



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 01:31 PM UTC

PDB ID : 7K55 / pdb_00007k55
EMDB ID : EMD-22674
Title : Near post-translocated +1-frameshifting(CCC-A) complex with EF-G and GDPCP (Structure III-FS)
Authors : Demo, G.; Loveland, A.B.; Svidritskiy, E.; Gamper, H.B.; Hou, Y.M.; Korostelev, A.A.
Deposited on : 2020-09-16
Resolution : 3.30 Å(reported)
Based on initial models : 5UYM, 4V9P, 4V7D, 6ENJ

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

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:

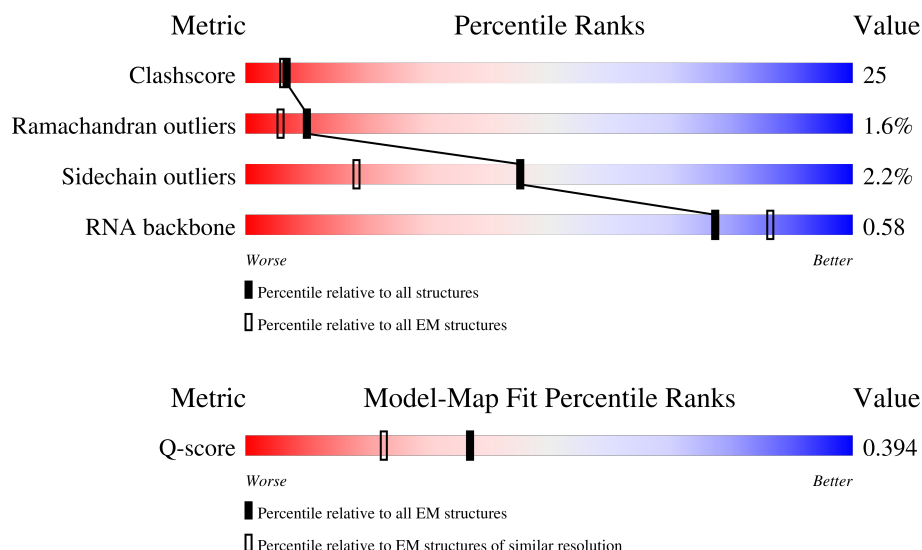
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
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

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.30 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.



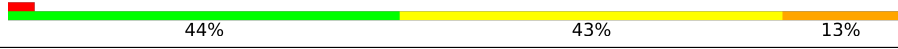
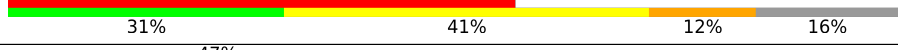
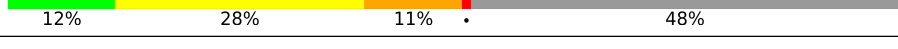
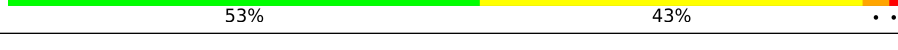
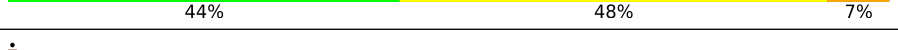
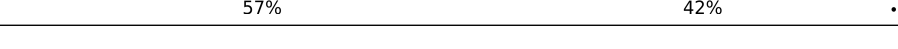
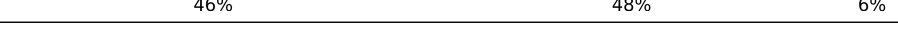
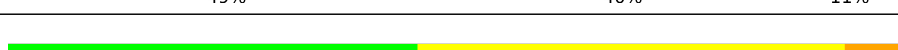
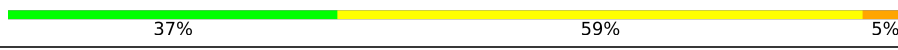
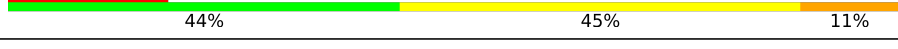
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	15087 (2.80 - 3.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 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 EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	b	271	
2	c	209	

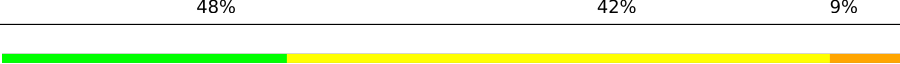
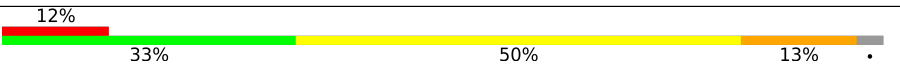
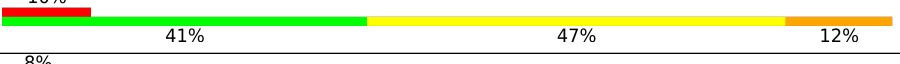
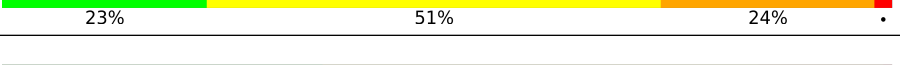
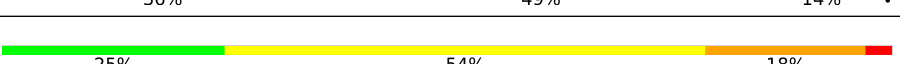
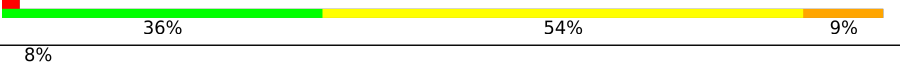
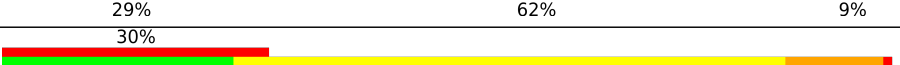
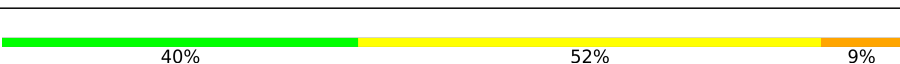
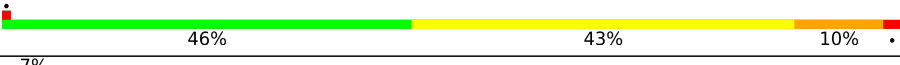
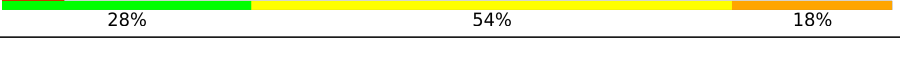
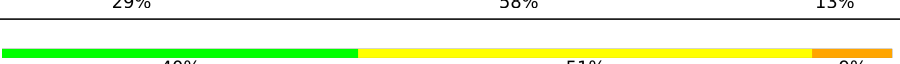
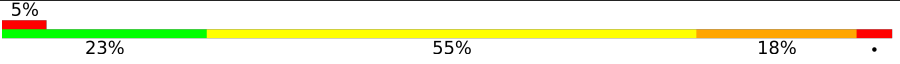
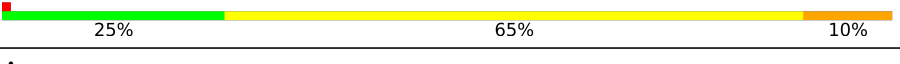
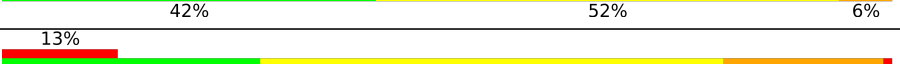
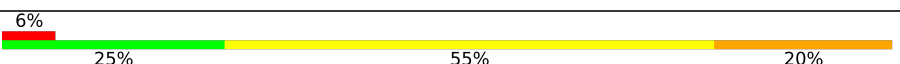
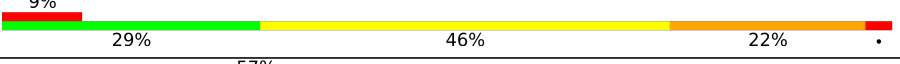
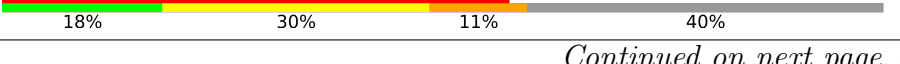
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
3	d	201	
4	e	177	
5	f	176	
6	g	149	
7	h	131	
8	i	141	
9	j	142	
10	k	122	
11	l	143	
12	m	136	
13	n	120	
14	o	116	
15	p	114	
16	q	117	
17	r	103	
18	s	110	
19	t	93	
20	u	102	
21	v	94	
22	w	75	
23	x	77	
24	y	63	
25	z	58	
26	A	66	
27	B	56	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
28	C	50	
29	D	46	
30	E	64	
31	F	38	
32	G	225	
33	H	206	
34	I	205	
35	J	157	
36	K	100	
37	L	151	
38	M	129	
39	N	127	
40	O	98	
41	P	116	
42	Q	123	
43	R	114	
44	S	100	
45	T	88	
46	U	82	
47	V	80	
48	W	65	
49	X	79	
50	Y	85	
51	Z	65	
52	a	223	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
53	3	1539	32%59%8%
54	1	2903	40%52%8%
55	2	120	45%44%10%
56	5	77	53%35%12%
57	6	77	36%40%43%14%
58	4	16	6%31%38%25%6%
59	8	711	20%25%57%14%

2 Entry composition

There are 63 unique types of molecules in this entry. The entry contains 153368 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	b	271	Total	C	N	O	S	0	0
			2083	1288	423	365	7		

- Molecule 2 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	c	209	Total	C	N	O	S	0	0
			1565	979	288	294	4		

- Molecule 3 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	d	201	Total	C	N	O	S	0	0
			1552	974	283	290	5		

- Molecule 4 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	e	177	Total	C	N	O	S	0	0
			1411	899	249	257	6		

- Molecule 5 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	f	176	Total	C	N	O	S	0	0
			1323	832	243	246	2		

- Molecule 6 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	g	125	Total	C	N	O	S	0	0
			936	590	166	179	1		

- Molecule 7 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	h	84	Total	C	N	O	S	0	0
			633	397	114	118	4		

- Molecule 8 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	i	74	Total	C	N	O	S	0	0
			551	358	91	99	3		

- Molecule 9 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	j	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

- Molecule 10 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	k	122	Total	C	N	O	S	0	0
			939	587	180	166	6		

- Molecule 11 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	l	143	Total	C	N	O	S	0	0
			1045	649	206	189	1		

- Molecule 12 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	m	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 13 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	n	120	Total	C	N	O	S	0	0
			961	593	196	167	5		

- Molecule 14 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	o	116	Total	C	N	O	0	0
			892	552	178	162		

- Molecule 15 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	p	114	Total	C	N	O	S	0	0
			917	574	179	163	1		

- Molecule 16 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	q	117	Total	C	N	O	0	0
			947	604	192	151		

- Molecule 17 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	r	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 18 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	s	110	Total	C	N	O	S	0	0
			857	532	166	156	3		

- Molecule 19 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	t	93	Total	C	N	O	S	0	0
			739	466	139	132	2		

- Molecule 20 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	u	102	Total	C	N	O	0	0
			780	492	146	142		

- Molecule 21 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	v	94	Total	C	N	O	S	0	0
			753	479	137	134	3		

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	w	75	Total	C	N	O	S	0	0
			575	356	116	102	1		

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	x	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

- Molecule 24 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	y	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 25 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	z	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 26 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	A	66	Total	C	N	O	S	0	0
			523	323	99	95	6		

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	B	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	C	50	Total	C	N	O	0	0
			410	263	75	72		

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	D	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	E	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 31 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	F	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 32 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	G	218	Total	C	N	O	S	0	0
			1705	1081	305	312	7		

- Molecule 33 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	H	206	Total	C	N	O	S	0	0
			1625	1028	305	289	3		

- Molecule 34 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	I	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

- Molecule 35 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	J	157	Total	C	N	O	S	0	0
			1157	719	218	214	6		

- Molecule 36 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	K	100	Total	C	N	O	S	0	0
			818	515	148	149	6		

- Molecule 37 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	L	151	Total	C	N	O	S	0	0
			1182	735	227	216	4		

- Molecule 38 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	M	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 39 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	N	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

- Molecule 40 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	O	98	Total	C	N	O	S	0	0
			787	493	150	143	1		

- Molecule 41 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	P	116	Total	C	N	O	S	0	0
			870	535	173	159	3		

- Molecule 42 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Q	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

- Molecule 43 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	R	114	Total	C	N	O	S	0	0
			884	546	178	157	3		

- Molecule 44 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	S	100	Total	C	N	O	S	0	0
			805	499	164	139	3		

- Molecule 45 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	T	88	Total	C	N	O	S	0	0
			714	439	144	130	1		

- Molecule 46 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	U	82	Total	C	N	O	S	0	0
			649	406	128	114	1		

- Molecule 47 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	V	80	Total	C	N	O	S	0	0
			649	411	121	114	3		

- Molecule 48 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	W	65	Total	C	N	O	S	0	0
			536	339	100	96	1		

- Molecule 49 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	X	79	Total	C	N	O	S	0	0
			638	408	120	108	2		

- Molecule 50 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	Y	85	Total	C	N	O	S	0	0
			665	411	137	114	3		

- Molecule 51 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	Z	65	Total	C	N	O	S	0	0
			545	335	117	92	1		

- Molecule 52 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	a	134	Total	C	N	O	S	0	0
			1027	645	186	194	2		

- Molecule 53 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	3	1539	Total	C	N	O	P	0	0
			33012	14725	6052	10697	1538		

- Molecule 54 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	1	2903	Total	C	N	O	P	0	0
			62317	27801	11468	20146	2902		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1	747	C	U	conflict	GB 802133627

- Molecule 55 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	2	120	Total	C	N	O	P	0	0
			2568	1145	471	833	119		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
2	120	A	-	insertion	GB 1266961702

- Molecule 56 is a RNA chain called tRNAPro.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	5	77	Total	C	N	O	P	0	0
			1647	733	295	542	77		

- Molecule 57 is a RNA chain called tRNAfMet.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	6	77	Total	C	N	O	P	0	0
			1640	732	297	535	76		

- Molecule 58 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	4	16	Total	C	N	O	P	0	0
			346	155	68	107	16		

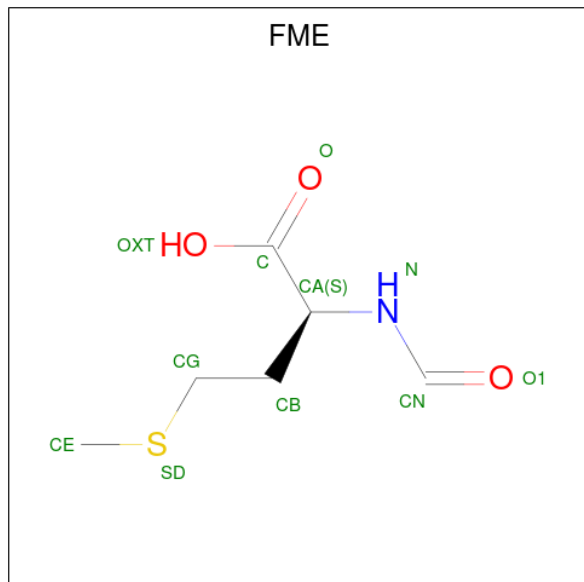
- Molecule 59 is a protein called Elongation factor G.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	8	685	Total	C	N	O	S	0	0
			5312	3351	911	1025	25		

There are 8 discrepancies between the modelled and reference sequences:

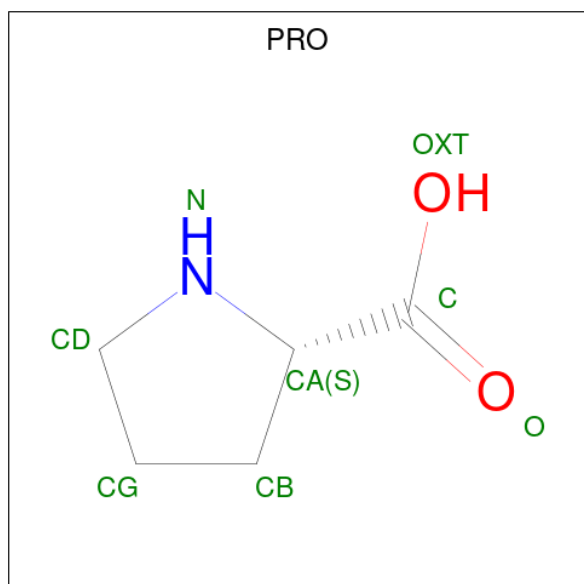
Chain	Residue	Modelled	Actual	Comment	Reference
8	705	LEU	-	expression tag	UNP U9XYS4
8	706	GLU	-	expression tag	UNP U9XYS4
8	707	HIS	-	expression tag	UNP U9XYS4
8	708	HIS	-	expression tag	UNP U9XYS4
8	709	HIS	-	expression tag	UNP U9XYS4
8	710	HIS	-	expression tag	UNP U9XYS4
8	711	HIS	-	expression tag	UNP U9XYS4
8	712	HIS	-	expression tag	UNP U9XYS4

- Molecule 60 is N-FORMYLMETHIONINE (CCD ID: FME) (formula: $C_6H_{11}NO_3S$) (labeled as "Ligand of Interest" by depositor).



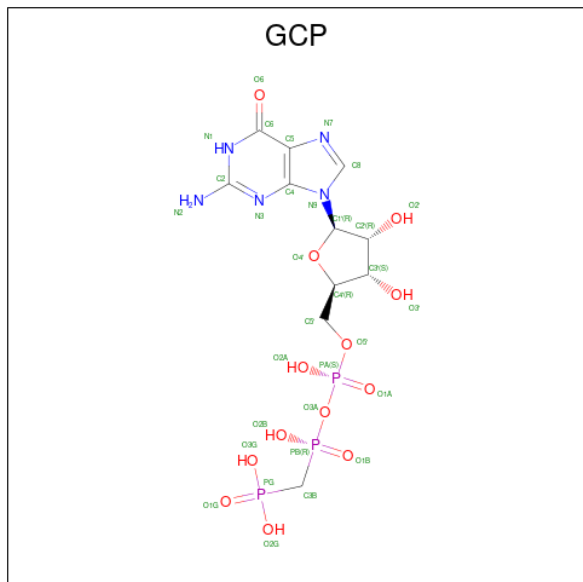
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	S	
60	1	1	10	6	1	2	1	0

- Molecule 61 is PROLINE (CCD ID: PRO) (formula: $C_5H_9NO_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
61	5	1	7	5	1	1	0

- Molecule 62 is PHOSPHOMETHYLPHOSPHONIC ACID GUANYLATE ESTER (CCD ID: GCP) (formula: $C_{11}H_{18}N_5O_{13}P_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
62	8	1	Total	C	N	O	P	0
			32	11	5	13	3	

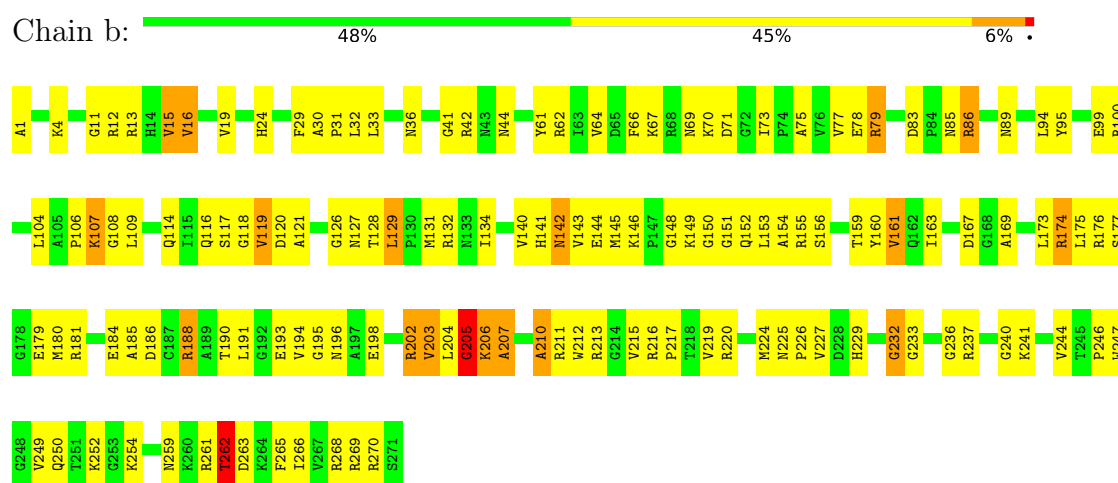
- Molecule 63 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
63	8	1	Total	Mg	0
			1	1	

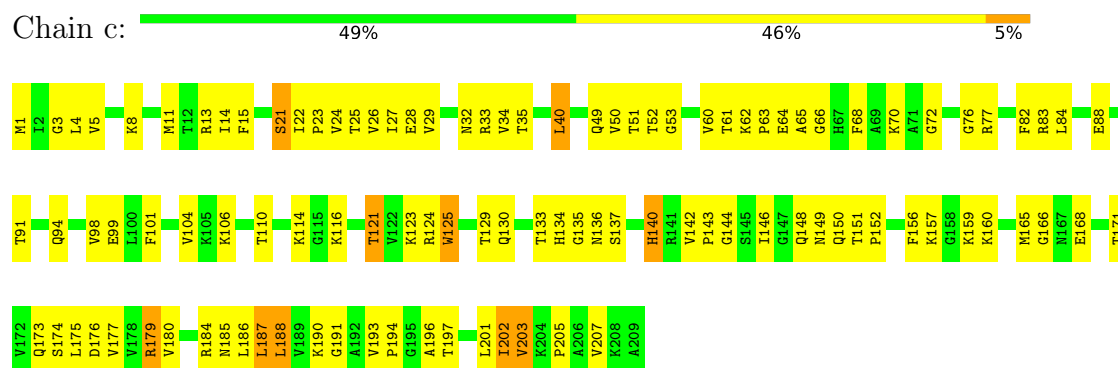
3 Residue-property plots

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

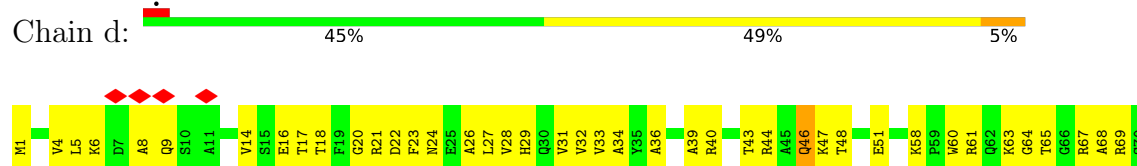
• Molecule 1: 50S ribosomal protein L2

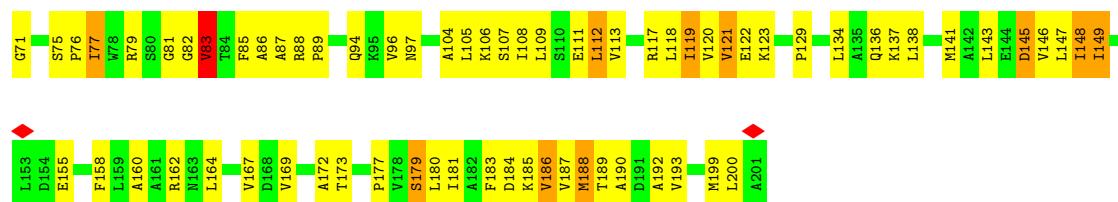


• Molecule 2: 50S ribosomal protein L3

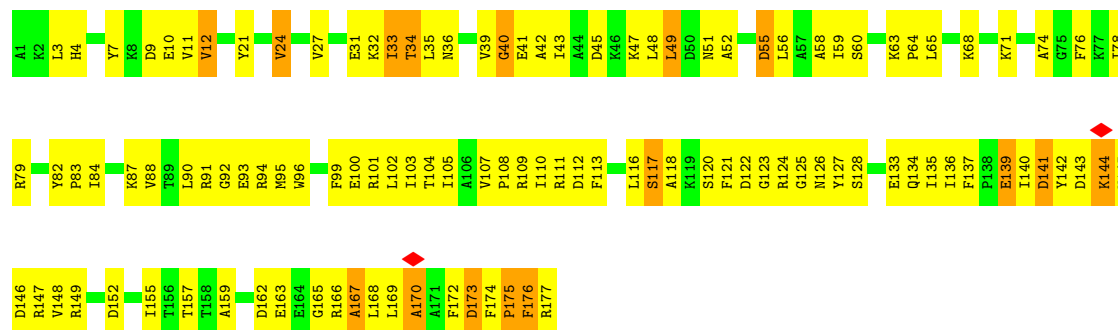


• Molecule 3: 50S ribosomal protein L4

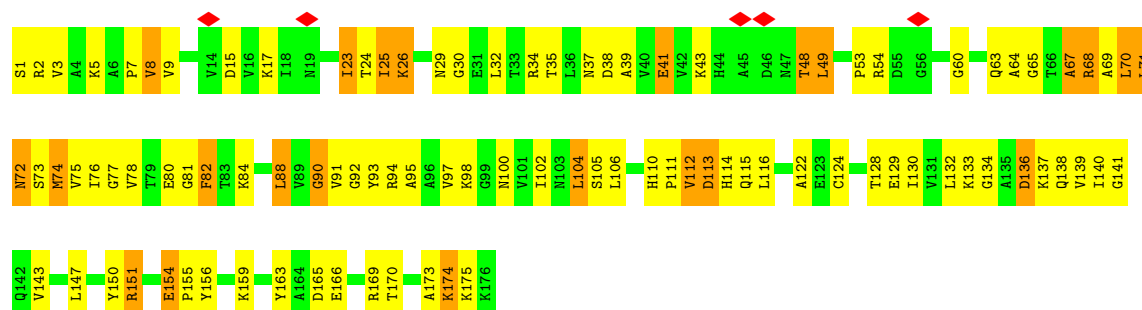




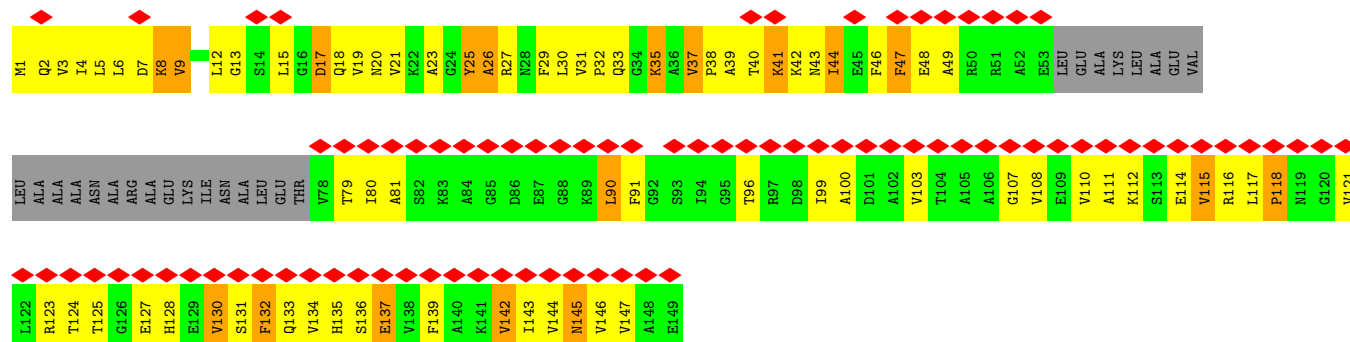
• Molecule 4: 50S ribosomal protein L5



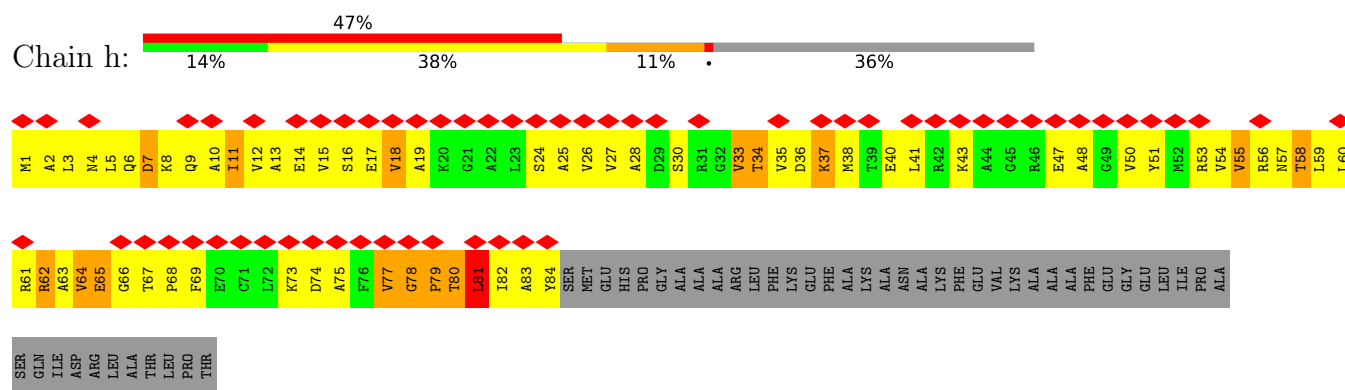
• Molecule 5: 50S ribosomal protein L6



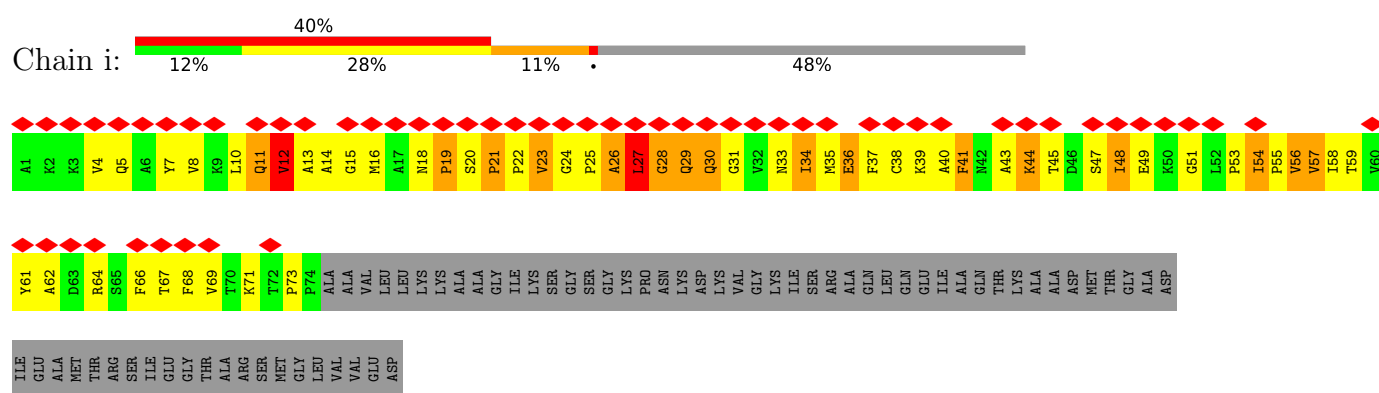
• Molecule 6: 50S ribosomal protein L9



- Molecule 7: 50S ribosomal protein L10



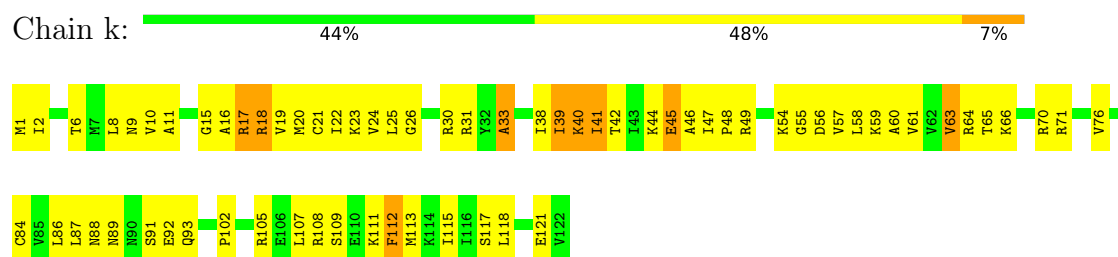
- Molecule 8: 50S ribosomal protein L11



- Molecule 9: 50S ribosomal protein L13

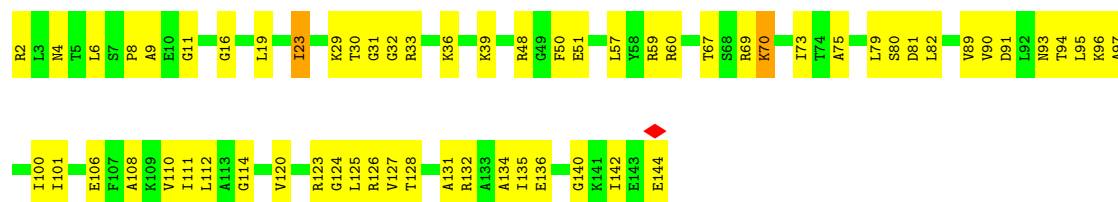


- Molecule 10: 50S ribosomal protein L14



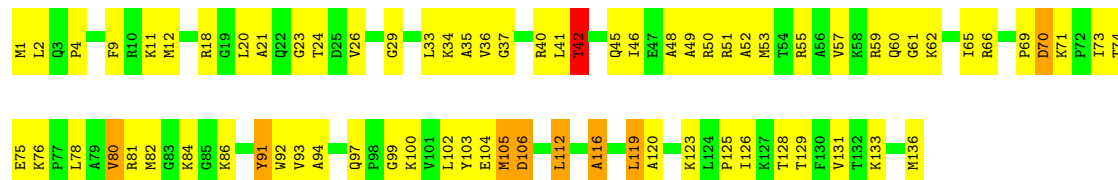
- Molecule 11: 50S ribosomal protein L15





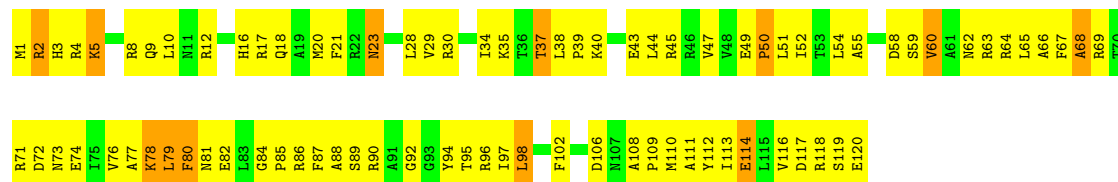
• Molecule 12: 50S ribosomal protein L16

Chain m: 46% 48% 6%



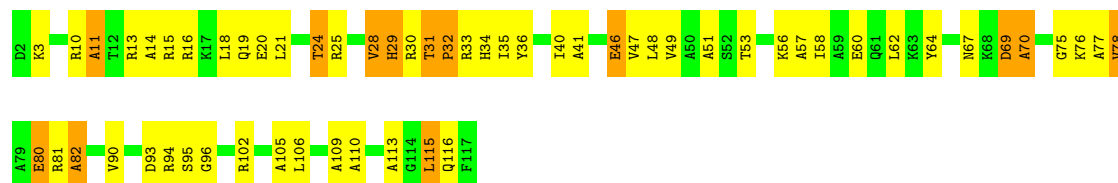
• Molecule 13: 50S ribosomal protein L17

Chain n: 31% 59% 10%



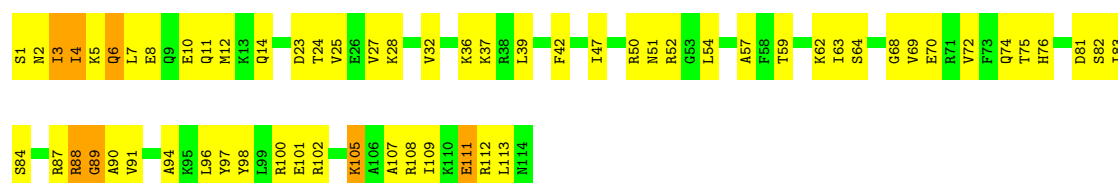
• Molecule 14: 50S ribosomal protein L18

Chain o: 49% 40% 11%



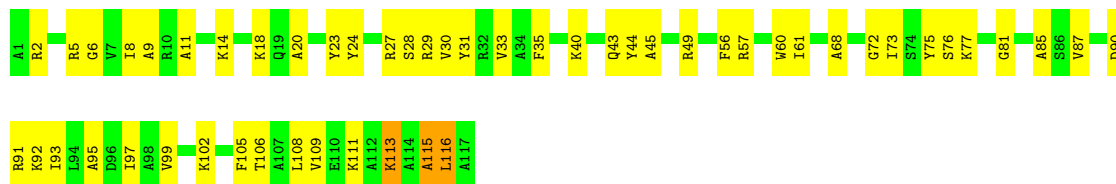
• Molecule 15: 50S ribosomal protein L19

Chain p: 46% 48% 6%



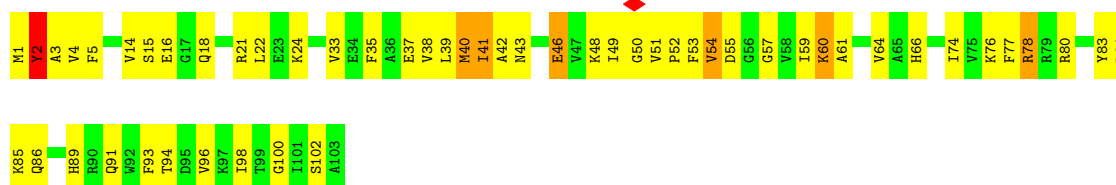
• Molecule 16: 50S ribosomal protein L20

Chain q:  56% 42% .



