:C4'  | 42:BU:82:ARG:HH22 | 2.31                     | 0.43              |
| 24:BA:567:A:N1   | 24:BA:568:U:C2    | 2.86                     | 0.43              |
| 24:BA:682:G:H2'  | 24:BA:683:C:C6    | 2.53                     | 0.43              |
| 24:BA:701:G:H5'  | 24:BA:1632:A:H1'  | 2.00                     | 0.43              |
| 24:BA:860:U:H5   | 24:BA:2267:A:C4'  | 2.31                     | 0.43              |
| 24:BA:972:G:H3'  | 24:BA:973:A:C3'   | 2.48                     | 0.43              |
| 24:BA:1007:C:H4' | 34:BM:108:PRO:CG  | 2.47                     | 0.43              |
| 24:BA:1011:G:OP2 | 41:BT:75:ASN:OD1  | 2.35                     | 0.43              |
| 24:BA:1158:C:C5' | 49:B2:31:LEU:HB3  | 2.47                     | 0.43              |
| 24:BA:1255:U:O4  | 29:BF:72:ARG:O    | 2.36                     | 0.43              |
| 24:BA:1266:G:OP1 | 51:B4:19:ARG:NE   | 2.51                     | 0.43              |
| 24:BA:1268:A:H2' | 24:BA:1269:A:O4'  | 2.18                     | 0.43              |
| 24:BA:1317:A:C6  | 24:BA:1318:C:C4   | 3.06                     | 0.43              |
| 24:BA:1323:U:OP2 | 43:BV:84:ARG:NH1  | 2.51                     | 0.43              |
| 24:BA:1344:G:C5  | 24:BA:1385:G:N7   | 2.86                     | 0.43              |
| 24:BA:1366:A:C5' | 50:B3:1:MET:H1    | 2.24                     | 0.43              |
| 24:BA:1471:A:C6  | 24:BA:1473:G:C8   | 3.06                     | 0.43              |
| 24:BA:1532:C:H3' | 24:BA:1532:C:P    | 2.57                     | 0.43              |
| 24:BA:1535:U:C4  | 24:BA:1536:A:C6   | 3.06                     | 0.43              |
| 24:BA:1608:A:C2  | 24:BA:1611:C:C6   | 3.06                     | 0.43              |
| 24:BA:1655:A:O3' | 28:BE:114:ALA:HA  | 2.18                     | 0.43              |
| 24:BA:1667:G:O6  | 24:BA:1992:G:OP2  | 2.36                     | 0.43              |
| 24:BA:1754:C:C4  | 24:BA:2717:G:H5'  | 2.53                     | 0.43              |
| 24:BA:1775:U:C2' | 24:BA:1776:G:O4'  | 2.60                     | 0.43              |
| 24:BA:1890:A:C8  | 24:BA:1891:G:C8   | 3.06                     | 0.43              |
| 24:BA:1942:C:C6  | 24:BA:1943:U:C5   | 3.06                     | 0.43              |
| 24:BA:1949:G:N2  | 24:BA:1958:C:N3   | 2.66                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1968:G:O2'   | 24:BA:1969:A:O5'   | 2.28                     | 0.43              |
| 24:BA:1983:C:O2'   | 24:BA:1984:G:C5'   | 2.58                     | 0.43              |
| 24:BA:2026:C:C2    | 24:BA:2027:G:C8    | 3.06                     | 0.43              |
| 24:BA:2051:A:H1'   | 28:BE:141:ILE:CD1  | 2.48                     | 0.43              |
| 24:BA:2273:A:H2'   | 24:BA:2274:A:H5'   | 2.00                     | 0.43              |
| 24:BA:2314:C:C2    | 24:BA:2315:G:C8    | 3.06                     | 0.43              |
| 24:BA:2417:C:O2'   | 24:BA:2418:A:H5'   | 2.18                     | 0.43              |
| 24:BA:2444:G:C2    | 24:BA:2445:G:C5    | 3.05                     | 0.43              |
| 24:BA:2583:G:C4    | 24:BA:2584:U:N3    | 2.83                     | 0.43              |
| 24:BA:2602:A:O2'   | 24:BA:2603:G:P     | 2.75                     | 0.43              |
| 24:BA:2784:C:C4'   | 28:BE:41:LYS:CE    | 2.95                     | 0.43              |
| 24:BA:2833:G:N3    | 24:BA:2833:G:C2'   | 2.79                     | 0.43              |
| 25:BB:9:G:N3       | 25:BB:9:G:C2'      | 2.78                     | 0.43              |
| 25:BB:24:G:H21     | 25:BB:27:C:H42     | 1.63                     | 0.43              |
| 25:BB:29:A:H2'     | 25:BB:30:C:O4'     | 2.18                     | 0.43              |
| 25:BB:73:A:N7      | 25:BB:104:A:C4     | 2.86                     | 0.43              |
| 26:BC:7:TYR:O      | 26:BC:10:LEU:N     | 2.51                     | 0.43              |
| 26:BC:89:ALA:CB    | 26:BC:150:GLY:O    | 2.66                     | 0.43              |
| 28:BE:49:LEU:HD21  | 28:BE:75:VAL:N     | 2.32                     | 0.43              |
| 28:BE:172:VAL:HA   | 28:BE:184:VAL:CG1  | 2.43                     | 0.43              |
| 28:BE:194:GLY:O    | 28:BE:195:LEU:HD22 | 2.17                     | 0.43              |
| 30:BG:17:PRO:O     | 30:BG:18:GLU:C     | 2.61                     | 0.43              |
| 30:BG:32:PRO:HB2   | 30:BG:163:ALA:CB   | 2.48                     | 0.43              |
| 31:BH:8:PRO:HB3    | 31:BH:51:ARG:NH1   | 2.17                     | 0.43              |
| 31:BH:52:VAL:HG22  | 31:BH:65:HIS:ND1   | 2.32                     | 0.43              |
| 31:BH:168:PRO:O    | 31:BH:169:VAL:C    | 2.60                     | 0.43              |
| 32:BK:38:LEU:O     | 32:BK:39:ALA:C     | 2.60                     | 0.43              |
| 33:BL:88:ALA:O     | 33:BL:90:LYS:N     | 2.40                     | 0.43              |
| 33:BL:104:VAL:HG13 | 33:BL:127:ILE:CD1  | 2.47                     | 0.43              |
| 33:BL:106:GLU:HA   | 33:BL:109:LYS:CE   | 2.46                     | 0.43              |
| 34:BM:23:LEU:HD11  | 34:BM:62:VAL:C     | 2.42                     | 0.43              |
| 34:BM:26:LEU:HD12  | 34:BM:26:LEU:C     | 2.40                     | 0.43              |
| 34:BM:46:VAL:HG11  | 34:BM:119:ARG:HH22 | 1.81                     | 0.43              |
| 34:BM:54:VAL:HG12  | 34:BM:122:VAL:HG11 | 1.97                     | 0.43              |
| 34:BM:74:ARG:CD    | 34:BM:82:LEU:CD1   | 2.96                     | 0.43              |
| 35:BN:16:ALA:HB1   | 35:BN:45:GLU:HB2   | 1.98                     | 0.43              |
| 35:BN:88:ASN:C     | 35:BN:90:GLN:H     | 2.25                     | 0.43              |
| 36:BO:106:LEU:O    | 36:BO:107:LYS:HB3  | 2.18                     | 0.43              |
| 37:BP:35:VAL:O     | 37:BP:35:VAL:CG1   | 2.66                     | 0.43              |
| 37:BP:51:ARG:HH22  | 37:BP:63:LYS:HZ1   | 1.66                     | 0.43              |
| 38:BQ:49:ASP:OD2   | 38:BQ:50:HIS:N     | 2.51                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 38:BQ:85:PRO:C    | 38:BQ:87:TYR:N    | 2.72                     | 0.43              |
| 38:BQ:105:ARG:CG  | 38:BQ:106:GLY:H   | 2.27                     | 0.43              |
| 40:BS:54:ARG:CD   | 40:BS:55:ASN:ND2  | 2.73                     | 0.43              |
| 40:BS:103:ARG:HE  | 40:BS:103:ARG:HB2 | 1.21                     | 0.43              |
| 41:BT:40:PHE:HD1  | 41:BT:40:PHE:H    | 1.66                     | 0.43              |
| 41:BT:83:LEU:HB3  | 41:BT:90:VAL:HG13 | 2.00                     | 0.43              |
| 41:BT:113:ALA:O   | 41:BT:114:LYS:C   | 2.61                     | 0.43              |
| 42:BU:5:VAL:CG2   | 42:BU:39:LEU:HA   | 2.42                     | 0.43              |
| 42:BU:22:VAL:HG11 | 42:BU:24:LYS:NZ   | 2.33                     | 0.43              |
| 42:BU:65:GLY:O    | 42:BU:66:ARG:CG   | 2.47                     | 0.43              |
| 43:BV:2:GLU:OE2   | 43:BV:2:GLU:HA    | 2.18                     | 0.43              |
| 43:BV:21:VAL:HG22 | 43:BV:75:TYR:CE2  | 2.53                     | 0.43              |
| 44:BW:36:LYS:HB2  | 44:BW:36:LYS:HZ2  | 1.83                     | 0.43              |
| 44:BW:70:LEU:HD23 | 44:BW:71:GLY:CA   | 2.48                     | 0.43              |
| 45:BX:12:THR:CA   | 45:BX:73:ARG:CZ   | 2.95                     | 0.43              |
| 46:BY:41:LEU:O    | 46:BY:45:ASP:CG   | 2.61                     | 0.43              |
| 46:BY:118:GLN:NE2 | 46:BY:172:ALA:HB1 | 2.33                     | 0.43              |
| 47:BZ:20:ARG:HB3  | 47:BZ:21:LEU:H    | 1.62                     | 0.43              |
| 47:BZ:36:ILE:C    | 47:BZ:37:LEU:HD23 | 2.43                     | 0.43              |
| 48:B1:16:LEU:HD22 | 48:B1:58:VAL:CG2  | 2.47                     | 0.43              |
| 50:B3:40:HIS:HB3  | 50:B3:41:PRO:HD3  | 1.97                     | 0.43              |
| 51:B4:31:VAL:HB   | 51:B4:32:PRO:HD2  | 1.99                     | 0.43              |
| 53:B6:30:VAL:HG22 | 53:B6:33:ARG:HH21 | 1.82                     | 0.43              |
| 54:B7:15:LYS:C    | 54:B7:22:VAL:HG13 | 2.42                     | 0.43              |
| 54:B7:39:LYS:HA   | 54:B7:42:ARG:CD   | 2.48                     | 0.43              |
| 55:B8:10:ILE:C    | 55:B8:12:ASP:N    | 2.71                     | 0.43              |
| 1:AA:78:G:N1      | 1:AA:79:G:C5      | 2.86                     | 0.43              |
| 1:AA:130:A:C6     | 19:AT:64:PRO:HG2  | 2.52                     | 0.43              |
| 1:AA:186(A):C:H4' | 22:AW:85:MET:HG3  | 2.00                     | 0.43              |
| 1:AA:186(B):C:H4' | 22:AW:89:ARG:NH2  | 2.33                     | 0.43              |
| 1:AA:251:G:N3     | 1:AA:266:G:O6     | 2.51                     | 0.43              |
| 1:AA:294:U:C2     | 1:AA:295:C:H5     | 2.34                     | 0.43              |
| 1:AA:301:G:C2     | 1:AA:302:G:C4     | 3.05                     | 0.43              |
| 1:AA:429:U:C1'    | 1:AA:430:A:H5''   | 2.48                     | 0.43              |
| 1:AA:528:C:O2'    | 1:AA:535:A:C8     | 2.69                     | 0.43              |
| 1:AA:579:G:N3     | 1:AA:580:U:C6     | 2.86                     | 0.43              |
| 1:AA:604:G:N2     | 1:AA:605:U:H1'    | 2.33                     | 0.43              |
| 1:AA:604:G:C6     | 1:AA:635:G:C6     | 3.06                     | 0.43              |
| 1:AA:658:G:C6     | 1:AA:659:U:C4     | 3.07                     | 0.43              |
| 1:AA:685:G:O5'    | 1:AA:685:G:H8     | 2.01                     | 0.43              |
| 1:AA:721:G:H1'    | 1:AA:722:A:C6     | 2.53                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:723:U:O5'    | 1:AA:723:U:N1     | 2.51                     | 0.43              |
| 1:AA:770:C:O2'    | 1:AA:771:G:H5'    | 2.18                     | 0.43              |
| 1:AA:838:G:C2     | 1:AA:849:C:C2     | 3.06                     | 0.43              |
| 1:AA:878:G:O4'    | 10:AK:3:THR:CG2   | 2.66                     | 0.43              |
| 1:AA:927:G:C4'    | 1:AA:1503:A:N7    | 2.80                     | 0.43              |
| 1:AA:1126:U:OP2   | 1:AA:1281:U:C2    | 2.70                     | 0.43              |
| 1:AA:1129:C:H4'   | 1:AA:1130:A:C8    | 2.52                     | 0.43              |
| 1:AA:1174:G:H8    | 1:AA:1174:G:H5'   | 1.84                     | 0.43              |
| 1:AA:1194:U:O5'   | 1:AA:1194:U:H6    | 2.01                     | 0.43              |
| 1:AA:1203:C:H6    | 1:AA:1203:C:O5'   | 2.01                     | 0.43              |
| 1:AA:1251:A:N1    | 1:AA:1285:A:H2    | 2.16                     | 0.43              |
| 1:AA:1300:G:C6    | 1:AA:1335:C:C5    | 3.05                     | 0.43              |
| 1:AA:1349:A:H2'   | 1:AA:1350:A:O4'   | 2.17                     | 0.43              |
| 1:AA:1361:G:C8    | 1:AA:1362:C:C5    | 3.06                     | 0.43              |
| 1:AA:1430:C:O2'   | 1:AA:1431:C:H5'   | 2.17                     | 0.43              |
| 1:AA:1454:G:C5    | 1:AA:1455:G:N7    | 2.86                     | 0.43              |
| 1:AA:1465:C:C4    | 1:AA:1466:C:C5    | 3.05                     | 0.43              |
| 2:A1:3:U:O2       | 2:A1:4:U:O4       | 2.36                     | 0.43              |
| 3:AD:17:C:C5      | 3:AD:19:G:C8      | 3.06                     | 0.43              |
| 3:AD:36:A:H3'     | 3:AD:37:A:H8      | 1.83                     | 0.43              |
| 3:AD:75:C:H5''    | 3:AD:76:A:O4'     | 2.18                     | 0.43              |
| 3:AB:52:G:O3'     | 24:BA:2471:C:OP1  | 2.36                     | 0.43              |
| 4:AE:16:HIS:CE1   | 4:AE:213:LEU:CD1  | 2.97                     | 0.43              |
| 4:AE:97:TRP:C     | 4:AE:99:GLY:H     | 2.25                     | 0.43              |
| 4:AE:118:LEU:HD22 | 4:AE:119:GLU:N    | 2.34                     | 0.43              |
| 5:AF:6:HIS:CD2    | 5:AF:9:GLY:H      | 2.36                     | 0.43              |
| 6:AG:30:LYS:HA    | 6:AG:34:GLU:HB3   | 1.98                     | 0.43              |
| 6:AG:61:LYS:HA    | 6:AG:203:VAL:HG13 | 2.00                     | 0.43              |
| 6:AG:63:LYS:HA    | 6:AG:66:ARG:CD    | 2.44                     | 0.43              |
| 6:AG:199:ASN:OD1  | 6:AG:200:GLU:N    | 2.37                     | 0.43              |
| 7:AH:11:ILE:CG2   | 7:AH:31:LEU:HD22  | 2.48                     | 0.43              |
| 7:AH:25:ARG:C     | 7:AH:26:PHE:CD1   | 2.96                     | 0.43              |
| 8:AI:9:VAL:HG22   | 8:AI:60:PHE:CD2   | 2.53                     | 0.43              |
| 8:AI:26:ILE:HG22  | 8:AI:30:LEU:CD1   | 2.42                     | 0.43              |
| 8:AI:100:ASN:HD22 | 8:AI:100:ASN:C    | 2.27                     | 0.43              |
| 9:AJ:46:ALA:HA    | 9:AJ:49:ILE:CD1   | 2.22                     | 0.43              |
| 9:AJ:65:ALA:O     | 9:AJ:69:VAL:CG2   | 2.63                     | 0.43              |
| 9:AJ:115:ARG:CG   | 9:AJ:118:VAL:HG21 | 2.48                     | 0.43              |
| 11:AL:23:ASN:O    | 11:AL:59:PHE:O    | 2.36                     | 0.43              |
| 11:AL:116:LYS:O   | 11:AL:118:LYS:N   | 2.51                     | 0.43              |
| 13:AN:88:GLY:O    | 13:AN:90:GLY:N    | 2.50                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 14:AO:110:VAL:HB   | 14:AO:113:ARG:CG  | 2.48                     | 0.43              |
| 18:AS:42:ARG:O     | 18:AS:43:LYS:CB   | 2.66                     | 0.43              |
| 19:AT:35:VAL:CG1   | 19:AT:36:ILE:H    | 2.30                     | 0.43              |
| 19:AT:35:VAL:C     | 19:AT:36:ILE:HD13 | 2.40                     | 0.43              |
| 19:AT:96:GLN:O     | 19:AT:96:GLN:OE1  | 2.36                     | 0.43              |
| 20:AU:53:ARG:C     | 20:AU:55:ARG:N    | 2.76                     | 0.43              |
| 21:AV:28:LYS:O     | 21:AV:29:ARG:HB2  | 2.18                     | 0.43              |
| 22:AW:54:LYS:HA    | 22:AW:57:ARG:CD   | 2.49                     | 0.43              |
| 22:AW:64:ASP:OD1   | 22:AW:81:LYS:HE3  | 2.17                     | 0.43              |
| 23:AX:13:ILE:HG23  | 23:AX:14:TRP:N    | 2.32                     | 0.43              |
| 24:BA:120:U:H1'    | 24:BA:149:A:C1'   | 2.47                     | 0.43              |
| 24:BA:137(A):G:O2' | 24:BA:138:G:C8    | 2.68                     | 0.43              |
| 24:BA:285:C:N3     | 24:BA:357:A:N1    | 2.66                     | 0.43              |
| 24:BA:332:A:O2'    | 24:BA:333:G:P     | 2.76                     | 0.43              |
| 24:BA:387:U:O2'    | 24:BA:388:G:N7    | 2.48                     | 0.43              |
| 24:BA:498:G:H8     | 24:BA:498:G:P     | 2.41                     | 0.43              |
| 24:BA:531:C:O4'    | 24:BA:532:A:C2    | 2.72                     | 0.43              |
| 24:BA:602:G:N2     | 24:BA:655:A:C3'   | 2.80                     | 0.43              |
| 24:BA:617:G:C8     | 24:BA:617:G:C3'   | 3.01                     | 0.43              |
| 24:BA:630:G:N2     | 24:BA:634:C:C4    | 2.86                     | 0.43              |
| 24:BA:705:A:C6     | 24:BA:727:A:H1'   | 2.54                     | 0.43              |
| 24:BA:743:G:H2'    | 24:BA:744:G:C8    | 2.52                     | 0.43              |
| 24:BA:774:A:H5''   | 24:BA:778:G:H4'   | 2.00                     | 0.43              |
| 24:BA:813:U:C2     | 24:BA:814:C:C6    | 3.07                     | 0.43              |
| 24:BA:815:C:H2'    | 24:BA:816:C:C6    | 2.54                     | 0.43              |
| 24:BA:855:G:N2     | 47:BZ:27:GLU:HB3  | 2.31                     | 0.43              |
| 24:BA:865:C:O2'    | 24:BA:866:A:C8    | 2.62                     | 0.43              |
| 24:BA:908:C:H2'    | 24:BA:909:A:C5'   | 2.48                     | 0.43              |
| 24:BA:954:G:H1'    | 24:BA:2274:A:H2   | 1.83                     | 0.43              |
| 24:BA:1022:G:N7    | 24:BA:1139:G:O6   | 2.51                     | 0.43              |
| 24:BA:1134:G:C4    | 24:BA:1136:G:OP2  | 2.72                     | 0.43              |
| 24:BA:1212:G:H1'   | 24:BA:1237:A:N6   | 2.33                     | 0.43              |
| 24:BA:1242:A:N3    | 24:BA:1242:A:H2'  | 2.32                     | 0.43              |
| 24:BA:1340:U:C5    | 44:BW:57:LEU:CG   | 2.98                     | 0.43              |
| 24:BA:1343:G:H3'   | 24:BA:1344:G:H5'' | 2.01                     | 0.43              |
| 24:BA:1366:A:N3    | 24:BA:1366:A:H2'  | 2.32                     | 0.43              |
| 24:BA:1451:C:O2    | 24:BA:1451:C:C2'  | 2.64                     | 0.43              |
| 24:BA:1472:A:H2'   | 24:BA:1473:G:O5'  | 2.17                     | 0.43              |
| 24:BA:1535:U:H3'   | 24:BA:1536:A:H8   | 1.82                     | 0.43              |
| 24:BA:1537:C:OP2   | 24:BA:1538:G:OP2  | 2.36                     | 0.43              |
| 24:BA:1606:G:H4'   | 24:BA:1608:A:C2   | 2.52                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1649:G:N3   | 38:BQ:107:ASP:HB3  | 2.33                     | 0.43              |
| 24:BA:1821:A:N6   | 24:BA:1822:G:C6    | 2.85                     | 0.43              |
| 24:BA:1836:C:N4   | 24:BA:1837:C:N4    | 2.65                     | 0.43              |
| 24:BA:1944:U:O2'  | 24:BA:1955:U:H1'   | 2.18                     | 0.43              |
| 24:BA:1971:A:C2   | 27:BD:240:ALA:N    | 2.85                     | 0.43              |
| 24:BA:2004:G:N7   | 24:BA:2005:A:C5    | 2.86                     | 0.43              |
| 24:BA:2029:G:N1   | 24:BA:2033:A:OP2   | 2.44                     | 0.43              |
| 24:BA:2093:G:H1'  | 32:BK:29:TYR:HD2   | 1.81                     | 0.43              |
| 24:BA:2427:C:C2'  | 24:BA:2428:G:OP2   | 2.66                     | 0.43              |
| 24:BA:2611:U:H6   | 24:BA:2611:U:C5'   | 2.26                     | 0.43              |
| 24:BA:2651:C:H2'  | 24:BA:2652:C:C6    | 2.52                     | 0.43              |
| 24:BA:2660:A:H2'  | 24:BA:2661:G:O4'   | 2.18                     | 0.43              |
| 24:BA:2739:U:O2'  | 24:BA:2740:A:H5'   | 2.18                     | 0.43              |
| 24:BA:2748:A:C4   | 24:BA:2757:A:N6    | 2.86                     | 0.43              |
| 24:BA:2786:U:O2'  | 28:BE:64:LYS:HB2   | 2.18                     | 0.43              |
| 24:BA:2818:G:C2   | 24:BA:2819:G:C8    | 3.06                     | 0.43              |
| 24:BA:2857:G:C2   | 24:BA:2861:G:C2    | 3.07                     | 0.43              |
| 24:BA:2880:C:N3   | 24:BA:2881:C:C5    | 2.86                     | 0.43              |
| 25:BB:76:G:C1'    | 46:BY:75:ASN:ND2   | 2.81                     | 0.43              |
| 25:BB:99:A:N3     | 25:BB:100:G:C8     | 2.87                     | 0.43              |
| 26:BC:19:ILE:O    | 26:BC:223:ARG:O    | 2.36                     | 0.43              |
| 26:BC:28:LEU:HA   | 26:BC:31:GLU:OE1   | 2.18                     | 0.43              |
| 27:BD:5:LYS:C     | 27:BD:6:PHE:O      | 2.59                     | 0.43              |
| 27:BD:6:PHE:N     | 27:BD:28:GLU:OE1   | 2.51                     | 0.43              |
| 27:BD:142:VAL:CG1 | 27:BD:193:VAL:HA   | 2.21                     | 0.43              |
| 28:BE:6:GLY:O     | 28:BE:26:ILE:CG2   | 2.66                     | 0.43              |
| 28:BE:6:GLY:O     | 28:BE:26:ILE:HG22  | 2.17                     | 0.43              |
| 28:BE:55:ASN:CG   | 28:BE:73:GLU:CD    | 2.85                     | 0.43              |
| 28:BE:108:SER:HG  | 28:BE:164:ARG:CA   | 2.30                     | 0.43              |
| 28:BE:149:ARG:C   | 28:BE:149:ARG:CD   | 2.90                     | 0.43              |
| 28:BE:185:LYS:O   | 28:BE:185:LYS:CD   | 2.65                     | 0.43              |
| 29:BF:169:ASN:ND2 | 29:BF:171:PRO:HG2  | 2.33                     | 0.43              |
| 30:BG:29:TRP:HB2  | 30:BG:31:VAL:CG2   | 2.48                     | 0.43              |
| 30:BG:59:GLU:HB3  | 30:BG:152:LEU:CD1  | 2.48                     | 0.43              |
| 30:BG:64:THR:HB   | 30:BG:102:PHE:CE1  | 2.53                     | 0.43              |
| 30:BG:101:ILE:C   | 30:BG:104:GLU:HB3  | 2.39                     | 0.43              |
| 30:BG:118:ARG:NH1 | 30:BG:118:ARG:CB   | 2.78                     | 0.43              |
| 31:BH:25:LYS:NZ   | 31:BH:27:LYS:NZ    | 2.67                     | 0.43              |
| 31:BH:118:PRO:CG  | 31:BH:121:ILE:HG21 | 2.48                     | 0.43              |
| 32:BK:75:LEU:HD12 | 32:BK:76:THR:O     | 2.18                     | 0.43              |
| 32:BK:145:VAL:CG1 | 32:BK:146:ALA:N    | 2.81                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 33:BL:14:ALA:HB2   | 33:BL:53:VAL:CG2  | 2.48                     | 0.43              |
| 33:BL:79:ARG:CD    | 33:BL:134:MET:HE2 | 2.49                     | 0.43              |
| 33:BL:129:GLY:CA   | 33:BL:132:ARG:NH2 | 2.81                     | 0.43              |
| 34:BM:19:GLU:HG2   | 34:BM:20:GLY:N    | 2.33                     | 0.43              |
| 34:BM:70:LYS:HD3   | 34:BM:70:LYS:N    | 2.33                     | 0.43              |
| 34:BM:88:GLU:OE2   | 34:BM:88:GLU:N    | 2.43                     | 0.43              |
| 34:BM:91:LEU:C     | 34:BM:93:THR:N    | 2.76                     | 0.43              |
| 35:BN:14:THR:O     | 35:BN:52:VAL:HG11 | 2.17                     | 0.43              |
| 35:BN:40:VAL:HA    | 35:BN:58:VAL:HG12 | 2.00                     | 0.43              |
| 35:BN:59:LYS:CG    | 35:BN:84:ALA:O    | 2.66                     | 0.43              |
| 35:BN:117:LEU:C    | 35:BN:117:LEU:CD2 | 2.72                     | 0.43              |
| 36:BO:76:LYS:CE    | 36:BO:81:GLN:CD   | 2.91                     | 0.43              |
| 36:BO:78:PRO:HA    | 36:BO:81:GLN:NE2  | 2.33                     | 0.43              |
| 36:BO:96:THR:O     | 36:BO:99:LEU:CB   | 2.66                     | 0.43              |
| 36:BO:114:ILE:CB   | 36:BO:130:PHE:HA  | 2.48                     | 0.43              |
| 37:BP:12:GLN:C     | 37:BP:12:GLN:CD   | 2.86                     | 0.43              |
| 37:BP:85:LYS:HE2   | 37:BP:88:GLY:HA3  | 1.98                     | 0.43              |
| 37:BP:137:TYR:HE2  | 46:BY:124:ILE:CD1 | 2.22                     | 0.43              |
| 38:BQ:13:HIS:HD1   | 38:BQ:14:SER:N    | 2.15                     | 0.43              |
| 38:BQ:84:ALA:N     | 38:BQ:85:PRO:CD   | 2.81                     | 0.43              |
| 38:BQ:105:ARG:C    | 38:BQ:107:ASP:N   | 2.76                     | 0.43              |
| 39:BR:52:SER:OG    | 39:BR:69:VAL:CG1  | 2.66                     | 0.43              |
| 39:BR:52:SER:OG    | 39:BR:69:VAL:HG11 | 2.18                     | 0.43              |
| 39:BR:77:ALA:HA    | 39:BR:80:LEU:CB   | 2.48                     | 0.43              |
| 40:BS:108:ARG:HH11 | 40:BS:108:ARG:N   | 2.10                     | 0.43              |
| 41:BT:61:TRP:CB    | 41:BT:65:ILE:HD11 | 2.48                     | 0.43              |
| 42:BU:35:LEU:O     | 42:BU:61:VAL:HG22 | 2.18                     | 0.43              |
| 43:BV:23:LEU:CD1   | 51:B4:26:THR:O    | 2.45                     | 0.43              |
| 44:BW:85:PRO:HB2   | 44:BW:87:GLN:NE2  | 2.33                     | 0.43              |
| 46:BY:60:GLU:OE2   | 46:BY:69:THR:HG22 | 2.18                     | 0.43              |
| 46:BY:95:PRO:O     | 46:BY:129:SER:C   | 2.61                     | 0.43              |
| 47:BZ:38:VAL:O     | 47:BZ:59:LEU:CB   | 2.53                     | 0.43              |
| 49:B2:49:LYS:O     | 49:B2:50:VAL:C    | 2.61                     | 0.43              |
| 50:B3:20:ASN:HB3   | 50:B3:30:GLU:CD   | 2.43                     | 0.43              |
| 55:B8:8:LYS:O      | 55:B8:9:ARG:O     | 2.35                     | 0.43              |
| 55:B8:10:ILE:CD1   | 55:B8:34:GLN:NE2  | 2.74                     | 0.43              |
| 1:AA:22:G:N9       | 1:AA:914:A:N6     | 2.66                     | 0.43              |
| 1:AA:64:G:C4'      | 1:AA:65:U:H5''    | 2.29                     | 0.43              |
| 1:AA:86:U:C2'      | 1:AA:87:A:H5'     | 2.47                     | 0.43              |
| 1:AA:133:U:OP1     | 22:AW:74:LYS:NZ   | 2.50                     | 0.43              |
| 1:AA:257:G:C5      | 1:AA:258:G:C8     | 3.06                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:332:G:N3     | 1:AA:333:G:C8     | 2.87                     | 0.43              |
| 1:AA:427:U:N1     | 1:AA:428:G:N7     | 2.66                     | 0.43              |
| 1:AA:600:C:C2     | 1:AA:601:C:C6     | 3.06                     | 0.43              |
| 1:AA:606:G:N2     | 1:AA:631:G:H2'    | 2.33                     | 0.43              |
| 1:AA:629:G:C4     | 1:AA:630:G:C8     | 3.06                     | 0.43              |
| 1:AA:761:G:C5     | 1:AA:762:C:C5     | 3.06                     | 0.43              |
| 1:AA:826:C:H2'    | 1:AA:827:U:H6     | 1.82                     | 0.43              |
| 1:AA:874:G:H2'    | 1:AA:875:C:C5'    | 2.47                     | 0.43              |
| 1:AA:953:G:H4'    | 15:AP:124:PRO:O   | 2.18                     | 0.43              |
| 1:AA:998(A):C:O2  | 1:AA:998(A):C:C2' | 2.65                     | 0.43              |
| 1:AA:1064:G:O3'   | 1:AA:1065:U:O4'   | 2.35                     | 0.43              |
| 1:AA:1081:G:H2'   | 1:AA:1082:G:H8    | 1.83                     | 0.43              |
| 1:AA:1166:G:N2    | 1:AA:1169:A:O5'   | 2.51                     | 0.43              |
| 1:AA:1192:C:N4    | 1:AA:1193:G:C6    | 2.85                     | 0.43              |
| 1:AA:1258:G:O2'   | 1:AA:1259:C:O4'   | 2.33                     | 0.43              |
| 1:AA:1321:C:H2'   | 1:AA:1322:C:C5    | 2.53                     | 0.43              |
| 1:AA:1337:G:H5''  | 1:AA:1338:G:OP1   | 2.18                     | 0.43              |
| 1:AA:1363:A:N3    | 1:AA:1365:G:O6    | 2.51                     | 0.43              |
| 1:AA:1399:C:C2    | 1:AA:1502:A:N6    | 2.86                     | 0.43              |
| 1:AA:1401:G:C6    | 1:AA:1402:C:C2    | 3.07                     | 0.43              |
| 1:AA:1423:G:C5'   | 35:BN:49:ARG:HH21 | 2.29                     | 0.43              |
| 1:AA:1436:U:O5'   | 1:AA:1436:U:C6    | 2.66                     | 0.43              |
| 1:AA:1436:U:C3'   | 1:AA:1437:C:H6    | 2.32                     | 0.43              |
| 1:AA:1499:A:C2'   | 1:AA:1500:A:H5'   | 2.48                     | 0.43              |
| 1:AA:1510:U:C2'   | 1:AA:1511:G:H8    | 2.22                     | 0.43              |
| 1:AA:1533:C:C5    | 1:AA:1534:A:N7    | 2.86                     | 0.43              |
| 2:A1:30:U:H2'     | 2:A1:31:U:C1'     | 2.44                     | 0.43              |
| 2:A1:38:U:O2'     | 2:A1:39:U:C5'     | 2.65                     | 0.43              |
| 3:AC:57:G:C4'     | 30:BG:82:LEU:CD2  | 2.96                     | 0.43              |
| 3:AC:66:U:C3'     | 3:AC:67:C:H6      | 2.30                     | 0.43              |
| 3:AD:40:C:H5'     | 3:AD:41:C:OP2     | 2.18                     | 0.43              |
| 4:AE:77:ALA:O     | 4:AE:80:ILE:HG22  | 2.19                     | 0.43              |
| 4:AE:84:GLU:HG2   | 4:AE:234:PRO:CG   | 2.47                     | 0.43              |
| 4:AE:222:ILE:HD13 | 4:AE:226:ARG:NH2  | 2.25                     | 0.43              |
| 5:AF:117:ALA:O    | 5:AF:121:ALA:HB2  | 2.19                     | 0.43              |
| 6:AG:29:PRO:O     | 6:AG:30:LYS:HB2   | 2.18                     | 0.43              |
| 6:AG:143:GLY:HA2  | 6:AG:185:PHE:CD1  | 2.54                     | 0.43              |
| 6:AG:153:ARG:O    | 6:AG:154:ASN:CB   | 2.66                     | 0.43              |
| 6:AG:155:LEU:O    | 6:AG:158:ILE:HB   | 2.18                     | 0.43              |
| 7:AH:15:ARG:HH11  | 7:AH:15:ARG:CG    | 2.31                     | 0.43              |
| 7:AH:25:ARG:HD3   | 7:AH:25:ARG:N     | 2.33                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 8:AI:8:ILE:HG23   | 8:AI:89:MET:H      | 1.82                     | 0.43              |
| 8:AI:45:LEU:HD23  | 8:AI:59:TYR:HA     | 2.00                     | 0.43              |
| 11:AL:45:ALA:O    | 11:AL:78:LYS:CG    | 2.66                     | 0.43              |
| 12:AM:65:LEU:CD1  | 16:AQ:36:PHE:CZ    | 3.02                     | 0.43              |
| 12:AM:79:ARG:HH11 | 12:AM:79:ARG:HA    | 1.84                     | 0.43              |
| 12:AM:82:ILE:HD13 | 12:AM:86:MET:HE1   | 2.00                     | 0.43              |
| 13:AN:13:GLN:HA   | 13:AN:76:GLY:CA    | 2.48                     | 0.43              |
| 13:AN:32:ILE:O    | 13:AN:39:PRO:CB    | 2.66                     | 0.43              |
| 13:AN:50:TYR:HD1  | 13:AN:55:LYS:HA    | 1.83                     | 0.43              |
| 13:AN:69:ALA:O    | 13:AN:72:ALA:CB    | 2.65                     | 0.43              |
| 14:AO:59:ARG:HE   | 14:AO:65:GLU:HG2   | 1.84                     | 0.43              |
| 14:AO:100:ILE:O   | 14:AO:101:VAL:HG22 | 2.19                     | 0.43              |
| 16:AQ:6:LEU:C     | 16:AQ:8:GLU:H      | 2.26                     | 0.43              |
| 18:AS:53:VAL:CG2  | 18:AS:54:GLU:N     | 2.81                     | 0.43              |
| 22:AW:13:LEU:HD13 | 22:AW:17:ARG:HH22  | 1.83                     | 0.43              |
| 22:AW:20:LEU:O    | 22:AW:24:LEU:HG    | 2.17                     | 0.43              |
| 24:BA:49:A:N7     | 24:BA:177:G:C6     | 2.86                     | 0.43              |
| 24:BA:67:U:C6     | 24:BA:67:U:C4'     | 3.01                     | 0.43              |
| 24:BA:126:A:OP1   | 53:B6:18:PHE:N     | 2.50                     | 0.43              |
| 24:BA:138:G:N3    | 24:BA:138:G:H2'    | 2.33                     | 0.43              |
| 24:BA:141:A:C2    | 24:BA:1596:A:C2'   | 3.01                     | 0.43              |
| 24:BA:146:G:C5    | 24:BA:147:U:C6     | 3.06                     | 0.43              |
| 24:BA:262:A:O2'   | 24:BA:263:C:C5'    | 2.66                     | 0.43              |
| 24:BA:284:U:OP2   | 24:BA:284:U:O4'    | 2.37                     | 0.43              |
| 24:BA:317:G:O2'   | 24:BA:318:C:H5'    | 2.18                     | 0.43              |
| 24:BA:333:G:C6    | 24:BA:334:C:C5     | 3.06                     | 0.43              |
| 24:BA:358:U:O2    | 24:BA:358:U:H2'    | 2.19                     | 0.43              |
| 24:BA:403:U:O2    | 24:BA:403:U:C2'    | 2.65                     | 0.43              |
| 24:BA:535:C:O2'   | 41:BT:53:ARG:CG    | 2.66                     | 0.43              |
| 24:BA:596:G:N1    | 24:BA:597:U:C2     | 2.86                     | 0.43              |
| 24:BA:638:G:C5    | 24:BA:639:U:C2     | 3.06                     | 0.43              |
| 24:BA:705:A:C2    | 24:BA:706:A:N9     | 2.85                     | 0.43              |
| 24:BA:713:G:N2    | 24:BA:714:U:C6     | 2.86                     | 0.43              |
| 24:BA:776:G:N9    | 24:BA:793:A:C2     | 2.86                     | 0.43              |
| 24:BA:819:A:C2'   | 24:BA:820:A:H8     | 2.30                     | 0.43              |
| 24:BA:1006:C:C2   | 24:BA:1137:G:N2    | 2.86                     | 0.43              |
| 24:BA:1025:G:C8   | 24:BA:1134:G:O4'   | 2.72                     | 0.43              |
| 24:BA:1031:G:H5'  | 24:BA:1032:A:OP2   | 2.18                     | 0.43              |
| 24:BA:1040:C:OP2  | 24:BA:1040:C:C5    | 2.71                     | 0.43              |
| 24:BA:1129:A:C5   | 24:BA:2570:G:H1'   | 2.53                     | 0.43              |
| 24:BA:1137:G:H2'  | 24:BA:1138:G:O5'   | 2.17                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 24:BA:1156:A:C2    | 41:BT:51:LYS:NZ     | 2.81                     | 0.43              |
| 24:BA:1272:A:H3'   | 24:BA:1646:C:N4     | 2.33                     | 0.43              |
| 24:BA:1342:A:C5    | 24:BA:1601:G:O6     | 2.71                     | 0.43              |
| 24:BA:1381:G:O6    | 24:BA:1382:G:N1     | 2.51                     | 0.43              |
| 24:BA:1444(A):A:C8 | 24:BA:1444(A):A:OP2 | 2.71                     | 0.43              |
| 24:BA:1529:A:H8    | 24:BA:1530:G:C4     | 2.36                     | 0.43              |
| 24:BA:1542:G:O2'   | 24:BA:1543:A:C4     | 2.62                     | 0.43              |
| 24:BA:1544:C:O2'   | 24:BA:1545:A:H4'    | 2.18                     | 0.43              |
| 24:BA:1661:G:C5    | 24:BA:1662:C:C5     | 3.05                     | 0.43              |
| 24:BA:1663:C:H5''  | 24:BA:1664:A:OP1    | 2.19                     | 0.43              |
| 24:BA:1728:G:N2    | 24:BA:1730:U:O2     | 2.51                     | 0.43              |
| 24:BA:1814:G:OP2   | 27:BD:43:ARG:HD2    | 2.18                     | 0.43              |
| 24:BA:1830:C:C2    | 24:BA:1831:G:N7     | 2.87                     | 0.43              |
| 24:BA:1988:C:H2'   | 24:BA:1989:G:C5'    | 2.48                     | 0.43              |
| 24:BA:1996:C:H2'   | 28:BE:123:ALA:HB3   | 1.97                     | 0.43              |
| 24:BA:2033:A:H2'   | 24:BA:2034:U:O5'    | 2.18                     | 0.43              |
| 24:BA:2180:U:H2'   | 24:BA:2181:G:C8     | 2.52                     | 0.43              |
| 24:BA:2264:C:C2'   | 24:BA:2265:U:O5'    | 2.67                     | 0.43              |
| 24:BA:2307:G:O2'   | 24:BA:2311:A:N6     | 2.50                     | 0.43              |
| 24:BA:2447:G:HO2'  | 24:BA:2448:A:P      | 2.36                     | 0.43              |
| 24:BA:2464:C:H2'   | 24:BA:2465:C:H6     | 1.82                     | 0.43              |
| 24:BA:2482:G:C4    | 24:BA:2483:C:C6     | 3.06                     | 0.43              |
| 24:BA:2507:C:H4'   | 24:BA:2573:C:N4     | 2.32                     | 0.43              |
| 24:BA:2512:C:C5'   | 28:BE:120:TRP:CH2   | 2.92                     | 0.43              |
| 24:BA:2558:C:O2    | 24:BA:2558:C:C2'    | 2.66                     | 0.43              |
| 24:BA:2644:G:H1    | 24:BA:2645:G:H21    | 1.64                     | 0.43              |
| 24:BA:2789:C:HO2'  | 24:BA:2790:A:P      | 2.41                     | 0.43              |
| 24:BA:2816:C:C2'   | 24:BA:2817:G:H5'    | 2.48                     | 0.43              |
| 24:BA:2898:U:N3    | 24:BA:2899:G:C5     | 2.87                     | 0.43              |
| 25:BB:100:G:C2'    | 25:BB:101:A:C8      | 2.88                     | 0.43              |
| 26:BC:45:ALA:HB2   | 26:BC:212:VAL:HA    | 2.00                     | 0.43              |
| 27:BD:90:ALA:HB3   | 27:BD:159:ALA:HA    | 2.00                     | 0.43              |
| 27:BD:219:PRO:C    | 27:BD:220:HIS:ND1   | 2.77                     | 0.43              |
| 27:BD:257:LEU:C    | 27:BD:258:LYS:O     | 2.62                     | 0.43              |
| 28:BE:13:ARG:CD    | 28:BE:20:ALA:O      | 2.65                     | 0.43              |
| 28:BE:44:TYR:C     | 28:BE:44:TYR:CD2    | 2.94                     | 0.43              |
| 28:BE:49:LEU:CB    | 28:BE:76:ARG:O      | 2.67                     | 0.43              |
| 28:BE:80:GLU:C     | 28:BE:83:ASP:OD2    | 2.62                     | 0.43              |
| 28:BE:149:ARG:HB2  | 28:BE:150:VAL:H     | 1.48                     | 0.43              |
| 28:BE:176:ILE:CG2  | 28:BE:181:LEU:CB    | 2.95                     | 0.43              |
| 29:BF:11:VAL:HB    | 29:BF:17:ARG:NH1    | 2.33                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 29:BF:39:TRP:CE2  | 29:BF:106:ARG:NH2  | 2.87                     | 0.43              |
| 29:BF:143:ALA:O   | 29:BF:144:LYS:C    | 2.61                     | 0.43              |
| 30:BG:8:LYS:HG3   | 30:BG:100:TRP:O    | 2.17                     | 0.43              |
| 30:BG:37:VAL:HG13 | 30:BG:158:ALA:O    | 2.17                     | 0.43              |
| 30:BG:39:ILE:CG1  | 30:BG:157:ILE:CD1  | 2.93                     | 0.43              |
| 30:BG:44:GLY:CA   | 30:BG:88:ILE:HG21  | 2.48                     | 0.43              |
| 30:BG:98:ARG:O    | 30:BG:101:ILE:HG22 | 2.17                     | 0.43              |
| 30:BG:111:LEU:CD2 | 30:BG:178:PHE:HD2  | 2.31                     | 0.43              |
| 30:BG:125:PHE:HB2 | 30:BG:131:TYR:C    | 2.43                     | 0.43              |
| 30:BG:166:ASP:C   | 30:BG:168:GLU:N    | 2.77                     | 0.43              |
| 35:BN:23:ARG:HH12 | 35:BN:30:ALA:HB2   | 1.83                     | 0.43              |
| 35:BN:40:VAL:O    | 35:BN:40:VAL:HG13  | 2.17                     | 0.43              |
| 35:BN:59:LYS:HA   | 35:BN:86:ILE:CG1   | 2.48                     | 0.43              |
| 36:BO:45:LEU:CD1  | 54:B7:3:LYS:NZ     | 2.80                     | 0.43              |
| 36:BO:48:PRO:O    | 36:BO:52:GLU:CD    | 2.62                     | 0.43              |
| 36:BO:49:ARG:CD   | 54:B7:52:LYS:HE3   | 2.48                     | 0.43              |
| 36:BO:55:ARG:NH2  | 36:BO:55:ARG:HA    | 2.33                     | 0.43              |
| 37:BP:130:LYS:HZ1 | 37:BP:132:VAL:HG22 | 1.84                     | 0.43              |
| 38:BQ:47:PHE:C    | 38:BQ:49:ASP:H     | 2.20                     | 0.43              |
| 38:BQ:83:ILE:O    | 38:BQ:86:ARG:HB2   | 2.17                     | 0.43              |
| 39:BR:13:ARG:NH2  | 39:BR:90:GLY:C     | 2.76                     | 0.43              |
| 39:BR:13:ARG:NH2  | 39:BR:92:TYR:N     | 2.66                     | 0.43              |
| 40:BS:21:GLU:HG3  | 40:BS:88:ILE:CD1   | 2.43                     | 0.43              |
| 40:BS:37:GLY:HA3  | 40:BS:42:ILE:O     | 2.18                     | 0.43              |
| 40:BS:54:ARG:HD3  | 40:BS:55:ASN:HD21  | 1.76                     | 0.43              |
| 41:BT:33:ARG:O    | 41:BT:36:ARG:N     | 2.51                     | 0.43              |
| 41:BT:59:ARG:HA   | 41:BT:62:ILE:HB    | 2.00                     | 0.43              |
| 41:BT:70:ARG:NH1  | 41:BT:70:ARG:CB    | 2.80                     | 0.43              |
| 42:BU:23:GLU:O    | 42:BU:23:GLU:HG2   | 2.17                     | 0.43              |
| 43:BV:46:PHE:O    | 43:BV:50:VAL:HG23  | 2.17                     | 0.43              |
| 44:BW:12:VAL:N    | 44:BW:28:PHE:HA    | 2.32                     | 0.43              |
| 44:BW:15:GLU:O    | 44:BW:16:LYS:C     | 2.60                     | 0.43              |
| 45:BX:35:TYR:O    | 45:BX:64:GLU:CA    | 2.66                     | 0.43              |
| 46:BY:18:LEU:CD2  | 46:BY:23:LYS:HD3   | 2.47                     | 0.43              |
| 46:BY:69:THR:HB   | 46:BY:90:VAL:HG13  | 1.99                     | 0.43              |
| 46:BY:103:ARG:O   | 46:BY:138:GLU:HB3  | 2.17                     | 0.43              |
| 46:BY:122:ARG:CB  | 46:BY:171:ILE:HA   | 2.48                     | 0.43              |
| 46:BY:179:ASP:O   | 46:BY:180:VAL:CG2  | 2.50                     | 0.43              |
| 47:BZ:31:VAL:CG1  | 47:BZ:67:VAL:CG2   | 2.94                     | 0.43              |
| 50:B3:56:VAL:C    | 50:B3:61:ARG:NE    | 2.76                     | 0.43              |
| 50:B3:59:PHE:O    | 50:B3:62:ARG:N     | 2.51                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 50:B3:65:ASP:CA  | 50:B3:68:ARG:CZ   | 2.95                     | 0.43              |
| 55:B8:7:VAL:CG1  | 55:B8:34:GLN:OE1  | 2.63                     | 0.43              |
| 55:B8:19:ARG:HD3 | 55:B8:22:ARG:CB   | 2.48                     | 0.43              |
| 1:AA:15:G:H2'    | 1:AA:16:A:C8      | 2.53                     | 0.43              |
| 1:AA:36:C:OP1    | 14:AO:123:LYS:HG2 | 2.18                     | 0.43              |
| 1:AA:110:C:H2'   | 1:AA:111:G:C8     | 2.53                     | 0.43              |
| 1:AA:181:G:H22   | 1:AA:223:U:H4'    | 1.83                     | 0.43              |
| 1:AA:377:G:P     | 18:AS:5:ARG:HD3   | 2.58                     | 0.43              |
| 1:AA:450:G:C8    | 1:AA:481:G:C6     | 3.06                     | 0.43              |
| 1:AA:513:C:H2'   | 1:AA:514:C:H6     | 1.83                     | 0.43              |
| 1:AA:525:C:H6    | 1:AA:525:C:O5'    | 2.02                     | 0.43              |
| 1:AA:531:U:H3'   | 1:AA:531:U:P      | 2.59                     | 0.43              |
| 1:AA:609:A:H2'   | 1:AA:610:G:H8     | 1.84                     | 0.43              |
| 1:AA:648:A:O2'   | 1:AA:649:G:H5'    | 2.19                     | 0.43              |
| 1:AA:667:G:C5'   | 17:AR:51:HIS:CE1  | 3.02                     | 0.43              |
| 1:AA:830:G:C2    | 1:AA:857:C:C2     | 3.07                     | 0.43              |
| 1:AA:892:A:H2'   | 1:AA:893:C:C6     | 2.53                     | 0.43              |
| 1:AA:951:G:C5    | 1:AA:1231:G:C6    | 3.07                     | 0.43              |
| 1:AA:1003:G:H21  | 1:AA:1005:A:H5'   | 1.82                     | 0.43              |
| 1:AA:1108:G:C6   | 1:AA:1109:C:N4    | 2.86                     | 0.43              |
| 1:AA:1157:A:N6   | 1:AA:1180:A:C5    | 2.86                     | 0.43              |
| 1:AA:1268:A:H2   | 1:AA:1327:C:H1'   | 1.83                     | 0.43              |
| 1:AA:1287:A:H1'  | 1:AA:1353:G:O2'   | 2.18                     | 0.43              |
| 1:AA:1293:G:O2'  | 1:AA:1294:G:H5'   | 2.18                     | 0.43              |
| 1:AA:1441:G:N2   | 1:AA:1459:C:H5    | 2.16                     | 0.43              |
| 1:AA:1484:C:H2'  | 1:AA:1485:U:H5'   | 1.99                     | 0.43              |
| 1:AA:1499:A:N6   | 1:AA:1500:A:N6    | 2.66                     | 0.43              |
| 2:A1:39:U:C6     | 2:A1:39:U:H3'     | 2.53                     | 0.43              |
| 3:AC:28:G:C2     | 3:AC:43:C:O2      | 2.71                     | 0.43              |
| 3:AC:50:U:C4     | 3:AC:65:G:N1      | 2.86                     | 0.43              |
| 3:AC:58:A:H2'    | 3:AC:61:C:C4      | 2.53                     | 0.43              |
| 3:AD:15:G:H8     | 3:AD:15:G:O5'     | 2.01                     | 0.43              |
| 3:AD:32:U:O2'    | 9:AJ:77:SER:CB    | 2.65                     | 0.43              |
| 5:AF:23:TYR:CD1  | 12:AM:11:PHE:HB2  | 2.54                     | 0.43              |
| 5:AF:27:LYS:HE3  | 5:AF:27:LYS:HB2   | 1.79                     | 0.43              |
| 5:AF:62:ASP:C    | 5:AF:63:ASN:CG    | 2.85                     | 0.43              |
| 6:AG:66:ARG:C    | 6:AG:68:TYR:H     | 2.26                     | 0.43              |
| 6:AG:134:ASP:O   | 6:AG:134:ASP:OD2  | 2.36                     | 0.43              |
| 7:AH:36:ASP:OD2  | 7:AH:40:ARG:HB3   | 2.18                     | 0.43              |
| 7:AH:76:ILE:CG2  | 7:AH:77:PRO:HD2   | 2.49                     | 0.43              |
| 8:AI:15:ASP:OD1  | 8:AI:15:ASP:C     | 2.61                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 8:AI:34:GLY:O     | 8:AI:68:PRO:HD3    | 2.19                     | 0.43              |
| 9:AJ:69:VAL:HG11  | 9:AJ:104:LEU:HD21  | 1.94                     | 0.43              |
| 9:AJ:75:VAL:HG22  | 9:AJ:87:VAL:C      | 2.43                     | 0.43              |
| 9:AJ:121:ALA:HB1  | 9:AJ:125:MET:HE3   | 2.01                     | 0.43              |
| 9:AJ:140:ASP:O    | 9:AJ:141:VAL:C     | 2.61                     | 0.43              |
| 10:AK:104:ARG:HD3 | 10:AK:107:LEU:HD11 | 2.01                     | 0.43              |
| 10:AK:104:ARG:HB2 | 10:AK:108:GLY:H    | 1.83                     | 0.43              |
| 10:AK:134:ILE:HB  | 10:AK:135:CYS:H    | 1.47                     | 0.43              |
| 15:AP:15:VAL:HG11 | 15:AP:39:ILE:HD11  | 1.98                     | 0.43              |
| 16:AQ:46:GLU:O    | 16:AQ:49:HIS:CB    | 2.64                     | 0.43              |
| 18:AS:40:ASP:O    | 18:AS:40:ASP:OD1   | 2.36                     | 0.43              |
| 20:AU:31:LEU:CD2  | 20:AU:65:ILE:HG13  | 2.48                     | 0.43              |
| 21:AV:17:GLU:OE1  | 21:AV:18:LYS:N     | 2.51                     | 0.43              |
| 22:AW:53:LEU:HD12 | 22:AW:100:ILE:HG13 | 2.00                     | 0.43              |
| 22:AW:57:ARG:HH21 | 22:AW:100:ILE:CD1  | 2.30                     | 0.43              |
| 24:BA:28:A:N3     | 24:BA:29:U:H4'     | 2.34                     | 0.43              |
| 24:BA:55:G:C2     | 24:BA:56:A:C8      | 3.06                     | 0.43              |
| 24:BA:73:A:H2'    | 24:BA:74:A:OP2     | 2.19                     | 0.43              |
| 24:BA:179:G:C5    | 24:BA:180:G:C5     | 3.06                     | 0.43              |
| 24:BA:204:A:H4'   | 24:BA:205:G:O5'    | 2.18                     | 0.43              |
| 24:BA:393:C:C2    | 24:BA:394:A:C8     | 3.06                     | 0.43              |
| 24:BA:479:A:O2'   | 24:BA:480:A:H5'    | 2.17                     | 0.43              |
| 24:BA:503:A:O2'   | 24:BA:506:G:OP2    | 2.37                     | 0.43              |
| 24:BA:622:G:O2'   | 24:BA:623:G:H5'    | 2.18                     | 0.43              |
| 24:BA:641:C:C2'   | 24:BA:642:G:C5'    | 2.89                     | 0.43              |
| 24:BA:662:G:OP1   | 36:BO:19:VAL:HG11  | 2.17                     | 0.43              |
| 24:BA:823:G:C4    | 24:BA:835:A:C2     | 3.06                     | 0.43              |
| 24:BA:882:G:H2'   | 24:BA:883:G:H8     | 1.83                     | 0.43              |
| 24:BA:998:C:O5'   | 24:BA:998:C:H6     | 2.00                     | 0.43              |
| 24:BA:1093:G:N2   | 24:BA:1098:A:N6    | 2.66                     | 0.43              |
| 24:BA:1178:C:C2   | 24:BA:1179:C:C4    | 3.05                     | 0.43              |
| 24:BA:1312:U:O3'  | 44:BW:63:LYS:CD    | 2.67                     | 0.43              |
| 24:BA:1344:G:H4'  | 24:BA:1384:A:C2    | 2.49                     | 0.43              |
| 24:BA:1348:G:O6   | 24:BA:1599:C:C4    | 2.72                     | 0.43              |
| 24:BA:1449:A:C4   | 24:BA:1529:A:C2    | 3.06                     | 0.43              |
| 24:BA:1662:C:C2   | 24:BA:1663:C:C5    | 3.07                     | 0.43              |
| 24:BA:1669:A:O3'  | 24:BA:2549:G:H5'   | 2.17                     | 0.43              |
| 24:BA:1678:G:O2'  | 24:BA:1679:U:H5'   | 2.18                     | 0.43              |
| 24:BA:1731:G:O2'  | 24:BA:1732:A:C5'   | 2.66                     | 0.43              |
| 24:BA:1826:G:N2   | 24:BA:1970:A:H2    | 2.15                     | 0.43              |
| 24:BA:1827:C:C5'  | 24:BA:1971:A:H4'   | 2.48                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1887:C:O2'  | 24:BA:1888:G:H5'   | 2.19                     | 0.43              |
| 24:BA:1909:C:N3   | 24:BA:1922:G:C2    | 2.87                     | 0.43              |
| 24:BA:1954:G:N3   | 24:BA:2551:C:C5'   | 2.79                     | 0.43              |
| 24:BA:2015:A:C8   | 24:BA:2016:U:C5    | 3.07                     | 0.43              |
| 24:BA:2106:G:H2'  | 24:BA:2107:C:H6    | 1.83                     | 0.43              |
| 24:BA:2129:C:O2'  | 24:BA:2130:U:O4'   | 2.25                     | 0.43              |
| 24:BA:2133:G:O6   | 24:BA:2157:G:N9    | 2.51                     | 0.43              |
| 24:BA:2216:G:C2'  | 24:BA:2217:G:H5'   | 2.49                     | 0.43              |
| 24:BA:2284:C:H5'' | 52:B5:9:LEU:HG     | 1.99                     | 0.43              |
| 24:BA:2358:G:N3   | 24:BA:2358:G:C2'   | 2.81                     | 0.43              |
| 24:BA:2360:A:OP2  | 24:BA:2360:A:H8    | 1.99                     | 0.43              |
| 24:BA:2514:U:C4   | 24:BA:2515:C:N4    | 2.82                     | 0.43              |
| 24:BA:2589:A:N3   | 24:BA:2590:A:C8    | 2.86                     | 0.43              |
| 24:BA:2616:C:C2   | 24:BA:2617:C:C5    | 3.06                     | 0.43              |
| 24:BA:2674:G:H4'  | 35:BN:26:LYS:NZ    | 2.33                     | 0.43              |
| 24:BA:2675:A:H2'  | 24:BA:2676:C:H6    | 1.83                     | 0.43              |
| 24:BA:2719:G:OP1  | 40:BS:101:PHE:CE1  | 2.71                     | 0.43              |
| 24:BA:2842:G:N2   | 24:BA:2843:G:H1'   | 2.34                     | 0.43              |
| 25:BB:73:A:C2     | 25:BB:74:U:N1      | 2.87                     | 0.43              |
| 27:BD:61:LEU:O    | 27:BD:62:TYR:CG    | 2.72                     | 0.43              |
| 27:BD:80:ALA:HB1  | 27:BD:96:HIS:CE1   | 2.52                     | 0.43              |
| 27:BD:142:VAL:CB  | 27:BD:192:THR:O    | 2.66                     | 0.43              |
| 27:BD:172:TYR:HA  | 27:BD:186:HIS:HA   | 2.00                     | 0.43              |
| 27:BD:203:ASN:O   | 27:BD:204:ILE:C    | 2.60                     | 0.43              |
| 28:BE:179:GLU:HB2 | 28:BE:181:LEU:CG   | 2.48                     | 0.43              |
| 29:BF:34:TRP:HB3  | 29:BF:38:ARG:NH1   | 2.31                     | 0.43              |
| 29:BF:128:ALA:O   | 29:BF:129:PHE:HB2  | 2.18                     | 0.43              |
| 29:BF:138:GLU:H   | 29:BF:138:GLU:HG2  | 1.43                     | 0.43              |
| 29:BF:185:ASP:HA  | 29:BF:188:ARG:HG2  | 1.99                     | 0.43              |
| 30:BG:15:VAL:HG21 | 30:BG:176:LEU:HD23 | 1.99                     | 0.43              |
| 30:BG:34:LEU:CD2  | 30:BG:172:LEU:HD11 | 2.48                     | 0.43              |
| 30:BG:55:LYS:CD   | 30:BG:147:ASP:O    | 2.54                     | 0.43              |
| 31:BH:7:LEU:CB    | 31:BH:65:HIS:NE2   | 2.80                     | 0.43              |
| 31:BH:35:VAL:HG21 | 31:BH:75:ALA:HB2   | 2.00                     | 0.43              |
| 31:BH:125:VAL:O   | 31:BH:125:VAL:HG12 | 2.18                     | 0.43              |
| 33:BL:27:LEU:CD1  | 33:BL:57:ILE:CD1   | 2.87                     | 0.43              |
| 33:BL:106:GLU:CA  | 33:BL:109:LYS:HE3  | 2.48                     | 0.43              |
| 35:BN:22:ILE:HB   | 35:BN:23:ARG:H     | 1.62                     | 0.43              |
| 35:BN:64:ARG:HH11 | 35:BN:67:LYS:HE2   | 1.83                     | 0.43              |
| 35:BN:101:PRO:CD  | 35:BN:119:PRO:O    | 2.63                     | 0.43              |
| 36:BO:35:HIS:O    | 36:BO:36:LYS:CD    | 2.65                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 36:BO:56:SER:OG    | 54:B7:27:THR:HG21  | 2.18                     | 0.43              |
| 37:BP:6:ARG:HG2    | 37:BP:70:PRO:CG    | 2.49                     | 0.43              |
| 37:BP:36:ALA:CA    | 37:BP:129:THR:HG22 | 2.48                     | 0.43              |
| 37:BP:102:VAL:HG13 | 37:BP:104:PHE:CZ   | 2.54                     | 0.43              |
| 38:BQ:13:HIS:ND1   | 38:BQ:13:HIS:C     | 2.74                     | 0.43              |
| 39:BR:26:LEU:H     | 39:BR:88:ASP:CB    | 2.31                     | 0.43              |
| 39:BR:26:LEU:HD12  | 39:BR:101:LEU:HD11 | 2.00                     | 0.43              |
| 39:BR:57:LYS:HD3   | 39:BR:58:LEU:N     | 2.34                     | 0.43              |
| 40:BS:92:GLY:HA2   | 40:BS:93:ARG:NE    | 2.33                     | 0.43              |
| 42:BU:28:GLU:N     | 42:BU:29:PRO:HD2   | 2.32                     | 0.43              |
| 43:BV:5:ALA:CB     | 43:BV:105:VAL:HG13 | 2.49                     | 0.43              |
| 44:BW:25:LYS:C     | 44:BW:26:TYR:CD1   | 2.96                     | 0.43              |
| 45:BX:6:HIS:CG     | 45:BX:33:LYS:NZ    | 2.84                     | 0.43              |
| 46:BY:76:LEU:CD2   | 46:BY:83:PRO:HB3   | 2.47                     | 0.43              |
| 46:BY:122:ARG:O    | 46:BY:124:ILE:N    | 2.51                     | 0.43              |
| 46:BY:138:GLU:O    | 46:BY:139:VAL:CG2  | 2.66                     | 0.43              |
| 47:BZ:44:ARG:CD    | 47:BZ:45:PHE:CE2   | 3.01                     | 0.43              |
| 50:B3:23:GLU:HB2   | 50:B3:24:THR:H     | 1.51                     | 0.43              |
| 51:B4:11:THR:CG2   | 51:B4:15:ARG:HB3   | 2.42                     | 0.43              |
| 52:B5:19:ARG:HH22  | 52:B5:41:PRO:CD    | 2.32                     | 0.43              |
| 54:B7:33:ASN:O     | 54:B7:34:TRP:CB    | 2.66                     | 0.43              |
| 1:AA:102:G:C6      | 1:AA:103:C:C4      | 3.06                     | 0.43              |
| 1:AA:102:G:C6      | 1:AA:103:C:C5      | 3.07                     | 0.43              |
| 1:AA:113:G:H4'     | 1:AA:354:G:H5''    | 1.99                     | 0.43              |
| 1:AA:186(B):C:H4'  | 22:AW:89:ARG:HH22  | 1.83                     | 0.43              |
| 1:AA:222:U:O2'     | 1:AA:223:U:H5'     | 2.18                     | 0.43              |
| 1:AA:237:C:H5''    | 19:AT:25:ARG:NH2   | 2.31                     | 0.43              |
| 1:AA:244:U:C6      | 1:AA:894:G:C2      | 3.07                     | 0.43              |
| 1:AA:302:G:O6      | 1:AA:303:A:C6      | 2.72                     | 0.43              |
| 1:AA:318:G:O2'     | 1:AA:1469:G:OP1    | 2.36                     | 0.43              |
| 1:AA:401:C:OP2     | 6:AG:73:ARG:NH2    | 2.52                     | 0.43              |
| 1:AA:407:G:O2'     | 6:AG:116:GLN:HG2   | 2.17                     | 0.43              |
| 1:AA:450:G:N7      | 1:AA:481:G:C5      | 2.86                     | 0.43              |
| 1:AA:486:U:C2      | 1:AA:487:A:C8      | 3.06                     | 0.43              |
| 1:AA:498:A:H61     | 1:AA:547:A:C5'     | 2.31                     | 0.43              |
| 1:AA:511:C:C2'     | 1:AA:512:U:C6      | 3.01                     | 0.43              |
| 1:AA:533:A:H3'     | 1:AA:534:U:C5'     | 2.47                     | 0.43              |
| 1:AA:548:G:O2'     | 1:AA:549:C:H5'     | 2.18                     | 0.43              |
| 1:AA:658:G:C2      | 1:AA:659:U:C2      | 3.07                     | 0.43              |
| 1:AA:696:A:C4      | 1:AA:697:U:O4'     | 2.72                     | 0.43              |
| 1:AA:887:G:O2'     | 1:AA:888:G:H5'     | 2.19                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:AA:924:C:H2'   | 1:AA:925:G:H8     | 1.83                     | 0.43              |
| 1:AA:1159:U:C5   | 1:AA:1181:G:N7    | 2.86                     | 0.43              |
| 1:AA:1194:U:H5'  | 7:AH:22:GLY:O     | 2.19                     | 0.43              |
| 1:AA:1312:G:C2'  | 1:AA:1313:U:H5'   | 2.48                     | 0.43              |
| 1:AA:1369:C:OP2  | 11:AL:111:ARG:HA  | 2.18                     | 0.43              |
| 1:AA:1375:A:C2   | 1:AA:1376:U:O2    | 2.71                     | 0.43              |
| 1:AA:1412:C:C2   | 1:AA:1413:A:N7    | 2.87                     | 0.43              |
| 1:AA:1498:U:C2   | 2:A1:41:U:OP1     | 2.72                     | 0.43              |
| 2:A1:10:U:O5'    | 2:A1:10:U:H6      | 2.01                     | 0.43              |
| 3:AC:57:G:C1'    | 30:BG:82:LEU:CD1  | 2.94                     | 0.43              |
| 3:AD:50:U:O2'    | 3:AD:51:U:H5'     | 2.17                     | 0.43              |
| 3:AB:75:C:O2     | 3:AB:75:C:C2'     | 2.67                     | 0.43              |
| 4:AE:16:HIS:O    | 4:AE:18:GLY:N     | 2.51                     | 0.43              |
| 4:AE:80:ILE:HG22 | 4:AE:81:VAL:N     | 2.33                     | 0.43              |
| 4:AE:84:GLU:CD   | 4:AE:219:VAL:HG21 | 2.43                     | 0.43              |
| 4:AE:193:ASP:O   | 4:AE:194:PRO:O    | 2.36                     | 0.43              |
| 4:AE:199:TYR:C   | 4:AE:201:ILE:HD12 | 2.44                     | 0.43              |
| 5:AF:49:SER:C    | 5:AF:51:GLY:N     | 2.76                     | 0.43              |
| 5:AF:82:GLU:O    | 5:AF:83:ARG:C     | 2.61                     | 0.43              |
| 5:AF:160:ALA:C   | 5:AF:162:GLN:N    | 2.69                     | 0.43              |
| 6:AG:13:ARG:NH1  | 6:AG:36:ARG:HD3   | 2.34                     | 0.43              |
| 6:AG:75:PHE:O    | 6:AG:76:ARG:C     | 2.61                     | 0.43              |
| 6:AG:100:ARG:O   | 6:AG:101:LEU:C    | 2.61                     | 0.43              |
| 6:AG:112:VAL:N   | 6:AG:116:GLN:OE1  | 2.42                     | 0.43              |
| 7:AH:37:ARG:NH1  | 7:AH:112:LEU:HA   | 2.33                     | 0.43              |
| 8:AI:14:LEU:HD21 | 8:AI:18:GLN:HG2   | 2.00                     | 0.43              |
| 8:AI:57:GLN:N    | 8:AI:57:GLN:CD    | 2.77                     | 0.43              |
| 8:AI:91:VAL:HG12 | 8:AI:92:LYS:O     | 2.18                     | 0.43              |
| 9:AJ:13:GLN:O    | 9:AJ:14:PRO:O     | 2.35                     | 0.43              |
| 9:AJ:15:ASP:HB3  | 9:AJ:20:ASP:H     | 1.84                     | 0.43              |
| 10:AK:19:VAL:O   | 10:AK:19:VAL:HG12 | 2.18                     | 0.43              |
| 11:AL:115:GLY:C  | 11:AL:117:HIS:N   | 2.73                     | 0.43              |
| 13:AN:50:TYR:CD1 | 13:AN:55:LYS:HA   | 2.54                     | 0.43              |
| 15:AP:6:GLY:O    | 15:AP:8:GLU:N     | 2.52                     | 0.43              |
| 15:AP:14:ARG:CG  | 15:AP:44:ARG:NH1  | 2.77                     | 0.43              |
| 17:AR:87:ILE:CG2 | 17:AR:88:ARG:N    | 2.81                     | 0.43              |
| 18:AS:16:HIS:C   | 18:AS:17:TYR:CD1  | 2.96                     | 0.43              |
| 18:AS:19:ILE:CG2 | 18:AS:36:ILE:O    | 2.67                     | 0.43              |
| 19:AT:83:ASP:O   | 19:AT:84:LEU:C    | 2.59                     | 0.43              |
| 19:AT:94:ASN:O   | 19:AT:95:TYR:C    | 2.61                     | 0.43              |
| 19:AT:95:TYR:C   | 19:AT:97:SER:N    | 2.77                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 20:AU:52:PRO:O    | 20:AU:53:ARG:C    | 2.61                     | 0.43              |
| 21:AV:27:GLU:O    | 21:AV:28:LYS:HB2  | 2.17                     | 0.43              |
| 21:AV:30:LEU:HB2  | 21:AV:48:THR:HG22 | 2.00                     | 0.43              |
| 21:AV:32:LYS:HB2  | 21:AV:57:HIS:CE1  | 2.54                     | 0.43              |
| 22:AW:11:SER:CA   | 22:AW:13:LEU:HD11 | 2.35                     | 0.43              |
| 22:AW:45:GLN:HE21 | 22:AW:91:LEU:CD1  | 2.17                     | 0.43              |
| 24:BA:60:G:C8     | 24:BA:63:U:C5     | 3.06                     | 0.43              |
| 24:BA:73:A:C2'    | 24:BA:74:A:OP2    | 2.67                     | 0.43              |
| 24:BA:176:G:C3'   | 24:BA:177:G:H8    | 2.30                     | 0.43              |
| 24:BA:179:G:C5'   | 53:B6:32:LYS:NZ   | 2.69                     | 0.43              |
| 24:BA:227:A:N6    | 24:BA:2407:G:H8   | 2.13                     | 0.43              |
| 24:BA:247:G:H22   | 54:B7:8:LYS:CG    | 2.31                     | 0.43              |
| 24:BA:271:G:H2'   | 24:BA:272:G:H8    | 1.83                     | 0.43              |
| 24:BA:400:G:O6    | 50:B3:63:TYR:CE2  | 2.68                     | 0.43              |
| 24:BA:410:G:C6    | 24:BA:418:G:C2    | 3.07                     | 0.43              |
| 24:BA:413:C:H42   | 24:BA:2410:G:H1   | 1.66                     | 0.43              |
| 24:BA:427:U:O2'   | 24:BA:428:A:O4'   | 2.35                     | 0.43              |
| 24:BA:447:A:C6    | 24:BA:473:G:H1'   | 2.54                     | 0.43              |
| 24:BA:451:C:OP1   | 29:BF:50:SER:OG   | 2.36                     | 0.43              |
| 24:BA:479:A:C2'   | 24:BA:480:A:OP2   | 2.66                     | 0.43              |
| 24:BA:503:A:C2    | 24:BA:506:G:C2    | 3.06                     | 0.43              |
| 24:BA:631:A:C8    | 24:BA:631:A:H3'   | 2.53                     | 0.43              |
| 24:BA:687:C:H4'   | 53:B6:4:THR:HG22  | 2.01                     | 0.43              |
| 24:BA:751:A:H62   | 24:BA:789:A:H62   | 1.66                     | 0.43              |
| 24:BA:783:A:O3'   | 24:BA:2589:A:P    | 2.76                     | 0.43              |
| 24:BA:805:G:C6    | 24:BA:2068:U:OP1  | 2.72                     | 0.43              |
| 24:BA:819:A:OP2   | 24:BA:1187:G:N2   | 2.51                     | 0.43              |
| 24:BA:842:G:C6    | 24:BA:843:G:C5    | 3.06                     | 0.43              |
| 24:BA:866:A:C2    | 24:BA:867:C:C6    | 3.06                     | 0.43              |
| 24:BA:869:G:C2'   | 24:BA:870:A:C5'   | 2.80                     | 0.43              |
| 24:BA:872:A:O2'   | 37:BP:66:ILE:CD1  | 2.66                     | 0.43              |
| 24:BA:974:G:HO2'  | 24:BA:1186:G:C1'  | 2.31                     | 0.43              |
| 24:BA:985:C:O5'   | 24:BA:985:C:C6    | 2.72                     | 0.43              |
| 24:BA:1013:C:C2   | 24:BA:1014:U:C5   | 3.06                     | 0.43              |
| 24:BA:1030:G:C5   | 24:BA:1125:G:N2   | 2.86                     | 0.43              |
| 24:BA:1035:U:H2'  | 24:BA:1036:G:C8   | 2.54                     | 0.43              |
| 24:BA:1059:G:H5'  | 33:BL:116:ASN:ND2 | 2.32                     | 0.43              |
| 24:BA:1163:G:N3   | 24:BA:1164:G:C8   | 2.86                     | 0.43              |
| 24:BA:1183:G:P    | 24:BA:1183:G:C3'  | 3.06                     | 0.43              |
| 24:BA:1302:A:H3'  | 24:BA:1303:G:H5'  | 2.00                     | 0.43              |
| 24:BA:1434:A:H61  | 24:BA:1558:A:N6   | 2.13                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1459:G:O6    | 24:BA:1461:G:C5   | 2.72                     | 0.43              |
| 24:BA:1565:C:OP1   | 27:BD:24:ILE:HG23 | 2.18                     | 0.43              |
| 24:BA:1569:A:H4'   | 27:BD:39:LYS:HE2  | 2.00                     | 0.43              |
| 24:BA:1654:A:C6    | 24:BA:1655:A:N7   | 2.87                     | 0.43              |
| 24:BA:1674:G:H21   | 24:BA:1676:A:H61  | 1.67                     | 0.43              |
| 24:BA:1697:G:O6    | 24:BA:1698:A:C6   | 2.72                     | 0.43              |
| 24:BA:1710:C:C2    | 24:BA:1711:C:C5   | 3.07                     | 0.43              |
| 24:BA:1743:G:H2'   | 24:BA:1746:G:O4'  | 2.18                     | 0.43              |
| 24:BA:1817:G:H2'   | 24:BA:1818:U:C5'  | 2.49                     | 0.43              |
| 24:BA:2030:A:HO2'  | 24:BA:2031:A:P    | 2.41                     | 0.43              |
| 24:BA:2069:G:C2    | 24:BA:2443:C:C4   | 3.07                     | 0.43              |
| 24:BA:2087:G:H5''  | 24:BA:2087:G:H8   | 1.83                     | 0.43              |
| 24:BA:2114:A:C6    | 24:BA:2170:A:N6   | 2.86                     | 0.43              |
| 24:BA:2126:A:C6    | 24:BA:2163:C:H4'  | 2.51                     | 0.43              |
| 24:BA:2318:G:P     | 24:BA:2318:G:C8   | 3.10                     | 0.43              |
| 24:BA:2358:G:C8    | 24:BA:2358:G:OP1  | 2.71                     | 0.43              |
| 24:BA:2358:G:C6    | 24:BA:2359:C:C5   | 3.07                     | 0.43              |
| 24:BA:2406:U:C4    | 36:BO:65:ARG:HB3  | 2.54                     | 0.43              |
| 24:BA:2474:C:H6    | 24:BA:2474:C:O5'  | 2.01                     | 0.43              |
| 24:BA:2485:G:H4'   | 37:BP:125:LEU:O   | 2.19                     | 0.43              |
| 24:BA:2521:C:C2    | 24:BA:2522:U:H6   | 2.31                     | 0.43              |
| 24:BA:2635:C:H5''  | 28:BE:78:LEU:CD1  | 2.49                     | 0.43              |
| 24:BA:2694:G:H8    | 24:BA:2694:G:O5'  | 2.01                     | 0.43              |
| 24:BA:2729:G:C6    | 24:BA:2730:C:C5   | 3.06                     | 0.43              |
| 24:BA:2737:G:C2    | 24:BA:2738:A:N7   | 2.86                     | 0.43              |
| 24:BA:2748:A:O2'   | 31:BH:66:GLY:CA   | 2.62                     | 0.43              |
| 24:BA:2782:G:H2'   | 24:BA:2783:G:C8   | 2.53                     | 0.43              |
| 25:BB:21:G:C6      | 25:BB:22:U:C2     | 3.07                     | 0.43              |
| 25:BB:44:G:H5''    | 25:BB:45:A:OP1    | 2.19                     | 0.43              |
| 25:BB:74:U:C3'     | 25:BB:75:G:O4'    | 2.65                     | 0.43              |
| 26:BC:19:ILE:CG2   | 26:BC:19:ILE:O    | 2.66                     | 0.43              |
| 26:BC:103:ILE:CD1  | 26:BC:110:PHE:CZ  | 3.00                     | 0.43              |
| 26:BC:163:PHE:O    | 26:BC:164:ARG:HB2 | 2.18                     | 0.43              |
| 26:BC:210:ARG:HH11 | 26:BC:210:ARG:CG  | 2.31                     | 0.43              |
| 27:BD:63:ARG:HB2   | 27:BD:87:ASN:OD1  | 2.19                     | 0.43              |
| 27:BD:63:ARG:CG    | 27:BD:65:ILE:HD11 | 2.48                     | 0.43              |
| 27:BD:67:PHE:O     | 27:BD:153:ALA:HB2 | 2.18                     | 0.43              |
| 27:BD:126:GLN:NE2  | 27:BD:129:ASN:OD1 | 2.38                     | 0.43              |
| 28:BE:32:PRO:HG3   | 28:BE:88:GLY:CA   | 2.47                     | 0.43              |
| 28:BE:66:HIS:ND1   | 28:BE:67:PHE:CA   | 2.81                     | 0.43              |
| 28:BE:71:GLY:O     | 28:BE:72:VAL:CG1  | 2.67                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 28:BE:80:GLU:HG2  | 28:BE:83:ASP:CG    | 2.41                     | 0.43              |
| 28:BE:111:ARG:HB3 | 28:BE:112:GLY:H    | 1.37                     | 0.43              |
| 30:BG:47:LYS:HB3  | 30:BG:72:ARG:HB3   | 2.00                     | 0.43              |
| 30:BG:49:ASP:C    | 30:BG:70:VAL:HG13  | 2.43                     | 0.43              |
| 30:BG:125:PHE:CB  | 30:BG:131:TYR:O    | 2.60                     | 0.43              |
| 30:BG:131:TYR:CE1 | 30:BG:133:LEU:O    | 2.65                     | 0.43              |
| 30:BG:163:ALA:O   | 30:BG:169:ALA:HB2  | 2.19                     | 0.43              |
| 31:BH:25:LYS:CE   | 31:BH:32:GLU:HB2   | 2.49                     | 0.43              |
| 31:BH:89:ILE:O    | 31:BH:89:ILE:HG23  | 2.18                     | 0.43              |
| 31:BH:143:GLN:O   | 31:BH:146:ALA:N    | 2.51                     | 0.43              |
| 32:BK:6:LEU:N     | 32:BK:8:PRO:HD2    | 2.33                     | 0.43              |
| 33:BL:20:ALA:HB3  | 33:BL:21:PRO:HD3   | 2.00                     | 0.43              |
| 34:BM:33:LEU:C    | 34:BM:33:LEU:CD2   | 2.89                     | 0.43              |
| 34:BM:97:ARG:O    | 34:BM:100:GLU:CA   | 2.66                     | 0.43              |
| 35:BN:6:THR:CG2   | 35:BN:21:CYS:HB3   | 2.48                     | 0.43              |
| 35:BN:42:SER:CA   | 35:BN:55:GLY:O     | 2.66                     | 0.43              |
| 35:BN:63:VAL:HB   | 35:BN:78:ARG:CD    | 2.48                     | 0.43              |
| 35:BN:77:ILE:HG12 | 40:BS:75:ILE:HD12  | 1.99                     | 0.43              |
| 35:BN:78:ARG:H    | 35:BN:78:ARG:CD    | 2.31                     | 0.43              |
| 36:BO:81:GLN:CB   | 36:BO:86:LYS:HE3   | 2.48                     | 0.43              |
| 36:BO:94:GLU:CD   | 36:BO:94:GLU:O     | 2.62                     | 0.43              |
| 36:BO:128:HIS:HA  | 36:BO:147:LEU:HD22 | 1.96                     | 0.43              |
| 37:BP:64:ILE:O    | 37:BP:65:PHE:CD2   | 2.71                     | 0.43              |
| 37:BP:68:ILE:HD12 | 37:BP:68:ILE:HA    | 1.86                     | 0.43              |
| 37:BP:79:LEU:O    | 37:BP:80:GLU:HB3   | 2.18                     | 0.43              |
| 38:BQ:28:LEU:O    | 38:BQ:31:HIS:N     | 2.51                     | 0.43              |
| 38:BQ:47:PHE:O    | 38:BQ:49:ASP:N     | 2.51                     | 0.43              |
| 38:BQ:52:ILE:CD1  | 38:BQ:56:LYS:HG2   | 2.47                     | 0.43              |
| 39:BR:94:TYR:HD1  | 39:BR:94:TYR:H     | 1.66                     | 0.43              |
| 40:BS:35:LYS:CG   | 40:BS:84:GLN:O     | 2.53                     | 0.43              |
| 40:BS:48:ILE:HG21 | 40:BS:50:ILE:HD11  | 1.99                     | 0.43              |
| 40:BS:50:ILE:HD12 | 40:BS:76:PHE:HB3   | 2.00                     | 0.43              |
| 41:BT:70:ARG:O    | 41:BT:72:HIS:N     | 2.51                     | 0.43              |
| 42:BU:6:LYS:HE3   | 42:BU:12:TYR:O     | 2.19                     | 0.43              |
| 44:BW:6:ASP:O     | 44:BW:7:VAL:C      | 2.61                     | 0.43              |
| 44:BW:68:ARG:HB3  | 44:BW:68:ARG:HH11  | 1.81                     | 0.43              |
| 45:BX:96:ILE:HD12 | 45:BX:103:GLY:HA2  | 2.00                     | 0.43              |
| 46:BY:45:ASP:C    | 46:BY:47:VAL:N     | 2.74                     | 0.43              |
| 46:BY:48:PHE:CA   | 46:BY:54:HIS:HE1   | 2.32                     | 0.43              |
| 46:BY:118:GLN:HB3 | 46:BY:144:LEU:HD13 | 2.01                     | 0.43              |
| 49:B2:31:LEU:HA   | 49:B2:31:LEU:HD22  | 1.71                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 51:B4:36:CYS:H   | 51:B4:49:CYS:HB3  | 1.84                     | 0.43              |
| 53:B6:18:PHE:C   | 53:B6:22:MET:HE3  | 2.43                     | 0.43              |
| 53:B6:21:ARG:CB  | 53:B6:21:ARG:CZ   | 2.97                     | 0.43              |
| 53:B6:35:ARG:NH1 | 53:B6:35:ARG:CB   | 2.81                     | 0.43              |
| 54:B7:6:THR:O    | 54:B7:6:THR:CG2   | 2.63                     | 0.43              |
| 54:B7:27:THR:N   | 54:B7:44:LYS:NZ   | 2.65                     | 0.43              |
| 54:B7:29:LYS:HZ3 | 54:B7:36:LYS:NZ   | 2.16                     | 0.43              |
| 55:B8:13:LYS:NZ  | 55:B8:13:LYS:CB   | 2.82                     | 0.43              |
| 1:AA:61:G:N7     | 1:AA:62:U:C4      | 2.87                     | 0.43              |
| 1:AA:131:C:N4    | 1:AA:232:G:H1     | 2.16                     | 0.43              |
| 1:AA:196:A:O2'   | 1:AA:222:U:O4'    | 2.36                     | 0.43              |
| 1:AA:342:C:C2    | 1:AA:348:G:N2     | 2.86                     | 0.43              |
| 1:AA:375:U:H2'   | 1:AA:376:G:O5'    | 2.18                     | 0.43              |
| 1:AA:411:A:N7    | 1:AA:429:U:C5     | 2.86                     | 0.43              |
| 1:AA:518:C:C5    | 1:AA:530:G:C8     | 3.07                     | 0.43              |
| 1:AA:529:G:N1    | 14:AO:49:ASN:CB   | 2.78                     | 0.43              |
| 1:AA:555:C:H2'   | 1:AA:555:C:O2     | 2.18                     | 0.43              |
| 1:AA:573:A:H2'   | 1:AA:574:A:N7     | 2.31                     | 0.43              |
| 1:AA:594:G:N1    | 1:AA:646:U:N3     | 2.67                     | 0.43              |
| 1:AA:598:U:C2    | 1:AA:599:C:C5     | 3.06                     | 0.43              |
| 1:AA:696:A:N1    | 1:AA:697:U:H1'    | 2.33                     | 0.43              |
| 1:AA:707:C:C2'   | 1:AA:708:C:O5'    | 2.67                     | 0.43              |
| 1:AA:833:U:H2'   | 1:AA:834:C:C6     | 2.52                     | 0.43              |
| 1:AA:874:G:N2    | 1:AA:875:C:N1     | 2.66                     | 0.43              |
| 1:AA:885:G:N2    | 1:AA:913:A:C2     | 2.85                     | 0.43              |
| 1:AA:893:C:H2'   | 1:AA:894:G:H8     | 1.84                     | 0.43              |
| 1:AA:918:A:H2'   | 1:AA:919:A:O4'    | 2.19                     | 0.43              |
| 1:AA:950:U:H1'   | 1:AA:971:G:C4     | 2.53                     | 0.43              |
| 1:AA:977:A:N6    | 1:AA:1224:G:O5'   | 2.51                     | 0.43              |
| 1:AA:994:A:C4    | 16:AQ:5:ALA:HA    | 2.54                     | 0.43              |
| 1:AA:1149:C:H2'  | 1:AA:1280:A:H61   | 1.83                     | 0.43              |
| 1:AA:1223:C:H6   | 1:AA:1223:C:H3'   | 1.84                     | 0.43              |
| 1:AA:1291:G:C6   | 1:AA:1292:U:C4    | 3.07                     | 0.43              |
| 1:AA:1331:G:C2'  | 1:AA:1332:A:OP2   | 2.66                     | 0.43              |
| 1:AA:1347:G:C8   | 11:AL:107:ARG:HB2 | 2.54                     | 0.43              |
| 1:AA:1347:G:N2   | 1:AA:1373:G:H2'   | 2.33                     | 0.43              |
| 1:AA:1349:A:C2'  | 1:AA:1350:A:H8    | 2.27                     | 0.43              |
| 1:AA:1410:G:C6   | 1:AA:1411:C:N4    | 2.86                     | 0.43              |
| 1:AA:1465:C:H2'  | 1:AA:1466:C:C5'   | 2.48                     | 0.43              |
| 1:AA:1472:U:C2'  | 1:AA:1473:A:H5'   | 2.47                     | 0.43              |
| 1:AA:1494:G:O2'  | 1:AA:1495:U:H6    | 1.98                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 3:AC:10:G:H2'      | 3:AC:11:C:C6      | 2.53                     | 0.43              |
| 3:AD:18:G:O2'      | 3:AD:19:G:H4'     | 2.18                     | 0.43              |
| 3:AD:60:U:OP2      | 3:AD:61:C:C5      | 2.72                     | 0.43              |
| 3:AB:12:U:H3'      | 3:AB:12:U:C6      | 2.53                     | 0.43              |
| 4:AE:21:ARG:C      | 4:AE:23:ARG:N     | 2.76                     | 0.43              |
| 5:AF:10:PHE:HB3    | 5:AF:11:ARG:NE    | 2.32                     | 0.43              |
| 5:AF:55:VAL:HG22   | 5:AF:68:VAL:CG2   | 2.47                     | 0.43              |
| 5:AF:134:ILE:O     | 5:AF:135:LYS:C    | 2.61                     | 0.43              |
| 6:AG:47:ARG:O      | 6:AG:47:ARG:HG3   | 2.18                     | 0.43              |
| 6:AG:133:VAL:HG21  | 6:AG:138:TYR:HE1  | 1.83                     | 0.43              |
| 8:AI:35:ALA:O      | 8:AI:36:ARG:CG    | 2.62                     | 0.43              |
| 8:AI:90:VAL:HG13   | 8:AI:90:VAL:O     | 2.18                     | 0.43              |
| 9:AJ:36:LYS:HA     | 9:AJ:36:LYS:HZ2   | 1.81                     | 0.43              |
| 9:AJ:46:ALA:O      | 9:AJ:47:CYS:C     | 2.60                     | 0.43              |
| 9:AJ:49:ILE:HG12   | 9:AJ:121:ALA:CB   | 2.47                     | 0.43              |
| 9:AJ:153:HIS:CE1   | 13:AN:58:PRO:CD   | 2.98                     | 0.43              |
| 10:AK:100:ILE:HD12 | 10:AK:100:ILE:N   | 2.11                     | 0.43              |
| 11:AL:23:ASN:HA    | 11:AL:57:GLY:O    | 2.18                     | 0.43              |
| 11:AL:99:LEU:CD2   | 11:AL:99:LEU:H    | 2.31                     | 0.43              |
| 11:AL:116:LYS:O    | 11:AL:117:HIS:C   | 2.62                     | 0.43              |
| 12:AM:69:ASN:O     | 12:AM:70:ARG:NH1  | 2.51                     | 0.43              |
| 13:AN:25:TYR:OH    | 13:AN:87:THR:HB   | 2.18                     | 0.43              |
| 13:AN:123:LYS:O    | 13:AN:124:LYS:C   | 2.61                     | 0.43              |
| 14:AO:98:TYR:CD1   | 14:AO:98:TYR:N    | 2.86                     | 0.43              |
| 14:AO:102:ARG:NH1  | 14:AO:110:VAL:HA  | 2.34                     | 0.43              |
| 17:AR:7:GLU:O      | 17:AR:8:LYS:C     | 2.62                     | 0.43              |
| 17:AR:12:ILE:HG12  | 17:AR:27:VAL:HG13 | 2.01                     | 0.43              |
| 19:AT:60:ILE:CD1   | 19:AT:62:SER:HA   | 2.48                     | 0.43              |
| 21:AV:30:LEU:HD23  | 21:AV:32:LYS:H    | 1.84                     | 0.43              |
| 21:AV:41:VAL:CB    | 21:AV:42:PRO:CD   | 2.81                     | 0.43              |
| 21:AV:63:THR:HG22  | 21:AV:64:GLU:N    | 2.33                     | 0.43              |
| 22:AW:25:ARG:O     | 22:AW:28:ALA:N    | 2.51                     | 0.43              |
| 24:BA:32:C:H1'     | 24:BA:474:G:N2    | 2.33                     | 0.43              |
| 24:BA:71:A:H4'     | 24:BA:72:U:C5'    | 2.24                     | 0.43              |
| 24:BA:112:U:C3'    | 24:BA:113:G:C5'   | 2.68                     | 0.43              |
| 24:BA:120:U:C2'    | 24:BA:121:G:OP2   | 2.66                     | 0.43              |
| 24:BA:196:A:C2     | 24:BA:828:U:H5''  | 2.50                     | 0.43              |
| 24:BA:213:A:H2'    | 24:BA:213:A:N3    | 2.33                     | 0.43              |
| 24:BA:251:A:O2'    | 24:BA:252:G:OP1   | 2.36                     | 0.43              |
| 24:BA:281:G:O2'    | 24:BA:282:A:H5''  | 2.19                     | 0.43              |
| 24:BA:349:G:C2'    | 24:BA:350:U:H6    | 2.24                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:351:G:O2'   | 24:BA:352:G:N7    | 2.35                     | 0.43              |
| 24:BA:379:G:C6    | 24:BA:396:G:C6    | 3.07                     | 0.43              |
| 24:BA:431:U:H2'   | 24:BA:431:U:O2    | 2.18                     | 0.43              |
| 24:BA:458:G:O2'   | 53:B6:40:TRP:CE2  | 2.72                     | 0.43              |
| 24:BA:523:C:C4    | 24:BA:524:U:C5    | 3.06                     | 0.43              |
| 24:BA:548:A:N6    | 24:BA:549:G:N3    | 2.66                     | 0.43              |
| 24:BA:585:G:C6    | 24:BA:1251:C:C6   | 3.06                     | 0.43              |
| 24:BA:586:A:H5'   | 29:BF:89:VAL:CB   | 2.47                     | 0.43              |
| 24:BA:607:U:C2    | 24:BA:608:A:H8    | 2.34                     | 0.43              |
| 24:BA:659:C:H4'   | 29:BF:102:PRO:CD  | 2.48                     | 0.43              |
| 24:BA:761:A:H8    | 24:BA:761:A:O5'   | 2.01                     | 0.43              |
| 24:BA:771:G:C6    | 24:BA:772:C:C4    | 3.06                     | 0.43              |
| 24:BA:837:C:C2'   | 24:BA:838:C:O5'   | 2.67                     | 0.43              |
| 24:BA:838:C:N1    | 24:BA:941:A:N6    | 2.66                     | 0.43              |
| 24:BA:844:C:OP2   | 24:BA:844:C:H6    | 2.01                     | 0.43              |
| 24:BA:849:A:H3'   | 24:BA:850:C:C6    | 2.53                     | 0.43              |
| 24:BA:909:A:C2    | 24:BA:912:C:N1    | 2.87                     | 0.43              |
| 24:BA:1024:G:C5   | 24:BA:1134:G:H1'  | 2.54                     | 0.43              |
| 24:BA:1053:C:C4   | 24:BA:1054:A:N6   | 2.87                     | 0.43              |
| 24:BA:1086:A:N3   | 24:BA:1086:A:H2'  | 2.33                     | 0.43              |
| 24:BA:1131:G:O6   | 24:BA:2025:C:H1'  | 2.18                     | 0.43              |
| 24:BA:1164:G:C4   | 24:BA:1165:U:C6   | 3.07                     | 0.43              |
| 24:BA:1195:G:C2   | 24:BA:1196:C:C6   | 3.06                     | 0.43              |
| 24:BA:1326:U:C2   | 24:BA:1327:C:O4'  | 2.71                     | 0.43              |
| 24:BA:1335:U:P    | 44:BW:65:ARG:NE   | 2.92                     | 0.43              |
| 24:BA:1341:U:H3   | 24:BA:1398:C:C5'  | 2.16                     | 0.43              |
| 24:BA:1389:G:H2'  | 24:BA:1390:U:H6   | 1.83                     | 0.43              |
| 24:BA:1416:G:C2   | 24:BA:1417:C:N4   | 2.87                     | 0.43              |
| 24:BA:1416:G:N3   | 24:BA:1583:A:C6   | 2.86                     | 0.43              |
| 24:BA:1419:A:H3'  | 24:BA:1420:U:N1   | 2.34                     | 0.43              |
| 24:BA:1419:A:H3'  | 24:BA:1420:U:O4'  | 2.18                     | 0.43              |
| 24:BA:1422:G:N2   | 24:BA:1423:G:C4   | 2.87                     | 0.43              |
| 24:BA:1438:U:O2'  | 24:BA:1439:A:H5'  | 2.18                     | 0.43              |
| 24:BA:1448:G:C4'  | 24:BA:1543:A:C6   | 2.90                     | 0.43              |
| 24:BA:1476:C:N4   | 24:BA:1477:A:N1   | 2.67                     | 0.43              |
| 24:BA:1578:U:H5'' | 24:BA:1580:A:N1   | 2.33                     | 0.43              |
| 24:BA:1579:A:H3'  | 24:BA:1580:A:O4'  | 2.19                     | 0.43              |
| 24:BA:1791:A:P    | 27:BD:213:ARG:HD3 | 2.58                     | 0.43              |
| 24:BA:1793:C:C4   | 24:BA:1794:U:O4   | 2.71                     | 0.43              |
| 24:BA:1796:U:O2'  | 24:BA:1797:C:O5'  | 2.36                     | 0.43              |
| 24:BA:1843:C:O2'  | 24:BA:1844:C:H5'  | 2.18                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1892:C:C4    | 24:BA:1893:C:C5    | 3.07                     | 0.43              |
| 24:BA:1899:G:N2    | 24:BA:1902:C:N4    | 2.61                     | 0.43              |
| 24:BA:1907:G:O6    | 24:BA:1924:C:N4    | 2.52                     | 0.43              |
| 24:BA:1953:A:N7    | 24:BA:2550:G:H1'   | 2.33                     | 0.43              |
| 24:BA:1957:C:O2    | 24:BA:1958:C:C6    | 2.72                     | 0.43              |
| 24:BA:1964:G:C6    | 24:BA:1967:C:C5    | 3.07                     | 0.43              |
| 24:BA:1991:U:O5'   | 24:BA:1991:U:H6    | 2.01                     | 0.43              |
| 24:BA:2028:U:H2'   | 24:BA:2029:G:N7    | 2.31                     | 0.43              |
| 24:BA:2029:G:H2'   | 24:BA:2030:A:O3'   | 2.19                     | 0.43              |
| 24:BA:2084:C:N3    | 24:BA:2085:C:C5    | 2.87                     | 0.43              |
| 24:BA:2086:U:OP2   | 27:BD:260:ARG:NH2  | 2.51                     | 0.43              |
| 24:BA:2153:G:O2'   | 24:BA:2154:G:H5'   | 2.18                     | 0.43              |
| 24:BA:2286:A:C8    | 52:B5:31:PRO:HD2   | 2.53                     | 0.43              |
| 24:BA:2289:G:OP2   | 24:BA:2289:G:C8    | 2.71                     | 0.43              |
| 24:BA:2292:C:H2'   | 24:BA:2293:C:H6    | 1.84                     | 0.43              |
| 24:BA:2432:A:N6    | 50:B3:32:TYR:CD2   | 2.87                     | 0.43              |
| 24:BA:2491:U:O2    | 24:BA:2492:U:C4    | 2.70                     | 0.43              |
| 24:BA:2526:G:C6    | 24:BA:2527:C:C5    | 3.05                     | 0.43              |
| 24:BA:2532:G:O5'   | 24:BA:2532:G:H8    | 2.02                     | 0.43              |
| 24:BA:2544:G:H2'   | 24:BA:2545:G:C4'   | 2.48                     | 0.43              |
| 24:BA:2595:G:C2    | 24:BA:2599:G:C6    | 3.06                     | 0.43              |
| 24:BA:2634:G:HO2'  | 24:BA:2635:C:C5'   | 2.31                     | 0.43              |
| 24:BA:2642:G:C2    | 24:BA:2773:C:N3    | 2.86                     | 0.43              |
| 24:BA:2642:G:N1    | 24:BA:2643:G:C5    | 2.86                     | 0.43              |
| 24:BA:2708:G:H4'   | 38:BQ:71:GLN:OE1   | 2.18                     | 0.43              |
| 24:BA:2742:C:O3'   | 55:B8:35:ARG:NH2   | 2.51                     | 0.43              |
| 24:BA:2804:C:C4    | 24:BA:2805:G:N1    | 2.87                     | 0.43              |
| 24:BA:2894:G:N3    | 24:BA:2894:G:H2'   | 2.34                     | 0.43              |
| 25:BB:9:G:N2       | 25:BB:10:C:C4      | 2.87                     | 0.43              |
| 25:BB:75:G:H21     | 46:BY:85:HIS:CE1   | 2.35                     | 0.43              |
| 26:BC:54:SER:C     | 26:BC:56:GLN:H     | 2.26                     | 0.43              |
| 26:BC:79:LYS:HG3   | 26:BC:119:VAL:CG1  | 2.49                     | 0.43              |
| 26:BC:103:ILE:HG21 | 26:BC:108:MET:SD   | 2.58                     | 0.43              |
| 26:BC:119:VAL:HG23 | 26:BC:123:VAL:HG23 | 2.01                     | 0.43              |
| 27:BD:37:LEU:CD2   | 27:BD:64:ILE:H     | 2.27                     | 0.43              |
| 27:BD:55:GLY:CA    | 27:BD:217:ARG:NH2  | 2.81                     | 0.43              |
| 27:BD:90:ALA:CB    | 27:BD:159:ALA:HA   | 2.49                     | 0.43              |
| 27:BD:122:ASP:C    | 27:BD:131:LEU:HD21 | 2.43                     | 0.43              |
| 27:BD:219:PRO:HG2  | 27:BD:220:HIS:H    | 1.83                     | 0.43              |
| 28:BE:4:ILE:HD11   | 28:BE:76:ARG:NH1   | 2.33                     | 0.43              |
| 28:BE:49:LEU:CD2   | 28:BE:76:ARG:O     | 2.66                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 29:BF:31:HIS:HB3  | 36:BO:11:GLY:H     | 1.80                     | 0.43              |
| 29:BF:36:VAL:HG11 | 29:BF:183:VAL:HG21 | 2.00                     | 0.43              |
| 30:BG:19:LEU:HA   | 30:BG:22:ARG:CB    | 2.47                     | 0.43              |
| 30:BG:96:ARG:C    | 30:BG:100:TRP:CE3  | 2.97                     | 0.43              |
| 30:BG:134:GLY:HA3 | 30:BG:156:ASP:CB   | 2.49                     | 0.43              |
| 31:BH:17:VAL:HG21 | 31:BH:45:VAL:CG1   | 2.31                     | 0.43              |
| 31:BH:26:VAL:HB   | 31:BH:75:ALA:HB1   | 2.01                     | 0.43              |
| 31:BH:85:LYS:CD   | 31:BH:145:ALA:CB   | 2.93                     | 0.43              |
| 32:BK:21:VAL:CA   | 32:BK:26:ALA:HB2   | 2.49                     | 0.43              |
| 32:BK:79:ILE:HB   | 32:BK:144:VAL:HG23 | 2.00                     | 0.43              |
| 32:BK:93:THR:O    | 32:BK:94:ALA:C     | 2.61                     | 0.43              |
| 33:BL:37:PHE:CZ   | 33:BL:58:THR:C     | 2.96                     | 0.43              |
| 33:BL:77:LEU:HA   | 33:BL:77:LEU:HD22  | 1.70                     | 0.43              |
| 34:BM:4:TYR:HB3   | 41:BT:64:ARG:NH1   | 2.33                     | 0.43              |
| 34:BM:34:LEU:CD2  | 34:BM:116:LEU:CD2  | 2.94                     | 0.43              |
| 34:BM:89:LYS:HA   | 34:BM:92:ALA:HB2   | 1.98                     | 0.43              |
| 34:BM:113:GLY:O   | 34:BM:114:ARG:C    | 2.61                     | 0.43              |
| 35:BN:3:GLN:CD    | 35:BN:3:GLN:N      | 2.76                     | 0.43              |
| 35:BN:21:CYS:CB   | 35:BN:40:VAL:O     | 2.67                     | 0.43              |
| 35:BN:36:GLY:N    | 35:BN:61:VAL:CG1   | 2.81                     | 0.43              |
| 36:BO:74:GLU:HB3  | 36:BO:107:LYS:HZ2  | 1.81                     | 0.43              |
| 36:BO:74:GLU:CB   | 36:BO:107:LYS:HD3  | 2.49                     | 0.43              |
| 36:BO:78:PRO:HD2  | 36:BO:115:LEU:C    | 2.43                     | 0.43              |
| 36:BO:81:GLN:C    | 36:BO:86:LYS:HG2   | 2.42                     | 0.43              |
| 36:BO:124:LYS:HG2 | 36:BO:143:GLY:HA3  | 2.01                     | 0.43              |
| 36:BO:126:VAL:HA  | 36:BO:146:VAL:N    | 2.31                     | 0.43              |
| 37:BP:25:ASP:OD1  | 37:BP:101:ARG:NH1  | 2.50                     | 0.43              |
| 37:BP:47:ILE:C    | 37:BP:49:ALA:N     | 2.74                     | 0.43              |
| 38:BQ:62:ALA:O    | 38:BQ:63:ARG:C     | 2.62                     | 0.43              |
| 38:BQ:105:ARG:NE  | 38:BQ:105:ARG:CA   | 2.79                     | 0.43              |
| 39:BR:57:LYS:CE   | 39:BR:58:LEU:HB3   | 2.49                     | 0.43              |
| 39:BR:62:LYS:C    | 39:BR:65:VAL:H     | 2.22                     | 0.43              |
| 39:BR:69:VAL:O    | 39:BR:73:LEU:HD22  | 2.18                     | 0.43              |
| 40:BS:96:ARG:CD   | 40:BS:117:ASP:OD2  | 2.50                     | 0.43              |
| 41:BT:89:GLU:HB3  | 42:BU:51:VAL:CA    | 2.49                     | 0.43              |
| 41:BT:94:ASN:C    | 41:BT:96:ALA:N     | 2.73                     | 0.43              |
| 42:BU:5:VAL:HG13  | 42:BU:39:LEU:CA    | 2.48                     | 0.43              |
| 42:BU:11:GLN:NE2  | 42:BU:24:LYS:NZ    | 2.37                     | 0.43              |
| 42:BU:15:GLU:O    | 42:BU:100:ARG:NH2  | 2.52                     | 0.43              |
| 42:BU:39:LEU:O    | 42:BU:40:LEU:CB    | 2.67                     | 0.43              |
| 42:BU:76:LYS:HA   | 42:BU:86:GLY:HA3   | 2.01                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 43:BV:25:ARG:NH2 | 43:BV:73:ALA:HA    | 2.34                     | 0.43              |
| 45:BX:2:ARG:HE   | 45:BX:4:LYS:N      | 2.16                     | 0.43              |
| 45:BX:35:TYR:O   | 45:BX:64:GLU:O     | 2.36                     | 0.43              |
| 46:BY:102:LEU:HG | 46:BY:125:LEU:CG   | 2.46                     | 0.43              |
| 46:BY:102:LEU:CG | 46:BY:125:LEU:HD12 | 2.48                     | 0.43              |
| 50:B3:59:PHE:CA  | 50:B3:62:ARG:NH1   | 2.82                     | 0.43              |
| 51:B4:44:THR:CA  | 51:B4:52:TYR:OH    | 2.67                     | 0.43              |
| 54:B7:26:LYS:C   | 54:B7:28:GLY:N     | 2.77                     | 0.43              |
| 54:B7:34:TRP:CA  | 54:B7:36:LYS:HB2   | 2.48                     | 0.43              |
| 1:AA:22:G:C2'    | 1:AA:23:C:C6       | 2.82                     | 0.43              |
| 1:AA:44:G:C2     | 1:AA:45:U:H1'      | 2.54                     | 0.43              |
| 1:AA:99:C:O2'    | 1:AA:101:A:OP1     | 2.33                     | 0.43              |
| 1:AA:199:G:H2'   | 1:AA:200:G:C8      | 2.53                     | 0.43              |
| 1:AA:247:G:N1    | 1:AA:278:G:C2      | 2.86                     | 0.43              |
| 1:AA:285:G:C4    | 1:AA:286:G:C8      | 3.07                     | 0.43              |
| 1:AA:333:G:C2    | 1:AA:334:C:C4      | 3.07                     | 0.43              |
| 1:AA:404:U:OP1   | 6:AG:118:ARG:NH1   | 2.51                     | 0.43              |
| 1:AA:407:G:O2'   | 1:AA:408:A:H5'     | 2.18                     | 0.43              |
| 1:AA:408:A:C6    | 1:AA:409:G:C6      | 3.06                     | 0.43              |
| 1:AA:440:A:C2'   | 1:AA:442:C:H6      | 2.31                     | 0.43              |
| 1:AA:558:G:C5'   | 1:AA:559:A:C5'     | 2.96                     | 0.43              |
| 1:AA:643:C:C4    | 1:AA:644:G:N7      | 2.87                     | 0.43              |
| 1:AA:714:G:H2'   | 1:AA:715:A:H8      | 1.77                     | 0.43              |
| 1:AA:747:C:H2'   | 1:AA:748:C:C1'     | 2.49                     | 0.43              |
| 1:AA:753:A:O2'   | 1:AA:754:C:OP2     | 2.34                     | 0.43              |
| 1:AA:761:G:H2'   | 1:AA:762:C:H6      | 1.84                     | 0.43              |
| 1:AA:862:C:N3    | 1:AA:863:U:C5      | 2.87                     | 0.43              |
| 1:AA:896:C:C2    | 1:AA:897:C:C6      | 3.06                     | 0.43              |
| 1:AA:934:C:C5    | 1:AA:1344:C:C2     | 3.07                     | 0.43              |
| 1:AA:950:U:H2'   | 1:AA:951:G:H5'     | 2.00                     | 0.43              |
| 1:AA:979:C:O2    | 16:AQ:19:ARG:NE    | 2.52                     | 0.43              |
| 1:AA:1004:A:C5'  | 1:AA:1025:U:C5     | 3.02                     | 0.43              |
| 1:AA:1018:C:C4   | 1:AA:1019:C:C5     | 3.06                     | 0.43              |
| 1:AA:1051:C:H2'  | 1:AA:1052:U:O4'    | 2.19                     | 0.43              |
| 1:AA:1055:A:H2   | 5:AF:156:ARG:HD3   | 1.83                     | 0.43              |
| 1:AA:1082:G:C6   | 1:AA:1083:U:C5     | 3.06                     | 0.43              |
| 1:AA:1228:C:OP1  | 15:AP:115:LYS:HB3  | 2.18                     | 0.43              |
| 1:AA:1300:G:H2'  | 1:AA:1301:U:OP2    | 2.18                     | 0.43              |
| 1:AA:1345:U:N3   | 1:AA:1377:A:N6     | 2.66                     | 0.43              |
| 1:AA:1360:A:N1   | 1:AA:1361:G:C2     | 2.86                     | 0.43              |
| 2:A1:27:A:H2'    | 2:A1:28:G:O4'      | 2.18                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 2:A1:51:U:HO2'    | 2:A1:52:U:C5'      | 2.31                     | 0.43              |
| 3:AC:29:G:C2      | 3:AC:30:G:C8       | 3.06                     | 0.43              |
| 3:AD:19:G:OP1     | 3:AD:20:U:O4       | 2.36                     | 0.43              |
| 3:AD:64:A:N3      | 3:AD:65:G:C8       | 2.87                     | 0.43              |
| 4:AE:47:THR:HB    | 4:AE:48:MET:SD     | 2.59                     | 0.43              |
| 4:AE:73:THR:O     | 4:AE:78:GLN:HB2    | 2.19                     | 0.43              |
| 4:AE:164:VAL:HG22 | 4:AE:165:VAL:H     | 1.82                     | 0.43              |
| 4:AE:218:ALA:O    | 4:AE:221:LEU:N     | 2.51                     | 0.43              |
| 4:AE:223:ILE:HA   | 4:AE:226:ARG:NE    | 2.34                     | 0.43              |
| 5:AF:15:THR:HG23  | 5:AF:15:THR:O      | 2.18                     | 0.43              |
| 5:AF:39:ILE:O     | 5:AF:41:GLY:N      | 2.52                     | 0.43              |
| 6:AG:76:ARG:HG3   | 6:AG:207:TYR:CD2   | 2.54                     | 0.43              |
| 6:AG:101:LEU:C    | 6:AG:101:LEU:HD12  | 2.43                     | 0.43              |
| 7:AH:50:GLU:HB2   | 7:AH:53:LEU:HG     | 2.01                     | 0.43              |
| 7:AH:56:GLN:HE21  | 7:AH:56:GLN:CA     | 2.30                     | 0.43              |
| 7:AH:97:GLY:O     | 7:AH:98:THR:C      | 2.61                     | 0.43              |
| 9:AJ:84:ASN:O     | 9:AJ:84:ASN:CG     | 2.61                     | 0.43              |
| 9:AJ:111:ARG:NH1  | 9:AJ:122:HIS:ND1   | 2.67                     | 0.43              |
| 9:AJ:152:ALA:C    | 9:AJ:154:TYR:N     | 2.77                     | 0.43              |
| 10:AK:7:ALA:HB2   | 10:AK:85:ARG:HH11  | 1.83                     | 0.43              |
| 10:AK:33:GLU:O    | 10:AK:34:GLU:C     | 2.61                     | 0.43              |
| 10:AK:64:LYS:C    | 10:AK:65:TYR:CD1   | 2.97                     | 0.43              |
| 10:AK:85:ARG:HD2  | 10:AK:85:ARG:HA    | 1.79                     | 0.43              |
| 11:AL:33:PHE:HE1  | 11:AL:47:LEU:HB2   | 1.84                     | 0.43              |
| 11:AL:49:PRO:HB2  | 11:AL:82:ALA:HA    | 2.00                     | 0.43              |
| 11:AL:75:ASP:O    | 11:AL:76:ALA:C     | 2.60                     | 0.43              |
| 12:AM:3:LYS:N     | 12:AM:3:LYS:HD2    | 2.33                     | 0.43              |
| 12:AM:30:SER:O    | 12:AM:78:ASN:HB3   | 2.18                     | 0.43              |
| 12:AM:63:PHE:HA   | 16:AQ:59:ALA:CB    | 2.48                     | 0.43              |
| 13:AN:42:TRP:CZ3  | 13:AN:47:VAL:HG22  | 2.53                     | 0.43              |
| 13:AN:99:GLN:HA   | 13:AN:105:VAL:HG22 | 2.00                     | 0.43              |
| 15:AP:8:GLU:O     | 15:AP:10:PRO:HD2   | 2.18                     | 0.43              |
| 15:AP:60:VAL:HG13 | 15:AP:64:TRP:CE3   | 2.54                     | 0.43              |
| 15:AP:104:ARG:HG2 | 15:AP:105:THR:N    | 2.31                     | 0.43              |
| 16:AQ:24:CYS:HA   | 16:AQ:39:LEU:HA    | 2.01                     | 0.43              |
| 18:AS:20:VAL:HG11 | 18:AS:32:TYR:CG    | 2.54                     | 0.43              |
| 19:AT:5:VAL:CA    | 19:AT:59:ILE:O     | 2.66                     | 0.43              |
| 20:AU:67:ALA:O    | 20:AU:68:LYS:C     | 2.60                     | 0.43              |
| 24:BA:29:U:O2     | 24:BA:30:G:C6      | 2.71                     | 0.43              |
| 24:BA:149:A:H8    | 24:BA:150:C:O4'    | 2.01                     | 0.43              |
| 24:BA:204:A:H4'   | 24:BA:205:G:H5'    | 2.01                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:246:C:N3     | 24:BA:247:G:C5    | 2.86                     | 0.43              |
| 24:BA:270(K):C:H3' | 24:BA:270(L):U:C6 | 2.45                     | 0.43              |
| 24:BA:327:G:H2'    | 24:BA:327:G:N3    | 2.34                     | 0.43              |
| 24:BA:328:U:O2'    | 45:BX:67:LEU:N    | 2.51                     | 0.43              |
| 24:BA:483:A:H62    | 24:BA:497:A:H2    | 1.60                     | 0.43              |
| 24:BA:562:U:C5     | 24:BA:2036:C:O4'  | 2.71                     | 0.43              |
| 24:BA:585:G:O6     | 24:BA:1251:C:C6   | 2.71                     | 0.43              |
| 24:BA:602:G:H4'    | 24:BA:603:A:O2'   | 2.18                     | 0.43              |
| 24:BA:668:G:H5'    | 24:BA:669:G:OP2   | 2.19                     | 0.43              |
| 24:BA:674:G:O3'    | 29:BF:74:ARG:CZ   | 2.66                     | 0.43              |
| 24:BA:684:G:C2     | 24:BA:794:G:N2    | 2.87                     | 0.43              |
| 24:BA:685:A:C2     | 24:BA:774:A:C2    | 3.07                     | 0.43              |
| 24:BA:685:A:C2     | 24:BA:774:A:N1    | 2.87                     | 0.43              |
| 24:BA:945:A:C2'    | 24:BA:946:G:H5''  | 2.49                     | 0.43              |
| 24:BA:978:G:N1     | 24:BA:979:G:N1    | 2.67                     | 0.43              |
| 24:BA:993:G:N7     | 24:BA:994:C:N4    | 2.65                     | 0.43              |
| 24:BA:1009:A:C2    | 24:BA:1010:A:C2   | 3.07                     | 0.43              |
| 24:BA:1210:A:H4'   | 24:BA:1211:U:C5'  | 2.48                     | 0.43              |
| 24:BA:1292:U:C2    | 24:BA:1293:C:C5   | 3.07                     | 0.43              |
| 24:BA:1296:G:N3    | 24:BA:1297:C:C5   | 2.87                     | 0.43              |
| 24:BA:1301:A:H2'   | 24:BA:1302:A:O5'  | 2.18                     | 0.43              |
| 24:BA:1334:G:H2'   | 24:BA:1335:U:H6   | 1.82                     | 0.43              |
| 24:BA:1338:G:N2    | 24:BA:1393:A:H2   | 2.15                     | 0.43              |
| 24:BA:1416:G:N2    | 24:BA:1417:C:C4   | 2.87                     | 0.43              |
| 24:BA:1471:A:C2'   | 24:BA:1472:A:C5'  | 2.92                     | 0.43              |
| 24:BA:1540:G:C3'   | 24:BA:1541:U:C5'  | 2.96                     | 0.43              |
| 24:BA:1550:C:C2    | 24:BA:1551:C:C5   | 3.06                     | 0.43              |
| 24:BA:1605:C:C6    | 24:BA:1606:G:C8   | 3.06                     | 0.43              |
| 24:BA:1635:G:N3    | 24:BA:1636:C:C6   | 2.87                     | 0.43              |
| 24:BA:1824:G:H2'   | 24:BA:1825:A:C1'  | 2.48                     | 0.43              |
| 24:BA:1906:G:C8    | 24:BA:1929:G:C8   | 3.06                     | 0.43              |
| 24:BA:1945:G:C2    | 24:BA:1946:U:C4   | 3.06                     | 0.43              |
| 24:BA:1980:G:O2'   | 24:BA:1981:A:C5'  | 2.67                     | 0.43              |
| 24:BA:2018:G:C6    | 24:BA:2019:A:C2   | 3.07                     | 0.43              |
| 24:BA:2025:C:C2'   | 24:BA:2026:C:H6   | 2.23                     | 0.43              |
| 24:BA:2025:C:C4    | 24:BA:2026:C:N4   | 2.87                     | 0.43              |
| 24:BA:2051:A:OP2   | 24:BA:2051:A:C8   | 2.69                     | 0.43              |
| 24:BA:2114:A:C8    | 24:BA:2114:A:OP2  | 2.71                     | 0.43              |
| 24:BA:2132:U:C2    | 24:BA:2133:G:H5'' | 2.54                     | 0.43              |
| 24:BA:2210:G:O2'   | 24:BA:2211:G:OP2  | 2.33                     | 0.43              |
| 24:BA:2230:G:H1'   | 50:B3:58:ARG:HH22 | 1.79                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2346:A:HO2'  | 24:BA:2347:C:P     | 2.40                     | 0.43              |
| 24:BA:2348:U:O2'   | 24:BA:2349:G:H5'   | 2.19                     | 0.43              |
| 24:BA:2395:C:N4    | 24:BA:2396:G:N7    | 2.67                     | 0.43              |
| 24:BA:2564:A:C6    | 24:BA:2565:A:N6    | 2.87                     | 0.43              |
| 24:BA:2682:U:O2    | 28:BE:12:THR:OG1   | 2.30                     | 0.43              |
| 24:BA:2893:G:H4'   | 24:BA:2894:G:O4'   | 2.18                     | 0.43              |
| 25:BB:31:C:C2'     | 25:BB:32:C:OP1     | 2.67                     | 0.43              |
| 25:BB:78:A:H2'     | 25:BB:79:C:C5'     | 2.44                     | 0.43              |
| 25:BB:78:A:C6      | 25:BB:99:A:N6      | 2.83                     | 0.43              |
| 26:BC:25:ALA:O     | 26:BC:29:VAL:HG12  | 2.19                     | 0.43              |
| 26:BC:30:LYS:HD2   | 26:BC:185:LEU:CD1  | 2.48                     | 0.43              |
| 26:BC:97:GLU:HG2   | 26:BC:100:ILE:HD12 | 1.98                     | 0.43              |
| 26:BC:225:ASN:O    | 26:BC:227:HIS:N    | 2.51                     | 0.43              |
| 27:BD:96:HIS:CE1   | 27:BD:102:LYS:CD   | 2.93                     | 0.43              |
| 27:BD:165:ILE:N    | 27:BD:165:ILE:CD1  | 2.81                     | 0.43              |
| 27:BD:176:ARG:CA   | 27:BD:182:LEU:CD2  | 2.96                     | 0.43              |
| 27:BD:244:ARG:HA   | 27:BD:252:TRP:HE1  | 1.83                     | 0.43              |
| 28:BE:36:ARG:CD    | 28:BE:41:LYS:HZ2   | 2.26                     | 0.43              |
| 28:BE:133:LYS:HD2  | 28:BE:137:HIS:ND1  | 2.32                     | 0.43              |
| 29:BF:62:ARG:HG3   | 29:BF:63:LYS:HD3   | 2.00                     | 0.43              |
| 29:BF:132:VAL:HG22 | 29:BF:135:LYS:HB2  | 1.98                     | 0.43              |
| 29:BF:142:TRP:C    | 29:BF:142:TRP:CD1  | 2.94                     | 0.43              |
| 29:BF:202:PHE:CZ   | 29:BF:205:ARG:NH1  | 2.87                     | 0.43              |
| 30:BG:12:TYR:CE2   | 30:BG:13:GLU:OE2   | 2.72                     | 0.43              |
| 30:BG:91:ARG:NH2   | 30:BG:91:ARG:CG    | 2.78                     | 0.43              |
| 30:BG:94:LEU:HB3   | 30:BG:99:MET:HE3   | 1.96                     | 0.43              |
| 30:BG:111:LEU:HB3  | 30:BG:112:PRO:HD2  | 1.94                     | 0.43              |
| 30:BG:150:ASP:O    | 30:BG:152:LEU:N    | 2.52                     | 0.43              |
| 31:BH:97:ARG:O     | 31:BH:99:VAL:HG23  | 2.18                     | 0.43              |
| 31:BH:98:LEU:C     | 31:BH:100:GLY:N    | 2.77                     | 0.43              |
| 32:BK:109:ILE:CG2  | 32:BK:110:ASP:N    | 2.82                     | 0.43              |
| 34:BM:77:GLY:O     | 34:BM:78:TYR:O     | 2.37                     | 0.43              |
| 34:BM:109:LYS:HZ2  | 34:BM:109:LYS:HA   | 1.83                     | 0.43              |
| 35:BN:77:ILE:HG21  | 40:BS:65:LYS:CE    | 2.29                     | 0.43              |
| 35:BN:77:ILE:HG23  | 40:BS:65:LYS:HE2   | 1.93                     | 0.43              |
| 35:BN:90:GLN:O     | 35:BN:91:LEU:O     | 2.36                     | 0.43              |
| 36:BO:65:ARG:HH12  | 36:BO:68:GLN:NE2   | 2.14                     | 0.43              |
| 36:BO:131:SER:N    | 36:BO:134:ALA:HB2  | 2.34                     | 0.43              |
| 37:BP:11:LYS:HZ3   | 37:BP:73:PRO:CG    | 2.32                     | 0.43              |
| 37:BP:36:ALA:O     | 37:BP:37:LEU:CD2   | 2.67                     | 0.43              |
| 37:BP:91:GLU:OE2   | 37:BP:91:GLU:N     | 2.51                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 37:BP:115:MET:HA  | 37:BP:118:LEU:CD1 | 2.47                     | 0.43              |
| 38:BQ:43:GLU:O    | 38:BQ:46:GLY:N    | 2.51                     | 0.43              |
| 38:BQ:54:LEU:O    | 38:BQ:80:PHE:HE1  | 2.00                     | 0.43              |
| 40:BS:33:LYS:HE3  | 40:BS:45:PHE:CE2  | 2.54                     | 0.43              |
| 41:BT:98:LEU:HD13 | 41:BT:101:ARG:CG  | 2.49                     | 0.43              |
| 44:BW:23:GLU:OE1  | 44:BW:24:GLY:N    | 2.51                     | 0.43              |
| 44:BW:39:ILE:O    | 44:BW:43:VAL:CG2  | 2.66                     | 0.43              |
| 45:BX:86:ARG:HA   | 45:BX:91:GLU:O    | 2.19                     | 0.43              |
| 45:BX:104:GLY:O   | 45:BX:105:ALA:C   | 2.62                     | 0.43              |
| 46:BY:34:ASN:OD1  | 46:BY:34:ASN:C    | 2.60                     | 0.43              |
| 46:BY:41:LEU:O    | 46:BY:44:PHE:CB   | 2.63                     | 0.43              |
| 46:BY:43:GLU:HA   | 46:BY:46:LYS:CE   | 2.48                     | 0.43              |
| 46:BY:108:PRO:O   | 46:BY:109:ALA:HB2 | 2.18                     | 0.43              |
| 47:BZ:45:PHE:C    | 47:BZ:46:LYS:HD3  | 2.43                     | 0.43              |
| 48:B1:20:VAL:CG2  | 48:B1:52:ILE:HG23 | 2.30                     | 0.43              |
| 48:B1:28:MET:HB3  | 48:B1:32:PHE:CE1  | 2.54                     | 0.43              |
| 48:B1:33:GLN:HB3  | 48:B1:41:GLN:CD   | 2.44                     | 0.43              |
| 48:B1:55:LEU:H    | 48:B1:55:LEU:CD1  | 2.31                     | 0.43              |
| 49:B2:5:LYS:C     | 49:B2:6:VAL:HG22  | 2.43                     | 0.43              |
| 49:B2:35:ARG:HG2  | 49:B2:35:ARG:H    | 1.65                     | 0.43              |
| 51:B4:47:PRO:C    | 51:B4:58:LEU:CG   | 2.84                     | 0.43              |
| 52:B5:31:PRO:HB3  | 52:B5:34:LEU:CD1  | 2.30                     | 0.43              |
| 55:B8:19:ARG:HD3  | 55:B8:22:ARG:HB2  | 2.01                     | 0.43              |
| 1:AA:50:A:C6      | 1:AA:361:G:O4'    | 2.71                     | 0.43              |
| 1:AA:85:U:H2'     | 1:AA:86:U:O4'     | 2.18                     | 0.43              |
| 1:AA:128:G:C5     | 1:AA:129:U:C4     | 3.07                     | 0.43              |
| 1:AA:136:C:O4'    | 18:AS:1:MET:CE    | 2.66                     | 0.43              |
| 1:AA:149:A:C2     | 1:AA:150:C:C2     | 3.07                     | 0.43              |
| 1:AA:160:A:C2'    | 1:AA:161:A:H5'    | 2.49                     | 0.43              |
| 1:AA:191(C):G:O2' | 1:AA:191(D):U:H5' | 2.18                     | 0.43              |
| 1:AA:259:G:C2     | 1:AA:260:G:N3     | 2.87                     | 0.43              |
| 1:AA:319:G:H4'    | 1:AA:1468:A:H4'   | 1.99                     | 0.43              |
| 1:AA:363:A:P      | 14:AO:33:ARG:HH21 | 2.41                     | 0.43              |
| 1:AA:407:G:N1     | 1:AA:436:C:C2     | 2.86                     | 0.43              |
| 1:AA:424:G:N3     | 1:AA:425:G:C8     | 2.86                     | 0.43              |
| 1:AA:483:C:N4     | 1:AA:484:G:N1     | 2.66                     | 0.43              |
| 1:AA:494:U:O2     | 1:AA:495:A:O4'    | 2.37                     | 0.43              |
| 1:AA:589:C:C4     | 1:AA:590:C:N4     | 2.87                     | 0.43              |
| 1:AA:766:A:C8     | 1:AA:814:A:N1     | 2.87                     | 0.43              |
| 1:AA:780:A:C2     | 1:AA:803:G:N1     | 2.86                     | 0.43              |
| 1:AA:922:G:C2'    | 1:AA:923:A:H5'    | 2.48                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:957:U:O2     | 1:AA:960:U:C5     | 2.71                     | 0.43              |
| 1:AA:991:U:OP2    | 1:AA:991:U:H6     | 2.02                     | 0.43              |
| 1:AA:1014:A:C2    | 1:AA:1219:U:H1'   | 2.54                     | 0.43              |
| 1:AA:1063:C:C5    | 1:AA:1064:G:C8    | 3.07                     | 0.43              |
| 1:AA:1099:G:H2'   | 1:AA:1100:C:O5'   | 2.19                     | 0.43              |
| 1:AA:1164:G:C6    | 1:AA:1165:C:N3    | 2.87                     | 0.43              |
| 1:AA:1226:C:C5    | 15:AP:104:ARG:CA  | 2.89                     | 0.43              |
| 1:AA:1234:C:N4    | 1:AA:1235:U:C4    | 2.86                     | 0.43              |
| 1:AA:1239:A:C8    | 1:AA:1241:G:H1'   | 2.53                     | 0.43              |
| 1:AA:1272:G:C4    | 1:AA:1273:G:C8    | 3.07                     | 0.43              |
| 1:AA:1328:C:H2'   | 1:AA:1329:A:H8    | 1.84                     | 0.43              |
| 1:AA:1343:G:O2'   | 11:AL:121:ARG:HA  | 2.18                     | 0.43              |
| 1:AA:1350:A:C6    | 1:AA:1351:U:C4    | 3.06                     | 0.43              |
| 1:AA:1436:U:C3'   | 1:AA:1437:C:C6    | 3.02                     | 0.43              |
| 1:AA:1436:U:C2'   | 1:AA:1437:C:C6    | 3.02                     | 0.43              |
| 1:AA:1455:G:H2'   | 1:AA:1459:C:H5'   | 1.99                     | 0.43              |
| 1:AA:1470:G:C2    | 1:AA:1471:G:C4    | 3.07                     | 0.43              |
| 1:AA:1483:A:H2'   | 1:AA:1484:C:H5'   | 2.00                     | 0.43              |
| 2:A1:35:U:C6      | 2:A1:35:U:C3'     | 3.01                     | 0.43              |
| 3:AC:2:C:H2'      | 3:AC:3:C:C6       | 2.49                     | 0.43              |
| 3:AC:7:A:C4       | 3:AC:49:C:C5      | 3.06                     | 0.43              |
| 3:AC:26:A:O2'     | 3:AC:27:G:H5'     | 2.18                     | 0.43              |
| 3:AC:27:G:N2      | 3:AC:28:G:C5      | 2.87                     | 0.43              |
| 3:AC:71:G:C6      | 3:AC:72:C:C4      | 3.06                     | 0.43              |
| 3:AD:17:C:H5      | 3:AD:19:G:H8      | 1.67                     | 0.43              |
| 3:AD:28:G:N1      | 3:AD:43:C:C2      | 2.87                     | 0.43              |
| 3:AB:45:U:O4      | 3:AB:46:G:O6      | 2.37                     | 0.43              |
| 3:AB:63:G:H1'     | 24:BA:2482:G:O4'  | 2.19                     | 0.43              |
| 4:AE:20:GLU:OE2   | 4:AE:189:ASP:OD2  | 2.33                     | 0.43              |
| 5:AF:16:ARG:C     | 5:AF:17:ASP:OD1   | 2.62                     | 0.43              |
| 5:AF:33:LEU:O     | 5:AF:36:ASP:N     | 2.52                     | 0.43              |
| 6:AG:11:LEU:O     | 6:AG:14:ARG:HB3   | 2.19                     | 0.43              |
| 6:AG:20:TYR:CB    | 6:AG:27:TYR:HA    | 2.49                     | 0.43              |
| 8:AI:97:PHE:CE2   | 20:AU:65:ILE:HD11 | 2.54                     | 0.43              |
| 9:AJ:63:LYS:HA    | 9:AJ:63:LYS:CE    | 2.33                     | 0.43              |
| 9:AJ:79:ARG:HG2   | 9:AJ:84:ASN:HB3   | 2.01                     | 0.43              |
| 9:AJ:135:VAL:O    | 9:AJ:138:LYS:CB   | 2.56                     | 0.43              |
| 9:AJ:139:GLU:O    | 9:AJ:142:GLU:HB2  | 2.18                     | 0.43              |
| 10:AK:10:LEU:CD2  | 10:AK:83:ILE:HD11 | 2.48                     | 0.43              |
| 10:AK:111:ILE:CG2 | 10:AK:118:VAL:CG1 | 2.97                     | 0.43              |
| 11:AL:31:GLN:HB3  | 11:AL:35:GLU:CD   | 2.43                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 11:AL:49:PRO:CD    | 11:AL:78:LYS:HZ3   | 2.29                     | 0.43              |
| 11:AL:112:LYS:CG   | 11:AL:117:HIS:HA   | 2.45                     | 0.43              |
| 12:AM:48:THR:OG1   | 12:AM:62:HIS:HB3   | 2.19                     | 0.43              |
| 12:AM:48:THR:O     | 12:AM:49:VAL:HG23  | 2.19                     | 0.43              |
| 13:AN:63:LEU:CA    | 13:AN:66:LEU:HG    | 2.47                     | 0.43              |
| 13:AN:110:ASP:HA   | 20:AU:88:LYS:HD3   | 2.01                     | 0.43              |
| 13:AN:123:LYS:N    | 13:AN:126:ARG:HG3  | 2.34                     | 0.43              |
| 14:AO:27:LEU:CD2   | 14:AO:62:SER:OG    | 2.66                     | 0.43              |
| 15:AP:10:PRO:HG2   | 15:AP:18:ALA:CB    | 2.48                     | 0.43              |
| 15:AP:82:MET:HE3   | 15:AP:82:MET:HB3   | 1.84                     | 0.43              |
| 17:AR:3:ILE:HA     | 17:AR:38:ARG:HH12  | 1.84                     | 0.43              |
| 17:AR:29:VAL:HG22  | 17:AR:67:LEU:HD21  | 2.01                     | 0.43              |
| 17:AR:53:HIS:CD2   | 17:AR:57:LEU:CD1   | 3.01                     | 0.43              |
| 18:AS:26:ARG:HG3   | 18:AS:26:ARG:HH11  | 1.83                     | 0.43              |
| 18:AS:26:ARG:HD3   | 18:AS:31:LYS:HZ3   | 1.84                     | 0.43              |
| 18:AS:55:ARG:O     | 18:AS:59:TRP:HB2   | 2.19                     | 0.43              |
| 19:AT:57:VAL:CB    | 19:AT:75:ARG:O     | 2.64                     | 0.43              |
| 20:AU:51:LEU:HD13  | 20:AU:51:LEU:H     | 1.82                     | 0.43              |
| 20:AU:64:ARG:HG3   | 20:AU:64:ARG:HH11  | 1.83                     | 0.43              |
| 24:BA:126:A:N6     | 24:BA:127:A:N1     | 2.56                     | 0.43              |
| 24:BA:137(A):G:N1  | 24:BA:138:G:O6     | 2.52                     | 0.43              |
| 24:BA:296:C:O2'    | 24:BA:297:C:H5'    | 2.19                     | 0.43              |
| 24:BA:363(D):G:C2' | 24:BA:363(E):U:H5' | 2.49                     | 0.43              |
| 24:BA:408:G:H2'    | 24:BA:409:C:H6     | 1.84                     | 0.43              |
| 24:BA:449:A:C2     | 24:BA:450:G:N7     | 2.86                     | 0.43              |
| 24:BA:491:G:H2'    | 24:BA:492:A:O4'    | 2.19                     | 0.43              |
| 24:BA:527:C:C5     | 24:BA:2779:U:H3'   | 2.54                     | 0.43              |
| 24:BA:557:U:O3'    | 34:BM:112:LEU:HD21 | 2.18                     | 0.43              |
| 24:BA:568:U:H2'    | 24:BA:570:G:H8     | 1.75                     | 0.43              |
| 24:BA:577:G:O6     | 24:BA:578:A:N6     | 2.52                     | 0.43              |
| 24:BA:592:G:HO2'   | 54:B7:2:PRO:HA     | 1.78                     | 0.43              |
| 24:BA:602:G:H21    | 24:BA:655:A:H2'    | 1.84                     | 0.43              |
| 24:BA:663:G:H5'    | 36:BO:18:ARG:NE    | 2.32                     | 0.43              |
| 24:BA:734:A:C2     | 24:BA:735:A:C8     | 3.07                     | 0.43              |
| 24:BA:734:A:N3     | 24:BA:735:A:C8     | 2.87                     | 0.43              |
| 24:BA:770:G:N2     | 24:BA:771:G:H1'    | 2.34                     | 0.43              |
| 24:BA:820:A:C8     | 24:BA:973:A:N6     | 2.87                     | 0.43              |
| 24:BA:943:U:OP2    | 36:BO:32:THR:HB    | 2.18                     | 0.43              |
| 24:BA:977:G:C8     | 24:BA:987:G:N2     | 2.87                     | 0.43              |
| 24:BA:983:A:H2'    | 24:BA:984:A:N7     | 2.34                     | 0.43              |
| 24:BA:986:C:C6     | 24:BA:986:C:C3'    | 3.02                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:996:A:C4   | 24:BA:997:G:N7    | 2.86                     | 0.43              |
| 24:BA:1022:G:N7  | 24:BA:1139:G:C6   | 2.87                     | 0.43              |
| 24:BA:1071:G:N2  | 24:BA:1089:G:H2'  | 2.34                     | 0.43              |
| 24:BA:1085:A:C8  | 24:BA:1086:A:H1'  | 2.53                     | 0.43              |
| 24:BA:1148:A:C6  | 24:BA:1149:G:C5   | 3.06                     | 0.43              |
| 24:BA:1324:G:C2  | 24:BA:1328:G:N1   | 2.87                     | 0.43              |
| 24:BA:1351:C:O2' | 24:BA:1571:A:N9   | 2.52                     | 0.43              |
| 24:BA:1389:G:C2  | 24:BA:1390:U:C4   | 3.07                     | 0.43              |
| 24:BA:1448:G:N2  | 24:BA:1529:A:H2   | 2.16                     | 0.43              |
| 24:BA:1527:G:H2' | 24:BA:1528:A:O5'  | 2.19                     | 0.43              |
| 24:BA:1530:G:N2  | 24:BA:1541:U:H2'  | 2.23                     | 0.43              |
| 24:BA:1689:A:N6  | 24:BA:1700:A:C4   | 2.86                     | 0.43              |
| 24:BA:1718:G:N7  | 24:BA:1725:G:N7   | 2.66                     | 0.43              |
| 24:BA:1728:G:H1  | 24:BA:1733:G:N2   | 2.16                     | 0.43              |
| 24:BA:1746:G:C4  | 24:BA:1747:G:C8   | 3.06                     | 0.43              |
| 24:BA:1856:G:N7  | 24:BA:1857:G:N3   | 2.67                     | 0.43              |
| 24:BA:1858:G:C5  | 24:BA:1883:G:C2   | 3.07                     | 0.43              |
| 24:BA:1927:A:N7  | 24:BA:1928:A:C5   | 2.87                     | 0.43              |
| 24:BA:1952:A:C6  | 24:BA:1953:A:N1   | 2.86                     | 0.43              |
| 24:BA:1971:A:C2  | 27:BD:239:ARG:CB  | 3.02                     | 0.43              |
| 24:BA:1997:G:H2' | 24:BA:1998:G:C8   | 2.54                     | 0.43              |
| 24:BA:1998:G:C6  | 24:BA:1999:C:N4   | 2.86                     | 0.43              |
| 24:BA:2044:C:C5  | 24:BA:2625:G:C2   | 3.06                     | 0.43              |
| 24:BA:2052:G:C6  | 24:BA:2053:G:C6   | 3.06                     | 0.43              |
| 24:BA:2067:G:N1  | 24:BA:2069:G:C5   | 2.87                     | 0.43              |
| 24:BA:2115:G:C2  | 24:BA:2117:A:C8   | 3.07                     | 0.43              |
| 24:BA:2226:C:O2  | 27:BD:262:ARG:NE  | 2.51                     | 0.43              |
| 24:BA:2289:G:H5' | 24:BA:2384:G:O2'  | 2.19                     | 0.43              |
| 24:BA:2358:G:N2  | 54:B7:52:LYS:HZ1  | 2.16                     | 0.43              |
| 24:BA:2408:U:C2  | 24:BA:2409:G:N7   | 2.86                     | 0.43              |
| 24:BA:2459:A:OP2 | 24:BA:2460:U:C4   | 2.71                     | 0.43              |
| 24:BA:2476:A:H2' | 24:BA:2477:C:O4'  | 2.19                     | 0.43              |
| 24:BA:2571:C:C2' | 24:BA:2572:A:OP1  | 2.67                     | 0.43              |
| 24:BA:2605:U:H2' | 24:BA:2606:C:H5'  | 2.01                     | 0.43              |
| 24:BA:2626:C:C6  | 24:BA:2626:C:C3'  | 3.02                     | 0.43              |
| 24:BA:2636:U:P   | 28:BE:78:LEU:HD12 | 2.58                     | 0.43              |
| 24:BA:2650:U:N3  | 24:BA:2651:C:C5   | 2.87                     | 0.43              |
| 24:BA:2807:G:C6  | 24:BA:2893:G:N7   | 2.87                     | 0.43              |
| 24:BA:2811:G:C6  | 24:BA:2891:G:C2   | 3.06                     | 0.43              |
| 24:BA:2812:G:N1  | 24:BA:2813:A:C6   | 2.87                     | 0.43              |
| 24:BA:2817:G:C2  | 24:BA:2830:G:C2   | 3.07                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:2826:A:H2'   | 24:BA:2827:C:H5'  | 2.01                     | 0.43              |
| 24:BA:2844:G:N3    | 24:BA:2844:G:C2'  | 2.81                     | 0.43              |
| 24:BA:2884:U:H2'   | 24:BA:2885:C:H5'  | 2.01                     | 0.43              |
| 25:BB:46:A:H8      | 25:BB:46:A:O5'    | 2.02                     | 0.43              |
| 25:BB:54:G:HO2'    | 25:BB:55:U:H5'    | 1.80                     | 0.43              |
| 25:BB:84:C:O2      | 25:BB:85:G:C8     | 2.71                     | 0.43              |
| 26:BC:10:LEU:HD22  | 26:BC:32:LEU:O    | 2.18                     | 0.43              |
| 26:BC:64:LEU:HD12  | 26:BC:161:ILE:CG2 | 2.44                     | 0.43              |
| 26:BC:107:TRP:CZ3  | 26:BC:110:PHE:HE2 | 2.37                     | 0.43              |
| 26:BC:162:GLU:O    | 26:BC:163:PHE:HD2 | 1.98                     | 0.43              |
| 27:BD:122:ASP:O    | 27:BD:123:ALA:C   | 2.61                     | 0.43              |
| 28:BE:4:ILE:O      | 28:BE:27:LEU:CD2  | 2.57                     | 0.43              |
| 28:BE:9:VAL:CG2    | 40:BS:7:ILE:HG21  | 2.48                     | 0.43              |
| 28:BE:38:THR:C     | 28:BE:42:ASP:OD2  | 2.62                     | 0.43              |
| 28:BE:40:GLU:OE2   | 28:BE:40:GLU:CA   | 2.64                     | 0.43              |
| 28:BE:60:ASN:OD1   | 28:BE:61:ARG:HD3  | 2.18                     | 0.43              |
| 28:BE:94:GLU:C     | 28:BE:96:PHE:N    | 2.77                     | 0.43              |
| 29:BF:9:ILE:CG2    | 29:BF:124:LEU:O   | 2.67                     | 0.43              |
| 29:BF:41:LEU:C     | 29:BF:44:ARG:CZ   | 2.90                     | 0.43              |
| 29:BF:53:THR:C     | 29:BF:55:GLY:N    | 2.77                     | 0.43              |
| 29:BF:97:TYR:O     | 29:BF:98:SER:O    | 2.37                     | 0.43              |
| 29:BF:106:ARG:CG   | 29:BF:107:LYS:H   | 2.31                     | 0.43              |
| 29:BF:182:ASN:OD1  | 29:BF:185:ASP:N   | 2.52                     | 0.43              |
| 30:BG:99:MET:O     | 30:BG:102:PHE:HB2 | 2.18                     | 0.43              |
| 30:BG:118:ARG:O    | 30:BG:180:PHE:CZ  | 2.72                     | 0.43              |
| 31:BH:35:VAL:HG11  | 31:BH:75:ALA:HB2  | 2.01                     | 0.43              |
| 32:BK:2:LYS:NZ     | 32:BK:39:ALA:CB   | 2.82                     | 0.43              |
| 32:BK:47:LEU:HG    | 32:BK:51:ILE:HD12 | 2.00                     | 0.43              |
| 32:BK:114:LEU:HB3  | 32:BK:115:ALA:H   | 1.36                     | 0.43              |
| 32:BK:127:VAL:CG1  | 32:BK:140:LEU:C   | 2.78                     | 0.43              |
| 33:BL:10:LEU:HD13  | 33:BL:23:VAL:HG22 | 1.97                     | 0.43              |
| 33:BL:94:GLU:O     | 33:BL:96:VAL:HG13 | 2.19                     | 0.43              |
| 33:BL:115:LEU:HD12 | 33:BL:118:THR:CG2 | 2.49                     | 0.43              |
| 34:BM:13:TRP:O     | 34:BM:138:LEU:CD1 | 2.62                     | 0.43              |
| 34:BM:38:HIS:CE1   | 41:BT:70:ARG:HH22 | 2.37                     | 0.43              |
| 34:BM:123:TYR:HB2  | 34:BM:129:PRO:HG3 | 2.00                     | 0.43              |
| 35:BN:3:GLN:CD     | 35:BN:3:GLN:O     | 2.61                     | 0.43              |
| 35:BN:73:ASP:HB3   | 40:BS:79:HIS:NE2  | 2.34                     | 0.43              |
| 36:BO:86:LYS:HZ1   | 36:BO:99:LEU:CD1  | 2.32                     | 0.43              |
| 36:BO:91:PHE:CE2   | 36:BO:96:THR:HA   | 2.53                     | 0.43              |
| 36:BO:97:PRO:CB    | 36:BO:102:ARG:NH1 | 2.79                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 36:BO:99:LEU:CD1  | 36:BO:101:VAL:HG22 | 2.44                     | 0.43              |
| 36:BO:99:LEU:C    | 36:BO:101:VAL:H    | 2.27                     | 0.43              |
| 37:BP:46:GLN:CG   | 37:BP:125:LEU:HA   | 2.48                     | 0.43              |
| 37:BP:130:LYS:HE3 | 37:BP:131:ILE:H    | 1.82                     | 0.43              |
| 38:BQ:20:LEU:HD13 | 38:BQ:21:TYR:CA    | 2.49                     | 0.43              |
| 39:BR:13:ARG:NH1  | 39:BR:89:ARG:O     | 2.51                     | 0.43              |
| 40:BS:4:GLY:C     | 40:BS:8:LYS:HE3    | 2.44                     | 0.43              |
| 40:BS:27:THR:CG2  | 40:BS:28:VAL:H     | 2.23                     | 0.43              |
| 40:BS:49:VAL:C    | 40:BS:50:ILE:CG1   | 2.90                     | 0.43              |
| 41:BT:41:ALA:O    | 41:BT:43:GLY:N     | 2.52                     | 0.43              |
| 41:BT:53:ARG:CB   | 41:BT:53:ARG:CZ    | 2.97                     | 0.43              |
| 43:BV:37:ARG:HG3  | 43:BV:38:TYR:HD1   | 1.84                     | 0.43              |
| 45:BX:82:PRO:HG2  | 45:BX:95:LYS:O     | 2.19                     | 0.43              |
| 46:BY:11:GLU:HG3  | 46:BY:36:LYS:HZ1   | 1.82                     | 0.43              |
| 46:BY:51:ALA:O    | 46:BY:53:ILE:N     | 2.51                     | 0.43              |
| 48:B1:34:ALA:O    | 48:B1:35:SER:CB    | 2.67                     | 0.43              |
| 50:B3:57:GLU:CA   | 50:B3:61:ARG:NH1   | 2.81                     | 0.43              |
| 52:B5:22:ALA:O    | 52:B5:23:THR:CG2   | 2.66                     | 0.43              |
| 53:B6:17:GLY:O    | 53:B6:21:ARG:NH1   | 2.51                     | 0.43              |
| 54:B7:17:THR:C    | 54:B7:19:SER:N     | 2.73                     | 0.43              |
| 54:B7:23:VAL:CG2  | 54:B7:47:LYS:O     | 2.51                     | 0.43              |
| 54:B7:62:LEU:N    | 54:B7:63:PRO:CD    | 2.81                     | 0.43              |
| 55:B8:9:ARG:NH2   | 55:B8:16:VAL:HB    | 2.34                     | 0.43              |
| 1:AA:20:U:O4'     | 1:AA:572:A:C2      | 2.72                     | 0.43              |
| 1:AA:21:G:C2      | 1:AA:915:A:N6      | 2.84                     | 0.43              |
| 1:AA:193:C:O4'    | 22:AW:60:GLU:CG    | 2.67                     | 0.43              |
| 1:AA:363:A:H5''   | 14:AO:105:TYR:OH   | 2.19                     | 0.43              |
| 1:AA:556:C:H2'    | 1:AA:557:G:O4'     | 2.19                     | 0.43              |
| 1:AA:584:G:OP2    | 19:AT:87:LYS:NZ    | 2.51                     | 0.43              |
| 1:AA:619:U:O2     | 1:AA:619:U:C2'     | 2.67                     | 0.43              |
| 1:AA:738:C:C4     | 1:AA:739:C:C5      | 3.06                     | 0.43              |
| 1:AA:760:G:C5'    | 1:AA:761:G:OP2     | 2.66                     | 0.43              |
| 1:AA:766:A:C2     | 1:AA:767:A:C1'     | 3.01                     | 0.43              |
| 1:AA:774:G:C6     | 1:AA:775:G:C5      | 3.07                     | 0.43              |
| 1:AA:826:C:C5'    | 10:AK:12:ARG:NH2   | 2.77                     | 0.43              |
| 1:AA:899:C:C4     | 1:AA:900:A:C6      | 3.07                     | 0.43              |
| 1:AA:915:A:H2'    | 1:AA:916:G:C4'     | 2.48                     | 0.43              |
| 1:AA:965:A:P      | 1:AA:1198:G:H5''   | 2.59                     | 0.43              |
| 1:AA:994:A:OP1    | 1:AA:995:C:H5      | 2.01                     | 0.43              |
| 1:AA:1061:G:N3    | 1:AA:1197:G:C2     | 2.87                     | 0.43              |
| 1:AA:1068:G:C8    | 1:AA:1094:G:N7     | 2.87                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1091:U:O2    | 1:AA:1093:A:C8    | 2.72                     | 0.43              |
| 1:AA:1187:G:C4    | 1:AA:1188:A:C8    | 3.07                     | 0.43              |
| 1:AA:1200:C:C5'   | 1:AA:1201:A:O3'   | 2.63                     | 0.43              |
| 1:AA:1225:A:OP2   | 15:AP:102:ARG:O   | 2.37                     | 0.43              |
| 1:AA:1344:C:O2'   | 1:AA:1349:A:H5'   | 2.18                     | 0.43              |
| 1:AA:1368:G:H2'   | 1:AA:1369:C:H6    | 1.84                     | 0.43              |
| 1:AA:1433:A:H8    | 1:AA:1433:A:O5'   | 2.02                     | 0.43              |
| 3:AC:57:G:C4'     | 30:BG:82:LEU:HD22 | 2.48                     | 0.43              |
| 3:AD:14:A:N3      | 3:AD:14:A:C2'     | 2.78                     | 0.43              |
| 3:AB:29:G:C5      | 3:AB:30:G:N7      | 2.87                     | 0.43              |
| 4:AE:60:ASP:O     | 4:AE:63:MET:N     | 2.52                     | 0.43              |
| 4:AE:95:GLN:C     | 4:AE:97:TRP:N     | 2.77                     | 0.43              |
| 4:AE:115:LEU:O    | 4:AE:118:LEU:HD13 | 2.19                     | 0.43              |
| 5:AF:22:TRP:CZ3   | 5:AF:32:LEU:HD13  | 2.53                     | 0.43              |
| 5:AF:43:LEU:CD1   | 5:AF:55:VAL:HG21  | 2.49                     | 0.43              |
| 5:AF:82:GLU:O     | 5:AF:85:ARG:CB    | 2.65                     | 0.43              |
| 6:AG:59:ARG:HB3   | 6:AG:63:LYS:HZ2   | 1.82                     | 0.43              |
| 6:AG:91:SER:O     | 6:AG:94:LEU:N     | 2.51                     | 0.43              |
| 6:AG:94:LEU:CA    | 6:AG:97:LEU:HD12  | 2.42                     | 0.43              |
| 6:AG:165:MET:O    | 6:AG:167:GLY:N    | 2.52                     | 0.43              |
| 7:AH:71:LEU:O     | 7:AH:72:GLN:HG2   | 2.18                     | 0.43              |
| 8:AI:52:ILE:CG2   | 8:AI:87:ARG:NH2   | 2.82                     | 0.43              |
| 10:AK:11:THR:OG1  | 10:AK:12:ARG:N    | 2.52                     | 0.43              |
| 10:AK:12:ARG:HH11 | 10:AK:26:VAL:HG22 | 1.83                     | 0.43              |
| 10:AK:45:ILE:HD12 | 10:AK:61:VAL:HG22 | 2.01                     | 0.43              |
| 10:AK:75:ARG:CG   | 10:AK:75:ARG:HH11 | 2.32                     | 0.43              |
| 10:AK:108:GLY:HA2 | 10:AK:138:TRP:CB  | 2.49                     | 0.43              |
| 10:AK:117:GLY:O   | 10:AK:119:LEU:CD2 | 2.67                     | 0.43              |
| 10:AK:126:LYS:HZ1 | 10:AK:127:LEU:CD2 | 2.30                     | 0.43              |
| 11:AL:65:VAL:CG2  | 11:AL:73:GLN:HB3  | 2.49                     | 0.43              |
| 11:AL:80:GLY:O    | 11:AL:81:ILE:C    | 2.62                     | 0.43              |
| 12:AM:81:THR:O    | 12:AM:85:LEU:CD1  | 2.67                     | 0.43              |
| 12:AM:89:ASP:O    | 12:AM:90:LEU:CG   | 2.63                     | 0.43              |
| 13:AN:59:TYR:CD1  | 13:AN:62:GLN:NE2  | 2.87                     | 0.43              |
| 13:AN:99:GLN:O    | 13:AN:105:VAL:CG2 | 2.67                     | 0.43              |
| 14:AO:33:ARG:C    | 14:AO:84:LEU:HD12 | 2.44                     | 0.43              |
| 15:AP:2:ALA:HB3   | 15:AP:4:ILE:CG1   | 2.49                     | 0.43              |
| 15:AP:14:ARG:HA   | 15:AP:44:ARG:CA   | 2.40                     | 0.43              |
| 15:AP:91:ARG:NH1  | 15:AP:96:LEU:HD12 | 2.32                     | 0.43              |
| 16:AQ:45:ARG:HH11 | 16:AQ:45:ARG:C    | 2.26                     | 0.43              |
| 17:AR:21:ASP:O    | 17:AR:21:ASP:CG   | 2.62                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 18:AS:4:ILE:HG12  | 18:AS:65:GLN:O     | 2.17                     | 0.43              |
| 20:AU:47:THR:C    | 20:AU:49:LYS:HE2   | 2.44                     | 0.43              |
| 22:AW:17:ARG:HA   | 22:AW:20:LEU:HG    | 2.00                     | 0.43              |
| 22:AW:25:ARG:CZ   | 22:AW:25:ARG:HB2   | 2.49                     | 0.43              |
| 22:AW:56:MET:C    | 22:AW:56:MET:SD    | 3.01                     | 0.43              |
| 24:BA:28:A:H2'    | 24:BA:28:A:N3      | 2.33                     | 0.43              |
| 24:BA:99:U:H5'    | 24:BA:101:G:H5'    | 2.00                     | 0.43              |
| 24:BA:107:C:O2'   | 24:BA:108:U:O5'    | 2.37                     | 0.43              |
| 24:BA:142:G:H4'   | 44:BW:37:THR:OG1   | 2.19                     | 0.43              |
| 24:BA:183:C:C1'   | 24:BA:433:C:H1'    | 2.29                     | 0.43              |
| 24:BA:185:U:O2'   | 24:BA:186:G:O4'    | 2.27                     | 0.43              |
| 24:BA:216:A:C2    | 24:BA:217:G:C6     | 3.07                     | 0.43              |
| 24:BA:270(X):G:C2 | 24:BA:270(Y):G:H4' | 2.53                     | 0.43              |
| 24:BA:281:G:N2    | 24:BA:283:A:H4'    | 2.34                     | 0.43              |
| 24:BA:389:G:C6    | 36:BO:64:LYS:HG2   | 2.54                     | 0.43              |
| 24:BA:476:G:H22   | 24:BA:478:A:H3'    | 1.81                     | 0.43              |
| 24:BA:580:C:N3    | 24:BA:581:C:C5     | 2.87                     | 0.43              |
| 24:BA:617:G:C8    | 24:BA:617:G:H3'    | 2.54                     | 0.43              |
| 24:BA:685:A:C2'   | 24:BA:686:G:OP2    | 2.67                     | 0.43              |
| 24:BA:727:A:N6    | 24:BA:729:G:C6     | 2.86                     | 0.43              |
| 24:BA:740:U:O5'   | 24:BA:1784:A:C6    | 2.72                     | 0.43              |
| 24:BA:804:A:O3'   | 24:BA:806:C:N4     | 2.52                     | 0.43              |
| 24:BA:828:U:C5    | 24:BA:829:A:N7     | 2.87                     | 0.43              |
| 24:BA:838:C:C2    | 24:BA:941:A:N6     | 2.87                     | 0.43              |
| 24:BA:850:C:H4'   | 49:B2:18:ASP:HB2   | 2.01                     | 0.43              |
| 24:BA:855:G:C6    | 24:BA:856:C:C4     | 3.07                     | 0.43              |
| 24:BA:909:A:C2    | 24:BA:912:C:H1'    | 2.54                     | 0.43              |
| 24:BA:974:G:N3    | 24:BA:1186:G:C5    | 2.87                     | 0.43              |
| 24:BA:984:A:P     | 24:BA:985:C:H41    | 2.41                     | 0.43              |
| 24:BA:1007:C:H4'  | 34:BM:108:PRO:HG3  | 2.01                     | 0.43              |
| 24:BA:1014:U:H2'  | 24:BA:1015:G:C5'   | 2.49                     | 0.43              |
| 24:BA:1015:G:C6   | 24:BA:1148:A:C6    | 3.06                     | 0.43              |
| 24:BA:1031:G:N1   | 24:BA:1032:A:C5    | 2.87                     | 0.43              |
| 24:BA:1057:A:O4'  | 24:BA:1084:A:N6    | 2.52                     | 0.43              |
| 24:BA:1080:C:H4'  | 33:BL:125:ARG:HB3  | 2.00                     | 0.43              |
| 24:BA:1103:A:C2'  | 24:BA:1104:C:OP1   | 2.67                     | 0.43              |
| 24:BA:1134:G:H2'  | 24:BA:1134:G:N3    | 2.34                     | 0.43              |
| 24:BA:1153:C:N4   | 24:BA:1154:G:O6    | 2.52                     | 0.43              |
| 24:BA:1204:A:C5'  | 24:BA:1206:G:OP1   | 2.56                     | 0.43              |
| 24:BA:1213:A:N1   | 24:BA:1237:A:H1'   | 2.34                     | 0.43              |
| 24:BA:1223:C:N3   | 24:BA:1227:A:N1    | 2.67                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1267:U:H3'  | 24:BA:1267:U:H6   | 1.83                     | 0.43              |
| 24:BA:1324:G:C2   | 24:BA:1331:A:C2   | 3.06                     | 0.43              |
| 24:BA:1334:G:H2'  | 24:BA:1335:U:C6   | 2.54                     | 0.43              |
| 24:BA:1344:G:C6   | 24:BA:1385:G:N7   | 2.86                     | 0.43              |
| 24:BA:1353:A:O2'  | 24:BA:1354:A:H5'  | 2.19                     | 0.43              |
| 24:BA:1358:G:H2'  | 24:BA:1371:G:N2   | 2.34                     | 0.43              |
| 24:BA:1496:A:C5   | 24:BA:1577:C:O2'  | 2.72                     | 0.43              |
| 24:BA:1532:C:OP2  | 24:BA:1532:C:C6   | 2.72                     | 0.43              |
| 24:BA:1568:G:P    | 27:BD:61:LEU:HD12 | 2.58                     | 0.43              |
| 24:BA:1576:U:H2'  | 24:BA:1577:C:C5   | 2.54                     | 0.43              |
| 24:BA:1603:A:N3   | 24:BA:1603:A:H2'  | 2.33                     | 0.43              |
| 24:BA:1635:G:C8   | 24:BA:1635:G:C5'  | 3.02                     | 0.43              |
| 24:BA:1672:C:H41  | 24:BA:1673:U:H5   | 1.66                     | 0.43              |
| 24:BA:1826:G:N2   | 24:BA:1827:C:C1'  | 2.82                     | 0.43              |
| 24:BA:1863:G:C5   | 24:BA:1864:U:C4   | 3.07                     | 0.43              |
| 24:BA:1951:U:C2'  | 24:BA:1953:A:O5'  | 2.66                     | 0.43              |
| 24:BA:2048:G:C2   | 24:BA:2049:G:N9   | 2.86                     | 0.43              |
| 24:BA:2133:G:O6   | 24:BA:2157:G:H1'  | 2.19                     | 0.43              |
| 24:BA:2136:C:C2   | 24:BA:2137:C:C5   | 3.07                     | 0.43              |
| 24:BA:2217:G:O4'  | 27:BD:150:LYS:NZ  | 2.42                     | 0.43              |
| 24:BA:2226:C:N3   | 24:BA:2227:A:N3   | 2.67                     | 0.43              |
| 24:BA:2234:G:N2   | 24:BA:2235:G:H1'  | 2.33                     | 0.43              |
| 24:BA:2245:U:H1'  | 24:BA:2435:A:H3'  | 2.00                     | 0.43              |
| 24:BA:2281:C:O2'  | 24:BA:2282:G:C5'  | 2.67                     | 0.43              |
| 24:BA:2284:C:H5'' | 52:B5:9:LEU:CG    | 2.48                     | 0.43              |
| 24:BA:2298:A:C2   | 24:BA:2321:G:C6   | 3.05                     | 0.43              |
| 24:BA:2309:A:H5'' | 24:BA:2310:A:H8   | 1.84                     | 0.43              |
| 24:BA:2312:U:OP1  | 30:BG:86:MET:HG2  | 2.18                     | 0.43              |
| 24:BA:2341:G:H2'  | 24:BA:2342:C:H6   | 1.72                     | 0.43              |
| 24:BA:2347:C:C4   | 24:BA:2348:U:O4   | 2.72                     | 0.43              |
| 24:BA:2358:G:N2   | 24:BA:2359:C:H1'  | 2.33                     | 0.43              |
| 24:BA:2387:U:OP2  | 24:BA:2387:U:C6   | 2.72                     | 0.43              |
| 24:BA:2491:U:C5   | 24:BA:2492:U:P    | 3.12                     | 0.43              |
| 24:BA:2509:G:C6   | 24:BA:2580:U:N3   | 2.87                     | 0.43              |
| 24:BA:2536:G:C5   | 24:BA:2537:U:C5   | 3.07                     | 0.43              |
| 24:BA:2586:C:C6   | 24:BA:2586:C:C3'  | 3.02                     | 0.43              |
| 24:BA:2588:G:N2   | 24:BA:2607:G:C5   | 2.87                     | 0.43              |
| 24:BA:2662:A:H2'  | 24:BA:2663:G:C5'  | 2.46                     | 0.43              |
| 24:BA:2717:G:N3   | 24:BA:2718:G:C8   | 2.86                     | 0.43              |
| 24:BA:2717:G:H2'  | 24:BA:2718:G:H8   | 1.83                     | 0.43              |
| 24:BA:2737:G:C5   | 24:BA:2738:A:N7   | 2.87                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2825:C:H2'   | 24:BA:2826:A:C8    | 2.53                     | 0.43              |
| 24:BA:2850:A:H2'   | 24:BA:2851:A:O5'   | 2.18                     | 0.43              |
| 24:BA:2852:G:H2'   | 24:BA:2853:C:H6    | 1.74                     | 0.43              |
| 24:BA:2863:C:C2'   | 24:BA:2864:G:H5'   | 2.48                     | 0.43              |
| 24:BA:2863:C:C2    | 24:BA:2864:G:C8    | 3.06                     | 0.43              |
| 25:BB:1:U:O4       | 25:BB:2:C:N4       | 2.52                     | 0.43              |
| 25:BB:29:A:C2      | 25:BB:56:G:C2      | 3.06                     | 0.43              |
| 25:BB:112:G:N2     | 25:BB:113:C:H1'    | 2.34                     | 0.43              |
| 26:BC:10:LEU:HD11  | 26:BC:32:LEU:HD22  | 1.99                     | 0.43              |
| 26:BC:89:ALA:CB    | 26:BC:154:ARG:HH11 | 2.31                     | 0.43              |
| 27:BD:23:GLU:HB3   | 27:BD:205:VAL:H    | 1.84                     | 0.43              |
| 27:BD:55:GLY:HA3   | 27:BD:217:ARG:NH2  | 2.34                     | 0.43              |
| 27:BD:90:ALA:HB2   | 27:BD:159:ALA:HB2  | 2.01                     | 0.43              |
| 27:BD:132:PRO:CB   | 27:BD:190:TYR:CE1  | 3.02                     | 0.43              |
| 27:BD:169:GLU:O    | 27:BD:170:GLY:C    | 2.62                     | 0.43              |
| 28:BE:12:THR:HG21  | 28:BE:19:ARG:CZ    | 2.46                     | 0.43              |
| 28:BE:133:LYS:CE   | 28:BE:137:HIS:CB   | 2.97                     | 0.43              |
| 28:BE:137:HIS:HB2  | 28:BE:138:PRO:CD   | 2.40                     | 0.43              |
| 29:BF:63:LYS:O     | 29:BF:64:ILE:HG22  | 2.19                     | 0.43              |
| 29:BF:124:LEU:HD21 | 29:BF:201:VAL:HG21 | 2.00                     | 0.43              |
| 29:BF:168:ARG:O    | 29:BF:169:ASN:O    | 2.36                     | 0.43              |
| 30:BG:27:ASN:OD1   | 30:BG:27:ASN:O     | 2.36                     | 0.43              |
| 30:BG:36:LYS:HE2   | 30:BG:38:VAL:CG1   | 2.29                     | 0.43              |
| 30:BG:57:ALA:HB1   | 30:BG:67:LYS:HG3   | 2.01                     | 0.43              |
| 30:BG:162:THR:O    | 30:BG:164:GLU:HG2  | 2.19                     | 0.43              |
| 31:BH:61:HIS:O     | 31:BH:62:LYS:C     | 2.61                     | 0.43              |
| 31:BH:96:ALA:HB3   | 31:BH:128:PRO:HB2  | 2.00                     | 0.43              |
| 31:BH:153:LYS:HD3  | 31:BH:154:PRO:HD3  | 2.00                     | 0.43              |
| 32:BK:72:LEU:O     | 32:BK:140:LEU:CD2  | 2.67                     | 0.43              |
| 32:BK:122:GLU:OE1  | 32:BK:122:GLU:HA   | 2.19                     | 0.43              |
| 33:BL:41:PHE:HZ    | 33:BL:57:ILE:HD13  | 1.78                     | 0.43              |
| 34:BM:33:LEU:O     | 34:BM:35:ARG:CG    | 2.66                     | 0.43              |
| 34:BM:78:TYR:HB3   | 34:BM:79:PRO:CD    | 2.37                     | 0.43              |
| 35:BN:34:THR:HB    | 35:BN:37:ASP:OD2   | 2.19                     | 0.43              |
| 35:BN:72:PRO:HB2   | 40:BS:84:GLN:HE21  | 1.84                     | 0.43              |
| 35:BN:85:VAL:O     | 35:BN:93:PRO:CG    | 2.67                     | 0.43              |
| 35:BN:92:GLU:OE2   | 35:BN:114:ILE:HG13 | 2.19                     | 0.43              |
| 35:BN:113:LYS:NZ   | 35:BN:113:LYS:O    | 2.48                     | 0.43              |
| 36:BO:72:PRO:CB    | 36:BO:110:TYR:O    | 2.67                     | 0.43              |
| 36:BO:97:PRO:CD    | 36:BO:102:ARG:NH2  | 2.82                     | 0.43              |
| 36:BO:122:PRO:HD3  | 36:BO:137:LYS:HB3  | 2.01                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 37:BP:122:GLY:CA  | 37:BP:125:LEU:HG  | 2.41                     | 0.43              |
| 38:BQ:20:LEU:C    | 38:BQ:22:ARG:N    | 2.76                     | 0.43              |
| 38:BQ:79:LEU:CG   | 38:BQ:80:PHE:N    | 2.79                     | 0.43              |
| 39:BR:10:ARG:C    | 39:BR:12:PHE:N    | 2.76                     | 0.43              |
| 39:BR:70:GLY:C    | 39:BR:104:GLY:HA3 | 2.43                     | 0.43              |
| 40:BS:8:LYS:CA    | 40:BS:11:GLU:OE1  | 2.67                     | 0.43              |
| 40:BS:30:VAL:CG2  | 40:BS:32:TYR:OH   | 2.64                     | 0.43              |
| 40:BS:70:VAL:HB   | 40:BS:74:ARG:CZ   | 2.43                     | 0.43              |
| 40:BS:85:LYS:NZ   | 40:BS:85:LYS:CB   | 2.81                     | 0.43              |
| 41:BT:55:ARG:HA   | 41:BT:58:ARG:HB3  | 2.01                     | 0.43              |
| 42:BU:20:LEU:HD22 | 42:BU:68:LYS:NZ   | 2.34                     | 0.43              |
| 42:BU:67:GLY:HA2  | 42:BU:94:LEU:CA   | 2.49                     | 0.43              |
| 45:BX:15:VAL:O    | 45:BX:16:ALA:C    | 2.61                     | 0.43              |
| 45:BX:47:LYS:CB   | 45:BX:49:VAL:HG22 | 2.36                     | 0.43              |
| 47:BZ:39:ARG:NH1  | 47:BZ:58:THR:OG1  | 2.48                     | 0.43              |
| 47:BZ:70:GLN:OE1  | 47:BZ:80:HIS:CD2  | 2.71                     | 0.43              |
| 48:B1:27:LEU:HA   | 48:B1:30:LEU:CD1  | 2.49                     | 0.43              |
| 48:B1:45:ILE:HD12 | 48:B1:45:ILE:C    | 2.44                     | 0.43              |
| 51:B4:40:LYS:CE   | 51:B4:52:TYR:HE1  | 2.31                     | 0.43              |
| 52:B5:21:TYR:CD2  | 52:B5:21:TYR:C    | 2.96                     | 0.43              |
| 53:B6:35:ARG:O    | 53:B6:36:GLN:NE2  | 2.52                     | 0.43              |
| 55:B8:7:VAL:CG2   | 55:B8:34:GLN:OE1  | 2.61                     | 0.43              |
| 1:AA:30:U:H2'     | 1:AA:31:G:OP1     | 2.19                     | 0.43              |
| 1:AA:67:C:C1'     | 1:AA:172:A:H1'    | 2.49                     | 0.43              |
| 1:AA:107:G:H2'    | 1:AA:108:G:O4'    | 2.19                     | 0.43              |
| 1:AA:113:G:O4'    | 1:AA:354:G:C5'    | 2.67                     | 0.43              |
| 1:AA:144:G:C4     | 1:AA:179:A:C2     | 3.07                     | 0.43              |
| 1:AA:185:A:O2'    | 1:AA:186:C:H5'    | 2.18                     | 0.43              |
| 1:AA:226:G:O2'    | 1:AA:227:G:H5'    | 2.18                     | 0.43              |
| 1:AA:242:C:H2'    | 1:AA:243:A:O5'    | 2.19                     | 0.43              |
| 1:AA:392:G:C5'    | 18:AS:12:LYS:NZ   | 2.78                     | 0.43              |
| 1:AA:451:A:H1'    | 1:AA:452:A:C5     | 2.52                     | 0.43              |
| 1:AA:738:C:N3     | 1:AA:739:C:C5     | 2.87                     | 0.43              |
| 1:AA:826:C:O5'    | 1:AA:826:C:H6     | 2.02                     | 0.43              |
| 1:AA:830:G:N1     | 1:AA:857:C:C4     | 2.87                     | 0.43              |
| 1:AA:978:A:H3'    | 1:AA:980:C:H41    | 1.83                     | 0.43              |
| 1:AA:1055:A:N3    | 1:AA:1055:A:C2'   | 2.77                     | 0.43              |
| 1:AA:1201:A:N3    | 1:AA:1201:A:C2'   | 2.80                     | 0.43              |
| 1:AA:1201:A:H2'   | 1:AA:1202:G:OP2   | 2.19                     | 0.43              |
| 1:AA:1309:G:OP2   | 15:AP:99:ARG:CZ   | 2.67                     | 0.43              |
| 1:AA:1326:C:O2'   | 1:AA:1327:C:C5'   | 2.67                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1329:A:P     | 15:AP:28:ALA:HB3  | 2.58                     | 0.43              |
| 1:AA:1358:U:C5    | 1:AA:1359:C:C5    | 3.06                     | 0.43              |
| 1:AA:1365:G:C6    | 1:AA:1366:C:N4    | 2.87                     | 0.43              |
| 1:AA:1374:A:C4    | 1:AA:1375:A:C8    | 3.07                     | 0.43              |
| 1:AA:1516:G:C2    | 1:AA:1518:A:P     | 3.12                     | 0.43              |
| 3:AC:22:G:O2'     | 3:AC:23:A:H5'     | 2.18                     | 0.43              |
| 3:AC:41:C:C2      | 3:AC:42:C:C6      | 3.07                     | 0.43              |
| 3:AC:48:C:OP2     | 3:AC:48:C:H6      | 2.02                     | 0.43              |
| 3:AD:54:U:OP2     | 3:AD:55:U:C5      | 2.72                     | 0.43              |
| 3:AD:55:U:H2'     | 3:AD:57:G:OP2     | 2.18                     | 0.43              |
| 4:AE:92:TYR:N     | 4:AE:92:TYR:CD2   | 2.87                     | 0.43              |
| 4:AE:93:VAL:HG12  | 4:AE:95:GLN:H     | 1.83                     | 0.43              |
| 4:AE:97:TRP:O     | 4:AE:99:GLY:N     | 2.46                     | 0.43              |
| 4:AE:105:PHE:O    | 4:AE:109:SER:CB   | 2.67                     | 0.43              |
| 4:AE:222:ILE:CD1  | 4:AE:223:ILE:HG13 | 2.47                     | 0.43              |
| 5:AF:29:TYR:HA    | 5:AF:32:LEU:HD12  | 2.01                     | 0.43              |
| 5:AF:43:LEU:HD11  | 5:AF:55:VAL:CG1   | 2.48                     | 0.43              |
| 6:AG:6:GLY:O      | 6:AG:8:VAL:N      | 2.52                     | 0.43              |
| 6:AG:18:LYS:O     | 6:AG:19:LEU:HD23  | 2.19                     | 0.43              |
| 6:AG:25:ARG:NH1   | 6:AG:25:ARG:HB3   | 2.34                     | 0.43              |
| 6:AG:32:ALA:N     | 6:AG:34:GLU:O     | 2.52                     | 0.43              |
| 7:AH:97:GLY:O     | 7:AH:99:GLY:N     | 2.52                     | 0.43              |
| 8:AI:24:GLU:OE2   | 8:AI:28:ARG:NH2   | 2.43                     | 0.43              |
| 8:AI:59:TYR:C     | 8:AI:60:PHE:HD1   | 2.27                     | 0.43              |
| 9:AJ:68:ASN:HD21  | 9:AJ:128:ALA:C    | 2.26                     | 0.43              |
| 9:AJ:79:ARG:CG    | 9:AJ:84:ASN:HB3   | 2.48                     | 0.43              |
| 10:AK:10:LEU:C    | 10:AK:14:ARG:HH12 | 2.20                     | 0.43              |
| 10:AK:100:ILE:O   | 10:AK:101:PRO:C   | 2.62                     | 0.43              |
| 11:AL:5:TYR:OH    | 11:AL:16:ARG:CG   | 2.67                     | 0.43              |
| 12:AM:24:VAL:HG13 | 12:AM:34:VAL:HB   | 2.01                     | 0.43              |
| 16:AQ:26:ARG:HE   | 16:AQ:43:CYS:CB   | 2.31                     | 0.43              |
| 17:AR:5:LYS:HG3   | 17:AR:6:GLU:OE2   | 2.19                     | 0.43              |
| 17:AR:54:ARG:CA   | 17:AR:57:LEU:HD13 | 2.49                     | 0.43              |
| 18:AS:74:LEU:HD23 | 18:AS:74:LEU:HA   | 1.82                     | 0.43              |
| 19:AT:27:PHE:O    | 19:AT:27:PHE:CD2  | 2.72                     | 0.43              |
| 19:AT:48:GLU:OE1  | 19:AT:48:GLU:N    | 2.51                     | 0.43              |
| 20:AU:45:SER:OG   | 20:AU:49:LYS:HE3  | 2.19                     | 0.43              |
| 21:AV:46:GLY:C    | 21:AV:47:HIS:CG   | 2.97                     | 0.43              |
| 22:AW:12:ALA:O    | 22:AW:15:ARG:N    | 2.51                     | 0.43              |
| 22:AW:51:GLU:CA   | 22:AW:54:LYS:HD2  | 2.42                     | 0.43              |
| 22:AW:82:SER:OG   | 22:AW:83:ARG:N    | 2.52                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 23:AX:13:ILE:HG22 | 23:AX:14:TRP:H    | 1.84                     | 0.43              |
| 24:BA:28:A:C2     | 24:BA:29:U:C1'    | 3.02                     | 0.43              |
| 24:BA:55:G:C2     | 24:BA:56:A:C5     | 3.07                     | 0.43              |
| 24:BA:83:G:O2'    | 24:BA:84:A:O4'    | 2.32                     | 0.43              |
| 24:BA:152:G:C2'   | 24:BA:153:C:O4'   | 2.60                     | 0.43              |
| 24:BA:247:G:H1    | 54:B7:11:LYS:HZ3  | 1.67                     | 0.43              |
| 24:BA:270(J):G:C5 | 24:BA:270(K):C:C4 | 3.06                     | 0.43              |
| 24:BA:295:G:HO2'  | 24:BA:296:C:H5'   | 1.80                     | 0.43              |
| 24:BA:388:G:OP2   | 50:B3:23:GLU:CD   | 2.62                     | 0.43              |
| 24:BA:412:A:C2'   | 24:BA:413:C:H5'   | 2.49                     | 0.43              |
| 24:BA:509:C:C2'   | 24:BA:510:C:OP2   | 2.66                     | 0.43              |
| 24:BA:558:G:C5'   | 34:BM:109:LYS:HG2 | 2.47                     | 0.43              |