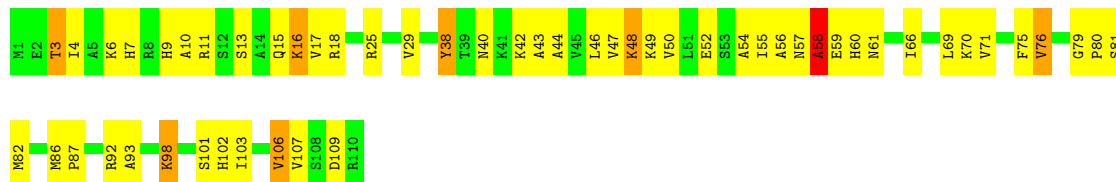
• Molecule 17: 50S ribosomal protein L21

Chain r:  49% 45% 6% .



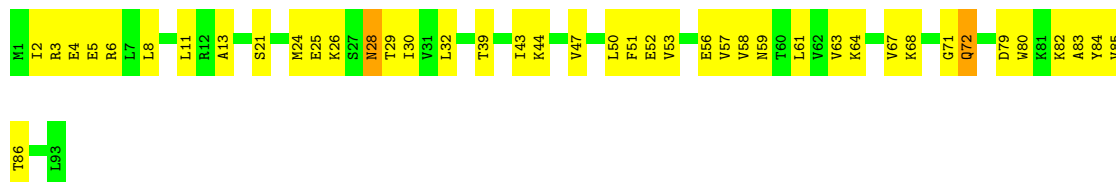
• Molecule 18: 50S ribosomal protein L22

Chain s:  51% 42% 6% .



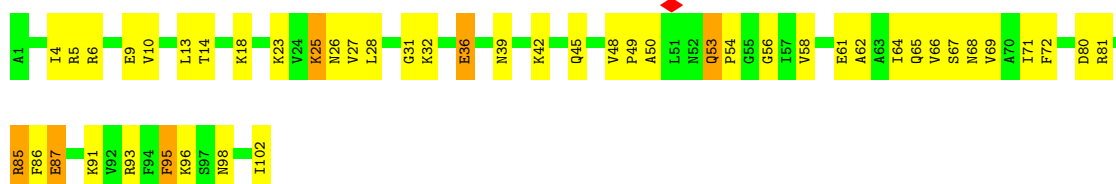
• Molecule 19: 50S ribosomal protein L23

Chain t:  55% 43% .



• Molecule 20: 50S ribosomal protein L24

Chain u:  54% 40% 6% .



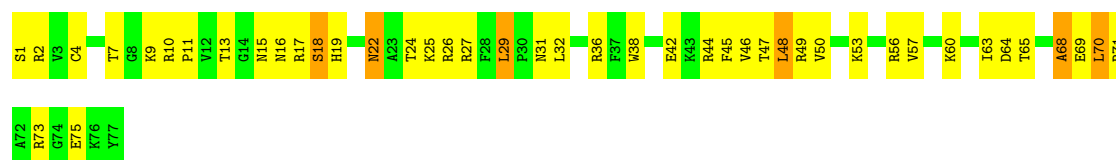
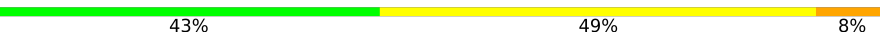
• Molecule 21: 50S ribosomal protein L25

Chain v: 

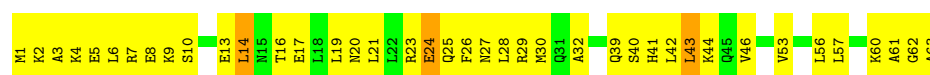
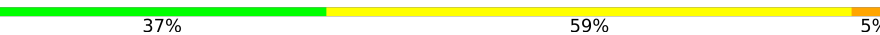
• Molecule 22: 50S ribosomal protein L27

Chain w: 

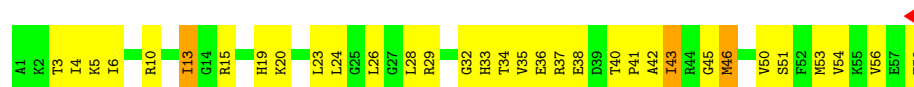
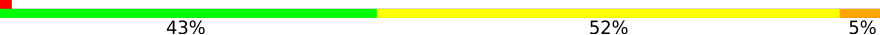
• Molecule 23: 50S ribosomal protein L28

Chain x: 

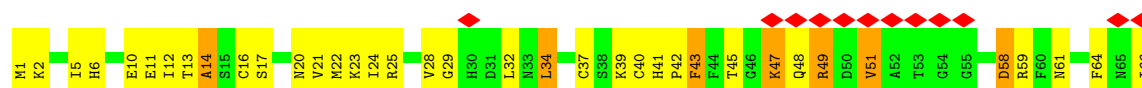
• Molecule 24: 50S ribosomal protein L29

Chain y: 

• Molecule 25: 50S ribosomal protein L30

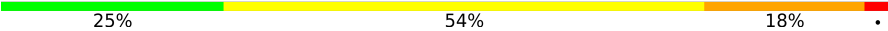
Chain z: 

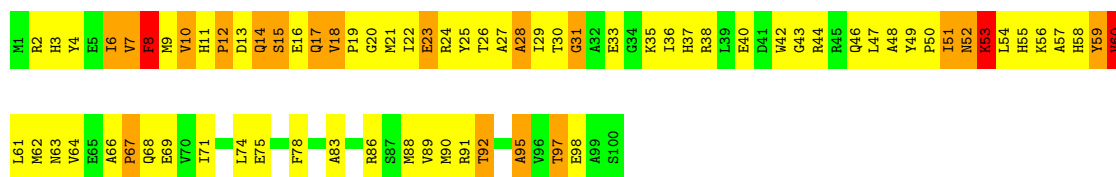
• Molecule 26: 50S ribosomal protein L31

Chain A: 

• Molecule 27: 50S ribosomal protein L32

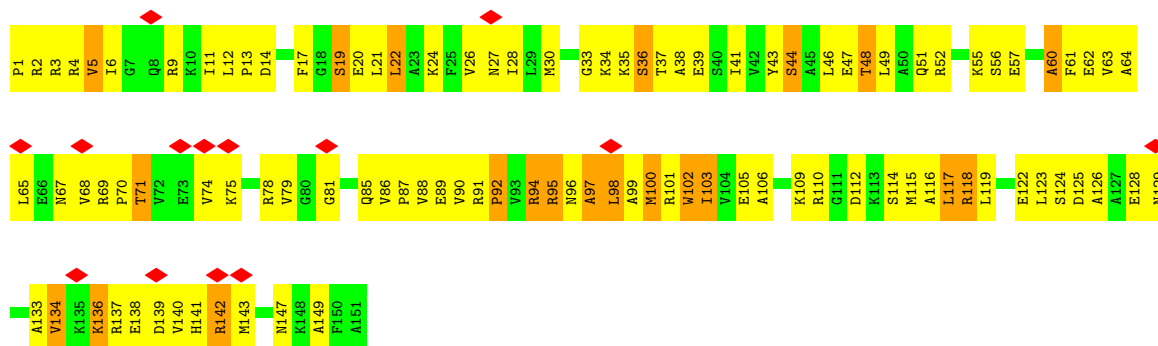
Chain B: 

Chain K: 



• Molecule 37: 30S ribosomal protein S7

Chain L: 



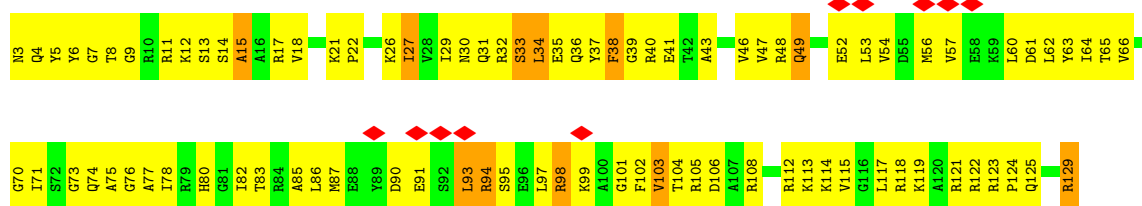
• Molecule 38: 30S ribosomal protein S8

Chain M: 



• Molecule 39: 30S ribosomal protein S9

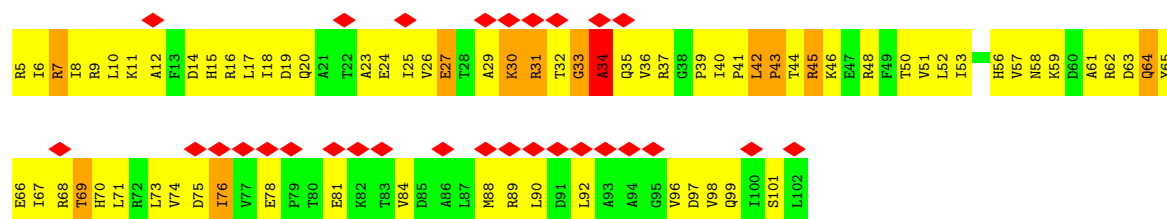
Chain N: 



• Molecule 40: 30S ribosomal protein S10

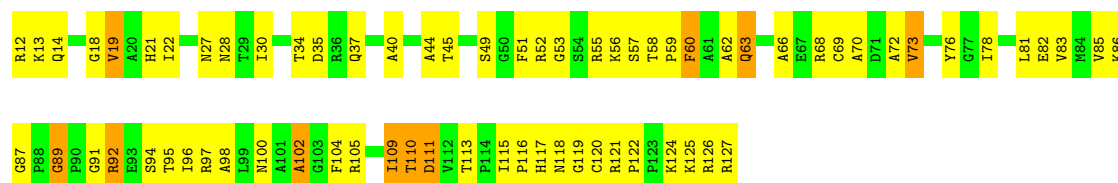
Chain O: 





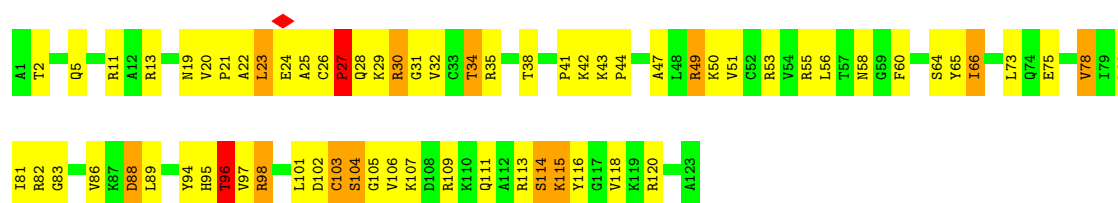
• Molecule 41: 30S ribosomal protein S11

Chain P: 40% 52% 9%



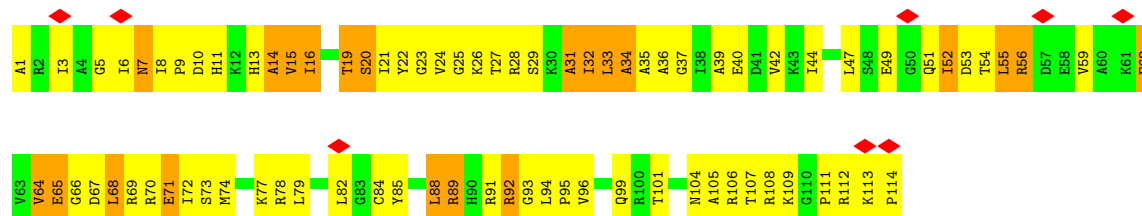
• Molecule 42: 30S ribosomal protein S12

Chain Q: 46% 43% 10%



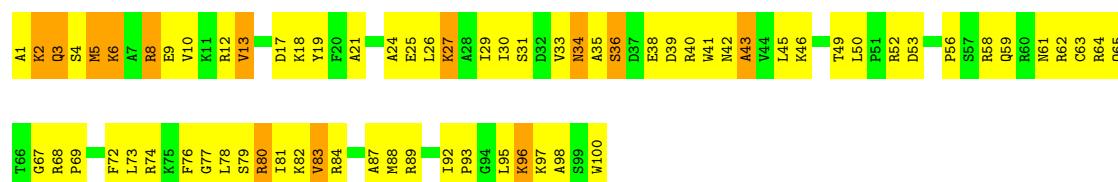
• Molecule 43: 30S ribosomal protein S13

Chain R: 7% 28% 54% 18%

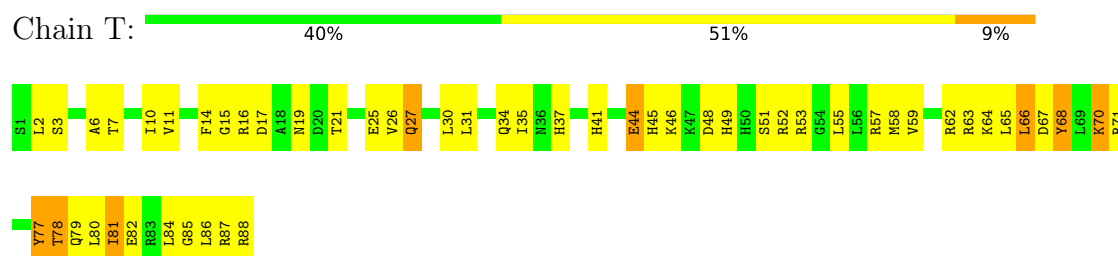


• Molecule 44: 30S ribosomal protein S14

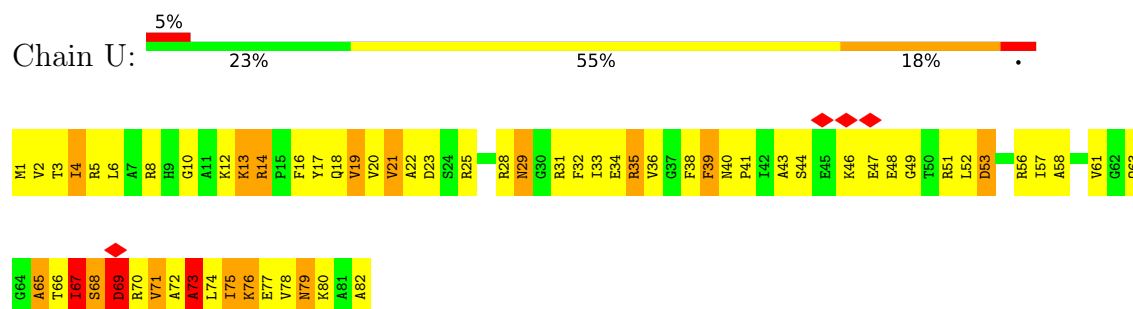
Chain S: 29% 58% 13%



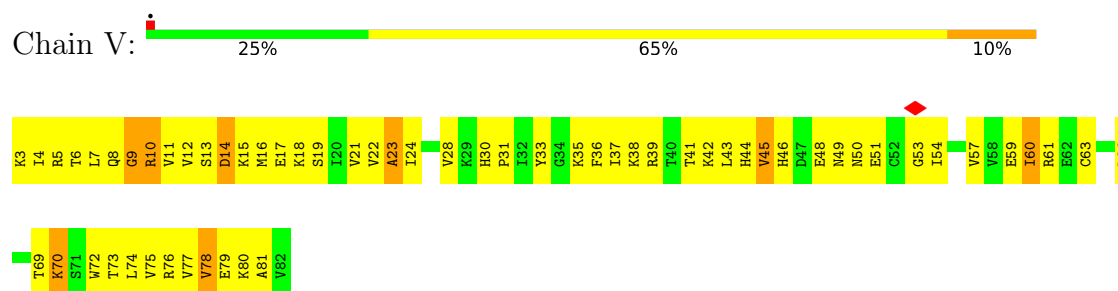
- Molecule 45: 30S ribosomal protein S15



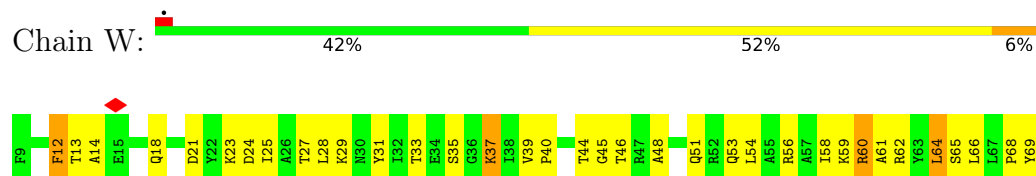
- Molecule 46: 30S ribosomal protein S16



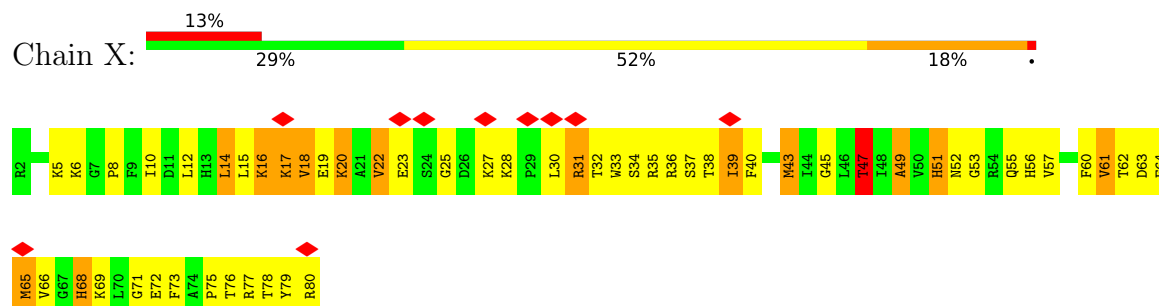
- Molecule 47: 30S ribosomal protein S17



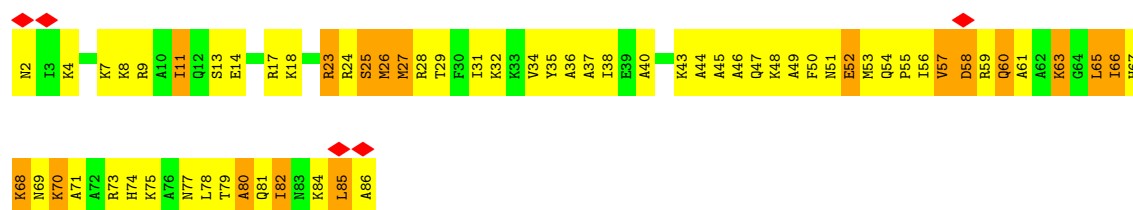
- Molecule 48: 30S ribosomal protein S18



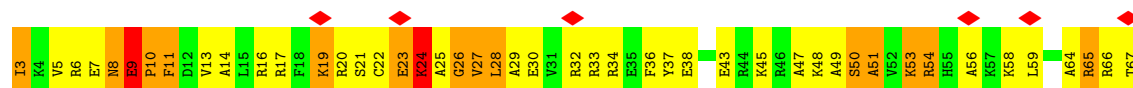
- Molecule 49: 30S ribosomal protein S19



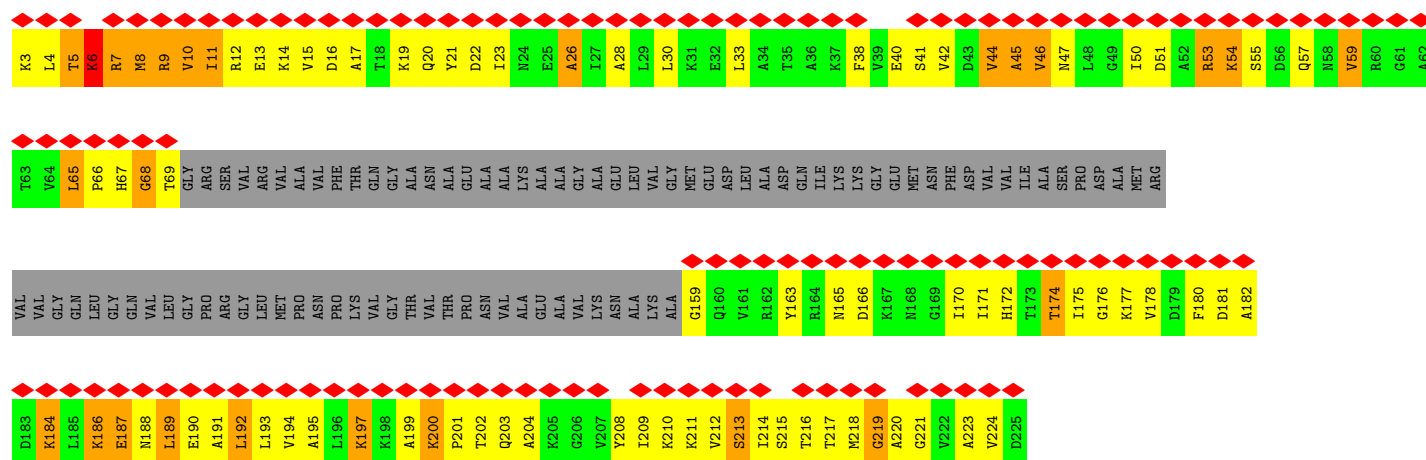
- Molecule 50: 30S ribosomal protein S20



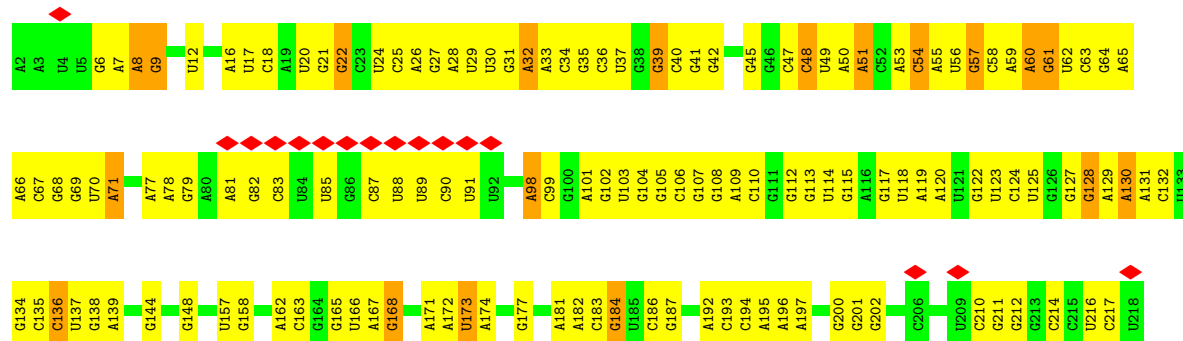
- Molecule 51: 30S ribosomal protein S21

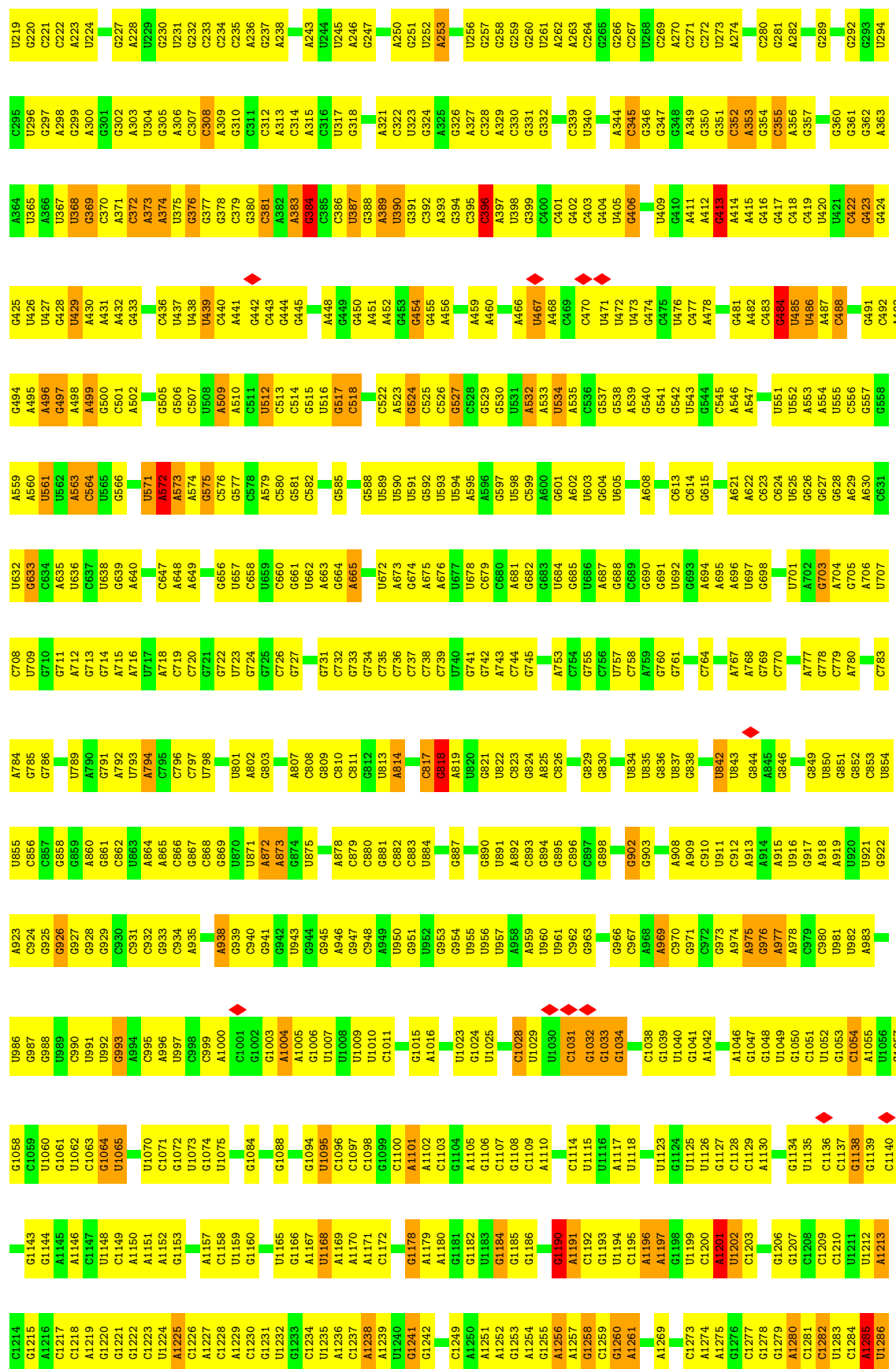


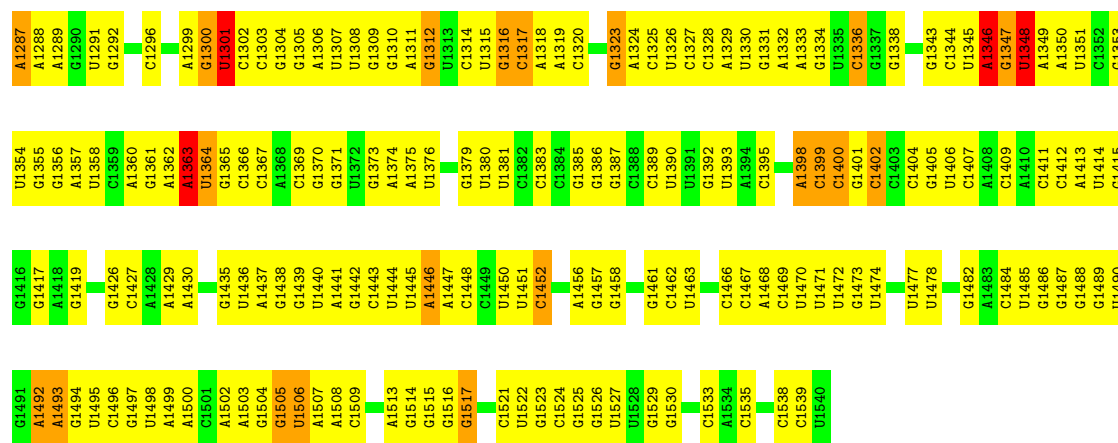
- Molecule 52: 50S ribosomal protein L1



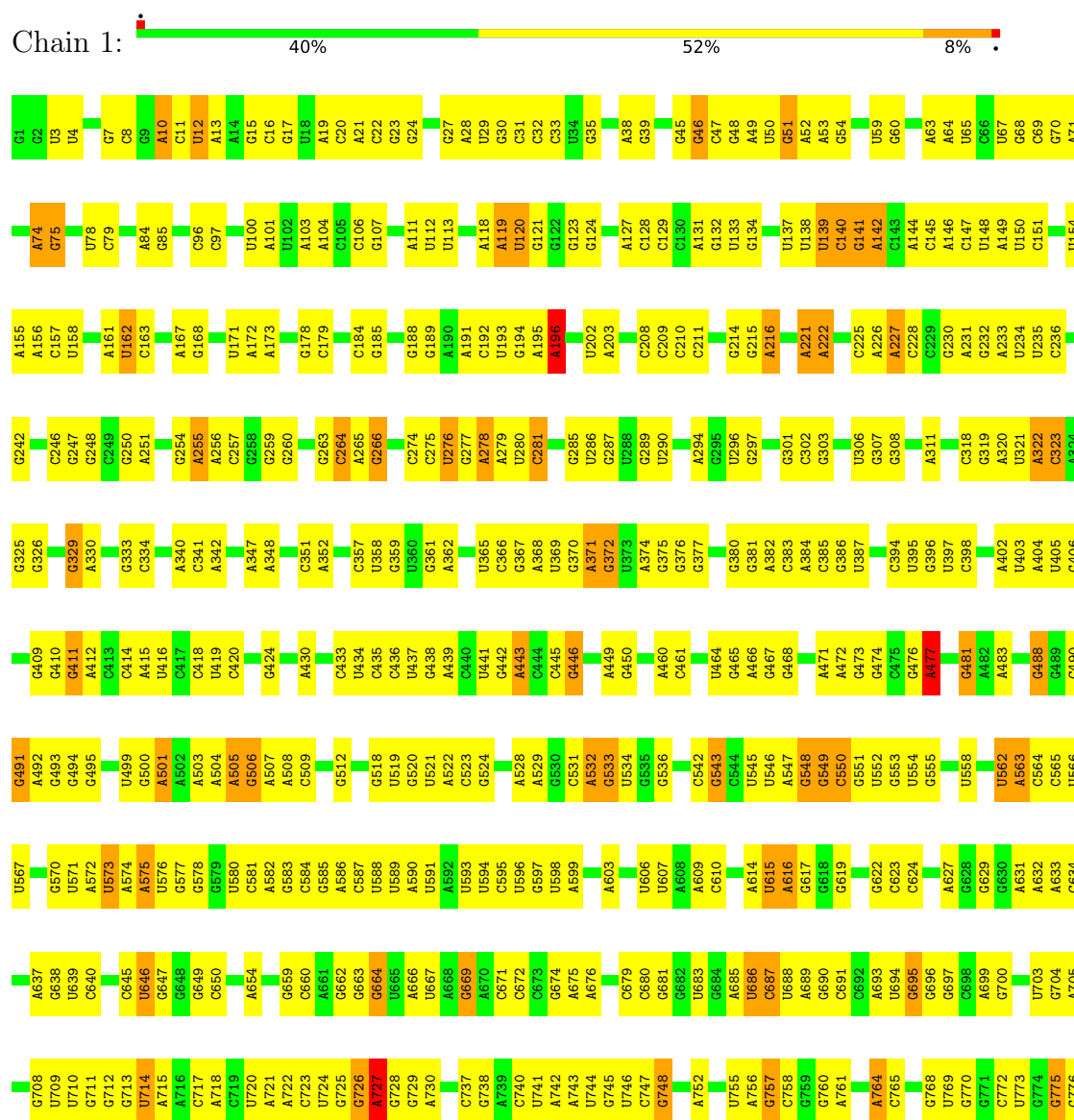
- Molecule 53: 16S ribosomal RNA



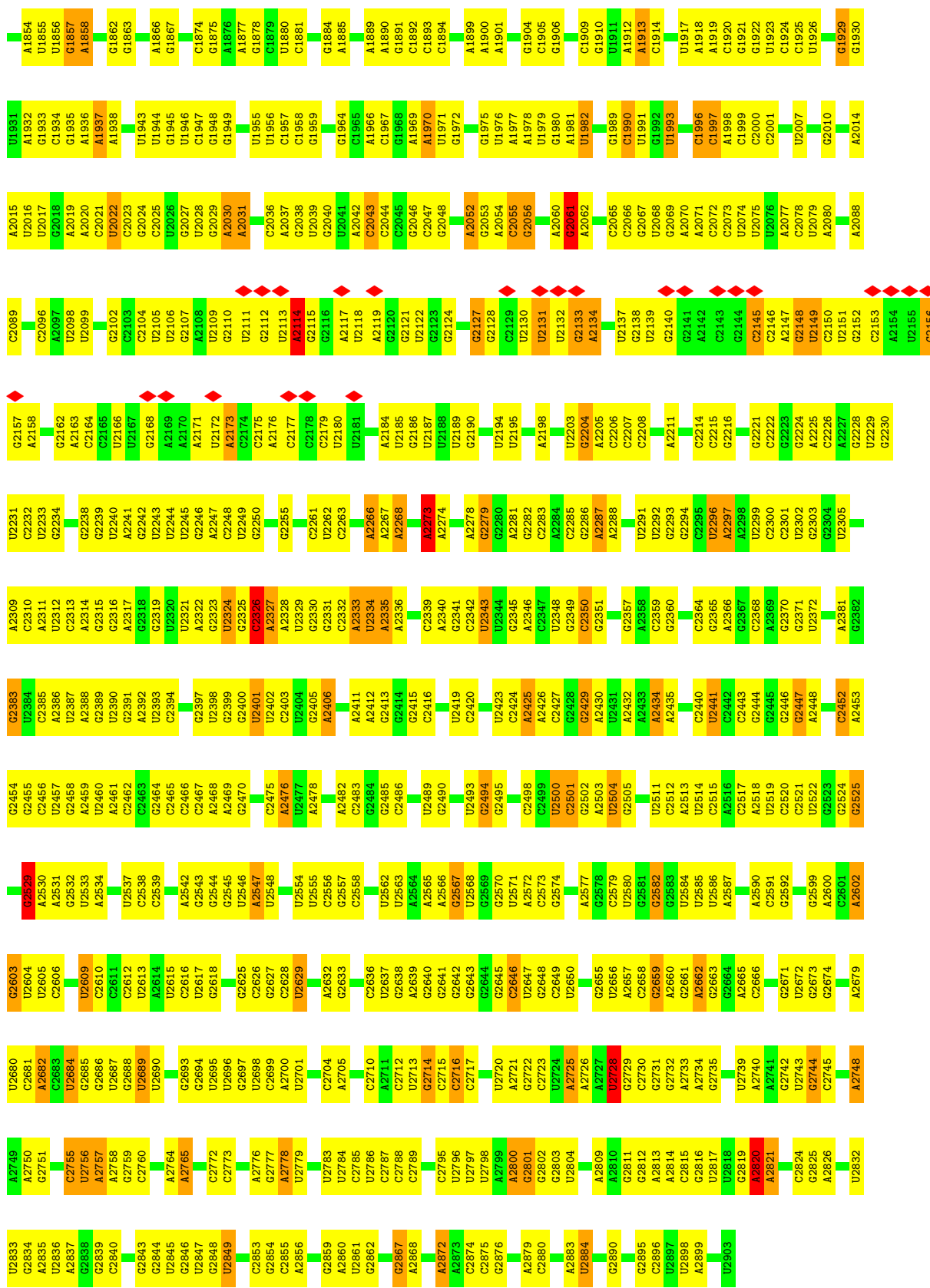




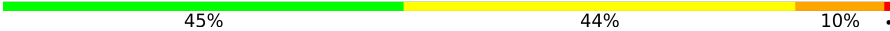
• Molecule 54: 23S ribosomal RNA

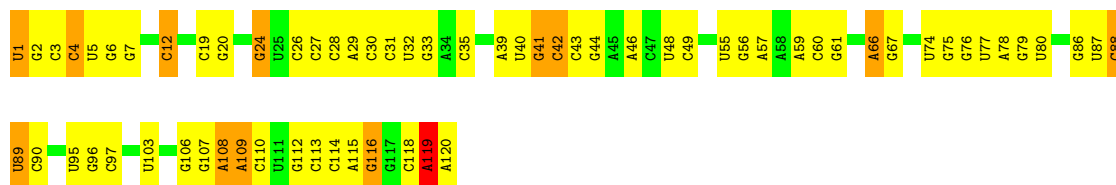


U1760	U1761	U1709	A1640	C1564	G1389	C1315	U1217	G1071	A1000	G923	U852	U779
A1641	G1642	G1710	A1641	C1565	A1393	U1316	G1218	C1072	A1001	G924	C853	U780
G1645	G1646	U1712	G1642	U1485	A1394	U1317	G1219	G1073	U1004	A925	C854	A781
U1785	A1786	U1713	G1645	U1486	A1395	U1318	G1220	G1074	C1005	G926	G855	A782
A1787	U1788	U1714	G1646	U1487	G1401	A1321	G1225	A1077	A1010	U929	G857	A783
C1768	U1647	U1715	U1648	U1488	U1402	A1322	G1236	U1078	G1011	G930	G858	G784
A1769	U1649	U1716	U1649	C1469	A1403	A1323	A1237	C1079	U1012	U931	G859	G785
C1790	A1650	G1717	A1650	A1490	C1404	C1324	G1238	U1082	C1013	U932	U860	C786
A1791	G1651	G1718	G1651	C1493	U1409	A1327	C1161	U1083	U1019	C935	A861	C787
U1794	A1654	U1719	A1654	C1499	U1410	A1328	G1162	A1084	U1018	A936	A863	A792
C1795	A1655	G1720	A1655	G1500	G1410	A1329	G1166	A1085	U1019	A941	A864	G799
U1796	C1656	A1722	G1656	U1501	G1416	U1329	G1167	A1086	A1020	G942	A865	A800
G1797	C1657	G1723	U1502	A1502	C1417	C1330	G1168	A1087	A1021	G943	U868	U803
U1798	C1658	G1724	A1503	G1503	G1418	C1331	G1169	A1088	G1022	G944	U870	A804
G1799	U1584	U1725	A1504	A1504	A1419	A1336	G1170	A1089	G1026	G945	U871	G805
C1800	C1585	C1726	A1506	A1506	A1420	C1337	G1171	A1095	A1027	G946	U872	C806
A1801	A1586	C1727	U1507	U1506	G1421	G1338	G1172	A1096	A1028	G947	U873	U807
U1802	U1662	C1728	C1507	C1507	G1424	G1341	G1173	U1097	A1029	G948	C873	G808
A1803	A1508	U1729	A1508	A1508	G1425	A1342	U1174	A1098	C1030	G949	G874	G809
U1807	A1515	G1730	A1515	A1515	A1427	G1343	A1175	U1101	G1031	G950	C875	U810
A1808	G1516	C1731	A1516	A1516	C1428	U1344	G1176	C1102	U1032	G951	C876	U811
A1809	G1517	G1732	G1517	G1517	G1428	C1345	G1177	A1103	U1033	G952	A877	C812
A1810	G1524	G1733	G1524	G1524	A1431	G1346	U1178	C1104	G1034	G953	A878	U813
G1811	A1525	U1734	A1525	A1525	G1432	U1347	G1179	U1105	U1035	G956	G879	C814
U1812	C1526	G1735	C1526	C1526	A1433	C1348	G1180	G1106	G1036	G957	G880	C815
C1816	G1527	U1736	G1527	G1527	A1434	C1351	U1181	G1107	G1037	U958	C881	C816
A1817	A1528	G1737	A1528	A1528	G1435	U1352	G1182	U1108	G1038	A959	A886	C817
U1818	G1529	U1738	G1529	G1529	G1436	U1353	U1183	C1109	A1040	A960	U887	G818
A1819	A1535	A1739	A1535	A1535	G1437	A1354	U1184	G1110	G1041	G961	A888	A819
U1820	C1536	G1740	C1536	C1536	U1440	C1357	G1185	A1111	G1042	G962	A889	A820
A1821	G1537	G1741	G1537	G1537	G1441	G1358	G1186	C1043	C1044	C964	C890	G823
G1822	U1539	U1742	U1539	U1539	G1442	G1361	G1187	G1115	G1045	G971	G891	G824
C1823	G1542	G1743	G1542	G1542	G1443	C1362	U1188	G1116	A1046	A972	A892	U824
U1824	A1544	A1744	A1544	A1544	G1444	C1363	U1189	C1117	A1047	A973	U895	U826
G1825	G1545	U1745	G1545	G1545	G1448	G1364	U1190	G1118	G1048	A974	A896	U827
U1826	U1546	G1746	U1546	U1546	G1449	A1365	G1193	A1127	C1052	A975	A897	U828
G1827	G1547	U1747	G1547	G1547	G1454	A1366	G1194	G1128	C1053	A898	C897	G830
A1828	C1548	U1748	C1548	C1548	G1454	A1367	U1197	A1129	A1054	A979	C898	G831
U1829	A1549	G1749	A1549	A1549	G1455	G1368	U1198	U1130	G1055	A980	A899	U832
C1830	G1550	U1750	G1550	G1550	G1456	G1369	U1199	G1131	G1056	C981	C903	A833
G1831	C1551	A1751	C1551	C1551	U1467	U1372	C1200	U1132	G1057	A982	G904	G834
A1832	A1552	U1752	A1552	A1552	C1462	A1373	G1201	A1133	U1058	A983	A910	C838
C1833	G1553	G1753	G1553	G1553	G1463	U1374	U1204	C1135	U1060	A988	A911	U839
U1837	U1554	U1754	U1554	U1554	G1464	A1375	A1205	G1136	U1061	G989	C912	C840
A1841	G1555	G1755	G1555	G1555	G1465	A1378	G1206	G1137	G1062	A990	C913	U845
G1842	C1556	U1756	C1556	C1556	U1466	U1379	C1207	U1138	G1063	C991	G914	U846
C1844	U1557	U1757	U1557	U1557	U1467	A1383	G1208	G1139	C1064	G992	C915	U847
A1847	G1558	G1758	G1558	G1558	U1468	A1384	U1209	U1140	U1065	G993	G916	C848
U1848	C1559	U1759	C1559	C1559	A1469	A1385	G1210	U1141	U1066	C994	A917	A849
U1851	G1560	U1760	G1560	G1560	A1470	A1386	G1211	A1142	U1067	C995	A920	U850
U1769	C1561	U1761	C1561	C1561	G1475	C1387	U1212	A1143	G1068	G996	C921	C851
U1779	U1562	U1779	U1562	U1562	U1476	G1388	A1213	A1144	A1069	G997	C922	
	U1563											



• Molecule 55: 5S ribosomal RNA

Chain 2:  45% 44% 10% .



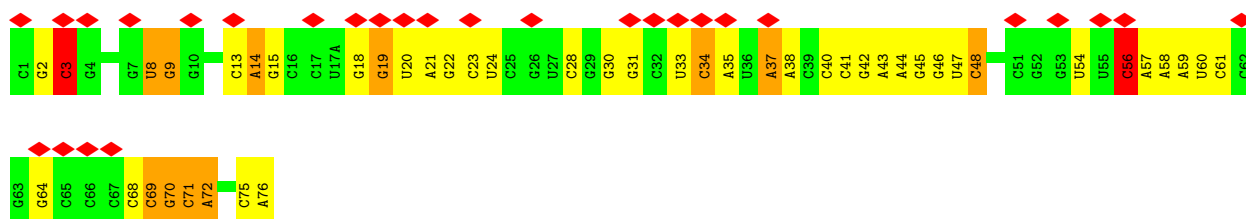
• Molecule 56: tRNAPro

Chain 5:  53% 35% 12%

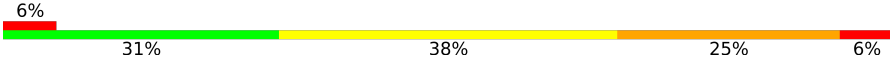


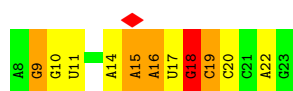
• Molecule 57: tRNAfMet

Chain 6:  36% 40% 43% 14% .

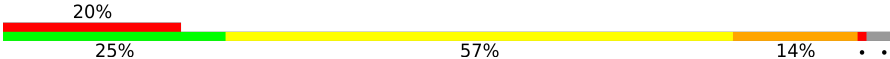


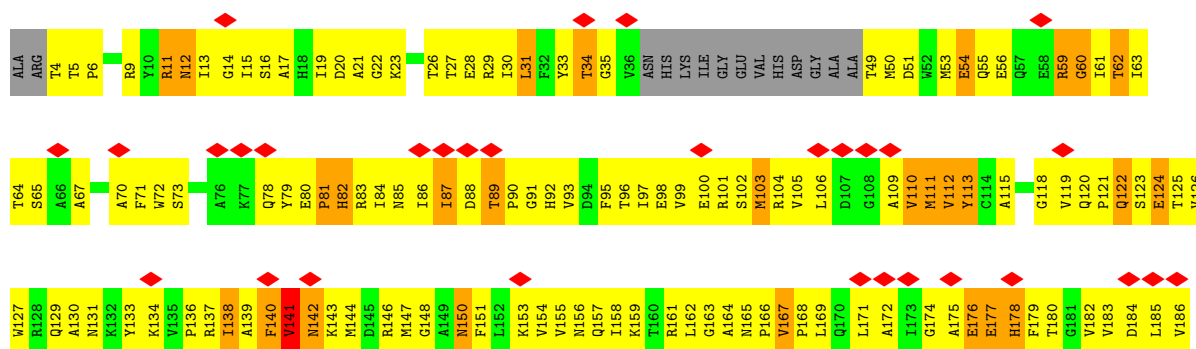
• Molecule 58: mRNA

Chain 4:  6% 31% 38% 25% 6%



• Molecule 59: Elongation factor G

Chain 8:  20% 25% 57% 14% . .





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	6029	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	47.5	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	130000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	25.366	Depositor
Minimum map value	-7.465	Depositor
Average map value	0.018	Depositor
Map value standard deviation	1.395	Depositor
Recommended contour level	3.3	Depositor
Map size (Å)	419.99997, 419.99997, 419.99997	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.05, 1.05, 1.05	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: MG, GCP, FME

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	b	1.01	15/2122 (0.7%)	1.19	17/2852 (0.6%)
2	c	0.94	9/1586 (0.6%)	1.14	17/2134 (0.8%)
3	d	1.00	10/1571 (0.6%)	1.16	20/2113 (0.9%)
4	e	0.95	10/1435 (0.7%)	1.15	10/1926 (0.5%)
5	f	1.32	26/1343 (1.9%)	1.34	26/1816 (1.4%)
6	g	1.83	30/946 (3.2%)	1.58	27/1275 (2.1%)
7	h	1.72	20/638 (3.1%)	1.67	19/860 (2.2%)
8	i	2.74	29/564 (5.1%)	2.09	38/768 (4.9%)
9	j	0.96	8/1152 (0.7%)	1.12	8/1551 (0.5%)
10	k	1.00	7/948 (0.7%)	1.22	12/1268 (0.9%)
11	l	0.88	4/1054 (0.4%)	1.10	7/1403 (0.5%)
12	m	1.04	6/1093 (0.5%)	1.21	11/1460 (0.8%)
13	n	1.05	8/974 (0.8%)	1.34	16/1301 (1.2%)
14	o	1.16	11/902 (1.2%)	1.27	10/1209 (0.8%)
15	p	0.97	5/929 (0.5%)	1.12	10/1242 (0.8%)
16	q	0.94	7/960 (0.7%)	1.15	10/1278 (0.8%)
17	r	0.97	6/829 (0.7%)	1.18	8/1107 (0.7%)
18	s	1.05	9/864 (1.0%)	1.23	9/1156 (0.8%)
19	t	0.98	6/745 (0.8%)	1.04	3/994 (0.3%)
20	u	0.77	2/788 (0.3%)	0.91	4/1051 (0.4%)
21	v	0.81	2/766 (0.3%)	1.14	5/1025 (0.5%)
22	w	0.98	3/582 (0.5%)	1.15	5/769 (0.7%)
23	x	0.94	4/635 (0.6%)	1.30	14/848 (1.7%)
24	y	1.18	3/510 (0.6%)	1.20	5/677 (0.7%)
25	z	1.05	4/453 (0.9%)	1.11	6/605 (1.0%)
26	A	1.48	6/532 (1.1%)	1.28	12/709 (1.7%)
27	B	0.96	2/450 (0.4%)	1.17	2/599 (0.3%)
28	C	0.98	3/417 (0.7%)	0.97	3/554 (0.5%)
29	D	0.88	1/380 (0.3%)	1.15	3/498 (0.6%)
30	E	1.10	5/513 (1.0%)	1.21	3/676 (0.4%)
31	F	1.40	3/303 (1.0%)	1.33	7/397 (1.8%)
32	G	1.41	36/1736 (2.1%)	1.35	28/2338 (1.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	H	1.60	33/1652 (2.0%)	1.42	38/2225 (1.7%)
34	I	1.88	46/1665 (2.8%)	1.79	68/2227 (3.1%)
35	J	1.24	15/1170 (1.3%)	1.34	20/1573 (1.3%)
36	K	2.03	20/836 (2.4%)	1.63	20/1128 (1.8%)
37	L	1.43	24/1196 (2.0%)	1.42	29/1602 (1.8%)
38	M	1.25	13/989 (1.3%)	1.29	9/1326 (0.7%)
39	N	1.05	7/1034 (0.7%)	1.26	16/1375 (1.2%)
40	O	1.56	14/797 (1.8%)	1.33	12/1077 (1.1%)
41	P	1.12	8/886 (0.9%)	1.25	10/1195 (0.8%)
42	Q	1.07	7/969 (0.7%)	1.20	9/1300 (0.7%)
43	R	1.72	19/893 (2.1%)	1.47	23/1193 (1.9%)
44	S	1.36	12/817 (1.5%)	1.28	12/1088 (1.1%)
45	T	1.31	11/722 (1.5%)	1.30	9/964 (0.9%)
46	U	1.60	15/659 (2.3%)	1.63	20/884 (2.3%)
47	V	1.03	4/658 (0.6%)	1.08	6/881 (0.7%)
48	W	1.01	4/545 (0.7%)	1.06	2/731 (0.3%)
49	X	1.60	19/653 (2.9%)	1.50	15/877 (1.7%)
50	Y	1.68	16/671 (2.4%)	1.65	22/888 (2.5%)
51	Z	1.56	15/551 (2.7%)	2.06	24/728 (3.3%)
52	a	1.42	18/1034 (1.7%)	1.51	30/1387 (2.2%)
53	3	0.56	0/36963	0.60	18/57662 (0.0%)
54	1	0.51	0/69796	0.59	32/108888 (0.0%)
55	2	0.49	0/2872	0.55	1/4479 (0.0%)
56	5	0.48	0/1840	0.57	0/2868
57	6	0.52	0/1832	0.64	4/2855 (0.1%)
58	4	0.54	0/388	0.75	2/603 (0.3%)
59	8	1.57	109/5411 (2.0%)	1.53	143/7323 (2.0%)
All	All	0.86	729/166219 (0.4%)	0.88	969/247786 (0.4%)

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
18	s	0	1
34	I	0	1
36	K	0	1
46	U	0	1
53	3	0	20
54	1	0	59
55	2	0	3

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
56	5	0	1
57	6	0	1
58	4	0	1
59	8	0	1
All	All	0	90

All (729) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	K	13	ASP	C-O	24.96	1.52	1.24
59	8	312	SER	C-O	24.96	1.55	1.23
8	i	19	PRO	C-O	24.30	1.55	1.24
8	i	54	ILE	C-O	23.54	1.50	1.24
8	i	27	LEU	C-O	22.54	1.50	1.24
36	K	53	LYS	C-O	-22.15	0.96	1.24
34	I	169	TRP	C-O	19.26	1.48	1.24
34	I	141	VAL	C-O	18.99	1.43	1.24
6	g	114	GLU	C-O	18.52	1.47	1.24
33	H	97	PRO	C-O	18.18	1.44	1.23
34	I	156	ALA	C-O	18.16	1.45	1.24
59	8	630	ASP	C-O	17.37	1.46	1.24
33	H	50	SER	C-O	17.22	1.50	1.23
59	8	472	ARG	C-O	16.80	1.45	1.24
26	A	14	ALA	C-O	16.57	1.42	1.23
34	I	132	ALA	C-O	16.45	1.44	1.24
52	a	26	ALA	C-O	16.38	1.43	1.24
34	I	109	THR	C-O	16.17	1.38	1.24
40	O	27	GLU	C-O	15.84	1.42	1.24
36	K	17	GLN	N-CA	15.77	1.66	1.46
6	g	144	VAL	C-O	15.51	1.41	1.23
8	i	12	VAL	C-O	15.30	1.42	1.24
43	R	16	ILE	C-O	15.30	1.42	1.24
37	L	98	LEU	C-O	15.30	1.42	1.24
6	g	44	ILE	C-O	15.23	1.42	1.24
40	O	30	LYS	C-O	15.13	1.41	1.24
33	H	68	HIS	C-O	14.94	1.41	1.24
8	i	56	VAL	C-O	14.83	1.39	1.23
59	8	598	SER	C-O	14.81	1.41	1.24
59	8	318	SER	C-O	14.79	1.42	1.24
59	8	629	GLY	C-O	14.59	1.41	1.23
32	G	130	LYS	C-O	14.46	1.40	1.24
43	R	7	ASN	C-O	14.37	1.41	1.24

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	8	176	GLU	C-O	-14.24	1.06	1.24
36	K	12	PRO	C-O	14.22	1.42	1.24
36	K	14	GLN	C-O	14.08	1.42	1.24
8	i	24	GLY	C-O	13.91	1.42	1.24
49	X	19	GLU	C-O	13.74	1.40	1.24
31	F	4	ARG	C-O	13.69	1.41	1.23
34	I	49	ASP	C-O	13.45	1.41	1.24
59	8	386	ILE	C-O	13.37	1.41	1.24
45	T	67	ASP	C-O	13.34	1.39	1.24
33	H	85	LYS	C-O	13.26	1.39	1.24
34	I	113	ALA	C-O	13.26	1.39	1.24
40	O	76	ILE	C-O	13.18	1.38	1.24
47	V	23	ALA	C-O	13.15	1.40	1.23
34	I	155	LYS	N-CA	13.11	1.63	1.46
33	H	138	GLN	C-O	13.11	1.40	1.24
43	R	51	GLN	C-O	12.90	1.39	1.23
32	G	131	LYS	C-O	12.78	1.39	1.24
59	8	180	THR	C-O	12.76	1.42	1.24
24	y	40	SER	C-O	12.74	1.40	1.24
43	R	52	ILE	C-O	12.64	1.39	1.24
50	Y	49	ALA	C-O	12.60	1.38	1.24
12	m	106	ASP	C-O	12.37	1.39	1.23
7	h	33	VAL	C-O	12.31	1.35	1.23
59	8	264	VAL	N-CA	12.30	1.60	1.46
50	Y	23	ARG	C-O	12.13	1.38	1.24
50	Y	60	GLN	C-O	12.10	1.39	1.24
32	G	37	VAL	C-O	12.03	1.37	1.24
59	8	231	GLU	C-O	11.99	1.38	1.24
59	8	230	SER	C-O	11.95	1.34	1.23
12	m	119	LEU	C-O	11.93	1.37	1.24
59	8	537	ILE	C-O	11.87	1.37	1.24
26	A	45	THR	C-O	11.83	1.39	1.24
8	i	39	LYS	C-O	11.72	1.38	1.24
6	g	128	HIS	C-O	11.72	1.38	1.23
33	H	43	THR	C-O	11.70	1.38	1.24
43	R	3	ILE	C-O	11.70	1.36	1.23
49	X	47	THR	N-CA	11.69	1.61	1.46
34	I	60	VAL	C-O	11.66	1.38	1.24
46	U	73	ALA	C-O	11.64	1.38	1.24
5	f	133	LYS	C-O	11.62	1.38	1.23
26	A	47	LYS	C-O	11.58	1.38	1.24
59	8	634	ASP	N-CA	11.55	1.60	1.46

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	i	38	CYS	C-O	11.54	1.38	1.24
51	Z	23	GLU	CA-C	11.53	1.62	1.52
59	8	599	ILE	C-O	11.46	1.38	1.24
6	g	29	PHE	C-O	11.41	1.37	1.24
44	S	24	ALA	C-O	11.36	1.38	1.24
9	j	90	GLU	C-O	11.34	1.37	1.24
2	c	157	LYS	C-O	11.23	1.37	1.23
34	I	48	SER	C-O	11.21	1.35	1.23
15	p	6	GLN	C-O	11.18	1.37	1.24
5	f	49	LEU	C-O	11.11	1.38	1.23
33	H	70	ALA	N-CA	11.01	1.60	1.46
37	L	96	ASN	C-O	11.00	1.36	1.24
34	I	143	SER	C-O	10.98	1.37	1.23
38	M	101	ALA	C-O	10.94	1.37	1.24
32	G	216	VAL	C-O	10.92	1.36	1.24
40	O	8	ILE	C-O	10.88	1.37	1.24
47	V	10	ARG	C-O	10.87	1.37	1.23
59	8	112	VAL	N-CA	10.75	1.59	1.46
46	U	4	ILE	C-O	10.74	1.36	1.24
59	8	124	GLU	C-O	10.74	1.37	1.24
13	n	47	VAL	C-O	10.74	1.34	1.23
34	I	122	ILE	C-O	10.73	1.34	1.24
59	8	109	ALA	C-O	10.73	1.37	1.23
59	8	602	LYS	N-CA	10.70	1.59	1.46
37	L	95	ARG	C-O	10.70	1.37	1.24
52	a	5	THR	C-O	10.63	1.37	1.24
35	J	120	HIS	C-O	10.52	1.35	1.24
59	8	113	TYR	C-O	10.52	1.37	1.23
46	U	38	PHE	C-O	10.51	1.37	1.24
7	h	78	GLY	CA-C	10.51	1.58	1.51
39	N	95	SER	C-O	10.47	1.36	1.24
59	8	650	THR	C-O	10.46	1.38	1.24
14	o	75	GLY	C-O	10.44	1.36	1.23
42	Q	53	ARG	C-O	10.44	1.36	1.23
9	j	20	ALA	N-CA	10.39	1.58	1.46
36	K	51	ILE	N-CA	10.39	1.61	1.46
13	n	78	LYS	C-O	10.38	1.37	1.24
34	I	121	ALA	C-O	10.37	1.38	1.23
59	8	556	GLY	C-O	10.33	1.36	1.23
38	M	16	GLY	C-O	10.33	1.36	1.23
43	R	31	ALA	C-O	10.33	1.36	1.24
1	b	117	SER	C-O	10.26	1.36	1.23

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
43	R	88	LEU	C-O	10.21	1.35	1.24
6	g	139	PHE	N-CA	10.18	1.58	1.45
33	H	136	ALA	C-O	10.18	1.36	1.24
28	C	33	LEU	C-O	10.17	1.36	1.23
7	h	7	ASP	C-O	10.15	1.36	1.24
37	L	125	ASP	C-O	10.13	1.37	1.24
50	Y	82	ILE	C-O	10.08	1.36	1.24
34	I	91	ALA	C-O	10.04	1.35	1.24
24	y	20	ASN	C-O	10.01	1.35	1.24
25	z	42	ALA	C-O	10.01	1.35	1.24
26	A	32	LEU	C-O	10.01	1.36	1.24
36	K	20	GLY	C-O	10.00	1.35	1.23
33	H	88	LYS	C-O	9.98	1.36	1.24
52	a	184	LYS	C-O	9.97	1.35	1.24
33	H	202	PHE	C-O	9.96	1.36	1.23
36	K	16	GLU	N-CA	9.95	1.58	1.46
40	O	29	ALA	C-O	9.94	1.34	1.24
44	S	36	SER	N-CA	9.94	1.57	1.46
44	S	19	TYR	C-O	9.92	1.34	1.23
59	8	544	VAL	C-O	9.91	1.36	1.24
59	8	600	ALA	C-O	9.86	1.37	1.24
32	G	132	GLU	C-O	9.85	1.36	1.24
59	8	593	PHE	C-O	9.83	1.37	1.24
7	h	19	ALA	N-CA	9.79	1.58	1.46
59	8	26	THR	C-O	9.77	1.35	1.24
36	K	8	PHE	C-O	9.74	1.35	1.23
3	d	121	VAL	N-CA	9.73	1.57	1.46
32	G	59	ILE	C-O	9.69	1.35	1.24
59	8	233	LEU	C-O	9.67	1.36	1.24
33	H	5	HIS	C-O	9.64	1.36	1.24
51	Z	25	ALA	C-N	9.58	1.47	1.33
39	N	15	ALA	N-CA	9.56	1.58	1.46
49	X	16	LYS	C-O	9.56	1.36	1.24
31	F	23	ILE	N-CA	9.52	1.57	1.46
51	Z	11	PHE	N-CA	9.52	1.57	1.46
5	f	8	VAL	C-O	9.49	1.34	1.24
59	8	378	ARG	C-O	9.46	1.35	1.23
11	l	134	ALA	C-O	9.45	1.35	1.24
48	W	12	PHE	C-O	9.45	1.32	1.24
34	I	181	PHE	C-O	9.44	1.35	1.24
6	g	26	ALA	C-O	9.43	1.34	1.24
59	8	477	PHE	N-CA	9.42	1.57	1.46

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	J	77	ASN	N-CA	9.41	1.60	1.46
59	8	275	VAL	C-O	9.40	1.34	1.24
59	8	16	SER	C-O	9.37	1.35	1.23
20	u	95	PHE	C-O	9.34	1.34	1.23
3	d	190	ALA	C-O	9.28	1.34	1.24
41	P	111	ASP	N-CA	9.28	1.57	1.46
48	W	61	ALA	C-O	9.23	1.35	1.24
10	k	33	ALA	C-O	9.22	1.34	1.23
44	S	43	ALA	C-O	9.21	1.35	1.24
59	8	601	PHE	C-O	9.21	1.34	1.24
33	H	137	VAL	C-O	9.20	1.34	1.24
32	G	78	ALA	C-O	9.18	1.34	1.24
43	R	89	ARG	C-O	9.16	1.35	1.24
14	o	30	ARG	N-CA	9.16	1.57	1.46
37	L	44	SER	C-O	9.16	1.34	1.24
43	R	15	VAL	C-O	9.13	1.34	1.24
7	h	78	GLY	N-CA	9.12	1.52	1.44
8	i	35	MET	C-O	9.11	1.34	1.24
52	a	42	VAL	C-O	9.10	1.34	1.24
1	b	188	ARG	C-O	9.08	1.35	1.24
8	i	36	GLU	C-O	9.05	1.35	1.24
18	s	106	VAL	C-O	9.05	1.34	1.24
6	g	48	GLU	N-CA	9.04	1.58	1.46
2	c	121	THR	C-O	9.01	1.34	1.24
43	R	20	SER	N-CA	8.98	1.57	1.46
35	J	138	ALA	C-O	8.97	1.34	1.24
59	8	471	ASP	C-O	8.89	1.35	1.24
45	T	68	TYR	C-O	8.89	1.35	1.24
32	G	76	SER	C-O	8.88	1.34	1.24
3	d	177	PRO	C-O	8.87	1.36	1.24
59	8	31	LEU	C-O	8.86	1.34	1.24
14	o	69	ASP	C-O	8.85	1.34	1.24
59	8	341	GLY	N-CA	8.84	1.58	1.45
8	i	40	ALA	C-O	8.83	1.35	1.24
14	o	58	ILE	C-O	8.79	1.32	1.23
59	8	13	ILE	N-CA	8.78	1.56	1.46
7	h	57	ASN	C-O	8.77	1.35	1.23
44	S	13	VAL	C-O	8.75	1.33	1.24
59	8	561	LEU	C-O	8.73	1.35	1.24
46	U	58	ALA	C-O	8.71	1.34	1.24
32	G	47	PRO	C-O	8.70	1.35	1.24
59	8	347	ASP	C-O	8.69	1.34	1.23

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	g	17	ASP	C-O	8.68	1.34	1.23
26	A	58	ASP	C-O	8.65	1.34	1.24
33	H	140	ALA	C-O	8.65	1.34	1.24
18	s	16	LYS	C-O	8.64	1.34	1.24
46	U	53	ASP	C-O	8.64	1.35	1.23
49	X	14	LEU	C-O	8.64	1.34	1.24
34	I	132	ALA	CA-C	8.59	1.64	1.52
6	g	25	TYR	C-O	8.57	1.33	1.24
34	I	123	MET	C-O	8.57	1.34	1.23
37	L	5	VAL	N-CA	8.54	1.57	1.46
59	8	140	PHE	C-O	8.54	1.32	1.23
29	D	19	ARG	C-O	8.54	1.34	1.24
50	Y	58	ASP	C-O	8.53	1.35	1.24
17	r	83	TYR	C-O	8.53	1.34	1.23
1	b	16	VAL	C-O	8.50	1.32	1.24
46	U	77	GLU	N-CA	8.50	1.56	1.46
3	d	137	LYS	C-O	8.47	1.33	1.24
2	c	203	VAL	N-CA	8.45	1.56	1.46
10	k	18	ARG	C-O	8.45	1.34	1.23
32	G	83	ALA	C-O	8.45	1.33	1.24
17	r	2	TYR	C-O	8.43	1.34	1.23
51	Z	11	PHE	CA-C	8.42	1.59	1.52
30	E	53	ASP	C-O	8.42	1.35	1.24
37	L	117	LEU	C-O	8.40	1.33	1.24
30	E	50	SER	C-O	8.40	1.34	1.23
43	R	49	GLU	C-O	8.40	1.34	1.24
6	g	112	LYS	C-O	8.37	1.33	1.24
22	w	54	THR	C-O	8.37	1.33	1.24
51	Z	19	LYS	C-O	8.37	1.33	1.24
5	f	74	MET	C-O	8.34	1.34	1.24
6	g	143	ILE	C-O	8.33	1.33	1.24
32	G	214	GLY	C-O	8.32	1.33	1.23
36	K	13	ASP	CA-C	8.32	1.63	1.52
59	8	295	ILE	C-O	8.32	1.33	1.24
59	8	136	PRO	C-O	8.31	1.34	1.23
7	h	62	ARG	C-O	8.30	1.34	1.24
5	f	82	PHE	C-O	8.30	1.33	1.23
46	U	76	LYS	C-O	8.28	1.34	1.24
59	8	277	ALA	C-O	8.27	1.33	1.24
52	a	201	PRO	C-O	8.27	1.32	1.23
32	G	65	LYS	C-O	8.27	1.34	1.24
46	U	67	ILE	N-CA	8.27	1.56	1.46

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	8	178	HIS	C-N	8.22	1.44	1.33
49	X	17	LYS	C-O	8.20	1.33	1.24
1	b	225	ASN	C-O	8.18	1.34	1.23
1	b	210	ALA	C-O	8.18	1.33	1.24
39	N	27	ILE	C-O	8.17	1.33	1.24
41	P	73	VAL	C-O	8.14	1.33	1.24
19	t	68	LYS	C-O	8.14	1.34	1.23
42	Q	34	THR	C-O	8.12	1.33	1.23
35	J	109	ALA	C-O	8.10	1.34	1.24
7	h	75	ALA	C-O	8.09	1.34	1.24
8	i	41	PHE	C-O	8.09	1.33	1.24
15	p	3	ILE	C-O	8.08	1.33	1.24
8	i	8	VAL	C-O	8.08	1.34	1.24
31	F	17	VAL	C-O	8.06	1.32	1.24
25	z	43	ILE	C-O	8.05	1.33	1.24
44	S	2	LYS	C-O	8.04	1.34	1.24
7	h	34	THR	C-O	8.03	1.34	1.24
13	n	5	LYS	N-CA	8.02	1.56	1.45
14	o	82	ALA	C-O	8.01	1.33	1.24
4	e	12	VAL	C-O	7.99	1.32	1.24
43	R	55	LEU	N-CA	7.98	1.55	1.46
52	a	23	ILE	C-O	7.98	1.33	1.24
3	d	136	GLN	C-O	7.97	1.34	1.24
3	d	188	MET	N-CA	7.97	1.55	1.45
59	8	663	MET	C-O	7.96	1.34	1.24
34	I	84	ASN	N-CA	7.94	1.55	1.46
59	8	627	ASN	C-N	7.92	1.44	1.33
34	I	154	VAL	C-O	7.91	1.33	1.24
38	M	63	LYS	C-O	7.89	1.33	1.24
35	J	64	GLU	C-O	7.88	1.33	1.24
35	J	75	LEU	C-O	-7.86	1.15	1.23
41	P	60	PHE	C-O	7.85	1.33	1.24
41	P	21	HIS	N-CA	7.85	1.55	1.46
32	G	141	GLU	C-O	7.84	1.33	1.24
40	O	34	ALA	N-CA	7.84	1.56	1.46
43	R	33	LEU	C-O	7.84	1.34	1.24
38	M	124	ILE	C-O	7.83	1.32	1.24
34	I	182	LYS	N-CA	7.82	1.55	1.46
42	Q	78	VAL	C-O	7.81	1.32	1.24
45	T	79	GLN	C-O	7.79	1.33	1.24
50	Y	24	ARG	C-O	7.77	1.33	1.24
59	8	153	LYS	C-O	7.75	1.33	1.24

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	b	185	ALA	C-O	7.75	1.33	1.24
17	r	15	SER	C-O	7.74	1.33	1.23
59	8	605	PHE	C-O	7.74	1.33	1.24
36	K	16	GLU	C-O	7.73	1.33	1.24
51	Z	26	GLY	N-CA	7.73	1.56	1.45
52	a	190	GLU	C-O	7.71	1.33	1.24
35	J	120	HIS	N-CA	7.71	1.58	1.46
34	I	105	GLY	C-O	-7.70	1.13	1.23
44	S	80	ARG	C-O	7.70	1.33	1.24
11	l	94	THR	C-O	-7.69	1.14	1.24
5	f	73	SER	C-O	7.69	1.33	1.24
59	8	142	ASN	N-CA	7.68	1.56	1.46
49	X	32	THR	C-O	7.67	1.34	1.23
38	M	36	ALA	C-O	7.66	1.33	1.24
19	t	68	LYS	N-CA	7.65	1.55	1.45
32	G	142	LYS	C-O	7.63	1.32	1.24
4	e	33	ILE	C-O	7.62	1.32	1.24
30	E	57	VAL	C-O	7.62	1.33	1.24
41	P	59	PRO	C-O	7.62	1.33	1.24
49	X	68	HIS	C-O	7.62	1.34	1.23
45	T	70	LYS	C-O	7.59	1.33	1.24
22	w	27	VAL	C-O	7.59	1.31	1.23
38	M	14	ARG	C-O	7.57	1.32	1.24
37	L	133	ALA	C-O	7.57	1.33	1.24
42	Q	98	ARG	N-CA	7.56	1.56	1.46
6	g	46	PHE	C-O	7.54	1.33	1.24
12	m	62	LYS	C-O	7.53	1.33	1.24
36	K	18	VAL	CA-C	7.53	1.60	1.52
33	H	135	ARG	C-O	7.52	1.32	1.24
8	i	38	CYS	C-N	7.51	1.44	1.33
32	G	75	ALA	C-O	7.48	1.34	1.24
37	L	92	PRO	C-O	7.48	1.34	1.24
11	l	108	ALA	C-O	7.47	1.33	1.23
6	g	116	ARG	N-CA	7.47	1.55	1.46
12	m	73	ILE	C-O	7.47	1.31	1.24
34	I	158	LEU	C-O	7.47	1.33	1.24
7	h	13	ALA	C-O	7.45	1.33	1.24
6	g	7	ASP	N-CA	7.42	1.55	1.46
37	L	36	SER	C-O	7.42	1.32	1.24
36	K	18	VAL	N-CA	7.41	1.55	1.46
15	p	36	LYS	C-O	7.41	1.32	1.23
7	h	37	LYS	N-CA	7.41	1.55	1.46

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	T	78	THR	C-O	7.40	1.32	1.24
43	R	35	ALA	N-CA	7.39	1.55	1.46
46	U	19	VAL	C-O	7.39	1.32	1.24
8	i	54	ILE	N-CA	7.38	1.52	1.46
32	G	218	ALA	C-O	7.36	1.32	1.24
27	B	51	ARG	C-O	7.32	1.32	1.23
7	h	11	ILE	N-CA	7.29	1.56	1.46
8	i	44	LYS	N-CA	7.27	1.54	1.46
5	f	25	ILE	C-O	7.26	1.31	1.24
8	i	19	PRO	CA-C	7.25	1.62	1.52
18	s	58	ALA	C-O	7.22	1.32	1.24
49	X	22	VAL	C-O	7.22	1.32	1.24
45	T	58	MET	C-O	7.20	1.32	1.24
5	f	114	HIS	N-CA	7.18	1.55	1.46
59	8	541	LYS	N-CA	7.18	1.56	1.46
45	T	77	TYR	C-O	7.17	1.32	1.24
38	M	87	ARG	C-O	7.16	1.32	1.23
34	I	160	LEU	N-CA	7.15	1.55	1.46
39	N	33	SER	N-CA	7.15	1.55	1.46
4	e	141	ASP	N-CA	7.15	1.56	1.46
51	Z	23	GLU	N-CA	7.12	1.53	1.46
59	8	495	ARG	N-CA	7.11	1.55	1.46
40	O	69	THR	N-CA	7.09	1.55	1.46
36	K	69	GLU	C-O	7.08	1.32	1.24
6	g	142	VAL	C-O	7.07	1.30	1.24
38	M	22	ALA	C-O	7.06	1.31	1.24
35	J	160	VAL	C-O	7.05	1.32	1.24
59	8	438	LEU	C-O	7.04	1.34	1.24
19	t	28	ASN	C-O	7.04	1.32	1.23
33	H	20	THR	C-O	7.04	1.31	1.24
10	k	45	GLU	C-O	7.03	1.32	1.23
30	E	22	LYS	C-O	7.03	1.32	1.23
48	W	60	ARG	C-O	7.02	1.32	1.24
38	M	47	ASP	N-CA	7.02	1.55	1.46
8	i	31	GLY	C-N	7.02	1.42	1.33
20	u	85	ARG	C-O	7.00	1.32	1.23
5	f	49	LEU	N-CA	6.99	1.54	1.45
46	U	75	ILE	C-O	6.99	1.32	1.24
43	R	64	VAL	N-CA	6.96	1.55	1.46
40	O	69	THR	C-O	6.94	1.31	1.24
8	i	58	ILE	C-O	6.94	1.31	1.24
34	I	53	GLN	N-CA	6.93	1.54	1.46

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	X	20	LYS	C-O	6.92	1.32	1.24
39	N	75	ALA	C-O	6.90	1.32	1.24
45	T	64	LYS	C-O	6.90	1.32	1.24
37	L	71	THR	C-O	6.89	1.33	1.23
36	K	28	ALA	C-O	6.87	1.32	1.24
52	a	45	ALA	C-O	6.86	1.32	1.24
49	X	66	VAL	N-CA	6.86	1.52	1.46
40	O	99	GLN	C-O	6.86	1.31	1.23
23	x	18	SER	N-CA	6.85	1.54	1.45
59	8	351	ASN	C-O	6.82	1.34	1.23
2	c	179	ARG	C-O	6.81	1.32	1.23
5	f	30	GLY	C-O	6.81	1.28	1.23
33	H	76	ILE	N-CA	6.80	1.53	1.46
43	R	32	ILE	C-O	6.79	1.31	1.24
1	b	203	VAL	N-CA	6.78	1.54	1.46
1	b	15	VAL	C-O	6.77	1.32	1.24
59	8	179	PHE	N-CA	6.77	1.55	1.46
1	b	174	ARG	C-O	6.76	1.32	1.24
2	c	84	LEU	N-CA	6.74	1.54	1.45
37	L	20	GLU	C-O	6.74	1.32	1.24
34	I	107	GLY	N-CA	6.73	1.55	1.45
59	8	661	SER	C-O	6.71	1.31	1.24
46	U	39	PHE	C-O	6.71	1.32	1.24
7	h	17	GLU	C-O	6.68	1.32	1.24
36	K	60	VAL	C-O	6.68	1.30	1.23
59	8	280	ASP	C-O	6.68	1.31	1.24
5	f	67	ALA	C-O	6.67	1.31	1.24
41	P	58	THR	C-O	6.67	1.32	1.23
59	8	479	VAL	N-CA	6.66	1.54	1.46
28	C	11	VAL	N-CA	6.65	1.54	1.46
49	X	47	THR	CA-C	6.64	1.61	1.52
59	8	178	HIS	N-CA	6.62	1.54	1.46
5	f	68	ARG	C-O	6.62	1.32	1.24
40	O	31	ARG	N-CA	6.62	1.54	1.46
7	h	24	SER	C-O	6.61	1.31	1.23
5	f	72	ASN	C-O	6.61	1.31	1.24
24	y	44	LYS	N-CA	6.61	1.54	1.46
25	z	33	HIS	C-O	6.60	1.31	1.23
59	8	193	TRP	N-CA	6.59	1.54	1.46
1	b	203	VAL	C-O	-6.59	1.16	1.24
59	8	360	PHE	C-N	6.58	1.43	1.33
33	H	69	THR	N-CA	6.57	1.54	1.45