| 24:BA:574:C:N1    | 24:BA:2055:C:C5   | 2.73                     | 0.43              |
| 24:BA:647:G:C2    | 24:BA:648:G:C5    | 3.07                     | 0.43              |
| 24:BA:660:G:C6    | 24:BA:661:C:N4    | 2.87                     | 0.43              |
| 24:BA:834:C:C2    | 24:BA:835:A:C8    | 3.07                     | 0.43              |
| 24:BA:852:G:C6    | 24:BA:853:G:C5    | 3.07                     | 0.43              |
| 24:BA:894:C:O2'   | 24:BA:895:U:H5'   | 2.18                     | 0.43              |
| 24:BA:900:A:N7    | 24:BA:901:A:C8    | 2.86                     | 0.43              |
| 24:BA:922:U:O2    | 24:BA:923:C:C5    | 2.72                     | 0.43              |
| 24:BA:962:G:C2    | 24:BA:963:U:N3    | 2.87                     | 0.43              |
| 24:BA:969:U:C2'   | 24:BA:970:C:C5'   | 2.94                     | 0.43              |
| 24:BA:988:A:O2'   | 24:BA:1157:G:C5'  | 2.65                     | 0.43              |
| 24:BA:1020:A:N3   | 24:BA:1140:C:C2   | 2.87                     | 0.43              |
| 24:BA:1190:G:OP2  | 36:BO:29:LYS:HD3  | 2.18                     | 0.43              |
| 24:BA:1197:G:C6   | 24:BA:1198:U:C6   | 3.06                     | 0.43              |
| 24:BA:1313:U:C2'  | 24:BA:1314:C:H5'  | 2.49                     | 0.43              |
| 24:BA:1392:A:C5   | 24:BA:1393:A:N6   | 2.87                     | 0.43              |
| 24:BA:1492:G:O2'  | 24:BA:1493:C:C5   | 2.72                     | 0.43              |
| 24:BA:1542:G:H1'  | 24:BA:1543:A:C2   | 2.54                     | 0.43              |
| 24:BA:1659:U:H2'  | 24:BA:1660:C:H6   | 1.84                     | 0.43              |
| 24:BA:1675:C:H2'  | 24:BA:1676:A:O4'  | 2.19                     | 0.43              |
| 24:BA:1775:U:N3   | 27:BD:208:LYS:HD2 | 2.34                     | 0.43              |
| 24:BA:1827:C:C2   | 24:BA:1828:G:H1'  | 2.54                     | 0.43              |
| 24:BA:1860:G:N3   | 24:BA:1860:G:H2'  | 2.33                     | 0.43              |
| 24:BA:1944:U:O4'  | 24:BA:1955:U:H6   | 1.98                     | 0.43              |
| 24:BA:1992:G:N7   | 24:BA:1997:G:N1   | 2.66                     | 0.43              |
| 24:BA:2009:G:H1'  | 38:BQ:107:ASP:CA  | 2.46                     | 0.43              |
| 24:BA:2014:A:C2   | 24:BA:2015:A:N1   | 2.87                     | 0.43              |
| 24:BA:2074:U:O2   | 24:BA:2075:U:C6   | 2.72                     | 0.43              |
| 24:BA:2124:G:N3   | 26:BC:217:THR:HA  | 2.34                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2149:G:N2   | 24:BA:2150:U:H1'   | 2.34                     | 0.43              |
| 24:BA:2210:G:O6   | 27:BD:70:TRP:CH2   | 2.72                     | 0.43              |
| 24:BA:2230:G:H1'  | 50:B3:58:ARG:CZ    | 2.47                     | 0.43              |
| 24:BA:2306:C:OP1  | 30:BG:136:ARG:CZ   | 2.67                     | 0.43              |
| 24:BA:2311:A:C5'  | 24:BA:2312:U:H5    | 2.32                     | 0.43              |
| 24:BA:2331:G:N7   | 24:BA:2332:U:C4    | 2.87                     | 0.43              |
| 24:BA:2334:G:H2'  | 24:BA:2335:A:OP1   | 2.19                     | 0.43              |
| 24:BA:2472:G:H3'  | 24:BA:2475:C:N4    | 2.34                     | 0.43              |
| 24:BA:2495:G:H2'  | 24:BA:2496:C:O4'   | 2.19                     | 0.43              |
| 24:BA:2556:C:H2'  | 24:BA:2557:G:C5'   | 2.49                     | 0.43              |
| 24:BA:2556:C:C2'  | 24:BA:2557:G:C5'   | 2.97                     | 0.43              |
| 24:BA:2559:C:C2   | 24:BA:2560:C:C5    | 3.07                     | 0.43              |
| 24:BA:2597:G:N9   | 27:BD:242:ARG:NH2  | 2.62                     | 0.43              |
| 24:BA:2639:A:C2'  | 24:BA:2640:G:O5'   | 2.66                     | 0.43              |
| 24:BA:2813:A:H2'  | 24:BA:2814:C:O4'   | 2.18                     | 0.43              |
| 24:BA:2876:G:C2   | 24:BA:2877:G:C8    | 3.07                     | 0.43              |
| 25:BB:4:C:N4      | 25:BB:117:G:N1     | 2.67                     | 0.43              |
| 25:BB:18:G:C2     | 25:BB:19:G:C8      | 3.07                     | 0.43              |
| 25:BB:73:A:HO2'   | 25:BB:74:U:C5'     | 2.31                     | 0.43              |
| 25:BB:83:G:N2     | 25:BB:84:C:Cl'     | 2.81                     | 0.43              |
| 25:BB:85:G:C2     | 25:BB:86:G:C5      | 3.07                     | 0.43              |
| 25:BB:99:A:C2'    | 25:BB:100:G:H5'    | 2.49                     | 0.43              |
| 26:BC:75:LEU:HD22 | 26:BC:110:PHE:CE1  | 2.51                     | 0.43              |
| 26:BC:81:GLU:OE2  | 26:BC:82:LYS:CD    | 2.67                     | 0.43              |
| 26:BC:120:MET:CE  | 26:BC:145:VAL:HG22 | 2.49                     | 0.43              |
| 26:BC:182:PRO:HG2 | 26:BC:183:GLU:OE1  | 2.17                     | 0.43              |
| 27:BD:21:PHE:N    | 27:BD:21:PHE:CD2   | 2.84                     | 0.43              |
| 27:BD:28:GLU:N    | 27:BD:28:GLU:OE1   | 2.52                     | 0.43              |
| 27:BD:55:GLY:CA   | 27:BD:218:ARG:HD3  | 2.48                     | 0.43              |
| 27:BD:78:LYS:O    | 27:BD:95:LEU:CD2   | 2.66                     | 0.43              |
| 27:BD:245:PRO:HA  | 27:BD:246:PRO:HD3  | 1.68                     | 0.43              |
| 27:BD:252:TRP:CE3 | 27:BD:252:TRP:CA   | 2.98                     | 0.43              |
| 28:BE:13:ARG:C    | 28:BE:13:ARG:CD    | 2.92                     | 0.43              |
| 28:BE:49:LEU:HD13 | 28:BE:50:GLY:N     | 2.34                     | 0.43              |
| 28:BE:144:ARG:O   | 28:BE:144:ARG:CG   | 2.67                     | 0.43              |
| 28:BE:154:LYS:HZ1 | 28:BE:156:MET:HE2  | 1.74                     | 0.43              |
| 29:BF:9:ILE:HA    | 29:BF:10:PRO:HD3   | 1.76                     | 0.43              |
| 29:BF:111:ALA:O   | 29:BF:112:MET:C    | 2.62                     | 0.43              |
| 30:BG:165:THR:O   | 30:BG:168:GLU:HB2  | 2.19                     | 0.43              |
| 30:BG:168:GLU:O   | 30:BG:169:ALA:C    | 2.61                     | 0.43              |
| 31:BH:24:VAL:CG2  | 31:BH:35:VAL:HG23  | 2.35                     | 0.43              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 32:BK:102:SER:CA   | 32:BK:108:THR:HG22 | 2.48                     | 0.43              |
| 32:BK:113:ARG:CZ   | 32:BK:132:PRO:CB   | 2.94                     | 0.43              |
| 34:BM:87:LEU:HD21  | 34:BM:88:GLU:OE1   | 2.18                     | 0.43              |
| 34:BM:107:LEU:HD13 | 34:BM:117:PHE:CG   | 2.53                     | 0.43              |
| 34:BM:135:PRO:C    | 34:BM:136:GLU:O    | 2.62                     | 0.43              |
| 35:BN:10:VAL:HG13  | 35:BN:14:THR:CG2   | 2.48                     | 0.43              |
| 35:BN:42:SER:OG    | 35:BN:43:VAL:N     | 2.51                     | 0.43              |
| 36:BO:56:SER:OG    | 54:B7:27:THR:CB    | 2.66                     | 0.43              |
| 36:BO:57:THR:HG22  | 36:BO:58:THR:N     | 2.34                     | 0.43              |
| 36:BO:96:THR:OG1   | 36:BO:102:ARG:CD   | 2.65                     | 0.43              |
| 38:BQ:35:THR:CG2   | 38:BQ:113:LEU:HD23 | 2.49                     | 0.43              |
| 38:BQ:73:VAL:CG2   | 38:BQ:74:LYS:H     | 2.25                     | 0.43              |
| 39:BR:14:VAL:HG12  | 39:BR:15:ARG:H     | 1.81                     | 0.43              |
| 39:BR:28:VAL:HA    | 39:BR:37:ALA:CB    | 2.46                     | 0.43              |
| 39:BR:42:ASP:C     | 39:BR:42:ASP:OD2   | 2.62                     | 0.43              |
| 39:BR:47:THR:O     | 39:BR:48:LEU:O     | 2.37                     | 0.43              |
| 39:BR:77:ALA:O     | 39:BR:80:LEU:N     | 2.52                     | 0.43              |
| 40:BS:67:SER:HA    | 40:BS:75:ILE:HA    | 2.01                     | 0.43              |
| 40:BS:91:ARG:C     | 40:BS:93:ARG:NH2   | 2.75                     | 0.43              |
| 41:BT:74:LEU:HD23  | 41:BT:75:ASN:H     | 1.83                     | 0.43              |
| 43:BV:8:ARG:HA     | 43:BV:102:HIS:CD2  | 2.54                     | 0.43              |
| 43:BV:24:ILE:HG22  | 43:BV:32:ALA:CA    | 2.49                     | 0.43              |
| 44:BW:14:SER:O     | 44:BW:17:ALA:HB3   | 2.19                     | 0.43              |
| 44:BW:18:TYR:OH    | 44:BW:96:ILE:CD1   | 2.67                     | 0.43              |
| 44:BW:63:LYS:HZ3   | 44:BW:72:LYS:HE2   | 1.83                     | 0.43              |
| 45:BX:12:THR:C     | 45:BX:73:ARG:NH1   | 2.76                     | 0.43              |
| 45:BX:93:GLY:C     | 45:BX:95:LYS:N     | 2.75                     | 0.43              |
| 45:BX:97:ARG:O     | 45:BX:98:VAL:CG2   | 2.66                     | 0.43              |
| 46:BY:16:SER:O     | 46:BY:17:ALA:C     | 2.61                     | 0.43              |
| 46:BY:30:ASN:HA    | 46:BY:89:PHE:CD2   | 2.54                     | 0.43              |
| 47:BZ:44:ARG:HE    | 47:BZ:77:ARG:NE    | 2.17                     | 0.43              |
| 47:BZ:44:ARG:HG2   | 47:BZ:45:PHE:CE2   | 2.54                     | 0.43              |
| 49:B2:30:ARG:N     | 49:B2:30:ARG:CD    | 2.73                     | 0.43              |
| 53:B6:19:ARG:HH11  | 53:B6:19:ARG:CG    | 2.31                     | 0.43              |
| 54:B7:21:LYS:HZ2   | 54:B7:21:LYS:CB    | 2.14                     | 0.43              |
| 54:B7:44:LYS:HA    | 54:B7:44:LYS:HZ2   | 1.84                     | 0.43              |
| 55:B8:12:ASP:O     | 55:B8:13:LYS:HG3   | 2.18                     | 0.43              |
| 1:AA:84:U:C2'      | 1:AA:85:U:O4'      | 2.62                     | 0.42              |
| 1:AA:151:A:N6      | 1:AA:171:A:C6      | 2.87                     | 0.42              |
| 1:AA:183:G:N3      | 1:AA:223:U:O2'     | 2.51                     | 0.42              |
| 1:AA:246:A:H1'     | 1:AA:247:G:C1'     | 2.48                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:AA:253:U:H2'   | 1:AA:254:G:C8     | 2.54                     | 0.42              |
| 1:AA:266:G:H2'   | 1:AA:267:C:OP2    | 2.19                     | 0.42              |
| 1:AA:307:C:C6    | 1:AA:307:C:O5'    | 2.72                     | 0.42              |
| 1:AA:383:A:OP2   | 1:AA:383:A:H8     | 2.01                     | 0.42              |
| 1:AA:519:C:C2'   | 1:AA:520:A:C5'    | 2.90                     | 0.42              |
| 1:AA:539:A:P     | 14:AO:114:LYS:NZ  | 2.91                     | 0.42              |
| 1:AA:558:G:O5'   | 1:AA:559:A:O3'    | 2.37                     | 0.42              |
| 1:AA:584:G:C2    | 1:AA:585:G:C8     | 3.07                     | 0.42              |
| 1:AA:642:A:C5    | 10:AK:115:SER:HA  | 2.54                     | 0.42              |
| 1:AA:687:A:C2    | 1:AA:704:A:C5     | 3.07                     | 0.42              |
| 1:AA:892:A:C2    | 1:AA:907:A:C4     | 3.07                     | 0.42              |
| 1:AA:901:A:C2'   | 1:AA:902:G:O5'    | 2.65                     | 0.42              |
| 1:AA:908:A:N3    | 1:AA:909:A:N7     | 2.67                     | 0.42              |
| 1:AA:965:A:C2    | 15:AP:124:PRO:HB3 | 2.54                     | 0.42              |
| 1:AA:971:G:H2'   | 1:AA:1365:G:O2'   | 2.19                     | 0.42              |
| 1:AA:973:G:H3'   | 1:AA:974:A:H5''   | 2.01                     | 0.42              |
| 1:AA:980:C:H1'   | 16:AQ:19:ARG:HA   | 2.01                     | 0.42              |
| 1:AA:1035:A:H2'  | 1:AA:1036:G:C5'   | 2.43                     | 0.42              |
| 1:AA:1067:A:N3   | 1:AA:1068:G:C1'   | 2.83                     | 0.42              |
| 1:AA:1087:G:H2'  | 1:AA:1088:G:H8    | 1.84                     | 0.42              |
| 1:AA:1130:A:H5'' | 1:AA:1131:G:OP2   | 2.19                     | 0.42              |
| 1:AA:1161:C:H2'  | 1:AA:1162:C:C5    | 2.54                     | 0.42              |
| 1:AA:1253:G:N2   | 1:AA:1285:A:N6    | 2.66                     | 0.42              |
| 1:AA:1360:A:N1   | 1:AA:1361:G:N1    | 2.67                     | 0.42              |
| 1:AA:1402:C:O2'  | 1:AA:1403:C:H5'   | 2.19                     | 0.42              |
| 1:AA:1414:U:C2'  | 1:AA:1415:G:H8    | 2.23                     | 0.42              |
| 1:AA:1431:C:H2'  | 1:AA:1432:G:C5'   | 2.49                     | 0.42              |
| 1:AA:1443:G:H4'  | 1:AA:1446:A:C4'   | 2.42                     | 0.42              |
| 3:AC:8:U:C1'     | 3:AC:48:C:HO2'    | 2.26                     | 0.42              |
| 3:AC:18:G:C8     | 3:AC:18:G:OP1     | 2.71                     | 0.42              |
| 3:AC:34:G:C6     | 3:AC:35:A:N7      | 2.87                     | 0.42              |
| 3:AD:34:G:N3     | 3:AD:35:A:H5''    | 2.34                     | 0.42              |
| 3:AD:40:C:C2'    | 3:AD:40:C:O2      | 2.67                     | 0.42              |
| 3:AB:1:G:N3      | 3:AB:1:G:C2'      | 2.81                     | 0.42              |
| 4:AE:8:LYS:O     | 4:AE:9:GLU:CB     | 2.67                     | 0.42              |
| 4:AE:55:PHE:HA   | 4:AE:58:ILE:HG13  | 2.01                     | 0.42              |
| 4:AE:77:ALA:CB   | 4:AE:211:ILE:HD13 | 2.44                     | 0.42              |
| 4:AE:97:TRP:CH2  | 4:AE:176:GLU:CD   | 2.77                     | 0.42              |
| 5:AF:42:LEU:O    | 5:AF:45:LYS:HB3   | 2.19                     | 0.42              |
| 5:AF:73:PRO:C    | 5:AF:76:VAL:HB    | 2.44                     | 0.42              |
| 5:AF:112:SER:OG  | 5:AF:115:LEU:CG   | 2.67                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:AF:142:MET:CG   | 5:AF:170:GLN:CD    | 2.92                     | 0.42              |
| 5:AF:151:VAL:C    | 5:AF:152:ILE:HG23  | 2.43                     | 0.42              |
| 6:AG:129:ASN:CG   | 6:AG:144:ASP:CG    | 2.86                     | 0.42              |
| 7:AH:36:ASP:OD1   | 7:AH:36:ASP:C      | 2.61                     | 0.42              |
| 7:AH:65:ASN:HD21  | 7:AH:136:MET:CE    | 2.32                     | 0.42              |
| 7:AH:71:LEU:CG    | 7:AH:72:GLN:N      | 2.82                     | 0.42              |
| 7:AH:82:VAL:HG13  | 7:AH:134:ALA:HB1   | 2.00                     | 0.42              |
| 7:AH:141:GLN:O    | 7:AH:142:LEU:CB    | 2.66                     | 0.42              |
| 8:AI:2:ARG:HH11   | 8:AI:69:GLU:HB3    | 1.84                     | 0.42              |
| 9:AJ:50:ILE:CD1   | 9:AJ:58:PRO:CB     | 2.96                     | 0.42              |
| 9:AJ:76:ARG:HH12  | 9:AJ:89:MET:HG3    | 1.82                     | 0.42              |
| 9:AJ:112:PRO:O    | 9:AJ:113:GLU:HG2   | 2.20                     | 0.42              |
| 10:AK:40:ALA:HB2  | 10:AK:45:ILE:CG2   | 2.49                     | 0.42              |
| 10:AK:45:ILE:HD12 | 10:AK:61:VAL:CG2   | 2.48                     | 0.42              |
| 10:AK:83:ILE:O    | 10:AK:83:ILE:HG23  | 2.18                     | 0.42              |
| 11:AL:33:PHE:HB3  | 11:AL:34:ASN:H     | 1.71                     | 0.42              |
| 11:AL:53:VAL:HG12 | 11:AL:53:VAL:O     | 2.18                     | 0.42              |
| 11:AL:66:ARG:HE   | 11:AL:66:ARG:HB3   | 1.70                     | 0.42              |
| 11:AL:83:ARG:HA   | 11:AL:86:VAL:HG23  | 2.00                     | 0.42              |
| 12:AM:13:HIS:ND1  | 12:AM:13:HIS:O     | 2.52                     | 0.42              |
| 12:AM:48:THR:OG1  | 12:AM:62:HIS:CD2   | 2.72                     | 0.42              |
| 13:AN:99:GLN:CB   | 13:AN:105:VAL:HG11 | 2.39                     | 0.42              |
| 14:AO:9:GLN:O     | 14:AO:12:ARG:N     | 2.50                     | 0.42              |
| 15:AP:4:ILE:O     | 15:AP:8:GLU:HB2    | 2.19                     | 0.42              |
| 15:AP:13:LYS:HA   | 15:AP:44:ARG:HE    | 1.80                     | 0.42              |
| 15:AP:42:ALA:O    | 15:AP:43:THR:C     | 2.62                     | 0.42              |
| 16:AQ:4:LYS:HA    | 16:AQ:7:ILE:CD1    | 2.49                     | 0.42              |
| 16:AQ:39:LEU:HB2  | 16:AQ:44:LEU:HB2   | 2.01                     | 0.42              |
| 17:AR:63:ARG:HG3  | 17:AR:64:ARG:H     | 1.83                     | 0.42              |
| 17:AR:69:TYR:CZ   | 17:AR:73:GLU:HG3   | 2.54                     | 0.42              |
| 18:AS:52:ASP:OD1  | 18:AS:55:ARG:HG2   | 2.18                     | 0.42              |
| 18:AS:55:ARG:HH21 | 18:AS:58:TYR:CB    | 2.32                     | 0.42              |
| 20:AU:71:LYS:O    | 20:AU:75:ILE:HG13  | 2.19                     | 0.42              |
| 22:AW:51:GLU:HA   | 22:AW:54:LYS:HE3   | 1.97                     | 0.42              |
| 22:AW:75:ASN:O    | 22:AW:78:ALA:CB    | 2.60                     | 0.42              |
| 24:BA:61:G:C6     | 24:BA:62:C:N3      | 2.87                     | 0.42              |
| 24:BA:223:A:N6    | 24:BA:374:A:O2'    | 2.51                     | 0.42              |
| 24:BA:297:C:H5''  | 45:BX:83:THR:CB    | 2.46                     | 0.42              |
| 24:BA:457:A:H1'   | 24:BA:459:U:C4     | 2.53                     | 0.42              |
| 24:BA:471:A:C5    | 24:BA:472:A:N7     | 2.87                     | 0.42              |
| 24:BA:475:U:O2    | 24:BA:475:U:H2'    | 2.19                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:491:G:H2'  | 24:BA:492:A:C1'   | 2.49                     | 0.42              |
| 24:BA:552:G:O2'  | 24:BA:553:U:C5'   | 2.65                     | 0.42              |
| 24:BA:565:C:H1'  | 24:BA:577:G:N2    | 2.34                     | 0.42              |
| 24:BA:629:G:N2   | 24:BA:640:C:OP1   | 2.49                     | 0.42              |
| 24:BA:775:G:N2   | 24:BA:787:U:O3'   | 2.51                     | 0.42              |
| 24:BA:819:A:H2'  | 24:BA:820:A:C1'   | 2.49                     | 0.42              |
| 24:BA:822:U:O2   | 24:BA:823:G:C8    | 2.72                     | 0.42              |
| 24:BA:849:A:C4   | 24:BA:850:C:C5    | 3.07                     | 0.42              |
| 24:BA:933:A:H2'  | 24:BA:934:G:O5'   | 2.19                     | 0.42              |
| 24:BA:1023:U:H2' | 24:BA:1024:G:C4'  | 2.49                     | 0.42              |
| 24:BA:1044:G:N3  | 24:BA:1111:A:H1'  | 2.34                     | 0.42              |
| 24:BA:1155:A:C2  | 24:BA:1157:G:C1'  | 2.97                     | 0.42              |
| 24:BA:1179:C:OP2 | 24:BA:1179:C:H3'  | 2.19                     | 0.42              |
| 24:BA:1212:G:N7  | 24:BA:1235:G:N1   | 2.67                     | 0.42              |
| 24:BA:1314:C:N4  | 24:BA:1315:C:N4   | 2.67                     | 0.42              |
| 24:BA:1346:G:C6  | 24:BA:1347:G:C6   | 3.07                     | 0.42              |
| 24:BA:1422:G:C2  | 24:BA:1423:G:C4   | 3.07                     | 0.42              |
| 24:BA:1449:A:C8  | 24:BA:1529:A:C2   | 3.08                     | 0.42              |
| 24:BA:1475:G:O6  | 24:BA:1517:G:C6   | 2.71                     | 0.42              |
| 24:BA:1535:U:O2  | 24:BA:1536:A:H1'  | 2.19                     | 0.42              |
| 24:BA:1589:C:C2  | 24:BA:1590:U:C6   | 3.07                     | 0.42              |
| 24:BA:1620:G:C2' | 24:BA:1621:U:O5'  | 2.67                     | 0.42              |
| 24:BA:1656:C:H2' | 24:BA:1656:C:O2   | 2.19                     | 0.42              |
| 24:BA:1700:A:H2' | 24:BA:1701:A:C4'  | 2.49                     | 0.42              |
| 24:BA:1780:A:P   | 24:BA:1782:C:P    | 3.17                     | 0.42              |
| 24:BA:1809:A:H61 | 50:B3:3:GLU:CB    | 2.31                     | 0.42              |
| 24:BA:1820:U:C1' | 27:BD:202:LYS:HG2 | 2.48                     | 0.42              |
| 24:BA:1832:C:C5  | 24:BA:1833:U:C5   | 3.07                     | 0.42              |
| 24:BA:1842:G:C6  | 24:BA:1901:A:C6   | 3.07                     | 0.42              |
| 24:BA:1915:U:C2' | 24:BA:1916:A:OP2  | 2.67                     | 0.42              |
| 24:BA:1977:A:C2  | 24:BA:1978:A:H1'  | 2.54                     | 0.42              |
| 24:BA:2128:C:N4  | 24:BA:2129:C:C5   | 2.87                     | 0.42              |
| 24:BA:2160:G:N2  | 24:BA:2161:C:O2   | 2.52                     | 0.42              |
| 24:BA:2311:A:C2  | 30:BG:45:GLU:OE1  | 2.71                     | 0.42              |
| 24:BA:2313:C:C2  | 24:BA:2314:C:C5   | 3.07                     | 0.42              |
| 24:BA:2423:U:H1' | 24:BA:2425:A:N9   | 2.34                     | 0.42              |
| 24:BA:2435:A:C2  | 24:BA:2436:G:C4   | 3.07                     | 0.42              |
| 24:BA:2460:U:H2' | 24:BA:2461:C:C5   | 2.54                     | 0.42              |
| 24:BA:2483:C:O2  | 24:BA:2483:C:C2'  | 2.67                     | 0.42              |
| 24:BA:2563:U:O2  | 24:BA:2565:A:O5'  | 2.36                     | 0.42              |
| 24:BA:2580:U:H2' | 24:BA:2581:G:C8   | 2.54                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2585:U:H2'   | 24:BA:2586:C:OP2   | 2.19                     | 0.42              |
| 24:BA:2616:C:H3'   | 24:BA:2617:C:C5    | 2.54                     | 0.42              |
| 24:BA:2617:C:C2'   | 24:BA:2618:G:O5'   | 2.66                     | 0.42              |
| 24:BA:2653:U:H3    | 24:BA:2654:A:N6    | 2.15                     | 0.42              |
| 24:BA:2689:U:C4    | 24:BA:2713:A:N6    | 2.87                     | 0.42              |
| 24:BA:2704:C:H2'   | 24:BA:2705:A:C1'   | 2.49                     | 0.42              |
| 24:BA:2715:C:N3    | 24:BA:2716:U:C5    | 2.87                     | 0.42              |
| 25:BB:59:A:C3'     | 25:BB:60:C:H5'     | 2.48                     | 0.42              |
| 26:BC:120:MET:HE3  | 26:BC:120:MET:HA   | 2.01                     | 0.42              |
| 26:BC:176:GLY:CA   | 26:BC:185:LEU:HD22 | 2.49                     | 0.42              |
| 27:BD:5:LYS:O      | 27:BD:27:THR:HG23  | 2.19                     | 0.42              |
| 27:BD:9:TYR:CG     | 27:BD:25:THR:HG23  | 2.53                     | 0.42              |
| 27:BD:23:GLU:CB    | 27:BD:205:VAL:H    | 2.32                     | 0.42              |
| 27:BD:101:GLU:OE1  | 27:BD:102:LYS:N    | 2.52                     | 0.42              |
| 27:BD:260:ARG:CG   | 27:BD:260:ARG:NH1  | 2.66                     | 0.42              |
| 28:BE:37:ARG:H     | 28:BE:40:GLU:HB2   | 1.83                     | 0.42              |
| 28:BE:49:LEU:HD12  | 28:BE:50:GLY:N     | 2.34                     | 0.42              |
| 29:BF:53:THR:O     | 29:BF:56:GLU:HG3   | 2.19                     | 0.42              |
| 29:BF:133:ASN:HD22 | 29:BF:133:ASN:HA   | 1.45                     | 0.42              |
| 30:BG:22:ARG:HG3   | 30:BG:23:PHE:HD2   | 1.84                     | 0.42              |
| 31:BH:67:LEU:O     | 31:BH:69:ARG:N     | 2.52                     | 0.42              |
| 31:BH:143:GLN:O    | 31:BH:144:VAL:C    | 2.61                     | 0.42              |
| 31:BH:164:TYR:CD2  | 31:BH:167:GLU:HG2  | 2.53                     | 0.42              |
| 32:BK:2:LYS:HZ2    | 32:BK:44:LEU:HD11  | 1.82                     | 0.42              |
| 33:BL:8:VAL:CG1    | 33:BL:27:LEU:HD23  | 2.49                     | 0.42              |
| 35:BN:68:GLU:OE2   | 35:BN:76:ALA:CB    | 2.42                     | 0.42              |
| 35:BN:110:GLY:O    | 35:BN:111:PHE:HB3  | 2.19                     | 0.42              |
| 35:BN:112:MET:O    | 35:BN:115:VAL:CA   | 2.67                     | 0.42              |
| 36:BO:23:PRO:CB    | 36:BO:28:GLY:CA    | 2.93                     | 0.42              |
| 36:BO:114:ILE:HD12 | 36:BO:123:LEU:HG   | 1.97                     | 0.42              |
| 37:BP:6:ARG:HB2    | 37:BP:44:ALA:HB3   | 1.94                     | 0.42              |
| 37:BP:16:ARG:HG3   | 37:BP:72:LYS:CG    | 2.48                     | 0.42              |
| 37:BP:65:PHE:HD2   | 37:BP:65:PHE:HA    | 1.69                     | 0.42              |
| 38:BQ:57:ARG:CZ    | 38:BQ:62:ALA:HB2   | 2.45                     | 0.42              |
| 38:BQ:77:ARG:HH11  | 38:BQ:77:ARG:CG    | 2.29                     | 0.42              |
| 39:BR:56:LEU:HB3   | 39:BR:59:LYS:HZ3   | 1.83                     | 0.42              |
| 40:BS:51:ARG:HH12  | 40:BS:114:LEU:HD13 | 1.80                     | 0.42              |
| 41:BT:25:TRP:CE3   | 41:BT:25:TRP:C     | 2.96                     | 0.42              |
| 41:BT:45:TYR:O     | 41:BT:47:TYR:N     | 2.52                     | 0.42              |
| 41:BT:99:ALA:CA    | 41:BT:106:PHE:CG   | 2.95                     | 0.42              |
| 42:BU:9:GLY:O      | 42:BU:10:LYS:CB    | 2.57                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 42:BU:89:GLN:HG2  | 42:BU:91:TYR:HD1  | 1.84                     | 0.42              |
| 43:BV:6:ILE:CA    | 43:BV:103:ILE:O   | 2.67                     | 0.42              |
| 43:BV:24:ILE:HG23 | 43:BV:35:ILE:CG2  | 2.49                     | 0.42              |
| 43:BV:58:ALA:HB1  | 43:BV:69:LEU:HD21 | 2.01                     | 0.42              |
| 43:BV:59:VAL:HA   | 43:BV:63:ASP:C    | 2.44                     | 0.42              |
| 43:BV:70:TYR:OH   | 43:BV:72:LYS:HB2  | 2.18                     | 0.42              |
| 44:BW:18:TYR:HD1  | 44:BW:21:PHE:HE1  | 1.66                     | 0.42              |
| 44:BW:33:LYS:HB2  | 44:BW:33:LYS:HZ3  | 1.84                     | 0.42              |
| 44:BW:57:LEU:C    | 44:BW:58:HIS:HD1  | 2.27                     | 0.42              |
| 44:BW:64:LYS:C    | 44:BW:70:LEU:HG   | 2.42                     | 0.42              |
| 46:BY:60:GLU:CD   | 46:BY:60:GLU:H    | 2.26                     | 0.42              |
| 47:BZ:27:GLU:N    | 47:BZ:69:PHE:CE1  | 2.86                     | 0.42              |
| 48:B1:20:VAL:HB   | 48:B1:55:LEU:HB3  | 2.01                     | 0.42              |
| 48:B1:58:VAL:C    | 48:B1:60:ASN:N    | 2.76                     | 0.42              |
| 51:B4:8:LYS:HB2   | 51:B4:9:LYS:HE2   | 2.00                     | 0.42              |
| 52:B5:45:LYS:O    | 52:B5:46:HIS:CB   | 2.66                     | 0.42              |
| 53:B6:5:TRP:CZ3   | 53:B6:7:PRO:HB3   | 2.53                     | 0.42              |
| 53:B6:28:ARG:HG3  | 53:B6:28:ARG:H    | 1.53                     | 0.42              |
| 53:B6:47:ARG:CG   | 53:B6:48:LYS:N    | 2.78                     | 0.42              |
| 54:B7:29:LYS:HE2  | 54:B7:36:LYS:HZ3  | 1.84                     | 0.42              |
| 55:B8:22:ARG:HD3  | 55:B8:24:TYR:CE1  | 2.53                     | 0.42              |
| 1:AA:51:A:N1      | 1:AA:353:A:C2     | 2.87                     | 0.42              |
| 1:AA:60:A:OP2     | 1:AA:387:U:H4'    | 2.19                     | 0.42              |
| 1:AA:65:U:C6      | 1:AA:381:C:C5     | 3.07                     | 0.42              |
| 1:AA:89:U:C4      | 1:AA:90:C:C5      | 3.07                     | 0.42              |
| 1:AA:111:G:C5'    | 1:AA:112:G:OP2    | 2.67                     | 0.42              |
| 1:AA:120:A:C6     | 1:AA:122:G:C2     | 3.08                     | 0.42              |
| 1:AA:174:C:OP1    | 1:AA:197:A:H2     | 2.03                     | 0.42              |
| 1:AA:342:C:C2     | 1:AA:348:G:C2     | 3.06                     | 0.42              |
| 1:AA:383:A:C2'    | 1:AA:384:G:H5'    | 2.49                     | 0.42              |
| 1:AA:390:C:H2'    | 1:AA:391:G:O5'    | 2.19                     | 0.42              |
| 1:AA:438:G:C2     | 1:AA:495:A:C8     | 3.07                     | 0.42              |
| 1:AA:503:C:C2     | 1:AA:504:C:C6     | 3.07                     | 0.42              |
| 1:AA:503:C:C4     | 1:AA:504:C:C5     | 3.07                     | 0.42              |
| 1:AA:519:C:C5     | 1:AA:520:A:C2     | 3.07                     | 0.42              |
| 1:AA:580:U:H2'    | 1:AA:580:U:O2     | 2.19                     | 0.42              |
| 1:AA:668:G:C4'    | 17:AR:48:LYS:O    | 2.60                     | 0.42              |
| 1:AA:721:G:OP1    | 1:AA:721:G:H8     | 2.02                     | 0.42              |
| 1:AA:767:A:C2'    | 1:AA:768:A:H5'    | 2.49                     | 0.42              |
| 1:AA:781:A:C2     | 1:AA:782:A:H1'    | 2.55                     | 0.42              |
| 1:AA:880:C:H2'    | 1:AA:881:G:O5'    | 2.19                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 1:AA:900:A:C4     | 1:AA:901:A:N7    | 2.87                     | 0.42              |
| 1:AA:945:G:C2     | 1:AA:1337:G:N3   | 2.86                     | 0.42              |
| 1:AA:953:G:O2'    | 1:AA:954:G:C5'   | 2.67                     | 0.42              |
| 1:AA:958:A:O2'    | 1:AA:959:A:H5'   | 2.20                     | 0.42              |
| 1:AA:962:C:C4     | 1:AA:963:G:C5    | 3.07                     | 0.42              |
| 1:AA:975:A:H4'    | 1:AA:976:G:C5'   | 2.50                     | 0.42              |
| 1:AA:975:A:H4'    | 1:AA:976:G:H5'   | 2.00                     | 0.42              |
| 1:AA:1000:A:H2'   | 1:AA:1001:G:H5'  | 2.00                     | 0.42              |
| 1:AA:1095:U:C2    | 1:AA:1096:C:C5   | 3.07                     | 0.42              |
| 1:AA:1105:A:C2    | 1:AA:1106:G:C8   | 3.07                     | 0.42              |
| 1:AA:1189:C:H2'   | 1:AA:1190:G:H5'  | 2.01                     | 0.42              |
| 1:AA:1250:A:H2'   | 1:AA:1251:A:O4'  | 2.19                     | 0.42              |
| 1:AA:1285:A:O2'   | 1:AA:1286:A:P    | 2.77                     | 0.42              |
| 1:AA:1291:G:N1    | 1:AA:1292:U:C4   | 2.87                     | 0.42              |
| 1:AA:1333:A:H2'   | 1:AA:1334:G:H8   | 1.80                     | 0.42              |
| 1:AA:1346:A:N1    | 9:AJ:10:ARG:HD3  | 2.31                     | 0.42              |
| 3:AC:10:G:H2'     | 3:AC:11:C:H6     | 1.84                     | 0.42              |
| 3:AB:14:A:C6      | 3:AB:22:G:O2'    | 2.70                     | 0.42              |
| 3:AB:24:G:C5      | 3:AB:25:C:C5     | 3.06                     | 0.42              |
| 3:AB:52:G:O2'     | 24:BA:2470:G:C4' | 2.67                     | 0.42              |
| 3:AB:75:C:N4      | 24:BA:2553:G:H1  | 2.15                     | 0.42              |
| 4:AE:49:GLU:H     | 4:AE:49:GLU:CD   | 2.28                     | 0.42              |
| 4:AE:59:GLU:O     | 4:AE:60:ASP:C    | 2.62                     | 0.42              |
| 4:AE:95:GLN:OE1   | 4:AE:95:GLN:HA   | 2.19                     | 0.42              |
| 5:AF:92:ALA:O     | 5:AF:96:GLY:N    | 2.47                     | 0.42              |
| 5:AF:113:ALA:HB3  | 5:AF:114:PRO:HD3 | 2.01                     | 0.42              |
| 5:AF:175:LEU:O    | 5:AF:176:HIS:O   | 2.37                     | 0.42              |
| 6:AG:3:ARG:HG3    | 6:AG:118:ARG:CZ  | 2.49                     | 0.42              |
| 6:AG:13:ARG:N     | 6:AG:32:ALA:HB2  | 2.34                     | 0.42              |
| 6:AG:19:LEU:N     | 6:AG:33:MET:CE   | 2.77                     | 0.42              |
| 6:AG:128:VAL:CG2  | 6:AG:133:VAL:N   | 2.82                     | 0.42              |
| 6:AG:170:VAL:HG11 | 6:AG:174:LEU:CD1 | 2.49                     | 0.42              |
| 7:AH:95:ALA:H     | 7:AH:96:PRO:CD   | 2.31                     | 0.42              |
| 9:AJ:150:ALA:CA   | 13:AN:59:TYR:CG  | 2.99                     | 0.42              |
| 10:AK:101:PRO:O   | 10:AK:102:ARG:CG | 2.67                     | 0.42              |
| 10:AK:121:ASP:HB3 | 10:AK:122:ARG:H  | 1.39                     | 0.42              |
| 12:AM:26:ALA:C    | 12:AM:28:ARG:N   | 2.77                     | 0.42              |
| 13:AN:31:THR:CG2  | 13:AN:32:ILE:N   | 2.81                     | 0.42              |
| 13:AN:44:SER:O    | 13:AN:47:VAL:HB  | 2.20                     | 0.42              |
| 13:AN:62:GLN:CD   | 13:AN:63:LEU:N   | 2.77                     | 0.42              |
| 13:AN:84:VAL:HG21 | 20:AU:88:LYS:CE  | 2.48                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 14:AO:58:VAL:HG12 | 14:AO:59:ARG:C     | 2.44                     | 0.42              |
| 15:AP:27:LYS:CD   | 15:AP:31:LYS:NZ    | 2.75                     | 0.42              |
| 16:AQ:12:ARG:HA   | 16:AQ:12:ARG:HD3   | 1.83                     | 0.42              |
| 19:AT:22:LEU:HD12 | 19:AT:23:VAL:N     | 2.34                     | 0.42              |
| 19:AT:83:ASP:O    | 19:AT:86:GLU:HB2   | 2.18                     | 0.42              |
| 19:AT:97:SER:O    | 19:AT:98:LEU:CD2   | 2.61                     | 0.42              |
| 20:AU:36:ASN:HD22 | 20:AU:36:ASN:HA    | 1.60                     | 0.42              |
| 22:AW:75:ASN:HB2  | 22:AW:78:ALA:HB3   | 2.01                     | 0.42              |
| 24:BA:162:U:OP2   | 24:BA:171:G:C2     | 2.72                     | 0.42              |
| 24:BA:253:C:C2'   | 24:BA:253:C:O2     | 2.67                     | 0.42              |
| 24:BA:300:A:C8    | 24:BA:300:A:H3'    | 2.53                     | 0.42              |
| 24:BA:303:U:C2'   | 24:BA:304:G:C5'    | 2.97                     | 0.42              |
| 24:BA:450:G:O6    | 24:BA:453:C:O5'    | 2.37                     | 0.42              |
| 24:BA:565:C:OP2   | 42:BU:82:ARG:HA    | 2.18                     | 0.42              |
| 24:BA:582:G:N2    | 24:BA:1259:G:C4    | 2.87                     | 0.42              |
| 24:BA:600:G:H4'   | 29:BF:105:VAL:CG1  | 2.48                     | 0.42              |
| 24:BA:633:A:H5''  | 24:BA:634:C:OP2    | 2.20                     | 0.42              |
| 24:BA:693:C:N4    | 24:BA:770:G:O6     | 2.52                     | 0.42              |
| 24:BA:824:A:C3'   | 24:BA:825:C:C6     | 3.02                     | 0.42              |
| 24:BA:861:A:N6    | 24:BA:916:G:N2     | 2.32                     | 0.42              |
| 24:BA:861:A:C5    | 24:BA:862:G:C8     | 3.07                     | 0.42              |
| 24:BA:1011:G:O6   | 24:BA:1151:G:C6    | 2.71                     | 0.42              |
| 24:BA:1063:G:C8   | 24:BA:1064:C:C5    | 3.07                     | 0.42              |
| 24:BA:1064:C:H3'  | 24:BA:1065:U:H5    | 1.83                     | 0.42              |
| 24:BA:1081:U:H2'  | 24:BA:1082:U:C6    | 2.53                     | 0.42              |
| 24:BA:1106:G:C6   | 24:BA:1107:G:N1    | 2.87                     | 0.42              |
| 24:BA:1223:C:O2   | 24:BA:1225:C:C5'   | 2.66                     | 0.42              |
| 24:BA:1223:C:N4   | 42:BU:88:ARG:HH22  | 2.17                     | 0.42              |
| 24:BA:1272:A:C6   | 24:BA:1618:A:N3    | 2.88                     | 0.42              |
| 24:BA:1275:A:C2'  | 24:BA:1276:A:O5'   | 2.68                     | 0.42              |
| 24:BA:1300:U:C6   | 24:BA:1300:U:P     | 3.12                     | 0.42              |
| 24:BA:1343:G:C6   | 24:BA:1344:G:C8    | 3.07                     | 0.42              |
| 24:BA:1389:G:H5'  | 24:BA:1525:G:H5'   | 1.99                     | 0.42              |
| 24:BA:1406:U:O2   | 24:BA:1407:C:C6    | 2.72                     | 0.42              |
| 24:BA:1455:G:C6   | 24:BA:1456:G:C8    | 3.07                     | 0.42              |
| 24:BA:1466:G:O2'  | 24:BA:1546:C:H4'   | 2.18                     | 0.42              |
| 24:BA:1483:G:N2   | 24:BA:1507:A:O2'   | 2.53                     | 0.42              |
| 24:BA:1545:A:H3'  | 24:BA:1545(A):A:C8 | 2.54                     | 0.42              |
| 24:BA:1587:A:H2'  | 24:BA:1588:C:H6    | 1.80                     | 0.42              |
| 24:BA:1615:C:C4   | 24:BA:1617:C:H1'   | 2.53                     | 0.42              |
| 24:BA:1668:A:H2   | 24:BA:1994:C:C6    | 2.38                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1682:G:H3'  | 24:BA:1683:C:H5    | 1.83                     | 0.42              |
| 24:BA:1696:G:C6   | 24:BA:1697:G:N1    | 2.86                     | 0.42              |
| 24:BA:1742:C:OP2  | 24:BA:1742:C:H6    | 2.01                     | 0.42              |
| 24:BA:1753:G:N1   | 24:BA:1756:G:C2    | 2.87                     | 0.42              |
| 24:BA:1767:C:N4   | 24:BA:1768:U:C4    | 2.87                     | 0.42              |
| 24:BA:1820:U:C1'  | 27:BD:202:LYS:CG   | 2.97                     | 0.42              |
| 24:BA:1916:A:OP2  | 24:BA:1916:A:C4    | 2.72                     | 0.42              |
| 24:BA:1917:U:H5   | 24:BA:1918:A:C5    | 2.38                     | 0.42              |
| 24:BA:2088:G:C6   | 24:BA:2089:U:N3    | 2.87                     | 0.42              |
| 24:BA:2263:C:H2'  | 24:BA:2263:C:O2    | 2.18                     | 0.42              |
| 24:BA:2284:C:C2   | 24:BA:2285:C:C5    | 3.07                     | 0.42              |
| 24:BA:2345:G:N3   | 24:BA:2381:C:H2'   | 2.34                     | 0.42              |
| 24:BA:2353:G:C6   | 24:BA:2365:G:C2    | 3.08                     | 0.42              |
| 24:BA:2357:U:H2'  | 24:BA:2358:G:O5'   | 2.18                     | 0.42              |
| 24:BA:2491:U:C5   | 24:BA:2492:U:C5'   | 3.00                     | 0.42              |
| 24:BA:2518:A:H5'' | 24:BA:2519:U:OP2   | 2.19                     | 0.42              |
| 24:BA:2531:A:O2'  | 24:BA:2532:G:C5'   | 2.66                     | 0.42              |
| 24:BA:2543:G:C6   | 24:BA:2544:G:N1    | 2.88                     | 0.42              |
| 24:BA:2553:G:H8   | 24:BA:2582:G:H2'   | 1.84                     | 0.42              |
| 24:BA:2626:C:C6   | 24:BA:2626:C:O5'   | 2.71                     | 0.42              |
| 24:BA:2666:C:C3'  | 24:BA:2667:C:H5'   | 2.48                     | 0.42              |
| 24:BA:2718:G:H2'  | 24:BA:2719:G:O5'   | 2.19                     | 0.42              |
| 24:BA:2737:G:C4   | 24:BA:2738:A:N7    | 2.87                     | 0.42              |
| 24:BA:2781:A:H2'  | 24:BA:2782:G:C3'   | 2.49                     | 0.42              |
| 24:BA:2782:G:O4'  | 24:BA:2782:G:P     | 2.77                     | 0.42              |
| 24:BA:2792:G:N2   | 24:BA:2793:G:C5    | 2.87                     | 0.42              |
| 24:BA:2848:G:N1   | 24:BA:2867:G:N3    | 2.66                     | 0.42              |
| 24:BA:2853:C:C2   | 24:BA:2854:G:C8    | 3.07                     | 0.42              |
| 25:BB:38:C:C6     | 25:BB:38:C:O5'     | 2.72                     | 0.42              |
| 25:BB:85:G:C4     | 25:BB:86:G:C8      | 3.08                     | 0.42              |
| 26:BC:68:LEU:HD22 | 26:BC:157:LYS:CA   | 2.46                     | 0.42              |
| 26:BC:99:ILE:O    | 26:BC:103:ILE:HG13 | 2.19                     | 0.42              |
| 26:BC:156:ILE:HA  | 26:BC:160:ARG:CG   | 2.49                     | 0.42              |
| 27:BD:6:PHE:O     | 27:BD:27:THR:CA    | 2.44                     | 0.42              |
| 27:BD:10:THR:N    | 27:BD:11:PRO:HD2   | 2.34                     | 0.42              |
| 27:BD:105:ILE:CG1 | 27:BD:106:ILE:HG12 | 2.22                     | 0.42              |
| 27:BD:267:SER:HG  | 27:BD:268:ARG:H    | 1.65                     | 0.42              |
| 28:BE:22:PRO:HA   | 28:BE:185:LYS:N    | 2.34                     | 0.42              |
| 28:BE:34:VAL:HG11 | 28:BE:36:ARG:CZ    | 2.49                     | 0.42              |
| 29:BF:52:LYS:C    | 29:BF:53:THR:HG23  | 2.44                     | 0.42              |
| 29:BF:61:GLY:O    | 29:BF:62:ARG:C     | 2.62                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 29:BF:173:VAL:HG22 | 29:BF:174:VAL:N    | 2.33                     | 0.42              |
| 30:BG:33:ARG:HH21  | 30:BG:33:ARG:CB    | 2.32                     | 0.42              |
| 30:BG:53:LEU:O     | 30:BG:68:PRO:CB    | 2.67                     | 0.42              |
| 30:BG:80:PHE:CG    | 30:BG:81:LYS:N     | 2.87                     | 0.42              |
| 31:BH:4:ILE:N      | 31:BH:4:ILE:CD1    | 2.80                     | 0.42              |
| 31:BH:8:PRO:CA     | 31:BH:51:ARG:CZ    | 2.97                     | 0.42              |
| 32:BK:9:LEU:O      | 32:BK:10:GLU:CB    | 2.63                     | 0.42              |
| 32:BK:41:GLU:O     | 32:BK:45:LYS:CB    | 2.68                     | 0.42              |
| 32:BK:93:THR:HG21  | 32:BK:95:LYS:HB3   | 1.98                     | 0.42              |
| 33:BL:27:LEU:HD21  | 33:BL:57:ILE:HD11  | 2.01                     | 0.42              |
| 33:BL:55:VAL:HG22  | 33:BL:69:THR:CG2   | 2.46                     | 0.42              |
| 35:BN:53:LYS:HG3   | 35:BN:55:GLY:N     | 2.34                     | 0.42              |
| 35:BN:62:VAL:C     | 35:BN:82:ASN:O     | 2.61                     | 0.42              |
| 36:BO:78:PRO:CG    | 36:BO:115:LEU:O    | 2.67                     | 0.42              |
| 37:BP:37:LEU:HB3   | 37:BP:38:GLU:OE2   | 2.18                     | 0.42              |
| 37:BP:37:LEU:HB2   | 37:BP:129:THR:HA   | 2.01                     | 0.42              |
| 37:BP:125:LEU:HB3  | 37:BP:126:PRO:CD   | 2.50                     | 0.42              |
| 37:BP:128:LYS:C    | 37:BP:129:THR:HG23 | 2.44                     | 0.42              |
| 38:BQ:25:ALA:O     | 38:BQ:29:LEU:CG    | 2.36                     | 0.42              |
| 39:BR:33:LYS:CD    | 39:BR:54:LEU:HD21  | 2.49                     | 0.42              |
| 40:BS:20:PRO:HA    | 40:BS:22:PHE:CE1   | 2.54                     | 0.42              |
| 40:BS:26:ASP:CA    | 40:BS:100:TYR:CE2  | 3.00                     | 0.42              |
| 41:BT:16:LYS:HG2   | 41:BT:20:LEU:CD2   | 2.46                     | 0.42              |
| 41:BT:28:ARG:HA    | 41:BT:31:SER:OG    | 2.19                     | 0.42              |
| 41:BT:88:ILE:HB    | 42:BU:52:VAL:HA    | 2.01                     | 0.42              |
| 42:BU:3:ALA:CB     | 42:BU:44:LYS:CE    | 2.97                     | 0.42              |
| 42:BU:93:GLU:OE2   | 42:BU:95:LEU:CD2   | 2.66                     | 0.42              |
| 43:BV:15:ARG:C     | 43:BV:16:LYS:HZ2   | 2.20                     | 0.42              |
| 43:BV:20:VAL:HG21  | 43:BV:47:VAL:HG11  | 2.01                     | 0.42              |
| 43:BV:22:ASP:HA    | 43:BV:75:TYR:CE2   | 2.54                     | 0.42              |
| 43:BV:40:ASN:OD1   | 43:BV:40:ASN:C     | 2.61                     | 0.42              |
| 44:BW:18:TYR:HA    | 44:BW:21:PHE:CE1   | 2.53                     | 0.42              |
| 45:BX:8:LYS:HE3    | 45:BX:28:LYS:HD2   | 2.00                     | 0.42              |
| 45:BX:12:THR:HA    | 45:BX:73:ARG:NH2   | 2.33                     | 0.42              |
| 45:BX:67:LEU:HD12  | 45:BX:71:LYS:NZ    | 2.34                     | 0.42              |
| 46:BY:17:ALA:O     | 46:BY:20:ARG:CB    | 2.68                     | 0.42              |
| 46:BY:55:HIS:ND1   | 46:BY:55:HIS:N     | 2.67                     | 0.42              |
| 46:BY:102:LEU:O    | 46:BY:123:ASP:O    | 2.36                     | 0.42              |
| 48:B1:39:LEU:N     | 48:B1:39:LEU:HD23  | 2.34                     | 0.42              |
| 48:B1:50:ARG:C     | 48:B1:54:ARG:CZ    | 2.92                     | 0.42              |
| 49:B2:19:GLN:O     | 49:B2:20:LYS:C     | 2.61                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 49:B2:41:PRO:CA   | 49:B2:44:ARG:HH11 | 2.17                     | 0.42              |
| 49:B2:48:GLU:O    | 49:B2:49:LYS:C    | 2.62                     | 0.42              |
| 50:B3:14:ILE:HG23 | 50:B3:16:CYS:SG   | 2.59                     | 0.42              |
| 1:AA:40:C:H2'     | 1:AA:41:G:O5'     | 2.20                     | 0.42              |
| 1:AA:91:C:N3      | 1:AA:92:G:N7      | 2.67                     | 0.42              |
| 1:AA:194:C:O2'    | 22:AW:68:LYS:NZ   | 2.38                     | 0.42              |
| 1:AA:194:C:H4'    | 22:AW:68:LYS:HE2  | 2.00                     | 0.42              |
| 1:AA:217:C:C4     | 1:AA:218:C:C5     | 3.07                     | 0.42              |
| 1:AA:263:A:H5''   | 22:AW:75:ASN:HD21 | 1.83                     | 0.42              |
| 1:AA:455:C:C6     | 1:AA:455:C:O5'    | 2.73                     | 0.42              |
| 1:AA:513:C:O5'    | 1:AA:513:C:H6     | 2.02                     | 0.42              |
| 1:AA:738:C:C4     | 1:AA:739:C:N4     | 2.88                     | 0.42              |
| 1:AA:843:U:C3'    | 1:AA:848:C:C5'    | 2.97                     | 0.42              |
| 1:AA:855:G:H2'    | 1:AA:856:C:C5'    | 2.49                     | 0.42              |
| 1:AA:872:A:C2     | 1:AA:874:G:N7     | 2.87                     | 0.42              |
| 1:AA:872:A:N1     | 1:AA:874:G:C5     | 2.87                     | 0.42              |
| 1:AA:921:U:H2'    | 1:AA:922:G:H8     | 1.83                     | 0.42              |
| 1:AA:956:U:C6     | 1:AA:956:U:OP2    | 2.72                     | 0.42              |
| 1:AA:977:A:C4'    | 1:AA:982:U:O4     | 2.66                     | 0.42              |
| 1:AA:1080:A:N7    | 1:AA:1081:G:C1'   | 2.82                     | 0.42              |
| 1:AA:1155:G:C6    | 1:AA:1156:G:C6    | 3.07                     | 0.42              |
| 1:AA:1223:C:H3'   | 1:AA:1223:C:C6    | 2.53                     | 0.42              |
| 1:AA:1231:G:OP2   | 11:AL:127:LYS:HE2 | 2.19                     | 0.42              |
| 1:AA:1317:C:OP1   | 1:AA:1317:C:C6    | 2.72                     | 0.42              |
| 1:AA:1339:A:C3'   | 1:AA:1340:A:H5'   | 2.49                     | 0.42              |
| 1:AA:1341:U:H5'   | 3:AC:32:U:H5'     | 1.99                     | 0.42              |
| 1:AA:1424:C:H2'   | 1:AA:1425:U:O5'   | 2.18                     | 0.42              |
| 1:AA:1433:A:N1    | 1:AA:1434:A:N3    | 2.67                     | 0.42              |
| 2:A1:5:U:O2       | 2:A1:6:U:H5       | 2.01                     | 0.42              |
| 3:AC:18:G:C6      | 3:AC:57:G:C6      | 3.08                     | 0.42              |
| 3:AD:7:A:N6       | 3:AD:49:C:C4      | 2.87                     | 0.42              |
| 3:AD:55:U:C6      | 3:AD:55:U:C3'     | 3.02                     | 0.42              |
| 4:AE:82:ARG:N     | 4:AE:92:TYR:HE1   | 2.16                     | 0.42              |
| 4:AE:88:ALA:O     | 4:AE:222:ILE:HD13 | 2.19                     | 0.42              |
| 4:AE:135:GLN:O    | 4:AE:139:LYS:HB3  | 2.19                     | 0.42              |
| 5:AF:50:ALA:CA    | 5:AF:72:LYS:HD2   | 2.49                     | 0.42              |
| 5:AF:77:ILE:CD1   | 5:AF:103:VAL:HG21 | 2.45                     | 0.42              |
| 5:AF:191:THR:HB   | 5:AF:193:TYR:CE2  | 2.53                     | 0.42              |
| 6:AG:26:CYS:CA    | 6:AG:31:CYS:HB3   | 2.40                     | 0.42              |
| 7:AH:11:ILE:CG2   | 7:AH:12:LEU:N     | 2.66                     | 0.42              |
| 7:AH:107:ARG:HB3  | 7:AH:107:ARG:HH11 | 1.84                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 7:AH:124:GLY:O    | 7:AH:126:ARG:N    | 2.52                     | 0.42              |
| 7:AH:152:ARG:C    | 7:AH:152:ARG:CD   | 2.92                     | 0.42              |
| 8:AI:74:ASP:O     | 8:AI:75:LEU:C     | 2.60                     | 0.42              |
| 9:AJ:66:VAL:HG12  | 9:AJ:70:LYS:CE    | 2.43                     | 0.42              |
| 9:AJ:121:ALA:HB1  | 9:AJ:125:MET:CE   | 2.48                     | 0.42              |
| 10:AK:87:SER:O    | 10:AK:88:LYS:C    | 2.63                     | 0.42              |
| 10:AK:96:GLY:O    | 10:AK:97:VAL:O    | 2.38                     | 0.42              |
| 11:AL:96:LEU:C    | 11:AL:100:GLY:HA3 | 2.43                     | 0.42              |
| 12:AM:56:HIS:C    | 12:AM:58:ASP:N    | 2.78                     | 0.42              |
| 13:AN:71:LYS:O    | 13:AN:74:ALA:CB   | 2.62                     | 0.42              |
| 14:AO:53:ARG:NH2  | 14:AO:92:ASP:HB3  | 2.34                     | 0.42              |
| 15:AP:83:ASP:O    | 15:AP:84:ILE:O    | 2.37                     | 0.42              |
| 16:AQ:4:LYS:O     | 16:AQ:6:LEU:N     | 2.53                     | 0.42              |
| 17:AR:29:VAL:HG21 | 17:AR:81:LEU:CD1  | 2.38                     | 0.42              |
| 17:AR:60:VAL:C    | 17:AR:63:ARG:HG3  | 2.41                     | 0.42              |
| 18:AS:57:ARG:O    | 18:AS:60:LEU:N    | 2.52                     | 0.42              |
| 19:AT:19:VAL:HG21 | 19:AT:73:VAL:HG21 | 2.01                     | 0.42              |
| 19:AT:22:LEU:CD1  | 19:AT:40:LYS:C    | 2.92                     | 0.42              |
| 19:AT:75:ARG:NH1  | 19:AT:76:LEU:C    | 2.77                     | 0.42              |
| 20:AU:59:SER:O    | 20:AU:62:GLU:N    | 2.51                     | 0.42              |
| 22:AW:61:SER:O    | 22:AW:65:LYS:HG2  | 2.19                     | 0.42              |
| 24:BA:35:G:H5'    | 24:BA:455:C:N3    | 2.34                     | 0.42              |
| 24:BA:37:C:H2'    | 24:BA:38:A:C8     | 2.54                     | 0.42              |
| 24:BA:73:A:H8     | 24:BA:73:A:O5'    | 2.02                     | 0.42              |
| 24:BA:146:G:C2'   | 24:BA:147:U:H5''  | 2.49                     | 0.42              |
| 24:BA:203:C:C6    | 24:BA:204:A:C8    | 3.07                     | 0.42              |
| 24:BA:241:A:H8    | 24:BA:243:U:C2    | 2.37                     | 0.42              |
| 24:BA:292:C:H41   | 24:BA:346:A:H62   | 1.67                     | 0.42              |
| 24:BA:300:A:C5    | 24:BA:334:C:H4'   | 2.54                     | 0.42              |
| 24:BA:301:G:C6    | 24:BA:317:G:C6    | 3.08                     | 0.42              |
| 24:BA:449:A:P     | 29:BF:85:GLY:HA2  | 2.59                     | 0.42              |
| 24:BA:482:A:N6    | 24:BA:506:G:C6    | 2.87                     | 0.42              |
| 24:BA:531:C:H42   | 41:BT:38:THR:HG22 | 1.83                     | 0.42              |
| 24:BA:594:U:C2    | 24:BA:595:C:C5    | 3.07                     | 0.42              |
| 24:BA:623:G:P     | 36:BO:105:LEU:CD2 | 3.03                     | 0.42              |
| 24:BA:727:A:N1    | 24:BA:729:G:C5    | 2.87                     | 0.42              |
| 24:BA:823:G:N3    | 24:BA:823:G:C2'   | 2.80                     | 0.42              |
| 24:BA:885:C:H41   | 24:BA:889:C:H6    | 1.67                     | 0.42              |
| 24:BA:900:A:C2'   | 24:BA:901:A:C5'   | 2.97                     | 0.42              |
| 24:BA:928:G:O2'   | 49:B2:43:ILE:CD1  | 2.67                     | 0.42              |
| 24:BA:969:U:H2'   | 24:BA:970:C:C5'   | 2.50                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:973:A:C1'    | 24:BA:1188:U:C5    | 3.02                     | 0.42              |
| 24:BA:1150:C:H2'   | 24:BA:1151:G:O4'   | 2.20                     | 0.42              |
| 24:BA:1231:G:C5    | 24:BA:1232:G:N7    | 2.87                     | 0.42              |
| 24:BA:1385:G:C5    | 24:BA:1386:C:C5    | 3.07                     | 0.42              |
| 24:BA:1399:C:OP1   | 44:BW:53:LYS:NZ    | 2.52                     | 0.42              |
| 24:BA:1449:A:P     | 24:BA:1543:A:N1    | 2.91                     | 0.42              |
| 24:BA:1673:U:O2'   | 24:BA:1674:G:OP1   | 2.37                     | 0.42              |
| 24:BA:1689:A:N6    | 24:BA:1700:A:N3    | 2.66                     | 0.42              |
| 24:BA:1707:G:C4    | 24:BA:1708:C:C6    | 3.07                     | 0.42              |
| 24:BA:1806:C:H2'   | 24:BA:1807:G:H5'   | 2.02                     | 0.42              |
| 24:BA:1816:G:OP2   | 27:BD:43:ARG:CZ    | 2.67                     | 0.42              |
| 24:BA:1858:G:C6    | 24:BA:1883:G:N1    | 2.87                     | 0.42              |
| 24:BA:1917:U:H6    | 24:BA:1917:U:C3'   | 2.30                     | 0.42              |
| 24:BA:1996:C:C2'   | 24:BA:1997:G:O5'   | 2.68                     | 0.42              |
| 24:BA:1997:G:N2    | 24:BA:1998:G:C4    | 2.87                     | 0.42              |
| 24:BA:2042:A:H2'   | 24:BA:2043:C:OP2   | 2.19                     | 0.42              |
| 24:BA:2047:U:C2    | 24:BA:2048:G:C8    | 3.07                     | 0.42              |
| 24:BA:2053:G:H4'   | 28:BE:145:LYS:NZ   | 2.34                     | 0.42              |
| 24:BA:2286:A:OP2   | 52:B5:27:LYS:CE    | 2.67                     | 0.42              |
| 24:BA:2304:G:O6    | 24:BA:2313:C:N4    | 2.52                     | 0.42              |
| 24:BA:2311:A:H2'   | 30:BG:43:LEU:CD2   | 2.49                     | 0.42              |
| 24:BA:2345:G:H21   | 24:BA:2381:C:H2'   | 1.84                     | 0.42              |
| 24:BA:2346:A:C2    | 24:BA:2383:G:C2    | 3.07                     | 0.42              |
| 24:BA:2553:G:O5'   | 24:BA:2554:U:OP2   | 2.36                     | 0.42              |
| 24:BA:2644:G:C6    | 24:BA:2645:G:C2    | 3.07                     | 0.42              |
| 24:BA:2685:G:O3'   | 35:BN:66:LYS:NZ    | 2.49                     | 0.42              |
| 24:BA:2709:G:C2'   | 24:BA:2710:C:O5'   | 2.64                     | 0.42              |
| 24:BA:2887:U:N3    | 24:BA:2888:C:C5    | 2.87                     | 0.42              |
| 26:BC:7:TYR:O      | 26:BC:8:ARG:C      | 2.59                     | 0.42              |
| 26:BC:22:ILE:HD11  | 26:BC:226:PRO:CA   | 2.42                     | 0.42              |
| 26:BC:40:THR:HB    | 26:BC:217:THR:OG1  | 2.19                     | 0.42              |
| 26:BC:74:VAL:HG12  | 26:BC:114:VAL:HG22 | 2.00                     | 0.42              |
| 26:BC:102:LYS:HE3  | 26:BC:107:TRP:HB3  | 2.01                     | 0.42              |
| 26:BC:114:VAL:HG12 | 26:BC:144:THR:HA   | 2.01                     | 0.42              |
| 26:BC:120:MET:CG   | 26:BC:145:VAL:HG13 | 2.48                     | 0.42              |
| 27:BD:27:THR:HG22  | 27:BD:29:PRO:CG    | 2.49                     | 0.42              |
| 27:BD:132:PRO:CD   | 27:BD:190:TYR:CZ   | 3.02                     | 0.42              |
| 28:BE:5:LEU:HD13   | 28:BE:197:ILE:HA   | 1.99                     | 0.42              |
| 28:BE:117:MET:CG   | 28:BE:136:ARG:NE   | 2.68                     | 0.42              |
| 28:BE:131:ALA:C    | 28:BE:133:LYS:N    | 2.77                     | 0.42              |
| 29:BF:5:ALA:C      | 29:BF:20:LEU:CD1   | 2.81                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 29:BF:153:SER:N   | 29:BF:190:GLU:HG3  | 2.30                     | 0.42              |
| 29:BF:195:ASP:C   | 29:BF:197:ASP:N    | 2.77                     | 0.42              |
| 30:BG:56:ALA:C    | 30:BG:68:PRO:HG2   | 2.44                     | 0.42              |
| 30:BG:110:ALA:CB  | 30:BG:139:LEU:CG   | 2.90                     | 0.42              |
| 30:BG:115:ARG:C   | 30:BG:117:PHE:N    | 2.78                     | 0.42              |
| 30:BG:125:PHE:HA  | 30:BG:132:ASN:HB2  | 1.96                     | 0.42              |
| 30:BG:157:ILE:CG1 | 30:BG:158:ALA:H    | 2.28                     | 0.42              |
| 31:BH:41:MET:SD   | 31:BH:64:LEU:CD2   | 3.06                     | 0.42              |
| 31:BH:45:VAL:CG1  | 31:BH:50:VAL:HG13  | 2.49                     | 0.42              |
| 31:BH:105:LEU:O   | 31:BH:113:VAL:CG2  | 2.67                     | 0.42              |
| 32:BK:66:GLU:N    | 32:BK:66:GLU:CD    | 2.76                     | 0.42              |
| 32:BK:69:LYS:O    | 32:BK:73:GLU:CD    | 2.62                     | 0.42              |
| 32:BK:115:ALA:O   | 32:BK:116:LEU:HB2  | 2.19                     | 0.42              |
| 32:BK:125:GLU:HB3 | 32:BK:143:SER:CA   | 2.48                     | 0.42              |
| 33:BL:62:ASP:O    | 33:BL:63:ARG:HB2   | 2.19                     | 0.42              |
| 34:BM:23:LEU:HD23 | 34:BM:23:LEU:N     | 2.34                     | 0.42              |
| 34:BM:42:TRP:HA   | 34:BM:47:ALA:HB1   | 2.01                     | 0.42              |
| 34:BM:42:TRP:HZ3  | 41:BT:71:GLN:NE2   | 2.17                     | 0.42              |
| 34:BM:96:GLU:HG2  | 34:BM:97:ARG:N     | 2.32                     | 0.42              |
| 35:BN:106:LEU:O   | 35:BN:109:LYS:HG3  | 2.20                     | 0.42              |
| 36:BO:46:LYS:HZ3  | 36:BO:50:ARG:CZ    | 2.31                     | 0.42              |
| 36:BO:98:GLU:O    | 36:BO:99:LEU:C     | 2.61                     | 0.42              |
| 36:BO:124:LYS:CD  | 36:BO:142:GLY:O    | 2.66                     | 0.42              |
| 37:BP:44:ALA:C    | 37:BP:47:ILE:HB    | 2.31                     | 0.42              |
| 37:BP:89:ASN:HB3  | 37:BP:91:GLU:OE1   | 2.19                     | 0.42              |
| 37:BP:132:VAL:HB  | 37:BP:133:ARG:CZ   | 2.49                     | 0.42              |
| 38:BQ:117:VAL:O   | 38:BQ:117:VAL:HG22 | 2.18                     | 0.42              |
| 39:BR:3:ARG:O     | 39:BR:7:TYR:HB2    | 2.18                     | 0.42              |
| 39:BR:19:LYS:O    | 39:BR:20:ARG:O     | 2.37                     | 0.42              |
| 40:BS:24:PRO:CG   | 40:BS:25:GLY:N     | 2.73                     | 0.42              |
| 40:BS:34:VAL:CG2  | 40:BS:36:GLU:HB2   | 2.45                     | 0.42              |
| 41:BT:66:ASN:HB3  | 41:BT:70:ARG:HD3   | 2.01                     | 0.42              |
| 41:BT:87:GLY:C    | 41:BT:89:GLU:N     | 2.76                     | 0.42              |
| 41:BT:94:ASN:O    | 41:BT:97:ASP:HB2   | 2.19                     | 0.42              |
| 41:BT:95:LEU:HD23 | 41:BT:95:LEU:H     | 1.82                     | 0.42              |
| 42:BU:40:LEU:CA   | 42:BU:54:GLY:CA    | 2.86                     | 0.42              |
| 42:BU:56:SER:C    | 42:BU:57:VAL:HG23  | 2.44                     | 0.42              |
| 43:BV:25:ARG:NE   | 43:BV:75:TYR:CE2   | 2.87                     | 0.42              |
| 44:BW:25:LYS:HG2  | 44:BW:82:GLN:HB2   | 2.01                     | 0.42              |
| 44:BW:39:ILE:CG2  | 44:BW:54:VAL:CG1   | 2.96                     | 0.42              |
| 44:BW:39:ILE:CB   | 44:BW:54:VAL:HG11  | 2.46                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 44:BW:66:LEU:HG    | 44:BW:70:LEU:HA   | 2.01                     | 0.42              |
| 46:BY:122:ARG:HB2  | 46:BY:171:ILE:HA  | 2.01                     | 0.42              |
| 46:BY:139:VAL:HG11 | 46:BY:155:LEU:O   | 2.19                     | 0.42              |
| 48:B1:26:GLU:HA    | 48:B1:29:GLU:CG   | 2.50                     | 0.42              |
| 48:B1:50:ARG:CB    | 48:B1:54:ARG:HH12 | 2.30                     | 0.42              |
| 50:B3:10:VAL:CG2   | 50:B3:60:GLN:HE22 | 2.31                     | 0.42              |
| 52:B5:54:ILE:OXT   | 52:B5:54:ILE:HG23 | 2.19                     | 0.42              |
| 53:B6:8:ASN:OD1    | 53:B6:10:ARG:HB2  | 2.19                     | 0.42              |
| 54:B7:50:LEU:O     | 54:B7:51:ALA:HB3  | 2.20                     | 0.42              |
| 1:AA:15:G:N3       | 1:AA:16:A:C8      | 2.88                     | 0.42              |
| 1:AA:44:G:C2       | 1:AA:45:U:C1'     | 3.02                     | 0.42              |
| 1:AA:129(A):G:C2   | 1:AA:191(A):G:C8  | 3.07                     | 0.42              |
| 1:AA:129(A):G:C4'  | 1:AA:130:A:O5'    | 2.63                     | 0.42              |
| 1:AA:134:A:C8      | 1:AA:134:A:O5'    | 2.72                     | 0.42              |
| 1:AA:186(A):C:O2'  | 1:AA:186(B):C:H5' | 2.19                     | 0.42              |
| 1:AA:193:C:N3      | 1:AA:194:C:N4     | 2.67                     | 0.42              |
| 1:AA:254:G:N2      | 19:AT:16:GLN:OE1  | 2.53                     | 0.42              |
| 1:AA:254:G:N3      | 1:AA:255:G:C8     | 2.88                     | 0.42              |
| 1:AA:255:G:OP1     | 19:AT:69:LYS:CE   | 2.67                     | 0.42              |
| 1:AA:270:A:C6      | 1:AA:271:C:C4     | 3.07                     | 0.42              |
| 1:AA:293:G:C2      | 1:AA:294:U:C6     | 3.07                     | 0.42              |
| 1:AA:323:U:C6      | 1:AA:323:U:C3'    | 3.01                     | 0.42              |
| 1:AA:408:A:C4      | 1:AA:409:G:N7     | 2.88                     | 0.42              |
| 1:AA:437:U:O2'     | 6:AG:123:HIS:ND1  | 2.44                     | 0.42              |
| 1:AA:509:A:N3      | 1:AA:543:C:O2'    | 2.39                     | 0.42              |
| 1:AA:540:G:C6      | 1:AA:541:G:C6     | 3.07                     | 0.42              |
| 1:AA:643:C:N3      | 1:AA:644:G:C8     | 2.86                     | 0.42              |
| 1:AA:740:U:OP2     | 17:AR:2:PRO:HB3   | 2.20                     | 0.42              |
| 1:AA:765:G:OP1     | 17:AR:50:HIS:CD2  | 2.72                     | 0.42              |
| 1:AA:823:G:C6      | 1:AA:878:G:C6     | 3.08                     | 0.42              |
| 1:AA:864:A:N6      | 1:AA:865:A:N6     | 2.67                     | 0.42              |
| 1:AA:874:G:H2'     | 1:AA:875:C:H5'    | 2.01                     | 0.42              |
| 1:AA:901:A:H2'     | 1:AA:902:G:O4'    | 2.19                     | 0.42              |
| 1:AA:938:A:H2'     | 1:AA:939:G:O5'    | 2.19                     | 0.42              |
| 1:AA:1018:C:O2'    | 1:AA:1019:C:H5'   | 2.19                     | 0.42              |
| 1:AA:1048:G:O2'    | 1:AA:1049:U:O3'   | 2.23                     | 0.42              |
| 1:AA:1057:G:C2'    | 1:AA:1058:G:O5'   | 2.67                     | 0.42              |
| 1:AA:1059:C:C4     | 1:AA:1060:C:C5    | 3.06                     | 0.42              |
| 1:AA:1095:U:N3     | 1:AA:1096:C:C4    | 2.87                     | 0.42              |
| 1:AA:1116:C:C2     | 1:AA:1117:G:C8    | 3.07                     | 0.42              |
| 1:AA:1167:A:C8     | 1:AA:1167:A:OP1   | 2.72                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1243:C:N3    | 1:AA:1244:C:C5    | 2.87                     | 0.42              |
| 1:AA:1297:C:H5'   | 1:AA:1298:C:OP1   | 2.19                     | 0.42              |
| 1:AA:1352:C:N3    | 1:AA:1371:G:C6    | 2.87                     | 0.42              |
| 1:AA:1405:G:O2'   | 1:AA:1519:A:H5'   | 2.19                     | 0.42              |
| 1:AA:1449:C:H2'   | 1:AA:1450:U:C5'   | 2.50                     | 0.42              |
| 1:AA:1509:C:HO2'  | 1:AA:1510:U:H5'   | 1.81                     | 0.42              |
| 3:AB:33:U:N3      | 3:AB:35:A:H5''    | 2.32                     | 0.42              |
| 4:AE:33:TYR:CD2   | 4:AE:43:ASP:HB2   | 2.53                     | 0.42              |
| 4:AE:92:TYR:O     | 4:AE:152:PHE:CA   | 2.67                     | 0.42              |
| 4:AE:92:TYR:CE2   | 4:AE:151:GLY:C    | 2.98                     | 0.42              |
| 4:AE:177:ALA:CB   | 4:AE:184:VAL:HG22 | 2.49                     | 0.42              |
| 5:AF:11:ARG:NE    | 5:AF:11:ARG:CA    | 2.82                     | 0.42              |
| 5:AF:34:LEU:O     | 5:AF:38:ARG:HG2   | 2.19                     | 0.42              |
| 5:AF:58:GLU:O     | 5:AF:65:ALA:N     | 2.51                     | 0.42              |
| 5:AF:64:VAL:HB    | 5:AF:99:VAL:CG1   | 2.49                     | 0.42              |
| 5:AF:95:THR:HB    | 5:AF:97:LYS:HE2   | 2.01                     | 0.42              |
| 5:AF:100:ALA:O    | 5:AF:102:ASN:CG   | 2.62                     | 0.42              |
| 5:AF:176:HIS:HB3  | 5:AF:177:THR:H    | 1.54                     | 0.42              |
| 5:AF:180:ALA:O    | 5:AF:182:ILE:HG13 | 2.19                     | 0.42              |
| 6:AG:32:ALA:HA    | 6:AG:37:PRO:HA    | 2.02                     | 0.42              |
| 6:AG:98:GLU:OE1   | 6:AG:107:ARG:HG3  | 2.18                     | 0.42              |
| 6:AG:118:ARG:HG3  | 6:AG:136:PRO:HB3  | 1.99                     | 0.42              |
| 6:AG:140:VAL:O    | 6:AG:141:ARG:C    | 2.62                     | 0.42              |
| 7:AH:50:GLU:CB    | 7:AH:53:LEU:HD23  | 2.48                     | 0.42              |
| 7:AH:89:ILE:HD11  | 7:AH:122:GLU:OE2  | 2.19                     | 0.42              |
| 7:AH:99:GLY:C     | 7:AH:101:ILE:CD1  | 2.92                     | 0.42              |
| 10:AK:120:THR:O   | 10:AK:123:GLU:OE1 | 2.38                     | 0.42              |
| 11:AL:27:THR:CG2  | 11:AL:30:GLY:H    | 2.32                     | 0.42              |
| 12:AM:60:ARG:NH1  | 12:AM:60:ARG:C    | 2.77                     | 0.42              |
| 13:AN:87:THR:HG22 | 13:AN:91:ARG:CZ   | 2.49                     | 0.42              |
| 13:AN:114:VAL:CG2 | 13:AN:115:PRO:CD  | 2.98                     | 0.42              |
| 14:AO:39:VAL:HG11 | 14:AO:41:ARG:HH22 | 1.83                     | 0.42              |
| 14:AO:82:VAL:HG12 | 14:AO:105:TYR:HD1 | 1.84                     | 0.42              |
| 15:AP:56:LEU:HG   | 15:AP:56:LEU:H    | 1.53                     | 0.42              |
| 15:AP:60:VAL:HG13 | 15:AP:64:TRP:CB   | 2.46                     | 0.42              |
| 17:AR:8:LYS:HE2   | 17:AR:9:GLN:NE2   | 2.35                     | 0.42              |
| 18:AS:66:PRO:C    | 18:AS:67:THR:O    | 2.52                     | 0.42              |
| 18:AS:66:PRO:O    | 18:AS:67:THR:C    | 2.63                     | 0.42              |
| 19:AT:43:LEU:HD11 | 19:AT:69:LYS:HB2  | 2.00                     | 0.42              |
| 21:AV:35:SER:O    | 21:AV:37:ARG:N    | 2.53                     | 0.42              |
| 21:AV:41:VAL:O    | 21:AV:44:MET:HB2  | 2.19                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:77:C:H6     | 24:BA:77:C:OP2     | 2.02                     | 0.42              |
| 24:BA:172:C:C6    | 24:BA:173:G:N7     | 2.88                     | 0.42              |
| 24:BA:215:G:H1'   | 24:BA:216:A:C5'    | 2.49                     | 0.42              |
| 24:BA:270(X):G:C2 | 24:BA:270(Y):G:C1' | 3.01                     | 0.42              |
| 24:BA:316:C:H2'   | 24:BA:317:G:H8     | 1.85                     | 0.42              |
| 24:BA:410:G:H5''  | 24:BA:411:G:P      | 2.60                     | 0.42              |
| 24:BA:515:A:N7    | 24:BA:516:C:C5     | 2.87                     | 0.42              |
| 24:BA:530:G:O2'   | 24:BA:532:A:P      | 2.76                     | 0.42              |
| 24:BA:601:C:O2'   | 24:BA:604:G:OP1    | 2.37                     | 0.42              |
| 24:BA:605:C:O2'   | 24:BA:606:U:H5'    | 2.19                     | 0.42              |
| 24:BA:609:A:N6    | 24:BA:619:G:H21    | 2.16                     | 0.42              |
| 24:BA:610:C:H2'   | 24:BA:611:C:C5     | 2.54                     | 0.42              |
| 24:BA:640:C:N4    | 24:BA:647:G:N1     | 2.62                     | 0.42              |
| 24:BA:663:G:OP1   | 36:BO:18:ARG:O     | 2.35                     | 0.42              |
| 24:BA:703:U:H2'   | 24:BA:704:G:O4'    | 2.19                     | 0.42              |
| 24:BA:754:C:H2'   | 24:BA:754:C:O2     | 2.18                     | 0.42              |
| 24:BA:783:A:C3'   | 27:BD:227:ASN:OD1  | 2.66                     | 0.42              |
| 24:BA:785:G:O2'   | 24:BA:786:C:P      | 2.77                     | 0.42              |
| 24:BA:866:A:H2'   | 24:BA:867:C:O5'    | 2.20                     | 0.42              |
| 24:BA:896:A:OP1   | 46:BY:146:ILE:HG22 | 2.19                     | 0.42              |
| 24:BA:956:G:H2'   | 24:BA:957:A:C8     | 2.54                     | 0.42              |
| 24:BA:974:G:H1'   | 24:BA:1186:G:C4    | 2.54                     | 0.42              |
| 24:BA:1044:G:C4   | 24:BA:1048:A:C8    | 3.07                     | 0.42              |
| 24:BA:1063:G:C5   | 24:BA:1064:C:N4    | 2.86                     | 0.42              |
| 24:BA:1076:C:OP2  | 24:BA:1076:C:H6    | 2.01                     | 0.42              |
| 24:BA:1137:G:C2'  | 24:BA:1138:G:O5'   | 2.67                     | 0.42              |
| 24:BA:1138:G:N2   | 24:BA:1139:G:C1'   | 2.72                     | 0.42              |
| 24:BA:1160:G:OP2  | 24:BA:1160:G:H8    | 2.03                     | 0.42              |
| 24:BA:1188:U:C2'  | 24:BA:1189:A:C5'   | 2.96                     | 0.42              |
| 24:BA:1193:G:H2'  | 24:BA:1194:A:O4'   | 2.20                     | 0.42              |
| 24:BA:1279:G:C6   | 24:BA:1280:G:C6    | 3.06                     | 0.42              |
| 24:BA:1362:C:C4   | 24:BA:1363:C:C5    | 3.07                     | 0.42              |
| 24:BA:1410:G:N2   | 24:BA:1593:G:C4    | 2.88                     | 0.42              |
| 24:BA:1444:G:C2   | 24:BA:1445:C:O2    | 2.72                     | 0.42              |
| 24:BA:1450:C:C2'  | 24:BA:1451:C:OP2   | 2.66                     | 0.42              |
| 24:BA:1460:A:N6   | 24:BA:1732:A:C2    | 2.87                     | 0.42              |
| 24:BA:1521:G:C3'  | 24:BA:1522:G:C5'   | 2.94                     | 0.42              |
| 24:BA:1543:A:C8   | 24:BA:1544:C:H1'   | 2.54                     | 0.42              |
| 24:BA:1670:C:P    | 24:BA:1671:U:C5    | 3.00                     | 0.42              |
| 24:BA:1743:G:H3'  | 24:BA:1746:G:C8    | 2.34                     | 0.42              |
| 24:BA:1818:U:H3   | 27:BD:155:LEU:H    | 1.67                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 24:BA:1919:A:OP2   | 24:BA:1920:C:C5   | 2.62                     | 0.42              |
| 24:BA:1924:C:O2'   | 24:BA:1925:C:H5'  | 2.18                     | 0.42              |
| 24:BA:1936:A:C1'   | 24:BA:1940:U:N3   | 2.82                     | 0.42              |
| 24:BA:1951:U:C2    | 24:BA:1953:A:C5'  | 3.03                     | 0.42              |
| 24:BA:2000:G:N1    | 24:BA:2001:A:C5   | 2.88                     | 0.42              |
| 24:BA:2088:G:H2'   | 24:BA:2089:U:O4'  | 2.19                     | 0.42              |
| 24:BA:2175:C:C2    | 24:BA:2176:A:C8   | 3.08                     | 0.42              |
| 24:BA:2182:G:C4    | 24:BA:2183:C:C6   | 3.07                     | 0.42              |
| 24:BA:2372:G:H2'   | 24:BA:2372:G:N3   | 2.34                     | 0.42              |
| 24:BA:2418:A:C4    | 24:BA:2419:U:C6   | 3.07                     | 0.42              |
| 24:BA:2509:G:N1    | 24:BA:2580:U:C2   | 2.87                     | 0.42              |
| 24:BA:2511:U:C4    | 24:BA:2512:C:C4   | 3.07                     | 0.42              |
| 24:BA:2563:U:H2'   | 24:BA:2565:A:OP2  | 2.19                     | 0.42              |
| 24:BA:2603:G:H2'   | 24:BA:2604:U:C5'  | 2.49                     | 0.42              |
| 24:BA:2685:G:H4'   | 35:BN:66:LYS:NZ   | 2.34                     | 0.42              |
| 24:BA:2706:G:H5'   | 24:BA:2852:G:OP1  | 2.19                     | 0.42              |
| 24:BA:2746:U:H5'   | 31:BH:139:GLN:CA  | 2.37                     | 0.42              |
| 24:BA:2770:G:C2'   | 24:BA:2771:C:H5'  | 2.47                     | 0.42              |
| 24:BA:2784:C:H2'   | 24:BA:2785:C:C6   | 2.51                     | 0.42              |
| 24:BA:2785:C:C2    | 24:BA:2786:U:C5   | 3.07                     | 0.42              |
| 24:BA:2816:C:O3'   | 51:B4:43:HIS:CE1  | 2.71                     | 0.42              |
| 24:BA:2872:G:N2    | 24:BA:2873:A:C6   | 2.88                     | 0.42              |
| 25:BB:78:A:C4      | 25:BB:99:A:N6     | 2.86                     | 0.42              |
| 25:BB:109:G:C2     | 25:BB:110:G:C5    | 3.07                     | 0.42              |
| 27:BD:7:LYS:HD3    | 27:BD:9:TYR:CE1   | 2.55                     | 0.42              |
| 27:BD:94:LEU:HD12  | 27:BD:94:LEU:C    | 2.44                     | 0.42              |
| 27:BD:105:ILE:HG13 | 27:BD:106:ILE:CD1 | 2.49                     | 0.42              |
| 27:BD:160:GLY:O    | 27:BD:162:SER:N   | 2.52                     | 0.42              |
| 27:BD:181:GLU:C    | 27:BD:182:LEU:HG  | 2.44                     | 0.42              |
| 27:BD:208:LYS:HB3  | 27:BD:211:ARG:CG  | 2.50                     | 0.42              |
| 27:BD:258:LYS:CA   | 27:BD:261:LYS:NZ  | 2.71                     | 0.42              |
| 28:BE:13:ARG:HG3   | 28:BE:22:PRO:HG3  | 1.98                     | 0.42              |
| 28:BE:49:LEU:CG    | 28:BE:76:ARG:O    | 2.67                     | 0.42              |
| 28:BE:91:VAL:CG2   | 28:BE:180:ASN:ND2 | 2.82                     | 0.42              |
| 29:BF:5:ALA:O      | 29:BF:7:TYR:CD1   | 2.73                     | 0.42              |
| 29:BF:46:ARG:C     | 29:BF:46:ARG:CD   | 2.93                     | 0.42              |
| 29:BF:57:VAL:HG12  | 29:BF:58:ALA:N    | 2.35                     | 0.42              |
| 29:BF:149:ASP:C    | 29:BF:172:TRP:NE1 | 2.78                     | 0.42              |
| 29:BF:154:VAL:HA   | 29:BF:191:ARG:O   | 2.18                     | 0.42              |
| 30:BG:92:VAL:HG13  | 30:BG:94:LEU:HD22 | 1.99                     | 0.42              |
| 30:BG:96:ARG:HB2   | 30:BG:96:ARG:HH11 | 1.85                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 30:BG:174:GLU:C   | 30:BG:179:PRO:HD3 | 2.43                     | 0.42              |
| 31:BH:97:ARG:O    | 31:BH:104:GLU:HG2 | 2.19                     | 0.42              |
| 32:BK:147:GLN:OE1 | 32:BK:148:GLU:N   | 2.53                     | 0.42              |
| 33:BL:79:ARG:HH21 | 33:BL:80:LYS:HE2  | 1.84                     | 0.42              |
| 34:BM:18:ALA:CB   | 34:BM:55:VAL:O    | 2.56                     | 0.42              |
| 34:BM:39:ARG:HB2  | 34:BM:48:MET:SD   | 2.59                     | 0.42              |
| 34:BM:51:PHE:HA   | 34:BM:119:ARG:O   | 2.19                     | 0.42              |
| 34:BM:55:VAL:HG11 | 34:BM:127:ASP:HA  | 2.01                     | 0.42              |
| 34:BM:72:TYR:CD2  | 34:BM:72:TYR:O    | 2.72                     | 0.42              |
| 35:BN:22:ILE:HB   | 35:BN:40:VAL:HG11 | 2.01                     | 0.42              |
| 36:BO:50:ARG:O    | 36:BO:51:PHE:C    | 2.62                     | 0.42              |
| 37:BP:63:LYS:CD   | 37:BP:64:ILE:N    | 2.76                     | 0.42              |
| 37:BP:125:LEU:CD2 | 37:BP:125:LEU:H   | 2.31                     | 0.42              |
| 39:BR:24:LEU:HG   | 39:BR:41:ASP:CA   | 2.49                     | 0.42              |
| 39:BR:32:LEU:HG   | 39:BR:97:ARG:HH12 | 1.83                     | 0.42              |
| 40:BS:53:ARG:HH22 | 40:BS:101:PHE:CA  | 2.31                     | 0.42              |
| 40:BS:72:VAL:O    | 40:BS:74:ARG:HD2  | 2.20                     | 0.42              |
| 41:BT:65:ILE:HB   | 41:BT:76:TYR:OH   | 2.19                     | 0.42              |
| 43:BV:16:LYS:HZ2  | 43:BV:16:LYS:CA   | 2.28                     | 0.42              |
| 43:BV:36:LEU:CD1  | 43:BV:47:VAL:HB   | 2.48                     | 0.42              |
| 44:BW:89:ILE:O    | 44:BW:92:LEU:HB2  | 2.18                     | 0.42              |
| 45:BX:65:ALA:O    | 45:BX:66:PRO:C    | 2.62                     | 0.42              |
| 45:BX:84:ARG:CG   | 45:BX:85:VAL:N    | 2.82                     | 0.42              |
| 46:BY:4:ARG:HD3   | 46:BY:38:TYR:CA   | 2.49                     | 0.42              |
| 46:BY:76:LEU:HD23 | 46:BY:82:ARG:C    | 2.43                     | 0.42              |
| 51:B4:33:CYS:C    | 51:B4:35:GLU:N    | 2.74                     | 0.42              |
| 54:B7:26:LYS:HD2  | 54:B7:45:GLY:H    | 1.84                     | 0.42              |
| 55:B8:14:CYS:SG   | 55:B8:32:HIS:CD2  | 3.13                     | 0.42              |
| 1:AA:19:C:OP1     | 7:AH:86:ALA:HB1   | 2.20                     | 0.42              |
| 1:AA:20:U:N3      | 1:AA:21:G:C5      | 2.88                     | 0.42              |
| 1:AA:51:A:N1      | 1:AA:353:A:N1     | 2.67                     | 0.42              |
| 1:AA:60:A:N6      | 1:AA:107:G:O2'    | 2.48                     | 0.42              |
| 1:AA:61:G:C6      | 1:AA:107:G:O6     | 2.72                     | 0.42              |
| 1:AA:80:G:H2'     | 1:AA:81:G:C1'     | 2.45                     | 0.42              |
| 1:AA:255:G:OP1    | 19:AT:69:LYS:HE2  | 2.18                     | 0.42              |
| 1:AA:315:A:N1     | 1:AA:330:C:N1     | 2.67                     | 0.42              |
| 1:AA:592:G:H2'    | 1:AA:593:G:C5'    | 2.45                     | 0.42              |
| 1:AA:627:G:C2'    | 1:AA:628:G:O5'    | 2.68                     | 0.42              |
| 1:AA:652:U:C5     | 1:AA:752:G:C2     | 3.08                     | 0.42              |
| 1:AA:698:G:C2     | 1:AA:699:C:C2     | 3.08                     | 0.42              |
| 1:AA:720:C:H4'    | 20:AU:50:ILE:CG2  | 2.49                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:723:U:H6     | 2:A1:30:U:H4'     | 1.84                     | 0.42              |
| 1:AA:760:G:C2'    | 19:AT:103:GLY:HA3 | 2.49                     | 0.42              |
| 1:AA:763:G:C2     | 1:AA:764:C:C6     | 3.07                     | 0.42              |
| 1:AA:783:C:H2'    | 1:AA:784:C:H6     | 1.84                     | 0.42              |
| 1:AA:828:A:H8     | 1:AA:829:G:C8     | 2.36                     | 0.42              |
| 1:AA:906:G:H5'    | 1:AA:907:A:OP2    | 2.20                     | 0.42              |
| 1:AA:993:G:N2     | 1:AA:995:C:N4     | 2.68                     | 0.42              |
| 1:AA:1073:U:C2    | 1:AA:1074:G:C8    | 3.07                     | 0.42              |
| 1:AA:1156:G:N3    | 1:AA:1179:A:N1    | 2.67                     | 0.42              |
| 1:AA:1231:G:H2'   | 1:AA:1232:U:H6    | 1.84                     | 0.42              |
| 1:AA:1305:G:OP1   | 23:AX:2:GLY:CA    | 2.66                     | 0.42              |
| 1:AA:1307:U:C2    | 1:AA:1308:U:C6    | 3.07                     | 0.42              |
| 1:AA:1320:C:C2    | 21:AV:72:GLY:HA3  | 2.55                     | 0.42              |
| 1:AA:1347:G:H3'   | 11:AL:107:ARG:HB3 | 2.02                     | 0.42              |
| 1:AA:1348:U:C2    | 1:AA:1349:A:C8    | 3.08                     | 0.42              |
| 1:AA:1392:G:H2'   | 1:AA:1393:U:O4'   | 2.18                     | 0.42              |
| 1:AA:1397:C:N4    | 2:A1:46:U:C5      | 2.87                     | 0.42              |
| 1:AA:1476:G:H2'   | 1:AA:1477:C:H6    | 1.79                     | 0.42              |
| 3:AC:40:C:H2'     | 3:AC:40:C:O2      | 2.19                     | 0.42              |
| 3:AC:49:C:C2      | 3:AC:50:U:C5      | 3.08                     | 0.42              |
| 3:AD:7:A:C6       | 3:AD:49:C:C6      | 3.07                     | 0.42              |
| 3:AB:14:A:N6      | 3:AB:22:G:O2'     | 2.52                     | 0.42              |
| 4:AE:113:HIS:ND1  | 4:AE:116:GLU:OE1  | 2.51                     | 0.42              |
| 4:AE:132:LYS:NZ   | 4:AE:132:LYS:CB   | 2.81                     | 0.42              |
| 4:AE:204:ASN:HD22 | 4:AE:205:ASP:N    | 2.17                     | 0.42              |
| 5:AF:54:ARG:O     | 5:AF:68:VAL:HG13  | 2.19                     | 0.42              |
| 5:AF:66:VAL:O     | 5:AF:102:ASN:HB2  | 2.19                     | 0.42              |
| 5:AF:139:GLN:C    | 5:AF:170:GLN:HE22 | 2.28                     | 0.42              |
| 5:AF:182:ILE:HD11 | 5:AF:203:PHE:CE1  | 2.54                     | 0.42              |
| 6:AG:51:PRO:O     | 6:AG:51:PRO:HG2   | 2.19                     | 0.42              |
| 6:AG:106:TYR:CZ   | 6:AG:112:VAL:C    | 2.98                     | 0.42              |
| 6:AG:125:HIS:HB3  | 6:AG:152:SER:CB   | 2.37                     | 0.42              |
| 7:AH:53:LEU:O     | 7:AH:57:LYS:CB    | 2.68                     | 0.42              |
| 8:AI:46:ARG:NH2   | 20:AU:37:VAL:HG21 | 2.35                     | 0.42              |
| 8:AI:78:GLU:HA    | 8:AI:81:ILE:HD12  | 2.02                     | 0.42              |
| 9:AJ:34:GLY:O     | 9:AJ:35:LYS:C     | 2.63                     | 0.42              |
| 11:AL:8:GLY:O     | 11:AL:15:ALA:O    | 2.37                     | 0.42              |
| 12:AM:56:HIS:C    | 12:AM:58:ASP:H    | 2.24                     | 0.42              |
| 13:AN:65:ALA:CB   | 13:AN:98:LEU:CD2  | 2.94                     | 0.42              |
| 13:AN:83:ILE:N    | 13:AN:83:ILE:CD1  | 2.82                     | 0.42              |
| 13:AN:99:GLN:O    | 13:AN:102:GLY:N   | 2.52                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 14:AO:11:VAL:CG2   | 19:AT:32:TYR:HD1   | 2.32                     | 0.42              |
| 14:AO:52:LEU:N     | 14:AO:52:LEU:CD2   | 2.79                     | 0.42              |
| 14:AO:105:TYR:HB2  | 14:AO:106:ASP:H    | 1.57                     | 0.42              |
| 15:AP:11:ARG:C     | 15:AP:13:LYS:H     | 2.27                     | 0.42              |
| 15:AP:19:LEU:HD21  | 15:AP:30:ALA:HA    | 2.02                     | 0.42              |
| 15:AP:52:GLU:HA    | 15:AP:55:ARG:CZ    | 2.48                     | 0.42              |
| 15:AP:81:LEU:O     | 15:AP:84:ILE:HG13  | 2.19                     | 0.42              |
| 18:AS:19:ILE:O     | 18:AS:36:ILE:O     | 2.37                     | 0.42              |
| 19:AT:62:SER:HB3   | 19:AT:72:ARG:CD    | 2.48                     | 0.42              |
| 20:AU:43:PHE:HD2   | 20:AU:56:THR:HG22  | 1.84                     | 0.42              |
| 21:AV:51:VAL:HG23  | 21:AV:60:VAL:CG2   | 2.49                     | 0.42              |
| 24:BA:7:G:O2'      | 24:BA:8:A:C5'      | 2.64                     | 0.42              |
| 24:BA:26:G:N2      | 24:BA:27:G:C2      | 2.87                     | 0.42              |
| 24:BA:104:U:O2'    | 24:BA:105:C:H5'    | 2.19                     | 0.42              |
| 24:BA:117:G:C6     | 24:BA:119:A:N6     | 2.87                     | 0.42              |
| 24:BA:126:A:C5'    | 53:B6:18:PHE:HD1   | 2.32                     | 0.42              |
| 24:BA:152:G:N1     | 24:BA:153:C:C2     | 2.88                     | 0.42              |
| 24:BA:207:A:C2     | 24:BA:208:C:H1'    | 2.53                     | 0.42              |
| 24:BA:241:A:H3'    | 24:BA:241:A:N3     | 2.34                     | 0.42              |
| 24:BA:245:G:P      | 36:BO:65:ARG:HH21  | 2.43                     | 0.42              |
| 24:BA:270(C):C:OP1 | 24:BA:365:C:C2'    | 2.67                     | 0.42              |
| 24:BA:363(A):A:N3  | 24:BA:363(A):A:C2' | 2.80                     | 0.42              |
| 24:BA:489:G:C2     | 24:BA:491:G:C4     | 3.07                     | 0.42              |
| 24:BA:511:U:H5     | 24:BA:512:G:C4     | 2.37                     | 0.42              |
| 24:BA:522:G:C5     | 24:BA:523:C:C5     | 3.08                     | 0.42              |
| 24:BA:570:G:N2     | 24:BA:2498:C:O2'   | 2.52                     | 0.42              |
| 24:BA:625:G:N1     | 36:BO:100:LEU:HB3  | 2.34                     | 0.42              |
| 24:BA:708:C:H2'    | 24:BA:709:U:C6     | 2.55                     | 0.42              |
| 24:BA:769:G:N3     | 24:BA:770:G:C8     | 2.87                     | 0.42              |
| 24:BA:800:A:N7     | 24:BA:802:A:O4'    | 2.52                     | 0.42              |
| 24:BA:883:G:N2     | 24:BA:894:C:C2     | 2.88                     | 0.42              |
| 24:BA:901:A:H2'    | 24:BA:902:C:C6     | 2.54                     | 0.42              |
| 24:BA:954:G:O2'    | 24:BA:2274:A:C2    | 2.58                     | 0.42              |
| 24:BA:1008:C:OP1   | 24:BA:1008:C:C6    | 2.72                     | 0.42              |
| 24:BA:1045:A:P     | 24:BA:1045:A:O4'   | 2.77                     | 0.42              |
| 24:BA:1065:U:C2'   | 24:BA:1066:U:H5''  | 2.48                     | 0.42              |
| 24:BA:1339:G:P     | 44:BW:78:LYS:HZ1   | 2.43                     | 0.42              |
| 24:BA:1451:C:C5'   | 24:BA:1453:A:OP2   | 2.59                     | 0.42              |
| 24:BA:1482:U:H1'   | 24:BA:1512:G:H22   | 1.85                     | 0.42              |
| 24:BA:1518:C:C2    | 24:BA:1519:G:O4'   | 2.72                     | 0.42              |
| 24:BA:1568:G:OP1   | 27:BD:86:PRO:HG2   | 2.19                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1588:C:C2   | 24:BA:1589:C:C5    | 3.07                     | 0.42              |
| 24:BA:1608:A:H2'  | 24:BA:1611:C:H41   | 1.84                     | 0.42              |
| 24:BA:1657:C:N3   | 24:BA:1658:C:C5    | 2.87                     | 0.42              |
| 24:BA:1669:A:H2'  | 24:BA:1670:C:C5'   | 2.44                     | 0.42              |
| 24:BA:1684:C:C2   | 24:BA:1705:G:N2    | 2.88                     | 0.42              |
| 24:BA:1687:G:H1'  | 24:BA:1702:G:H22   | 1.85                     | 0.42              |
| 24:BA:1703:G:C2'  | 24:BA:1704:G:C5'   | 2.96                     | 0.42              |
| 24:BA:1816:G:P    | 27:BD:43:ARG:NH2   | 2.93                     | 0.42              |
| 24:BA:1861:G:N2   | 24:BA:1862:G:C1'   | 2.82                     | 0.42              |
| 24:BA:1891:G:C6   | 24:BA:1892:C:C4    | 3.07                     | 0.42              |
| 24:BA:1925:C:N3   | 24:BA:1929:G:N1    | 2.63                     | 0.42              |
| 24:BA:1933:G:H21  | 24:BA:1974:C:C5'   | 2.08                     | 0.42              |
| 24:BA:1945:G:C2'  | 24:BA:1946:U:O5'   | 2.68                     | 0.42              |
| 24:BA:1952:A:H1'  | 24:BA:2560:C:O2'   | 2.20                     | 0.42              |
| 24:BA:2043:C:H2'  | 24:BA:2044:C:O5'   | 2.18                     | 0.42              |
| 24:BA:2086:U:H3   | 24:BA:2233:U:H3    | 1.68                     | 0.42              |
| 24:BA:2094:G:N7   | 24:BA:2095:C:C5    | 2.88                     | 0.42              |
| 24:BA:2140:C:O2'  | 24:BA:2141:G:H5'   | 2.19                     | 0.42              |
| 24:BA:2198:A:C2   | 32:BK:29:TYR:HD2   | 2.37                     | 0.42              |
| 24:BA:2391:G:O6   | 24:BA:2425:A:H5''  | 2.19                     | 0.42              |
| 24:BA:2415:G:P    | 36:BO:61:ARG:HD2   | 2.58                     | 0.42              |
| 24:BA:2434:A:O4'  | 24:BA:2434:A:OP2   | 2.38                     | 0.42              |
| 24:BA:2479:G:H2'  | 24:BA:2480:C:O4'   | 2.19                     | 0.42              |
| 24:BA:2557:G:C4   | 24:BA:2558:C:C5    | 3.08                     | 0.42              |
| 24:BA:2576:G:H3'  | 24:BA:2576:G:N3    | 2.34                     | 0.42              |
| 24:BA:2699:C:H2'  | 24:BA:2700:C:C5'   | 2.49                     | 0.42              |
| 24:BA:2781:A:C2'  | 24:BA:2782:G:O2'   | 2.57                     | 0.42              |
| 24:BA:2879:C:O2   | 24:BA:2879:C:C2'   | 2.67                     | 0.42              |
| 24:BA:2901:C:N3   | 24:BA:2902:C:C5    | 2.87                     | 0.42              |
| 26:BC:10:LEU:HD21 | 26:BC:220:PRO:CG   | 2.49                     | 0.42              |
| 26:BC:13:LYS:HB2  | 26:BC:32:LEU:HD23  | 2.01                     | 0.42              |
| 26:BC:47:LEU:HD23 | 26:BC:169:GLY:O    | 2.18                     | 0.42              |
| 26:BC:64:LEU:CG   | 26:BC:161:ILE:HG12 | 2.50                     | 0.42              |
| 26:BC:73:ARG:CB   | 26:BC:93:TYR:HE2   | 2.32                     | 0.42              |
| 27:BD:29:PRO:HG3  | 27:BD:82:ILE:HG22  | 2.01                     | 0.42              |
| 27:BD:65:ILE:CD1  | 27:BD:104:TYR:CB   | 2.96                     | 0.42              |
| 27:BD:90:ALA:HB2  | 27:BD:159:ALA:HB1  | 2.01                     | 0.42              |
| 27:BD:122:ASP:O   | 27:BD:123:ALA:O    | 2.37                     | 0.42              |
| 27:BD:131:LEU:C   | 27:BD:190:TYR:CD2  | 2.98                     | 0.42              |
| 27:BD:258:LYS:CG  | 27:BD:259:THR:N    | 2.82                     | 0.42              |
| 27:BD:263:ARG:O   | 27:BD:266:SER:CB   | 2.63                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 28:BE:59:VAL:HB    | 28:BE:62:PRO:CG    | 2.49                     | 0.42              |
| 28:BE:104:VAL:HG22 | 28:BE:198:VAL:CA   | 2.50                     | 0.42              |
| 28:BE:188:VAL:O    | 28:BE:189:PRO:C    | 2.60                     | 0.42              |
| 29:BF:29:ASN:ND2   | 29:BF:30:PRO:N     | 2.67                     | 0.42              |
| 29:BF:156:LEU:HA   | 29:BF:193:VAL:O    | 2.20                     | 0.42              |
| 29:BF:175:THR:O    | 29:BF:175:THR:OG1  | 2.33                     | 0.42              |
| 30:BG:4:ASP:OD1    | 30:BG:7:LEU:HD12   | 2.19                     | 0.42              |
| 31:BH:20:ALA:HB3   | 31:BH:21:PRO:HD2   | 1.99                     | 0.42              |
| 31:BH:25:LYS:HG3   | 31:BH:27:LYS:HG3   | 2.02                     | 0.42              |
| 32:BK:27:ARG:O     | 32:BK:32:PRO:HD3   | 2.19                     | 0.42              |
| 32:BK:67:ARG:O     | 32:BK:71:ILE:HG13  | 2.19                     | 0.42              |
| 33:BL:79:ARG:HE    | 33:BL:79:ARG:HB2   | 1.62                     | 0.42              |
| 34:BM:35:ARG:HD3   | 34:BM:48:MET:HE3   | 2.02                     | 0.42              |
| 34:BM:67:LEU:O     | 34:BM:68:GLU:CG    | 2.67                     | 0.42              |
| 35:BN:98:VAL:O     | 35:BN:98:VAL:CG2   | 2.66                     | 0.42              |
| 35:BN:100:GLY:HA2  | 35:BN:118:ALA:O    | 2.19                     | 0.42              |
| 36:BO:74:GLU:N     | 36:BO:107:LYS:CE   | 2.83                     | 0.42              |
| 36:BO:107:LYS:NZ   | 36:BO:111:ARG:N    | 2.67                     | 0.42              |
| 37:BP:27:VAL:HG22  | 37:BP:28:ALA:O     | 2.18                     | 0.42              |
| 37:BP:40:ALA:HA    | 37:BP:98:LYS:CG    | 2.40                     | 0.42              |
| 37:BP:118:LEU:HB3  | 37:BP:131:ILE:HD13 | 2.01                     | 0.42              |
| 38:BQ:5:LYS:NZ     | 38:BQ:6:SER:CA     | 2.82                     | 0.42              |
| 38:BQ:54:LEU:HG    | 38:BQ:57:ARG:HD3   | 2.01                     | 0.42              |
| 38:BQ:83:ILE:C     | 38:BQ:85:PRO:N     | 2.77                     | 0.42              |
| 39:BR:18:ILE:HD12  | 39:BR:18:ILE:N     | 2.35                     | 0.42              |
| 39:BR:71:ARG:HA    | 39:BR:104:GLY:O    | 2.20                     | 0.42              |
| 40:BS:64:ARG:O     | 40:BS:65:LYS:O     | 2.37                     | 0.42              |
| 40:BS:82:LEU:HA    | 40:BS:82:LEU:HD23  | 1.81                     | 0.42              |
| 41:BT:86:ALA:O     | 41:BT:90:VAL:CG2   | 2.68                     | 0.42              |
| 42:BU:20:LEU:HD13  | 42:BU:95:LEU:HD13  | 2.01                     | 0.42              |
| 42:BU:22:VAL:C     | 42:BU:93:GLU:HB3   | 2.44                     | 0.42              |
| 43:BV:49:LYS:HA    | 43:BV:49:LYS:HE2   | 2.00                     | 0.42              |
| 44:BW:12:VAL:HA    | 44:BW:29:TRP:CD1   | 2.54                     | 0.42              |
| 44:BW:30:VAL:O     | 44:BW:31:HIS:C     | 2.62                     | 0.42              |
| 44:BW:31:HIS:HE1   | 44:BW:33:LYS:HD2   | 1.83                     | 0.42              |
| 46:BY:78:LYS:CG    | 46:BY:79:ARG:N     | 2.82                     | 0.42              |
| 46:BY:153:SER:OG   | 46:BY:154:ASP:N    | 2.52                     | 0.42              |
| 48:B1:7:GLU:O      | 48:B1:10:LYS:HG2   | 2.18                     | 0.42              |
| 48:B1:27:LEU:HD11  | 48:B1:48:LEU:CG    | 2.49                     | 0.42              |
| 48:B1:29:GLU:O     | 48:B1:33:GLN:CD    | 2.62                     | 0.42              |
| 49:B2:9:VAL:HG13   | 49:B2:54:VAL:CA    | 2.37                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 50:B3:5:ILE:CD1    | 50:B3:10:VAL:N    | 2.81                     | 0.42              |
| 51:B4:36:CYS:HB2   | 51:B4:37:LYS:CE   | 2.50                     | 0.42              |
| 55:B8:7:VAL:HG21   | 55:B8:36:GLN:CD   | 2.45                     | 0.42              |
| 1:AA:41:G:C5       | 1:AA:42:G:N7      | 2.88                     | 0.42              |
| 1:AA:248:C:H4'     | 1:AA:283:C:H1'    | 2.01                     | 0.42              |
| 1:AA:283:C:C2      | 1:AA:284:G:C8     | 3.07                     | 0.42              |
| 1:AA:293:G:N3      | 1:AA:294:U:C6     | 2.88                     | 0.42              |
| 1:AA:299:G:C4      | 1:AA:300:A:N6     | 2.88                     | 0.42              |
| 1:AA:425:G:H2'     | 1:AA:426:G:H5'    | 2.01                     | 0.42              |
| 1:AA:723:U:O2      | 1:AA:723:U:C2'    | 2.68                     | 0.42              |
| 1:AA:724:G:N2      | 1:AA:725:G:N9     | 2.68                     | 0.42              |
| 1:AA:755:G:OP2     | 17:AR:65:ARG:HD2  | 2.19                     | 0.42              |
| 1:AA:854:G:OP2     | 1:AA:871:U:O2     | 2.38                     | 0.42              |
| 1:AA:965:A:N6      | 15:AP:126:LYS:OXT | 2.52                     | 0.42              |
| 1:AA:969:A:C2'     | 12:AM:55:LYS:HZ1  | 2.29                     | 0.42              |
| 1:AA:996:A:N1      | 1:AA:997:U:C4     | 2.88                     | 0.42              |
| 1:AA:1088:G:N2     | 1:AA:1089:G:H1'   | 2.34                     | 0.42              |
| 1:AA:1261:A:C2     | 1:AA:1262:C:N3    | 2.88                     | 0.42              |
| 1:AA:1326:C:C2     | 1:AA:1327:C:C5    | 3.07                     | 0.42              |
| 1:AA:1331:G:C4'    | 1:AA:1331:G:OP1   | 2.68                     | 0.42              |
| 1:AA:1408:A:H2     | 1:AA:1495:U:C5    | 2.28                     | 0.42              |
| 1:AA:1539:C:C4     | 2:A1:26:G:C2      | 3.08                     | 0.42              |
| 2:A1:37:U:C2       | 2:A1:38:U:O4      | 2.73                     | 0.42              |
| 3:AC:10:G:C6       | 3:AC:11:C:N4      | 2.88                     | 0.42              |
| 3:AD:2:C:H2'       | 3:AD:3:C:H6       | 1.80                     | 0.42              |
| 3:AB:20:U:H3'      | 3:AB:21:A:H5''    | 1.99                     | 0.42              |
| 4:AE:84:GLU:OE2    | 4:AE:84:GLU:CA    | 2.68                     | 0.42              |
| 4:AE:138:LEU:HG    | 4:AE:138:LEU:H    | 1.68                     | 0.42              |
| 6:AG:3:ARG:C       | 6:AG:4:TYR:O      | 2.63                     | 0.42              |
| 6:AG:101:LEU:HD21  | 6:AG:121:VAL:CG1  | 2.50                     | 0.42              |
| 7:AH:109:ILE:HD11  | 7:AH:136:MET:SD   | 2.59                     | 0.42              |
| 7:AH:129:ILE:O     | 7:AH:132:ALA:N    | 2.53                     | 0.42              |
| 8:AI:52:ILE:C      | 8:AI:54:LYS:N     | 2.77                     | 0.42              |
| 9:AJ:38:LEU:CA     | 9:AJ:41:ARG:HG3   | 2.45                     | 0.42              |
| 9:AJ:41:ARG:CG     | 9:AJ:41:ARG:HH11  | 2.32                     | 0.42              |
| 9:AJ:51:GLN:HE22   | 9:AJ:58:PRO:CD    | 2.33                     | 0.42              |
| 9:AJ:76:ARG:O      | 9:AJ:156:TRP:CZ2  | 2.72                     | 0.42              |
| 10:AK:69:ARG:NH1   | 10:AK:69:ARG:HG3  | 2.34                     | 0.42              |
| 10:AK:111:ILE:HD12 | 10:AK:136:GLU:HA  | 2.00                     | 0.42              |
| 11:AL:17:VAL:HG11  | 11:AL:81:ILE:HG12 | 2.02                     | 0.42              |
| 11:AL:33:PHE:CE2   | 11:AL:43:ALA:O    | 2.73                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 11:AL:40:LEU:HB3   | 11:AL:42:ARG:CB   | 2.29                     | 0.42              |
| 12:AM:16:LEU:HD12  | 12:AM:70:ARG:HG2  | 2.00                     | 0.42              |
| 13:AN:42:TRP:CE3   | 13:AN:43:SER:CA   | 2.91                     | 0.42              |
| 13:AN:50:TYR:CE1   | 13:AN:60:ALA:HB2  | 2.54                     | 0.42              |
| 14:AO:23:LYS:HE3   | 14:AO:23:LYS:CA   | 2.15                     | 0.42              |
| 14:AO:33:ARG:O     | 14:AO:84:LEU:CG   | 2.62                     | 0.42              |
| 14:AO:43:VAL:HG12  | 14:AO:44:THR:N    | 2.33                     | 0.42              |
| 14:AO:46:LYS:HZ3   | 14:AO:94:PRO:CG   | 2.32                     | 0.42              |
| 14:AO:68:ALA:CB    | 14:AO:98:TYR:C    | 2.89                     | 0.42              |
| 17:AR:68:ARG:O     | 17:AR:69:TYR:C    | 2.61                     | 0.42              |
| 19:AT:3:LYS:C      | 19:AT:4:LYS:O     | 2.62                     | 0.42              |
| 19:AT:10:VAL:HG11  | 19:AT:52:LYS:C    | 2.45                     | 0.42              |
| 19:AT:17:LYS:HE3   | 19:AT:48:GLU:CA   | 2.45                     | 0.42              |
| 20:AU:80:PRO:O     | 20:AU:82:THR:N    | 2.53                     | 0.42              |
| 22:AW:49:ALA:HB3   | 22:AW:99:LEU:CG   | 2.49                     | 0.42              |
| 22:AW:64:ASP:C     | 22:AW:66:ALA:N    | 2.71                     | 0.42              |
| 24:BA:7:G:C2       | 24:BA:8:A:C4      | 3.07                     | 0.42              |
| 24:BA:171:G:C2     | 24:BA:172:C:N3    | 2.88                     | 0.42              |
| 24:BA:270(L):U:O2  | 24:BA:270(M):U:C5 | 2.72                     | 0.42              |
| 24:BA:273(F):C:O2' | 24:BA:363(A):A:C2 | 2.71                     | 0.42              |
| 24:BA:295:G:N9     | 24:BA:345:A:C2    | 2.87                     | 0.42              |
| 24:BA:310:A:C5     | 24:BA:312:G:C4    | 3.08                     | 0.42              |
| 24:BA:329:G:O2'    | 24:BA:330:A:OP1   | 2.31                     | 0.42              |
| 24:BA:418:G:C2     | 24:BA:419:C:C6    | 3.08                     | 0.42              |
| 24:BA:449:A:N3     | 24:BA:450:G:C8    | 2.88                     | 0.42              |
| 24:BA:450:G:O5'    | 24:BA:450:G:C8    | 2.68                     | 0.42              |
| 24:BA:531:C:O2     | 24:BA:531:C:C2'   | 2.68                     | 0.42              |
| 24:BA:558:G:OP1    | 34:BM:109:LYS:CG  | 2.67                     | 0.42              |
| 24:BA:600:G:N3     | 24:BA:600:G:H2'   | 2.35                     | 0.42              |
| 24:BA:608:A:C2'    | 24:BA:609:A:H5'   | 2.49                     | 0.42              |
| 24:BA:627:A:H5''   | 36:BO:75:ILE:CG2  | 2.50                     | 0.42              |
| 24:BA:659:C:C2     | 24:BA:660:G:C8    | 3.07                     | 0.42              |
| 24:BA:659:C:C4'    | 29:BF:102:PRO:CD  | 2.97                     | 0.42              |
| 24:BA:666:G:O2'    | 24:BA:667:U:C5'   | 2.68                     | 0.42              |
| 24:BA:769:G:C6     | 24:BA:770:G:N7    | 2.88                     | 0.42              |
| 24:BA:800:A:C8     | 24:BA:802:A:H5'   | 2.55                     | 0.42              |
| 24:BA:858:U:OP1    | 47:BZ:44:ARG:CZ   | 2.68                     | 0.42              |
| 24:BA:863:A:C2     | 24:BA:864:G:C6    | 3.08                     | 0.42              |
| 24:BA:909:A:C2     | 24:BA:912:C:C6    | 3.08                     | 0.42              |
| 24:BA:971:C:H4'    | 24:BA:983:A:O2'   | 2.19                     | 0.42              |
| 24:BA:974(A):C:H1' | 24:BA:1186:G:N2   | 2.35                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1038:C:O2   | 24:BA:1038:C:H2'  | 2.19                     | 0.42              |
| 24:BA:1096:A:C6   | 33:BL:26:ALA:HB1  | 2.54                     | 0.42              |
| 24:BA:1177:A:C6   | 24:BA:1178:C:N4   | 2.88                     | 0.42              |
| 24:BA:1225:C:C4'  | 42:BU:87:HIS:CE1  | 3.02                     | 0.42              |
| 24:BA:1242:A:H5'' | 24:BA:1243:G:OP2  | 2.19                     | 0.42              |
| 24:BA:1388:G:C4   | 24:BA:1400:G:N2   | 2.87                     | 0.42              |
| 24:BA:1414:G:C2   | 24:BA:1415:U:C2   | 3.07                     | 0.42              |
| 24:BA:1454:U:H5'  | 24:BA:1455:G:P    | 2.58                     | 0.42              |
| 24:BA:1469:A:C8   | 24:BA:1469:A:C3'  | 3.02                     | 0.42              |
| 24:BA:1559:G:C4   | 24:BA:1559:G:C3'  | 2.76                     | 0.42              |
| 24:BA:1569:A:N1   | 24:BA:1570:A:C6   | 2.87                     | 0.42              |
| 24:BA:1571:A:N3   | 24:BA:1571:A:C2'  | 2.83                     | 0.42              |
| 24:BA:1639:U:C2'  | 24:BA:1640:C:H5'' | 2.42                     | 0.42              |
| 24:BA:1661:G:N1   | 24:BA:2000:G:C4   | 2.88                     | 0.42              |
| 24:BA:1684:C:N3   | 24:BA:1705:G:C2   | 2.88                     | 0.42              |
| 24:BA:1727:U:C2'  | 24:BA:1728:G:OP1  | 2.68                     | 0.42              |
| 24:BA:1732:A:OP1  | 24:BA:1733:G:C4   | 2.72                     | 0.42              |
| 24:BA:1772:G:O2'  | 24:BA:1773:A:H4'  | 2.19                     | 0.42              |
| 24:BA:1806:C:H2'  | 24:BA:1807:G:O5'  | 2.19                     | 0.42              |
| 24:BA:1967:C:H2'  | 24:BA:1968:G:H5'  | 2.00                     | 0.42              |
| 24:BA:1993:U:C5   | 24:BA:1994:C:H5   | 2.34                     | 0.42              |
| 24:BA:2032:G:H4'  | 24:BA:2033:A:OP1  | 2.19                     | 0.42              |
| 24:BA:2052:G:C4   | 24:BA:2053:G:N7   | 2.87                     | 0.42              |
| 24:BA:2074:U:C2   | 24:BA:2436:G:C2   | 3.08                     | 0.42              |
| 24:BA:2262:U:C4'  | 24:BA:2328:A:C2   | 2.97                     | 0.42              |
| 24:BA:2292:C:H2'  | 24:BA:2293:C:C6   | 2.54                     | 0.42              |
| 24:BA:2349:G:C6   | 24:BA:2369:A:C6   | 3.08                     | 0.42              |
| 24:BA:2351:G:H22  | 24:BA:2365:G:H2'  | 1.85                     | 0.42              |
| 24:BA:2352:A:O2'  | 24:BA:2353:G:H5'  | 2.19                     | 0.42              |
| 24:BA:2538:C:C2   | 24:BA:2539:C:H5   | 2.33                     | 0.42              |
| 24:BA:2544:G:C2'  | 24:BA:2545:G:C5'  | 2.98                     | 0.42              |
| 24:BA:2640:G:C5   | 24:BA:2641:G:N7   | 2.88                     | 0.42              |
| 24:BA:2658:C:C2'  | 24:BA:2659:G:C5'  | 2.64                     | 0.42              |
| 24:BA:2698:U:N3   | 24:BA:2699:C:N4   | 2.67                     | 0.42              |
| 24:BA:2707:G:O2'  | 38:BQ:68:ARG:HG3  | 2.20                     | 0.42              |
| 24:BA:2721:A:C2   | 24:BA:2873:A:N1   | 2.88                     | 0.42              |
| 24:BA:2758:A:C5   | 24:BA:2759:G:N7   | 2.87                     | 0.42              |
| 24:BA:2797:U:OP1  | 24:BA:2799:A:O4'  | 2.38                     | 0.42              |
| 24:BA:2845:G:C4   | 24:BA:2846:G:C8   | 3.08                     | 0.42              |
| 25:BB:15:A:H4'    | 25:BB:16:G:OP2    | 2.19                     | 0.42              |
| 25:BB:55:U:O2'    | 25:BB:56:G:C5'    | 2.57                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 25:BB:73:A:C6      | 25:BB:104:A:H1'    | 2.55                     | 0.42              |
| 25:BB:110:G:N3     | 25:BB:111:U:H1'    | 2.35                     | 0.42              |
| 26:BC:223:ARG:CB   | 26:BC:223:ARG:HH11 | 2.33                     | 0.42              |
| 27:BD:51:VAL:HG12  | 27:BD:52:ARG:HD3   | 2.02                     | 0.42              |
| 27:BD:136:ILE:CD1  | 27:BD:173:VAL:HG11 | 2.40                     | 0.42              |
| 27:BD:226:MET:HB3  | 27:BD:227:ASN:H    | 1.36                     | 0.42              |
| 28:BE:1:MET:O      | 28:BE:2:LYS:HG3    | 2.20                     | 0.42              |
| 28:BE:53:PRO:CG    | 28:BE:75:VAL:CG2   | 2.86                     | 0.42              |
| 28:BE:64:LYS:O     | 28:BE:67:PHE:CB    | 2.67                     | 0.42              |
| 29:BF:53:THR:O     | 29:BF:55:GLY:N     | 2.51                     | 0.42              |
| 30:BG:19:LEU:HA    | 30:BG:22:ARG:HG2   | 2.02                     | 0.42              |
| 31:BH:118:PRO:CD   | 31:BH:121:ILE:HD13 | 2.29                     | 0.42              |
| 31:BH:119:GLU:O    | 31:BH:120:GLY:C    | 2.61                     | 0.42              |
| 32:BK:81:VAL:HG21  | 32:BK:123:LEU:CD1  | 2.49                     | 0.42              |
| 32:BK:93:THR:O     | 32:BK:96:ASP:CB    | 2.66                     | 0.42              |
| 34:BM:7:LYS:CD     | 34:BM:39:ARG:NH2   | 2.82                     | 0.42              |
| 34:BM:13:TRP:C     | 34:BM:14:VAL:HG23  | 2.43                     | 0.42              |
| 34:BM:25:ARG:O     | 34:BM:29:LYS:HG3   | 2.20                     | 0.42              |
| 34:BM:39:ARG:HG2   | 34:BM:40:PRO:HD2   | 2.02                     | 0.42              |
| 34:BM:39:ARG:CG    | 34:BM:40:PRO:HD2   | 2.50                     | 0.42              |
| 34:BM:95:PRO:CA    | 34:BM:98:VAL:HG23  | 2.46                     | 0.42              |
| 35:BN:114:ILE:HG22 | 35:BN:115:VAL:N    | 2.32                     | 0.42              |
| 36:BO:86:LYS:NZ    | 36:BO:99:LEU:CD1   | 2.83                     | 0.42              |
| 37:BP:72:LYS:O     | 37:BP:93:TYR:HA    | 2.20                     | 0.42              |
| 38:BQ:39:PRO:C     | 38:BQ:41:ALA:N     | 2.74                     | 0.42              |
| 39:BR:11:LYS:N     | 39:BR:11:LYS:HD2   | 2.33                     | 0.42              |
| 39:BR:17:ARG:HH11  | 39:BR:25:ARG:HD2   | 1.82                     | 0.42              |
| 39:BR:34:HIS:O     | 39:BR:35:ILE:O     | 2.37                     | 0.42              |
| 40:BS:78:LEU:HD23  | 40:BS:79:HIS:H     | 1.83                     | 0.42              |
| 41:BT:97:ASP:O     | 41:BT:100:VAL:HG23 | 2.20                     | 0.42              |
| 43:BV:12:ILE:CD1   | 43:BV:12:ILE:H     | 2.32                     | 0.42              |
| 44:BW:54:VAL:HG22  | 44:BW:81:VAL:CG2   | 2.40                     | 0.42              |
| 44:BW:63:LYS:N     | 44:BW:72:LYS:HG2   | 2.24                     | 0.42              |
| 44:BW:83:VAL:HG11  | 44:BW:87:GLN:O     | 2.20                     | 0.42              |
| 46:BY:103:ARG:O    | 46:BY:138:GLU:HA   | 2.20                     | 0.42              |
| 46:BY:160:GLY:O    | 46:BY:161:VAL:O    | 2.38                     | 0.42              |
| 47:BZ:84:LEU:HB3   | 47:BZ:85:ALA:H     | 1.57                     | 0.42              |
| 48:B1:1:MET:O      | 48:B1:2:ARG:C      | 2.60                     | 0.42              |
| 51:B4:15:ARG:O     | 51:B4:18:ALA:HB3   | 2.20                     | 0.42              |
| 52:B5:25:LYS:HG2   | 52:B5:26:ASN:N     | 2.34                     | 0.42              |
| 53:B6:21:ARG:C     | 53:B6:31:LEU:HD11  | 2.44                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 53:B6:34:ARG:NH2 | 53:B6:42:LEU:HG | 2.34                     | 0.42              |
| 55:B8:15:LYS:O   | 55:B8:25:VAL:HA | 2.19                     | 0.42              |
| 1:AA:7:G:H1'     | 1:AA:298:A:C4   | 2.53                     | 0.42              |
| 1:AA:66:G:H2'    | 1:AA:67:C:O5'   | 2.20                     | 0.42              |
| 1:AA:66:G:P      | 1:AA:66:G:H8    | 2.42                     | 0.42              |
| 1:AA:101:A:N3    | 1:AA:102:G:C8   | 2.88                     | 0.42              |
| 1:AA:113:G:C5    | 1:AA:114:U:C4   | 3.07                     | 0.42              |
| 1:AA:151:A:C6    | 1:AA:152:A:N3   | 2.87                     | 0.42              |
| 1:AA:164:U:C2'   | 1:AA:164:U:O2   | 2.64                     | 0.42              |
| 1:AA:258:G:C6    | 1:AA:259:G:C5   | 3.08                     | 0.42              |
| 1:AA:265:G:C8    | 1:AA:267:C:C4   | 3.08                     | 0.42              |
| 1:AA:373:A:C5    | 1:AA:482:A:N7   | 2.88                     | 0.42              |
| 1:AA:390:C:H2'   | 1:AA:391:G:C8   | 2.46                     | 0.42              |
| 1:AA:392:G:C4    | 1:AA:393:A:C8   | 3.08                     | 0.42              |
| 1:AA:443:C:N1    | 1:AA:492:G:N2   | 2.67                     | 0.42              |
| 1:AA:576:G:N7    | 1:AA:881:G:O4'  | 2.53                     | 0.42              |
| 1:AA:577:G:C1'   | 1:AA:816:A:C2   | 3.03                     | 0.42              |
| 1:AA:680:C:C2    | 1:AA:711:G:C2   | 3.08                     | 0.42              |
| 1:AA:701:C:H5''  | 1:AA:702:A:C3'  | 2.49                     | 0.42              |
| 1:AA:702:A:O2'   | 1:AA:703:G:P    | 2.77                     | 0.42              |
| 1:AA:831:U:H2'   | 1:AA:832:C:O4'  | 2.18                     | 0.42              |
| 1:AA:848:C:O2'   | 1:AA:849:C:C5'  | 2.66                     | 0.42              |
| 1:AA:865:A:C5    | 1:AA:866:C:O2   | 2.73                     | 0.42              |
| 1:AA:880:C:OP2   | 14:AO:9:GLN:NE2 | 2.52                     | 0.42              |
| 1:AA:924:C:H2'   | 1:AA:925:G:O5'  | 2.19                     | 0.42              |
| 1:AA:979:C:C5    | 1:AA:980:C:C5   | 3.08                     | 0.42              |
| 1:AA:1004:A:C3'  | 1:AA:1025:U:C4  | 2.89                     | 0.42              |
| 1:AA:1053:G:O3'  | 1:AA:1054:C:H4' | 2.19                     | 0.42              |
| 1:AA:1103:C:C2   | 1:AA:1104:G:C8  | 3.07                     | 0.42              |
| 1:AA:1130:A:C2   | 1:AA:1146:A:C2  | 3.07                     | 0.42              |
| 1:AA:1130:A:C6   | 1:AA:1146:A:N1  | 2.88                     | 0.42              |
| 1:AA:1164:G:C6   | 1:AA:1165:C:C4  | 3.07                     | 0.42              |
| 1:AA:1183:A:C2'  | 1:AA:1184:G:OP1 | 2.68                     | 0.42              |
| 1:AA:1324:A:C2   | 1:AA:1325:C:C6  | 3.07                     | 0.42              |
| 1:AA:1331:G:HO2' | 1:AA:1332:A:P   | 2.43                     | 0.42              |
| 1:AA:1386:G:O2'  | 1:AA:1387:G:C5' | 2.68                     | 0.42              |
| 1:AA:1455:G:H5'' | 22:AW:31:SER:OG | 2.19                     | 0.42              |
| 1:AA:1494:G:C2   | 1:AA:1495:U:C4  | 3.08                     | 0.42              |
| 1:AA:1537:U:C2   | 1:AA:1538:C:C5  | 3.08                     | 0.42              |
| 2:A1:39:U:H3'    | 2:A1:39:U:H6    | 1.85                     | 0.42              |
| 3:AD:73:A:C2'    | 3:AD:74:C:OP1   | 2.68                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 3:AB:15:G:C4      | 3:AB:59:U:O2       | 2.73                     | 0.42              |
| 3:AB:57:G:H2'     | 3:AB:57:G:N3       | 2.34                     | 0.42              |
| 4:AE:23:ARG:H     | 4:AE:23:ARG:HG3    | 1.46                     | 0.42              |
| 4:AE:75:LYS:NZ    | 4:AE:75:LYS:C      | 2.76                     | 0.42              |
| 4:AE:163:PHE:CD1  | 4:AE:185:ILE:O     | 2.72                     | 0.42              |
| 4:AE:187:LEU:HB2  | 4:AE:201:ILE:HG22  | 2.02                     | 0.42              |
| 4:AE:228:GLY:O    | 4:AE:230:VAL:HG23  | 2.19                     | 0.42              |
| 5:AF:33:LEU:HD23  | 5:AF:36:ASP:HB3    | 2.01                     | 0.42              |
| 5:AF:40:ARG:HE    | 16:AQ:52:GLN:NE2   | 2.18                     | 0.42              |
| 5:AF:120:VAL:HG13 | 5:AF:133:ALA:HB1   | 2.00                     | 0.42              |
| 6:AG:88:VAL:O     | 6:AG:92:VAL:HG23   | 2.20                     | 0.42              |
| 6:AG:97:LEU:O     | 6:AG:103:ASN:ND2   | 2.49                     | 0.42              |
| 6:AG:126:ILE:H    | 6:AG:132:ARG:HD2   | 1.84                     | 0.42              |
| 7:AH:34:VAL:HG23  | 7:AH:62:ALA:HB1    | 2.02                     | 0.42              |
| 7:AH:100:VAL:HG11 | 7:AH:107:ARG:CG    | 2.34                     | 0.42              |
| 7:AH:152:ARG:O    | 7:AH:152:ARG:HD3   | 2.20                     | 0.42              |
| 8:AI:7:ASN:CG     | 8:AI:62:TRP:CD1    | 2.90                     | 0.42              |
| 8:AI:21:LEU:HD12  | 8:AI:24:GLU:OE1    | 2.19                     | 0.42              |
| 9:AJ:12:LEU:HD11  | 9:AJ:21:VAL:HB     | 2.02                     | 0.42              |
| 9:AJ:88:PRO:HD2   | 9:AJ:152:ALA:CA    | 2.49                     | 0.42              |
| 9:AJ:93:PRO:O     | 9:AJ:96:GLN:N      | 2.53                     | 0.42              |
| 9:AJ:110:GLN:O    | 9:AJ:111:ARG:C     | 2.63                     | 0.42              |
| 10:AK:5:PRO:O     | 10:AK:8:ASP:CB     | 2.54                     | 0.42              |
| 10:AK:104:ARG:HB2 | 10:AK:107:LEU:HG   | 2.02                     | 0.42              |
| 11:AL:97:LYS:CE   | 11:AL:102:LEU:HD13 | 2.48                     | 0.42              |
| 12:AM:16:LEU:CD2  | 12:AM:16:LEU:H     | 2.33                     | 0.42              |
| 12:AM:49:VAL:CG1  | 16:AQ:41:ARG:HB2   | 2.49                     | 0.42              |
| 13:AN:71:LYS:HG3  | 13:AN:72:ALA:N     | 2.35                     | 0.42              |
| 15:AP:6:GLY:HA2   | 30:BG:114:ILE:CD1  | 2.49                     | 0.42              |
| 15:AP:7:VAL:CG1   | 30:BG:140:ILE:HG13 | 2.50                     | 0.42              |
| 19:AT:53:LEU:O    | 19:AT:53:LEU:CG    | 2.66                     | 0.42              |
| 19:AT:60:ILE:HG12 | 19:AT:61:GLU:N     | 2.34                     | 0.42              |
| 19:AT:104:LYS:CD  | 19:AT:105:ALA:N    | 2.79                     | 0.42              |
| 20:AU:18:ARG:HH21 | 20:AU:21:LYS:CG    | 2.33                     | 0.42              |
| 20:AU:58:LEU:HD13 | 20:AU:66:LEU:CD2   | 2.49                     | 0.42              |
| 20:AU:62:GLU:C    | 20:AU:64:ARG:N     | 2.77                     | 0.42              |
| 21:AV:22:LEU:CA   | 21:AV:25:LYS:NZ    | 2.83                     | 0.42              |
| 22:AW:8:ARG:NH1   | 22:AW:8:ARG:CB     | 2.82                     | 0.42              |
| 24:BA:192:C:OP1   | 24:BA:2243:U:OP1   | 2.38                     | 0.42              |
| 24:BA:197:A:C4    | 24:BA:198:C:C6     | 3.08                     | 0.42              |
| 24:BA:216:A:N6    | 24:BA:431:U:H3     | 2.13                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 24:BA:217:G:H2'   | 24:BA:218:A:C5'  | 2.50                     | 0.42              |
| 24:BA:221:A:C8    | 24:BA:266:G:N7   | 2.88                     | 0.42              |
| 24:BA:344:G:C2    | 24:BA:345:A:N6   | 2.88                     | 0.42              |
| 24:BA:374:A:C4    | 24:BA:375:C:C6   | 3.08                     | 0.42              |
| 24:BA:451:C:H2'   | 24:BA:453:C:H5   | 1.84                     | 0.42              |
| 24:BA:459:U:O2'   | 24:BA:460:A:H5'  | 2.20                     | 0.42              |
| 24:BA:460:A:C2'   | 24:BA:461:C:C6   | 2.92                     | 0.42              |
| 24:BA:544:C:H2'   | 24:BA:545:G:C5'  | 2.50                     | 0.42              |
| 24:BA:545:G:O3'   | 24:BA:546:C:C5   | 2.72                     | 0.42              |
| 24:BA:576:U:OP1   | 24:BA:2503:A:OP1 | 2.38                     | 0.42              |
| 24:BA:593:G:C6    | 24:BA:594:U:C5   | 3.07                     | 0.42              |
| 24:BA:621:A:C2'   | 24:BA:622:G:H5'  | 2.35                     | 0.42              |
| 24:BA:667:U:H2'   | 24:BA:668:G:C1'  | 2.50                     | 0.42              |
| 24:BA:713:G:N3    | 24:BA:713:G:C2'  | 2.78                     | 0.42              |
| 24:BA:733:G:C6    | 24:BA:761:A:C5   | 3.08                     | 0.42              |
| 24:BA:738:G:C6    | 24:BA:759:G:O6   | 2.73                     | 0.42              |
| 24:BA:749:C:OP2   | 43:BV:88:ARG:NH1 | 2.47                     | 0.42              |
| 24:BA:764:A:H3'   | 24:BA:765:G:C5'  | 2.49                     | 0.42              |
| 24:BA:774:A:C8    | 24:BA:775:G:N7   | 2.88                     | 0.42              |
| 24:BA:814:C:P     | 42:BU:85:LYS:HB2 | 2.59                     | 0.42              |
| 24:BA:863:A:N1    | 24:BA:864:G:C6   | 2.88                     | 0.42              |
| 24:BA:944:G:O6    | 36:BO:35:HIS:NE2 | 2.53                     | 0.42              |
| 24:BA:957:A:OP1   | 37:BP:76:LYS:HA  | 2.19                     | 0.42              |
| 24:BA:978:G:N2    | 24:BA:979:G:C2   | 2.88                     | 0.42              |
| 24:BA:1045:A:O2'  | 24:BA:1047:G:C5' | 2.67                     | 0.42              |
| 24:BA:1049:C:N3   | 24:BA:1050:A:C5  | 2.88                     | 0.42              |
| 24:BA:1059:G:N7   | 24:BA:1060:U:H1' | 2.34                     | 0.42              |
| 24:BA:1062:G:O5'  | 24:BA:1070:A:H5' | 2.19                     | 0.42              |
| 24:BA:1155:A:P    | 24:BA:1155:A:C3' | 3.08                     | 0.42              |
| 24:BA:1161:C:O2'  | 42:BU:22:VAL:CG1 | 2.68                     | 0.42              |
| 24:BA:1250:G:HO2' | 24:BA:1251:C:P   | 2.38                     | 0.42              |
| 24:BA:1364:G:N7   | 50:B3:2:LYS:CB   | 2.68                     | 0.42              |
| 24:BA:1372:U:C6   | 24:BA:1372:U:H3' | 2.54                     | 0.42              |
| 24:BA:1373:A:H2'  | 24:BA:1374:G:H8  | 1.79                     | 0.42              |
| 24:BA:1466:G:C2'  | 24:BA:1547:C:N4  | 2.57                     | 0.42              |
| 24:BA:1516:U:C6   | 24:BA:1517:G:N7  | 2.88                     | 0.42              |
| 24:BA:1704:G:C6   | 24:BA:1705:G:C5  | 3.08                     | 0.42              |
| 24:BA:1912:A:C8   | 24:BA:1913:A:C1' | 2.96                     | 0.42              |
| 24:BA:1913:A:C5   | 24:BA:1918:A:N7  | 2.88                     | 0.42              |
| 24:BA:1967:C:O2   | 24:BA:1968:G:O4' | 2.38                     | 0.42              |
| 24:BA:2002:G:C6   | 24:BA:2003:G:N7  | 2.87                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2093:G:O2'  | 24:BA:2094:G:H5'   | 2.19                     | 0.42              |
| 24:BA:2114:A:O5'  | 24:BA:2114:A:C8    | 2.66                     | 0.42              |
| 24:BA:2160:G:O2'  | 24:BA:2161:C:C5'   | 2.68                     | 0.42              |
| 24:BA:2289:G:N7   | 24:BA:2289:G:OP2   | 2.52                     | 0.42              |
| 24:BA:2521:C:O2   | 24:BA:2522:U:C1'   | 2.67                     | 0.42              |
| 24:BA:2582:G:C3'  | 24:BA:2583:G:H5'   | 2.49                     | 0.42              |
| 24:BA:2589:A:OP1  | 27:BD:226:MET:SD   | 2.77                     | 0.42              |
| 24:BA:2603:G:OP2  | 47:BZ:1:MET:CB     | 2.61                     | 0.42              |
| 24:BA:2683:C:C5   | 24:BA:2684:U:C5    | 3.07                     | 0.42              |
| 24:BA:2716:U:C2   | 24:BA:2717:G:N7    | 2.87                     | 0.42              |
| 24:BA:2729:G:C5   | 24:BA:2730:C:C5    | 3.07                     | 0.42              |
| 24:BA:2808:U:H3'  | 24:BA:2809:A:C5'   | 2.49                     | 0.42              |
| 24:BA:2820:A:O3'  | 38:BQ:4:LEU:CD2    | 2.63                     | 0.42              |
| 24:BA:2843:G:C2   | 24:BA:2844:G:C8    | 3.08                     | 0.42              |
| 24:BA:2887:U:N3   | 24:BA:2888:C:C4    | 2.88                     | 0.42              |
| 25:BB:9:G:C4'     | 39:BR:43:GLU:OE2   | 2.62                     | 0.42              |
| 25:BB:16:G:C6     | 25:BB:17:C:C4      | 3.07                     | 0.42              |
| 25:BB:19:G:N2     | 25:BB:20:C:C2      | 2.88                     | 0.42              |
| 25:BB:57:A:N3     | 30:BG:29:TRP:CD1   | 2.87                     | 0.42              |
| 26:BC:103:ILE:CG2 | 26:BC:108:MET:SD   | 3.08                     | 0.42              |
| 26:BC:156:ILE:HA  | 26:BC:160:ARG:HB2  | 2.01                     | 0.42              |
| 27:BD:27:THR:HG21 | 27:BD:82:ILE:CG2   | 2.50                     | 0.42              |
| 27:BD:101:GLU:CD  | 27:BD:102:LYS:O    | 2.63                     | 0.42              |
| 27:BD:141:VAL:O   | 27:BD:194:GLY:N    | 2.47                     | 0.42              |
| 27:BD:183:ARG:CG  | 27:BD:268:ARG:HD2  | 2.49                     | 0.42              |
| 27:BD:209:ALA:O   | 27:BD:213:ARG:CG   | 2.67                     | 0.42              |
| 28:BE:115:GLY:O   | 28:BE:117:MET:C    | 2.63                     | 0.42              |
| 29:BF:5:ALA:O     | 29:BF:7:TYR:HD1    | 2.03                     | 0.42              |
| 29:BF:197:ASP:C   | 29:BF:200:GLU:HG3  | 2.45                     | 0.42              |
| 30:BG:1:MET:O     | 30:BG:3:LEU:N      | 2.52                     | 0.42              |
| 30:BG:55:LYS:HZ1  | 30:BG:152:LEU:HD11 | 1.83                     | 0.42              |
| 31:BH:99:VAL:O    | 31:BH:99:VAL:HG12  | 2.18                     | 0.42              |
| 32:BK:64:GLU:O    | 32:BK:65:ALA:C     | 2.62                     | 0.42              |
| 32:BK:92:VAL:HB   | 32:BK:120:ILE:HG23 | 2.01                     | 0.42              |
| 33:BL:103:GLN:C   | 33:BL:106:GLU:HG3  | 2.45                     | 0.42              |
| 34:BM:7:LYS:HZ3   | 34:BM:10:GLU:HB3   | 1.85                     | 0.42              |
| 34:BM:115:ARG:HA  | 34:BM:118:LYS:CG   | 2.49                     | 0.42              |
| 35:BN:12:ASP:OD2  | 35:BN:93:PRO:HG3   | 2.19                     | 0.42              |
| 35:BN:90:GLN:CD   | 35:BN:110:GLY:O    | 2.62                     | 0.42              |
| 36:BO:46:LYS:CA   | 36:BO:49:ARG:NH1   | 2.82                     | 0.42              |
| 36:BO:80:TYR:OH   | 36:BO:100:LEU:HD21 | 2.19                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 36:BO:124:LYS:HB3 | 36:BO:143:GLY:CA  | 2.50                     | 0.42              |
| 36:BO:126:VAL:CA  | 36:BO:145:PRO:HA  | 2.49                     | 0.42              |
| 37:BP:34:LEU:CG   | 37:BP:67:ARG:NH2  | 2.79                     | 0.42              |
| 37:BP:42:ILE:HD11 | 37:BP:46:GLN:HE21 | 1.82                     | 0.42              |
| 38:BQ:53:HIS:CD2  | 38:BQ:56:LYS:HZ1  | 2.35                     | 0.42              |
| 38:BQ:96:ARG:HG2  | 38:BQ:98:LEU:HD12 | 1.98                     | 0.42              |
| 39:BR:70:GLY:O    | 39:BR:73:LEU:N    | 2.53                     | 0.42              |
| 40:BS:6:LEU:CD2   | 40:BS:7:ILE:N     | 2.82                     | 0.42              |
| 40:BS:50:ILE:CG2  | 40:BS:68:TYR:CB   | 2.98                     | 0.42              |
| 40:BS:100:TYR:C   | 40:BS:102:ILE:H   | 2.27                     | 0.42              |
| 41:BT:17:ILE:HG21 | 41:BT:36:ARG:HD3  | 2.02                     | 0.42              |
| 41:BT:105:VAL:C   | 41:BT:108:GLU:OE2 | 2.63                     | 0.42              |
| 42:BU:1:MET:SD    | 42:BU:15:GLU:OE2  | 2.78                     | 0.42              |
| 42:BU:12:TYR:OH   | 42:BU:14:VAL:O    | 2.35                     | 0.42              |
| 42:BU:25:LEU:HD23 | 42:BU:28:GLU:HB2  | 2.02                     | 0.42              |
| 42:BU:28:GLU:CD   | 42:BU:94:LEU:HB2  | 2.45                     | 0.42              |
| 43:BV:65:LEU:HB2  | 43:BV:68:ARG:HD3  | 2.01                     | 0.42              |
| 44:BW:15:GLU:O    | 44:BW:18:TYR:HB2  | 2.19                     | 0.42              |
| 44:BW:47:PHE:C    | 44:BW:49:VAL:HG13 | 2.44                     | 0.42              |
| 46:BY:15:PRO:HB2  | 46:BY:19:ARG:NH1  | 2.35                     | 0.42              |
| 46:BY:19:ARG:HH21 | 46:BY:84:GLU:CA   | 2.32                     | 0.42              |
| 46:BY:77:ASP:O    | 46:BY:78:LYS:O    | 2.37                     | 0.42              |
| 50:B3:58:ARG:HB3  | 50:B3:59:PHE:H    | 1.35                     | 0.42              |
| 50:B3:59:PHE:HA   | 50:B3:62:ARG:CZ   | 2.49                     | 0.42              |
| 51:B4:8:LYS:C     | 51:B4:9:LYS:CG    | 2.89                     | 0.42              |
| 51:B4:11:THR:HG23 | 51:B4:15:ARG:CG   | 2.49                     | 0.42              |
| 52:B5:16:CYS:O    | 52:B5:19:ARG:HD3  | 2.20                     | 0.42              |
| 53:B6:17:GLY:C    | 53:B6:21:ARG:HH22 | 2.27                     | 0.42              |
| 53:B6:25:PRO:HA   | 53:B6:28:ARG:CZ   | 2.50                     | 0.42              |
| 54:B7:12:LYS:O    | 54:B7:14:VAL:HG23 | 2.18                     | 0.42              |
| 1:AA:35:G:C5      | 1:AA:36:C:C5      | 3.08                     | 0.42              |
| 1:AA:42:G:C4      | 1:AA:43:C:C5      | 3.08                     | 0.42              |
| 1:AA:44:G:C2      | 1:AA:399:G:C2     | 3.08                     | 0.42              |
| 1:AA:78:G:C6      | 1:AA:79:G:N7      | 2.88                     | 0.42              |
| 1:AA:131:C:C5     | 1:AA:232:G:N2     | 2.88                     | 0.42              |
| 1:AA:236:G:C2'    | 1:AA:237:C:H6     | 2.33                     | 0.42              |
| 1:AA:278:G:N2     | 1:AA:279:A:N6     | 2.67                     | 0.42              |
| 1:AA:421:U:O2     | 5:AF:127:ARG:CZ   | 2.68                     | 0.42              |
| 1:AA:424:G:H8     | 1:AA:424:G:O5'    | 2.02                     | 0.42              |
| 1:AA:450:G:H3'    | 1:AA:481:G:H1     | 1.84                     | 0.42              |
| 1:AA:513:C:N4     | 1:AA:514:C:N4     | 2.68                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:AA:573:A:C2'   | 1:AA:574:A:C8     | 2.92                     | 0.42              |
| 1:AA:578:C:H3'   | 1:AA:578:C:C6     | 2.55                     | 0.42              |
| 1:AA:589:C:H1'   | 1:AA:653:A:N6     | 2.35                     | 0.42              |
| 1:AA:730:G:N7    | 1:AA:731:G:C1'    | 2.78                     | 0.42              |
| 1:AA:748:C:O2'   | 1:AA:749:C:O4'    | 2.38                     | 0.42              |
| 1:AA:821:G:C6    | 1:AA:880:C:N3     | 2.88                     | 0.42              |
| 1:AA:843:U:H3'   | 1:AA:848:C:O4'    | 2.19                     | 0.42              |
| 1:AA:879:C:N3    | 1:AA:880:C:C5     | 2.88                     | 0.42              |
| 1:AA:912:C:OP1   | 14:AO:94:PRO:HG3  | 2.19                     | 0.42              |
| 1:AA:953:G:N1    | 1:AA:1229:A:C6    | 2.88                     | 0.42              |
| 1:AA:1001:G:H3'  | 1:AA:1001:G:C8    | 2.55                     | 0.42              |
| 1:AA:1084:G:OP1  | 1:AA:1086:U:C1'   | 2.68                     | 0.42              |
| 1:AA:1127:G:N2   | 1:AA:1147:C:N4    | 2.67                     | 0.42              |
| 1:AA:1191:A:C5'  | 5:AF:4:LYS:HZ2    | 2.32                     | 0.42              |
| 1:AA:1262:C:O5'  | 1:AA:1262:C:H6    | 2.02                     | 0.42              |
| 1:AA:1298:C:O2   | 1:AA:1298:C:C2'   | 2.59                     | 0.42              |
| 1:AA:1324:A:C4'  | 1:AA:1362:C:H4'   | 2.48                     | 0.42              |
| 1:AA:1325:C:H2'  | 1:AA:1326:C:C6    | 2.54                     | 0.42              |
| 1:AA:1404:C:C2   | 1:AA:1405:G:C8    | 3.08                     | 0.42              |
| 1:AA:1433:A:C2'  | 1:AA:1434:A:H5'   | 2.50                     | 0.42              |
| 1:AA:1476:G:C2   | 1:AA:1477:C:C4    | 3.07                     | 0.42              |
| 1:AA:1508:G:HO2' | 1:AA:1509:C:H5'   | 1.85                     | 0.42              |
| 1:AA:1534:A:C2   | 1:AA:1535:C:C6    | 3.08                     | 0.42              |
| 3:AD:32:U:H1'    | 9:AJ:86:GLN:HE22  | 1.84                     | 0.42              |
| 3:AD:43:C:C2     | 3:AD:44:G:C8      | 3.07                     | 0.42              |
| 3:AD:74:C:OP2    | 50:B3:22:ILE:CG1  | 2.67                     | 0.42              |
| 4:AE:20:GLU:O    | 4:AE:39:ILE:CG1   | 2.64                     | 0.42              |
| 4:AE:43:ASP:O    | 4:AE:44:LEU:O     | 2.38                     | 0.42              |
| 4:AE:119:GLU:OE1 | 4:AE:142:LEU:HD21 | 2.18                     | 0.42              |
| 4:AE:171:ALA:O   | 4:AE:174:VAL:CB   | 2.63                     | 0.42              |
| 5:AF:12:LEU:O    | 5:AF:17:ASP:CG    | 2.62                     | 0.42              |
| 5:AF:12:LEU:HD11 | 5:AF:18:TRP:CZ2   | 2.55                     | 0.42              |
| 5:AF:12:LEU:HD22 | 16:AQ:58:LYS:HB2  | 2.01                     | 0.42              |
| 5:AF:16:ARG:O    | 5:AF:17:ASP:CG    | 2.63                     | 0.42              |
| 5:AF:36:ASP:O    | 5:AF:36:ASP:OD2   | 2.36                     | 0.42              |
| 5:AF:40:ARG:O    | 5:AF:44:GLU:HG3   | 2.19                     | 0.42              |
| 5:AF:129:ALA:CB  | 5:AF:132:ARG:HD2  | 2.49                     | 0.42              |
| 6:AG:31:CYS:O    | 6:AG:33:MET:SD    | 2.78                     | 0.42              |
| 7:AH:83:GLU:HG2  | 7:AH:88:LYS:HE2   | 2.02                     | 0.42              |
| 7:AH:109:ILE:CD1 | 7:AH:136:MET:SD   | 3.08                     | 0.42              |
| 8:AI:62:TRP:CD1  | 20:AU:35:ARG:NH2  | 2.88                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 8:AI:97:PHE:CD2    | 20:AU:31:LEU:HD22  | 2.54                     | 0.42              |
| 9:AJ:8:GLU:C       | 9:AJ:8:GLU:OE2     | 2.63                     | 0.42              |
| 9:AJ:49:ILE:HD12   | 9:AJ:49:ILE:N      | 2.34                     | 0.42              |
| 9:AJ:75:VAL:HG13   | 9:AJ:87:VAL:N      | 2.35                     | 0.42              |
| 9:AJ:77:SER:OG     | 9:AJ:86:GLN:OE1    | 2.37                     | 0.42              |
| 9:AJ:127:ALA:C     | 9:AJ:129:GLU:N     | 2.77                     | 0.42              |
| 10:AK:35:ILE:HD13  | 10:AK:35:ILE:N     | 2.35                     | 0.42              |
| 10:AK:45:ILE:HG13  | 10:AK:47:GLY:C     | 2.45                     | 0.42              |
| 11:AL:17:VAL:HG11  | 11:AL:81:ILE:CA    | 2.48                     | 0.42              |
| 11:AL:33:PHE:CZ    | 11:AL:46:ALA:HB3   | 2.54                     | 0.42              |
| 11:AL:98:PRO:O     | 11:AL:100:GLY:N    | 2.51                     | 0.42              |
| 11:AL:121:ARG:CG   | 11:AL:121:ARG:NH1  | 2.81                     | 0.42              |
| 12:AM:12:ASP:C     | 12:AM:15:THR:HG22  | 2.45                     | 0.42              |
| 12:AM:47:PHE:HZ    | 12:AM:65:LEU:CB    | 2.33                     | 0.42              |
| 13:AN:54:ARG:HH11  | 13:AN:54:ARG:CG    | 2.22                     | 0.42              |
| 13:AN:98:LEU:O     | 13:AN:99:GLN:C     | 2.60                     | 0.42              |
| 14:AO:61:THR:O     | 14:AO:62:SER:CB    | 2.68                     | 0.42              |
| 14:AO:82:VAL:HG12  | 14:AO:105:TYR:CD1  | 2.55                     | 0.42              |
| 15:AP:19:LEU:HB2   | 15:AP:25:ILE:HG21  | 2.00                     | 0.42              |
| 18:AS:9:PHE:CE2    | 18:AS:18:ARG:HG3   | 2.52                     | 0.42              |
| 19:AT:14:LYS:O     | 19:AT:15:MET:C     | 2.63                     | 0.42              |
| 19:AT:76:LEU:C     | 19:AT:76:LEU:CD2   | 2.89                     | 0.42              |
| 21:AV:33:THR:HG21  | 21:AV:49:ILE:CD1   | 2.43                     | 0.42              |
| 22:AW:72:LEU:HD13  | 22:AW:77:ALA:HA    | 2.02                     | 0.42              |
| 22:AW:74:LYS:N     | 22:AW:74:LYS:HD3   | 2.35                     | 0.42              |
| 22:AW:77:ALA:C     | 22:AW:80:ARG:HB2   | 2.43                     | 0.42              |
| 24:BA:28:A:C3'     | 24:BA:29:U:H5'     | 2.50                     | 0.42              |
| 24:BA:95:G:C6      | 24:BA:96:G:C8      | 3.07                     | 0.42              |
| 24:BA:283:A:H3'    | 24:BA:283:A:OP1    | 2.20                     | 0.42              |
| 24:BA:342:G:C2     | 24:BA:343:C:C2     | 3.08                     | 0.42              |
| 24:BA:363(C):G:C2' | 24:BA:363(D):G:H5' | 2.48                     | 0.42              |
| 24:BA:391:G:H5'    | 24:BA:412:A:H4'    | 2.01                     | 0.42              |
| 24:BA:434:U:H6     | 24:BA:434:U:P      | 2.43                     | 0.42              |
| 24:BA:464:U:C1'    | 53:B6:12:ARG:HH22  | 2.33                     | 0.42              |
| 24:BA:477:A:C4     | 24:BA:478:A:N7     | 2.88                     | 0.42              |
| 24:BA:491:G:C2     | 24:BA:492:A:N3     | 2.88                     | 0.42              |
| 24:BA:566:U:C3'    | 24:BA:567:A:H8     | 2.32                     | 0.42              |
| 24:BA:623:G:N7     | 24:BA:624:C:C4     | 2.88                     | 0.42              |
| 24:BA:771:G:N3     | 24:BA:772:C:C5     | 2.88                     | 0.42              |
| 24:BA:816:C:C4     | 24:BA:1192:G:N1    | 2.88                     | 0.42              |
| 24:BA:830:G:H1'    | 24:BA:2448:A:N1    | 2.35                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:832:G:P    | 36:BO:35:HIS:CB   | 3.04                     | 0.42              |
| 24:BA:860:U:C5   | 24:BA:2267:A:C4'  | 2.96                     | 0.42              |
| 24:BA:910:A:C6   | 24:BA:911:A:N6    | 2.88                     | 0.42              |
| 24:BA:922:U:N3   | 24:BA:923:C:N4    | 2.66                     | 0.42              |
| 24:BA:945:A:C2'  | 24:BA:946:G:C5'   | 2.98                     | 0.42              |
| 24:BA:969:U:OP1  | 49:B2:20:LYS:NZ   | 2.53                     | 0.42              |
| 24:BA:1131:G:N3  | 34:BM:74:ARG:HD2  | 2.35                     | 0.42              |
| 24:BA:1148:A:N1  | 24:BA:1149:G:C6   | 2.87                     | 0.42              |
| 24:BA:1152:C:H4' | 41:BT:80:ILE:CG2  | 2.49                     | 0.42              |
| 24:BA:1165:U:O2' | 24:BA:1166:C:C6   | 2.68                     | 0.42              |
| 24:BA:1224:G:C3' | 42:BU:87:HIS:CE1  | 3.03                     | 0.42              |
| 24:BA:1268:A:OP2 | 24:BA:2005:A:H5'' | 2.19                     | 0.42              |
| 24:BA:1284:A:C6  | 24:BA:1285:G:C2   | 3.08                     | 0.42              |
| 24:BA:1322:A:OP1 | 43:BV:11:ARG:NE   | 2.47                     | 0.42              |
| 24:BA:1363:C:C1' | 24:BA:1810:A:H1'  | 2.49                     | 0.42              |
| 24:BA:1366:A:OP1 | 50:B3:1:MET:HA    | 2.20                     | 0.42              |
| 24:BA:1391:U:C2  | 24:BA:1394:U:H5   | 2.37                     | 0.42              |
| 24:BA:1527:G:N7  | 24:BA:1541:U:O4   | 2.52                     | 0.42              |
| 24:BA:1561:G:H8  | 24:BA:1561:G:O5'  | 2.02                     | 0.42              |
| 24:BA:1569:A:O3' | 27:BD:39:LYS:CE   | 2.66                     | 0.42              |
| 24:BA:1615:C:N4  | 24:BA:1617:C:C2   | 2.87                     | 0.42              |
| 24:BA:1726:G:C5  | 24:BA:1727:U:C4   | 3.08                     | 0.42              |
| 24:BA:1731:G:N3  | 24:BA:1731:G:C3'  | 2.83                     | 0.42              |
| 24:BA:1777:U:C2' | 24:BA:1778:U:C5'  | 2.97                     | 0.42              |
| 24:BA:1843:C:O2  | 24:BA:1844:C:C6   | 2.73                     | 0.42              |
| 24:BA:1855:G:C5  | 24:BA:1856:G:N7   | 2.88                     | 0.42              |
| 24:BA:1884:A:P   | 24:BA:1884:A:O4'  | 2.78                     | 0.42              |
| 24:BA:1988:C:C2  | 24:BA:1989:G:C8   | 3.08                     | 0.42              |
| 24:BA:2026:C:H2' | 24:BA:2027:G:O4'  | 2.20                     | 0.42              |
| 24:BA:2129:C:P   | 26:BC:6:ARG:CG    | 3.07                     | 0.42              |
| 24:BA:2148:G:C4  | 24:BA:2149:G:C8   | 3.08                     | 0.42              |
| 24:BA:2209:C:O2' | 24:BA:2210:G:C3'  | 2.67                     | 0.42              |
| 24:BA:2302:G:C2  | 24:BA:2303:G:C8   | 3.08                     | 0.42              |
| 24:BA:2331:G:N2  | 24:BA:2385:C:C5   | 2.88                     | 0.42              |
| 24:BA:2466:C:OP1 | 55:B8:5:ALA:CB    | 2.65                     | 0.42              |
| 24:BA:2554:U:C5  | 24:BA:2556:C:N3   | 2.86                     | 0.42              |
| 24:BA:2567:G:H2' | 24:BA:2568:C:H6   | 1.82                     | 0.42              |
| 24:BA:2570:G:N2  | 24:BA:2571:C:C1'  | 2.83                     | 0.42              |
| 24:BA:2688:U:N3  | 24:BA:2719:G:N3   | 2.62                     | 0.42              |
| 24:BA:2722:G:C6  | 24:BA:2723:C:C4   | 3.07                     | 0.42              |
| 24:BA:2755:C:O2' | 24:BA:2756:U:C6   | 2.53                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2765:A:C2'   | 24:BA:2766:G:OP1   | 2.67                     | 0.42              |
| 24:BA:2776:A:C4    | 24:BA:2778:A:C8    | 3.08                     | 0.42              |
| 24:BA:2820:A:N6    | 28:BE:192:ASN:O    | 2.53                     | 0.42              |
| 24:BA:2876:G:H5'   | 40:BS:1:MET:H3     | 1.84                     | 0.42              |
| 25:BB:63:G:H2'     | 25:BB:64:C:C5      | 2.53                     | 0.42              |
| 25:BB:79:C:H2'     | 25:BB:80:U:H5'     | 2.01                     | 0.42              |
| 26:BC:78:ALA:HA    | 26:BC:119:VAL:CG1  | 2.49                     | 0.42              |
| 26:BC:97:GLU:CG    | 26:BC:122:ALA:CB   | 2.97                     | 0.42              |
| 26:BC:211:SER:CB   | 26:BC:213:TYR:CE1  | 3.03                     | 0.42              |
| 26:BC:213:TYR:HB3  | 26:BC:222:VAL:O    | 2.20                     | 0.42              |
| 27:BD:105:ILE:CG1  | 27:BD:106:ILE:N    | 2.82                     | 0.42              |
| 27:BD:163:ALA:HA   | 27:BD:175:LEU:HD21 | 2.01                     | 0.42              |
| 27:BD:174:ILE:CD1  | 27:BD:174:ILE:N    | 2.78                     | 0.42              |
| 27:BD:244:ARG:CA   | 27:BD:252:TRP:CD1  | 3.03                     | 0.42              |
| 27:BD:248:SER:O    | 27:BD:248:SER:OG   | 2.38                     | 0.42              |
| 27:BD:268:ARG:O    | 27:BD:269:PHE:CG   | 2.73                     | 0.42              |
| 28:BE:117:MET:HG2  | 28:BE:136:ARG:NE   | 2.10                     | 0.42              |
| 29:BF:37:VAL:O     | 29:BF:184:TYR:CE1  | 2.72                     | 0.42              |
| 29:BF:91:GLY:HA2   | 29:BF:92:PRO:HD2   | 1.91                     | 0.42              |
| 30:BG:35:GLU:OE2   | 30:BG:160:VAL:CG1  | 2.68                     | 0.42              |
| 30:BG:75:LYS:HG2   | 30:BG:85:GLY:H     | 1.85                     | 0.42              |
| 31:BH:6:ARG:H      | 31:BH:7:LEU:HD23   | 1.85                     | 0.42              |
| 32:BK:2:LYS:HZ2    | 32:BK:39:ALA:CB    | 2.29                     | 0.42              |
| 33:BL:79:ARG:O     | 33:BL:82:ALA:HB3   | 2.20                     | 0.42              |
| 34:BM:58:ASP:C     | 34:BM:60:ILE:N     | 2.76                     | 0.42              |
| 35:BN:23:ARG:H     | 35:BN:23:ARG:CD    | 2.29                     | 0.42              |
| 35:BN:86:ILE:CD1   | 35:BN:90:GLN:HG3   | 2.49                     | 0.42              |
| 36:BO:74:GLU:CD    | 36:BO:101:VAL:O    | 2.62                     | 0.42              |
| 36:BO:97:PRO:C     | 36:BO:99:LEU:N     | 2.74                     | 0.42              |
| 36:BO:126:VAL:HB   | 36:BO:146:VAL:CG2  | 2.48                     | 0.42              |
| 37:BP:82:ARG:HD2   | 47:BZ:5:LYS:HD3    | 2.01                     | 0.42              |
| 38:BQ:88:ARG:NH1   | 38:BQ:88:ARG:CB    | 2.63                     | 0.42              |
| 39:BR:29:PHE:C     | 39:BR:30:ARG:CG    | 2.93                     | 0.42              |
| 39:BR:49:VAL:HG22  | 39:BR:76:LYS:HZ2   | 1.84                     | 0.42              |
| 40:BS:24:PRO:C     | 40:BS:25:GLY:O     | 2.63                     | 0.42              |
| 40:BS:30:VAL:HG21  | 40:BS:90:GLN:CA    | 2.41                     | 0.42              |
| 40:BS:39:ARG:O     | 40:BS:40:THR:C     | 2.62                     | 0.42              |
| 40:BS:70:VAL:C     | 40:BS:74:ARG:NH1   | 2.77                     | 0.42              |
| 41:BT:105:VAL:HG12 | 41:BT:106:PHE:H    | 1.84                     | 0.42              |
| 42:BU:49:THR:HG22  | 42:BU:50:PRO:CD    | 2.37                     | 0.42              |
| 43:BV:72:LYS:HB3   | 43:BV:108:GLY:CA   | 2.46                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 44:BW:15:GLU:N     | 44:BW:16:LYS:HE2   | 2.34                     | 0.42              |
| 44:BW:17:ALA:CB    | 44:BW:27:THR:OG1   | 2.59                     | 0.42              |
| 45:BX:23:ARG:CG    | 45:BX:39:VAL:HG22  | 2.49                     | 0.42              |
| 45:BX:95:LYS:HE3   | 45:BX:103:GLY:CA   | 2.49                     | 0.42              |
| 46:BY:19:ARG:HE    | 46:BY:24:LEU:HD21  | 1.85                     | 0.42              |
| 46:BY:20:ARG:CG    | 46:BY:20:ARG:NH1   | 2.82                     | 0.42              |
| 46:BY:98:MET:HE2   | 46:BY:100:VAL:HG12 | 2.02                     | 0.42              |
| 46:BY:155:LEU:HD12 | 46:BY:155:LEU:HA   | 1.87                     | 0.42              |
| 46:BY:157:LEU:HD22 | 46:BY:161:VAL:HG13 | 2.01                     | 0.42              |
| 46:BY:162:GLU:HA   | 46:BY:162:GLU:OE1  | 2.19                     | 0.42              |
| 48:B1:3:LYS:HA     | 48:B1:3:LYS:HD3    | 1.82                     | 0.42              |
| 49:B2:43:ILE:O     | 49:B2:47:VAL:HG23  | 2.20                     | 0.42              |
| 49:B2:55:ARG:NH2   | 49:B2:55:ARG:HG3   | 2.33                     | 0.42              |
| 51:B4:34:PRO:HD3   | 51:B4:40:LYS:NZ    | 2.35                     | 0.42              |
| 53:B6:21:ARG:O     | 53:B6:28:ARG:N     | 2.52                     | 0.42              |
| 54:B7:5:LYS:HB2    | 54:B7:60:LEU:CA    | 2.37                     | 0.42              |
| 54:B7:6:THR:C      | 54:B7:8:LYS:N      | 2.74                     | 0.42              |
| 55:B8:19:ARG:O     | 55:B8:19:ARG:CG    | 2.68                     | 0.42              |
| 1:AA:24:U:O2'      | 1:AA:25:C:H5'      | 2.20                     | 0.42              |
| 1:AA:50:A:C2       | 1:AA:360:A:H2'     | 2.54                     | 0.42              |
| 1:AA:50:A:H2       | 1:AA:360:A:C2'     | 2.32                     | 0.42              |
| 1:AA:102:G:N3      | 1:AA:151:A:C2      | 2.88                     | 0.42              |
| 1:AA:130:A:C2      | 1:AA:264:U:H6      | 2.38                     | 0.42              |
| 1:AA:132:C:C2      | 1:AA:231:G:C2      | 3.04                     | 0.42              |
| 1:AA:188:U:C2'     | 1:AA:189:U:O5'     | 2.68                     | 0.42              |
| 1:AA:221:C:C2      | 1:AA:222:U:C5      | 3.08                     | 0.42              |
| 1:AA:343:U:O2'     | 1:AA:344:A:O5'     | 2.26                     | 0.42              |
| 1:AA:377:G:H2'     | 1:AA:378:G:H8      | 1.84                     | 0.42              |
| 1:AA:403:C:H2'     | 1:AA:404:U:C6      | 2.55                     | 0.42              |
| 1:AA:428:G:O2'     | 1:AA:429:U:O5'     | 2.36                     | 0.42              |
| 1:AA:483:C:C6      | 1:AA:483:C:H3'     | 2.54                     | 0.42              |
| 1:AA:562:C:O2'     | 14:AO:15:ARG:CG    | 2.68                     | 0.42              |
| 1:AA:632:A:O2'     | 1:AA:633:G:H5'     | 2.19                     | 0.42              |
| 1:AA:697:U:C3'     | 1:AA:698:G:H8      | 2.32                     | 0.42              |
| 1:AA:713:G:H22     | 1:AA:777:A:H1'     | 1.82                     | 0.42              |
| 1:AA:744:C:H4'     | 1:AA:852:G:O2'     | 2.20                     | 0.42              |
| 1:AA:812:C:O2      | 1:AA:813:U:C5      | 2.67                     | 0.42              |
| 1:AA:835:U:O2      | 1:AA:852:G:N2      | 2.53                     | 0.42              |
| 1:AA:895:G:C2      | 1:AA:896:C:C4      | 3.07                     | 0.42              |
| 1:AA:950:U:OP2     | 15:AP:102:ARG:NH2  | 2.53                     | 0.42              |
| 1:AA:958:A:N3      | 21:AV:55:LYS:HB2   | 2.34                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:972:C:O2     | 1:AA:972:C:C2'     | 2.68                     | 0.42              |
| 1:AA:993:G:N2     | 1:AA:1046:A:N3     | 2.68                     | 0.42              |
| 1:AA:1066:C:H5''  | 1:AA:1067:A:P      | 2.60                     | 0.42              |
| 1:AA:1084:G:H2'   | 1:AA:1085:U:H6     | 1.77                     | 0.42              |
| 1:AA:1228:C:O4'   | 15:AP:117:VAL:HG23 | 2.20                     | 0.42              |
| 1:AA:1268:A:O2'   | 1:AA:1269:A:O5'    | 2.38                     | 0.42              |
| 1:AA:1305:G:O4'   | 1:AA:1305:G:OP2    | 2.38                     | 0.42              |
| 1:AA:1410:G:N2    | 1:AA:1411:C:C2     | 2.88                     | 0.42              |
| 1:AA:1475:G:H2'   | 1:AA:1476:G:H8     | 1.85                     | 0.42              |
| 1:AA:1481:U:C2'   | 1:AA:1482:G:C8     | 2.96                     | 0.42              |
| 3:AC:15:G:N2      | 3:AC:60:U:O2       | 2.53                     | 0.42              |
| 3:AC:34:G:N3      | 3:AC:35:A:C8       | 2.88                     | 0.42              |
| 3:AC:75:C:O3'     | 3:AC:76:A:O3'      | 2.38                     | 0.42              |
| 3:AD:58:A:O2'     | 3:AD:60:U:O4       | 2.38                     | 0.42              |
| 4:AE:20:GLU:O     | 4:AE:40:HIS:HB2    | 2.20                     | 0.42              |
| 4:AE:55:PHE:HD2   | 4:AE:221:LEU:HB2   | 1.85                     | 0.42              |
| 4:AE:59:GLU:HA    | 4:AE:221:LEU:HD11  | 2.01                     | 0.42              |
| 4:AE:80:ILE:HD12  | 4:AE:208:ILE:CD1   | 2.50                     | 0.42              |
| 4:AE:169:LYS:NZ   | 4:AE:170:GLU:HB2   | 2.35                     | 0.42              |
| 5:AF:70:VAL:HG12  | 5:AF:71:ALA:N      | 2.31                     | 0.42              |
| 5:AF:138:VAL:HG12 | 5:AF:149:ALA:HB3   | 2.01                     | 0.42              |
| 5:AF:147:LYS:HE3  | 5:AF:147:LYS:HA    | 2.02                     | 0.42              |
| 6:AG:78:LEU:O     | 6:AG:81:GLU:HB3    | 2.19                     | 0.42              |
| 6:AG:105:VAL:HB   | 6:AG:117:ALA:HB1   | 2.01                     | 0.42              |
| 7:AH:39:GLY:C     | 7:AH:68:GLU:CD     | 2.87                     | 0.42              |
| 7:AH:106:PRO:C    | 7:AH:109:ILE:HG22  | 2.45                     | 0.42              |
| 7:AH:131:ILE:HG22 | 7:AH:132:ALA:N     | 2.33                     | 0.42              |
| 8:AI:50:TYR:N     | 8:AI:50:TYR:CD2    | 2.87                     | 0.42              |
| 9:AJ:71:PRO:CD    | 9:AJ:96:GLN:HG3    | 2.50                     | 0.42              |
| 10:AK:85:ARG:HD2  | 10:AK:86:ILE:H     | 1.85                     | 0.42              |
| 10:AK:92:ARG:NH1  | 10:AK:92:ARG:CG    | 2.78                     | 0.42              |
| 10:AK:102:ARG:CG  | 10:AK:102:ARG:HH11 | 2.32                     | 0.42              |
| 11:AL:7:THR:CG2   | 11:AL:9:ARG:NH1    | 2.82                     | 0.42              |
| 13:AN:80:VAL:N    | 13:AN:104:GLN:HE21 | 2.17                     | 0.42              |
| 14:AO:14:GLY:O    | 14:AO:15:ARG:HG3   | 2.19                     | 0.42              |
| 15:AP:69:GLU:O    | 15:AP:69:GLU:OE1   | 2.37                     | 0.42              |
| 15:AP:91:ARG:O    | 15:AP:96:LEU:CD2   | 2.68                     | 0.42              |
| 16:AQ:24:CYS:HA   | 16:AQ:38:GLY:O     | 2.19                     | 0.42              |
| 18:AS:27:LYS:N    | 18:AS:27:LYS:NZ    | 2.55                     | 0.42              |
| 19:AT:13:ASP:O    | 19:AT:14:LYS:C     | 2.63                     | 0.42              |
| 19:AT:76:LEU:HD23 | 19:AT:76:LEU:O     | 2.20                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 22:AW:12:ALA:O    | 22:AW:13:LEU:C    | 2.62                     | 0.42              |
| 22:AW:61:SER:HG   | 22:AW:62:LEU:H    | 1.68                     | 0.42              |
| 24:BA:245:G:C2    | 24:BA:246:C:C5    | 3.08                     | 0.42              |
| 24:BA:270(T):G:N1 | 24:BA:270(U):C:C4 | 2.88                     | 0.42              |
| 24:BA:276:A:N3    | 24:BA:276:A:C2'   | 2.82                     | 0.42              |
| 24:BA:317:G:N2    | 24:BA:334:C:O2    | 2.53                     | 0.42              |
| 24:BA:414:C:C1'   | 24:BA:1864:U:O2'  | 2.67                     | 0.42              |
| 24:BA:438:G:H2'   | 24:BA:439:G:O5'   | 2.19                     | 0.42              |
| 24:BA:443:A:C1'   | 24:BA:1201:C:O4'  | 2.68                     | 0.42              |
| 24:BA:450:G:C5'   | 29:BF:52:LYS:CD   | 2.90                     | 0.42              |
| 24:BA:457:A:C1'   | 24:BA:459:U:N3    | 2.74                     | 0.42              |
| 24:BA:507:A:H5'   | 24:BA:509:C:H1'   | 2.00                     | 0.42              |
| 24:BA:563:G:C4    | 24:BA:2018:G:C2   | 3.08                     | 0.42              |
| 24:BA:651:G:C8    | 24:BA:652:C:C1'   | 3.03                     | 0.42              |
| 24:BA:677:A:C4    | 24:BA:678:C:C5    | 3.08                     | 0.42              |
| 24:BA:677:A:O2'   | 24:BA:2071:A:H5'  | 2.20                     | 0.42              |
| 24:BA:702:G:H2'   | 24:BA:703:U:O5'   | 2.20                     | 0.42              |
| 24:BA:738:G:N7    | 24:BA:739:G:C2    | 2.87                     | 0.42              |
| 24:BA:763:G:N1    | 24:BA:765:G:C4    | 2.88                     | 0.42              |
| 24:BA:813:U:C5    | 36:BO:25:SER:CB   | 3.03                     | 0.42              |
| 24:BA:832:G:C5    | 24:BA:833:U:O4    | 2.73                     | 0.42              |
| 24:BA:833:U:C2'   | 24:BA:834:C:O5'   | 2.68                     | 0.42              |
| 24:BA:849:A:C6    | 24:BA:931:G:N1    | 2.86                     | 0.42              |
| 24:BA:854:G:N2    | 24:BA:855:G:C4    | 2.87                     | 0.42              |
| 24:BA:910:A:H1'   | 24:BA:2264:C:O2'  | 2.20                     | 0.42              |
| 24:BA:947:G:N2    | 24:BA:971:C:C2    | 2.88                     | 0.42              |
| 24:BA:1122:G:N2   | 24:BA:1123:C:C2   | 2.88                     | 0.42              |
| 24:BA:1150:C:C2   | 24:BA:1151:G:C8   | 3.08                     | 0.42              |
| 24:BA:1225:C:N3   | 24:BA:1226:G:C2   | 2.88                     | 0.42              |
| 24:BA:1292:U:N3   | 24:BA:1293:C:C5   | 2.88                     | 0.42              |
| 24:BA:1491:G:H2'  | 24:BA:1492:G:C3'  | 2.50                     | 0.42              |
| 24:BA:1585:C:C5'  | 24:BA:1586:A:OP1  | 2.57                     | 0.42              |
| 24:BA:1657:C:C2   | 24:BA:1658:C:C5   | 3.08                     | 0.42              |
| 24:BA:1769:G:C5   | 24:BA:1984:G:C6   | 3.08                     | 0.42              |
| 24:BA:1914:C:P    | 24:BA:1916:A:N6   | 2.93                     | 0.42              |
| 24:BA:1936:A:C2   | 24:BA:1940:U:O2   | 2.72                     | 0.42              |
| 24:BA:1941:C:C6   | 24:BA:1965:C:C2   | 3.07                     | 0.42              |
| 24:BA:2027:G:C1'  | 24:BA:2037:G:N2   | 2.71                     | 0.42              |
| 24:BA:2083:G:C2   | 24:BA:2084:C:N3   | 2.88                     | 0.42              |
| 24:BA:2110:G:H2'  | 24:BA:2120:G:H5'  | 1.96                     | 0.42              |
| 24:BA:2115:G:C4   | 24:BA:2117:A:N7   | 2.87                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2175:C:OP1   | 26:BC:5:LYS:HG2    | 2.20                     | 0.42              |
| 24:BA:2178:C:H1'   | 26:BC:168:THR:OG1  | 2.19                     | 0.42              |
| 24:BA:2210:G:C6    | 27:BD:70:TRP:CD2   | 3.08                     | 0.42              |
| 24:BA:2236:C:C5    | 24:BA:2237:G:C5    | 3.08                     | 0.42              |
| 24:BA:2239:G:N3    | 24:BA:2240:C:C6    | 2.87                     | 0.42              |
| 24:BA:2331:G:C4    | 24:BA:2332:U:C2    | 3.08                     | 0.42              |
| 24:BA:2341:G:H22   | 24:BA:2374:C:H4'   | 1.84                     | 0.42              |
| 24:BA:2373:G:N3    | 24:BA:2374:C:C5    | 2.88                     | 0.42              |
| 24:BA:2389:G:H5''  | 24:BA:2390:U:H6    | 1.84                     | 0.42              |
| 24:BA:2414:G:O6    | 24:BA:2415:G:O6    | 2.38                     | 0.42              |
| 24:BA:2515:C:C2'   | 24:BA:2516:G:O5'   | 2.67                     | 0.42              |
| 24:BA:2518:A:H3'   | 24:BA:2518:A:H8    | 1.84                     | 0.42              |
| 24:BA:2564:A:C5    | 24:BA:2565:A:N7    | 2.88                     | 0.42              |
| 24:BA:2653:U:C4    | 24:BA:2654:A:C5    | 3.07                     | 0.42              |
| 24:BA:2659:G:N3    | 24:BA:2663:G:O6    | 2.53                     | 0.42              |
| 24:BA:2756:U:O2'   | 24:BA:2757:A:P     | 2.78                     | 0.42              |
| 24:BA:2760:C:O2'   | 24:BA:2761:G:H5'   | 2.19                     | 0.42              |
| 24:BA:2801:A:OP1   | 24:BA:2802:G:OP1   | 2.37                     | 0.42              |
| 24:BA:2821:A:OP2   | 24:BA:2821:A:C3'   | 2.59                     | 0.42              |
| 24:BA:2869:G:C2    | 24:BA:2870:C:C2    | 3.07                     | 0.42              |
| 25:BB:28:C:H2'     | 25:BB:29:A:C8      | 2.55                     | 0.42              |
| 25:BB:30:C:C2      | 25:BB:31:C:O4'     | 2.72                     | 0.42              |
| 25:BB:48:A:O3'     | 39:BR:95:HIS:NE2   | 2.52                     | 0.42              |
| 25:BB:62:C:N3      | 25:BB:63:G:N7      | 2.68                     | 0.42              |
| 26:BC:90:GLY:C     | 26:BC:153:ILE:CG2  | 2.93                     | 0.42              |
| 26:BC:93:TYR:CE1   | 26:BC:109:ASP:HB3  | 2.54                     | 0.42              |
| 26:BC:148:ASN:HD22 | 26:BC:151:GLU:HB2  | 1.84                     | 0.42              |
| 26:BC:211:SER:HB2  | 26:BC:213:TYR:OH   | 2.18                     | 0.42              |
| 27:BD:5:LYS:C      | 27:BD:29:PRO:HD3   | 2.44                     | 0.42              |
| 27:BD:28:GLU:N     | 27:BD:28:GLU:CD    | 2.77                     | 0.42              |
| 27:BD:63:ARG:CA    | 27:BD:63:ARG:CZ    | 2.98                     | 0.42              |
| 27:BD:73:VAL:HG12  | 27:BD:120:GLY:HA2  | 2.00                     | 0.42              |
| 27:BD:182:LEU:HG   | 27:BD:270:ILE:HD11 | 2.02                     | 0.42              |
| 27:BD:182:LEU:CG   | 27:BD:270:ILE:HD11 | 2.49                     | 0.42              |
| 27:BD:246:PRO:C    | 27:BD:250:TRP:HB2  | 2.43                     | 0.42              |
| 27:BD:269:PHE:O    | 27:BD:270:ILE:CG1  | 2.67                     | 0.42              |
| 28:BE:11:MET:CG    | 28:BE:12:THR:N     | 2.83                     | 0.42              |
| 28:BE:179:GLU:CD   | 28:BE:179:GLU:H    | 2.28                     | 0.42              |
| 28:BE:187:ALA:C    | 28:BE:189:PRO:N    | 2.78                     | 0.42              |
| 30:BG:53:LEU:HA    | 30:BG:72:ARG:HH21  | 1.84                     | 0.42              |
| 30:BG:119:GLY:CA   | 30:BG:180:PHE:CD2  | 3.03                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 30:BG:175:LEU:HD23 | 30:BG:175:LEU:HA   | 1.69                     | 0.42              |
| 34:BM:34:LEU:HD21  | 34:BM:52:VAL:CG1   | 2.44                     | 0.42              |
| 34:BM:39:ARG:O     | 34:BM:42:TRP:HB3   | 2.19                     | 0.42              |
| 34:BM:85:ILE:HA    | 34:BM:86:PRO:HD3   | 1.75                     | 0.42              |
| 36:BO:33:ARG:O     | 36:BO:34:GLY:C     | 2.63                     | 0.42              |
| 37:BP:11:LYS:HD2   | 37:BP:13:GLN:O     | 2.20                     | 0.42              |
| 37:BP:16:ARG:HH21  | 37:BP:73:PRO:HG3   | 1.84                     | 0.42              |
| 37:BP:34:LEU:O     | 37:BP:103:MET:O    | 2.37                     | 0.42              |
| 37:BP:44:ALA:HA    | 37:BP:47:ILE:CD1   | 2.26                     | 0.42              |
| 37:BP:68:ILE:HG12  | 37:BP:97:VAL:HG13  | 2.00                     | 0.42              |
| 37:BP:89:ASN:N     | 37:BP:89:ASN:ND2   | 2.56                     | 0.42              |
| 38:BQ:102:GLU:OE2  | 38:BQ:102:GLU:CA   | 2.68                     | 0.42              |
| 38:BQ:108:GLY:O    | 38:BQ:110:PRO:CD   | 2.65                     | 0.42              |
| 39:BR:23:ARG:HD2   | 39:BR:23:ARG:HA    | 1.25                     | 0.42              |
| 40:BS:30:VAL:CG2   | 40:BS:31:SER:H     | 2.33                     | 0.42              |
| 40:BS:81:PRO:O     | 40:BS:85:LYS:NZ    | 2.50                     | 0.42              |
| 41:BT:65:ILE:HG23  | 41:BT:96:ALA:CA    | 2.49                     | 0.42              |
| 41:BT:82:GLY:HA2   | 41:BT:117:GLN:CG   | 2.28                     | 0.42              |
| 41:BT:94:ASN:ND2   | 42:BU:6:LYS:HZ1    | 2.13                     | 0.42              |
| 42:BU:72:VAL:CG1   | 42:BU:73:SER:H     | 2.24                     | 0.42              |
| 43:BV:3:ALA:HB2    | 43:BV:58:ALA:HB2   | 2.01                     | 0.42              |
| 43:BV:8:ARG:HB3    | 43:BV:9:TYR:H      | 1.38                     | 0.42              |
| 43:BV:19:LEU:HD23  | 51:B4:25:LEU:HD22  | 2.02                     | 0.42              |
| 43:BV:21:VAL:CG2   | 43:BV:75:TYR:CD2   | 3.03                     | 0.42              |
| 43:BV:24:ILE:HD11  | 43:BV:47:VAL:HG11  | 2.00                     | 0.42              |
| 43:BV:98:LYS:NZ    | 43:BV:98:LYS:CB    | 2.82                     | 0.42              |
| 45:BX:12:THR:HG21  | 45:BX:70:SER:C     | 2.45                     | 0.42              |
| 45:BX:45:VAL:HG12  | 45:BX:57:GLN:CD    | 2.44                     | 0.42              |
| 46:BY:50:GLN:C     | 46:BY:52:SER:N     | 2.73                     | 0.42              |
| 46:BY:55:HIS:CD2   | 46:BY:124:ILE:HD13 | 2.54                     | 0.42              |
| 46:BY:175:VAL:HG22 | 46:BY:176:PRO:CD   | 2.37                     | 0.42              |
| 47:BZ:33:ALA:C     | 47:BZ:35:ASN:H     | 2.26                     | 0.42              |
| 47:BZ:53:MET:HE3   | 47:BZ:57:PHE:C     | 2.44                     | 0.42              |
| 48:B1:16:LEU:HD21  | 48:B1:59:LEU:HB2   | 2.01                     | 0.42              |
| 49:B2:16:PRO:O     | 49:B2:19:GLN:HB3   | 2.20                     | 0.42              |
| 51:B4:4:HIS:ND1    | 51:B4:5:PRO:HD3    | 2.35                     | 0.42              |
| 52:B5:27:LYS:CD    | 52:B5:29:ASN:HD21  | 2.33                     | 0.42              |
| 52:B5:33:LYS:CE    | 52:B5:34:LEU:HD23  | 2.50                     | 0.42              |
| 53:B6:31:LEU:HA    | 53:B6:31:LEU:HD23  | 1.80                     | 0.42              |
| 54:B7:10:ALA:HA    | 54:B7:14:VAL:CG1   | 2.49                     | 0.42              |
| 54:B7:20:GLY:O     | 54:B7:21:LYS:CG    | 2.60                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:AA:51:A:H4'    | 1:AA:52:G:H5''   | 2.01                     | 0.42              |
| 1:AA:62:U:H2'    | 1:AA:63:C:C6     | 2.55                     | 0.42              |
| 1:AA:112:G:H5'   | 1:AA:389:A:C4'   | 2.30                     | 0.42              |
| 1:AA:136:C:C1'   | 18:AS:1:MET:HE1  | 2.50                     | 0.42              |
| 1:AA:147:G:C6    | 1:AA:148:G:C5    | 3.08                     | 0.42              |
| 1:AA:148:G:H1    | 1:AA:174:C:N4    | 2.09                     | 0.42              |
| 1:AA:222:U:C2'   | 1:AA:223:U:O5'   | 2.68                     | 0.42              |
| 1:AA:255:G:C6    | 1:AA:256:U:C4    | 3.08                     | 0.42              |
| 1:AA:319:G:H2'   | 1:AA:320:C:H5'   | 2.01                     | 0.42              |
| 1:AA:324:G:OP1   | 22:AW:22:ARG:HB3 | 2.20                     | 0.42              |
| 1:AA:409:G:OP2   | 6:AG:22:LYS:HE2  | 2.20                     | 0.42              |
| 1:AA:416:G:C2'   | 1:AA:417:C:C6    | 2.89                     | 0.42              |
| 1:AA:451:A:HO2'  | 1:AA:452:A:C1'   | 2.32                     | 0.42              |
| 1:AA:570:G:N2    | 1:AA:873:A:H61   | 2.18                     | 0.42              |
| 1:AA:587:G:N3    | 1:AA:755:G:C6    | 2.88                     | 0.42              |
| 1:AA:610:G:C2'   | 1:AA:611:A:C5'   | 2.96                     | 0.42              |
| 1:AA:675:A:C2'   | 1:AA:676:A:C8    | 2.99                     | 0.42              |
| 1:AA:776:G:N2    | 1:AA:802:A:OP2   | 2.53                     | 0.42              |
| 1:AA:880:C:C2'   | 1:AA:881:G:O5'   | 2.68                     | 0.42              |
| 1:AA:942:G:N2    | 1:AA:943:U:C2    | 2.88                     | 0.42              |
| 1:AA:947:G:O2'   | 1:AA:948:C:C5'   | 2.61                     | 0.42              |
| 1:AA:980:C:C5    | 1:AA:981:U:N3    | 2.87                     | 0.42              |
| 1:AA:1003:G:OP2  | 1:AA:1004:A:C2   | 2.73                     | 0.42              |
| 1:AA:1076:C:O2'  | 1:AA:1077:G:H5'  | 2.19                     | 0.42              |
| 1:AA:1170:A:H8   | 1:AA:1170:A:H3'  | 1.84                     | 0.42              |
| 1:AA:1175:G:N1   | 1:AA:1176:A:C6   | 2.88                     | 0.42              |
| 1:AA:1250:A:N7   | 1:AA:1251:A:C5   | 2.88                     | 0.42              |
| 1:AA:1320:C:H1'  | 21:AV:73:GLU:HB3 | 2.02                     | 0.42              |
| 1:AA:1394:A:C8   | 1:AA:1501:C:H1'  | 2.50                     | 0.42              |
| 1:AA:1511:G:C5   | 1:AA:1512:U:C5   | 3.08                     | 0.42              |
| 1:AA:1537:U:C4   | 1:AA:1538:C:C5   | 3.07                     | 0.42              |
| 2:A1:41:U:H2'    | 2:A1:42:U:C6     | 2.55                     | 0.42              |
| 3:AC:18:G:N2     | 3:AC:58:A:C8     | 2.88                     | 0.42              |
| 3:AD:18:G:C6     | 3:AD:57:G:C2     | 3.07                     | 0.42              |
| 3:AD:21:A:N6     | 3:AD:48:C:H6     | 2.16                     | 0.42              |
| 3:AB:12:U:H5'    | 24:BA:1915:U:C5' | 2.47                     | 0.42              |
| 4:AE:71:VAL:O    | 4:AE:164:VAL:CG2 | 2.62                     | 0.42              |
| 4:AE:114:ARG:O   | 4:AE:118:LEU:CB  | 2.68                     | 0.42              |
| 4:AE:114:ARG:HG3 | 4:AE:115:LEU:N   | 2.35                     | 0.42              |
| 4:AE:118:LEU:O   | 4:AE:121:LEU:N   | 2.53                     | 0.42              |
| 4:AE:126:GLU:O   | 4:AE:127:ILE:O   | 2.37                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:AE:131:PRO:C    | 4:AE:134:GLU:H    | 2.27                     | 0.42              |
| 4:AE:185:ILE:HG22 | 4:AE:199:TYR:CB   | 2.47                     | 0.42              |
| 5:AF:33:LEU:O     | 5:AF:36:ASP:CB    | 2.59                     | 0.42              |
| 5:AF:59:ARG:HH11  | 5:AF:59:ARG:HG2   | 1.85                     | 0.42              |
| 5:AF:181:ASN:ND2  | 5:AF:206:GLU:HA   | 2.34                     | 0.42              |
| 6:AG:13:ARG:HE    | 6:AG:40:PRO:CB    | 2.24                     | 0.42              |
| 6:AG:166:LYS:CA   | 6:AG:178:VAL:HG11 | 2.50                     | 0.42              |
| 6:AG:194:LEU:N    | 6:AG:194:LEU:CD2  | 2.67                     | 0.42              |
| 7:AH:19:MET:CE    | 7:AH:20:GLN:N     | 2.83                     | 0.42              |
| 7:AH:37:ARG:C     | 7:AH:38:GLN:HG3   | 2.45                     | 0.42              |
| 7:AH:73:ASN:C     | 7:AH:73:ASN:HD22  | 2.16                     | 0.42              |
| 8:AI:8:ILE:HG22   | 8:AI:87:ARG:O     | 2.19                     | 0.42              |
| 8:AI:80:ARG:O     | 8:AI:81:ILE:O     | 2.37                     | 0.42              |
| 8:AI:82:ARG:C     | 8:AI:83:ASP:CG    | 2.87                     | 0.42              |
| 8:AI:94:GLN:CB    | 20:AU:32:ARG:NH2  | 2.81                     | 0.42              |
| 9:AJ:6:ARG:N      | 9:AJ:6:ARG:NH1    | 2.67                     | 0.42              |
| 11:AL:6:GLY:HA3   | 11:AL:84:ALA:H    | 1.84                     | 0.42              |
| 11:AL:9:ARG:HA    | 11:AL:76:ALA:HB1  | 2.01                     | 0.42              |
| 11:AL:47:LEU:O    | 11:AL:47:LEU:CD1  | 2.62                     | 0.42              |
| 11:AL:125:TYR:HB3 | 11:AL:126:SER:H   | 1.58                     | 0.42              |
| 12:AM:30:SER:OG   | 12:AM:81:THR:HA   | 2.19                     | 0.42              |
| 12:AM:37:PRO:HA   | 12:AM:72:VAL:HA   | 2.02                     | 0.42              |
| 12:AM:81:THR:O    | 12:AM:83:GLU:N    | 2.52                     | 0.42              |
| 13:AN:44:SER:HB2  | 13:AN:47:VAL:HG23 | 2.02                     | 0.42              |
| 13:AN:122:LYS:O   | 13:AN:124:LYS:N   | 2.53                     | 0.42              |
| 14:AO:123:LYS:HB3 | 14:AO:123:LYS:HE3 | 1.85                     | 0.42              |
| 15:AP:22:ILE:CG1  | 15:AP:25:ILE:HD12 | 2.50                     | 0.42              |
| 15:AP:45:VAL:C    | 15:AP:47:ASP:N    | 2.78                     | 0.42              |
| 18:AS:46:PRO:CD   | 18:AS:47:ASP:H    | 2.32                     | 0.42              |
| 18:AS:80:PHE:O    | 18:AS:80:PHE:CD2  | 2.72                     | 0.42              |
| 19:AT:31:LEU:O    | 19:AT:31:LEU:CG   | 2.59                     | 0.42              |
| 19:AT:58:GLU:OE1  | 19:AT:75:ARG:N    | 2.52                     | 0.42              |
| 21:AV:48:THR:HG23 | 21:AV:60:VAL:O    | 2.20                     | 0.42              |
| 22:AW:40:ALA:O    | 22:AW:42:GLN:N    | 2.53                     | 0.42              |
| 23:AX:18:TYR:HA   | 23:AX:22:ARG:HB3  | 2.02                     | 0.42              |
| 23:AX:25:LYS:CD   | 23:AX:25:LYS:O    | 2.68                     | 0.42              |
| 24:BA:28:A:C8     | 24:BA:513:A:N6    | 2.88                     | 0.42              |
| 24:BA:76:C:H5'    | 48:B1:54:ARG:HH22 | 1.84                     | 0.42              |
| 24:BA:108:U:H2'   | 24:BA:109:G:O4'   | 2.20                     | 0.42              |
| 24:BA:126:A:C2'   | 24:BA:127:A:C5'   | 2.96                     | 0.42              |
| 24:BA:189:G:N2    | 24:BA:206:U:C5    | 2.88                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1              | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|-------------------|--------------------------|-------------------|
| 24:BA:203:C:C5      | 24:BA:204:A:N7    | 2.88                     | 0.42              |
| 24:BA:213:A:N1      | 24:BA:214:G:N3    | 2.68                     | 0.42              |
| 24:BA:219:G:O5'     | 24:BA:219:G:C8    | 2.59                     | 0.42              |
| 24:BA:270(Z):U:HO2' | 24:BA:271(A):C:P  | 2.40                     | 0.42              |
| 24:BA:364:C:O5'     | 24:BA:364:C:H6    | 2.03                     | 0.42              |
| 24:BA:365:C:H2'     | 24:BA:366:C:C5    | 2.54                     | 0.42              |
| 24:BA:365:C:C4      | 24:BA:366:C:N4    | 2.88                     | 0.42              |
| 24:BA:480:A:H2'     | 24:BA:481:G:OP1   | 2.20                     | 0.42              |
| 24:BA:507:A:C4'     | 24:BA:509:C:C6    | 3.03                     | 0.42              |
| 24:BA:696:G:C2      | 24:BA:697:C:C5    | 3.08                     | 0.42              |
| 24:BA:723:G:C2      | 24:BA:724:U:C1'   | 3.02                     | 0.42              |
| 24:BA:814:C:O2'     | 24:BA:1224:G:N2   | 2.47                     | 0.42              |
| 24:BA:824:A:H2'     | 24:BA:825:C:C6    | 2.54                     | 0.42              |
| 24:BA:878:A:C2'     | 24:BA:879:G:C8    | 3.03                     | 0.42              |
| 24:BA:879:G:O2'     | 24:BA:880:G:H5'   | 2.20                     | 0.42              |
| 24:BA:906:G:C6      | 24:BA:907:U:O4    | 2.73                     | 0.42              |
| 24:BA:1241:A:O2'    | 24:BA:1242:A:OP1  | 2.38                     | 0.42              |
| 24:BA:1257:C:C1'    | 29:BF:83:PHE:HB2  | 2.50                     | 0.42              |
| 24:BA:1278:A:O3'    | 38:BQ:34:ILE:HG23 | 2.20                     | 0.42              |
| 24:BA:1305:C:O2'    | 24:BA:1306:C:H5'  | 2.19                     | 0.42              |
| 24:BA:1310:G:H1     | 24:BA:1604:C:N4   | 2.18                     | 0.42              |
| 24:BA:1324:G:C2'    | 24:BA:1325:G:OP1  | 2.68                     | 0.42              |
| 24:BA:1344:G:C6     | 24:BA:1404:C:C4   | 3.08                     | 0.42              |
| 24:BA:1449(A):G:C4  | 24:BA:1450:C:C5   | 3.07                     | 0.42              |
| 24:BA:1549:C:H2'    | 24:BA:1550:C:C6   | 2.49                     | 0.42              |
| 24:BA:1593:G:H2'    | 24:BA:1594:G:H8   | 1.85                     | 0.42              |
| 24:BA:1635:G:O2'    | 24:BA:1636:C:H5'  | 2.20                     | 0.42              |
| 24:BA:1651:G:C2'    | 24:BA:1652:A:C8   | 2.94                     | 0.42              |
| 24:BA:1672:C:O2     | 24:BA:2582:G:H1'  | 2.20                     | 0.42              |
| 24:BA:1698:A:C2'    | 24:BA:1699:G:OP2  | 2.68                     | 0.42              |
| 24:BA:1761:C:H3'    | 24:BA:1761:C:C6   | 2.55                     | 0.42              |
| 24:BA:1796:U:H2'    | 24:BA:1797:C:C6   | 2.55                     | 0.42              |
| 24:BA:1799:G:H8     | 27:BD:268:ARG:NH1 | 2.04                     | 0.42              |
| 24:BA:1811:G:C2'    | 24:BA:1812:A:O4'  | 2.68                     | 0.42              |
| 24:BA:1887:C:H2'    | 24:BA:1888:G:O4'  | 2.20                     | 0.42              |
| 24:BA:1906:G:C2     | 24:BA:1929:G:O6   | 2.73                     | 0.42              |
| 24:BA:1908:C:O2'    | 24:BA:1909:C:O5'  | 2.37                     | 0.42              |
| 24:BA:1913:A:C2'    | 24:BA:1916:A:C2   | 3.03                     | 0.42              |
| 24:BA:1935:G:C2'    | 24:BA:1936:A:OP2  | 2.68                     | 0.42              |
| 24:BA:1935:G:C5     | 24:BA:1962:C:C5   | 3.08                     | 0.42              |
| 24:BA:1952:A:H2'    | 24:BA:1953:A:O4'  | 2.20                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1992:G:C6    | 24:BA:1997:G:N3    | 2.88                     | 0.42              |
| 24:BA:2052:G:H1'   | 28:BE:150:VAL:CA   | 2.48                     | 0.42              |
| 24:BA:2075:U:H1'   | 24:BA:2597:G:N2    | 2.33                     | 0.42              |
| 24:BA:2106:G:H2'   | 24:BA:2107:C:C6    | 2.55                     | 0.42              |
| 24:BA:2147:G:C2    | 24:BA:2148:G:H4'   | 2.55                     | 0.42              |
| 24:BA:2186:G:C2    | 24:BA:2187:G:C6    | 3.08                     | 0.42              |
| 24:BA:2199:A:H1'   | 32:BK:29:TYR:OH    | 2.19                     | 0.42              |
| 24:BA:2213:U:C4'   | 24:BA:2215:G:N7    | 2.83                     | 0.42              |
| 24:BA:2216:G:N2    | 27:BD:150:LYS:HZ3  | 2.17                     | 0.42              |
| 24:BA:2285:C:C6    | 52:B5:27:LYS:HE2   | 2.55                     | 0.42              |
| 24:BA:2340:G:C2    | 24:BA:2341:G:C8    | 3.08                     | 0.42              |
| 24:BA:2367:G:C2    | 24:BA:2368:C:C5    | 3.08                     | 0.42              |
| 24:BA:2378:A:C4    | 39:BR:20:ARG:NH1   | 2.88                     | 0.42              |
| 24:BA:2423:U:O2'   | 24:BA:2425:A:H5'   | 2.20                     | 0.42              |
| 24:BA:2444:G:N3    | 24:BA:2444:G:H2'   | 2.34                     | 0.42              |
| 24:BA:2500:U:HO2'  | 24:BA:2501:C:P     | 2.42                     | 0.42              |
| 24:BA:2507:C:N1    | 24:BA:2583:G:N2    | 2.68                     | 0.42              |
| 24:BA:2554:U:C4    | 24:BA:2555:U:O4    | 2.73                     | 0.42              |
| 24:BA:2581:G:O6    | 24:BA:2610:C:H2'   | 2.17                     | 0.42              |
| 24:BA:2690:C:H41   | 38:BQ:14:SER:CB    | 2.32                     | 0.42              |
| 24:BA:2691:C:N3    | 24:BA:2719:G:C2    | 2.88                     | 0.42              |
| 24:BA:2744:G:C2    | 24:BA:2761:G:C4    | 3.08                     | 0.42              |
| 24:BA:2805:G:H2'   | 24:BA:2807:G:H4'   | 2.01                     | 0.42              |
| 24:BA:2817:G:C6    | 24:BA:2818:G:C5    | 3.08                     | 0.42              |
| 24:BA:2826:A:O2'   | 24:BA:2827:C:H5'   | 2.19                     | 0.42              |
| 25:BB:66:A:H2      | 25:BB:108:C:C1'    | 2.33                     | 0.42              |
| 26:BC:22:ILE:CD1   | 26:BC:190:ARG:CZ   | 2.97                     | 0.42              |
| 26:BC:77:ILE:HG23  | 26:BC:96:GLY:O     | 2.19                     | 0.42              |
| 26:BC:77:ILE:C     | 26:BC:119:VAL:HG21 | 2.45                     | 0.42              |
| 26:BC:89:ALA:HB1   | 26:BC:150:GLY:O    | 2.19                     | 0.42              |
| 26:BC:137:LEU:HD23 | 26:BC:138:PRO:CD   | 2.49                     | 0.42              |
| 27:BD:9:TYR:HH     | 27:BD:91:ARG:CZ    | 2.26                     | 0.42              |
| 27:BD:12:SER:HB2   | 27:BD:14:ARG:NH2   | 2.34                     | 0.42              |
| 27:BD:22:SER:HA    | 27:BD:205:VAL:O    | 2.20                     | 0.42              |
| 27:BD:108:PRO:C    | 27:BD:196:VAL:O    | 2.63                     | 0.42              |
| 27:BD:133:LEU:HD12 | 27:BD:186:HIS:C    | 2.45                     | 0.42              |
| 27:BD:146:GLU:HA   | 27:BD:154:LYS:O    | 2.20                     | 0.42              |
| 27:BD:181:GLU:OE1  | 27:BD:270:ILE:HG22 | 2.20                     | 0.42              |
| 27:BD:238:GLY:C    | 27:BD:239:ARG:HD2  | 2.44                     | 0.42              |
| 28:BE:8:LYS:CB     | 28:BE:24:THR:CG2   | 2.98                     | 0.42              |
| 28:BE:38:THR:CB    | 28:BE:39:PRO:CD    | 2.98                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 28:BE:64:LYS:C    | 28:BE:66:HIS:N     | 2.74                     | 0.42              |
| 28:BE:64:LYS:HG2  | 28:BE:67:PHE:CD1   | 2.55                     | 0.42              |
| 28:BE:152:LYS:CD  | 28:BE:152:LYS:C    | 2.92                     | 0.42              |
| 30:BG:1:MET:O     | 30:BG:2:PRO:C      | 2.60                     | 0.42              |
| 30:BG:62:LEU:HB3  | 30:BG:143:GLU:HG3  | 2.01                     | 0.42              |
| 30:BG:125:PHE:HD2 | 30:BG:129:GLY:CA   | 2.33                     | 0.42              |
| 31:BH:31:GLY:C    | 31:BH:33:LEU:N     | 2.73                     | 0.42              |
| 31:BH:105:LEU:O   | 31:BH:113:VAL:HG21 | 2.20                     | 0.42              |
| 31:BH:118:PRO:HG2 | 31:BH:121:ILE:HG21 | 2.00                     | 0.42              |
| 31:BH:163:TYR:O   | 31:BH:164:TYR:C    | 2.63                     | 0.42              |
| 31:BH:175:LYS:CG  | 31:BH:176:ALA:H    | 2.32                     | 0.42              |
| 32:BK:77:LEU:HD12 | 32:BK:142:VAL:CG2  | 2.50                     | 0.42              |
| 34:BM:15:LEU:CD2  | 34:BM:137:LYS:HB3  | 2.50                     | 0.42              |
| 34:BM:33:LEU:HD11 | 34:BM:52:VAL:CB    | 2.49                     | 0.42              |
| 34:BM:70:LYS:CD   | 34:BM:86:PRO:HA    | 2.50                     | 0.42              |
| 35:BN:13:ASN:N    | 35:BN:94:ARG:CB    | 2.82                     | 0.42              |
| 35:BN:26:LYS:CG   | 35:BN:27:GLY:H     | 2.29                     | 0.42              |
| 35:BN:63:VAL:HG21 | 35:BN:80:ASP:C     | 2.45                     | 0.42              |
| 35:BN:121:VAL:HA  | 40:BS:70:VAL:CG1   | 2.49                     | 0.42              |
| 36:BO:70:GLN:O    | 36:BO:71:VAL:HG23  | 2.20                     | 0.42              |
| 36:BO:76:LYS:HD3  | 36:BO:112:LEU:HB3  | 2.02                     | 0.42              |
| 36:BO:124:LYS:HB3 | 36:BO:143:GLY:HA2  | 2.02                     | 0.42              |
| 37:BP:67:ARG:HD3  | 37:BP:103:MET:SD   | 2.60                     | 0.42              |
| 37:BP:77:LYS:HB3  | 37:BP:78:PRO:CD    | 2.39                     | 0.42              |
| 37:BP:102:VAL:O   | 37:BP:103:MET:HE2  | 2.20                     | 0.42              |
| 39:BR:19:LYS:C    | 39:BR:20:ARG:O     | 2.62                     | 0.42              |
| 39:BR:71:ARG:N    | 39:BR:104:GLY:HA3  | 2.35                     | 0.42              |
| 40:BS:28:VAL:HG23 | 40:BS:94:ALA:CA    | 2.50                     | 0.42              |
| 40:BS:67:SER:CB   | 40:BS:75:ILE:CG2   | 2.98                     | 0.42              |
| 41:BT:97:ASP:HB3  | 41:BT:101:ARG:HE   | 1.82                     | 0.42              |
| 42:BU:15:GLU:CB   | 42:BU:16:PRO:CD    | 2.98                     | 0.42              |
| 42:BU:36:PRO:HA   | 42:BU:61:VAL:HG22  | 2.02                     | 0.42              |
| 42:BU:70:ILE:HG22 | 42:BU:89:GLN:O     | 2.20                     | 0.42              |
| 45:BX:46:LYS:HZ3  | 45:BX:47:LYS:HG3   | 1.85                     | 0.42              |
| 46:BY:31:ARG:CZ   | 46:BY:31:ARG:HB3   | 2.42                     | 0.42              |
| 46:BY:60:GLU:CD   | 46:BY:67:LEU:O     | 2.62                     | 0.42              |
| 46:BY:92:SER:O    | 46:BY:93:ASP:CB    | 2.65                     | 0.42              |
| 46:BY:104:PHE:CE1 | 46:BY:171:ILE:HG13 | 2.55                     | 0.42              |
| 46:BY:105:VAL:O   | 46:BY:140:ASP:OD2  | 2.37                     | 0.42              |
| 48:B1:19:LEU:HD13 | 48:B1:20:VAL:CA    | 2.49                     | 0.42              |
| 48:B1:27:LEU:CD1  | 48:B1:48:LEU:HD23  | 2.50                     | 0.42              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 50:B3:21:VAL:CG1 | 50:B3:23:GLU:CG   | 2.97                     | 0.42              |
| 54:B7:3:LYS:O    | 54:B7:4:MET:HB2   | 2.20                     | 0.42              |
| 54:B7:42:ARG:C   | 54:B7:43:GLN:NE2  | 2.78                     | 0.42              |
| 1:AA:42:G:C6     | 1:AA:43:C:C4      | 3.08                     | 0.41              |
| 1:AA:44:G:C6     | 1:AA:399:G:N1     | 2.87                     | 0.41              |
| 1:AA:95:G:H2'    | 1:AA:96:G:O4'     | 2.20                     | 0.41              |
| 1:AA:130:A:O2'   | 1:AA:190:G:N2     | 2.53                     | 0.41              |
| 1:AA:244:U:H2'   | 1:AA:245:C:OP2    | 2.19                     | 0.41              |
| 1:AA:293:G:C6    | 1:AA:305:G:C2     | 3.08                     | 0.41              |
| 1:AA:297:G:N2    | 1:AA:299:G:H3'    | 2.35                     | 0.41              |
| 1:AA:328:C:O2    | 1:AA:328:C:C3'    | 2.68                     | 0.41              |
| 1:AA:438:G:N3    | 1:AA:495:A:C8     | 2.88                     | 0.41              |
| 1:AA:448:A:C4    | 1:AA:487:A:C2     | 3.08                     | 0.41              |
| 1:AA:498:A:C8    | 1:AA:547:A:C6     | 3.08                     | 0.41              |
| 1:AA:519:C:H5'   | 14:AO:51:ALA:CB   | 2.49                     | 0.41              |
| 1:AA:606:G:C2    | 1:AA:631:G:C2     | 3.08                     | 0.41              |
| 1:AA:671:G:N3    | 1:AA:671:G:H2'    | 2.35                     | 0.41              |
| 1:AA:683:G:N3    | 13:AN:38:ASN:ND2  | 2.68                     | 0.41              |
| 1:AA:701:C:HO2'  | 1:AA:702:A:P      | 2.39                     | 0.41              |
| 1:AA:718:G:H4'   | 13:AN:117:ASN:ND2 | 2.25                     | 0.41              |
| 1:AA:728:A:C8    | 17:AR:54:ARG:NH1  | 2.88                     | 0.41              |
| 1:AA:763:G:N2    | 1:AA:764:C:C2     | 2.88                     | 0.41              |
| 1:AA:957:U:O2    | 1:AA:960:U:C6     | 2.73                     | 0.41              |
| 1:AA:970:C:H42   | 15:AP:126:LYS:NZ  | 2.18                     | 0.41              |
| 1:AA:999:U:C4    | 1:AA:1042:G:C6    | 3.08                     | 0.41              |
| 1:AA:1055:A:N6   | 1:AA:1206:G:C8    | 2.88                     | 0.41              |
| 1:AA:1100:C:O2'  | 1:AA:1102:A:O5'   | 2.37                     | 0.41              |
| 1:AA:1102:A:N6   | 1:AA:1103:C:N4    | 2.68                     | 0.41              |
| 1:AA:1141:C:C2   | 1:AA:1142:G:C8    | 3.07                     | 0.41              |
| 1:AA:1157:A:N6   | 1:AA:1180:A:N7    | 2.68                     | 0.41              |
| 1:AA:1191:A:H5'' | 5:AF:4:LYS:CE     | 2.50                     | 0.41              |
| 1:AA:1194:U:C4   | 1:AA:1195:C:C4    | 3.08                     | 0.41              |
| 1:AA:1245:A:C4   | 1:AA:1246:C:C5    | 3.08                     | 0.41              |
| 1:AA:1256:A:H61  | 1:AA:1278:U:C2'   | 2.32                     | 0.41              |
| 1:AA:1287:A:H2   | 1:AA:1370:G:H21   | 1.67                     | 0.41              |
| 1:AA:1302:U:H4'  | 1:AA:1303:C:OP1   | 2.20                     | 0.41              |
| 1:AA:1307:U:O5'  | 1:AA:1307:U:C6    | 2.66                     | 0.41              |
| 1:AA:1313:U:O4   | 21:AV:4:SER:HB2   | 2.17                     | 0.41              |
| 1:AA:1374:A:C1'  | 9:AJ:31:MET:HE1   | 2.48                     | 0.41              |
| 1:AA:1393:U:C2'  | 1:AA:1394:A:OP2   | 2.68                     | 0.41              |
| 1:AA:1418:A:H2'  | 1:AA:1419:G:H5'   | 2.00                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 1:AA:1453:G:C2'    | 1:AA:1454:G:C5'    | 2.98                     | 0.41              |
| 1:AA:1494:G:N3     | 1:AA:1495:U:C5     | 2.88                     | 0.41              |
| 3:AC:8:U:H1'       | 3:AC:48:C:H1'      | 2.02                     | 0.41              |
| 4:AE:33:TYR:HB3    | 4:AE:42:ILE:O      | 2.20                     | 0.41              |
| 4:AE:42:ILE:CD1    | 4:AE:47:THR:OG1    | 2.68                     | 0.41              |
| 4:AE:99:GLY:C      | 4:AE:101:MET:H     | 2.26                     | 0.41              |
| 4:AE:112:VAL:O     | 4:AE:116:GLU:OE2   | 2.38                     | 0.41              |
| 4:AE:118:LEU:CD2   | 4:AE:142:LEU:HD12  | 2.48                     | 0.41              |
| 5:AF:6:HIS:CD2     | 5:AF:8:ILE:HG22    | 2.55                     | 0.41              |
| 5:AF:33:LEU:HD23   | 5:AF:36:ASP:CB     | 2.50                     | 0.41              |
| 5:AF:34:LEU:HD23   | 5:AF:34:LEU:C      | 2.44                     | 0.41              |
| 5:AF:128:PHE:O     | 5:AF:130:VAL:N     | 2.52                     | 0.41              |
| 5:AF:131:ARG:HH22  | 7:AH:51:VAL:HG23   | 1.85                     | 0.41              |
| 5:AF:194:GLY:O     | 5:AF:196:LEU:CD2   | 2.68                     | 0.41              |
| 6:AG:17:VAL:O      | 6:AG:17:VAL:HG12   | 2.20                     | 0.41              |
| 6:AG:159:ARG:HG2   | 6:AG:159:ARG:NH1   | 2.35                     | 0.41              |
| 6:AG:161:ASN:O     | 6:AG:165:MET:CB    | 2.67                     | 0.41              |
| 8:AI:14:LEU:HD11   | 8:AI:18:GLN:HB3    | 1.99                     | 0.41              |
| 8:AI:23:LYS:HE3    | 8:AI:61:LEU:HD11   | 2.02                     | 0.41              |
| 10:AK:65:TYR:CD2   | 10:AK:78:GLN:HA    | 2.55                     | 0.41              |
| 10:AK:75:ARG:HH11  | 10:AK:75:ARG:HG3   | 1.85                     | 0.41              |
| 11:AL:72:GLY:O     | 11:AL:75:ASP:OD2   | 2.37                     | 0.41              |
| 12:AM:46:ARG:CZ    | 16:AQ:61:TRP:CE3   | 3.03                     | 0.41              |
| 12:AM:65:LEU:HD13  | 16:AQ:36:PHE:HE2   | 1.81                     | 0.41              |
| 13:AN:104:GLN:HE22 | 13:AN:106:LYS:CB   | 2.33                     | 0.41              |
| 14:AO:7:ILE:CG2    | 14:AO:8:ASN:N      | 2.80                     | 0.41              |
| 14:AO:102:ARG:HH11 | 14:AO:110:VAL:HG13 | 1.85                     | 0.41              |
| 15:AP:3:ARG:NH2    | 30:BG:113:ARG:NH2  | 2.68                     | 0.41              |
| 15:AP:8:GLU:HG3    | 15:AP:22:ILE:CD1   | 2.50                     | 0.41              |
| 15:AP:48:LEU:HD23  | 15:AP:48:LEU:C     | 2.44                     | 0.41              |
| 16:AQ:3:ARG:O      | 16:AQ:3:ARG:CG     | 2.68                     | 0.41              |
| 16:AQ:48:ALA:N     | 16:AQ:53:LEU:HD12  | 2.35                     | 0.41              |
| 16:AQ:51:GLY:O     | 16:AQ:53:LEU:N     | 2.52                     | 0.41              |
| 17:AR:67:LEU:O     | 17:AR:68:ARG:C     | 2.63                     | 0.41              |
| 21:AV:77:THR:HG23  | 21:AV:78:ARG:HG2   | 2.01                     | 0.41              |
| 22:AW:49:ALA:HB3   | 22:AW:99:LEU:HG    | 2.01                     | 0.41              |
| 22:AW:74:LYS:HB2   | 22:AW:75:ASN:H     | 1.65                     | 0.41              |
| 23:AX:19:GLY:C     | 23:AX:21:TYR:H     | 2.28                     | 0.41              |
| 24:BA:1:G:H2'      | 24:BA:2:G:H8       | 1.84                     | 0.41              |
| 24:BA:36:G:H2'     | 24:BA:37:C:O4'     | 2.20                     | 0.41              |
| 24:BA:88:G:C5'     | 24:BA:89:G:OP2     | 2.57                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:109:G:N1     | 24:BA:110:G:C8     | 2.88                     | 0.41              |
| 24:BA:140:A:C5     | 24:BA:141:A:C8     | 3.08                     | 0.41              |
| 24:BA:270(B):A:C2' | 24:BA:270(C):C:H6  | 2.33                     | 0.41              |
| 24:BA:329:G:OP2    | 45:BX:66:PRO:HG3   | 2.19                     | 0.41              |
| 24:BA:389:G:H1'    | 24:BA:2412:A:H2'   | 2.00                     | 0.41              |
| 24:BA:397:G:OP2    | 50:B3:59:PHE:CZ    | 2.67                     | 0.41              |
| 24:BA:402:A:N1     | 24:BA:403:U:C6     | 2.88                     | 0.41              |
| 24:BA:411:G:N1     | 24:BA:2407:G:O6    | 2.49                     | 0.41              |
| 24:BA:416:C:N3     | 24:BA:2407:G:O6    | 2.53                     | 0.41              |
| 24:BA:458:G:O2'    | 53:B6:40:TRP:CZ2   | 2.67                     | 0.41              |
| 24:BA:566:U:H5''   | 42:BU:82:ARG:HH12  | 1.77                     | 0.41              |
| 24:BA:600:G:H1'    | 29:BF:105:VAL:CG2  | 2.50                     | 0.41              |
| 24:BA:636:G:OP1    | 36:BO:132:LYS:HG3  | 2.19                     | 0.41              |
| 24:BA:696:G:C4     | 24:BA:697:C:C5     | 3.07                     | 0.41              |
| 24:BA:707:G:C6     | 24:BA:708:C:C4     | 3.08                     | 0.41              |
| 24:BA:756:C:C4     | 24:BA:757:U:C5     | 3.08                     | 0.41              |
| 24:BA:781:A:H2'    | 24:BA:781:A:N3     | 2.35                     | 0.41              |
| 24:BA:790:C:C3'    | 24:BA:790:C:C6     | 3.03                     | 0.41              |
| 24:BA:794:G:C4     | 24:BA:795:C:C5     | 3.08                     | 0.41              |
| 24:BA:826:U:H3'    | 24:BA:828:U:C4     | 2.54                     | 0.41              |
| 24:BA:843:G:C2     | 24:BA:936:C:N3     | 2.88                     | 0.41              |
| 24:BA:901:A:H2'    | 24:BA:902:C:H6     | 1.83                     | 0.41              |
| 24:BA:1002:G:C2'   | 24:BA:1003:G:O5'   | 2.67                     | 0.41              |
| 24:BA:1055:G:O5'   | 24:BA:1055:G:C8    | 2.60                     | 0.41              |
| 24:BA:1061:U:H4'   | 24:BA:1070:A:C3'   | 2.47                     | 0.41              |
| 24:BA:1103:A:H2'   | 24:BA:1104:C:OP1   | 2.19                     | 0.41              |
| 24:BA:1120:G:O2'   | 24:BA:1121:C:H5'   | 2.19                     | 0.41              |
| 24:BA:1279:G:H4'   | 38:BQ:31:HIS:CD2   | 2.55                     | 0.41              |
| 24:BA:1364:G:O5'   | 24:BA:1809:A:N1    | 2.53                     | 0.41              |
| 24:BA:1405:U:C2'   | 24:BA:1406:U:C5    | 2.87                     | 0.41              |
| 24:BA:1426:G:H3'   | 24:BA:1427:A:H8    | 1.85                     | 0.41              |
| 24:BA:1426:G:C3'   | 24:BA:1427:A:H5''  | 2.50                     | 0.41              |
| 24:BA:1449:A:C6    | 24:BA:1449(A):G:C5 | 3.08                     | 0.41              |
| 24:BA:1479:G:C2'   | 24:BA:1480:G:H8    | 2.19                     | 0.41              |
| 24:BA:1500:G:C4    | 24:BA:1501:C:C5    | 3.08                     | 0.41              |
| 24:BA:1571:A:OP2   | 24:BA:1571:A:O4'   | 2.38                     | 0.41              |
| 24:BA:1619:G:N2    | 53:B6:3:ARG:NH1    | 2.68                     | 0.41              |
| 24:BA:1631:A:C6    | 24:BA:1632:A:C2    | 3.08                     | 0.41              |
| 24:BA:1676:A:C2'   | 24:BA:1677:A:O5'   | 2.68                     | 0.41              |
| 24:BA:1702:G:C5    | 24:BA:1703:G:C8    | 3.08                     | 0.41              |
| 24:BA:1820:U:O2'   | 24:BA:1821:A:P     | 2.78                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1999:C:O2'   | 24:BA:2722:G:N2    | 2.52                     | 0.41              |
| 24:BA:2083:G:N3    | 24:BA:2084:C:C6    | 2.88                     | 0.41              |
| 24:BA:2126:A:HO2'  | 24:BA:2127:G:P     | 2.42                     | 0.41              |
| 24:BA:2154:G:H2'   | 24:BA:2155:G:O4'   | 2.19                     | 0.41              |
| 24:BA:2284:C:N3    | 24:BA:2285:C:C4    | 2.87                     | 0.41              |
| 24:BA:2293:C:N3    | 24:BA:2294:C:C5    | 2.88                     | 0.41              |
| 24:BA:2336:A:H2    | 47:BZ:57:PHE:CZ    | 2.38                     | 0.41              |
| 24:BA:2548:G:O6    | 24:BA:2561:A:N6    | 2.53                     | 0.41              |
| 24:BA:2610:C:C2'   | 24:BA:2611:U:OP2   | 2.68                     | 0.41              |
| 24:BA:2621:A:O2'   | 24:BA:2622:C:H5'   | 2.20                     | 0.41              |
| 24:BA:2708:G:C4'   | 38:BQ:71:GLN:OE1   | 2.68                     | 0.41              |
| 25:BB:77:U:H3'     | 25:BB:77:U:C6      | 2.47                     | 0.41              |
| 25:BB:83:G:O2'     | 25:BB:84:C:C5'     | 2.61                     | 0.41              |
| 26:BC:10:LEU:HD21  | 26:BC:33:ALA:HB2   | 2.02                     | 0.41              |
| 26:BC:22:ILE:HD13  | 26:BC:189:ILE:CG2  | 2.50                     | 0.41              |
| 26:BC:137:LEU:HD23 | 26:BC:138:PRO:N    | 2.35                     | 0.41              |
| 27:BD:49:ILE:HD12  | 27:BD:49:ILE:H     | 1.84                     | 0.41              |
| 27:BD:54:ARG:HB3   | 27:BD:218:ARG:CB   | 2.44                     | 0.41              |
| 27:BD:78:LYS:CD    | 27:BD:114:GLY:O    | 2.67                     | 0.41              |
| 27:BD:243:GLY:O    | 27:BD:244:ARG:CG   | 2.68                     | 0.41              |
| 28:BE:85:ASN:O     | 28:BE:87:GLU:N     | 2.38                     | 0.41              |
| 28:BE:102:VAL:CG2  | 28:BE:104:VAL:HG23 | 2.50                     | 0.41              |
| 28:BE:119:ARG:NE   | 28:BE:119:ARG:C    | 2.78                     | 0.41              |
| 28:BE:137:HIS:CB   | 28:BE:138:PRO:CD   | 2.95                     | 0.41              |
| 29:BF:81:PRO:C     | 29:BF:83:PHE:H     | 2.25                     | 0.41              |
| 29:BF:116:ASP:O    | 29:BF:119:ARG:CD   | 2.68                     | 0.41              |
| 29:BF:170:LEU:HB3  | 29:BF:171:PRO:CD   | 2.49                     | 0.41              |
| 30:BG:47:LYS:CG    | 30:BG:72:ARG:O     | 2.68                     | 0.41              |
| 30:BG:105:LYS:CA   | 30:BG:109:VAL:HG13 | 2.49                     | 0.41              |
| 30:BG:108:ASN:OD1  | 30:BG:177:GLY:HA2  | 2.19                     | 0.41              |
| 30:BG:142:PRO:C    | 30:BG:143:GLU:CG   | 2.93                     | 0.41              |
| 31:BH:151:ILE:O    | 31:BH:151:ILE:HG23 | 2.19                     | 0.41              |
| 33:BL:3:LYS:HE3    | 33:BL:3:LYS:HB2    | 1.78                     | 0.41              |
| 34:BM:71:ILE:HG22  | 34:BM:72:TYR:H     | 1.85                     | 0.41              |
| 35:BN:53:LYS:HG3   | 35:BN:55:GLY:H     | 1.84                     | 0.41              |
| 35:BN:64:ARG:HE    | 35:BN:66:LYS:C     | 2.27                     | 0.41              |
| 37:BP:42:ILE:HD13  | 37:BP:43:THR:CA    | 2.49                     | 0.41              |
| 37:BP:43:THR:HA    | 37:BP:94:VAL:CB    | 2.50                     | 0.41              |
| 37:BP:125:LEU:HD23 | 37:BP:125:LEU:H    | 1.83                     | 0.41              |
| 38:BQ:90:ARG:CB    | 38:BQ:94:TYR:HE2   | 2.33                     | 0.41              |
| 39:BR:64:GLU:OE2   | 39:BR:67:ARG:CB    | 2.61                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 40:BS:6:LEU:CG    | 40:BS:7:ILE:N      | 2.82                     | 0.41              |
| 41:BT:32:PHE:O    | 41:BT:33:ARG:C     | 2.62                     | 0.41              |
| 41:BT:33:ARG:HB2  | 41:BT:33:ARG:CZ    | 2.50                     | 0.41              |
| 41:BT:91:ASP:C    | 41:BT:95:LEU:HD21  | 2.44                     | 0.41              |
| 41:BT:94:ASN:O    | 41:BT:96:ALA:N     | 2.52                     | 0.41              |
| 41:BT:111:GLU:C   | 41:BT:114:LYS:HE3  | 2.45                     | 0.41              |
| 43:BV:16:LYS:H    | 43:BV:16:LYS:NZ    | 2.07                     | 0.41              |
| 43:BV:56:ALA:O    | 43:BV:57:ASN:C     | 2.62                     | 0.41              |
| 43:BV:72:LYS:O    | 43:BV:106:ILE:HG23 | 2.18                     | 0.41              |
| 44:BW:8:ILE:H     | 44:BW:9:LEU:CD1    | 2.33                     | 0.41              |
| 44:BW:89:ILE:C    | 44:BW:92:LEU:HD13  | 2.45                     | 0.41              |
| 46:BY:39:VAL:HG22 | 46:BY:44:PHE:CZ    | 2.48                     | 0.41              |
| 46:BY:95:PRO:CB   | 46:BY:131:ARG:H    | 2.33                     | 0.41              |
| 47:BZ:27:GLU:OE1  | 47:BZ:27:GLU:CA    | 2.67                     | 0.41              |
| 48:B1:30:LEU:CD1  | 48:B1:45:ILE:HA    | 2.49                     | 0.41              |
| 48:B1:56:LEU:O    | 48:B1:57:THR:C     | 2.63                     | 0.41              |
| 49:B2:40:THR:HG22 | 49:B2:42:ALA:CB    | 2.50                     | 0.41              |
| 50:B3:21:VAL:HG13 | 50:B3:23:GLU:CG    | 2.50                     | 0.41              |
| 52:B5:17:LYS:CE   | 52:B5:48:VAL:CG1   | 2.98                     | 0.41              |
| 53:B6:31:LEU:O    | 53:B6:35:ARG:CG    | 2.66                     | 0.41              |
| 54:B7:12:LYS:HG2  | 54:B7:13:ARG:NH1   | 2.28                     | 0.41              |
| 1:AA:61:G:C6      | 1:AA:62:U:N3       | 2.88                     | 0.41              |
| 1:AA:104:G:P      | 22:AW:21:LYS:HZ3   | 2.43                     | 0.41              |
| 1:AA:120:A:H2'    | 1:AA:122:G:C8      | 2.55                     | 0.41              |
| 1:AA:145:G:C6     | 1:AA:178:C:N4      | 2.88                     | 0.41              |
| 1:AA:149:A:C2     | 1:AA:150:C:N3      | 2.89                     | 0.41              |
| 1:AA:280:C:C1'    | 19:AT:38:ARG:CZ    | 2.98                     | 0.41              |
| 1:AA:438:G:N2     | 1:AA:494:U:C2      | 2.88                     | 0.41              |
| 1:AA:440:A:H3'    | 1:AA:442:C:C5      | 2.55                     | 0.41              |
| 1:AA:518:C:O2     | 1:AA:529:G:O6      | 2.38                     | 0.41              |
| 1:AA:520:A:OP1    | 14:AO:52:LEU:CD2   | 2.68                     | 0.41              |
| 1:AA:697:U:H5'    | 1:AA:786:G:O2'     | 2.21                     | 0.41              |
| 1:AA:830:G:O6     | 1:AA:857:C:N4      | 2.54                     | 0.41              |
| 1:AA:1053:G:O5'   | 1:AA:1055:A:OP1    | 2.38                     | 0.41              |
| 1:AA:1068:G:O6    | 1:AA:1108:G:C2     | 2.73                     | 0.41              |
| 1:AA:1090:U:O2'   | 1:AA:1091:U:C5'    | 2.68                     | 0.41              |
| 1:AA:1095:U:OP1   | 1:AA:1108:G:N2     | 2.53                     | 0.41              |
| 1:AA:1102:A:N1    | 1:AA:1103:C:C4     | 2.89                     | 0.41              |
| 1:AA:1185:G:H8    | 1:AA:1185:G:O5'    | 2.03                     | 0.41              |
| 1:AA:1287:A:H61   | 1:AA:1371:G:H5'    | 1.85                     | 0.41              |
| 1:AA:1290:G:C6    | 1:AA:1291:G:N7     | 2.88                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 1:AA:1306:A:H3'    | 1:AA:1307:U:C5    | 2.55                     | 0.41              |
| 1:AA:1336:C:O2'    | 1:AA:1337:G:OP2   | 2.37                     | 0.41              |
| 1:AA:1347:G:H3'    | 11:AL:107:ARG:O   | 2.20                     | 0.41              |
| 1:AA:1360:A:C2     | 1:AA:1361:G:C4    | 3.09                     | 0.41              |
| 1:AA:1371:G:H5''   | 11:AL:68:GLY:C    | 2.45                     | 0.41              |
| 1:AA:1411:C:C2     | 1:AA:1412:C:C6    | 3.08                     | 0.41              |
| 3:AC:9:A:C5'       | 3:AC:10:G:OP2     | 2.68                     | 0.41              |
| 3:AC:19:G:O2'      | 3:AC:20:U:OP2     | 2.32                     | 0.41              |
| 3:AC:33:U:O5'      | 3:AC:33:U:H6      | 2.03                     | 0.41              |
| 3:AC:75:C:OP1      | 3:AC:76:A:OP2     | 2.39                     | 0.41              |
| 3:AB:14:A:N9       | 3:AB:22:G:N2      | 2.67                     | 0.41              |
| 4:AE:21:ARG:HE     | 4:AE:21:ARG:H     | 1.63                     | 0.41              |
| 4:AE:35:GLU:OE2    | 4:AE:36:ARG:C     | 2.64                     | 0.41              |
| 4:AE:163:PHE:CZ    | 4:AE:186:ALA:CA   | 3.02                     | 0.41              |
| 5:AF:11:ARG:NH2    | 5:AF:179:ARG:H    | 2.08                     | 0.41              |
| 5:AF:156:ARG:HH12  | 5:AF:161:GLU:C    | 2.22                     | 0.41              |
| 5:AF:194:GLY:C     | 5:AF:196:LEU:HD23 | 2.45                     | 0.41              |
| 6:AG:61:LYS:HE3    | 6:AG:61:LYS:C     | 2.46                     | 0.41              |
| 6:AG:126:ILE:O     | 6:AG:132:ARG:HB2  | 2.20                     | 0.41              |
| 7:AH:26:PHE:HB2    | 7:AH:27:ARG:H     | 1.57                     | 0.41              |
| 7:AH:137:GLU:O     | 7:AH:138:ALA:C    | 2.62                     | 0.41              |
| 7:AH:149:GLU:OE2   | 7:AH:152:ARG:HG3  | 2.20                     | 0.41              |
| 9:AJ:69:VAL:HG13   | 9:AJ:135:VAL:HG22 | 2.02                     | 0.41              |
| 9:AJ:126:ASP:CB    | 9:AJ:131:LYS:HG3  | 2.50                     | 0.41              |
| 10:AK:28:ALA:HB3   | 10:AK:57:PRO:O    | 2.20                     | 0.41              |
| 10:AK:65:TYR:HB3   | 10:AK:76:PRO:HB2  | 2.02                     | 0.41              |
| 10:AK:109:ILE:HG12 | 10:AK:137:VAL:H   | 1.84                     | 0.41              |
| 11:AL:17:VAL:HG11  | 11:AL:81:ILE:CG1  | 2.50                     | 0.41              |
| 12:AM:5:ARG:CD     | 12:AM:6:ILE:N     | 2.83                     | 0.41              |
| 12:AM:79:ARG:NH2   | 12:AM:82:ILE:CG2  | 2.82                     | 0.41              |
| 13:AN:21:ILE:O     | 13:AN:21:ILE:HG13 | 2.19                     | 0.41              |
| 14:AO:86:ARG:NH1   | 14:AO:119:LYS:CG  | 2.66                     | 0.41              |
| 15:AP:88:ARG:CZ    | 15:AP:92:HIS:HD2  | 2.33                     | 0.41              |
| 15:AP:121:LYS:O    | 15:AP:121:LYS:HG3 | 2.20                     | 0.41              |
| 16:AQ:41:ARG:HG3   | 16:AQ:42:ILE:N    | 2.35                     | 0.41              |
| 17:AR:34:LEU:HD11  | 17:AR:35:ARG:HG3  | 2.02                     | 0.41              |
| 18:AS:9:PHE:CD2    | 18:AS:9:PHE:N     | 2.88                     | 0.41              |
| 20:AU:21:LYS:NZ    | 20:AU:23:LYS:CB   | 2.66                     | 0.41              |
| 20:AU:81:PHE:O     | 20:AU:82:THR:CG2  | 2.67                     | 0.41              |
| 21:AV:29:ARG:O     | 21:AV:30:LEU:C    | 2.63                     | 0.41              |
| 21:AV:30:LEU:CD1   | 21:AV:59:PRO:HB3  | 2.51                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 22:AW:32:ALA:O    | 22:AW:33:ILE:C    | 2.62                     | 0.41              |
| 22:AW:51:GLU:CB   | 22:AW:54:LYS:NZ   | 2.77                     | 0.41              |
| 22:AW:64:ASP:O    | 22:AW:67:ALA:CA   | 2.66                     | 0.41              |
| 24:BA:13:A:C2     | 24:BA:526:A:N7    | 2.88                     | 0.41              |
| 24:BA:118:A:C8    | 24:BA:119:A:C8    | 3.08                     | 0.41              |
| 24:BA:120:U:C5    | 24:BA:150:C:H5    | 2.37                     | 0.41              |
| 24:BA:154:G:C6    | 24:BA:155:C:N4    | 2.88                     | 0.41              |
| 24:BA:184:C:H2'   | 24:BA:185:U:H5    | 1.86                     | 0.41              |
| 24:BA:262:A:C4    | 24:BA:263:C:C6    | 3.08                     | 0.41              |
| 24:BA:307:G:C4    | 24:BA:309:G:OP2   | 2.72                     | 0.41              |
| 24:BA:360:G:C8    | 24:BA:361:G:C8    | 3.07                     | 0.41              |
| 24:BA:374:A:H2'   | 24:BA:374:A:N3    | 2.35                     | 0.41              |
| 24:BA:463:G:H3'   | 24:BA:463:G:C8    | 2.55                     | 0.41              |
| 24:BA:558:G:C2    | 24:BA:559:G:C8    | 3.08                     | 0.41              |
| 24:BA:559:G:C2'   | 24:BA:560:C:O4'   | 2.65                     | 0.41              |
| 24:BA:573:G:H22   | 24:BA:2029:G:H21  | 1.69                     | 0.41              |
| 24:BA:584:C:OP2   | 41:BT:10:ARG:NH2  | 2.45                     | 0.41              |
| 24:BA:586:A:C2    | 24:BA:809:G:C2    | 3.07                     | 0.41              |
| 24:BA:612:G:C2    | 24:BA:615:G:N2    | 2.88                     | 0.41              |
| 24:BA:627:A:H61   | 24:BA:638:G:C1'   | 2.15                     | 0.41              |
| 24:BA:627:A:P     | 24:BA:637:A:H61   | 2.43                     | 0.41              |
| 24:BA:629:G:H5'   | 24:BA:649:G:C2    | 2.55                     | 0.41              |
| 24:BA:636:G:P     | 36:BO:132:LYS:HG3 | 2.61                     | 0.41              |
| 24:BA:650:C:N3    | 24:BA:651:G:N3    | 2.67                     | 0.41              |
| 24:BA:667:U:C4    | 24:BA:668:G:N7    | 2.89                     | 0.41              |
| 24:BA:669:G:C5    | 24:BA:801:G:N1    | 2.88                     | 0.41              |
| 24:BA:726:G:H5''  | 24:BA:727:A:OP1   | 2.20                     | 0.41              |
| 24:BA:728:G:H4'   | 24:BA:729:G:C8    | 2.55                     | 0.41              |
| 24:BA:796:C:H2'   | 24:BA:797:C:C6    | 2.55                     | 0.41              |
| 24:BA:819:A:C2'   | 24:BA:820:A:C8    | 2.97                     | 0.41              |
| 24:BA:826:U:OP1   | 24:BA:2428:G:C3'  | 2.63                     | 0.41              |
| 24:BA:918:A:H2'   | 25:BB:80:U:O2'    | 2.20                     | 0.41              |
| 24:BA:960:A:C5    | 24:BA:962:G:C8    | 3.08                     | 0.41              |
| 24:BA:967:C:H3'   | 24:BA:967:C:C6    | 2.55                     | 0.41              |
| 24:BA:971:C:H2'   | 24:BA:972:G:O4'   | 2.20                     | 0.41              |
| 24:BA:1033:U:H5'' | 55:B8:9:ARG:HH21  | 1.84                     | 0.41              |
| 24:BA:1086:A:C3'  | 24:BA:1087:G:H5'  | 2.32                     | 0.41              |
| 24:BA:1197:G:N3   | 24:BA:1197:G:H2'  | 2.34                     | 0.41              |
| 24:BA:1212:G:C6   | 24:BA:1236:G:C6   | 3.08                     | 0.41              |
| 24:BA:1257:C:H1'  | 29:BF:83:PHE:HB2  | 2.02                     | 0.41              |
| 24:BA:1275:A:H1'  | 38:BQ:12:ARG:HH21 | 1.85                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:1305:C:O2'  | 24:BA:1306:C:C5'   | 2.68                     | 0.41              |
| 24:BA:1340:U:H2'  | 24:BA:1341:U:OP1   | 2.20                     | 0.41              |
| 24:BA:1420:U:C6   | 24:BA:1420:U:OP2   | 2.73                     | 0.41              |
| 24:BA:1450:C:C2'  | 24:BA:1451:C:H4'   | 2.48                     | 0.41              |
| 24:BA:1549:C:O2'  | 24:BA:1550:C:H5'   | 2.19                     | 0.41              |
| 24:BA:1567:A:OP2  | 27:BD:86:PRO:HA    | 2.21                     | 0.41              |
| 24:BA:1767:C:N3   | 24:BA:1768:U:C5    | 2.88                     | 0.41              |
| 24:BA:1791:A:O4'  | 27:BD:209:ALA:CB   | 2.61                     | 0.41              |
| 24:BA:1829:A:H5'  | 24:BA:1830:C:OP2   | 2.20                     | 0.41              |
| 24:BA:1990:C:C4   | 24:BA:1991:U:O4    | 2.73                     | 0.41              |
| 24:BA:2155:G:C2'  | 24:BA:2156:G:O5'   | 2.68                     | 0.41              |
| 24:BA:2212:A:H61  | 24:BA:2215:G:H1'   | 1.85                     | 0.41              |
| 24:BA:2279:G:HO2' | 24:BA:2280:G:P     | 2.43                     | 0.41              |
| 24:BA:2298:A:N1   | 24:BA:2321:G:O6    | 2.52                     | 0.41              |
| 24:BA:2304:G:H4'  | 30:BG:132:ASN:HD21 | 1.84                     | 0.41              |
| 24:BA:2310:A:H2'  | 24:BA:2311:A:OP2   | 2.19                     | 0.41              |
| 24:BA:2310:A:N1   | 30:BG:80:PHE:CD2   | 2.87                     | 0.41              |
| 24:BA:2323:G:N3   | 24:BA:2324:C:C5    | 2.88                     | 0.41              |
| 24:BA:2350:C:H2'  | 24:BA:2351:G:O5'   | 2.20                     | 0.41              |
| 24:BA:2423:U:O4'  | 24:BA:2425:A:C8    | 2.72                     | 0.41              |
| 24:BA:2441:C:H2'  | 24:BA:2441:C:O2    | 2.20                     | 0.41              |
| 24:BA:2470:G:N3   | 24:BA:2470:G:H2'   | 2.35                     | 0.41              |
| 24:BA:2493:U:H6   | 24:BA:2493:U:C3'   | 2.19                     | 0.41              |
| 24:BA:2521:C:O2   | 24:BA:2522:U:O4'   | 2.38                     | 0.41              |
| 24:BA:2564:A:C2   | 24:BA:2647:U:H5'   | 2.55                     | 0.41              |
| 24:BA:2596:U:O2'  | 27:BD:242:ARG:HD3  | 2.20                     | 0.41              |
| 24:BA:2678:C:H2'  | 24:BA:2679:A:H8    | 1.85                     | 0.41              |
| 24:BA:2772:C:N3   | 24:BA:2773:C:C5    | 2.87                     | 0.41              |
| 24:BA:2848:G:O2'  | 24:BA:2849:U:P     | 2.78                     | 0.41              |
| 24:BA:2856:C:O5'  | 24:BA:2856:C:H6    | 2.03                     | 0.41              |
| 24:BA:2857:G:C8   | 24:BA:2857:G:C3'   | 3.03                     | 0.41              |
| 24:BA:2899:G:C4   | 24:BA:2900:A:C8    | 3.08                     | 0.41              |
| 25:BB:48:A:H4'    | 39:BR:95:HIS:CE1   | 2.54                     | 0.41              |
| 25:BB:69:G:C4     | 25:BB:70:C:C5      | 3.08                     | 0.41              |
| 25:BB:82:G:C2'    | 25:BB:83:G:OP2     | 2.67                     | 0.41              |
| 25:BB:85:G:C2     | 25:BB:92:G:C2      | 3.08                     | 0.41              |
| 26:BC:87:GLU:CG   | 26:BC:94:VAL:HG11  | 2.50                     | 0.41              |
| 27:BD:122:ASP:HA  | 27:BD:135:PHE:CD2  | 2.56                     | 0.41              |
| 27:BD:183:ARG:NH2 | 27:BD:268:ARG:NH1  | 2.68                     | 0.41              |
| 27:BD:208:LYS:O   | 27:BD:209:ALA:C    | 2.63                     | 0.41              |
| 28:BE:27:LEU:O    | 28:BE:180:ASN:HB3  | 2.20                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 28:BE:156:MET:O    | 28:BE:157:ALA:O    | 2.38                     | 0.41              |
| 29:BF:11:VAL:HG13  | 29:BF:127:GLU:CB   | 2.36                     | 0.41              |
| 29:BF:33:LEU:O     | 29:BF:34:TRP:C     | 2.60                     | 0.41              |
| 29:BF:37:VAL:CA    | 29:BF:184:TYR:CZ   | 2.99                     | 0.41              |
| 29:BF:168:ARG:HD3  | 29:BF:169:ASN:N    | 2.34                     | 0.41              |
| 30:BG:113:ARG:HH21 | 30:BG:139:LEU:CD2  | 2.33                     | 0.41              |
| 31:BH:175:LYS:HG2  | 31:BH:176:ALA:H    | 1.85                     | 0.41              |
| 32:BK:93:THR:HG23  | 32:BK:95:LYS:N     | 2.34                     | 0.41              |
| 33:BL:81:ALA:HB1   | 33:BL:107:ILE:HD13 | 2.03                     | 0.41              |
| 34:BM:8:GLN:O      | 34:BM:10:GLU:N     | 2.53                     | 0.41              |
| 34:BM:53:VAL:CG1   | 34:BM:123:TYR:HE2  | 2.33                     | 0.41              |
| 34:BM:99:LEU:HD21  | 34:BM:122:VAL:CG2  | 2.40                     | 0.41              |
| 35:BN:24:VAL:HG21  | 35:BN:26:LYS:CG    | 2.47                     | 0.41              |
| 35:BN:47:ILE:CD1   | 35:BN:52:VAL:CG1   | 2.91                     | 0.41              |
| 35:BN:53:LYS:HE3   | 35:BN:53:LYS:HB2   | 1.89                     | 0.41              |
| 35:BN:77:ILE:CA    | 35:BN:78:ARG:NH1   | 2.82                     | 0.41              |
| 36:BO:56:SER:HB3   | 54:B7:13:ARG:HH21  | 1.78                     | 0.41              |
| 36:BO:80:TYR:CZ    | 36:BO:100:LEU:HG   | 2.55                     | 0.41              |
| 37:BP:64:ILE:HG22  | 37:BP:105:GLU:CB   | 2.50                     | 0.41              |
| 38:BQ:9:LYS:O      | 38:BQ:10:LEU:HD23  | 2.20                     | 0.41              |
| 38:BQ:75:LEU:CA    | 38:BQ:78:LYS:HB3   | 2.46                     | 0.41              |
| 39:BR:17:ARG:O     | 39:BR:20:ARG:HG2   | 2.20                     | 0.41              |
| 39:BR:28:VAL:O     | 39:BR:29:PHE:CB    | 2.58                     | 0.41              |
| 39:BR:49:VAL:HG11  | 39:BR:77:ALA:HA    | 2.02                     | 0.41              |
| 40:BS:3:ARG:C      | 40:BS:7:ILE:HG12   | 2.44                     | 0.41              |
| 40:BS:17:THR:HG21  | 40:BS:20:PRO:CG    | 2.50                     | 0.41              |
| 40:BS:45:PHE:CZ    | 40:BS:87:ASP:CB    | 2.99                     | 0.41              |
| 41:BT:16:LYS:HD2   | 41:BT:17:ILE:HD13  | 2.02                     | 0.41              |
| 41:BT:19:LYS:C     | 41:BT:21:ALA:N     | 2.76                     | 0.41              |
| 41:BT:93:LYS:N     | 41:BT:93:LYS:HZ3   | 2.18                     | 0.41              |
| 41:BT:97:ASP:O     | 41:BT:101:ARG:NE   | 2.53                     | 0.41              |
| 41:BT:110:VAL:HG12 | 41:BT:114:LYS:NZ   | 2.35                     | 0.41              |
| 41:BT:111:GLU:O    | 41:BT:114:LYS:HE3  | 2.20                     | 0.41              |
| 43:BV:8:ARG:O      | 43:BV:10:VAL:N     | 2.53                     | 0.41              |
| 45:BX:105:ALA:O    | 45:BX:107:ASP:N    | 2.53                     | 0.41              |
| 46:BY:30:ASN:HA    | 46:BY:89:PHE:CE2   | 2.55                     | 0.41              |
| 46:BY:102:LEU:CD2  | 46:BY:125:LEU:HD12 | 2.49                     | 0.41              |
| 46:BY:116:VAL:HG23 | 46:BY:144:LEU:O    | 2.19                     | 0.41              |
| 49:B2:16:PRO:O     | 49:B2:17:LYS:C     | 2.61                     | 0.41              |
| 50:B3:8:LYS:CG     | 50:B3:9:LEU:N      | 2.76                     | 0.41              |
| 52:B5:17:LYS:CE    | 52:B5:50:ARG:HB2   | 2.50                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 54:B7:10:ALA:HB1  | 54:B7:64:TYR:CG  | 2.54                     | 0.41              |
| 54:B7:38:GLY:C    | 54:B7:39:LYS:HE2 | 2.45                     | 0.41              |
| 54:B7:63:PRO:CG   | 54:B7:64:TYR:H   | 2.33                     | 0.41              |
| 1:AA:25:C:H4'     | 1:AA:524:G:C2    | 2.55                     | 0.41              |
| 1:AA:64:G:N2      | 1:AA:68:G:O6     | 2.42                     | 0.41              |
| 1:AA:149:A:C2     | 1:AA:150:C:C4    | 3.08                     | 0.41              |
| 1:AA:468:A:H4'    | 18:AS:82:GLN:CB  | 2.38                     | 0.41              |
| 1:AA:486:U:C2'    | 1:AA:486:U:O2    | 2.67                     | 0.41              |
| 1:AA:607:A:C4     | 1:AA:608:A:H8    | 2.38                     | 0.41              |
| 1:AA:667:G:C6     | 1:AA:740:U:C4    | 3.08                     | 0.41              |
| 1:AA:671:G:C2'    | 1:AA:672:U:O4'   | 2.67                     | 0.41              |
| 1:AA:761:G:C1'    | 19:AT:103:GLY:O  | 2.68                     | 0.41              |
| 1:AA:811:C:C5     | 1:AA:812:C:O2    | 2.73                     | 0.41              |
| 1:AA:812:C:O4'    | 1:AA:813:U:C6    | 2.73                     | 0.41              |
| 1:AA:994:A:H2     | 16:AQ:4:LYS:HG2  | 1.86                     | 0.41              |
| 1:AA:1044:A:C6    | 1:AA:1045:C:H1'  | 2.55                     | 0.41              |
| 1:AA:1056:U:H5'   | 5:AF:163:ALA:CB  | 2.50                     | 0.41              |
| 1:AA:1080:A:C8    | 1:AA:1080:A:O5'  | 2.74                     | 0.41              |
| 1:AA:1091:U:C6    | 1:AA:1093:A:OP2  | 2.73                     | 0.41              |
| 1:AA:1159:U:C5    | 1:AA:1181:G:C5   | 3.08                     | 0.41              |
| 1:AA:1166:G:C2    | 1:AA:1171:G:O6   | 2.72                     | 0.41              |
| 1:AA:1175:G:H2'   | 1:AA:1176:A:C8   | 2.55                     | 0.41              |
| 1:AA:1185:G:H2'   | 1:AA:1186:G:H5'  | 2.02                     | 0.41              |
| 1:AA:1251:A:C2    | 1:AA:1252:A:N1   | 2.88                     | 0.41              |
| 1:AA:1371:G:C5    | 1:AA:1372:U:C6   | 3.08                     | 0.41              |
| 1:AA:1422:G:N3    | 1:AA:1423:G:C8   | 2.88                     | 0.41              |
| 1:AA:1480:G:C2'   | 1:AA:1481:U:H5'  | 2.50                     | 0.41              |
| 1:AA:1518:A:C6    | 1:AA:1519:A:N6   | 2.88                     | 0.41              |
| 2:A1:16:U:N3      | 2:A1:18:U:OP1    | 2.53                     | 0.41              |
| 3:AC:33:U:N1      | 3:AC:35:A:OP2    | 2.53                     | 0.41              |
| 3:AB:62:C:C2      | 3:AB:63:G:C8     | 3.08                     | 0.41              |
| 4:AE:80:ILE:HG23  | 4:AE:212:GLN:NE2 | 2.32                     | 0.41              |
| 4:AE:118:LEU:CD2  | 4:AE:118:LEU:C   | 2.93                     | 0.41              |
| 4:AE:163:PHE:HE1  | 4:AE:201:ILE:CD1 | 2.30                     | 0.41              |
| 4:AE:213:LEU:HD21 | 4:AE:217:ARG:HE  | 1.85                     | 0.41              |
| 5:AF:22:TRP:CB    | 5:AF:59:ARG:CB   | 2.87                     | 0.41              |
| 5:AF:38:ARG:HB2   | 5:AF:94:LEU:CG   | 2.50                     | 0.41              |
| 5:AF:47:LEU:CD1   | 5:AF:49:SER:HB3  | 2.47                     | 0.41              |
| 5:AF:74:GLY:C     | 5:AF:76:VAL:H    | 2.28                     | 0.41              |
| 5:AF:108:ASN:ND2  | 5:AF:111:LEU:CD1 | 2.72                     | 0.41              |
| 5:AF:150:LYS:HA   | 5:AF:169:ALA:HB1 | 2.01                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:AG:57:ARG:HB3   | 6:AG:206:PHE:CB    | 2.34                     | 0.41              |
| 6:AG:59:ARG:CB    | 6:AG:63:LYS:HZ2    | 2.33                     | 0.41              |
| 7:AH:14:ARG:O     | 7:AH:14:ARG:HG3    | 2.20                     | 0.41              |
| 8:AI:50:TYR:CE1   | 8:AI:52:ILE:HD11   | 2.54                     | 0.41              |
| 9:AJ:106:GLN:CA   | 9:AJ:106:GLN:NE2   | 2.69                     | 0.41              |
| 10:AK:9:MET:HE3   | 10:AK:13:ILE:HD11  | 1.99                     | 0.41              |
| 10:AK:12:ARG:HB2  | 10:AK:26:VAL:HG21  | 2.01                     | 0.41              |
| 10:AK:65:TYR:HB2  | 10:AK:66:GLY:H     | 1.56                     | 0.41              |
| 12:AM:46:ARG:NE   | 12:AM:64:GLU:OE2   | 2.54                     | 0.41              |
| 12:AM:51:ARG:N    | 12:AM:60:ARG:HA    | 2.35                     | 0.41              |
| 13:AN:21:ILE:HG22 | 13:AN:30:VAL:HG21  | 2.01                     | 0.41              |
| 14:AO:37:CYS:SG   | 14:AO:78:GLN:O     | 2.78                     | 0.41              |
| 14:AO:39:VAL:CB   | 14:AO:57:LYS:HB2   | 2.34                     | 0.41              |
| 15:AP:6:GLY:C     | 15:AP:8:GLU:N      | 2.77                     | 0.41              |
| 15:AP:74:VAL:O    | 15:AP:78:ILE:CG1   | 2.64                     | 0.41              |
| 17:AR:13:GLN:O    | 17:AR:15:PHE:N     | 2.53                     | 0.41              |
| 17:AR:29:VAL:CG2  | 17:AR:81:LEU:HD11  | 2.39                     | 0.41              |
| 18:AS:2:VAL:O     | 18:AS:2:VAL:HG12   | 2.20                     | 0.41              |
| 18:AS:40:ASP:OD1  | 18:AS:48:TRP:HB2   | 2.20                     | 0.41              |
| 19:AT:65:ILE:O    | 19:AT:66:SER:HB3   | 2.18                     | 0.41              |
| 22:AW:16:HIS:O    | 22:AW:19:SER:HB3   | 2.20                     | 0.41              |
| 22:AW:50:GLU:CA   | 22:AW:99:LEU:HD12  | 2.49                     | 0.41              |
| 22:AW:57:ARG:C    | 22:AW:59:ALA:H     | 2.28                     | 0.41              |
| 24:BA:21:A:H2'    | 24:BA:22:C:O4'     | 2.20                     | 0.41              |
| 24:BA:43:G:C2     | 24:BA:438:G:C4     | 3.08                     | 0.41              |
| 24:BA:132:G:H2'   | 24:BA:132:G:N3     | 2.34                     | 0.41              |
| 24:BA:181:A:H5'   | 24:BA:181:A:H8     | 1.78                     | 0.41              |
| 24:BA:215:G:H1'   | 24:BA:216:A:H5''   | 2.00                     | 0.41              |
| 24:BA:270(L):U:O2 | 24:BA:270(L):U:C2' | 2.65                     | 0.41              |
| 24:BA:270(T):G:C6 | 24:BA:270(U):C:C4  | 3.08                     | 0.41              |
| 24:BA:291:C:C4    | 24:BA:292:C:C5     | 3.08                     | 0.41              |
| 24:BA:292:C:N4    | 24:BA:346:A:H62    | 2.19                     | 0.41              |
| 24:BA:330:A:H1'   | 24:BA:1210:A:C5    | 2.55                     | 0.41              |
| 24:BA:363(F):A:N3 | 24:BA:363(F):A:H2' | 2.34                     | 0.41              |
| 24:BA:379:G:C6    | 24:BA:380:U:C4     | 3.08                     | 0.41              |
| 24:BA:399:G:N1    | 24:BA:400:G:H1'    | 2.34                     | 0.41              |
| 24:BA:449:A:O3'   | 29:BF:52:LYS:HD3   | 2.20                     | 0.41              |
| 24:BA:476:G:N2    | 24:BA:479:A:OP2    | 2.50                     | 0.41              |
| 24:BA:483:A:C2    | 24:BA:484:C:C1'    | 3.03                     | 0.41              |
| 24:BA:564:C:H1'   | 41:BT:37:GLU:OE2   | 2.17                     | 0.41              |
| 24:BA:569:U:H2'   | 24:BA:983:A:N6     | 2.35                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 24:BA:596:G:H2'  | 24:BA:597:U:O4'    | 2.20                     | 0.41              |
| 24:BA:612:G:N2   | 24:BA:617:G:N1     | 2.64                     | 0.41              |
| 24:BA:638:G:N2   | 24:BA:651:G:H5'    | 2.35                     | 0.41              |
| 24:BA:662:G:OP1  | 36:BO:19:VAL:CG1   | 2.68                     | 0.41              |
| 24:BA:693:C:H4'  | 24:BA:1354:A:H1'   | 2.03                     | 0.41              |
| 24:BA:719:C:O2'  | 24:BA:720:C:H5'    | 2.19                     | 0.41              |
| 24:BA:821:A:C8   | 24:BA:946:G:C4     | 3.08                     | 0.41              |
| 24:BA:826:U:C4   | 24:BA:828:U:H6     | 2.38                     | 0.41              |
| 24:BA:850:C:C5'  | 49:B2:18:ASP:HB2   | 2.50                     | 0.41              |
| 24:BA:886:C:H4'  | 24:BA:887:A:O4'    | 2.19                     | 0.41              |
| 24:BA:903:C:C2   | 24:BA:904:C:C5     | 3.08                     | 0.41              |
| 24:BA:996:A:N3   | 24:BA:997:G:C8     | 2.88                     | 0.41              |
| 24:BA:1009:A:H5' | 41:BT:59:ARG:HH12  | 1.84                     | 0.41              |
| 24:BA:1013:C:OP2 | 24:BA:1142:U:C2    | 2.73                     | 0.41              |
| 24:BA:1031:G:C4  | 24:BA:1032:A:N7    | 2.88                     | 0.41              |
| 24:BA:1055:G:N2  | 24:BA:1084:A:N3    | 2.66                     | 0.41              |
| 24:BA:1071:G:C3' | 24:BA:1072:C:C5'   | 2.98                     | 0.41              |
| 24:BA:1077:A:P   | 33:BL:93:ARG:HB2   | 2.61                     | 0.41              |
| 24:BA:1098:A:O2' | 33:BL:30:HIS:HE1   | 2.04                     | 0.41              |
| 24:BA:1100:C:H2' | 24:BA:1101:U:OP1   | 2.20                     | 0.41              |
| 24:BA:1101:U:O2  | 24:BA:1102:C:C6    | 2.73                     | 0.41              |
| 24:BA:1147:C:C2  | 24:BA:1148:A:C8    | 3.08                     | 0.41              |
| 24:BA:1196:C:H2' | 24:BA:1197:G:N9    | 2.35                     | 0.41              |
| 24:BA:1234:U:C4  | 24:BA:1235:G:C2    | 3.08                     | 0.41              |
| 24:BA:1264:G:C6  | 24:BA:1265:A:N7    | 2.86                     | 0.41              |
| 24:BA:1296:G:C2  | 24:BA:1297:C:C4    | 3.09                     | 0.41              |
| 24:BA:1298:C:C4  | 24:BA:1299:G:C6    | 3.08                     | 0.41              |
| 24:BA:1325:G:OP2 | 24:BA:1616:A:C8    | 2.73                     | 0.41              |
| 24:BA:1355:G:C2  | 24:BA:1377:G:C2    | 3.09                     | 0.41              |
| 24:BA:1385:G:O2' | 24:BA:1386:C:C5'   | 2.68                     | 0.41              |
| 24:BA:1410:G:C6  | 24:BA:1411:C:C4    | 3.07                     | 0.41              |
| 24:BA:1423:G:C2  | 24:BA:1424:G:C8    | 3.08                     | 0.41              |
| 24:BA:1498:C:O2  | 24:BA:1498:C:H2'   | 2.21                     | 0.41              |
| 24:BA:1553:A:H2' | 24:BA:1555:G:N7    | 2.36                     | 0.41              |
| 24:BA:1560:G:C5  | 24:BA:1561:G:C5    | 3.07                     | 0.41              |
| 24:BA:1588:C:O2' | 24:BA:1589:C:H5'   | 2.21                     | 0.41              |
| 24:BA:1625:C:C3' | 24:BA:1626:G:H4'   | 2.47                     | 0.41              |
| 24:BA:1788:C:C1' | 27:BD:222:ARG:HH21 | 2.32                     | 0.41              |
| 24:BA:1835:G:C2  | 24:BA:1836:C:C6    | 3.08                     | 0.41              |
| 24:BA:1853:A:H8  | 24:BA:1853:A:OP2   | 2.03                     | 0.41              |
| 24:BA:1916:A:N3  | 24:BA:1916:A:H2'   | 2.35                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1951:U:H2'   | 24:BA:1951:U:O2    | 2.19                     | 0.41              |
| 24:BA:2000:G:C6    | 24:BA:2001:A:N7    | 2.89                     | 0.41              |
| 24:BA:2014:A:C2'   | 24:BA:2015:A:OP2   | 2.69                     | 0.41              |
| 24:BA:2026:C:O2    | 24:BA:2027:G:O4'   | 2.38                     | 0.41              |
| 24:BA:2033:A:C6    | 24:BA:2036:C:N3    | 2.88                     | 0.41              |
| 24:BA:2040:C:C2'   | 24:BA:2041:U:O5'   | 2.68                     | 0.41              |
| 24:BA:2077:A:C5    | 24:BA:2435:A:N7    | 2.88                     | 0.41              |
| 24:BA:2093:G:C2'   | 24:BA:2094:G:H5'   | 2.50                     | 0.41              |
| 24:BA:2094:G:N7    | 24:BA:2095:C:C4    | 2.88                     | 0.41              |
| 24:BA:2096:U:C2    | 24:BA:2097:C:H5    | 2.37                     | 0.41              |
| 24:BA:2161:C:N3    | 24:BA:2162:G:N7    | 2.68                     | 0.41              |
| 24:BA:2167:U:O2    | 24:BA:2167:U:H2'   | 2.20                     | 0.41              |
| 24:BA:2230:G:N1    | 24:BA:2231:C:C4    | 2.89                     | 0.41              |
| 24:BA:2280:G:C6    | 24:BA:2281:C:N4    | 2.88                     | 0.41              |
| 24:BA:2333:A:H1'   | 24:BA:2335:A:C2    | 2.41                     | 0.41              |
| 24:BA:2353:G:N1    | 24:BA:2365:G:C2    | 2.88                     | 0.41              |
| 24:BA:2354:G:O2'   | 24:BA:2355:C:H5'   | 2.20                     | 0.41              |
| 24:BA:2361:A:C4    | 24:BA:2362:G:C8    | 3.08                     | 0.41              |
| 24:BA:2472:G:C4    | 24:BA:2475:C:N3    | 2.88                     | 0.41              |
| 24:BA:2515:C:H2'   | 24:BA:2516:G:O5'   | 2.20                     | 0.41              |
| 24:BA:2644:G:N1    | 24:BA:2645:G:C2    | 2.88                     | 0.41              |
| 24:BA:2653:U:C4    | 24:BA:2654:A:N6    | 2.86                     | 0.41              |
| 24:BA:2660:A:H2'   | 24:BA:2661:G:C5'   | 2.50                     | 0.41              |
| 24:BA:2808:U:H1'   | 24:BA:2892:A:H61   | 1.85                     | 0.41              |
| 24:BA:2820:A:H62   | 28:BE:192:ASN:H    | 1.69                     | 0.41              |
| 24:BA:2850:A:C4    | 24:BA:2851:A:C8    | 3.08                     | 0.41              |
| 25:BB:29:A:P       | 39:BR:34:HIS:ND1   | 2.93                     | 0.41              |
| 25:BB:71:C:C3'     | 25:BB:72:G:C5'     | 2.95                     | 0.41              |
| 25:BB:82:G:H2'     | 25:BB:83:G:OP2     | 2.20                     | 0.41              |
| 26:BC:86:ALA:HB2   | 26:BC:149:ILE:HG12 | 2.01                     | 0.41              |
| 26:BC:189:ILE:HD13 | 26:BC:224:ILE:HD12 | 2.01                     | 0.41              |
| 27:BD:9:TYR:CD1    | 27:BD:25:THR:HG23  | 2.56                     | 0.41              |
| 27:BD:63:ARG:HB3   | 27:BD:88:ARG:HH21  | 1.85                     | 0.41              |
| 27:BD:75:ILE:O     | 27:BD:75:ILE:HG22  | 2.19                     | 0.41              |
| 27:BD:182:LEU:HD12 | 27:BD:270:ILE:CD1  | 2.47                     | 0.41              |
| 28:BE:13:ARG:NE    | 28:BE:21:VAL:N     | 2.68                     | 0.41              |
| 28:BE:23:VAL:HG11  | 28:BE:188:VAL:HG22 | 2.01                     | 0.41              |
| 28:BE:49:LEU:HD11  | 28:BE:76:ARG:H     | 1.85                     | 0.41              |
| 28:BE:105:THR:HG22 | 28:BE:199:ARG:CZ   | 2.50                     | 0.41              |
| 28:BE:176:ILE:HG23 | 28:BE:181:LEU:H    | 1.85                     | 0.41              |
| 28:BE:179:GLU:N    | 28:BE:179:GLU:CD   | 2.77                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 29:BF:38:ARG:O    | 29:BF:42:ALA:CB    | 2.68                     | 0.41              |
| 30:BG:9:ARG:CG    | 30:BG:9:ARG:NH1    | 2.80                     | 0.41              |
| 30:BG:36:LYS:HB2  | 30:BG:95:ARG:O     | 2.20                     | 0.41              |
| 30:BG:53:LEU:HD12 | 30:BG:53:LEU:N     | 2.35                     | 0.41              |
| 31:BH:10:PRO:C    | 31:BH:12:PRO:HD2   | 2.45                     | 0.41              |
| 32:BK:3:VAL:HG13  | 32:BK:31:LEU:HD12  | 2.01                     | 0.41              |
| 32:BK:136:VAL:O   | 32:BK:136:VAL:CG2  | 2.68                     | 0.41              |
| 33:BL:123:ALA:O   | 33:BL:127:ILE:HG13 | 2.21                     | 0.41              |
| 34:BM:57:ALA:HB1  | 34:BM:99:LEU:HD23  | 2.02                     | 0.41              |
| 34:BM:109:LYS:HG3 | 34:BM:112:LEU:HB2  | 1.98                     | 0.41              |
| 35:BN:4:PRO:C     | 35:BN:22:ILE:O     | 2.62                     | 0.41              |
| 35:BN:17:ARG:NH2  | 35:BN:98:VAL:O     | 2.52                     | 0.41              |
| 35:BN:85:VAL:CB   | 35:BN:93:PRO:HG3   | 2.46                     | 0.41              |
| 35:BN:111:PHE:HD1 | 35:BN:115:VAL:HG23 | 1.86                     | 0.41              |
| 36:BO:49:ARG:NH2  | 36:BO:49:ARG:CG    | 2.81                     | 0.41              |
| 36:BO:74:GLU:HB2  | 36:BO:107:LYS:HD3  | 2.01                     | 0.41              |
| 36:BO:81:GLN:CA   | 36:BO:86:LYS:HG2   | 2.48                     | 0.41              |
| 37:BP:43:THR:HG23 | 37:BP:46:GLN:NE2   | 2.34                     | 0.41              |
| 37:BP:110:THR:O   | 37:BP:111:GLU:HG2  | 2.19                     | 0.41              |
| 38:BQ:55:ALA:HA   | 38:BQ:80:PHE:CE1   | 2.54                     | 0.41              |
| 39:BR:41:ASP:CG   | 39:BR:42:ASP:H     | 2.26                     | 0.41              |
| 41:BT:24:TYR:N    | 41:BT:24:TYR:CD1   | 2.89                     | 0.41              |
| 41:BT:28:ARG:CB   | 41:BT:38:THR:HG21  | 2.37                     | 0.41              |
| 41:BT:34:LYS:HA   | 41:BT:37:GLU:HB2   | 2.02                     | 0.41              |
| 41:BT:39:LEU:HA   | 41:BT:39:LEU:HD23  | 1.53                     | 0.41              |
| 42:BU:37:VAL:CG1  | 42:BU:37:VAL:O     | 2.68                     | 0.41              |
| 42:BU:49:THR:CB   | 42:BU:50:PRO:CD    | 2.88                     | 0.41              |
| 43:BV:17:VAL:HG23 | 43:BV:18:ARG:N     | 2.33                     | 0.41              |
| 45:BX:13:VAL:N    | 45:BX:73:ARG:CZ    | 2.83                     | 0.41              |
| 45:BX:76:CYS:HB2  | 45:BX:100:ALA:CB   | 2.50                     | 0.41              |
| 48:B1:6:GLU:OE1   | 48:B1:6:GLU:HA     | 2.20                     | 0.41              |
| 48:B1:43:HIS:O    | 48:B1:44:LYS:C     | 2.63                     | 0.41              |
| 49:B2:7:LYS:CE    | 49:B2:32:GLN:HA    | 2.50                     | 0.41              |
| 50:B3:5:ILE:O     | 50:B3:56:VAL:HA    | 2.20                     | 0.41              |
| 50:B3:5:ILE:CB    | 50:B3:7:PRO:HD2    | 2.46                     | 0.41              |
| 52:B5:35:GLU:O    | 52:B5:36:LEU:O     | 2.38                     | 0.41              |
| 1:AA:46:G:N2      | 1:AA:366:C:C1'     | 2.83                     | 0.41              |
| 1:AA:48:C:H2'     | 1:AA:49:U:OP1      | 2.20                     | 0.41              |
| 1:AA:50:A:H61     | 1:AA:361:G:C5'     | 2.33                     | 0.41              |
| 1:AA:51:A:H4'     | 1:AA:52:G:O5'      | 2.16                     | 0.41              |
| 1:AA:66:G:O4'     | 1:AA:173:U:C4      | 2.72                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:AA:255:G:OP1   | 19:AT:69:LYS:NZ   | 2.53                     | 0.41              |
| 1:AA:265:G:H5''  | 19:AT:65:ILE:HA   | 2.03                     | 0.41              |
| 1:AA:274:A:O3'   | 1:AA:275:G:O4'    | 2.38                     | 0.41              |
| 1:AA:317:G:C2'   | 1:AA:318:G:C5'    | 2.99                     | 0.41              |
| 1:AA:328:C:O2'   | 1:AA:329:A:O5'    | 2.32                     | 0.41              |
| 1:AA:336:C:O2'   | 1:AA:337:C:H5'    | 2.20                     | 0.41              |
| 1:AA:452:A:C6    | 1:AA:453:A:N6     | 2.88                     | 0.41              |
| 1:AA:538:G:O3'   | 14:AO:114:LYS:CD  | 2.52                     | 0.41              |
| 1:AA:538:G:C3'   | 14:AO:114:LYS:HD3 | 2.48                     | 0.41              |
| 1:AA:547:A:C4'   | 1:AA:548:G:OP1    | 2.69                     | 0.41              |
| 1:AA:577:G:HO2'  | 1:AA:578:C:P      | 2.42                     | 0.41              |
| 1:AA:686:U:O4    | 1:AA:703:G:O2'    | 2.38                     | 0.41              |
| 1:AA:730:G:C2'   | 1:AA:731:G:H5'    | 2.49                     | 0.41              |
| 1:AA:739:C:O2    | 1:AA:739:C:C2'    | 2.69                     | 0.41              |
| 1:AA:856:C:O2    | 1:AA:856:C:H2'    | 2.19                     | 0.41              |
| 1:AA:892:A:C4    | 1:AA:907:A:C6     | 3.09                     | 0.41              |
| 1:AA:1081:G:OP1  | 7:AH:17:ALA:C     | 2.64                     | 0.41              |
| 1:AA:1095:U:H5'  | 1:AA:1109:C:C2    | 2.56                     | 0.41              |
| 1:AA:1401:G:C6   | 1:AA:1504:G:N2    | 2.88                     | 0.41              |
| 1:AA:1474:G:C6   | 1:AA:1475:G:N7    | 2.88                     | 0.41              |
| 1:AA:1507:A:N6   | 1:AA:1530:G:C5    | 2.88                     | 0.41              |
| 2:A1:37:U:C2'    | 2:A1:38:U:C6      | 3.04                     | 0.41              |
| 2:A1:39:U:C6     | 2:A1:39:U:C3'     | 3.04                     | 0.41              |
| 3:AC:28:G:N1     | 3:AC:43:C:C2      | 2.89                     | 0.41              |
| 4:AE:19:HIS:C    | 4:AE:20:GLU:CG    | 2.91                     | 0.41              |
| 4:AE:70:PHE:O    | 4:AE:92:TYR:CB    | 2.67                     | 0.41              |
| 4:AE:96:ARG:O    | 4:AE:98:LEU:N     | 2.53                     | 0.41              |
| 4:AE:117:GLU:CD  | 4:AE:117:GLU:C    | 2.88                     | 0.41              |
| 5:AF:66:VAL:O    | 5:AF:102:ASN:ND2  | 2.53                     | 0.41              |
| 5:AF:113:ALA:O   | 5:AF:114:PRO:C    | 2.63                     | 0.41              |
| 5:AF:165:THR:CG2 | 5:AF:166:GLU:N    | 2.81                     | 0.41              |
| 6:AG:4:TYR:CD2   | 6:AG:5:ILE:N      | 2.88                     | 0.41              |
| 6:AG:13:ARG:NH1  | 6:AG:36:ARG:HB2   | 2.28                     | 0.41              |
| 6:AG:18:LYS:HE2  | 6:AG:20:TYR:HB3   | 2.03                     | 0.41              |
| 6:AG:89:THR:O    | 6:AG:90:GLY:C     | 2.63                     | 0.41              |
| 6:AG:107:ARG:HD2 | 6:AG:173:TRP:CH2  | 2.55                     | 0.41              |
| 6:AG:169:LYS:HA  | 6:AG:176:LEU:HD11 | 2.02                     | 0.41              |
| 6:AG:191:ARG:O   | 6:AG:194:LEU:HD23 | 2.20                     | 0.41              |
| 7:AH:9:LYS:HD3   | 7:AH:108:ALA:HB1  | 2.02                     | 0.41              |
| 8:AI:7:ASN:O     | 8:AI:8:ILE:HG12   | 2.19                     | 0.41              |
| 9:AJ:27:ILE:HA   | 9:AJ:30:ILE:HD12  | 2.02                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 9:AJ:69:VAL:O     | 9:AJ:138:LYS:HD2   | 2.19                     | 0.41              |
| 9:AJ:87:VAL:HG21  | 9:AJ:154:TYR:CB    | 2.49                     | 0.41              |
| 9:AJ:95:ARG:C     | 9:AJ:97:GLN:N      | 2.75                     | 0.41              |
| 9:AJ:118:VAL:HG12 | 9:AJ:122:HIS:NE2   | 2.36                     | 0.41              |
| 10:AK:39:LEU:HB3  | 10:AK:40:ALA:H     | 1.75                     | 0.41              |
| 13:AN:33:THR:CA   | 13:AN:38:ASN:O     | 2.69                     | 0.41              |
| 13:AN:86:GLY:N    | 13:AN:112:THR:HG23 | 2.35                     | 0.41              |
| 15:AP:8:GLU:C     | 15:AP:10:PRO:HD3   | 2.45                     | 0.41              |
| 15:AP:56:LEU:O    | 15:AP:59:TYR:CB    | 2.51                     | 0.41              |
| 17:AR:71:GLN:CA   | 17:AR:78:TYR:CD1   | 3.03                     | 0.41              |
| 20:AU:53:ARG:O    | 20:AU:55:ARG:N     | 2.54                     | 0.41              |
| 21:AV:16:LEU:O    | 21:AV:19:VAL:N     | 2.53                     | 0.41              |
| 21:AV:22:LEU:C    | 21:AV:22:LEU:CD2   | 2.91                     | 0.41              |
| 21:AV:44:MET:O    | 21:AV:62:ILE:HD13  | 2.20                     | 0.41              |
| 22:AW:41:ILE:O    | 22:AW:91:LEU:CD1   | 2.68                     | 0.41              |
| 22:AW:79:ARG:HG3  | 22:AW:79:ARG:NH1   | 2.34                     | 0.41              |
| 24:BA:18:C:C2     | 24:BA:19:C:C6      | 3.08                     | 0.41              |
| 24:BA:58:G:OP1    | 44:BW:75:ASP:N     | 2.53                     | 0.41              |
| 24:BA:64:A:H2'    | 24:BA:65:C:O4'     | 2.21                     | 0.41              |
| 24:BA:119:A:O2'   | 24:BA:120:U:H3'    | 2.20                     | 0.41              |
| 24:BA:174:C:N3    | 24:BA:175:G:C8     | 2.88                     | 0.41              |
| 24:BA:322:A:O2'   | 24:BA:323:G:OP2    | 2.37                     | 0.41              |
| 24:BA:398:G:H2'   | 24:BA:399:G:O4'    | 2.21                     | 0.41              |
| 24:BA:408:G:O5'   | 24:BA:408:G:C8     | 2.64                     | 0.41              |
| 24:BA:480:A:C2'   | 24:BA:481:G:OP1    | 2.68                     | 0.41              |
| 24:BA:491:G:C4    | 24:BA:492:A:C8     | 3.08                     | 0.41              |
| 24:BA:519:U:O5'   | 43:BV:75:TYR:HD1   | 2.02                     | 0.41              |
| 24:BA:531:C:C2    | 24:BA:532:A:O2'    | 2.66                     | 0.41              |
| 24:BA:594:U:N3    | 24:BA:595:C:N4     | 2.69                     | 0.41              |
| 24:BA:622:G:C6    | 24:BA:623:G:N2     | 2.89                     | 0.41              |
| 24:BA:631:A:C8    | 24:BA:631:A:OP1    | 2.73                     | 0.41              |
| 24:BA:659:C:C4'   | 29:BF:102:PRO:HD3  | 2.50                     | 0.41              |
| 24:BA:699:A:H8    | 24:BA:699:A:O5'    | 2.03                     | 0.41              |
| 24:BA:774:A:H5'   | 24:BA:778:G:C4'    | 2.50                     | 0.41              |
| 24:BA:879:G:C2    | 24:BA:880:G:C4     | 3.08                     | 0.41              |
| 24:BA:930:U:O2    | 24:BA:932:G:N2     | 2.52                     | 0.41              |
| 24:BA:956:G:C8    | 24:BA:956:G:C3'    | 3.04                     | 0.41              |
| 24:BA:970:C:O2    | 24:BA:970:C:C2'    | 2.69                     | 0.41              |
| 24:BA:991:C:H5'   | 24:BA:1185:C:H2'   | 2.02                     | 0.41              |
| 24:BA:991:C:O4'   | 24:BA:1185:C:H2'   | 2.20                     | 0.41              |
| 24:BA:1074:G:C4   | 24:BA:1075:C:N4    | 2.87                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:1112:G:OP1 | 31:BH:4:ILE:HG21  | 2.20                     | 0.41              |
| 24:BA:1323:U:C5  | 24:BA:1324:G:N7   | 2.89                     | 0.41              |
| 24:BA:1348:G:O6  | 24:BA:1349:A:C6   | 2.74                     | 0.41              |
| 24:BA:1356:G:C5  | 24:BA:1357:U:C5   | 3.08                     | 0.41              |
| 24:BA:1356:G:H2' | 24:BA:1357:U:C5'  | 2.51                     | 0.41              |
| 24:BA:1363:C:N4  | 50:B3:2:LYS:CD    | 2.83                     | 0.41              |
| 24:BA:1489:U:H4' | 24:BA:1490:A:OP2  | 2.20                     | 0.41              |
| 24:BA:1496:A:H2' | 24:BA:1497:U:H5   | 1.84                     | 0.41              |
| 24:BA:1536:A:C5  | 24:BA:1537:C:C4   | 3.08                     | 0.41              |
| 24:BA:1558:A:H4' | 24:BA:1559:G:N7   | 2.36                     | 0.41              |
| 24:BA:1648:C:O2  | 24:BA:1648:C:H2'  | 2.20                     | 0.41              |
| 24:BA:1660:C:N3  | 24:BA:2001:A:C6   | 2.88                     | 0.41              |
| 24:BA:1675:C:O2  | 24:BA:1676:A:C8   | 2.73                     | 0.41              |
| 24:BA:1689:A:C6  | 24:BA:1698:A:C2   | 3.07                     | 0.41              |
| 24:BA:1786:A:C5  | 24:BA:1787:A:C5   | 3.08                     | 0.41              |
| 24:BA:1786:A:N7  | 24:BA:1787:A:N7   | 2.69                     | 0.41              |
| 24:BA:1952:A:C2  | 35:BN:22:ILE:HG23 | 2.56                     | 0.41              |
| 24:BA:1969:A:C4' | 24:BA:1970:A:H5'  | 2.37                     | 0.41              |
| 24:BA:1972:A:C2  | 24:BA:1973:G:N7   | 2.89                     | 0.41              |
| 24:BA:2010:G:OP2 | 43:BV:41:LYS:HE2  | 2.20                     | 0.41              |
| 24:BA:2015:A:H2' | 24:BA:2016:U:H6   | 1.86                     | 0.41              |
| 24:BA:2018:G:C5  | 24:BA:2019:A:C5   | 3.08                     | 0.41              |
| 24:BA:2033:A:C2' | 24:BA:2034:U:O5'  | 2.68                     | 0.41              |
| 24:BA:2090:G:C2  | 24:BA:2091:U:N3   | 2.89                     | 0.41              |
| 24:BA:2101:G:C6  | 24:BA:2102:U:C4   | 3.09                     | 0.41              |
| 24:BA:2115:G:O2' | 24:BA:2171:A:N6   | 2.52                     | 0.41              |
| 24:BA:2168:G:N2  | 24:BA:2170:A:C3'  | 2.79                     | 0.41              |
| 24:BA:2338:G:C6  | 24:BA:2339:G:N7   | 2.88                     | 0.41              |
| 24:BA:2371:G:N2  | 24:BA:2372:G:C2   | 2.88                     | 0.41              |
| 24:BA:2468:G:C3' | 24:BA:2476:A:C2   | 2.94                     | 0.41              |
| 24:BA:2512:C:O4' | 28:BE:139:GLY:HA3 | 2.20                     | 0.41              |
| 24:BA:2624:G:H1' | 51:B4:22:HIS:NE2  | 2.35                     | 0.41              |
| 24:BA:2708:G:OP1 | 38:BQ:68:ARG:CG   | 2.65                     | 0.41              |
| 24:BA:2721:A:H3' | 24:BA:2722:G:C8   | 2.55                     | 0.41              |
| 24:BA:2746:U:H2' | 24:BA:2747:G:H8   | 1.86                     | 0.41              |
| 24:BA:2781:A:O3' | 24:BA:2782:G:C4'  | 2.66                     | 0.41              |
| 25:BB:8:U:O2     | 25:BB:9:G:C8      | 2.74                     | 0.41              |
| 25:BB:44:G:H1'   | 25:BB:47:C:H42    | 1.85                     | 0.41              |
| 26:BC:52:ARG:CG  | 26:BC:53:ARG:N    | 2.84                     | 0.41              |
| 26:BC:62:VAL:CG2 | 26:BC:63:SER:N    | 2.82                     | 0.41              |
| 26:BC:138:PRO:HA | 26:BC:144:THR:HB  | 2.02                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 26:BC:214:VAL:HG23 | 26:BC:224:ILE:HG21 | 2.02                     | 0.41              |
| 27:BD:77:ALA:CB    | 27:BD:95:LEU:HD11  | 2.46                     | 0.41              |
| 27:BD:136:ILE:H    | 27:BD:168:ARG:NH2  | 2.17                     | 0.41              |
| 27:BD:201:HIS:HB3  | 27:BD:202:LYS:HD2  | 2.02                     | 0.41              |
| 27:BD:265:PRO:O    | 27:BD:267:SER:N    | 2.53                     | 0.41              |
| 28:BE:119:ARG:CZ   | 28:BE:155:LYS:CG   | 2.98                     | 0.41              |
| 28:BE:119:ARG:HE   | 28:BE:120:TRP:CA   | 2.34                     | 0.41              |
| 28:BE:161:GLY:C    | 28:BE:163:GLU:OE1  | 2.63                     | 0.41              |
| 29:BF:71:GLY:C     | 29:BF:73:ALA:N     | 2.75                     | 0.41              |
| 30:BG:57:ALA:CB    | 30:BG:67:LYS:C     | 2.93                     | 0.41              |
| 30:BG:133:LEU:HD13 | 30:BG:133:LEU:HA   | 1.93                     | 0.41              |
| 31:BH:22:GLY:O     | 31:BH:37:VAL:HG22  | 2.20                     | 0.41              |
| 31:BH:91:GLY:C     | 31:BH:93:GLY:N     | 2.77                     | 0.41              |
| 32:BK:75:LEU:C     | 32:BK:141:LYS:HE2  | 2.46                     | 0.41              |
| 32:BK:98:ALA:O     | 32:BK:102:SER:CB   | 2.68                     | 0.41              |
| 33:BL:9:LYS:HG2    | 33:BL:56:GLU:OE2   | 2.21                     | 0.41              |
| 33:BL:72:PRO:O     | 33:BL:73:PRO:C     | 2.63                     | 0.41              |
| 33:BL:104:VAL:O    | 33:BL:127:ILE:HD12 | 2.20                     | 0.41              |
| 34:BM:30:ILE:O     | 34:BM:33:LEU:HD12  | 2.21                     | 0.41              |
| 36:BO:45:LEU:HB3   | 36:BO:46:LYS:HE3   | 2.01                     | 0.41              |
| 36:BO:111:ARG:CD   | 36:BO:129:ALA:HB2  | 2.50                     | 0.41              |
| 36:BO:132:LYS:C    | 36:BO:134:ALA:N    | 2.76                     | 0.41              |
| 37:BP:130:LYS:HE2  | 37:BP:130:LYS:HB3  | 1.66                     | 0.41              |
| 38:BQ:53:HIS:CE1   | 38:BQ:56:LYS:HE2   | 2.54                     | 0.41              |
| 38:BQ:54:LEU:C     | 38:BQ:57:ARG:HB2   | 2.43                     | 0.41              |
| 38:BQ:61:HIS:C     | 38:BQ:64:ARG:NH1   | 2.78                     | 0.41              |
| 38:BQ:74:LYS:NZ    | 38:BQ:74:LYS:CB    | 2.72                     | 0.41              |
| 40:BS:45:PHE:HE1   | 40:BS:86:ILE:CG2   | 2.33                     | 0.41              |
| 41:BT:57:PHE:O     | 41:BT:60:LEU:N     | 2.54                     | 0.41              |
| 42:BU:78:LYS:HG3   | 42:BU:79:VAL:N     | 2.35                     | 0.41              |
| 43:BV:42:ARG:C     | 43:BV:44:ALA:H     | 2.29                     | 0.41              |
| 44:BW:7:VAL:CG2    | 48:B1:31:ARG:NH1   | 2.79                     | 0.41              |
| 46:BY:24:LEU:HD12  | 46:BY:41:LEU:CD2   | 2.50                     | 0.41              |
| 48:B1:3:LYS:O      | 48:B1:6:GLU:CB     | 2.68                     | 0.41              |
| 48:B1:10:LYS:HD3   | 48:B1:10:LYS:N     | 2.35                     | 0.41              |
| 48:B1:24:LYS:HA    | 48:B1:52:ILE:HD13  | 2.02                     | 0.41              |
| 48:B1:53:ALA:O     | 48:B1:54:ARG:C     | 2.61                     | 0.41              |
| 50:B3:6:HIS:CB     | 50:B3:56:VAL:HG13  | 2.48                     | 0.41              |
| 53:B6:43:THR:O     | 53:B6:46:VAL:CA    | 2.68                     | 0.41              |
| 54:B7:15:LYS:O     | 54:B7:22:VAL:CB    | 2.68                     | 0.41              |
| 54:B7:40:GLU:C     | 54:B7:42:ARG:N     | 2.78                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 55:B8:2:LYS:O    | 55:B8:3:VAL:CG2   | 2.58                     | 0.41              |
| 1:AA:68:G:C4'    | 1:AA:171:A:C1'    | 2.98                     | 0.41              |
| 1:AA:131:C:O2    | 1:AA:131:C:H2'    | 2.19                     | 0.41              |
| 1:AA:188:U:H2'   | 1:AA:189:U:O5'    | 2.20                     | 0.41              |
| 1:AA:253:U:H2'   | 1:AA:254:G:H8     | 1.85                     | 0.41              |
| 1:AA:292:G:C8    | 1:AA:293:G:H1'    | 2.55                     | 0.41              |
| 1:AA:317:G:C2    | 1:AA:318:G:C8     | 3.08                     | 0.41              |
| 1:AA:390:C:C2    | 1:AA:391:G:N7     | 2.88                     | 0.41              |
| 1:AA:541:G:H2'   | 1:AA:542:G:C8     | 2.53                     | 0.41              |
| 1:AA:552:U:H2'   | 1:AA:553:A:O4'    | 2.20                     | 0.41              |
| 1:AA:570:G:OP2   | 1:AA:820:U:O2'    | 2.39                     | 0.41              |
| 1:AA:728:A:C5'   | 17:AR:54:ARG:HH22 | 2.32                     | 0.41              |
| 1:AA:874:G:C6    | 1:AA:875:C:C4     | 3.08                     | 0.41              |
| 1:AA:897:C:H2'   | 1:AA:898:G:O5'    | 2.20                     | 0.41              |
| 1:AA:923:A:H5''  | 7:AH:21:ALA:HB2   | 2.02                     | 0.41              |
| 1:AA:959:A:N1    | 1:AA:1221:G:O2'   | 2.51                     | 0.41              |
| 1:AA:970:C:C5'   | 1:AA:972:C:C6     | 3.03                     | 0.41              |
| 1:AA:981:U:C5    | 1:AA:981:U:OP2    | 2.73                     | 0.41              |
| 1:AA:989:C:H2'   | 1:AA:990:C:C5'    | 2.48                     | 0.41              |
| 1:AA:1068:G:H2'  | 1:AA:1069:C:O4'   | 2.20                     | 0.41              |
| 1:AA:1151:A:N7   | 1:AA:1152:A:N7    | 2.69                     | 0.41              |
| 1:AA:1181:G:H2'  | 1:AA:1182:G:C5'   | 2.51                     | 0.41              |
| 1:AA:1255:G:N2   | 1:AA:1276:G:H21   | 2.16                     | 0.41              |
| 1:AA:1256:A:O2'  | 1:AA:1257:U:C1'   | 2.67                     | 0.41              |
| 1:AA:1314:C:OP2  | 21:AV:6:LYS:CB    | 2.68                     | 0.41              |
| 1:AA:1346:A:C8   | 1:AA:1348:U:C4    | 3.09                     | 0.41              |
| 1:AA:1377:A:H5'' | 1:AA:1378:C:C5    | 2.54                     | 0.41              |
| 1:AA:1415:G:H2'  | 1:AA:1416:G:C5'   | 2.51                     | 0.41              |
| 1:AA:1502:A:N1   | 1:AA:1504:G:C2    | 2.89                     | 0.41              |
| 1:AA:1521:G:N3   | 1:AA:1522:U:C6    | 2.89                     | 0.41              |
| 2:A1:21:G:C2'    | 2:A1:22:C:O4'     | 2.69                     | 0.41              |
| 2:A1:37:U:H2'    | 2:A1:38:U:N3      | 2.36                     | 0.41              |
| 3:AC:15:G:N3     | 3:AC:15:G:H2'     | 2.36                     | 0.41              |
| 3:AC:21:A:N6     | 3:AC:46:G:H1      | 2.17                     | 0.41              |
| 3:AB:12:U:O5'    | 3:AB:12:U:H6      | 2.03                     | 0.41              |
| 3:AB:32:U:C4     | 3:AB:33:U:C4      | 3.08                     | 0.41              |
| 3:AB:67:C:O2     | 3:AB:67:C:C2'     | 2.67                     | 0.41              |
| 4:AE:54:THR:O    | 4:AE:55:PHE:C     | 2.63                     | 0.41              |
| 4:AE:89:GLY:O    | 4:AE:90:MET:HG2   | 2.20                     | 0.41              |
| 4:AE:157:ARG:O   | 4:AE:158:LEU:CG   | 2.68                     | 0.41              |
| 4:AE:180:LEU:O   | 4:AE:181:PHE:CB   | 2.61                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 5:AF:94:LEU:O     | 5:AF:95:THR:CG2    | 2.67                     | 0.41              |
| 5:AF:97:LYS:O     | 5:AF:98:ASN:O      | 2.37                     | 0.41              |
| 6:AG:3:ARG:HG3    | 6:AG:3:ARG:HH11    | 1.85                     | 0.41              |
| 6:AG:4:TYR:CZ     | 6:AG:5:ILE:O       | 2.73                     | 0.41              |
| 6:AG:93:PHE:C     | 6:AG:95:GLY:N      | 2.78                     | 0.41              |
| 6:AG:106:TYR:CZ   | 6:AG:112:VAL:O     | 2.73                     | 0.41              |
| 7:AH:28:PHE:HE1   | 7:AH:49:PRO:O      | 2.04                     | 0.41              |
| 7:AH:58:ALA:O     | 7:AH:59:GLY:C      | 2.63                     | 0.41              |
| 7:AH:79:GLU:HG3   | 7:AH:93:PRO:HD3    | 2.00                     | 0.41              |
| 7:AH:135:THR:HG22 | 7:AH:139:LEU:HD11  | 2.02                     | 0.41              |
| 8:AI:4:TYR:CA     | 8:AI:93:SER:OG     | 2.68                     | 0.41              |
| 8:AI:76:ALA:CA    | 8:AI:79:LEU:HG     | 2.50                     | 0.41              |
| 9:AJ:72:ARG:HH11  | 9:AJ:72:ARG:CG     | 2.32                     | 0.41              |
| 9:AJ:88:PRO:HD2   | 9:AJ:152:ALA:HA    | 2.01                     | 0.41              |
| 10:AK:14:ARG:NE   | 10:AK:15:ASN:ND2   | 2.68                     | 0.41              |
| 10:AK:28:ALA:C    | 10:AK:32:LYS:CD    | 2.82                     | 0.41              |
| 11:AL:3:GLN:HG3   | 11:AL:20:ARG:HD3   | 2.02                     | 0.41              |
| 12:AM:34:VAL:HG13 | 12:AM:74:ILE:HG12  | 2.02                     | 0.41              |
| 13:AN:21:ILE:HD11 | 13:AN:82:VAL:HG11  | 2.03                     | 0.41              |
| 13:AN:54:ARG:O    | 13:AN:57:THR:N     | 2.54                     | 0.41              |
| 13:AN:57:THR:C    | 13:AN:59:TYR:H     | 2.26                     | 0.41              |
| 14:AO:5:PRO:C     | 14:AO:6:THR:HG23   | 2.45                     | 0.41              |
| 14:AO:7:ILE:O     | 14:AO:10:LEU:HB2   | 2.21                     | 0.41              |
| 14:AO:62:SER:O    | 14:AO:64:TYR:N     | 2.53                     | 0.41              |
| 14:AO:69:TYR:O    | 14:AO:100:ILE:HD11 | 2.21                     | 0.41              |
| 15:AP:10:PRO:O    | 15:AP:45:VAL:HG11  | 2.20                     | 0.41              |
| 16:AQ:41:ARG:HA   | 16:AQ:44:LEU:HD22  | 2.02                     | 0.41              |
| 16:AQ:47:LEU:HA   | 16:AQ:47:LEU:HD23  | 1.67                     | 0.41              |
| 18:AS:8:ARG:HH12  | 18:AS:11:SER:C     | 2.28                     | 0.41              |
| 19:AT:10:VAL:HG11 | 19:AT:53:LEU:N     | 2.36                     | 0.41              |
| 19:AT:27:PHE:O    | 19:AT:36:ILE:HG12  | 2.20                     | 0.41              |
| 19:AT:36:ILE:N    | 19:AT:36:ILE:CD1   | 2.65                     | 0.41              |
| 19:AT:78:GLU:HG3  | 19:AT:79:SER:N     | 2.34                     | 0.41              |
| 22:AW:51:GLU:H    | 22:AW:51:GLU:HG2   | 1.65                     | 0.41              |
| 22:AW:53:LEU:HB2  | 22:AW:100:ILE:CD1  | 2.50                     | 0.41              |
| 22:AW:74:LYS:HD3  | 22:AW:74:LYS:H     | 1.86                     | 0.41              |
| 24:BA:199:A:C2    | 24:BA:2433:A:C4    | 3.07                     | 0.41              |
| 24:BA:202:U:H2'   | 24:BA:203:C:N1     | 2.36                     | 0.41              |
| 24:BA:222:A:N6    | 24:BA:232:G:N3     | 2.69                     | 0.41              |
| 24:BA:247:G:C6    | 54:B7:11:LYS:NZ    | 2.87                     | 0.41              |
| 24:BA:266:G:H2'   | 24:BA:267:C:O5'    | 2.21                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:292:C:C3'  | 24:BA:293:U:C2    | 3.02                     | 0.41              |
| 24:BA:357:A:C5   | 24:BA:358:U:C5    | 3.08                     | 0.41              |
| 24:BA:412:A:H2'  | 24:BA:413:C:H5'   | 2.01                     | 0.41              |
| 24:BA:573:G:C3'  | 24:BA:574:C:H5''  | 2.51                     | 0.41              |
| 24:BA:577:G:C6   | 24:BA:578:A:C5    | 3.09                     | 0.41              |
| 24:BA:598:G:O2'  | 36:BO:14:LYS:CE   | 2.67                     | 0.41              |
| 24:BA:724:U:O2   | 24:BA:725:G:O4'   | 2.38                     | 0.41              |
| 24:BA:730:C:O5'  | 24:BA:761:A:OP1   | 2.38                     | 0.41              |
| 24:BA:820:A:C2'  | 24:BA:821:A:C5'   | 2.86                     | 0.41              |
| 24:BA:849:A:H3'  | 24:BA:850:C:H6    | 1.85                     | 0.41              |
| 24:BA:860:U:H6   | 24:BA:2267:A:C5'  | 2.33                     | 0.41              |
| 24:BA:885:C:N4   | 24:BA:889:C:C1'   | 2.80                     | 0.41              |
| 24:BA:914:C:H5   | 24:BA:915:C:H5    | 1.64                     | 0.41              |
| 24:BA:942:G:O3'  | 36:BO:32:THR:CA   | 2.68                     | 0.41              |
| 24:BA:954:G:C6   | 24:BA:964:C:N3    | 2.87                     | 0.41              |
| 24:BA:958:U:C6   | 37:BP:41:TRP:HH2  | 2.39                     | 0.41              |
| 24:BA:1028:A:O2' | 24:BA:1029:A:H5'  | 2.19                     | 0.41              |
| 24:BA:1112:G:O4' | 24:BA:1112:G:P    | 2.79                     | 0.41              |
| 24:BA:1133:U:O2' | 24:BA:1136:G:OP1  | 2.34                     | 0.41              |
| 24:BA:1152:C:OP1 | 41:BT:81:HIS:CE1  | 2.73                     | 0.41              |
| 24:BA:1157:G:C2  | 24:BA:1158:C:C2   | 3.09                     | 0.41              |
| 24:BA:1168:G:H8  | 24:BA:1168:G:O5'  | 2.04                     | 0.41              |
| 24:BA:1255:U:OP1 | 24:BA:1256:G:H4'  | 2.20                     | 0.41              |
| 24:BA:1343:G:C2  | 24:BA:1405:U:C6   | 3.08                     | 0.41              |
| 24:BA:1467:C:OP1 | 24:BA:1467:C:H4'  | 2.20                     | 0.41              |
| 24:BA:1521:G:H8  | 24:BA:1522:G:O4'  | 2.03                     | 0.41              |
| 24:BA:1535:U:N3  | 24:BA:1536:A:C4   | 2.88                     | 0.41              |
| 24:BA:1629:U:H1' | 24:BA:2699:C:P    | 2.61                     | 0.41              |
| 24:BA:1731:G:N2  | 24:BA:1732:A:OP2  | 2.50                     | 0.41              |
| 24:BA:1754:C:H5  | 40:BS:98:LYS:CD   | 2.33                     | 0.41              |
| 24:BA:1777:U:O2' | 24:BA:1778:U:C5'  | 2.54                     | 0.41              |
| 24:BA:1854:A:H2' | 24:BA:1855:G:O4'  | 2.20                     | 0.41              |
| 24:BA:1889:A:H2' | 24:BA:1890:A:H8   | 1.77                     | 0.41              |
| 24:BA:1900:A:C2  | 24:BA:1970:A:N6   | 2.89                     | 0.41              |
| 24:BA:1903:G:C5  | 24:BA:1904:G:N7   | 2.88                     | 0.41              |
| 24:BA:1913:A:N3  | 24:BA:1913:A:C2'  | 2.84                     | 0.41              |
| 24:BA:1967:C:N3  | 24:BA:1968:G:N3   | 2.68                     | 0.41              |
| 24:BA:1995:U:C5  | 24:BA:1996:C:H5   | 2.33                     | 0.41              |
| 24:BA:2017:U:C2' | 51:B4:8:LYS:O     | 2.68                     | 0.41              |
| 24:BA:2056:G:N3  | 24:BA:2056:G:C2'  | 2.79                     | 0.41              |
| 24:BA:2075:U:C2' | 24:BA:2076:U:H5'' | 2.40                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2082:A:H2'  | 24:BA:2083:G:C8    | 2.54                     | 0.41              |
| 24:BA:2093:G:C1'  | 32:BK:29:TYR:CD2   | 3.03                     | 0.41              |
| 24:BA:2169:A:N1   | 24:BA:2170:A:C6    | 2.88                     | 0.41              |
| 24:BA:2285:C:H4'  | 24:BA:2288:A:C6    | 2.55                     | 0.41              |
| 24:BA:2320:A:C2   | 24:BA:2334:G:OP1   | 2.74                     | 0.41              |
| 24:BA:2392:A:C2'  | 24:BA:2393:A:H5'   | 2.51                     | 0.41              |
| 24:BA:2392:A:N1   | 24:BA:2424:C:O2    | 2.53                     | 0.41              |
| 24:BA:2491:U:C5   | 24:BA:2492:U:O5'   | 2.73                     | 0.41              |
| 24:BA:2505:G:C8   | 24:BA:2505:G:C3'   | 3.03                     | 0.41              |
| 24:BA:2510:C:N4   | 24:BA:2575:C:N3    | 2.68                     | 0.41              |
| 24:BA:2527:C:H3'  | 24:BA:2527:C:P     | 2.59                     | 0.41              |
| 24:BA:2533:A:OP1  | 24:BA:2665:A:H4'   | 2.21                     | 0.41              |
| 24:BA:2545:G:HO2' | 24:BA:2565:A:N6    | 2.17                     | 0.41              |
| 24:BA:2627:G:O2'  | 24:BA:2628:C:H5'   | 2.20                     | 0.41              |
| 24:BA:2631:G:C5   | 24:BA:2632:A:C8    | 3.08                     | 0.41              |
| 24:BA:2723:C:O3'  | 38:BQ:2:ARG:N      | 2.53                     | 0.41              |
| 24:BA:2729:G:H2'  | 24:BA:2730:C:O4'   | 2.20                     | 0.41              |
| 24:BA:2784:C:O2'  | 28:BE:36:ARG:NH2   | 2.53                     | 0.41              |
| 24:BA:2812:G:C6   | 24:BA:2813:A:C6    | 3.08                     | 0.41              |
| 24:BA:2822:G:OP2  | 24:BA:2822:G:C8    | 2.73                     | 0.41              |
| 24:BA:2847:U:C6   | 24:BA:2848:G:C8    | 3.09                     | 0.41              |
| 24:BA:2899:G:H2'  | 24:BA:2900:A:H8    | 1.84                     | 0.41              |
| 25:BB:6:C:N3      | 25:BB:115:G:N2     | 2.69                     | 0.41              |
| 25:BB:45:A:N6     | 25:BB:46:A:C2      | 2.88                     | 0.41              |
| 25:BB:46:A:O2'    | 25:BB:47:C:C5'     | 2.68                     | 0.41              |
| 25:BB:65:C:C4     | 25:BB:108:C:C5     | 3.09                     | 0.41              |
| 25:BB:85:G:N1     | 25:BB:86:G:C5      | 2.88                     | 0.41              |
| 25:BB:103:U:H4'   | 46:BY:97:GLU:OE2   | 2.20                     | 0.41              |
| 26:BC:36:LYS:HD2  | 26:BC:36:LYS:HA    | 1.85                     | 0.41              |
| 26:BC:41:VAL:CG1  | 26:BC:216:THR:HG22 | 2.47                     | 0.41              |
| 26:BC:43:VAL:O    | 26:BC:44:HIS:ND1   | 2.53                     | 0.41              |
| 26:BC:59:ARG:NH2  | 26:BC:164:ARG:NH1  | 2.69                     | 0.41              |
| 26:BC:68:LEU:CD2  | 26:BC:156:ILE:O    | 2.67                     | 0.41              |
| 26:BC:163:PHE:HE1 | 26:BC:196:LEU:N    | 2.19                     | 0.41              |
| 27:BD:85:ASP:OD2  | 27:BD:87:ASN:ND2   | 2.53                     | 0.41              |
| 27:BD:134:ARG:HA  | 27:BD:168:ARG:NH2  | 2.34                     | 0.41              |
| 27:BD:161:THR:N   | 27:BD:196:VAL:CG2  | 2.83                     | 0.41              |
| 27:BD:212:SER:O   | 27:BD:215:LEU:HB2  | 2.20                     | 0.41              |
| 28:BE:5:LEU:CD1   | 28:BE:196:VAL:C    | 2.93                     | 0.41              |
| 28:BE:61:ARG:CB   | 28:BE:62:PRO:CD    | 2.99                     | 0.41              |
| 28:BE:119:ARG:CD  | 28:BE:156:MET:N    | 2.83                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 28:BE:200:GLU:CD   | 28:BE:200:GLU:N    | 2.76                     | 0.41              |
| 29:BF:39:TRP:HZ3   | 29:BF:43:LYS:HB2   | 1.86                     | 0.41              |
| 29:BF:78:ILE:HD13  | 29:BF:83:PHE:HZ    | 1.85                     | 0.41              |
| 29:BF:132:VAL:HG22 | 29:BF:135:LYS:HB3  | 2.02                     | 0.41              |
| 29:BF:149:ASP:HA   | 29:BF:172:TRP:NE1  | 2.36                     | 0.41              |
| 30:BG:44:GLY:CA    | 30:BG:72:ARG:CB    | 2.97                     | 0.41              |
| 30:BG:86:MET:H     | 30:BG:87:PRO:HD2   | 1.81                     | 0.41              |
| 30:BG:110:ALA:CB   | 30:BG:139:LEU:HD11 | 2.51                     | 0.41              |
| 31:BH:7:LEU:HB3    | 31:BH:65:HIS:CD2   | 2.55                     | 0.41              |
| 32:BK:40:THR:HG22  | 32:BK:41:GLU:H     | 1.84                     | 0.41              |
| 33:BL:37:PHE:HE2   | 33:BL:65:PHE:CA    | 2.32                     | 0.41              |
| 34:BM:21:LYS:CB    | 34:BM:26:LEU:HD22  | 2.50                     | 0.41              |
| 34:BM:22:THR:CG2   | 34:BM:61:ARG:CZ    | 2.98                     | 0.41              |
| 34:BM:103:VAL:HG22 | 34:BM:104:LYS:CE   | 2.49                     | 0.41              |
| 35:BN:85:VAL:CG1   | 35:BN:93:PRO:HB3   | 2.47                     | 0.41              |
| 35:BN:103:ALA:CB   | 35:BN:107:ARG:CZ   | 2.98                     | 0.41              |
| 37:BP:8:LYS:HZ1    | 37:BP:72:LYS:C     | 2.28                     | 0.41              |
| 37:BP:79:LEU:O     | 37:BP:80:GLU:HG3   | 2.20                     | 0.41              |
| 37:BP:80:GLU:C     | 37:BP:80:GLU:CD    | 2.88                     | 0.41              |
| 37:BP:88:GLY:O     | 37:BP:89:ASN:HB2   | 2.20                     | 0.41              |
| 37:BP:130:LYS:O    | 37:BP:131:ILE:HG13 | 2.21                     | 0.41              |
| 39:BR:14:VAL:CG1   | 39:BR:15:ARG:N     | 2.64                     | 0.41              |
| 39:BR:27:SER:C     | 39:BR:28:VAL:O     | 2.63                     | 0.41              |
| 39:BR:36:TYR:CD1   | 39:BR:37:ALA:N     | 2.89                     | 0.41              |
| 39:BR:81:GLY:O     | 39:BR:82:ILE:C     | 2.61                     | 0.41              |
| 40:BS:33:LYS:HB2   | 40:BS:45:PHE:CD1   | 2.56                     | 0.41              |
| 41:BT:61:TRP:O     | 41:BT:64:ARG:N     | 2.53                     | 0.41              |
| 41:BT:62:ILE:HG22  | 41:BT:63:VAL:HG23  | 2.03                     | 0.41              |
| 41:BT:111:GLU:O    | 41:BT:112:ARG:C    | 2.62                     | 0.41              |
| 42:BU:12:TYR:HE1   | 42:BU:14:VAL:CB    | 2.30                     | 0.41              |
| 43:BV:88:ARG:O     | 43:BV:89:ALA:CB    | 2.69                     | 0.41              |
| 44:BW:5:TYR:O      | 44:BW:7:VAL:HG12   | 2.19                     | 0.41              |
| 44:BW:47:PHE:CZ    | 44:BW:92:LEU:HD11  | 2.45                     | 0.41              |
| 45:BX:19:LYS:NZ    | 45:BX:39:VAL:HG12  | 2.36                     | 0.41              |
| 46:BY:9:TYR:C      | 46:BY:10:ARG:CG    | 2.94                     | 0.41              |
| 46:BY:94:GLU:C     | 46:BY:130:PRO:HG3  | 2.44                     | 0.41              |
| 47:BZ:21:LEU:HD11  | 47:BZ:40:GLN:N     | 2.36                     | 0.41              |
| 48:B1:15:GLU:O     | 48:B1:17:GLU:N     | 2.54                     | 0.41              |
| 48:B1:23:LYS:HB3   | 48:B1:23:LYS:HZ2   | 1.84                     | 0.41              |
| 48:B1:30:LEU:HD13  | 48:B1:45:ILE:HA    | 2.03                     | 0.41              |
| 48:B1:58:VAL:O     | 48:B1:60:ASN:N     | 2.53                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|------------------|--------------------------|-------------------|
| 49:B2:2:PRO:O     | 49:B2:39:ASP:HB2 | 2.20                     | 0.41              |
| 49:B2:55:ARG:HH21 | 49:B2:55:ARG:CG  | 2.30                     | 0.41              |
| 51:B4:29:THR:O    | 51:B4:30:LEU:HG  | 2.21                     | 0.41              |
| 51:B4:55:ARG:C    | 51:B4:56:LYS:HG2 | 2.43                     | 0.41              |
| 1:AA:20:U:O2'     | 1:AA:21:G:C5'    | 2.65                     | 0.41              |
| 1:AA:46:G:C4      | 1:AA:396:G:N1    | 2.88                     | 0.41              |
| 1:AA:50:A:N1      | 1:AA:360:A:O2'   | 2.31                     | 0.41              |
| 1:AA:63:C:N3      | 1:AA:105:G:C6    | 2.88                     | 0.41              |
| 1:AA:103:C:C1'    | 1:AA:151:A:C2    | 3.01                     | 0.41              |
| 1:AA:118:U:C4     | 1:AA:288:A:H2'   | 2.52                     | 0.41              |
| 1:AA:134:A:C5     | 1:AA:325:A:C2    | 3.09                     | 0.41              |
| 1:AA:149:A:C6     | 1:AA:150:C:N4    | 2.88                     | 0.41              |
| 1:AA:248:C:O4'    | 1:AA:282:A:H2    | 2.03                     | 0.41              |
| 1:AA:273:A:C1'    | 19:AT:16:GLN:OE1 | 2.66                     | 0.41              |
| 1:AA:319:G:C2'    | 1:AA:320:C:C5'   | 2.98                     | 0.41              |
| 1:AA:448:A:C5     | 1:AA:487:A:C2    | 3.08                     | 0.41              |
| 1:AA:449:C:N1     | 1:AA:450:G:H1'   | 2.27                     | 0.41              |
| 1:AA:509:A:N7     | 1:AA:510:A:N6    | 2.68                     | 0.41              |
| 1:AA:558:G:H5''   | 1:AA:559:A:C5'   | 2.51                     | 0.41              |
| 1:AA:667:G:C2     | 1:AA:740:U:C2    | 3.09                     | 0.41              |
| 1:AA:690:G:C2'    | 1:AA:691:G:O5'   | 2.69                     | 0.41              |
| 1:AA:723:U:H6     | 2:A1:30:U:C4'    | 2.34                     | 0.41              |
| 1:AA:815:A:N6     | 1:AA:1529:G:C4   | 2.89                     | 0.41              |
| 1:AA:833:U:H2'    | 1:AA:834:C:H6    | 1.85                     | 0.41              |
| 1:AA:834:C:O2'    | 1:AA:835:U:C4'   | 2.69                     | 0.41              |
| 1:AA:838:G:N2     | 1:AA:849:C:C2    | 2.88                     | 0.41              |
| 1:AA:869:G:H5''   | 1:AA:870:U:OP1   | 2.21                     | 0.41              |
| 1:AA:986:A:H2'    | 1:AA:987:G:C8    | 2.56                     | 0.41              |
| 1:AA:993:G:C2     | 1:AA:1046:A:C2   | 3.08                     | 0.41              |
| 1:AA:1165:C:H2'   | 1:AA:1166:G:C5'  | 2.50                     | 0.41              |
| 1:AA:1181:G:O2'   | 1:AA:1182:G:H5'  | 2.20                     | 0.41              |
| 1:AA:1202:G:O2'   | 1:AA:1203:C:O5'  | 2.38                     | 0.41              |
| 1:AA:1301:U:C5    | 1:AA:1303:C:C5   | 3.09                     | 0.41              |
| 1:AA:1363:A:H4'   | 1:AA:1364:U:O5'  | 2.21                     | 0.41              |
| 1:AA:1536:C:C2    | 1:AA:1537:U:C5   | 3.08                     | 0.41              |
| 1:AA:1537:U:N3    | 1:AA:1538:C:C5   | 2.89                     | 0.41              |
| 2:A1:15:U:O5'     | 2:A1:15:U:H6     | 2.04                     | 0.41              |
| 2:A1:35:U:H6      | 2:A1:35:U:P      | 2.43                     | 0.41              |
| 3:AC:6:G:C4       | 3:AC:7:A:N7      | 2.88                     | 0.41              |
| 3:AD:5:G:N3       | 3:AD:5:G:H2'     | 2.36                     | 0.41              |
| 3:AD:48:C:N4      | 3:AD:59:U:C2     | 2.88                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:AD:76:A:OP1     | 24:BA:2421:G:N2   | 2.53                     | 0.41              |
| 4:AE:20:GLU:OE2   | 4:AE:205:ASP:OD2  | 2.39                     | 0.41              |
| 4:AE:36:ARG:NE    | 4:AE:36:ARG:HA    | 2.35                     | 0.41              |
| 4:AE:42:ILE:HD12  | 4:AE:203:GLY:N    | 2.36                     | 0.41              |
| 4:AE:59:GLU:N     | 4:AE:221:LEU:HD11 | 2.36                     | 0.41              |
| 4:AE:158:LEU:O    | 4:AE:160:ASP:OD2  | 2.38                     | 0.41              |
| 4:AE:162:ILE:N    | 4:AE:162:ILE:CD1  | 2.80                     | 0.41              |
| 4:AE:201:ILE:HD12 | 4:AE:201:ILE:H    | 1.86                     | 0.41              |
| 5:AF:6:HIS:CB     | 16:AQ:49:HIS:CE1  | 3.01                     | 0.41              |
| 5:AF:72:LYS:O     | 5:AF:76:VAL:CB    | 2.68                     | 0.41              |
| 5:AF:142:MET:HG3  | 5:AF:143:GLU:N    | 2.35                     | 0.41              |
| 6:AG:63:LYS:H     | 6:AG:63:LYS:CD    | 2.32                     | 0.41              |
| 6:AG:150:GLU:C    | 6:AG:152:SER:N    | 2.76                     | 0.41              |
| 6:AG:200:GLU:C    | 6:AG:204:ILE:CD1  | 2.94                     | 0.41              |
| 9:AJ:37:ASN:C     | 9:AJ:39:ALA:N     | 2.77                     | 0.41              |
| 9:AJ:69:VAL:HA    | 9:AJ:135:VAL:HG13 | 2.02                     | 0.41              |
| 10:AK:120:THR:O   | 10:AK:121:ASP:C   | 2.64                     | 0.41              |
| 11:AL:24:GLY:C    | 11:AL:25:LYS:HD2  | 2.46                     | 0.41              |
| 11:AL:50:LEU:CD2  | 11:AL:56:LEU:HB2  | 2.51                     | 0.41              |
| 11:AL:118:LYS:HD3 | 11:AL:118:LYS:HA  | 1.79                     | 0.41              |
| 13:AN:22:HIS:HA   | 13:AN:85:ARG:O    | 2.21                     | 0.41              |
| 14:AO:6:THR:CB    | 14:AO:9:GLN:OE1   | 2.69                     | 0.41              |
| 14:AO:46:LYS:CE   | 14:AO:47:LYS:NZ   | 2.75                     | 0.41              |
| 14:AO:126:LYS:O   | 14:AO:128:ALA:N   | 2.54                     | 0.41              |
| 15:AP:14:ARG:NE   | 15:AP:44:ARG:HH11 | 2.19                     | 0.41              |
| 17:AR:79:ARG:HB2  | 17:AR:79:ARG:CZ   | 2.51                     | 0.41              |
| 18:AS:34:GLU:OE1  | 18:AS:36:ILE:HG23 | 2.20                     | 0.41              |
| 18:AS:35:LYS:NZ   | 18:AS:37:GLY:CA   | 2.83                     | 0.41              |
| 19:AT:48:GLU:C    | 19:AT:48:GLU:CD   | 2.89                     | 0.41              |
| 20:AU:22:VAL:C    | 20:AU:24:ALA:H    | 2.29                     | 0.41              |
| 24:BA:52:A:C5     | 24:BA:118:A:C2    | 3.08                     | 0.41              |
| 24:BA:84:A:O3'    | 24:BA:85:G:O4'    | 2.38                     | 0.41              |
| 24:BA:149:A:C8    | 24:BA:149:A:C3'   | 2.98                     | 0.41              |
| 24:BA:180:G:N2    | 24:BA:214:G:O6    | 2.53                     | 0.41              |
| 24:BA:196:A:N6    | 24:BA:831:G:O2'   | 2.53                     | 0.41              |
| 24:BA:198:C:C6    | 24:BA:198:C:O5'   | 2.74                     | 0.41              |
| 24:BA:225:A:N6    | 24:BA:226:G:C6    | 2.89                     | 0.41              |
| 24:BA:331:A:C4    | 24:BA:1209:G:N1   | 2.89                     | 0.41              |
| 24:BA:447:A:C1'   | 24:BA:449:A:N6    | 2.70                     | 0.41              |
| 24:BA:452:G:N2    | 24:BA:458:G:H21   | 2.19                     | 0.41              |
| 24:BA:511:U:C5    | 24:BA:512:G:H1'   | 2.55                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 24:BA:521:G:C2   | 24:BA:522:G:C8     | 3.09                     | 0.41              |
| 24:BA:533:G:C5   | 24:BA:534:U:C4     | 3.08                     | 0.41              |
| 24:BA:558:G:N3   | 24:BA:559:G:C8     | 2.89                     | 0.41              |
| 24:BA:571:A:C6   | 24:BA:2030:A:N1    | 2.89                     | 0.41              |
| 24:BA:663:G:C4'  | 36:BO:18:ARG:NE    | 2.69                     | 0.41              |
| 24:BA:703:U:O4   | 24:BA:730:C:N4     | 2.54                     | 0.41              |
| 24:BA:729:G:C5   | 24:BA:730:C:H1'    | 2.54                     | 0.41              |
| 24:BA:733:G:C8   | 24:BA:761:A:C6     | 3.08                     | 0.41              |
| 24:BA:757:U:H2'  | 24:BA:758:C:O5'    | 2.20                     | 0.41              |
| 24:BA:864:G:C2'  | 24:BA:865:C:O4'    | 2.64                     | 0.41              |
| 24:BA:928:G:C8   | 24:BA:929:G:C8     | 3.09                     | 0.41              |
| 24:BA:987:G:C5   | 24:BA:988:A:C8     | 3.08                     | 0.41              |
| 24:BA:994:C:C5'  | 24:BA:995:C:OP1    | 2.68                     | 0.41              |
| 24:BA:996:A:C5   | 24:BA:1160:G:C2    | 3.08                     | 0.41              |
| 24:BA:1022:G:N7  | 34:BM:65:LYS:CE    | 2.78                     | 0.41              |
| 24:BA:1056:G:H5' | 24:BA:1057:A:OP1   | 2.20                     | 0.41              |
| 24:BA:1066:U:O2' | 24:BA:1068:G:C8    | 2.60                     | 0.41              |
| 24:BA:1083:U:H1' | 24:BA:1085:A:C6    | 2.56                     | 0.41              |
| 24:BA:1260:G:C2  | 24:BA:1261:C:C6    | 3.09                     | 0.41              |
| 24:BA:1287:A:N3  | 24:BA:1287:A:C2'   | 2.82                     | 0.41              |
| 24:BA:1314:C:N3  | 24:BA:1315:C:C4    | 2.88                     | 0.41              |
| 24:BA:1519:G:H3' | 24:BA:1520:U:O4'   | 2.18                     | 0.41              |
| 24:BA:1562:A:H2' | 24:BA:1563:G:H8    | 1.85                     | 0.41              |
| 24:BA:1605:C:C5  | 24:BA:1606:G:C5    | 3.09                     | 0.41              |
| 24:BA:1656:C:C5' | 28:BE:136:ARG:CZ   | 2.98                     | 0.41              |
| 24:BA:1670:C:C3' | 24:BA:1671:U:H5'   | 2.51                     | 0.41              |
| 24:BA:1718:G:C2' | 24:BA:1725:G:H8    | 2.05                     | 0.41              |
| 24:BA:1798:U:O5' | 27:BD:257:LEU:HD12 | 2.19                     | 0.41              |
| 24:BA:1808:U:C2  | 24:BA:1810:A:H2    | 2.38                     | 0.41              |
| 24:BA:1901:A:O2' | 27:BD:244:ARG:HD2  | 2.20                     | 0.41              |
| 24:BA:1946:U:C2' | 24:BA:1947:C:O5'   | 2.68                     | 0.41              |
| 24:BA:1993:U:C6  | 24:BA:1994:C:C5    | 2.93                     | 0.41              |
| 24:BA:2003:G:O6  | 24:BA:2004:G:C6    | 2.74                     | 0.41              |
| 24:BA:2027:G:C4  | 24:BA:2028:U:C6    | 3.08                     | 0.41              |
| 24:BA:2041:U:OP2 | 24:BA:2041:U:H6    | 2.03                     | 0.41              |
| 24:BA:2056:G:N2  | 24:BA:2057:A:C4    | 2.88                     | 0.41              |
| 24:BA:2088:G:O2' | 24:BA:2089:U:H5'   | 2.21                     | 0.41              |
| 24:BA:2175:C:O2  | 24:BA:2175:C:C2'   | 2.66                     | 0.41              |
| 24:BA:2199:A:C4  | 24:BA:2205:C:C6    | 3.09                     | 0.41              |
| 24:BA:2249:U:O2' | 24:BA:2275:C:C2    | 2.73                     | 0.41              |
| 24:BA:2469:A:N7  | 24:BA:2470:G:C8    | 2.88                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2511:U:O4    | 24:BA:2512:C:N4    | 2.54                     | 0.41              |
| 24:BA:2525:G:C2    | 24:BA:2539:C:C4    | 3.07                     | 0.41              |
| 24:BA:2615:U:H6    | 24:BA:2615:U:H5'   | 1.84                     | 0.41              |
| 24:BA:2842:G:C2    | 24:BA:2843:G:H1'   | 2.55                     | 0.41              |
| 25:BB:46:A:C2'     | 25:BB:47:C:O5'     | 2.68                     | 0.41              |
| 25:BB:73:A:C5      | 25:BB:104:A:N3     | 2.88                     | 0.41              |
| 26:BC:181:PRO:HB2  | 26:BC:184:LYS:HG3  | 2.02                     | 0.41              |
| 26:BC:223:ARG:CB   | 26:BC:223:ARG:NH1  | 2.84                     | 0.41              |
| 27:BD:5:LYS:O      | 27:BD:6:PHE:O      | 2.39                     | 0.41              |
| 27:BD:68:LYS:HG2   | 27:BD:152:GLY:HA2  | 2.03                     | 0.41              |
| 27:BD:155:LEU:O    | 27:BD:155:LEU:CG   | 2.66                     | 0.41              |
| 27:BD:159:ALA:CB   | 27:BD:202:LYS:NZ   | 2.80                     | 0.41              |
| 27:BD:178:PRO:O    | 27:BD:179:SER:C    | 2.63                     | 0.41              |
| 27:BD:232:PRO:CG   | 27:BD:246:PRO:O    | 2.68                     | 0.41              |
| 28:BE:5:LEU:O      | 28:BE:195:LEU:HD22 | 2.21                     | 0.41              |
| 28:BE:13:ARG:NE    | 28:BE:21:VAL:CA    | 2.83                     | 0.41              |
| 28:BE:154:LYS:CD   | 28:BE:154:LYS:O    | 2.69                     | 0.41              |
| 29:BF:136:THR:O    | 29:BF:139:PHE:N    | 2.53                     | 0.41              |
| 29:BF:163:VAL:HG21 | 29:BF:195:ASP:CG   | 2.45                     | 0.41              |
| 29:BF:199:TRP:O    | 29:BF:203:GLN:OE1  | 2.39                     | 0.41              |
| 30:BG:11:TYR:O     | 30:BG:15:VAL:CG2   | 2.67                     | 0.41              |
| 30:BG:26:GLN:HE21  | 30:BG:31:VAL:HG21  | 1.82                     | 0.41              |
| 30:BG:55:LYS:HE2   | 30:BG:148:MET:HB3  | 2.02                     | 0.41              |
| 30:BG:55:LYS:CE    | 30:BG:152:LEU:HD11 | 2.50                     | 0.41              |
| 30:BG:72:ARG:HA    | 30:BG:88:ILE:CD1   | 2.51                     | 0.41              |
| 31:BH:76:VAL:O     | 31:BH:79:VAL:CG2   | 2.68                     | 0.41              |
| 31:BH:121:ILE:HD12 | 31:BH:144:VAL:HG11 | 2.03                     | 0.41              |
| 31:BH:155:SER:HB2  | 31:BH:159:GLU:HA   | 2.01                     | 0.41              |
| 32:BK:17:GLN:O     | 32:BK:18:VAL:HG23  | 2.21                     | 0.41              |
| 34:BM:10:GLU:HG2   | 34:BM:12:ARG:HH22  | 1.85                     | 0.41              |
| 34:BM:74:ARG:HB2   | 34:BM:82:LEU:HA    | 2.03                     | 0.41              |
| 34:BM:95:PRO:C     | 34:BM:97:ARG:N     | 2.74                     | 0.41              |
| 34:BM:97:ARG:HA    | 34:BM:100:GLU:CB   | 2.51                     | 0.41              |
| 36:BO:15:ARG:NE    | 36:BO:15:ARG:HA    | 2.35                     | 0.41              |
| 36:BO:89:ALA:O     | 36:BO:124:LYS:O    | 2.38                     | 0.41              |
| 37:BP:45:GLN:N     | 37:BP:45:GLN:OE1   | 2.53                     | 0.41              |
| 37:BP:50:ALA:O     | 37:BP:54:MET:HG2   | 2.20                     | 0.41              |
| 38:BQ:57:ARG:NE    | 38:BQ:62:ALA:CB    | 2.68                     | 0.41              |
| 38:BQ:109:ALA:O    | 38:BQ:111:LEU:HG   | 2.20                     | 0.41              |
| 38:BQ:115:GLU:HG2  | 38:BQ:116:LEU:O    | 2.20                     | 0.41              |
| 38:BQ:116:LEU:CD2  | 38:BQ:116:LEU:H    | 2.25                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 39:BR:11:LYS:CA   | 39:BR:14:VAL:HB   | 2.49                     | 0.41              |
| 39:BR:26:LEU:HD11 | 39:BR:37:ALA:CB   | 2.44                     | 0.41              |
| 39:BR:28:VAL:CG2  | 39:BR:29:PHE:N    | 2.74                     | 0.41              |
| 39:BR:78:LEU:CD1  | 39:BR:79:ALA:N    | 2.70                     | 0.41              |
| 40:BS:65:LYS:CE   | 40:BS:75:ILE:CD1  | 2.98                     | 0.41              |
| 40:BS:105:LEU:O   | 40:BS:106:SER:C   | 2.62                     | 0.41              |
| 41:BT:3:ARG:O     | 41:BT:4:ALA:CB    | 2.67                     | 0.41              |
| 41:BT:32:PHE:HB2  | 41:BT:33:ARG:H    | 1.49                     | 0.41              |
| 41:BT:115:ALA:O   | 41:BT:116:ALA:C   | 2.63                     | 0.41              |
| 43:BV:5:ALA:CB    | 43:BV:105:VAL:O   | 2.55                     | 0.41              |
| 45:BX:26:LYS:HZ1  | 45:BX:36:ALA:CB   | 2.33                     | 0.41              |
| 46:BY:23:LYS:HE3  | 46:BY:38:TYR:CB   | 2.51                     | 0.41              |
| 46:BY:137:ILE:C   | 46:BY:138:GLU:CG  | 2.92                     | 0.41              |
| 46:BY:150:LEU:O   | 46:BY:171:ILE:CG2 | 2.68                     | 0.41              |
| 48:B1:4:GLN:O     | 48:B1:5:LEU:C     | 2.62                     | 0.41              |
| 49:B2:3:ARG:O     | 49:B2:59:VAL:O    | 2.39                     | 0.41              |
| 50:B3:17:GLY:CA   | 50:B3:33:VAL:HG12 | 2.50                     | 0.41              |
| 50:B3:55:ARG:HB3  | 50:B3:56:VAL:H    | 1.57                     | 0.41              |
| 50:B3:60:GLN:H    | 50:B3:60:GLN:HG2  | 1.75                     | 0.41              |
| 51:B4:55:ARG:O    | 51:B4:57:VAL:HG13 | 2.21                     | 0.41              |
| 52:B5:19:ARG:O    | 52:B5:20:ASN:CB   | 2.68                     | 0.41              |
| 55:B8:9:ARG:CZ    | 55:B8:16:VAL:HB   | 2.50                     | 0.41              |
| 1:AA:35:G:N3      | 14:AO:118:SER:OG  | 2.37                     | 0.41              |
| 1:AA:97:U:H6      | 1:AA:97:U:O5'     | 2.04                     | 0.41              |
| 1:AA:132:C:N3     | 1:AA:231:G:N2     | 2.67                     | 0.41              |
| 1:AA:173:U:C5'    | 1:AA:197:A:C2'    | 2.99                     | 0.41              |
| 1:AA:192:U:C4'    | 22:AW:103:GLY:N   | 2.83                     | 0.41              |
| 1:AA:255:G:P      | 19:AT:69:LYS:NZ   | 2.94                     | 0.41              |
| 1:AA:354:G:C2     | 1:AA:355:C:C4     | 3.08                     | 0.41              |
| 1:AA:429:U:O2     | 1:AA:431:A:N7     | 2.54                     | 0.41              |
| 1:AA:458:C:C4     | 1:AA:464:G:C6     | 3.08                     | 0.41              |
| 1:AA:468:A:H3'    | 1:AA:474:G:H8     | 1.85                     | 0.41              |
| 1:AA:518:C:O2'    | 14:AO:50:SER:CB   | 2.66                     | 0.41              |
| 1:AA:548:G:C6     | 1:AA:549:C:N4     | 2.89                     | 0.41              |
| 1:AA:579:G:O4'    | 1:AA:728:A:H1'    | 2.20                     | 0.41              |
| 1:AA:685:G:H4'    | 13:AN:40:ILE:HA   | 2.02                     | 0.41              |
| 1:AA:698:G:C6     | 1:AA:699:C:N4     | 2.89                     | 0.41              |
| 1:AA:725:G:H2'    | 1:AA:726:C:C6     | 2.56                     | 0.41              |
| 1:AA:760:G:H5'    | 1:AA:761:G:OP2    | 2.20                     | 0.41              |
| 1:AA:791:G:N7     | 1:AA:792:A:N7     | 2.69                     | 0.41              |
| 1:AA:866:C:H5''   | 1:AA:867:G:C8     | 2.56                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:937:A:N3     | 1:AA:1379:G:N1    | 2.68                     | 0.41              |
| 1:AA:951:G:C2'    | 1:AA:970:C:O2'    | 2.68                     | 0.41              |
| 1:AA:952:U:C2'    | 1:AA:953:G:H5'    | 2.50                     | 0.41              |
| 1:AA:1001:G:C8    | 1:AA:1001:G:C3'   | 3.04                     | 0.41              |
| 1:AA:1029:G:N3    | 1:AA:1031:G:OP2   | 2.54                     | 0.41              |
| 1:AA:1030:C:H2'   | 1:AA:1031:G:C8    | 2.55                     | 0.41              |
| 1:AA:1032(B):G:C2 | 1:AA:1033:G:C4    | 3.08                     | 0.41              |
| 1:AA:1050:G:N3    | 1:AA:1050:G:H2'   | 2.35                     | 0.41              |
| 1:AA:1081:G:OP1   | 7:AH:18:ARG:CA    | 2.69                     | 0.41              |
| 1:AA:1144:G:N1    | 1:AA:1145:C:C2    | 2.89                     | 0.41              |
| 1:AA:1157:A:N3    | 1:AA:1157:A:C2'   | 2.80                     | 0.41              |
| 1:AA:1234:C:C4'   | 1:AA:1364:U:O2'   | 2.68                     | 0.41              |
| 1:AA:1284:C:C6    | 1:AA:1285:A:C8    | 3.09                     | 0.41              |
| 1:AA:1288:A:N3    | 1:AA:1352:C:O2'   | 2.49                     | 0.41              |
| 1:AA:1291:G:C2    | 1:AA:1292:U:C2    | 3.07                     | 0.41              |
| 1:AA:1331:G:O2'   | 1:AA:1332:A:P     | 2.78                     | 0.41              |
| 1:AA:1387:G:O2'   | 1:AA:1388:C:H5'   | 2.21                     | 0.41              |
| 1:AA:1405:G:H4'   | 1:AA:1519:A:C5'   | 2.50                     | 0.41              |
| 2:A1:44:U:N3      | 2:A1:45:U:C5      | 2.89                     | 0.41              |
| 3:AC:19:G:H5''    | 3:AC:20:U:C5      | 2.56                     | 0.41              |
| 3:AD:62:C:O2'     | 26:BC:53:ARG:CG   | 2.55                     | 0.41              |
| 3:AB:72:C:N3      | 3:AB:73:A:N7      | 2.68                     | 0.41              |
| 4:AE:25:ASN:HD21  | 4:AE:27:LYS:HB2   | 1.85                     | 0.41              |
| 4:AE:39:ILE:HG12  | 4:AE:40:HIS:O     | 2.21                     | 0.41              |
| 4:AE:69:LEU:HD13  | 4:AE:70:PHE:H     | 1.84                     | 0.41              |
| 4:AE:85:ALA:HB3   | 4:AE:92:TYR:CD1   | 2.56                     | 0.41              |
| 4:AE:144:ARG:O    | 4:AE:147:LYS:N    | 2.54                     | 0.41              |
| 4:AE:188:ALA:O    | 4:AE:205:ASP:HB3  | 2.21                     | 0.41              |
| 5:AF:15:THR:HG21  | 5:AF:181:ASN:H    | 1.85                     | 0.41              |
| 5:AF:33:LEU:HD21  | 16:AQ:52:GLN:O    | 2.20                     | 0.41              |
| 5:AF:124:ILE:CD1  | 5:AF:130:VAL:CG1  | 2.97                     | 0.41              |
| 5:AF:172:ARG:HG2  | 5:AF:172:ARG:HH11 | 1.86                     | 0.41              |
| 6:AG:62:GLN:HA    | 6:AG:62:GLN:NE2   | 2.36                     | 0.41              |
| 6:AG:193:ASP:OD2  | 6:AG:194:LEU:CD2  | 2.67                     | 0.41              |
| 7:AH:78:HIS:ND1   | 10:AK:104:ARG:CD  | 2.82                     | 0.41              |
| 7:AH:145:LYS:CA   | 7:AH:148:VAL:HG23 | 2.47                     | 0.41              |
| 8:AI:59:TYR:CE2   | 8:AI:61:LEU:HD21  | 2.55                     | 0.41              |
| 9:AJ:16:LEU:O     | 11:AL:41:VAL:CG1  | 2.69                     | 0.41              |
| 9:AJ:91:VAL:O     | 9:AJ:92:SER:C     | 2.63                     | 0.41              |
| 9:AJ:118:VAL:HG12 | 9:AJ:122:HIS:CE1  | 2.55                     | 0.41              |
| 10:AK:18:ARG:NE   | 10:AK:18:ARG:H    | 2.18                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 10:AK:23:SER:HA    | 10:AK:62:TYR:CD1  | 2.55                     | 0.41              |
| 10:AK:45:ILE:HD11  | 10:AK:48:TYR:CB   | 2.37                     | 0.41              |
| 10:AK:104:ARG:HE   | 10:AK:138:TRP:HZ3 | 1.63                     | 0.41              |
| 11:AL:31:GLN:HG2   | 11:AL:35:GLU:OE1  | 2.21                     | 0.41              |
| 11:AL:71:SER:O     | 11:AL:72:GLY:C    | 2.63                     | 0.41              |
| 11:AL:97:LYS:HZ2   | 11:AL:102:LEU:CD2 | 2.31                     | 0.41              |
| 11:AL:99:LEU:HD22  | 11:AL:99:LEU:H    | 1.86                     | 0.41              |
| 13:AN:50:TYR:CE2   | 13:AN:54:ARG:HB3  | 2.56                     | 0.41              |
| 14:AO:32:PHE:HB3   | 14:AO:86:ARG:HA   | 2.02                     | 0.41              |
| 14:AO:117:ARG:O    | 14:AO:121:GLY:CA  | 2.68                     | 0.41              |
| 14:AO:119:LYS:HB2  | 14:AO:119:LYS:HE3 | 1.67                     | 0.41              |
| 15:AP:69:GLU:O     | 15:AP:72:ALA:N    | 2.53                     | 0.41              |
| 17:AR:34:LEU:HD12  | 17:AR:35:ARG:CA   | 2.50                     | 0.41              |
| 17:AR:62:GLN:CD    | 17:AR:65:ARG:HH21 | 2.27                     | 0.41              |
| 19:AT:5:VAL:O      | 19:AT:6:LEU:CB    | 2.68                     | 0.41              |
| 19:AT:14:LYS:O     | 19:AT:15:MET:O    | 2.39                     | 0.41              |
| 20:AU:40:LEU:O     | 20:AU:43:PHE:CD1  | 2.63                     | 0.41              |
| 20:AU:62:GLU:C     | 20:AU:66:LEU:CD2  | 2.93                     | 0.41              |
| 23:AX:5:ASP:O      | 23:AX:6:ARG:HG2   | 2.20                     | 0.41              |
| 24:BA:74:A:C2      | 48:B1:46:ARG:NE   | 2.88                     | 0.41              |
| 24:BA:150:C:N3     | 24:BA:176:G:N2    | 2.59                     | 0.41              |
| 24:BA:194:G:C6     | 24:BA:195:A:C6    | 3.08                     | 0.41              |
| 24:BA:194:G:H8     | 24:BA:194:G:O5'   | 2.03                     | 0.41              |
| 24:BA:205:G:O2'    | 24:BA:206:U:OP2   | 2.23                     | 0.41              |
| 24:BA:222:A:C8     | 24:BA:224:G:C8    | 3.09                     | 0.41              |
| 24:BA:235:U:O5'    | 24:BA:235:U:H6    | 2.03                     | 0.41              |
| 24:BA:247:G:N1     | 54:B7:11:LYS:NZ   | 2.68                     | 0.41              |
| 24:BA:270(S):G:H2' | 24:BA:270(T):G:H8 | 1.86                     | 0.41              |
| 24:BA:271(C):U:O2' | 24:BA:271:G:H4'   | 2.20                     | 0.41              |
| 24:BA:295:G:OP1    | 24:BA:338:G:O6    | 2.38                     | 0.41              |
| 24:BA:379:G:H4'    | 24:BA:2232:U:H5'' | 2.02                     | 0.41              |
| 24:BA:416:C:C5     | 24:BA:417:C:C5    | 3.09                     | 0.41              |
| 24:BA:447:A:C4     | 24:BA:473:G:C8    | 3.08                     | 0.41              |
| 24:BA:454:A:O3'    | 24:BA:455:C:O4'   | 2.38                     | 0.41              |
| 24:BA:454:A:O2'    | 24:BA:455:C:C2    | 2.68                     | 0.41              |
| 24:BA:491:G:H3'    | 24:BA:492:A:H8    | 1.85                     | 0.41              |
| 24:BA:542:C:C2     | 24:BA:543:C:C6    | 3.08                     | 0.41              |
| 24:BA:592:G:C6     | 24:BA:593:G:C5    | 3.08                     | 0.41              |
| 24:BA:598:G:H21    | 24:BA:599:G:H1'   | 1.85                     | 0.41              |
| 24:BA:601:C:H2'    | 24:BA:602:G:H5'   | 2.02                     | 0.41              |
| 24:BA:671:C:C4     | 24:BA:672:C:N4    | 2.87                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:725:G:O6    | 24:BA:726:G:N2    | 2.50                     | 0.41              |
| 24:BA:733:G:OP2   | 24:BA:733:G:H8    | 2.04                     | 0.41              |
| 24:BA:740:U:C1'   | 24:BA:1784:A:C5   | 3.04                     | 0.41              |
| 24:BA:743:G:C6    | 24:BA:744:G:C6    | 3.09                     | 0.41              |
| 24:BA:771:G:H2'   | 24:BA:772:C:H6    | 1.83                     | 0.41              |
| 24:BA:1009:A:C4'  | 41:BT:62:ILE:HG21 | 2.46                     | 0.41              |
| 24:BA:1047:G:C6   | 24:BA:1110:G:N7   | 2.89                     | 0.41              |
| 24:BA:1057:A:C2   | 24:BA:1058:G:N7   | 2.89                     | 0.41              |
| 24:BA:1102:C:C2   | 24:BA:1103:A:N7   | 2.88                     | 0.41              |
| 24:BA:1107:G:O2'  | 24:BA:1108:U:H5'  | 2.19                     | 0.41              |
| 24:BA:1128:A:C6   | 24:BA:2518:A:N6   | 2.76                     | 0.41              |
| 24:BA:1141:U:HO2' | 24:BA:1142:U:P    | 2.44                     | 0.41              |
| 24:BA:1183:G:H4'  | 24:BA:1184:G:O4'  | 2.20                     | 0.41              |
| 24:BA:1298:C:O2'  | 24:BA:1302:A:N7   | 2.54                     | 0.41              |
| 24:BA:1342:A:N7   | 24:BA:1601:G:O6   | 2.53                     | 0.41              |
| 24:BA:1355:G:N2   | 24:BA:1377:G:C1'  | 2.75                     | 0.41              |
| 24:BA:1479:G:N2   | 24:BA:1515:C:C4   | 2.87                     | 0.41              |
| 24:BA:1491:G:N1   | 24:BA:1500:G:C2   | 2.89                     | 0.41              |
| 24:BA:1517:G:C2   | 24:BA:1518:C:C2   | 3.08                     | 0.41              |
| 24:BA:1649:G:C6   | 24:BA:1650:G:N7   | 2.89                     | 0.41              |
| 24:BA:1679:U:O4   | 24:BA:1764:G:H5'' | 2.20                     | 0.41              |
| 24:BA:1710:C:H1'  | 24:BA:2858:C:N4   | 2.33                     | 0.41              |
| 24:BA:1807:G:H21  | 24:BA:1809:A:H4'  | 1.86                     | 0.41              |
| 24:BA:1850:G:H2'  | 24:BA:1851:U:O4'  | 2.19                     | 0.41              |
| 24:BA:1943:U:HO2' | 24:BA:1944:U:P    | 2.39                     | 0.41              |
| 24:BA:1953:A:H1'  | 24:BA:2560:C:O4'  | 2.21                     | 0.41              |
| 24:BA:1970:A:C6   | 24:BA:1972:A:N7   | 2.89                     | 0.41              |
| 24:BA:2072:G:C2   | 24:BA:2073:C:C5   | 3.09                     | 0.41              |
| 24:BA:2103:C:N3   | 24:BA:2104:G:N7   | 2.68                     | 0.41              |
| 24:BA:2218:G:C6   | 24:BA:2219:G:C5   | 3.09                     | 0.41              |
| 24:BA:2261:C:N4   | 47:BZ:15:ASP:O    | 2.53                     | 0.41              |
| 24:BA:2286:A:C5'  | 24:BA:2287:A:H1'  | 2.49                     | 0.41              |
| 24:BA:2459:A:OP2  | 24:BA:2460:U:H5   | 2.01                     | 0.41              |
| 24:BA:2469:A:OP2  | 24:BA:2476:A:C2   | 2.74                     | 0.41              |
| 24:BA:2474:C:H2'  | 24:BA:2475:C:O5'  | 2.20                     | 0.41              |
| 24:BA:2482:G:H2'  | 24:BA:2483:C:C5'  | 2.48                     | 0.41              |
| 24:BA:2490:G:HO2' | 24:BA:2491:U:P    | 2.44                     | 0.41              |
| 24:BA:2499:C:O2   | 24:BA:2499:C:C2'  | 2.67                     | 0.41              |
| 24:BA:2595:G:N2   | 24:BA:2599:G:O6   | 2.54                     | 0.41              |
| 24:BA:2690:C:N4   | 38:BQ:14:SER:OG   | 2.53                     | 0.41              |
| 24:BA:2691:C:O4'  | 24:BA:2872:G:C5   | 2.74                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2692:C:C2   | 24:BA:2693:A:C8    | 3.09                     | 0.41              |
| 24:BA:2706:G:C2   | 24:BA:2707:G:C4    | 3.08                     | 0.41              |
| 24:BA:2841:C:C2'  | 24:BA:2842:G:C8    | 2.87                     | 0.41              |
| 25:BB:77:U:C5     | 25:BB:98:G:N2      | 2.88                     | 0.41              |
| 26:BC:19:ILE:CD1  | 26:BC:223:ARG:HB3  | 2.19                     | 0.41              |
| 26:BC:21:THR:HG22 | 26:BC:225:ASN:ND2  | 2.35                     | 0.41              |
| 26:BC:32:LEU:HD13 | 26:BC:220:PRO:HG2  | 2.01                     | 0.41              |
| 26:BC:64:LEU:HD22 | 26:BC:188:ASN:O    | 2.20                     | 0.41              |
| 26:BC:65:PRO:O    | 26:BC:66:HIS:CB    | 2.68                     | 0.41              |
| 26:BC:66:HIS:NE2  | 26:BC:184:LYS:HD3  | 2.36                     | 0.41              |
| 27:BD:37:LEU:CG   | 27:BD:63:ARG:HA    | 2.49                     | 0.41              |
| 27:BD:59:LYS:O    | 27:BD:62:TYR:OH    | 2.38                     | 0.41              |
| 27:BD:85:ASP:C    | 27:BD:87:ASN:ND2   | 2.79                     | 0.41              |
| 27:BD:142:VAL:HB  | 27:BD:191:ALA:HB1  | 2.01                     | 0.41              |
| 28:BE:46:ALA:HB2  | 28:BE:85:ASN:OD1   | 2.21                     | 0.41              |
| 29:BF:120:GLU:OE1 | 29:BF:120:GLU:N    | 2.53                     | 0.41              |
| 29:BF:124:LEU:HG  | 29:BF:197:ASP:HB2  | 2.02                     | 0.41              |
| 29:BF:200:GLU:CD  | 29:BF:201:VAL:N    | 2.76                     | 0.41              |
| 30:BG:19:LEU:CA   | 30:BG:22:ARG:HG2   | 2.51                     | 0.41              |
| 30:BG:39:ILE:CG1  | 30:BG:157:ILE:HG13 | 2.48                     | 0.41              |
| 30:BG:44:GLY:C    | 30:BG:46:ALA:N     | 2.75                     | 0.41              |
| 30:BG:90:LEU:CD1  | 30:BG:90:LEU:O     | 2.68                     | 0.41              |
| 30:BG:152:LEU:HB2 | 30:BG:155:MET:CE   | 2.50                     | 0.41              |
| 31:BH:5:GLY:O     | 31:BH:6:ARG:CB     | 2.69                     | 0.41              |
| 31:BH:35:VAL:HA   | 31:BH:36:PRO:HD2   | 1.74                     | 0.41              |
| 33:BL:12:LEU:CB   | 33:BL:13:PRO:CD    | 2.97                     | 0.41              |
| 33:BL:99:ILE:HD12 | 33:BL:136:VAL:CG1  | 2.51                     | 0.41              |
| 34:BM:34:LEU:HA   | 34:BM:49:GLY:CA    | 2.50                     | 0.41              |
| 34:BM:53:VAL:HG12 | 34:BM:130:HIS:NE2  | 2.36                     | 0.41              |
| 35:BN:78:ARG:N    | 35:BN:78:ARG:CD    | 2.84                     | 0.41              |
| 36:BO:34:GLY:C    | 36:BO:36:LYS:N     | 2.78                     | 0.41              |
| 36:BO:46:LYS:NZ   | 36:BO:50:ARG:CZ    | 2.83                     | 0.41              |
| 37:BP:6:ARG:CD    | 37:BP:7:MET:N      | 2.84                     | 0.41              |
| 37:BP:109:VAL:O   | 37:BP:110:THR:C    | 2.64                     | 0.41              |
| 38:BQ:45:ARG:CA   | 38:BQ:95:THR:HG21  | 2.50                     | 0.41              |
| 38:BQ:74:LYS:H    | 38:BQ:74:LYS:HD3   | 1.86                     | 0.41              |
| 39:BR:9:ARG:HA    | 39:BR:12:PHE:HE2   | 1.80                     | 0.41              |
| 39:BR:38:GLN:NE2  | 39:BR:47:THR:HG21  | 2.36                     | 0.41              |
| 39:BR:67:ARG:NH2  | 39:BR:67:ARG:CG    | 2.78                     | 0.41              |
| 39:BR:73:LEU:HA   | 39:BR:76:LYS:HB3   | 2.01                     | 0.41              |
| 39:BR:102:ALA:O   | 39:BR:103:GLU:C    | 2.60                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 40:BS:12:SER:O    | 40:BS:13:ARG:C    | 2.63                     | 0.41              |
| 40:BS:16:ARG:HG3  | 40:BS:16:ARG:HH11 | 1.86                     | 0.41              |
| 40:BS:64:ARG:NH2  | 40:BS:77:PRO:C    | 2.79                     | 0.41              |
| 40:BS:64:ARG:CD   | 40:BS:65:LYS:H    | 1.99                     | 0.41              |
| 41:BT:40:PHE:CD2  | 42:BU:78:LYS:CE   | 3.03                     | 0.41              |
| 41:BT:86:ALA:O    | 41:BT:90:VAL:HG21 | 2.21                     | 0.41              |
| 41:BT:108:GLU:OE2 | 41:BT:108:GLU:N   | 2.51                     | 0.41              |