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	8	340	SER	CA-C	-6.56	1.44	1.52
7	h	37	LYS	C-O	6.56	1.32	1.24
59	8	246	ALA	C-O	6.56	1.31	1.24
16	q	31	TYR	N-CA	6.54	1.53	1.46
5	f	41	GLU	C-O	6.54	1.31	1.23
5	f	104	LEU	C-O	6.54	1.32	1.23
49	X	61	VAL	C-O	6.53	1.31	1.24
6	g	42	LYS	C-O	6.52	1.31	1.24
59	8	122	GLN	C-O	-6.51	1.14	1.24
59	8	628	THR	C-O	6.51	1.32	1.24
11	l	75	ALA	C-O	6.51	1.32	1.24
51	Z	9	GLU	CA-C	6.50	1.61	1.52
34	I	132	ALA	N-CA	6.49	1.54	1.46
32	G	32	GLY	C-N	6.49	1.42	1.33
1	b	263	ASP	N-CA	6.46	1.54	1.46
59	8	87	ILE	N-CA	6.46	1.54	1.46
40	O	33	GLY	C-N	6.45	1.42	1.33
36	K	59	TYR	C-O	6.45	1.31	1.23
14	o	70	ALA	C-O	6.44	1.31	1.24
38	M	34	ALA	C-O	6.44	1.31	1.24
59	8	667	ALA	C-O	6.43	1.31	1.24
14	o	105	ALA	C-O	6.41	1.31	1.24
59	8	178	HIS	C-O	6.39	1.32	1.24
52	a	59	VAL	C-O	6.39	1.30	1.24
41	P	109	ILE	C-O	6.38	1.31	1.23
34	I	129	VAL	N-CA	6.38	1.53	1.46
19	t	47	VAL	C-O	6.36	1.32	1.24
32	G	77	GLU	C-O	6.33	1.31	1.24
59	8	472	ARG	CA-C	6.33	1.61	1.52
8	i	67	THR	C-O	6.33	1.31	1.23
52	a	10	VAL	N-CA	6.31	1.54	1.46
4	e	36	ASN	N-CA	6.31	1.53	1.46
18	s	71	VAL	C-O	6.31	1.31	1.24
51	Z	25	ALA	C-O	6.30	1.33	1.24
45	T	27	GLN	C-O	6.30	1.31	1.24
13	n	23	ASN	C-O	6.30	1.31	1.24
14	o	11	ALA	C-O	6.28	1.31	1.24
32	G	135	MET	N-CA	6.28	1.53	1.46
34	I	199	ILE	C-O	6.26	1.31	1.23
10	k	17	ARG	C-O	6.26	1.31	1.24
33	H	7	ASN	C-O	6.25	1.31	1.24
59	8	312	SER	CA-C	6.25	1.60	1.52

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	I	75	TYR	C-O	-6.24	1.16	1.24
18	s	56	ALA	C-O	6.22	1.31	1.24
47	V	9	GLY	C-N	6.22	1.41	1.33
44	S	6	LYS	N-CA	6.20	1.53	1.46
12	m	116	ALA	C-O	6.20	1.31	1.24
9	j	85	LYS	N-CA	6.19	1.53	1.46
5	f	8	VAL	N-CA	6.19	1.54	1.46
38	M	79	ARG	C-O	6.19	1.31	1.23
30	E	55	GLY	C-O	6.19	1.32	1.23
49	X	23	GLU	N-CA	6.19	1.53	1.46
33	H	86	LEU	C-O	6.18	1.31	1.24
9	j	34	ARG	C-O	6.18	1.31	1.24
59	8	82	HIS	C-O	6.17	1.32	1.23
49	X	15	LEU	C-O	6.17	1.31	1.24
34	I	84	ASN	C-O	6.15	1.31	1.24
32	G	66	ILE	C-O	6.15	1.30	1.24
4	e	55	ASP	C-O	6.14	1.31	1.24
25	z	46	MET	N-CA	6.13	1.53	1.46
59	8	559	GLU	C-O	6.13	1.31	1.24
6	g	32	PRO	C-N	6.13	1.44	1.33
32	G	212	TYR	C-N	6.12	1.42	1.34
45	T	66	LEU	C-O	6.12	1.31	1.24
34	I	154	VAL	C-N	6.10	1.42	1.33
40	O	45	ARG	C-O	6.10	1.31	1.23
19	t	4	GLU	C-O	6.09	1.31	1.24
6	g	41	LYS	C-O	6.09	1.31	1.24
35	J	127	TYR	N-CA	6.08	1.53	1.45
4	e	78	ILE	C-O	6.08	1.30	1.24
49	X	19	GLU	N-CA	6.08	1.53	1.46
5	f	136	ASP	C-O	6.07	1.31	1.24
50	Y	66	ILE	N-CA	6.07	1.53	1.46
59	8	378	ARG	CA-C	6.07	1.60	1.52
38	M	9	MET	C-O	6.05	1.31	1.24
37	L	94	ARG	C-O	6.03	1.31	1.24
1	b	262	THR	C-N	6.02	1.42	1.33
59	8	578	LEU	N-CA	6.01	1.53	1.46
35	J	113	VAL	N-CA	6.01	1.54	1.46
5	f	69	ALA	C-O	6.01	1.31	1.24
33	H	35	ASP	C-O	5.99	1.31	1.24
37	L	38	ALA	C-O	5.98	1.31	1.24
13	n	65	LEU	C-O	5.98	1.30	1.24
12	m	105	MET	C-O	5.97	1.31	1.24

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	j	98	GLU	C-O	5.95	1.31	1.24
35	J	113	VAL	C-O	5.95	1.31	1.24
59	8	235	GLU	N-CA	5.95	1.53	1.46
33	H	97	PRO	CA-C	5.95	1.60	1.52
59	8	124	GLU	C-N	5.95	1.42	1.33
46	U	73	ALA	CA-C	5.94	1.60	1.52
21	v	64	VAL	C-O	5.93	1.31	1.24
6	g	47	PHE	C-O	5.93	1.30	1.24
36	K	10	VAL	C-O	5.92	1.30	1.23
44	S	96	LYS	C-O	5.91	1.31	1.24
32	G	105	THR	C-O	5.91	1.31	1.24
59	8	262	ILE	CA-C	5.91	1.58	1.52
32	G	170	ILE	C-O	5.90	1.31	1.24
52	a	6	LYS	C-O	5.90	1.31	1.24
6	g	145	ASN	C-O	5.89	1.31	1.23
59	8	629	GLY	CA-C	5.89	1.58	1.52
10	k	113	MET	N-CA	5.88	1.53	1.46
59	8	633	GLY	N-CA	5.88	1.53	1.45
50	Y	57	VAL	C-O	5.87	1.31	1.24
36	K	67	PRO	C-O	5.87	1.31	1.23
3	d	145	ASP	C-O	5.83	1.31	1.23
32	G	209	VAL	C-O	5.82	1.30	1.24
19	t	86	THR	C-O	5.80	1.30	1.24
59	8	533	GLY	N-CA	5.80	1.53	1.45
7	h	12	VAL	C-O	5.80	1.31	1.24
50	Y	27	MET	N-CA	5.79	1.53	1.46
34	I	142	VAL	C-O	5.79	1.31	1.24
37	L	19	SER	C-O	5.79	1.31	1.23
37	L	97	ALA	C-O	5.79	1.31	1.24
13	n	4	ARG	C-N	5.79	1.40	1.33
32	G	51	GLU	N-CA	5.79	1.53	1.46
4	e	102	LEU	C-O	5.78	1.30	1.24
5	f	134	GLY	C-O	5.78	1.31	1.23
32	G	49	PHE	C-O	5.78	1.30	1.24
35	J	159	SER	C-O	5.78	1.30	1.23
5	f	26	LYS	C-O	5.76	1.30	1.24
16	q	45	ALA	C-O	5.76	1.30	1.24
10	k	41	ILE	N-CA	5.76	1.52	1.46
16	q	8	ILE	C-O	5.76	1.30	1.24
59	8	282	VAL	C-O	5.76	1.30	1.24
52	a	65	LEU	CA-C	5.75	1.59	1.53
59	8	624	PRO	C-N	-5.75	1.25	1.33

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	h	38	MET	N-CA	5.73	1.52	1.46
8	i	27	LEU	C-N	5.72	1.41	1.33
8	i	39	LYS	N-CA	5.72	1.53	1.46
33	H	139	ASN	C-O	5.72	1.30	1.24
37	L	34	LYS	C-O	5.72	1.31	1.24
59	8	358	GLU	C-O	5.71	1.31	1.23
59	8	113	TYR	N-CA	5.71	1.53	1.45
18	s	3	THR	C-O	5.71	1.31	1.24
5	f	90	GLY	N-CA	5.70	1.53	1.45
59	8	325	ALA	C-O	5.70	1.30	1.24
8	i	23	VAL	C-O	5.70	1.31	1.24
33	H	188	ALA	C-O	5.69	1.31	1.24
45	T	3	SER	C-O	5.69	1.31	1.24
35	J	76	ASN	CA-C	-5.69	1.46	1.53
5	f	43	LYS	N-CA	5.68	1.52	1.46
50	Y	25	SER	C-O	5.67	1.30	1.24
34	I	95	GLY	CA-C	5.67	1.59	1.51
35	J	132	PRO	C-O	5.66	1.31	1.24
34	I	64	TYR	N-CA	5.66	1.52	1.46
59	8	232	GLU	C-O	5.66	1.30	1.24
1	b	79	ARG	N-CA	5.66	1.52	1.46
4	e	155	ILE	C-O	5.65	1.29	1.23
21	v	70	ILE	C-O	5.65	1.30	1.24
37	L	37	THR	C-O	5.63	1.30	1.23
37	L	134	VAL	C-O	5.63	1.31	1.24
10	k	65	THR	C-O	5.63	1.30	1.23
59	8	110	VAL	C-O	5.63	1.31	1.24
6	g	100	ALA	C-O	5.62	1.31	1.24
46	U	76	LYS	C-N	5.62	1.41	1.33
46	U	68	SER	C-O	5.62	1.31	1.24
59	8	14	GLY	C-O	5.61	1.31	1.23
7	h	33	VAL	CA-C	5.61	1.57	1.52
8	i	24	GLY	N-CA	5.61	1.52	1.44
32	G	173	LYS	C-N	5.61	1.41	1.33
36	K	51	ILE	CA-C	-5.61	1.46	1.52
6	g	130	VAL	C-O	5.61	1.30	1.24
33	H	50	SER	CA-C	5.61	1.59	1.53
59	8	360	PHE	N-CA	5.59	1.53	1.45
1	b	205	GLY	N-CA	5.59	1.53	1.45
59	8	441	GLU	C-N	5.58	1.40	1.33
7	h	16	SER	C-O	5.58	1.30	1.24
59	8	150	ASN	N-CA	5.56	1.53	1.45

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	8	635	LEU	C-O	5.56	1.30	1.24
15	p	89	GLY	N-CA	5.55	1.52	1.45
59	8	623	THR	C-O	5.54	1.31	1.24
32	G	46	VAL	C-O	5.54	1.29	1.24
59	8	251	ALA	C-O	5.53	1.30	1.24
52	a	189	LEU	C-O	5.52	1.30	1.24
49	X	43	MET	C-O	5.51	1.31	1.24
59	8	218	TRP	C-N	5.51	1.41	1.33
2	c	177	VAL	N-CA	5.51	1.53	1.46
44	S	24	ALA	CA-C	5.50	1.61	1.52
15	p	4	ILE	C-O	5.50	1.31	1.24
59	8	322	PHE	N-CA	5.50	1.53	1.46
52	a	65	LEU	N-CA	5.50	1.53	1.46
38	M	125	ILE	C-O	5.49	1.29	1.23
34	I	181	PHE	C-N	5.48	1.41	1.33
18	s	98	LYS	C-O	5.48	1.29	1.23
32	G	215	ALA	C-O	5.48	1.30	1.24
34	I	52	VAL	C-O	5.48	1.30	1.24
50	Y	18	LYS	C-O	5.47	1.30	1.24
35	J	78	GLY	C-O	5.46	1.31	1.24
32	G	85	SER	C-N	5.46	1.38	1.33
33	H	133	MET	C-O	5.46	1.30	1.24
51	Z	45	LYS	C-O	5.46	1.30	1.24
34	I	122	ILE	C-N	5.46	1.40	1.33
59	8	156	ASN	C-O	5.46	1.30	1.24
42	Q	30	ARG	C-O	5.45	1.30	1.23
27	B	13	GLY	C-O	5.45	1.30	1.23
52	a	46	VAL	C-O	5.45	1.30	1.23
37	L	118	ARG	C-O	5.43	1.30	1.24
51	Z	51	ALA	C-O	5.43	1.30	1.24
39	N	34	LEU	N-CA	5.43	1.53	1.46
59	8	571	VAL	N-CA	5.42	1.52	1.46
49	X	49	ALA	C-O	5.41	1.30	1.24
2	c	140	HIS	C-O	5.41	1.30	1.24
34	I	127	ARG	N-CA	5.41	1.52	1.46
39	N	99	LYS	N-CA	5.40	1.53	1.46
34	I	113	ALA	CA-C	5.40	1.59	1.52
33	H	180	ASP	C-O	5.40	1.30	1.23
44	S	83	VAL	C-O	5.40	1.30	1.24
9	j	27	ARG	C-O	5.39	1.30	1.24
40	O	7	ARG	C-O	5.39	1.30	1.23
16	q	43	GLN	C-O	5.38	1.30	1.24

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	d	107	SER	C-O	5.38	1.30	1.24
3	d	148	ILE	C-O	5.38	1.30	1.24
26	A	34	LEU	C-O	5.37	1.30	1.23
33	H	186	SER	C-O	5.37	1.29	1.23
5	f	26	LYS	N-CA	5.37	1.52	1.46
59	8	603	GLU	N-CA	5.37	1.52	1.46
52	a	44	VAL	C-O	5.36	1.30	1.24
43	R	56	ARG	N-CA	5.36	1.53	1.46
6	g	143	ILE	C-N	5.36	1.40	1.33
37	L	102	TRP	N-CA	5.35	1.53	1.46
33	H	184	ASN	C-O	5.35	1.30	1.23
33	H	141	MET	N-CA	5.34	1.52	1.46
42	Q	88	ASP	C-O	5.34	1.30	1.24
51	Z	5	VAL	N-CA	5.34	1.53	1.46
43	R	20	SER	CA-C	5.33	1.60	1.52
23	x	26	ARG	N-CA	5.33	1.53	1.46
2	c	21	SER	N-CA	5.33	1.52	1.46
23	x	24	THR	N-CA	5.32	1.52	1.46
34	I	155	LYS	C-O	5.32	1.30	1.24
5	f	23	ILE	C-O	5.31	1.30	1.24
5	f	82	PHE	N-CA	5.31	1.52	1.46
8	i	28	GLY	N-CA	5.31	1.53	1.45
2	c	188	LEU	C-O	5.30	1.30	1.23
52	a	201	PRO	CA-C	5.30	1.58	1.52
32	G	219	THR	C-O	5.29	1.30	1.24
18	s	15	GLN	C-O	5.29	1.30	1.24
34	I	72	ARG	C-O	-5.29	1.18	1.24
52	a	186	LYS	C-O	5.29	1.30	1.24
37	L	96	ASN	CA-C	5.28	1.59	1.52
16	q	35	PHE	C-O	5.28	1.30	1.24
14	o	30	ARG	C-N	5.28	1.40	1.33
59	8	625	GLU	CA-C	5.27	1.57	1.52
50	Y	27	MET	C-O	5.27	1.30	1.24
59	8	264	VAL	CA-C	5.27	1.59	1.52
59	8	533	GLY	C-O	5.27	1.31	1.23
49	X	32	THR	N-CA	5.26	1.53	1.45
34	I	124	VAL	C-O	5.25	1.30	1.24
14	o	80	GLU	C-O	5.24	1.30	1.24
6	g	127	GLU	C-N	5.24	1.40	1.33
5	f	77	GLY	C-O	5.24	1.30	1.23
34	I	144	ILE	C-N	5.23	1.41	1.33
59	8	125	THR	C-O	5.23	1.30	1.24

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	g	142	VAL	C-N	5.23	1.41	1.33
59	8	481	ALA	N-CA	5.23	1.52	1.46
42	Q	49	ARG	C-O	5.22	1.30	1.24
13	n	18	GLN	C-O	5.21	1.30	1.24
16	q	76	SER	C-O	5.21	1.30	1.24
50	Y	85	LEU	C-O	5.21	1.30	1.24
9	j	103	ILE	C-O	5.20	1.30	1.24
17	r	78	ARG	N-CA	5.20	1.53	1.46
8	i	53	PRO	C-N	5.20	1.38	1.33
59	8	245	GLU	C-O	5.20	1.30	1.24
59	8	325	ALA	N-CA	5.19	1.52	1.46
28	C	8	ILE	C-O	5.19	1.30	1.24
43	R	34	ALA	C-O	5.19	1.30	1.24
51	Z	23	GLU	C-N	-5.19	1.26	1.33
6	g	35	LYS	C-O	5.16	1.30	1.24
33	H	120	THR	C-O	5.16	1.30	1.24
59	8	613	LEU	C-O	5.16	1.30	1.23
33	H	118	SER	C-O	5.16	1.30	1.24
50	Y	86	ALA	N-CA	5.15	1.56	1.46
4	e	31	GLU	N-CA	5.15	1.52	1.46
23	x	48	LEU	N-CA	5.15	1.52	1.46
34	I	97	LEU	N-CA	5.15	1.52	1.46
40	O	76	ILE	CA-C	5.14	1.58	1.52
7	h	57	ASN	N-CA	5.14	1.52	1.46
59	8	493	THR	C-O	5.13	1.28	1.24
9	j	94	ALA	N-CA	5.13	1.52	1.46
32	G	130	LYS	CA-C	5.13	1.59	1.52
8	i	12	VAL	N-CA	5.13	1.52	1.46
37	L	48	THR	N-CA	5.12	1.52	1.46
46	U	14	ARG	C-O	5.11	1.30	1.24
22	w	36	GLN	N-CA	5.11	1.52	1.45
44	S	8	ARG	C-O	5.11	1.30	1.24
47	V	60	ILE	C-O	5.10	1.29	1.23
1	b	41	GLY	C-O	5.10	1.30	1.23
6	g	114	GLU	CA-C	5.10	1.58	1.52
3	d	112	LEU	C-O	5.10	1.29	1.24
18	s	80	PRO	C-O	5.10	1.30	1.24
32	G	79	VAL	C-O	5.10	1.29	1.24
34	I	182	LYS	C-O	5.10	1.30	1.23
13	n	60	VAL	C-O	5.09	1.28	1.23
32	G	211	LEU	C-O	5.09	1.30	1.24
37	L	103	ILE	C-O	5.08	1.29	1.24

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	W	37	LYS	C-O	5.08	1.29	1.23
59	8	263	LEU	C-N	-5.07	1.26	1.33
32	G	68	PHE	C-O	5.07	1.29	1.23
32	G	108	GLN	C-O	5.07	1.30	1.24
51	Z	10	PRO	C-N	-5.07	1.27	1.33
34	I	99	ASN	C-O	5.06	1.29	1.24
59	8	553	VAL	C-O	5.06	1.30	1.24
4	e	49	LEU	C-O	5.06	1.29	1.24
50	Y	63	LYS	C-N	5.06	1.41	1.33
51	Z	50	SER	C-O	5.05	1.30	1.24
14	o	29	HIS	CA-C	-5.05	1.46	1.52
17	r	40	MET	N-CA	5.05	1.51	1.46
6	g	43	ASN	C-O	5.04	1.30	1.24
17	r	60	LYS	N-CA	5.04	1.52	1.46
16	q	9	ALA	C-O	5.03	1.29	1.24
41	P	63	GLN	N-CA	5.03	1.52	1.46
33	H	81	GLU	C-O	5.03	1.30	1.24
50	Y	85	LEU	C-N	5.03	1.40	1.33
49	X	25	GLY	N-CA	5.02	1.50	1.45
33	H	43	THR	C-N	5.02	1.40	1.33
6	g	30	LEU	C-O	5.01	1.31	1.23
59	8	279	LEU	C-O	5.01	1.30	1.24
8	i	30	GLN	N-CA	5.00	1.52	1.46
8	i	48	ILE	N-CA	5.00	1.52	1.46

All (969) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	Z	23	GLU	CA-C-O	19.41	140.75	119.40
51	Z	23	GLU	O-C-N	-17.56	104.58	121.79
36	K	50	PRO	CA-C-N	-15.48	103.36	123.17
36	K	50	PRO	C-N-CA	-15.48	103.36	123.17
49	X	45	GLY	CA-C-O	15.06	134.01	118.95
36	K	13	ASP	CA-C-O	14.43	136.34	120.90
34	I	154	VAL	CA-C-N	-13.71	98.20	121.92
34	I	154	VAL	C-N-CA	-13.71	98.20	121.92
51	Z	25	ALA	N-CA-C	-13.31	97.31	113.15
59	8	178	HIS	CA-C-N	-12.34	102.19	122.17
59	8	178	HIS	C-N-CA	-12.34	102.19	122.17
46	U	76	LYS	CA-C-N	-12.22	103.90	120.28
46	U	76	LYS	C-N-CA	-12.22	103.90	120.28
51	Z	25	ALA	CA-C-N	-12.16	97.57	121.41

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	Z	25	ALA	C-N-CA	-12.16	97.57	121.41
8	i	27	LEU	CA-C-N	-12.00	97.89	121.41
8	i	27	LEU	C-N-CA	-12.00	97.89	121.41
34	I	152	SER	O-C-N	-11.87	106.80	122.59
59	8	601	PHE	CA-C-N	-11.61	103.56	120.28
59	8	601	PHE	C-N-CA	-11.61	103.56	120.28
33	H	75	VAL	CA-C-N	-11.28	108.42	121.85
33	H	75	VAL	C-N-CA	-11.28	108.42	121.85
8	i	38	CYS	CA-C-N	-11.22	104.36	120.29
8	i	38	CYS	C-N-CA	-11.22	104.36	120.29
59	8	262	ILE	CA-C-O	11.07	133.06	121.44
59	8	472	ARG	CA-C-O	11.03	132.57	120.10
59	8	262	ILE	O-C-N	-10.80	111.31	122.75
35	J	75	LEU	O-C-N	-10.74	111.50	122.99
34	I	181	PHE	CA-C-N	-10.60	106.66	122.56
34	I	181	PHE	C-N-CA	-10.60	106.66	122.56
6	g	29	PHE	CA-C-N	-10.28	104.49	122.79
6	g	29	PHE	C-N-CA	-10.28	104.49	122.79
36	K	16	GLU	CA-C-N	-10.25	101.97	121.54
36	K	16	GLU	C-N-CA	-10.25	101.97	121.54
41	P	19	VAL	CA-C-O	10.21	129.30	120.22
6	g	114	GLU	CA-C-N	-10.20	108.32	122.91
6	g	114	GLU	C-N-CA	-10.20	108.32	122.91
40	O	30	LYS	O-C-N	10.18	132.55	122.07
31	F	21	GLY	CA-C-O	9.95	131.27	119.13
59	8	472	ARG	CA-C-N	-9.94	106.45	122.26
59	8	472	ARG	C-N-CA	-9.94	106.45	122.26
59	8	625	GLU	N-CA-C	9.94	125.44	112.72
34	I	14	GLU	CA-C-N	-9.93	111.62	123.44
34	I	14	GLU	C-N-CA	-9.93	111.62	123.44
18	s	38	TYR	CA-C-N	-9.86	109.25	123.05
18	s	38	TYR	C-N-CA	-9.86	109.25	123.05
13	n	4	ARG	CA-C-N	-9.82	104.21	121.29
13	n	4	ARG	C-N-CA	-9.82	104.21	121.29
7	h	78	GLY	N-CA-C	9.80	127.67	115.22
52	a	65	LEU	N-CA-C	9.74	123.50	109.48
37	L	3	ARG	CA-C-O	9.73	129.56	118.47
40	O	33	GLY	CA-C-N	-9.69	103.03	121.54
40	O	33	GLY	C-N-CA	-9.69	103.03	121.54
7	h	18	VAL	CA-C-N	-9.68	106.54	120.29
7	h	18	VAL	C-N-CA	-9.68	106.54	120.29
41	P	19	VAL	O-C-N	-9.51	114.41	122.97

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	I	8	LEU	N-CA-C	-9.25	104.08	114.62
46	U	76	LYS	N-CA-C	-9.19	100.39	111.69
46	U	77	GLU	N-CA-C	9.17	121.28	111.28
6	g	114	GLU	CA-C-O	9.07	129.03	118.79
59	8	633	GLY	CA-C-N	-9.04	107.26	120.28
59	8	633	GLY	C-N-CA	-9.04	107.26	120.28
13	n	2	ARG	O-C-N	-8.90	112.32	122.91
59	8	124	GLU	CA-C-N	-8.90	107.66	120.29
59	8	124	GLU	C-N-CA	-8.90	107.66	120.29
59	8	192	ASN	CA-C-N	-8.89	110.45	122.99
59	8	192	ASN	C-N-CA	-8.89	110.45	122.99
5	f	7	PRO	CA-C-N	-8.89	111.02	123.11
5	f	7	PRO	C-N-CA	-8.89	111.02	123.11
59	8	441	GLU	CA-C-N	-8.87	109.97	122.66
59	8	441	GLU	C-N-CA	-8.87	109.97	122.66
33	H	69	THR	CA-C-N	-8.80	104.33	121.94
33	H	69	THR	C-N-CA	-8.80	104.33	121.94
50	Y	85	LEU	CA-C-N	-8.76	105.93	121.70
50	Y	85	LEU	C-N-CA	-8.76	105.93	121.70
8	i	21	PRO	N-CA-C	8.73	121.35	110.70
8	i	53	PRO	CA-C-N	-8.73	109.41	122.24
8	i	53	PRO	C-N-CA	-8.73	109.41	122.24
59	8	111	MET	CA-C-N	-8.73	108.58	122.64
59	8	111	MET	C-N-CA	-8.73	108.58	122.64
50	Y	49	ALA	CA-C-O	8.70	129.77	120.55
3	d	119	ILE	O-C-N	-8.65	114.32	123.14
50	Y	63	LYS	CA-C-N	-8.53	106.61	122.05
50	Y	63	LYS	C-N-CA	-8.53	106.61	122.05
6	g	47	PHE	CA-C-N	-8.51	106.53	122.27
6	g	47	PHE	C-N-CA	-8.51	106.53	122.27
59	8	340	SER	CA-C-N	-8.48	104.78	121.41
59	8	340	SER	C-N-CA	-8.48	104.78	121.41
49	X	45	GLY	O-C-N	-8.46	112.56	122.38
59	8	142	ASN	N-CA-C	8.43	123.69	113.23
21	v	62	THR	CA-C-N	-8.39	108.95	120.95
21	v	62	THR	C-N-CA	-8.39	108.95	120.95
4	e	170	ALA	N-CA-C	-8.39	102.14	111.28
52	a	199	ALA	N-CA-C	-8.37	102.63	112.92
1	b	213	ARG	CA-C-N	-8.34	110.45	122.29
1	b	213	ARG	C-N-CA	-8.34	110.45	122.29
8	i	23	VAL	CA-C-N	-8.32	108.81	121.87
8	i	23	VAL	C-N-CA	-8.32	108.81	121.87

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	G	132	GLU	CA-C-N	-8.31	106.56	120.68
32	G	132	GLU	C-N-CA	-8.31	106.56	120.68
34	I	148	ALA	N-CA-C	-8.30	100.23	110.61
59	8	594	LYS	N-CA-C	-8.29	102.20	111.82
36	K	15	SER	CA-C-N	-8.29	109.02	120.38
36	K	15	SER	C-N-CA	-8.29	109.02	120.38
46	U	75	ILE	CA-C-N	-8.26	106.45	120.58
46	U	75	ILE	C-N-CA	-8.26	106.45	120.58
44	S	24	ALA	CA-C-O	8.25	129.60	119.78
59	8	476	GLU	CA-C-N	-8.24	109.75	122.60
59	8	476	GLU	C-N-CA	-8.24	109.75	122.60
46	U	73	ALA	O-C-N	-8.21	111.67	122.59
34	I	145	ARG	N-CA-C	8.19	122.58	110.30
36	K	13	ASP	O-C-N	-8.19	113.58	122.09
43	R	34	ALA	CA-C-N	-8.17	106.84	121.14
43	R	34	ALA	C-N-CA	-8.17	106.84	121.14
36	K	16	GLU	O-C-N	8.17	130.78	122.12
34	I	52	VAL	CA-C-N	-8.13	108.75	120.29
34	I	52	VAL	C-N-CA	-8.13	108.75	120.29
38	M	70	VAL	N-CA-C	8.10	118.20	110.42
59	8	637	ARG	CA-C-N	-8.10	109.46	122.66
59	8	637	ARG	C-N-CA	-8.10	109.46	122.66
18	s	40	ASN	N-CA-C	8.04	122.05	108.23
37	L	98	LEU	CA-C-N	-8.03	108.11	120.31
37	L	98	LEU	C-N-CA	-8.03	108.11	120.31
59	8	167	VAL	CA-C-N	-7.99	112.54	120.21
59	8	167	VAL	C-N-CA	-7.99	112.54	120.21
7	h	33	VAL	CA-C-O	7.99	127.99	121.68
12	m	61	GLY	CA-C-N	-7.93	112.05	123.00
12	m	61	GLY	C-N-CA	-7.93	112.05	123.00
46	U	71	VAL	N-CA-C	-7.93	102.80	110.42
59	8	177	GLU	CA-C-N	-7.92	109.97	122.65
59	8	177	GLU	C-N-CA	-7.92	109.97	122.65
46	U	73	ALA	CA-C-O	7.91	131.82	120.51
52	a	187	GLU	CA-C-N	-7.91	110.16	120.44
52	a	187	GLU	C-N-CA	-7.91	110.16	120.44
59	8	130	ALA	N-CA-C	-7.90	103.09	112.89
34	I	81	LEU	N-CA-C	7.90	120.52	110.33
8	i	27	LEU	CA-C-O	7.89	128.78	120.42
16	q	31	TYR	N-CA-C	7.87	120.62	111.02
13	n	50	PRO	CA-C-N	-7.87	109.92	120.54
13	n	50	PRO	C-N-CA	-7.87	109.92	120.54

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	o	28	VAL	CA-C-N	-7.87	111.68	122.77
14	o	28	VAL	C-N-CA	-7.87	111.68	122.77
51	Z	9	GLU	CA-C-N	-7.87	110.01	119.84
51	Z	9	GLU	C-N-CA	-7.87	110.01	119.84
36	K	18	VAL	N-CA-C	7.84	125.83	108.88
36	K	53	LYS	O-C-N	-7.84	112.16	122.59
24	y	43	LEU	CA-C-N	-7.84	110.25	120.44
24	y	43	LEU	C-N-CA	-7.84	110.25	120.44
51	Z	28	LEU	N-CA-C	-7.84	102.67	111.14
1	b	262	THR	CA-C-N	-7.83	105.69	121.18
1	b	262	THR	C-N-CA	-7.83	105.69	121.18
5	f	88	LEU	CA-C-N	-7.81	112.72	123.10
5	f	88	LEU	C-N-CA	-7.81	112.72	123.10
59	8	474	LYS	O-C-N	7.79	130.38	122.12
12	m	53	MET	N-CA-C	-7.79	104.38	114.04
34	I	152	SER	CA-C-O	7.79	131.65	120.51
8	i	36	GLU	CA-C-O	7.77	128.91	119.97
33	H	34	SER	N-CA-C	-7.72	103.31	112.89
52	a	54	LYS	N-CA-C	-7.71	98.16	109.11
6	g	137	GLU	CA-C-O	7.71	128.97	119.11
44	S	49	THR	N-CA-C	-7.70	102.22	111.69
31	F	21	GLY	O-C-N	-7.68	112.81	122.41
9	j	18	VAL	O-C-N	-7.67	114.89	123.18
59	8	600	ALA	CA-C-N	-7.67	110.01	120.44
59	8	600	ALA	C-N-CA	-7.67	110.01	120.44
35	J	121	ASN	N-CA-C	7.66	127.11	110.80
7	h	37	LYS	CA-C-N	-7.65	110.41	122.73
7	h	37	LYS	C-N-CA	-7.65	110.41	122.73
11	l	96	LYS	N-CA-C	-7.65	102.95	111.82
12	m	80	VAL	N-CA-C	7.64	119.61	108.53
8	i	43	ALA	CA-C-N	-7.61	110.73	122.60
8	i	43	ALA	C-N-CA	-7.61	110.73	122.60
33	H	31	ASN	N-CA-C	-7.59	103.01	111.82
33	H	140	ALA	CA-C-N	-7.59	109.51	120.29
33	H	140	ALA	C-N-CA	-7.59	109.51	120.29
7	h	13	ALA	N-CA-C	-7.59	102.67	112.23
59	8	598	SER	CA-C-O	7.58	128.82	120.63
1	b	203	VAL	O-C-N	-7.58	114.31	122.95
34	I	159	GLU	CA-C-N	-7.58	108.07	120.72
34	I	159	GLU	C-N-CA	-7.58	108.07	120.72
59	8	494	ILE	CA-C-N	-7.57	108.80	120.31
59	8	494	ILE	C-N-CA	-7.57	108.80	120.31

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	j	18	VAL	CA-C-O	7.56	129.52	120.67
8	i	31	GLY	N-CA-C	-7.52	104.19	115.32
59	8	629	GLY	CA-C-O	7.52	129.12	121.00
16	q	29	ARG	CA-C-O	7.47	128.26	119.67
46	U	65	ALA	CA-C-O	7.46	129.28	120.70
59	8	176	GLU	O-C-N	-7.45	112.69	122.59
12	m	42	THR	N-CA-C	7.43	119.40	110.19
16	q	116	LEU	N-CA-C	-7.42	102.56	111.69
3	d	119	ILE	CA-C-O	7.40	129.16	120.72
13	n	2	ARG	N-CA-C	7.39	121.26	111.28
40	O	68	ARG	CA-C-N	-7.38	111.98	123.13
40	O	68	ARG	C-N-CA	-7.38	111.98	123.13
34	I	125	ASN	N-CA-C	7.37	126.50	110.80
36	K	14	GLN	CA-C-O	7.37	128.54	119.11
59	8	663	MET	CA-C-N	-7.36	109.39	120.94
59	8	663	MET	C-N-CA	-7.36	109.39	120.94
49	X	51	HIS	N-CA-C	7.35	120.89	110.23
34	I	132	ALA	CA-C-O	7.34	131.01	120.51
47	V	14	ASP	N-CA-C	7.33	122.42	112.68
35	J	75	LEU	CA-C-O	7.32	129.15	121.31
58	4	18	G	N9-C1'-C2'	7.32	122.98	112.00
18	s	81	SER	CA-C-N	-7.30	113.07	122.77
18	s	81	SER	C-N-CA	-7.30	113.07	122.77
44	S	5	MET	CA-C-N	-7.29	110.65	120.79
44	S	5	MET	C-N-CA	-7.29	110.65	120.79
50	Y	65	LEU	CA-C-N	-7.29	111.10	122.69
50	Y	65	LEU	C-N-CA	-7.29	111.10	122.69
8	i	73	PRO	N-CA-C	-7.27	101.83	110.70
59	8	140	PHE	CA-C-N	-7.27	112.99	122.37
59	8	140	PHE	C-N-CA	-7.27	112.99	122.37
42	Q	114	SER	N-CA-C	-7.24	103.33	111.07
53	3	439	U	N1-C1'-C2'	7.24	122.85	112.00
8	i	47	SER	CA-C-N	-7.23	108.96	121.97
8	i	47	SER	C-N-CA	-7.23	108.96	121.97
26	A	14	ALA	CA-C-N	-7.22	112.08	122.77
26	A	14	ALA	C-N-CA	-7.22	112.08	122.77
25	z	13	ILE	N-CA-C	7.22	117.35	110.42
10	k	112	PHE	CA-C-N	-7.21	109.90	120.28
10	k	112	PHE	C-N-CA	-7.21	109.90	120.28
59	8	312	SER	CA-C-O	7.20	129.86	121.44
51	Z	53	LYS	CA-C-N	-7.19	108.28	120.58
51	Z	53	LYS	C-N-CA	-7.19	108.28	120.58