| 42:BU:1:MET:HB3   | 42:BU:15:GLU:CG   | 2.50                     | 0.41              |
| 42:BU:83:ARG:CG   | 42:BU:84:LYS:N    | 2.83                     | 0.41              |
| 42:BU:100:ARG:NE  | 42:BU:100:ARG:HA  | 2.36                     | 0.41              |
| 44:BW:25:LYS:O    | 44:BW:26:TYR:CD1  | 2.73                     | 0.41              |
| 44:BW:52:VAL:O    | 44:BW:53:LYS:O    | 2.37                     | 0.41              |
| 46:BY:66:SER:C    | 46:BY:67:LEU:HG   | 2.45                     | 0.41              |
| 47:BZ:27:GLU:HA   | 47:BZ:69:PHE:CE1  | 2.56                     | 0.41              |
| 48:B1:48:LEU:HD12 | 48:B1:51:GLN:CD   | 2.45                     | 0.41              |
| 49:B2:17:LYS:C    | 49:B2:19:GLN:N    | 2.78                     | 0.41              |
| 50:B3:22:ILE:N    | 50:B3:22:ILE:CD1  | 2.84                     | 0.41              |
| 50:B3:28:LYS:CE   | 50:B3:29:PRO:HD2  | 2.40                     | 0.41              |
| 51:B4:10:LYS:CD   | 51:B4:15:ARG:CZ   | 2.99                     | 0.41              |
| 52:B5:29:ASN:O    | 52:B5:30:THR:C    | 2.63                     | 0.41              |
| 54:B7:4:MET:O     | 54:B7:5:LYS:O     | 2.39                     | 0.41              |
| 55:B8:7:VAL:CG2   | 55:B8:36:GLN:NE2  | 2.77                     | 0.41              |
| 1:AA:161:A:N1     | 1:AA:347:G:O2'    | 2.48                     | 0.41              |
| 1:AA:217:C:C4     | 1:AA:218:C:C4     | 3.09                     | 0.41              |
| 1:AA:323:U:C5     | 1:AA:324:G:C4     | 2.98                     | 0.41              |
| 1:AA:380:G:H2'    | 1:AA:382:A:OP2    | 2.20                     | 0.41              |
| 1:AA:427:U:O5'    | 1:AA:427:U:C6     | 2.64                     | 0.41              |
| 1:AA:437:U:C5     | 1:AA:438:G:C5     | 3.09                     | 0.41              |
| 1:AA:498:A:H4'    | 1:AA:500:G:C5'    | 2.47                     | 0.41              |
| 1:AA:563:A:O2'    | 1:AA:566:G:C2'    | 2.68                     | 0.41              |
| 1:AA:592:G:C6     | 1:AA:648:A:N6     | 2.89                     | 0.41              |
| 1:AA:619:U:O2     | 1:AA:619:U:H2'    | 2.20                     | 0.41              |
| 1:AA:673:G:O2'    | 1:AA:674:G:C8     | 2.73                     | 0.41              |
| 1:AA:681:C:O2'    | 1:AA:682:G:H5'    | 2.20                     | 0.41              |
| 1:AA:782:A:C8     | 1:AA:783:C:C5     | 3.08                     | 0.41              |
| 1:AA:937:A:C8     | 1:AA:938:A:N7     | 2.88                     | 0.41              |
| 1:AA:949:A:HO2'   | 1:AA:1364:U:H3    | 1.63                     | 0.41              |
| 1:AA:971:G:O5'    | 1:AA:1231:G:N2    | 2.53                     | 0.41              |
| 1:AA:1065:U:O2    | 1:AA:1065:U:C2'   | 2.57                     | 0.41              |
| 1:AA:1101:A:H1'   | 1:AA:1102:A:O4'   | 2.21                     | 0.41              |
| 1:AA:1115:C:C4    | 1:AA:1116:C:C4    | 3.09                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1135:U:O3'   | 1:AA:1136:U:C6    | 2.70                     | 0.41              |
| 1:AA:1157:A:C6    | 1:AA:1180:A:C6    | 3.09                     | 0.41              |
| 1:AA:1188:A:H2'   | 1:AA:1189:C:C6    | 2.56                     | 0.41              |
| 1:AA:1221:G:C6    | 1:AA:1222:G:C5    | 3.08                     | 0.41              |
| 1:AA:1311:G:OP2   | 21:AV:2:PRO:CD    | 2.69                     | 0.41              |
| 1:AA:1318:A:H8    | 1:AA:1318:A:O5'   | 2.04                     | 0.41              |
| 1:AA:1371:G:C6    | 1:AA:1372:U:C4    | 3.08                     | 0.41              |
| 1:AA:1423:G:C6    | 1:AA:1424:C:C4    | 3.09                     | 0.41              |
| 1:AA:1424:C:H2'   | 1:AA:1425:U:H6    | 1.85                     | 0.41              |
| 1:AA:1425:U:O2    | 1:AA:1476:G:C2    | 2.74                     | 0.41              |
| 1:AA:1540:U:C6    | 1:AA:1540:U:O5'   | 2.74                     | 0.41              |
| 3:AC:5:G:O2'      | 3:AC:6:G:C5'      | 2.69                     | 0.41              |
| 3:AC:63:G:H2'     | 3:AC:64:A:C8      | 2.56                     | 0.41              |
| 3:AD:44:G:C3'     | 3:AD:45:U:H5'     | 2.50                     | 0.41              |
| 3:AD:62:C:H5'     | 26:BC:52:ARG:HD3  | 2.00                     | 0.41              |
| 3:AB:9:A:C2       | 3:AB:46:G:N2      | 2.89                     | 0.41              |
| 4:AE:28:PHE:CE1   | 4:AE:31:TYR:CB    | 3.04                     | 0.41              |
| 4:AE:46:LYS:O     | 4:AE:49:GLU:N     | 2.54                     | 0.41              |
| 4:AE:85:ALA:C     | 4:AE:87:ARG:N     | 2.77                     | 0.41              |
| 4:AE:90:MET:SD    | 4:AE:91:PRO:CD    | 3.01                     | 0.41              |
| 4:AE:157:ARG:CA   | 4:AE:158:LEU:HD23 | 2.50                     | 0.41              |
| 5:AF:180:ALA:O    | 5:AF:181:ASN:C    | 2.62                     | 0.41              |
| 6:AG:60:GLU:OE2   | 6:AG:202:LEU:CD1  | 2.67                     | 0.41              |
| 6:AG:165:MET:SD   | 6:AG:165:MET:C    | 3.04                     | 0.41              |
| 6:AG:196:LEU:O    | 6:AG:196:LEU:CD1  | 2.69                     | 0.41              |
| 7:AH:71:LEU:HG    | 7:AH:72:GLN:N     | 2.35                     | 0.41              |
| 7:AH:106:PRO:HG2  | 7:AH:122:GLU:OE2  | 2.20                     | 0.41              |
| 9:AJ:80:VAL:HG12  | 9:AJ:81:GLY:N     | 2.36                     | 0.41              |
| 9:AJ:146:GLU:HG3  | 9:AJ:149:ARG:CZ   | 2.50                     | 0.41              |
| 10:AK:6:ILE:CD1   | 10:AK:85:ARG:NE   | 2.83                     | 0.41              |
| 10:AK:6:ILE:HD12  | 10:AK:85:ARG:CD   | 2.51                     | 0.41              |
| 10:AK:14:ARG:CD   | 10:AK:15:ASN:ND2  | 2.83                     | 0.41              |
| 10:AK:35:ILE:O    | 10:AK:37:ARG:N    | 2.53                     | 0.41              |
| 10:AK:36:LEU:O    | 10:AK:39:LEU:HB2  | 2.18                     | 0.41              |
| 11:AL:26:VAL:CG1  | 11:AL:63:ILE:HD13 | 2.51                     | 0.41              |
| 12:AM:79:ARG:O    | 12:AM:80:LYS:C    | 2.63                     | 0.41              |
| 13:AN:12:ARG:NH1  | 13:AN:40:ILE:HG23 | 2.35                     | 0.41              |
| 14:AO:6:THR:OG1   | 14:AO:9:GLN:HB2   | 2.21                     | 0.41              |
| 15:AP:45:VAL:O    | 15:AP:46:LYS:C    | 2.64                     | 0.41              |
| 17:AR:36:ILE:HG22 | 17:AR:37:ASN:N    | 2.36                     | 0.41              |
| 19:AT:10:VAL:HB   | 19:AT:54:GLY:H    | 1.85                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 20:AU:17:SER:CB  | 20:AU:54:ARG:HH12 | 2.32                     | 0.41              |
| 22:AW:102:GLY:O  | 22:AW:104:LEU:N   | 2.54                     | 0.41              |
| 23:AX:17:THR:C   | 23:AX:22:ARG:HH21 | 2.29                     | 0.41              |
| 24:BA:10:G:N1    | 24:BA:11:G:C6     | 2.89                     | 0.41              |
| 24:BA:87:C:N4    | 24:BA:96:G:C6     | 2.89                     | 0.41              |
| 24:BA:104:U:OP2  | 24:BA:105:C:C5    | 2.73                     | 0.41              |
| 24:BA:120:U:O2'  | 24:BA:149:A:O4'   | 2.37                     | 0.41              |
| 24:BA:121:G:O4'  | 24:BA:148:C:H2'   | 2.20                     | 0.41              |
| 24:BA:126:A:H5'' | 53:B6:18:PHE:CE1  | 2.54                     | 0.41              |
| 24:BA:150:C:O2'  | 24:BA:151:C:C5'   | 2.67                     | 0.41              |
| 24:BA:285:C:O2'  | 24:BA:286:C:O5'   | 2.39                     | 0.41              |
| 24:BA:303:U:H2'  | 24:BA:304:G:C5'   | 2.50                     | 0.41              |
| 24:BA:349:G:H2'  | 24:BA:349:G:N3    | 2.35                     | 0.41              |
| 24:BA:468:G:C2'  | 24:BA:469:G:H5'   | 2.51                     | 0.41              |
| 24:BA:479:A:OP2  | 24:BA:479:A:O4'   | 2.39                     | 0.41              |
| 24:BA:535:C:H2'  | 24:BA:536:A:C5'   | 2.51                     | 0.41              |
| 24:BA:545:G:N3   | 24:BA:545:G:H2'   | 2.36                     | 0.41              |
| 24:BA:545:G:O5'  | 24:BA:545:G:C8    | 2.74                     | 0.41              |
| 24:BA:572:A:N7   | 24:BA:573:G:N1    | 2.69                     | 0.41              |
| 24:BA:578:A:H2'  | 24:BA:2018:G:C5'  | 2.29                     | 0.41              |
| 24:BA:626:U:H4'  | 24:BA:653:A:C2    | 2.55                     | 0.41              |
| 24:BA:630:G:H2'  | 24:BA:631:A:O5'   | 2.21                     | 0.41              |
| 24:BA:696:G:H2'  | 24:BA:697:C:H6    | 1.86                     | 0.41              |
| 24:BA:735:A:C8   | 24:BA:735:A:C3'   | 3.04                     | 0.41              |
| 24:BA:736:C:N4   | 24:BA:737:C:N4    | 2.68                     | 0.41              |
| 24:BA:763:G:H1'  | 24:BA:765:G:O4'   | 2.20                     | 0.41              |
| 24:BA:793:A:OP2  | 24:BA:793:A:O4'   | 2.39                     | 0.41              |
| 24:BA:844:C:OP2  | 24:BA:845:G:C5    | 2.74                     | 0.41              |
| 24:BA:896:A:HO2' | 46:BY:179:ASP:CG  | 2.29                     | 0.41              |
| 24:BA:948:G:C6   | 24:BA:949:C:C4    | 3.09                     | 0.41              |
| 24:BA:1024:G:C6  | 24:BA:1138:G:O6   | 2.73                     | 0.41              |
| 24:BA:1054:A:H8  | 24:BA:1054:A:O5'  | 2.03                     | 0.41              |
| 24:BA:1058:G:C6  | 24:BA:1081:U:N3   | 2.89                     | 0.41              |
| 24:BA:1102:C:O2  | 24:BA:1102:C:C2'  | 2.63                     | 0.41              |
| 24:BA:1179:C:C2' | 24:BA:1180:C:C6   | 3.00                     | 0.41              |
| 24:BA:1183:G:N3  | 24:BA:1183:G:O4'  | 2.53                     | 0.41              |
| 24:BA:1248:G:C8  | 41:BT:2:PRO:C     | 2.99                     | 0.41              |
| 24:BA:1283:G:H22 | 24:BA:1286:A:C5'  | 2.33                     | 0.41              |
| 24:BA:1291:C:C5' | 24:BA:1535:U:O3'  | 2.69                     | 0.41              |
| 24:BA:1300:U:O2  | 24:BA:1301:A:N6   | 2.54                     | 0.41              |
| 24:BA:1342:A:H8  | 24:BA:1342:A:O5'  | 2.04                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:1353:A:C6  | 24:BA:1378:A:C5   | 3.09                     | 0.41              |
| 24:BA:1388:G:C6  | 24:BA:1400:G:N1   | 2.89                     | 0.41              |
| 24:BA:1423:G:H5' | 24:BA:1493:C:H1'  | 2.02                     | 0.41              |
| 24:BA:1431:U:C4  | 24:BA:1432:C:C5   | 3.09                     | 0.41              |
| 24:BA:1438:U:C2' | 24:BA:1439:A:C5'  | 2.89                     | 0.41              |
| 24:BA:1453:A:C2  | 24:BA:1454:U:C1'  | 3.04                     | 0.41              |
| 24:BA:1487:G:C5  | 24:BA:1488:G:N7   | 2.88                     | 0.41              |
| 24:BA:1500:G:O2' | 24:BA:1501:C:C5'  | 2.69                     | 0.41              |
| 24:BA:1511:A:C8  | 24:BA:1512:G:H5'' | 2.56                     | 0.41              |
| 24:BA:1529:A:C8  | 24:BA:1530:G:C4   | 3.08                     | 0.41              |
| 24:BA:1565:C:C3' | 24:BA:1565:C:C6   | 3.04                     | 0.41              |
| 24:BA:1571:A:N3  | 24:BA:1571:A:H2'  | 2.35                     | 0.41              |
| 24:BA:1664:A:O2' | 35:BN:66:LYS:CE   | 2.69                     | 0.41              |
| 24:BA:1689:A:C6  | 24:BA:1700:A:N3   | 2.89                     | 0.41              |
| 24:BA:1689:A:C6  | 24:BA:1700:A:C4   | 3.08                     | 0.41              |
| 24:BA:1789:A:H5' | 24:BA:1790:C:OP2  | 2.21                     | 0.41              |
| 24:BA:1889:A:C2  | 24:BA:1890:A:C4   | 3.09                     | 0.41              |
| 24:BA:1964:G:C6  | 24:BA:1967:C:H5   | 2.38                     | 0.41              |
| 24:BA:2015:A:OP2 | 24:BA:2015:A:O4'  | 2.38                     | 0.41              |
| 24:BA:2075:U:O2  | 24:BA:2238:G:N2   | 2.53                     | 0.41              |
| 24:BA:2225:A:O2' | 24:BA:2226:C:OP2  | 2.29                     | 0.41              |
| 24:BA:2255:G:C2  | 24:BA:2256:G:N9   | 2.89                     | 0.41              |
| 24:BA:2256:G:C6  | 24:BA:2257:U:C4   | 3.08                     | 0.41              |
| 24:BA:2279:G:N3  | 24:BA:2280:G:C8   | 2.88                     | 0.41              |
| 24:BA:2327:A:N7  | 24:BA:2388:A:C6   | 2.89                     | 0.41              |
| 24:BA:2335:A:C2' | 24:BA:2337:G:C8   | 3.03                     | 0.41              |
| 24:BA:2346:A:O2' | 24:BA:2347:C:OP2  | 2.32                     | 0.41              |
| 24:BA:2370:G:C4  | 24:BA:2371:G:C8   | 3.08                     | 0.41              |
| 24:BA:2392:A:O2' | 24:BA:2393:A:P    | 2.79                     | 0.41              |
| 24:BA:2508:G:N2  | 24:BA:2509:G:H1'  | 2.35                     | 0.41              |
| 24:BA:2636:U:C4' | 28:BE:79:ARG:NH2  | 2.80                     | 0.41              |
| 24:BA:2640:G:O3' | 34:BM:75:TYR:CE1  | 2.74                     | 0.41              |
| 24:BA:2705:A:C8  | 24:BA:2706:G:N7   | 2.89                     | 0.41              |
| 24:BA:2705:A:N7  | 24:BA:2706:G:N7   | 2.68                     | 0.41              |
| 24:BA:2710:C:C4  | 24:BA:2711:A:N7   | 2.88                     | 0.41              |
| 24:BA:2790:A:O4' | 24:BA:2893:G:C2   | 2.72                     | 0.41              |
| 24:BA:2808:U:OP1 | 24:BA:2809:A:OP2  | 2.38                     | 0.41              |
| 24:BA:2817:G:N2  | 24:BA:2830:G:C4   | 2.89                     | 0.41              |
| 24:BA:2867:G:O3' | 24:BA:2868:A:H8   | 2.03                     | 0.41              |
| 25:BB:25:A:C2    | 25:BB:26:A:H1'    | 2.55                     | 0.41              |
| 25:BB:40:U:O5'   | 25:BB:40:U:H6     | 2.04                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 25:BB:45:A:N3      | 25:BB:45:A:H2'     | 2.36                     | 0.41              |
| 25:BB:68:C:C2'     | 25:BB:69:G:H8      | 2.34                     | 0.41              |
| 26:BC:71:GLN:CG    | 26:BC:72:VAL:HG23  | 2.49                     | 0.41              |
| 26:BC:89:ALA:HB2   | 26:BC:154:ARG:NH1  | 2.36                     | 0.41              |
| 27:BD:20:ASP:O     | 27:BD:21:PHE:CB    | 2.69                     | 0.41              |
| 27:BD:54:ARG:HA    | 27:BD:220:HIS:N    | 2.36                     | 0.41              |
| 27:BD:117:VAL:HG13 | 27:BD:129:ASN:N    | 2.35                     | 0.41              |
| 27:BD:175:LEU:CD2  | 27:BD:176:ARG:O    | 2.69                     | 0.41              |
| 27:BD:244:ARG:CA   | 27:BD:252:TRP:NE1  | 2.84                     | 0.41              |
| 27:BD:258:LYS:CA   | 27:BD:261:LYS:HD2  | 2.49                     | 0.41              |
| 28:BE:47:VAL:C     | 28:BE:48:GLN:NE2   | 2.78                     | 0.41              |
| 28:BE:91:VAL:CG2   | 28:BE:93:VAL:H     | 2.20                     | 0.41              |
| 29:BF:11:VAL:CB    | 29:BF:17:ARG:HH12  | 2.33                     | 0.41              |
| 29:BF:31:HIS:O     | 29:BF:38:ARG:NH2   | 2.54                     | 0.41              |
| 29:BF:199:TRP:CD1  | 29:BF:199:TRP:H    | 2.38                     | 0.41              |
| 29:BF:201:VAL:HA   | 29:BF:204:ASN:HD21 | 1.80                     | 0.41              |
| 29:BF:201:VAL:CB   | 29:BF:205:ARG:HH21 | 2.32                     | 0.41              |
| 30:BG:5:VAL:HG12   | 30:BG:6:ALA:N      | 2.35                     | 0.41              |
| 30:BG:38:VAL:HG12  | 30:BG:93:THR:HG23  | 2.01                     | 0.41              |
| 30:BG:50:ALA:HA    | 30:BG:70:VAL:HG13  | 2.01                     | 0.41              |
| 31:BH:91:GLY:O     | 31:BH:92:ILE:C     | 2.64                     | 0.41              |
| 31:BH:97:ARG:CB    | 31:BH:97:ARG:HH21  | 2.34                     | 0.41              |
| 31:BH:98:LEU:O     | 31:BH:99:VAL:HB    | 2.20                     | 0.41              |
| 31:BH:103:LEU:O    | 31:BH:113:VAL:HG12 | 2.19                     | 0.41              |
| 32:BK:40:THR:HG22  | 32:BK:42:SER:H     | 1.86                     | 0.41              |
| 32:BK:54:GLN:OE1   | 32:BK:57:ARG:HD2   | 2.21                     | 0.41              |
| 33:BL:78:ILE:HG21  | 33:BL:136:VAL:HG11 | 1.97                     | 0.41              |
| 33:BL:104:VAL:CG1  | 33:BL:127:ILE:HB   | 2.45                     | 0.41              |
| 34:BM:121:LYS:C    | 34:BM:122:VAL:CG1  | 2.94                     | 0.41              |
| 35:BN:53:LYS:HG3   | 35:BN:54:GLU:N     | 2.34                     | 0.41              |
| 35:BN:94:ARG:HG2   | 35:BN:96:THR:N     | 2.35                     | 0.41              |
| 36:BO:77:ARG:CZ    | 36:BO:79:ARG:HB3   | 2.50                     | 0.41              |
| 36:BO:79:ARG:HE    | 36:BO:83:VAL:HG12  | 1.86                     | 0.41              |
| 36:BO:99:LEU:HD22  | 36:BO:101:VAL:CG2  | 2.46                     | 0.41              |
| 38:BQ:17:ARG:O     | 38:BQ:20:LEU:N     | 2.54                     | 0.41              |
| 38:BQ:75:LEU:CD2   | 38:BQ:78:LYS:HB3   | 2.50                     | 0.41              |
| 39:BR:74:ALA:HB2   | 39:BR:104:GLY:C    | 2.45                     | 0.41              |
| 39:BR:76:LYS:C     | 39:BR:80:LEU:HD23  | 2.45                     | 0.41              |
| 40:BS:15:VAL:HG11  | 40:BS:18:ASP:OD1   | 2.20                     | 0.41              |
| 41:BT:46:ALA:N     | 41:BT:49:HIS:ND1   | 2.69                     | 0.41              |
| 45:BX:35:TYR:HD1   | 45:BX:64:GLU:O     | 2.03                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 46:BY:116:VAL:HG12 | 46:BY:176:PRO:CA  | 2.49                     | 0.41              |
| 46:BY:116:VAL:HG22 | 46:BY:145:GLU:HG2 | 2.01                     | 0.41              |
| 47:BZ:38:VAL:CG1   | 47:BZ:45:PHE:CE1  | 3.03                     | 0.41              |
| 49:B2:26:LEU:CG    | 49:B2:47:VAL:HG22 | 2.37                     | 0.41              |
| 49:B2:30:ARG:O     | 49:B2:31:LEU:C    | 2.63                     | 0.41              |
| 49:B2:41:PRO:HG3   | 49:B2:44:ARG:NH1  | 2.36                     | 0.41              |
| 49:B2:52:HIS:CE1   | 49:B2:53:LEU:CG   | 3.01                     | 0.41              |
| 50:B3:59:PHE:HE1   | 50:B3:60:GLN:HE21 | 1.68                     | 0.41              |
| 50:B3:59:PHE:HB3   | 50:B3:62:ARG:NH1  | 2.36                     | 0.41              |
| 51:B4:57:VAL:O     | 51:B4:58:LEU:HB3  | 2.20                     | 0.41              |
| 1:AA:8:A:H1'       | 7:AH:102:ALA:C    | 2.39                     | 0.41              |
| 1:AA:67:C:H5'      | 1:AA:172:A:HO2'   | 1.79                     | 0.41              |
| 1:AA:68:G:C5'      | 1:AA:171:A:H1'    | 2.50                     | 0.41              |
| 1:AA:73:G:N2       | 1:AA:74:C:C2      | 2.88                     | 0.41              |
| 1:AA:80:G:C2'      | 1:AA:81:G:H8      | 2.34                     | 0.41              |
| 1:AA:85:U:H2'      | 1:AA:86:U:H5'     | 2.02                     | 0.41              |
| 1:AA:89:U:O2'      | 1:AA:90:C:H5'     | 2.21                     | 0.41              |
| 1:AA:96:G:H2'      | 1:AA:97:U:C5      | 2.51                     | 0.41              |
| 1:AA:118:U:H3'     | 1:AA:288:A:N6     | 2.35                     | 0.41              |
| 1:AA:136:C:O4'     | 18:AS:1:MET:HE1   | 2.21                     | 0.41              |
| 1:AA:196:A:H8      | 1:AA:196:A:H3'    | 1.86                     | 0.41              |
| 1:AA:254:G:O2'     | 19:AT:18:THR:OG1  | 2.35                     | 0.41              |
| 1:AA:284:G:O2'     | 1:AA:285:G:C5'    | 2.62                     | 0.41              |
| 1:AA:298:A:H8      | 1:AA:298:A:OP1    | 2.04                     | 0.41              |
| 1:AA:329:A:C6      | 1:AA:332:G:C2     | 3.09                     | 0.41              |
| 1:AA:354:G:N3      | 1:AA:355:C:C6     | 2.88                     | 0.41              |
| 1:AA:369:C:C2      | 1:AA:370:C:C5     | 3.09                     | 0.41              |
| 1:AA:375:U:C2'     | 1:AA:376:G:C5'    | 2.99                     | 0.41              |
| 1:AA:386:C:N4      | 1:AA:387:U:C4     | 2.89                     | 0.41              |
| 1:AA:391:G:O6      | 1:AA:392:G:C6     | 2.74                     | 0.41              |
| 1:AA:401:C:OP2     | 6:AG:73:ARG:CZ    | 2.69                     | 0.41              |
| 1:AA:410:G:N2      | 1:AA:429:U:C2     | 2.88                     | 0.41              |
| 1:AA:418:C:O2'     | 1:AA:419:C:H5'    | 2.20                     | 0.41              |
| 1:AA:439:A:C4      | 1:AA:496:A:C5     | 3.09                     | 0.41              |
| 1:AA:455:C:O2'     | 1:AA:456:C:H5'    | 2.21                     | 0.41              |
| 1:AA:468:A:N6      | 1:AA:474:G:N1     | 2.68                     | 0.41              |
| 1:AA:468:A:N7      | 1:AA:474:G:N7     | 2.69                     | 0.41              |
| 1:AA:475:G:C4      | 1:AA:476:G:N7     | 2.89                     | 0.41              |
| 1:AA:498:A:C4      | 1:AA:547:A:C2     | 3.09                     | 0.41              |
| 1:AA:518:C:H5      | 1:AA:530:G:C8     | 2.39                     | 0.41              |
| 1:AA:520:A:H3'     | 1:AA:520:A:C8     | 2.56                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 1:AA:537:G:O2'   | 1:AA:538:G:H5'     | 2.20                     | 0.41              |
| 1:AA:584:G:C6    | 1:AA:585:G:N7      | 2.88                     | 0.41              |
| 1:AA:595:G:HO2'  | 1:AA:596:C:H5      | 1.67                     | 0.41              |
| 1:AA:622:A:H2'   | 1:AA:623:C:O5'     | 2.21                     | 0.41              |
| 1:AA:637:G:C2    | 1:AA:638:G:C8      | 3.08                     | 0.41              |
| 1:AA:658:G:OP1   | 17:AR:31:LEU:HD23  | 2.21                     | 0.41              |
| 1:AA:662:G:N1    | 1:AA:744:C:C4      | 2.89                     | 0.41              |
| 1:AA:687:A:O2'   | 1:AA:688:G:OP2     | 2.38                     | 0.41              |
| 1:AA:690:G:C2    | 1:AA:691:G:O4'     | 2.74                     | 0.41              |
| 1:AA:735:C:C6    | 1:AA:735:C:O5'     | 2.72                     | 0.41              |
| 1:AA:741:G:H2'   | 1:AA:742:G:H8      | 1.85                     | 0.41              |
| 1:AA:785:G:C2    | 1:AA:798:G:C4      | 3.09                     | 0.41              |
| 1:AA:837:G:C2    | 1:AA:838:G:C5      | 3.08                     | 0.41              |
| 1:AA:867:G:N3    | 1:AA:868:C:C6      | 2.89                     | 0.41              |
| 1:AA:896:C:H2'   | 1:AA:897:C:C6      | 2.56                     | 0.41              |
| 1:AA:908:A:H2'   | 1:AA:909:A:C8      | 2.53                     | 0.41              |
| 1:AA:930:C:C4    | 1:AA:931:C:C5      | 3.09                     | 0.41              |
| 1:AA:938:A:C2    | 1:AA:939:G:N9      | 2.89                     | 0.41              |
| 1:AA:961:U:O4'   | 1:AA:983:A:C2      | 2.73                     | 0.41              |
| 1:AA:966:G:H2'   | 1:AA:967:C:O5'     | 2.21                     | 0.41              |
| 1:AA:979:C:OP2   | 1:AA:980:C:N4      | 2.54                     | 0.41              |
| 1:AA:1026:G:O6   | 1:AA:1036:G:N2     | 2.53                     | 0.41              |
| 1:AA:1081:G:OP1  | 7:AH:18:ARG:CB     | 2.68                     | 0.41              |
| 1:AA:1115:C:O2'  | 1:AA:1116:C:C5'    | 2.69                     | 0.41              |
| 1:AA:1165:C:N4   | 1:AA:1166:G:C5     | 2.89                     | 0.41              |
| 1:AA:1169:A:C5   | 1:AA:1170:A:N1     | 2.89                     | 0.41              |
| 1:AA:1206:G:C6   | 1:AA:1207:G:C5     | 3.09                     | 0.41              |
| 1:AA:1210:C:C4'  | 1:AA:1214:C:H42    | 2.33                     | 0.41              |
| 1:AA:1229:A:P    | 15:AP:116:THR:HG22 | 2.60                     | 0.41              |
| 1:AA:1270:C:C4   | 1:AA:1271:G:N7     | 2.89                     | 0.41              |
| 1:AA:1274:G:H2'  | 1:AA:1274:G:N3     | 2.36                     | 0.41              |
| 1:AA:1278:U:H5'  | 1:AA:1279:A:H4'    | 2.02                     | 0.41              |
| 1:AA:1279:A:H5'' | 12:AM:7:LYS:HE2    | 2.02                     | 0.41              |
| 1:AA:1310:G:N7   | 21:AV:2:PRO:HD3    | 2.36                     | 0.41              |
| 1:AA:1311:G:N7   | 21:AV:2:PRO:CA     | 2.84                     | 0.41              |
| 1:AA:1331:G:O6   | 23:AX:7:ARG:NH2    | 2.54                     | 0.41              |
| 1:AA:1348:U:P    | 11:AL:109:VAL:HA   | 2.60                     | 0.41              |
| 1:AA:1358:U:OP1  | 16:AQ:35:ARG:HG3   | 2.21                     | 0.41              |
| 1:AA:1367:C:OP2  | 11:AL:115:GLY:HA2  | 2.21                     | 0.41              |
| 1:AA:1403:C:O2   | 1:AA:1499:A:N6     | 2.54                     | 0.41              |
| 1:AA:1442:G:N2   | 1:AA:1442:G:P      | 2.94                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 2:A1:29:G:C6      | 2:A1:30:U:C5      | 3.09                     | 0.41              |
| 3:AC:67:C:N4      | 3:AC:68:C:H41     | 2.19                     | 0.41              |
| 3:AD:15:G:O6      | 3:AD:48:C:C4      | 2.74                     | 0.41              |
| 3:AB:12:U:C6      | 3:AB:12:U:C3'     | 3.04                     | 0.41              |
| 4:AE:43:ASP:OD2   | 4:AE:45:GLN:HB2   | 2.21                     | 0.41              |
| 4:AE:45:GLN:H     | 4:AE:45:GLN:CD    | 2.29                     | 0.41              |
| 4:AE:58:ILE:CG2   | 4:AE:221:LEU:CD1  | 2.99                     | 0.41              |
| 4:AE:61:LEU:C     | 4:AE:64:ARG:HD2   | 2.46                     | 0.41              |
| 4:AE:213:LEU:O    | 4:AE:216:SER:HB3  | 2.21                     | 0.41              |
| 4:AE:221:LEU:HD13 | 4:AE:222:ILE:HA   | 2.02                     | 0.41              |
| 5:AF:59:ARG:HD3   | 5:AF:61:ALA:O     | 2.20                     | 0.41              |
| 5:AF:183:ASP:OD2  | 5:AF:184:TYR:N    | 2.54                     | 0.41              |
| 6:AG:18:LYS:C     | 6:AG:20:TYR:N     | 2.72                     | 0.41              |
| 6:AG:36:ARG:HG2   | 6:AG:38:TYR:OH    | 2.21                     | 0.41              |
| 6:AG:47:ARG:HH11  | 6:AG:47:ARG:CB    | 2.32                     | 0.41              |
| 6:AG:60:GLU:O     | 6:AG:61:LYS:C     | 2.62                     | 0.41              |
| 6:AG:100:ARG:NH1  | 6:AG:137:SER:HA   | 2.35                     | 0.41              |
| 7:AH:9:LYS:HD3    | 7:AH:108:ALA:CB   | 2.51                     | 0.41              |
| 7:AH:109:ILE:CD1  | 7:AH:139:LEU:HD11 | 2.50                     | 0.41              |
| 7:AH:141:GLN:O    | 7:AH:142:LEU:CG   | 2.67                     | 0.41              |
| 8:AI:69:GLU:HB2   | 8:AI:70:ASP:H     | 1.43                     | 0.41              |
| 9:AJ:71:PRO:HB2   | 9:AJ:72:ARG:H     | 1.77                     | 0.41              |
| 9:AJ:81:GLY:C     | 9:AJ:83:ALA:N     | 2.77                     | 0.41              |
| 10:AK:10:LEU:HA   | 10:AK:83:ILE:HD11 | 2.03                     | 0.41              |
| 10:AK:25:ASP:OD1  | 10:AK:25:ASP:N    | 2.53                     | 0.41              |
| 10:AK:68:ARG:NE   | 10:AK:74:PRO:HB3  | 2.36                     | 0.41              |
| 10:AK:81:HIS:CD2  | 10:AK:138:TRP:O   | 2.74                     | 0.41              |
| 11:AL:5:TYR:CZ    | 11:AL:18:PHE:CE2  | 3.08                     | 0.41              |
| 11:AL:6:GLY:CA    | 11:AL:80:GLY:O    | 2.60                     | 0.41              |
| 11:AL:91:ASP:OD2  | 11:AL:91:ASP:C    | 2.64                     | 0.41              |
| 11:AL:116:LYS:HB3 | 11:AL:122:ALA:N   | 2.34                     | 0.41              |
| 13:AN:41:THR:HB   | 13:AN:71:LYS:CD   | 2.50                     | 0.41              |
| 13:AN:66:LEU:O    | 13:AN:67:ASP:C    | 2.61                     | 0.41              |
| 13:AN:120:ARG:HE  | 13:AN:126:ARG:NH2 | 2.19                     | 0.41              |
| 14:AO:46:LYS:HZ3  | 14:AO:94:PRO:HG2  | 1.84                     | 0.41              |
| 14:AO:59:ARG:CA   | 14:AO:64:TYR:O    | 2.51                     | 0.41              |
| 14:AO:85:ILE:CD1  | 14:AO:99:HIS:O    | 2.69                     | 0.41              |
| 14:AO:103:GLY:HA2 | 14:AO:107:ALA:O   | 2.21                     | 0.41              |
| 14:AO:109:GLY:O   | 14:AO:111:LYS:N   | 2.54                     | 0.41              |
| 14:AO:110:VAL:CB  | 14:AO:113:ARG:HG3 | 2.51                     | 0.41              |
| 15:AP:3:ARG:CZ    | 30:BG:113:ARG:NE  | 2.84                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 15:AP:48:LEU:HD23  | 15:AP:52:GLU:HB2   | 1.93                     | 0.41              |
| 15:AP:67:GLU:O     | 15:AP:68:GLY:C     | 2.64                     | 0.41              |
| 15:AP:90:LEU:CD2   | 15:AP:93:ARG:HD3   | 2.50                     | 0.41              |
| 16:AQ:41:ARG:C     | 16:AQ:44:LEU:HB3   | 2.46                     | 0.41              |
| 16:AQ:58:LYS:HD3   | 16:AQ:58:LYS:C     | 2.37                     | 0.41              |
| 18:AS:1:MET:HE3    | 18:AS:1:MET:HB3    | 1.82                     | 0.41              |
| 18:AS:4:ILE:O      | 18:AS:66:PRO:HA    | 2.21                     | 0.41              |
| 18:AS:32:TYR:O     | 18:AS:34:GLU:N     | 2.54                     | 0.41              |
| 18:AS:40:ASP:HA    | 18:AS:41:PRO:HD3   | 1.76                     | 0.41              |
| 18:AS:71:ARG:HH11  | 18:AS:71:ARG:HB3   | 1.85                     | 0.41              |
| 18:AS:75:ARG:HA    | 18:AS:80:PHE:HB3   | 2.03                     | 0.41              |
| 18:AS:75:ARG:HG3   | 18:AS:80:PHE:CG    | 2.55                     | 0.41              |
| 19:AT:53:LEU:HG    | 19:AT:82:MET:HE1   | 2.03                     | 0.41              |
| 20:AU:47:THR:N     | 20:AU:49:LYS:HE2   | 2.36                     | 0.41              |
| 20:AU:56:THR:HB    | 20:AU:58:LEU:CD1   | 2.44                     | 0.41              |
| 21:AV:13:ASP:C     | 21:AV:15:LEU:N     | 2.77                     | 0.41              |
| 21:AV:35:SER:C     | 21:AV:37:ARG:N     | 2.79                     | 0.41              |
| 21:AV:51:VAL:HB    | 21:AV:75:ALA:CB    | 2.50                     | 0.41              |
| 24:BA:14:A:N7      | 24:BA:15:G:C1'     | 2.84                     | 0.41              |
| 24:BA:97:C:C4      | 24:BA:98:G:C8      | 3.08                     | 0.41              |
| 24:BA:112:U:N3     | 24:BA:113:G:H1'    | 2.35                     | 0.41              |
| 24:BA:173:G:N2     | 24:BA:174:C:C2     | 2.89                     | 0.41              |
| 24:BA:176:G:C2'    | 24:BA:177:G:C8     | 2.90                     | 0.41              |
| 24:BA:210:C:OP1    | 53:B6:29:LYS:HD3   | 2.21                     | 0.41              |
| 24:BA:213:A:C2     | 24:BA:214:G:O4'    | 2.74                     | 0.41              |
| 24:BA:242:G:C2'    | 24:BA:254:G:O6     | 2.64                     | 0.41              |
| 24:BA:256:A:H2'    | 24:BA:257:A:C8     | 2.55                     | 0.41              |
| 24:BA:270(B):A:O2' | 24:BA:270(C):C:H3' | 2.21                     | 0.41              |
| 24:BA:270(D):C:H2' | 24:BA:270(E):G:C8  | 2.56                     | 0.41              |
| 24:BA:270(M):U:O2  | 24:BA:270(M):U:C2' | 2.68                     | 0.41              |
| 24:BA:270(R):G:N2  | 24:BA:270(S):G:C4  | 2.89                     | 0.41              |
| 24:BA:280:C:H3'    | 24:BA:282:A:OP2    | 2.20                     | 0.41              |
| 24:BA:281:G:O2'    | 24:BA:282:A:C5'    | 2.68                     | 0.41              |
| 24:BA:300:A:H3'    | 24:BA:300:A:H8     | 1.84                     | 0.41              |
| 24:BA:301:G:C5     | 24:BA:317:G:N1     | 2.89                     | 0.41              |
| 24:BA:312:G:N3     | 24:BA:313:C:C5     | 2.89                     | 0.41              |
| 24:BA:358:U:OP2    | 24:BA:359:A:N7     | 2.54                     | 0.41              |
| 24:BA:363(C):G:H2' | 24:BA:363(D):G:O5' | 2.21                     | 0.41              |
| 24:BA:370:G:C2     | 24:BA:424:G:C8     | 3.08                     | 0.41              |
| 24:BA:373:U:C2'    | 24:BA:374:A:OP2    | 2.68                     | 0.41              |
| 24:BA:385:C:O2     | 24:BA:385:C:H2'    | 2.21                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 24:BA:413:C:N4   | 24:BA:2410:G:H1   | 2.19                     | 0.41              |
| 24:BA:424:G:C2'  | 24:BA:425:G:C5'   | 2.99                     | 0.41              |
| 24:BA:432:A:H8   | 24:BA:432:A:O5'   | 2.04                     | 0.41              |
| 24:BA:445:C:O2'  | 24:BA:449:A:C8    | 2.74                     | 0.41              |
| 24:BA:447:A:OP1  | 41:BT:5:LYS:NZ    | 2.53                     | 0.41              |
| 24:BA:458:G:C2'  | 53:B6:40:TRP:NE1  | 2.83                     | 0.41              |
| 24:BA:465:G:N2   | 24:BA:683:C:C2'   | 2.83                     | 0.41              |
| 24:BA:470:A:H2'  | 24:BA:471:A:C4'   | 2.51                     | 0.41              |
| 24:BA:471:A:C8   | 24:BA:472:A:N7    | 2.89                     | 0.41              |
| 24:BA:479:A:C6   | 24:BA:481:G:C4    | 3.09                     | 0.41              |
| 24:BA:481:G:O2'  | 24:BA:507:A:N6    | 2.54                     | 0.41              |
| 24:BA:496:G:C6   | 24:BA:497:A:C6    | 3.09                     | 0.41              |
| 24:BA:529:A:O3'  | 24:BA:530:G:H8    | 2.03                     | 0.41              |
| 24:BA:559:G:HO2' | 24:BA:560:C:C5'   | 2.28                     | 0.41              |
| 24:BA:562:U:C2'  | 24:BA:563:G:OP2   | 2.69                     | 0.41              |
| 24:BA:596:G:H3'  | 24:BA:597:U:H6    | 1.85                     | 0.41              |
| 24:BA:607:U:N3   | 24:BA:608:A:N7    | 2.69                     | 0.41              |
| 24:BA:629:G:C6   | 24:BA:630:G:C6    | 3.09                     | 0.41              |
| 24:BA:656:G:O2'  | 24:BA:657:U:O5'   | 2.38                     | 0.41              |
| 24:BA:679:C:O2   | 24:BA:679:C:C2'   | 2.67                     | 0.41              |
| 24:BA:710:G:H2'  | 24:BA:711:G:C8    | 2.56                     | 0.41              |
| 24:BA:748:G:N7   | 24:BA:750:A:N7    | 2.69                     | 0.41              |
| 24:BA:761:A:C5'  | 24:BA:762:U:OP1   | 2.69                     | 0.41              |
| 24:BA:763:G:C5'  | 27:BD:211:ARG:CZ  | 2.98                     | 0.41              |
| 24:BA:784:A:C6   | 24:BA:792:G:N3    | 2.84                     | 0.41              |
| 24:BA:792:G:C6   | 24:BA:2440:C:C6   | 3.09                     | 0.41              |
| 24:BA:799:G:C5   | 24:BA:800:A:C6    | 3.09                     | 0.41              |
| 24:BA:806:C:O5'  | 24:BA:806:C:C6    | 2.68                     | 0.41              |
| 24:BA:825:C:C1'  | 24:BA:2428:G:N2   | 2.75                     | 0.41              |
| 24:BA:851:U:C1'  | 49:B2:46:ASN:HB2  | 2.50                     | 0.41              |
| 24:BA:876:C:H2'  | 24:BA:877:U:C6    | 2.56                     | 0.41              |
| 24:BA:974:G:C4   | 24:BA:1186:G:C5   | 3.08                     | 0.41              |
| 24:BA:987:G:O6   | 24:BA:988:A:C6    | 2.74                     | 0.41              |
| 24:BA:988:A:O2'  | 24:BA:1157:G:H4'  | 2.21                     | 0.41              |
| 24:BA:1027:A:C2' | 24:BA:1028:A:H8   | 2.33                     | 0.41              |
| 24:BA:1036:G:C2  | 24:BA:1037:G:C8   | 3.09                     | 0.41              |
| 24:BA:1096:A:N6  | 33:BL:30:HIS:HD2  | 2.19                     | 0.41              |
| 24:BA:1124:C:O2' | 55:B8:36:GLN:O    | 2.39                     | 0.41              |
| 24:BA:1136:G:N2  | 24:BA:1137:G:C1'  | 2.84                     | 0.41              |
| 24:BA:1247:A:H2' | 24:BA:1248:G:H5'' | 2.03                     | 0.41              |
| 24:BA:1271:G:OP2 | 24:BA:1272:A:OP1  | 2.38                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1272:A:H5'  | 24:BA:1646:C:N3   | 2.35                     | 0.41              |
| 24:BA:1277:G:O2'  | 38:BQ:24:GLN:CG   | 2.69                     | 0.41              |
| 24:BA:1326:U:C4   | 24:BA:1327:C:C6   | 3.09                     | 0.41              |
| 24:BA:1334:G:OP1  | 44:BW:65:ARG:NH1  | 2.52                     | 0.41              |
| 24:BA:1338:G:N3   | 24:BA:1393:A:H2   | 2.19                     | 0.41              |
| 24:BA:1341:U:C4   | 24:BA:1398:C:H5'  | 2.54                     | 0.41              |
| 24:BA:1343:G:C8   | 24:BA:1597:A:N6   | 2.89                     | 0.41              |
| 24:BA:1358:G:C8   | 24:BA:1371:G:C6   | 3.09                     | 0.41              |
| 24:BA:1364:G:C8   | 24:BA:1364:G:OP2  | 2.74                     | 0.41              |
| 24:BA:1395:A:C6   | 24:BA:1398:C:C2   | 3.09                     | 0.41              |
| 24:BA:1429:G:H1'  | 24:BA:1568:G:N3   | 2.36                     | 0.41              |
| 24:BA:1517:G:N2   | 24:BA:1518:C:O2   | 2.53                     | 0.41              |
| 24:BA:1524:G:N3   | 24:BA:1525:G:C8   | 2.89                     | 0.41              |
| 24:BA:1568:G:O2'  | 24:BA:1569:A:P    | 2.75                     | 0.41              |
| 24:BA:1601:G:N3   | 24:BA:1601:G:H2'  | 2.34                     | 0.41              |
| 24:BA:1603:A:N1   | 24:BA:1604:C:N4   | 2.69                     | 0.41              |
| 24:BA:1647:G:C5'  | 24:BA:1648:C:OP1  | 2.69                     | 0.41              |
| 24:BA:1661:G:C5   | 24:BA:2000:G:C2   | 3.09                     | 0.41              |
| 24:BA:1693:U:O4   | 24:BA:1977:A:N7   | 2.53                     | 0.41              |
| 24:BA:1696:G:H2'  | 24:BA:1697:G:C1'  | 2.51                     | 0.41              |
| 24:BA:1699:G:C5   | 24:BA:1763:G:N3   | 2.89                     | 0.41              |
| 24:BA:1742:C:O4'  | 24:BA:1742:C:P    | 2.79                     | 0.41              |
| 24:BA:1813:G:HO2' | 27:BD:52:ARG:NH2  | 2.15                     | 0.41              |
| 24:BA:1819:A:H5'' | 27:BD:178:PRO:HB3 | 1.95                     | 0.41              |
| 24:BA:1825:A:C6   | 24:BA:1826:G:C6   | 3.08                     | 0.41              |
| 24:BA:1831:G:H2'  | 24:BA:1832:C:H6   | 1.86                     | 0.41              |
| 24:BA:1861:G:OP1  | 26:BC:206:GLY:HA2 | 2.21                     | 0.41              |
| 24:BA:1906:G:C5   | 24:BA:1929:G:C5   | 3.09                     | 0.41              |
| 24:BA:1908:C:H2'  | 24:BA:1909:C:C6   | 2.55                     | 0.41              |
| 24:BA:1931:U:H6   | 24:BA:1931:U:H2'  | 1.65                     | 0.41              |
| 24:BA:1932:A:N6   | 24:BA:1933:G:C6   | 2.88                     | 0.41              |
| 24:BA:1945:G:O2'  | 24:BA:1946:U:H5'  | 2.20                     | 0.41              |
| 24:BA:1982:C:H5'' | 24:BA:1983:C:OP2  | 2.21                     | 0.41              |
| 24:BA:2007:C:O2'  | 24:BA:2008:C:H5'  | 2.20                     | 0.41              |
| 24:BA:2018:G:OP2  | 24:BA:2018:G:C8   | 2.70                     | 0.41              |
| 24:BA:2045:C:O2'  | 24:BA:2046:G:C5'  | 2.69                     | 0.41              |
| 24:BA:2087:G:H8   | 24:BA:2087:G:C5'  | 2.34                     | 0.41              |
| 24:BA:2093:G:O3'  | 32:BK:25:TYR:HB3  | 2.21                     | 0.41              |
| 24:BA:2117:A:N6   | 24:BA:2171:A:C2   | 2.86                     | 0.41              |
| 24:BA:2190:G:C6   | 24:BA:2191:G:N7   | 2.89                     | 0.41              |
| 24:BA:2207:C:C3'  | 24:BA:2208:U:C5'  | 2.98                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2246:G:C1'   | 24:BA:2426:A:C2    | 3.04                     | 0.41              |
| 24:BA:2252:G:N7    | 24:BA:2253:G:N7    | 2.69                     | 0.41              |
| 24:BA:2264:C:C2    | 24:BA:2277:G:N2    | 2.89                     | 0.41              |
| 24:BA:2280:G:N3    | 24:BA:2281:C:C5    | 2.89                     | 0.41              |
| 24:BA:2284:C:H2'   | 24:BA:2285:C:C6    | 2.56                     | 0.41              |
| 24:BA:2323:G:N3    | 24:BA:2324:C:C4    | 2.89                     | 0.41              |
| 24:BA:2356:C:H5''  | 24:BA:2356:C:C6    | 2.55                     | 0.41              |
| 24:BA:2373:G:N3    | 24:BA:2374:C:C4    | 2.89                     | 0.41              |
| 24:BA:2391:G:C2'   | 24:BA:2392:A:OP2   | 2.68                     | 0.41              |
| 24:BA:2423:U:C6    | 24:BA:2423:U:H5'   | 2.56                     | 0.41              |
| 24:BA:2431:U:HO2'  | 24:BA:2432:A:H8    | 1.66                     | 0.41              |
| 24:BA:2462:U:N3    | 24:BA:2463:C:C4    | 2.89                     | 0.41              |
| 24:BA:2485:G:H5''  | 37:BP:46:GLN:OE1   | 2.21                     | 0.41              |
| 24:BA:2500:U:O2'   | 24:BA:2501:C:OP1   | 2.34                     | 0.41              |
| 24:BA:2530:A:H3'   | 24:BA:2531:A:C5'   | 2.50                     | 0.41              |
| 24:BA:2545:G:HO2'  | 24:BA:2565:A:H61   | 1.69                     | 0.41              |
| 24:BA:2563:U:C4'   | 35:BN:28:SER:HG    | 2.31                     | 0.41              |
| 24:BA:2569:G:N3    | 24:BA:2570:G:H8    | 2.16                     | 0.41              |
| 24:BA:2653:U:N3    | 24:BA:2668:G:N1    | 2.69                     | 0.41              |
| 24:BA:2688:U:N3    | 24:BA:2719:G:C2    | 2.89                     | 0.41              |
| 24:BA:2690:C:O2'   | 24:BA:2691:C:P     | 2.76                     | 0.41              |
| 24:BA:2705:A:C2'   | 24:BA:2706:G:O5'   | 2.66                     | 0.41              |
| 24:BA:2771:C:H2'   | 24:BA:2771:C:O2    | 2.21                     | 0.41              |
| 24:BA:2786:U:C2    | 24:BA:2787:C:C5    | 3.08                     | 0.41              |
| 24:BA:2810:A:H62   | 24:BA:2891:G:H21   | 1.68                     | 0.41              |
| 24:BA:2823:A:C5'   | 24:BA:2824:C:OP2   | 2.69                     | 0.41              |
| 24:BA:2828:C:N3    | 24:BA:2829:C:N4    | 2.69                     | 0.41              |
| 24:BA:2881:C:H4'   | 38:BQ:117:VAL:HG21 | 2.03                     | 0.41              |
| 25:BB:40:U:H2'     | 25:BB:41:U:OP1     | 2.21                     | 0.41              |
| 25:BB:52:A:N3      | 25:BB:53:A:O4'     | 2.54                     | 0.41              |
| 25:BB:88:C:C4      | 25:BB:89:G:N3      | 2.86                     | 0.41              |
| 25:BB:95:U:C2      | 25:BB:96:G:N7      | 2.89                     | 0.41              |
| 25:BB:118:G:C4     | 25:BB:119:A:N7     | 2.89                     | 0.41              |
| 26:BC:104:LEU:HD13 | 26:BC:130:ILE:CG1  | 2.51                     | 0.41              |
| 26:BC:104:LEU:HD11 | 26:BC:130:ILE:HD11 | 2.02                     | 0.41              |
| 26:BC:138:PRO:HB3  | 26:BC:145:VAL:HG22 | 2.02                     | 0.41              |
| 26:BC:190:ARG:HH11 | 26:BC:190:ARG:CG   | 2.34                     | 0.41              |
| 26:BC:213:TYR:HA   | 26:BC:224:ILE:HG12 | 2.02                     | 0.41              |
| 27:BD:5:LYS:HB2    | 27:BD:82:ILE:CG1   | 2.51                     | 0.41              |
| 27:BD:105:ILE:CD1  | 27:BD:106:ILE:HG23 | 2.51                     | 0.41              |
| 27:BD:123:ALA:HB1  | 27:BD:129:ASN:HB3  | 2.02                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 27:BD:124:PRO:O    | 27:BD:126:GLN:HG2  | 2.21                     | 0.41              |
| 27:BD:259:THR:O    | 27:BD:260:ARG:C    | 2.60                     | 0.41              |
| 28:BE:8:LYS:HZ1    | 40:BS:3:ARG:NE     | 2.19                     | 0.41              |
| 28:BE:30:PRO:HG2   | 28:BE:90:THR:HG22  | 2.03                     | 0.41              |
| 28:BE:38:THR:O     | 28:BE:42:ASP:N     | 2.53                     | 0.41              |
| 28:BE:40:GLU:OE2   | 28:BE:40:GLU:HA    | 2.20                     | 0.41              |
| 28:BE:43:GLY:O     | 28:BE:45:THR:CG2   | 2.62                     | 0.41              |
| 28:BE:119:ARG:NH2  | 28:BE:155:LYS:CB   | 2.84                     | 0.41              |
| 28:BE:119:ARG:HH11 | 28:BE:120:TRP:CA   | 2.30                     | 0.41              |
| 28:BE:164:ARG:CG   | 28:BE:165:VAL:N    | 2.84                     | 0.41              |
| 29:BF:4:VAL:O      | 29:BF:4:VAL:HG12   | 2.20                     | 0.41              |
| 29:BF:8:GLN:O      | 29:BF:9:ILE:HD12   | 2.19                     | 0.41              |
| 29:BF:27:GLU:CG    | 29:BF:116:ASP:HB2  | 2.51                     | 0.41              |
| 29:BF:90:PHE:O     | 29:BF:91:GLY:O     | 2.39                     | 0.41              |
| 29:BF:157:VAL:O    | 29:BF:194:MET:CB   | 2.60                     | 0.41              |
| 29:BF:194:MET:HE1  | 29:BF:197:ASP:CA   | 2.51                     | 0.41              |
| 30:BG:43:LEU:HD12  | 30:BG:43:LEU:HA    | 1.59                     | 0.41              |
| 30:BG:60:LEU:C     | 30:BG:66:GLN:O     | 2.63                     | 0.41              |
| 31:BH:11:VAL:N     | 31:BH:50:VAL:CG2   | 2.83                     | 0.41              |
| 31:BH:24:VAL:HG13  | 31:BH:37:VAL:HG12  | 2.03                     | 0.41              |
| 31:BH:30:LYS:O     | 31:BH:31:GLY:C     | 2.64                     | 0.41              |
| 31:BH:85:LYS:NZ    | 31:BH:85:LYS:CB    | 2.82                     | 0.41              |
| 31:BH:142:GLY:O    | 31:BH:145:ALA:HB3  | 2.20                     | 0.41              |
| 31:BH:149:ARG:CG   | 31:BH:153:LYS:CD   | 2.97                     | 0.41              |
| 32:BK:2:LYS:CD     | 32:BK:44:LEU:HD21  | 2.51                     | 0.41              |
| 32:BK:30:LEU:O     | 32:BK:33:ARG:HG3   | 2.20                     | 0.41              |
| 32:BK:92:VAL:CG1   | 32:BK:120:ILE:HG23 | 2.51                     | 0.41              |
| 33:BL:24:GLY:CA    | 33:BL:34:ILE:HG23  | 2.51                     | 0.41              |
| 33:BL:37:PHE:HZ    | 33:BL:58:THR:C     | 2.28                     | 0.41              |
| 33:BL:79:ARG:CG    | 33:BL:134:MET:HE2  | 2.51                     | 0.41              |
| 34:BM:13:TRP:O     | 34:BM:136:GLU:OE2  | 2.39                     | 0.41              |
| 34:BM:26:LEU:O     | 34:BM:30:ILE:CD1   | 2.69                     | 0.41              |
| 34:BM:42:TRP:C     | 34:BM:43:THR:HG1   | 2.28                     | 0.41              |
| 34:BM:55:VAL:N     | 34:BM:130:HIS:HE1  | 2.18                     | 0.41              |
| 34:BM:89:LYS:CA    | 34:BM:92:ALA:HB3   | 2.48                     | 0.41              |
| 34:BM:135:PRO:O    | 34:BM:136:GLU:C    | 2.64                     | 0.41              |
| 34:BM:140:VAL:OXT  | 34:BM:140:VAL:CG1  | 2.69                     | 0.41              |
| 35:BN:13:ASN:O     | 35:BN:14:THR:C     | 2.62                     | 0.41              |
| 35:BN:43:VAL:CG2   | 35:BN:45:GLU:O     | 2.69                     | 0.41              |
| 35:BN:73:ASP:C     | 40:BS:79:HIS:CE1   | 2.98                     | 0.41              |
| 35:BN:88:ASN:HB2   | 35:BN:89:ASN:OD1   | 2.20                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 36:BO:34:GLY:O    | 36:BO:36:LYS:N     | 2.54                     | 0.41              |
| 36:BO:86:LYS:HB3  | 36:BO:87:ASP:H     | 1.59                     | 0.41              |
| 36:BO:96:THR:C    | 36:BO:102:ARG:CD   | 2.92                     | 0.41              |
| 36:BO:112:LEU:HB2 | 36:BO:128:HIS:CE1  | 2.56                     | 0.41              |
| 37:BP:6:ARG:HH21  | 37:BP:8:LYS:N      | 2.17                     | 0.41              |
| 37:BP:22:LYS:CE   | 37:BP:23:GLY:N     | 2.84                     | 0.41              |
| 37:BP:39:PRO:CB   | 37:BP:127:ILE:HG12 | 2.51                     | 0.41              |
| 37:BP:68:ILE:HG21 | 37:BP:95:ALA:HB1   | 2.02                     | 0.41              |
| 37:BP:97:VAL:N    | 37:BP:98:LYS:HE2   | 2.36                     | 0.41              |
| 37:BP:102:VAL:CG1 | 37:BP:104:PHE:CZ   | 3.04                     | 0.41              |
| 38:BQ:22:ARG:HD3  | 38:BQ:69:ASP:O     | 2.21                     | 0.41              |
| 39:BR:29:PHE:C    | 39:BR:35:ILE:HD12  | 2.46                     | 0.41              |
| 39:BR:40:ILE:CG2  | 39:BR:41:ASP:H     | 2.33                     | 0.41              |
| 39:BR:54:LEU:O    | 39:BR:56:LEU:HD22  | 2.21                     | 0.41              |
| 39:BR:74:ALA:CB   | 39:BR:108:GLY:H    | 2.28                     | 0.41              |
| 39:BR:104:GLY:O   | 39:BR:105:ALA:C    | 2.63                     | 0.41              |
| 40:BS:19:LEU:O    | 40:BS:20:PRO:O     | 2.38                     | 0.41              |
| 40:BS:73:GLU:HG3  | 40:BS:73:GLU:O     | 2.21                     | 0.41              |
| 40:BS:101:PHE:HD2 | 40:BS:101:PHE:HA   | 1.78                     | 0.41              |
| 40:BS:105:LEU:C   | 40:BS:107:ASP:N    | 2.78                     | 0.41              |
| 40:BS:113:LYS:O   | 40:BS:116:ALA:CB   | 2.65                     | 0.41              |
| 42:BU:20:LEU:O    | 42:BU:20:LEU:HG    | 2.21                     | 0.41              |
| 42:BU:25:LEU:HG   | 42:BU:28:GLU:OE1   | 2.20                     | 0.41              |
| 43:BV:78:GLU:OE2  | 43:BV:101:SER:OG   | 2.29                     | 0.41              |
| 44:BW:13:LEU:N    | 44:BW:13:LEU:HD23  | 2.36                     | 0.41              |
| 44:BW:25:LYS:HG2  | 44:BW:82:GLN:HE21  | 1.86                     | 0.41              |
| 44:BW:47:PHE:O    | 44:BW:49:VAL:HG13  | 2.19                     | 0.41              |
| 44:BW:68:ARG:NH1  | 44:BW:68:ARG:CB    | 2.84                     | 0.41              |
| 45:BX:36:ALA:HB1  | 45:BX:62:GLU:O     | 2.20                     | 0.41              |
| 46:BY:8:TYR:N     | 46:BY:8:TYR:HD1    | 2.15                     | 0.41              |
| 46:BY:31:ARG:NH1  | 46:BY:31:ARG:CG    | 2.84                     | 0.41              |
| 46:BY:40:ASP:N    | 46:BY:44:PHE:CE1   | 2.89                     | 0.41              |
| 46:BY:44:PHE:HB3  | 46:BY:48:PHE:HE1   | 1.86                     | 0.41              |
| 46:BY:48:PHE:O    | 46:BY:51:ALA:N     | 2.39                     | 0.41              |
| 46:BY:103:ARG:HE  | 46:BY:103:ARG:CA   | 2.26                     | 0.41              |
| 46:BY:127:LYS:CD  | 46:BY:165:VAL:HG23 | 2.42                     | 0.41              |
| 46:BY:155:LEU:O   | 46:BY:156:LYS:CB   | 2.68                     | 0.41              |
| 48:B1:7:GLU:O     | 48:B1:10:LYS:CB    | 2.69                     | 0.41              |
| 48:B1:23:LYS:HD3  | 48:B1:55:LEU:HD21  | 2.01                     | 0.41              |
| 48:B1:28:MET:HE2  | 48:B1:28:MET:HB3   | 1.88                     | 0.41              |
| 50:B3:39:CYS:O    | 50:B3:40:HIS:CD2   | 2.74                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 50:B3:40:HIS:CB   | 50:B3:41:PRO:HD3  | 2.51                     | 0.41              |
| 50:B3:41:PRO:HA   | 50:B3:58:ARG:NH1  | 2.35                     | 0.41              |
| 50:B3:42:PHE:O    | 50:B3:61:ARG:CZ   | 2.69                     | 0.41              |
| 51:B4:35:GLU:OE1  | 51:B4:51:TYR:CD2  | 2.74                     | 0.41              |
| 51:B4:56:LYS:C    | 51:B4:57:VAL:CG1  | 2.93                     | 0.41              |
| 52:B5:16:CYS:SG   | 52:B5:20:ASN:HB2  | 2.61                     | 0.41              |
| 52:B5:44:ARG:HB3  | 52:B5:45:LYS:H    | 1.74                     | 0.41              |
| 53:B6:13:ALA:O    | 53:B6:16:HIS:O    | 2.39                     | 0.41              |
| 54:B7:8:LYS:CE    | 54:B7:11:LYS:HZ2  | 2.31                     | 0.41              |
| 54:B7:26:LYS:O    | 54:B7:47:LYS:HD2  | 2.21                     | 0.41              |
| 54:B7:40:GLU:O    | 54:B7:42:ARG:N    | 2.54                     | 0.41              |
| 55:B8:1:MET:HG2   | 55:B8:2:LYS:N     | 2.35                     | 0.41              |
| 55:B8:10:ILE:CG1  | 55:B8:32:HIS:HD2  | 2.34                     | 0.41              |
| 1:AA:11:G:O2'     | 1:AA:12:U:H5'     | 2.21                     | 0.41              |
| 1:AA:160:A:H2     | 1:AA:343:U:H1'    | 1.84                     | 0.41              |
| 1:AA:170:U:H2'    | 1:AA:170:U:O2     | 2.20                     | 0.41              |
| 1:AA:397:A:C2'    | 1:AA:398:C:OP2    | 2.69                     | 0.41              |
| 1:AA:543:C:OP2    | 6:AG:10:ARG:NH2   | 2.53                     | 0.41              |
| 1:AA:592:G:C6     | 1:AA:648:A:C6     | 3.09                     | 0.41              |
| 1:AA:626:U:H2'    | 1:AA:627:G:H8     | 1.86                     | 0.41              |
| 1:AA:673:G:C6     | 1:AA:734:G:C6     | 3.09                     | 0.41              |
| 1:AA:766:A:C2'    | 1:AA:767:A:H8     | 2.34                     | 0.41              |
| 1:AA:924:C:C2     | 1:AA:925:G:C8     | 3.08                     | 0.41              |
| 1:AA:1043:C:C4    | 1:AA:1044:A:N7    | 2.89                     | 0.41              |
| 1:AA:1080:A:O5'   | 1:AA:1080:A:H8    | 2.04                     | 0.41              |
| 1:AA:1092:A:C8    | 1:AA:1183:A:N7    | 2.89                     | 0.41              |
| 1:AA:1107:C:H2'   | 1:AA:1107:C:O2    | 2.21                     | 0.41              |
| 1:AA:1148:U:H5'   | 11:AL:16:ARG:HD2  | 2.01                     | 0.41              |
| 1:AA:1363:A:H1'   | 1:AA:1365:G:N7    | 2.35                     | 0.41              |
| 1:AA:1440:C:O2    | 1:AA:1441:G:O4'   | 2.39                     | 0.41              |
| 1:AA:1475:G:H2'   | 1:AA:1476:G:O5'   | 2.21                     | 0.41              |
| 2:A1:39:U:H4'     | 2:A1:40:U:H5'     | 2.01                     | 0.41              |
| 3:AC:74:C:N4      | 47:BZ:4:LYS:HZ1   | 2.17                     | 0.41              |
| 3:AD:17:C:N4      | 3:AD:19:G:C8      | 2.85                     | 0.41              |
| 3:AB:18:G:O2'     | 3:AB:57:G:N2      | 2.53                     | 0.41              |
| 3:AB:74:C:C4      | 24:BA:2555:U:N1   | 2.89                     | 0.41              |
| 4:AE:53:ARG:O     | 4:AE:54:THR:C     | 2.64                     | 0.41              |
| 4:AE:118:LEU:HD22 | 4:AE:142:LEU:HD13 | 2.02                     | 0.41              |
| 4:AE:130:ARG:NE   | 4:AE:130:ARG:CA   | 2.78                     | 0.41              |
| 5:AF:18:TRP:CE2   | 16:AQ:55:GLY:O    | 2.74                     | 0.41              |
| 5:AF:138:VAL:CG1  | 5:AF:149:ALA:HB3  | 2.51                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 6:AG:106:TYR:O    | 6:AG:107:ARG:C     | 2.64                     | 0.41              |
| 6:AG:108:LEU:HD22 | 6:AG:108:LEU:HA    | 1.78                     | 0.41              |
| 6:AG:122:ARG:HG3  | 6:AG:136:PRO:HG2   | 2.03                     | 0.41              |
| 6:AG:180:GLY:C    | 6:AG:182:LYS:HG2   | 2.46                     | 0.41              |
| 7:AH:75:THR:CA    | 7:AH:118:ILE:HD11  | 2.50                     | 0.41              |
| 8:AI:2:ARG:CD     | 8:AI:69:GLU:HG2    | 2.51                     | 0.41              |
| 8:AI:11:ASN:HB3   | 8:AI:84:ASN:HB3    | 2.03                     | 0.41              |
| 9:AJ:26:PHE:O     | 9:AJ:29:LYS:HB2    | 2.21                     | 0.41              |
| 9:AJ:68:ASN:C     | 9:AJ:135:VAL:HG13  | 2.46                     | 0.41              |
| 9:AJ:86:GLN:O     | 9:AJ:148:ASN:CB    | 2.65                     | 0.41              |
| 9:AJ:150:ALA:HA   | 13:AN:59:TYR:HB2   | 2.03                     | 0.41              |
| 10:AK:20:TYR:HD1  | 10:AK:65:TYR:CZ    | 2.38                     | 0.41              |
| 10:AK:32:LYS:O    | 10:AK:35:ILE:N     | 2.55                     | 0.41              |
| 10:AK:92:ARG:HH11 | 10:AK:92:ARG:CG    | 2.20                     | 0.41              |
| 10:AK:104:ARG:O   | 10:AK:107:LEU:HD23 | 2.21                     | 0.41              |
| 11:AL:47:LEU:HD11 | 11:AL:56:LEU:CD1   | 2.51                     | 0.41              |
| 12:AM:15:THR:OG1  | 12:AM:93:GLY:C     | 2.64                     | 0.41              |
| 12:AM:17:ASP:O    | 12:AM:21:GLN:CB    | 2.70                     | 0.41              |
| 12:AM:33:GLN:O    | 12:AM:34:VAL:HG23  | 2.20                     | 0.41              |
| 13:AN:15:ALA:C    | 13:AN:78:GLN:HE22  | 2.29                     | 0.41              |
| 13:AN:102:GLY:O   | 13:AN:103:LEU:C    | 2.64                     | 0.41              |
| 14:AO:5:PRO:HG3   | 14:AO:15:ARG:NH2   | 2.35                     | 0.41              |
| 14:AO:31:PRO:HB2  | 14:AO:32:PHE:H     | 1.71                     | 0.41              |
| 14:AO:84:LEU:CA   | 14:AO:104:VAL:HG11 | 2.50                     | 0.41              |
| 14:AO:86:ARG:NH2  | 14:AO:119:LYS:HD3  | 2.35                     | 0.41              |
| 15:AP:19:LEU:HD13 | 15:AP:25:ILE:CG2   | 2.51                     | 0.41              |
| 16:AQ:16:PHE:HB3  | 16:AQ:18:VAL:HG22  | 2.03                     | 0.41              |
| 17:AR:13:GLN:HE21 | 17:AR:13:GLN:HB3   | 1.66                     | 0.41              |
| 17:AR:33:THR:HB   | 17:AR:34:LEU:H     | 1.79                     | 0.41              |
| 17:AR:56:LEU:CD1  | 17:AR:59:MET:HE3   | 2.51                     | 0.41              |
| 18:AS:31:LYS:NZ   | 18:AS:31:LYS:CB    | 2.78                     | 0.41              |
| 18:AS:58:TYR:HD1  | 18:AS:59:TRP:CA    | 2.33                     | 0.41              |
| 20:AU:69:THR:C    | 20:AU:71:LYS:N     | 2.71                     | 0.41              |
| 22:AW:26:ASN:O    | 22:AW:27:LYS:C     | 2.57                     | 0.41              |
| 24:BA:142:G:H2'   | 24:BA:143:C:H6     | 1.82                     | 0.41              |
| 24:BA:146:G:H2'   | 24:BA:147:U:H5''   | 2.03                     | 0.41              |
| 24:BA:180:G:H2'   | 24:BA:180:G:N3     | 2.36                     | 0.41              |
| 24:BA:214:G:C2'   | 24:BA:215:G:O4'    | 2.69                     | 0.41              |
| 24:BA:278:A:O4'   | 24:BA:278:A:OP1    | 2.38                     | 0.41              |
| 24:BA:319:C:C4    | 24:BA:320:A:C5     | 3.09                     | 0.41              |
| 24:BA:325:G:C8    | 24:BA:325:G:C3'    | 3.04                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|---------------------|--------------------------|-------------------|
| 24:BA:475:U:C6   | 24:BA:509:C:C4      | 3.09                     | 0.41              |
| 24:BA:566:U:H3'  | 24:BA:567:A:C8      | 2.55                     | 0.41              |
| 24:BA:583:G:O2'  | 24:BA:584:C:C5'     | 2.66                     | 0.41              |
| 24:BA:603:A:O2'  | 24:BA:604:G:O5'     | 2.38                     | 0.41              |
| 24:BA:682:G:C4   | 24:BA:683:C:C5      | 3.08                     | 0.41              |
| 24:BA:704:G:N3   | 24:BA:704:G:H2'     | 2.36                     | 0.41              |
| 24:BA:720:C:C2   | 24:BA:721:C:C6      | 3.09                     | 0.41              |
| 24:BA:733:G:N7   | 24:BA:761:A:C5      | 2.89                     | 0.41              |
| 24:BA:752:A:H5'  | 53:B6:1:MET:HE3     | 2.03                     | 0.41              |
| 24:BA:814:C:H4'  | 24:BA:1224:G:C2     | 2.56                     | 0.41              |
| 24:BA:892:G:H2'  | 24:BA:893:C:H6      | 1.85                     | 0.41              |
| 24:BA:1012:U:N3  | 24:BA:1142(A):A:O2' | 2.54                     | 0.41              |
| 24:BA:1036:G:P   | 31:BH:59:ARG:HH21   | 2.43                     | 0.41              |
| 24:BA:1059:G:H21 | 33:BL:130:SER:HB3   | 1.81                     | 0.41              |
| 24:BA:1080:C:O2' | 24:BA:1081:U:H5'    | 2.21                     | 0.41              |
| 24:BA:1207:C:H6  | 24:BA:1207:C:H5''   | 1.86                     | 0.41              |
| 24:BA:1238:G:N1  | 24:BA:1239:G:C4     | 2.89                     | 0.41              |
| 24:BA:1239:G:C2' | 24:BA:1240:U:H5'    | 2.51                     | 0.41              |
| 24:BA:1266:G:H2' | 24:BA:1267:U:OP2    | 2.20                     | 0.41              |
| 24:BA:1298:C:N4  | 24:BA:1299:G:C6     | 2.89                     | 0.41              |
| 24:BA:1304:C:H2' | 24:BA:1305:C:O5'    | 2.20                     | 0.41              |
| 24:BA:1376:C:O2  | 24:BA:1377:G:C1'    | 2.69                     | 0.41              |
| 24:BA:1387:C:C2' | 24:BA:1388:G:H8     | 2.25                     | 0.41              |
| 24:BA:1453:A:C5  | 38:BQ:77:ARG:HD3    | 2.56                     | 0.41              |
| 24:BA:1502:C:O5' | 24:BA:1502:C:H6     | 2.04                     | 0.41              |
| 24:BA:1579:A:C5  | 24:BA:1580:A:H1'    | 2.56                     | 0.41              |
| 24:BA:1667:G:O5' | 35:BN:7:TYR:CZ      | 2.74                     | 0.41              |
| 24:BA:1672:C:C5  | 24:BA:1673:U:C5     | 3.09                     | 0.41              |
| 24:BA:1687:G:C2' | 24:BA:1701:A:H61    | 2.34                     | 0.41              |
| 24:BA:1917:U:C5  | 24:BA:1918:A:N9     | 2.89                     | 0.41              |
| 24:BA:1957:C:H2' | 24:BA:1958:C:C6     | 2.55                     | 0.41              |
| 24:BA:1993:U:C4  | 24:BA:1994:C:N4     | 2.67                     | 0.41              |
| 24:BA:2018:G:O6  | 24:BA:2035:G:C6     | 2.74                     | 0.41              |
| 24:BA:2046:G:C1' | 51:B4:22:HIS:HD1    | 2.33                     | 0.41              |
| 24:BA:2173:A:C2  | 24:BA:2174:C:H1'    | 2.56                     | 0.41              |
| 24:BA:2175:C:N3  | 24:BA:2176:A:C8     | 2.89                     | 0.41              |
| 24:BA:2205:C:OP1 | 50:B3:44:THR:HG23   | 2.21                     | 0.41              |
| 24:BA:2244:U:C2' | 24:BA:2244:U:O2     | 2.65                     | 0.41              |
| 24:BA:2318:G:C2' | 24:BA:2319:G:OP2    | 2.68                     | 0.41              |
| 24:BA:2423:U:H1' | 24:BA:2425:A:N3     | 2.35                     | 0.41              |
| 24:BA:2515:C:O2' | 24:BA:2516:G:C5'    | 2.64                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:2612:C:O2    | 51:B4:4:HIS:HB2    | 2.20                     | 0.41              |
| 24:BA:2637:U:O2'   | 24:BA:2638:G:C1'   | 2.69                     | 0.41              |
| 24:BA:2730:C:H2'   | 24:BA:2731:G:C8    | 2.56                     | 0.41              |
| 24:BA:2766:G:N3    | 24:BA:2767:C:C5    | 2.89                     | 0.41              |
| 25:BB:10:C:H6      | 25:BB:10:C:O5'     | 2.04                     | 0.41              |
| 25:BB:84:C:H2'     | 25:BB:85:G:C5'     | 2.45                     | 0.41              |
| 25:BB:85:G:H2'     | 25:BB:86:G:H8      | 1.85                     | 0.41              |
| 26:BC:19:ILE:C     | 26:BC:20:TYR:CD1   | 2.99                     | 0.41              |
| 26:BC:20:TYR:CE1   | 26:BC:222:VAL:CG1  | 3.04                     | 0.41              |
| 26:BC:49:ILE:HG23  | 26:BC:208:PHE:HE1  | 1.85                     | 0.41              |
| 26:BC:124:GLY:HA2  | 26:BC:137:LEU:CD2  | 2.51                     | 0.41              |
| 26:BC:207:THR:O    | 26:BC:207:THR:HG22 | 2.21                     | 0.41              |
| 27:BD:37:LEU:CD1   | 27:BD:64:ILE:N     | 2.79                     | 0.41              |
| 27:BD:39:LYS:N     | 27:BD:39:LYS:CD    | 2.81                     | 0.41              |
| 27:BD:106:ILE:HB   | 27:BD:107:ALA:H    | 1.62                     | 0.41              |
| 27:BD:117:VAL:HG12 | 27:BD:118:VAL:N    | 2.34                     | 0.41              |
| 27:BD:145:VAL:HG22 | 27:BD:191:ALA:HB1  | 2.02                     | 0.41              |
| 27:BD:156:ALA:C    | 27:BD:158:ALA:N    | 2.77                     | 0.41              |
| 27:BD:223:GLY:O    | 27:BD:224:ALA:C    | 2.64                     | 0.41              |
| 27:BD:263:ARG:HB2  | 27:BD:264:LYS:H    | 1.73                     | 0.41              |
| 28:BE:38:THR:CG2   | 28:BE:39:PRO:HD3   | 2.50                     | 0.41              |
| 28:BE:133:LYS:CG   | 28:BE:137:HIS:CD2  | 3.04                     | 0.41              |
| 28:BE:154:LYS:CD   | 28:BE:155:LYS:O    | 2.68                     | 0.41              |
| 29:BF:28:ILE:HD12  | 29:BF:28:ILE:HA    | 1.99                     | 0.41              |
| 29:BF:80:ALA:O     | 29:BF:83:PHE:CD2   | 2.74                     | 0.41              |
| 29:BF:122:LYS:HE3  | 29:BF:192:LEU:CG   | 2.51                     | 0.41              |
| 29:BF:185:ASP:C    | 29:BF:188:ARG:HG3  | 2.45                     | 0.41              |
| 30:BG:34:LEU:HD12  | 30:BG:34:LEU:H     | 1.85                     | 0.41              |
| 30:BG:35:GLU:O     | 30:BG:160:VAL:O    | 2.39                     | 0.41              |
| 30:BG:68:PRO:CB    | 30:BG:72:ARG:NH1   | 2.79                     | 0.41              |
| 31:BH:8:PRO:C      | 31:BH:9:ILE:HG13   | 2.47                     | 0.41              |
| 31:BH:83:TYR:HE1   | 31:BH:138:LYS:HD3  | 1.86                     | 0.41              |
| 32:BK:120:ILE:O    | 32:BK:120:ILE:HG23 | 2.21                     | 0.41              |
| 33:BL:49:GLY:O     | 33:BL:50:ASP:CG    | 2.64                     | 0.41              |
| 34:BM:18:ALA:N     | 34:BM:21:LYS:HD2   | 2.35                     | 0.41              |
| 34:BM:74:ARG:O     | 34:BM:76:SER:N     | 2.52                     | 0.41              |
| 35:BN:2:ILE:HG12   | 35:BN:32:TYR:HD1   | 1.86                     | 0.41              |
| 35:BN:15:GLY:C     | 35:BN:46:ALA:O     | 2.64                     | 0.41              |
| 36:BO:6:LEU:O      | 36:BO:6:LEU:CD2    | 2.64                     | 0.41              |
| 36:BO:36:LYS:CD    | 36:BO:42:SER:OG    | 2.69                     | 0.41              |
| 37:BP:59:ARG:NH1   | 46:BY:177:PRO:HB2  | 2.36                     | 0.41              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 38:BQ:58:GLY:N    | 38:BQ:80:PHE:CZ   | 2.89                     | 0.41              |
| 39:BR:96:GLY:O    | 39:BR:98:VAL:N    | 2.54                     | 0.41              |
| 40:BS:65:LYS:CA   | 40:BS:76:PHE:O    | 2.63                     | 0.41              |
| 40:BS:85:LYS:HB3  | 40:BS:85:LYS:NZ   | 2.31                     | 0.41              |
| 41:BT:34:LYS:O    | 41:BT:35:ALA:C    | 2.61                     | 0.41              |
| 41:BT:105:VAL:O   | 41:BT:109:LEU:CD1 | 2.69                     | 0.41              |
| 43:BV:33:ARG:CD   | 43:BV:33:ARG:C    | 2.94                     | 0.41              |
| 44:BW:35:THR:N    | 44:BW:38:GLU:CB   | 2.84                     | 0.41              |
| 45:BX:6:HIS:CD2   | 45:BX:71:LYS:HE2  | 2.56                     | 0.41              |
| 46:BY:1:MET:CE    | 46:BY:61:LEU:HG   | 2.51                     | 0.41              |
| 47:BZ:33:ALA:CA   | 47:BZ:61:ALA:O    | 2.60                     | 0.41              |
| 48:B1:35:SER:CA   | 48:B1:38:GLN:OE1  | 2.66                     | 0.41              |
| 48:B1:57:THR:O    | 48:B1:60:ASN:HB3  | 2.20                     | 0.41              |
| 49:B2:45:GLY:HA2  | 49:B2:48:GLU:CG   | 2.46                     | 0.41              |
| 49:B2:47:VAL:O    | 49:B2:50:VAL:HB   | 2.21                     | 0.41              |
| 52:B5:15:GLU:CD   | 52:B5:21:TYR:CB   | 2.87                     | 0.41              |
| 54:B7:38:GLY:CA   | 54:B7:41:ILE:HG12 | 2.51                     | 0.41              |
| 55:B8:19:ARG:HD2  | 55:B8:24:TYR:CD2  | 2.55                     | 0.41              |
| 1:AA:14:U:O2      | 1:AA:17:U:C5      | 2.74                     | 0.40              |
| 1:AA:22:G:OP2     | 1:AA:561:U:O2     | 2.39                     | 0.40              |
| 1:AA:186(B):C:C4' | 22:AW:89:ARG:NH2  | 2.83                     | 0.40              |
| 1:AA:196:A:H3'    | 1:AA:196:A:C8     | 2.56                     | 0.40              |
| 1:AA:253:U:O4'    | 1:AA:276:G:H1'    | 2.21                     | 0.40              |
| 1:AA:280:C:H1'    | 19:AT:38:ARG:CD   | 2.51                     | 0.40              |
| 1:AA:339:C:C4     | 1:AA:340:U:C5     | 3.10                     | 0.40              |
| 1:AA:374:A:O4'    | 1:AA:481:G:N2     | 2.54                     | 0.40              |
| 1:AA:406:G:C8     | 1:AA:495:A:C2     | 3.09                     | 0.40              |
| 1:AA:599:C:O3'    | 10:AK:96:GLY:HA3  | 2.21                     | 0.40              |
| 1:AA:652:U:C1'    | 1:AA:653:A:C2     | 3.04                     | 0.40              |
| 1:AA:780:A:N3     | 1:AA:803:G:N1     | 2.69                     | 0.40              |
| 1:AA:781:A:O2'    | 1:AA:782:A:P      | 2.78                     | 0.40              |
| 1:AA:972:C:OP2    | 12:AM:57:LYS:NZ   | 2.52                     | 0.40              |
| 1:AA:978:A:C2     | 1:AA:1319:A:N3    | 2.89                     | 0.40              |
| 1:AA:986:A:H4'    | 21:AV:55:LYS:CE   | 2.51                     | 0.40              |
| 1:AA:988:G:C6     | 1:AA:989:C:C4     | 3.09                     | 0.40              |
| 1:AA:993:G:H21    | 1:AA:995:C:N4     | 2.19                     | 0.40              |
| 1:AA:1009:G:N3    | 1:AA:1010:G:C8    | 2.89                     | 0.40              |
| 1:AA:1015:A:C5    | 1:AA:1016:A:C6    | 3.09                     | 0.40              |
| 1:AA:1033:G:C2    | 1:AA:1034:G:C4    | 3.09                     | 0.40              |
| 1:AA:1053:G:O6    | 1:AA:1200:C:OP2   | 2.39                     | 0.40              |
| 1:AA:1055:A:N6    | 1:AA:1206:G:C4    | 2.89                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 1:AA:1120:G:N1    | 1:AA:1154:G:C2     | 2.89                     | 0.40              |
| 1:AA:1133:G:C5    | 1:AA:1134:G:N7     | 2.89                     | 0.40              |
| 1:AA:1195:C:H5''  | 1:AA:1196:U:OP2    | 2.21                     | 0.40              |
| 1:AA:1269:A:C5    | 1:AA:1313:U:O4'    | 2.74                     | 0.40              |
| 1:AA:1276:G:HO2'  | 1:AA:1282:C:H4'    | 1.83                     | 0.40              |
| 1:AA:1338:G:C6    | 1:AA:1339:A:C6     | 3.09                     | 0.40              |
| 1:AA:1422:G:C2    | 1:AA:1423:G:C8     | 3.10                     | 0.40              |
| 1:AA:1517:G:C1'   | 24:BA:1920:C:P     | 3.06                     | 0.40              |
| 2:A1:37:U:H2'     | 2:A1:38:U:N1       | 2.35                     | 0.40              |
| 3:AC:11:C:H2'     | 3:AC:12:U:C5       | 2.57                     | 0.40              |
| 3:AC:38:A:C8      | 3:AC:39:U:C6       | 3.09                     | 0.40              |
| 3:AC:44:G:C2'     | 3:AC:45:U:H5'      | 2.50                     | 0.40              |
| 3:AB:47:U:C4      | 3:AB:49:C:H4'      | 2.56                     | 0.40              |
| 4:AE:45:GLN:C     | 4:AE:49:GLU:OE1    | 2.64                     | 0.40              |
| 4:AE:204:ASN:HD22 | 4:AE:204:ASN:C     | 2.29                     | 0.40              |
| 4:AE:216:SER:O    | 4:AE:217:ARG:C     | 2.64                     | 0.40              |
| 4:AE:222:ILE:CB   | 4:AE:226:ARG:HH21  | 2.23                     | 0.40              |
| 5:AF:18:TRP:O     | 5:AF:21:ARG:HG2    | 2.20                     | 0.40              |
| 5:AF:43:LEU:C     | 5:AF:45:LYS:N      | 2.79                     | 0.40              |
| 5:AF:87:LEU:HB2   | 5:AF:101:LEU:HD12  | 2.02                     | 0.40              |
| 5:AF:124:ILE:O    | 5:AF:125:GLU:C     | 2.64                     | 0.40              |
| 6:AG:20:TYR:CD2   | 6:AG:27:TYR:CD2    | 3.09                     | 0.40              |
| 6:AG:165:MET:HE2  | 6:AG:178:VAL:HG22  | 2.02                     | 0.40              |
| 7:AH:45:PHE:HE1   | 7:AH:47:LYS:CD     | 2.33                     | 0.40              |
| 7:AH:64:ARG:HG2   | 7:AH:64:ARG:H      | 1.69                     | 0.40              |
| 8:AI:57:GLN:CD    | 8:AI:57:GLN:C      | 2.88                     | 0.40              |
| 8:AI:98:LEU:CD2   | 8:AI:98:LEU:C      | 2.94                     | 0.40              |
| 9:AJ:108:ALA:O    | 9:AJ:109:ASN:C     | 2.64                     | 0.40              |
| 9:AJ:113:GLU:OE1  | 9:AJ:122:HIS:ND1   | 2.54                     | 0.40              |
| 10:AK:14:ARG:HA   | 10:AK:17:THR:CB    | 2.50                     | 0.40              |
| 10:AK:46:LYS:HG3  | 10:AK:64:LYS:HG3   | 2.03                     | 0.40              |
| 10:AK:77:GLU:HB3  | 10:AK:78:GLN:H     | 1.45                     | 0.40              |
| 10:AK:114:THR:C   | 10:AK:116:LYS:N    | 2.72                     | 0.40              |
| 11:AL:121:ARG:HG2 | 11:AL:121:ARG:O    | 2.21                     | 0.40              |
| 13:AN:67:ASP:C    | 13:AN:69:ALA:N     | 2.73                     | 0.40              |
| 14:AO:27:LEU:CD2  | 14:AO:33:ARG:HD3   | 2.48                     | 0.40              |
| 14:AO:30:ALA:HB1  | 14:AO:31:PRO:CD    | 2.49                     | 0.40              |
| 14:AO:57:LYS:HE2  | 14:AO:67:THR:CG2   | 2.50                     | 0.40              |
| 14:AO:122:THR:O   | 14:AO:123:LYS:C    | 2.63                     | 0.40              |
| 15:AP:7:VAL:N     | 30:BG:114:ILE:HD13 | 2.36                     | 0.40              |
| 15:AP:15:VAL:HG11 | 15:AP:34:LEU:HD23  | 2.03                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|-------------------|--------------------------|-------------------|
| 17:AR:79:ARG:HG3   | 17:AR:82:ILE:HD12 | 2.02                     | 0.40              |
| 19:AT:10:VAL:HG12  | 19:AT:54:GLY:N    | 2.26                     | 0.40              |
| 20:AU:50:ILE:O     | 20:AU:50:ILE:HG22 | 2.20                     | 0.40              |
| 22:AW:13:LEU:O     | 22:AW:16:HIS:N    | 2.54                     | 0.40              |
| 24:BA:30:G:OP1     | 41:BT:11:ARG:CZ   | 2.69                     | 0.40              |
| 24:BA:55:G:C2      | 24:BA:56:A:N7     | 2.89                     | 0.40              |
| 24:BA:70:G:H2'     | 24:BA:114:U:C6    | 2.56                     | 0.40              |
| 24:BA:144:C:H2'    | 24:BA:145:G:C4'   | 2.51                     | 0.40              |
| 24:BA:162:U:O2     | 24:BA:162:U:H2'   | 2.20                     | 0.40              |
| 24:BA:224:G:N2     | 24:BA:225:A:H1'   | 2.36                     | 0.40              |
| 24:BA:227:A:H62    | 24:BA:2407:G:H8   | 1.68                     | 0.40              |
| 24:BA:247:G:O2'    | 24:BA:386:G:C2    | 2.74                     | 0.40              |
| 24:BA:278:A:HO2'   | 24:BA:279:C:C1'   | 2.34                     | 0.40              |
| 24:BA:301:G:H2'    | 24:BA:302:C:C5    | 2.49                     | 0.40              |
| 24:BA:317:G:C2'    | 24:BA:318:C:H5'   | 2.50                     | 0.40              |
| 24:BA:326:G:C4     | 24:BA:327:G:N7    | 2.89                     | 0.40              |
| 24:BA:433:C:H2'    | 24:BA:434:U:C6    | 2.56                     | 0.40              |
| 24:BA:465:G:C6     | 24:BA:466:A:C5    | 3.09                     | 0.40              |
| 24:BA:508:G:C5'    | 24:BA:509:C:OP1   | 2.70                     | 0.40              |
| 24:BA:516:C:O2'    | 24:BA:517:C:C5'   | 2.62                     | 0.40              |
| 24:BA:535:C:C2'    | 24:BA:536:A:C5'   | 2.98                     | 0.40              |
| 24:BA:579:G:N1     | 24:BA:580:C:C4    | 2.89                     | 0.40              |
| 24:BA:584:C:O2'    | 24:BA:585:G:H5'   | 2.21                     | 0.40              |
| 24:BA:598:G:C6     | 24:BA:660:G:C6    | 3.09                     | 0.40              |
| 24:BA:670:A:C2'    | 36:BO:41:ARG:CZ   | 2.87                     | 0.40              |
| 24:BA:684:G:C2     | 24:BA:775:G:C5    | 3.09                     | 0.40              |
| 24:BA:691:C:C2'    | 24:BA:692:C:H5'   | 2.51                     | 0.40              |
| 24:BA:710:G:H2'    | 24:BA:711:G:H8    | 1.85                     | 0.40              |
| 24:BA:839:U:H4'    | 24:BA:1191:G:H21  | 1.86                     | 0.40              |
| 24:BA:849:A:H2'    | 24:BA:850:C:H6    | 1.84                     | 0.40              |
| 24:BA:856:C:C1'    | 47:BZ:69:PHE:CE1  | 3.00                     | 0.40              |
| 24:BA:864:G:C2'    | 24:BA:865:C:C1'   | 2.91                     | 0.40              |
| 24:BA:997:G:O2'    | 24:BA:998:C:O5'   | 2.39                     | 0.40              |
| 24:BA:1009:A:N1    | 24:BA:1010:A:C2   | 2.89                     | 0.40              |
| 24:BA:1189:A:C5'   | 24:BA:1190:G:OP2  | 2.68                     | 0.40              |
| 24:BA:1222:C:N3    | 24:BA:1223:C:C6   | 2.90                     | 0.40              |
| 24:BA:1272:A:OP2   | 24:BA:1646:C:C2'  | 2.53                     | 0.40              |
| 24:BA:1300:U:C2'   | 24:BA:1626:G:N2   | 2.67                     | 0.40              |
| 24:BA:1304:C:H2'   | 24:BA:1305:C:H5'  | 2.03                     | 0.40              |
| 24:BA:1444(A):A:C8 | 24:BA:1460:A:O2'  | 2.74                     | 0.40              |
| 24:BA:1519:G:H2'   | 24:BA:1519:G:N3   | 2.35                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1520:U:C6   | 24:BA:1520:U:O5'  | 2.74                     | 0.40              |
| 24:BA:1551:C:C2   | 24:BA:1552:G:C8   | 3.09                     | 0.40              |
| 24:BA:1603:A:N1   | 24:BA:1604:C:C4   | 2.89                     | 0.40              |
| 24:BA:1625:C:C2   | 24:BA:1626:G:H1'  | 2.56                     | 0.40              |
| 24:BA:1672:C:O2'  | 24:BA:1673:U:OP1  | 2.26                     | 0.40              |
| 24:BA:1769:G:C2   | 24:BA:1984:G:C4   | 3.09                     | 0.40              |
| 24:BA:1800:C:H1'  | 24:BA:1802:A:C8   | 2.56                     | 0.40              |
| 24:BA:1841:U:C2   | 24:BA:1842:G:C8   | 3.08                     | 0.40              |
| 24:BA:1945:G:H5'  | 24:BA:1945:G:H8   | 1.84                     | 0.40              |
| 24:BA:2040:C:H2'  | 24:BA:2041:U:C6   | 2.56                     | 0.40              |
| 24:BA:2069:G:C2   | 24:BA:2070:G:C8   | 3.09                     | 0.40              |
| 24:BA:2080:G:H2'  | 24:BA:2081:C:O5'  | 2.21                     | 0.40              |
| 24:BA:2093:G:C5'  | 32:BK:25:TYR:CG   | 3.04                     | 0.40              |
| 24:BA:2097:C:C4   | 24:BA:2193:G:C6   | 3.09                     | 0.40              |
| 24:BA:2236:C:H6   | 24:BA:2236:C:C5'  | 2.33                     | 0.40              |
| 24:BA:2287:A:H2   | 24:BA:2346:A:N6   | 2.18                     | 0.40              |
| 24:BA:2298:A:C2   | 24:BA:2321:G:N1   | 2.89                     | 0.40              |
| 24:BA:2309:A:N3   | 24:BA:2309:A:C3'  | 2.83                     | 0.40              |
| 24:BA:2355:C:OP1  | 47:BZ:25:ARG:NH2  | 2.54                     | 0.40              |
| 24:BA:2390:U:H2'  | 24:BA:2391:G:O5'  | 2.21                     | 0.40              |
| 24:BA:2427:C:H4'  | 24:BA:2428:G:H5'' | 2.01                     | 0.40              |
| 24:BA:2437:U:O2'  | 24:BA:2438:U:H5'  | 2.21                     | 0.40              |
| 24:BA:2572:A:C4'  | 24:BA:2573:C:OP1  | 2.69                     | 0.40              |
| 24:BA:2580:U:C5   | 24:BA:2581:G:N7   | 2.89                     | 0.40              |
| 24:BA:2603:G:C2'  | 24:BA:2604:U:H5'  | 2.50                     | 0.40              |
| 24:BA:2633:G:C6   | 24:BA:2634:G:C5   | 3.09                     | 0.40              |
| 24:BA:2658:C:C4   | 24:BA:2664:G:N2   | 2.89                     | 0.40              |
| 24:BA:2659:G:H2'  | 24:BA:2661:G:OP2  | 2.20                     | 0.40              |
| 24:BA:2734:A:H62  | 24:BA:2770:G:H1'  | 1.83                     | 0.40              |
| 24:BA:2773:C:O2'  | 24:BA:2774:C:O5'  | 2.31                     | 0.40              |
| 25:BB:1:U:O4'     | 25:BB:1:U:OP1     | 2.39                     | 0.40              |
| 25:BB:18:G:H2'    | 25:BB:19:G:H8     | 1.86                     | 0.40              |
| 25:BB:40:U:H1'    | 25:BB:45:A:N6     | 2.22                     | 0.40              |
| 25:BB:63:G:C4     | 25:BB:64:C:C5     | 3.09                     | 0.40              |
| 26:BC:7:TYR:CE1   | 26:BC:10:LEU:HG   | 2.55                     | 0.40              |
| 26:BC:64:LEU:CD1  | 26:BC:174:PRO:O   | 2.69                     | 0.40              |
| 27:BD:72:LYS:HZ2  | 27:BD:75:ILE:CD1  | 2.34                     | 0.40              |
| 27:BD:117:VAL:CG1 | 27:BD:129:ASN:OD1 | 2.56                     | 0.40              |
| 27:BD:177:LEU:H   | 27:BD:177:LEU:CD2 | 2.26                     | 0.40              |
| 28:BE:46:ALA:CB   | 28:BE:85:ASN:HD21 | 2.31                     | 0.40              |
| 28:BE:51:PHE:C    | 28:BE:52:LEU:HD23 | 2.46                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 28:BE:108:SER:OG   | 28:BE:163:GLU:C    | 2.64                     | 0.40              |
| 28:BE:174:ASP:CG   | 28:BE:175:VAL:N    | 2.78                     | 0.40              |
| 28:BE:176:ILE:HG21 | 28:BE:181:LEU:HD12 | 2.03                     | 0.40              |
| 29:BF:69:HIS:O     | 29:BF:69:HIS:CG    | 2.71                     | 0.40              |
| 30:BG:19:LEU:HA    | 30:BG:22:ARG:HE    | 1.85                     | 0.40              |
| 30:BG:30:GLU:HB2   | 30:BG:162:THR:HG21 | 2.02                     | 0.40              |
| 30:BG:33:ARG:NH2   | 30:BG:34:LEU:CA    | 2.84                     | 0.40              |
| 30:BG:109:VAL:O    | 30:BG:109:VAL:HG23 | 2.21                     | 0.40              |
| 30:BG:112:PRO:HG2  | 30:BG:112:PRO:O    | 2.20                     | 0.40              |
| 30:BG:113:ARG:HH21 | 30:BG:139:LEU:HD22 | 1.86                     | 0.40              |
| 30:BG:119:GLY:CA   | 30:BG:180:PHE:CG   | 3.04                     | 0.40              |
| 32:BK:5:LEU:CG     | 32:BK:17:GLN:O     | 2.69                     | 0.40              |
| 33:BL:134:MET:HE3  | 33:BL:135:GLY:N    | 2.35                     | 0.40              |
| 34:BM:46:VAL:CG1   | 34:BM:119:ARG:HH12 | 2.34                     | 0.40              |
| 35:BN:54:GLU:HA    | 35:BN:54:GLU:OE1   | 2.21                     | 0.40              |
| 35:BN:66:LYS:HA    | 35:BN:66:LYS:HD2   | 1.83                     | 0.40              |
| 36:BO:42:SER:HB3   | 36:BO:43:GLY:H     | 1.59                     | 0.40              |
| 36:BO:126:VAL:HG23 | 36:BO:127:ALA:H    | 1.85                     | 0.40              |
| 36:BO:130:PHE:O    | 36:BO:131:SER:O    | 2.39                     | 0.40              |
| 37:BP:75:THR:HA    | 37:BP:91:GLU:HG2   | 2.01                     | 0.40              |
| 38:BQ:41:ALA:CB    | 38:BQ:97:VAL:HG13  | 2.37                     | 0.40              |
| 38:BQ:52:ILE:CG2   | 38:BQ:53:HIS:N     | 2.83                     | 0.40              |
| 38:BQ:96:ARG:CD    | 38:BQ:98:LEU:HD11  | 2.51                     | 0.40              |
| 39:BR:106:ARG:NH1  | 39:BR:106:ARG:HG2  | 2.36                     | 0.40              |
| 40:BS:20:PRO:CB    | 40:BS:22:PHE:CE1   | 3.03                     | 0.40              |
| 40:BS:23:ARG:NH2   | 40:BS:89:VAL:HA    | 2.36                     | 0.40              |
| 40:BS:61:PHE:O     | 40:BS:62:THR:CG2   | 2.67                     | 0.40              |
| 44:BW:7:VAL:HG21   | 48:B1:31:ARG:CZ    | 2.51                     | 0.40              |
| 44:BW:7:VAL:CG2    | 48:B1:31:ARG:CZ    | 2.99                     | 0.40              |
| 45:BX:2:ARG:HD2    | 45:BX:3:VAL:CA     | 2.49                     | 0.40              |
| 45:BX:6:HIS:CD2    | 45:BX:33:LYS:NZ    | 2.89                     | 0.40              |
| 45:BX:35:TYR:CD1   | 45:BX:35:TYR:N     | 2.87                     | 0.40              |
| 45:BX:44:ILE:O     | 45:BX:44:ILE:CG2   | 2.63                     | 0.40              |
| 45:BX:67:LEU:HD12  | 45:BX:71:LYS:HZ1   | 1.86                     | 0.40              |
| 45:BX:81:LYS:NZ    | 45:BX:96:ILE:HG12  | 2.36                     | 0.40              |
| 46:BY:16:SER:OG    | 46:BY:17:ALA:N     | 2.54                     | 0.40              |
| 47:BZ:31:VAL:HG13  | 47:BZ:67:VAL:HG23  | 2.03                     | 0.40              |
| 48:B1:36:ILE:O     | 48:B1:38:GLN:HG3   | 2.21                     | 0.40              |
| 49:B2:17:LYS:O     | 49:B2:20:LYS:N     | 2.54                     | 0.40              |
| 49:B2:27:GLY:O     | 49:B2:28:LEU:O     | 2.37                     | 0.40              |
| 50:B3:6:HIS:CB     | 50:B3:56:VAL:HA    | 2.50                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 50:B3:42:PHE:O    | 50:B3:57:GLU:HA   | 2.20                     | 0.40              |
| 51:B4:43:HIS:O    | 51:B4:44:THR:CG2  | 2.65                     | 0.40              |
| 51:B4:47:PRO:O    | 51:B4:58:LEU:CD2  | 2.69                     | 0.40              |
| 1:AA:22:G:N3      | 1:AA:23:C:C6      | 2.89                     | 0.40              |
| 1:AA:40:C:C2'     | 1:AA:41:G:O5'     | 2.69                     | 0.40              |
| 1:AA:59:A:N6      | 1:AA:331:G:H1'    | 2.36                     | 0.40              |
| 1:AA:101:A:C2'    | 1:AA:102:G:H8     | 2.16                     | 0.40              |
| 1:AA:116:A:OP1    | 1:AA:289:G:OP1    | 2.39                     | 0.40              |
| 1:AA:122:G:H2'    | 1:AA:123:C:O4'    | 2.21                     | 0.40              |
| 1:AA:142:G:HO2'   | 1:AA:196:A:H2     | 1.55                     | 0.40              |
| 1:AA:159:G:N1     | 1:AA:163:C:N4     | 2.70                     | 0.40              |
| 1:AA:186(A):C:N4  | 1:AA:191:G:N1     | 2.70                     | 0.40              |
| 1:AA:186(A):C:O4' | 22:AW:85:MET:SD   | 2.79                     | 0.40              |
| 1:AA:191:G:C6     | 1:AA:192:U:C4     | 3.10                     | 0.40              |
| 1:AA:261:U:C3'    | 1:AA:263:A:OP2    | 2.69                     | 0.40              |
| 1:AA:310:G:C4     | 1:AA:311:C:C5     | 3.08                     | 0.40              |
| 1:AA:315:A:N1     | 1:AA:330:C:C5     | 2.90                     | 0.40              |
| 1:AA:363:A:N7     | 14:AO:30:ALA:CB   | 2.74                     | 0.40              |
| 1:AA:413:G:N1     | 6:AG:36:ARG:NH1   | 2.69                     | 0.40              |
| 1:AA:498:A:N6     | 1:AA:547:A:O5'    | 2.45                     | 0.40              |
| 1:AA:624:C:O2     | 1:AA:625:G:C8     | 2.75                     | 0.40              |
| 1:AA:774:G:H3'    | 1:AA:775:G:C8     | 2.56                     | 0.40              |
| 1:AA:796:C:OP1    | 13:AN:123:LYS:HD3 | 2.20                     | 0.40              |
| 1:AA:824:C:H1'    | 10:AK:1:MET:O     | 2.22                     | 0.40              |
| 1:AA:835:U:C2     | 1:AA:852:G:N2     | 2.89                     | 0.40              |
| 1:AA:843:U:N3     | 4:AE:37:ASN:HA    | 2.37                     | 0.40              |
| 1:AA:873:A:H4'    | 1:AA:874:G:OP2    | 2.20                     | 0.40              |
| 1:AA:885:G:O2'    | 1:AA:915:A:C2     | 2.74                     | 0.40              |
| 1:AA:1170:A:C8    | 1:AA:1170:A:H3'   | 2.56                     | 0.40              |
| 1:AA:1298:C:C5    | 9:AJ:114:ARG:CD   | 2.95                     | 0.40              |
| 1:AA:1347:G:H3'   | 11:AL:107:ARG:CA  | 2.51                     | 0.40              |
| 1:AA:1422:G:N1    | 1:AA:1423:G:C6    | 2.89                     | 0.40              |
| 1:AA:1517:G:C6    | 1:AA:1518:A:C2    | 3.09                     | 0.40              |
| 3:AC:1:G:C2       | 3:AC:2:C:C4       | 3.10                     | 0.40              |
| 3:AC:16:U:C4'     | 3:AC:18:G:H5''    | 2.46                     | 0.40              |
| 3:AC:37:A:C6      | 3:AC:38:A:C6      | 3.09                     | 0.40              |
| 3:AC:67:C:N4      | 3:AC:68:C:N4      | 2.68                     | 0.40              |
| 3:AC:75:C:C6      | 3:AC:75:C:H3'     | 2.56                     | 0.40              |
| 4:AE:97:TRP:HZ2   | 4:AE:102:LEU:HD11 | 1.80                     | 0.40              |
| 4:AE:118:LEU:CD1  | 4:AE:141:GLU:OE2  | 2.65                     | 0.40              |
| 5:AF:5:ILE:HG22   | 12:AM:51:ARG:NH2  | 2.37                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 5:AF:29:TYR:O    | 5:AF:29:TYR:CD2   | 2.60                     | 0.40              |
| 6:AG:64:LEU:O    | 6:AG:65:ARG:C     | 2.64                     | 0.40              |
| 6:AG:101:LEU:HG  | 6:AG:102:ASP:N    | 2.35                     | 0.40              |
| 6:AG:127:THR:C   | 6:AG:128:VAL:O    | 2.61                     | 0.40              |
| 6:AG:153:ARG:O   | 6:AG:154:ASN:HB3  | 2.21                     | 0.40              |
| 6:AG:160:GLN:OE1 | 6:AG:160:GLN:HA   | 2.20                     | 0.40              |
| 6:AG:208:SER:O   | 6:AG:209:ARG:NH1  | 2.43                     | 0.40              |
| 8:AI:27:GLN:O    | 8:AI:28:ARG:C     | 2.63                     | 0.40              |
| 8:AI:52:ILE:HD13 | 8:AI:87:ARG:HH21  | 1.70                     | 0.40              |
| 8:AI:82:ARG:O    | 8:AI:84:ASN:N     | 2.54                     | 0.40              |
| 9:AJ:10:ARG:HH11 | 9:AJ:10:ARG:CB    | 2.33                     | 0.40              |
| 9:AJ:12:LEU:HD21 | 9:AJ:25:ALA:HB2   | 2.02                     | 0.40              |
| 9:AJ:41:ARG:CZ   | 9:AJ:41:ARG:HB3   | 2.49                     | 0.40              |
| 9:AJ:68:ASN:HB3  | 9:AJ:135:VAL:HG11 | 2.03                     | 0.40              |
| 10:AK:23:SER:HA  | 10:AK:62:TYR:HD1  | 1.86                     | 0.40              |
| 12:AM:12:ASP:CB  | 12:AM:15:THR:HG22 | 2.51                     | 0.40              |
| 12:AM:46:ARG:CD  | 12:AM:64:GLU:OE2  | 2.69                     | 0.40              |
| 12:AM:80:LYS:HD3 | 12:AM:80:LYS:C    | 2.46                     | 0.40              |
| 14:AO:17:LYS:O   | 14:AO:18:VAL:O    | 2.39                     | 0.40              |
| 14:AO:57:LYS:HG2 | 14:AO:67:THR:CG2  | 2.30                     | 0.40              |
| 14:AO:89:ARG:C   | 14:AO:90:VAL:HG23 | 2.46                     | 0.40              |
| 15:AP:12:ASN:O   | 15:AP:12:ASN:OD1  | 2.38                     | 0.40              |
| 15:AP:15:VAL:HB  | 15:AP:34:LEU:HD21 | 2.02                     | 0.40              |
| 15:AP:27:LYS:C   | 15:AP:29:ARG:N    | 2.79                     | 0.40              |
| 15:AP:84:ILE:CD1 | 15:AP:86:CYS:SG   | 3.07                     | 0.40              |
| 17:AR:25:THR:OG1 | 17:AR:26:GLU:N    | 2.54                     | 0.40              |
| 19:AT:87:LYS:O   | 19:AT:88:TYR:C    | 2.63                     | 0.40              |
| 20:AU:36:ASN:H   | 20:AU:40:LEU:HD11 | 1.87                     | 0.40              |
| 21:AV:11:VAL:CG1 | 21:AV:38:SER:OG   | 2.69                     | 0.40              |
| 21:AV:36:ARG:C   | 21:AV:38:SER:H    | 2.28                     | 0.40              |
| 21:AV:36:ARG:C   | 21:AV:71:LEU:HB2  | 2.45                     | 0.40              |
| 22:AW:25:ARG:CG  | 22:AW:25:ARG:NH1  | 2.84                     | 0.40              |
| 22:AW:40:ALA:C   | 22:AW:42:GLN:N    | 2.77                     | 0.40              |
| 22:AW:75:ASN:O   | 22:AW:76:ALA:C    | 2.64                     | 0.40              |
| 24:BA:60:G:N7    | 24:BA:63:U:O4     | 2.53                     | 0.40              |
| 24:BA:70:G:C4'   | 24:BA:71:A:H5'    | 2.51                     | 0.40              |
| 24:BA:104:U:OP2  | 24:BA:104:U:C6    | 2.73                     | 0.40              |
| 24:BA:144:C:H2'  | 24:BA:145:G:H5'   | 1.99                     | 0.40              |
| 24:BA:187:G:C2'  | 24:BA:1365:A:H2   | 2.19                     | 0.40              |
| 24:BA:216:A:O2'  | 24:BA:217:G:O4'   | 2.36                     | 0.40              |
| 24:BA:220:G:C4'  | 24:BA:234:C:H4'   | 2.21                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 24:BA:241:A:O4'    | 24:BA:241:A:P       | 2.79                     | 0.40              |
| 24:BA:270(B):A:H4' | 24:BA:270(C):C:C6   | 2.55                     | 0.40              |
| 24:BA:270(C):C:O2  | 24:BA:273:G:O2'     | 2.33                     | 0.40              |
| 24:BA:286:C:H2'    | 24:BA:287:C:O4'     | 2.21                     | 0.40              |
| 24:BA:295:G:C8     | 24:BA:338:G:N2      | 2.89                     | 0.40              |
| 24:BA:459:U:H2'    | 24:BA:460:A:H8      | 1.86                     | 0.40              |
| 24:BA:463:G:C2     | 24:BA:467:G:C5      | 3.09                     | 0.40              |
| 24:BA:484:C:C2'    | 24:BA:485:C:C6      | 2.83                     | 0.40              |
| 24:BA:506:G:OP2    | 24:BA:506:G:O4'     | 2.40                     | 0.40              |
| 24:BA:541:C:H5''   | 24:BA:542:C:OP2     | 2.21                     | 0.40              |
| 24:BA:551:G:O4'    | 24:BA:1220:A:N1     | 2.54                     | 0.40              |
| 24:BA:609(A):G:C5  | 24:BA:610:C:C5      | 3.09                     | 0.40              |
| 24:BA:618:G:C2'    | 24:BA:618(A):C:C6   | 3.01                     | 0.40              |
| 24:BA:700:G:C2     | 24:BA:701:G:C8      | 3.10                     | 0.40              |
| 24:BA:730:C:C2     | 24:BA:731:C:C5      | 3.08                     | 0.40              |
| 24:BA:748:G:OP2    | 43:BV:88:ARG:NE     | 2.54                     | 0.40              |
| 24:BA:799:G:C5     | 24:BA:800:A:N1      | 2.89                     | 0.40              |
| 24:BA:848:G:N3     | 24:BA:933:A:N3      | 2.68                     | 0.40              |
| 24:BA:861:A:P      | 24:BA:862:G:OP2     | 2.78                     | 0.40              |
| 24:BA:960:A:H8     | 24:BA:960:A:O5'     | 2.04                     | 0.40              |
| 24:BA:967:C:O2'    | 24:BA:968:G:H5'     | 2.20                     | 0.40              |
| 24:BA:987:G:O2'    | 24:BA:1000:A:Cl'    | 2.58                     | 0.40              |
| 24:BA:1065:U:C4    | 24:BA:1066:U:C6     | 3.09                     | 0.40              |
| 24:BA:1142:U:C2'   | 24:BA:1142(A):A:O5' | 2.70                     | 0.40              |
| 24:BA:1156:A:P     | 41:BT:55:ARG:NH2    | 2.94                     | 0.40              |
| 24:BA:1162:G:OP2   | 24:BA:1162:G:H8     | 2.04                     | 0.40              |
| 24:BA:1166:C:C2'   | 24:BA:1167:U:O5'    | 2.69                     | 0.40              |
| 24:BA:1419:A:C8    | 24:BA:1421:G:O6     | 2.74                     | 0.40              |
| 24:BA:1531:C:HO2'  | 24:BA:1532:C:P      | 2.44                     | 0.40              |
| 24:BA:1582:C:O5'   | 24:BA:1583:A:H5''   | 2.21                     | 0.40              |
| 24:BA:1609:A:H3'   | 24:BA:1609:A:N3     | 2.36                     | 0.40              |
| 24:BA:1649:G:N1    | 24:BA:1650:G:N7     | 2.69                     | 0.40              |
| 24:BA:1651:G:O3'   | 24:BA:1652:A:O4'    | 2.38                     | 0.40              |
| 24:BA:1652:A:N7    | 24:BA:1653:G:C2     | 2.89                     | 0.40              |
| 24:BA:1727:U:O2'   | 24:BA:1728:G:P      | 2.76                     | 0.40              |
| 24:BA:1766:U:C2'   | 24:BA:1767:C:H5'    | 2.52                     | 0.40              |
| 24:BA:1815:A:H4'   | 24:BA:1817:G:O4'    | 2.21                     | 0.40              |
| 24:BA:1838:C:C4    | 24:BA:1899:G:C6     | 3.10                     | 0.40              |
| 24:BA:1906:G:N1    | 24:BA:1907:G:C5     | 2.90                     | 0.40              |
| 24:BA:1944:U:O2'   | 24:BA:1955:U:Cl'    | 2.68                     | 0.40              |
| 24:BA:1955:U:O2'   | 24:BA:1956:U:P      | 2.79                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1975:G:C2   | 24:BA:1976:U:C2   | 3.10                     | 0.40              |
| 24:BA:2020:A:P    | 41:BT:27:LEU:HD22 | 2.62                     | 0.40              |
| 24:BA:2027:G:C4   | 24:BA:2037:G:N1   | 2.88                     | 0.40              |
| 24:BA:2031:A:N6   | 24:BA:2498:C:C1'  | 2.77                     | 0.40              |
| 24:BA:2040:C:H6   | 24:BA:2040:C:O5'  | 2.05                     | 0.40              |
| 24:BA:2048:G:C2   | 24:BA:2049:G:C8   | 3.10                     | 0.40              |
| 24:BA:2051:A:N6   | 24:BA:2614:A:N7   | 2.70                     | 0.40              |
| 24:BA:2091:U:C2'  | 24:BA:2092:U:OP1  | 2.69                     | 0.40              |
| 24:BA:2208:U:C4'  | 27:BD:151:LYS:HZ2 | 2.34                     | 0.40              |
| 24:BA:2253:G:H2'  | 24:BA:2254:C:O5'  | 2.20                     | 0.40              |
| 24:BA:2280:G:C4   | 24:BA:2281:C:C5   | 3.10                     | 0.40              |
| 24:BA:2306:C:C5   | 24:BA:2311:A:N6   | 2.80                     | 0.40              |
| 24:BA:2392:A:HO2' | 24:BA:2393:A:P    | 2.44                     | 0.40              |
| 24:BA:2542:A:O4'  | 24:BA:2542:A:OP1  | 2.38                     | 0.40              |
| 24:BA:2542:A:O4'  | 24:BA:2542:A:P    | 2.80                     | 0.40              |
| 24:BA:2586:C:C4   | 24:BA:2587:A:N6   | 2.87                     | 0.40              |
| 24:BA:2607:G:H2'  | 24:BA:2608:G:C5'  | 2.35                     | 0.40              |
| 24:BA:2680:C:OP1  | 28:BE:190:GLY:CA  | 2.66                     | 0.40              |
| 24:BA:2690:C:N4   | 38:BQ:14:SER:CB   | 2.84                     | 0.40              |
| 24:BA:2754:U:H3'  | 24:BA:2754:U:C6   | 2.56                     | 0.40              |
| 24:BA:2756:U:O2'  | 24:BA:2757:A:OP2  | 2.37                     | 0.40              |
| 24:BA:2851:A:H1'  | 38:BQ:61:HIS:NE2  | 2.36                     | 0.40              |
| 24:BA:2886:G:H21  | 24:BA:2887:U:H1'  | 1.85                     | 0.40              |
| 24:BA:2899:G:O6   | 24:BA:2900:A:N6   | 2.54                     | 0.40              |
| 25:BB:37:C:N4     | 25:BB:44:G:C6     | 2.89                     | 0.40              |
| 25:BB:40:U:C2'    | 25:BB:41:U:OP1    | 2.70                     | 0.40              |
| 25:BB:65:C:C2'    | 25:BB:66:A:H5'    | 2.50                     | 0.40              |
| 25:BB:73:A:C2'    | 25:BB:74:U:O5'    | 2.69                     | 0.40              |
| 26:BC:100:ILE:CG2 | 26:BC:126:LYS:HE2 | 2.51                     | 0.40              |
| 27:BD:51:VAL:HG11 | 27:BD:52:ARG:NH1  | 2.37                     | 0.40              |
| 27:BD:85:ASP:OD1  | 27:BD:87:ASN:O    | 2.39                     | 0.40              |
| 27:BD:169:GLU:CG  | 27:BD:184:LYS:HZ3 | 2.34                     | 0.40              |
| 28:BE:14:ILE:O    | 28:BE:14:ILE:CD1  | 2.69                     | 0.40              |
| 28:BE:186:GLY:O   | 28:BE:188:VAL:N   | 2.49                     | 0.40              |
| 29:BF:66:PRO:O    | 29:BF:66:PRO:HG2  | 2.21                     | 0.40              |
| 29:BF:184:TYR:HB2 | 29:BF:185:ASP:H   | 1.68                     | 0.40              |
| 30:BG:30:GLU:C    | 30:BG:32:PRO:HA   | 2.46                     | 0.40              |
| 30:BG:107:LEU:CG  | 30:BG:177:GLY:O   | 2.70                     | 0.40              |
| 30:BG:134:GLY:CA  | 30:BG:156:ASP:HA  | 2.51                     | 0.40              |
| 31:BH:140:LYS:HA  | 31:BH:143:GLN:CD  | 2.46                     | 0.40              |
| 31:BH:159:GLU:OE2 | 31:BH:163:TYR:HE1 | 2.05                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 32:BK:10:GLU:C     | 32:BK:11:ASN:OD1   | 2.65                     | 0.40              |
| 33:BL:22:PRO:C     | 33:BL:26:ALA:HB3   | 2.46                     | 0.40              |
| 33:BL:49:GLY:O     | 33:BL:50:ASP:OD2   | 2.39                     | 0.40              |
| 33:BL:104:VAL:HG11 | 33:BL:124:ALA:O    | 2.21                     | 0.40              |
| 33:BL:105:LEU:HD23 | 33:BL:105:LEU:H    | 1.84                     | 0.40              |
| 33:BL:105:LEU:HA   | 33:BL:124:ALA:HB2  | 2.03                     | 0.40              |
| 34:BM:74:ARG:CZ    | 34:BM:82:LEU:HD21  | 2.51                     | 0.40              |
| 34:BM:127:ASP:C    | 34:BM:129:PRO:N    | 2.79                     | 0.40              |
| 34:BM:127:ASP:CG   | 34:BM:128:HIS:N    | 2.79                     | 0.40              |
| 35:BN:11:ALA:HA    | 35:BN:14:THR:HG21  | 2.02                     | 0.40              |
| 35:BN:21:CYS:SG    | 35:BN:23:ARG:N     | 2.94                     | 0.40              |
| 35:BN:70:LYS:CE    | 35:BN:104:ARG:HG3  | 2.44                     | 0.40              |
| 36:BO:108:LYS:HG2  | 36:BO:109:GLY:N    | 2.35                     | 0.40              |
| 37:BP:37:LEU:CB    | 37:BP:38:GLU:OE2   | 2.69                     | 0.40              |
| 37:BP:48:GLU:O     | 37:BP:52:VAL:HG23  | 2.21                     | 0.40              |
| 38:BQ:7:GLY:O      | 38:BQ:8:ARG:O      | 2.38                     | 0.40              |
| 38:BQ:30:THR:CG2   | 38:BQ:31:HIS:CE1   | 3.04                     | 0.40              |
| 38:BQ:97:VAL:O     | 38:BQ:98:LEU:HG    | 2.20                     | 0.40              |
| 39:BR:28:VAL:CB    | 39:BR:101:LEU:HG   | 2.51                     | 0.40              |
| 39:BR:79:ALA:C     | 39:BR:81:GLY:N     | 2.75                     | 0.40              |
| 40:BS:22:PHE:C     | 40:BS:24:PRO:HD3   | 2.46                     | 0.40              |
| 41:BT:36:ARG:O     | 41:BT:40:PHE:CD1   | 2.75                     | 0.40              |
| 41:BT:40:PHE:CE2   | 42:BU:84:LYS:HG2   | 2.56                     | 0.40              |
| 41:BT:81:HIS:HB3   | 41:BT:117:GLN:HE22 | 1.82                     | 0.40              |
| 42:BU:15:GLU:O     | 42:BU:98:GLU:OE1   | 2.39                     | 0.40              |
| 42:BU:38:LEU:H     | 42:BU:38:LEU:CD2   | 2.33                     | 0.40              |
| 43:BV:3:ALA:CB     | 43:BV:107:LEU:HB3  | 2.41                     | 0.40              |
| 43:BV:43:GLY:C     | 43:BV:47:VAL:CG2   | 2.95                     | 0.40              |
| 45:BX:9:LYS:HD2    | 45:BX:110:GLU:CG   | 2.52                     | 0.40              |
| 46:BY:14:LYS:N     | 46:BY:14:LYS:HD3   | 2.36                     | 0.40              |
| 46:BY:77:ASP:HA    | 46:BY:84:GLU:CD    | 2.46                     | 0.40              |
| 46:BY:151:HIS:CD2  | 46:BY:170:THR:H    | 2.39                     | 0.40              |
| 46:BY:158:PRO:O    | 46:BY:161:VAL:HG22 | 2.21                     | 0.40              |
| 49:B2:7:LYS:HE2    | 49:B2:32:GLN:HA    | 2.02                     | 0.40              |
| 52:B5:52:VAL:CG1   | 52:B5:53:LYS:N     | 2.64                     | 0.40              |
| 1:AA:222:U:C2      | 1:AA:223:U:C5      | 3.09                     | 0.40              |
| 1:AA:335:C:H4'     | 1:AA:1434:A:H4'    | 2.02                     | 0.40              |
| 1:AA:398:C:H2'     | 1:AA:399:G:C8      | 2.56                     | 0.40              |
| 1:AA:402:G:OP1     | 6:AG:74:GLN:NE2    | 2.54                     | 0.40              |
| 1:AA:426:G:C2      | 1:AA:427:U:C2      | 3.09                     | 0.40              |
| 1:AA:457:C:H3'     | 1:AA:457:C:C6      | 2.56                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:464:G:H8     | 1:AA:464:G:O5'    | 2.03                     | 0.40              |
| 1:AA:477:G:C2     | 1:AA:478:A:C4     | 3.09                     | 0.40              |
| 1:AA:521:G:P      | 14:AO:54:LYS:NZ   | 2.95                     | 0.40              |
| 1:AA:528:C:C4'    | 1:AA:535:A:N6     | 2.84                     | 0.40              |
| 1:AA:938:A:C2'    | 1:AA:939:G:C5'    | 2.98                     | 0.40              |
| 1:AA:1009:G:C2    | 1:AA:1010:G:C8    | 3.08                     | 0.40              |
| 1:AA:1029:G:H21   | 1:AA:1031:G:H3'   | 1.86                     | 0.40              |
| 1:AA:1049:U:O2    | 1:AA:1201:A:H1'   | 2.21                     | 0.40              |
| 1:AA:1148:U:C5'   | 11:AL:16:ARG:HD2  | 2.51                     | 0.40              |
| 1:AA:1151:A:H1'   | 12:AM:39:PRO:CB   | 2.52                     | 0.40              |
| 1:AA:1196:U:C5'   | 1:AA:1197:G:H5'   | 2.45                     | 0.40              |
| 1:AA:1245:A:C6    | 1:AA:1293:G:N1    | 2.89                     | 0.40              |
| 1:AA:1253:G:H22   | 1:AA:1285:A:N6    | 2.19                     | 0.40              |
| 1:AA:1273:G:C2'   | 1:AA:1274:G:H8    | 2.35                     | 0.40              |
| 1:AA:1309:G:C1'   | 15:AP:74:VAL:HG13 | 2.51                     | 0.40              |
| 1:AA:1338:G:C6    | 1:AA:1339:A:N6    | 2.90                     | 0.40              |
| 1:AA:1350:A:H2'   | 1:AA:1351:U:H6    | 1.86                     | 0.40              |
| 1:AA:1395:C:H2'   | 1:AA:1396:A:O5'   | 2.21                     | 0.40              |
| 1:AA:1431:C:O2'   | 1:AA:1432:G:C5'   | 2.69                     | 0.40              |
| 1:AA:1477:C:C2    | 1:AA:1478:C:C5    | 3.09                     | 0.40              |
| 2:A1:8:U:O2       | 2:A1:8:U:H2'      | 2.21                     | 0.40              |
| 2:A1:30:U:C4      | 2:A1:31:U:N3      | 2.90                     | 0.40              |
| 3:AC:19:G:N1      | 3:AC:56:C:N4      | 2.68                     | 0.40              |
| 3:AC:37:A:N6      | 3:AC:38:A:N1      | 2.70                     | 0.40              |
| 3:AC:52:G:C6      | 3:AC:53:G:C5      | 3.10                     | 0.40              |
| 4:AE:9:GLU:CG     | 4:AE:10:LEU:N     | 2.83                     | 0.40              |
| 4:AE:71:VAL:HG22  | 4:AE:93:VAL:CA    | 2.52                     | 0.40              |
| 4:AE:163:PHE:CZ   | 4:AE:187:LEU:N    | 2.90                     | 0.40              |
| 4:AE:167:PRO:CG   | 4:AE:168:THR:N    | 2.83                     | 0.40              |
| 5:AF:84:ILE:HA    | 5:AF:101:LEU:CD1  | 2.50                     | 0.40              |
| 6:AG:13:ARG:HA    | 6:AG:32:ALA:HB2   | 2.02                     | 0.40              |
| 6:AG:20:TYR:HA    | 6:AG:26:CYS:C     | 2.39                     | 0.40              |
| 6:AG:58:LEU:HD13  | 6:AG:58:LEU:O     | 2.22                     | 0.40              |
| 6:AG:122:ARG:HA   | 6:AG:134:ASP:HB2  | 2.03                     | 0.40              |
| 6:AG:193:ASP:C    | 6:AG:194:LEU:HD13 | 2.46                     | 0.40              |
| 7:AH:79:GLU:OE1   | 10:AK:105:ARG:HB2 | 2.22                     | 0.40              |
| 9:AJ:42:ILE:HG22  | 9:AJ:117:ALA:HA   | 2.04                     | 0.40              |
| 9:AJ:55:GLY:O     | 9:AJ:56:GLN:C     | 2.64                     | 0.40              |
| 10:AK:39:LEU:HD13 | 10:AK:39:LEU:HA   | 1.71                     | 0.40              |
| 10:AK:119:LEU:HB3 | 10:AK:123:GLU:OE2 | 2.20                     | 0.40              |
| 11:AL:16:ARG:HH12 | 11:AL:64:THR:HG21 | 1.86                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 12:AM:12:ASP:O    | 12:AM:15:THR:CG2   | 2.67                     | 0.40              |
| 12:AM:76:ASN:N    | 12:AM:76:ASN:ND2   | 2.69                     | 0.40              |
| 14:AO:6:THR:HG21  | 14:AO:9:GLN:OE1    | 2.21                     | 0.40              |
| 14:AO:93:LEU:N    | 14:AO:93:LEU:CD2   | 2.80                     | 0.40              |
| 16:AQ:8:GLU:O     | 16:AQ:10:ALA:N     | 2.55                     | 0.40              |
| 17:AR:7:GLU:HA    | 17:AR:10:LYS:CG    | 2.51                     | 0.40              |
| 17:AR:7:GLU:CB    | 17:AR:10:LYS:HE3   | 2.45                     | 0.40              |
| 17:AR:63:ARG:HH22 | 17:AR:87:ILE:CD1   | 2.30                     | 0.40              |
| 18:AS:34:GLU:CD   | 18:AS:35:LYS:O     | 2.64                     | 0.40              |
| 19:AT:15:MET:HB3  | 19:AT:18:THR:OG1   | 2.21                     | 0.40              |
| 22:AW:14:LYS:O    | 22:AW:17:ARG:N     | 2.54                     | 0.40              |
| 22:AW:56:MET:O    | 22:AW:56:MET:SD    | 2.78                     | 0.40              |
| 24:BA:5:A:N3      | 24:BA:6:A:C8       | 2.89                     | 0.40              |
| 24:BA:64:A:H5'    | 44:BW:73:ARG:CA    | 2.48                     | 0.40              |
| 24:BA:119:A:C3'   | 24:BA:120:U:H5'    | 2.51                     | 0.40              |
| 24:BA:251:A:C5    | 24:BA:252:G:H1'    | 2.57                     | 0.40              |
| 24:BA:270(E):G:C6 | 24:BA:270(F):U:C4  | 3.10                     | 0.40              |
| 24:BA:270(W):G:C5 | 24:BA:270(X):G:N7  | 2.88                     | 0.40              |
| 24:BA:292:C:C1'   | 24:BA:293:U:H3     | 2.34                     | 0.40              |
| 24:BA:392:C:C2    | 24:BA:393:C:C5     | 3.09                     | 0.40              |
| 24:BA:408:G:C2    | 24:BA:409:C:C6     | 3.09                     | 0.40              |
| 24:BA:428:A:H3'   | 24:BA:429:A:C8     | 2.56                     | 0.40              |
| 24:BA:463:G:C2    | 24:BA:467:G:C6     | 3.09                     | 0.40              |
| 24:BA:514:A:H2'   | 24:BA:515:A:C5'    | 2.50                     | 0.40              |
| 24:BA:528:A:C3'   | 24:BA:528:A:C8     | 3.03                     | 0.40              |
| 24:BA:528:A:C8    | 24:BA:528:A:H3'    | 2.56                     | 0.40              |
| 24:BA:544:C:C2'   | 24:BA:545:G:H5'    | 2.52                     | 0.40              |
| 24:BA:558:G:O2'   | 24:BA:559:G:H5'    | 2.20                     | 0.40              |
| 24:BA:638:G:H21   | 24:BA:651:G:H5'    | 1.86                     | 0.40              |
| 24:BA:728:G:C4'   | 24:BA:729:G:C8     | 3.05                     | 0.40              |
| 24:BA:833:U:O2'   | 36:BO:49:ARG:HD3   | 2.20                     | 0.40              |
| 24:BA:850:C:C2    | 24:BA:851:U:C6     | 3.09                     | 0.40              |
| 24:BA:997:G:C3'   | 41:BT:92:ARG:NH1   | 2.84                     | 0.40              |
| 24:BA:1012:U:H5'  | 24:BA:1013:C:P     | 2.61                     | 0.40              |
| 24:BA:1023:U:N3   | 24:BA:1024:G:H1'   | 2.37                     | 0.40              |
| 24:BA:1024:G:H5'' | 24:BA:1025:G:H5'   | 1.91                     | 0.40              |
| 24:BA:1058:G:C2   | 33:BL:116:ASN:ND2  | 2.90                     | 0.40              |
| 24:BA:1079:C:H4'  | 33:BL:132:ARG:HH12 | 1.87                     | 0.40              |
| 24:BA:1174:A:N1   | 24:BA:1177:A:C5    | 2.89                     | 0.40              |
| 24:BA:1200:C:C2   | 24:BA:1201:C:H5    | 2.39                     | 0.40              |
| 24:BA:1328:G:O2'  | 24:BA:1329:U:H5''  | 2.21                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 24:BA:1332:G:C6   | 24:BA:1609:A:C6   | 3.09                     | 0.40              |
| 24:BA:1403:C:C2'  | 24:BA:1404:C:O5'  | 2.69                     | 0.40              |
| 24:BA:1422:G:H4'  | 24:BA:1493:C:O2'  | 2.21                     | 0.40              |
| 24:BA:1495:A:P    | 24:BA:1496:A:OP2  | 2.79                     | 0.40              |
| 24:BA:1565:C:C4   | 24:BA:1567:A:C1'  | 3.04                     | 0.40              |
| 24:BA:1614:A:H5'' | 24:BA:1615:C:OP2  | 2.21                     | 0.40              |
| 24:BA:1615:C:N3   | 43:BV:87:PRO:HG3  | 2.36                     | 0.40              |
| 24:BA:1631:A:H2'  | 24:BA:1632:A:O5'  | 2.21                     | 0.40              |
| 24:BA:1655:A:H2'  | 24:BA:1656:C:C1'  | 2.50                     | 0.40              |
| 24:BA:1688:U:H3   | 24:BA:1700:A:C5'  | 2.34                     | 0.40              |
| 24:BA:1695:G:N2   | 24:BA:1696:G:N9   | 2.70                     | 0.40              |
| 24:BA:1790:C:O2   | 24:BA:1791:A:N7   | 2.54                     | 0.40              |
| 24:BA:1799:G:C8   | 27:BD:183:ARG:NH1 | 2.87                     | 0.40              |
| 24:BA:1806:C:H6   | 24:BA:1806:C:O5'  | 2.03                     | 0.40              |
| 24:BA:1837:C:H1'  | 24:BA:1928:A:N3   | 2.36                     | 0.40              |
| 24:BA:1845:G:C5   | 24:BA:1896:G:N1   | 2.89                     | 0.40              |
| 24:BA:1847:A:O2'  | 24:BA:1848:A:C8   | 2.74                     | 0.40              |
| 24:BA:1930:G:H2'  | 24:BA:1968:G:C6   | 2.56                     | 0.40              |
| 24:BA:1940:U:H4'  | 24:BA:1941:C:OP1  | 2.21                     | 0.40              |
| 24:BA:2040:C:C4   | 24:BA:2041:U:O4   | 2.74                     | 0.40              |
| 24:BA:2043:C:C2   | 24:BA:2044:C:C5   | 3.10                     | 0.40              |
| 24:BA:2106:G:N1   | 24:BA:2184:G:C5   | 2.89                     | 0.40              |
| 24:BA:2139:C:O2'  | 24:BA:2140:C:H5'  | 2.21                     | 0.40              |
| 24:BA:2255:G:C6   | 24:BA:2256:G:C5   | 3.10                     | 0.40              |
| 24:BA:2285:C:C4'  | 24:BA:2288:A:N6   | 2.83                     | 0.40              |
| 24:BA:2300:G:C2'  | 24:BA:2301:C:H5'  | 2.51                     | 0.40              |
| 24:BA:2312:U:HO2' | 30:BG:40:ASN:ND2  | 2.17                     | 0.40              |
| 24:BA:2360:A:OP1  | 54:B7:49:VAL:HG22 | 2.20                     | 0.40              |
| 24:BA:2371:G:H2'  | 24:BA:2372:G:C1'  | 2.51                     | 0.40              |
| 24:BA:2383:G:N2   | 24:BA:2384:G:C2   | 2.89                     | 0.40              |
| 24:BA:2457:U:C4   | 24:BA:2458:G:C2   | 3.09                     | 0.40              |
| 24:BA:2509:G:C2   | 24:BA:2580:U:C2   | 3.09                     | 0.40              |
| 24:BA:2520:C:N4   | 24:BA:2567:G:C5   | 2.90                     | 0.40              |
| 24:BA:2578:G:N7   | 28:BE:140:SER:CB  | 2.84                     | 0.40              |
| 24:BA:2618:G:C4   | 24:BA:2619:C:C5   | 3.10                     | 0.40              |
| 24:BA:2649:U:C2   | 24:BA:2650:U:C5   | 3.09                     | 0.40              |
| 24:BA:2718:G:O3'  | 40:BS:101:PHE:HD1 | 2.03                     | 0.40              |
| 24:BA:2776:A:H2   | 24:BA:2778:A:H2'  | 1.81                     | 0.40              |
| 24:BA:2821:A:OP2  | 28:BE:110:GLY:O   | 2.40                     | 0.40              |
| 24:BA:2865:U:C6   | 24:BA:2865:U:O5'  | 2.62                     | 0.40              |
| 24:BA:2870:C:O2   | 24:BA:2871:C:H1'  | 2.21                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 24:BA:2893:G:H2'  | 24:BA:2894:G:OP2   | 2.21                     | 0.40              |
| 25:BB:2:C:OP2     | 25:BB:2:C:C6       | 2.74                     | 0.40              |
| 25:BB:7:G:O2'     | 25:BB:8:U:P        | 2.78                     | 0.40              |
| 25:BB:43:C:H2'    | 25:BB:44:G:C5'     | 2.50                     | 0.40              |
| 26:BC:38:ASP:CG   | 26:BC:178:ALA:HB3  | 2.41                     | 0.40              |
| 26:BC:52:ARG:NH1  | 26:BC:52:ARG:CB    | 2.85                     | 0.40              |
| 26:BC:59:ARG:HD3  | 26:BC:164:ARG:HG2  | 2.00                     | 0.40              |
| 27:BD:137:PRO:HG2 | 27:BD:140:THR:CG2  | 2.52                     | 0.40              |
| 27:BD:173:VAL:O   | 27:BD:184:LYS:HG3  | 2.20                     | 0.40              |
| 27:BD:251:GLY:C   | 27:BD:255:LYS:HZ2  | 2.28                     | 0.40              |
| 28:BE:54:GLN:CB   | 28:BE:57:LYS:NZ    | 2.84                     | 0.40              |
| 28:BE:118:LYS:HD3 | 28:BE:119:ARG:H    | 1.86                     | 0.40              |
| 28:BE:119:ARG:HD2 | 28:BE:156:MET:N    | 2.29                     | 0.40              |
| 29:BF:12:LEU:HD22 | 29:BF:128:ALA:C    | 2.46                     | 0.40              |
| 29:BF:51:THR:O    | 29:BF:52:LYS:CB    | 2.69                     | 0.40              |
| 29:BF:54:ARG:HA   | 29:BF:56:GLU:OE1   | 2.21                     | 0.40              |
| 29:BF:106:ARG:CG  | 29:BF:107:LYS:HG3  | 2.49                     | 0.40              |
| 29:BF:153:SER:H   | 29:BF:190:GLU:CG   | 2.32                     | 0.40              |
| 30:BG:8:LYS:HE2   | 30:BG:103:LEU:HD23 | 2.04                     | 0.40              |
| 30:BG:139:LEU:CD1 | 30:BG:142:PRO:CB   | 2.94                     | 0.40              |
| 30:BG:141:PHE:O   | 30:BG:143:GLU:N    | 2.52                     | 0.40              |
| 30:BG:172:LEU:HG  | 30:BG:173:LEU:N    | 2.37                     | 0.40              |
| 31:BH:97:ARG:NH1  | 31:BH:99:VAL:HG22  | 2.36                     | 0.40              |
| 31:BH:156:ALA:O   | 31:BH:157:TYR:CD2  | 2.74                     | 0.40              |
| 32:BK:88:ILE:HD11 | 32:BK:123:LEU:HD22 | 2.02                     | 0.40              |
| 32:BK:97:ILE:C    | 32:BK:101:LEU:HD23 | 2.46                     | 0.40              |
| 32:BK:98:ALA:O    | 32:BK:99:GLU:C     | 2.62                     | 0.40              |
| 33:BL:59:ILE:HA   | 33:BL:64:SER:O     | 2.22                     | 0.40              |
| 33:BL:75:SER:O    | 33:BL:78:ILE:HB    | 2.22                     | 0.40              |
| 33:BL:113:PRO:C   | 33:BL:115:LEU:H    | 2.26                     | 0.40              |
| 34:BM:57:ALA:HB3  | 34:BM:124:ALA:CB   | 2.51                     | 0.40              |
| 34:BM:74:ARG:HG2  | 34:BM:76:SER:OG    | 2.20                     | 0.40              |
| 34:BM:123:TYR:HD2 | 34:BM:130:HIS:HD2  | 1.69                     | 0.40              |
| 34:BM:136:GLU:C   | 34:BM:137:LYS:CG   | 2.94                     | 0.40              |
| 35:BN:86:ILE:HD13 | 35:BN:90:GLN:CG    | 2.50                     | 0.40              |
| 36:BO:65:ARG:NH1  | 36:BO:68:GLN:HE22  | 2.16                     | 0.40              |
| 36:BO:76:LYS:NZ   | 36:BO:99:LEU:CD1   | 2.83                     | 0.40              |
| 38:BQ:28:LEU:O    | 38:BQ:30:THR:N     | 2.54                     | 0.40              |
| 38:BQ:54:LEU:HA   | 38:BQ:57:ARG:HB2   | 2.01                     | 0.40              |
| 38:BQ:86:ARG:NH2  | 38:BQ:118:GLU:OE1  | 2.55                     | 0.40              |
| 39:BR:11:LYS:CA   | 39:BR:14:VAL:CG2   | 2.92                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 39:BR:59:LYS:N   | 39:BR:59:LYS:CD    | 2.84                     | 0.40              |
| 39:BR:74:ALA:C   | 39:BR:108:GLY:HA2  | 2.46                     | 0.40              |
| 41:BT:16:LYS:CD  | 41:BT:17:ILE:HD13  | 2.51                     | 0.40              |
| 42:BU:10:LYS:C   | 42:BU:12:TYR:N     | 2.78                     | 0.40              |
| 42:BU:40:LEU:CD1 | 42:BU:55:ALA:CA    | 2.92                     | 0.40              |
| 43:BV:55:ALA:C   | 43:BV:58:ALA:HB3   | 2.43                     | 0.40              |
| 44:BW:25:LYS:HA  | 44:BW:82:GLN:HA    | 2.03                     | 0.40              |
| 44:BW:33:LYS:O   | 44:BW:34:ALA:C     | 2.64                     | 0.40              |
| 45:BX:10:GLY:N   | 45:BX:110:GLU:CD   | 2.79                     | 0.40              |
| 46:BY:51:ALA:O   | 46:BY:52:SER:C     | 2.62                     | 0.40              |
| 46:BY:99:TYR:HD1 | 46:BY:126:VAL:HG23 | 1.87                     | 0.40              |
| 49:B2:4:LEU:CD2  | 49:B2:4:LEU:C      | 2.94                     | 0.40              |
| 50:B3:11:PRO:O   | 50:B3:12:ALA:CB    | 2.70                     | 0.40              |
| 50:B3:65:ASP:CA  | 50:B3:68:ARG:HH12  | 2.33                     | 0.40              |
| 51:B4:41:PRO:HG2 | 51:B4:44:THR:OG1   | 2.20                     | 0.40              |
| 53:B6:5:TRP:CD2  | 53:B6:7:PRO:HD3    | 2.56                     | 0.40              |
| 53:B6:10:ARG:HB3 | 53:B6:14:LYS:HD2   | 2.03                     | 0.40              |
| 53:B6:33:ARG:O   | 53:B6:37:LYS:HG3   | 2.21                     | 0.40              |
| 54:B7:51:ALA:C   | 54:B7:54:GLU:OE1   | 2.65                     | 0.40              |
| 1:AA:27:G:H8     | 1:AA:27:G:P        | 2.44                     | 0.40              |
| 1:AA:77:C:H6     | 1:AA:77:C:O5'      | 2.03                     | 0.40              |
| 1:AA:136:C:O2    | 1:AA:137:C:C6      | 2.75                     | 0.40              |
| 1:AA:172:A:N7    | 1:AA:174:C:C4      | 2.89                     | 0.40              |
| 1:AA:193:C:O2'   | 1:AA:194:C:C5'     | 2.69                     | 0.40              |
| 1:AA:247:G:C6    | 1:AA:278:G:C2      | 3.09                     | 0.40              |
| 1:AA:254:G:H21   | 19:AT:16:GLN:CD    | 2.29                     | 0.40              |
| 1:AA:260:G:N3    | 1:AA:261:U:O2      | 2.54                     | 0.40              |
| 1:AA:260:G:C2    | 1:AA:261:U:O2      | 2.75                     | 0.40              |
| 1:AA:341:C:C2    | 1:AA:342:C:C5      | 3.10                     | 0.40              |
| 1:AA:491:G:C2'   | 1:AA:492:G:H5'     | 2.51                     | 0.40              |
| 1:AA:551:U:C2    | 1:AA:552:U:C5      | 3.09                     | 0.40              |
| 1:AA:560:U:N3    | 1:AA:566:G:O4'     | 2.54                     | 0.40              |
| 1:AA:650:G:C2    | 1:AA:651:C:C6      | 3.09                     | 0.40              |
| 1:AA:670:G:C6    | 1:AA:671:G:N7      | 2.90                     | 0.40              |
| 1:AA:673:G:C2    | 1:AA:674:G:C6      | 3.10                     | 0.40              |
| 1:AA:688:G:N1    | 1:AA:700:G:C6      | 2.89                     | 0.40              |
| 1:AA:736:C:C5'   | 20:AU:72:ARG:HH22  | 2.02                     | 0.40              |
| 1:AA:744:C:H2'   | 1:AA:745:C:H6      | 1.86                     | 0.40              |
| 1:AA:901:A:H2    | 1:AA:902:G:O2'     | 2.04                     | 0.40              |
| 1:AA:979:C:OP2   | 1:AA:981:U:N3      | 2.52                     | 0.40              |
| 1:AA:1029:G:O2'  | 1:AA:1031:G:N7     | 2.43                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:AA:1121:U:O5'   | 1:AA:1121:U:H6    | 2.04                     | 0.40              |
| 1:AA:1210:C:H4'   | 1:AA:1214:C:C4    | 2.55                     | 0.40              |
| 1:AA:1277:C:C5    | 1:AA:1278:U:O2    | 2.74                     | 0.40              |
| 1:AA:1386:G:H2'   | 1:AA:1387:G:H8    | 1.86                     | 0.40              |
| 1:AA:1397:C:H42   | 2:A1:46:U:H5      | 1.69                     | 0.40              |
| 1:AA:1459:C:OP1   | 22:AW:27:LYS:NZ   | 2.54                     | 0.40              |
| 1:AA:1472:U:H6    | 1:AA:1472:U:O5'   | 2.04                     | 0.40              |
| 2:A1:9:U:C2       | 2:A1:13:U:O4      | 2.74                     | 0.40              |
| 2:A1:52:U:O4'     | 6:AG:49:ARG:O     | 2.40                     | 0.40              |
| 3:AD:9:A:N6       | 3:AD:22:G:N7      | 2.69                     | 0.40              |
| 3:AD:34:G:N3      | 3:AD:34:G:C2'     | 2.84                     | 0.40              |
| 3:AD:37:A:H3'     | 3:AD:38:A:C8      | 2.54                     | 0.40              |
| 3:AD:57:G:C8      | 3:AD:57:G:OP2     | 2.75                     | 0.40              |
| 3:AD:64:A:O2'     | 3:AD:65:G:H5'     | 2.21                     | 0.40              |
| 3:AB:54:U:OP1     | 37:BP:60:ARG:HD3  | 2.21                     | 0.40              |
| 4:AE:17:PHE:CD1   | 4:AE:17:PHE:C     | 2.98                     | 0.40              |
| 4:AE:50:GLU:O     | 4:AE:53:ARG:HB3   | 2.21                     | 0.40              |
| 4:AE:80:ILE:CG1   | 4:AE:208:ILE:HD13 | 2.51                     | 0.40              |
| 4:AE:84:GLU:HG3   | 4:AE:212:GLN:CD   | 2.46                     | 0.40              |
| 4:AE:179:LYS:HB3  | 10:AK:72:PRO:HB3  | 2.03                     | 0.40              |
| 5:AF:77:ILE:HD13  | 5:AF:84:ILE:HB    | 2.04                     | 0.40              |
| 5:AF:164:ARG:CG   | 5:AF:165:THR:H    | 2.34                     | 0.40              |
| 6:AG:57:ARG:HH22  | 7:AH:107:ARG:HE   | 1.65                     | 0.40              |
| 6:AG:91:SER:OG    | 6:AG:92:VAL:N     | 2.54                     | 0.40              |
| 6:AG:106:TYR:O    | 6:AG:108:LEU:N    | 2.54                     | 0.40              |
| 6:AG:108:LEU:C    | 6:AG:110:PHE:N    | 2.79                     | 0.40              |
| 6:AG:187:ARG:NH2  | 6:AG:188:LEU:HD21 | 2.37                     | 0.40              |
| 7:AH:109:ILE:CG2  | 7:AH:110:LEU:H    | 2.32                     | 0.40              |
| 8:AI:3:ARG:O      | 8:AI:93:SER:CB    | 2.69                     | 0.40              |
| 8:AI:99:ALA:HB3   | 20:AU:31:LEU:HD11 | 2.01                     | 0.40              |
| 9:AJ:36:LYS:O     | 9:AJ:39:ALA:HB3   | 2.21                     | 0.40              |
| 9:AJ:91:VAL:O     | 9:AJ:92:SER:O     | 2.40                     | 0.40              |
| 9:AJ:123:GLU:OE1  | 9:AJ:134:ALA:N    | 2.45                     | 0.40              |
| 10:AK:67:PRO:O    | 10:AK:68:ARG:C    | 2.64                     | 0.40              |
| 10:AK:70:GLN:NE2  | 10:AK:70:GLN:HA   | 2.37                     | 0.40              |
| 10:AK:87:SER:HB3  | 10:AK:93:VAL:N    | 2.30                     | 0.40              |
| 10:AK:88:LYS:N    | 10:AK:88:LYS:HZ3  | 2.17                     | 0.40              |
| 11:AL:33:PHE:CZ   | 11:AL:43:ALA:O    | 2.74                     | 0.40              |
| 11:AL:69:GLY:C    | 11:AL:73:GLN:CD   | 2.89                     | 0.40              |
| 11:AL:93:ARG:O    | 11:AL:95:LYS:N    | 2.46                     | 0.40              |
| 13:AN:14:VAL:HG11 | 13:AN:35:PRO:HG2  | 2.02                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2              | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|---------------------|--------------------------|-------------------|
| 15:AP:3:ARG:NH2  | 30:BG:113:ARG:NE    | 2.69                     | 0.40              |
| 15:AP:91:ARG:HD2 | 15:AP:96:LEU:HG     | 2.03                     | 0.40              |
| 17:AR:79:ARG:O   | 17:AR:82:ILE:HB     | 2.22                     | 0.40              |
| 18:AS:3:LYS:CD   | 18:AS:24:ALA:HB2    | 2.52                     | 0.40              |
| 19:AT:12:SER:H   | 19:AT:20:THR:HG1    | 1.66                     | 0.40              |
| 19:AT:13:ASP:HB3 | 19:AT:52:LYS:HG2    | 2.03                     | 0.40              |
| 19:AT:68:ARG:N   | 19:AT:70:ARG:CZ     | 2.83                     | 0.40              |
| 21:AV:40:ILE:C   | 21:AV:41:VAL:HG22   | 2.45                     | 0.40              |
| 21:AV:66:MET:O   | 21:AV:69:HIS:HD2    | 2.04                     | 0.40              |
| 22:AW:23:ARG:O   | 22:AW:24:LEU:O      | 2.39                     | 0.40              |
| 22:AW:25:ARG:O   | 22:AW:26:ASN:C      | 2.63                     | 0.40              |
| 22:AW:66:ALA:O   | 22:AW:68:LYS:N      | 2.55                     | 0.40              |
| 22:AW:83:ARG:O   | 22:AW:84:LEU:C      | 2.64                     | 0.40              |
| 23:AX:3:LYS:HZ2  | 23:AX:13:ILE:CG2    | 2.33                     | 0.40              |
| 24:BA:21:A:H2'   | 24:BA:22:C:H6       | 1.86                     | 0.40              |
| 24:BA:64:A:H4'   | 44:BW:73:ARG:N      | 2.37                     | 0.40              |
| 24:BA:122:G:OP1  | 24:BA:149:A:O2'     | 2.39                     | 0.40              |
| 24:BA:128:C:N4   | 24:BA:129:C:N4      | 2.69                     | 0.40              |
| 24:BA:219:G:O2'  | 24:BA:220:G:H5'     | 2.22                     | 0.40              |
| 24:BA:298:G:H1   | 24:BA:338:G:C4'     | 2.34                     | 0.40              |
| 24:BA:322:A:H1'  | 24:BA:341:G:C8      | 2.57                     | 0.40              |
| 24:BA:335:C:C2   | 24:BA:336:C:C5      | 3.10                     | 0.40              |
| 24:BA:447:A:C2   | 24:BA:473:G:C8      | 3.09                     | 0.40              |
| 24:BA:491:G:C6   | 24:BA:492:A:C6      | 3.09                     | 0.40              |
| 24:BA:573:G:O3'  | 24:BA:576:U:O4      | 2.39                     | 0.40              |
| 24:BA:613:U:C5   | 24:BA:614:U:C2      | 3.09                     | 0.40              |
| 24:BA:623:G:N7   | 24:BA:624:C:C5      | 2.90                     | 0.40              |
| 24:BA:705:A:N6   | 24:BA:727:A:C1'     | 2.84                     | 0.40              |
| 24:BA:718:A:H8   | 24:BA:719:C:C6      | 2.38                     | 0.40              |
| 24:BA:784:A:OP1  | 24:BA:2587:A:O2'    | 2.37                     | 0.40              |
| 24:BA:930:U:C6   | 24:BA:930:U:C3'     | 3.05                     | 0.40              |
| 24:BA:932:G:N2   | 24:BA:933:A:C2      | 2.89                     | 0.40              |
| 24:BA:939:G:H2'  | 24:BA:940:G:O5'     | 2.21                     | 0.40              |
| 24:BA:1024:G:C6  | 24:BA:1025:G:N7     | 2.90                     | 0.40              |
| 24:BA:1051:G:C4' | 24:BA:2752:C:O4'    | 2.68                     | 0.40              |
| 24:BA:1142:U:H2' | 24:BA:1142(A):A:O5' | 2.21                     | 0.40              |
| 24:BA:1180:C:H2' | 24:BA:1181:C:C5     | 2.54                     | 0.40              |
| 24:BA:1222:C:N3  | 24:BA:1227:A:N6     | 2.70                     | 0.40              |
| 24:BA:1333:C:N3  | 24:BA:1334:G:N7     | 2.69                     | 0.40              |
| 24:BA:1367:A:H3' | 24:BA:1367:A:C8     | 2.56                     | 0.40              |
| 24:BA:1487:G:C2' | 24:BA:1488:G:H5'    | 2.52                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1545(A):A:H8 | 24:BA:1545(A):A:P  | 2.44                     | 0.40              |
| 24:BA:1567:A:N6    | 27:BD:84:TYR:CE1   | 2.89                     | 0.40              |
| 24:BA:1579:A:H2'   | 24:BA:1580:A:O4'   | 2.21                     | 0.40              |
| 24:BA:1613:G:N7    | 24:BA:1617:C:C5    | 2.89                     | 0.40              |
| 24:BA:1641:A:H8    | 24:BA:1641:A:OP2   | 2.05                     | 0.40              |
| 24:BA:1750:G:C4    | 24:BA:1751:C:C5    | 3.09                     | 0.40              |
| 24:BA:1977:A:O2'   | 24:BA:1978:A:O5'   | 2.39                     | 0.40              |
| 24:BA:1991:U:C2'   | 24:BA:1992:G:OP2   | 2.69                     | 0.40              |
| 24:BA:2023:G:C6    | 24:BA:2024:G:C6    | 3.10                     | 0.40              |
| 24:BA:2198:A:N7    | 32:BK:29:TYR:O     | 2.55                     | 0.40              |
| 24:BA:2209:C:O5'   | 27:BD:151:LYS:HD2  | 2.21                     | 0.40              |
| 24:BA:2216:G:C2    | 24:BA:2217:G:C8    | 3.09                     | 0.40              |
| 24:BA:2259:G:C4    | 24:BA:2427:C:N4    | 2.90                     | 0.40              |
| 24:BA:2285:C:OP2   | 52:B5:27:LYS:HE3   | 2.21                     | 0.40              |
| 24:BA:2287:A:N7    | 24:BA:2289:G:C4    | 2.88                     | 0.40              |
| 24:BA:2339:G:H2'   | 24:BA:2340:G:H8    | 1.87                     | 0.40              |
| 24:BA:2345:G:H21   | 24:BA:2381:C:C2'   | 2.34                     | 0.40              |
| 24:BA:2458:G:C5    | 24:BA:2490:G:C6    | 3.09                     | 0.40              |
| 24:BA:2519:U:C4'   | 24:BA:2520:C:OP1   | 2.68                     | 0.40              |
| 24:BA:2556:C:H2'   | 24:BA:2557:G:C4'   | 2.50                     | 0.40              |
| 24:BA:2574:G:O2'   | 28:BE:143:ASN:CB   | 2.69                     | 0.40              |
| 24:BA:2596:U:C5    | 24:BA:2597:G:C6    | 3.10                     | 0.40              |
| 24:BA:2599:G:H2'   | 24:BA:2600:A:H8    | 1.87                     | 0.40              |
| 24:BA:2639:A:N3    | 24:BA:2778:A:C2    | 2.89                     | 0.40              |
| 24:BA:2684:U:O2'   | 35:BN:67:LYS:CD    | 2.69                     | 0.40              |
| 24:BA:2737:G:N3    | 24:BA:2738:A:C8    | 2.89                     | 0.40              |
| 24:BA:2782:G:C2    | 24:BA:2783:G:C5    | 3.10                     | 0.40              |
| 24:BA:2808:U:H5''  | 24:BA:2809:A:OP2   | 2.21                     | 0.40              |
| 24:BA:2857:G:N2    | 24:BA:2861:G:C4    | 2.90                     | 0.40              |
| 24:BA:2881:C:C2    | 24:BA:2882:A:C8    | 3.09                     | 0.40              |
| 25:BB:16:G:C6      | 25:BB:69:G:C2      | 3.09                     | 0.40              |
| 26:BC:7:TYR:HE2    | 26:BC:11:LEU:HD22  | 1.85                     | 0.40              |
| 26:BC:20:TYR:O     | 26:BC:21:THR:HG23  | 2.21                     | 0.40              |
| 26:BC:75:LEU:HD22  | 26:BC:110:PHE:CE2  | 2.54                     | 0.40              |
| 26:BC:176:GLY:HA3  | 26:BC:185:LEU:HD22 | 2.04                     | 0.40              |
| 27:BD:5:LYS:CD     | 27:BD:31:LYS:NZ    | 2.84                     | 0.40              |
| 27:BD:8:PRO:CG     | 27:BD:26:LYS:HG3   | 2.46                     | 0.40              |
| 27:BD:29:PRO:HB2   | 27:BD:31:LYS:HD2   | 2.02                     | 0.40              |
| 27:BD:40:THR:CG2   | 27:BD:43:ARG:NE    | 2.85                     | 0.40              |
| 27:BD:134:ARG:N    | 27:BD:168:ARG:HH12 | 2.18                     | 0.40              |
| 27:BD:147:LEU:CD2  | 27:BD:154:LYS:HG3  | 2.49                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|--------------------|--------------------------|-------------------|
| 27:BD:276:LYS:OXT | 27:BD:276:LYS:HD2  | 2.21                     | 0.40              |
| 28:BE:118:LYS:NZ  | 28:BE:119:ARG:N    | 2.69                     | 0.40              |
| 28:BE:185:LYS:O   | 28:BE:185:LYS:HG2  | 2.19                     | 0.40              |
| 29:BF:12:LEU:HD22 | 29:BF:128:ALA:CA   | 2.52                     | 0.40              |
| 29:BF:113:ALA:HB1 | 29:BF:187:VAL:HG13 | 2.02                     | 0.40              |
| 30:BG:4:ASP:CA    | 30:BG:7:LEU:HB2    | 2.46                     | 0.40              |
| 31:BH:41:MET:HE3  | 31:BH:68:THR:HG21  | 2.03                     | 0.40              |
| 31:BH:152:ARG:O   | 31:BH:162:ILE:HG22 | 2.21                     | 0.40              |
| 32:BK:23:PRO:O    | 32:BK:24:GLY:C     | 2.63                     | 0.40              |
| 32:BK:47:LEU:O    | 32:BK:51:ILE:HG13  | 2.22                     | 0.40              |
| 32:BK:125:GLU:CA  | 32:BK:142:VAL:O    | 2.70                     | 0.40              |
| 33:BL:17:ALA:O    | 33:BL:18:THR:CB    | 2.70                     | 0.40              |
| 33:BL:71:THR:HB   | 33:BL:111:LYS:CE   | 2.51                     | 0.40              |
| 34:BM:54:VAL:HA   | 34:BM:130:HIS:HE1  | 1.86                     | 0.40              |
| 34:BM:91:LEU:HD23 | 34:BM:98:VAL:CG2   | 2.40                     | 0.40              |
| 34:BM:100:GLU:HB3 | 34:BM:104:LYS:HE3  | 2.03                     | 0.40              |
| 35:BN:25:LEU:C    | 35:BN:25:LEU:HD23  | 2.47                     | 0.40              |
| 35:BN:49:ARG:O    | 35:BN:50:GLY:O     | 2.40                     | 0.40              |
| 36:BO:32:THR:OG1  | 36:BO:33:ARG:N     | 2.53                     | 0.40              |
| 37:BP:35:VAL:CG1  | 37:BP:130:LYS:O    | 2.66                     | 0.40              |
| 37:BP:40:ALA:O    | 37:BP:97:VAL:O     | 2.39                     | 0.40              |
| 37:BP:68:ILE:HD13 | 37:BP:97:VAL:HG13  | 2.02                     | 0.40              |
| 37:BP:79:LEU:C    | 37:BP:80:GLU:CG    | 2.93                     | 0.40              |
| 37:BP:91:GLU:N    | 37:BP:93:TYR:OH    | 2.55                     | 0.40              |
| 37:BP:110:THR:O   | 37:BP:111:GLU:CG   | 2.70                     | 0.40              |
| 38:BQ:45:ARG:HB2  | 38:BQ:97:VAL:CG2   | 2.51                     | 0.40              |
| 38:BQ:79:LEU:CD2  | 38:BQ:80:PHE:HA    | 2.48                     | 0.40              |
| 39:BR:14:VAL:O    | 39:BR:18:ILE:CD1   | 2.69                     | 0.40              |
| 39:BR:28:VAL:CG2  | 39:BR:101:LEU:HG   | 2.51                     | 0.40              |
| 41:BT:61:TRP:O    | 41:BT:63:VAL:N     | 2.55                     | 0.40              |
| 42:BU:58:VAL:HG12 | 42:BU:59:ALA:N     | 2.37                     | 0.40              |
| 43:BV:30:GLU:OE2  | 43:BV:31:GLU:N     | 2.54                     | 0.40              |
| 43:BV:68:ARG:HB2  | 43:BV:110:LYS:O    | 2.22                     | 0.40              |
| 43:BV:103:ILE:O   | 43:BV:103:ILE:HG12 | 2.21                     | 0.40              |
| 44:BW:33:LYS:HB2  | 44:BW:33:LYS:HZ2   | 1.86                     | 0.40              |
| 44:BW:90:GLU:O    | 44:BW:91:ALA:C     | 2.64                     | 0.40              |
| 46:BY:30:ASN:C    | 46:BY:89:PHE:HE2   | 2.26                     | 0.40              |
| 46:BY:43:GLU:O    | 46:BY:46:LYS:N     | 2.54                     | 0.40              |
| 47:BZ:75:LEU:HD12 | 47:BZ:75:LEU:H     | 1.86                     | 0.40              |
| 48:B1:16:LEU:CD2  | 48:B1:59:LEU:HB2   | 2.51                     | 0.40              |
| 50:B3:33:VAL:HG13 | 50:B3:35:VAL:HG23  | 2.04                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 52:B5:17:LYS:HE2 | 52:B5:48:VAL:HG13 | 2.04                     | 0.40              |
| 52:B5:35:GLU:O   | 52:B5:51:GLU:OE2  | 2.39                     | 0.40              |
| 52:B5:38:LYS:HB3 | 52:B5:39:TYR:H    | 1.40                     | 0.40              |
| 1:AA:32:A:OP1    | 1:AA:398:C:H1'    | 2.20                     | 0.40              |
| 1:AA:87:A:N7     | 1:AA:88:C:C2      | 2.89                     | 0.40              |
| 1:AA:87:A:C8     | 1:AA:88:C:C6      | 3.09                     | 0.40              |
| 1:AA:89:U:N3     | 1:AA:90:C:C5      | 2.90                     | 0.40              |
| 1:AA:93:U:O2     | 1:AA:95:G:N7      | 2.54                     | 0.40              |
| 1:AA:104:G:C2    | 1:AA:105:G:C8     | 3.09                     | 0.40              |
| 1:AA:160:A:N1    | 1:AA:346:G:O6     | 2.55                     | 0.40              |
| 1:AA:175:C:C2    | 1:AA:176:C:C5     | 3.09                     | 0.40              |
| 1:AA:186(B):C:C2 | 1:AA:186(C):G:H8  | 2.40                     | 0.40              |
| 1:AA:189:U:C2    | 19:AT:72:ARG:NH2  | 2.85                     | 0.40              |
| 1:AA:266:G:O2'   | 1:AA:268:C:OP2    | 2.30                     | 0.40              |
| 1:AA:273:A:C6    | 1:AA:274:A:C5     | 3.10                     | 0.40              |
| 1:AA:286:G:C6    | 1:AA:287:U:C5     | 3.09                     | 0.40              |
| 1:AA:335:C:H4'   | 1:AA:1434:A:C4'   | 2.52                     | 0.40              |
| 1:AA:363:A:C4    | 14:AO:31:PRO:HD2  | 2.57                     | 0.40              |
| 1:AA:432:A:N7    | 1:AA:433:C:C4     | 2.90                     | 0.40              |
| 1:AA:519:C:OP1   | 14:AO:50:SER:OG   | 2.27                     | 0.40              |
| 1:AA:602:A:C6    | 1:AA:603:U:C4     | 3.10                     | 0.40              |
| 1:AA:609:A:O2'   | 1:AA:610:G:H5'    | 2.21                     | 0.40              |
| 1:AA:634:C:H2'   | 1:AA:635:G:H8     | 1.86                     | 0.40              |
| 1:AA:697:U:H3'   | 1:AA:698:G:H8     | 1.87                     | 0.40              |
| 1:AA:698:G:N2    | 1:AA:699:C:C2     | 2.89                     | 0.40              |
| 1:AA:702:A:N6    | 24:BA:1848:A:C2   | 2.89                     | 0.40              |
| 1:AA:760:G:N1    | 19:AT:105:ALA:OXT | 2.40                     | 0.40              |
| 1:AA:803:G:C6    | 1:AA:804:U:C4     | 3.10                     | 0.40              |
| 1:AA:818:G:O2'   | 1:AA:819:A:P      | 2.80                     | 0.40              |
| 1:AA:867:G:C2    | 1:AA:868:C:C5     | 3.09                     | 0.40              |
| 1:AA:894:G:C6    | 1:AA:895:G:N7     | 2.89                     | 0.40              |
| 1:AA:899:C:N3    | 1:AA:900:A:C2     | 2.90                     | 0.40              |
| 1:AA:901:A:HO2'  | 1:AA:902:G:P      | 2.44                     | 0.40              |
| 1:AA:934:C:H5    | 1:AA:1344:C:C2    | 2.39                     | 0.40              |
| 1:AA:1113:C:C5   | 1:AA:1113:C:OP2   | 2.75                     | 0.40              |
| 1:AA:1125:U:H4'  | 1:AA:1125:U:OP2   | 2.20                     | 0.40              |
| 1:AA:1226:C:OP2  | 15:AP:103:THR:CB  | 2.69                     | 0.40              |
| 1:AA:1228:C:O2'  | 15:AP:116:THR:HA  | 2.22                     | 0.40              |
| 1:AA:1287:A:H61  | 1:AA:1371:G:C5'   | 2.34                     | 0.40              |
| 1:AA:1298:C:C6   | 9:AJ:114:ARG:HD3  | 2.52                     | 0.40              |
| 1:AA:1328:C:N4   | 1:AA:1329:A:N6    | 2.70                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1           | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|--------------------|--------------------------|-------------------|
| 1:AA:1331:G:OP1  | 1:AA:1331:G:O4'    | 2.40                     | 0.40              |
| 1:AA:1413:A:O2'  | 1:AA:1414:U:O5'    | 2.40                     | 0.40              |
| 1:AA:1489:G:C2   | 1:AA:1490:C:C2     | 3.10                     | 0.40              |
| 1:AA:1532:U:C2   | 2:A1:33:U:O2       | 2.75                     | 0.40              |
| 2:A1:50:U:O2'    | 2:A1:51:U:P        | 2.79                     | 0.40              |
| 3:AB:55:U:H5''   | 46:BY:178:GLU:OE2  | 2.21                     | 0.40              |
| 4:AE:11:LEU:HD23 | 4:AE:11:LEU:N      | 2.36                     | 0.40              |
| 4:AE:68:ILE:HG23 | 4:AE:161:ALA:O     | 2.22                     | 0.40              |
| 4:AE:131:PRO:O   | 4:AE:132:LYS:C     | 2.65                     | 0.40              |
| 4:AE:165:VAL:CG2 | 4:AE:166:ASP:H     | 2.16                     | 0.40              |
| 4:AE:219:VAL:O   | 4:AE:223:ILE:CD1   | 2.69                     | 0.40              |
| 4:AE:221:LEU:C   | 4:AE:221:LEU:HD22  | 2.44                     | 0.40              |
| 5:AF:48:TYR:O    | 5:AF:51:GLY:N      | 2.53                     | 0.40              |
| 5:AF:52:LEU:O    | 5:AF:115:LEU:HD21  | 2.21                     | 0.40              |
| 5:AF:174:PRO:C   | 5:AF:176:HIS:N     | 2.78                     | 0.40              |
| 7:AH:31:LEU:HB2  | 7:AH:129:ILE:HG23  | 2.03                     | 0.40              |
| 7:AH:84:PHE:CB   | 7:AH:134:ALA:HA    | 2.52                     | 0.40              |
| 7:AH:138:ALA:O   | 7:AH:139:LEU:C     | 2.64                     | 0.40              |
| 7:AH:142:LEU:C   | 7:AH:143:ARG:HD3   | 2.47                     | 0.40              |
| 8:AI:18:GLN:O    | 8:AI:19:LEU:C      | 2.63                     | 0.40              |
| 8:AI:29:ALA:O    | 8:AI:32:ASN:N      | 2.54                     | 0.40              |
| 8:AI:52:ILE:HG21 | 8:AI:87:ARG:HH12   | 1.86                     | 0.40              |
| 9:AJ:6:ARG:CZ    | 9:AJ:6:ARG:CA      | 3.00                     | 0.40              |
| 9:AJ:21:VAL:HG23 | 9:AJ:22:LEU:HD23   | 2.03                     | 0.40              |
| 9:AJ:27:ILE:CG1  | 9:AJ:43:PHE:CD1    | 2.99                     | 0.40              |
| 9:AJ:72:ARG:NE   | 9:AJ:142:GLU:CD    | 2.80                     | 0.40              |
| 9:AJ:90:GLU:OE2  | 9:AJ:90:GLU:N      | 2.54                     | 0.40              |
| 9:AJ:125:MET:O   | 9:AJ:127:ALA:N     | 2.55                     | 0.40              |
| 9:AJ:143:ARG:HD2 | 9:AJ:144:MET:N     | 2.18                     | 0.40              |
| 10:AK:29:SER:HB3 | 10:AK:32:LYS:HZ3   | 1.84                     | 0.40              |
| 10:AK:100:ILE:CB | 10:AK:125:ARG:HH21 | 2.33                     | 0.40              |
| 12:AM:27:ALA:HB1 | 12:AM:74:ILE:CD1   | 2.52                     | 0.40              |
| 13:AN:110:ASP:CG | 20:AU:85:LEU:HB3   | 2.47                     | 0.40              |
| 13:AN:116:HIS:O  | 13:AN:117:ASN:CB   | 2.69                     | 0.40              |
| 14:AO:34:ARG:CG  | 14:AO:105:TYR:CE1  | 3.05                     | 0.40              |
| 14:AO:54:LYS:HB3 | 14:AO:70:ILE:CB    | 2.38                     | 0.40              |
| 15:AP:13:LYS:HA  | 15:AP:44:ARG:HH21  | 1.87                     | 0.40              |
| 15:AP:26:GLY:H   | 15:AP:29:ARG:HB2   | 1.86                     | 0.40              |
| 15:AP:36:LYS:CD  | 15:AP:59:TYR:HE1   | 2.35                     | 0.40              |
| 15:AP:70:LEU:O   | 15:AP:73:GLU:HB3   | 2.21                     | 0.40              |
| 15:AP:77:ASN:HA  | 15:AP:80:ARG:CG    | 2.51                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 16:AQ:58:LYS:HD2  | 16:AQ:59:ALA:O    | 2.21                     | 0.40              |
| 17:AR:36:ILE:HD11 | 17:AR:60:VAL:HA   | 2.02                     | 0.40              |
| 19:AT:21:VAL:HG23 | 19:AT:42:TYR:C    | 2.45                     | 0.40              |
| 20:AU:45:SER:CA   | 20:AU:51:LEU:HD21 | 2.52                     | 0.40              |
| 20:AU:62:GLU:O    | 20:AU:64:ARG:N    | 2.55                     | 0.40              |
| 24:BA:54:G:N2     | 24:BA:55:G:C4     | 2.89                     | 0.40              |
| 24:BA:66:C:C4     | 24:BA:67:U:C4     | 3.10                     | 0.40              |
| 24:BA:231:C:N4    | 24:BA:232:G:H22   | 2.09                     | 0.40              |
| 24:BA:234:C:O2'   | 24:BA:235:U:H5'   | 2.21                     | 0.40              |
| 24:BA:270(Z):U:O4 | 24:BA:271(C):U:N1 | 2.54                     | 0.40              |
| 24:BA:287:C:C2'   | 24:BA:287:C:O2    | 2.65                     | 0.40              |
| 24:BA:398:G:OP2   | 50:B3:59:PHE:HE2  | 2.04                     | 0.40              |
| 24:BA:412:A:C6    | 24:BA:413:C:C2    | 3.09                     | 0.40              |
| 24:BA:441:U:H6    | 24:BA:441:U:O5'   | 2.05                     | 0.40              |
| 24:BA:508:G:O2'   | 24:BA:509:C:C5'   | 2.61                     | 0.40              |
| 24:BA:570:G:H22   | 24:BA:2498:C:C2'  | 2.35                     | 0.40              |
| 24:BA:624:C:H6    | 24:BA:624:C:C4'   | 2.34                     | 0.40              |
| 24:BA:631:A:H1'   | 24:BA:2416:C:H5'  | 2.03                     | 0.40              |
| 24:BA:677:A:N6    | 24:BA:802:A:N7    | 2.70                     | 0.40              |
| 24:BA:769:G:C4    | 24:BA:770:G:C8    | 3.10                     | 0.40              |
| 24:BA:771:G:N2    | 24:BA:772:C:C2    | 2.89                     | 0.40              |
| 24:BA:778:G:N2    | 24:BA:787:U:N1    | 2.69                     | 0.40              |
| 24:BA:987:G:HO2'  | 24:BA:1000:A:H1'  | 1.83                     | 0.40              |
| 24:BA:1048:A:P    | 24:BA:1109:C:H42  | 2.45                     | 0.40              |
| 24:BA:1099:G:N3   | 24:BA:1099:G:H2'  | 2.36                     | 0.40              |
| 24:BA:1131:G:N2   | 34:BM:72:TYR:CZ   | 2.89                     | 0.40              |
| 24:BA:1169:G:C5   | 24:BA:1170:G:C8   | 3.10                     | 0.40              |
| 24:BA:1274:A:O2'  | 24:BA:1275:A:H5'  | 2.21                     | 0.40              |
| 24:BA:1438:U:H3   | 24:BA:1553:A:H62  | 1.60                     | 0.40              |
| 24:BA:1471:A:O2'  | 24:BA:1472:A:H5'  | 2.20                     | 0.40              |
| 24:BA:1487:G:HO2' | 24:BA:1488:G:H5'  | 1.82                     | 0.40              |
| 24:BA:1641:A:N6   | 24:BA:1642:G:C2   | 2.89                     | 0.40              |
| 24:BA:1666:G:N7   | 24:BA:1667:G:C8   | 2.90                     | 0.40              |
| 24:BA:1668:A:N7   | 24:BA:1674:G:N3   | 2.70                     | 0.40              |
| 24:BA:1675:C:C4   | 28:BE:128:SER:CB  | 3.02                     | 0.40              |
| 24:BA:1750:G:O2'  | 24:BA:2860:A:C2   | 2.67                     | 0.40              |
| 24:BA:1859:A:C2   | 24:BA:1884:A:O2'  | 2.69                     | 0.40              |
| 24:BA:1902:C:H2'  | 24:BA:1903:G:O4'  | 2.22                     | 0.40              |
| 24:BA:1923:U:H2'  | 24:BA:1924:C:C5   | 2.57                     | 0.40              |
| 24:BA:1949:G:C2   | 24:BA:1958:C:N3   | 2.90                     | 0.40              |
| 24:BA:1964:G:OP1  | 24:BA:1964:G:H8   | 2.02                     | 0.40              |

*Continued on next page...*

*Continued from previous page...*

| Atom-1             | Atom-2             | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|--------------------|--------------------------|-------------------|
| 24:BA:1996:C:O2    | 24:BA:1997:G:C4'   | 2.65                     | 0.40              |
| 24:BA:2051:A:C6    | 24:BA:2614:A:N7    | 2.89                     | 0.40              |
| 24:BA:2057:A:H1'   | 51:B4:4:HIS:O      | 2.21                     | 0.40              |
| 24:BA:2157:G:O2'   | 24:BA:2158:A:P     | 2.79                     | 0.40              |
| 24:BA:2189:U:H2'   | 24:BA:2190:G:H8    | 1.86                     | 0.40              |
| 24:BA:2287:A:H2    | 24:BA:2346:A:H61   | 1.69                     | 0.40              |
| 24:BA:2356:C:OP1   | 47:BZ:24:LYS:HD3   | 2.22                     | 0.40              |
| 24:BA:2358:G:N2    | 24:BA:2359:C:O4'   | 2.54                     | 0.40              |
| 24:BA:2371:G:N2    | 24:BA:2372:G:N1    | 2.70                     | 0.40              |
| 24:BA:2440:C:C2'   | 24:BA:2441:C:O5'   | 2.67                     | 0.40              |
| 24:BA:2458:G:C5    | 24:BA:2490:G:C2    | 3.10                     | 0.40              |
| 24:BA:2468:G:C6    | 24:BA:2481:G:C4    | 3.10                     | 0.40              |
| 24:BA:2578:G:O2'   | 24:BA:2579:C:P     | 2.79                     | 0.40              |
| 24:BA:2600:A:C2    | 24:BA:2601:C:C4    | 3.10                     | 0.40              |
| 24:BA:2644:G:C6    | 24:BA:2645:G:N2    | 2.89                     | 0.40              |
| 24:BA:2737:G:C4    | 24:BA:2738:A:C8    | 3.09                     | 0.40              |
| 24:BA:2792:G:C2    | 24:BA:2793:G:N7    | 2.89                     | 0.40              |
| 24:BA:2848:G:N2    | 24:BA:2849:U:N3    | 2.55                     | 0.40              |
| 24:BA:2864:G:C4    | 24:BA:2865:U:C4    | 3.10                     | 0.40              |
| 25:BB:4:C:C5       | 25:BB:5:C:C5       | 3.09                     | 0.40              |
| 26:BC:46:LYS:HD3   | 26:BC:46:LYS:C     | 2.46                     | 0.40              |
| 26:BC:52:ARG:HG3   | 26:BC:53:ARG:N     | 2.37                     | 0.40              |
| 26:BC:68:LEU:CG    | 26:BC:69:GLY:H     | 2.35                     | 0.40              |
| 26:BC:86:ALA:CB    | 26:BC:149:ILE:HG23 | 2.45                     | 0.40              |
| 26:BC:97:GLU:CB    | 26:BC:100:ILE:HD12 | 2.51                     | 0.40              |
| 27:BD:208:LYS:HB3  | 27:BD:211:ARG:HG3  | 2.02                     | 0.40              |
| 27:BD:217:ARG:HG3  | 27:BD:218:ARG:N    | 2.34                     | 0.40              |
| 27:BD:245:PRO:O    | 27:BD:252:TRP:CH2  | 2.74                     | 0.40              |
| 27:BD:257:LEU:O    | 27:BD:258:LYS:O    | 2.40                     | 0.40              |
| 28:BE:55:ASN:HB2   | 28:BE:73:GLU:CD    | 2.46                     | 0.40              |
| 28:BE:164:ARG:C    | 28:BE:165:VAL:HG23 | 2.45                     | 0.40              |
| 29:BF:75:HIS:CE1   | 29:BF:77:ASP:O     | 2.75                     | 0.40              |
| 30:BG:49:ASP:H     | 30:BG:53:LEU:CD1   | 2.34                     | 0.40              |
| 30:BG:165:THR:HG22 | 30:BG:166:ASP:N    | 2.37                     | 0.40              |
| 31:BH:7:LEU:HB3    | 31:BH:65:HIS:CE1   | 2.56                     | 0.40              |
| 31:BH:7:LEU:CG     | 31:BH:65:HIS:NE2   | 2.85                     | 0.40              |
| 31:BH:35:VAL:HB    | 31:BH:72:ILE:HG23  | 2.02                     | 0.40              |
| 32:BK:58:LEU:CA    | 32:BK:61:ARG:HG2   | 2.50                     | 0.40              |
| 32:BK:122:GLU:O    | 32:BK:123:LEU:CB   | 2.69                     | 0.40              |
| 33:BL:78:ILE:HD11  | 33:BL:127:ILE:HA   | 2.02                     | 0.40              |
| 33:BL:87:GLY:HA2   | 33:BL:134:MET:SD   | 2.62                     | 0.40              |

*Continued on next page...*

Continued from previous page...