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	A	43	PHE	N-CA-C	-7.19	103.48	111.82
52	a	200	LYS	N-CA-C	7.17	125.65	109.81
33	H	126	ARG	N-CA-C	7.16	121.96	113.23
59	8	547	GLY	N-CA-C	7.16	121.30	112.64
32	G	130	LYS	CA-C-O	7.16	128.56	120.90
4	e	139	GLU	CA-C-O	7.15	128.13	120.55
33	H	62	SER	CA-C-N	-7.15	109.10	121.97
33	H	62	SER	C-N-CA	-7.15	109.10	121.97
43	R	37	GLY	CA-C-N	-7.12	113.81	123.14
43	R	37	GLY	C-N-CA	-7.12	113.81	123.14
35	J	75	LEU	N-CA-C	7.12	117.98	108.38
59	8	148	GLY	CA-C-O	7.12	126.87	118.97
26	A	42	PRO	N-CA-C	7.11	122.08	112.48
8	i	29	GLN	CA-C-N	-7.11	110.82	122.54
8	i	29	GLN	C-N-CA	-7.11	110.82	122.54
9	j	20	ALA	N-CA-C	7.11	121.91	112.25
13	n	119	SER	N-CA-C	-7.10	105.04	113.21
41	P	102	ALA	CA-C-N	-7.09	110.62	122.25
41	P	102	ALA	C-N-CA	-7.09	110.62	122.25
59	8	317	PHE	N-CA-C	7.09	119.45	110.24
59	8	156	ASN	N-CA-C	-7.08	102.98	111.69
59	8	566	LEU	N-CA-C	-7.06	103.68	112.72
59	8	90	PRO	N-CA-C	-7.05	105.35	114.03
52	a	197	LYS	CA-C-N	-7.05	111.61	122.60
52	a	197	LYS	C-N-CA	-7.05	111.61	122.60
5	f	70	LEU	CA-C-N	-7.04	110.29	120.29
5	f	70	LEU	C-N-CA	-7.04	110.29	120.29
29	D	35	ARG	N-CA-C	-7.03	104.17	112.89
59	8	248	ILE	N-CA-C	-7.03	103.34	111.00
35	J	76	ASN	CA-C-N	-7.02	112.30	122.19
35	J	76	ASN	C-N-CA	-7.02	112.30	122.19
43	R	71	GLU	N-CA-C	-7.01	103.56	111.07
34	I	96	ARG	N-CA-C	7.01	119.61	110.43
11	l	97	ALA	N-CA-C	-7.01	104.20	112.89
1	b	202	ARG	CA-C-N	-6.99	113.35	122.37
1	b	202	ARG	C-N-CA	-6.99	113.35	122.37
2	c	202	ILE	CA-C-N	-6.97	114.06	123.12
2	c	202	ILE	C-N-CA	-6.97	114.06	123.12
59	8	318	SER	O-C-N	6.96	131.84	122.59
52	a	8	MET	N-CA-C	-6.95	103.79	111.36
53	3	1346	A	N9-C1'-C2'	6.95	122.42	112.00
50	Y	51	ASN	CA-C-N	-6.93	109.68	122.09

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	Y	51	ASN	C-N-CA	-6.93	109.68	122.09
7	h	77	VAL	CA-C-N	-6.92	111.01	121.87
7	h	77	VAL	C-N-CA	-6.92	111.01	121.87
34	I	181	PHE	O-C-N	6.90	131.43	123.29
34	I	147	LYS	CA-C-N	-6.90	109.99	122.54
34	I	147	LYS	C-N-CA	-6.90	109.99	122.54
39	N	95	SER	CA-C-O	6.89	128.28	120.90
34	I	76	LYS	N-CA-C	-6.88	103.80	111.71
43	R	52	ILE	CA-C-N	-6.87	110.34	120.38
43	R	52	ILE	C-N-CA	-6.87	110.34	120.38
53	3	1190	G	C2'-C3'-O3'	6.86	119.79	109.50
34	I	82	LYS	O-C-N	-6.86	115.31	123.27
33	H	202	PHE	O-C-N	6.84	130.97	122.63
57	6	69	C	N1-C1'-C2'	6.84	122.25	112.00
52	a	174	THR	CA-C-N	-6.83	113.79	122.26
52	a	174	THR	C-N-CA	-6.83	113.79	122.26
37	L	126	ALA	N-CA-C	-6.81	104.94	113.18
23	x	25	LYS	CA-C-N	-6.81	112.16	122.23
23	x	25	LYS	C-N-CA	-6.81	112.16	122.23
51	Z	9	GLU	CA-C-O	6.81	129.48	120.16
54	1	2501	C	N1-C1'-C2'	6.81	122.21	112.00
59	8	596	ALA	CA-C-N	-6.80	110.63	120.29
59	8	596	ALA	C-N-CA	-6.80	110.63	120.29
7	h	65	GLU	N-CA-C	-6.80	103.95	111.36
59	8	104	ARG	N-CA-C	-6.79	104.47	112.89
37	L	60	ALA	N-CA-C	-6.79	104.86	113.01
3	d	179	SER	CA-C-N	-6.78	111.21	120.44
3	d	179	SER	C-N-CA	-6.78	111.21	120.44
43	R	92	ARG	CA-C-N	-6.78	109.77	122.05
43	R	92	ARG	C-N-CA	-6.78	109.77	122.05
34	I	82	LYS	CA-C-O	6.78	127.56	120.30
5	f	165	ASP	CA-C-N	-6.77	111.73	121.42
5	f	165	ASP	C-N-CA	-6.77	111.73	121.42
57	6	56	C	N1-C1'-C2'	6.75	122.12	112.00
23	x	22	ASN	CA-C-O	6.75	127.99	120.43
34	I	123	MET	CA-C-N	-6.73	113.82	123.11
34	I	123	MET	C-N-CA	-6.73	113.82	123.11
51	Z	8	ASN	N-CA-C	6.73	125.13	110.80
59	8	218	TRP	CA-C-N	-6.73	109.07	120.58
59	8	218	TRP	C-N-CA	-6.73	109.07	120.58
49	X	22	VAL	N-CA-C	-6.72	103.97	110.42
21	v	91	PHE	CA-C-N	-6.72	113.97	122.37

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	v	91	PHE	C-N-CA	-6.72	113.97	122.37
37	L	38	ALA	CA-C-N	-6.71	110.76	120.29
37	L	38	ALA	C-N-CA	-6.71	110.76	120.29
34	I	105	GLY	O-C-N	-6.71	113.98	122.70
4	e	141	ASP	N-CA-C	6.70	121.83	112.72
34	I	155	LYS	CA-C-O	6.70	126.51	119.14
59	8	601	PHE	O-C-N	6.70	129.32	122.09
34	I	99	ASN	N-CA-C	-6.69	103.61	111.03
34	I	96	ARG	CA-C-N	-6.67	111.55	120.63
34	I	96	ARG	C-N-CA	-6.67	111.55	120.63
34	I	95	GLY	O-C-N	-6.67	114.03	122.70
59	8	133	TYR	N-CA-C	-6.67	104.89	113.16
39	N	31	GLN	CA-C-O	6.66	130.03	120.51
14	o	28	VAL	O-C-N	-6.64	115.99	123.10
34	I	116	LEU	CA-C-N	-6.63	111.37	120.46
34	I	116	LEU	C-N-CA	-6.63	111.37	120.46
42	Q	115	LYS	N-CA-C	-6.63	101.14	110.50
15	p	3	ILE	CA-C-N	-6.63	108.89	120.29
15	p	3	ILE	C-N-CA	-6.63	108.89	120.29
59	8	140	PHE	CA-C-O	6.63	126.79	120.09
7	h	10	ALA	N-CA-C	-6.60	104.16	111.82
22	w	49	CYS	CA-C-N	-6.60	112.86	121.96
22	w	49	CYS	C-N-CA	-6.60	112.86	121.96
10	k	41	ILE	N-CA-C	6.59	118.32	108.96
25	z	45	GLY	CA-C-N	-6.59	111.88	120.44
25	z	45	GLY	C-N-CA	-6.59	111.88	120.44
2	c	82	PHE	CA-C-O	6.58	128.49	120.92
34	I	160	LEU	N-CA-C	6.58	120.56	112.54
39	N	31	GLN	O-C-N	-6.57	113.85	122.59
43	R	68	LEU	N-CA-C	-6.56	104.75	112.89
23	x	68	ALA	N-CA-C	-6.56	104.05	111.07
14	o	28	VAL	CA-C-O	6.56	128.01	120.67
54	1	1130	U	C2'-C3'-O3'	6.55	119.33	109.50
34	I	38	GLY	N-CA-C	-6.55	103.14	111.72
39	N	14	SER	CA-C-N	-6.55	112.23	121.99
39	N	14	SER	C-N-CA	-6.55	112.23	121.99
59	8	12	ASN	CA-C-N	-6.54	112.28	122.69
59	8	12	ASN	C-N-CA	-6.54	112.28	122.69
29	D	23	ALA	N-CA-C	6.54	120.12	111.75
52	a	9	ARG	N-CA-C	-6.54	104.23	111.36
59	8	311	ALA	N-CA-C	-6.54	101.59	110.68
32	G	86	CYS	N-CA-C	-6.53	99.05	108.07

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	8	29	ARG	CA-C-N	-6.53	111.14	120.42
59	8	29	ARG	C-N-CA	-6.53	111.14	120.42
8	i	36	GLU	CA-C-N	-6.53	110.40	122.09
8	i	36	GLU	C-N-CA	-6.53	110.40	122.09
34	I	142	VAL	O-C-N	6.53	130.77	122.61
59	8	341	GLY	O-C-N	-6.52	114.22	122.70
34	I	178	GLU	CA-C-N	-6.51	116.64	122.43
34	I	178	GLU	C-N-CA	-6.51	116.64	122.43
52	a	53	ARG	N-CA-C	-6.51	104.27	111.36
12	m	60	GLN	N-CA-C	6.49	120.19	107.98
50	Y	58	ASP	CA-C-N	-6.48	110.95	120.28
50	Y	58	ASP	C-N-CA	-6.48	110.95	120.28
49	X	45	GLY	CA-C-N	-6.47	112.66	122.81
49	X	45	GLY	C-N-CA	-6.47	112.66	122.81
59	8	360	PHE	CA-C-O	-6.47	114.51	121.56
50	Y	85	LEU	O-C-N	6.46	129.07	122.09
59	8	89	THR	N-CA-C	6.45	124.07	109.81
23	x	71	ARG	N-CA-C	-6.45	103.53	111.40
33	H	177	LEU	N-CA-C	6.44	118.30	111.28
32	G	85	SER	N-CA-C	-6.44	105.39	113.18
59	8	110	VAL	CA-C-N	-6.44	113.97	123.11
59	8	110	VAL	C-N-CA	-6.44	113.97	123.11
2	c	201	LEU	CA-C-O	6.43	129.04	121.58
46	U	68	SER	N-CA-C	6.43	124.50	110.80
48	W	64	LEU	CA-C-N	-6.43	113.70	125.02
48	W	64	LEU	C-N-CA	-6.43	113.70	125.02
6	g	142	VAL	CA-C-N	-6.42	114.83	122.93
6	g	142	VAL	C-N-CA	-6.42	114.83	122.93
34	I	113	ALA	CA-C-O	6.42	127.23	120.42
18	s	106	VAL	CA-C-N	-6.42	114.20	123.06
18	s	106	VAL	C-N-CA	-6.42	114.20	123.06
2	c	203	VAL	N-CA-C	6.42	117.11	107.80
32	G	133	ALA	CA-C-N	-6.41	111.69	120.28
32	G	133	ALA	C-N-CA	-6.41	111.69	120.28
51	Z	9	GLU	O-C-N	-6.41	113.95	121.32
8	i	39	LYS	CA-C-N	-6.40	110.15	122.06
8	i	39	LYS	C-N-CA	-6.40	110.15	122.06
34	I	159	GLU	N-CA-C	6.40	118.05	111.14
4	e	139	GLU	O-C-N	-6.39	115.34	122.12
51	Z	27	VAL	N-CA-C	-6.39	103.06	111.05
37	L	124	SER	CA-C-N	-6.39	110.41	121.66
37	L	124	SER	C-N-CA	-6.39	110.41	121.66

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	R	54	THR	CA-C-N	-6.39	112.13	120.44
43	R	54	THR	C-N-CA	-6.39	112.13	120.44
37	L	3	ARG	O-C-N	-6.38	113.79	121.64
14	o	78	VAL	CA-C-N	-6.38	111.73	120.28
14	o	78	VAL	C-N-CA	-6.38	111.73	120.28
23	x	16	ASN	CA-C-O	6.38	128.32	121.05
13	n	2	ARG	CA-C-N	-6.38	113.15	122.65
13	n	2	ARG	C-N-CA	-6.38	113.15	122.65
51	Z	58	LYS	N-CA-C	-6.37	104.43	111.82
14	o	29	HIS	CA-C-N	-6.37	113.21	122.19
14	o	29	HIS	C-N-CA	-6.37	113.21	122.19
34	I	115	GLN	CA-C-N	-6.37	111.75	120.28
34	I	115	GLN	C-N-CA	-6.37	111.75	120.28
53	3	1301	U	N1-C1'-C2'	6.36	121.55	112.00
17	r	50	GLY	N-CA-C	-6.35	104.92	113.24
5	f	112	VAL	O-C-N	-6.35	115.98	123.03
7	h	10	ALA	CA-C-N	-6.32	109.42	120.29
7	h	10	ALA	C-N-CA	-6.32	109.42	120.29
46	U	65	ALA	O-C-N	-6.32	114.61	123.01
1	b	213	ARG	N-CA-C	-6.31	105.43	113.01
32	G	173	LYS	CA-C-N	-6.30	111.74	120.38
32	G	173	LYS	C-N-CA	-6.30	111.74	120.38
42	Q	104	SER	N-CA-C	6.29	118.64	110.53
59	8	599	ILE	CA-C-O	6.29	127.44	120.71
24	y	14	LEU	N-CA-C	-6.29	104.43	111.28
16	q	115	ALA	CA-C-N	-6.28	109.84	120.58
16	q	115	ALA	C-N-CA	-6.28	109.84	120.58
59	8	124	GLU	N-CA-C	-6.28	105.48	113.01
8	i	62	ALA	N-CA-C	-6.27	104.33	112.23
39	N	98	ARG	CA-C-N	-6.27	111.23	120.38
39	N	98	ARG	C-N-CA	-6.27	111.23	120.38
46	U	67	ILE	N-CA-C	6.26	118.67	108.97
13	n	68	ALA	N-CA-C	-6.25	104.53	111.71
37	L	36	SER	CA-C-O	6.25	127.17	120.55
49	X	25	GLY	N-CA-C	6.25	119.29	112.29
15	p	4	ILE	N-CA-C	-6.24	103.08	111.44
20	u	67	SER	CA-C-N	-6.23	112.57	122.29
20	u	67	SER	C-N-CA	-6.23	112.57	122.29
38	M	125	ILE	N-CA-C	6.23	117.17	111.81
7	h	7	ASP	CA-C-O	6.23	127.15	120.55
26	A	49	ARG	N-CA-C	6.22	118.87	111.71
4	e	144	LYS	CA-C-N	-6.22	110.78	121.97

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	e	144	LYS	C-N-CA	-6.22	110.78	121.97
8	i	12	VAL	N-CA-C	-6.21	96.42	109.34
2	c	82	PHE	O-C-N	-6.21	115.96	123.16
27	B	53	VAL	CA-C-N	-6.21	114.46	121.85
27	B	53	VAL	C-N-CA	-6.21	114.46	121.85
3	d	186	VAL	CA-C-O	6.21	127.17	120.53
18	s	61	ASN	N-CA-C	-6.20	105.47	113.16
34	I	169	TRP	CA-C-O	6.20	126.99	119.49
35	J	112	ALA	CA-C-N	-6.20	110.51	120.86
35	J	112	ALA	C-N-CA	-6.20	110.51	120.86
26	A	14	ALA	O-C-N	6.19	130.91	123.36
59	8	178	HIS	N-CA-C	-6.19	105.30	112.92
33	H	35	ASP	N-CA-C	-6.18	104.65	111.82
59	8	339	TYR	CA-C-N	-6.18	111.74	122.37
59	8	339	TYR	C-N-CA	-6.18	111.74	122.37
59	8	141	VAL	CA-C-N	-6.17	110.80	121.66
59	8	141	VAL	C-N-CA	-6.17	110.80	121.66
52	a	4	LEU	N-CA-C	6.17	119.71	109.96
59	8	359	ARG	CA-C-N	-6.17	111.25	120.94
59	8	359	ARG	C-N-CA	-6.17	111.25	120.94
59	8	11	ARG	CA-C-O	6.17	127.02	120.36
54	1	886	A	N9-C1'-C2'	6.17	121.25	112.00
59	8	287	PRO	N-CA-C	6.16	120.51	111.03
8	i	57	VAL	CA-C-N	-6.16	115.29	123.17
8	i	57	VAL	C-N-CA	-6.16	115.29	123.17
59	8	277	ALA	CA-C-N	-6.15	111.55	120.29
59	8	277	ALA	C-N-CA	-6.15	111.55	120.29
53	3	572	A	N9-C1'-C2'	6.15	121.22	112.00
35	J	73	VAL	O-C-N	-6.14	116.55	123.18
52	a	11	ILE	N-CA-C	-6.14	104.52	110.42
39	N	99	LYS	N-CA-C	6.14	119.61	111.75
37	L	136	LYS	CA-C-N	-6.13	112.26	120.54
37	L	136	LYS	C-N-CA	-6.13	112.26	120.54
59	8	339	TYR	N-CA-C	-6.13	104.70	111.82
38	M	19	ALA	CA-C-N	-6.13	113.80	122.63
38	M	19	ALA	C-N-CA	-6.13	113.80	122.63
33	H	187	GLU	CA-C-N	-6.13	114.03	122.30
33	H	187	GLU	C-N-CA	-6.13	114.03	122.30
34	I	116	LEU	N-CA-C	-6.13	104.60	111.28
59	8	233	LEU	CA-C-N	-6.12	112.57	120.65
59	8	233	LEU	C-N-CA	-6.12	112.57	120.65
41	P	63	GLN	CA-C-N	-6.11	111.74	120.42

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
41	P	63	GLN	C-N-CA	-6.11	111.74	120.42
52	a	9	ARG	CA-C-N	-6.11	110.81	120.47
52	a	9	ARG	C-N-CA	-6.11	110.81	120.47
59	8	630	ASP	CA-C-O	6.11	126.89	119.38
59	8	663	MET	CA-C-O	6.10	125.92	119.03
34	I	141	VAL	CA-C-O	6.10	127.47	120.76
47	V	9	GLY	CA-C-N	-6.10	111.06	121.85
47	V	9	GLY	C-N-CA	-6.10	111.06	121.85
33	H	69	THR	N-CA-C	6.09	118.44	109.24
53	3	818	G	N9-C1'-C2'	6.09	121.14	112.00
7	h	75	ALA	CA-C-O	6.09	126.96	119.05
35	J	102	THR	CA-C-N	-6.08	109.50	121.41
35	J	102	THR	C-N-CA	-6.08	109.50	121.41
59	8	22	GLY	N-CA-C	-6.08	105.11	115.08
43	R	20	SER	N-CA-C	6.08	120.24	112.34
52	a	26	ALA	CA-C-N	-6.07	111.04	121.97
52	a	26	ALA	C-N-CA	-6.07	111.04	121.97
32	G	134	LEU	CA-C-N	-6.07	112.15	120.28
32	G	134	LEU	C-N-CA	-6.07	112.15	120.28
34	I	152	SER	CA-C-N	-6.06	112.71	122.23
34	I	152	SER	C-N-CA	-6.06	112.71	122.23
54	1	1020	A	C2'-C3'-O3'	6.06	118.58	109.50
53	3	1201	A	C2'-C3'-O3'	6.05	118.58	109.50
6	g	137	GLU	O-C-N	-6.04	113.61	122.43
21	v	91	PHE	CA-C-O	6.04	126.82	120.36
2	c	157	LYS	O-C-N	6.04	130.44	122.95
59	8	81	PRO	N-CA-C	6.04	119.91	110.80
34	I	79	ALA	N-CA-C	-6.03	105.00	112.90
34	I	63	ILE	CA-C-N	-6.03	113.08	122.67
34	I	63	ILE	C-N-CA	-6.03	113.08	122.67
33	H	68	HIS	O-C-N	6.03	130.73	123.13
34	I	112	GLU	CA-C-N	-6.03	111.73	120.29
34	I	112	GLU	C-N-CA	-6.03	111.73	120.29
54	1	477	A	N9-C1'-C2'	6.02	121.03	112.00
24	y	40	SER	CA-C-O	6.01	126.77	119.38
54	1	2061	G	O4'-C1'-C2'	-5.99	101.61	107.60
39	N	94	ARG	N-CA-C	-5.99	105.46	112.89
47	V	45	VAL	N-CA-C	5.99	117.40	108.23
35	J	125	LYS	CA-C-O	5.98	126.70	120.30
43	R	14	ALA	N-CA-C	5.98	121.18	111.37
59	8	632	ILE	CA-C-N	-5.98	109.69	121.41
59	8	632	ILE	C-N-CA	-5.98	109.69	121.41

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	r	64	VAL	N-CA-C	5.98	117.10	111.48
54	l	2529	G	N9-C1'-C2'	5.97	120.96	112.00
6	g	32	PRO	CA-C-N	-5.96	110.46	122.55
6	g	32	PRO	C-N-CA	-5.96	110.46	122.55
35	J	120	HIS	CA-C-O	5.96	127.39	121.20
35	J	73	VAL	CA-C-O	5.95	127.64	120.67
51	Z	22	CYS	CA-C-N	-5.95	114.41	121.90
51	Z	22	CYS	C-N-CA	-5.95	114.41	121.90
6	g	132	PHE	CA-C-N	-5.95	112.58	122.21
6	g	132	PHE	C-N-CA	-5.95	112.58	122.21
10	k	11	ALA	N-CA-C	5.93	120.14	113.02
39	N	13	SER	CA-C-N	-5.93	114.17	123.13
39	N	13	SER	C-N-CA	-5.93	114.17	123.13
49	X	18	VAL	N-CA-C	5.93	117.47	111.00
13	n	47	VAL	CA-C-O	5.93	125.87	120.30
59	8	11	ARG	O-C-N	-5.93	116.25	123.30
59	8	324	ILE	CA-C-N	-5.93	114.42	123.07
59	8	324	ILE	C-N-CA	-5.93	114.42	123.07
8	i	36	GLU	O-C-N	-5.92	114.98	122.27
32	G	222	GLU	N-CA-C	-5.92	105.14	112.90
52	a	5	THR	CA-C-O	5.92	128.98	120.51
17	r	41	ILE	CA-C-N	-5.92	113.63	122.39
17	r	41	ILE	C-N-CA	-5.92	113.63	122.39
44	S	83	VAL	CA-C-N	-5.92	111.88	120.29
44	S	83	VAL	C-N-CA	-5.92	111.88	120.29
59	8	598	SER	O-C-N	-5.92	115.85	122.12
2	c	177	VAL	CA-C-N	-5.91	116.89	123.16
2	c	177	VAL	C-N-CA	-5.91	116.89	123.16
59	8	577	ARG	CA-C-N	-5.91	114.66	122.99
59	8	577	ARG	C-N-CA	-5.91	114.66	122.99
2	c	144	GLY	O-C-N	-5.91	117.82	122.90
59	8	103	MET	CA-C-N	-5.91	110.80	121.14
59	8	103	MET	C-N-CA	-5.91	110.80	121.14
5	f	88	LEU	CA-C-O	5.91	127.65	120.62
3	d	22	ASP	N-CA-C	5.90	117.94	110.33
4	e	144	LYS	N-CA-C	-5.90	105.17	112.90
6	g	37	VAL	CA-C-N	-5.90	113.89	119.85
6	g	37	VAL	C-N-CA	-5.90	113.89	119.85
11	l	70	LYS	CA-C-N	-5.90	111.92	120.29
11	l	70	LYS	C-N-CA	-5.90	111.92	120.29
17	r	77	PHE	CA-C-N	-5.89	114.23	123.13
17	r	77	PHE	C-N-CA	-5.89	114.23	123.13

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	f	65	GLY	N-CA-C	-5.89	105.66	112.73
40	O	30	LYS	CA-C-N	-5.89	111.80	120.28
40	O	30	LYS	C-N-CA	-5.89	111.80	120.28
54	1	894	U	N1-C1'-C2'	5.89	120.83	112.00
23	x	16	ASN	O-C-N	-5.88	116.07	123.01
59	8	539	ASP	CA-C-N	-5.88	115.90	123.19
59	8	539	ASP	C-N-CA	-5.88	115.90	123.19
50	Y	26	MET	CA-C-N	-5.88	112.33	120.38
50	Y	26	MET	C-N-CA	-5.88	112.33	120.38
51	Z	48	LYS	CA-C-N	-5.87	112.41	120.28
51	Z	48	LYS	C-N-CA	-5.87	112.41	120.28
49	X	19	GLU	CA-C-N	-5.87	111.95	120.29
49	X	19	GLU	C-N-CA	-5.87	111.95	120.29
6	g	116	ARG	N-CA-C	5.87	119.38	109.76
32	G	73	ARG	N-CA-C	5.86	117.34	111.07
49	X	22	VAL	CA-C-N	-5.86	112.92	122.65
49	X	22	VAL	C-N-CA	-5.86	112.92	122.65
52	a	28	ALA	N-CA-C	-5.86	106.67	113.88
46	U	65	ALA	CA-C-N	-5.86	114.44	122.93
46	U	65	ALA	C-N-CA	-5.86	114.44	122.93
15	p	88	ARG	CA-C-N	-5.85	113.27	120.64
15	p	88	ARG	C-N-CA	-5.85	113.27	120.64
1	b	16	VAL	O-C-N	5.84	129.51	123.20
6	g	143	ILE	CA-C-N	-5.84	113.07	122.25
6	g	143	ILE	C-N-CA	-5.84	113.07	122.25
10	k	1	MET	CA-C-N	-5.84	113.15	122.50
10	k	1	MET	C-N-CA	-5.84	113.15	122.50
28	C	50	GLU	N-CA-C	5.84	119.00	110.17
34	I	155	LYS	N-CA-C	-5.84	106.32	113.50
55	2	119	A	N9-C1'-C2'	5.84	120.76	112.00
3	d	186	VAL	O-C-N	-5.83	116.28	123.10
5	f	48	THR	CA-C-N	-5.82	113.03	122.81
5	f	48	THR	C-N-CA	-5.82	113.03	122.81
37	L	79	VAL	N-CA-C	-5.80	106.08	113.22
59	8	627	ASN	CA-C-N	-5.80	110.45	121.54
59	8	627	ASN	C-N-CA	-5.80	110.45	121.54
11	l	11	GLY	CA-C-N	-5.80	112.58	122.56
11	l	11	GLY	C-N-CA	-5.80	112.58	122.56
9	j	81	ILE	N-CA-C	5.80	121.41	109.34
45	T	70	LYS	CA-C-N	-5.80	111.32	120.60
45	T	70	LYS	C-N-CA	-5.80	111.32	120.60
14	o	116	GLN	N-CA-C	5.80	117.74	108.41

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	m	119	LEU	CA-C-N	-5.78	112.93	120.44
12	m	119	LEU	C-N-CA	-5.78	112.93	120.44
40	O	76	ILE	CA-C-O	5.78	127.63	121.04
32	G	80	LYS	CA-C-N	-5.78	112.58	120.44
32	G	80	LYS	C-N-CA	-5.78	112.58	120.44
13	n	4	ARG	O-C-N	5.77	127.93	121.87
45	T	81	ILE	CA-C-N	-5.77	111.53	120.31
45	T	81	ILE	C-N-CA	-5.77	111.53	120.31
43	R	1	ALA	CA-C-N	5.77	133.02	122.92
43	R	1	ALA	C-N-CA	5.77	133.02	122.92
39	N	103	VAL	CA-C-O	5.77	123.97	118.90
42	Q	105	GLY	N-CA-C	-5.76	102.96	111.03
59	8	635	LEU	CA-C-O	5.76	127.07	120.90
5	f	133	LYS	O-C-N	5.76	129.72	123.10
6	g	8	LYS	CA-C-N	5.76	132.34	121.97
6	g	8	LYS	C-N-CA	5.76	132.34	121.97
41	P	110	THR	CA-C-N	-5.75	115.06	123.00
41	P	110	THR	C-N-CA	-5.75	115.06	123.00
31	F	23	ILE	N-CA-C	5.74	116.47	108.89
50	Y	70	LYS	N-CA-C	-5.74	105.03	111.28
53	3	374	A	N9-C1'-C2'	5.74	120.61	112.00
57	6	34	C	N1-C1'-C2'	5.73	120.60	112.00
13	n	79	LEU	N-CA-C	-5.73	102.44	110.35
33	H	88	LYS	CA-C-N	-5.73	112.08	121.19
33	H	88	LYS	C-N-CA	-5.73	112.08	121.19
33	H	194	VAL	CA-C-N	-5.73	115.31	123.10
33	H	194	VAL	C-N-CA	-5.73	115.31	123.10
59	8	112	VAL	N-CA-C	5.73	117.85	108.97
33	H	38	VAL	N-CA-C	-5.72	104.94	110.72
40	O	35	GLN	N-CA-C	5.71	117.60	110.91
44	S	36	SER	N-CA-C	5.71	119.03	112.97
59	8	156	ASN	CA-C-N	-5.71	112.63	120.28
59	8	156	ASN	C-N-CA	-5.71	112.63	120.28
11	l	67	THR	CA-C-O	5.70	126.65	120.32
52	a	26	ALA	CA-C-O	5.70	126.99	121.00
52	a	68	GLY	N-CA-C	5.70	123.28	112.62
2	c	98	VAL	N-CA-C	5.69	116.43	110.62
9	j	93	ILE	CA-C-N	-5.69	112.08	120.28
9	j	93	ILE	C-N-CA	-5.69	112.08	120.28
30	E	56	LEU	CA-C-N	-5.68	111.50	120.47
30	E	56	LEU	C-N-CA	-5.68	111.50	120.47
35	J	69	ASN	CA-C-N	-5.67	112.93	121.05

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	J	69	ASN	C-N-CA	-5.67	112.93	121.05
43	R	62	PHE	CA-C-O	5.67	128.29	121.88
52	a	192	LEU	N-CA-C	-5.67	105.18	111.36
13	n	21	PHE	CA-C-N	-5.67	112.24	120.29
13	n	21	PHE	C-N-CA	-5.67	112.24	120.29
43	R	64	VAL	N-CA-C	5.66	121.11	109.34
3	d	82	GLY	N-CA-C	5.66	126.59	113.18
50	Y	52	GLU	CA-C-N	-5.65	111.55	122.06
50	Y	52	GLU	C-N-CA	-5.65	111.55	122.06
59	8	262	ILE	N-CA-C	5.65	115.42	108.53
45	T	44	GLU	N-CA-C	-5.63	102.42	110.59
2	c	65	ALA	N-CA-C	-5.63	105.15	111.28
26	A	45	THR	CA-C-N	-5.62	110.78	120.79
26	A	45	THR	C-N-CA	-5.62	110.78	120.79
52	a	6	LYS	CA-C-O	5.62	128.55	120.51
45	T	41	HIS	CA-C-N	-5.62	113.78	122.49
45	T	41	HIS	C-N-CA	-5.62	113.78	122.49
36	K	31	GLY	N-CA-C	-5.62	105.99	112.73
54	1	278	A	N9-C1'-C2'	5.62	120.43	112.00
54	1	1669	A	N9-C1'-C2'	5.62	120.43	112.00
37	L	95	ARG	CA-C-N	-5.62	112.96	120.54
37	L	95	ARG	C-N-CA	-5.62	112.96	120.54
59	8	322	PHE	N-CA-C	5.62	121.00	114.04
6	g	139	PHE	N-CA-C	5.61	119.06	110.36
35	J	122	VAL	N-CA-C	5.61	121.01	109.34
53	3	384	G	N9-C1'-C2'	5.60	120.41	112.00
35	J	87	VAL	N-CA-C	5.60	120.99	109.34
54	1	2728	U	N1-C1'-C2'	5.59	120.39	112.00
43	R	16	ILE	CA-C-O	5.59	126.76	120.95
58	4	16	A	N9-C1'-C2'	5.58	120.38	112.00
32	G	162	VAL	N-CA-C	5.58	117.03	108.71
34	I	154	VAL	O-C-N	5.58	127.51	121.87
36	K	35	LYS	N-CA-C	5.58	118.11	110.24
37	L	101	ARG	CA-C-N	-5.58	112.25	120.28
37	L	101	ARG	C-N-CA	-5.58	112.25	120.28
38	M	124	ILE	N-CA-C	5.58	116.90	109.37
19	t	44	LYS	N-CA-C	-5.57	105.12	111.14
34	I	95	GLY	CA-C-O	5.57	130.27	120.57
44	S	34	ASN	O-C-N	-5.57	115.18	122.59
3	d	180	LEU	CA-C-N	-5.57	111.39	120.64
3	d	180	LEU	C-N-CA	-5.57	111.39	120.64
54	1	748	G	N9-C1'-C2'	5.56	120.34	112.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	f	71	LEU	CA-C-N	-5.56	113.21	120.44
5	f	71	LEU	C-N-CA	-5.56	113.21	120.44
23	x	70	LEU	CA-C-N	-5.56	111.42	120.71
23	x	70	LEU	C-N-CA	-5.56	111.42	120.71
4	e	117	SER	N-CA-C	5.56	117.46	110.24
12	m	112	LEU	N-CA-C	-5.56	105.30	111.36
37	L	139	ASP	N-CA-C	-5.55	105.13	111.07
39	N	15	ALA	N-CA-C	5.55	117.27	108.67
33	H	52	SER	CA-C-N	-5.55	111.47	121.62
33	H	52	SER	C-N-CA	-5.55	111.47	121.62
59	8	34	THR	N-CA-C	-5.54	106.49	113.20
5	f	112	VAL	CA-C-O	5.54	126.50	120.57
33	H	138	GLN	CA-C-N	-5.53	112.44	120.29
33	H	138	GLN	C-N-CA	-5.53	112.44	120.29
50	Y	27	MET	CA-C-N	-5.53	112.87	120.28
50	Y	27	MET	C-N-CA	-5.53	112.87	120.28
10	k	17	ARG	CA-C-N	-5.52	113.17	122.29
10	k	17	ARG	C-N-CA	-5.52	113.17	122.29
6	g	137	GLU	CA-C-N	-5.52	115.91	123.14
6	g	137	GLU	C-N-CA	-5.52	115.91	123.14
38	M	47	ASP	N-CA-C	5.51	117.36	110.91
53	3	1363	A	N9-C1'-C2'	5.51	120.27	112.00
37	L	88	VAL	N-CA-C	5.51	115.83	108.11
37	L	96	ASN	CA-C-O	5.51	126.79	120.90
59	8	472	ARG	O-C-N	-5.50	115.78	122.22
1	b	71	ASP	CA-C-N	-5.50	112.80	122.09
1	b	71	ASP	C-N-CA	-5.50	112.80	122.09
46	U	35	ARG	CA-C-N	-5.50	117.74	122.96
46	U	35	ARG	C-N-CA	-5.50	117.74	122.96
8	i	39	LYS	CA-C-O	5.49	126.24	120.42
16	q	11	ALA	CA-C-N	-5.49	113.30	120.44
16	q	11	ALA	C-N-CA	-5.49	113.30	120.44
34	I	112	GLU	N-CA-C	-5.49	106.36	113.16
37	L	142	ARG	N-CA-C	-5.48	105.38	111.36
53	3	484	G	N9-C1'-C2'	5.48	122.22	114.00
51	Z	54	ARG	N-CA-C	-5.48	104.95	111.69
59	8	264	VAL	N-CA-C	5.47	116.62	108.46
38	M	45	ILE	O-C-N	-5.47	116.98	123.00
36	K	13	ASP	CA-C-N	-5.47	110.91	121.58
36	K	13	ASP	C-N-CA	-5.47	110.91	121.58
54	l	1060	U	N1-C1'-C2'	5.47	122.21	114.00
8	i	38	CYS	O-C-N	5.47	129.76	122.43

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	R	19	THR	CA-C-N	-5.47	111.83	120.63
43	R	19	THR	C-N-CA	-5.47	111.83	120.63
54	1	1178	C	N1-C1'-C2'	5.45	120.17	112.00
40	O	37	ARG	N-CA-C	5.45	119.48	111.04
54	1	158	U	N1-C1'-C2'	5.44	120.16	112.00
54	1	2324	U	N1-C1'-C2'	5.44	120.16	112.00
33	H	98	ALA	CA-C-N	-5.44	114.72	122.77
33	H	98	ALA	C-N-CA	-5.44	114.72	122.77
32	G	212	TYR	CA-C-N	-5.44	112.45	120.28
32	G	212	TYR	C-N-CA	-5.44	112.45	120.28
53	3	563	A	N9-C1'-C2'	5.44	120.16	112.00
16	q	29	ARG	CA-C-N	-5.43	116.09	123.10
16	q	29	ARG	C-N-CA	-5.43	116.09	123.10
34	I	158	LEU	CA-C-N	-5.43	113.05	120.44
34	I	158	LEU	C-N-CA	-5.43	113.05	120.44
50	Y	49	ALA	O-C-N	-5.43	116.36	122.12
51	Z	27	VAL	CA-C-N	-5.43	113.06	120.44
51	Z	27	VAL	C-N-CA	-5.43	113.06	120.44
53	3	1348	U	N1-C1'-C2'	5.42	120.13	112.00
33	H	67	ILE	CA-C-O	5.42	126.10	120.36
8	i	41	PHE	N-CA-C	-5.41	105.28	111.07
42	Q	103	CYS	N-CA-C	-5.41	99.92	108.73
43	R	51	GLN	CA-C-O	5.41	125.19	118.43
53	3	1492	A	N9-C1'-C2'	5.40	120.11	112.00
59	8	556	GLY	CA-C-N	-5.40	112.75	120.42
59	8	556	GLY	C-N-CA	-5.40	112.75	120.42
10	k	39	ILE	CA-C-O	5.39	126.97	121.63
15	p	111	GLU	N-CA-C	5.39	118.10	110.50
52	a	6	LYS	N-CA-C	5.39	122.27	110.80
59	8	104	ARG	CA-C-N	-5.38	112.28	121.97
59	8	104	ARG	C-N-CA	-5.38	112.28	121.97
59	8	243	LEU	CA-C-O	5.38	126.73	120.49
22	w	71	LYS	CA-C-N	-5.38	114.87	122.34
22	w	71	LYS	C-N-CA	-5.38	114.87	122.34
59	8	590	GLU	N-CA-C	-5.37	105.42	111.28
32	G	221	ARG	CA-C-N	-5.37	111.64	121.52
32	G	221	ARG	C-N-CA	-5.37	111.64	121.52
37	L	125	ASP	CA-C-O	5.36	125.55	119.27
47	V	51	GLU	N-CA-C	5.36	120.09	113.50
25	z	32	GLY	CA-C-N	-5.36	113.10	120.71
25	z	32	GLY	C-N-CA	-5.36	113.10	120.71
39	N	33	SER	N-CA-C	5.35	122.20	110.80

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	w	53	HIS	N-CA-C	-5.35	106.12	113.56
1	b	161	VAL	CA-C-N	-5.35	114.92	122.94
1	b	161	VAL	C-N-CA	-5.35	114.92	122.94
26	A	48	GLN	CA-C-N	-5.35	112.58	120.28
26	A	48	GLN	C-N-CA	-5.35	112.58	120.28
54	1	2820	A	N9-C1'-C2'	5.35	120.02	112.00
8	i	19	PRO	CA-C-O	5.34	130.32	120.60
4	e	167	ALA	N-CA-C	-5.34	105.57	111.71
5	f	25	ILE	CA-C-N	-5.34	114.52	122.74
5	f	25	ILE	C-N-CA	-5.34	114.52	122.74
34	I	111	ALA	CA-C-N	-5.34	112.71	122.38
34	I	111	ALA	C-N-CA	-5.34	112.71	122.38
53	3	496	A	N9-C1'-C2'	5.34	120.01	112.00
59	8	416	ILE	N-CA-C	5.34	116.98	108.87
34	I	159	GLU	O-C-N	5.33	127.85	122.09
37	L	100	MET	CA-C-N	-5.33	112.72	120.29
37	L	100	MET	C-N-CA	-5.33	112.72	120.29
4	e	34	THR	CA-C-O	5.33	126.56	120.54
44	S	27	LYS	CA-C-N	-5.32	113.75	122.79
44	S	27	LYS	C-N-CA	-5.32	113.75	122.79
8	i	39	LYS	N-CA-C	-5.31	105.57	111.36
31	F	21	GLY	CA-C-N	-5.31	116.18	123.14
31	F	21	GLY	C-N-CA	-5.31	116.18	123.14
32	G	32	GLY	CA-C-N	-5.31	113.54	123.05
32	G	32	GLY	C-N-CA	-5.31	113.54	123.05
3	d	121	VAL	N-CA-C	5.31	117.27	108.99
31	F	22	VAL	CA-C-N	-5.31	114.34	121.66
31	F	22	VAL	C-N-CA	-5.31	114.34	121.66
49	X	31	ARG	CA-C-N	-5.31	113.45	123.27
49	X	31	ARG	C-N-CA	-5.31	113.45	123.27
42	Q	96	THR	CA-C-O	5.30	127.87	121.88
32	G	57	ASN	N-CA-C	-5.30	105.50	111.28
33	H	57	GLU	CA-C-N	-5.30	116.31	123.46
33	H	57	GLU	C-N-CA	-5.30	116.31	123.46
2	c	187	LEU	CA-C-N	-5.30	114.25	122.09
2	c	187	LEU	C-N-CA	-5.30	114.25	122.09
42	Q	97	VAL	CA-C-N	-5.29	113.48	121.05
42	Q	97	VAL	C-N-CA	-5.29	113.48	121.05
54	1	727	A	N9-C1'-C2'	5.29	119.94	112.00
19	t	67	VAL	CA-C-N	-5.29	112.02	122.02
19	t	67	VAL	C-N-CA	-5.29	112.02	122.02
39	N	49	GLN	N-CA-C	5.29	120.80	113.45

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	f	100	ASN	CA-C-N	-5.29	116.22	123.14
5	f	100	ASN	C-N-CA	-5.29	116.22	123.14
10	k	9	ASN	CA-C-N	-5.29	115.55	122.37
10	k	9	ASN	C-N-CA	-5.29	115.55	122.37
54	l	2333	A	C2'-C3'-O3'	-5.29	105.77	113.70
8	i	54	ILE	N-CA-C	-5.29	101.97	107.84
59	8	340	SER	O-C-N	5.29	129.72	123.33
59	8	436	GLY	N-CA-C	-5.29	106.37	112.50
38	M	91	LEU	N-CA-C	5.28	117.18	109.84
53	3	128	G	N9-C1'-C2'	5.28	119.91	112.00
15	p	107	ALA	CA-C-N	-5.27	114.38	122.87
15	p	107	ALA	C-N-CA	-5.27	114.38	122.87
34	I	129	VAL	N-CA-C	5.27	117.22	108.99
52	a	28	ALA	CA-C-N	-5.27	111.72	120.68
52	a	28	ALA	C-N-CA	-5.27	111.72	120.68
44	S	35	ALA	CA-C-N	-5.27	114.08	122.66
44	S	35	ALA	C-N-CA	-5.27	114.08	122.66
12	m	105	MET	CA-C-N	-5.27	114.20	122.73
12	m	105	MET	C-N-CA	-5.27	114.20	122.73
8	i	31	GLY	CA-C-N	-5.26	113.09	120.77
8	i	31	GLY	C-N-CA	-5.26	113.09	120.77
2	c	201	LEU	O-C-N	-5.26	115.73	122.94
54	l	2343	U	N1-C1'-C2'	5.26	119.89	112.00
1	b	4	LYS	CA-C-N	-5.25	113.58	122.67
1	b	4	LYS	C-N-CA	-5.25	113.58	122.67
23	x	46	VAL	CA-C-O	5.25	126.15	120.43
33	H	137	VAL	N-CA-C	5.25	115.39	110.30
38	M	45	ILE	CA-C-O	5.25	127.03	121.67
35	J	127	TYR	N-CA-C	5.25	118.49	110.36
7	h	64	VAL	CA-C-N	-5.23	112.86	120.29
7	h	64	VAL	C-N-CA	-5.23	112.86	120.29
17	r	14	VAL	N-CA-C	5.23	117.39	108.86
3	d	149	ILE	CA-C-N	-5.23	114.38	122.59
3	d	149	ILE	C-N-CA	-5.23	114.38	122.59
33	H	135	ARG	CA-C-N	-5.23	113.28	120.28
33	H	135	ARG	C-N-CA	-5.23	113.28	120.28
37	L	22	LEU	CA-C-N	-5.23	113.28	120.28
37	L	22	LEU	C-N-CA	-5.23	113.28	120.28
7	h	12	VAL	CA-C-N	-5.23	111.80	120.68
7	h	12	VAL	C-N-CA	-5.23	111.80	120.68
59	8	26	THR	CA-C-N	-5.23	113.28	120.28
59	8	26	THR	C-N-CA	-5.23	113.28	120.28

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	G	56	LEU	N-CA-C	-5.22	105.67	111.36
54	1	2832	U	N1-C1'-C2'	5.22	119.83	112.00
13	n	60	VAL	N-CA-C	-5.22	106.71	111.67
28	C	9	LYS	CA-C-N	-5.22	115.04	123.23
28	C	9	LYS	C-N-CA	-5.22	115.04	123.23
23	x	29	LEU	CA-C-O	5.21	123.93	119.66
54	1	501	A	N9-C1'-C2'	5.21	119.81	112.00
59	8	180	THR	CA-C-O	5.21	125.02	119.34
59	8	602	LYS	CA-C-N	-5.21	113.51	120.54
59	8	602	LYS	C-N-CA	-5.21	113.51	120.54
37	L	3	ARG	CA-C-N	-5.21	114.49	122.87
37	L	3	ARG	C-N-CA	-5.21	114.49	122.87
59	8	627	ASN	CA-C-O	-5.21	114.37	120.20
50	Y	36	ALA	N-CA-C	-5.20	105.79	111.82
32	G	78	ALA	CA-C-N	-5.20	114.01	120.56
32	G	78	ALA	C-N-CA	-5.20	114.01	120.56
59	8	123	SER	N-CA-C	-5.20	106.62	113.12
54	1	2847	U	N1-C1'-C2'	5.20	119.79	112.00
32	G	46	VAL	CB-CA-C	-5.19	108.77	113.70
53	3	413	G	N9-C1'-C2'	5.19	121.78	114.00
54	1	1419	A	N9-C1'-C2'	5.18	119.77	112.00
59	8	216	ASN	N-CA-C	-5.18	106.12	112.90
23	x	46	VAL	O-C-N	-5.17	117.48	123.07
46	U	69	ASP	N-CA-C	5.17	121.81	110.80
59	8	500	ASP	N-CA-C	5.17	116.50	110.41
8	i	26	ALA	N-CA-C	5.16	118.74	112.23
34	I	77	GLU	N-CA-C	-5.16	105.73	111.36
50	Y	80	ALA	N-CA-C	-5.16	105.78	111.71
2	c	125	TRP	CA-C-N	-5.16	115.31	122.74
2	c	125	TRP	C-N-CA	-5.16	115.31	122.74
3	d	83	VAL	N-CA-C	5.15	120.05	109.34
20	u	25	LYS	N-CA-C	-5.14	104.60	111.24
59	8	178	HIS	O-C-N	5.14	128.51	122.34
40	O	5	ARG	CA-C-N	-5.14	116.72	122.93
40	O	5	ARG	C-N-CA	-5.14	116.72	122.93
3	d	119	ILE	CA-C-N	-5.13	116.28	123.10
3	d	119	ILE	C-N-CA	-5.13	116.28	123.10
57	6	3	C	N1-C1'-C2'	5.13	119.69	112.00
29	D	36	ALA	N-CA-C	-5.12	106.29	112.54
47	V	78	VAL	N-CA-C	-5.12	102.48	109.55
10	k	63	VAL	N-CA-C	5.12	116.05	111.90
8	i	58	ILE	O-C-N	5.12	127.67	122.71

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	K	7	VAL	CA-C-N	-5.12	112.99	121.89
36	K	7	VAL	C-N-CA	-5.12	112.99	121.89
54	1	1066	U	N1-C1'-C2'	5.11	119.66	112.00
54	1	1818	U	N1-C1'-C2'	5.11	119.66	112.00
54	1	1313	U	N1-C1'-C2'	5.10	119.65	112.00
15	p	81	ASP	CA-C-N	-5.10	113.87	122.29
15	p	81	ASP	C-N-CA	-5.10	113.87	122.29
16	q	113	LYS	N-CA-C	-5.10	105.85	111.71
25	z	15	ARG	N-CA-C	5.10	117.11	110.53
43	R	5	GLY	N-CA-C	5.09	125.26	113.18
5	f	111	PRO	CA-C-N	-5.09	116.52	122.93
5	f	111	PRO	C-N-CA	-5.09	116.52	122.93
9	j	84	ILE	CA-C-N	-5.09	114.22	121.50
9	j	84	ILE	C-N-CA	-5.09	114.22	121.50
6	g	115	VAL	N-CA-C	5.09	116.30	108.71
18	s	48	LYS	N-CA-C	-5.09	105.92	111.82
23	x	19	HIS	N-CA-C	-5.09	105.73	111.28
54	1	1395	A	N9-C1'-C2'	5.09	119.63	112.00
59	8	234	MET	CA-C-N	-5.09	112.46	120.60
59	8	234	MET	C-N-CA	-5.09	112.46	120.60
6	g	47	PHE	O-C-N	5.09	127.58	122.09
20	u	53	GLN	N-CA-C	5.09	117.89	108.94
1	b	78	GLU	CA-C-N	-5.08	113.10	121.80
1	b	78	GLU	C-N-CA	-5.08	113.10	121.80
36	K	23	GLU	CA-C-N	-5.08	113.83	120.44
36	K	23	GLU	C-N-CA	-5.08	113.83	120.44
23	x	18	SER	N-CA-C	5.08	117.41	110.55
54	1	2273	A	N9-C1'-C2'	5.08	119.62	112.00
3	d	193	VAL	CA-C-N	-5.08	113.48	120.28
3	d	193	VAL	C-N-CA	-5.08	113.48	120.28
5	f	113	ASP	CA-C-N	-5.08	115.03	122.19
5	f	113	ASP	C-N-CA	-5.08	115.03	122.19
34	I	49	ASP	CA-C-O	5.07	127.77	120.51
52	a	203	GLN	CA-C-N	-5.07	115.03	122.19
52	a	203	GLN	C-N-CA	-5.07	115.03	122.19
17	r	64	VAL	CB-CA-C	-5.07	107.40	111.71
42	Q	96	THR	O-C-N	-5.07	115.49	122.23
30	E	50	SER	CA-C-O	5.07	127.61	121.88
54	1	2326	C	C2'-C3'-O3'	5.07	121.30	113.70
33	H	111	ASP	N-CA-C	-5.06	99.07	108.24
46	U	29	ASN	CA-C-N	-5.06	116.01	122.19
46	U	29	ASN	C-N-CA	-5.06	116.01	122.19

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	G	131	LYS	N-CA-C	5.06	116.61	111.14
51	Z	20	ARG	CA-C-N	-5.06	112.29	121.14
51	Z	20	ARG	C-N-CA	-5.06	112.29	121.14
54	1	1111	A	N9-C1'-C2'	5.06	119.59	112.00
45	T	79	GLN	CA-C-N	-5.06	113.11	120.29
45	T	79	GLN	C-N-CA	-5.06	113.11	120.29
34	I	122	ILE	CA-C-N	-5.05	114.02	122.21
34	I	122	ILE	C-N-CA	-5.05	114.02	122.21
33	H	33	ASP	CA-C-N	-5.05	112.30	121.14
33	H	33	ASP	C-N-CA	-5.05	112.30	121.14
3	d	120	VAL	CA-C-N	-5.05	114.24	122.57
3	d	120	VAL	C-N-CA	-5.05	114.24	122.57
39	N	101	GLY	N-CA-C	5.05	117.41	111.35
41	P	19	VAL	CA-C-N	-5.05	114.06	122.64
41	P	19	VAL	C-N-CA	-5.05	114.06	122.64
24	y	44	LYS	N-CA-C	5.04	116.47	111.07
54	1	443	A	N9-C1'-C2'	5.04	119.57	112.00
49	X	19	GLU	CA-C-O	5.04	125.89	120.55
35	J	123	LEU	N-CA-C	-5.04	103.75	110.55
53	3	1256	A	N9-C1'-C2'	5.03	119.54	112.00
59	8	167	VAL	CA-C-O	5.03	126.68	119.95
26	A	21	VAL	CA-C-N	-5.02	115.16	122.44
26	A	21	VAL	C-N-CA	-5.02	115.16	122.44
5	f	49	LEU	CA-C-O	-5.01	115.59	121.46
59	8	603	GLU	CA-C-N	-5.01	113.86	120.22
59	8	603	GLU	C-N-CA	-5.01	113.86	120.22
59	8	380	GLY	CA-C-N	-5.01	111.98	121.54
59	8	380	GLY	C-N-CA	-5.01	111.98	121.54
14	o	115	LEU	CA-C-O	5.00	126.76	121.16
59	8	71	PHE	CA-C-N	-5.00	112.99	121.85
59	8	71	PHE	C-N-CA	-5.00	112.99	121.85

There are no chirality outliers.

All (90) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
54	1	1060	U	Sidechain
54	1	1087	G	Sidechain
54	1	1204	A	Sidechain
54	1	1212	G	Sidechain
54	1	1271	G	Sidechain
54	1	1328	A	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	1	1432	G	Sidechain
54	1	1433	A	Sidechain
54	1	1558	C	Sidechain
54	1	1645	G	Sidechain
54	1	1647	U	Sidechain
54	1	1775	U	Sidechain
54	1	1827	U	Sidechain
54	1	1828	G	Sidechain
54	1	1937	A	Sidechain
54	1	196	A	Sidechain
54	1	1981	A	Sidechain
54	1	1990	C	Sidechain
54	1	1996	C	Sidechain
54	1	2061	G	Sidechain
54	1	2114	A	Sidechain
54	1	2266	A	Sidechain
54	1	2273	A	Sidechain
54	1	2326	C	Sidechain
54	1	2401	U	Sidechain
54	1	2424	C	Sidechain
54	1	2447	G	Sidechain
54	1	2452	C	Sidechain
54	1	2500	U	Sidechain
54	1	2517	C	Sidechain
54	1	2529	G	Sidechain
54	1	2532	G	Sidechain
54	1	2659	G	Sidechain
54	1	2662	A	Sidechain
54	1	27	G	Sidechain
54	1	2725	A	Sidechain
54	1	2728	U	Sidechain
54	1	2883	A	Sidechain
54	1	370	G	Sidechain
54	1	411	G	Sidechain
54	1	446	G	Sidechain
54	1	450	G	Sidechain
54	1	476	G	Sidechain
54	1	477	A	Sidechain
54	1	488	G	Sidechain
54	1	500	G	Sidechain
54	1	501	A	Sidechain
54	1	506	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	1	512	G	Sidechain
54	1	562	U	Sidechain
54	1	683	U	Sidechain
54	1	726	G	Sidechain
54	1	727	A	Sidechain
54	1	757	G	Sidechain
54	1	775	G	Sidechain
54	1	810	U	Sidechain
54	1	868	U	Sidechain
54	1	894	U	Sidechain
54	1	973	A	Sidechain
55	2	1	U	Sidechain
55	2	119	A	Sidechain
55	2	24	G	Sidechain
53	3	1064	G	Sidechain
53	3	1178	G	Sidechain
53	3	1191	A	Sidechain
53	3	1285	A	Sidechain
53	3	1301	U	Sidechain
53	3	1316	G	Sidechain
53	3	1323	G	Sidechain
53	3	308	C	Sidechain
53	3	324	G	Sidechain
53	3	383	A	Sidechain
53	3	384	G	Sidechain
53	3	396	C	Sidechain
53	3	413	G	Sidechain
53	3	484	G	Sidechain
53	3	532	A	Sidechain
53	3	57	G	Sidechain
53	3	703	G	Sidechain
53	3	872	A	Sidechain
53	3	898	G	Sidechain
53	3	938	A	Sidechain
58	4	18	G	Sidechain
56	5	44	G	Sidechain
57	6	3	C	Sidechain
59	8	598	SER	Mainchain
34	I	152	SER	Mainchain
36	K	53	LYS	Mainchain
46	U	73	ALA	Mainchain
18	s	58	ALA	Mainchain

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	b	2083	0	2157	153	0
2	c	1565	0	1616	98	0
3	d	1552	0	1619	104	0
4	e	1411	0	1447	112	0
5	f	1323	0	1374	87	0
6	g	936	0	961	58	0
7	h	633	0	666	65	0
8	i	551	0	577	57	0
9	j	1129	0	1162	61	0
10	k	939	0	1012	75	0
11	l	1045	0	1117	69	0
12	m	1074	0	1157	71	0
13	n	961	0	1000	75	0
14	o	892	0	923	47	0
15	p	917	0	965	66	0
16	q	947	0	1022	51	0
17	r	816	0	839	47	0
18	s	857	0	922	40	0
19	t	739	0	807	35	0
20	u	780	0	834	42	0
21	v	753	0	780	37	0
22	w	575	0	592	29	0
23	x	625	0	655	41	0
24	y	509	0	543	38	0
25	z	449	0	491	26	0
26	A	523	0	524	30	0
27	B	444	0	461	33	0
28	C	410	0	440	18	0
29	D	377	0	418	17	0
30	E	504	0	574	24	0
31	F	302	0	343	28	0
32	G	1705	0	1732	120	0
33	H	1625	0	1699	114	0
34	I	1643	0	1710	198	0
35	J	1157	0	1199	93	0
36	K	818	0	808	85	0
37	L	1182	0	1240	95	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	M	979	0	1034	90	0
39	N	1022	0	1070	102	0
40	O	787	0	828	80	0
41	P	870	0	878	75	0
42	Q	955	0	1019	100	0
43	R	884	0	944	85	0
44	S	805	0	847	76	0
45	T	714	0	737	43	0
46	U	649	0	666	86	0
47	V	649	0	691	81	0
48	W	536	0	552	34	0
49	X	638	0	665	58	0
50	Y	665	0	714	70	0
51	Z	545	0	579	55	0
52	a	1027	0	1092	88	0
53	3	33012	0	16618	1129	0
54	1	62317	0	31346	1557	0
55	2	2568	0	1303	70	0
56	5	1647	0	831	26	0
57	6	1640	0	837	38	0
58	4	346	0	175	19	0
59	8	5312	0	5283	508	0
60	1	10	0	10	0	0
61	5	7	0	7	0	0
62	8	32	0	14	8	0
63	8	1	0	0	0	0
All	All	153368	0	105126	6337	0

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 25.

All (6337) 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)
46:U:79:ASN:HD21	46:U:82:ALA:HB3	1.06	1.14
55:2:3:C:H2'	55:2:4:C:H5''	1.27	1.12
51:Z:24:LYS:HB3	51:Z:26:GLY:H	0.95	1.11
52:a:6:LYS:O	52:a:8:MET:N	1.82	1.11
51:Z:23:GLU:O	51:Z:24:LYS:HB2	1.31	1.09
59:8:115:ALA:HB2	59:8:143:LYS:HB2	1.32	1.09
58:4:18:G:H3'	58:4:19:C:H5''	1.34	1.09

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:J:83:PRO:HG3	35:J:97:PRO:HD2	1.35	1.08
53:3:354:G:H2'	53:3:355:C:H5''	1.34	1.07
59:8:62:THR:HG22	59:8:91:GLY:HA2	1.34	1.07
54:1:1243:C:H2'	54:1:1244:A:H5''	1.37	1.06
38:M:9:MET:HG3	38:M:26:MET:HE1	1.36	1.06
42:Q:106:VAL:HG21	42:Q:109:ARG:HE	1.16	1.05
51:Z:23:GLU:O	51:Z:24:LYS:CB	2.03	1.05
32:G:17:HIS:HD2	32:G:37:VAL:HG21	1.18	1.03
34:I:24:VAL:HB	53:3:409:U:H5''	1.41	1.00
59:8:6:PRO:HG3	59:8:9:ARG:HE	1.24	0.99
54:1:1851:U:H4'	57:6:70:G:H21	1.24	0.99
34:I:90:LEU:HA	34:I:93:LEU:HD12	1.43	0.99
58:4:17:U:H2'	58:4:18:G:H4'	1.43	0.99
24:y:24:GLU:HG3	24:y:28:LEU:HG	1.45	0.99
53:3:108:G:H5''	53:3:109:A:C2	1.97	0.99
4:e:118:ALA:HA	4:e:166:ARG:HH12	1.23	0.98
43:R:92:ARG:HE	43:R:94:LEU:HD12	1.27	0.98
36:K:47:LEU:HD12	36:K:55:HIS:HA	1.44	0.98
54:1:2800:A:H3'	54:1:2801:G:H5'	1.46	0.98
47:V:11:VAL:HA	47:V:22:VAL:HG22	1.45	0.98
2:c:176:ASP:HB2	2:c:190:LYS:HB3	1.44	0.97
33:H:171:ARG:HG2	33:H:173:PRO:HD3	1.45	0.97
51:Z:24:LYS:HB3	51:Z:26:GLY:N	1.78	0.97
13:n:34:ILE:HG12	13:n:113:ILE:HG22	1.47	0.97
34:I:97:LEU:HD21	34:I:117:VAL:HG21	1.46	0.97
40:O:41:PRO:HG3	53:3:1150:A:N3	1.80	0.97
54:1:2297:A:N1	54:1:2321:U:H5	1.62	0.96
42:Q:28:GLN:HG2	42:Q:80:LEU:HD21	1.47	0.96
53:3:386:C:H2'	53:3:387:U:H5''	1.47	0.96
35:J:80:LEU:HD23	35:J:122:VAL:HG11	1.48	0.95
59:8:520:ILE:HB	59:8:576:ILE:HD11	1.47	0.95
54:1:2328:A:H2'	54:1:2329:U:C6	2.01	0.95
51:Z:24:LYS:CB	51:Z:26:GLY:H	1.78	0.95
1:b:155:ARG:HB2	54:1:1818:U:H5''	1.47	0.94
59:8:493:THR:HG22	59:8:613:LEU:HD11	1.45	0.94
43:R:15:VAL:HG23	43:R:16:ILE:HD12	1.50	0.94
53:3:112:G:H21	53:3:354:G:H5'	1.30	0.94
8:i:11:GLN:HG2	8:i:12:VAL:H	1.32	0.94
43:R:47:LEU:HB3	43:R:52:ILE:HD11	1.49	0.94
47:V:4:ILE:HG23	47:V:5:ARG:H	1.32	0.94
51:Z:16:ARG:HB2	51:Z:16:ARG:HH11	1.32	0.94

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:1638:C:H2'	54:1:1639:C:H5''	1.48	0.94
53:3:1502:A:H8	53:3:1505:G:H22	0.99	0.93
32:G:17:HIS:CD2	32:G:37:VAL:HG21	2.03	0.93
35:J:47:PHE:H	35:J:69:ASN:HD21	0.96	0.93
53:3:135:C:H2'	53:3:136:C:H5''	1.47	0.93
13:n:44:LEU:HD23	13:n:113:ILE:HD13	1.48	0.93
46:U:72:ALA:HA	46:U:75:ILE:HG22	1.50	0.92
53:3:108:G:H5''	53:3:109:A:H2	1.34	0.92
54:1:322:A:H5'	54:1:340:A:H1'	1.50	0.92
54:1:1702:G:H2'	54:1:1703:G:H5''	1.51	0.92
34:I:38:GLY:HA3	53:3:542:G:H5''	1.48	0.92
34:I:132:ALA:H	53:3:403:C:H5'	1.34	0.92
54:1:2557:G:H2'	54:1:2558:C:C6	2.05	0.92
53:3:555:U:H2'	53:3:556:C:C6	2.05	0.92
46:U:18:GLN:HB3	46:U:35:ARG:HD2	1.52	0.92
59:8:11:ARG:HH22	59:8:286:LEU:HB3	1.34	0.92
59:8:97:ILE:HG13	59:8:101:ARG:HH12	1.35	0.92
3:d:94:GLN:HE22	3:d:96:VAL:HG13	1.34	0.91
49:X:52:ASN:HD22	49:X:55:GLN:NE2	1.67	0.91
47:V:12:VAL:HG23	47:V:23:ALA:H	1.34	0.91
59:8:164:ALA:HB1	59:8:262:ILE:HD11	1.49	0.91
6:g:1:MET:HE3	6:g:2:GLN:H	1.34	0.91
8:i:34:ILE:H	8:i:34:ILE:HD12	1.34	0.91
54:1:275:C:H2'	54:1:276:U:H4'	1.50	0.91
56:5:26:A:N6	56:5:44:G:H1	1.67	0.91
2:c:188:LEU:HD23	2:c:188:LEU:H	1.36	0.91
59:8:632:ILE:HA	59:8:635:LEU:HD12	1.53	0.91
1:b:12:ARG:HD3	1:b:15:VAL:HG21	1.51	0.90
52:a:5:THR:O	52:a:6:LYS:O	1.89	0.90
28:C:28:THR:HG23	28:C:29:LYS:HG2	1.53	0.90
14:o:16:ARG:HA	14:o:19:GLN:HG2	1.54	0.90
34:I:24:VAL:HB	53:3:409:U:C5'	2.00	0.90
59:8:17:ALA:HB3	59:8:23:LYS:HD3	1.54	0.90
38:M:46:GLU:HG2	38:M:63:LYS:HG2	1.52	0.90
53:3:380:G:H2'	53:3:381:C:H5''	1.54	0.90
40:O:52:LEU:HB2	44:S:80:ARG:HE	1.34	0.90
53:3:105:G:H2'	53:3:106:C:C6	2.07	0.89
54:1:1078:U:H4'	54:1:1079:C:H5''	1.54	0.89
35:J:47:PHE:H	35:J:69:ASN:ND2	1.70	0.89
36:K:18:VAL:HG13	36:K:19:PRO:HD3	1.53	0.89
54:1:1367:A:H2'	54:1:1368:G:H5'	1.54	0.89

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:s:92:ARG:HH11	18:s:92:ARG:HB2	1.38	0.89
34:I:78:ALA:HB2	34:I:89:LEU:HD13	1.54	0.89
9:j:81:ILE:H	9:j:81:ILE:HD12	1.37	0.88
5:f:17:LYS:HB2	5:f:24:THR:HB	1.55	0.88
4:e:121:PHE:HB3	4:e:162:ASP:HB2	1.54	0.88
12:m:74:THR:HG21	12:m:86:LYS:HE2	1.54	0.88
53:3:328:C:H5'	53:3:329:A:H5'	1.56	0.88
59:8:62:THR:HG22	59:8:91:GLY:CA	2.02	0.88
14:o:31:THR:HG22	14:o:32:PRO:HD2	1.53	0.88
53:3:12:U:H4'	53:3:526:C:H4'	1.55	0.88
59:8:342:VAL:HG12	59:8:379:ALA:H	1.38	0.88
53:3:955:U:H3	53:3:1225:A:H61	1.21	0.88
26:A:58:ASP:HA	26:A:61:ASN:HD22	1.39	0.88
39:N:9:GLY:HA2	39:N:80:HIS:HB3	1.56	0.87
59:8:23:LYS:HG2	59:8:89:THR:HG22	1.57	0.87
52:a:44:VAL:HA	52:a:214:ILE:HG22	1.56	0.87
59:8:158:ILE:HD12	59:8:162:LEU:HD13	1.57	0.87
59:8:448:TRP:HB2	59:8:457:ILE:HB	1.55	0.87
51:Z:16:ARG:HB2	51:Z:16:ARG:NH1	1.89	0.87
59:8:353:VAL:HB	59:8:404:ILE:HD12	1.57	0.87
4:e:32:LYS:HA	4:e:95:MET:HE2	1.56	0.87
53:3:313:A:H2'	53:3:314:C:C6	2.09	0.86
17:r:76:LYS:HB2	17:r:85:LYS:HB3	1.57	0.86
26:A:58:ASP:HA	26:A:61:ASN:ND2	1.89	0.86
54:1:1052:C:H2'	54:1:1053:C:H5'	1.54	0.86
59:8:147:MET:HA	59:8:176:GLU:HG2	1.57	0.86
33:H:42:LEU:HD23	33:H:54:ILE:HG21	1.56	0.86
51:Z:9:GLU:HB3	51:Z:10:PRO:HD3	1.55	0.86
55:2:1:U:C5	55:2:2:G:N7	2.43	0.86
33:H:149:LYS:HB3	33:H:200:TRP:HB2	1.55	0.86
47:V:13:SER:HA	47:V:54:ILE:HG22	1.54	0.86
59:8:445:PHE:HE2	59:8:458:ILE:HG23	1.37	0.86
22:w:33:ILE:HG21	22:w:76:ILE:HG21	1.57	0.86
54:1:1857:G:H1'	54:1:1885:A:N6	1.91	0.86
59:8:472:ARG:O	59:8:476:GLU:HB2	1.74	0.85
37:L:11:ILE:H	37:L:11:ILE:HD12	1.41	0.85
59:8:435:LEU:HA	59:8:438:LEU:HB2	1.56	0.85
27:B:21:LEU:HD12	27:B:21:LEU:H	1.39	0.85
43:R:106:ARG:NE	43:R:106:ARG:HA	1.92	0.85
1:b:67:LYS:HG2	1:b:69:ASN:HD22	1.38	0.85
57:6:37:A:H2'	57:6:38:A:H5'	1.58	0.85

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:M:42:GLU:HG2	38:M:100:ILE:HD13	1.57	0.85
33:H:107:LYS:HD2	33:H:110:LEU:HD12	1.58	0.85
39:N:90:ASP:O	39:N:94:ARG:N	2.08	0.85
42:Q:38:THR:HG22	42:Q:50:LYS:HA	1.57	0.85
53:3:813:U:H2'	53:3:814:A:H5''	1.58	0.85
53:3:354:G:C2'	53:3:355:C:H5''	2.07	0.85
59:8:495:ARG:HA	59:8:495:ARG:HE	1.41	0.85
3:d:28:VAL:HG12	11:l:6:LEU:HD21	1.57	0.84
59:8:420:VAL:HA	59:8:483:VAL:HA	1.57	0.84
35:J:162:GLU:OE2	35:J:163:ILE:HG23	1.76	0.84
11:l:70:LYS:HA	11:l:73:ILE:HD12	1.58	0.84
41:P:52:ARG:NH1	41:P:52:ARG:HA	1.93	0.84
53:3:1450:U:H2'	53:3:1452:C:H5'	1.59	0.84
36:K:37:HIS:HB3	36:K:97:THR:HB	1.60	0.84
33:H:59:PRO:HG2	33:H:62:SER:HB3	1.60	0.84
53:3:1259:C:H3'	53:3:1260:G:H5''	1.60	0.84
1:b:120:ASP:HB2	6:g:91:PHE:HZ	1.42	0.83
35:J:47:PHE:N	35:J:69:ASN:HD21	1.74	0.83
53:3:31:G:N2	53:3:47:C:H5''	1.91	0.83
23:x:18:SER:HB3	23:x:22:ASN:H	1.44	0.83
54:1:2243:U:H2'	54:1:2244:U:C6	2.13	0.83
59:8:62:THR:CG2	59:8:91:GLY:CA	2.56	0.83
9:j:61:LYS:HE2	9:j:61:LYS:HA	1.61	0.83
54:1:1801:A:H5''	54:1:2203:U:H2'	1.59	0.83
59:8:62:THR:CG2	59:8:91:GLY:HA2	2.08	0.83
44:S:62:ARG:HH12	44:S:69:PRO:HB3	1.42	0.83
55:2:66:A:H61	55:2:107:G:H2'	1.42	0.83
24:y:17:GLU:HB3	24:y:53:VAL:HG11	1.58	0.82
35:J:13:LYS:HB3	35:J:37:VAL:HG23	1.61	0.82
11:l:124:GLY:H	11:l:144:GLU:HA	1.40	0.82
26:A:20:ASN:HB2	26:A:39:LYS:HD3	1.61	0.82
42:Q:113:ARG:HH21	42:Q:120:ARG:HG3	1.43	0.82
53:3:389:A:C6	53:3:390:U:H1'	2.14	0.82
53:3:456:A:H61	53:3:476:U:H3	1.23	0.82
55:2:3:C:C2'	55:2:4:C:H5''	2.08	0.82
55:2:118:C:H2'	55:2:119:A:H8	1.41	0.82
50:Y:79:THR:HA	50:Y:82:ILE:HG12	1.59	0.82
53:3:59:A:H1'	53:3:354:G:N2	1.94	0.82
41:P:87:GLY:H	41:P:113:THR:HG22	1.42	0.82
43:R:92:ARG:NE	43:R:94:LEU:HD12	1.93	0.82
53:3:392:C:H2'	53:3:393:A:H8	1.45	0.82