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 34:BM:7:LYS:CE    | 34:BM:39:ARG:HH22 | 2.31                     | 0.40              |
| 34:BM:126:PRO:HG2 | 34:BM:128:HIS:ND1 | 2.36                     | 0.40              |
| 35:BN:24:VAL:H    | 35:BN:30:ALA:HB1  | 1.85                     | 0.40              |
| 37:BP:135:ASP:O   | 37:BP:136:ALA:HB2 | 2.22                     | 0.40              |
| 39:BR:3:ARG:CD    | 39:BR:3:ARG:N     | 2.85                     | 0.40              |
| 39:BR:65:VAL:HG22 | 39:BR:66:ALA:H    | 1.86                     | 0.40              |
| 39:BR:100:ALA:C   | 39:BR:102:ALA:N   | 2.77                     | 0.40              |
| 39:BR:105:ALA:O   | 39:BR:108:GLY:CA  | 2.70                     | 0.40              |
| 41:BT:44:ASN:HA   | 41:BT:47:TYR:CG   | 2.56                     | 0.40              |
| 41:BT:55:ARG:HA   | 41:BT:58:ARG:CB   | 2.51                     | 0.40              |
| 41:BT:74:LEU:HB3  | 41:BT:78:THR:HB   | 1.99                     | 0.40              |
| 41:BT:108:GLU:HA  | 41:BT:111:GLU:HG2 | 2.02                     | 0.40              |
| 42:BU:22:VAL:HG13 | 42:BU:23:GLU:H    | 1.87                     | 0.40              |
| 44:BW:15:GLU:O    | 44:BW:18:TYR:CB   | 2.69                     | 0.40              |
| 44:BW:58:HIS:NE2  | 44:BW:77:LYS:CE   | 2.85                     | 0.40              |
| 44:BW:65:ARG:HA   | 44:BW:70:LEU:HG   | 2.04                     | 0.40              |
| 44:BW:68:ARG:C    | 44:BW:69:TYR:CD1  | 2.99                     | 0.40              |
| 45:BX:46:LYS:HZ2  | 45:BX:52:SER:CB   | 2.23                     | 0.40              |
| 46:BY:6:LYS:HA    | 46:BY:37:VAL:HA   | 2.04                     | 0.40              |
| 46:BY:110:GLY:CA  | 46:BY:144:LEU:CB  | 2.95                     | 0.40              |
| 46:BY:130:PRO:C   | 46:BY:132:ASN:N   | 2.79                     | 0.40              |
| 47:BZ:19:LYS:O    | 47:BZ:20:ARG:CD   | 2.62                     | 0.40              |
| 48:B1:31:ARG:H    | 48:B1:31:ARG:HG2  | 1.62                     | 0.40              |
| 49:B2:52:HIS:O    | 49:B2:53:LEU:C    | 2.64                     | 0.40              |
| 50:B3:9:LEU:HD22  | 50:B3:11:PRO:CG   | 2.52                     | 0.40              |
| 51:B4:35:GLU:OE2  | 51:B4:51:TYR:CZ   | 2.74                     | 0.40              |
| 53:B6:18:PHE:HB3  | 53:B6:22:MET:HE2  | 2.02                     | 0.40              |
| 53:B6:27:GLY:O    | 53:B6:28:ARG:C    | 2.65                     | 0.40              |
| 53:B6:43:THR:HA   | 53:B6:46:VAL:HB   | 2.03                     | 0.40              |
| 54:B7:5:LYS:HD2   | 54:B7:63:PRO:CG   | 2.51                     | 0.40              |
| 54:B7:51:ALA:O    | 54:B7:53:PRO:HD2  | 2.22                     | 0.40              |

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

| Atom-1        | Atom-2                | Interatomic distance (Å) | Clash overlap (Å) |
|---------------|-----------------------|--------------------------|-------------------|
| 25:BB:0:A:OP1 | 25:BB:0:A:OP1[15_545] | 2.18                     | 0.02              |

## 5.3 Torsion angles ⓘ

### 5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed      | Favoured  | Allowed  | Outliers | Percentiles |   |
|-----|-------|---------------|-----------|----------|----------|-------------|---|
| 4   | AE    | 232/256 (91%) | 114 (49%) | 42 (18%) | 76 (33%) | 0           | 0 |
| 5   | AF    | 204/239 (85%) | 107 (52%) | 46 (22%) | 51 (25%) | 0           | 1 |
| 6   | AG    | 206/209 (99%) | 96 (47%)  | 57 (28%) | 53 (26%) | 0           | 1 |
| 7   | AH    | 148/162 (91%) | 93 (63%)  | 38 (26%) | 17 (12%) | 0           | 5 |
| 8   | AI    | 99/101 (98%)  | 58 (59%)  | 19 (19%) | 22 (22%) | 0           | 1 |
| 9   | AJ    | 153/156 (98%) | 73 (48%)  | 45 (29%) | 35 (23%) | 0           | 1 |
| 10  | AK    | 136/138 (99%) | 68 (50%)  | 35 (26%) | 33 (24%) | 0           | 1 |
| 11  | AL    | 125/128 (98%) | 62 (50%)  | 33 (26%) | 30 (24%) | 0           | 1 |
| 12  | AM    | 96/105 (91%)  | 52 (54%)  | 20 (21%) | 24 (25%) | 0           | 1 |
| 13  | AN    | 117/129 (91%) | 65 (56%)  | 29 (25%) | 23 (20%) | 0           | 2 |
| 14  | AO    | 122/132 (92%) | 50 (41%)  | 30 (25%) | 42 (34%) | 0           | 0 |
| 15  | AP    | 123/126 (98%) | 56 (46%)  | 34 (28%) | 33 (27%) | 0           | 0 |
| 16  | AQ    | 58/61 (95%)   | 24 (41%)  | 16 (28%) | 18 (31%) | 0           | 0 |
| 17  | AR    | 86/89 (97%)   | 36 (42%)  | 35 (41%) | 15 (17%) | 0           | 2 |
| 18  | AS    | 81/88 (92%)   | 42 (52%)  | 24 (30%) | 15 (18%) | 0           | 2 |
| 19  | AT    | 102/105 (97%) | 62 (61%)  | 23 (22%) | 17 (17%) | 0           | 2 |
| 20  | AU    | 71/88 (81%)   | 26 (37%)  | 26 (37%) | 19 (27%) | 0           | 0 |
| 21  | AV    | 78/93 (84%)   | 32 (41%)  | 23 (30%) | 23 (30%) | 0           | 0 |
| 22  | AW    | 97/106 (92%)  | 38 (39%)  | 32 (33%) | 27 (28%) | 0           | 0 |
| 23  | AX    | 22/27 (82%)   | 9 (41%)   | 6 (27%)  | 7 (32%)  | 0           | 0 |
| 26  | BC    | 226/229 (99%) | 155 (69%) | 41 (18%) | 30 (13%) | 0           | 3 |
| 27  | BD    | 270/276 (98%) | 125 (46%) | 59 (22%) | 86 (32%) | 0           | 0 |
| 28  | BE    | 204/206 (99%) | 117 (57%) | 31 (15%) | 56 (28%) | 0           | 0 |
| 29  | BF    | 206/210 (98%) | 109 (53%) | 46 (22%) | 51 (25%) | 0           | 1 |
| 30  | BG    | 180/182 (99%) | 79 (44%)  | 47 (26%) | 54 (30%) | 0           | 0 |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Analysed        | Favoured   | Allowed    | Outliers   | Percentiles |   |
|-----|-------|-----------------|------------|------------|------------|-------------|---|
| 31  | BH    | 172/180 (96%)   | 80 (46%)   | 46 (27%)   | 46 (27%)   | 0           | 0 |
| 32  | BK    | 146/148 (99%)   | 91 (62%)   | 30 (20%)   | 25 (17%)   | 0           | 2 |
| 33  | BL    | 136/147 (92%)   | 69 (51%)   | 38 (28%)   | 29 (21%)   | 0           | 2 |
| 34  | BM    | 137/140 (98%)   | 64 (47%)   | 28 (20%)   | 45 (33%)   | 0           | 0 |
| 35  | BN    | 120/122 (98%)   | 59 (49%)   | 23 (19%)   | 38 (32%)   | 0           | 0 |
| 36  | BO    | 143/150 (95%)   | 57 (40%)   | 36 (25%)   | 50 (35%)   | 0           | 0 |
| 37  | BP    | 134/141 (95%)   | 49 (37%)   | 33 (25%)   | 52 (39%)   | 0           | 0 |
| 38  | BQ    | 115/118 (98%)   | 57 (50%)   | 39 (34%)   | 19 (16%)   | 0           | 2 |
| 39  | BR    | 108/112 (96%)   | 48 (44%)   | 29 (27%)   | 31 (29%)   | 0           | 0 |
| 40  | BS    | 115/146 (79%)   | 52 (45%)   | 26 (23%)   | 37 (32%)   | 0           | 0 |
| 41  | BT    | 115/118 (98%)   | 35 (30%)   | 50 (44%)   | 30 (26%)   | 0           | 1 |
| 42  | BU    | 99/101 (98%)    | 52 (52%)   | 19 (19%)   | 28 (28%)   | 0           | 0 |
| 43  | BV    | 108/113 (96%)   | 63 (58%)   | 24 (22%)   | 21 (19%)   | 0           | 2 |
| 44  | BW    | 92/96 (96%)     | 57 (62%)   | 16 (17%)   | 19 (21%)   | 0           | 2 |
| 45  | BX    | 108/110 (98%)   | 43 (40%)   | 32 (30%)   | 33 (31%)   | 0           | 0 |
| 46  | BY    | 178/206 (86%)   | 95 (53%)   | 44 (25%)   | 39 (22%)   | 0           | 1 |
| 47  | BZ    | 83/85 (98%)     | 52 (63%)   | 21 (25%)   | 10 (12%)   | 0           | 4 |
| 48  | B1    | 65/67 (97%)     | 36 (55%)   | 20 (31%)   | 9 (14%)    | 0           | 3 |
| 49  | B2    | 57/60 (95%)     | 34 (60%)   | 8 (14%)    | 15 (26%)   | 0           | 1 |
| 50  | B3    | 69/71 (97%)     | 23 (33%)   | 16 (23%)   | 30 (44%)   | 0           | 0 |
| 51  | B4    | 55/60 (92%)     | 14 (26%)   | 19 (34%)   | 22 (40%)   | 0           | 0 |
| 52  | B5    | 47/54 (87%)     | 14 (30%)   | 7 (15%)    | 26 (55%)   | 0           | 0 |
| 53  | B6    | 47/49 (96%)     | 20 (43%)   | 12 (26%)   | 15 (32%)   | 0           | 0 |
| 54  | B7    | 62/65 (95%)     | 23 (37%)   | 18 (29%)   | 21 (34%)   | 0           | 0 |
| 55  | B8    | 35/37 (95%)     | 20 (57%)   | 5 (14%)    | 10 (29%)   | 0           | 0 |
| All | All   | 5988/6337 (94%) | 2955 (49%) | 1476 (25%) | 1557 (26%) | 0           | 1 |

All (1557) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4   | AE    | 8   | LYS  |
| 4   | AE    | 11  | LEU  |
| 4   | AE    | 13  | ALA  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4   | AE    | 15  | VAL  |
| 4   | AE    | 16  | HIS  |
| 4   | AE    | 17  | PHE  |
| 4   | AE    | 22  | LYS  |
| 4   | AE    | 26  | PRO  |
| 4   | AE    | 37  | ASN  |
| 4   | AE    | 42  | ILE  |
| 4   | AE    | 44  | LEU  |
| 4   | AE    | 45  | GLN  |
| 4   | AE    | 76  | GLN  |
| 4   | AE    | 77  | ALA  |
| 4   | AE    | 78  | GLN  |
| 4   | AE    | 97  | TRP  |
| 4   | AE    | 104 | ASN  |
| 4   | AE    | 109 | SER  |
| 4   | AE    | 122 | PHE  |
| 4   | AE    | 124 | SER  |
| 4   | AE    | 127 | ILE  |
| 4   | AE    | 131 | PRO  |
| 4   | AE    | 147 | LYS  |
| 4   | AE    | 153 | ARG  |
| 4   | AE    | 154 | LEU  |
| 4   | AE    | 155 | LEU  |
| 4   | AE    | 161 | ALA  |
| 4   | AE    | 165 | VAL  |
| 4   | AE    | 168 | THR  |
| 4   | AE    | 169 | LYS  |
| 4   | AE    | 171 | ALA  |
| 4   | AE    | 172 | ILE  |
| 4   | AE    | 181 | PHE  |
| 4   | AE    | 191 | ASP  |
| 4   | AE    | 194 | PRO  |
| 4   | AE    | 195 | ASP  |
| 4   | AE    | 200 | ILE  |
| 4   | AE    | 201 | ILE  |
| 4   | AE    | 204 | ASN  |
| 4   | AE    | 207 | ALA  |
| 4   | AE    | 211 | ILE  |
| 4   | AE    | 226 | ARG  |
| 4   | AE    | 230 | VAL  |
| 4   | AE    | 232 | PRO  |
| 4   | AE    | 236 | TYR  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 5   | AF    | 4   | LYS  |
| 5   | AF    | 12  | LEU  |
| 5   | AF    | 14  | ILE  |
| 5   | AF    | 18  | TRP  |
| 5   | AF    | 24  | ALA  |
| 5   | AF    | 28  | GLN  |
| 5   | AF    | 39  | ILE  |
| 5   | AF    | 43  | LEU  |
| 5   | AF    | 52  | LEU  |
| 5   | AF    | 53  | ALA  |
| 5   | AF    | 64  | VAL  |
| 5   | AF    | 65  | ALA  |
| 5   | AF    | 79  | ARG  |
| 5   | AF    | 83  | ARG  |
| 5   | AF    | 84  | ILE  |
| 5   | AF    | 95  | THR  |
| 5   | AF    | 97  | LYS  |
| 5   | AF    | 98  | ASN  |
| 5   | AF    | 119 | ARG  |
| 5   | AF    | 129 | ALA  |
| 5   | AF    | 157 | ILE  |
| 5   | AF    | 160 | ALA  |
| 5   | AF    | 176 | HIS  |
| 5   | AF    | 177 | THR  |
| 5   | AF    | 179 | ARG  |
| 5   | AF    | 191 | THR  |
| 5   | AF    | 192 | THR  |
| 6   | AG    | 3   | ARG  |
| 6   | AG    | 17  | VAL  |
| 6   | AG    | 18  | LYS  |
| 6   | AG    | 21  | LEU  |
| 6   | AG    | 29  | PRO  |
| 6   | AG    | 30  | LYS  |
| 6   | AG    | 31  | CYS  |
| 6   | AG    | 48  | ALA  |
| 6   | AG    | 56  | VAL  |
| 6   | AG    | 71  | SER  |
| 6   | AG    | 86  | LYS  |
| 6   | AG    | 88  | VAL  |
| 6   | AG    | 99  | SER  |
| 6   | AG    | 109 | GLY  |
| 6   | AG    | 131 | ARG  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 6   | AG    | 142 | PRO  |
| 6   | AG    | 148 | VAL  |
| 6   | AG    | 150 | GLU  |
| 6   | AG    | 151 | LYS  |
| 6   | AG    | 154 | ASN  |
| 6   | AG    | 166 | LYS  |
| 6   | AG    | 168 | ARG  |
| 6   | AG    | 170 | VAL  |
| 6   | AG    | 179 | GLU  |
| 6   | AG    | 191 | ARG  |
| 6   | AG    | 195 | ALA  |
| 6   | AG    | 198 | VAL  |
| 6   | AG    | 199 | ASN  |
| 7   | AH    | 12  | LEU  |
| 7   | AH    | 55  | VAL  |
| 7   | AH    | 75  | THR  |
| 7   | AH    | 128 | PRO  |
| 7   | AH    | 144 | THR  |
| 8   | AI    | 11  | ASN  |
| 8   | AI    | 16  | GLN  |
| 8   | AI    | 27  | GLN  |
| 8   | AI    | 72  | VAL  |
| 8   | AI    | 81  | ILE  |
| 8   | AI    | 82  | ARG  |
| 8   | AI    | 84  | ASN  |
| 8   | AI    | 85  | VAL  |
| 8   | AI    | 95  | GLU  |
| 8   | AI    | 97  | PHE  |
| 9   | AJ    | 4   | ARG  |
| 9   | AJ    | 8   | GLU  |
| 9   | AJ    | 14  | PRO  |
| 9   | AJ    | 17  | VAL  |
| 9   | AJ    | 31  | MET  |
| 9   | AJ    | 35  | LYS  |
| 9   | AJ    | 37  | ASN  |
| 9   | AJ    | 71  | PRO  |
| 9   | AJ    | 91  | VAL  |
| 9   | AJ    | 111 | ARG  |
| 9   | AJ    | 134 | ALA  |
| 9   | AJ    | 142 | GLU  |
| 10  | AK    | 6   | ILE  |
| 10  | AK    | 13  | ILE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 10  | AK    | 29  | SER  |
| 10  | AK    | 30  | ARG  |
| 10  | AK    | 63  | LEU  |
| 10  | AK    | 74  | PRO  |
| 10  | AK    | 75  | ARG  |
| 10  | AK    | 76  | PRO  |
| 10  | AK    | 77  | GLU  |
| 10  | AK    | 79  | VAL  |
| 10  | AK    | 103 | VAL  |
| 10  | AK    | 105 | ARG  |
| 10  | AK    | 115 | SER  |
| 10  | AK    | 121 | ASP  |
| 10  | AK    | 129 | VAL  |
| 11  | AL    | 29  | ASN  |
| 11  | AL    | 33  | PHE  |
| 11  | AL    | 44  | VAL  |
| 11  | AL    | 70  | LYS  |
| 11  | AL    | 98  | PRO  |
| 11  | AL    | 109 | VAL  |
| 11  | AL    | 116 | LYS  |
| 11  | AL    | 118 | LYS  |
| 12  | AM    | 34  | VAL  |
| 12  | AM    | 36  | GLY  |
| 12  | AM    | 39  | PRO  |
| 12  | AM    | 40  | LEU  |
| 12  | AM    | 55  | LYS  |
| 12  | AM    | 56  | HIS  |
| 12  | AM    | 60  | ARG  |
| 12  | AM    | 72  | VAL  |
| 12  | AM    | 79  | ARG  |
| 12  | AM    | 80  | LYS  |
| 12  | AM    | 90  | LEU  |
| 13  | AN    | 14  | VAL  |
| 13  | AN    | 15  | ALA  |
| 13  | AN    | 27  | ASN  |
| 13  | AN    | 39  | PRO  |
| 13  | AN    | 74  | ALA  |
| 13  | AN    | 78  | GLN  |
| 13  | AN    | 106 | LYS  |
| 13  | AN    | 113 | PRO  |
| 13  | AN    | 116 | HIS  |
| 14  | AO    | 6   | THR  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 14  | AO    | 7   | ILE  |
| 14  | AO    | 18  | VAL  |
| 14  | AO    | 19  | ARG  |
| 14  | AO    | 22  | SER  |
| 14  | AO    | 28  | LYS  |
| 14  | AO    | 30  | ALA  |
| 14  | AO    | 46  | LYS  |
| 14  | AO    | 48  | PRO  |
| 14  | AO    | 51  | ALA  |
| 14  | AO    | 62  | SER  |
| 14  | AO    | 66  | VAL  |
| 14  | AO    | 83  | VAL  |
| 14  | AO    | 92  | ASP  |
| 14  | AO    | 101 | VAL  |
| 14  | AO    | 110 | VAL  |
| 14  | AO    | 116 | SER  |
| 14  | AO    | 127 | GLU  |
| 15  | AP    | 11  | ARG  |
| 15  | AP    | 12  | ASN  |
| 15  | AP    | 14  | ARG  |
| 15  | AP    | 59  | TYR  |
| 15  | AP    | 84  | ILE  |
| 15  | AP    | 101 | GLN  |
| 15  | AP    | 107 | ALA  |
| 15  | AP    | 121 | LYS  |
| 15  | AP    | 124 | PRO  |
| 16  | AQ    | 12  | ARG  |
| 16  | AQ    | 18  | VAL  |
| 16  | AQ    | 29  | ARG  |
| 16  | AQ    | 31  | ARG  |
| 16  | AQ    | 34  | TYR  |
| 16  | AQ    | 36  | PHE  |
| 16  | AQ    | 44  | LEU  |
| 16  | AQ    | 54  | PRO  |
| 16  | AQ    | 55  | GLY  |
| 17  | AR    | 3   | ILE  |
| 17  | AR    | 16  | ALA  |
| 18  | AS    | 11  | SER  |
| 18  | AS    | 15  | PRO  |
| 18  | AS    | 24  | ALA  |
| 18  | AS    | 27  | LYS  |
| 18  | AS    | 61  | SER  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 19  | AT    | 3   | LYS  |
| 19  | AT    | 4   | LYS  |
| 19  | AT    | 15  | MET  |
| 19  | AT    | 34  | LYS  |
| 19  | AT    | 48  | GLU  |
| 19  | AT    | 50  | LYS  |
| 19  | AT    | 81  | ARG  |
| 19  | AT    | 104 | LYS  |
| 20  | AU    | 42  | ARG  |
| 20  | AU    | 49  | LYS  |
| 20  | AU    | 52  | PRO  |
| 20  | AU    | 59  | SER  |
| 20  | AU    | 75  | ILE  |
| 20  | AU    | 79  | LEU  |
| 20  | AU    | 82  | THR  |
| 20  | AU    | 87  | ARG  |
| 21  | AV    | 3   | ARG  |
| 21  | AV    | 6   | LYS  |
| 21  | AV    | 12  | ASP  |
| 21  | AV    | 21  | GLU  |
| 21  | AV    | 28  | LYS  |
| 21  | AV    | 32  | LYS  |
| 21  | AV    | 40  | ILE  |
| 21  | AV    | 42  | PRO  |
| 21  | AV    | 43  | GLU  |
| 21  | AV    | 64  | GLU  |
| 21  | AV    | 70  | LYS  |
| 21  | AV    | 79  | THR  |
| 22  | AW    | 12  | ALA  |
| 22  | AW    | 99  | LEU  |
| 22  | AW    | 105 | SER  |
| 23  | AX    | 6   | ARG  |
| 23  | AX    | 9   | ARG  |
| 26  | BC    | 35  | ALA  |
| 26  | BC    | 39  | GLU  |
| 26  | BC    | 54  | SER  |
| 26  | BC    | 61  | THR  |
| 26  | BC    | 66  | HIS  |
| 26  | BC    | 72  | VAL  |
| 26  | BC    | 217 | THR  |
| 27  | BD    | 6   | PHE  |
| 27  | BD    | 10  | THR  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 27  | BD    | 17  | THR  |
| 27  | BD    | 18  | VAL  |
| 27  | BD    | 30  | GLU  |
| 27  | BD    | 33  | LEU  |
| 27  | BD    | 35  | LYS  |
| 27  | BD    | 44  | ASN  |
| 27  | BD    | 53  | PHE  |
| 27  | BD    | 54  | ARG  |
| 27  | BD    | 58  | HIS  |
| 27  | BD    | 70  | TRP  |
| 27  | BD    | 72  | LYS  |
| 27  | BD    | 73  | VAL  |
| 27  | BD    | 81  | ALA  |
| 27  | BD    | 91  | ARG  |
| 27  | BD    | 106 | ILE  |
| 27  | BD    | 107 | ALA  |
| 27  | BD    | 108 | PRO  |
| 27  | BD    | 118 | VAL  |
| 27  | BD    | 121 | PRO  |
| 27  | BD    | 122 | ASP  |
| 27  | BD    | 125 | ILE  |
| 27  | BD    | 133 | LEU  |
| 27  | BD    | 134 | ARG  |
| 27  | BD    | 145 | VAL  |
| 27  | BD    | 153 | ALA  |
| 27  | BD    | 155 | LEU  |
| 27  | BD    | 157 | ARG  |
| 27  | BD    | 158 | ALA  |
| 27  | BD    | 160 | GLY  |
| 27  | BD    | 167 | GLY  |
| 27  | BD    | 178 | PRO  |
| 27  | BD    | 179 | SER  |
| 27  | BD    | 219 | PRO  |
| 27  | BD    | 224 | ALA  |
| 27  | BD    | 225 | ALA  |
| 27  | BD    | 232 | PRO  |
| 27  | BD    | 239 | ARG  |
| 27  | BD    | 241 | PRO  |
| 27  | BD    | 244 | ARG  |
| 27  | BD    | 247 | ALA  |
| 27  | BD    | 249 | PRO  |
| 27  | BD    | 252 | TRP  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 27  | BD    | 258 | LYS  |
| 27  | BD    | 264 | LYS  |
| 27  | BD    | 268 | ARG  |
| 27  | BD    | 270 | ILE  |
| 27  | BD    | 271 | ILE  |
| 28  | BE    | 16  | ARG  |
| 28  | BE    | 38  | THR  |
| 28  | BE    | 42  | ASP  |
| 28  | BE    | 54  | GLN  |
| 28  | BE    | 68  | ALA  |
| 28  | BE    | 70  | ALA  |
| 28  | BE    | 74  | PRO  |
| 28  | BE    | 92  | THR  |
| 28  | BE    | 111 | ARG  |
| 28  | BE    | 117 | MET  |
| 28  | BE    | 122 | PHE  |
| 28  | BE    | 128 | SER  |
| 28  | BE    | 133 | LYS  |
| 28  | BE    | 134 | ILE  |
| 28  | BE    | 145 | LYS  |
| 28  | BE    | 149 | ARG  |
| 28  | BE    | 151 | TYR  |
| 28  | BE    | 157 | ALA  |
| 28  | BE    | 168 | MET  |
| 28  | BE    | 173 | VAL  |
| 28  | BE    | 180 | ASN  |
| 28  | BE    | 191 | PRO  |
| 28  | BE    | 202 | LYS  |
| 29  | BF    | 13  | SER  |
| 29  | BF    | 14  | PRO  |
| 29  | BF    | 30  | PRO  |
| 29  | BF    | 45  | ARG  |
| 29  | BF    | 52  | LYS  |
| 29  | BF    | 53  | THR  |
| 29  | BF    | 57  | VAL  |
| 29  | BF    | 58  | ALA  |
| 29  | BF    | 62  | ARG  |
| 29  | BF    | 67  | GLN  |
| 29  | BF    | 68  | LYS  |
| 29  | BF    | 69  | HIS  |
| 29  | BF    | 75  | HIS  |
| 29  | BF    | 82  | ILE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 29  | BF    | 84  | VAL  |
| 29  | BF    | 85  | GLY  |
| 29  | BF    | 89  | VAL  |
| 29  | BF    | 91  | GLY  |
| 29  | BF    | 99  | TYR  |
| 29  | BF    | 100 | THR  |
| 29  | BF    | 104 | LYS  |
| 29  | BF    | 132 | VAL  |
| 29  | BF    | 151 | SER  |
| 29  | BF    | 169 | ASN  |
| 29  | BF    | 172 | TRP  |
| 29  | BF    | 186 | ILE  |
| 29  | BF    | 196 | LEU  |
| 30  | BG    | 16  | ARG  |
| 30  | BG    | 18  | GLU  |
| 30  | BG    | 27  | ASN  |
| 30  | BG    | 32  | PRO  |
| 30  | BG    | 36  | LYS  |
| 30  | BG    | 42  | GLY  |
| 30  | BG    | 43  | LEU  |
| 30  | BG    | 51  | ARG  |
| 30  | BG    | 66  | GLN  |
| 30  | BG    | 68  | PRO  |
| 30  | BG    | 73  | ALA  |
| 30  | BG    | 76  | SER  |
| 30  | BG    | 78  | SER  |
| 30  | BG    | 86  | MET  |
| 30  | BG    | 104 | GLU  |
| 30  | BG    | 111 | LEU  |
| 30  | BG    | 114 | ILE  |
| 30  | BG    | 115 | ARG  |
| 30  | BG    | 116 | ASP  |
| 30  | BG    | 117 | PHE  |
| 30  | BG    | 123 | ASN  |
| 30  | BG    | 124 | SER  |
| 30  | BG    | 128 | ARG  |
| 30  | BG    | 131 | TYR  |
| 30  | BG    | 132 | ASN  |
| 30  | BG    | 133 | LEU  |
| 30  | BG    | 138 | GLN  |
| 30  | BG    | 140 | ILE  |
| 30  | BG    | 143 | GLU  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 30  | BG    | 144 | ILE  |
| 30  | BG    | 148 | MET  |
| 30  | BG    | 164 | GLU  |
| 30  | BG    | 172 | LEU  |
| 30  | BG    | 181 | ARG  |
| 31  | BH    | 6   | ARG  |
| 31  | BH    | 7   | LEU  |
| 31  | BH    | 12  | PRO  |
| 31  | BH    | 15  | VAL  |
| 31  | BH    | 20  | ALA  |
| 31  | BH    | 30  | LYS  |
| 31  | BH    | 56  | SER  |
| 31  | BH    | 99  | VAL  |
| 31  | BH    | 104 | GLU  |
| 31  | BH    | 107 | VAL  |
| 31  | BH    | 111 | HIS  |
| 31  | BH    | 127 | GLU  |
| 31  | BH    | 136 | ILE  |
| 31  | BH    | 152 | ARG  |
| 31  | BH    | 153 | LYS  |
| 31  | BH    | 155 | SER  |
| 31  | BH    | 157 | TYR  |
| 31  | BH    | 160 | LYS  |
| 31  | BH    | 164 | TYR  |
| 31  | BH    | 168 | PRO  |
| 32  | BK    | 10  | GLU  |
| 32  | BK    | 14  | ASP  |
| 32  | BK    | 15  | VAL  |
| 32  | BK    | 22  | LYS  |
| 32  | BK    | 23  | PRO  |
| 32  | BK    | 25  | TYR  |
| 32  | BK    | 27  | ARG  |
| 32  | BK    | 33  | ARG  |
| 32  | BK    | 39  | ALA  |
| 32  | BK    | 74  | ASN  |
| 32  | BK    | 91  | SER  |
| 32  | BK    | 102 | SER  |
| 32  | BK    | 112 | LYS  |
| 32  | BK    | 134 | PRO  |
| 33  | BL    | 17  | ALA  |
| 33  | BL    | 18  | THR  |
| 33  | BL    | 34  | ILE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 33  | BL    | 50  | ASP  |
| 33  | BL    | 66  | THR  |
| 33  | BL    | 67  | PHE  |
| 33  | BL    | 71  | THR  |
| 33  | BL    | 73  | PRO  |
| 33  | BL    | 112 | MET  |
| 33  | BL    | 118 | THR  |
| 34  | BM    | 3   | THR  |
| 34  | BM    | 4   | TYR  |
| 34  | BM    | 7   | LYS  |
| 34  | BM    | 9   | VAL  |
| 34  | BM    | 23  | LEU  |
| 34  | BM    | 31  | ALA  |
| 34  | BM    | 35  | ARG  |
| 34  | BM    | 43  | THR  |
| 34  | BM    | 46  | VAL  |
| 34  | BM    | 48  | MET  |
| 34  | BM    | 50  | ASP  |
| 34  | BM    | 58  | ASP  |
| 34  | BM    | 59  | LYS  |
| 34  | BM    | 66  | LYS  |
| 34  | BM    | 68  | GLU  |
| 34  | BM    | 76  | SER  |
| 34  | BM    | 79  | PRO  |
| 34  | BM    | 83  | LYS  |
| 34  | BM    | 127 | ASP  |
| 34  | BM    | 135 | PRO  |
| 34  | BM    | 136 | GLU  |
| 35  | BN    | 4   | PRO  |
| 35  | BN    | 11  | ALA  |
| 35  | BN    | 14  | THR  |
| 35  | BN    | 17  | ARG  |
| 35  | BN    | 26  | LYS  |
| 35  | BN    | 28  | SER  |
| 35  | BN    | 29  | ASN  |
| 35  | BN    | 30  | ALA  |
| 35  | BN    | 46  | ALA  |
| 35  | BN    | 53  | LYS  |
| 35  | BN    | 63  | VAL  |
| 35  | BN    | 64  | ARG  |
| 35  | BN    | 66  | LYS  |
| 35  | BN    | 89  | ASN  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 35  | BN    | 93  | PRO  |
| 35  | BN    | 97  | ARG  |
| 35  | BN    | 101 | PRO  |
| 35  | BN    | 103 | ALA  |
| 35  | BN    | 105 | GLU  |
| 35  | BN    | 110 | GLY  |
| 35  | BN    | 111 | PHE  |
| 35  | BN    | 119 | PRO  |
| 36  | BO    | 8   | PRO  |
| 36  | BO    | 12  | ALA  |
| 36  | BO    | 14  | LYS  |
| 36  | BO    | 27  | HIS  |
| 36  | BO    | 29  | LYS  |
| 36  | BO    | 42  | SER  |
| 36  | BO    | 44  | GLY  |
| 36  | BO    | 47  | ASP  |
| 36  | BO    | 55  | ARG  |
| 36  | BO    | 56  | SER  |
| 36  | BO    | 57  | THR  |
| 36  | BO    | 58  | THR  |
| 36  | BO    | 64  | LYS  |
| 36  | BO    | 72  | PRO  |
| 36  | BO    | 88  | LEU  |
| 36  | BO    | 96  | THR  |
| 36  | BO    | 102 | ARG  |
| 36  | BO    | 106 | LEU  |
| 36  | BO    | 107 | LYS  |
| 36  | BO    | 122 | PRO  |
| 36  | BO    | 127 | ALA  |
| 37  | BP    | 11  | LYS  |
| 37  | BP    | 21  | THR  |
| 37  | BP    | 27  | VAL  |
| 37  | BP    | 29  | PHE  |
| 37  | BP    | 39  | PRO  |
| 37  | BP    | 40  | ALA  |
| 37  | BP    | 58  | PHE  |
| 37  | BP    | 59  | ARG  |
| 37  | BP    | 66  | ILE  |
| 37  | BP    | 67  | ARG  |
| 37  | BP    | 68  | ILE  |
| 37  | BP    | 71  | ASP  |
| 37  | BP    | 77  | LYS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 37  | BP    | 78  | PRO  |
| 37  | BP    | 80  | GLU  |
| 37  | BP    | 81  | VAL  |
| 37  | BP    | 111 | GLU  |
| 37  | BP    | 124 | LYS  |
| 37  | BP    | 125 | LEU  |
| 37  | BP    | 126 | PRO  |
| 37  | BP    | 132 | VAL  |
| 37  | BP    | 138 | ASP  |
| 38  | BQ    | 4   | LEU  |
| 38  | BQ    | 38  | VAL  |
| 38  | BQ    | 57  | ARG  |
| 38  | BQ    | 72  | ASP  |
| 38  | BQ    | 76  | VAL  |
| 38  | BQ    | 88  | ARG  |
| 38  | BQ    | 89  | ASP  |
| 39  | BR    | 5   | THR  |
| 39  | BR    | 14  | VAL  |
| 39  | BR    | 28  | VAL  |
| 39  | BR    | 29  | PHE  |
| 39  | BR    | 31  | SER  |
| 39  | BR    | 32  | LEU  |
| 39  | BR    | 35  | ILE  |
| 39  | BR    | 36  | TYR  |
| 39  | BR    | 48  | LEU  |
| 39  | BR    | 51  | ALA  |
| 39  | BR    | 54  | LEU  |
| 39  | BR    | 58  | LEU  |
| 39  | BR    | 61  | ASN  |
| 40  | BS    | 2   | ASN  |
| 40  | BS    | 3   | ARG  |
| 40  | BS    | 5   | ALA  |
| 40  | BS    | 19  | LEU  |
| 40  | BS    | 20  | PRO  |
| 40  | BS    | 22  | PHE  |
| 40  | BS    | 25  | GLY  |
| 40  | BS    | 27  | THR  |
| 40  | BS    | 39  | ARG  |
| 40  | BS    | 45  | PHE  |
| 40  | BS    | 58  | ASN  |
| 40  | BS    | 83  | ILE  |
| 40  | BS    | 98  | LYS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 40  | BS    | 100 | TYR  |
| 40  | BS    | 103 | ARG  |
| 40  | BS    | 105 | LEU  |
| 40  | BS    | 106 | SER  |
| 40  | BS    | 109 | GLU  |
| 41  | BT    | 3   | ARG  |
| 41  | BT    | 4   | ALA  |
| 41  | BT    | 8   | VAL  |
| 41  | BT    | 22  | LYS  |
| 41  | BT    | 31  | SER  |
| 41  | BT    | 32  | PHE  |
| 41  | BT    | 33  | ARG  |
| 41  | BT    | 62  | ILE  |
| 41  | BT    | 75  | ASN  |
| 41  | BT    | 94  | ASN  |
| 42  | BU    | 10  | LYS  |
| 42  | BU    | 11  | GLN  |
| 42  | BU    | 13  | ARG  |
| 42  | BU    | 15  | GLU  |
| 42  | BU    | 19  | LYS  |
| 42  | BU    | 22  | VAL  |
| 42  | BU    | 31  | ALA  |
| 42  | BU    | 32  | THR  |
| 42  | BU    | 39  | LEU  |
| 42  | BU    | 40  | LEU  |
| 42  | BU    | 46  | VAL  |
| 42  | BU    | 50  | PRO  |
| 42  | BU    | 57  | VAL  |
| 42  | BU    | 68  | LYS  |
| 42  | BU    | 69  | LYS  |
| 42  | BU    | 73  | SER  |
| 42  | BU    | 82  | ARG  |
| 42  | BU    | 100 | ARG  |
| 43  | BV    | 9   | TYR  |
| 43  | BV    | 11  | ARG  |
| 43  | BV    | 12  | ILE  |
| 43  | BV    | 14  | PRO  |
| 43  | BV    | 25  | ARG  |
| 43  | BV    | 27  | LYS  |
| 43  | BV    | 41  | LYS  |
| 43  | BV    | 44  | ALA  |
| 43  | BV    | 58  | ALA  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 43  | BV    | 64  | MET  |
| 43  | BV    | 65  | LEU  |
| 43  | BV    | 73  | ALA  |
| 43  | BV    | 92  | ARG  |
| 44  | BW    | 4   | ALA  |
| 44  | BW    | 6   | ASP  |
| 44  | BW    | 63  | LYS  |
| 44  | BW    | 73  | ARG  |
| 44  | BW    | 89  | ILE  |
| 44  | BW    | 90  | GLU  |
| 44  | BW    | 95  | LEU  |
| 45  | BX    | 10  | GLY  |
| 45  | BX    | 15  | VAL  |
| 45  | BX    | 31  | LEU  |
| 45  | BX    | 40  | GLU  |
| 45  | BX    | 42  | VAL  |
| 45  | BX    | 45  | VAL  |
| 45  | BX    | 46  | LYS  |
| 45  | BX    | 47  | LYS  |
| 45  | BX    | 57  | GLN  |
| 45  | BX    | 58  | GLY  |
| 45  | BX    | 65  | ALA  |
| 45  | BX    | 71  | LYS  |
| 45  | BX    | 72  | VAL  |
| 45  | BX    | 77  | PRO  |
| 45  | BX    | 82  | PRO  |
| 45  | BX    | 108 | THR  |
| 46  | BY    | 41  | LEU  |
| 46  | BY    | 42  | VAL  |
| 46  | BY    | 57  | ILE  |
| 46  | BY    | 62  | PRO  |
| 46  | BY    | 78  | LYS  |
| 46  | BY    | 79  | ARG  |
| 46  | BY    | 83  | PRO  |
| 46  | BY    | 93  | ASP  |
| 46  | BY    | 94  | GLU  |
| 46  | BY    | 108 | PRO  |
| 46  | BY    | 109 | ALA  |
| 46  | BY    | 146 | ILE  |
| 46  | BY    | 155 | LEU  |
| 46  | BY    | 159 | PRO  |
| 46  | BY    | 161 | VAL  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 46  | BY    | 162 | GLU  |
| 46  | BY    | 165 | VAL  |
| 47  | BZ    | 2   | ALA  |
| 47  | BZ    | 29  | GLN  |
| 47  | BZ    | 55  | ARG  |
| 47  | BZ    | 84  | LEU  |
| 48  | B1    | 12  | SER  |
| 48  | B1    | 13  | PRO  |
| 48  | B1    | 15  | GLU  |
| 48  | B1    | 34  | ALA  |
| 48  | B1    | 35  | SER  |
| 48  | B1    | 42  | ASN  |
| 49  | B2    | 9   | VAL  |
| 49  | B2    | 11  | SER  |
| 49  | B2    | 13  | ILE  |
| 49  | B2    | 28  | LEU  |
| 49  | B2    | 29  | ARG  |
| 49  | B2    | 30  | ARG  |
| 49  | B2    | 31  | LEU  |
| 49  | B2    | 52  | HIS  |
| 50  | B3    | 6   | HIS  |
| 50  | B3    | 8   | LYS  |
| 50  | B3    | 11  | PRO  |
| 50  | B3    | 13  | ARG  |
| 50  | B3    | 14  | ILE  |
| 50  | B3    | 18  | CYS  |
| 50  | B3    | 32  | TYR  |
| 50  | B3    | 33  | VAL  |
| 50  | B3    | 39  | CYS  |
| 50  | B3    | 53  | GLU  |
| 50  | B3    | 55  | ARG  |
| 51  | B4    | 7   | PRO  |
| 51  | B4    | 10  | LYS  |
| 51  | B4    | 11  | THR  |
| 51  | B4    | 18  | ALA  |
| 51  | B4    | 23  | HIS  |
| 51  | B4    | 36  | CYS  |
| 51  | B4    | 38  | ALA  |
| 51  | B4    | 42  | PRO  |
| 52  | B5    | 8   | LYS  |
| 52  | B5    | 17  | LYS  |
| 52  | B5    | 20  | ASN  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 52  | B5    | 23  | THR  |
| 52  | B5    | 26  | ASN  |
| 52  | B5    | 27  | LYS  |
| 52  | B5    | 29  | ASN  |
| 52  | B5    | 30  | THR  |
| 52  | B5    | 36  | LEU  |
| 52  | B5    | 37  | ARG  |
| 52  | B5    | 38  | LYS  |
| 52  | B5    | 46  | HIS  |
| 52  | B5    | 49  | HIS  |
| 52  | B5    | 50  | ARG  |
| 52  | B5    | 51  | GLU  |
| 52  | B5    | 53  | LYS  |
| 53  | B6    | 2   | LYS  |
| 53  | B6    | 10  | ARG  |
| 53  | B6    | 41  | ARG  |
| 53  | B6    | 47  | ARG  |
| 54  | B7    | 5   | LYS  |
| 54  | B7    | 27  | THR  |
| 54  | B7    | 30  | ARG  |
| 54  | B7    | 36  | LYS  |
| 54  | B7    | 37  | SER  |
| 54  | B7    | 39  | LYS  |
| 54  | B7    | 62  | LEU  |
| 54  | B7    | 63  | PRO  |
| 55  | B8    | 5   | ALA  |
| 55  | B8    | 9   | ARG  |
| 55  | B8    | 10  | ILE  |
| 55  | B8    | 11  | CYS  |
| 4   | AE    | 9   | GLU  |
| 4   | AE    | 29  | ALA  |
| 4   | AE    | 73  | THR  |
| 4   | AE    | 102 | LEU  |
| 4   | AE    | 151 | GLY  |
| 4   | AE    | 178 | ARG  |
| 4   | AE    | 190 | THR  |
| 4   | AE    | 227 | GLY  |
| 5   | AF    | 27  | LYS  |
| 5   | AF    | 30  | ARG  |
| 5   | AF    | 66  | VAL  |
| 5   | AF    | 74  | GLY  |
| 5   | AF    | 101 | LEU  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 5   | AF    | 158 | GLY  |
| 5   | AF    | 206 | GLU  |
| 6   | AG    | 4   | TYR  |
| 6   | AG    | 67  | ILE  |
| 6   | AG    | 73  | ARG  |
| 6   | AG    | 101 | LEU  |
| 6   | AG    | 107 | ARG  |
| 6   | AG    | 138 | TYR  |
| 6   | AG    | 139 | ARG  |
| 6   | AG    | 165 | MET  |
| 6   | AG    | 181 | MET  |
| 6   | AG    | 200 | GLU  |
| 6   | AG    | 208 | SER  |
| 7   | AH    | 37  | ARG  |
| 7   | AH    | 98  | THR  |
| 7   | AH    | 102 | ALA  |
| 7   | AH    | 104 | ALA  |
| 8   | AI    | 13  | ASN  |
| 8   | AI    | 14  | LEU  |
| 8   | AI    | 51  | PRO  |
| 8   | AI    | 83  | ASP  |
| 9   | AJ    | 23  | VAL  |
| 9   | AJ    | 56  | GLN  |
| 9   | AJ    | 72  | ARG  |
| 9   | AJ    | 92  | SER  |
| 9   | AJ    | 94  | ARG  |
| 9   | AJ    | 112 | PRO  |
| 9   | AJ    | 113 | GLU  |
| 9   | AJ    | 146 | GLU  |
| 9   | AJ    | 153 | HIS  |
| 10  | AK    | 37  | ARG  |
| 10  | AK    | 78  | GLN  |
| 10  | AK    | 97  | VAL  |
| 10  | AK    | 102 | ARG  |
| 10  | AK    | 108 | GLY  |
| 10  | AK    | 123 | GLU  |
| 10  | AK    | 134 | ILE  |
| 11  | AL    | 39  | GLY  |
| 11  | AL    | 68  | GLY  |
| 11  | AL    | 71  | SER  |
| 11  | AL    | 94  | ALA  |
| 11  | AL    | 104 | ARG  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 11  | AL    | 114 | TYR  |
| 11  | AL    | 120 | ARG  |
| 11  | AL    | 125 | TYR  |
| 12  | AM    | 31  | GLY  |
| 12  | AM    | 58  | ASP  |
| 12  | AM    | 61  | GLU  |
| 12  | AM    | 78  | ASN  |
| 12  | AM    | 94  | VAL  |
| 13  | AN    | 13  | GLN  |
| 13  | AN    | 55  | LYS  |
| 13  | AN    | 76  | GLY  |
| 13  | AN    | 102 | GLY  |
| 13  | AN    | 104 | GLN  |
| 13  | AN    | 115 | PRO  |
| 14  | AO    | 31  | PRO  |
| 14  | AO    | 41  | ARG  |
| 14  | AO    | 42  | THR  |
| 14  | AO    | 76  | ASN  |
| 14  | AO    | 87  | GLY  |
| 14  | AO    | 94  | PRO  |
| 14  | AO    | 126 | LYS  |
| 15  | AP    | 8   | GLU  |
| 15  | AP    | 43  | THR  |
| 15  | AP    | 46  | LYS  |
| 15  | AP    | 67  | GLU  |
| 15  | AP    | 117 | VAL  |
| 15  | AP    | 122 | LYS  |
| 15  | AP    | 123 | ALA  |
| 16  | AQ    | 5   | ALA  |
| 16  | AQ    | 9   | LYS  |
| 16  | AQ    | 17  | LYS  |
| 16  | AQ    | 22  | THR  |
| 16  | AQ    | 28  | GLY  |
| 16  | AQ    | 56  | VAL  |
| 17  | AR    | 6   | GLU  |
| 17  | AR    | 46  | HIS  |
| 17  | AR    | 76  | GLU  |
| 17  | AR    | 83  | GLU  |
| 17  | AR    | 87  | ILE  |
| 18  | AS    | 30  | GLY  |
| 18  | AS    | 43  | LYS  |
| 18  | AS    | 82  | GLN  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 19  | AT    | 16  | GLN  |
| 19  | AT    | 33  | GLY  |
| 19  | AT    | 96  | GLN  |
| 19  | AT    | 98  | LEU  |
| 20  | AU    | 28  | GLU  |
| 20  | AU    | 34  | TYR  |
| 20  | AU    | 37  | VAL  |
| 20  | AU    | 38  | GLU  |
| 20  | AU    | 54  | ARG  |
| 20  | AU    | 64  | ARG  |
| 21  | AV    | 20  | LEU  |
| 21  | AV    | 36  | ARG  |
| 21  | AV    | 65  | ASN  |
| 21  | AV    | 71  | LEU  |
| 22  | AW    | 49  | ALA  |
| 22  | AW    | 56  | MET  |
| 22  | AW    | 68  | LYS  |
| 22  | AW    | 101 | GLY  |
| 22  | AW    | 102 | GLY  |
| 22  | AW    | 103 | GLY  |
| 23  | AX    | 7   | ARG  |
| 26  | BC    | 22  | ILE  |
| 26  | BC    | 67  | GLY  |
| 26  | BC    | 80  | GLY  |
| 26  | BC    | 132 | GLY  |
| 26  | BC    | 140 | PRO  |
| 26  | BC    | 161 | ILE  |
| 26  | BC    | 164 | ARG  |
| 27  | BD    | 52  | ARG  |
| 27  | BD    | 62  | TYR  |
| 27  | BD    | 110 | GLY  |
| 27  | BD    | 111 | LEU  |
| 27  | BD    | 123 | ALA  |
| 27  | BD    | 149 | PRO  |
| 27  | BD    | 152 | GLY  |
| 27  | BD    | 189 | CYS  |
| 27  | BD    | 196 | VAL  |
| 27  | BD    | 204 | ILE  |
| 27  | BD    | 207 | GLY  |
| 27  | BD    | 217 | ARG  |
| 27  | BD    | 243 | GLY  |
| 27  | BD    | 262 | ARG  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 27  | BD    | 263 | ARG  |
| 27  | BD    | 266 | SER  |
| 28  | BE    | 22  | PRO  |
| 28  | BE    | 44  | TYR  |
| 28  | BE    | 72  | VAL  |
| 28  | BE    | 93  | VAL  |
| 28  | BE    | 95  | ILE  |
| 28  | BE    | 115 | GLY  |
| 28  | BE    | 118 | LYS  |
| 28  | BE    | 121 | ASN  |
| 28  | BE    | 124 | GLY  |
| 28  | BE    | 139 | GLY  |
| 28  | BE    | 155 | LYS  |
| 28  | BE    | 178 | GLU  |
| 28  | BE    | 187 | ALA  |
| 29  | BF    | 54  | ARG  |
| 29  | BF    | 81  | PRO  |
| 29  | BF    | 98  | SER  |
| 29  | BF    | 102 | PRO  |
| 29  | BF    | 126 | VAL  |
| 29  | BF    | 136 | THR  |
| 29  | BF    | 158 | THR  |
| 29  | BF    | 167 | ALA  |
| 29  | BF    | 177 | ALA  |
| 29  | BF    | 184 | TYR  |
| 29  | BF    | 190 | GLU  |
| 30  | BG    | 20  | ILE  |
| 30  | BG    | 24  | GLY  |
| 30  | BG    | 61  | ALA  |
| 30  | BG    | 88  | ILE  |
| 30  | BG    | 151 | ALA  |
| 30  | BG    | 154 | GLY  |
| 30  | BG    | 163 | ALA  |
| 31  | BH    | 31  | GLY  |
| 31  | BH    | 33  | LEU  |
| 31  | BH    | 42  | ARG  |
| 31  | BH    | 57  | ASP  |
| 31  | BH    | 105 | LEU  |
| 31  | BH    | 110 | SER  |
| 31  | BH    | 118 | PRO  |
| 31  | BH    | 120 | GLY  |
| 31  | BH    | 151 | ILE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 31  | BH    | 156 | ALA  |
| 31  | BH    | 169 | VAL  |
| 32  | BK    | 11  | ASN  |
| 32  | BK    | 86  | THR  |
| 32  | BK    | 114 | LEU  |
| 32  | BK    | 123 | LEU  |
| 33  | BL    | 7   | VAL  |
| 33  | BL    | 20  | ALA  |
| 33  | BL    | 52  | ILE  |
| 33  | BL    | 61  | ALA  |
| 33  | BL    | 74  | ALA  |
| 33  | BL    | 89  | HIS  |
| 33  | BL    | 113 | PRO  |
| 34  | BM    | 19  | GLU  |
| 34  | BM    | 30  | ILE  |
| 34  | BM    | 34  | LEU  |
| 34  | BM    | 38  | HIS  |
| 34  | BM    | 40  | PRO  |
| 34  | BM    | 47  | ALA  |
| 34  | BM    | 63  | THR  |
| 34  | BM    | 67  | LEU  |
| 34  | BM    | 88  | GLU  |
| 34  | BM    | 92  | ALA  |
| 34  | BM    | 105 | GLY  |
| 34  | BM    | 110 | GLY  |
| 34  | BM    | 114 | ARG  |
| 35  | BN    | 49  | ARG  |
| 35  | BN    | 50  | GLY  |
| 35  | BN    | 52  | VAL  |
| 35  | BN    | 88  | ASN  |
| 35  | BN    | 90  | GLN  |
| 35  | BN    | 102 | VAL  |
| 35  | BN    | 104 | ARG  |
| 35  | BN    | 121 | VAL  |
| 36  | BO    | 7   | ARG  |
| 36  | BO    | 11  | GLY  |
| 36  | BO    | 23  | PRO  |
| 36  | BO    | 32  | THR  |
| 36  | BO    | 34  | GLY  |
| 36  | BO    | 39  | LYS  |
| 36  | BO    | 43  | GLY  |
| 36  | BO    | 67  | MET  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 36  | BO    | 84  | ASN  |
| 36  | BO    | 87  | ASP  |
| 36  | BO    | 92  | GLU  |
| 37  | BP    | 12  | GLN  |
| 37  | BP    | 45  | GLN  |
| 37  | BP    | 88  | GLY  |
| 37  | BP    | 94  | VAL  |
| 37  | BP    | 100 | GLY  |
| 37  | BP    | 107 | ALA  |
| 37  | BP    | 127 | ILE  |
| 37  | BP    | 136 | ALA  |
| 37  | BP    | 137 | TYR  |
| 38  | BQ    | 8   | ARG  |
| 38  | BQ    | 71  | GLN  |
| 38  | BQ    | 86  | ARG  |
| 38  | BQ    | 94  | TYR  |
| 39  | BR    | 11  | LYS  |
| 39  | BR    | 23  | ARG  |
| 39  | BR    | 30  | ARG  |
| 39  | BR    | 33  | LYS  |
| 39  | BR    | 43  | GLU  |
| 39  | BR    | 67  | ARG  |
| 39  | BR    | 78  | LEU  |
| 39  | BR    | 82  | ILE  |
| 39  | BR    | 97  | ARG  |
| 40  | BS    | 24  | PRO  |
| 40  | BS    | 30  | VAL  |
| 40  | BS    | 36  | GLU  |
| 40  | BS    | 41  | ARG  |
| 40  | BS    | 82  | LEU  |
| 40  | BS    | 99  | LEU  |
| 40  | BS    | 104 | ASN  |
| 40  | BS    | 114 | LEU  |
| 41  | BT    | 26  | GLY  |
| 41  | BT    | 27  | LEU  |
| 41  | BT    | 47  | TYR  |
| 41  | BT    | 53  | ARG  |
| 41  | BT    | 78  | THR  |
| 41  | BT    | 88  | ILE  |
| 41  | BT    | 90  | VAL  |
| 41  | BT    | 93  | LYS  |
| 41  | BT    | 110 | VAL  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 42  | BU    | 8   | GLY  |
| 42  | BU    | 14  | VAL  |
| 42  | BU    | 18  | LEU  |
| 42  | BU    | 45  | THR  |
| 42  | BU    | 72  | VAL  |
| 42  | BU    | 81  | TYR  |
| 43  | BV    | 15  | ARG  |
| 43  | BV    | 26  | GLY  |
| 43  | BV    | 30  | GLU  |
| 43  | BV    | 75  | TYR  |
| 43  | BV    | 90  | ARG  |
| 44  | BW    | 8   | ILE  |
| 44  | BW    | 15  | GLU  |
| 44  | BW    | 33  | LYS  |
| 44  | BW    | 49  | VAL  |
| 44  | BW    | 53  | LYS  |
| 44  | BW    | 67  | GLY  |
| 44  | BW    | 74  | PRO  |
| 44  | BW    | 85  | PRO  |
| 45  | BX    | 21  | LYS  |
| 45  | BX    | 29  | GLU  |
| 45  | BX    | 33  | LYS  |
| 45  | BX    | 34  | LYS  |
| 45  | BX    | 48  | ALA  |
| 45  | BX    | 66  | PRO  |
| 45  | BX    | 83  | THR  |
| 45  | BX    | 86  | ARG  |
| 45  | BX    | 95  | LYS  |
| 45  | BX    | 106 | LEU  |
| 46  | BY    | 11  | GLU  |
| 46  | BY    | 31  | ARG  |
| 46  | BY    | 50  | GLN  |
| 46  | BY    | 54  | HIS  |
| 46  | BY    | 123 | ASP  |
| 46  | BY    | 169 | GLU  |
| 46  | BY    | 170 | THR  |
| 47  | BZ    | 21  | LEU  |
| 47  | BZ    | 67  | VAL  |
| 48  | B1    | 17  | GLU  |
| 48  | B1    | 66  | ASN  |
| 49  | B2    | 39  | ASP  |
| 49  | B2    | 53  | LEU  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 50  | B3    | 3   | GLU  |
| 50  | B3    | 7   | PRO  |
| 50  | B3    | 21  | VAL  |
| 50  | B3    | 48  | ARG  |
| 50  | B3    | 50  | VAL  |
| 50  | B3    | 51  | ASP  |
| 50  | B3    | 56  | VAL  |
| 51  | B4    | 20  | ARG  |
| 52  | B5    | 18  | ARG  |
| 52  | B5    | 28  | ARG  |
| 52  | B5    | 31  | PRO  |
| 52  | B5    | 32  | ASN  |
| 52  | B5    | 48  | VAL  |
| 52  | B5    | 52  | VAL  |
| 53  | B6    | 3   | ARG  |
| 53  | B6    | 5   | TRP  |
| 53  | B6    | 14  | LYS  |
| 53  | B6    | 19  | ARG  |
| 54  | B7    | 32  | LEU  |
| 54  | B7    | 34  | TRP  |
| 54  | B7    | 52  | LYS  |
| 55  | B8    | 3   | VAL  |
| 55  | B8    | 7   | VAL  |
| 55  | B8    | 33  | LYS  |
| 4   | AE    | 88  | ALA  |
| 4   | AE    | 96  | ARG  |
| 4   | AE    | 110 | GLN  |
| 4   | AE    | 141 | GLU  |
| 4   | AE    | 157 | ARG  |
| 4   | AE    | 180 | LEU  |
| 4   | AE    | 183 | PRO  |
| 4   | AE    | 237 | ALA  |
| 5   | AF    | 7   | PRO  |
| 5   | AF    | 49  | SER  |
| 5   | AF    | 62  | ASP  |
| 5   | AF    | 81  | GLY  |
| 5   | AF    | 127 | ARG  |
| 5   | AF    | 139 | GLN  |
| 5   | AF    | 145 | GLY  |
| 5   | AF    | 178 | LEU  |
| 5   | AF    | 181 | ASN  |
| 6   | AG    | 7   | PRO  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 6   | AG    | 40  | PRO  |
| 6   | AG    | 51  | PRO  |
| 6   | AG    | 53  | ASP  |
| 6   | AG    | 153 | ARG  |
| 7   | AH    | 26  | PHE  |
| 7   | AH    | 96  | PRO  |
| 7   | AH    | 112 | LEU  |
| 8   | AI    | 12  | PRO  |
| 8   | AI    | 15  | ASP  |
| 8   | AI    | 69  | GLU  |
| 9   | AJ    | 6   | ARG  |
| 9   | AJ    | 38  | LEU  |
| 9   | AJ    | 103 | TRP  |
| 9   | AJ    | 121 | ALA  |
| 10  | AK    | 24  | THR  |
| 10  | AK    | 39  | LEU  |
| 10  | AK    | 41  | ARG  |
| 10  | AK    | 44  | PHE  |
| 10  | AK    | 69  | ARG  |
| 10  | AK    | 73  | ASP  |
| 10  | AK    | 90  | GLY  |
| 11  | AL    | 43  | ALA  |
| 11  | AL    | 47  | LEU  |
| 11  | AL    | 102 | LEU  |
| 11  | AL    | 103 | THR  |
| 11  | AL    | 105 | ASP  |
| 11  | AL    | 117 | HIS  |
| 12  | AM    | 77  | PRO  |
| 13  | AN    | 37  | GLY  |
| 13  | AN    | 53  | SER  |
| 13  | AN    | 93  | GLN  |
| 13  | AN    | 123 | LYS  |
| 14  | AO    | 23  | LYS  |
| 14  | AO    | 26  | ALA  |
| 14  | AO    | 80  | HIS  |
| 14  | AO    | 100 | ILE  |
| 14  | AO    | 105 | TYR  |
| 14  | AO    | 106 | ASP  |
| 14  | AO    | 107 | ALA  |
| 14  | AO    | 121 | GLY  |
| 14  | AO    | 122 | THR  |
| 15  | AP    | 5   | ALA  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 15  | AP    | 45  | VAL  |
| 15  | AP    | 70  | LEU  |
| 15  | AP    | 75  | ALA  |
| 15  | AP    | 87  | TYR  |
| 15  | AP    | 120 | LYS  |
| 17  | AR    | 19  | PRO  |
| 17  | AR    | 33  | THR  |
| 17  | AR    | 88  | ARG  |
| 18  | AS    | 28  | ARG  |
| 18  | AS    | 44  | THR  |
| 18  | AS    | 54  | GLU  |
| 18  | AS    | 66  | PRO  |
| 20  | AU    | 71  | LYS  |
| 20  | AU    | 72  | ARG  |
| 20  | AU    | 81  | PHE  |
| 21  | AV    | 25  | LYS  |
| 21  | AV    | 30  | LEU  |
| 22  | AW    | 15  | ARG  |
| 22  | AW    | 24  | LEU  |
| 22  | AW    | 32  | ALA  |
| 22  | AW    | 50  | GLU  |
| 22  | AW    | 57  | ARG  |
| 22  | AW    | 59  | ALA  |
| 22  | AW    | 76  | ALA  |
| 22  | AW    | 84  | LEU  |
| 26  | BC    | 59  | ARG  |
| 26  | BC    | 69  | GLY  |
| 26  | BC    | 78  | ALA  |
| 26  | BC    | 90  | GLY  |
| 26  | BC    | 167 | LYS  |
| 26  | BC    | 226 | PRO  |
| 27  | BD    | 56  | GLY  |
| 27  | BD    | 86  | PRO  |
| 27  | BD    | 226 | MET  |
| 27  | BD    | 227 | ASN  |
| 27  | BD    | 233 | HIS  |
| 27  | BD    | 245 | PRO  |
| 27  | BD    | 246 | PRO  |
| 27  | BD    | 259 | THR  |
| 28  | BE    | 51  | PHE  |
| 28  | BE    | 67  | PHE  |
| 28  | BE    | 75  | VAL  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 28  | BE    | 126 | PRO  |
| 29  | BF    | 21  | ALA  |
| 29  | BF    | 24  | LEU  |
| 29  | BF    | 72  | ARG  |
| 29  | BF    | 159 | GLY  |
| 30  | BG    | 30  | GLU  |
| 30  | BG    | 57  | ALA  |
| 30  | BG    | 81  | LYS  |
| 30  | BG    | 106 | LEU  |
| 30  | BG    | 125 | PHE  |
| 30  | BG    | 167 | GLU  |
| 30  | BG    | 178 | PHE  |
| 31  | BH    | 67  | LEU  |
| 31  | BH    | 94  | TYR  |
| 31  | BH    | 114 | VAL  |
| 32  | BK    | 100 | ALA  |
| 32  | BK    | 116 | LEU  |
| 33  | BL    | 31  | GLY  |
| 33  | BL    | 51  | ALA  |
| 33  | BL    | 82  | ALA  |
| 33  | BL    | 84  | LEU  |
| 34  | BM    | 18  | ALA  |
| 34  | BM    | 29  | LYS  |
| 34  | BM    | 109 | LYS  |
| 34  | BM    | 138 | LEU  |
| 35  | BN    | 10  | VAL  |
| 35  | BN    | 59  | LYS  |
| 35  | BN    | 91  | LEU  |
| 35  | BN    | 92  | GLU  |
| 35  | BN    | 109 | LYS  |
| 36  | BO    | 16  | ARG  |
| 36  | BO    | 26  | GLY  |
| 36  | BO    | 37  | GLY  |
| 36  | BO    | 81  | GLN  |
| 37  | BP    | 26  | TYR  |
| 37  | BP    | 31  | ASP  |
| 37  | BP    | 46  | GLN  |
| 37  | BP    | 73  | PRO  |
| 37  | BP    | 115 | MET  |
| 38  | BQ    | 5   | LYS  |
| 38  | BQ    | 49  | ASP  |
| 38  | BQ    | 58  | GLY  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 38  | BQ    | 100 | LEU  |
| 39  | BR    | 10  | ARG  |
| 39  | BR    | 60  | GLY  |
| 39  | BR    | 66  | ALA  |
| 39  | BR    | 72  | ALA  |
| 39  | BR    | 102 | ALA  |
| 40  | BS    | 4   | GLY  |
| 40  | BS    | 28  | VAL  |
| 40  | BS    | 102 | ILE  |
| 41  | BT    | 6   | THR  |
| 41  | BT    | 96  | ALA  |
| 41  | BT    | 97  | ASP  |
| 42  | BU    | 29  | PRO  |
| 43  | BV    | 66  | GLU  |
| 43  | BV    | 67  | ASP  |
| 44  | BW    | 48  | LYS  |
| 45  | BX    | 16  | ALA  |
| 45  | BX    | 74  | PRO  |
| 46  | BY    | 64  | GLY  |
| 46  | BY    | 80  | ARG  |
| 46  | BY    | 82  | ARG  |
| 46  | BY    | 95  | PRO  |
| 46  | BY    | 131 | ARG  |
| 46  | BY    | 145 | GLU  |
| 46  | BY    | 160 | GLY  |
| 47  | BZ    | 56  | ASP  |
| 47  | BZ    | 83  | PRO  |
| 50  | B3    | 27  | THR  |
| 50  | B3    | 58  | ARG  |
| 50  | B3    | 61  | ARG  |
| 51  | B4    | 5   | PRO  |
| 51  | B4    | 9   | LYS  |
| 51  | B4    | 14  | ALA  |
| 51  | B4    | 47  | PRO  |
| 51  | B4    | 59  | GLU  |
| 52  | B5    | 25  | LYS  |
| 52  | B5    | 34  | LEU  |
| 53  | B6    | 4   | THR  |
| 53  | B6    | 11  | LYS  |
| 53  | B6    | 31  | LEU  |
| 53  | B6    | 39  | ARG  |
| 53  | B6    | 40  | TRP  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 53  | B6    | 46  | VAL  |
| 54  | B7    | 13  | ARG  |
| 54  | B7    | 18  | ALA  |
| 54  | B7    | 41  | ILE  |
| 54  | B7    | 53  | PRO  |
| 54  | B7    | 57  | ARG  |
| 54  | B7    | 61  | LEU  |
| 4   | AE    | 74  | LYS  |
| 4   | AE    | 91  | PRO  |
| 4   | AE    | 98  | LEU  |
| 4   | AE    | 150 | SER  |
| 4   | AE    | 158 | LEU  |
| 4   | AE    | 167 | PRO  |
| 4   | AE    | 174 | VAL  |
| 4   | AE    | 193 | ASP  |
| 4   | AE    | 229 | VAL  |
| 5   | AF    | 3   | ASN  |
| 5   | AF    | 16  | ARG  |
| 5   | AF    | 109 | PRO  |
| 6   | AG    | 36  | ARG  |
| 6   | AG    | 147 | ALA  |
| 6   | AG    | 196 | LEU  |
| 7   | AH    | 53  | LEU  |
| 7   | AH    | 153 | LYS  |
| 8   | AI    | 17  | SER  |
| 9   | AJ    | 32  | ARG  |
| 9   | AJ    | 93  | PRO  |
| 9   | AJ    | 97  | GLN  |
| 9   | AJ    | 131 | LYS  |
| 9   | AJ    | 155 | ARG  |
| 10  | AK    | 71  | GLY  |
| 11  | AL    | 55  | ALA  |
| 11  | AL    | 95  | LYS  |
| 11  | AL    | 110 | GLU  |
| 11  | AL    | 126 | SER  |
| 12  | AM    | 30  | SER  |
| 12  | AM    | 53  | PRO  |
| 12  | AM    | 54  | PHE  |
| 13  | AN    | 118 | GLY  |
| 14  | AO    | 16  | GLU  |
| 14  | AO    | 17  | LYS  |
| 14  | AO    | 70  | ILE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 15  | AP    | 72  | ALA  |
| 15  | AP    | 106 | ASN  |
| 16  | AQ    | 16  | PHE  |
| 17  | AR    | 5   | LYS  |
| 17  | AR    | 44  | LYS  |
| 18  | AS    | 57  | ARG  |
| 18  | AS    | 64  | ALA  |
| 19  | AT    | 6   | LEU  |
| 19  | AT    | 14  | LYS  |
| 19  | AT    | 53  | LEU  |
| 21  | AV    | 76  | PRO  |
| 22  | AW    | 58  | LYS  |
| 22  | AW    | 61  | SER  |
| 22  | AW    | 78  | ALA  |
| 22  | AW    | 97  | ALA  |
| 23  | AX    | 8   | THR  |
| 23  | AX    | 24  | ARG  |
| 26  | BC    | 56  | GLN  |
| 26  | BC    | 71  | GLN  |
| 27  | BD    | 37  | LEU  |
| 27  | BD    | 209 | ALA  |
| 27  | BD    | 248 | SER  |
| 27  | BD    | 257 | LEU  |
| 28  | BE    | 28  | ALA  |
| 28  | BE    | 32  | PRO  |
| 28  | BE    | 53  | PRO  |
| 28  | BE    | 89  | ASP  |
| 28  | BE    | 94  | GLU  |
| 28  | BE    | 119 | ARG  |
| 28  | BE    | 135 | HIS  |
| 28  | BE    | 143 | ASN  |
| 28  | BE    | 165 | VAL  |
| 29  | BF    | 64  | ILE  |
| 29  | BF    | 111 | ALA  |
| 29  | BF    | 137 | LYS  |
| 29  | BF    | 168 | ARG  |
| 29  | BF    | 183 | VAL  |
| 30  | BG    | 153 | ARG  |
| 30  | BG    | 166 | ASP  |
| 31  | BH    | 58  | GLU  |
| 31  | BH    | 138 | LYS  |
| 31  | BH    | 154 | PRO  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 31  | BH    | 175 | LYS  |
| 32  | BK    | 34  | GLY  |
| 33  | BL    | 85  | GLU  |
| 33  | BL    | 95  | LYS  |
| 34  | BM    | 28  | THR  |
| 34  | BM    | 90  | MET  |
| 34  | BM    | 108 | PRO  |
| 35  | BN    | 106 | LEU  |
| 36  | BO    | 9   | ASN  |
| 36  | BO    | 15  | ARG  |
| 36  | BO    | 25  | SER  |
| 36  | BO    | 35  | HIS  |
| 36  | BO    | 63  | PRO  |
| 36  | BO    | 89  | ALA  |
| 36  | BO    | 108 | LYS  |
| 37  | BP    | 22  | LYS  |
| 37  | BP    | 37  | LEU  |
| 37  | BP    | 79  | LEU  |
| 37  | BP    | 84  | GLY  |
| 37  | BP    | 89  | ASN  |
| 37  | BP    | 98  | LYS  |
| 38  | BQ    | 12  | ARG  |
| 38  | BQ    | 42  | LYS  |
| 39  | BR    | 59  | LYS  |
| 39  | BR    | 80  | LEU  |
| 39  | BR    | 89  | ARG  |
| 40  | BS    | 9   | LEU  |
| 40  | BS    | 77  | PRO  |
| 40  | BS    | 96  | ARG  |
| 40  | BS    | 110 | ILE  |
| 40  | BS    | 111 | ARG  |
| 40  | BS    | 112 | ARG  |
| 41  | BT    | 41  | ALA  |
| 41  | BT    | 60  | LEU  |
| 41  | BT    | 72  | HIS  |
| 41  | BT    | 111 | GLU  |
| 42  | BU    | 2   | PHE  |
| 44  | BW    | 32  | PRO  |
| 45  | BX    | 85  | VAL  |
| 46  | BY    | 47  | VAL  |
| 46  | BY    | 113 | ALA  |
| 48  | B1    | 36  | ILE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 49  | B2    | 23  | LEU  |
| 49  | B2    | 42  | ALA  |
| 50  | B3    | 26  | SER  |
| 50  | B3    | 41  | PRO  |
| 50  | B3    | 52  | THR  |
| 51  | B4    | 24  | ALA  |
| 51  | B4    | 48  | GLU  |
| 51  | B4    | 56  | LYS  |
| 51  | B4    | 58  | LEU  |
| 52  | B5    | 40  | CYS  |
| 52  | B5    | 47  | THR  |
| 53  | B6    | 35  | ARG  |
| 55  | B8    | 12  | ASP  |
| 55  | B8    | 29  | ASN  |
| 4   | AE    | 75  | LYS  |
| 5   | AF    | 146 | ALA  |
| 5   | AF    | 174 | PRO  |
| 7   | AH    | 95  | ALA  |
| 7   | AH    | 113 | ALA  |
| 8   | AI    | 36  | ARG  |
| 9   | AJ    | 96  | GLN  |
| 9   | AJ    | 122 | HIS  |
| 10  | AK    | 65  | TYR  |
| 10  | AK    | 104 | ARG  |
| 11  | AL    | 52  | ALA  |
| 11  | AL    | 107 | ARG  |
| 12  | AM    | 73  | ASP  |
| 14  | AO    | 111 | LYS  |
| 14  | AO    | 123 | LYS  |
| 15  | AP    | 27  | LYS  |
| 15  | AP    | 103 | THR  |
| 16  | AQ    | 13  | THR  |
| 17  | AR    | 29  | VAL  |
| 18  | AS    | 36  | ILE  |
| 20  | AU    | 19  | LYS  |
| 21  | AV    | 11  | VAL  |
| 21  | AV    | 29  | ARG  |
| 21  | AV    | 67  | VAL  |
| 21  | AV    | 73  | GLU  |
| 22  | AW    | 25  | ARG  |
| 22  | AW    | 60  | GLU  |
| 23  | AX    | 10  | ARG  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 23  | AX    | 22  | ARG  |
| 26  | BC    | 20  | TYR  |
| 26  | BC    | 84  | LYS  |
| 26  | BC    | 117 | PRO  |
| 26  | BC    | 148 | ASN  |
| 26  | BC    | 200 | LYS  |
| 27  | BD    | 88  | ARG  |
| 27  | BD    | 208 | LYS  |
| 27  | BD    | 210 | GLY  |
| 27  | BD    | 231 | HIS  |
| 28  | BE    | 8   | LYS  |
| 28  | BE    | 58  | ARG  |
| 28  | BE    | 129 | HIS  |
| 28  | BE    | 179 | GLU  |
| 29  | BF    | 178 | PRO  |
| 29  | BF    | 182 | ASN  |
| 29  | BF    | 185 | ASP  |
| 30  | BG    | 7   | LEU  |
| 30  | BG    | 113 | ARG  |
| 30  | BG    | 135 | LEU  |
| 31  | BH    | 75  | ALA  |
| 32  | BK    | 40  | THR  |
| 33  | BL    | 26  | ALA  |
| 33  | BL    | 54  | PRO  |
| 33  | BL    | 101 | TRP  |
| 34  | BM    | 78  | TYR  |
| 34  | BM    | 87  | LEU  |
| 34  | BM    | 112 | LEU  |
| 35  | BN    | 67  | LYS  |
| 36  | BO    | 19  | VAL  |
| 36  | BO    | 31  | ALA  |
| 36  | BO    | 120 | ALA  |
| 36  | BO    | 131 | SER  |
| 37  | BP    | 47  | ILE  |
| 37  | BP    | 62  | GLY  |
| 37  | BP    | 119 | ARG  |
| 38  | BQ    | 74  | LYS  |
| 40  | BS    | 13  | ARG  |
| 41  | BT    | 9   | VAL  |
| 42  | BU    | 66  | ARG  |
| 44  | BW    | 24  | GLY  |
| 45  | BX    | 17  | SER  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 46  | BY    | 85  | HIS  |
| 46  | BY    | 168 | GLU  |
| 49  | B2    | 17  | LYS  |
| 50  | B3    | 24  | THR  |
| 51  | B4    | 49  | CYS  |
| 51  | B4    | 51  | TYR  |
| 55  | B8    | 4   | ARG  |
| 4   | AE    | 20  | GLU  |
| 4   | AE    | 176 | GLU  |
| 5   | AF    | 87  | LEU  |
| 6   | AG    | 92  | VAL  |
| 6   | AG    | 94  | LEU  |
| 6   | AG    | 117 | ALA  |
| 7   | AH    | 142 | LEU  |
| 8   | AI    | 37  | VAL  |
| 9   | AJ    | 18  | TYR  |
| 9   | AJ    | 50  | ILE  |
| 9   | AJ    | 130 | GLY  |
| 10  | AK    | 80  | ILE  |
| 11  | AL    | 57  | GLY  |
| 12  | AM    | 37  | PRO  |
| 12  | AM    | 41  | PRO  |
| 13  | AN    | 34  | ASP  |
| 14  | AO    | 90  | VAL  |
| 15  | AP    | 3   | ARG  |
| 15  | AP    | 7   | VAL  |
| 15  | AP    | 97  | PRO  |
| 19  | AT    | 17  | LYS  |
| 19  | AT    | 80  | GLY  |
| 22  | AW    | 20  | LEU  |
| 22  | AW    | 67  | ALA  |
| 26  | BC    | 49  | ILE  |
| 27  | BD    | 83  | GLU  |
| 27  | BD    | 238 | GLY  |
| 27  | BD    | 254 | THR  |
| 29  | BF    | 134 | GLY  |
| 30  | BG    | 44  | GLY  |
| 31  | BH    | 125 | VAL  |
| 31  | BH    | 131 | VAL  |
| 31  | BH    | 173 | PRO  |
| 32  | BK    | 111 | PRO  |
| 35  | BN    | 115 | VAL  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 37  | BP    | 28  | ALA  |
| 37  | BP    | 91  | GLU  |
| 38  | BQ    | 61  | HIS  |
| 40  | BS    | 80  | SER  |
| 41  | BT    | 7   | GLY  |
| 50  | B3    | 22  | ILE  |
| 50  | B3    | 29  | PRO  |
| 51  | B4    | 27  | PRO  |
| 51  | B4    | 31  | VAL  |
| 54  | B7    | 8   | LYS  |
| 54  | B7    | 20  | GLY  |
| 54  | B7    | 33  | ASN  |
| 4   | AE    | 130 | ARG  |
| 5   | AF    | 70  | VAL  |
| 13  | AN    | 49  | GLY  |
| 16  | AQ    | 7   | ILE  |
| 17  | AR    | 82  | ILE  |
| 26  | BC    | 41  | VAL  |
| 27  | BD    | 127 | VAL  |
| 32  | BK    | 7   | GLU  |
| 33  | BL    | 83  | GLY  |
| 36  | BO    | 53  | GLY  |
| 37  | BP    | 19  | GLY  |
| 37  | BP    | 61  | GLY  |
| 41  | BT    | 87  | GLY  |
| 41  | BT    | 105 | VAL  |
| 45  | BX    | 24  | VAL  |
| 46  | BY    | 141 | VAL  |
| 49  | B2    | 43  | ILE  |
| 54  | B7    | 14  | VAL  |
| 6   | AG    | 128 | VAL  |
| 6   | AG    | 136 | PRO  |
| 6   | AG    | 143 | GLY  |
| 8   | AI    | 26  | ILE  |
| 15  | AP    | 113 | PRO  |
| 17  | AR    | 45  | VAL  |
| 20  | AU    | 51  | LEU  |
| 22  | AW    | 100 | ILE  |
| 28  | BE    | 71  | GLY  |
| 28  | BE    | 116 | VAL  |
| 28  | BE    | 161 | GLY  |
| 31  | BH    | 76  | VAL  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 33  | BL    | 91  | PRO  |
| 34  | BM    | 44  | PRO  |
| 36  | BO    | 97  | PRO  |
| 37  | BP    | 99  | PRO  |
| 44  | BW    | 43  | VAL  |
| 47  | BZ    | 8   | GLY  |
| 47  | BZ    | 73  | GLY  |
| 49  | B2    | 45  | GLY  |
| 5   | AF    | 197 | GLY  |
| 14  | AO    | 104 | VAL  |
| 27  | BD    | 142 | VAL  |
| 31  | BH    | 55  | PRO  |
| 31  | BH    | 126 | PRO  |
| 33  | BL    | 87  | GLY  |
| 37  | BP    | 106 | VAL  |
| 46  | BY    | 167 | PRO  |
| 50  | B3    | 28  | LYS  |
| 4   | AE    | 239 | VAL  |
| 8   | AI    | 65  | VAL  |
| 12  | AM    | 91  | PRO  |
| 14  | AO    | 96  | VAL  |
| 15  | AP    | 15  | VAL  |
| 15  | AP    | 85  | GLY  |
| 22  | AW    | 41  | ILE  |
| 26  | BC    | 14  | VAL  |
| 31  | BH    | 115 | VAL  |
| 37  | BP    | 52  | VAL  |
| 39  | BR    | 69  | VAL  |
| 42  | BU    | 90  | PRO  |
| 45  | BX    | 44  | ILE  |
| 46  | BY    | 129 | SER  |
| 46  | BY    | 177 | PRO  |
| 50  | B3    | 5   | ILE  |
| 50  | B3    | 54  | GLY  |
| 4   | AE    | 182 | ILE  |
| 11  | AL    | 90  | PRO  |
| 13  | AN    | 48  | ILE  |
| 15  | AP    | 53  | VAL  |
| 32  | BK    | 31  | LEU  |
| 36  | BO    | 126 | VAL  |
| 43  | BV    | 80  | PRO  |
| 45  | BX    | 18  | GLY  |

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed       | Rotameric | Outliers | Percentiles |    |
|-----|-------|----------------|-----------|----------|-------------|----|
| 4   | AE    | 202/220 (92%)  | 133 (66%) | 69 (34%) | 0           | 1  |
| 5   | AF    | 160/188 (85%)  | 121 (76%) | 39 (24%) | 1           | 4  |
| 6   | AG    | 180/181 (99%)  | 129 (72%) | 51 (28%) | 0           | 3  |
| 7   | AH    | 115/123 (94%)  | 76 (66%)  | 39 (34%) | 0           | 2  |
| 8   | AI    | 90/90 (100%)   | 62 (69%)  | 28 (31%) | 0           | 2  |
| 9   | AJ    | 126/127 (99%)  | 93 (74%)  | 33 (26%) | 0           | 3  |
| 10  | AK    | 119/119 (100%) | 85 (71%)  | 34 (29%) | 0           | 3  |
| 11  | AL    | 98/99 (99%)    | 74 (76%)  | 24 (24%) | 1           | 4  |
| 12  | AM    | 88/92 (96%)    | 67 (76%)  | 21 (24%) | 1           | 5  |
| 13  | AN    | 90/99 (91%)    | 75 (83%)  | 15 (17%) | 2           | 11 |
| 14  | AO    | 104/109 (95%)  | 79 (76%)  | 25 (24%) | 1           | 5  |
| 15  | AP    | 100/101 (99%)  | 75 (75%)  | 25 (25%) | 0           | 4  |
| 16  | AQ    | 49/50 (98%)    | 37 (76%)  | 12 (24%) | 1           | 4  |
| 17  | AR    | 79/80 (99%)    | 62 (78%)  | 17 (22%) | 1           | 6  |
| 18  | AS    | 72/74 (97%)    | 47 (65%)  | 25 (35%) | 0           | 1  |
| 19  | AT    | 96/97 (99%)    | 69 (72%)  | 27 (28%) | 0           | 3  |
| 20  | AU    | 64/77 (83%)    | 51 (80%)  | 13 (20%) | 1           | 7  |
| 21  | AV    | 71/80 (89%)    | 58 (82%)  | 13 (18%) | 2           | 9  |
| 22  | AW    | 76/82 (93%)    | 59 (78%)  | 17 (22%) | 1           | 6  |
| 23  | AX    | 19/22 (86%)    | 17 (90%)  | 2 (10%)  | 6           | 22 |
| 26  | BC    | 180/181 (99%)  | 147 (82%) | 33 (18%) | 2           | 9  |
| 27  | BD    | 215/218 (99%)  | 150 (70%) | 65 (30%) | 0           | 2  |
| 28  | BE    | 166/166 (100%) | 102 (61%) | 64 (39%) | 0           | 1  |
| 29  | BF    | 164/166 (99%)  | 103 (63%) | 61 (37%) | 0           | 1  |
| 30  | BG    | 156/156 (100%) | 111 (71%) | 45 (29%) | 0           | 2  |
| 31  | BH    | 143/148 (97%)  | 102 (71%) | 41 (29%) | 0           | 3  |

*Continued on next page...*

Continued from previous page...

| Mol | Chain | Analysed        | Rotameric  | Outliers   | Percentiles |    |
|-----|-------|-----------------|------------|------------|-------------|----|
| 32  | BK    | 124/124 (100%)  | 89 (72%)   | 35 (28%)   | 0           | 3  |
| 33  | BL    | 105/111 (95%)   | 87 (83%)   | 18 (17%)   | 2           | 10 |
| 34  | BM    | 118/119 (99%)   | 73 (62%)   | 45 (38%)   | 0           | 1  |
| 35  | BN    | 100/100 (100%)  | 62 (62%)   | 38 (38%)   | 0           | 1  |
| 36  | BO    | 111/116 (96%)   | 74 (67%)   | 37 (33%)   | 0           | 2  |
| 37  | BP    | 106/111 (96%)   | 65 (61%)   | 41 (39%)   | 0           | 1  |
| 38  | BQ    | 100/101 (99%)   | 70 (70%)   | 30 (30%)   | 0           | 2  |
| 39  | BR    | 87/88 (99%)     | 63 (72%)   | 24 (28%)   | 0           | 3  |
| 40  | BS    | 105/127 (83%)   | 67 (64%)   | 38 (36%)   | 0           | 1  |
| 41  | BT    | 93/94 (99%)     | 64 (69%)   | 29 (31%)   | 0           | 2  |
| 42  | BU    | 82/82 (100%)    | 58 (71%)   | 24 (29%)   | 0           | 2  |
| 43  | BV    | 90/92 (98%)     | 62 (69%)   | 28 (31%)   | 0           | 2  |
| 44  | BW    | 76/78 (97%)     | 54 (71%)   | 22 (29%)   | 0           | 2  |
| 45  | BX    | 91/91 (100%)    | 72 (79%)   | 19 (21%)   | 1           | 7  |
| 46  | BY    | 159/179 (89%)   | 116 (73%)  | 43 (27%)   | 0           | 3  |
| 47  | BZ    | 67/67 (100%)    | 49 (73%)   | 18 (27%)   | 0           | 3  |
| 48  | B1    | 62/62 (100%)    | 44 (71%)   | 18 (29%)   | 0           | 2  |
| 49  | B2    | 51/52 (98%)     | 36 (71%)   | 15 (29%)   | 0           | 2  |
| 50  | B3    | 63/63 (100%)    | 43 (68%)   | 20 (32%)   | 0           | 2  |
| 51  | B4    | 50/52 (96%)     | 33 (66%)   | 17 (34%)   | 0           | 1  |
| 52  | B5    | 48/52 (92%)     | 31 (65%)   | 17 (35%)   | 0           | 1  |
| 53  | B6    | 42/42 (100%)    | 30 (71%)   | 12 (29%)   | 0           | 3  |
| 54  | B7    | 54/55 (98%)     | 39 (72%)   | 15 (28%)   | 0           | 3  |
| 55  | B8    | 34/34 (100%)    | 28 (82%)   | 6 (18%)    | 2           | 10 |
| All | All   | 5040/5237 (96%) | 3593 (71%) | 1447 (29%) | 0           | 3  |

All (1447) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4   | AE    | 10  | LEU  |
| 4   | AE    | 11  | LEU  |
| 4   | AE    | 17  | PHE  |
| 4   | AE    | 20  | GLU  |
| 4   | AE    | 21  | ARG  |

Continued on next page...

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4   | AE    | 23  | ARG  |
| 4   | AE    | 25  | ASN  |
| 4   | AE    | 26  | PRO  |
| 4   | AE    | 32  | ILE  |
| 4   | AE    | 35  | GLU  |
| 4   | AE    | 36  | ARG  |
| 4   | AE    | 40  | HIS  |
| 4   | AE    | 44  | LEU  |
| 4   | AE    | 47  | THR  |
| 4   | AE    | 48  | MET  |
| 4   | AE    | 49  | GLU  |
| 4   | AE    | 52  | GLU  |
| 4   | AE    | 56  | ARG  |
| 4   | AE    | 57  | PHE  |
| 4   | AE    | 61  | LEU  |
| 4   | AE    | 64  | ARG  |
| 4   | AE    | 68  | ILE  |
| 4   | AE    | 69  | LEU  |
| 4   | AE    | 70  | PHE  |
| 4   | AE    | 74  | LYS  |
| 4   | AE    | 75  | LYS  |
| 4   | AE    | 80  | ILE  |
| 4   | AE    | 84  | GLU  |
| 4   | AE    | 91  | PRO  |
| 4   | AE    | 92  | TYR  |
| 4   | AE    | 101 | MET  |
| 4   | AE    | 102 | LEU  |
| 4   | AE    | 105 | PHE  |
| 4   | AE    | 111 | ARG  |
| 4   | AE    | 114 | ARG  |
| 4   | AE    | 116 | GLU  |
| 4   | AE    | 118 | LEU  |
| 4   | AE    | 122 | PHE  |
| 4   | AE    | 131 | PRO  |
| 4   | AE    | 132 | LYS  |
| 4   | AE    | 134 | GLU  |
| 4   | AE    | 135 | GLN  |
| 4   | AE    | 137 | ARG  |
| 4   | AE    | 147 | LYS  |
| 4   | AE    | 148 | TYR  |
| 4   | AE    | 152 | PHE  |
| 4   | AE    | 153 | ARG  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4   | AE    | 154 | LEU  |
| 4   | AE    | 158 | LEU  |
| 4   | AE    | 162 | ILE  |
| 4   | AE    | 168 | THR  |
| 4   | AE    | 169 | LYS  |
| 4   | AE    | 172 | ILE  |
| 4   | AE    | 181 | PHE  |
| 4   | AE    | 182 | ILE  |
| 4   | AE    | 185 | ILE  |
| 4   | AE    | 187 | LEU  |
| 4   | AE    | 189 | ASP  |
| 4   | AE    | 191 | ASP  |
| 4   | AE    | 194 | PRO  |
| 4   | AE    | 195 | ASP  |
| 4   | AE    | 196 | LEU  |
| 4   | AE    | 208 | ILE  |
| 4   | AE    | 209 | ARG  |
| 4   | AE    | 212 | GLN  |
| 4   | AE    | 217 | ARG  |
| 4   | AE    | 221 | LEU  |
| 4   | AE    | 222 | ILE  |
| 4   | AE    | 229 | VAL  |
| 5   | AF    | 5   | ILE  |
| 5   | AF    | 8   | ILE  |
| 5   | AF    | 10  | PHE  |
| 5   | AF    | 15  | THR  |
| 5   | AF    | 29  | TYR  |
| 5   | AF    | 33  | LEU  |
| 5   | AF    | 34  | LEU  |
| 5   | AF    | 35  | GLU  |
| 5   | AF    | 38  | ARG  |
| 5   | AF    | 46  | GLU  |
| 5   | AF    | 48  | TYR  |
| 5   | AF    | 52  | LEU  |
| 5   | AF    | 67  | THR  |
| 5   | AF    | 76  | VAL  |
| 5   | AF    | 82  | GLU  |
| 5   | AF    | 89  | GLU  |
| 5   | AF    | 91  | LEU  |
| 5   | AF    | 95  | THR  |
| 5   | AF    | 97  | LYS  |
| 5   | AF    | 99  | VAL  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 5   | AF    | 107 | GLN  |
| 5   | AF    | 125 | GLU  |
| 5   | AF    | 136 | GLN  |
| 5   | AF    | 139 | GLN  |
| 5   | AF    | 140 | ARG  |
| 5   | AF    | 142 | MET  |
| 5   | AF    | 164 | ARG  |
| 5   | AF    | 165 | THR  |
| 5   | AF    | 176 | HIS  |
| 5   | AF    | 178 | LEU  |
| 5   | AF    | 186 | PHE  |
| 5   | AF    | 188 | LEU  |
| 5   | AF    | 190 | ARG  |
| 5   | AF    | 193 | TYR  |
| 5   | AF    | 195 | VAL  |
| 5   | AF    | 196 | LEU  |
| 5   | AF    | 198 | VAL  |
| 5   | AF    | 201 | TYR  |
| 5   | AF    | 204 | LEU  |
| 6   | AG    | 5   | ILE  |
| 6   | AG    | 8   | VAL  |
| 6   | AG    | 9   | CYS  |
| 6   | AG    | 14  | ARG  |
| 6   | AG    | 15  | GLU  |
| 6   | AG    | 20  | TYR  |
| 6   | AG    | 25  | ARG  |
| 6   | AG    | 26  | CYS  |
| 6   | AG    | 29  | PRO  |
| 6   | AG    | 31  | CYS  |
| 6   | AG    | 33  | MET  |
| 6   | AG    | 47  | ARG  |
| 6   | AG    | 51  | PRO  |
| 6   | AG    | 58  | LEU  |
| 6   | AG    | 59  | ARG  |
| 6   | AG    | 61  | LYS  |
| 6   | AG    | 62  | GLN  |
| 6   | AG    | 63  | LYS  |
| 6   | AG    | 64  | LEU  |
| 6   | AG    | 68  | TYR  |
| 6   | AG    | 78  | LEU  |
| 6   | AG    | 83  | SER  |
| 6   | AG    | 85  | LYS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 6   | AG    | 101 | LEU  |
| 6   | AG    | 104 | VAL  |
| 6   | AG    | 107 | ARG  |
| 6   | AG    | 108 | LEU  |
| 6   | AG    | 112 | VAL  |
| 6   | AG    | 114 | ARG  |
| 6   | AG    | 116 | GLN  |
| 6   | AG    | 120 | LEU  |
| 6   | AG    | 131 | ARG  |
| 6   | AG    | 132 | ARG  |
| 6   | AG    | 135 | LEU  |
| 6   | AG    | 141 | ARG  |
| 6   | AG    | 142 | PRO  |
| 6   | AG    | 146 | ILE  |
| 6   | AG    | 154 | ASN  |
| 6   | AG    | 155 | LEU  |
| 6   | AG    | 168 | ARG  |
| 6   | AG    | 173 | TRP  |
| 6   | AG    | 175 | SER  |
| 6   | AG    | 178 | VAL  |
| 6   | AG    | 181 | MET  |
| 6   | AG    | 182 | LYS  |
| 6   | AG    | 190 | ASP  |
| 6   | AG    | 191 | ARG  |
| 6   | AG    | 193 | ASP  |
| 6   | AG    | 194 | LEU  |
| 6   | AG    | 196 | LEU  |
| 6   | AG    | 198 | VAL  |
| 7   | AH    | 5   | ASP  |
| 7   | AH    | 6   | PHE  |
| 7   | AH    | 7   | GLU  |
| 7   | AH    | 15  | ARG  |
| 7   | AH    | 16  | THR  |
| 7   | AH    | 25  | ARG  |
| 7   | AH    | 26  | PHE  |
| 7   | AH    | 27  | ARG  |
| 7   | AH    | 28  | PHE  |
| 7   | AH    | 31  | LEU  |
| 7   | AH    | 34  | VAL  |
| 7   | AH    | 41  | VAL  |
| 7   | AH    | 56  | GLN  |
| 7   | AH    | 60  | TYR  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 7   | AH    | 63  | ARG  |
| 7   | AH    | 64  | ARG  |
| 7   | AH    | 67  | VAL  |
| 7   | AH    | 78  | HIS  |
| 7   | AH    | 79  | GLU  |
| 7   | AH    | 80  | ILE  |
| 7   | AH    | 81  | GLU  |
| 7   | AH    | 89  | ILE  |
| 7   | AH    | 91  | LEU  |
| 7   | AH    | 101 | ILE  |
| 7   | AH    | 105 | VAL  |
| 7   | AH    | 111 | GLU  |
| 7   | AH    | 112 | LEU  |
| 7   | AH    | 119 | LEU  |
| 7   | AH    | 121 | LYS  |
| 7   | AH    | 128 | PRO  |
| 7   | AH    | 129 | ILE  |
| 7   | AH    | 131 | ILE  |
| 7   | AH    | 133 | TYR  |
| 7   | AH    | 139 | LEU  |
| 7   | AH    | 141 | GLN  |
| 7   | AH    | 142 | LEU  |
| 7   | AH    | 143 | ARG  |
| 7   | AH    | 145 | LYS  |
| 7   | AH    | 150 | ARG  |
| 8   | AI    | 2   | ARG  |
| 8   | AI    | 4   | TYR  |
| 8   | AI    | 5   | GLU  |
| 8   | AI    | 6   | VAL  |
| 8   | AI    | 8   | ILE  |
| 8   | AI    | 10  | LEU  |
| 8   | AI    | 13  | ASN  |
| 8   | AI    | 14  | LEU  |
| 8   | AI    | 37  | VAL  |
| 8   | AI    | 40  | VAL  |
| 8   | AI    | 42  | GLU  |
| 8   | AI    | 47  | ARG  |
| 8   | AI    | 48  | LEU  |
| 8   | AI    | 50  | TYR  |
| 8   | AI    | 55  | ASP  |
| 8   | AI    | 57  | GLN  |
| 8   | AI    | 60  | PHE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 8   | AI    | 65  | VAL  |
| 8   | AI    | 66  | GLU  |
| 8   | AI    | 69  | GLU  |
| 8   | AI    | 74  | ASP  |
| 8   | AI    | 75  | LEU  |
| 8   | AI    | 79  | LEU  |
| 8   | AI    | 83  | ASP  |
| 8   | AI    | 88  | VAL  |
| 8   | AI    | 94  | GLN  |
| 8   | AI    | 95  | GLU  |
| 8   | AI    | 98  | LEU  |
| 9   | AJ    | 5   | ARG  |
| 9   | AJ    | 6   | ARG  |
| 9   | AJ    | 12  | LEU  |
| 9   | AJ    | 14  | PRO  |
| 9   | AJ    | 17  | VAL  |
| 9   | AJ    | 22  | LEU  |
| 9   | AJ    | 36  | LYS  |
| 9   | AJ    | 41  | ARG  |
| 9   | AJ    | 47  | CYS  |
| 9   | AJ    | 51  | GLN  |
| 9   | AJ    | 54  | THR  |
| 9   | AJ    | 56  | GLN  |
| 9   | AJ    | 69  | VAL  |
| 9   | AJ    | 72  | ARG  |
| 9   | AJ    | 74  | GLU  |
| 9   | AJ    | 76  | ARG  |
| 9   | AJ    | 80  | VAL  |
| 9   | AJ    | 99  | LEU  |
| 9   | AJ    | 101 | LEU  |
| 9   | AJ    | 103 | TRP  |
| 9   | AJ    | 106 | GLN  |
| 9   | AJ    | 111 | ARG  |
| 9   | AJ    | 113 | GLU  |
| 9   | AJ    | 123 | GLU  |
| 9   | AJ    | 124 | LEU  |
| 9   | AJ    | 126 | ASP  |
| 9   | AJ    | 139 | GLU  |
| 9   | AJ    | 140 | ASP  |
| 9   | AJ    | 143 | ARG  |
| 9   | AJ    | 146 | GLU  |
| 9   | AJ    | 149 | ARG  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 9   | AJ    | 155 | ARG  |
| 9   | AJ    | 156 | TRP  |
| 10  | AK    | 1   | MET  |
| 10  | AK    | 4   | ASP  |
| 10  | AK    | 6   | ILE  |
| 10  | AK    | 14  | ARG  |
| 10  | AK    | 15  | ASN  |
| 10  | AK    | 18  | ARG  |
| 10  | AK    | 25  | ASP  |
| 10  | AK    | 26  | VAL  |
| 10  | AK    | 31  | PHE  |
| 10  | AK    | 32  | LYS  |
| 10  | AK    | 33  | GLU  |
| 10  | AK    | 36  | LEU  |
| 10  | AK    | 37  | ARG  |
| 10  | AK    | 38  | ILE  |
| 10  | AK    | 39  | LEU  |
| 10  | AK    | 45  | ILE  |
| 10  | AK    | 49  | GLU  |
| 10  | AK    | 50  | ARG  |
| 10  | AK    | 63  | LEU  |
| 10  | AK    | 70  | GLN  |
| 10  | AK    | 80  | ILE  |
| 10  | AK    | 84  | ARG  |
| 10  | AK    | 88  | LYS  |
| 10  | AK    | 92  | ARG  |
| 10  | AK    | 98  | LYS  |
| 10  | AK    | 100 | ILE  |
| 10  | AK    | 102 | ARG  |
| 10  | AK    | 103 | VAL  |
| 10  | AK    | 104 | ARG  |
| 10  | AK    | 107 | LEU  |
| 10  | AK    | 111 | ILE  |
| 10  | AK    | 119 | LEU  |
| 10  | AK    | 122 | ARG  |
| 10  | AK    | 136 | GLU  |
| 11  | AL    | 4   | TYR  |
| 11  | AL    | 7   | THR  |
| 11  | AL    | 11  | LYS  |
| 11  | AL    | 12  | GLU  |
| 11  | AL    | 19  | LEU  |
| 11  | AL    | 21  | PRO  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 11  | AL    | 28  | VAL  |
| 11  | AL    | 32  | ASP  |
| 11  | AL    | 37  | PHE  |
| 11  | AL    | 47  | LEU  |
| 11  | AL    | 54  | ASP  |
| 11  | AL    | 63  | ILE  |
| 11  | AL    | 64  | THR  |
| 11  | AL    | 75  | ASP  |
| 11  | AL    | 79  | LEU  |
| 11  | AL    | 89  | ASN  |
| 11  | AL    | 98  | PRO  |
| 11  | AL    | 99  | LEU  |
| 11  | AL    | 101 | PHE  |
| 11  | AL    | 102 | LEU  |
| 11  | AL    | 105 | ASP  |
| 11  | AL    | 110 | GLU  |
| 11  | AL    | 116 | LYS  |
| 11  | AL    | 117 | HIS  |
| 12  | AM    | 3   | LYS  |
| 12  | AM    | 4   | ILE  |
| 12  | AM    | 5   | ARG  |
| 12  | AM    | 8   | LEU  |
| 12  | AM    | 9   | ARG  |
| 12  | AM    | 11  | PHE  |
| 12  | AM    | 14  | LYS  |
| 12  | AM    | 33  | GLN  |
| 12  | AM    | 45  | ARG  |
| 12  | AM    | 47  | PHE  |
| 12  | AM    | 49  | VAL  |
| 12  | AM    | 60  | ARG  |
| 12  | AM    | 62  | HIS  |
| 12  | AM    | 63  | PHE  |
| 12  | AM    | 79  | ARG  |
| 12  | AM    | 81  | THR  |
| 12  | AM    | 82  | ILE  |
| 12  | AM    | 83  | GLU  |
| 12  | AM    | 84  | GLN  |
| 12  | AM    | 85  | LEU  |
| 12  | AM    | 95  | GLU  |
| 13  | AN    | 13  | GLN  |
| 13  | AN    | 18  | ARG  |
| 13  | AN    | 22  | HIS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 13  | AN    | 39  | PRO  |
| 13  | AN    | 40  | ILE  |
| 13  | AN    | 42  | TRP  |
| 13  | AN    | 50  | TYR  |
| 13  | AN    | 54  | ARG  |
| 13  | AN    | 62  | GLN  |
| 13  | AN    | 67  | ASP  |
| 13  | AN    | 78  | GLN  |
| 13  | AN    | 82  | VAL  |
| 13  | AN    | 99  | GLN  |
| 13  | AN    | 116 | HIS  |
| 13  | AN    | 125 | PHE  |
| 14  | AO    | 8   | ASN  |
| 14  | AO    | 10  | LEU  |
| 14  | AO    | 16  | GLU  |
| 14  | AO    | 23  | LYS  |
| 14  | AO    | 24  | VAL  |
| 14  | AO    | 32  | PHE  |
| 14  | AO    | 38  | THR  |
| 14  | AO    | 42  | THR  |
| 14  | AO    | 53  | ARG  |
| 14  | AO    | 60  | LEU  |
| 14  | AO    | 64  | TYR  |
| 14  | AO    | 65  | GLU  |
| 14  | AO    | 66  | VAL  |
| 14  | AO    | 73  | GLU  |
| 14  | AO    | 79  | GLU  |
| 14  | AO    | 84  | LEU  |
| 14  | AO    | 85  | ILE  |
| 14  | AO    | 93  | LEU  |
| 14  | AO    | 98  | TYR  |
| 14  | AO    | 100 | ILE  |
| 14  | AO    | 101 | VAL  |
| 14  | AO    | 113 | ARG  |
| 14  | AO    | 119 | LYS  |
| 14  | AO    | 126 | LYS  |
| 14  | AO    | 127 | GLU  |
| 15  | AP    | 4   | ILE  |
| 15  | AP    | 8   | GLU  |
| 15  | AP    | 9   | ILE  |
| 15  | AP    | 11  | ARG  |
| 15  | AP    | 25  | ILE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 15  | AP    | 35  | GLU  |
| 15  | AP    | 47  | ASP  |
| 15  | AP    | 48  | LEU  |
| 15  | AP    | 49  | THR  |
| 15  | AP    | 61  | GLU  |
| 15  | AP    | 64  | TRP  |
| 15  | AP    | 66  | LEU  |
| 15  | AP    | 73  | GLU  |
| 15  | AP    | 77  | ASN  |
| 15  | AP    | 81  | LEU  |
| 15  | AP    | 88  | ARG  |
| 15  | AP    | 96  | LEU  |
| 15  | AP    | 99  | ARG  |
| 15  | AP    | 101 | GLN  |
| 15  | AP    | 108 | ARG  |
| 15  | AP    | 110 | ARG  |
| 15  | AP    | 115 | LYS  |
| 15  | AP    | 121 | LYS  |
| 15  | AP    | 124 | PRO  |
| 15  | AP    | 126 | LYS  |
| 16  | AQ    | 11  | LYS  |
| 16  | AQ    | 18  | VAL  |
| 16  | AQ    | 22  | THR  |
| 16  | AQ    | 24  | CYS  |
| 16  | AQ    | 29  | ARG  |
| 16  | AQ    | 34  | TYR  |
| 16  | AQ    | 40  | CYS  |
| 16  | AQ    | 43  | CYS  |
| 16  | AQ    | 45  | ARG  |
| 16  | AQ    | 49  | HIS  |
| 16  | AQ    | 54  | PRO  |
| 16  | AQ    | 56  | VAL  |
| 17  | AR    | 3   | ILE  |
| 17  | AR    | 4   | THR  |
| 17  | AR    | 5   | LYS  |
| 17  | AR    | 13  | GLN  |
| 17  | AR    | 14  | GLU  |
| 17  | AR    | 26  | GLU  |
| 17  | AR    | 36  | ILE  |
| 17  | AR    | 39  | LEU  |
| 17  | AR    | 41  | GLU  |
| 17  | AR    | 42  | HIS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 17  | AR    | 44  | LYS  |
| 17  | AR    | 49  | ASP  |
| 17  | AR    | 64  | ARG  |
| 17  | AR    | 66  | LEU  |
| 17  | AR    | 73  | GLU  |
| 17  | AR    | 78  | TYR  |
| 17  | AR    | 79  | ARG  |
| 18  | AS    | 2   | VAL  |
| 18  | AS    | 3   | LYS  |
| 18  | AS    | 4   | ILE  |
| 18  | AS    | 6   | LEU  |
| 18  | AS    | 14  | ASN  |
| 18  | AS    | 15  | PRO  |
| 18  | AS    | 18  | ARG  |
| 18  | AS    | 27  | LYS  |
| 18  | AS    | 31  | LYS  |
| 18  | AS    | 32  | TYR  |
| 18  | AS    | 36  | ILE  |
| 18  | AS    | 39  | TYR  |
| 18  | AS    | 40  | ASP  |
| 18  | AS    | 51  | VAL  |
| 18  | AS    | 52  | ASP  |
| 18  | AS    | 54  | GLU  |
| 18  | AS    | 55  | ARG  |
| 18  | AS    | 59  | TRP  |
| 18  | AS    | 62  | VAL  |
| 18  | AS    | 65  | GLN  |
| 18  | AS    | 66  | PRO  |
| 18  | AS    | 69  | THR  |
| 18  | AS    | 72  | ARG  |
| 18  | AS    | 75  | ARG  |
| 18  | AS    | 82  | GLN  |
| 19  | AT    | 12  | SER  |
| 19  | AT    | 15  | MET  |
| 19  | AT    | 18  | THR  |
| 19  | AT    | 24  | GLU  |
| 19  | AT    | 25  | ARG  |
| 19  | AT    | 27  | PHE  |
| 19  | AT    | 28  | PRO  |
| 19  | AT    | 36  | ILE  |
| 19  | AT    | 40  | LYS  |
| 19  | AT    | 43  | LEU  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 19  | AT    | 48  | GLU  |
| 19  | AT    | 51  | TYR  |
| 19  | AT    | 57  | VAL  |
| 19  | AT    | 58  | GLU  |
| 19  | AT    | 60  | ILE  |
| 19  | AT    | 62  | SER  |
| 19  | AT    | 67  | LYS  |
| 19  | AT    | 69  | LYS  |
| 19  | AT    | 84  | LEU  |
| 19  | AT    | 86  | GLU  |
| 19  | AT    | 87  | LYS  |
| 19  | AT    | 93  | GLN  |
| 19  | AT    | 95  | TYR  |
| 19  | AT    | 96  | GLN  |
| 19  | AT    | 98  | LEU  |
| 19  | AT    | 100 | LYS  |
| 19  | AT    | 101 | ARG  |
| 20  | AU    | 28  | GLU  |
| 20  | AU    | 36  | ASN  |
| 20  | AU    | 37  | VAL  |
| 20  | AU    | 38  | GLU  |
| 20  | AU    | 49  | LYS  |
| 20  | AU    | 55  | ARG  |
| 20  | AU    | 62  | GLU  |
| 20  | AU    | 63  | GLN  |
| 20  | AU    | 72  | ARG  |
| 20  | AU    | 79  | LEU  |
| 20  | AU    | 80  | PRO  |
| 20  | AU    | 81  | PHE  |
| 20  | AU    | 83  | GLU  |
| 21  | AV    | 12  | ASP  |
| 21  | AV    | 15  | LEU  |
| 21  | AV    | 16  | LEU  |
| 21  | AV    | 17  | GLU  |
| 21  | AV    | 18  | LYS  |
| 21  | AV    | 19  | VAL  |
| 21  | AV    | 25  | LYS  |
| 21  | AV    | 37  | ARG  |
| 21  | AV    | 41  | VAL  |
| 21  | AV    | 42  | PRO  |
| 21  | AV    | 43  | GLU  |
| 21  | AV    | 57  | HIS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 21  | AV    | 74  | PHE  |
| 22  | AW    | 13  | LEU  |
| 22  | AW    | 23  | ARG  |
| 22  | AW    | 25  | ARG  |
| 22  | AW    | 30  | LYS  |
| 22  | AW    | 35  | THR  |
| 22  | AW    | 42  | GLN  |
| 22  | AW    | 46  | GLU  |
| 22  | AW    | 51  | GLU  |
| 22  | AW    | 56  | MET  |
| 22  | AW    | 63  | ILE  |
| 22  | AW    | 71  | THR  |
| 22  | AW    | 73  | HIS  |
| 22  | AW    | 79  | ARG  |
| 22  | AW    | 84  | LEU  |
| 22  | AW    | 87  | LYS  |
| 22  | AW    | 88  | VAL  |
| 22  | AW    | 91  | LEU  |
| 23  | AX    | 9   | ARG  |
| 23  | AX    | 10  | ARG  |
| 26  | BC    | 6   | ARG  |
| 26  | BC    | 15  | ASP  |
| 26  | BC    | 20  | TYR  |
| 26  | BC    | 27  | HIS  |
| 26  | BC    | 46  | LYS  |
| 26  | BC    | 58  | VAL  |
| 26  | BC    | 59  | ARG  |
| 26  | BC    | 70  | LYS  |
| 26  | BC    | 81  | GLU  |
| 26  | BC    | 83  | ILE  |
| 26  | BC    | 92  | ASP  |
| 26  | BC    | 99  | ILE  |
| 26  | BC    | 101 | GLN  |
| 26  | BC    | 102 | LYS  |
| 26  | BC    | 108 | MET  |
| 26  | BC    | 125 | SER  |
| 26  | BC    | 130 | ILE  |
| 26  | BC    | 137 | LEU  |
| 26  | BC    | 144 | THR  |
| 26  | BC    | 155 | GLU  |
| 26  | BC    | 160 | ARG  |
| 26  | BC    | 161 | ILE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 26  | BC    | 163 | PHE  |
| 26  | BC    | 164 | ARG  |
| 26  | BC    | 166 | ASP  |
| 26  | BC    | 180 | PHE  |
| 26  | BC    | 189 | ILE  |
| 26  | BC    | 190 | ARG  |
| 26  | BC    | 202 | GLU  |
| 26  | BC    | 209 | LEU  |
| 26  | BC    | 212 | VAL  |
| 26  | BC    | 213 | TYR  |
| 26  | BC    | 222 | VAL  |
| 27  | BD    | 17  | THR  |
| 27  | BD    | 23  | GLU  |
| 27  | BD    | 31  | LYS  |
| 27  | BD    | 34  | VAL  |
| 27  | BD    | 37  | LEU  |
| 27  | BD    | 39  | LYS  |
| 27  | BD    | 44  | ASN  |
| 27  | BD    | 46  | GLN  |
| 27  | BD    | 51  | VAL  |
| 27  | BD    | 53  | PHE  |
| 27  | BD    | 59  | LYS  |
| 27  | BD    | 63  | ARG  |
| 27  | BD    | 70  | TRP  |
| 27  | BD    | 73  | VAL  |
| 27  | BD    | 84  | TYR  |
| 27  | BD    | 87  | ASN  |
| 27  | BD    | 91  | ARG  |
| 27  | BD    | 92  | ILE  |
| 27  | BD    | 94  | LEU  |
| 27  | BD    | 95  | LEU  |
| 27  | BD    | 106 | ILE  |
| 27  | BD    | 109 | ASP  |
| 27  | BD    | 115 | GLN  |
| 27  | BD    | 116 | GLN  |
| 27  | BD    | 117 | VAL  |
| 27  | BD    | 118 | VAL  |
| 27  | BD    | 121 | PRO  |
| 27  | BD    | 131 | LEU  |
| 27  | BD    | 134 | ARG  |
| 27  | BD    | 145 | VAL  |
| 27  | BD    | 146 | GLU  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 27  | BD    | 147 | LEU  |
| 27  | BD    | 155 | LEU  |
| 27  | BD    | 164 | GLN  |
| 27  | BD    | 169 | GLU  |
| 27  | BD    | 175 | LEU  |
| 27  | BD    | 176 | ARG  |
| 27  | BD    | 177 | LEU  |
| 27  | BD    | 179 | SER  |
| 27  | BD    | 181 | GLU  |
| 27  | BD    | 186 | HIS  |
| 27  | BD    | 188 | GLU  |
| 27  | BD    | 192 | THR  |
| 27  | BD    | 200 | ASP  |
| 27  | BD    | 202 | LYS  |
| 27  | BD    | 206 | LEU  |
| 27  | BD    | 217 | ARG  |
| 27  | BD    | 220 | HIS  |
| 27  | BD    | 226 | MET  |
| 27  | BD    | 229 | VAL  |
| 27  | BD    | 230 | ASP  |
| 27  | BD    | 232 | PRO  |
| 27  | BD    | 233 | HIS  |
| 27  | BD    | 239 | ARG  |
| 27  | BD    | 249 | PRO  |
| 27  | BD    | 250 | TRP  |
| 27  | BD    | 252 | TRP  |
| 27  | BD    | 253 | GLN  |
| 27  | BD    | 254 | THR  |
| 27  | BD    | 258 | LYS  |
| 27  | BD    | 259 | THR  |
| 27  | BD    | 260 | ARG  |
| 27  | BD    | 264 | LYS  |
| 27  | BD    | 270 | ILE  |
| 27  | BD    | 273 | ARG  |
| 28  | BE    | 2   | LYS  |
| 28  | BE    | 4   | ILE  |
| 28  | BE    | 5   | LEU  |
| 28  | BE    | 7   | VAL  |
| 28  | BE    | 8   | LYS  |
| 28  | BE    | 12  | THR  |
| 28  | BE    | 13  | ARG  |
| 28  | BE    | 14  | ILE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 28  | BE    | 17  | ASP  |
| 28  | BE    | 22  | PRO  |
| 28  | BE    | 27  | LEU  |
| 28  | BE    | 33  | VAL  |
| 28  | BE    | 35  | GLN  |
| 28  | BE    | 38  | THR  |
| 28  | BE    | 41  | LYS  |
| 28  | BE    | 45  | THR  |
| 28  | BE    | 48  | GLN  |
| 28  | BE    | 49  | LEU  |
| 28  | BE    | 51  | PHE  |
| 28  | BE    | 53  | PRO  |
| 28  | BE    | 56  | PRO  |
| 28  | BE    | 66  | HIS  |
| 28  | BE    | 77  | ILE  |
| 28  | BE    | 78  | LEU  |
| 28  | BE    | 80  | GLU  |
| 28  | BE    | 91  | VAL  |
| 28  | BE    | 96  | PHE  |
| 28  | BE    | 102 | VAL  |
| 28  | BE    | 108 | SER  |
| 28  | BE    | 113 | PHE  |
| 28  | BE    | 116 | VAL  |
| 28  | BE    | 118 | LYS  |
| 28  | BE    | 119 | ARG  |
| 28  | BE    | 120 | TRP  |
| 28  | BE    | 121 | ASN  |
| 28  | BE    | 122 | PHE  |
| 28  | BE    | 126 | PRO  |
| 28  | BE    | 129 | HIS  |
| 28  | BE    | 134 | ILE  |
| 28  | BE    | 135 | HIS  |
| 28  | BE    | 136 | ARG  |
| 28  | BE    | 137 | HIS  |
| 28  | BE    | 141 | ILE  |
| 28  | BE    | 143 | ASN  |
| 28  | BE    | 149 | ARG  |
| 28  | BE    | 150 | VAL  |
| 28  | BE    | 152 | LYS  |
| 28  | BE    | 154 | LYS  |
| 28  | BE    | 163 | GLU  |
| 28  | BE    | 165 | VAL  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 28  | BE    | 170 | LEU  |
| 28  | BE    | 171 | GLU  |
| 28  | BE    | 173 | VAL  |
| 28  | BE    | 176 | ILE  |
| 28  | BE    | 179 | GLU  |
| 28  | BE    | 180 | ASN  |
| 28  | BE    | 181 | LEU  |
| 28  | BE    | 184 | VAL  |
| 28  | BE    | 185 | LYS  |
| 28  | BE    | 191 | PRO  |
| 28  | BE    | 195 | LEU  |
| 28  | BE    | 197 | ILE  |
| 28  | BE    | 199 | ARG  |
| 28  | BE    | 202 | LYS  |
| 29  | BF    | 8   | GLN  |
| 29  | BF    | 14  | PRO  |
| 29  | BF    | 17  | ARG  |
| 29  | BF    | 19  | GLU  |
| 29  | BF    | 20  | LEU  |
| 29  | BF    | 23  | ASP  |
| 29  | BF    | 27  | GLU  |
| 29  | BF    | 29  | ASN  |
| 29  | BF    | 30  | PRO  |
| 29  | BF    | 33  | LEU  |
| 29  | BF    | 34  | TRP  |
| 29  | BF    | 35  | GLU  |
| 29  | BF    | 39  | TRP  |
| 29  | BF    | 46  | ARG  |
| 29  | BF    | 60  | SER  |
| 29  | BF    | 64  | ILE  |
| 29  | BF    | 67  | GLN  |
| 29  | BF    | 69  | HIS  |
| 29  | BF    | 74  | ARG  |
| 29  | BF    | 75  | HIS  |
| 29  | BF    | 77  | ASP  |
| 29  | BF    | 78  | ILE  |
| 29  | BF    | 82  | ILE  |
| 29  | BF    | 83  | PHE  |
| 29  | BF    | 88  | VAL  |
| 29  | BF    | 95  | ARG  |
| 29  | BF    | 102 | PRO  |
| 29  | BF    | 105 | VAL  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 29  | BF    | 106 | ARG  |
| 29  | BF    | 108 | LYS  |
| 29  | BF    | 112 | MET  |
| 29  | BF    | 117 | ARG  |
| 29  | BF    | 119 | ARG  |
| 29  | BF    | 120 | GLU  |
| 29  | BF    | 122 | LYS  |
| 29  | BF    | 124 | LEU  |
| 29  | BF    | 126 | VAL  |
| 29  | BF    | 127 | GLU  |
| 29  | BF    | 133 | ASN  |
| 29  | BF    | 137 | LYS  |
| 29  | BF    | 138 | GLU  |
| 29  | BF    | 140 | LEU  |
| 29  | BF    | 152 | GLU  |
| 29  | BF    | 155 | LEU  |
| 29  | BF    | 156 | LEU  |
| 29  | BF    | 157 | VAL  |
| 29  | BF    | 158 | THR  |
| 29  | BF    | 168 | ARG  |
| 29  | BF    | 170 | LEU  |
| 29  | BF    | 175 | THR  |
| 29  | BF    | 178 | PRO  |
| 29  | BF    | 181 | LEU  |
| 29  | BF    | 183 | VAL  |
| 29  | BF    | 184 | TYR  |
| 29  | BF    | 188 | ARG  |
| 29  | BF    | 192 | LEU  |
| 29  | BF    | 197 | ASP  |
| 29  | BF    | 200 | GLU  |
| 29  | BF    | 203 | GLN  |
| 29  | BF    | 204 | ASN  |
| 29  | BF    | 206 | ILE  |
| 30  | BG    | 3   | LEU  |
| 30  | BG    | 8   | LYS  |
| 30  | BG    | 12  | TYR  |
| 30  | BG    | 13  | GLU  |
| 30  | BG    | 14  | GLU  |
| 30  | BG    | 16  | ARG  |
| 30  | BG    | 20  | ILE  |
| 30  | BG    | 22  | ARG  |
| 30  | BG    | 25  | TYR  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 30  | BG    | 32  | PRO  |
| 30  | BG    | 33  | ARG  |
| 30  | BG    | 34  | LEU  |
| 30  | BG    | 36  | LYS  |
| 30  | BG    | 39  | ILE  |
| 30  | BG    | 41  | GLN  |
| 30  | BG    | 51  | ARG  |
| 30  | BG    | 54  | GLU  |
| 30  | BG    | 55  | LYS  |
| 30  | BG    | 62  | LEU  |
| 30  | BG    | 63  | ILE  |
| 30  | BG    | 68  | PRO  |
| 30  | BG    | 77  | ILE  |
| 30  | BG    | 82  | LEU  |
| 30  | BG    | 91  | ARG  |
| 30  | BG    | 92  | VAL  |
| 30  | BG    | 94  | LEU  |
| 30  | BG    | 96  | ARG  |
| 30  | BG    | 101 | ILE  |
| 30  | BG    | 102 | PHE  |
| 30  | BG    | 103 | LEU  |
| 30  | BG    | 109 | VAL  |
| 30  | BG    | 117 | PHE  |
| 30  | BG    | 120 | LEU  |
| 30  | BG    | 126 | ASP  |
| 30  | BG    | 128 | ARG  |
| 30  | BG    | 133 | LEU  |
| 30  | BG    | 135 | LEU  |
| 30  | BG    | 139 | LEU  |
| 30  | BG    | 143 | GLU  |
| 30  | BG    | 144 | ILE  |
| 30  | BG    | 148 | MET  |
| 30  | BG    | 152 | LEU  |
| 30  | BG    | 153 | ARG  |
| 30  | BG    | 174 | GLU  |
| 30  | BG    | 181 | ARG  |
| 31  | BH    | 4   | ILE  |
| 31  | BH    | 7   | LEU  |
| 31  | BH    | 11  | VAL  |
| 31  | BH    | 13  | LYS  |
| 31  | BH    | 18  | GLU  |
| 31  | BH    | 25  | LYS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 31  | BH    | 32  | GLU  |
| 31  | BH    | 35  | VAL  |
| 31  | BH    | 37  | VAL  |
| 31  | BH    | 40  | GLU  |
| 31  | BH    | 45  | VAL  |
| 31  | BH    | 46  | GLU  |
| 31  | BH    | 50  | VAL  |
| 31  | BH    | 52  | VAL  |
| 31  | BH    | 53  | GLU  |
| 31  | BH    | 68  | THR  |
| 31  | BH    | 69  | ARG  |
| 31  | BH    | 74  | ASN  |
| 31  | BH    | 83  | TYR  |
| 31  | BH    | 85  | LYS  |
| 31  | BH    | 89  | ILE  |
| 31  | BH    | 90  | LYS  |
| 31  | BH    | 94  | TYR  |
| 31  | BH    | 95  | ARG  |
| 31  | BH    | 103 | LEU  |
| 31  | BH    | 105 | LEU  |
| 31  | BH    | 111 | HIS  |
| 31  | BH    | 115 | VAL  |
| 31  | BH    | 116 | GLU  |
| 31  | BH    | 125 | VAL  |
| 31  | BH    | 131 | VAL  |
| 31  | BH    | 132 | ARG  |
| 31  | BH    | 136 | ILE  |
| 31  | BH    | 153 | LYS  |
| 31  | BH    | 157 | TYR  |
| 31  | BH    | 158 | HIS  |
| 31  | BH    | 162 | ILE  |
| 31  | BH    | 164 | TYR  |
| 31  | BH    | 167 | GLU  |
| 31  | BH    | 168 | PRO  |
| 31  | BH    | 172 | LYS  |
| 32  | BK    | 4   | ILE  |
| 32  | BK    | 5   | LEU  |
| 32  | BK    | 6   | LEU  |
| 32  | BK    | 11  | ASN  |
| 32  | BK    | 12  | LEU  |
| 32  | BK    | 20  | ASP  |
| 32  | BK    | 25  | TYR  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 32  | BK    | 27  | ARG  |
| 32  | BK    | 29  | TYR  |
| 32  | BK    | 30  | LEU  |
| 32  | BK    | 35  | LEU  |
| 32  | BK    | 38  | LEU  |
| 32  | BK    | 45  | LYS  |
| 32  | BK    | 48  | GLU  |
| 32  | BK    | 60  | GLU  |
| 32  | BK    | 66  | GLU  |
| 32  | BK    | 70  | LYS  |
| 32  | BK    | 75  | LEU  |
| 32  | BK    | 77  | LEU  |
| 32  | BK    | 78  | THR  |
| 32  | BK    | 79  | ILE  |
| 32  | BK    | 81  | VAL  |
| 32  | BK    | 85  | GLU  |
| 32  | BK    | 114 | LEU  |
| 32  | BK    | 117 | GLU  |
| 32  | BK    | 125 | GLU  |
| 32  | BK    | 128 | LEU  |
| 32  | BK    | 129 | THR  |
| 32  | BK    | 130 | TYR  |
| 32  | BK    | 131 | LYS  |
| 32  | BK    | 134 | PRO  |
| 32  | BK    | 135 | GLU  |
| 32  | BK    | 142 | VAL  |
| 32  | BK    | 145 | VAL  |
| 32  | BK    | 147 | GLN  |
| 33  | BL    | 4   | VAL  |
| 33  | BL    | 10  | LEU  |
| 33  | BL    | 12  | LEU  |
| 33  | BL    | 29  | GLN  |
| 33  | BL    | 38  | VAL  |
| 33  | BL    | 56  | GLU  |
| 33  | BL    | 66  | THR  |
| 33  | BL    | 73  | PRO  |
| 33  | BL    | 77  | LEU  |
| 33  | BL    | 91  | PRO  |
| 33  | BL    | 101 | TRP  |
| 33  | BL    | 105 | LEU  |
| 33  | BL    | 113 | PRO  |
| 33  | BL    | 115 | LEU  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 33  | BL    | 116 | ASN  |
| 33  | BL    | 117 | THR  |
| 33  | BL    | 118 | THR  |
| 33  | BL    | 120 | LEU  |
| 34  | BM    | 2   | LYS  |
| 34  | BM    | 5   | VAL  |
| 34  | BM    | 7   | LYS  |
| 34  | BM    | 8   | GLN  |
| 34  | BM    | 12  | ARG  |
| 34  | BM    | 13  | TRP  |
| 34  | BM    | 14  | VAL  |
| 34  | BM    | 15  | LEU  |
| 34  | BM    | 16  | ILE  |
| 34  | BM    | 17  | ASP  |
| 34  | BM    | 22  | THR  |
| 34  | BM    | 25  | ARG  |
| 34  | BM    | 28  | THR  |
| 34  | BM    | 32  | THR  |
| 34  | BM    | 33  | LEU  |
| 34  | BM    | 35  | ARG  |
| 34  | BM    | 37  | LYS  |
| 34  | BM    | 39  | ARG  |
| 34  | BM    | 42  | TRP  |
| 34  | BM    | 43  | THR  |
| 34  | BM    | 45  | ASN  |
| 34  | BM    | 48  | MET  |
| 34  | BM    | 52  | VAL  |
| 34  | BM    | 55  | VAL  |
| 34  | BM    | 59  | LYS  |
| 34  | BM    | 67  | LEU  |
| 34  | BM    | 69  | GLN  |
| 34  | BM    | 72  | TYR  |
| 34  | BM    | 75  | TYR  |
| 34  | BM    | 78  | TYR  |
| 34  | BM    | 79  | PRO  |
| 34  | BM    | 82  | LEU  |
| 34  | BM    | 85  | ILE  |
| 34  | BM    | 89  | LYS  |
| 34  | BM    | 90  | MET  |
| 34  | BM    | 91  | LEU  |
| 34  | BM    | 98  | VAL  |
| 34  | BM    | 101 | HIS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 34  | BM    | 103 | VAL  |
| 34  | BM    | 109 | LYS  |
| 34  | BM    | 122 | VAL  |
| 34  | BM    | 127 | ASP  |
| 34  | BM    | 134 | ARG  |
| 34  | BM    | 135 | PRO  |
| 34  | BM    | 136 | GLU  |
| 35  | BN    | 3   | GLN  |
| 35  | BN    | 6   | THR  |
| 35  | BN    | 7   | TYR  |
| 35  | BN    | 8   | LEU  |
| 35  | BN    | 12  | ASP  |
| 35  | BN    | 14  | THR  |
| 35  | BN    | 19  | ILE  |
| 35  | BN    | 20  | MET  |
| 35  | BN    | 23  | ARG  |
| 35  | BN    | 24  | VAL  |
| 35  | BN    | 25  | LEU  |
| 35  | BN    | 28  | SER  |
| 35  | BN    | 29  | ASN  |
| 35  | BN    | 34  | THR  |
| 35  | BN    | 38  | VAL  |
| 35  | BN    | 39  | ILE  |
| 35  | BN    | 47  | ILE  |
| 35  | BN    | 52  | VAL  |
| 35  | BN    | 56  | ASP  |
| 35  | BN    | 58  | VAL  |
| 35  | BN    | 59  | LYS  |
| 35  | BN    | 62  | VAL  |
| 35  | BN    | 64  | ARG  |
| 35  | BN    | 65  | THR  |
| 35  | BN    | 77  | ILE  |
| 35  | BN    | 78  | ARG  |
| 35  | BN    | 82  | ASN  |
| 35  | BN    | 85  | VAL  |
| 35  | BN    | 87  | ILE  |
| 35  | BN    | 89  | ASN  |
| 35  | BN    | 92  | GLU  |
| 35  | BN    | 97  | ARG  |
| 35  | BN    | 98  | VAL  |
| 35  | BN    | 104 | ARG  |
| 35  | BN    | 113 | LYS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 35  | BN    | 114 | ILE  |
| 35  | BN    | 116 | SER  |
| 35  | BN    | 121 | VAL  |
| 36  | BO    | 7   | ARG  |
| 36  | BO    | 13  | ASN  |
| 36  | BO    | 17  | LYS  |
| 36  | BO    | 29  | LYS  |
| 36  | BO    | 30  | THR  |
| 36  | BO    | 40  | SER  |
| 36  | BO    | 45  | LEU  |
| 36  | BO    | 46  | LYS  |
| 36  | BO    | 48  | PRO  |
| 36  | BO    | 52  | GLU  |
| 36  | BO    | 55  | ARG  |
| 36  | BO    | 59  | LEU  |
| 36  | BO    | 60  | MET  |
| 36  | BO    | 64  | LYS  |
| 36  | BO    | 65  | ARG  |
| 36  | BO    | 68  | GLN  |
| 36  | BO    | 74  | GLU  |
| 36  | BO    | 75  | ILE  |
| 36  | BO    | 79  | ARG  |
| 36  | BO    | 84  | ASN  |
| 36  | BO    | 88  | LEU  |
| 36  | BO    | 99  | LEU  |
| 36  | BO    | 100 | LEU  |
| 36  | BO    | 105 | LEU  |
| 36  | BO    | 108 | LYS  |
| 36  | BO    | 110 | TYR  |
| 36  | BO    | 114 | ILE  |
| 36  | BO    | 117 | GLU  |
| 36  | BO    | 122 | PRO  |
| 36  | BO    | 123 | LEU  |
| 36  | BO    | 126 | VAL  |
| 36  | BO    | 128 | HIS  |
| 36  | BO    | 130 | PHE  |
| 36  | BO    | 137 | LYS  |
| 36  | BO    | 138 | LEU  |
| 36  | BO    | 147 | LEU  |
| 36  | BO    | 149 | GLU  |
| 37  | BP    | 6   | ARG  |
| 37  | BP    | 8   | LYS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 37  | BP    | 18  | LYS  |
| 37  | BP    | 32  | TYR  |
| 37  | BP    | 34  | LEU  |
| 37  | BP    | 41  | TRP  |
| 37  | BP    | 42  | ILE  |
| 37  | BP    | 43  | THR  |
| 37  | BP    | 45  | GLN  |
| 37  | BP    | 48  | GLU  |
| 37  | BP    | 51  | ARG  |
| 37  | BP    | 60  | ARG  |
| 37  | BP    | 63  | LYS  |
| 37  | BP    | 64  | ILE  |
| 37  | BP    | 65  | PHE  |
| 37  | BP    | 68  | ILE  |
| 37  | BP    | 71  | ASP  |
| 37  | BP    | 74  | TYR  |
| 37  | BP    | 78  | PRO  |
| 37  | BP    | 79  | LEU  |
| 37  | BP    | 80  | GLU  |
| 37  | BP    | 83  | MET  |
| 37  | BP    | 89  | ASN  |
| 37  | BP    | 91  | GLU  |
| 37  | BP    | 94  | VAL  |
| 37  | BP    | 97  | VAL  |
| 37  | BP    | 98  | LYS  |
| 37  | BP    | 101 | ARG  |
| 37  | BP    | 104 | PHE  |
| 37  | BP    | 105 | GLU  |
| 37  | BP    | 109 | VAL  |
| 37  | BP    | 112 | GLU  |
| 37  | BP    | 118 | LEU  |
| 37  | BP    | 124 | LYS  |
| 37  | BP    | 126 | PRO  |
| 37  | BP    | 127 | ILE  |
| 37  | BP    | 130 | LYS  |
| 37  | BP    | 133 | ARG  |
| 37  | BP    | 134 | ARG  |
| 37  | BP    | 135 | ASP  |
| 37  | BP    | 139 | GLU  |
| 38  | BQ    | 4   | LEU  |
| 38  | BQ    | 5   | LYS  |
| 38  | BQ    | 10  | LEU  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 38  | BQ    | 11  | ASN  |
| 38  | BQ    | 13  | HIS  |
| 38  | BQ    | 18  | LEU  |
| 38  | BQ    | 23  | ASN  |
| 38  | BQ    | 28  | LEU  |
| 38  | BQ    | 37  | THR  |
| 38  | BQ    | 49  | ASP  |
| 38  | BQ    | 52  | ILE  |
| 38  | BQ    | 56  | LYS  |
| 38  | BQ    | 57  | ARG  |
| 38  | BQ    | 59  | ASP  |
| 38  | BQ    | 60  | LEU  |
| 38  | BQ    | 64  | ARG  |
| 38  | BQ    | 67  | LEU  |
| 38  | BQ    | 70  | LEU  |
| 38  | BQ    | 74  | LYS  |
| 38  | BQ    | 77  | ARG  |
| 38  | BQ    | 79  | LEU  |
| 38  | BQ    | 82  | GLU  |
| 38  | BQ    | 86  | ARG  |
| 38  | BQ    | 88  | ARG  |
| 38  | BQ    | 89  | ASP  |
| 38  | BQ    | 99  | LYS  |
| 38  | BQ    | 100 | LEU  |
| 38  | BQ    | 105 | ARG  |
| 38  | BQ    | 113 | LEU  |
| 38  | BQ    | 116 | LEU  |
| 39  | BR    | 3   | ARG  |
| 39  | BR    | 9   | ARG  |
| 39  | BR    | 11  | LYS  |
| 39  | BR    | 12  | PHE  |
| 39  | BR    | 19  | LYS  |
| 39  | BR    | 20  | ARG  |
| 39  | BR    | 21  | THR  |
| 39  | BR    | 23  | ARG  |
| 39  | BR    | 24  | LEU  |
| 39  | BR    | 26  | LEU  |
| 39  | BR    | 27  | SER  |
| 39  | BR    | 36  | TYR  |
| 39  | BR    | 42  | ASP  |
| 39  | BR    | 57  | LYS  |
| 39  | BR    | 69  | VAL  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 39  | BR    | 73  | LEU  |
| 39  | BR    | 76  | LYS  |
| 39  | BR    | 78  | LEU  |
| 39  | BR    | 80  | LEU  |
| 39  | BR    | 88  | ASP  |
| 39  | BR    | 94  | TYR  |
| 39  | BR    | 97  | ARG  |
| 39  | BR    | 98  | VAL  |
| 39  | BR    | 112 | PHE  |
| 40  | BS    | 1   | MET  |
| 40  | BS    | 11  | GLU  |
| 40  | BS    | 20  | PRO  |
| 40  | BS    | 22  | PHE  |
| 40  | BS    | 23  | ARG  |
| 40  | BS    | 30  | VAL  |
| 40  | BS    | 32  | TYR  |
| 40  | BS    | 39  | ARG  |
| 40  | BS    | 43  | GLN  |
| 40  | BS    | 46  | GLU  |
| 40  | BS    | 48  | ILE  |
| 40  | BS    | 50  | ILE  |
| 40  | BS    | 54  | ARG  |
| 40  | BS    | 55  | ASN  |
| 40  | BS    | 57  | PHE  |
| 40  | BS    | 58  | ASN  |
| 40  | BS    | 61  | PHE  |
| 40  | BS    | 62  | THR  |
| 40  | BS    | 64  | ARG  |
| 40  | BS    | 66  | VAL  |
| 40  | BS    | 68  | TYR  |
| 40  | BS    | 75  | ILE  |
| 40  | BS    | 78  | LEU  |
| 40  | BS    | 79  | HIS  |
| 40  | BS    | 82  | LEU  |
| 40  | BS    | 85  | LYS  |
| 40  | BS    | 86  | ILE  |
| 40  | BS    | 88  | ILE  |
| 40  | BS    | 93  | ARG  |
| 40  | BS    | 95  | ARG  |
| 40  | BS    | 96  | ARG  |
| 40  | BS    | 101 | PHE  |
| 40  | BS    | 102 | ILE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 40  | BS    | 103 | ARG  |
| 40  | BS    | 106 | SER  |
| 40  | BS    | 107 | ASP  |
| 40  | BS    | 108 | ARG  |
| 40  | BS    | 109 | GLU  |
| 41  | BT    | 6   | THR  |
| 41  | BT    | 13  | LYS  |
| 41  | BT    | 16  | LYS  |
| 41  | BT    | 19  | LYS  |
| 41  | BT    | 25  | TRP  |
| 41  | BT    | 32  | PHE  |
| 41  | BT    | 38  | THR  |
| 41  | BT    | 50  | ARG  |
| 41  | BT    | 52  | ARG  |
| 41  | BT    | 53  | ARG  |
| 41  | BT    | 54  | LYS  |
| 41  | BT    | 55  | ARG  |
| 41  | BT    | 58  | ARG  |
| 41  | BT    | 62  | ILE  |
| 41  | BT    | 65  | ILE  |
| 41  | BT    | 71  | GLN  |
| 41  | BT    | 74  | LEU  |
| 41  | BT    | 75  | ASN  |
| 41  | BT    | 77  | SER  |
| 41  | BT    | 81  | HIS  |
| 41  | BT    | 83  | LEU  |
| 41  | BT    | 84  | LYS  |
| 41  | BT    | 88  | ILE  |
| 41  | BT    | 92  | ARG  |
| 41  | BT    | 93  | LYS  |
| 41  | BT    | 100 | VAL  |
| 41  | BT    | 105 | VAL  |
| 41  | BT    | 108 | GLU  |
| 41  | BT    | 114 | LYS  |
| 42  | BU    | 4   | ILE  |
| 42  | BU    | 13  | ARG  |
| 42  | BU    | 14  | VAL  |
| 42  | BU    | 15  | GLU  |
| 42  | BU    | 18  | LEU  |
| 42  | BU    | 29  | PRO  |
| 42  | BU    | 35  | LEU  |
| 42  | BU    | 36  | PRO  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 42  | BU    | 40  | LEU  |
| 42  | BU    | 43  | GLU  |
| 42  | BU    | 44  | LYS  |
| 42  | BU    | 45  | THR  |
| 42  | BU    | 49  | THR  |
| 42  | BU    | 52  | VAL  |
| 42  | BU    | 56  | SER  |
| 42  | BU    | 60  | GLU  |
| 42  | BU    | 62  | LEU  |
| 42  | BU    | 64  | HIS  |
| 42  | BU    | 78  | LYS  |
| 42  | BU    | 79  | VAL  |
| 42  | BU    | 83  | ARG  |
| 42  | BU    | 84  | LYS  |
| 42  | BU    | 87  | HIS  |
| 42  | BU    | 93  | GLU  |
| 43  | BV    | 4   | LYS  |
| 43  | BV    | 8   | ARG  |
| 43  | BV    | 10  | VAL  |
| 43  | BV    | 11  | ARG  |
| 43  | BV    | 12  | ILE  |
| 43  | BV    | 16  | LYS  |
| 43  | BV    | 18  | ARG  |
| 43  | BV    | 24  | ILE  |
| 43  | BV    | 31  | GLU  |
| 43  | BV    | 33  | ARG  |
| 43  | BV    | 40  | ASN  |
| 43  | BV    | 42  | ARG  |
| 43  | BV    | 45  | TYR  |
| 43  | BV    | 47  | VAL  |
| 43  | BV    | 51  | LEU  |
| 43  | BV    | 60  | ASN  |
| 43  | BV    | 66  | GLU  |
| 43  | BV    | 67  | ASP  |
| 43  | BV    | 71  | VAL  |
| 43  | BV    | 82  | LEU  |
| 43  | BV    | 87  | PRO  |
| 43  | BV    | 88  | ARG  |
| 43  | BV    | 90  | ARG  |
| 43  | BV    | 94  | ASP  |
| 43  | BV    | 95  | ILE  |
| 43  | BV    | 98  | LYS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 43  | BV    | 103 | ILE  |
| 43  | BV    | 106 | ILE  |
| 44  | BW    | 8   | ILE  |
| 44  | BW    | 9   | LEU  |
| 44  | BW    | 13  | LEU  |
| 44  | BW    | 14  | SER  |
| 44  | BW    | 16  | LYS  |
| 44  | BW    | 23  | GLU  |
| 44  | BW    | 28  | PHE  |
| 44  | BW    | 33  | LYS  |
| 44  | BW    | 36  | LYS  |
| 44  | BW    | 37  | THR  |
| 44  | BW    | 38  | GLU  |
| 44  | BW    | 45  | THR  |
| 44  | BW    | 47  | PHE  |
| 44  | BW    | 50  | LYS  |
| 44  | BW    | 51  | VAL  |
| 44  | BW    | 55  | ASN  |
| 44  | BW    | 57  | LEU  |
| 44  | BW    | 63  | LYS  |
| 44  | BW    | 65  | ARG  |
| 44  | BW    | 73  | ARG  |
| 44  | BW    | 83  | VAL  |
| 44  | BW    | 92  | LEU  |
| 45  | BX    | 6   | HIS  |
| 45  | BX    | 12  | THR  |
| 45  | BX    | 13  | VAL  |
| 45  | BX    | 14  | LEU  |
| 45  | BX    | 19  | LYS  |
| 45  | BX    | 27  | VAL  |
| 45  | BX    | 28  | LYS  |
| 45  | BX    | 35  | TYR  |
| 45  | BX    | 42  | VAL  |
| 45  | BX    | 64  | GLU  |
| 45  | BX    | 72  | VAL  |
| 45  | BX    | 73  | ARG  |
| 45  | BX    | 75  | ILE  |
| 45  | BX    | 84  | ARG  |
| 45  | BX    | 90  | LEU  |
| 45  | BX    | 91  | GLU  |
| 45  | BX    | 96  | ILE  |
| 45  | BX    | 102 | CYS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 45  | BX    | 107 | ASP  |
| 46  | BY    | 3   | TYR  |
| 46  | BY    | 8   | TYR  |
| 46  | BY    | 13  | GLU  |
| 46  | BY    | 14  | LYS  |
| 46  | BY    | 24  | LEU  |
| 46  | BY    | 28  | MET  |
| 46  | BY    | 30  | ASN  |
| 46  | BY    | 43  | GLU  |
| 46  | BY    | 44  | PHE  |
| 46  | BY    | 45  | ASP  |
| 46  | BY    | 47  | VAL  |
| 46  | BY    | 49  | ARG  |
| 46  | BY    | 50  | GLN  |
| 46  | BY    | 53  | ILE  |
| 46  | BY    | 58  | VAL  |
| 46  | BY    | 59  | LEU  |
| 46  | BY    | 60  | GLU  |
| 46  | BY    | 62  | PRO  |
| 46  | BY    | 63  | ASP  |
| 46  | BY    | 70  | LEU  |
| 46  | BY    | 78  | LYS  |
| 46  | BY    | 83  | PRO  |
| 46  | BY    | 86  | VAL  |
| 46  | BY    | 87  | ASP  |
| 46  | BY    | 89  | PHE  |
| 46  | BY    | 90  | VAL  |
| 46  | BY    | 95  | PRO  |
| 46  | BY    | 104 | PHE  |
| 46  | BY    | 108 | PRO  |
| 46  | BY    | 118 | GLN  |
| 46  | BY    | 120 | ILE  |
| 46  | BY    | 129 | SER  |
| 46  | BY    | 140 | ASP  |
| 46  | BY    | 141 | VAL  |
| 46  | BY    | 151 | HIS  |
| 46  | BY    | 155 | LEU  |
| 46  | BY    | 159 | PRO  |
| 46  | BY    | 163 | LEU  |
| 46  | BY    | 168 | GLU  |
| 46  | BY    | 171 | ILE  |
| 46  | BY    | 174 | VAL  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 46  | BY    | 175 | VAL  |
| 46  | BY    | 179 | ASP  |
| 47  | BZ    | 10  | THR  |
| 47  | BZ    | 20  | ARG  |
| 47  | BZ    | 26  | TYR  |
| 47  | BZ    | 29  | GLN  |
| 47  | BZ    | 30  | VAL  |
| 47  | BZ    | 32  | ARG  |
| 47  | BZ    | 36  | ILE  |
| 47  | BZ    | 37  | LEU  |
| 47  | BZ    | 40  | GLN  |
| 47  | BZ    | 41  | ARG  |
| 47  | BZ    | 46  | LYS  |
| 47  | BZ    | 55  | ARG  |
| 47  | BZ    | 57  | PHE  |
| 47  | BZ    | 58  | THR  |
| 47  | BZ    | 64  | ASP  |
| 47  | BZ    | 68  | GLU  |
| 47  | BZ    | 74  | ARG  |
| 47  | BZ    | 81  | VAL  |
| 48  | B1    | 1   | MET  |
| 48  | B1    | 6   | GLU  |
| 48  | B1    | 12  | SER  |
| 48  | B1    | 19  | LEU  |
| 48  | B1    | 22  | GLU  |
| 48  | B1    | 30  | LEU  |
| 48  | B1    | 32  | PHE  |
| 48  | B1    | 33  | GLN  |
| 48  | B1    | 35  | SER  |
| 48  | B1    | 45  | ILE  |
| 48  | B1    | 48  | LEU  |
| 48  | B1    | 50  | ARG  |
| 48  | B1    | 54  | ARG  |
| 48  | B1    | 56  | LEU  |
| 48  | B1    | 58  | VAL  |
| 48  | B1    | 64  | ARG  |
| 48  | B1    | 65  | GLN  |
| 48  | B1    | 66  | ASN  |
| 49  | B2    | 3   | ARG  |
| 49  | B2    | 5   | LYS  |
| 49  | B2    | 6   | VAL  |
| 49  | B2    | 12  | PRO  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 49  | B2    | 15  | TYR  |
| 49  | B2    | 26  | LEU  |
| 49  | B2    | 28  | LEU  |
| 49  | B2    | 30  | ARG  |
| 49  | B2    | 31  | LEU  |
| 49  | B2    | 32  | GLN  |
| 49  | B2    | 37  | LEU  |
| 49  | B2    | 41  | PRO  |
| 49  | B2    | 50  | VAL  |
| 49  | B2    | 55  | ARG  |
| 49  | B2    | 59  | VAL  |
| 50  | B3    | 3   | GLU  |
| 50  | B3    | 11  | PRO  |
| 50  | B3    | 14  | ILE  |
| 50  | B3    | 15  | ILE  |
| 50  | B3    | 16  | CYS  |
| 50  | B3    | 23  | GLU  |
| 50  | B3    | 24  | THR  |
| 50  | B3    | 27  | THR  |
| 50  | B3    | 29  | PRO  |
| 50  | B3    | 31  | ILE  |
| 50  | B3    | 37  | SER  |
| 50  | B3    | 46  | GLN  |
| 50  | B3    | 47  | GLN  |
| 50  | B3    | 49  | PHE  |
| 50  | B3    | 56  | VAL  |
| 50  | B3    | 57  | GLU  |
| 50  | B3    | 59  | PHE  |
| 50  | B3    | 60  | GLN  |
| 50  | B3    | 62  | ARG  |
| 50  | B3    | 68  | ARG  |
| 51  | B4    | 4   | HIS  |
| 51  | B4    | 9   | LYS  |
| 51  | B4    | 11  | THR  |
| 51  | B4    | 15  | ARG  |
| 51  | B4    | 17  | ASP  |
| 51  | B4    | 20  | ARG  |
| 51  | B4    | 25  | LEU  |
| 51  | B4    | 26  | THR  |
| 51  | B4    | 30  | LEU  |
| 51  | B4    | 33  | CYS  |
| 51  | B4    | 36  | CYS  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 51  | B4    | 37  | LYS  |
| 51  | B4    | 39  | MET  |
| 51  | B4    | 49  | CYS  |
| 51  | B4    | 51  | TYR  |
| 51  | B4    | 58  | LEU  |
| 51  | B4    | 59  | GLU  |
| 52  | B5    | 7   | ILE  |
| 52  | B5    | 10  | LEU  |
| 52  | B5    | 11  | LEU  |
| 52  | B5    | 13  | CYS  |
| 52  | B5    | 15  | GLU  |
| 52  | B5    | 19  | ARG  |
| 52  | B5    | 29  | ASN  |
| 52  | B5    | 30  | THR  |
| 52  | B5    | 31  | PRO  |
| 52  | B5    | 32  | ASN  |
| 52  | B5    | 33  | LYS  |
| 52  | B5    | 38  | LYS  |
| 52  | B5    | 43  | CYS  |
| 52  | B5    | 46  | HIS  |
| 52  | B5    | 48  | VAL  |
| 52  | B5    | 51  | GLU  |
| 52  | B5    | 54  | ILE  |
| 53  | B6    | 5   | TRP  |
| 53  | B6    | 6   | GLN  |
| 53  | B6    | 8   | ASN  |
| 53  | B6    | 12  | ARG  |
| 53  | B6    | 19  | ARG  |
| 53  | B6    | 21  | ARG  |
| 53  | B6    | 24  | THR  |
| 53  | B6    | 34  | ARG  |
| 53  | B6    | 36  | GLN  |
| 53  | B6    | 41  | ARG  |
| 53  | B6    | 46  | VAL  |
| 53  | B6    | 48  | LYS  |
| 54  | B7    | 5   | LYS  |
| 54  | B7    | 16  | ILE  |
| 54  | B7    | 21  | LYS  |
| 54  | B7    | 23  | VAL  |
| 54  | B7    | 33  | ASN  |
| 54  | B7    | 39  | LYS  |
| 54  | B7    | 41  | ILE  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 54  | B7    | 42  | ARG  |
| 54  | B7    | 44  | LYS  |
| 54  | B7    | 50  | LEU  |
| 54  | B7    | 52  | LYS  |
| 54  | B7    | 56  | GLU  |
| 54  | B7    | 58  | ILE  |
| 54  | B7    | 59  | LYS  |
| 54  | B7    | 62  | LEU  |
| 55  | B8    | 3   | VAL  |
| 55  | B8    | 10  | ILE  |
| 55  | B8    | 17  | ILE  |
| 55  | B8    | 19  | ARG  |
| 55  | B8    | 23  | VAL  |
| 55  | B8    | 27  | CYS  |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (178) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4   | AE    | 40  | HIS  |
| 4   | AE    | 78  | GLN  |
| 4   | AE    | 94  | ASN  |
| 4   | AE    | 135 | GLN  |
| 4   | AE    | 146 | GLN  |
| 4   | AE    | 204 | ASN  |
| 4   | AE    | 224 | GLN  |
| 5   | AF    | 6   | HIS  |
| 5   | AF    | 28  | GLN  |
| 5   | AF    | 102 | ASN  |
| 5   | AF    | 108 | ASN  |
| 5   | AF    | 110 | ASN  |
| 5   | AF    | 136 | GLN  |
| 5   | AF    | 139 | GLN  |
| 5   | AF    | 170 | GLN  |
| 6   | AG    | 42  | GLN  |
| 6   | AG    | 62  | GLN  |
| 6   | AG    | 74  | GLN  |
| 6   | AG    | 77  | ASN  |
| 6   | AG    | 154 | ASN  |
| 6   | AG    | 161 | ASN  |
| 6   | AG    | 201 | GLN  |
| 7   | AH    | 56  | GLN  |
| 7   | AH    | 65  | ASN  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 7   | AH    | 72  | GLN  |
| 7   | AH    | 78  | HIS  |
| 8   | AI    | 13  | ASN  |
| 8   | AI    | 18  | GLN  |
| 8   | AI    | 32  | ASN  |
| 8   | AI    | 64  | GLN  |
| 8   | AI    | 100 | ASN  |
| 9   | AJ    | 56  | GLN  |
| 9   | AJ    | 68  | ASN  |
| 9   | AJ    | 96  | GLN  |
| 9   | AJ    | 97  | GLN  |
| 9   | AJ    | 106 | GLN  |
| 9   | AJ    | 109 | ASN  |
| 9   | AJ    | 110 | GLN  |
| 9   | AJ    | 148 | ASN  |
| 9   | AJ    | 153 | HIS  |
| 10  | AK    | 15  | ASN  |
| 10  | AK    | 70  | GLN  |
| 11  | AL    | 3   | GLN  |
| 11  | AL    | 23  | ASN  |
| 11  | AL    | 58  | HIS  |
| 11  | AL    | 73  | GLN  |
| 11  | AL    | 87  | GLN  |
| 11  | AL    | 89  | ASN  |
| 11  | AL    | 117 | HIS  |
| 12  | AM    | 56  | HIS  |
| 12  | AM    | 62  | HIS  |
| 12  | AM    | 68  | HIS  |
| 12  | AM    | 76  | ASN  |
| 12  | AM    | 78  | ASN  |
| 13  | AN    | 26  | ASN  |
| 13  | AN    | 27  | ASN  |
| 13  | AN    | 38  | ASN  |
| 13  | AN    | 104 | GLN  |
| 13  | AN    | 117 | ASN  |
| 14  | AO    | 49  | ASN  |
| 14  | AO    | 99  | HIS  |
| 15  | AP    | 12  | ASN  |
| 15  | AP    | 40  | ASN  |
| 15  | AP    | 62  | ASN  |
| 15  | AP    | 92  | HIS  |
| 17  | AR    | 9   | GLN  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 17  | AR    | 13  | GLN  |
| 17  | AR    | 37  | ASN  |
| 17  | AR    | 50  | HIS  |
| 17  | AR    | 62  | GLN  |
| 18  | AS    | 82  | GLN  |
| 19  | AT    | 93  | GLN  |
| 21  | AV    | 14  | HIS  |
| 21  | AV    | 23  | ASN  |
| 21  | AV    | 57  | HIS  |
| 22  | AW    | 16  | HIS  |
| 22  | AW    | 42  | GLN  |
| 22  | AW    | 45  | GLN  |
| 22  | AW    | 73  | HIS  |
| 22  | AW    | 75  | ASN  |
| 26  | BC    | 3   | HIS  |
| 26  | BC    | 56  | GLN  |
| 26  | BC    | 57  | ASN  |
| 26  | BC    | 66  | HIS  |
| 26  | BC    | 148 | ASN  |
| 26  | BC    | 188 | ASN  |
| 27  | BD    | 45  | ASN  |
| 27  | BD    | 87  | ASN  |
| 27  | BD    | 115 | GLN  |
| 27  | BD    | 166 | GLN  |
| 27  | BD    | 198 | ASN  |
| 27  | BD    | 201 | HIS  |
| 28  | BE    | 35  | GLN  |
| 28  | BE    | 85  | ASN  |
| 28  | BE    | 121 | ASN  |
| 28  | BE    | 129 | HIS  |
| 28  | BE    | 135 | HIS  |
| 29  | BF    | 67  | GLN  |
| 29  | BF    | 133 | ASN  |
| 29  | BF    | 169 | ASN  |
| 30  | BG    | 26  | GLN  |
| 30  | BG    | 40  | ASN  |
| 30  | BG    | 41  | GLN  |
| 30  | BG    | 123 | ASN  |
| 30  | BG    | 130 | ASN  |
| 31  | BH    | 74  | ASN  |
| 31  | BH    | 143 | GLN  |
| 32  | BK    | 28  | ASN  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 32  | BK    | 104 | GLN  |
| 32  | BK    | 105 | HIS  |
| 32  | BK    | 139 | GLN  |
| 33  | BL    | 11  | GLN  |
| 33  | BL    | 30  | HIS  |
| 33  | BL    | 47  | ASN  |
| 33  | BL    | 116 | ASN  |
| 34  | BM    | 38  | HIS  |
| 34  | BM    | 94  | HIS  |
| 35  | BN    | 5   | GLN  |
| 35  | BN    | 89  | ASN  |
| 35  | BN    | 90  | GLN  |
| 36  | BO    | 13  | ASN  |
| 36  | BO    | 35  | HIS  |
| 36  | BO    | 38  | GLN  |
| 36  | BO    | 68  | GLN  |
| 36  | BO    | 81  | GLN  |
| 36  | BO    | 84  | ASN  |
| 37  | BP    | 12  | GLN  |
| 37  | BP    | 89  | ASN  |
| 38  | BQ    | 24  | GLN  |
| 38  | BQ    | 31  | HIS  |
| 39  | BR    | 38  | GLN  |
| 39  | BR    | 84  | GLN  |
| 40  | BS    | 55  | ASN  |
| 40  | BS    | 58  | ASN  |
| 40  | BS    | 90  | GLN  |
| 41  | BT    | 44  | ASN  |
| 41  | BT    | 66  | ASN  |
| 41  | BT    | 71  | GLN  |
| 41  | BT    | 94  | ASN  |
| 41  | BT    | 117 | GLN  |
| 42  | BU    | 11  | GLN  |
| 42  | BU    | 87  | HIS  |
| 42  | BU    | 89  | GLN  |
| 43  | BV    | 34  | ASN  |
| 43  | BV    | 61  | ASN  |
| 43  | BV    | 62  | HIS  |
| 43  | BV    | 102 | HIS  |
| 44  | BW    | 31  | HIS  |
| 44  | BW    | 55  | ASN  |
| 44  | BW    | 82  | GLN  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 44  | BW    | 87  | GLN  |
| 45  | BX    | 6   | HIS  |
| 46  | BY    | 32  | HIS  |
| 46  | BY    | 34  | ASN  |
| 46  | BY    | 75  | ASN  |
| 46  | BY    | 118 | GLN  |
| 46  | BY    | 121 | HIS  |
| 47  | BZ    | 17  | GLN  |
| 47  | BZ    | 35  | ASN  |
| 48  | B1    | 33  | GLN  |
| 48  | B1    | 41  | GLN  |
| 48  | B1    | 51  | GLN  |
| 48  | B1    | 65  | GLN  |
| 50  | B3    | 46  | GLN  |
| 51  | B4    | 23  | HIS  |
| 51  | B4    | 43  | HIS  |
| 52  | B5    | 20  | ASN  |
| 52  | B5    | 29  | ASN  |
| 52  | B5    | 32  | ASN  |
| 53  | B6    | 6   | GLN  |
| 53  | B6    | 16  | HIS  |
| 53  | B6    | 36  | GLN  |
| 54  | B7    | 31  | HIS  |
| 54  | B7    | 33  | ASN  |
| 54  | B7    | 35  | GLN  |
| 54  | B7    | 43  | GLN  |
| 55  | B8    | 29  | ASN  |
| 55  | B8    | 36  | GLN  |