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:392:C:H2'	53:3:393:A:C8	2.14	0.82
53:3:439:U:H3	53:3:498:A:H61	1.27	0.82
54:1:799:G:H5''	54:1:800:A:H2'	1.61	0.82
3:d:18:THR:HG23	3:d:200:LEU:HD23	1.60	0.82
53:3:36:C:H2'	53:3:37:U:H5'	1.62	0.82
19:t:64:LYS:HA	19:t:79:ASP:OD2	1.80	0.81
33:H:180:ASP:HB2	33:H:204:GLY:HA3	1.61	0.81
42:Q:73:LEU:HD13	42:Q:102:ASP:HB3	1.60	0.81
53:3:1409:C:H4'	54:1:1914:C:N4	1.95	0.81
57:6:70:G:H2'	57:6:71:C:H4'	1.61	0.81
1:b:204:LEU:HD23	1:b:204:LEU:H	1.45	0.81
36:K:48:ALA:HB1	48:W:68:PRO:HG3	1.62	0.81
51:Z:14:ALA:HB1	51:Z:16:ARG:HH12	1.45	0.81
54:1:75:G:H22	54:1:111:A:H2	1.27	0.81
59:8:298:ILE:HG12	59:8:299:LEU:O	1.79	0.81
50:Y:70:LYS:HA	50:Y:73:ARG:HD3	1.60	0.81
54:1:1243:C:C2'	54:1:1244:A:H5''	2.10	0.81
33:H:10:ARG:HA	33:H:13:ILE:HD13	1.62	0.81
42:Q:23:LEU:HD22	42:Q:29:LYS:NZ	1.95	0.81
59:8:422:PRO:HG3	59:8:481:ALA:HB1	1.62	0.81
30:E:30:HIS:O	30:E:32:LEU:N	2.13	0.81
37:L:78:ARG:HE	37:L:81:GLY:HA2	1.46	0.81
46:U:31:ARG:HB2	53:3:310:G:H5''	1.62	0.81
36:K:47:LEU:HD13	36:K:51:ILE:HD12	1.62	0.81
59:8:299:LEU:HG	59:8:403:PRO:HB3	1.63	0.81
34:I:8:LEU:HD21	34:I:31:CYS:HB2	1.61	0.81
59:8:351:ASN:ND2	59:8:354:LYS:HB3	1.95	0.81
9:j:1:MET:HG3	9:j:2:LYS:H	1.46	0.80
54:1:784:G:H5'	54:1:785:G:OP1	1.80	0.80
34:I:81:LEU:HD13	34:I:88:ASN:OD1	1.81	0.80
43:R:7:ASN:HD22	43:R:21:ILE:HG13	1.46	0.80
2:c:123:LYS:HG3	2:c:165:MET:HE1	1.63	0.80
33:H:35:ASP:HB2	33:H:58:ARG:HH22	1.45	0.80
12:m:34:LYS:HE3	12:m:131:VAL:HG11	1.63	0.80
34:I:131:ILE:HA	53:3:403:C:H4'	1.61	0.80
54:1:2514:U:H2'	54:1:2515:C:C6	2.17	0.80
46:U:79:ASN:ND2	46:U:82:ALA:HB3	1.92	0.80
59:8:298:ILE:HG23	59:8:406:LEU:HD23	1.63	0.80
2:c:179:ARG:HB3	2:c:188:LEU:HD21	1.63	0.80
4:e:93:GLU:OE2	4:e:94:ARG:HG2	1.82	0.80
32:G:185:ILE:HA	32:G:199:ILE:HB	1.63	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:I:94:GLU:HG2	34:I:185:PRO:HG2	1.62	0.80
54:1:45:G:H5''	54:1:46:G:H5'	1.62	0.80
54:1:488:G:H22	54:1:491:G:H5''	1.47	0.80
56:5:26:A:H61	56:5:44:G:H1	0.84	0.80
57:6:47:U:H5''	57:6:48:C:H5'	1.63	0.80
12:m:57:VAL:HG11	12:m:105:MET:HE2	1.63	0.80
32:G:94:ARG:HH12	53:3:1100:C:H3'	1.46	0.80
39:N:125:GLN:HE22	53:3:943:U:H1'	1.46	0.80
1:b:107:LYS:HB2	1:b:195:GLY:HA2	1.64	0.80
33:H:13:ILE:HG22	33:H:14:VAL:HG13	1.63	0.80
40:O:52:LEU:HD21	40:O:59:LYS:HD2	1.64	0.80
59:8:256:VAL:HG12	59:8:261:ILE:HG13	1.64	0.80
19:t:24:MET:HE3	19:t:28:ASN:HA	1.64	0.79
31:F:36:ARG:HG3	31:F:37:GLN:HG2	1.64	0.79
53:3:926:G:H22	58:4:19:C:H3'	1.46	0.79
54:1:2310:C:H2'	54:1:2311:A:H5''	1.64	0.79
39:N:40:ARG:HD3	53:3:1292:G:H5'	1.64	0.79
25:z:40:THR:HB	25:z:43:ILE:HG12	1.64	0.79
46:U:20:VAL:HG23	46:U:34:GLU:O	1.82	0.79
22:w:36:GLN:HE22	22:w:41:PHE:HB2	1.47	0.79
32:G:8:MET:N	32:G:42:LEU:HD11	1.97	0.79
34:I:132:ALA:N	53:3:403:C:H5'	1.97	0.79
59:8:70:ALA:HB3	59:8:84:ILE:HB	1.64	0.79
53:3:167:A:H2'	53:3:168:G:H5''	1.65	0.79
53:3:1299:A:H2'	53:3:1300:G:H4'	1.64	0.79
53:3:1513:A:H2'	53:3:1514:G:H8	1.48	0.79
54:1:1597:A:H5''	54:1:1598:A:H5'	1.62	0.79
54:1:855:G:H3'	54:1:856:G:H5''	1.64	0.79
53:3:313:A:H2'	53:3:314:C:H6	1.48	0.79
53:3:412:A:H62	53:3:431:A:H61	1.30	0.79
53:3:1033:G:H2'	53:3:1034:G:H5''	1.65	0.79
54:1:2557:G:H2'	54:1:2558:C:H6	1.45	0.79
5:f:25:ILE:HD12	5:f:74:MET:HE2	1.64	0.79
5:f:174:LYS:HE3	54:1:2529:G:H4'	1.65	0.79
11:l:82:LEU:HD13	11:l:120:VAL:HG11	1.65	0.79
11:l:100:ILE:HG13	11:l:101:ILE:HG23	1.64	0.79
16:q:23:TYR:HB2	16:q:28:SER:HB3	1.64	0.79
34:I:97:LEU:HD23	34:I:98:ASP:N	1.98	0.79
34:I:103:ARG:HG3	34:I:169:TRP:HE1	1.48	0.79
47:V:14:ASP:HB2	47:V:53:GLY:HA2	1.65	0.79
56:5:1:C:H2'	56:5:2:G:C8	2.16	0.79

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:c:34:VAL:HA	2:c:50:VAL:HG12	1.64	0.78
14:o:40:ILE:HG12	14:o:47:VAL:HG12	1.64	0.78
34:I:75:TYR:HA	34:I:78:ALA:HB3	1.64	0.78
36:K:27:ALA:HA	36:K:30:THR:HB	1.65	0.78
42:Q:106:VAL:HG21	42:Q:109:ARG:NE	1.97	0.78
53:3:714:G:H2'	53:3:715:A:C8	2.18	0.78
59:8:494:ILE:HG13	59:8:524:PRO:HB3	1.65	0.78
7:h:3:LEU:HD11	7:h:5:LEU:HG	1.65	0.78
38:M:28:SER:HA	38:M:32:LYS:HD3	1.64	0.78
5:f:8:VAL:HG22	5:f:68:ARG:NH1	1.97	0.78
7:h:77:VAL:HG12	7:h:82:ILE:HD13	1.64	0.78
47:V:57:VAL:HB	47:V:79:GLU:HB3	1.65	0.78
41:P:55:ARG:NH1	41:P:55:ARG:HB3	1.99	0.78
45:T:63:ARG:HH12	45:T:87:ARG:NH1	1.82	0.78
54:1:1141:U:H4'	54:1:1142:A:O4'	1.84	0.78
7:h:2:ALA:HB3	7:h:6:GLN:HB3	1.66	0.78
53:3:1105:A:H2'	53:3:1106:G:C8	2.19	0.78
17:r:89:HIS:HE1	17:r:91:GLN:HB2	1.48	0.78
34:I:12:ARG:HB3	34:I:37:PRO:HG3	1.65	0.78
34:I:25:ARG:HH21	34:I:30:LYS:HB2	1.49	0.78
39:N:121:ARG:HE	53:3:1348:U:H4'	1.48	0.78
34:I:115:GLN:OE1	34:I:118:SER:HB3	1.84	0.78
20:u:5:ARG:HD3	54:1:84:A:H3'	1.65	0.78
53:3:411:A:H61	53:3:430:A:H62	1.29	0.78
32:G:19:THR:HG23	32:G:20:ARG:H	1.49	0.77
40:O:7:ARG:O	40:O:101:SER:HB2	1.84	0.77
42:Q:22:ALA:HB1	42:Q:56:LEU:HD12	1.66	0.77
53:3:355:C:H1'	53:3:388:G:H1'	1.66	0.77
54:1:2102:G:H1	54:1:2187:U:H3	1.32	0.77
53:3:112:G:N2	53:3:354:G:H5'	1.98	0.77
53:3:1237:C:H4'	53:3:1300:G:H22	1.48	0.77
54:1:2524:G:H2'	54:1:2525:G:H5''	1.67	0.77
59:8:19:ILE:HG13	62:8:801:GCP:O2G	1.85	0.77
4:e:118:ALA:HA	4:e:166:ARG:NH1	1.99	0.77
10:k:2:ILE:HD12	10:k:6:THR:HG21	1.65	0.77
34:I:202:LEU:O	34:I:202:LEU:HD23	1.85	0.77
37:L:48:THR:HA	37:L:51:GLN:HB2	1.64	0.77
41:P:28:ASN:ND2	41:P:30:ILE:HG13	1.99	0.77
38:M:94:VAL:CG2	38:M:101:ALA:HB2	2.14	0.77
54:1:2241:A:H2'	54:1:2242:G:H8	1.48	0.77
8:i:11:GLN:HB3	8:i:54:ILE:O	1.84	0.77

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:I:56:GLU:HG2	34:I:198:LEU:HB2	1.66	0.77
37:L:47:GLU:HB3	37:L:51:GLN:NE2	1.99	0.77
48:W:27:THR:HG23	48:W:28:LEU:HD12	1.65	0.77
53:3:1063:C:H2'	53:3:1064:G:C8	2.19	0.77
6:g:96:THR:HG22	6:g:117:LEU:HG	1.66	0.77
8:i:11:GLN:CG	8:i:12:VAL:H	1.96	0.77
33:H:151:GLU:HG2	33:H:166:TRP:HB3	1.64	0.77
54:1:2246:G:H2'	54:1:2247:A:H8	1.50	0.77
57:6:59:A:H2'	57:6:60:U:H5'	1.66	0.77
18:s:92:ARG:HB2	18:s:92:ARG:NH1	2.00	0.77
34:I:68:GLU:HB2	53:3:545:C:H5'	1.64	0.77
53:3:922:G:H21	53:3:1398:A:H8	1.32	0.77
8:i:25:PRO:HG2	54:1:1095:A:H2	1.49	0.77
40:O:12:ALA:HB2	40:O:96:VAL:HG13	1.66	0.77
53:3:1363:A:H2'	53:3:1365:G:N7	1.99	0.77
39:N:70:GLY:HA3	53:3:1371:G:O3'	1.85	0.77
46:U:46:LYS:HG3	46:U:47:GLU:H	1.50	0.77
49:X:14:LEU:HD13	49:X:34:SER:HB3	1.67	0.77
53:3:664:G:H22	53:3:741:G:H1	1.30	0.77
53:3:1383:C:H5'	57:6:34:C:C5	2.20	0.77
20:u:13:LEU:O	20:u:18:LYS:HG3	1.85	0.76
37:L:114:SER:HB3	37:L:117:LEU:HB2	1.64	0.76
34:I:64:TYR:O	34:I:96:ARG:NH1	2.18	0.76
53:3:1241:G:H2'	53:3:1242:G:H8	1.51	0.76
59:8:20:ASP:HA	62:8:801:GCP:H3B1	1.67	0.76
59:8:426:ALA:O	59:8:430:LYS:HE2	1.86	0.76
59:8:638:ARG:HH12	59:8:666:TYR:HB2	1.51	0.76
34:I:68:GLU:CB	53:3:545:C:H5'	2.15	0.76
3:d:46:GLN:HB3	3:d:83:VAL:HG21	1.65	0.76
12:m:2:LEU:HD12	12:m:2:LEU:H	1.51	0.76
33:H:137:VAL:HG12	33:H:141:MET:HE1	1.68	0.76
41:P:126:ARG:NH2	53:3:692:U:H5''	2.01	0.76
26:A:11:GLU:HA	26:A:25:ARG:HA	1.68	0.76
8:i:20:SER:HB3	8:i:21:PRO:HD3	1.68	0.76
53:3:922:G:H2'	53:3:923:A:C8	2.20	0.76
54:1:1802:A:H2'	54:1:1803:A:C8	2.21	0.76
12:m:40:ARG:HB3	12:m:93:VAL:HG21	1.68	0.76
52:a:212:VAL:HB	52:a:224:VAL:HG22	1.66	0.76
53:3:1502:A:H8	53:3:1505:G:N2	1.82	0.76
54:1:1507:C:H2'	54:1:1508:A:H4'	1.66	0.76
54:1:2731:G:H2'	54:1:2732:G:C8	2.21	0.76

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2743:U:H2'	54:1:2744:G:H5''	1.67	0.76
39:N:41:GLU:HG2	39:N:71:ILE:HG21	1.66	0.76
8:i:33:ASN:H	8:i:64:ARG:HH21	1.31	0.76
41:P:78:ILE:HB	41:P:104:PHE:HE1	1.51	0.76
45:T:21:THR:HG21	53:3:658:C:O4'	1.86	0.76
8:i:4:VAL:HG11	54:1:1098:A:H4'	1.69	0.75
54:1:1548:A:H2'	54:1:1549:A:C8	2.21	0.75
7:h:3:LEU:HD12	7:h:5:LEU:H	1.49	0.75
43:R:85:TYR:HA	43:R:88:LEU:HD12	1.69	0.75
46:U:18:GLN:CB	46:U:35:ARG:HD2	2.14	0.75
52:a:51:ASP:HB3	52:a:53:ARG:HD3	1.67	0.75
53:3:1343:G:H2'	53:3:1344:C:C6	2.22	0.75
59:8:62:THR:HG21	59:8:89:THR:HB	1.66	0.75
8:i:48:ILE:HD11	8:i:54:ILE:HD13	1.68	0.75
35:J:101:GLY:HA3	35:J:121:ASN:HA	1.66	0.75
40:O:64:GLN:NE2	40:O:64:GLN:H	1.85	0.75
41:P:34:THR:HG22	41:P:40:ALA:HA	1.67	0.75
53:3:393:A:H2'	53:3:394:G:O4'	1.86	0.75
7:h:59:LEU:HB3	7:h:62:ARG:HB3	1.67	0.75
37:L:138:GLU:HA	37:L:141:HIS:HB2	1.67	0.75
54:1:1394:U:H4'	54:1:1603:A:H4'	1.66	0.75
44:S:87:ALA:HB2	44:S:92:ILE:HD12	1.67	0.75
3:d:118:LEU:HD21	3:d:188:MET:HE1	1.68	0.75
34:I:158:LEU:HD11	34:I:174:ALA:HB1	1.66	0.75
47:V:10:ARG:O	47:V:22:VAL:HG13	1.87	0.75
53:3:1515:G:H2'	53:3:1516:G:H8	1.52	0.75
53:3:514:C:H2'	53:3:515:G:H8	1.50	0.75
54:1:1702:G:C2'	54:1:1703:G:H5''	2.15	0.75
59:8:255:ARG:HB3	59:8:255:ARG:NH1	2.02	0.75
24:y:2:LYS:HG3	24:y:3:ALA:H	1.51	0.74
42:Q:113:ARG:HB2	42:Q:118:VAL:HB	1.70	0.74
53:3:448:A:N6	53:3:487:A:H1'	2.01	0.74
53:3:377:G:H2'	53:3:378:G:C8	2.21	0.74
3:d:112:LEU:HD13	3:d:118:LEU:HD13	1.69	0.74
17:r:38:VAL:HG11	17:r:57:GLY:HA3	1.67	0.74
35:J:14:LEU:HA	35:J:36:THR:HG22	1.69	0.74
53:3:25:C:H2'	53:3:26:A:H8	1.53	0.74
53:3:1309:G:H2'	53:3:1310:G:H8	1.52	0.74
59:8:6:PRO:CG	59:8:9:ARG:HE	1.97	0.74
59:8:540:ILE:HG22	59:8:542:GLY:H	1.52	0.74
59:8:97:ILE:HD13	59:8:412:PRO:HG3	1.68	0.74