### 5.3.3 RNA ⓘ

| Mol | Chain | Analysed        | Backbone Outliers | Pucker Outliers |
|-----|-------|-----------------|-------------------|-----------------|
| 1   | AA    | 1515/1522 (99%) | 463 (30%)         | 137 (9%)        |
| 2   | A1    | 49/50 (98%)     | 21 (42%)          | 4 (8%)          |
| 24  | BA    | 2888/2916 (99%) | 1206 (41%)        | 253 (8%)        |
| 25  | BB    | 122/123 (99%)   | 46 (37%)          | 3 (2%)          |
| 3   | AB    | 75/76 (98%)     | 32 (42%)          | 1 (1%)          |
| 3   | AC    | 75/76 (98%)     | 23 (30%)          | 4 (5%)          |
| 3   | AD    | 75/76 (98%)     | 23 (30%)          | 1 (1%)          |
| All | All   | 4799/4839 (99%) | 1814 (37%)        | 403 (8%)        |

All (1814) RNA backbone outliers are listed below:

| Mol | Chain | Res    | Type |
|-----|-------|--------|------|
| 1   | AA    | 6      | G    |
| 1   | AA    | 8      | A    |
| 1   | AA    | 9      | G    |
| 1   | AA    | 14     | U    |
| 1   | AA    | 19     | C    |
| 1   | AA    | 20     | U    |
| 1   | AA    | 31     | G    |
| 1   | AA    | 32     | A    |
| 1   | AA    | 39     | G    |
| 1   | AA    | 44     | G    |
| 1   | AA    | 45     | U    |
| 1   | AA    | 48     | C    |
| 1   | AA    | 50     | A    |
| 1   | AA    | 51     | A    |
| 1   | AA    | 52     | G    |
| 1   | AA    | 61     | G    |
| 1   | AA    | 65     | U    |
| 1   | AA    | 66     | G    |
| 1   | AA    | 78     | G    |
| 1   | AA    | 82     | U    |
| 1   | AA    | 89     | U    |
| 1   | AA    | 101    | A    |
| 1   | AA    | 103    | C    |
| 1   | AA    | 108    | G    |
| 1   | AA    | 110    | C    |
| 1   | AA    | 115    | G    |
| 1   | AA    | 116    | A    |
| 1   | AA    | 120    | A    |
| 1   | AA    | 121    | C    |
| 1   | AA    | 122    | G    |
| 1   | AA    | 124    | G    |
| 1   | AA    | 127    | G    |
| 1   | AA    | 129(A) | G    |
| 1   | AA    | 130    | A    |
| 1   | AA    | 131    | C    |
| 1   | AA    | 132    | C    |
| 1   | AA    | 134    | A    |
| 1   | AA    | 163    | C    |
| 1   | AA    | 182    | U    |
| 1   | AA    | 188    | U    |
| 1   | AA    | 189    | U    |
| 1   | AA    | 190    | G    |
| 1   | AA    | 191(A) | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | AA    | 195 | A    |
| 1   | AA    | 197 | A    |
| 1   | AA    | 198 | G    |
| 1   | AA    | 209 | U    |
| 1   | AA    | 210 | U    |
| 1   | AA    | 216 | G    |
| 1   | AA    | 236 | G    |
| 1   | AA    | 243 | A    |
| 1   | AA    | 244 | U    |
| 1   | AA    | 245 | C    |
| 1   | AA    | 247 | G    |
| 1   | AA    | 251 | G    |
| 1   | AA    | 252 | U    |
| 1   | AA    | 253 | U    |
| 1   | AA    | 262 | A    |
| 1   | AA    | 264 | U    |
| 1   | AA    | 265 | G    |
| 1   | AA    | 266 | G    |
| 1   | AA    | 267 | C    |
| 1   | AA    | 270 | A    |
| 1   | AA    | 275 | G    |
| 1   | AA    | 279 | A    |
| 1   | AA    | 280 | C    |
| 1   | AA    | 281 | G    |
| 1   | AA    | 282 | A    |
| 1   | AA    | 289 | G    |
| 1   | AA    | 293 | G    |
| 1   | AA    | 295 | C    |
| 1   | AA    | 296 | U    |
| 1   | AA    | 306 | G    |
| 1   | AA    | 308 | C    |
| 1   | AA    | 309 | G    |
| 1   | AA    | 313 | A    |
| 1   | AA    | 314 | C    |
| 1   | AA    | 315 | A    |
| 1   | AA    | 316 | G    |
| 1   | AA    | 326 | G    |
| 1   | AA    | 328 | C    |
| 1   | AA    | 329 | A    |
| 1   | AA    | 330 | C    |
| 1   | AA    | 332 | G    |
| 1   | AA    | 336 | C    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | AA    | 345 | C    |
| 1   | AA    | 346 | G    |
| 1   | AA    | 348 | G    |
| 1   | AA    | 351 | G    |
| 1   | AA    | 352 | C    |
| 1   | AA    | 353 | A    |
| 1   | AA    | 354 | G    |
| 1   | AA    | 364 | A    |
| 1   | AA    | 367 | U    |
| 1   | AA    | 368 | U    |
| 1   | AA    | 372 | C    |
| 1   | AA    | 373 | A    |
| 1   | AA    | 378 | G    |
| 1   | AA    | 379 | C    |
| 1   | AA    | 382 | A    |
| 1   | AA    | 383 | A    |
| 1   | AA    | 388 | G    |
| 1   | AA    | 389 | A    |
| 1   | AA    | 390 | C    |
| 1   | AA    | 392 | G    |
| 1   | AA    | 397 | A    |
| 1   | AA    | 398 | C    |
| 1   | AA    | 410 | G    |
| 1   | AA    | 412 | A    |
| 1   | AA    | 413 | G    |
| 1   | AA    | 414 | A    |
| 1   | AA    | 422 | C    |
| 1   | AA    | 423 | G    |
| 1   | AA    | 428 | G    |
| 1   | AA    | 429 | U    |
| 1   | AA    | 430 | A    |
| 1   | AA    | 438 | G    |
| 1   | AA    | 439 | A    |
| 1   | AA    | 451 | A    |
| 1   | AA    | 452 | A    |
| 1   | AA    | 454 | C    |
| 1   | AA    | 465 | A    |
| 1   | AA    | 466 | C    |
| 1   | AA    | 467 | G    |
| 1   | AA    | 474 | G    |
| 1   | AA    | 481 | G    |
| 1   | AA    | 482 | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | AA    | 483 | C    |
| 1   | AA    | 484 | G    |
| 1   | AA    | 485 | G    |
| 1   | AA    | 486 | U    |
| 1   | AA    | 487 | A    |
| 1   | AA    | 496 | A    |
| 1   | AA    | 497 | U    |
| 1   | AA    | 500 | G    |
| 1   | AA    | 508 | C    |
| 1   | AA    | 509 | A    |
| 1   | AA    | 511 | C    |
| 1   | AA    | 518 | C    |
| 1   | AA    | 519 | C    |
| 1   | AA    | 521 | G    |
| 1   | AA    | 522 | C    |
| 1   | AA    | 524 | G    |
| 1   | AA    | 527 | G    |
| 1   | AA    | 528 | C    |
| 1   | AA    | 530 | G    |
| 1   | AA    | 531 | U    |
| 1   | AA    | 532 | A    |
| 1   | AA    | 533 | A    |
| 1   | AA    | 534 | U    |
| 1   | AA    | 535 | A    |
| 1   | AA    | 536 | C    |
| 1   | AA    | 541 | G    |
| 1   | AA    | 548 | G    |
| 1   | AA    | 553 | A    |
| 1   | AA    | 555 | C    |
| 1   | AA    | 559 | A    |
| 1   | AA    | 560 | U    |
| 1   | AA    | 561 | U    |
| 1   | AA    | 563 | A    |
| 1   | AA    | 565 | U    |
| 1   | AA    | 566 | G    |
| 1   | AA    | 567 | G    |
| 1   | AA    | 572 | A    |
| 1   | AA    | 573 | A    |
| 1   | AA    | 575 | G    |
| 1   | AA    | 577 | G    |
| 1   | AA    | 579 | G    |
| 1   | AA    | 585 | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | AA    | 595 | G    |
| 1   | AA    | 596 | C    |
| 1   | AA    | 598 | U    |
| 1   | AA    | 607 | A    |
| 1   | AA    | 609 | A    |
| 1   | AA    | 623 | C    |
| 1   | AA    | 642 | A    |
| 1   | AA    | 650 | G    |
| 1   | AA    | 653 | A    |
| 1   | AA    | 655 | A    |
| 1   | AA    | 665 | A    |
| 1   | AA    | 672 | U    |
| 1   | AA    | 673 | G    |
| 1   | AA    | 679 | C    |
| 1   | AA    | 687 | A    |
| 1   | AA    | 688 | G    |
| 1   | AA    | 690 | G    |
| 1   | AA    | 691 | G    |
| 1   | AA    | 693 | G    |
| 1   | AA    | 694 | A    |
| 1   | AA    | 697 | U    |
| 1   | AA    | 702 | A    |
| 1   | AA    | 703 | G    |
| 1   | AA    | 704 | A    |
| 1   | AA    | 718 | G    |
| 1   | AA    | 719 | C    |
| 1   | AA    | 721 | G    |
| 1   | AA    | 723 | U    |
| 1   | AA    | 724 | G    |
| 1   | AA    | 728 | A    |
| 1   | AA    | 730 | G    |
| 1   | AA    | 731 | G    |
| 1   | AA    | 733 | A    |
| 1   | AA    | 749 | C    |
| 1   | AA    | 752 | G    |
| 1   | AA    | 753 | A    |
| 1   | AA    | 754 | C    |
| 1   | AA    | 763 | G    |
| 1   | AA    | 764 | C    |
| 1   | AA    | 766 | A    |
| 1   | AA    | 776 | G    |
| 1   | AA    | 777 | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | AA    | 781 | A    |
| 1   | AA    | 782 | A    |
| 1   | AA    | 785 | G    |
| 1   | AA    | 788 | U    |
| 1   | AA    | 790 | A    |
| 1   | AA    | 791 | G    |
| 1   | AA    | 793 | U    |
| 1   | AA    | 794 | A    |
| 1   | AA    | 801 | U    |
| 1   | AA    | 812 | C    |
| 1   | AA    | 813 | U    |
| 1   | AA    | 815 | A    |
| 1   | AA    | 816 | A    |
| 1   | AA    | 817 | C    |
| 1   | AA    | 818 | G    |
| 1   | AA    | 819 | A    |
| 1   | AA    | 820 | U    |
| 1   | AA    | 821 | G    |
| 1   | AA    | 828 | A    |
| 1   | AA    | 841 | U    |
| 1   | AA    | 843 | U    |
| 1   | AA    | 848 | C    |
| 1   | AA    | 854 | G    |
| 1   | AA    | 860 | A    |
| 1   | AA    | 865 | A    |
| 1   | AA    | 870 | U    |
| 1   | AA    | 871 | U    |
| 1   | AA    | 872 | A    |
| 1   | AA    | 873 | A    |
| 1   | AA    | 874 | G    |
| 1   | AA    | 884 | U    |
| 1   | AA    | 885 | G    |
| 1   | AA    | 889 | A    |
| 1   | AA    | 890 | G    |
| 1   | AA    | 891 | U    |
| 1   | AA    | 901 | A    |
| 1   | AA    | 902 | G    |
| 1   | AA    | 907 | A    |
| 1   | AA    | 910 | C    |
| 1   | AA    | 913 | A    |
| 1   | AA    | 914 | A    |
| 1   | AA    | 917 | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 1   | AA    | 919  | A    |
| 1   | AA    | 920  | U    |
| 1   | AA    | 926  | G    |
| 1   | AA    | 927  | G    |
| 1   | AA    | 932  | C    |
| 1   | AA    | 934  | C    |
| 1   | AA    | 935  | A    |
| 1   | AA    | 945  | G    |
| 1   | AA    | 949  | A    |
| 1   | AA    | 950  | U    |
| 1   | AA    | 956  | U    |
| 1   | AA    | 958  | A    |
| 1   | AA    | 960  | U    |
| 1   | AA    | 961  | U    |
| 1   | AA    | 963  | G    |
| 1   | AA    | 965  | A    |
| 1   | AA    | 966  | G    |
| 1   | AA    | 967  | C    |
| 1   | AA    | 968  | A    |
| 1   | AA    | 969  | A    |
| 1   | AA    | 971  | G    |
| 1   | AA    | 972  | C    |
| 1   | AA    | 974  | A    |
| 1   | AA    | 975  | A    |
| 1   | AA    | 976  | G    |
| 1   | AA    | 977  | A    |
| 1   | AA    | 980  | C    |
| 1   | AA    | 982  | U    |
| 1   | AA    | 991  | U    |
| 1   | AA    | 993  | G    |
| 1   | AA    | 994  | A    |
| 1   | AA    | 995  | C    |
| 1   | AA    | 997  | U    |
| 1   | AA    | 998  | G    |
| 1   | AA    | 1000 | A    |
| 1   | AA    | 1001 | G    |
| 1   | AA    | 1002 | G    |
| 1   | AA    | 1003 | G    |
| 1   | AA    | 1004 | A    |
| 1   | AA    | 1005 | A    |
| 1   | AA    | 1006 | C    |
| 1   | AA    | 1007 | C    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 1   | AA    | 1016 | A    |
| 1   | AA    | 1023 | G    |
| 1   | AA    | 1024 | G    |
| 1   | AA    | 1026 | G    |
| 1   | AA    | 1027 | C    |
| 1   | AA    | 1029 | G    |
| 1   | AA    | 1049 | U    |
| 1   | AA    | 1050 | G    |
| 1   | AA    | 1054 | C    |
| 1   | AA    | 1056 | U    |
| 1   | AA    | 1057 | G    |
| 1   | AA    | 1063 | C    |
| 1   | AA    | 1064 | G    |
| 1   | AA    | 1065 | U    |
| 1   | AA    | 1066 | C    |
| 1   | AA    | 1067 | A    |
| 1   | AA    | 1068 | G    |
| 1   | AA    | 1081 | G    |
| 1   | AA    | 1084 | G    |
| 1   | AA    | 1085 | U    |
| 1   | AA    | 1086 | U    |
| 1   | AA    | 1089 | G    |
| 1   | AA    | 1094 | G    |
| 1   | AA    | 1096 | C    |
| 1   | AA    | 1097 | C    |
| 1   | AA    | 1100 | C    |
| 1   | AA    | 1101 | A    |
| 1   | AA    | 1102 | A    |
| 1   | AA    | 1103 | C    |
| 1   | AA    | 1118 | C    |
| 1   | AA    | 1123 | A    |
| 1   | AA    | 1125 | U    |
| 1   | AA    | 1126 | U    |
| 1   | AA    | 1129 | C    |
| 1   | AA    | 1130 | A    |
| 1   | AA    | 1131 | G    |
| 1   | AA    | 1132 | C    |
| 1   | AA    | 1136 | U    |
| 1   | AA    | 1138 | G    |
| 1   | AA    | 1139 | G    |
| 1   | AA    | 1140 | C    |
| 1   | AA    | 1145 | C    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 1   | AA    | 1146 | A    |
| 1   | AA    | 1147 | C    |
| 1   | AA    | 1148 | U    |
| 1   | AA    | 1152 | A    |
| 1   | AA    | 1156 | G    |
| 1   | AA    | 1157 | A    |
| 1   | AA    | 1158 | C    |
| 1   | AA    | 1159 | U    |
| 1   | AA    | 1160 | G    |
| 1   | AA    | 1161 | C    |
| 1   | AA    | 1174 | G    |
| 1   | AA    | 1182 | G    |
| 1   | AA    | 1183 | A    |
| 1   | AA    | 1184 | G    |
| 1   | AA    | 1185 | G    |
| 1   | AA    | 1188 | A    |
| 1   | AA    | 1189 | C    |
| 1   | AA    | 1190 | G    |
| 1   | AA    | 1195 | C    |
| 1   | AA    | 1196 | U    |
| 1   | AA    | 1197 | G    |
| 1   | AA    | 1200 | C    |
| 1   | AA    | 1201 | A    |
| 1   | AA    | 1202 | G    |
| 1   | AA    | 1203 | C    |
| 1   | AA    | 1211 | U    |
| 1   | AA    | 1212 | U    |
| 1   | AA    | 1213 | A    |
| 1   | AA    | 1215 | G    |
| 1   | AA    | 1225 | A    |
| 1   | AA    | 1226 | C    |
| 1   | AA    | 1227 | A    |
| 1   | AA    | 1229 | A    |
| 1   | AA    | 1240 | U    |
| 1   | AA    | 1241 | G    |
| 1   | AA    | 1249 | C    |
| 1   | AA    | 1256 | A    |
| 1   | AA    | 1257 | U    |
| 1   | AA    | 1263 | C    |
| 1   | AA    | 1269 | A    |
| 1   | AA    | 1270 | C    |
| 1   | AA    | 1278 | U    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res     | Type |
|-----|-------|---------|------|
| 1   | AA    | 1279    | A    |
| 1   | AA    | 1280    | A    |
| 1   | AA    | 1281    | U    |
| 1   | AA    | 1282    | C    |
| 1   | AA    | 1283    | G    |
| 1   | AA    | 1285    | A    |
| 1   | AA    | 1286    | A    |
| 1   | AA    | 1287    | A    |
| 1   | AA    | 1289    | A    |
| 1   | AA    | 1292    | U    |
| 1   | AA    | 1297    | C    |
| 1   | AA    | 1298    | C    |
| 1   | AA    | 1301    | U    |
| 1   | AA    | 1302    | U    |
| 1   | AA    | 1303    | C    |
| 1   | AA    | 1305    | G    |
| 1   | AA    | 1317    | C    |
| 1   | AA    | 1318    | A    |
| 1   | AA    | 1319    | A    |
| 1   | AA    | 1320    | C    |
| 1   | AA    | 1322    | C    |
| 1   | AA    | 1323    | G    |
| 1   | AA    | 1331    | G    |
| 1   | AA    | 1332    | A    |
| 1   | AA    | 1333    | A    |
| 1   | AA    | 1345    | U    |
| 1   | AA    | 1346    | A    |
| 1   | AA    | 1347    | G    |
| 1   | AA    | 1348    | U    |
| 1   | AA    | 1353    | G    |
| 1   | AA    | 1362(A) | C    |
| 1   | AA    | 1363    | A    |
| 1   | AA    | 1364    | U    |
| 1   | AA    | 1365    | G    |
| 1   | AA    | 1375    | A    |
| 1   | AA    | 1378    | C    |
| 1   | AA    | 1379    | G    |
| 1   | AA    | 1381    | U    |
| 1   | AA    | 1393    | U    |
| 1   | AA    | 1394    | A    |
| 1   | AA    | 1395    | C    |
| 1   | AA    | 1396    | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 1   | AA    | 1397 | C    |
| 1   | AA    | 1398 | A    |
| 1   | AA    | 1399 | C    |
| 1   | AA    | 1400 | C    |
| 1   | AA    | 1401 | G    |
| 1   | AA    | 1404 | C    |
| 1   | AA    | 1413 | A    |
| 1   | AA    | 1419 | G    |
| 1   | AA    | 1430 | C    |
| 1   | AA    | 1431 | C    |
| 1   | AA    | 1432 | G    |
| 1   | AA    | 1435 | G    |
| 1   | AA    | 1440 | C    |
| 1   | AA    | 1442 | G    |
| 1   | AA    | 1443 | G    |
| 1   | AA    | 1446 | A    |
| 1   | AA    | 1447 | G    |
| 1   | AA    | 1449 | C    |
| 1   | AA    | 1450 | U    |
| 1   | AA    | 1451 | A    |
| 1   | AA    | 1454 | G    |
| 1   | AA    | 1466 | C    |
| 1   | AA    | 1467 | G    |
| 1   | AA    | 1469 | G    |
| 1   | AA    | 1481 | U    |
| 1   | AA    | 1484 | C    |
| 1   | AA    | 1492 | A    |
| 1   | AA    | 1493 | A    |
| 1   | AA    | 1494 | G    |
| 1   | AA    | 1495 | U    |
| 1   | AA    | 1498 | U    |
| 1   | AA    | 1504 | G    |
| 1   | AA    | 1505 | G    |
| 1   | AA    | 1506 | U    |
| 1   | AA    | 1507 | A    |
| 1   | AA    | 1517 | G    |
| 1   | AA    | 1520 | G    |
| 1   | AA    | 1527 | C    |
| 1   | AA    | 1530 | G    |
| 1   | AA    | 1531 | A    |
| 1   | AA    | 1532 | U    |
| 1   | AA    | 1534 | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 2   | A1    | 5   | U    |
| 2   | A1    | 9   | U    |
| 2   | A1    | 13  | U    |
| 2   | A1    | 17  | U    |
| 2   | A1    | 18  | U    |
| 2   | A1    | 19  | U    |
| 2   | A1    | 20  | G    |
| 2   | A1    | 21  | G    |
| 2   | A1    | 26  | G    |
| 2   | A1    | 27  | A    |
| 2   | A1    | 30  | U    |
| 2   | A1    | 34  | U    |
| 2   | A1    | 36  | U    |
| 2   | A1    | 37  | U    |
| 2   | A1    | 38  | U    |
| 2   | A1    | 40  | U    |
| 2   | A1    | 45  | U    |
| 2   | A1    | 47  | U    |
| 2   | A1    | 48  | U    |
| 2   | A1    | 51  | U    |
| 2   | A1    | 52  | U    |
| 3   | AC    | 6   | G    |
| 3   | AC    | 8   | U    |
| 3   | AC    | 10  | G    |
| 3   | AC    | 15  | G    |
| 3   | AC    | 17  | C    |
| 3   | AC    | 18  | G    |
| 3   | AC    | 19  | G    |
| 3   | AC    | 20  | U    |
| 3   | AC    | 40  | C    |
| 3   | AC    | 41  | C    |
| 3   | AC    | 43  | C    |
| 3   | AC    | 46  | G    |
| 3   | AC    | 47  | U    |
| 3   | AC    | 48  | C    |
| 3   | AC    | 49  | C    |
| 3   | AC    | 58  | A    |
| 3   | AC    | 59  | U    |
| 3   | AC    | 60  | U    |
| 3   | AC    | 61  | C    |
| 3   | AC    | 64  | A    |
| 3   | AC    | 74  | C    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 3   | AC    | 75  | C    |
| 3   | AC    | 76  | A    |
| 3   | AD    | 10  | G    |
| 3   | AD    | 13  | C    |
| 3   | AD    | 17  | C    |
| 3   | AD    | 18  | G    |
| 3   | AD    | 19  | G    |
| 3   | AD    | 27  | G    |
| 3   | AD    | 34  | G    |
| 3   | AD    | 35  | A    |
| 3   | AD    | 36  | A    |
| 3   | AD    | 40  | C    |
| 3   | AD    | 41  | C    |
| 3   | AD    | 42  | C    |
| 3   | AD    | 45  | U    |
| 3   | AD    | 46  | G    |
| 3   | AD    | 48  | C    |
| 3   | AD    | 49  | C    |
| 3   | AD    | 52  | G    |
| 3   | AD    | 56  | C    |
| 3   | AD    | 58  | A    |
| 3   | AD    | 59  | U    |
| 3   | AD    | 61  | C    |
| 3   | AD    | 74  | C    |
| 3   | AD    | 76  | A    |
| 3   | AB    | 2   | C    |
| 3   | AB    | 3   | C    |
| 3   | AB    | 4   | C    |
| 3   | AB    | 6   | G    |
| 3   | AB    | 8   | U    |
| 3   | AB    | 9   | A    |
| 3   | AB    | 10  | G    |
| 3   | AB    | 12  | U    |
| 3   | AB    | 14  | A    |
| 3   | AB    | 15  | G    |
| 3   | AB    | 16  | U    |
| 3   | AB    | 19  | G    |
| 3   | AB    | 20  | U    |
| 3   | AB    | 21  | A    |
| 3   | AB    | 22  | G    |
| 3   | AB    | 25  | C    |
| 3   | AB    | 34  | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 3   | AB    | 36  | A    |
| 3   | AB    | 37  | A    |
| 3   | AB    | 41  | C    |
| 3   | AB    | 43  | C    |
| 3   | AB    | 47  | U    |
| 3   | AB    | 48  | C    |
| 3   | AB    | 49  | C    |
| 3   | AB    | 55  | U    |
| 3   | AB    | 57  | G    |
| 3   | AB    | 58  | A    |
| 3   | AB    | 59  | U    |
| 3   | AB    | 61  | C    |
| 3   | AB    | 62  | C    |
| 3   | AB    | 68  | C    |
| 3   | AB    | 74  | C    |
| 24  | BA    | 13  | A    |
| 24  | BA    | 14  | A    |
| 24  | BA    | 15  | G    |
| 24  | BA    | 20  | C    |
| 24  | BA    | 26  | G    |
| 24  | BA    | 29  | U    |
| 24  | BA    | 34  | C    |
| 24  | BA    | 35  | G    |
| 24  | BA    | 46  | C    |
| 24  | BA    | 49  | A    |
| 24  | BA    | 50  | U    |
| 24  | BA    | 52  | A    |
| 24  | BA    | 60  | G    |
| 24  | BA    | 61  | G    |
| 24  | BA    | 63  | U    |
| 24  | BA    | 64  | A    |
| 24  | BA    | 68  | G    |
| 24  | BA    | 71  | A    |
| 24  | BA    | 72  | U    |
| 24  | BA    | 73  | A    |
| 24  | BA    | 74  | A    |
| 24  | BA    | 75  | G    |
| 24  | BA    | 76  | C    |
| 24  | BA    | 77  | C    |
| 24  | BA    | 82  | G    |
| 24  | BA    | 84  | A    |
| 24  | BA    | 88  | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type |
|-----|-------|--------|------|
| 24  | BA    | 90     | U    |
| 24  | BA    | 91     | A    |
| 24  | BA    | 92     | G    |
| 24  | BA    | 96     | G    |
| 24  | BA    | 101    | G    |
| 24  | BA    | 102    | G    |
| 24  | BA    | 104    | U    |
| 24  | BA    | 105    | C    |
| 24  | BA    | 109    | G    |
| 24  | BA    | 112    | U    |
| 24  | BA    | 113    | G    |
| 24  | BA    | 119    | A    |
| 24  | BA    | 120    | U    |
| 24  | BA    | 121    | G    |
| 24  | BA    | 125    | G    |
| 24  | BA    | 126    | A    |
| 24  | BA    | 131    | G    |
| 24  | BA    | 132    | G    |
| 24  | BA    | 136    | G    |
| 24  | BA    | 138    | G    |
| 24  | BA    | 139    | G    |
| 24  | BA    | 140    | A    |
| 24  | BA    | 141(A) | C    |
| 24  | BA    | 147    | U    |
| 24  | BA    | 149    | A    |
| 24  | BA    | 161    | U    |
| 24  | BA    | 163    | U    |
| 24  | BA    | 164    | U    |
| 24  | BA    | 171    | G    |
| 24  | BA    | 178    | G    |
| 24  | BA    | 180    | G    |
| 24  | BA    | 181    | A    |
| 24  | BA    | 182    | A    |
| 24  | BA    | 192    | C    |
| 24  | BA    | 193    | U    |
| 24  | BA    | 196    | A    |
| 24  | BA    | 197    | A    |
| 24  | BA    | 199    | A    |
| 24  | BA    | 200    | U    |
| 24  | BA    | 201    | C    |
| 24  | BA    | 204    | A    |
| 24  | BA    | 205    | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type |
|-----|-------|--------|------|
| 24  | BA    | 206    | U    |
| 24  | BA    | 216    | A    |
| 24  | BA    | 218    | A    |
| 24  | BA    | 221    | A    |
| 24  | BA    | 222    | A    |
| 24  | BA    | 223    | A    |
| 24  | BA    | 228    | A    |
| 24  | BA    | 229    | A    |
| 24  | BA    | 230    | U    |
| 24  | BA    | 232    | G    |
| 24  | BA    | 233    | A    |
| 24  | BA    | 234    | C    |
| 24  | BA    | 241    | A    |
| 24  | BA    | 242    | G    |
| 24  | BA    | 244    | A    |
| 24  | BA    | 245    | G    |
| 24  | BA    | 247    | G    |
| 24  | BA    | 248    | G    |
| 24  | BA    | 249    | C    |
| 24  | BA    | 250    | G    |
| 24  | BA    | 251    | A    |
| 24  | BA    | 252    | G    |
| 24  | BA    | 254    | G    |
| 24  | BA    | 264    | C    |
| 24  | BA    | 265    | A    |
| 24  | BA    | 266    | G    |
| 24  | BA    | 270    | A    |
| 24  | BA    | 270(A) | A    |
| 24  | BA    | 270(B) | A    |
| 24  | BA    | 270(C) | C    |
| 24  | BA    | 270(E) | G    |
| 24  | BA    | 270(G) | C    |
| 24  | BA    | 270(K) | C    |
| 24  | BA    | 270(L) | U    |
| 24  | BA    | 270(M) | U    |
| 24  | BA    | 270(N) | G    |
| 24  | BA    | 270(V) | G    |
| 24  | BA    | 270(Z) | U    |
| 24  | BA    | 271(A) | C    |
| 24  | BA    | 271(B) | G    |
| 24  | BA    | 271(C) | U    |
| 24  | BA    | 271    | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type |
|-----|-------|--------|------|
| 24  | BA    | 272    | G    |
| 24  | BA    | 273(F) | C    |
| 24  | BA    | 275    | G    |
| 24  | BA    | 276    | A    |
| 24  | BA    | 277    | C    |
| 24  | BA    | 278    | A    |
| 24  | BA    | 279    | C    |
| 24  | BA    | 280    | C    |
| 24  | BA    | 281    | G    |
| 24  | BA    | 282    | A    |
| 24  | BA    | 283    | A    |
| 24  | BA    | 284    | U    |
| 24  | BA    | 286    | C    |
| 24  | BA    | 287    | C    |
| 24  | BA    | 289    | A    |
| 24  | BA    | 290    | G    |
| 24  | BA    | 293    | U    |
| 24  | BA    | 300    | A    |
| 24  | BA    | 302    | C    |
| 24  | BA    | 310    | A    |
| 24  | BA    | 311    | A    |
| 24  | BA    | 312    | G    |
| 24  | BA    | 316    | C    |
| 24  | BA    | 322    | A    |
| 24  | BA    | 323    | G    |
| 24  | BA    | 324    | A    |
| 24  | BA    | 329    | G    |
| 24  | BA    | 330    | A    |
| 24  | BA    | 332    | A    |
| 24  | BA    | 333    | G    |
| 24  | BA    | 339    | U    |
| 24  | BA    | 341    | G    |
| 24  | BA    | 342    | G    |
| 24  | BA    | 345    | A    |
| 24  | BA    | 347    | A    |
| 24  | BA    | 348    | G    |
| 24  | BA    | 349    | G    |
| 24  | BA    | 350    | U    |
| 24  | BA    | 351    | G    |
| 24  | BA    | 352    | G    |
| 24  | BA    | 354    | G    |
| 24  | BA    | 356    | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type |
|-----|-------|--------|------|
| 24  | BA    | 359    | A    |
| 24  | BA    | 360    | G    |
| 24  | BA    | 361    | G    |
| 24  | BA    | 363(A) | A    |
| 24  | BA    | 363(B) | G    |
| 24  | BA    | 364    | C    |
| 24  | BA    | 365    | C    |
| 24  | BA    | 366    | C    |
| 24  | BA    | 370    | G    |
| 24  | BA    | 372    | G    |
| 24  | BA    | 373    | U    |
| 24  | BA    | 374    | A    |
| 24  | BA    | 377    | C    |
| 24  | BA    | 382    | G    |
| 24  | BA    | 386    | G    |
| 24  | BA    | 387    | U    |
| 24  | BA    | 388    | G    |
| 24  | BA    | 390    | A    |
| 24  | BA    | 391    | G    |
| 24  | BA    | 395    | U    |
| 24  | BA    | 397    | G    |
| 24  | BA    | 401    | A    |
| 24  | BA    | 404    | C    |
| 24  | BA    | 405    | U    |
| 24  | BA    | 406    | G    |
| 24  | BA    | 408    | G    |
| 24  | BA    | 411    | G    |
| 24  | BA    | 412    | A    |
| 24  | BA    | 413    | C    |
| 24  | BA    | 421    | U    |
| 24  | BA    | 422    | A    |
| 24  | BA    | 423    | A    |
| 24  | BA    | 424    | G    |
| 24  | BA    | 428    | A    |
| 24  | BA    | 429    | A    |
| 24  | BA    | 443    | A    |
| 24  | BA    | 444    | C    |
| 24  | BA    | 446    | G    |
| 24  | BA    | 448    | U    |
| 24  | BA    | 449    | A    |
| 24  | BA    | 451    | C    |
| 24  | BA    | 452    | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 24  | BA    | 453 | C    |
| 24  | BA    | 454 | A    |
| 24  | BA    | 455 | C    |
| 24  | BA    | 456 | C    |
| 24  | BA    | 457 | A    |
| 24  | BA    | 470 | A    |
| 24  | BA    | 471 | A    |
| 24  | BA    | 475 | U    |
| 24  | BA    | 479 | A    |
| 24  | BA    | 480 | A    |
| 24  | BA    | 481 | G    |
| 24  | BA    | 484 | C    |
| 24  | BA    | 492 | A    |
| 24  | BA    | 503 | A    |
| 24  | BA    | 504 | U    |
| 24  | BA    | 505 | A    |
| 24  | BA    | 506 | G    |
| 24  | BA    | 507 | A    |
| 24  | BA    | 508 | G    |
| 24  | BA    | 509 | C    |
| 24  | BA    | 510 | C    |
| 24  | BA    | 512 | G    |
| 24  | BA    | 519 | U    |
| 24  | BA    | 525 | U    |
| 24  | BA    | 527 | C    |
| 24  | BA    | 528 | A    |
| 24  | BA    | 529 | A    |
| 24  | BA    | 530 | G    |
| 24  | BA    | 531 | C    |
| 24  | BA    | 532 | A    |
| 24  | BA    | 533 | G    |
| 24  | BA    | 541 | C    |
| 24  | BA    | 549 | G    |
| 24  | BA    | 554 | U    |
| 24  | BA    | 556 | G    |
| 24  | BA    | 559 | G    |
| 24  | BA    | 560 | C    |
| 24  | BA    | 563 | G    |
| 24  | BA    | 567 | A    |
| 24  | BA    | 568 | U    |
| 24  | BA    | 572 | A    |
| 24  | BA    | 573 | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type |
|-----|-------|--------|------|
| 24  | BA    | 574    | C    |
| 24  | BA    | 575    | A    |
| 24  | BA    | 579    | G    |
| 24  | BA    | 580    | C    |
| 24  | BA    | 583    | G    |
| 24  | BA    | 586    | A    |
| 24  | BA    | 588    | U    |
| 24  | BA    | 591    | C    |
| 24  | BA    | 593    | G    |
| 24  | BA    | 599    | G    |
| 24  | BA    | 600    | G    |
| 24  | BA    | 601    | C    |
| 24  | BA    | 603    | A    |
| 24  | BA    | 604    | G    |
| 24  | BA    | 605    | C    |
| 24  | BA    | 607    | U    |
| 24  | BA    | 612    | G    |
| 24  | BA    | 613    | U    |
| 24  | BA    | 614    | U    |
| 24  | BA    | 615    | G    |
| 24  | BA    | 616    | A    |
| 24  | BA    | 617    | G    |
| 24  | BA    | 618(A) | C    |
| 24  | BA    | 620    | G    |
| 24  | BA    | 621    | A    |
| 24  | BA    | 622    | G    |
| 24  | BA    | 624    | C    |
| 24  | BA    | 625    | G    |
| 24  | BA    | 626    | U    |
| 24  | BA    | 627    | A    |
| 24  | BA    | 629    | G    |
| 24  | BA    | 631    | A    |
| 24  | BA    | 634    | C    |
| 24  | BA    | 637    | A    |
| 24  | BA    | 641    | C    |
| 24  | BA    | 643    | A    |
| 24  | BA    | 644    | A    |
| 24  | BA    | 646    | A    |
| 24  | BA    | 650    | C    |
| 24  | BA    | 651    | G    |
| 24  | BA    | 653    | A    |
| 24  | BA    | 654    | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 24  | BA    | 655 | A    |
| 24  | BA    | 656 | G    |
| 24  | BA    | 657 | U    |
| 24  | BA    | 665 | C    |
| 24  | BA    | 666 | G    |
| 24  | BA    | 668 | G    |
| 24  | BA    | 669 | G    |
| 24  | BA    | 670 | A    |
| 24  | BA    | 671 | C    |
| 24  | BA    | 674 | G    |
| 24  | BA    | 684 | G    |
| 24  | BA    | 686 | G    |
| 24  | BA    | 687 | C    |
| 24  | BA    | 698 | C    |
| 24  | BA    | 704 | G    |
| 24  | BA    | 705 | A    |
| 24  | BA    | 713 | G    |
| 24  | BA    | 714 | U    |
| 24  | BA    | 715 | G    |
| 24  | BA    | 716 | A    |
| 24  | BA    | 718 | A    |
| 24  | BA    | 723 | G    |
| 24  | BA    | 727 | A    |
| 24  | BA    | 728 | G    |
| 24  | BA    | 729 | G    |
| 24  | BA    | 730 | C    |
| 24  | BA    | 731 | C    |
| 24  | BA    | 734 | A    |
| 24  | BA    | 735 | A    |
| 24  | BA    | 736 | C    |
| 24  | BA    | 739 | G    |
| 24  | BA    | 740 | U    |
| 24  | BA    | 741 | G    |
| 24  | BA    | 744 | G    |
| 24  | BA    | 745 | G    |
| 24  | BA    | 746 | A    |
| 24  | BA    | 747 | U    |
| 24  | BA    | 748 | G    |
| 24  | BA    | 749 | C    |
| 24  | BA    | 750 | A    |
| 24  | BA    | 751 | A    |
| 24  | BA    | 752 | A    |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 24         | BA           | 758        | C           |
| 24         | BA           | 759        | G           |
| 24         | BA           | 762        | U           |
| 24         | BA           | 763        | G           |
| 24         | BA           | 764        | A           |
| 24         | BA           | 765        | G           |
| 24         | BA           | 774        | A           |
| 24         | BA           | 775        | G           |
| 24         | BA           | 776        | G           |
| 24         | BA           | 777        | A           |
| 24         | BA           | 779        | U           |
| 24         | BA           | 781        | A           |
| 24         | BA           | 782        | A           |
| 24         | BA           | 783        | A           |
| 24         | BA           | 784        | A           |
| 24         | BA           | 785        | G           |
| 24         | BA           | 786        | C           |
| 24         | BA           | 789        | A           |
| 24         | BA           | 790        | C           |
| 24         | BA           | 791        | C           |
| 24         | BA           | 792        | G           |
| 24         | BA           | 793        | A           |
| 24         | BA           | 794        | G           |
| 24         | BA           | 799        | G           |
| 24         | BA           | 800        | A           |
| 24         | BA           | 801        | G           |
| 24         | BA           | 802        | A           |
| 24         | BA           | 803        | U           |
| 24         | BA           | 805        | G           |
| 24         | BA           | 806        | C           |
| 24         | BA           | 812        | C           |
| 24         | BA           | 816        | C           |
| 24         | BA           | 819        | A           |
| 24         | BA           | 821        | A           |
| 24         | BA           | 823        | G           |
| 24         | BA           | 824        | A           |
| 24         | BA           | 827        | U           |
| 24         | BA           | 829        | A           |
| 24         | BA           | 830        | G           |
| 24         | BA           | 831        | G           |
| 24         | BA           | 833        | U           |
| 24         | BA           | 844        | C           |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 24         | BA           | 846        | C           |
| 24         | BA           | 847        | U           |
| 24         | BA           | 858        | U           |
| 24         | BA           | 859        | G           |
| 24         | BA           | 860        | U           |
| 24         | BA           | 861        | A           |
| 24         | BA           | 865        | C           |
| 24         | BA           | 868        | U           |
| 24         | BA           | 870        | A           |
| 24         | BA           | 881        | G           |
| 24         | BA           | 886        | C           |
| 24         | BA           | 887        | A           |
| 24         | BA           | 888        | C           |
| 24         | BA           | 889        | C           |
| 24         | BA           | 890        | A           |
| 24         | BA           | 892        | G           |
| 24         | BA           | 893        | C           |
| 24         | BA           | 896        | A           |
| 24         | BA           | 897        | C           |
| 24         | BA           | 898        | C           |
| 24         | BA           | 899        | A           |
| 24         | BA           | 906        | G           |
| 24         | BA           | 907        | U           |
| 24         | BA           | 909        | A           |
| 24         | BA           | 910        | A           |
| 24         | BA           | 914        | C           |
| 24         | BA           | 918        | A           |
| 24         | BA           | 919        | G           |
| 24         | BA           | 920        | G           |
| 24         | BA           | 930        | U           |
| 24         | BA           | 931        | G           |
| 24         | BA           | 932        | G           |
| 24         | BA           | 933        | A           |
| 24         | BA           | 939        | G           |
| 24         | BA           | 941        | A           |
| 24         | BA           | 943        | U           |
| 24         | BA           | 944        | G           |
| 24         | BA           | 945        | A           |
| 24         | BA           | 946        | G           |
| 24         | BA           | 956        | G           |
| 24         | BA           | 957        | A           |
| 24         | BA           | 958        | U           |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type |
|-----|-------|--------|------|
| 24  | BA    | 959    | A    |
| 24  | BA    | 961    | C    |
| 24  | BA    | 962    | G    |
| 24  | BA    | 965    | C    |
| 24  | BA    | 972    | G    |
| 24  | BA    | 973    | A    |
| 24  | BA    | 974    | G    |
| 24  | BA    | 974(A) | C    |
| 24  | BA    | 976    | C    |
| 24  | BA    | 982    | C    |
| 24  | BA    | 983    | A    |
| 24  | BA    | 987    | G    |
| 24  | BA    | 990    | A    |
| 24  | BA    | 995    | C    |
| 24  | BA    | 996    | A    |
| 24  | BA    | 997    | G    |
| 24  | BA    | 1008   | C    |
| 24  | BA    | 1009   | A    |
| 24  | BA    | 1011   | G    |
| 24  | BA    | 1012   | U    |
| 24  | BA    | 1013   | C    |
| 24  | BA    | 1021   | A    |
| 24  | BA    | 1022   | G    |
| 24  | BA    | 1023   | U    |
| 24  | BA    | 1024   | G    |
| 24  | BA    | 1025   | G    |
| 24  | BA    | 1026   | U    |
| 24  | BA    | 1027   | A    |
| 24  | BA    | 1031   | G    |
| 24  | BA    | 1032   | A    |
| 24  | BA    | 1033   | U    |
| 24  | BA    | 1034   | G    |
| 24  | BA    | 1039   | G    |
| 24  | BA    | 1044   | G    |
| 24  | BA    | 1045   | A    |
| 24  | BA    | 1046   | A    |
| 24  | BA    | 1047   | G    |
| 24  | BA    | 1056   | G    |
| 24  | BA    | 1060   | U    |
| 24  | BA    | 1061   | U    |
| 24  | BA    | 1062   | G    |
| 24  | BA    | 1064   | C    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 1065 | U    |
| 24  | BA    | 1066 | U    |
| 24  | BA    | 1067 | A    |
| 24  | BA    | 1069 | A    |
| 24  | BA    | 1070 | A    |
| 24  | BA    | 1071 | G    |
| 24  | BA    | 1072 | C    |
| 24  | BA    | 1073 | A    |
| 24  | BA    | 1076 | C    |
| 24  | BA    | 1077 | A    |
| 24  | BA    | 1079 | C    |
| 24  | BA    | 1084 | A    |
| 24  | BA    | 1085 | A    |
| 24  | BA    | 1086 | A    |
| 24  | BA    | 1087 | G    |
| 24  | BA    | 1088 | A    |
| 24  | BA    | 1090 | U    |
| 24  | BA    | 1093 | G    |
| 24  | BA    | 1099 | G    |
| 24  | BA    | 1101 | U    |
| 24  | BA    | 1103 | A    |
| 24  | BA    | 1104 | C    |
| 24  | BA    | 1106 | G    |
| 24  | BA    | 1110 | G    |
| 24  | BA    | 1111 | A    |
| 24  | BA    | 1112 | G    |
| 24  | BA    | 1113 | U    |
| 24  | BA    | 1116 | C    |
| 24  | BA    | 1126 | A    |
| 24  | BA    | 1127 | A    |
| 24  | BA    | 1128 | A    |
| 24  | BA    | 1130 | U    |
| 24  | BA    | 1131 | G    |
| 24  | BA    | 1132 | A    |
| 24  | BA    | 1134 | G    |
| 24  | BA    | 1135 | C    |
| 24  | BA    | 1140 | C    |
| 24  | BA    | 1141 | U    |
| 24  | BA    | 1143 | A    |
| 24  | BA    | 1154 | G    |
| 24  | BA    | 1155 | A    |
| 24  | BA    | 1156 | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 1157 | G    |
| 24  | BA    | 1160 | G    |
| 24  | BA    | 1162 | G    |
| 24  | BA    | 1171 | G    |
| 24  | BA    | 1173 | G    |
| 24  | BA    | 1174 | A    |
| 24  | BA    | 1175 | U    |
| 24  | BA    | 1176 | G    |
| 24  | BA    | 1177 | A    |
| 24  | BA    | 1179 | C    |
| 24  | BA    | 1180 | C    |
| 24  | BA    | 1182 | A    |
| 24  | BA    | 1183 | G    |
| 24  | BA    | 1184 | G    |
| 24  | BA    | 1185 | C    |
| 24  | BA    | 1186 | G    |
| 24  | BA    | 1190 | G    |
| 24  | BA    | 1199 | U    |
| 24  | BA    | 1201 | C    |
| 24  | BA    | 1203 | G    |
| 24  | BA    | 1204 | A    |
| 24  | BA    | 1205 | U    |
| 24  | BA    | 1207 | C    |
| 24  | BA    | 1209 | G    |
| 24  | BA    | 1211 | U    |
| 24  | BA    | 1212 | G    |
| 24  | BA    | 1213 | A    |
| 24  | BA    | 1220 | A    |
| 24  | BA    | 1221 | C    |
| 24  | BA    | 1222 | C    |
| 24  | BA    | 1225 | C    |
| 24  | BA    | 1228 | G    |
| 24  | BA    | 1238 | G    |
| 24  | BA    | 1241 | A    |
| 24  | BA    | 1242 | A    |
| 24  | BA    | 1244 | G    |
| 24  | BA    | 1247 | A    |
| 24  | BA    | 1248 | G    |
| 24  | BA    | 1249 | U    |
| 24  | BA    | 1251 | C    |
| 24  | BA    | 1252 | G    |
| 24  | BA    | 1253 | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 1254 | A    |
| 24  | BA    | 1255 | U    |
| 24  | BA    | 1256 | G    |
| 24  | BA    | 1258 | C    |
| 24  | BA    | 1260 | G    |
| 24  | BA    | 1264 | G    |
| 24  | BA    | 1265 | A    |
| 24  | BA    | 1266 | G    |
| 24  | BA    | 1267 | U    |
| 24  | BA    | 1268 | A    |
| 24  | BA    | 1271 | G    |
| 24  | BA    | 1272 | A    |
| 24  | BA    | 1273 | U    |
| 24  | BA    | 1274 | A    |
| 24  | BA    | 1275 | A    |
| 24  | BA    | 1286 | A    |
| 24  | BA    | 1289 | C    |
| 24  | BA    | 1296 | G    |
| 24  | BA    | 1297 | C    |
| 24  | BA    | 1301 | A    |
| 24  | BA    | 1302 | A    |
| 24  | BA    | 1303 | G    |
| 24  | BA    | 1304 | C    |
| 24  | BA    | 1311 | G    |
| 24  | BA    | 1312 | U    |
| 24  | BA    | 1321 | A    |
| 24  | BA    | 1324 | G    |
| 24  | BA    | 1325 | G    |
| 24  | BA    | 1326 | U    |
| 24  | BA    | 1327 | C    |
| 24  | BA    | 1329 | U    |
| 24  | BA    | 1330 | C    |
| 24  | BA    | 1335 | U    |
| 24  | BA    | 1340 | U    |
| 24  | BA    | 1341 | U    |
| 24  | BA    | 1342 | A    |
| 24  | BA    | 1343 | G    |
| 24  | BA    | 1344 | G    |
| 24  | BA    | 1345 | C    |
| 24  | BA    | 1347 | G    |
| 24  | BA    | 1350 | C    |
| 24  | BA    | 1364 | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res     | Type |
|-----|-------|---------|------|
| 24  | BA    | 1365    | A    |
| 24  | BA    | 1366    | A    |
| 24  | BA    | 1368    | G    |
| 24  | BA    | 1378    | A    |
| 24  | BA    | 1379    | A    |
| 24  | BA    | 1388    | G    |
| 24  | BA    | 1394    | U    |
| 24  | BA    | 1395    | A    |
| 24  | BA    | 1397    | U    |
| 24  | BA    | 1398    | C    |
| 24  | BA    | 1403    | C    |
| 24  | BA    | 1407    | C    |
| 24  | BA    | 1416    | G    |
| 24  | BA    | 1418    | G    |
| 24  | BA    | 1419    | A    |
| 24  | BA    | 1420    | U    |
| 24  | BA    | 1421    | G    |
| 24  | BA    | 1424    | G    |
| 24  | BA    | 1425    | G    |
| 24  | BA    | 1427    | A    |
| 24  | BA    | 1428    | C    |
| 24  | BA    | 1429    | G    |
| 24  | BA    | 1438    | U    |
| 24  | BA    | 1444(A) | A    |
| 24  | BA    | 1445    | C    |
| 24  | BA    | 1451    | C    |
| 24  | BA    | 1453    | A    |
| 24  | BA    | 1455    | G    |
| 24  | BA    | 1456    | G    |
| 24  | BA    | 1459    | G    |
| 24  | BA    | 1460    | A    |
| 24  | BA    | 1462    | C    |
| 24  | BA    | 1463    | C    |
| 24  | BA    | 1467    | C    |
| 24  | BA    | 1468    | C    |
| 24  | BA    | 1471    | A    |
| 24  | BA    | 1477    | A    |
| 24  | BA    | 1478    | G    |
| 24  | BA    | 1480    | G    |
| 24  | BA    | 1482    | U    |
| 24  | BA    | 1485    | G    |
| 24  | BA    | 1489    | U    |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 24         | BA           | 1490       | A           |
| 24         | BA           | 1491       | G           |
| 24         | BA           | 1492       | G           |
| 24         | BA           | 1493       | C           |
| 24         | BA           | 1494       | A           |
| 24         | BA           | 1495       | A           |
| 24         | BA           | 1496       | A           |
| 24         | BA           | 1497       | U           |
| 24         | BA           | 1498       | C           |
| 24         | BA           | 1499       | C           |
| 24         | BA           | 1507       | A           |
| 24         | BA           | 1508       | A           |
| 24         | BA           | 1509       | C           |
| 24         | BA           | 1510       | A           |
| 24         | BA           | 1511       | A           |
| 24         | BA           | 1512       | G           |
| 24         | BA           | 1513       | C           |
| 24         | BA           | 1514       | U           |
| 24         | BA           | 1515       | C           |
| 24         | BA           | 1516       | U           |
| 24         | BA           | 1517       | G           |
| 24         | BA           | 1519       | G           |
| 24         | BA           | 1521       | G           |
| 24         | BA           | 1526       | G           |
| 24         | BA           | 1527       | G           |
| 24         | BA           | 1529       | A           |
| 24         | BA           | 1530       | G           |
| 24         | BA           | 1532       | C           |
| 24         | BA           | 1537       | C           |
| 24         | BA           | 1540       | G           |
| 24         | BA           | 1542       | G           |
| 24         | BA           | 1544       | C           |
| 24         | BA           | 1552       | G           |
| 24         | BA           | 1553       | A           |
| 24         | BA           | 1554       | A           |
| 24         | BA           | 1555       | G           |
| 24         | BA           | 1558       | A           |
| 24         | BA           | 1559       | G           |
| 24         | BA           | 1560       | G           |
| 24         | BA           | 1561       | G           |
| 24         | BA           | 1566       | A           |
| 24         | BA           | 1567       | A           |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 1569 | A    |
| 24  | BA    | 1570 | A    |
| 24  | BA    | 1571 | A    |
| 24  | BA    | 1572 | A    |
| 24  | BA    | 1573 | G    |
| 24  | BA    | 1576 | U    |
| 24  | BA    | 1577 | C    |
| 24  | BA    | 1578 | U    |
| 24  | BA    | 1579 | A    |
| 24  | BA    | 1580 | A    |
| 24  | BA    | 1581 | G    |
| 24  | BA    | 1583 | A    |
| 24  | BA    | 1585 | C    |
| 24  | BA    | 1586 | A    |
| 24  | BA    | 1587 | A    |
| 24  | BA    | 1591 | G    |
| 24  | BA    | 1602 | U    |
| 24  | BA    | 1603 | A    |
| 24  | BA    | 1607 | C    |
| 24  | BA    | 1608 | A    |
| 24  | BA    | 1609 | A    |
| 24  | BA    | 1610 | A    |
| 24  | BA    | 1612 | C    |
| 24  | BA    | 1614 | A    |
| 24  | BA    | 1615 | C    |
| 24  | BA    | 1617 | C    |
| 24  | BA    | 1618 | A    |
| 24  | BA    | 1619 | G    |
| 24  | BA    | 1623 | G    |
| 24  | BA    | 1625 | C    |
| 24  | BA    | 1626 | G    |
| 24  | BA    | 1627 | G    |
| 24  | BA    | 1631 | A    |
| 24  | BA    | 1634 | A    |
| 24  | BA    | 1635 | G    |
| 24  | BA    | 1640 | C    |
| 24  | BA    | 1641 | A    |
| 24  | BA    | 1644 | C    |
| 24  | BA    | 1645 | G    |
| 24  | BA    | 1647 | G    |
| 24  | BA    | 1648 | C    |
| 24  | BA    | 1649 | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 1651 | G    |
| 24  | BA    | 1652 | A    |
| 24  | BA    | 1653 | G    |
| 24  | BA    | 1654 | A    |
| 24  | BA    | 1655 | A    |
| 24  | BA    | 1656 | C    |
| 24  | BA    | 1657 | C    |
| 24  | BA    | 1664 | A    |
| 24  | BA    | 1667 | G    |
| 24  | BA    | 1668 | A    |
| 24  | BA    | 1670 | C    |
| 24  | BA    | 1673 | U    |
| 24  | BA    | 1674 | G    |
| 24  | BA    | 1675 | C    |
| 24  | BA    | 1678 | G    |
| 24  | BA    | 1681 | G    |
| 24  | BA    | 1682 | G    |
| 24  | BA    | 1683 | C    |
| 24  | BA    | 1684 | C    |
| 24  | BA    | 1688 | U    |
| 24  | BA    | 1694 | C    |
| 24  | BA    | 1698 | A    |
| 24  | BA    | 1699 | G    |
| 24  | BA    | 1700 | A    |
| 24  | BA    | 1701 | A    |
| 24  | BA    | 1703 | G    |
| 24  | BA    | 1706 | U    |
| 24  | BA    | 1707 | G    |
| 24  | BA    | 1709 | U    |
| 24  | BA    | 1710 | C    |
| 24  | BA    | 1725 | G    |
| 24  | BA    | 1728 | G    |
| 24  | BA    | 1729 | A    |
| 24  | BA    | 1731 | G    |
| 24  | BA    | 1732 | A    |
| 24  | BA    | 1733 | G    |
| 24  | BA    | 1734 | C    |
| 24  | BA    | 1741 | C    |
| 24  | BA    | 1742 | C    |
| 24  | BA    | 1743 | G    |
| 24  | BA    | 1746 | G    |
| 24  | BA    | 1747 | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 1755 | A    |
| 24  | BA    | 1757 | U    |
| 24  | BA    | 1758 | G    |
| 24  | BA    | 1759 | A    |
| 24  | BA    | 1762 | A    |
| 24  | BA    | 1763 | G    |
| 24  | BA    | 1764 | G    |
| 24  | BA    | 1773 | A    |
| 24  | BA    | 1775 | U    |
| 24  | BA    | 1779 | U    |
| 24  | BA    | 1780 | A    |
| 24  | BA    | 1781 | C    |
| 24  | BA    | 1782 | C    |
| 24  | BA    | 1783 | A    |
| 24  | BA    | 1784 | A    |
| 24  | BA    | 1785 | A    |
| 24  | BA    | 1790 | C    |
| 24  | BA    | 1791 | A    |
| 24  | BA    | 1798 | U    |
| 24  | BA    | 1799 | G    |
| 24  | BA    | 1800 | C    |
| 24  | BA    | 1801 | G    |
| 24  | BA    | 1802 | A    |
| 24  | BA    | 1803 | A    |
| 24  | BA    | 1805 | U    |
| 24  | BA    | 1809 | A    |
| 24  | BA    | 1810 | A    |
| 24  | BA    | 1815 | A    |
| 24  | BA    | 1816 | G    |
| 24  | BA    | 1817 | G    |
| 24  | BA    | 1819 | A    |
| 24  | BA    | 1820 | U    |
| 24  | BA    | 1821 | A    |
| 24  | BA    | 1826 | G    |
| 24  | BA    | 1828 | G    |
| 24  | BA    | 1829 | A    |
| 24  | BA    | 1834 | U    |
| 24  | BA    | 1839 | G    |
| 24  | BA    | 1840 | G    |
| 24  | BA    | 1847 | A    |
| 24  | BA    | 1848 | A    |
| 24  | BA    | 1852 | C    |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 24         | BA           | 1853       | A           |
| 24         | BA           | 1857       | G           |
| 24         | BA           | 1858       | G           |
| 24         | BA           | 1878       | G           |
| 24         | BA           | 1880       | C           |
| 24         | BA           | 1881       | C           |
| 24         | BA           | 1884       | A           |
| 24         | BA           | 1901       | A           |
| 24         | BA           | 1906       | G           |
| 24         | BA           | 1911       | U           |
| 24         | BA           | 1913       | A           |
| 24         | BA           | 1914       | C           |
| 24         | BA           | 1915       | U           |
| 24         | BA           | 1916       | A           |
| 24         | BA           | 1917       | U           |
| 24         | BA           | 1919       | A           |
| 24         | BA           | 1920       | C           |
| 24         | BA           | 1923       | U           |
| 24         | BA           | 1929       | G           |
| 24         | BA           | 1930       | G           |
| 24         | BA           | 1931       | U           |
| 24         | BA           | 1934       | C           |
| 24         | BA           | 1936       | A           |
| 24         | BA           | 1937       | A           |
| 24         | BA           | 1938       | A           |
| 24         | BA           | 1939       | U           |
| 24         | BA           | 1940       | U           |
| 24         | BA           | 1941       | C           |
| 24         | BA           | 1942       | C           |
| 24         | BA           | 1943       | U           |
| 24         | BA           | 1944       | U           |
| 24         | BA           | 1945       | G           |
| 24         | BA           | 1946       | U           |
| 24         | BA           | 1953       | A           |
| 24         | BA           | 1954       | G           |
| 24         | BA           | 1955       | U           |
| 24         | BA           | 1956       | U           |
| 24         | BA           | 1958       | C           |
| 24         | BA           | 1962       | C           |
| 24         | BA           | 1964       | G           |
| 24         | BA           | 1965       | C           |
| 24         | BA           | 1966       | A           |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 1967 | C    |
| 24  | BA    | 1968 | G    |
| 24  | BA    | 1970 | A    |
| 24  | BA    | 1971 | A    |
| 24  | BA    | 1972 | A    |
| 24  | BA    | 1977 | A    |
| 24  | BA    | 1978 | A    |
| 24  | BA    | 1981 | A    |
| 24  | BA    | 1982 | C    |
| 24  | BA    | 1989 | G    |
| 24  | BA    | 1992 | G    |
| 24  | BA    | 1993 | U    |
| 24  | BA    | 1995 | U    |
| 24  | BA    | 1996 | C    |
| 24  | BA    | 1997 | G    |
| 24  | BA    | 2000 | G    |
| 24  | BA    | 2005 | A    |
| 24  | BA    | 2014 | A    |
| 24  | BA    | 2015 | A    |
| 24  | BA    | 2016 | U    |
| 24  | BA    | 2018 | G    |
| 24  | BA    | 2019 | A    |
| 24  | BA    | 2020 | A    |
| 24  | BA    | 2021 | C    |
| 24  | BA    | 2022 | U    |
| 24  | BA    | 2023 | G    |
| 24  | BA    | 2030 | A    |
| 24  | BA    | 2031 | A    |
| 24  | BA    | 2032 | G    |
| 24  | BA    | 2033 | A    |
| 24  | BA    | 2034 | U    |
| 24  | BA    | 2035 | G    |
| 24  | BA    | 2041 | U    |
| 24  | BA    | 2043 | C    |
| 24  | BA    | 2044 | C    |
| 24  | BA    | 2048 | G    |
| 24  | BA    | 2050 | C    |
| 24  | BA    | 2051 | A    |
| 24  | BA    | 2052 | G    |
| 24  | BA    | 2055 | C    |
| 24  | BA    | 2056 | G    |
| 24  | BA    | 2060 | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 2061 | G    |
| 24  | BA    | 2062 | A    |
| 24  | BA    | 2063 | C    |
| 24  | BA    | 2064 | C    |
| 24  | BA    | 2068 | U    |
| 24  | BA    | 2069 | G    |
| 24  | BA    | 2073 | C    |
| 24  | BA    | 2074 | U    |
| 24  | BA    | 2075 | U    |
| 24  | BA    | 2076 | U    |
| 24  | BA    | 2077 | A    |
| 24  | BA    | 2080 | G    |
| 24  | BA    | 2092 | U    |
| 24  | BA    | 2093 | G    |
| 24  | BA    | 2094 | G    |
| 24  | BA    | 2110 | G    |
| 24  | BA    | 2111 | C    |
| 24  | BA    | 2114 | A    |
| 24  | BA    | 2116 | G    |
| 24  | BA    | 2117 | A    |
| 24  | BA    | 2119 | A    |
| 24  | BA    | 2120 | G    |
| 24  | BA    | 2123 | G    |
| 24  | BA    | 2126 | A    |
| 24  | BA    | 2127 | G    |
| 24  | BA    | 2132 | U    |
| 24  | BA    | 2133 | G    |
| 24  | BA    | 2134 | A    |
| 24  | BA    | 2135 | A    |
| 24  | BA    | 2136 | C    |
| 24  | BA    | 2144 | U    |
| 24  | BA    | 2148 | G    |
| 24  | BA    | 2156 | G    |
| 24  | BA    | 2157 | G    |
| 24  | BA    | 2158 | A    |
| 24  | BA    | 2159 | G    |
| 24  | BA    | 2165 | G    |
| 24  | BA    | 2172 | U    |
| 24  | BA    | 2173 | A    |
| 24  | BA    | 2185 | C    |
| 24  | BA    | 2194 | G    |
| 24  | BA    | 2195 | C    |

*Continued on next page...*

*Continued from previous page...*

| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 24         | BA           | 2196       | C           |
| 24         | BA           | 2197       | U           |
| 24         | BA           | 2198       | A           |
| 24         | BA           | 2205       | C           |
| 24         | BA           | 2206       | C           |
| 24         | BA           | 2208       | U           |
| 24         | BA           | 2209       | C           |
| 24         | BA           | 2210       | G           |
| 24         | BA           | 2211       | G           |
| 24         | BA           | 2212       | A           |
| 24         | BA           | 2213       | U           |
| 24         | BA           | 2215       | G           |
| 24         | BA           | 2224       | G           |
| 24         | BA           | 2225       | A           |
| 24         | BA           | 2226       | C           |
| 24         | BA           | 2227       | A           |
| 24         | BA           | 2228       | G           |
| 24         | BA           | 2238       | G           |
| 24         | BA           | 2239       | G           |
| 24         | BA           | 2240       | C           |
| 24         | BA           | 2241       | A           |
| 24         | BA           | 2245       | U           |
| 24         | BA           | 2250       | G           |
| 24         | BA           | 2251       | G           |
| 24         | BA           | 2254       | C           |
| 24         | BA           | 2257       | U           |
| 24         | BA           | 2258       | C           |
| 24         | BA           | 2265       | U           |
| 24         | BA           | 2266       | A           |
| 24         | BA           | 2267       | A           |
| 24         | BA           | 2268       | A           |
| 24         | BA           | 2269       | A           |
| 24         | BA           | 2274       | A           |
| 24         | BA           | 2275       | C           |
| 24         | BA           | 2276       | G           |
| 24         | BA           | 2278       | A           |
| 24         | BA           | 2281       | C           |
| 24         | BA           | 2283       | C           |
| 24         | BA           | 2284       | C           |
| 24         | BA           | 2286       | A           |
| 24         | BA           | 2287       | A           |
| 24         | BA           | 2288       | A           |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 2289 | G    |
| 24  | BA    | 2290 | G    |
| 24  | BA    | 2291 | U    |
| 24  | BA    | 2297 | C    |
| 24  | BA    | 2305 | A    |
| 24  | BA    | 2306 | C    |
| 24  | BA    | 2307 | G    |
| 24  | BA    | 2308 | G    |
| 24  | BA    | 2309 | A    |
| 24  | BA    | 2310 | A    |
| 24  | BA    | 2311 | A    |
| 24  | BA    | 2312 | U    |
| 24  | BA    | 2316 | C    |
| 24  | BA    | 2318 | G    |
| 24  | BA    | 2319 | G    |
| 24  | BA    | 2320 | A    |
| 24  | BA    | 2321 | G    |
| 24  | BA    | 2322 | A    |
| 24  | BA    | 2323 | G    |
| 24  | BA    | 2325 | G    |
| 24  | BA    | 2327 | A    |
| 24  | BA    | 2333 | A    |
| 24  | BA    | 2334 | G    |
| 24  | BA    | 2337 | G    |
| 24  | BA    | 2344 | U    |
| 24  | BA    | 2345 | G    |
| 24  | BA    | 2346 | A    |
| 24  | BA    | 2347 | C    |
| 24  | BA    | 2349 | G    |
| 24  | BA    | 2350 | C    |
| 24  | BA    | 2351 | G    |
| 24  | BA    | 2356 | C    |
| 24  | BA    | 2357 | U    |
| 24  | BA    | 2358 | G    |
| 24  | BA    | 2360 | A    |
| 24  | BA    | 2361 | A    |
| 24  | BA    | 2362 | G    |
| 24  | BA    | 2372 | G    |
| 24  | BA    | 2373 | G    |
| 24  | BA    | 2374 | C    |
| 24  | BA    | 2377 | A    |
| 24  | BA    | 2379 | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 2382 | G    |
| 24  | BA    | 2383 | G    |
| 24  | BA    | 2384 | G    |
| 24  | BA    | 2385 | C    |
| 24  | BA    | 2387 | U    |
| 24  | BA    | 2389 | G    |
| 24  | BA    | 2390 | U    |
| 24  | BA    | 2393 | A    |
| 24  | BA    | 2402 | C    |
| 24  | BA    | 2403 | C    |
| 24  | BA    | 2406 | U    |
| 24  | BA    | 2407 | G    |
| 24  | BA    | 2416 | C    |
| 24  | BA    | 2417 | C    |
| 24  | BA    | 2423 | U    |
| 24  | BA    | 2424 | C    |
| 24  | BA    | 2425 | A    |
| 24  | BA    | 2426 | A    |
| 24  | BA    | 2427 | C    |
| 24  | BA    | 2428 | G    |
| 24  | BA    | 2429 | G    |
| 24  | BA    | 2430 | A    |
| 24  | BA    | 2431 | U    |
| 24  | BA    | 2432 | A    |
| 24  | BA    | 2433 | A    |
| 24  | BA    | 2434 | A    |
| 24  | BA    | 2435 | A    |
| 24  | BA    | 2437 | U    |
| 24  | BA    | 2439 | A    |
| 24  | BA    | 2440 | C    |
| 24  | BA    | 2441 | C    |
| 24  | BA    | 2444 | G    |
| 24  | BA    | 2445 | G    |
| 24  | BA    | 2447 | G    |
| 24  | BA    | 2448 | A    |
| 24  | BA    | 2449 | U    |
| 24  | BA    | 2460 | U    |
| 24  | BA    | 2469 | A    |
| 24  | BA    | 2475 | C    |
| 24  | BA    | 2476 | A    |
| 24  | BA    | 2480 | C    |
| 24  | BA    | 2490 | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 2491 | U    |
| 24  | BA    | 2492 | U    |
| 24  | BA    | 2493 | U    |
| 24  | BA    | 2496 | C    |
| 24  | BA    | 2497 | A    |
| 24  | BA    | 2498 | C    |
| 24  | BA    | 2499 | C    |
| 24  | BA    | 2500 | U    |
| 24  | BA    | 2501 | C    |
| 24  | BA    | 2502 | G    |
| 24  | BA    | 2503 | A    |
| 24  | BA    | 2504 | U    |
| 24  | BA    | 2505 | G    |
| 24  | BA    | 2510 | C    |
| 24  | BA    | 2513 | G    |
| 24  | BA    | 2518 | A    |
| 24  | BA    | 2519 | U    |
| 24  | BA    | 2520 | C    |
| 24  | BA    | 2523 | G    |
| 24  | BA    | 2526 | G    |
| 24  | BA    | 2527 | C    |
| 24  | BA    | 2529 | G    |
| 24  | BA    | 2531 | A    |
| 24  | BA    | 2532 | G    |
| 24  | BA    | 2535 | G    |
| 24  | BA    | 2539 | C    |
| 24  | BA    | 2542 | A    |
| 24  | BA    | 2543 | G    |
| 24  | BA    | 2547 | U    |
| 24  | BA    | 2548 | G    |
| 24  | BA    | 2551 | C    |
| 24  | BA    | 2554 | U    |
| 24  | BA    | 2555 | U    |
| 24  | BA    | 2556 | C    |
| 24  | BA    | 2563 | U    |
| 24  | BA    | 2566 | A    |
| 24  | BA    | 2567 | G    |
| 24  | BA    | 2572 | A    |
| 24  | BA    | 2573 | C    |
| 24  | BA    | 2575 | C    |
| 24  | BA    | 2576 | G    |
| 24  | BA    | 2577 | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 2578 | G    |
| 24  | BA    | 2580 | U    |
| 24  | BA    | 2582 | G    |
| 24  | BA    | 2585 | U    |
| 24  | BA    | 2586 | C    |
| 24  | BA    | 2593 | U    |
| 24  | BA    | 2602 | A    |
| 24  | BA    | 2603 | G    |
| 24  | BA    | 2606 | C    |
| 24  | BA    | 2609 | U    |
| 24  | BA    | 2610 | C    |
| 24  | BA    | 2611 | U    |
| 24  | BA    | 2613 | U    |
| 24  | BA    | 2614 | A    |
| 24  | BA    | 2615 | U    |
| 24  | BA    | 2616 | C    |
| 24  | BA    | 2617 | C    |
| 24  | BA    | 2620 | C    |
| 24  | BA    | 2625 | G    |
| 24  | BA    | 2626 | C    |
| 24  | BA    | 2628 | C    |
| 24  | BA    | 2629 | A    |
| 24  | BA    | 2630 | G    |
| 24  | BA    | 2637 | U    |
| 24  | BA    | 2638 | G    |
| 24  | BA    | 2640 | G    |
| 24  | BA    | 2644 | G    |
| 24  | BA    | 2645 | G    |
| 24  | BA    | 2646 | C    |
| 24  | BA    | 2654 | A    |
| 24  | BA    | 2655 | G    |
| 24  | BA    | 2661 | G    |
| 24  | BA    | 2663 | G    |
| 24  | BA    | 2664 | G    |
| 24  | BA    | 2666 | C    |
| 24  | BA    | 2682 | U    |
| 24  | BA    | 2683 | C    |
| 24  | BA    | 2685 | G    |
| 24  | BA    | 2689 | U    |
| 24  | BA    | 2690 | C    |
| 24  | BA    | 2691 | C    |
| 24  | BA    | 2699 | C    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res     | Type |
|-----|-------|---------|------|
| 24  | BA    | 2701    | C    |
| 24  | BA    | 2702    | U    |
| 24  | BA    | 2704    | C    |
| 24  | BA    | 2706    | G    |
| 24  | BA    | 2708    | G    |
| 24  | BA    | 2710    | C    |
| 24  | BA    | 2711    | A    |
| 24  | BA    | 2712    | U    |
| 24  | BA    | 2712(A) | A    |
| 24  | BA    | 2714    | G    |
| 24  | BA    | 2719    | G    |
| 24  | BA    | 2720    | U    |
| 24  | BA    | 2725    | A    |
| 24  | BA    | 2726    | U    |
| 24  | BA    | 2727    | G    |
| 24  | BA    | 2732    | G    |
| 24  | BA    | 2733    | A    |
| 24  | BA    | 2734    | A    |
| 24  | BA    | 2748    | A    |
| 24  | BA    | 2749    | A    |
| 24  | BA    | 2750    | A    |
| 24  | BA    | 2751    | G    |
| 24  | BA    | 2754    | U    |
| 24  | BA    | 2756    | U    |
| 24  | BA    | 2757    | A    |
| 24  | BA    | 2758    | A    |
| 24  | BA    | 2766    | G    |
| 24  | BA    | 2772    | C    |
| 24  | BA    | 2777    | G    |
| 24  | BA    | 2778    | A    |
| 24  | BA    | 2779    | U    |
| 24  | BA    | 2780    | G    |
| 24  | BA    | 2781    | A    |
| 24  | BA    | 2782    | G    |
| 24  | BA    | 2783    | G    |
| 24  | BA    | 2787    | C    |
| 24  | BA    | 2789    | C    |
| 24  | BA    | 2790    | A    |
| 24  | BA    | 2791    | C    |
| 24  | BA    | 2795    | G    |
| 24  | BA    | 2797    | U    |
| 24  | BA    | 2798    | C    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 2799 | A    |
| 24  | BA    | 2801 | A    |
| 24  | BA    | 2803 | C    |
| 24  | BA    | 2804 | C    |
| 24  | BA    | 2805 | G    |
| 24  | BA    | 2807 | G    |
| 24  | BA    | 2809 | A    |
| 24  | BA    | 2810 | A    |
| 24  | BA    | 2812 | G    |
| 24  | BA    | 2814 | C    |
| 24  | BA    | 2815 | C    |
| 24  | BA    | 2820 | A    |
| 24  | BA    | 2821 | A    |
| 24  | BA    | 2822 | G    |
| 24  | BA    | 2823 | A    |
| 24  | BA    | 2832 | U    |
| 24  | BA    | 2833 | G    |
| 24  | BA    | 2834 | G    |
| 24  | BA    | 2835 | A    |
| 24  | BA    | 2836 | U    |
| 24  | BA    | 2843 | G    |
| 24  | BA    | 2844 | G    |
| 24  | BA    | 2845 | G    |
| 24  | BA    | 2847 | U    |
| 24  | BA    | 2849 | U    |
| 24  | BA    | 2850 | A    |
| 24  | BA    | 2851 | A    |
| 24  | BA    | 2852 | G    |
| 24  | BA    | 2858 | C    |
| 24  | BA    | 2861 | G    |
| 24  | BA    | 2866 | U    |
| 24  | BA    | 2867 | G    |
| 24  | BA    | 2868 | A    |
| 24  | BA    | 2872 | G    |
| 24  | BA    | 2874 | C    |
| 24  | BA    | 2877 | G    |
| 24  | BA    | 2878 | U    |
| 24  | BA    | 2879 | C    |
| 24  | BA    | 2880 | C    |
| 24  | BA    | 2883 | A    |
| 24  | BA    | 2891 | G    |
| 24  | BA    | 2892 | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 2893 | G    |
| 24  | BA    | 2894 | G    |
| 24  | BA    | 2899 | G    |
| 25  | BB    | 0    | A    |
| 25  | BB    | 1    | U    |
| 25  | BB    | 2    | C    |
| 25  | BB    | 3    | C    |
| 25  | BB    | 5    | C    |
| 25  | BB    | 6    | C    |
| 25  | BB    | 8    | U    |
| 25  | BB    | 12   | C    |
| 25  | BB    | 13   | A    |
| 25  | BB    | 15   | A    |
| 25  | BB    | 16   | G    |
| 25  | BB    | 25   | A    |
| 25  | BB    | 32   | C    |
| 25  | BB    | 35   | U    |
| 25  | BB    | 36   | C    |
| 25  | BB    | 41   | U    |
| 25  | BB    | 42   | C    |
| 25  | BB    | 45   | A    |
| 25  | BB    | 46   | A    |
| 25  | BB    | 51   | G    |
| 25  | BB    | 52   | A    |
| 25  | BB    | 54   | G    |
| 25  | BB    | 57   | A    |
| 25  | BB    | 66   | A    |
| 25  | BB    | 67   | G    |
| 25  | BB    | 69   | G    |
| 25  | BB    | 73   | A    |
| 25  | BB    | 74   | U    |
| 25  | BB    | 75   | G    |
| 25  | BB    | 83   | G    |
| 25  | BB    | 85   | G    |
| 25  | BB    | 87   | G    |
| 25  | BB    | 88   | C    |
| 25  | BB    | 89   | G    |
| 25  | BB    | 90   | C    |
| 25  | BB    | 99   | A    |
| 25  | BB    | 101  | A    |
| 25  | BB    | 103  | U    |
| 25  | BB    | 105  | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 25  | BB    | 109 | G    |
| 25  | BB    | 111 | U    |
| 25  | BB    | 116 | G    |
| 25  | BB    | 117 | G    |
| 25  | BB    | 118 | G    |
| 25  | BB    | 119 | A    |
| 25  | BB    | 120 | U    |

All (403) RNA pucker outliers are listed below:

| Mol | Chain | Res    | Type |
|-----|-------|--------|------|
| 1   | AA    | 5      | U    |
| 1   | AA    | 8      | A    |
| 1   | AA    | 30     | U    |
| 1   | AA    | 31     | G    |
| 1   | AA    | 47     | C    |
| 1   | AA    | 51     | A    |
| 1   | AA    | 60     | A    |
| 1   | AA    | 65     | U    |
| 1   | AA    | 88     | C    |
| 1   | AA    | 99     | C    |
| 1   | AA    | 109    | A    |
| 1   | AA    | 115    | G    |
| 1   | AA    | 119    | A    |
| 1   | AA    | 129(A) | G    |
| 1   | AA    | 181    | G    |
| 1   | AA    | 190    | G    |
| 1   | AA    | 208    | U    |
| 1   | AA    | 210    | U    |
| 1   | AA    | 243    | A    |
| 1   | AA    | 244    | U    |
| 1   | AA    | 246    | A    |
| 1   | AA    | 250    | A    |
| 1   | AA    | 251    | G    |
| 1   | AA    | 266    | G    |
| 1   | AA    | 274    | A    |
| 1   | AA    | 279    | A    |
| 1   | AA    | 280    | C    |
| 1   | AA    | 281    | G    |
| 1   | AA    | 305    | G    |
| 1   | AA    | 308    | C    |
| 1   | AA    | 327    | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | AA    | 328 | C    |
| 1   | AA    | 329 | A    |
| 1   | AA    | 344 | A    |
| 1   | AA    | 345 | C    |
| 1   | AA    | 351 | G    |
| 1   | AA    | 366 | C    |
| 1   | AA    | 367 | U    |
| 1   | AA    | 372 | C    |
| 1   | AA    | 413 | G    |
| 1   | AA    | 428 | G    |
| 1   | AA    | 429 | U    |
| 1   | AA    | 451 | A    |
| 1   | AA    | 484 | G    |
| 1   | AA    | 495 | A    |
| 1   | AA    | 496 | A    |
| 1   | AA    | 498 | A    |
| 1   | AA    | 508 | C    |
| 1   | AA    | 518 | C    |
| 1   | AA    | 531 | U    |
| 1   | AA    | 535 | A    |
| 1   | AA    | 547 | A    |
| 1   | AA    | 559 | A    |
| 1   | AA    | 560 | U    |
| 1   | AA    | 562 | C    |
| 1   | AA    | 563 | A    |
| 1   | AA    | 566 | G    |
| 1   | AA    | 576 | G    |
| 1   | AA    | 652 | U    |
| 1   | AA    | 686 | U    |
| 1   | AA    | 687 | A    |
| 1   | AA    | 701 | C    |
| 1   | AA    | 702 | A    |
| 1   | AA    | 703 | G    |
| 1   | AA    | 717 | C    |
| 1   | AA    | 721 | G    |
| 1   | AA    | 723 | U    |
| 1   | AA    | 748 | C    |
| 1   | AA    | 753 | A    |
| 1   | AA    | 781 | A    |
| 1   | AA    | 792 | A    |
| 1   | AA    | 793 | U    |
| 1   | AA    | 812 | C    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 1   | AA    | 815  | A    |
| 1   | AA    | 816  | A    |
| 1   | AA    | 817  | C    |
| 1   | AA    | 818  | G    |
| 1   | AA    | 819  | A    |
| 1   | AA    | 820  | U    |
| 1   | AA    | 871  | U    |
| 1   | AA    | 872  | A    |
| 1   | AA    | 873  | A    |
| 1   | AA    | 889  | A    |
| 1   | AA    | 890  | G    |
| 1   | AA    | 901  | A    |
| 1   | AA    | 913  | A    |
| 1   | AA    | 918  | A    |
| 1   | AA    | 960  | U    |
| 1   | AA    | 965  | A    |
| 1   | AA    | 968  | A    |
| 1   | AA    | 974  | A    |
| 1   | AA    | 975  | A    |
| 1   | AA    | 992  | U    |
| 1   | AA    | 993  | G    |
| 1   | AA    | 1004 | A    |
| 1   | AA    | 1049 | U    |
| 1   | AA    | 1055 | A    |
| 1   | AA    | 1065 | U    |
| 1   | AA    | 1067 | A    |
| 1   | AA    | 1084 | G    |
| 1   | AA    | 1085 | U    |
| 1   | AA    | 1101 | A    |
| 1   | AA    | 1129 | C    |
| 1   | AA    | 1145 | C    |
| 1   | AA    | 1159 | U    |
| 1   | AA    | 1182 | G    |
| 1   | AA    | 1183 | A    |
| 1   | AA    | 1196 | U    |
| 1   | AA    | 1212 | U    |
| 1   | AA    | 1214 | C    |
| 1   | AA    | 1224 | G    |
| 1   | AA    | 1226 | C    |
| 1   | AA    | 1239 | A    |
| 1   | AA    | 1240 | U    |
| 1   | AA    | 1285 | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 1   | AA    | 1297 | C    |
| 1   | AA    | 1300 | G    |
| 1   | AA    | 1302 | U    |
| 1   | AA    | 1322 | C    |
| 1   | AA    | 1331 | G    |
| 1   | AA    | 1345 | U    |
| 1   | AA    | 1346 | A    |
| 1   | AA    | 1347 | G    |
| 1   | AA    | 1363 | A    |
| 1   | AA    | 1364 | U    |
| 1   | AA    | 1377 | A    |
| 1   | AA    | 1394 | A    |
| 1   | AA    | 1399 | C    |
| 1   | AA    | 1400 | C    |
| 1   | AA    | 1446 | A    |
| 1   | AA    | 1468 | A    |
| 1   | AA    | 1502 | A    |
| 1   | AA    | 1504 | G    |
| 1   | AA    | 1505 | G    |
| 1   | AA    | 1528 | U    |
| 1   | AA    | 1529 | G    |
| 1   | AA    | 1531 | A    |
| 2   | A1    | 17   | U    |
| 2   | A1    | 36   | U    |
| 2   | A1    | 50   | U    |
| 2   | A1    | 51   | U    |
| 3   | AC    | 7    | A    |
| 3   | AC    | 9    | A    |
| 3   | AC    | 58   | A    |
| 3   | AC    | 73   | A    |
| 3   | AD    | 58   | A    |
| 3   | AB    | 58   | A    |
| 24  | BA    | 13   | A    |
| 24  | BA    | 60   | G    |
| 24  | BA    | 67   | U    |
| 24  | BA    | 70   | G    |
| 24  | BA    | 71   | A    |
| 24  | BA    | 83   | G    |
| 24  | BA    | 90   | U    |
| 24  | BA    | 119  | A    |
| 24  | BA    | 125  | G    |
| 24  | BA    | 196  | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type |
|-----|-------|--------|------|
| 24  | BA    | 199    | A    |
| 24  | BA    | 204    | A    |
| 24  | BA    | 205    | G    |
| 24  | BA    | 215    | G    |
| 24  | BA    | 221    | A    |
| 24  | BA    | 227    | A    |
| 24  | BA    | 251    | A    |
| 24  | BA    | 270(B) | A    |
| 24  | BA    | 270(L) | U    |
| 24  | BA    | 270(M) | U    |
| 24  | BA    | 270(Z) | U    |
| 24  | BA    | 271(B) | G    |
| 24  | BA    | 280    | C    |
| 24  | BA    | 283    | A    |
| 24  | BA    | 311    | A    |
| 24  | BA    | 323    | G    |
| 24  | BA    | 329    | G    |
| 24  | BA    | 331    | A    |
| 24  | BA    | 332    | A    |
| 24  | BA    | 351    | G    |
| 24  | BA    | 371    | A    |
| 24  | BA    | 403    | U    |
| 24  | BA    | 442    | G    |
| 24  | BA    | 455    | C    |
| 24  | BA    | 470    | A    |
| 24  | BA    | 503    | A    |
| 24  | BA    | 504    | U    |
| 24  | BA    | 506    | G    |
| 24  | BA    | 508    | G    |
| 24  | BA    | 526    | A    |
| 24  | BA    | 530    | G    |
| 24  | BA    | 559    | G    |
| 24  | BA    | 573    | G    |
| 24  | BA    | 574    | C    |
| 24  | BA    | 587    | C    |
| 24  | BA    | 602    | G    |
| 24  | BA    | 616    | A    |
| 24  | BA    | 620    | G    |
| 24  | BA    | 637    | A    |
| 24  | BA    | 643    | A    |
| 24  | BA    | 645    | C    |
| 24  | BA    | 669    | G    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type |
|-----|-------|--------|------|
| 24  | BA    | 670    | A    |
| 24  | BA    | 685    | A    |
| 24  | BA    | 686    | G    |
| 24  | BA    | 730    | C    |
| 24  | BA    | 740    | U    |
| 24  | BA    | 745    | G    |
| 24  | BA    | 746    | A    |
| 24  | BA    | 747    | U    |
| 24  | BA    | 750    | A    |
| 24  | BA    | 762    | U    |
| 24  | BA    | 773    | U    |
| 24  | BA    | 774    | A    |
| 24  | BA    | 776    | G    |
| 24  | BA    | 782    | A    |
| 24  | BA    | 783    | A    |
| 24  | BA    | 785    | G    |
| 24  | BA    | 788    | A    |
| 24  | BA    | 789    | A    |
| 24  | BA    | 800    | A    |
| 24  | BA    | 801    | G    |
| 24  | BA    | 811    | U    |
| 24  | BA    | 829    | A    |
| 24  | BA    | 830    | G    |
| 24  | BA    | 846    | C    |
| 24  | BA    | 858    | U    |
| 24  | BA    | 930    | U    |
| 24  | BA    | 944    | G    |
| 24  | BA    | 945    | A    |
| 24  | BA    | 957    | A    |
| 24  | BA    | 958    | U    |
| 24  | BA    | 960    | A    |
| 24  | BA    | 961    | C    |
| 24  | BA    | 973    | A    |
| 24  | BA    | 974(A) | C    |
| 24  | BA    | 989    | G    |
| 24  | BA    | 1008   | C    |
| 24  | BA    | 1011   | G    |
| 24  | BA    | 1022   | G    |
| 24  | BA    | 1024   | G    |
| 24  | BA    | 1064   | C    |
| 24  | BA    | 1078   | U    |
| 24  | BA    | 1085   | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res     | Type |
|-----|-------|---------|------|
| 24  | BA    | 1100    | C    |
| 24  | BA    | 1109    | C    |
| 24  | BA    | 1110    | G    |
| 24  | BA    | 1126    | A    |
| 24  | BA    | 1130    | U    |
| 24  | BA    | 1131    | G    |
| 24  | BA    | 1154    | G    |
| 24  | BA    | 1178    | C    |
| 24  | BA    | 1179    | C    |
| 24  | BA    | 1183    | G    |
| 24  | BA    | 1203    | G    |
| 24  | BA    | 1204    | A    |
| 24  | BA    | 1210    | A    |
| 24  | BA    | 1212    | G    |
| 24  | BA    | 1221    | C    |
| 24  | BA    | 1237    | A    |
| 24  | BA    | 1241    | A    |
| 24  | BA    | 1247    | A    |
| 24  | BA    | 1248    | G    |
| 24  | BA    | 1250    | G    |
| 24  | BA    | 1253    | A    |
| 24  | BA    | 1267    | U    |
| 24  | BA    | 1272    | A    |
| 24  | BA    | 1288    | U    |
| 24  | BA    | 1300    | U    |
| 24  | BA    | 1302    | A    |
| 24  | BA    | 1323    | U    |
| 24  | BA    | 1342    | A    |
| 24  | BA    | 1349    | A    |
| 24  | BA    | 1378    | A    |
| 24  | BA    | 1379    | A    |
| 24  | BA    | 1406    | U    |
| 24  | BA    | 1420    | U    |
| 24  | BA    | 1427    | A    |
| 24  | BA    | 1428    | C    |
| 24  | BA    | 1444(A) | A    |
| 24  | BA    | 1477    | A    |
| 24  | BA    | 1489    | U    |
| 24  | BA    | 1515    | C    |
| 24  | BA    | 1554    | A    |
| 24  | BA    | 1558    | A    |
| 24  | BA    | 1566    | A    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 1568 | G    |
| 24  | BA    | 1572 | A    |
| 24  | BA    | 1585 | C    |
| 24  | BA    | 1603 | A    |
| 24  | BA    | 1608 | A    |
| 24  | BA    | 1610 | A    |
| 24  | BA    | 1625 | C    |
| 24  | BA    | 1626 | G    |
| 24  | BA    | 1634 | A    |
| 24  | BA    | 1647 | G    |
| 24  | BA    | 1650 | G    |
| 24  | BA    | 1693 | U    |
| 24  | BA    | 1694 | C    |
| 24  | BA    | 1698 | A    |
| 24  | BA    | 1699 | G    |
| 24  | BA    | 1727 | U    |
| 24  | BA    | 1758 | G    |
| 24  | BA    | 1778 | U    |
| 24  | BA    | 1780 | A    |
| 24  | BA    | 1784 | A    |
| 24  | BA    | 1791 | A    |
| 24  | BA    | 1800 | C    |
| 24  | BA    | 1801 | G    |
| 24  | BA    | 1819 | A    |
| 24  | BA    | 1820 | U    |
| 24  | BA    | 1828 | G    |
| 24  | BA    | 1930 | G    |
| 24  | BA    | 1936 | A    |
| 24  | BA    | 1937 | A    |
| 24  | BA    | 1938 | A    |
| 24  | BA    | 1940 | U    |
| 24  | BA    | 1943 | U    |
| 24  | BA    | 1962 | C    |
| 24  | BA    | 1964 | G    |
| 24  | BA    | 1966 | A    |
| 24  | BA    | 1970 | A    |
| 24  | BA    | 1977 | A    |
| 24  | BA    | 1980 | G    |
| 24  | BA    | 1981 | A    |
| 24  | BA    | 1992 | G    |
| 24  | BA    | 1996 | C    |
| 24  | BA    | 2017 | U    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 2021 | C    |
| 24  | BA    | 2022 | U    |
| 24  | BA    | 2030 | A    |
| 24  | BA    | 2032 | G    |
| 24  | BA    | 2033 | A    |
| 24  | BA    | 2047 | U    |
| 24  | BA    | 2049 | G    |
| 24  | BA    | 2051 | A    |
| 24  | BA    | 2055 | C    |
| 24  | BA    | 2073 | C    |
| 24  | BA    | 2076 | U    |
| 24  | BA    | 2110 | G    |
| 24  | BA    | 2111 | C    |
| 24  | BA    | 2118 | U    |
| 24  | BA    | 2126 | A    |
| 24  | BA    | 2157 | G    |
| 24  | BA    | 2158 | A    |
| 24  | BA    | 2171 | A    |
| 24  | BA    | 2172 | U    |
| 24  | BA    | 2210 | G    |
| 24  | BA    | 2213 | U    |
| 24  | BA    | 2225 | A    |
| 24  | BA    | 2240 | C    |
| 24  | BA    | 2275 | C    |
| 24  | BA    | 2282 | G    |
| 24  | BA    | 2319 | G    |
| 24  | BA    | 2324 | C    |
| 24  | BA    | 2345 | G    |
| 24  | BA    | 2350 | C    |
| 24  | BA    | 2384 | G    |
| 24  | BA    | 2392 | A    |
| 24  | BA    | 2416 | C    |
| 24  | BA    | 2422 | A    |
| 24  | BA    | 2427 | C    |
| 24  | BA    | 2428 | G    |
| 24  | BA    | 2436 | G    |
| 24  | BA    | 2439 | A    |
| 24  | BA    | 2447 | G    |
| 24  | BA    | 2490 | G    |
| 24  | BA    | 2491 | U    |
| 24  | BA    | 2497 | A    |
| 24  | BA    | 2500 | U    |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type |
|-----|-------|------|------|
| 24  | BA    | 2501 | C    |
| 24  | BA    | 2503 | A    |
| 24  | BA    | 2517 | C    |
| 24  | BA    | 2519 | U    |
| 24  | BA    | 2542 | A    |
| 24  | BA    | 2571 | C    |
| 24  | BA    | 2572 | A    |
| 24  | BA    | 2602 | A    |
| 24  | BA    | 2609 | U    |
| 24  | BA    | 2610 | C    |
| 24  | BA    | 2613 | U    |
| 24  | BA    | 2615 | U    |
| 24  | BA    | 2637 | U    |
| 24  | BA    | 2654 | A    |
| 24  | BA    | 2688 | U    |
| 24  | BA    | 2689 | U    |
| 24  | BA    | 2690 | C    |
| 24  | BA    | 2705 | A    |
| 24  | BA    | 2707 | G    |
| 24  | BA    | 2726 | U    |
| 24  | BA    | 2755 | C    |
| 24  | BA    | 2756 | U    |
| 24  | BA    | 2776 | A    |
| 24  | BA    | 2777 | G    |
| 24  | BA    | 2778 | A    |
| 24  | BA    | 2790 | A    |
| 24  | BA    | 2799 | A    |
| 24  | BA    | 2835 | A    |
| 24  | BA    | 2848 | G    |
| 24  | BA    | 2849 | U    |
| 24  | BA    | 2866 | U    |
| 24  | BA    | 2879 | C    |
| 24  | BA    | 2893 | G    |
| 25  | BB    | 7    | G    |
| 25  | BB    | 15   | A    |
| 25  | BB    | 56   | G    |

## 5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

There are no non-standard protein/DNA/RNA residues in this entry.

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

| Mol | Chain | Number of breaks |
|-----|-------|------------------|
| 24  | BA    | 2                |

All chain breaks are listed below:

| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1     | BA    | 2756:U    | O3'    | 2757:A    | P      | 1.77         |
| 1     | BA    | 1203:G    | O3'    | 1204:A    | P      | 1.19         |

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

| Mol | Chain | Analysed        | <RSRZ> | #RSRZ>2        | OWAB(Å <sup>2</sup> ) | Q<0.9 |
|-----|-------|-----------------|--------|----------------|-----------------------|-------|
| 1   | AA    | 1515/1522 (99%) | 0.58   | 201 (13%) 7 14 | 145, 221, 302, 356    | 0     |
| 2   | A1    | 50/50 (100%)    | 4.44   | 38 (76%) 0 1   | 200, 320, 348, 357    | 0     |
| 3   | AB    | 76/76 (100%)    | 2.91   | 54 (71%) 0 2   | 288, 351, 370, 374    | 0     |
| 3   | AC    | 76/76 (100%)    | 0.12   | 4 (5%) 32 33   | 167, 214, 260, 284    | 0     |
| 3   | AD    | 76/76 (100%)    | 0.61   | 9 (11%) 9 16   | 222, 271, 293, 316    | 0     |
| 4   | AE    | 234/256 (91%)   | 2.29   | 91 (38%) 1 4   | 189, 226, 271, 304    | 0     |
| 5   | AF    | 206/239 (86%)   | 2.46   | 94 (45%) 0 3   | 222, 244, 266, 277    | 0     |
| 6   | AG    | 208/209 (99%)   | 1.66   | 74 (35%) 1 4   | 168, 215, 233, 242    | 0     |
| 7   | AH    | 150/162 (92%)   | 2.70   | 72 (48%) 0 3   | 174, 210, 235, 257    | 0     |
| 8   | AI    | 101/101 (100%)  | 3.26   | 62 (61%) 0 2   | 191, 223, 236, 261    | 0     |
| 9   | AJ    | 155/156 (99%)   | 1.84   | 56 (36%) 1 4   | 210, 240, 256, 275    | 0     |
| 10  | AK    | 138/138 (100%)  | 2.01   | 48 (34%) 1 5   | 186, 208, 225, 232    | 0     |
| 11  | AL    | 127/128 (99%)   | 1.34   | 37 (29%) 1 6   | 222, 261, 276, 287    | 0     |
| 12  | AM    | 98/105 (93%)    | 1.12   | 23 (23%) 2 7   | 230, 260, 274, 282    | 0     |
| 13  | AN    | 119/129 (92%)   | 1.50   | 34 (28%) 1 6   | 193, 212, 245, 267    | 0     |
| 14  | AO    | 124/132 (93%)   | 1.87   | 41 (33%) 1 5   | 179, 199, 233, 267    | 0     |
| 15  | AP    | 125/126 (99%)   | 0.68   | 15 (12%) 9 15  | 223, 243, 272, 278    | 0     |
| 16  | AQ    | 60/61 (98%)     | 0.87   | 12 (20%) 3 9   | 215, 248, 259, 263    | 0     |
| 17  | AR    | 88/89 (98%)     | 1.79   | 32 (36%) 1 4   | 186, 207, 231, 238    | 0     |
| 18  | AS    | 83/88 (94%)     | 0.78   | 16 (19%) 3 9   | 180, 201, 226, 249    | 0     |
| 19  | AT    | 104/105 (99%)   | 1.08   | 22 (21%) 2 8   | 164, 193, 244, 277    | 0     |
| 20  | AU    | 73/88 (82%)     | 3.42   | 40 (54%) 0 3   | 184, 209, 258, 287    | 0     |
| 21  | AV    | 80/93 (86%)     | 0.74   | 11 (13%) 6 14  | 226, 252, 266, 270    | 0     |
| 22  | AW    | 99/106 (93%)    | 1.26   | 26 (26%) 1 6   | 167, 195, 225, 241    | 0     |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Analysed        | <RSRZ> | #RSRZ>2       | OWAB(Å <sup>2</sup> ) | Q<0.9 |
|-----|-------|-----------------|--------|---------------|-----------------------|-------|
| 23  | AX    | 24/27 (88%)     | -0.50  | 0 100 100     | 230, 249, 280, 288    | 0     |
| 24  | BA    | 2889/2916 (99%) | 0.80   | 567 (19%) 3 9 | 129, 215, 297, 342    | 0     |
| 25  | BB    | 123/123 (100%)  | -0.44  | 1 (0%) 82 71  | 199, 259, 293, 316    | 0     |
| 26  | BC    | 228/229 (99%)   | 1.84   | 84 (36%) 1 4  | 250, 281, 300, 313    | 0     |
| 27  | BD    | 272/276 (98%)   | 1.06   | 55 (20%) 3 9  | 130, 199, 221, 259    | 0     |
| 28  | BE    | 206/206 (100%)  | 2.13   | 88 (42%) 0 3  | 148, 186, 232, 269    | 0     |
| 29  | BF    | 208/210 (99%)   | 2.18   | 77 (37%) 1 4  | 164, 238, 263, 276    | 0     |
| 30  | BG    | 182/182 (100%)  | 0.72   | 25 (13%) 6 14 | 212, 246, 268, 276    | 0     |
| 31  | BH    | 174/180 (96%)   | 1.84   | 66 (37%) 1 4  | 196, 241, 260, 271    | 0     |
| 32  | BK    | 148/148 (100%)  | 2.09   | 65 (43%) 0 3  | 202, 227, 249, 257    | 0     |
| 33  | BL    | 138/147 (93%)   | 2.92   | 72 (52%) 0 3  | 271, 298, 312, 327    | 0     |
| 34  | BM    | 139/140 (99%)   | 1.24   | 41 (29%) 1 6  | 167, 198, 224, 235    | 0     |
| 35  | BN    | 122/122 (100%)  | 1.64   | 34 (27%) 1 6  | 148, 177, 209, 221    | 0     |
| 36  | BO    | 145/150 (96%)   | 0.80   | 26 (17%) 3 10 | 166, 247, 276, 315    | 0     |
| 37  | BP    | 136/141 (96%)   | 1.37   | 39 (28%) 1 6  | 166, 208, 234, 241    | 0     |
| 38  | BQ    | 117/118 (99%)   | 0.15   | 5 (4%) 40 38  | 168, 192, 219, 226    | 0     |
| 39  | BR    | 110/112 (98%)   | -0.03  | 1 (0%) 81 69  | 186, 235, 263, 289    | 0     |
| 40  | BS    | 117/146 (80%)   | 1.44   | 31 (26%) 1 6  | 164, 194, 227, 242    | 0     |
| 41  | BT    | 117/118 (99%)   | 1.15   | 25 (21%) 2 8  | 183, 202, 220, 232    | 0     |
| 42  | BU    | 101/101 (100%)  | 2.33   | 47 (46%) 0 3  | 168, 225, 246, 257    | 0     |
| 43  | BV    | 110/113 (97%)   | 2.25   | 50 (45%) 0 3  | 180, 209, 237, 248    | 0     |
| 44  | BW    | 94/96 (97%)     | 0.60   | 12 (12%) 7 14 | 212, 232, 280, 288    | 0     |
| 45  | BX    | 110/110 (100%)  | 1.23   | 30 (27%) 1 6  | 221, 255, 287, 305    | 0     |
| 46  | BY    | 180/206 (87%)   | 0.98   | 34 (18%) 3 10 | 208, 246, 268, 279    | 0     |
| 47  | BZ    | 85/85 (100%)    | 0.40   | 10 (11%) 9 16 | 211, 229, 242, 271    | 0     |
| 48  | B1    | 67/67 (100%)    | 0.49   | 5 (7%) 20 25  | 218, 243, 263, 268    | 0     |
| 49  | B2    | 59/60 (98%)     | 0.86   | 8 (13%) 7 14  | 204, 224, 249, 259    | 0     |
| 50  | B3    | 71/71 (100%)    | 2.30   | 27 (38%) 1 4  | 199, 223, 238, 246    | 0     |
| 51  | B4    | 57/60 (95%)     | 1.77   | 26 (45%) 0 3  | 164, 209, 264, 289    | 0     |
| 52  | B5    | 49/54 (90%)     | 1.00   | 11 (22%) 2 8  | 206, 232, 242, 252    | 0     |
| 53  | B6    | 49/49 (100%)    | 0.56   | 6 (12%) 8 15  | 162, 209, 221, 235    | 0     |

*Continued on next page...*

Continued from previous page...

| Mol | Chain | Analysed          | <RSRZ> | #RSRZ>2        | OWAB(Å <sup>2</sup> ) | Q<0.9 |
|-----|-------|-------------------|--------|----------------|-----------------------|-------|
| 54  | B7    | 64/65 (98%)       | 0.16   | 3 (4%) 36 36   | 164, 195, 225, 242    | 0     |
| 55  | B8    | 37/37 (100%)      | 0.93   | 6 (16%) 4 11   | 205, 215, 224, 226    | 0     |
| All | All   | 10893/11176 (97%) | 1.19   | 2689 (24%) 2 7 | 129, 223, 295, 374    | 0     |

All (2689) RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 5   | AF    | 207 | VAL  | 27.0 |
| 7   | AH    | 154 | GLY  | 25.9 |
| 20  | AU    | 16  | PRO  | 21.9 |
| 8   | AI    | 101 | ALA  | 20.2 |
| 4   | AE    | 7   | VAL  | 19.6 |
| 7   | AH    | 5   | ASP  | 18.1 |
| 14  | AO    | 128 | ALA  | 17.9 |
| 33  | BL    | 2   | LYS  | 17.9 |
| 20  | AU    | 18  | ARG  | 16.5 |
| 15  | AP    | 123 | ALA  | 16.1 |
| 29  | BF    | 78  | ILE  | 16.1 |
| 29  | BF    | 63  | LYS  | 15.2 |
| 14  | AO    | 112 | ASP  | 14.1 |
| 4   | AE    | 8   | LYS  | 13.9 |
| 17  | AR    | 89  | GLY  | 13.2 |
| 3   | AB    | 68  | C    | 13.2 |
| 7   | AH    | 150 | ARG  | 13.1 |
| 4   | AE    | 224 | GLN  | 13.0 |
| 5   | AF    | 201 | TYR  | 13.0 |
| 2   | A1    | 17  | U    | 12.8 |
| 26  | BC    | 125 | SER  | 12.8 |
| 10  | AK    | 66  | GLY  | 12.7 |
| 20  | AU    | 23  | LYS  | 12.7 |
| 15  | AP    | 124 | PRO  | 12.6 |
| 14  | AO    | 127 | GLU  | 12.5 |
| 2   | A1    | 3   | U    | 12.2 |
| 7   | AH    | 153 | LYS  | 11.9 |
| 42  | BU    | 84  | LYS  | 11.9 |
| 29  | BF    | 79  | GLY  | 11.6 |
| 8   | AI    | 100 | ASN  | 11.5 |
| 50  | B3    | 50  | VAL  | 11.5 |
| 50  | B3    | 48  | ARG  | 11.4 |
| 33  | BL    | 94  | GLU  | 11.4 |
| 33  | BL    | 3   | LYS  | 11.4 |

Continued on next page...

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 8   | AI    | 98   | LEU  | 11.3 |
| 2   | A1    | 4    | U    | 11.3 |
| 3   | AB    | 69   | G    | 11.3 |
| 33  | BL    | 93   | ARG  | 11.2 |
| 5   | AF    | 107  | GLN  | 11.1 |
| 35  | BN    | 71   | ARG  | 11.0 |
| 4   | AE    | 235  | SER  | 10.9 |
| 2   | A1    | 20   | G    | 10.8 |
| 7   | AH    | 64   | ARG  | 10.8 |
| 29  | BF    | 64   | ILE  | 10.8 |
| 5   | AF    | 48   | TYR  | 10.8 |
| 33  | BL    | 5    | VAL  | 10.5 |
| 4   | AE    | 228  | GLY  | 10.5 |
| 22  | AW    | 9    | ASN  | 10.4 |
| 20  | AU    | 28   | GLU  | 10.4 |
| 43  | BV    | 86   | LEU  | 10.3 |
| 4   | AE    | 240  | GLN  | 10.2 |
| 50  | B3    | 49   | PHE  | 10.2 |
| 10  | AK    | 105  | ARG  | 10.1 |
| 20  | AU    | 17   | SER  | 9.9  |
| 26  | BC    | 126  | LYS  | 9.9  |
| 2   | A1    | 11   | U    | 9.9  |
| 8   | AI    | 95   | GLU  | 9.9  |
| 33  | BL    | 138  | VAL  | 9.8  |
| 5   | AF    | 150  | LYS  | 9.8  |
| 9   | AJ    | 90   | GLU  | 9.8  |
| 32  | BK    | 50   | ARG  | 9.7  |
| 33  | BL    | 4    | VAL  | 9.7  |
| 4   | AE    | 9    | GLU  | 9.5  |
| 29  | BF    | 62   | ARG  | 9.5  |
| 33  | BL    | 59   | ILE  | 9.4  |
| 4   | AE    | 13   | ALA  | 9.3  |
| 4   | AE    | 229  | VAL  | 9.2  |
| 9   | AJ    | 13   | GLN  | 9.2  |
| 41  | BT    | 104  | GLN  | 9.2  |
| 5   | AF    | 45   | LYS  | 9.2  |
| 33  | BL    | 89   | HIS  | 9.2  |
| 29  | BF    | 68   | LYS  | 9.2  |
| 1   | AA    | 1517 | G    | 9.1  |
| 4   | AE    | 227  | GLY  | 9.1  |
| 28  | BE    | 141  | ILE  | 8.9  |
| 8   | AI    | 43   | LEU  | 8.9  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 29  | BF    | 82   | ILE  | 8.9  |
| 19  | AT    | 102  | GLY  | 8.9  |
| 13  | AN    | 93   | GLN  | 8.8  |
| 2   | A1    | 21   | G    | 8.8  |
| 8   | AI    | 96   | PRO  | 8.7  |
| 28  | BE    | 69   | LYS  | 8.7  |
| 29  | BF    | 87   | GLY  | 8.7  |
| 8   | AI    | 52   | ILE  | 8.6  |
| 43  | BV    | 110  | LYS  | 8.6  |
| 31  | BH    | 168  | PRO  | 8.6  |
| 28  | BE    | 71   | GLY  | 8.5  |
| 35  | BN    | 110  | GLY  | 8.5  |
| 24  | BA    | 795  | C    | 8.5  |
| 29  | BF    | 77   | ASP  | 8.5  |
| 33  | BL    | 62   | ASP  | 8.5  |
| 29  | BF    | 81   | PRO  | 8.5  |
| 1   | AA    | 1407 | C    | 8.3  |
| 22  | AW    | 8    | ARG  | 8.3  |
| 1   | AA    | 1542 | U    | 8.3  |
| 10  | AK    | 68   | ARG  | 8.3  |
| 43  | BV    | 94   | ASP  | 8.3  |
| 9   | AJ    | 19   | GLY  | 8.3  |
| 2   | A1    | 5    | U    | 8.2  |
| 29  | BF    | 84   | VAL  | 8.2  |
| 30  | BG    | 71   | THR  | 8.2  |
| 28  | BE    | 87   | GLU  | 8.2  |
| 28  | BE    | 130  | GLY  | 8.2  |
| 17  | AR    | 44   | LYS  | 8.1  |
| 42  | BU    | 82   | ARG  | 8.1  |
| 8   | AI    | 40   | VAL  | 8.1  |
| 3   | AB    | 70   | G    | 8.1  |
| 29  | BF    | 61   | GLY  | 8.1  |
| 29  | BF    | 88   | VAL  | 8.1  |
| 35  | BN    | 109  | LYS  | 8.1  |
| 24  | BA    | 686  | G    | 8.0  |
| 28  | BE    | 86   | PRO  | 8.0  |
| 42  | BU    | 77   | ALA  | 8.0  |
| 8   | AI    | 97   | PHE  | 8.0  |
| 20  | AU    | 24   | ALA  | 7.9  |
| 30  | BG    | 74   | LYS  | 7.9  |
| 19  | AT    | 101  | ARG  | 7.9  |
| 5   | AF    | 118  | GLN  | 7.9  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 11  | AL    | 125    | TYR  | 7.9  |
| 24  | BA    | 270(N) | G    | 7.9  |
| 5   | AF    | 132    | ARG  | 7.9  |
| 35  | BN    | 89     | ASN  | 7.9  |
| 29  | BF    | 67     | GLN  | 7.9  |
| 50  | B3    | 71     | ARG  | 7.8  |
| 6   | AG    | 86     | LYS  | 7.8  |
| 7   | AH    | 110    | LEU  | 7.8  |
| 26  | BC    | 3      | HIS  | 7.8  |
| 7   | AH    | 6      | PHE  | 7.8  |
| 33  | BL    | 85     | GLU  | 7.8  |
| 29  | BF    | 89     | VAL  | 7.8  |
| 50  | B3    | 70     | GLY  | 7.7  |
| 33  | BL    | 63     | ARG  | 7.7  |
| 1   | AA    | 843    | U    | 7.7  |
| 20  | AU    | 57     | GLY  | 7.7  |
| 8   | AI    | 99     | ALA  | 7.6  |
| 11  | AL    | 90     | PRO  | 7.6  |
| 8   | AI    | 41     | GLU  | 7.6  |
| 4   | AE    | 217    | ARG  | 7.6  |
| 7   | AH    | 73     | ASN  | 7.6  |
| 5   | AF    | 105    | GLU  | 7.6  |
| 43  | BV    | 67     | ASP  | 7.6  |
| 5   | AF    | 86     | VAL  | 7.6  |
| 24  | BA    | 1963   | U    | 7.5  |
| 42  | BU    | 76     | LYS  | 7.5  |
| 29  | BF    | 75     | HIS  | 7.5  |
| 28  | BE    | 84     | PHE  | 7.4  |
| 8   | AI    | 47     | ARG  | 7.4  |
| 24  | BA    | 275    | G    | 7.4  |
| 10  | AK    | 54     | ASP  | 7.4  |
| 29  | BF    | 65     | TRP  | 7.3  |
| 2   | A1    | 19     | U    | 7.3  |
| 14  | AO    | 111    | LYS  | 7.3  |
| 27  | BD    | 170    | GLY  | 7.3  |
| 29  | BF    | 69     | HIS  | 7.3  |
| 29  | BF    | 80     | ALA  | 7.3  |
| 24  | BA    | 685    | A    | 7.3  |
| 20  | AU    | 25     | THR  | 7.3  |
| 50  | B3    | 20     | ASN  | 7.3  |
| 26  | BC    | 140    | PRO  | 7.2  |
| 28  | BE    | 72     | VAL  | 7.2  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 28  | BE    | 88   | GLY  | 7.2  |
| 42  | BU    | 101  | GLY  | 7.2  |
| 43  | BV    | 85   | VAL  | 7.2  |
| 6   | AG    | 195  | ALA  | 7.2  |
| 28  | BE    | 151  | TYR  | 7.2  |
| 20  | AU    | 76   | LEU  | 7.1  |
| 9   | AJ    | 11   | GLN  | 7.1  |
| 2   | A1    | 16   | U    | 7.1  |
| 26  | BC    | 2    | LYS  | 7.1  |
| 11  | AL    | 95   | LYS  | 7.1  |
| 29  | BF    | 70   | THR  | 7.1  |
| 9   | AJ    | 14   | PRO  | 7.0  |
| 33  | BL    | 139  | VAL  | 7.0  |
| 1   | AA    | 1408 | A    | 7.0  |
| 35  | BN    | 91   | LEU  | 7.0  |
| 5   | AF    | 46   | GLU  | 7.0  |
| 42  | BU    | 57   | VAL  | 7.0  |
| 50  | B3    | 51   | ASP  | 6.9  |
| 26  | BC    | 104  | LEU  | 6.9  |
| 11  | AL    | 94   | ALA  | 6.9  |
| 7   | AH    | 149  | GLU  | 6.9  |
| 7   | AH    | 63   | ARG  | 6.9  |
| 32  | BK    | 74   | ASN  | 6.9  |
| 4   | AE    | 193  | ASP  | 6.9  |
| 6   | AG    | 84   | LYS  | 6.9  |
| 27  | BD    | 265  | PRO  | 6.9  |
| 8   | AI    | 16   | GLN  | 6.8  |
| 26  | BC    | 124  | GLY  | 6.8  |
| 20  | AU    | 27   | GLY  | 6.8  |
| 33  | BL    | 60   | TYR  | 6.8  |
| 11  | AL    | 128  | ARG  | 6.8  |
| 4   | AE    | 234  | PRO  | 6.8  |
| 27  | BD    | 275  | LYS  | 6.8  |
| 4   | AE    | 11   | LEU  | 6.8  |
| 37  | BP    | 135  | ASP  | 6.7  |
| 4   | AE    | 10   | LEU  | 6.7  |
| 42  | BU    | 58   | VAL  | 6.7  |
| 36  | BO    | 149  | GLU  | 6.7  |
| 29  | BF    | 76   | GLY  | 6.7  |
| 24  | BA    | 2238 | G    | 6.7  |
| 6   | AG    | 157  | LEU  | 6.7  |
| 31  | BH    | 92   | ILE  | 6.6  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 2   | A1    | 18   | U    | 6.6  |
| 22  | AW    | 11   | SER  | 6.6  |
| 2   | A1    | 22   | C    | 6.6  |
| 3   | AB    | 67   | C    | 6.6  |
| 1   | AA    | 1487 | G    | 6.6  |
| 24  | BA    | 1903 | G    | 6.6  |
| 16  | AQ    | 10   | ALA  | 6.6  |
| 26  | BC    | 227  | HIS  | 6.6  |
| 10  | AK    | 126  | LYS  | 6.6  |
| 33  | BL    | 29   | GLN  | 6.6  |
| 14  | AO    | 125  | PRO  | 6.5  |
| 24  | BA    | 687  | C    | 6.5  |
| 27  | BD    | 271  | ILE  | 6.5  |
| 15  | AP    | 122  | LYS  | 6.5  |
| 1   | AA    | 1409 | C    | 6.5  |
| 28  | BE    | 142  | GLY  | 6.5  |
| 1   | AA    | 841  | U    | 6.5  |
| 21  | AV    | 81   | ARG  | 6.5  |
| 24  | BA    | 274  | G    | 6.4  |
| 24  | BA    | 684  | G    | 6.4  |
| 24  | BA    | 1971 | A    | 6.4  |
| 33  | BL    | 96   | VAL  | 6.4  |
| 4   | AE    | 89   | GLY  | 6.4  |
| 55  | B8    | 28   | GLU  | 6.4  |
| 5   | AF    | 167  | TRP  | 6.4  |
| 1   | AA    | 5    | U    | 6.4  |
| 24  | BA    | 791  | C    | 6.4  |
| 3   | AD    | 75   | C    | 6.4  |
| 3   | AB    | 1    | G    | 6.4  |
| 10  | AK    | 52   | ASP  | 6.4  |
| 20  | AU    | 26   | LEU  | 6.4  |
| 10  | AK    | 106  | GLY  | 6.4  |
| 24  | BA    | 728  | G    | 6.4  |
| 2   | A1    | 49   | U    | 6.4  |
| 24  | BA    | 796  | C    | 6.4  |
| 26  | BC    | 69   | GLY  | 6.4  |
| 28  | BE    | 70   | ALA  | 6.4  |
| 32  | BK    | 56   | LYS  | 6.3  |
| 11  | AL    | 91   | ASP  | 6.3  |
| 10  | AK    | 23   | SER  | 6.3  |
| 24  | BA    | 2242 | G    | 6.3  |
| 24  | BA    | 739  | G    | 6.3  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 29  | BF    | 86   | GLY  | 6.3  |
| 9   | AJ    | 80   | VAL  | 6.3  |
| 9   | AJ    | 153  | HIS  | 6.3  |
| 27  | BD    | 122  | ASP  | 6.3  |
| 17  | AR    | 45   | VAL  | 6.3  |
| 50  | B3    | 36   | CYS  | 6.3  |
| 24  | BA    | 1433 | U    | 6.3  |
| 2   | A1    | 50   | U    | 6.3  |
| 5   | AF    | 147  | LYS  | 6.2  |
| 40  | BS    | 41   | ARG  | 6.2  |
| 44  | BW    | 68   | ARG  | 6.2  |
| 2   | A1    | 12   | U    | 6.2  |
| 17  | AR    | 5    | LYS  | 6.2  |
| 7   | AH    | 140  | ARG  | 6.2  |
| 24  | BA    | 1554 | A    | 6.2  |
| 32  | BK    | 105  | HIS  | 6.2  |
| 36  | BO    | 150  | ALA  | 6.2  |
| 5   | AF    | 173  | VAL  | 6.2  |
| 17  | AR    | 41   | GLU  | 6.2  |
| 10  | AK    | 70   | GLN  | 6.2  |
| 31  | BH    | 20   | ALA  | 6.2  |
| 24  | BA    | 2076 | U    | 6.2  |
| 26  | BC    | 16   | PRO  | 6.2  |
| 4   | AE    | 236  | TYR  | 6.2  |
| 36  | BO    | 148  | LEU  | 6.2  |
| 32  | BK    | 52   | ARG  | 6.1  |
| 42  | BU    | 83   | ARG  | 6.1  |
| 24  | BA    | 2433 | A    | 6.1  |
| 8   | AI    | 46   | ARG  | 6.1  |
| 24  | BA    | 729  | G    | 6.1  |
| 24  | BA    | 1367 | A    | 6.1  |
| 26  | BC    | 1    | PRO  | 6.1  |
| 8   | AI    | 94   | GLN  | 6.1  |
| 50  | B3    | 47   | GLN  | 6.1  |
| 1   | AA    | 1477 | C    | 6.1  |
| 26  | BC    | 15   | ASP  | 6.1  |
| 29  | BF    | 66   | PRO  | 6.1  |
| 32  | BK    | 28   | ASN  | 6.1  |
| 24  | BA    | 794  | G    | 6.1  |
| 24  | BA    | 2441 | C    | 6.1  |
| 2   | A1    | 48   | U    | 6.1  |
| 31  | BH    | 177  | GLY  | 6.0  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 20  | AU    | 21   | LYS  | 6.0  |
| 10  | AK    | 22   | GLU  | 6.0  |
| 28  | BE    | 145  | LYS  | 6.0  |
| 24  | BA    | 683  | C    | 6.0  |
| 24  | BA    | 1    | G    | 6.0  |
| 31  | BH    | 119  | GLU  | 6.0  |
| 5   | AF    | 149  | ALA  | 6.0  |
| 28  | BE    | 131  | ALA  | 6.0  |
| 40  | BS    | 16   | ARG  | 6.0  |
| 40  | BS    | 83   | ILE  | 6.0  |
| 5   | AF    | 49   | SER  | 6.0  |
| 43  | BV    | 65   | LEU  | 6.0  |
| 41  | BT    | 118  | GLY  | 6.0  |
| 9   | AJ    | 62   | PHE  | 6.0  |
| 5   | AF    | 71   | ALA  | 6.0  |
| 12  | AM    | 100  | THR  | 6.0  |
| 24  | BA    | 1902 | C    | 6.0  |
| 32  | BK    | 73   | GLU  | 6.0  |
| 43  | BV    | 87   | PRO  | 6.0  |
| 33  | BL    | 90   | LYS  | 6.0  |
| 10  | AK    | 55   | GLY  | 5.9  |
| 28  | BE    | 203  | LYS  | 5.9  |
| 24  | BA    | 1099 | G    | 5.9  |
| 7   | AH    | 60   | TYR  | 5.9  |
| 10  | AK    | 80   | ILE  | 5.9  |
| 22  | AW    | 98   | PRO  | 5.9  |
| 1   | AA    | 1415 | G    | 5.9  |
| 28  | BE    | 127  | ASP  | 5.9  |
| 24  | BA    | 788  | A    | 5.9  |
| 6   | AG    | 83   | SER  | 5.9  |
| 27  | BD    | 126  | GLN  | 5.9  |
| 35  | BN    | 108  | GLU  | 5.9  |
| 45  | BX    | 31   | LEU  | 5.9  |
| 30  | BG    | 84   | LYS  | 5.9  |
| 1   | AA    | 1541 | U    | 5.9  |
| 33  | BL    | 61   | ALA  | 5.9  |
| 24  | BA    | 1055 | G    | 5.9  |
| 31  | BH    | 84   | SER  | 5.9  |
| 32  | BK    | 22   | LYS  | 5.8  |
| 5   | AF    | 98   | ASN  | 5.8  |
| 24  | BA    | 2241 | A    | 5.8  |
| 4   | AE    | 197  | VAL  | 5.8  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 13  | AN    | 49   | GLY  | 5.8  |
| 24  | BA    | 1725 | G    | 5.8  |
| 24  | BA    | 2210 | G    | 5.8  |
| 29  | BF    | 73   | ALA  | 5.8  |
| 51  | B4    | 59   | GLU  | 5.8  |
| 24  | BA    | 2902 | C    | 5.8  |
| 41  | BT    | 103  | PRO  | 5.8  |
| 31  | BH    | 30   | LYS  | 5.8  |
| 32  | BK    | 23   | PRO  | 5.8  |
| 24  | BA    | 764  | A    | 5.8  |
| 8   | AI    | 10   | LEU  | 5.8  |
| 1   | AA    | 842  | C    | 5.8  |
| 32  | BK    | 103  | ARG  | 5.7  |
| 28  | BE    | 126  | PRO  | 5.7  |
| 13  | AN    | 73   | MET  | 5.7  |
| 6   | AG    | 166  | LYS  | 5.7  |
| 29  | BF    | 144  | LYS  | 5.7  |
| 20  | AU    | 81   | PHE  | 5.7  |
| 10  | AK    | 125  | ARG  | 5.7  |
| 31  | BH    | 130  | ARG  | 5.7  |
| 45  | BX    | 2    | ARG  | 5.7  |
| 24  | BA    | 2131 | G    | 5.7  |
| 28  | BE    | 17   | ASP  | 5.7  |
| 26  | BC    | 17   | ASN  | 5.7  |
| 33  | BL    | 50   | ASP  | 5.7  |
| 26  | BC    | 123  | VAL  | 5.6  |
| 34  | BM    | 9    | VAL  | 5.6  |
| 26  | BC    | 67   | GLY  | 5.6  |
| 43  | BV    | 97   | LYS  | 5.6  |
| 12  | AM    | 89   | ASP  | 5.6  |
| 46  | BY    | 63   | ASP  | 5.6  |
| 8   | AI    | 42   | GLU  | 5.6  |
| 17  | AR    | 53   | HIS  | 5.6  |
| 32  | BK    | 70   | LYS  | 5.6  |
| 1   | AA    | 1486 | G    | 5.6  |
| 3   | AB    | 17   | C    | 5.6  |
| 9   | AJ    | 93   | PRO  | 5.6  |
| 24  | BA    | 772  | C    | 5.6  |
| 6   | AG    | 197  | PRO  | 5.6  |
| 29  | BF    | 74   | ARG  | 5.6  |
| 3   | AD    | 69   | G    | 5.6  |
| 28  | BE    | 39   | PRO  | 5.6  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 13  | AN    | 96     | ARG  | 5.6  |
| 4   | AE    | 52     | GLU  | 5.6  |
| 2   | A1    | 36     | U    | 5.5  |
| 5   | AF    | 42     | LEU  | 5.5  |
| 20  | AU    | 84     | LYS  | 5.5  |
| 27  | BD    | 171    | ASP  | 5.5  |
| 43  | BV    | 64     | MET  | 5.5  |
| 40  | BS    | 43     | GLN  | 5.5  |
| 34  | BM    | 78     | TYR  | 5.5  |
| 51  | B4    | 5      | PRO  | 5.5  |
| 37  | BP    | 110    | THR  | 5.5  |
| 28  | BE    | 89     | ASP  | 5.5  |
| 26  | BC    | 100    | ILE  | 5.5  |
| 9   | AJ    | 61     | VAL  | 5.5  |
| 7   | AH    | 8      | GLU  | 5.5  |
| 5   | AF    | 93     | LYS  | 5.5  |
| 10  | AK    | 46     | LYS  | 5.5  |
| 8   | AI    | 50     | TYR  | 5.5  |
| 24  | BA    | 270(O) | U    | 5.5  |
| 42  | BU    | 46     | VAL  | 5.5  |
| 26  | BC    | 9      | ALA  | 5.5  |
| 33  | BL    | 43     | ALA  | 5.5  |
| 42  | BU    | 32     | THR  | 5.5  |
| 43  | BV    | 30     | GLU  | 5.5  |
| 5   | AF    | 53     | ALA  | 5.4  |
| 13  | AN    | 100    | ALA  | 5.4  |
| 46  | BY    | 106    | GLY  | 5.4  |
| 3   | AD    | 76     | A    | 5.4  |
| 35  | BN    | 95     | GLY  | 5.4  |
| 42  | BU    | 85     | LYS  | 5.4  |
| 43  | BV    | 93     | ALA  | 5.4  |
| 26  | BC    | 31     | GLU  | 5.4  |
| 24  | BA    | 2798   | C    | 5.4  |
| 28  | BE    | 42     | ASP  | 5.4  |
| 40  | BS    | 20     | PRO  | 5.4  |
| 50  | B3    | 69     | LYS  | 5.4  |
| 20  | AU    | 78     | LEU  | 5.4  |
| 31  | BH    | 86     | GLU  | 5.4  |
| 34  | BM    | 128    | HIS  | 5.4  |
| 1   | AA    | 1478   | C    | 5.4  |
| 24  | BA    | 466    | A    | 5.4  |
| 24  | BA    | 1944   | U    | 5.4  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 42  | BU    | 13     | ARG  | 5.4  |
| 1   | AA    | 1420   | C    | 5.4  |
| 22  | AW    | 48     | LYS  | 5.4  |
| 24  | BA    | 2655   | G    | 5.4  |
| 2   | A1    | 23     | A    | 5.4  |
| 7   | AH    | 14     | ARG  | 5.4  |
| 29  | BF    | 151    | SER  | 5.4  |
| 31  | BH    | 167    | GLU  | 5.4  |
| 24  | BA    | 2442   | C    | 5.4  |
| 29  | BF    | 51     | THR  | 5.4  |
| 24  | BA    | 1054   | A    | 5.4  |
| 1   | AA    | 1167   | A    | 5.3  |
| 33  | BL    | 64     | SER  | 5.3  |
| 27  | BD    | 169    | GLU  | 5.3  |
| 24  | BA    | 273(F) | C    | 5.3  |
| 13  | AN    | 70     | LYS  | 5.3  |
| 26  | BC    | 228    | SER  | 5.3  |
| 7   | AH    | 40     | ARG  | 5.3  |
| 8   | AI    | 2      | ARG  | 5.3  |
| 41  | BT    | 107    | ALA  | 5.3  |
| 24  | BA    | 1901   | A    | 5.3  |
| 1   | AA    | 1511   | G    | 5.3  |
| 45  | BX    | 3      | VAL  | 5.3  |
| 4   | AE    | 220    | ASP  | 5.3  |
| 43  | BV    | 68     | ARG  | 5.3  |
| 49  | B2    | 58     | VAL  | 5.3  |
| 9   | AJ    | 60     | LYS  | 5.3  |
| 24  | BA    | 2      | G    | 5.3  |
| 20  | AU    | 82     | THR  | 5.3  |
| 31  | BH    | 165    | ALA  | 5.3  |
| 26  | BC    | 141    | LYS  | 5.3  |
| 36  | BO    | 123    | LEU  | 5.3  |
| 13  | AN    | 99     | GLN  | 5.3  |
| 9   | AJ    | 155    | ARG  | 5.3  |
| 40  | BS    | 39     | ARG  | 5.3  |
| 1   | AA    | 1479   | C    | 5.3  |
| 26  | BC    | 111    | ASP  | 5.3  |
| 50  | B3    | 67     | TYR  | 5.3  |
| 9   | AJ    | 4      | ARG  | 5.3  |
| 26  | BC    | 70     | LYS  | 5.3  |
| 10  | AK    | 73     | ASP  | 5.3  |
| 28  | BE    | 140    | SER  | 5.3  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 7   | AH    | 92     | LYS  | 5.2  |
| 13  | AN    | 74     | ALA  | 5.2  |
| 28  | BE    | 205    | ALA  | 5.2  |
| 43  | BV    | 2      | GLU  | 5.2  |
| 32  | BK    | 104    | GLN  | 5.2  |
| 44  | BW    | 69     | TYR  | 5.2  |
| 24  | BA    | 1046   | A    | 5.2  |
| 26  | BC    | 13     | LYS  | 5.2  |
| 26  | BC    | 101    | GLN  | 5.2  |
| 17  | AR    | 47     | LYS  | 5.2  |
| 24  | BA    | 273(D) | C    | 5.2  |
| 24  | BA    | 785    | G    | 5.2  |
| 24  | BA    | 276    | A    | 5.2  |
| 24  | BA    | 363(F) | A    | 5.2  |
| 5   | AF    | 89     | GLU  | 5.2  |
| 42  | BU    | 86     | GLY  | 5.2  |
| 24  | BA    | 1840   | G    | 5.1  |
| 31  | BH    | 10     | PRO  | 5.1  |
| 31  | BH    | 12     | PRO  | 5.1  |
| 8   | AI    | 48     | LEU  | 5.1  |
| 26  | BC    | 127    | LEU  | 5.1  |
| 24  | BA    | 1107   | G    | 5.1  |
| 33  | BL    | 18     | THR  | 5.1  |
| 40  | BS    | 40     | THR  | 5.1  |
| 35  | BN    | 112    | MET  | 5.1  |
| 26  | BC    | 122    | ALA  | 5.1  |
| 36  | BO    | 70     | GLN  | 5.1  |
| 24  | BA    | 682    | G    | 5.1  |
| 20  | AU    | 59     | SER  | 5.1  |
| 26  | BC    | 129    | ARG  | 5.1  |
| 24  | BA    | 2062   | A    | 5.1  |
| 11  | AL    | 126    | SER  | 5.1  |
| 37  | BP    | 31     | ASP  | 5.1  |
| 24  | BA    | 771    | G    | 5.1  |
| 24  | BA    | 2659   | G    | 5.1  |
| 43  | BV    | 24     | ILE  | 5.1  |
| 33  | BL    | 88     | ALA  | 5.1  |
| 4   | AE    | 226    | ARG  | 5.1  |
| 1   | AA    | 1403   | C    | 5.1  |
| 29  | BF    | 53     | THR  | 5.1  |
| 8   | AI    | 3      | ARG  | 5.1  |
| 29  | BF    | 14     | PRO  | 5.1  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 4   | AE    | 146  | GLN  | 5.1  |
| 21  | AV    | 28   | LYS  | 5.0  |
| 24  | BA    | 101  | G    | 5.0  |
| 24  | BA    | 2668 | G    | 5.0  |
| 40  | BS    | 19   | LEU  | 5.0  |
| 9   | AJ    | 154  | TYR  | 5.0  |
| 33  | BL    | 69   | THR  | 5.0  |
| 27  | BD    | 124  | PRO  | 5.0  |
| 28  | BE    | 68   | ALA  | 5.0  |
| 29  | BF    | 71   | GLY  | 5.0  |
| 4   | AE    | 239  | VAL  | 5.0  |
| 40  | BS    | 63   | VAL  | 5.0  |
| 9   | AJ    | 16   | LEU  | 5.0  |
| 1   | AA    | 1520 | G    | 5.0  |
| 5   | AF    | 82   | GLU  | 5.0  |
| 18  | AS    | 51   | VAL  | 5.0  |
| 42  | BU    | 34   | GLU  | 5.0  |
| 1   | AA    | 1483 | A    | 5.0  |
| 24  | BA    | 2258 | C    | 5.0  |
| 33  | BL    | 6    | ALA  | 5.0  |
| 1   | AA    | 1443 | G    | 5.0  |
| 49  | B2    | 60   | GLU  | 5.0  |
| 19  | AT    | 30   | PRO  | 5.0  |
| 27  | BD    | 272  | ALA  | 5.0  |
| 50  | B3    | 66   | SER  | 5.0  |
| 5   | AF    | 175  | LEU  | 5.0  |
| 26  | BC    | 28   | LEU  | 5.0  |
| 42  | BU    | 16   | PRO  | 5.0  |
| 1   | AA    | 1414 | U    | 5.0  |
| 50  | B3    | 1    | MET  | 5.0  |
| 10  | AK    | 13   | ILE  | 4.9  |
| 1   | AA    | 1423 | G    | 4.9  |
| 1   | AA    | 1476 | G    | 4.9  |
| 24  | BA    | 1361 | G    | 4.9  |
| 4   | AE    | 225  | ALA  | 4.9  |
| 2   | A1    | 47   | U    | 4.9  |
| 17  | AR    | 19   | PRO  | 4.9  |
| 5   | AF    | 44   | GLU  | 4.9  |
| 24  | BA    | 793  | A    | 4.9  |
| 24  | BA    | 2610 | C    | 4.9  |
| 5   | AF    | 106  | VAL  | 4.9  |
| 10  | AK    | 67   | PRO  | 4.9  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 4   | AE    | 129    | GLU  | 4.9  |
| 5   | AF    | 90     | GLU  | 4.9  |
| 24  | BA    | 2586   | C    | 4.9  |
| 43  | BV    | 66     | GLU  | 4.9  |
| 24  | BA    | 1106   | G    | 4.9  |
| 5   | AF    | 74     | GLY  | 4.9  |
| 8   | AI    | 39     | LYS  | 4.9  |
| 46  | BY    | 64     | GLY  | 4.9  |
| 24  | BA    | 363(C) | G    | 4.9  |
| 7   | AH    | 129    | ILE  | 4.9  |
| 30  | BG    | 79     | ASN  | 4.9  |
| 10  | AK    | 44     | PHE  | 4.9  |
| 29  | BF    | 149    | ASP  | 4.9  |
| 1   | AA    | 1394   | A    | 4.9  |
| 9   | AJ    | 137    | LYS  | 4.9  |
| 10  | AK    | 76     | PRO  | 4.9  |
| 5   | AF    | 92     | ALA  | 4.8  |
| 1   | AA    | 1406   | U    | 4.8  |
| 11  | AL    | 2      | GLU  | 4.8  |
| 1   | AA    | 1416   | G    | 4.8  |
| 20  | AU    | 88     | LYS  | 4.8  |
| 5   | AF    | 109    | PRO  | 4.8  |
| 40  | BS    | 105    | LEU  | 4.8  |
| 32  | BK    | 46     | ALA  | 4.8  |
| 8   | AI    | 93     | SER  | 4.8  |
| 27  | BD    | 274    | ARG  | 4.8  |
| 27  | BD    | 276    | LYS  | 4.8  |
| 37  | BP    | 138    | ASP  | 4.8  |
| 2   | A1    | 51     | U    | 4.8  |
| 7   | AH    | 83     | GLU  | 4.8  |
| 31  | BH    | 47     | GLU  | 4.8  |
| 27  | BD    | 116    | GLN  | 4.8  |
| 24  | BA    | 1779   | U    | 4.8  |
| 29  | BF    | 83     | PHE  | 4.8  |
| 41  | BT    | 88     | ILE  | 4.8  |
| 33  | BL    | 17     | ALA  | 4.8  |
| 28  | BE    | 52     | LEU  | 4.8  |
| 24  | BA    | 1695   | G    | 4.8  |
| 1   | AA    | 1422   | G    | 4.8  |
| 24  | BA    | 782    | A    | 4.8  |
| 7   | AH    | 109    | ILE  | 4.7  |
| 24  | BA    | 1056   | G    | 4.7  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 24  | BA    | 790    | C    | 4.7  |
| 24  | BA    | 1053   | C    | 4.7  |
| 24  | BA    | 2804   | C    | 4.7  |
| 29  | BF    | 13     | SER  | 4.7  |
| 22  | AW    | 10     | LEU  | 4.7  |
| 7   | AH    | 147    | ASP  | 4.7  |
| 14  | AO    | 19     | ARG  | 4.7  |
| 12  | AM    | 96     | ILE  | 4.7  |
| 26  | BC    | 12     | GLU  | 4.7  |
| 33  | BL    | 36     | GLU  | 4.7  |
| 35  | BN    | 101    | PRO  | 4.7  |
| 1   | AA    | 1404   | C    | 4.7  |
| 26  | BC    | 4      | GLY  | 4.7  |
| 6   | AG    | 47     | ARG  | 4.7  |
| 43  | BV    | 99     | ARG  | 4.7  |
| 12  | AM    | 87     | THR  | 4.7  |
| 41  | BT    | 73     | GLY  | 4.7  |
| 11  | AL    | 123    | PRO  | 4.7  |
| 28  | BE    | 28     | ALA  | 4.7  |
| 24  | BA    | 1555   | G    | 4.7  |
| 24  | BA    | 2557   | G    | 4.7  |
| 42  | BU    | 56     | SER  | 4.7  |
| 10  | AK    | 69     | ARG  | 4.7  |
| 24  | BA    | 1100   | C    | 4.7  |
| 42  | BU    | 74     | LYS  | 4.7  |
| 51  | B4    | 11     | THR  | 4.7  |
| 7   | AH    | 143    | ARG  | 4.7  |
| 24  | BA    | 1566   | A    | 4.7  |
| 3   | AB    | 56     | C    | 4.7  |
| 8   | AI    | 8      | ILE  | 4.7  |
| 24  | BA    | 363(B) | G    | 4.7  |
| 24  | BA    | 727    | A    | 4.7  |
| 27  | BD    | 134    | ARG  | 4.6  |
| 37  | BP    | 112    | GLU  | 4.6  |
| 7   | AH    | 65     | ASN  | 4.6  |
| 17  | AR    | 43     | LEU  | 4.6  |
| 2   | A1    | 8      | U    | 4.6  |
| 5   | AF    | 169    | ALA  | 4.6  |
| 5   | AF    | 51     | GLY  | 4.6  |
| 37  | BP    | 47     | ILE  | 4.6  |
| 6   | AG    | 85     | LYS  | 4.6  |
| 40  | BS    | 14     | TYR  | 4.6  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 1   | AA    | 1475 | G    | 4.6  |
| 15  | AP    | 118  | ALA  | 4.6  |
| 24  | BA    | 775  | G    | 4.6  |
| 43  | BV    | 21   | VAL  | 4.6  |
| 24  | BA    | 2079 | U    | 4.6  |
| 43  | BV    | 92   | ARG  | 4.6  |
| 33  | BL    | 44   | ALA  | 4.6  |
| 29  | BF    | 147  | GLY  | 4.6  |
| 1   | AA    | 848  | C    | 4.6  |
| 10  | AK    | 134  | ILE  | 4.6  |
| 32  | BK    | 55   | ALA  | 4.6  |
| 1   | AA    | 1421 | G    | 4.6  |
| 24  | BA    | 759  | G    | 4.6  |
| 24  | BA    | 1058 | G    | 4.6  |
| 24  | BA    | 2077 | A    | 4.6  |
| 31  | BH    | 126  | PRO  | 4.6  |
| 6   | AG    | 80   | GLU  | 4.6  |
| 5   | AF    | 168  | ALA  | 4.5  |
| 24  | BA    | 1835 | G    | 4.5  |
| 24  | BA    | 2660 | A    | 4.5  |
| 2   | A1    | 45   | U    | 4.5  |
| 5   | AF    | 72   | LYS  | 4.5  |
| 5   | AF    | 202  | ILE  | 4.5  |
| 12  | AM    | 90   | LEU  | 4.5  |
| 40  | BS    | 22   | PHE  | 4.5  |
| 31  | BH    | 82   | GLY  | 4.5  |
| 24  | BA    | 2792 | G    | 4.5  |
| 4   | AE    | 68   | ILE  | 4.5  |
| 7   | AH    | 135  | THR  | 4.5  |
| 27  | BD    | 121  | PRO  | 4.5  |
| 31  | BH    | 173  | PRO  | 4.5  |
| 32  | BK    | 16   | GLY  | 4.5  |
| 24  | BA    | 1788 | C    | 4.5  |
| 12  | AM    | 25   | GLU  | 4.5  |
| 9   | AJ    | 17   | VAL  | 4.5  |
| 45  | BX    | 75   | ILE  | 4.5  |
| 7   | AH    | 146  | ALA  | 4.5  |
| 35  | BN    | 116  | SER  | 4.5  |
| 1   | AA    | 793  | U    | 4.5  |
| 14  | AO    | 23   | LYS  | 4.5  |
| 24  | BA    | 698  | C    | 4.5  |
| 24  | BA    | 1839 | G    | 4.5  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 24  | BA    | 2795 | G    | 4.5  |
| 27  | BD    | 201  | HIS  | 4.5  |
| 13  | AN    | 107  | SER  | 4.5  |
| 42  | BU    | 49   | THR  | 4.5  |
| 6   | AG    | 199  | ASN  | 4.5  |
| 24  | BA    | 680  | G    | 4.5  |
| 28  | BE    | 116  | VAL  | 4.5  |
| 42  | BU    | 31   | ALA  | 4.5  |
| 42  | BU    | 81   | TYR  | 4.5  |
| 33  | BL    | 117  | THR  | 4.5  |
| 41  | BT    | 112  | ARG  | 4.5  |
| 43  | BV    | 29   | LEU  | 4.5  |
| 5   | AF    | 152  | ILE  | 4.5  |
| 7   | AH    | 67   | VAL  | 4.5  |
| 24  | BA    | 1432 | C    | 4.5  |
| 6   | AG    | 183  | GLY  | 4.5  |
| 43  | BV    | 26   | GLY  | 4.5  |
| 13  | AN    | 11   | LYS  | 4.4  |
| 19  | AT    | 83   | ASP  | 4.4  |
| 3   | AB    | 39   | U    | 4.4  |
| 17  | AR    | 14   | GLU  | 4.4  |
| 4   | AE    | 232  | PRO  | 4.4  |
| 13  | AN    | 129  | SER  | 4.4  |
| 20  | AU    | 80   | PRO  | 4.4  |
| 24  | BA    | 1084 | A    | 4.4  |
| 26  | BC    | 179  | SER  | 4.4  |
| 27  | BD    | 273  | ARG  | 4.4  |
| 14  | AO    | 18   | VAL  | 4.4  |
| 4   | AE    | 195  | ASP  | 4.4  |
| 28  | BE    | 18   | ASP  | 4.4  |
| 17  | AR    | 6    | GLU  | 4.4  |
| 24  | BA    | 1368 | G    | 4.4  |
| 41  | BT    | 111  | GLU  | 4.4  |
| 11  | AL    | 127  | LYS  | 4.4  |
| 15  | AP    | 119  | GLY  | 4.4  |
| 31  | BH    | 21   | PRO  | 4.4  |
| 5   | AF    | 151  | VAL  | 4.4  |
| 24  | BA    | 740  | U    | 4.4  |
| 1   | AA    | 1410 | G    | 4.4  |
| 27  | BD    | 168  | ARG  | 4.4  |
| 24  | BA    | 1918 | A    | 4.4  |
| 1   | AA    | 1510 | U    | 4.4  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 24  | BA    | 273(E) | U    | 4.4  |
| 28  | BE    | 96     | PHE  | 4.4  |
| 24  | BA    | 4      | C    | 4.4  |
| 49  | B2    | 35     | ARG  | 4.4  |
| 29  | BF    | 90     | PHE  | 4.4  |
| 24  | BA    | 786    | C    | 4.4  |
| 24  | BA    | 2794   | C    | 4.4  |
| 9   | AJ    | 18     | TYR  | 4.4  |
| 11  | AL    | 99     | LEU  | 4.4  |
| 13  | AN    | 19     | ALA  | 4.4  |
| 7   | AH    | 15     | ARG  | 4.4  |
| 8   | AI    | 87     | ARG  | 4.4  |
| 29  | BF    | 145    | GLU  | 4.4  |
| 1   | AA    | 1417   | G    | 4.4  |
| 24  | BA    | 363(D) | G    | 4.4  |
| 24  | BA    | 2735   | G    | 4.4  |
| 24  | BA    | 1981   | A    | 4.4  |
| 5   | AF    | 184    | TYR  | 4.4  |
| 10  | AK    | 75     | ARG  | 4.4  |
| 17  | AR    | 87     | ILE  | 4.4  |
| 31  | BH    | 101    | ARG  | 4.4  |
| 33  | BL    | 98     | ARG  | 4.4  |
| 24  | BA    | 781    | A    | 4.4  |
| 20  | AU    | 20     | ALA  | 4.3  |
| 37  | BP    | 136    | ALA  | 4.3  |
| 4   | AE    | 124    | SER  | 4.3  |
| 1   | AA    | 1474   | G    | 4.3  |
| 15  | AP    | 120    | LYS  | 4.3  |
| 5   | AF    | 129    | ALA  | 4.3  |
| 22  | AW    | 12     | ALA  | 4.3  |
| 18  | AS    | 39     | TYR  | 4.3  |
| 4   | AE    | 140    | HIS  | 4.3  |
| 16  | AQ    | 11     | LYS  | 4.3  |
| 51  | B4    | 60     | VAL  | 4.3  |
| 51  | B4    | 7      | PRO  | 4.3  |
| 43  | BV    | 63     | ASP  | 4.3  |
| 4   | AE    | 45     | GLN  | 4.3  |
| 28  | BE    | 150    | VAL  | 4.3  |
| 31  | BH    | 100    | GLY  | 4.3  |
| 6   | AG    | 179    | GLU  | 4.3  |
| 24  | BA    | 363(A) | A    | 4.3  |
| 24  | BA    | 125    | G    | 4.3  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 24  | BA    | 1817   | G    | 4.3  |
| 9   | AJ    | 21     | VAL  | 4.3  |
| 8   | AI    | 38     | GLU  | 4.3  |
| 3   | AB    | 66     | U    | 4.3  |
| 28  | BE    | 157    | ALA  | 4.3  |
| 37  | BP    | 133    | ARG  | 4.3  |
| 3   | AD    | 70     | G    | 4.3  |
| 24  | BA    | 363    | G    | 4.3  |
| 24  | BA    | 2667   | C    | 4.3  |
| 28  | BE    | 182    | LEU  | 4.3  |
| 31  | BH    | 13     | LYS  | 4.3  |
| 9   | AJ    | 120    | ILE  | 4.3  |
| 8   | AI    | 9      | VAL  | 4.3  |
| 24  | BA    | 2666   | C    | 4.3  |
| 7   | AH    | 151    | LEU  | 4.3  |
| 18  | AS    | 73     | LEU  | 4.3  |
| 26  | BC    | 71     | GLN  | 4.3  |
| 4   | AE    | 137    | ARG  | 4.2  |
| 20  | AU    | 75     | ILE  | 4.2  |
| 8   | AI    | 59     | TYR  | 4.2  |
| 24  | BA    | 1741   | C    | 4.2  |
| 24  | BA    | 1982   | C    | 4.2  |
| 24  | BA    | 2606   | C    | 4.2  |
| 42  | BU    | 48     | GLY  | 4.2  |
| 24  | BA    | 2599   | G    | 4.2  |
| 24  | BA    | 2793   | G    | 4.2  |
| 2   | A1    | 44     | U    | 4.2  |
| 31  | BH    | 76     | VAL  | 4.2  |
| 46  | BY    | 47     | VAL  | 4.2  |
| 26  | BC    | 27     | HIS  | 4.2  |
| 28  | BE    | 129    | HIS  | 4.2  |
| 24  | BA    | 2901   | C    | 4.2  |
| 53  | B6    | 15     | THR  | 4.2  |
| 24  | BA    | 792    | G    | 4.2  |
| 24  | BA    | 1821   | A    | 4.2  |
| 11  | AL    | 86     | VAL  | 4.2  |
| 33  | BL    | 84     | LEU  | 4.2  |
| 6   | AG    | 151    | LYS  | 4.2  |
| 51  | B4    | 37     | LYS  | 4.2  |
| 24  | BA    | 273(C) | C    | 4.2  |
| 24  | BA    | 462    | C    | 4.2  |
| 29  | BF    | 150    | GLY  | 4.2  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 34  | BM    | 93     | THR  | 4.2  |
| 24  | BA    | 1822   | G    | 4.2  |
| 3   | AB    | 38     | A    | 4.2  |
| 5   | AF    | 200    | ALA  | 4.2  |
| 33  | BL    | 9      | LYS  | 4.2  |
| 4   | AE    | 33     | TYR  | 4.2  |
| 8   | AI    | 22     | GLU  | 4.2  |
| 24  | BA    | 1564   | C    | 4.2  |
| 8   | AI    | 61     | LEU  | 4.2  |
| 20  | AU    | 53     | ARG  | 4.2  |
| 6   | AG    | 87     | GLY  | 4.2  |
| 41  | BT    | 7      | GLY  | 4.2  |
| 28  | BE    | 134    | ILE  | 4.2  |
| 6   | AG    | 10     | ARG  | 4.2  |
| 20  | AU    | 74     | ARG  | 4.2  |
| 29  | BF    | 54     | ARG  | 4.2  |
| 7   | AH    | 88     | LYS  | 4.2  |
| 45  | BX    | 30     | VAL  | 4.2  |
| 24  | BA    | 270(M) | U    | 4.1  |
| 49  | B2    | 34     | GLU  | 4.1  |
| 4   | AE    | 175    | ARG  | 4.1  |
| 5   | AF    | 79     | ARG  | 4.1  |
| 9   | AJ    | 5      | ARG  | 4.1  |
| 12  | AM    | 29     | ARG  | 4.1  |
| 31  | BH    | 27     | LYS  | 4.1  |
| 33  | BL    | 70     | LYS  | 4.1  |
| 24  | BA    | 1360   | A    | 4.1  |
| 9   | AJ    | 55     | GLY  | 4.1  |
| 50  | B3    | 32     | TYR  | 4.1  |
| 19  | AT    | 96     | GLN  | 4.1  |
| 24  | BA    | 1057   | A    | 4.1  |
| 24  | BA    | 1787   | A    | 4.1  |
| 24  | BA    | 2584   | U    | 4.1  |
| 8   | AI    | 54     | LYS  | 4.1  |
| 15  | AP    | 117    | VAL  | 4.1  |
| 7   | AH    | 128    | PRO  | 4.1  |
| 8   | AI    | 51     | PRO  | 4.1  |
| 11  | AL    | 87     | GLN  | 4.1  |
| 24  | BA    | 2071   | A    | 4.1  |
| 29  | BF    | 15     | SER  | 4.1  |
| 51  | B4    | 47     | PRO  | 4.1  |
| 24  | BA    | 270(L) | U    | 4.1  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 43  | BV    | 89   | ALA  | 4.1  |
| 42  | BU    | 45   | THR  | 4.1  |
| 24  | BA    | 681  | G    | 4.1  |
| 5   | AF    | 62   | ASP  | 4.1  |
| 24  | BA    | 546  | C    | 4.1  |
| 26  | BC    | 8    | ARG  | 4.1  |
| 20  | AU    | 83   | GLU  | 4.1  |
| 42  | BU    | 47   | VAL  | 4.1  |
| 28  | BE    | 55   | ASN  | 4.1  |
| 3   | AC    | 16   | U    | 4.1  |
| 24  | BA    | 2900 | A    | 4.1  |
| 29  | BF    | 141  | ALA  | 4.1  |
| 34  | BM    | 92   | ALA  | 4.1  |
| 10  | AK    | 83   | ILE  | 4.1  |
| 17  | AR    | 3    | ILE  | 4.1  |
| 9   | AJ    | 78   | ARG  | 4.1  |
| 33  | BL    | 65   | PHE  | 4.1  |
| 14  | AO    | 108  | ALA  | 4.1  |
| 28  | BE    | 1    | MET  | 4.1  |
| 6   | AG    | 81   | GLU  | 4.1  |
| 14  | AO    | 76   | ASN  | 4.1  |
| 41  | BT    | 85   | LYS  | 4.1  |
| 5   | AF    | 85   | ARG  | 4.1  |
| 31  | BH    | 17   | VAL  | 4.1  |
| 3   | AB    | 3    | C    | 4.1  |
| 6   | AG    | 165  | MET  | 4.1  |
| 24  | BA    | 2424 | C    | 4.1  |
| 31  | BH    | 32   | GLU  | 4.0  |
| 8   | AI    | 53   | ALA  | 4.0  |
| 9   | AJ    | 124  | LEU  | 4.0  |
| 24  | BA    | 689  | A    | 4.0  |
| 13  | AN    | 101  | SER  | 4.0  |
| 1   | AA    | 711  | G    | 4.0  |
| 1   | AA    | 1482 | G    | 4.0  |
| 1   | AA    | 1488 | G    | 4.0  |
| 24  | BA    | 738  | G    | 4.0  |
| 24  | BA    | 769  | G    | 4.0  |
| 22  | AW    | 97   | ALA  | 4.0  |
| 24  | BA    | 1098 | A    | 4.0  |
| 41  | BT    | 100  | VAL  | 4.0  |
| 24  | BA    | 2672 | G    | 4.0  |
| 28  | BE    | 66   | HIS  | 4.0  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 4   | AE    | 12   | GLU  | 4.0  |
| 41  | BT    | 115  | ALA  | 4.0  |
| 6   | AG    | 170  | VAL  | 4.0  |
| 33  | BL    | 101  | TRP  | 4.0  |
| 31  | BH    | 176  | ALA  | 4.0  |
| 32  | BK    | 49   | ALA  | 4.0  |
| 24  | BA    | 1780 | A    | 4.0  |
| 24  | BA    | 2432 | A    | 4.0  |
| 6   | AG    | 148  | VAL  | 4.0  |
| 2   | A1    | 15   | U    | 4.0  |
| 5   | AF    | 104  | GLN  | 4.0  |
| 24  | BA    | 747  | U    | 4.0  |
| 45  | BX    | 89   | PHE  | 4.0  |
| 1   | AA    | 899  | C    | 4.0  |
| 1   | AA    | 1514 | C    | 4.0  |
| 33  | BL    | 81   | ALA  | 4.0  |
| 10  | AK    | 122  | ARG  | 4.0  |
| 41  | BT    | 102  | GLU  | 4.0  |
| 45  | BX    | 106  | LEU  | 4.0  |
| 24  | BA    | 1843 | C    | 4.0  |
| 35  | BN    | 33   | ALA  | 4.0  |
| 1   | AA    | 790  | A    | 4.0  |
| 4   | AE    | 194  | PRO  | 4.0  |
| 6   | AG    | 191  | ARG  | 4.0  |
| 24  | BA    | 774  | A    | 4.0  |
| 24  | BA    | 2669 | G    | 4.0  |
| 24  | BA    | 2833 | G    | 4.0  |
| 31  | BH    | 112  | PRO  | 4.0  |
| 40  | BS    | 51   | ARG  | 4.0  |
| 34  | BM    | 140  | VAL  | 4.0  |
| 45  | BX    | 85   | VAL  | 4.0  |
| 7   | AH    | 36   | ASP  | 4.0  |
| 43  | BV    | 60   | ASN  | 4.0  |
| 1   | AA    | 688  | G    | 4.0  |
| 6   | AG    | 89   | THR  | 4.0  |
| 24  | BA    | 2736 | G    | 4.0  |
| 6   | AG    | 162  | LEU  | 3.9  |
| 7   | AH    | 152  | ARG  | 3.9  |
| 24  | BA    | 1818 | U    | 3.9  |
| 24  | BA    | 2585 | U    | 3.9  |
| 28  | BE    | 16   | ARG  | 3.9  |
| 24  | BA    | 2060 | A    | 3.9  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 32  | BK    | 8      | PRO  | 3.9  |
| 24  | BA    | 2737   | G    | 3.9  |
| 51  | B4    | 48     | GLU  | 3.9  |
| 24  | BA    | 363(E) | U    | 3.9  |
| 37  | BP    | 134    | ARG  | 3.9  |
| 21  | AV    | 17     | GLU  | 3.9  |
| 37  | BP    | 113    | GLN  | 3.9  |
| 3   | AB    | 47     | U    | 3.9  |
| 24  | BA    | 270(P) | C    | 3.9  |
| 24  | BA    | 273(B) | C    | 3.9  |
| 24  | BA    | 2078   | C    | 3.9  |
| 24  | BA    | 2605   | U    | 3.9  |
| 32  | BK    | 67     | ARG  | 3.9  |
| 45  | BX    | 105    | ALA  | 3.9  |
| 52  | B5    | 6      | ARG  | 3.9  |
| 1   | AA    | 1418   | A    | 3.9  |
| 4   | AE    | 14     | GLY  | 3.9  |
| 1   | AA    | 898    | G    | 3.9  |
| 24  | BA    | 2899   | G    | 3.9  |
| 10  | AK    | 102    | ARG  | 3.9  |
| 24  | BA    | 679    | C    | 3.9  |
| 35  | BN    | 107    | ARG  | 3.9  |
| 50  | B3    | 46     | GLN  | 3.9  |
| 4   | AE    | 62     | ALA  | 3.9  |
| 24  | BA    | 2245   | U    | 3.9  |
| 24  | BA    | 1927   | A    | 3.9  |
| 24  | BA    | 1904   | G    | 3.9  |
| 7   | AH    | 31     | LEU  | 3.9  |
| 24  | BA    | 1965   | C    | 3.9  |
| 24  | BA    | 2803   | C    | 3.9  |
| 30  | BG    | 23     | PHE  | 3.9  |
| 51  | B4    | 6      | VAL  | 3.9  |
| 4   | AE    | 79     | ASP  | 3.9  |
| 24  | BA    | 1045   | A    | 3.9  |
| 24  | BA    | 2797   | U    | 3.9  |
| 33  | BL    | 33     | ASN  | 3.9  |
| 17  | AR    | 57     | LEU  | 3.9  |
| 28  | BE    | 183    | LEU  | 3.9  |
| 24  | BA    | 1816   | G    | 3.8  |
| 31  | BH    | 45     | VAL  | 3.9  |
| 35  | BN    | 45     | GLU  | 3.9  |
| 13  | AN    | 127    | LYS  | 3.8  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 24  | BA    | 1732   | A    | 3.8  |
| 37  | BP    | 74     | TYR  | 3.8  |
| 43  | BV    | 37     | ARG  | 3.8  |
| 8   | AI    | 60     | PHE  | 3.8  |
| 3   | AB    | 18     | G    | 3.8  |
| 19  | AT    | 100    | LYS  | 3.8  |
| 24  | BA    | 1905   | C    | 3.8  |
| 24  | BA    | 2072   | G    | 3.8  |
| 31  | BH    | 14     | GLY  | 3.8  |
| 4   | AE    | 64     | ARG  | 3.8  |
| 33  | BL    | 35     | MET  | 3.8  |
| 5   | AF    | 122    | GLU  | 3.8  |
| 7   | AH    | 113    | ALA  | 3.8  |
| 46  | BY    | 135    | GLU  | 3.8  |
| 24  | BA    | 465    | G    | 3.8  |
| 1   | AA    | 892    | A    | 3.8  |
| 24  | BA    | 1434   | A    | 3.8  |
| 24  | BA    | 1786   | A    | 3.8  |
| 15  | AP    | 114    | ARG  | 3.8  |
| 43  | BV    | 88     | ARG  | 3.8  |
| 26  | BC    | 92     | ASP  | 3.8  |
| 43  | BV    | 38     | TYR  | 3.8  |
| 24  | BA    | 270(H) | C    | 3.8  |
| 24  | BA    | 400    | G    | 3.8  |
| 24  | BA    | 1907   | G    | 3.8  |
| 50  | B3    | 68     | ARG  | 3.8  |
| 27  | BD    | 269    | PHE  | 3.8  |
| 42  | BU    | 6      | LYS  | 3.8  |
| 43  | BV    | 61     | ASN  | 3.8  |
| 1   | AA    | 1099   | G    | 3.8  |
| 9   | AJ    | 56     | GLN  | 3.8  |
| 9   | AJ    | 92     | SER  | 3.8  |
| 28  | BE    | 149    | ARG  | 3.8  |
| 31  | BH    | 170    | ARG  | 3.8  |
| 24  | BA    | 3      | U    | 3.8  |
| 24  | BA    | 688    | U    | 3.8  |
| 32  | BK    | 11     | ASN  | 3.8  |
| 24  | BA    | 545    | G    | 3.8  |
| 24  | BA    | 1978   | A    | 3.8  |
| 30  | BG    | 24     | GLY  | 3.8  |
| 34  | BM    | 131    | GLN  | 3.8  |
| 16  | AQ    | 37     | PHE  | 3.8  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 27  | BD    | 27   | THR  | 3.8  |
| 27  | BD    | 138  | VAL  | 3.8  |
| 52  | B5    | 8    | LYS  | 3.8  |
| 40  | BS    | 17   | THR  | 3.8  |
| 7   | AH    | 104  | ALA  | 3.8  |
| 24  | BA    | 2596 | U    | 3.8  |
| 4   | AE    | 32   | ILE  | 3.8  |
| 26  | BC    | 118  | ASP  | 3.8  |
| 31  | BH    | 46   | GLU  | 3.8  |
| 37  | BP    | 111  | GLU  | 3.8  |
| 1   | AA    | 715  | A    | 3.8  |
| 24  | BA    | 5    | A    | 3.8  |
| 24  | BA    | 1784 | A    | 3.8  |
| 3   | AB    | 34   | G    | 3.7  |
| 24  | BA    | 468  | G    | 3.7  |
| 24  | BA    | 2805 | G    | 3.7  |
| 24  | BA    | 773  | U    | 3.7  |
| 7   | AH    | 118  | ILE  | 3.7  |
| 24  | BA    | 678  | C    | 3.7  |
| 24  | BA    | 1742 | C    | 3.7  |
| 24  | BA    | 1800 | C    | 3.7  |
| 24  | BA    | 2791 | C    | 3.7  |
| 13  | AN    | 12   | ARG  | 3.7  |
| 14  | AO    | 20   | LYS  | 3.7  |
| 44  | BW    | 94   | GLY  | 3.7  |
| 3   | AB    | 71   | G    | 3.7  |
| 24  | BA    | 2558 | C    | 3.7  |
| 24  | BA    | 2591 | C    | 3.7  |
| 41  | BT    | 114  | LYS  | 3.7  |
| 20  | AU    | 54   | ARG  | 3.7  |
| 50  | B3    | 21   | VAL  | 3.7  |
| 28  | BE    | 56   | PRO  | 3.7  |
| 28  | BE    | 54   | GLN  | 3.7  |
| 24  | BA    | 436  | C    | 3.7  |
| 27  | BD    | 6    | PHE  | 3.7  |
| 7   | AH    | 70   | PRO  | 3.7  |
| 19  | AT    | 93   | GLN  | 3.7  |
| 24  | BA    | 1820 | U    | 3.7  |
| 7   | AH    | 71   | LEU  | 3.7  |
| 11  | AL    | 88   | TYR  | 3.7  |
| 29  | BF    | 22   | ALA  | 3.7  |
| 37  | BP    | 82   | ARG  | 3.7  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 33  | BL    | 68   | VAL  | 3.7  |
| 6   | AG    | 150  | GLU  | 3.7  |
| 24  | BA    | 2598 | A    | 3.7  |
| 1   | AA    | 6    | G    | 3.7  |
| 1   | AA    | 1419 | G    | 3.7  |
| 24  | BA    | 2080 | G    | 3.7  |
| 43  | BV    | 27   | LYS  | 3.7  |
| 6   | AG    | 107  | ARG  | 3.7  |
| 53  | B6    | 21   | ARG  | 3.7  |
| 24  | BA    | 364  | C    | 3.7  |
| 24  | BA    | 2085 | C    | 3.7  |
| 24  | BA    | 190  | A    | 3.7  |
| 24  | BA    | 2257 | U    | 3.7  |
| 24  | BA    | 2439 | A    | 3.7  |
| 20  | AU    | 85   | LEU  | 3.7  |
| 40  | BS    | 44   | ASP  | 3.7  |
| 47  | BZ    | 5    | LYS  | 3.7  |
| 1   | AA    | 631  | G    | 3.7  |
| 1   | AA    | 1088 | G    | 3.7  |
| 3   | AB    | 40   | C    | 3.7  |
| 33  | BL    | 92   | GLY  | 3.7  |
| 24  | BA    | 1785 | A    | 3.7  |
| 26  | BC    | 66   | HIS  | 3.7  |
| 35  | BN    | 119  | PRO  | 3.7  |
| 20  | AU    | 34   | TYR  | 3.7  |
| 29  | BF    | 4    | VAL  | 3.6  |
| 27  | BD    | 32   | SER  | 3.6  |
| 24  | BA    | 1942 | C    | 3.6  |
| 24  | BA    | 1979 | C    | 3.6  |
| 6   | AG    | 126  | ILE  | 3.6  |
| 18  | AS    | 46   | PRO  | 3.6  |
| 24  | BA    | 2435 | A    | 3.6  |
| 28  | BE    | 31   | CYS  | 3.6  |
| 12  | AM    | 3    | LYS  | 3.6  |
| 8   | AI    | 86   | ARG  | 3.6  |
| 43  | BV    | 105  | VAL  | 3.6  |
| 2   | A1    | 39   | U    | 3.6  |
| 3   | AB    | 19   | G    | 3.6  |
| 28  | BE    | 128  | SER  | 3.6  |
| 12  | AM    | 99   | LYS  | 3.6  |
| 26  | BC    | 65   | PRO  | 3.6  |
| 29  | BF    | 3    | GLU  | 3.6  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 32  | BK    | 59     | ALA  | 3.6  |
| 40  | BS    | 13     | ARG  | 3.6  |
| 43  | BV    | 1      | MET  | 3.6  |
| 7   | AH    | 139    | LEU  | 3.6  |
| 5   | AF    | 96     | GLY  | 3.6  |
| 41  | BT    | 87     | GLY  | 3.6  |
| 9   | AJ    | 49     | ILE  | 3.6  |
| 34  | BM    | 66     | LYS  | 3.6  |
| 50  | B3    | 37     | SER  | 3.6  |
| 24  | BA    | 2426   | A    | 3.6  |
| 24  | BA    | 2654   | A    | 3.6  |
| 47  | BZ    | 83     | PRO  | 3.6  |
| 7   | AH    | 38     | GLN  | 3.6  |
| 21  | AV    | 13     | ASP  | 3.6  |
| 45  | BX    | 103    | GLY  | 3.6  |
| 35  | BN    | 18     | LYS  | 3.6  |
| 1   | AA    | 1518   | A    | 3.6  |
| 24  | BA    | 1562   | A    | 3.6  |
| 11  | AL    | 53     | VAL  | 3.6  |
| 17  | AR    | 17     | ARG  | 3.6  |
| 44  | BW    | 95     | LEU  | 3.6  |
| 10  | AK    | 35     | ILE  | 3.6  |
| 24  | BA    | 270(G) | C    | 3.6  |
| 24  | BA    | 456    | C    | 3.6  |
| 24  | BA    | 1258   | C    | 3.6  |
| 24  | BA    | 1774   | C    | 3.6  |
| 53  | B6    | 48     | LYS  | 3.6  |
| 1   | AA    | 661    | G    | 3.6  |
| 2   | A1    | 10     | U    | 3.6  |
| 5   | AF    | 127    | ARG  | 3.6  |
| 14  | AO    | 64     | TYR  | 3.6  |
| 6   | AG    | 181    | MET  | 3.6  |
| 26  | BC    | 177    | LYS  | 3.6  |
| 29  | BF    | 93     | LYS  | 3.6  |
| 1   | AA    | 806    | C    | 3.6  |
| 24  | BA    | 731    | C    | 3.6  |
| 24  | BA    | 2063   | C    | 3.6  |
| 1   | AA    | 791    | G    | 3.6  |
| 24  | BA    | 2590   | A    | 3.6  |
| 7   | AH    | 133    | TYR  | 3.6  |
| 10  | AK    | 39     | LEU  | 3.6  |
| 29  | BF    | 170    | LEU  | 3.6  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 18  | AS    | 83     | GLU  | 3.6  |
| 29  | BF    | 190    | GLU  | 3.6  |
| 28  | BE    | 133    | LYS  | 3.6  |
| 32  | BK    | 112    | LYS  | 3.6  |
| 46  | BY    | 65     | GLN  | 3.6  |
| 31  | BH    | 22     | GLY  | 3.6  |
| 40  | BS    | 37     | GLY  | 3.6  |
| 1   | AA    | 248    | C    | 3.6  |
| 24  | BA    | 461    | C    | 3.6  |
| 5   | AF    | 73     | PRO  | 3.5  |
| 5   | AF    | 172    | ARG  | 3.5  |
| 24  | BA    | 778    | G    | 3.5  |
| 46  | BY    | 172    | ALA  | 3.5  |
| 41  | BT    | 72     | HIS  | 3.5  |
| 46  | BY    | 66     | SER  | 3.5  |
| 14  | AO    | 73     | GLU  | 3.5  |
| 30  | BG    | 157    | ILE  | 3.5  |
| 24  | BA    | 1052   | C    | 3.5  |
| 3   | AB    | 16     | U    | 3.5  |
| 20  | AU    | 30     | ASP  | 3.5  |
| 24  | BA    | 270(T) | G    | 3.5  |
| 47  | BZ    | 85     | ALA  | 3.5  |
| 10  | AK    | 98     | LYS  | 3.5  |
| 4   | AE    | 143    | GLU  | 3.5  |
| 24  | BA    | 270(K) | C    | 3.5  |
| 24  | BA    | 1777   | U    | 3.5  |
| 8   | AI    | 6      | VAL  | 3.5  |
| 29  | BF    | 92     | PRO  | 3.5  |
| 31  | BH    | 26     | VAL  | 3.5  |
| 19  | AT    | 103    | GLY  | 3.5  |
| 34  | BM    | 23     | LEU  | 3.5  |
| 1   | AA    | 1519   | A    | 3.5  |
| 6   | AG    | 198    | VAL  | 3.5  |
| 24  | BA    | 1781   | C    | 3.5  |
| 24  | BA    | 199    | A    | 3.5  |
| 24  | BA    | 677    | A    | 3.5  |
| 11  | AL    | 54     | ASP  | 3.5  |
| 24  | BA    | 1369   | G    | 3.5  |
| 24  | BA    | 1563   | G    | 3.5  |
| 35  | BN    | 37     | ASP  | 3.5  |
| 2   | A1    | 52     | U    | 3.5  |
| 8   | AI    | 27     | GLN  | 3.5  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 24  | BA    | 2556 | C    | 3.5  |
| 33  | BL    | 67   | PHE  | 3.5  |
| 1   | AA    | 802  | A    | 3.5  |
| 28  | BE    | 147  | PRO  | 3.5  |
| 35  | BN    | 46   | ALA  | 3.5  |
| 51  | B4    | 8    | LYS  | 3.5  |
| 37  | BP    | 42   | ILE  | 3.5  |
| 1   | AA    | 630  | G    | 3.5  |
| 24  | BA    | 776  | G    | 3.5  |
| 51  | B4    | 23   | HIS  | 3.5  |
| 4   | AE    | 86   | GLU  | 3.5  |
| 22  | AW    | 13   | LEU  | 3.5  |
| 37  | BP    | 108  | GLY  | 3.5  |
| 7   | AH    | 56   | GLN  | 3.5  |
| 9   | AJ    | 9    | VAL  | 3.5  |
| 14  | AO    | 126  | LYS  | 3.5  |
| 34  | BM    | 79   | PRO  | 3.5  |
| 24  | BA    | 405  | U    | 3.5  |
| 24  | BA    | 2664 | G    | 3.5  |
| 4   | AE    | 38   | GLY  | 3.5  |
| 31  | BH    | 166  | GLY  | 3.5  |
| 5   | AF    | 126  | ARG  | 3.5  |
| 13  | AN    | 14   | VAL  | 3.5  |
| 20  | AU    | 72   | ARG  | 3.5  |
| 26  | BC    | 183  | GLU  | 3.5  |
| 1   | AA    | 1509 | C    | 3.5  |
| 12  | AM    | 22   | LYS  | 3.5  |
| 24  | BA    | 676  | A    | 3.5  |
| 24  | BA    | 2753 | A    | 3.5  |
| 24  | BA    | 2799 | A    | 3.5  |
| 37  | BP    | 93   | TYR  | 3.5  |
| 24  | BA    | 2243 | U    | 3.4  |
| 32  | BK    | 116  | LEU  | 3.4  |
| 24  | BA    | 2802 | G    | 3.4  |
| 33  | BL    | 28   | GLY  | 3.4  |
| 13  | AN    | 105  | VAL  | 3.4  |
| 31  | BH    | 19   | VAL  | 3.4  |
| 4   | AE    | 150  | SER  | 3.4  |
| 24  | BA    | 2657 | A    | 3.4  |
| 33  | BL    | 66   | THR  | 3.4  |
| 4   | AE    | 56   | ARG  | 3.4  |
| 9   | AJ    | 6    | ARG  | 3.4  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 53  | B6    | 49   | ARG  | 3.4  |
| 5   | AF    | 125  | GLU  | 3.4  |
| 46  | BY    | 148  | ASP  | 3.4  |
| 1   | AA    | 1158 | C    | 3.4  |
| 1   | AA    | 1176 | A    | 3.4  |
| 7   | AH    | 87   | SER  | 3.4  |
| 10  | AK    | 72   | PRO  | 3.4  |
| 24  | BA    | 789  | A    | 3.4  |
| 24  | BA    | 1938 | A    | 3.4  |
| 24  | BA    | 2260 | C    | 3.4  |
| 27  | BD    | 266  | SER  | 3.4  |
| 33  | BL    | 110  | GLN  | 3.4  |
| 54  | B7    | 18   | ALA  | 3.4  |
| 7   | AH    | 123  | LEU  | 3.4  |
| 8   | AI    | 32   | ASN  | 3.4  |
| 24  | BA    | 2244 | U    | 3.4  |
| 31  | BH    | 122  | THR  | 3.4  |
| 19  | AT    | 81   | ARG  | 3.4  |
| 9   | AJ    | 81   | GLY  | 3.4  |
| 24  | BA    | 1259 | G    | 3.4  |
| 30  | BG    | 48   | GLU  | 3.4  |
| 24  | BA    | 401  | A    | 3.4  |
| 24  | BA    | 1926 | U    | 3.4  |
| 33  | BL    | 113  | PRO  | 3.4  |
| 6   | AG    | 17   | VAL  | 3.4  |
| 14  | AO    | 114  | LYS  | 3.4  |
| 28  | BE    | 25   | VAL  | 3.4  |
| 28  | BE    | 82   | ARG  | 3.4  |
| 24  | BA    | 1930 | G    | 3.4  |
| 7   | AH    | 95   | ALA  | 3.4  |
| 14  | AO    | 68   | ALA  | 3.4  |
| 24  | BA    | 1101 | U    | 3.4  |
| 24  | BA    | 1771 | C    | 3.4  |
| 24  | BA    | 2437 | U    | 3.4  |
| 40  | BS    | 90   | GLN  | 3.4  |
| 50  | B3    | 63   | TYR  | 3.4  |
| 4   | AE    | 179  | LYS  | 3.4  |
| 43  | BV    | 95   | ILE  | 3.4  |
| 24  | BA    | 762  | U    | 3.4  |
| 1   | AA    | 700  | G    | 3.4  |
| 2   | A1    | 24   | A    | 3.4  |
| 3   | AD    | 11   | C    | 3.4  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 9   | AJ    | 57   | GLU  | 3.4  |
| 24  | BA    | 2391 | G    | 3.4  |
| 24  | BA    | 2607 | G    | 3.4  |
| 24  | BA    | 2608 | G    | 3.4  |
| 20  | AU    | 68   | LYS  | 3.4  |
| 26  | BC    | 79   | LYS  | 3.4  |
| 5   | AF    | 75   | VAL  | 3.4  |
| 30  | BG    | 78   | SER  | 3.4  |
| 36  | BO    | 90   | ARG  | 3.4  |
| 5   | AF    | 165  | THR  | 3.4  |
| 51  | B4    | 58   | LEU  | 3.4  |
| 1   | AA    | 1497 | G    | 3.4  |
| 24  | BA    | 271  | G    | 3.4  |
| 24  | BA    | 467  | G    | 3.4  |
| 24  | BA    | 1928 | A    | 3.4  |
| 24  | BA    | 2070 | G    | 3.4  |
| 24  | BA    | 2436 | G    | 3.4  |
| 11  | AL    | 92   | TYR  | 3.4  |
| 40  | BS    | 35   | LYS  | 3.4  |
| 27  | BD    | 176  | ARG  | 3.4  |
| 43  | BV    | 59   | VAL  | 3.4  |
| 50  | B3    | 45   | GLY  | 3.4  |
| 24  | BA    | 1108 | U    | 3.4  |
| 24  | BA    | 1778 | U    | 3.4  |
| 24  | BA    | 2438 | U    | 3.4  |
| 33  | BL    | 51   | ALA  | 3.3  |
| 24  | BA    | 708  | C    | 3.3  |
| 24  | BA    | 1556 | C    | 3.3  |
| 24  | BA    | 1783 | A    | 3.3  |
| 24  | BA    | 1844 | C    | 3.3  |
| 1   | AA    | 769  | G    | 3.3  |
| 5   | AF    | 128  | PHE  | 3.3  |
| 24  | BA    | 770  | G    | 3.3  |
| 41  | BT    | 9    | VAL  | 3.3  |
| 2   | A1    | 13   | U    | 3.3  |
| 46  | BY    | 132  | ASN  | 3.3  |
| 24  | BA    | 455  | C    | 3.3  |
| 24  | BA    | 758  | C    | 3.3  |
| 24  | BA    | 1565 | C    | 3.3  |
| 29  | BF    | 10   | PRO  | 3.3  |
| 5   | AF    | 206  | GLU  | 3.3  |
| 1   | AA    | 902  | G    | 3.3  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 28  | BE    | 198  | VAL  | 3.3  |
| 32  | BK    | 142  | VAL  | 3.3  |
| 1   | AA    | 1425 | U    | 3.3  |
| 2   | A1    | 14   | U    | 3.3  |
| 45  | BX    | 104  | GLY  | 3.3  |
| 46  | BY    | 133  | ILE  | 3.3  |
| 42  | BU    | 59   | ALA  | 3.3  |
| 1   | AA    | 808  | C    | 3.3  |
| 24  | BA    | 2601 | C    | 3.3  |
| 6   | AG    | 49   | ARG  | 3.3  |
| 13  | AN    | 25   | TYR  | 3.3  |
| 28  | BE    | 73   | GLU  | 3.3  |
| 24  | BA    | 1801 | G    | 3.3  |
| 24  | BA    | 1814 | G    | 3.3  |
| 1   | AA    | 1512 | U    | 3.3  |
| 30  | BG    | 106  | LEU  | 3.3  |
| 32  | BK    | 140  | LEU  | 3.3  |
| 5   | AF    | 81   | GLY  | 3.3  |
| 14  | AO    | 124  | LYS  | 3.3  |
| 55  | B8    | 13   | LYS  | 3.3  |
| 11  | AL    | 122  | ALA  | 3.3  |
| 32  | BK    | 78   | THR  | 3.3  |
| 1   | AA    | 810  | C    | 3.3  |
| 3   | AB    | 4    | C    | 3.3  |
| 1   | AA    | 838  | G    | 3.3  |
| 38  | BQ    | 101  | ALA  | 3.3  |
| 1   | AA    | 1163 | C    | 3.3  |
| 1   | AA    | 1484 | C    | 3.3  |
| 24  | BA    | 673  | C    | 3.3  |
| 24  | BA    | 1789 | A    | 3.3  |
| 29  | BF    | 6    | VAL  | 3.3  |
| 31  | BH    | 39   | PRO  | 3.3  |
| 7   | AH    | 131  | ILE  | 3.3  |
| 24  | BA    | 2656 | U    | 3.3  |
| 8   | AI    | 58   | GLY  | 3.3  |
| 24  | BA    | 1047 | G    | 3.3  |
| 24  | BA    | 2661 | G    | 3.3  |
| 33  | BL    | 82   | ALA  | 3.3  |
| 24  | BA    | 784  | A    | 3.3  |
| 24  | BA    | 1815 | A    | 3.3  |
| 24  | BA    | 1972 | A    | 3.3  |
| 24  | BA    | 2278 | A    | 3.3  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 32  | BK    | 12   | LEU  | 3.3  |
| 55  | B8    | 11   | CYS  | 3.3  |
| 35  | BN    | 88   | ASN  | 3.3  |
| 13  | AN    | 92   | GLU  | 3.3  |
| 13  | AN    | 102  | GLY  | 3.3  |
| 1   | AA    | 1516 | G    | 3.3  |
| 24  | BA    | 2583 | G    | 3.3  |
| 41  | BT    | 71   | GLN  | 3.3  |
| 13  | AN    | 15   | ALA  | 3.3  |
| 1   | AA    | 1515 | C    | 3.3  |
| 24  | BA    | 787  | U    | 3.3  |
| 7   | AH    | 49   | PRO  | 3.3  |
| 15  | AP    | 113  | PRO  | 3.3  |
| 6   | AG    | 192  | GLU  | 3.2  |
| 29  | BF    | 52   | LYS  | 3.2  |
| 42  | BU    | 78   | LYS  | 3.2  |
| 5   | AF    | 188  | LEU  | 3.2  |
| 2   | A1    | 35   | U    | 3.2  |
| 1   | AA    | 860  | A    | 3.2  |
| 8   | AI    | 55   | ASP  | 3.2  |
| 24  | BA    | 1894 | C    | 3.2  |
| 24  | BA    | 2658 | C    | 3.2  |
| 24  | BA    | 2757 | A    | 3.2  |
| 34  | BM    | 11   | PRO  | 3.2  |
| 13  | AN    | 106  | LYS  | 3.2  |
| 27  | BD    | 35   | LYS  | 3.2  |
| 42  | BU    | 87   | HIS  | 3.2  |
| 33  | BL    | 31   | GLY  | 3.2  |
| 28  | BE    | 178  | GLU  | 3.2  |
| 17  | AR    | 13   | GLN  | 3.2  |
| 1   | AA    | 800  | G    | 3.2  |
| 24  | BA    | 702  | G    | 3.2  |
| 24  | BA    | 1037 | G    | 3.2  |
| 4   | AE    | 90   | MET  | 3.2  |
| 24  | BA    | 1083 | U    | 3.2  |
| 24  | BA    | 1110 | G    | 3.2  |
| 36  | BO    | 88   | LEU  | 3.2  |
| 42  | BU    | 79   | VAL  | 3.2  |
| 24  | BA    | 2075 | U    | 3.2  |
| 24  | BA    | 2434 | A    | 3.2  |
| 3   | AC    | 17   | C    | 3.2  |
| 24  | BA    | 1983 | C    | 3.2  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 17  | AR    | 48   | LYS  | 3.2  |
| 37  | BP    | 137  | TYR  | 3.2  |
| 4   | AE    | 151  | GLY  | 3.2  |
| 16  | AQ    | 13   | THR  | 3.2  |
| 27  | BD    | 139  | GLY  | 3.2  |
| 32  | BK    | 129  | THR  | 3.2  |
| 33  | BL    | 102  | GLU  | 3.2  |
| 5   | AF    | 170  | GLN  | 3.2  |
| 24  | BA    | 1966 | A    | 3.2  |
| 24  | BA    | 1038 | C    | 3.2  |
| 4   | AE    | 148  | TYR  | 3.2  |
| 6   | AG    | 177  | ASP  | 3.2  |
| 26  | BC    | 187  | ASP  | 3.2  |
| 20  | AU    | 45   | SER  | 3.2  |
| 28  | BE    | 99   | GLY  | 3.2  |
| 17  | AR    | 88   | ARG  | 3.2  |
| 26  | BC    | 24   | GLU  | 3.2  |
| 26  | BC    | 68   | LEU  | 3.2  |
| 31  | BH    | 125  | VAL  | 3.2  |
| 42  | BU    | 80   | GLN  | 3.2  |
| 34  | BM    | 2    | LYS  | 3.2  |
| 35  | BN    | 113  | LYS  | 3.2  |
| 3   | AB    | 62   | C    | 3.2  |
| 24  | BA    | 2440 | C    | 3.2  |
| 6   | AG    | 171  | GLY  | 3.2  |
| 36  | BO    | 27   | HIS  | 3.2  |
| 4   | AE    | 96   | ARG  | 3.2  |
| 19  | AT    | 97   | SER  | 3.2  |
| 43  | BV    | 84   | ARG  | 3.2  |
| 4   | AE    | 78   | GLN  | 3.2  |
| 12  | AM    | 50   | ILE  | 3.2  |
| 28  | BE    | 85   | ASN  | 3.2  |
| 1   | AA    | 792  | A    | 3.2  |
| 1   | AA    | 1513 | A    | 3.2  |
| 24  | BA    | 2790 | A    | 3.2  |
| 24  | BA    | 1804 | C    | 3.2  |
| 33  | BL    | 91   | PRO  | 3.2  |
| 46  | BY    | 160  | GLY  | 3.2  |
| 5   | AF    | 190  | ARG  | 3.2  |
| 37  | BP    | 119  | ARG  | 3.2  |
| 11  | AL    | 60   | ASP  | 3.2  |
| 4   | AE    | 49   | GLU  | 3.2  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 28  | BE    | 146    | THR  | 3.2  |
| 30  | BG    | 145    | THR  | 3.2  |
| 32  | BK    | 117    | GLU  | 3.2  |
| 52  | B5    | 14     | THR  | 3.2  |
| 26  | BC    | 18     | LYS  | 3.2  |
| 41  | BT    | 34     | LYS  | 3.2  |
| 4   | AE    | 37     | ASN  | 3.2  |
| 24  | BA    | 460    | A    | 3.2  |
| 1   | AA    | 1175   | G    | 3.2  |
| 1   | AA    | 1177   | G    | 3.2  |
| 24  | BA    | 760    | G    | 3.2  |
| 24  | BA    | 1696   | G    | 3.2  |
| 37  | BP    | 78     | PRO  | 3.2  |
| 32  | BK    | 123    | LEU  | 3.2  |
| 33  | BL    | 16     | LYS  | 3.1  |
| 43  | BV    | 83     | LYS  | 3.1  |
| 47  | BZ    | 71     | ASP  | 3.2  |
| 22  | AW    | 51     | GLU  | 3.1  |
| 7   | AH    | 141    | GLN  | 3.1  |
| 5   | AF    | 63     | ASN  | 3.1  |
| 3   | AD    | 68     | C    | 3.1  |
| 2   | A1    | 34     | U    | 3.1  |
| 24  | BA    | 270(S) | G    | 3.1  |
| 24  | BA    | 765    | G    | 3.1  |
| 32  | BK    | 130    | TYR  | 3.1  |
| 4   | AE    | 27     | LYS  | 3.1  |
| 43  | BV    | 62     | HIS  | 3.1  |
| 17  | AR    | 73     | GLU  | 3.1  |
| 52  | B5    | 51     | GLU  | 3.1  |
| 24  | BA    | 777    | A    | 3.1  |
| 42  | BU    | 71     | LEU  | 3.1  |
| 3   | AB    | 41     | C    | 3.1  |
| 28  | BE    | 143    | ASN  | 3.1  |
| 6   | AG    | 76     | ARG  | 3.1  |
| 9   | AJ    | 133    | GLY  | 3.1  |
| 15  | AP    | 125    | ARG  | 3.1  |
| 24  | BA    | 1039   | G    | 3.1  |
| 24  | BA    | 1929   | G    | 3.1  |
| 6   | AG    | 158    | ILE  | 3.1  |
| 45  | BX    | 11     | ASP  | 3.1  |
| 1   | AA    | 1492   | A    | 3.1  |
| 5   | AF    | 139    | GLN  | 3.1  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 54  | B7    | 19     | SER  | 3.1  |
| 24  | BA    | 2652   | C    | 3.1  |
| 28  | BE    | 189    | PRO  | 3.1  |
| 5   | AF    | 54     | ARG  | 3.1  |
| 26  | BC    | 72     | VAL  | 3.1  |
| 26  | BC    | 121    | GLY  | 3.1  |
| 27  | BD    | 74     | GLY  | 3.1  |
| 52  | B5    | 37     | ARG  | 3.1  |
| 29  | BF    | 198    | ALA  | 3.1  |
| 51  | B4    | 53     | ALA  | 3.1  |
| 45  | BX    | 90     | LEU  | 3.1  |
| 24  | BA    | 1917   | U    | 3.1  |
| 37  | BP    | 80     | GLU  | 3.1  |
| 44  | BW    | 45     | THR  | 3.1  |
| 24  | BA    | 2651   | C    | 3.1  |
| 7   | AH    | 89     | ILE  | 3.1  |
| 36  | BO    | 69     | GLY  | 3.1  |
| 37  | BP    | 68     | ILE  | 3.1  |
| 52  | B5    | 7      | ILE  | 3.1  |
| 1   | AA    | 1160   | G    | 3.1  |
| 24  | BA    | 1772   | G    | 3.1  |
| 36  | BO    | 141    | ALA  | 3.1  |
| 18  | AS    | 74     | LEU  | 3.1  |
| 21  | AV    | 21     | GLU  | 3.1  |
| 3   | AB    | 37     | A    | 3.1  |
| 20  | AU    | 42     | ARG  | 3.1  |
| 24  | BA    | 2738   | A    | 3.1  |
| 1   | AA    | 897    | C    | 3.1  |
| 4   | AE    | 167    | PRO  | 3.1  |
| 33  | BL    | 7      | VAL  | 3.1  |
| 14  | AO    | 67     | THR  | 3.1  |
| 24  | BA    | 270(Q) | C    | 3.1  |
| 3   | AB    | 65     | G    | 3.1  |
| 14  | AO    | 80     | HIS  | 3.1  |
| 7   | AH    | 66     | MET  | 3.1  |
| 14  | AO    | 63     | GLY  | 3.1  |
| 24  | BA    | 730    | C    | 3.1  |
| 27  | BD    | 125    | ILE  | 3.1  |
| 8   | AI    | 45     | LEU  | 3.1  |
| 1   | AA    | 801    | U    | 3.1  |
| 1   | AA    | 861    | G    | 3.1  |
| 1   | AA    | 1087   | G    | 3.1  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 6   | AG    | 110  | PHE  | 3.1  |
| 10  | AK    | 53   | VAL  | 3.1  |
| 24  | BA    | 2388 | A    | 3.1  |
| 24  | BA    | 2587 | A    | 3.1  |
| 28  | BE    | 154  | LYS  | 3.1  |
| 46  | BY    | 1    | MET  | 3.1  |
| 31  | BH    | 29   | PRO  | 3.0  |
| 46  | BY    | 53   | ILE  | 3.1  |
| 50  | B3    | 30   | GLU  | 3.1  |
| 51  | B4    | 12   | SER  | 3.0  |
| 1   | AA    | 1155 | G    | 3.0  |
| 1   | AA    | 1166 | G    | 3.0  |
| 1   | AA    | 1178 | G    | 3.0  |
| 24  | BA    | 2761 | G    | 3.0  |
| 48  | B1    | 66   | ASN  | 3.0  |
| 6   | AG    | 178  | VAL  | 3.0  |
| 7   | AH    | 115  | VAL  | 3.0  |
| 42  | BU    | 68   | LYS  | 3.0  |
| 43  | BV    | 90   | ARG  | 3.0  |
| 50  | B3    | 2    | LYS  | 3.0  |
| 24  | BA    | 126  | A    | 3.0  |
| 9   | AJ    | 67   | GLU  | 3.0  |
| 32  | BK    | 10   | GLU  | 3.0  |
| 1   | AA    | 783  | C    | 3.0  |
| 1   | AA    | 1424 | C    | 3.0  |
| 3   | AB    | 2    | C    | 3.0  |
| 5   | AF    | 52   | LEU  | 3.0  |
| 19  | AT    | 26   | GLN  | 3.0  |
| 24  | BA    | 1109 | C    | 3.0  |
| 47  | BZ    | 6    | GLY  | 3.0  |
| 42  | BU    | 35   | LEU  | 3.0  |
| 36  | BO    | 140  | ALA  | 3.0  |
| 9   | AJ    | 66   | VAL  | 3.0  |
| 19  | AT    | 104  | LYS  | 3.0  |
| 24  | BA    | 726  | G    | 3.0  |
| 24  | BA    | 1622 | G    | 3.0  |
| 16  | AQ    | 7    | ILE  | 3.0  |
| 1   | AA    | 1101 | A    | 3.0  |
| 24  | BA    | 1919 | A    | 3.0  |
| 7   | AH    | 68   | GLU  | 3.0  |
| 7   | AH    | 106  | PRO  | 3.0  |
| 29  | BF    | 91   | GLY  | 3.0  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 1   | AA    | 1536 | C    | 3.0  |
| 32  | BK    | 148  | GLU  | 3.0  |
| 24  | BA    | 2609 | U    | 3.0  |
| 24  | BA    | 2650 | U    | 3.0  |
| 6   | AG    | 164  | ALA  | 3.0  |
| 17  | AR    | 84   | LYS  | 3.0  |
| 19  | AT    | 17   | LYS  | 3.0  |
| 33  | BL    | 48   | MET  | 3.0  |
| 42  | BU    | 4    | ILE  | 3.0  |
| 24  | BA    | 6    | A    | 3.0  |
| 28  | BE    | 138  | PRO  | 3.0  |
| 42  | BU    | 12   | TYR  | 3.0  |
| 1   | AA    | 849  | C    | 3.0  |
| 24  | BA    | 1836 | C    | 3.0  |
| 4   | AE    | 82   | ARG  | 3.0  |
| 42  | BU    | 100  | ARG  | 3.0  |
| 3   | AB    | 73   | A    | 3.0  |
| 24  | BA    | 2744 | G    | 3.0  |
| 29  | BF    | 94   | PRO  | 3.0  |
| 8   | AI    | 5    | GLU  | 3.0  |
| 9   | AJ    | 8    | GLU  | 3.0  |
| 5   | AF    | 136  | GLN  | 3.0  |
| 8   | AI    | 64   | GLN  | 3.0  |
| 33  | BL    | 46   | ALA  | 3.0  |
| 21  | AV    | 18   | LYS  | 3.0  |
| 33  | BL    | 86   | LYS  | 3.0  |
| 27  | BD    | 145  | VAL  | 3.0  |
| 55  | B8    | 12   | ASP  | 3.0  |
| 32  | BK    | 75   | LEU  | 3.0  |
| 1   | AA    | 210  | U    | 3.0  |
| 1   | AA    | 698  | G    | 3.0  |
| 24  | BA    | 2751 | G    | 3.0  |
| 36  | BO    | 20   | GLY  | 3.0  |
| 16  | AQ    | 46   | GLU  | 3.0  |
| 40  | BS    | 65   | LYS  | 3.0  |
| 29  | BF    | 206  | ILE  | 3.0  |
| 34  | BM    | 99   | LEU  | 3.0  |
| 24  | BA    | 2898 | U    | 3.0  |
| 17  | AR    | 20   | GLY  | 3.0  |
| 24  | BA    | 2066 | C    | 3.0  |
| 30  | BG    | 73   | ALA  | 3.0  |
| 33  | BL    | 39   | LYS  | 3.0  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 34  | BM    | 137    | LYS  | 3.0  |
| 44  | BW    | 91     | ALA  | 3.0  |
| 9   | AJ    | 110    | GLN  | 3.0  |
| 4   | AE    | 238    | LEU  | 2.9  |
| 9   | AJ    | 156    | TRP  | 2.9  |
| 24  | BA    | 1141   | U    | 2.9  |
| 24  | BA    | 2653   | U    | 2.9  |
| 29  | BF    | 23     | ASP  | 2.9  |
| 33  | BL    | 97     | GLY  | 2.9  |
| 24  | BA    | 2237   | G    | 2.9  |
| 6   | AG    | 77     | ASN  | 2.9  |
| 34  | BM    | 132    | ALA  | 2.9  |
| 7   | AH    | 24     | ARG  | 2.9  |
| 45  | BX    | 109    | GLU  | 2.9  |
| 51  | B4    | 19     | ARG  | 2.9  |
| 10  | AK    | 9      | MET  | 2.9  |
| 45  | BX    | 1      | MET  | 2.9  |
| 7   | AH    | 120    | THR  | 2.9  |
| 14  | AO    | 109    | GLY  | 2.9  |
| 28  | BE    | 206    | LYS  | 2.9  |
| 1   | AA    | 803    | G    | 2.9  |
| 3   | AB    | 5      | G    | 2.9  |
| 5   | AF    | 50     | ALA  | 2.9  |
| 24  | BA    | 736    | C    | 2.9  |
| 24  | BA    | 1043   | C    | 2.9  |
| 24  | BA    | 2755   | C    | 2.9  |
| 14  | AO    | 113    | ARG  | 2.9  |
| 28  | BE    | 63     | LEU  | 2.9  |
| 31  | BH    | 44     | VAL  | 2.9  |
| 31  | BH    | 50     | VAL  | 2.9  |
| 35  | BN    | 87     | ILE  | 2.9  |
| 7   | AH    | 72     | GLN  | 2.9  |
| 24  | BA    | 270(F) | U    | 2.9  |
| 4   | AE    | 65     | GLY  | 2.9  |
| 24  | BA    | 734    | A    | 2.9  |
| 24  | BA    | 1095   | A    | 2.9  |
| 34  | BM    | 64     | GLY  | 2.9  |
| 1   | AA    | 701    | C    | 2.9  |
| 7   | AH    | 105    | VAL  | 2.9  |
| 24  | BA    | 404    | C    | 2.9  |
| 26  | BC    | 6      | ARG  | 2.9  |
| 1   | AA    | 1405   | G    | 2.9  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 24  | BA    | 7      | G    | 2.9  |
| 24  | BA    | 273(A) | G    | 2.9  |
| 12  | AM    | 54     | PHE  | 2.9  |
| 24  | BA    | 1969   | A    | 2.9  |
| 28  | BE    | 139    | GLY  | 2.9  |
| 8   | AI    | 56     | PRO  | 2.9  |
| 11  | AL    | 21     | PRO  | 2.9  |
| 19  | AT    | 89     | LEU  | 2.9  |
| 31  | BH    | 169    | VAL  | 2.9  |
| 31  | BH    | 171    | LEU  | 2.9  |
| 24  | BA    | 2760   | C    | 2.9  |
| 36  | BO    | 87     | ASP  | 2.9  |
| 2   | A1    | 46     | U    | 2.9  |
| 24  | BA    | 1776   | G    | 2.9  |
| 37  | BP    | 141    | GLN  | 2.9  |
| 51  | B4    | 56     | LYS  | 2.9  |
| 24  | BA    | 1567   | A    | 2.9  |
| 24  | BA    | 2059   | A    | 2.9  |
| 8   | AI    | 79     | LEU  | 2.9  |
| 19  | AT    | 98     | LEU  | 2.9  |
| 32  | BK    | 29     | TYR  | 2.9  |
| 12  | AM    | 28     | ARG  | 2.9  |
| 35  | BN    | 102    | VAL  | 2.9  |
| 37  | BP    | 59     | ARG  | 2.9  |
| 43  | BV    | 96     | ILE  | 2.9  |
| 46  | BY    | 134    | PRO  | 2.9  |
| 28  | BE    | 114    | ALA  | 2.9  |
| 51  | B4    | 36     | CYS  | 2.9  |
| 1   | AA    | 1426   | C    | 2.9  |
| 24  | BA    | 2074   | U    | 2.9  |
| 40  | BS    | 27     | THR  | 2.9  |
| 20  | AU    | 33     | ASP  | 2.9  |
| 3   | AB    | 44     | G    | 2.9  |
| 24  | BA    | 2067   | G    | 2.9  |
| 45  | BX    | 40     | GLU  | 2.9  |
| 33  | BL    | 47     | ASN  | 2.9  |
| 3   | AB    | 7      | A    | 2.9  |
| 5   | AF    | 55     | VAL  | 2.9  |
| 32  | BK    | 144    | VAL  | 2.9  |
| 39  | BR    | 85     | VAL  | 2.9  |
| 47  | BZ    | 11     | ARG  | 2.9  |
| 1   | AA    | 249    | U    | 2.9  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 28  | BE    | 135    | HIS  | 2.9  |
| 27  | BD    | 109    | ASP  | 2.9  |
| 53  | B6    | 11     | LYS  | 2.9  |
| 5   | AF    | 166    | GLU  | 2.9  |
| 24  | BA    | 270(E) | G    | 2.9  |
| 28  | BE    | 94     | GLU  | 2.9  |
| 42  | BU    | 75     | PHE  | 2.9  |
| 13  | AN    | 103    | LEU  | 2.9  |
| 32  | BK    | 72     | LEU  | 2.9  |
| 24  | BA    | 2665   | A    | 2.8  |
| 28  | BE    | 95     | ILE  | 2.8  |
| 31  | BH    | 11     | VAL  | 2.8  |
| 32  | BK    | 57     | ARG  | 2.8  |
| 36  | BO    | 7      | ARG  | 2.8  |
| 46  | BY    | 146    | ILE  | 2.8  |
| 24  | BA    | 2604   | U    | 2.8  |
| 26  | BC    | 35     | ALA  | 2.8  |
| 24  | BA    | 1765   | C    | 2.8  |
| 24  | BA    | 2073   | C    | 2.8  |
| 19  | AT    | 37     | LYS  | 2.8  |
| 31  | BH    | 16     | SER  | 2.8  |
| 34  | BM    | 73     | THR  | 2.8  |
| 4   | AE    | 59     | GLU  | 2.8  |
| 24  | BA    | 1051   | G    | 2.8  |
| 24  | BA    | 2673   | G    | 2.8  |
| 24  | BA    | 2894   | G    | 2.8  |
| 1   | AA    | 859    | A    | 2.8  |
| 7   | AH    | 69     | VAL  | 2.8  |
| 35  | BN    | 93     | PRO  | 2.8  |
| 26  | BC    | 34     | THR  | 2.8  |
| 24  | BA    | 1173   | G    | 2.8  |
| 31  | BH    | 81     | GLU  | 2.8  |
| 40  | BS    | 36     | GLU  | 2.8  |
| 4   | AE    | 42     | ILE  | 2.8  |
| 9   | AJ    | 149    | ARG  | 2.8  |
| 29  | BF    | 57     | VAL  | 2.8  |
| 32  | BK    | 132    | PRO  | 2.8  |
| 14  | AO    | 21     | LYS  | 2.8  |
| 7   | AH    | 119    | LEU  | 2.8  |
| 32  | BK    | 76     | THR  | 2.8  |
| 5   | AF    | 171    | GLY  | 2.8  |
| 8   | AI    | 88     | VAL  | 2.8  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 10  | AK    | 108    | GLY  | 2.8  |
| 11  | AL    | 51     | ARG  | 2.8  |
| 24  | BA    | 270(I) | G    | 2.8  |
| 32  | BK    | 27     | ARG  | 2.8  |
| 34  | BM    | 134    | ARG  | 2.8  |
| 28  | BE    | 168    | MET  | 2.8  |
| 45  | BX    | 41     | GLY  | 2.8  |
| 4   | AE    | 125    | PRO  | 2.8  |
| 6   | AG    | 174    | LEU  | 2.8  |
| 22  | AW    | 43     | LEU  | 2.8  |
| 28  | BE    | 67     | PHE  | 2.8  |
| 30  | BG    | 70     | VAL  | 2.8  |
| 49  | B2    | 36     | VAL  | 2.8  |
| 7   | AH    | 50     | GLU  | 2.8  |
| 26  | BC    | 143    | GLY  | 2.8  |
| 36  | BO    | 144    | GLU  | 2.8  |
| 1   | AA    | 909    | A    | 2.8  |
| 1   | AA    | 1491   | G    | 2.8  |
| 3   | AB    | 6      | G    | 2.8  |
| 24  | BA    | 270(J) | G    | 2.8  |
| 45  | BX    | 102    | CYS  | 2.8  |
| 1   | AA    | 1098   | C    | 2.8  |
| 3   | AB    | 72     | C    | 2.8  |
| 22  | AW    | 84     | LEU  | 2.8  |
| 24  | BA    | 209    | C    | 2.8  |
| 6   | AG    | 79     | PHE  | 2.8  |
| 2   | A1    | 9      | U    | 2.8  |
| 20  | AU    | 77     | GLY  | 2.8  |
| 4   | AE    | 233    | SER  | 2.8  |
| 22  | AW    | 19     | SER  | 2.8  |
| 33  | BL    | 100    | THR  | 2.8  |
| 46  | BY    | 107    | THR  | 2.8  |
| 1   | AA    | 662    | G    | 2.8  |
| 1   | AA    | 771    | G    | 2.8  |
| 1   | AA    | 837    | G    | 2.8  |
| 24  | BA    | 2759   | G    | 2.8  |
| 33  | BL    | 40     | ALA  | 2.8  |
| 51  | B4    | 38     | ALA  | 2.8  |
| 3   | AB    | 43     | C    | 2.8  |
| 5   | AF    | 203    | PHE  | 2.8  |
| 24  | BA    | 1782   | C    | 2.8  |
| 24  | BA    | 1808   | U    | 2.8  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 46  | BY    | 171    | ILE  | 2.8  |
| 26  | BC    | 5      | LYS  | 2.8  |
| 29  | BF    | 120    | GLU  | 2.8  |
| 6   | AG    | 175    | SER  | 2.8  |
| 29  | BF    | 210    | ALA  | 2.8  |
| 34  | BM    | 4      | TYR  | 2.8  |
| 1   | AA    | 761    | G    | 2.8  |
| 10  | AK    | 59     | LEU  | 2.8  |
| 24  | BA    | 1112   | G    | 2.8  |
| 24  | BA    | 1964   | G    | 2.8  |
| 24  | BA    | 1893   | C    | 2.8  |
| 26  | BC    | 103    | ILE  | 2.7  |
| 40  | BS    | 38     | ASN  | 2.7  |
| 8   | AI    | 1      | MET  | 2.7  |
| 4   | AE    | 22     | LYS  | 2.7  |
| 26  | BC    | 128    | GLY  | 2.7  |
| 27  | BD    | 180    | GLY  | 2.7  |
| 30  | BG    | 75     | LYS  | 2.7  |
| 33  | BL    | 95     | LYS  | 2.7  |
| 45  | BX    | 18     | GLY  | 2.7  |
| 11  | AL    | 48     | GLU  | 2.7  |
| 17  | AR    | 7      | GLU  | 2.7  |
| 29  | BF    | 21     | ALA  | 2.7  |
| 29  | BF    | 42     | ALA  | 2.7  |
| 46  | BY    | 119    | GLU  | 2.7  |
| 12  | AM    | 53     | PRO  | 2.7  |
| 46  | BY    | 159    | PRO  | 2.7  |
| 24  | BA    | 270(R) | G    | 2.7  |
| 1   | AA    | 697    | U    | 2.7  |
| 1   | AA    | 1100   | C    | 2.7  |
| 2   | A1    | 6      | U    | 2.7  |
| 24  | BA    | 797    | C    | 2.7  |
| 24  | BA    | 1775   | U    | 2.7  |
| 6   | AG    | 139    | ARG  | 2.7  |
| 20  | AU    | 86     | VAL  | 2.7  |
| 8   | AI    | 11     | ASN  | 2.7  |
| 9   | AJ    | 53     | LYS  | 2.7  |
| 27  | BD    | 5      | LYS  | 2.7  |
| 33  | BL    | 42     | ASN  | 2.7  |
| 10  | AK    | 135    | CYS  | 2.7  |
| 31  | BH    | 120    | GLY  | 2.7  |
| 34  | BM    | 80     | GLY  | 2.7  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 26  | BC    | 162    | GLU  | 2.7  |
| 26  | BC    | 226    | PRO  | 2.7  |
| 1   | AA    | 1156   | G    | 2.7  |
| 1   | AA    | 1182   | G    | 2.7  |
| 1   | AA    | 1452   | C    | 2.7  |
| 24  | BA    | 189    | G    | 2.7  |
| 24  | BA    | 1973   | G    | 2.7  |
| 6   | AG    | 73     | ARG  | 2.7  |
| 31  | BH    | 43     | VAL  | 2.7  |
| 15  | AP    | 121    | LYS  | 2.7  |
| 27  | BD    | 78     | LYS  | 2.7  |
| 50  | B3    | 8      | LYS  | 2.7  |
| 17  | AR    | 85     | LEU  | 2.7  |
| 26  | BC    | 158    | ALA  | 2.7  |
| 24  | BA    | 2423   | U    | 2.7  |
| 29  | BF    | 129    | PHE  | 2.7  |
| 35  | BN    | 92     | GLU  | 2.7  |
| 5   | AF    | 57     | ILE  | 2.7  |
| 1   | AA    | 186(D) | C    | 2.7  |
| 1   | AA    | 1161   | C    | 2.7  |
| 5   | AF    | 138    | VAL  | 2.7  |
| 21  | AV    | 25     | LYS  | 2.7  |
| 24  | BA    | 780    | G    | 2.7  |
| 24  | BA    | 1806   | C    | 2.7  |
| 24  | BA    | 2789   | C    | 2.7  |
| 42  | BU    | 14     | VAL  | 2.7  |
| 46  | BY    | 180    | VAL  | 2.7  |
| 51  | B4    | 9      | LYS  | 2.7  |
| 51  | B4    | 15     | ARG  | 2.7  |
| 51  | B4    | 20     | ARG  | 2.7  |
| 52  | B5    | 33     | LYS  | 2.7  |
| 27  | BD    | 203    | ASN  | 2.7  |
| 1   | AA    | 687    | A    | 2.7  |
| 1   | AA    | 782    | A    | 2.7  |
| 11  | AL    | 58     | HIS  | 2.7  |
| 24  | BA    | 1900   | A    | 2.7  |
| 24  | BA    | 2801   | A    | 2.7  |
| 8   | AI    | 31     | GLU  | 2.7  |
| 26  | BC    | 197    | GLU  | 2.7  |
| 31  | BH    | 159    | GLU  | 2.7  |
| 33  | BL    | 137    | GLU  | 2.7  |
| 36  | BO    | 122    | PRO  | 2.7  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 9   | AJ    | 64   | GLN  | 2.7  |
| 45  | BX    | 110  | GLU  | 2.7  |
| 1   | AA    | 762  | C    | 2.7  |
| 42  | BU    | 66   | ARG  | 2.7  |
| 3   | AB    | 57   | G    | 2.7  |
| 24  | BA    | 2502 | G    | 2.7  |
| 24  | BA    | 2595 | G    | 2.7  |
| 6   | AG    | 190  | ASP  | 2.7  |
| 9   | AJ    | 132  | GLY  | 2.7  |
| 8   | AI    | 49   | ALA  | 2.7  |
| 21  | AV    | 24   | ALA  | 2.7  |
| 37  | BP    | 140  | ALA  | 2.7  |
| 1   | AA    | 250  | A    | 2.7  |
| 6   | AG    | 38   | TYR  | 2.7  |
| 28  | BE    | 32   | PRO  | 2.7  |
| 26  | BC    | 14   | VAL  | 2.7  |
| 33  | BL    | 103  | GLN  | 2.7  |
| 37  | BP    | 27   | VAL  | 2.7  |
| 1   | AA    | 1162 | C    | 2.7  |
| 4   | AE    | 155  | LEU  | 2.7  |
| 29  | BF    | 24   | LEU  | 2.7  |
| 1   | AA    | 674  | G    | 2.7  |
| 1   | AA    | 830  | G    | 2.7  |
| 40  | BS    | 12   | SER  | 2.7  |
| 24  | BA    | 1211 | U    | 2.7  |
| 24  | BA    | 2671 | A    | 2.7  |
| 6   | AG    | 146  | ILE  | 2.7  |
| 28  | BE    | 137  | HIS  | 2.7  |
| 38  | BQ    | 102  | GLU  | 2.7  |
| 24  | BA    | 732  | C    | 2.7  |
| 3   | AB    | 46   | G    | 2.7  |
| 14  | AO    | 38   | THR  | 2.7  |
| 14  | AO    | 122  | THR  | 2.7  |
| 17  | AR    | 40   | SER  | 2.7  |
| 24  | BA    | 2754 | U    | 2.7  |
| 27  | BD    | 110  | GLY  | 2.7  |
| 29  | BF    | 16   | GLY  | 2.7  |
| 13  | AN    | 128  | ALA  | 2.6  |
| 26  | BC    | 78   | ALA  | 2.6  |
| 9   | AJ    | 136  | LYS  | 2.6  |
| 24  | BA    | 191  | A    | 2.6  |
| 5   | AF    | 131  | ARG  | 2.6  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 9   | AJ    | 72   | ARG  | 2.6  |
| 27  | BD    | 127  | VAL  | 2.6  |
| 35  | BN    | 72   | PRO  | 2.6  |
| 43  | BV    | 76   | VAL  | 2.6  |
| 45  | BX    | 84   | ARG  | 2.6  |
| 5   | AF    | 108  | ASN  | 2.6  |
| 4   | AE    | 110  | GLN  | 2.6  |
| 24  | BA    | 277  | C    | 2.6  |
| 24  | BA    | 365  | C    | 2.6  |
| 24  | BA    | 1694 | C    | 2.6  |
| 24  | BA    | 1925 | C    | 2.6  |
| 1   | AA    | 1485 | U    | 2.6  |
| 28  | BE    | 29   | GLY  | 2.6  |
| 31  | BH    | 174  | GLY  | 2.6  |
| 1   | AA    | 809  | G    | 2.6  |
| 24  | BA    | 836  | G    | 2.6  |
| 24  | BA    | 1356 | G    | 2.6  |
| 24  | BA    | 1906 | G    | 2.6  |
| 5   | AF    | 97   | LYS  | 2.6  |
| 18  | AS    | 50   | LYS  | 2.6  |
| 31  | BH    | 90   | LYS  | 2.6  |
| 43  | BV    | 75   | TYR  | 2.6  |
| 20  | AU    | 32   | ARG  | 2.6  |
| 34  | BM    | 135  | PRO  | 2.6  |
| 36  | BO    | 147  | LEU  | 2.6  |
| 3   | AB    | 49   | C    | 2.6  |
| 30  | BG    | 26   | GLN  | 2.6  |
| 1   | AA    | 660  | G    | 2.6  |
| 1   | AA    | 714  | G    | 2.6  |
| 24  | BA    | 1266 | G    | 2.6  |
| 43  | BV    | 56   | ALA  | 2.6  |
| 24  | BA    | 2058 | A    | 2.6  |
| 11  | AL    | 98   | PRO  | 2.6  |
| 1   | AA    | 748  | C    | 2.6  |
| 8   | AI    | 57   | GLN  | 2.6  |
| 10  | AK    | 77   | GLU  | 2.6  |
| 24  | BA    | 807  | U    | 2.6  |
| 24  | BA    | 1040 | C    | 2.6  |
| 24  | BA    | 2507 | C    | 2.6  |
| 32  | BK    | 64   | GLU  | 2.6  |
| 5   | AF    | 80   | GLY  | 2.6  |
| 4   | AE    | 200  | ILE  | 2.6  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 42  | BU    | 55   | ALA  | 2.6  |
| 14  | AO    | 66   | VAL  | 2.6  |
| 24  | BA    | 1114 | G    | 2.6  |
| 24  | BA    | 2168 | G    | 2.6  |
| 41  | BT    | 8    | VAL  | 2.6  |
| 49  | B2    | 56   | VAL  | 2.6  |
| 1   | AA    | 653  | A    | 2.6  |
| 42  | BU    | 36   | PRO  | 2.6  |
| 26  | BC    | 23   | ASP  | 2.6  |
| 1   | AA    | 99   | C    | 2.6  |
| 4   | AE    | 126  | GLU  | 2.6  |
| 22  | AW    | 46   | GLU  | 2.6  |
| 26  | BC    | 202  | GLU  | 2.6  |
| 47  | BZ    | 12   | ASN  | 2.6  |
| 12  | AM    | 55   | LYS  | 2.6  |
| 48  | B1    | 67   | ALA  | 2.6  |
| 12  | AM    | 86   | MET  | 2.6  |
| 16  | AQ    | 45   | ARG  | 2.6  |
| 35  | BN    | 20   | MET  | 2.6  |
| 35  | BN    | 49   | ARG  | 2.6  |
| 24  | BA    | 1980 | G    | 2.6  |
| 24  | BA    | 2762 | G    | 2.6  |
| 34  | BM    | 3    | THR  | 2.6  |
| 7   | AH    | 96   | PRO  | 2.6  |
| 24  | BA    | 99   | U    | 2.6  |
| 13  | AN    | 110  | ASP  | 2.6  |
| 24  | BA    | 2050 | C    | 2.6  |
| 5   | AF    | 148  | GLY  | 2.6  |
| 30  | BG    | 167  | GLU  | 2.6  |
| 36  | BO    | 22   | GLY  | 2.6  |
| 8   | AI    | 13   | ASN  | 2.6  |
| 52  | B5    | 20   | ASN  | 2.6  |
| 4   | AE    | 36   | ARG  | 2.6  |
| 6   | AG    | 78   | LEU  | 2.6  |
| 32  | BK    | 37   | VAL  | 2.6  |
| 32  | BK    | 107  | VAL  | 2.6  |
| 34  | BM    | 62   | VAL  | 2.6  |
| 1   | AA    | 78   | G    | 2.6  |
| 1   | AA    | 1494 | G    | 2.6  |
| 3   | AB    | 8    | U    | 2.6  |
| 5   | AF    | 114  | PRO  | 2.6  |
| 9   | AJ    | 71   | PRO  | 2.6  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 24  | BA    | 1371 | G    | 2.6  |
| 31  | BH    | 117  | PRO  | 2.6  |
| 46  | BY    | 52   | SER  | 2.6  |
| 1   | AA    | 74   | C    | 2.6  |
| 24  | BA    | 1790 | C    | 2.6  |
| 6   | AG    | 69   | GLY  | 2.6  |
| 32  | BK    | 7    | GLU  | 2.6  |
| 37  | BP    | 116  | GLU  | 2.6  |
| 50  | B3    | 18   | CYS  | 2.6  |
| 9   | AJ    | 59   | LEU  | 2.6  |
| 6   | AG    | 168  | ARG  | 2.6  |
| 11  | AL    | 44   | VAL  | 2.6  |
| 19  | AT    | 92   | ARG  | 2.6  |
| 35  | BN    | 1    | MET  | 2.6  |
| 41  | BT    | 36   | ARG  | 2.6  |
| 46  | BY    | 4    | ARG  | 2.6  |
| 53  | B6    | 9    | ARG  | 2.6  |
| 1   | AA    | 1413 | A    | 2.6  |
| 24  | BA    | 162  | U    | 2.6  |
| 24  | BA    | 278  | A    | 2.6  |
| 24  | BA    | 1431 | U    | 2.6  |
| 24  | BA    | 1946 | U    | 2.6  |
| 24  | BA    | 2602 | A    | 2.6  |
| 24  | BA    | 2750 | A    | 2.6  |
| 24  | BA    | 1042 | G    | 2.6  |
| 24  | BA    | 2125 | G    | 2.6  |
| 29  | BF    | 25   | PRO  | 2.6  |
| 20  | AU    | 71   | LYS  | 2.5  |
| 8   | AI    | 26   | ILE  | 2.5  |
| 24  | BA    | 210  | C    | 2.5  |
| 24  | BA    | 2065 | C    | 2.5  |
| 27  | BD    | 155  | LEU  | 2.5  |
| 29  | BF    | 12   | LEU  | 2.5  |
| 29  | BF    | 85   | GLY  | 2.5  |
| 46  | BY    | 61   | LEU  | 2.5  |
| 10  | AK    | 93   | VAL  | 2.5  |
| 42  | BU    | 53   | GLU  | 2.5  |
| 43  | BV    | 31   | GLU  | 2.5  |
| 24  | BA    | 735  | A    | 2.5  |
| 34  | BM    | 40   | PRO  | 2.5  |
| 1   | AA    | 710  | G    | 2.5  |
| 4   | AE    | 67   | THR  | 2.5  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 24  | BA    | 690  | G    | 2.5  |
| 17  | AR    | 50   | HIS  | 2.5  |
| 28  | BE    | 5    | LEU  | 2.5  |
| 22  | AW    | 45   | GLN  | 2.5  |
| 12  | AM    | 76   | ASN  | 2.5  |
| 37  | BP    | 26   | TYR  | 2.5  |
| 1   | AA    | 829  | G    | 2.5  |
| 24  | BA    | 1036 | G    | 2.5  |
| 24  | BA    | 2279 | G    | 2.5  |
| 1   | AA    | 75   | C    | 2.5  |
| 3   | AB    | 48   | C    | 2.5  |
| 26  | BC    | 134  | ARG  | 2.5  |
| 31  | BH    | 134  | SER  | 2.5  |
| 36  | BO    | 142  | GLY  | 2.5  |
| 30  | BG    | 150  | ASP  | 2.5  |
| 24  | BA    | 2531 | A    | 2.5  |
| 26  | BC    | 225  | ASN  | 2.5  |
| 44  | BW    | 78   | LYS  | 2.5  |
| 55  | B8    | 27   | CYS  | 2.5  |
| 4   | AE    | 209  | ARG  | 2.5  |
| 5   | AF    | 197  | GLY  | 2.5  |
| 10  | AK    | 97   | VAL  | 2.5  |
| 22  | AW    | 15   | ARG  | 2.5  |
| 22  | AW    | 80   | ARG  | 2.5  |
| 24  | BA    | 799  | G    | 2.5  |
| 24  | BA    | 1092 | C    | 2.5  |
| 24  | BA    | 2443 | C    | 2.5  |
| 27  | BD    | 73   | VAL  | 2.5  |
| 28  | BE    | 148  | GLY  | 2.5  |
| 30  | BG    | 159  | VAL  | 2.5  |
| 32  | BK    | 81   | VAL  | 2.5  |
| 36  | BO    | 21   | ARG  | 2.5  |
| 6   | AG    | 91   | SER  | 2.5  |
| 24  | BA    | 464  | U    | 2.5  |
| 24  | BA    | 2086 | U    | 2.5  |
| 13  | AN    | 104  | GLN  | 2.5  |
| 17  | AR    | 83   | GLU  | 2.5  |
| 29  | BF    | 152  | GLU  | 2.5  |
| 36  | BO    | 94   | GLU  | 2.5  |
| 4   | AE    | 214  | ILE  | 2.5  |
| 21  | AV    | 76   | PRO  | 2.5  |
| 17  | AR    | 37   | ASN  | 2.5  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 5   | AF    | 141  | VAL  | 2.5  |
| 40  | BS    | 89   | VAL  | 2.5  |
| 3   | AB    | 42   | C    | 2.5  |
| 37  | BP    | 83   | MET  | 2.5  |
| 19  | AT    | 99   | SER  | 2.5  |
| 24  | BA    | 2126 | A    | 2.5  |
| 32  | BK    | 71   | ILE  | 2.5  |
| 1   | AA    | 1412 | C    | 2.5  |
| 4   | AE    | 77   | ALA  | 2.5  |
| 4   | AE    | 169  | LYS  | 2.5  |
| 32  | BK    | 62   | LYS  | 2.5  |
| 4   | AE    | 119  | GLU  | 2.5  |
| 6   | AG    | 186  | LEU  | 2.5  |
| 33  | BL    | 120  | LEU  | 2.5  |
| 38  | BQ    | 44   | LEU  | 2.5  |
| 5   | AF    | 124  | ILE  | 2.5  |
| 24  | BA    | 752  | A    | 2.5  |
| 24  | BA    | 1111 | A    | 2.5  |
| 31  | BH    | 9    | ILE  | 2.5  |
| 6   | AG    | 153  | ARG  | 2.5  |
| 11  | AL    | 89   | ASN  | 2.5  |
| 1   | AA    | 519  | C    | 2.5  |
| 4   | AE    | 207  | ALA  | 2.5  |
| 11  | AL    | 25   | LYS  | 2.5  |
| 24  | BA    | 304  | G    | 2.5  |
| 24  | BA    | 469  | G    | 2.5  |
| 34  | BM    | 26   | LEU  | 2.4  |
| 13  | AN    | 13   | GLN  | 2.4  |
| 33  | BL    | 56   | GLU  | 2.4  |
| 37  | BP    | 139  | GLU  | 2.4  |
| 43  | BV    | 109  | GLU  | 2.4  |
| 11  | AL    | 32   | ASP  | 2.4  |
| 24  | BA    | 779  | U    | 2.4  |
| 28  | BE    | 184  | VAL  | 2.4  |
| 45  | BX    | 24   | VAL  | 2.4  |
| 22  | AW    | 47   | GLY  | 2.4  |
| 50  | B3    | 19   | GLY  | 2.4  |
| 6   | AG    | 111  | ALA  | 2.4  |
| 24  | BA    | 693  | C    | 2.4  |
| 24  | BA    | 2745 | C    | 2.4  |
| 28  | BE    | 97   | LYS  | 2.4  |
| 45  | BX    | 21   | LYS  | 2.4  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 50  | B3    | 38   | LYS  | 2.4  |
| 1   | AA    | 683  | G    | 2.4  |
| 1   | AA    | 1480 | G    | 2.4  |
| 6   | AG    | 185  | PHE  | 2.4  |
| 10  | AK    | 111  | ILE  | 2.4  |
| 13  | AN    | 83   | ILE  | 2.4  |
| 33  | BL    | 34   | ILE  | 2.4  |
| 14  | AO    | 116  | SER  | 2.4  |
| 26  | BC    | 63   | SER  | 2.4  |
| 28  | BE    | 179  | GLU  | 2.4  |
| 6   | AG    | 105  | VAL  | 2.4  |
| 24  | BA    | 1955 | U    | 2.4  |
| 24  | BA    | 2555 | U    | 2.4  |
| 36  | BO    | 146  | VAL  | 2.4  |
| 40  | BS    | 29   | ARG  | 2.4  |
| 40  | BS    | 64   | ARG  | 2.4  |
| 28  | BE    | 174  | ASP  | 2.4  |
| 45  | BX    | 107  | ASP  | 2.4  |
| 47  | BZ    | 15   | ASP  | 2.4  |
| 21  | AV    | 8    | GLY  | 2.4  |
| 16  | AQ    | 2    | ALA  | 2.4  |
| 18  | AS    | 49   | LEU  | 2.4  |
| 32  | BK    | 35   | LEU  | 2.4  |
| 3   | AB    | 28   | G    | 2.4  |
| 12  | AM    | 75   | ILE  | 2.4  |
| 24  | BA    | 741  | G    | 2.4  |
| 24  | BA    | 1561 | G    | 2.4  |
| 24  | BA    | 1823 | G    | 2.4  |
| 24  | BA    | 2235 | G    | 2.4  |
| 24  | BA    | 2505 | G    | 2.4  |
| 24  | BA    | 2893 | G    | 2.4  |
| 45  | BX    | 55   | TYR  | 2.4  |
| 1   | AA    | 706  | A    | 2.4  |
| 1   | AA    | 807  | A    | 2.4  |
| 3   | AB    | 21   | A    | 2.4  |
| 29  | BF    | 18   | ARG  | 2.4  |
| 46  | BY    | 58   | VAL  | 2.4  |
| 37  | BP    | 115  | MET  | 2.4  |
| 5   | AF    | 135  | LYS  | 2.4  |
| 27  | BD    | 128  | GLY  | 2.4  |
| 28  | BE    | 115  | GLY  | 2.4  |
| 1   | AA    | 707  | C    | 2.4  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 1   | AA    | 805  | C    | 2.4  |
| 1   | AA    | 893  | C    | 2.4  |
| 24  | BA    | 1430 | C    | 2.4  |
| 32  | BK    | 53   | ALA  | 2.4  |
| 8   | AI    | 85   | VAL  | 2.4  |
| 24  | BA    | 1689 | A    | 2.4  |
| 24  | BA    | 2600 | A    | 2.4  |
| 10  | AK    | 101  | PRO  | 2.4  |
| 12  | AM    | 33   | GLN  | 2.4  |
| 26  | BC    | 52   | ARG  | 2.4  |
| 40  | BS    | 93   | ARG  | 2.4  |
| 14  | AO    | 65   | GLU  | 2.4  |
| 46  | BY    | 108  | PRO  | 2.4  |
| 49  | B2    | 57   | GLU  | 2.4  |
| 7   | AH    | 124  | GLY  | 2.4  |
| 11  | AL    | 52   | ALA  | 2.4  |
| 18  | AS    | 47   | ASP  | 2.4  |
| 44  | BW    | 6    | ASP  | 2.4  |
| 3   | AB    | 32   | U    | 2.4  |
| 24  | BA    | 2387 | U    | 2.4  |
| 26  | BC    | 20   | TYR  | 2.4  |
| 37  | BP    | 81   | VAL  | 2.4  |
| 43  | BV    | 34   | ASN  | 2.4  |
| 3   | AB    | 35   | A    | 2.4  |
| 10  | AK    | 50   | ARG  | 2.4  |
| 24  | BA    | 207  | A    | 2.4  |
| 24  | BA    | 783  | A    | 2.4  |
| 24  | BA    | 1803 | A    | 2.4  |
| 24  | BA    | 1899 | G    | 2.4  |
| 24  | BA    | 2807 | G    | 2.4  |
| 34  | BM    | 29   | LYS  | 2.4  |
| 36  | BO    | 139  | LYS  | 2.4  |
| 49  | B2    | 28   | LEU  | 2.4  |
| 19  | AT    | 80   | GLY  | 2.4  |
| 18  | AS    | 77   | ALA  | 2.4  |
| 27  | BD    | 144  | ALA  | 2.4  |
| 46  | BY    | 173  | ALA  | 2.4  |
| 22  | AW    | 17   | ARG  | 2.4  |
| 34  | BM    | 25   | ARG  | 2.4  |
| 38  | BQ    | 97   | VAL  | 2.4  |
| 46  | BY    | 9    | TYR  | 2.4  |
| 55  | B8    | 4    | ARG  | 2.4  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 1   | AA    | 712  | A    | 2.4  |
| 3   | AB    | 36   | A    | 2.4  |
| 4   | AE    | 147  | LYS  | 2.4  |
| 24  | BA    | 1366 | A    | 2.4  |
| 35  | BN    | 44   | LYS  | 2.4  |
| 5   | AF    | 87   | LEU  | 2.4  |
| 11  | AL    | 56   | LEU  | 2.4  |
| 24  | BA    | 1799 | G    | 2.4  |
| 24  | BA    | 1828 | G    | 2.4  |
| 32  | BK    | 139  | GLN  | 2.4  |
| 27  | BD    | 167  | GLY  | 2.4  |
| 33  | BL    | 15   | GLY  | 2.4  |
| 35  | BN    | 36   | GLY  | 2.4  |
| 32  | BK    | 63   | ALA  | 2.4  |
| 47  | BZ    | 2    | ALA  | 2.4  |
| 1   | AA    | 699  | C    | 2.4  |
| 31  | BH    | 72   | ILE  | 2.4  |
| 24  | BA    | 1943 | U    | 2.4  |
| 6   | AG    | 193  | ASP  | 2.4  |
| 4   | AE    | 53   | ARG  | 2.4  |
| 8   | AI    | 90   | VAL  | 2.4  |
| 14  | AO    | 86   | ARG  | 2.4  |
| 28  | BE    | 104  | VAL  | 2.4  |
| 8   | AI    | 84   | ASN  | 2.4  |
| 11  | AL    | 34   | ASN  | 2.4  |
| 44  | BW    | 70   | LEU  | 2.4  |
| 6   | AG    | 74   | GLN  | 2.3  |
| 24  | BA    | 1059 | G    | 2.3  |
| 24  | BA    | 2277 | G    | 2.3  |
| 24  | BA    | 2446 | G    | 2.3  |
| 24  | BA    | 2763 | G    | 2.3  |
| 19  | AT    | 24   | GLU  | 2.3  |
| 32  | BK    | 24   | GLY  | 2.3  |
| 33  | BL    | 128  | ALA  | 2.3  |
| 37  | BP    | 129  | THR  | 2.3  |
| 40  | BS    | 94   | ALA  | 2.3  |
| 24  | BA    | 203  | C    | 2.3  |
| 24  | BA    | 208  | C    | 2.3  |
| 24  | BA    | 2390 | U    | 2.3  |
| 46  | BY    | 92   | SER  | 2.3  |
| 6   | AG    | 184  | LYS  | 2.3  |
| 10  | AK    | 84   | ARG  | 2.3  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 43  | BV    | 20     | VAL  | 2.3  |
| 17  | AR    | 49     | ASP  | 2.3  |
| 38  | BQ    | 75     | LEU  | 2.3  |
| 4   | AE    | 76     | GLN  | 2.3  |
| 11  | AL    | 24     | GLY  | 2.3  |
| 26  | BC    | 135    | GLY  | 2.3  |
| 30  | BG    | 85     | GLY  | 2.3  |
| 34  | BM    | 88     | GLU  | 2.3  |
| 35  | BN    | 90     | GLN  | 2.3  |
| 36  | BO    | 109    | GLY  | 2.3  |
| 1   | AA    | 208    | U    | 2.3  |
| 24  | BA    | 200    | U    | 2.3  |
| 24  | BA    | 270(U) | C    | 2.3  |
| 24  | BA    | 1837   | C    | 2.3  |
| 24  | BA    | 2551   | C    | 2.3  |
| 6   | AG    | 140    | VAL  | 2.3  |
| 27  | BD    | 54     | ARG  | 2.3  |
| 30  | BG    | 72     | ARG  | 2.3  |
| 1   | AA    | 781    | A    | 2.3  |
| 24  | BA    | 2013   | A    | 2.3  |
| 31  | BH    | 154    | PRO  | 2.3  |
| 8   | AI    | 78     | GLU  | 2.3  |
| 12  | AM    | 21     | GLN  | 2.3  |
| 13  | AN    | 21     | ILE  | 2.3  |
| 31  | BH    | 48     | GLY  | 2.3  |
| 24  | BA    | 2153   | G    | 2.3  |
| 24  | BA    | 2634   | G    | 2.3  |
| 28  | BE    | 35     | GLN  | 2.3  |
| 32  | BK    | 79     | ILE  | 2.3  |
| 24  | BA    | 308    | G    | 2.3  |
| 24  | BA    | 763    | G    | 2.3  |
| 24  | BA    | 1325   | G    | 2.3  |
| 34  | BM    | 136    | GLU  | 2.3  |
| 42  | BU    | 98     | GLU  | 2.3  |
| 1   | AA    | 1496   | C    | 2.3  |
| 3   | AB    | 74     | C    | 2.3  |
| 8   | AI    | 28     | ARG  | 2.3  |
| 11  | AL    | 109    | VAL  | 2.3  |
| 24  | BA    | 2752   | C    | 2.3  |
| 43  | BV    | 39     | THR  | 2.3  |
| 26  | BC    | 73     | ARG  | 2.3  |
| 51  | B4    | 55     | ARG  | 2.3  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 30  | BG    | 76   | SER  | 2.3  |
| 3   | AC    | 35   | A    | 2.3  |
| 24  | BA    | 2758 | A    | 2.3  |
| 34  | BM    | 126  | PRO  | 2.3  |
| 1   | AA    | 1498 | U    | 2.3  |
| 1   | AA    | 1540 | U    | 2.3  |
| 24  | BA    | 1033 | U    | 2.3  |
| 24  | BA    | 1105 | U    | 2.3  |
| 24  | BA    | 1834 | U    | 2.3  |
| 26  | BC    | 106  | GLY  | 2.3  |
| 33  | BL    | 83   | GLY  | 2.3  |
| 47  | BZ    | 13   | GLY  | 2.3  |
| 1   | AA    | 1154 | G    | 2.3  |
| 11  | AL    | 23   | ASN  | 2.3  |
| 1   | AA    | 1411 | C    | 2.3  |
| 4   | AE    | 111  | ARG  | 2.3  |
| 31  | BH    | 77   | LYS  | 2.3  |
| 7   | AH    | 91   | LEU  | 2.3  |
| 17  | AR    | 56   | LEU  | 2.3  |
| 24  | BA    | 2261 | C    | 2.3  |
| 28  | BE    | 170  | LEU  | 2.3  |
| 42  | BU    | 18   | LEU  | 2.3  |
| 45  | BX    | 108  | THR  | 2.3  |
| 5   | AF    | 20   | SER  | 2.3  |
| 3   | AD    | 12   | U    | 2.3  |
| 26  | BC    | 130  | ILE  | 2.3  |
| 50  | B3    | 7    | PRO  | 2.3  |
| 6   | AG    | 53   | ASP  | 2.3  |
| 6   | AG    | 182  | LYS  | 2.3  |
| 7   | AH    | 145  | LYS  | 2.3  |
| 7   | AH    | 148  | VAL  | 2.3  |
| 31  | BH    | 15   | VAL  | 2.3  |
| 32  | BK    | 21   | VAL  | 2.3  |
| 6   | AG    | 209  | ARG  | 2.3  |
| 24  | BA    | 1115 | G    | 2.3  |
| 24  | BA    | 2152 | G    | 2.3  |
| 1   | AA    | 1395 | C    | 2.3  |
| 24  | BA    | 1041 | C    | 2.3  |
| 24  | BA    | 1961 | C    | 2.3  |
| 29  | BF    | 133  | ASN  | 2.3  |
| 18  | AS    | 48   | TRP  | 2.3  |
| 3   | AB    | 33   | U    | 2.3  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 12  | AM    | 63   | PHE  | 2.3  |
| 17  | AR    | 18   | PHE  | 2.3  |
| 32  | BK    | 109  | ILE  | 2.3  |
| 5   | AF    | 60   | ALA  | 2.3  |
| 22  | AW    | 49   | ALA  | 2.3  |
| 48  | B1    | 62   | LYS  | 2.3  |
| 35  | BN    | 8    | LEU  | 2.3  |
| 51  | B4    | 57   | VAL  | 2.3  |
| 7   | AH    | 122  | GLU  | 2.3  |
| 16  | AQ    | 8    | GLU  | 2.3  |
| 24  | BA    | 463  | G    | 2.3  |
| 24  | BA    | 2164 | C    | 2.3  |
| 3   | AB    | 58   | A    | 2.3  |
| 24  | BA    | 8    | A    | 2.3  |
| 24  | BA    | 706  | A    | 2.3  |
| 24  | BA    | 2492 | U    | 2.3  |
| 27  | BD    | 65   | ILE  | 2.3  |
| 4   | AE    | 159  | PRO  | 2.3  |
| 26  | BC    | 36   | LYS  | 2.3  |
| 31  | BH    | 28   | GLY  | 2.3  |
| 41  | BT    | 116  | ALA  | 2.3  |
| 46  | BY    | 49   | ARG  | 2.3  |
| 9   | AJ    | 97   | GLN  | 2.3  |
| 1   | AA    | 88   | C    | 2.2  |
| 1   | AA    | 1402 | C    | 2.2  |
| 14  | AO    | 79   | GLU  | 2.2  |
| 32  | BK    | 48   | GLU  | 2.2  |
| 1   | AA    | 285  | G    | 2.2  |
| 2   | A1    | 26   | G    | 2.2  |
| 3   | AB    | 27   | G    | 2.2  |
| 1   | AA    | 891  | U    | 2.2  |
| 1   | AA    | 1159 | U    | 2.2  |
| 1   | AA    | 1427 | U    | 2.2  |
| 3   | AB    | 20   | U    | 2.2  |
| 21  | AV    | 23   | ASN  | 2.2  |
| 24  | BA    | 1921 | G    | 2.2  |
| 24  | BA    | 2780 | G    | 2.2  |
| 24  | BA    | 2783 | G    | 2.2  |
| 28  | BE    | 15   | PHE  | 2.2  |
| 45  | BX    | 60   | PHE  | 2.2  |
| 5   | AF    | 182  | ILE  | 2.2  |
| 40  | BS    | 86   | ILE  | 2.2  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 6   | AG    | 167  | GLY  | 2.2  |
| 7   | AH    | 97   | GLY  | 2.2  |
| 8   | AI    | 23   | LYS  | 2.2  |
| 13  | AN    | 124  | LYS  | 2.2  |
| 27  | BD    | 76   | PRO  | 2.2  |
| 32  | BK    | 80   | PRO  | 2.2  |
| 37  | BP    | 30   | GLY  | 2.2  |
| 43  | BV    | 28   | SER  | 2.2  |
| 46  | BY    | 142  | SER  | 2.2  |
| 8   | AI    | 14   | LEU  | 2.2  |
| 9   | AJ    | 147  | ALA  | 2.2  |
| 17  | AR    | 11   | VAL  | 2.2  |
| 30  | BG    | 120  | LEU  | 2.2  |
| 9   | AJ    | 73   | MET  | 2.2  |
| 11  | AL    | 93   | ARG  | 2.2  |
| 4   | AE    | 128  | GLU  | 2.2  |
| 4   | AE    | 75   | LYS  | 2.2  |
| 24  | BA    | 1174 | A    | 2.2  |
| 28  | BE    | 181  | LEU  | 2.2  |
| 5   | AF    | 66   | VAL  | 2.2  |
| 34  | BM    | 6    | PRO  | 2.2  |
| 35  | BN    | 35   | VAL  | 2.2  |
| 10  | AK    | 85   | ARG  | 2.2  |
| 18  | AS    | 57   | ARG  | 2.2  |
| 29  | BF    | 17   | ARG  | 2.2  |
| 48  | B1    | 2    | ARG  | 2.2  |
| 51  | B4    | 16   | ARG  | 2.2  |
| 1   | AA    | 271  | C    | 2.2  |
| 1   | AA    | 680  | C    | 2.2  |
| 2   | A1    | 7    | U    | 2.2  |
| 8   | AI    | 15   | ASP  | 2.2  |
| 24  | BA    | 9    | U    | 2.2  |
| 34  | BM    | 139  | GLU  | 2.2  |
| 5   | AF    | 134  | ILE  | 2.2  |
| 52  | B5    | 54   | ILE  | 2.2  |
| 1   | AA    | 76   | G    | 2.2  |
| 1   | AA    | 890  | G    | 2.2  |
| 9   | AJ    | 63   | LYS  | 2.2  |
| 24  | BA    | 98   | G    | 2.2  |
| 24  | BA    | 458  | G    | 2.2  |
| 24  | BA    | 798  | G    | 2.2  |
| 24  | BA    | 1813 | G    | 2.2  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 24  | BA    | 1842 | G    | 2.2  |
| 22  | AW    | 104  | LEU  | 2.2  |
| 24  | BA    | 548  | A    | 2.2  |
| 24  | BA    | 1365 | A    | 2.2  |
| 24  | BA    | 1802 | A    | 2.2  |
| 4   | AE    | 66   | GLY  | 2.2  |
| 5   | AF    | 205  | GLY  | 2.2  |
| 11  | AL    | 57   | GLY  | 2.2  |
| 27  | BD    | 161  | THR  | 2.2  |
| 42  | BU    | 42   | GLY  | 2.2  |
| 4   | AE    | 30   | ARG  | 2.2  |
| 5   | AF    | 179  | ARG  | 2.2  |
| 20  | AU    | 35   | ARG  | 2.2  |
| 14  | AO    | 50   | SER  | 2.2  |
| 26  | BC    | 221  | SER  | 2.2  |
| 24  | BA    | 362  | U    | 2.2  |
| 24  | BA    | 2897 | U    | 2.2  |
| 3   | AB    | 61   | C    | 2.2  |
| 9   | AJ    | 26   | PHE  | 2.2  |
| 14  | AO    | 16   | GLU  | 2.2  |
| 14  | AO    | 85   | ILE  | 2.2  |
| 16  | AQ    | 52   | GLN  | 2.2  |
| 24  | BA    | 1908 | C    | 2.2  |
| 31  | BH    | 127  | GLU  | 2.2  |
| 48  | B1    | 65   | GLN  | 2.2  |
| 26  | BC    | 137  | LEU  | 2.2  |
| 34  | BM    | 75   | TYR  | 2.2  |
| 3   | AB    | 14   | A    | 2.2  |
| 9   | AJ    | 103  | TRP  | 2.2  |
| 24  | BA    | 402  | A    | 2.2  |
| 24  | BA    | 2597 | G    | 2.2  |
| 9   | AJ    | 134  | ALA  | 2.2  |
| 16  | AQ    | 12   | ARG  | 2.2  |
| 20  | AU    | 87   | ARG  | 2.2  |
| 34  | BM    | 77   | GLY  | 2.2  |
| 42  | BU    | 29   | PRO  | 2.2  |
| 41  | BT    | 6    | THR  | 2.2  |
| 27  | BD    | 248  | SER  | 2.2  |
| 18  | AS    | 19   | ILE  | 2.2  |
| 24  | BA    | 2146 | C    | 2.2  |
| 26  | BC    | 184  | LYS  | 2.2  |
| 6   | AG    | 145  | GLU  | 2.2  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 16  | AQ    | 44   | LEU  | 2.2  |
| 26  | BC    | 209  | LEU  | 2.2  |
| 41  | BT    | 18   | LEU  | 2.2  |
| 1   | AA    | 787  | A    | 2.2  |
| 1   | AA    | 1183 | A    | 2.2  |
| 24  | BA    | 204  | A    | 2.2  |
| 24  | BA    | 1254 | A    | 2.2  |
| 24  | BA    | 1359 | A    | 2.2  |
| 1   | AA    | 1521 | G    | 2.2  |
| 28  | BE    | 65   | GLY  | 2.2  |
| 28  | BE    | 158  | GLY  | 2.2  |
| 6   | AG    | 142  | PRO  | 2.2  |
| 36  | BO    | 89   | ALA  | 2.2  |
| 43  | BV    | 74   | ALA  | 2.2  |
| 1   | AA    | 871  | U    | 2.2  |
| 24  | BA    | 2130 | U    | 2.2  |
| 22  | AW    | 16   | HIS  | 2.2  |
| 51  | B4    | 4    | HIS  | 2.2  |
| 1   | AA    | 1535 | C    | 2.2  |
| 22  | AW    | 92   | LEU  | 2.2  |
| 24  | BA    | 2240 | C    | 2.2  |
| 24  | BA    | 2896 | C    | 2.2  |
| 37  | BP    | 79   | LEU  | 2.2  |
| 41  | BT    | 5    | LYS  | 2.2  |
| 44  | BW    | 48   | LYS  | 2.2  |
| 13  | AN    | 75   | TYR  | 2.2  |
| 24  | BA    | 118  | A    | 2.2  |
| 24  | BA    | 1773 | A    | 2.2  |
| 24  | BA    | 2530 | A    | 2.2  |
| 24  | BA    | 2734 | A    | 2.2  |
| 26  | BC    | 190  | ARG  | 2.2  |
| 31  | BH    | 51   | ARG  | 2.2  |
| 14  | AO    | 74   | GLY  | 2.2  |
| 1   | AA    | 1489 | G    | 2.2  |
| 7   | AH    | 138  | ALA  | 2.2  |
| 20  | AU    | 73   | ALA  | 2.2  |
| 24  | BA    | 307  | G    | 2.2  |
| 24  | BA    | 710  | G    | 2.2  |
| 24  | BA    | 1678 | G    | 2.2  |
| 24  | BA    | 2154 | G    | 2.2  |
| 24  | BA    | 2532 | G    | 2.2  |
| 24  | BA    | 1991 | U    | 2.2  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 6   | AG    | 169    | LYS  | 2.2  |
| 10  | AK    | 107    | LEU  | 2.2  |
| 24  | BA    | 253    | C    | 2.2  |
| 24  | BA    | 485    | C    | 2.2  |
| 24  | BA    | 2461   | C    | 2.2  |
| 24  | BA    | 2774   | C    | 2.2  |
| 7   | AH    | 82     | VAL  | 2.2  |
| 8   | AI    | 37     | VAL  | 2.2  |
| 27  | BD    | 112    | GLN  | 2.2  |
| 28  | BE    | 172    | VAL  | 2.2  |
| 37  | BP    | 105    | GLU  | 2.2  |
| 14  | AO    | 14     | GLY  | 2.1  |
| 27  | BD    | 71     | ASP  | 2.1  |
| 35  | BN    | 27     | GLY  | 2.1  |
| 36  | BO    | 82     | GLY  | 2.1  |
| 1   | AA    | 96     | G    | 2.1  |
| 24  | BA    | 1091   | G    | 2.1  |
| 24  | BA    | 2280   | G    | 2.1  |
| 24  | BA    | 2663   | G    | 2.1  |
| 35  | BN    | 19     | ILE  | 2.1  |
| 44  | BW    | 96     | ILE  | 2.1  |
| 19  | AT    | 7      | THR  | 2.1  |
| 1   | AA    | 749    | C    | 2.1  |
| 24  | BA    | 270(D) | C    | 2.1  |
| 24  | BA    | 486    | C    | 2.1  |
| 24  | BA    | 587    | C    | 2.1  |
| 24  | BA    | 692    | C    | 2.1  |
| 34  | BM    | 94     | HIS  | 2.1  |
| 5   | AF    | 130    | VAL  | 2.1  |
| 43  | BV    | 47     | VAL  | 2.1  |
| 17  | AR    | 71     | GLN  | 2.1  |
| 26  | BC    | 164    | ARG  | 2.1  |
| 3   | AB    | 31     | A    | 2.1  |
| 5   | AF    | 146    | ALA  | 2.1  |
| 24  | BA    | 305    | U    | 2.1  |
| 24  | BA    | 457    | A    | 2.1  |
| 24  | BA    | 1308   | A    | 2.1  |
| 25  | BB    | 41     | U    | 2.1  |
| 37  | BP    | 100    | GLY  | 2.1  |
| 46  | BY    | 143    | GLY  | 2.1  |
| 14  | AO    | 31     | PRO  | 2.1  |
| 26  | BC    | 181    | PRO  | 2.1  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 27  | BD    | 245    | PRO  | 2.1  |
| 31  | BH    | 118    | PRO  | 2.1  |
| 1   | AA    | 1131   | G    | 2.1  |
| 6   | AG    | 120    | LEU  | 2.1  |
| 24  | BA    | 102    | G    | 2.1  |
| 24  | BA    | 1429   | G    | 2.1  |
| 24  | BA    | 1697   | G    | 2.1  |
| 32  | BK    | 131    | LYS  | 2.1  |
| 32  | BK    | 138    | ILE  | 2.1  |
| 45  | BX    | 34     | LYS  | 2.1  |
| 1   | AA    | 186(E) | C    | 2.1  |
| 12  | AM    | 92     | THR  | 2.1  |
| 9   | AJ    | 91     | VAL  | 2.1  |
| 24  | BA    | 2136   | C    | 2.1  |
| 42  | BU    | 51     | VAL  | 2.1  |
| 54  | B7    | 14     | VAL  | 2.1  |
| 30  | BG    | 83     | ARG  | 2.1  |
| 1   | AA    | 191(F) | U    | 2.1  |
| 1   | AA    | 900    | A    | 2.1  |
| 18  | AS    | 76     | GLN  | 2.1  |
| 24  | BA    | 2344   | U    | 2.1  |
| 24  | BA    | 2361   | A    | 2.1  |
| 29  | BF    | 130    | ALA  | 2.1  |
| 34  | BM    | 68     | GLU  | 2.1  |
| 10  | AK    | 36     | LEU  | 2.1  |
| 32  | BK    | 69     | LYS  | 2.1  |
| 45  | BX    | 88     | LYS  | 2.1  |
| 1   | AA    | 157    | G    | 2.1  |
| 24  | BA    | 1171   | G    | 2.1  |
| 24  | BA    | 1950   | G    | 2.1  |
| 24  | BA    | 2156   | G    | 2.1  |
| 13  | AN    | 91     | ARG  | 2.1  |
| 24  | BA    | 1049   | C    | 2.1  |
| 24  | BA    | 1962   | C    | 2.1  |
| 29  | BF    | 183    | VAL  | 2.1  |
| 44  | BW    | 30     | VAL  | 2.1  |
| 42  | BU    | 88     | ARG  | 2.1  |
| 1   | AA    | 958    | A    | 2.1  |
| 5   | AF    | 180    | ALA  | 2.1  |
| 15  | AP    | 2      | ALA  | 2.1  |
| 22  | AW    | 52     | ALA  | 2.1  |
| 24  | BA    | 2775   | A    | 2.1  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 32  | BK    | 122  | GLU  | 2.1  |
| 34  | BM    | 20   | GLY  | 2.1  |
| 34  | BM    | 125  | GLY  | 2.1  |
| 4   | AE    | 221  | LEU  | 2.1  |
| 13  | AN    | 98   | LEU  | 2.1  |
| 14  | AO    | 45   | PRO  | 2.1  |
| 1   | AA    | 79   | G    | 2.1  |
| 1   | AA    | 258  | G    | 2.1  |
| 1   | AA    | 786  | G    | 2.1  |
| 10  | AK    | 137  | VAL  | 2.1  |
| 4   | AE    | 130  | ARG  | 2.1  |
| 24  | BA    | 2064 | C    | 2.1  |
| 45  | BX    | 50   | ARG  | 2.1  |
| 52  | B5    | 28   | ARG  | 2.1  |
| 32  | BK    | 108  | THR  | 2.1  |
| 51  | B4    | 43   | HIS  | 2.1  |
| 1   | AA    | 716  | A    | 2.1  |
| 1   | AA    | 768  | A    | 2.1  |
| 3   | AC    | 36   | A    | 2.1  |
| 6   | AG    | 108  | LEU  | 2.1  |
| 6   | AG    | 196  | LEU  | 2.1  |
| 7   | AH    | 17   | ALA  | 2.1  |
| 15  | AP    | 96   | LEU  | 2.1  |
| 18  | AS    | 82   | GLN  | 2.1  |
| 24  | BA    | 2448 | A    | 2.1  |
| 26  | BC    | 132  | GLY  | 2.1  |
| 29  | BF    | 8    | GLN  | 2.1  |
| 37  | BP    | 50   | ALA  | 2.1  |
| 40  | BS    | 50   | ILE  | 2.1  |
| 46  | BY    | 178  | GLU  | 2.1  |
| 26  | BC    | 138  | PRO  | 2.1  |
| 1   | AA    | 257  | G    | 2.1  |
| 3   | AB    | 29   | G    | 2.1  |
| 24  | BA    | 808  | G    | 2.1  |
| 24  | BA    | 2234 | G    | 2.1  |
| 24  | BA    | 2428 | G    | 2.1  |
| 24  | BA    | 2638 | G    | 2.1  |
| 28  | BE    | 75   | VAL  | 2.1  |
| 32  | BK    | 14   | ASP  | 2.1  |
| 24  | BA    | 1362 | C    | 2.1  |
| 24  | BA    | 2785 | C    | 2.1  |
| 9   | AJ    | 85   | TYR  | 2.1  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res    | Type | RSRZ |
|-----|-------|--------|------|------|
| 3   | AB    | 23     | A    | 2.1  |
| 6   | AG    | 176    | LEU  | 2.1  |
| 9   | AJ    | 65     | ALA  | 2.1  |
| 9   | AJ    | 104    | LEU  | 2.1  |
| 43  | BV    | 72     | LYS  | 2.1  |
| 24  | BA    | 2274   | A    | 2.1  |
| 27  | BD    | 90     | ALA  | 2.1  |
| 11  | AL    | 3      | GLN  | 2.1  |
| 27  | BD    | 115    | GLN  | 2.1  |
| 31  | BH    | 4      | ILE  | 2.1  |
| 5   | AF    | 19     | GLU  | 2.1  |
| 29  | BF    | 19     | GLU  | 2.1  |
| 1   | AA    | 97     | U    | 2.1  |
| 4   | AE    | 136    | VAL  | 2.1  |
| 7   | AH    | 33     | VAL  | 2.1  |
| 5   | AF    | 119    | ARG  | 2.1  |
| 27  | BD    | 14     | ARG  | 2.1  |
| 1   | AA    | 682    | G    | 2.1  |
| 24  | BA    | 2276   | G    | 2.1  |
| 1   | AA    | 689    | C    | 2.1  |
| 7   | AH    | 12     | LEU  | 2.1  |
| 10  | AK    | 127    | LEU  | 2.1  |
| 14  | AO    | 17     | LYS  | 2.1  |
| 29  | BF    | 155    | LEU  | 2.1  |
| 31  | BH    | 160    | LYS  | 2.1  |
| 34  | BM    | 120    | LEU  | 2.1  |
| 4   | AE    | 28     | PHE  | 2.1  |
| 4   | AE    | 218    | ALA  | 2.1  |
| 6   | AG    | 16     | GLY  | 2.1  |
| 19  | AT    | 90     | ILE  | 2.1  |
| 22  | AW    | 55     | ILE  | 2.1  |
| 22  | AW    | 106    | ALA  | 2.1  |
| 24  | BA    | 705    | A    | 2.1  |
| 28  | BE    | 204    | ALA  | 2.1  |
| 33  | BL    | 107    | ILE  | 2.1  |
| 18  | AS    | 44     | THR  | 2.1  |
| 15  | AP    | 50     | GLU  | 2.1  |
| 31  | BH    | 18     | GLU  | 2.1  |
| 24  | BA    | 459    | U    | 2.1  |
| 1   | AA    | 186(C) | G    | 2.0  |
| 1   | AA    | 251    | G    | 2.0  |
| 3   | AD    | 67     | C    | 2.0  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res  | Type | RSRZ |
|-----|-------|------|------|------|
| 34  | BM    | 83   | LYS  | 2.0  |
| 7   | AH    | 54   | ALA  | 2.0  |
| 10  | AK    | 6    | ILE  | 2.0  |
| 13  | AN    | 89   | ALA  | 2.0  |
| 32  | BK    | 13   | GLY  | 2.0  |
| 37  | BP    | 28   | ALA  | 2.0  |
| 6   | AG    | 37   | PRO  | 2.0  |
| 27  | BD    | 140  | THR  | 2.0  |
| 1   | AA    | 831  | U    | 2.0  |
| 2   | A1    | 33   | U    | 2.0  |
| 30  | BG    | 149  | VAL  | 2.0  |
| 14  | AO    | 97   | ARG  | 2.0  |
| 15  | AP    | 108  | ARG  | 2.0  |
| 43  | BV    | 15   | ARG  | 2.0  |
| 32  | BK    | 6    | LEU  | 2.0  |
| 37  | BP    | 125  | LEU  | 2.0  |
| 1   | AA    | 272  | C    | 2.0  |
| 1   | AA    | 1490 | C    | 2.0  |
| 12  | AM    | 47   | PHE  | 2.0  |
| 24  | BA    | 11   | G    | 2.0  |
| 24  | BA    | 1987 | G    | 2.0  |
| 27  | BD    | 62   | TYR  | 2.0  |
| 3   | AB    | 26   | A    | 2.0  |
| 24  | BA    | 2670 | A    | 2.0  |
| 2   | A1    | 38   | U    | 2.0  |
| 10  | AK    | 118  | VAL  | 2.0  |
| 14  | AO    | 11   | VAL  | 2.0  |
| 24  | BA    | 1535 | U    | 2.0  |
| 24  | BA    | 2491 | U    | 2.0  |
| 29  | BF    | 199  | TRP  | 2.0  |
| 46  | BY    | 2    | GLU  | 2.0  |
| 3   | AD    | 74   | C    | 2.0  |
| 24  | BA    | 697  | C    | 2.0  |
| 24  | BA    | 1102 | C    | 2.0  |
| 26  | BC    | 37   | PHE  | 2.0  |
| 34  | BM    | 30   | ILE  | 2.0  |
| 1   | AA    | 858  | G    | 2.0  |
| 1   | AA    | 1013 | G    | 2.0  |
| 3   | AB    | 10   | G    | 2.0  |
| 4   | AE    | 34   | ALA  | 2.0  |
| 24  | BA    | 214  | G    | 2.0  |
| 24  | BA    | 1954 | G    | 2.0  |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 24  | BA    | 303 | U    | 2.0  |
| 14  | AO    | 110 | VAL  | 2.0  |
| 28  | BE    | 53  | PRO  | 2.0  |
| 26  | BC    | 59  | ARG  | 2.0  |
| 33  | BL    | 11  | GLN  | 2.0  |
| 26  | BC    | 207 | THR  | 2.0  |
| 52  | B5    | 18  | ARG  | 2.0  |
| 6   | AG    | 71  | SER  | 2.0  |
| 30  | BG    | 80  | PHE  | 2.0  |

## 6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

## 6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 6.4 Ligands [i](#)

There are no ligands in this entry.

## 6.5 Other polymers [i](#)

There are no such residues in this entry.