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:8:398:CYS:HB3	59:8:402:ALA:HB3	1.67	0.74
26:A:43:PHE:HD2	26:A:47:LYS:HE3	1.52	0.74
36:K:40:GLU:H	36:K:61:LEU:HD11	1.51	0.74
38:M:58:LEU:HG	38:M:60:LEU:HD22	1.68	0.74
53:3:1311:A:H2'	53:3:1312:G:H5''	1.69	0.74
53:3:135:C:C2'	53:3:136:C:H5''	2.18	0.74
54:1:2648:G:H2'	54:1:2649:C:C6	2.23	0.74
2:c:149:ASN:O	2:c:152:PRO:HD2	1.88	0.74
4:e:168:LEU:O	4:e:172:PHE:N	2.15	0.74
13:n:109:PRO:O	13:n:110:MET:HE2	1.87	0.74
35:J:24:VAL:HG22	35:J:25:LYS:H	1.50	0.74
53:3:36:C:C2'	53:3:37:U:H5'	2.18	0.74
53:3:448:A:C6	53:3:487:A:H1'	2.22	0.74
59:8:6:PRO:HG3	59:8:9:ARG:NE	2.01	0.74
59:8:553:VAL:HG21	59:8:578:LEU:HD22	1.69	0.74
59:8:673:LEU:HD12	59:8:674:THR:HG23	1.70	0.74
11:l:128:THR:HG23	11:l:131:ALA:H	1.53	0.74
38:M:85:TYR:HB3	38:M:123:GLU:HG3	1.69	0.74
51:Z:9:GLU:HB3	51:Z:10:PRO:CD	2.18	0.74
56:5:10:G:N2	56:5:26:A:H1'	2.02	0.74
25:z:23:LEU:HD22	25:z:28:LEU:HD12	1.69	0.74
34:I:115:GLN:NE2	53:3:406:G:H1'	2.03	0.74
43:R:78:ARG:HH12	43:R:82:LEU:HD13	1.53	0.74
53:3:418:C:H2'	53:3:419:C:C6	2.22	0.74
54:1:1353:A:H2'	54:1:1354:A:C8	2.23	0.74
2:c:106:LYS:HE2	2:c:174:SER:HB2	1.70	0.73
10:k:64:ARG:HD3	10:k:102:PRO:O	1.88	0.73
13:n:87:PHE:HD1	13:n:90:ARG:HD3	1.53	0.73
53:3:1409:C:H4'	54:1:1914:C:H41	1.50	0.73
1:b:132:ARG:HH21	1:b:186:ASP:HA	1.52	0.73
45:T:63:ARG:HH12	45:T:87:ARG:HH11	1.32	0.73
53:3:36:C:H2'	53:3:37:U:C5'	2.17	0.73
54:1:2104:C:H2'	54:1:2105:U:C6	2.24	0.73
54:1:2537:U:H2'	54:1:2538:C:C6	2.23	0.73
1:b:12:ARG:HD3	1:b:15:VAL:CG2	2.17	0.73
10:k:22:ILE:HD11	10:k:40:LYS:HG3	1.70	0.73
38:M:112:ASP:HB2	38:M:116:ARG:HH12	1.52	0.73
43:R:13:HIS:HB3	43:R:16:ILE:HD13	1.68	0.73
54:1:2243:U:H2'	54:1:2244:U:H6	1.51	0.73
3:d:47:LYS:O	3:d:83:VAL:HB	1.88	0.73
43:R:101:THR:HG22	53:3:1226:C:H2'	1.70	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:243:A:C2	53:3:245:U:H2'	2.24	0.73
54:1:2412:A:H2'	54:1:2413:G:O4'	1.88	0.73
7:h:48:ALA:HB3	7:h:51:TYR:CE1	2.22	0.73
34:I:103:ARG:HB2	34:I:170:LEU:HD21	1.70	0.73
34:I:115:GLN:HE22	53:3:406:G:H1'	1.52	0.73
53:3:53:A:C2	53:3:54:C:H1'	2.24	0.73
59:8:157:GLN:HB3	59:8:161:ARG:HH21	1.54	0.73
21:v:41:GLU:C	21:v:42:LEU:HD12	2.14	0.73
33:H:155:ARG:HB3	33:H:155:ARG:HH11	1.53	0.73
37:L:61:PHE:HE2	37:L:123:LEU:HD22	1.54	0.73
51:Z:32:ARG:HG2	51:Z:33:ARG:HG2	1.69	0.73
33:H:110:LEU:HG	33:H:143:LEU:HD23	1.70	0.73
39:N:40:ARG:HD3	53:3:1292:G:C5'	2.19	0.73
41:P:44:ALA:HB3	41:P:69:CYS:HB2	1.71	0.73
41:P:127:ARG:HB2	51:Z:34:ARG:HH22	1.52	0.73
52:a:6:LYS:C	52:a:8:MET:H	1.95	0.73
53:3:950:U:H4'	53:3:971:G:N2	2.03	0.73
53:3:1369:C:H2'	53:3:1370:G:C8	2.23	0.73
55:2:60:C:H2'	55:2:61:G:H8	1.52	0.73
59:8:138:ILE:HG22	59:8:263:LEU:HD13	1.69	0.73
59:8:243:LEU:HD11	59:8:248:ILE:HG13	1.71	0.73
33:H:11:LEU:HD23	33:H:17:TRP:NE1	2.04	0.73
34:I:96:ARG:HE	34:I:133:SER:HA	1.53	0.73
54:1:623:C:H2'	54:1:624:C:C6	2.24	0.73
54:1:1442:U:H2'	54:1:1443:U:C6	2.24	0.73
59:8:73:SER:OG	59:8:79:TYR:HB3	1.88	0.73
32:G:8:MET:HE2	32:G:10:LYS:HA	1.68	0.72
33:H:153:SER:HB3	33:H:164:THR:HG22	1.71	0.72
53:3:697:U:H2'	53:3:698:G:H5'	1.71	0.72
20:u:13:LEU:HD22	20:u:14:THR:HG23	1.71	0.72
42:Q:118:VAL:O	53:3:36:C:H4'	1.88	0.72
51:Z:65:ARG:O	51:Z:65:ARG:HG2	1.87	0.72
54:1:1258:U:H2'	54:1:1259:G:C8	2.24	0.72
59:8:190:ALA:HB3	59:8:205:GLU:HG3	1.71	0.72
3:d:149:ILE:HD11	3:d:172:ALA:HA	1.71	0.72
33:H:96:VAL:HB	33:H:97:PRO:HD2	1.70	0.72
38:M:120:LEU:HD12	38:M:120:LEU:O	1.89	0.72
39:N:83:THR:HG21	39:N:102:PHE:HB2	1.71	0.72
49:X:77:ARG:HB3	53:3:1225:A:O2'	1.90	0.72
53:3:1238:A:C2	53:3:1241:G:H1'	2.24	0.72
54:1:2246:G:H2'	54:1:2247:A:C8	2.25	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:J:97:PRO:HA	35:J:122:VAL:HG12	1.69	0.72
39:N:115:VAL:HG23	53:3:1367:C:H5''	1.71	0.72
54:1:488:G:N2	54:1:491:G:H5''	2.03	0.72
14:o:24:THR:HB	14:o:90:VAL:HG12	1.72	0.72
16:q:111:LYS:HB2	17:r:48:LYS:HE2	1.72	0.72
36:K:46:GLN:HA	36:K:56:LYS:HA	1.69	0.72
47:V:66:LEU:HB2	47:V:70:LYS:HB3	1.70	0.72
49:X:49:ALA:HB1	49:X:56:HIS:HB3	1.71	0.72
50:Y:23:ARG:HA	50:Y:26:MET:HE2	1.71	0.72
54:1:1889:A:H2'	54:1:1890:A:C8	2.25	0.72
54:1:2114:A:H61	54:1:2117:A:H62	1.35	0.72
54:1:2834:G:H2'	54:1:2879:A:N6	2.04	0.72
47:V:46:HIS:HB2	47:V:70:LYS:HD3	1.71	0.72
53:3:962:C:H2'	53:3:963:G:O4'	1.90	0.72
59:8:119:VAL:HG21	59:8:675:LYS:HD3	1.71	0.72
14:o:94:ARG:HB2	14:o:94:ARG:NH2	2.04	0.72
20:u:65:GLN:HB2	20:u:68:ASN:ND2	2.05	0.72
53:3:380:G:C2'	53:3:381:C:H5''	2.20	0.72
53:3:418:C:H2'	53:3:419:C:H6	1.54	0.72
54:1:1565:C:O2'	54:1:1566:A:H2'	1.90	0.72
4:e:105:ILE:C	4:e:108:PRO:HD2	2.15	0.72
42:Q:73:LEU:HD23	42:Q:73:LEU:H	1.54	0.72
51:Z:66:ARG:NE	51:Z:66:ARG:HA	2.03	0.72
54:1:1851:U:C4'	57:6:70:G:H21	2.02	0.72
59:8:93:VAL:O	59:8:96:THR:HG23	1.89	0.72
23:x:2:ARG:O	23:x:11:PRO:HD3	1.90	0.71
39:N:129:ARG:HD2	39:N:129:ARG:N	2.04	0.71
54:1:1688:U:H2'	54:1:1698:A:N6	2.05	0.71
54:1:2241:A:H2'	54:1:2242:G:C8	2.25	0.71
10:k:92:GLU:HB2	10:k:111:LYS:HD2	1.70	0.71
16:q:30:VAL:HG23	54:1:581:C:H5'	1.72	0.71
40:O:25:ILE:HD11	40:O:76:ILE:HD11	1.70	0.71
7:h:74:ASP:O	7:h:77:VAL:HG23	1.89	0.71
31:F:29:ALA:O	31:F:31:PRO:HD3	1.89	0.71
39:N:98:ARG:HH12	53:3:1179:A:H5''	1.53	0.71
53:3:1105:A:H2'	53:3:1106:G:H8	1.56	0.71
54:1:191:A:H2'	54:1:192:C:H6	1.55	0.71
54:1:1424:G:H2'	54:1:1425:G:O4'	1.90	0.71
11:l:23:ILE:H	11:l:23:ILE:HD12	1.55	0.71
16:q:2:ARG:HD3	54:1:446:G:OP1	1.90	0.71
37:L:62:GLU:HA	37:L:65:LEU:HB2	1.70	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:U:6:LEU:HB3	46:U:17:TYR:HB3	1.71	0.71
52:a:200:LYS:NZ	52:a:204:ALA:HB3	2.06	0.71
53:3:1495:U:H2'	53:3:1496:C:C6	2.25	0.71
54:1:383:C:H2'	54:1:385:C:H41	1.55	0.71
54:1:1637:A:H5'	54:1:1760:C:O2'	1.91	0.71
54:1:2233:U:H2'	54:1:2234:G:C8	2.25	0.71
59:8:297:GLY:HA3	59:8:309:ARG:HE	1.55	0.71
59:8:418:ILE:HD13	59:8:466:LEU:HD23	1.72	0.71
59:8:420:VAL:HG22	59:8:483:VAL:HG22	1.71	0.71
10:k:93:GLN:NE2	10:k:111:LYS:HD3	2.05	0.71
11:l:59:ARG:HD2	54:1:250:G:H4'	1.71	0.71
46:U:6:LEU:HB2	53:3:376:G:OP1	1.89	0.71
48:W:25:ILE:O	48:W:29:LYS:HG3	1.91	0.71
53:3:231:U:H2'	53:3:232:G:H8	1.55	0.71
53:3:744:C:H2'	53:3:745:G:H8	1.54	0.71
53:3:1060:U:H2'	53:3:1061:G:H8	1.55	0.71
56:5:72:G:O2'	56:5:73:A:H5'	1.90	0.71
59:8:628:THR:HG21	59:8:652:VAL:HG21	1.71	0.71
5:f:34:ARG:HG3	5:f:35:THR:H	1.56	0.71
12:m:29:GLY:HA2	12:m:106:ASP:HB2	1.72	0.71
14:o:62:LEU:HG	14:o:70:ALA:HA	1.72	0.71
31:F:4:ARG:HD3	31:F:6:SER:O	1.90	0.71
34:I:56:GLU:HB2	34:I:198:LEU:HD23	1.73	0.71
34:I:103:ARG:HH21	34:I:110:ARG:HH22	1.38	0.71
53:3:167:A:H2'	53:3:168:G:C5'	2.20	0.71
53:3:514:C:H2'	53:3:515:G:C8	2.26	0.71
8:i:10:LEU:O	8:i:11:GLN:HB2	1.87	0.71
14:o:10:ARG:HH21	54:1:2294:G:H5''	1.56	0.71
37:L:134:VAL:HG13	37:L:137:ARG:HH21	1.55	0.71
53:3:438:U:C4	53:3:494:G:H2'	2.25	0.71
53:3:1506:U:O2'	53:3:1507:A:H5'	1.91	0.71
3:d:122:GLU:HG2	3:d:123:LYS:H	1.53	0.71
15:p:59:THR:HG22	15:p:72:VAL:HG12	1.73	0.71
34:I:57:LYS:HE3	34:I:61:ARG:HH11	1.55	0.71
50:Y:59:ARG:NH1	53:3:177:G:H5'	2.05	0.71
53:3:1286:U:H2'	53:3:1287:A:H5'	1.69	0.71
18:s:4:ILE:HG22	18:s:106:VAL:HG22	1.73	0.71
31:F:19:ARG:NH1	54:1:2755:C:H2'	2.06	0.71
12:m:69:PRO:HA	12:m:94:ALA:HB2	1.73	0.71
39:N:83:THR:HG21	39:N:102:PHE:CB	2.21	0.71
46:U:67:ILE:N	46:U:67:ILE:HD12	2.06	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:8:157:GLN:HB3	59:8:161:ARG:NH2	2.06	0.71
59:8:332:ASN:HD21	59:8:334:THR:HB	1.55	0.71
33:H:155:ARG:HH11	33:H:155:ARG:CB	2.04	0.70
46:U:28:ARG:NH1	53:3:390:U:H5''	2.06	0.70
47:V:66:LEU:HB2	47:V:70:LYS:CB	2.21	0.70
54:1:1638:C:C2'	54:1:1639:C:H5''	2.18	0.70
8:i:19:PRO:HG2	8:i:27:LEU:HD13	1.72	0.70
34:I:31:CYS:O	34:I:32:LYS:HG2	1.90	0.70
40:O:57:VAL:HG22	40:O:58:ASN:H	1.54	0.70
46:U:72:ALA:HB1	46:U:76:LYS:NZ	2.05	0.70
53:3:77:A:H2'	53:3:78:A:C8	2.26	0.70
54:1:1434:A:H2'	54:1:1435:G:C8	2.27	0.70
54:1:1936:A:H2	54:1:1943:U:H3	1.37	0.70
10:k:19:VAL:HB	10:k:41:ILE:HD12	1.73	0.70
39:N:17:ARG:HB2	39:N:65:THR:HB	1.71	0.70
52:a:6:LYS:HD2	54:1:2130:U:OP2	1.91	0.70
53:3:422:C:H4'	53:3:423:G:N2	2.05	0.70
54:1:441:U:H2'	54:1:442:G:C8	2.27	0.70
59:8:539:ASP:HB3	59:8:578:LEU:O	1.91	0.70
41:P:122:PRO:HB2	51:Z:33:ARG:HA	1.72	0.70
46:U:10:GLY:HA2	53:3:624:C:H4'	1.74	0.70
53:3:354:G:H2'	53:3:355:C:C5'	2.17	0.70
53:3:664:G:N2	53:3:741:G:H1	1.90	0.70
33:H:76:ILE:HG23	33:H:102:ILE:HD13	1.72	0.70
2:c:129:THR:HG22	54:1:1997:C:P	2.31	0.70
10:k:8:LEU:HD23	10:k:84:CYS:HB2	1.74	0.70
20:u:9:GLU:HG3	20:u:72:PHE:HB3	1.71	0.70
28:C:20:TYR:OH	54:1:2348:U:H5'	1.91	0.70
35:J:79:THR:HB	35:J:121:ASN:ND2	2.05	0.70
39:N:62:LEU:HD23	39:N:62:LEU:H	1.55	0.70
53:3:1114:C:H2'	53:3:1115:U:C6	2.27	0.70
54:1:962:G:H2'	54:1:963:U:H6	1.57	0.70
3:d:134:LEU:O	3:d:138:LEU:HD23	1.91	0.70
13:n:38:LEU:HB3	13:n:39:PRO:HD3	1.73	0.70
17:r:21:ARG:HD2	17:r:93:PHE:HB2	1.74	0.70
42:Q:98:ARG:HD2	42:Q:106:VAL:CG1	2.21	0.70
54:1:2800:A:H3'	54:1:2801:G:C5'	2.20	0.70
54:1:2861:U:H2'	54:1:2862:G:H8	1.56	0.70
59:8:197:ASP:O	59:8:272:ASN:ND2	2.24	0.70
59:8:502:GLU:HG2	59:8:519:VAL:HG22	1.74	0.70
2:c:40:LEU:H	2:c:40:LEU:HD12	1.56	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:H:155:ARG:HB3	33:H:155:ARG:NH1	2.07	0.70
42:Q:50:LYS:HB3	42:Q:66:ILE:HD12	1.74	0.70
54:1:286:U:H2'	54:1:287:G:H8	1.56	0.70
54:1:855:G:C3'	54:1:856:G:H5''	2.22	0.70
54:1:1847:A:HO2'	54:1:1848:A:H8	1.38	0.70
26:A:37:CYS:H	26:A:40:CYS:HB3	1.57	0.70
32:G:198:VAL:HG22	32:G:200:PRO:HD3	1.74	0.70
38:M:46:GLU:HG2	38:M:63:LYS:CG	2.22	0.70
53:3:386:C:C2'	53:3:387:U:H5''	2.20	0.70
53:3:517:G:O2'	53:3:530:G:H4'	1.92	0.70
53:3:868:C:H2'	53:3:869:G:O4'	1.92	0.70
54:1:1139:G:O2'	54:1:1140:C:H5'	1.91	0.70
54:1:1858:A:H1'	54:1:1885:A:C2	2.27	0.70
59:8:451:GLU:HG2	59:8:452:GLU:H	1.57	0.70
3:d:44:ARG:HH22	3:d:87:ALA:HB3	1.57	0.70
53:3:621:A:H2'	53:3:622:A:C8	2.27	0.70
53:3:1024:G:H2'	53:3:1025:U:H5'	1.74	0.70
54:1:920:A:H2'	54:1:921:C:C6	2.27	0.70
54:1:1077:A:H2'	54:1:1078:U:H5'	1.74	0.70
59:8:137:ARG:HE	59:8:262:ILE:HD13	1.57	0.70
1:b:153:LEU:HD13	1:b:175:LEU:HD21	1.74	0.69
35:J:125:LYS:HD3	53:3:8:A:H5''	1.73	0.69
58:4:17:U:C4	58:4:18:G:H1'	2.27	0.69
30:E:14:LYS:HB2	30:E:22:LYS:HE3	1.74	0.69
35:J:132:PRO:HG2	35:J:133:ILE:HD12	1.75	0.69
54:1:920:A:H2'	54:1:921:C:H6	1.56	0.69
21:v:72:VAL:HG12	21:v:93:ARG:HA	1.73	0.69
36:K:9:MET:HE1	36:K:51:ILE:HD13	1.72	0.69
54:1:2328:A:H2'	54:1:2329:U:H6	1.54	0.69
59:8:155:VAL:O	59:8:158:ILE:HG22	1.93	0.69
16:q:5:ARG:HH11	54:1:584:C:H3'	1.57	0.69
31:F:36:ARG:NH2	54:1:2539:C:H4'	2.07	0.69
44:S:36:SER:HA	44:S:40:ARG:HG3	1.75	0.69
45:T:63:ARG:HH21	45:T:66:LEU:HD11	1.57	0.69
54:1:194:G:H2'	54:1:195:A:O4'	1.93	0.69
59:8:113:TYR:HB2	59:8:141:VAL:HG13	1.74	0.69
2:c:130:GLN:HE22	2:c:142:VAL:HG22	1.56	0.69
47:V:80:LYS:HG2	47:V:81:ALA:H	1.58	0.69
53:3:303:A:H2'	53:3:304:U:O4'	1.93	0.69
53:3:744:C:H2'	53:3:745:G:C8	2.27	0.69
54:1:1052:C:C2'	54:1:1053:C:H5''	2.23	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2278:A:H3'	54:1:2279:G:H5''	1.72	0.69
40:O:27:GLU:O	40:O:30:LYS:HG2	1.92	0.69
53:3:344:A:H5''	53:3:345:C:H5	1.58	0.69
54:1:2327:A:H2'	54:1:2328:A:C8	2.27	0.69
59:8:54:GLU:H	59:8:54:GLU:CD	2.00	0.69
3:d:105:LEU:O	3:d:109:LEU:HD13	1.92	0.69
10:k:21:CYS:SG	10:k:39:ILE:HD12	2.33	0.69
11:l:79:LEU:HD12	11:l:114:GLY:H	1.57	0.69
20:u:42:LYS:HE2	54:1:499:U:H5''	1.75	0.69
47:V:70:LYS:HE2	47:V:70:LYS:HA	1.73	0.69
54:1:1810:A:H2'	54:1:1811:G:O4'	1.92	0.69
3:d:147:LEU:HB2	3:d:183:PHE:CD2	2.27	0.69
15:p:52:ARG:HH21	54:1:2720:U:H5''	1.56	0.69
20:u:49:PRO:HA	20:u:53:GLN:HB3	1.75	0.69
39:N:47:VAL:HG12	39:N:78:ILE:HB	1.73	0.69
40:O:50:THR:HA	40:O:63:ASP:O	1.93	0.69
43:R:68:LEU:O	43:R:68:LEU:HD23	1.91	0.69
47:V:4:ILE:O	47:V:5:ARG:HD2	1.93	0.69
53:3:292:G:H21	53:3:608:A:H61	1.39	0.69
53:3:552:U:H2'	53:3:553:A:H8	1.57	0.69
53:3:792:A:H1'	53:3:794:A:N7	2.08	0.69
53:3:1063:C:H3'	53:3:1064:G:H2'	1.73	0.69
54:1:473:G:O2'	54:1:474:G:H5'	1.93	0.69
54:1:1476:U:H3	54:1:1515:A:H62	1.38	0.69
59:8:550:ILE:HB	59:8:551:PRO:HD3	1.75	0.69
1:b:86:ARG:HG3	1:b:86:ARG:HH11	1.57	0.69
8:i:23:VAL:HG22	8:i:26:ALA:HB3	1.73	0.69
13:n:97:ILE:HG22	13:n:113:ILE:HA	1.75	0.69
42:Q:82:ARG:HH21	53:3:552:U:H5''	1.58	0.69
45:T:87:ARG:HH21	45:T:88:ARG:HG2	1.58	0.69
56:5:24:G:H2'	56:5:25:C:C6	2.27	0.69
59:8:15:ILE:HA	59:8:110:VAL:HG22	1.74	0.69
36:K:40:GLU:HB3	36:K:61:LEU:HD21	1.74	0.69
49:X:36:ARG:HB3	53:3:1320:C:C5	2.28	0.69
53:3:380:G:H21	53:3:383:A:H62	1.39	0.69
53:3:425:G:H2'	53:3:426:U:O4'	1.93	0.69
53:3:1343:G:H2'	53:3:1344:C:H6	1.57	0.69
1:b:270:ARG:NH1	1:b:270:ARG:HB3	2.08	0.68
12:m:50:ARG:HG2	12:m:50:ARG:HH21	1.58	0.68
39:N:34:LEU:HD12	39:N:38:PHE:HE1	1.57	0.68
59:8:59:ARG:HG3	59:8:60:GLY:H	1.58	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:i:11:GLN:HG2	8:i:12:VAL:N	2.07	0.68
27:B:2:VAL:HG11	54:1:2016:U:H1'	1.75	0.68
42:Q:23:LEU:HB3	42:Q:26:CYS:HB3	1.76	0.68
53:3:1038:C:H2'	53:3:1039:G:H8	1.57	0.68
54:1:49:A:H5'	54:1:51:G:O4'	1.93	0.68
54:1:741:U:H2'	54:1:742:A:C8	2.29	0.68
5:f:8:VAL:O	5:f:48:THR:HB	1.93	0.68
10:k:93:GLN:HE22	10:k:111:LYS:HD3	1.58	0.68
29:D:1:MET:CE	54:1:752:A:H5''	2.24	0.68
31:F:4:ARG:HB2	54:1:2466:C:OP1	1.92	0.68
38:M:73:SER:HB3	38:M:129:ALA:HB3	1.76	0.68
44:S:72:PHE:CE1	44:S:77:GLY:HA2	2.28	0.68
47:V:7:LEU:HD22	47:V:72:TRP:HH2	1.58	0.68
54:1:679:C:H2'	54:1:680:C:C6	2.28	0.68
54:1:2393:U:H2'	54:1:2394:C:C6	2.28	0.68
54:1:2443:C:H2'	54:1:2444:G:H8	1.58	0.68
1:b:268:ARG:HA	1:b:268:ARG:HH11	1.56	0.68
9:j:56:VAL:HB	9:j:124:VAL:HG12	1.76	0.68
42:Q:58:ASN:OD1	42:Q:60:PHE:HB2	1.93	0.68
54:1:322:A:H5'	54:1:340:A:C1'	2.23	0.68
54:1:1187:G:O5'	54:1:1187:G:H8	1.76	0.68
54:1:1802:A:H2'	54:1:1803:A:H8	1.58	0.68
54:1:1851:U:H4'	57:6:70:G:N2	2.03	0.68
3:d:129:PRO:HA	3:d:160:ALA:HB2	1.75	0.68
7:h:34:THR:HG22	54:1:1085:A:H61	1.59	0.68
54:1:1857:G:H1'	54:1:1885:A:H62	1.55	0.68
55:2:2:G:N1	55:2:119:A:N6	2.42	0.68
12:m:26:VAL:HG21	12:m:133:LYS:HA	1.76	0.68
17:r:60:LYS:HB2	17:r:100:GLY:HA3	1.74	0.68
35:J:12:GLU:HA	35:J:38:VAL:HG12	1.75	0.68
35:J:83:PRO:HG3	35:J:96:GLN:HG3	1.75	0.68
50:Y:27:MET:O	50:Y:31:ILE:HG13	1.94	0.68
54:1:548:G:H2'	54:1:549:G:C4'	2.24	0.68
55:2:30:C:H2'	55:2:31:C:H5'	1.74	0.68
59:8:363:ILE:HA	59:8:385:ALA:HA	1.75	0.68
3:d:29:HIS:CE1	11:l:8:PRO:HB3	2.29	0.68
12:m:12:MET:HA	54:1:910:A:H62	1.58	0.68
30:E:3:ILE:HD13	30:E:62:PRO:HG3	1.74	0.68
44:S:13:VAL:HA	44:S:59:GLN:HE22	1.59	0.68
53:3:373:A:H5'	53:3:481:G:H5'	1.75	0.68
55:2:118:C:H2'	55:2:119:A:C8	2.28	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:8:627:ASN:O	59:8:631:VAL:HG23	1.94	0.68
3:d:6:LYS:NZ	3:d:141:MET:HG2	2.08	0.68
6:g:8:LYS:O	6:g:9:VAL:HG23	1.94	0.68
39:N:34:LEU:HD21	39:N:48:ARG:HH21	1.57	0.68
44:S:5:MET:HA	44:S:8:ARG:HB3	1.76	0.68
54:1:2662:A:H2'	54:1:2663:G:O4'	1.94	0.68
54:1:2834:G:H2'	54:1:2879:A:H61	1.57	0.68
58:4:18:G:H3'	58:4:19:C:C5'	2.16	0.68
1:b:262:THR:HG21	54:1:1800:C:OP2	1.93	0.68
10:k:17:ARG:C	10:k:18:ARG:HD3	2.19	0.68
38:M:11:THR:HA	38:M:14:ARG:NH1	2.08	0.68
40:O:24:GLU:HG3	40:O:92:LEU:HD12	1.74	0.68
47:V:74:LEU:HD23	47:V:75:VAL:N	2.09	0.68
53:3:1435:G:H2'	53:3:1436:U:C6	2.27	0.68
54:1:876:C:H2'	54:1:877:A:O4'	1.94	0.68
59:8:233:LEU:HA	59:8:236:LYS:HD2	1.76	0.68
59:8:691:PRO:HG2	59:8:694:VAL:HG23	1.75	0.68
2:c:11:MET:HE1	54:1:2680:U:O2'	1.94	0.68
36:K:6:ILE:CG2	36:K:89:VAL:HG22	2.24	0.68
41:P:55:ARG:HB3	41:P:55:ARG:HH11	1.57	0.68
45:T:25:GLU:HG3	45:T:80:LEU:HD22	1.75	0.68
53:3:1053:G:O6	53:3:1199:U:H2'	1.94	0.68
53:3:1277:C:O2'	53:3:1279:G:H1'	1.94	0.68
53:3:1513:A:H2'	53:3:1514:G:C8	2.29	0.68
54:1:593:U:H2'	54:1:594:U:C6	2.29	0.68
54:1:2345:G:N3	54:1:2381:A:H2'	2.08	0.68
54:1:2555:U:H2'	54:1:2556:C:H5'	1.75	0.68
53:3:545:C:H3'	53:3:546:A:C8	2.29	0.67
54:1:1827:U:O2'	54:1:1828:G:H5'	1.95	0.67
54:1:2131:U:OP1	54:1:2133:G:H5'	1.94	0.67
54:1:2331:G:H2'	54:1:2332:C:C6	2.29	0.67
32:G:140:LEU:HD23	32:G:144:GLU:HB2	1.75	0.67
42:Q:98:ARG:HD2	42:Q:106:VAL:HG12	1.76	0.67
46:U:6:LEU:HD12	46:U:17:TYR:HB3	1.74	0.67
53:3:560:A:H4'	53:3:561:U:H5'	1.75	0.67
53:3:1048:G:H2'	53:3:1050:G:C8	2.30	0.67
53:3:1229:A:H2'	53:3:1230:C:C6	2.29	0.67
54:1:1807:G:H2'	54:1:1808:A:H5'	1.76	0.67
35:J:15:ILE:HD11	35:J:109:ALA:HA	1.75	0.67
47:V:12:VAL:HG23	47:V:23:ALA:N	2.06	0.67
54:1:580:U:H2'	54:1:581:C:C6	2.29	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:979:A:H2'	54:1:982:C:H42	1.59	0.67
54:1:2088:A:H2'	54:1:2089:C:C6	2.30	0.67
59:8:19:ILE:HD12	59:8:92:HIS:HD1	1.57	0.67
5:f:41:GLU:HG2	5:f:54:ARG:HE	1.59	0.67
5:f:163:TYR:HB2	5:f:166:GLU:HG3	1.76	0.67
38:M:88:LYS:HE3	38:M:119:GLY:HA2	1.76	0.67
59:8:59:ARG:HG2	59:8:61:ILE:HG12	1.77	0.67
4:e:60:SER:OG	4:e:90:LEU:HD23	1.95	0.67
12:m:55:ARG:HB2	12:m:55:ARG:NH2	2.09	0.67
44:S:72:PHE:HE1	44:S:77:GLY:HA2	1.59	0.67
52:a:6:LYS:C	52:a:8:MET:N	2.51	0.67
53:3:59:A:H1'	53:3:354:G:C2	2.29	0.67
53:3:429:U:H4'	53:3:430:A:O5'	1.94	0.67
53:3:1332:A:H2'	53:3:1333:A:C8	2.29	0.67
34:I:148:ALA:O	34:I:151:GLN:HG2	1.95	0.67
45:T:7:THR:O	45:T:11:VAL:HG23	1.94	0.67
50:Y:17:ARG:HB3	53:3:323:U:H5'	1.77	0.67
52:a:163:TYR:HB2	52:a:171:ILE:HD11	1.76	0.67
53:3:674:G:H2'	53:3:675:A:C8	2.30	0.67
54:1:2268:A:H8	54:1:2268:A:H5'	1.57	0.67
59:8:98:GLU:HA	59:8:101:ARG:HH11	1.60	0.67
59:8:103:MET:HA	59:8:106:LEU:HG	1.77	0.67
59:8:445:PHE:CE2	59:8:458:ILE:HG23	2.25	0.67
34:I:57:LYS:HG2	34:I:61:ARG:HD3	1.75	0.67
35:J:22:LYS:HB3	35:J:29:ILE:HG23	1.77	0.67
54:1:2813:A:H2'	54:1:2814:A:H8	1.59	0.67
50:Y:78:LEU:HD23	50:Y:79:THR:H	1.60	0.67
53:3:252:U:O2	53:3:252:U:H2'	1.94	0.67
55:2:1:U:H5	55:2:2:G:N7	1.92	0.67
59:8:396:THR:HG21	59:8:405:ILE:H	1.60	0.67
2:c:77:ARG:HG2	2:c:77:ARG:HH21	1.60	0.67
4:e:91:ARG:HA	4:e:95:MET:HG3	1.77	0.67
9:j:8:PRO:HG3	9:j:48:VAL:CG1	2.25	0.67
38:M:94:VAL:HG23	38:M:101:ALA:HB2	1.76	0.67
53:3:817:C:H4'	53:3:818:G:H5''	1.76	0.67
54:1:1315:C:H1'	54:1:1393:A:N3	2.10	0.67
54:1:2393:U:H2'	54:1:2394:C:H6	1.58	0.67
13:n:106:ASP:OD2	13:n:108:ALA:HB2	1.95	0.67
20:u:39:ASN:O	20:u:61:GLU:HA	1.95	0.67
30:E:30:HIS:C	30:E:32:LEU:H	2.03	0.67
38:M:112:ASP:HB2	38:M:116:ARG:NH1	2.10	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:N:104:THR:HG22	39:N:106:ASP:H	1.60	0.67
40:O:51:VAL:HG22	40:O:52:LEU:H	1.60	0.67
53:3:222:C:H2'	53:3:223:A:H8	1.61	0.67
54:1:1367:A:C2'	54:1:1368:G:H5'	2.25	0.67
54:1:2145:C:H3'	54:1:2146:C:H5'	1.76	0.67
59:8:522:MET:HB2	59:8:574:MET:HE1	1.75	0.67
8:i:55:PRO:HG2	8:i:71:LYS:HB2	1.77	0.66
49:X:68:HIS:HB3	49:X:72:GLU:HG3	1.76	0.66
53:3:579:A:H2'	53:3:580:C:C6	2.30	0.66
2:c:51:THR:OG1	2:c:76:GLY:HA3	1.94	0.66
3:d:48:THR:HG23	3:d:86:ALA:HB3	1.77	0.66
23:x:63:ILE:HG13	23:x:64:ASP:H	1.60	0.66
34:I:73:ASN:HA	34:I:76:LYS:HG2	1.76	0.66
53:3:537:G:H2'	53:3:538:G:C8	2.29	0.66
53:3:982:U:H4'	53:3:983:A:O5'	1.93	0.66
53:3:1053:G:N7	53:3:1199:U:H3'	2.10	0.66
54:1:69:C:O2'	54:1:70:G:H5'	1.95	0.66
54:1:445:C:O2'	54:1:446:G:H5'	1.94	0.66
15:p:88:ARG:HH22	15:p:113:LEU:H	1.44	0.66
24:y:13:GLU:HA	24:y:16:THR:HG22	1.77	0.66
32:G:160:LEU:HB2	32:G:182:VAL:HG12	1.76	0.66
36:K:43:GLY:HA2	36:K:58:HIS:CE1	2.30	0.66
40:O:52:LEU:HB2	44:S:80:ARG:NE	2.10	0.66
53:3:67:C:H4'	53:3:172:A:H4'	1.75	0.66
53:3:1280:A:O2'	53:3:1281:C:H5'	1.95	0.66
54:1:226:A:H2'	54:1:227:A:O4'	1.94	0.66
54:1:394:C:H2'	54:1:395:U:O4'	1.96	0.66
59:8:421:GLU:HB3	59:8:482:ASN:O	1.94	0.66
2:c:114:LYS:HE2	2:c:196:ALA:HB2	1.77	0.66
11:l:23:ILE:HD12	11:l:23:ILE:N	2.09	0.66
39:N:82:ILE:O	39:N:86:LEU:HG	1.95	0.66
43:R:70:ARG:HA	43:R:73:SER:HB2	1.77	0.66
53:3:68:G:H22	53:3:101:A:H2	1.40	0.66
54:1:191:A:H2'	54:1:192:C:C6	2.30	0.66
1:b:250:GLN:OE1	1:b:254:LYS:HB2	1.96	0.66
34:I:30:LYS:O	34:I:30:LYS:HD3	1.95	0.66
34:I:112:GLU:O	34:I:116:LEU:HD13	1.95	0.66
38:M:22:ALA:O	38:M:61:THR:HA	1.96	0.66
53:3:1217:C:H2'	53:3:1218:C:C6	2.30	0.66
54:1:713:G:H2'	54:1:714:U:H5''	1.76	0.66
54:1:2281:A:O2'	54:1:2282:G:H5'	1.95	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2661:G:H5''	59:8:19:ILE:HD13	1.76	0.66
13:n:86:ARG:NH2	13:n:117:ASP:HB3	2.11	0.66
47:V:7:LEU:HD22	47:V:72:TRP:CH2	2.31	0.66
54:1:222:A:H61	54:1:232:G:H1'	1.60	0.66
54:1:891:G:H2'	54:1:892:A:H8	1.60	0.66
54:1:1386:C:H2'	54:1:1387:A:H8	1.60	0.66
54:1:2834:G:O2'	54:1:2835:A:H5'	1.94	0.66
11:l:51:GLU:OE2	30:E:56:LEU:HD21	1.95	0.66
42:Q:41:PRO:HG2	42:Q:49:ARG:HE	1.61	0.66
53:3:947:G:H2'	53:3:948:C:O4'	1.96	0.66
54:1:1170:C:H2'	54:1:1171:G:C8	2.30	0.66
54:1:208:C:H2'	54:1:209:C:C6	2.31	0.66
54:1:1989:G:H2'	54:1:1990:C:O4'	1.95	0.66
56:5:46:G:H2'	56:5:47:U:H4'	1.78	0.66
8:i:54:ILE:HG22	8:i:55:PRO:HD2	1.77	0.66
33:H:171:ARG:HB2	53:3:1106:G:H5''	1.77	0.66
37:L:30:MET:HE1	37:L:33:GLY:HA2	1.78	0.66
54:1:548:G:H2'	54:1:549:G:H4'	1.78	0.66
54:1:690:G:H2'	54:1:691:C:C6	2.31	0.66
54:1:704:G:H1'	54:1:727:A:N6	2.11	0.66
54:1:1675:C:H42	54:1:1993:U:H1'	1.61	0.66
59:8:558:GLN:HA	59:8:561:LEU:HD23	1.77	0.66
4:e:163:GLU:O	4:e:167:ALA:N	2.20	0.66
12:m:80:VAL:HG12	12:m:81:ARG:O	1.95	0.66
32:G:55:GLU:O	32:G:59:ILE:HG12	1.96	0.66
48:W:54:LEU:O	48:W:58:ILE:HG12	1.96	0.66
50:Y:11:ILE:O	50:Y:14:GLU:HG3	1.95	0.66
53:3:1315:U:H2'	53:3:1316:G:O4'	1.96	0.66
54:1:329:G:O4'	54:1:477:A:H1'	1.95	0.66
18:s:6:LYS:HG3	54:1:494:G:H4'	1.77	0.65
33:H:42:LEU:O	33:H:46:LEU:HD13	1.95	0.65
54:1:518:G:H2'	54:1:519:U:C6	2.31	0.65
54:1:1773:A:H2'	54:1:1774:C:H5'	1.78	0.65
54:1:2432:A:H1'	57:6:75:C:O4'	1.95	0.65
59:8:93:VAL:HG21	59:8:122:GLN:HB3	1.77	0.65
59:8:465:HIS:O	59:8:469:ILE:HG13	1.95	0.65
4:e:65:LEU:HD22	55:2:42:C:C5	2.30	0.65
33:H:12:GLY:HA3	44:S:96:LYS:HE2	1.78	0.65
39:N:34:LEU:HD12	39:N:38:PHE:CE1	2.31	0.65
11:l:132:ARG:HG3	11:l:142:ILE:HD12	1.77	0.65
33:H:40:GLN:O	33:H:44:LYS:HB2	1.95	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:J:105:ILE:HD11	35:J:123:LEU:HB3	1.76	0.65
38:M:11:THR:HA	38:M:14:ARG:HH12	1.61	0.65
53:3:552:U:H2'	53:3:553:A:C8	2.30	0.65
53:3:1218:C:H2'	53:3:1219:A:H8	1.61	0.65
54:1:1197:G:H2'	54:1:1198:U:H6	1.59	0.65
54:1:2134:A:N7	54:1:2157:G:H4'	2.11	0.65
55:2:28:C:H2'	55:2:29:A:C8	2.31	0.65
4:e:134:GLN:HE21	4:e:135:ILE:HG22	1.60	0.65
4:e:175:PRO:O	4:e:176:PHE:HB2	1.95	0.65
15:p:12:MET:HG2	15:p:76:HIS:CD2	2.32	0.65
31:F:3:VAL:HG12	31:F:36:ARG:HE	1.60	0.65
53:3:16:A:C2'	53:3:17:U:H5'	2.27	0.65
53:3:20:U:H2'	53:3:21:G:O4'	1.96	0.65
53:3:484:G:H1'	53:3:486:U:OP2	1.95	0.65
35:J:133:ILE:HD12	35:J:133:ILE:H	1.60	0.65
46:U:40:ASN:HB3	46:U:43:ALA:HB2	1.77	0.65
54:1:2813:A:H2'	54:1:2814:A:C8	2.31	0.65
54:1:2848:G:O2'	54:1:2867:G:N2	2.29	0.65
59:8:53:MET:O	59:8:56:GLU:N	2.30	0.65
14:o:21:LEU:O	14:o:21:LEU:HD23	1.96	0.65
40:O:40:ILE:HD13	53:3:1125:U:C6	2.31	0.65
47:V:28:VAL:HB	47:V:37:ILE:HB	1.78	0.65
54:1:1199:U:H2'	54:1:1200:C:C6	2.32	0.65
54:1:2075:U:H2'	54:1:2238:G:H22	1.62	0.65
55:2:28:C:H2'	55:2:29:A:H8	1.62	0.65
3:d:145:ASP:HB3	3:d:184:ASP:OD2	1.97	0.65
35:J:92:ARG:HB3	35:J:92:ARG:NH1	2.11	0.65
45:T:55:LEU:HD21	54:1:715:A:C2	2.31	0.65
53:3:67:C:H4'	53:3:172:A:C4'	2.27	0.65
53:3:883:C:O2'	53:3:884:U:H5'	1.97	0.65
54:1:878:A:H3'	54:1:879:G:H8	1.61	0.65
54:1:1068:G:H21	54:1:1096:A:H5'	1.61	0.65
1:b:206:LYS:HA	54:1:729:G:O6	1.97	0.65
24:y:1:MET:HA	24:y:4:LYS:HE2	1.79	0.65
38:M:94:VAL:HG21	38:M:101:ALA:HB2	1.78	0.65
47:V:28:VAL:HG21	47:V:39:ARG:HG3	1.78	0.65
52:a:41:SER:HA	52:a:177:LYS:HA	1.78	0.65
53:3:401:C:H2'	53:3:402:G:H8	1.60	0.65
53:3:1324:A:H2'	53:3:1325:C:C6	2.32	0.65
54:1:819:A:OP2	54:1:1187:G:N2	2.30	0.65
54:1:2156:G:C2'	54:1:2157:G:H5'	2.27	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:b:205:GLY:HA2	54:1:1791:A:O2'	1.97	0.65
4:e:147:ARG:HG3	4:e:149:ARG:HH12	1.62	0.65
54:1:690:G:H2'	54:1:691:C:H6	1.60	0.65
54:1:2297:A:N1	54:1:2321:U:C5	2.55	0.65
12:m:123:LYS:HE2	54:1:2483:C:O2	1.96	0.65
35:J:75:LEU:HD12	35:J:78:GLY:HA2	1.79	0.65
43:R:78:ARG:HH11	43:R:78:ARG:HG2	1.62	0.65
47:V:19:SER:HB3	47:V:70:LYS:NZ	2.12	0.65
47:V:48:GLU:HG2	47:V:49:ASN:H	1.61	0.65
49:X:10:ILE:HD13	49:X:40:PHE:HE2	1.61	0.65
49:X:79:TYR:CE2	49:X:80:ARG:HG3	2.32	0.65
53:3:1062:U:H2'	53:3:1063:C:C6	2.32	0.65
59:8:158:ILE:CD1	59:8:162:LEU:HD13	2.26	0.65
3:d:112:LEU:HB3	3:d:118:LEU:HB2	1.79	0.64
10:k:30:ARG:CD	54:1:2674:G:H4'	2.27	0.64
24:y:2:LYS:HG3	24:y:3:ALA:N	2.11	0.64
33:H:106:ARG:N	33:H:106:ARG:HD2	2.12	0.64
33:H:122:GLN:O	33:H:125:ARG:HG3	1.96	0.64
38:M:10:LEU:HD22	38:M:74:ILE:HD11	1.80	0.64
42:Q:82:ARG:HG3	42:Q:95:HIS:HB2	1.79	0.64
47:V:28:VAL:HG21	47:V:39:ARG:CG	2.27	0.64
47:V:60:ILE:HA	47:V:75:VAL:HG23	1.78	0.64
50:Y:53:MET:HG2	50:Y:56:ILE:HB	1.78	0.64
53:3:470:C:H2'	53:3:471:U:C6	2.32	0.64
54:1:917:A:H5''	54:1:2268:A:H61	1.61	0.64
59:8:80:GLU:N	59:8:81:PRO:HD3	2.11	0.64
1:b:226:PRO:HD3	1:b:233:GLY:HA2	1.78	0.64
41:P:115:ILE:H	48:W:72:ARG:HH22	1.43	0.64
49:X:71:GLY:HA3	53:3:1320:C:O2	1.97	0.64
53:3:1048:G:H2'	53:3:1050:G:H8	1.61	0.64
53:3:1213:A:C2	53:3:1215:G:H1'	2.31	0.64
54:1:21:A:H2'	54:1:22:C:C6	2.32	0.64
54:1:1856:U:H2'	54:1:1857:G:O4'	1.96	0.64
59:8:310:HIS:HB2	59:8:315:GLU:HG3	1.80	0.64
27:B:37:HIS:HB3	27:B:43:THR:HG22	1.79	0.64
39:N:46:VAL:HA	39:N:49:GLN:OE1	1.97	0.64
41:P:49:SER:HA	41:P:68:ARG:NH1	2.12	0.64
52:a:11:ILE:HG23	52:a:33:LEU:HD22	1.78	0.64
54:1:1467:U:H2'	54:1:1468:U:H5''	1.78	0.64
54:1:1506:U:H2'	54:1:1507:C:C6	2.32	0.64
2:c:11:MET:HE3	54:1:2681:C:H4'	1.80	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:90:LEU:HD12	6:g:123:ARG:O	1.97	0.64
10:k:59:LYS:HG2	10:k:89:ASN:HA	1.79	0.64
53:3:575:G:O2'	53:3:821:G:H5'	1.98	0.64
53:3:1369:C:H2'	53:3:1370:G:H8	1.62	0.64
54:1:1028:A:H2'	54:1:1029:A:C8	2.32	0.64
54:1:2323:G:H2'	54:1:2324:U:O4'	1.96	0.64
33:H:46:LEU:HD23	33:H:51:VAL:HG11	1.80	0.64
34:I:75:TYR:O	34:I:79:ALA:N	2.31	0.64
35:J:114:LEU:HB3	35:J:119:VAL:HG21	1.78	0.64
36:K:86:ARG:CZ	53:3:673:A:H4'	2.28	0.64
53:3:55:A:H2'	53:3:56:U:H5'	1.79	0.64
53:3:1096:C:H2'	53:3:1097:C:C6	2.32	0.64
54:1:874:G:H2'	54:1:875:G:C8	2.32	0.64
54:1:1733:G:H2'	54:1:1734:G:H8	1.61	0.64
59:8:574:MET:HE3	59:8:575:GLY:H	1.61	0.64
1:b:94:LEU:HD13	1:b:100:ARG:HG2	1.80	0.64
13:n:64:ARG:HA	13:n:67:PHE:HB3	1.80	0.64
15:p:12:MET:SD	15:p:14:GLN:HG2	2.37	0.64
18:s:92:ARG:HH11	18:s:92:ARG:CB	2.10	0.64
32:G:17:HIS:HA	32:G:37:VAL:CG2	2.27	0.64
34:I:89:LEU:O	34:I:93:LEU:HG	1.98	0.64
34:I:129:VAL:HG12	34:I:131:ILE:H	1.62	0.64
45:T:17:ASP:OD2	45:T:19:ASN:HB2	1.96	0.64
53:3:1354:U:H2'	53:3:1355:G:H8	1.61	0.64
23:x:63:ILE:HG13	23:x:64:ASP:N	2.11	0.64
40:O:88:MET:O	40:O:89:ARG:HG2	1.97	0.64
53:3:16:A:O2'	53:3:17:U:H5'	1.97	0.64
53:3:396:C:H1'	53:3:398:U:OP1	1.97	0.64
53:3:1144:G:H21	53:3:1146:A:H62	1.46	0.64
54:1:263:G:H3'	54:1:264:C:H5''	1.78	0.64
1:b:270:ARG:HB3	1:b:270:ARG:HH11	1.62	0.64
11:l:39:LYS:HG3	54:1:832:U:OP1	1.98	0.64
24:y:14:LEU:O	24:y:17:GLU:HG3	1.98	0.64
32:G:72:LYS:NZ	32:G:75:ALA:HB2	2.13	0.64
34:I:25:ARG:NH2	34:I:30:LYS:HB2	2.12	0.64
37:L:24:LYS:O	37:L:28:ILE:HG13	1.98	0.64
41:P:126:ARG:HH22	53:3:692:U:H5''	1.63	0.64
52:a:193:LEU:HB3	52:a:197:LYS:HE2	1.80	0.64
53:3:273:U:H2'	53:3:274:A:H5'	1.79	0.64
54:1:2148:G:H2'	54:1:2149:U:C6	2.32	0.64
54:1:2255:G:O2'	56:5:3:G:H5''	1.98	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2895:G:H2'	54:1:2896:C:C6	2.32	0.64
2:c:5:VAL:HB	2:c:32:ASN:HD21	1.62	0.64
10:k:63:VAL:HG12	10:k:107:LEU:HD11	1.80	0.64
36:K:3:HIS:CG	36:K:95:ALA:HB2	2.33	0.64
52:a:15:VAL:HG21	52:a:220:ALA:HB3	1.80	0.64
54:1:155:A:H2'	54:1:156:A:C8	2.33	0.64
54:1:2537:U:H2'	54:1:2538:C:H6	1.63	0.64
55:2:115:A:H2'	55:2:116:G:C8	2.33	0.64
56:5:4:C:O2'	56:5:5:G:H5'	1.97	0.64
1:b:120:ASP:HB2	6:g:91:PHE:CZ	2.29	0.64
10:k:10:VAL:HG13	10:k:86:LEU:HD23	1.79	0.64
22:w:58:LYS:HE3	54:1:2366:A:H4'	1.80	0.64
46:U:70:ARG:HB3	53:3:376:G:OP2	1.98	0.64
48:W:56:ARG:HG2	48:W:60:ARG:NH1	2.13	0.64
54:1:1733:G:H2'	54:1:1734:G:C8	2.33	0.64
1:b:204:LEU:HD23	1:b:204:LEU:N	2.12	0.63
2:c:66:GLY:HA3	54:1:2787:C:H5'	1.80	0.63
36:K:7:VAL:HG23	36:K:60:VAL:O	1.98	0.63
43:R:106:ARG:HH11	43:R:112:ARG:HA	1.63	0.63
54:1:2513:A:H2'	54:1:2514:U:C6	2.33	0.63
59:8:245:GLU:O	59:8:248:ILE:HG22	1.98	0.63
59:8:332:ASN:ND2	59:8:334:THR:HB	2.13	0.63
1:b:116:GLN:HB3	1:b:127:ASN:ND2	2.13	0.63
7:h:26:VAL:HG12	7:h:82:ILE:HG23	1.80	0.63
33:H:57:GLU:HG3	33:H:59:PRO:HD3	1.80	0.63
40:O:57:VAL:HG22	40:O:58:ASN:N	2.12	0.63
45:T:16:ARG:N	45:T:16:ARG:HD2	2.12	0.63
53:3:432:A:H3'	53:3:433:G:H8	1.62	0.63
53:3:1323:G:H2'	53:3:1324:A:H8	1.63	0.63
53:3:1521:C:O2'	53:3:1522:U:H5'	1.98	0.63
54:1:581:C:H2'	54:1:582:A:C8	2.33	0.63
54:1:1609:A:H1'	54:1:1616:A:H1'	1.79	0.63
54:1:1679:A:H2'	54:1:1680:U:C6	2.33	0.63
54:1:1935:G:H1'	54:1:1964:G:N2	2.12	0.63
2:c:146:ILE:HG22	2:c:159:LYS:HE2	1.80	0.63
35:J:164:LEU:HD12	35:J:165:GLY:N	2.14	0.63
39:N:46:VAL:O	39:N:49:GLN:HG2	1.98	0.63
39:N:105:ARG:HG2	53:3:1117:A:O3'	1.98	0.63
44:S:68:ARG:HG3	53:3:1202:U:H4'	1.78	0.63
53:3:389:A:H2'	53:3:390:U:H5'	1.80	0.63
55:2:119:A:C2	55:2:120:A:H1'	2.32	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:c:173:GLN:HE22	2:c:207:VAL:HG12	1.64	0.63
10:k:70:ARG:HH22	54:1:2684:U:H5'	1.63	0.63
33:H:28:PHE:CE2	44:S:76:PHE:HE1	2.16	0.63
34:I:8:LEU:HD22	53:3:429:U:OP1	1.99	0.63
38:M:9:MET:HE1	38:M:35:ILE:HG23	1.81	0.63
43:R:55:LEU:O	43:R:59:VAL:HG23	1.97	0.63
53:3:137:U:H2'	53:3:138:G:H8	1.63	0.63
53:3:955:U:H3	53:3:1225:A:N6	1.94	0.63
54:1:1209:U:H2'	54:1:1210:G:H21	1.63	0.63
54:1:1957:C:H2'	54:1:1958:C:C6	2.33	0.63
54:1:2443:C:H2'	54:1:2444:G:C8	2.34	0.63
4:e:125:GLY:HA3	4:e:159:ALA:HB3	1.80	0.63
8:i:5:GLN:HE21	8:i:61:TYR:HA	1.62	0.63
36:K:29:ILE:HG23	36:K:66:ALA:HB2	1.81	0.63
37:L:47:GLU:HB3	37:L:51:GLN:HE21	1.61	0.63
41:P:96:ILE:O	41:P:100:ASN:N	2.27	0.63
47:V:3:LYS:HG2	47:V:4:ILE:H	1.62	0.63
51:Z:17:ARG:NH1	51:Z:21:SER:HB3	2.13	0.63
53:3:129:A:H2	53:3:232:G:H22	1.45	0.63
53:3:926:G:N2	58:4:19:C:H3'	2.12	0.63
53:3:1497:G:H2'	53:3:1498:U:O2	1.98	0.63
54:1:1300:G:H4'	54:1:1301:A:H5'	1.81	0.63
59:8:351:ASN:H	59:8:357:ARG:HA	1.63	0.63
59:8:544:VAL:HG11	59:8:580:PHE:HB2	1.81	0.63
59:8:587:ASP:CG	59:8:588:SER:H	2.06	0.63
1:b:15:VAL:HG12	1:b:204:LEU:O	1.99	0.63
5:f:139:VAL:O	5:f:143:VAL:HG23	1.98	0.63
53:3:512:U:H2'	53:3:513:C:C6	2.33	0.63
54:1:467:G:O2'	54:1:468:G:H5'	1.99	0.63
54:1:581:C:H2'	54:1:582:A:H8	1.63	0.63
54:1:2679:A:O2'	54:1:2680:U:H5'	1.99	0.63
59:8:189:LYS:HB2	59:8:205:GLU:O	1.99	0.63
59:8:335:PHE:HD1	59:8:384:ALA:HB2	1.63	0.63
59:8:494:ILE:HG21	59:8:522:MET:CE	2.29	0.63
27:B:24:VAL:HG23	27:B:25:THR:H	1.63	0.63
52:a:189:LEU:HD21	52:a:224:VAL:CG1	2.29	0.63
53:3:1118:U:H1'	53:3:1179:A:C4	2.33	0.63
54:1:2233:U:H2'	54:1:2234:G:H8	1.62	0.63
15:p:32:VAL:HG22	15:p:37:LYS:HG2	1.81	0.63
18:s:103:ILE:HD12	18:s:103:ILE:N	2.14	0.63
33:H:51:VAL:HG12	33:H:69:THR:OG1	1.99	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y:66:ILE:HG21	50:Y:71:ALA:H	1.64	0.63
53:3:982:U:H4'	53:3:983:A:C5'	2.29	0.63
59:8:137:ARG:NE	59:8:262:ILE:HD13	2.13	0.63
1:b:244:VAL:HG12	1:b:250:GLN:N	2.13	0.63
4:e:63:LYS:H	26:A:6:HIS:CE1	2.17	0.63
7:h:11:ILE:HD12	7:h:63:ALA:HA	1.81	0.63
15:p:90:ALA:HB2	15:p:112:ARG:HB2	1.81	0.63
17:r:80:ARG:HH12	54:1:571:U:H3'	1.64	0.63
32:G:94:ARG:NH1	53:3:1100:C:H3'	2.13	0.63
52:a:19:LYS:HG2	52:a:20:GLN:H	1.63	0.63
53:3:17:U:H2'	53:3:18:C:C6	2.33	0.63
53:3:137:U:H2'	53:3:138:G:C8	2.34	0.63
53:3:473:U:H2'	53:3:474:G:H8	1.64	0.63
54:1:646:U:C4	54:1:2368:C:H1'	2.33	0.63
1:b:207:ALA:HB2	54:1:1790:C:O2'	1.99	0.62
46:U:70:ARG:CZ	46:U:74:LEU:HD21	2.29	0.62
53:3:538:G:H2'	53:3:539:A:H8	1.63	0.62
54:1:146:A:H2'	54:1:147:C:C6	2.34	0.62
54:1:1258:U:H2'	54:1:1259:G:H8	1.62	0.62
8:i:34:ILE:H	8:i:34:ILE:CD1	2.09	0.62
26:A:16:CYS:HB3	26:A:34:LEU:HD23	1.81	0.62
41:P:127:ARG:HB3	53:3:796:C:OP1	1.99	0.62
50:Y:43:LYS:O	50:Y:47:GLN:HG2	1.99	0.62
53:3:220:G:O2'	53:3:221:C:H5'	2.00	0.62
53:3:398:U:H2'	53:3:399:G:H8	1.63	0.62
53:3:1229:A:H2'	53:3:1230:C:H6	1.64	0.62
54:1:914:G:H5'	54:1:915:C:OP2	2.00	0.62
54:1:1982:U:H5'	54:1:1982:U:H6	1.63	0.62
54:1:2415:G:H2'	54:1:2416:C:H6	1.64	0.62
58:4:9:G:H2'	58:4:10:G:C8	2.34	0.62
59:8:540:ILE:HG21	59:8:545:ILE:HB	1.80	0.62
4:e:33:ILE:HB	4:e:90:LEU:HD11	1.81	0.62
10:k:18:ARG:HB2	10:k:45:GLU:OE2	1.98	0.62
11:l:111:ILE:N	11:l:111:ILE:HD12	2.14	0.62
43:R:7:ASN:OD1	43:R:9:PRO:HD3	1.99	0.62
45:T:46:LYS:HA	45:T:52:ARG:HH22	1.65	0.62
53:3:691:G:H1'	53:3:696:A:N6	2.14	0.62
53:3:1152:A:H2'	53:3:1153:G:C8	2.34	0.62
53:3:1349:A:H1'	53:3:1374:A:N6	2.14	0.62
53:3:1435:G:H2'	53:3:1436:U:H6	1.64	0.62
54:1:1874:C:H2'	54:1:1875:G:O4'	1.99	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:c:136:ASN:HD21	2:c:140:HIS:HA	1.63	0.62
4:e:4:HIS:HB2	4:e:96:TRP:CE2	2.34	0.62
4:e:117:SER:HA	4:e:177:ARG:HB2	1.81	0.62
10:k:19:VAL:CB	10:k:41:ILE:HD12	2.30	0.62
19:t:50:LEU:HD23	24:y:26:PHE:CZ	2.35	0.62
34:I:9:LYS:NZ	53:3:427:U:H5''	2.15	0.62
52:a:33:LEU:HD13	52:a:219:GLY:HA2	1.80	0.62
53:3:665:A:N3	53:3:732:C:H2'	2.14	0.62
54:1:721:A:H2'	54:1:722:A:C8	2.34	0.62
54:1:1715:G:HO2'	54:1:1716:U:H6	1.47	0.62
59:8:351:ASN:HD21	59:8:354:LYS:HB3	1.63	0.62
1:b:24:HIS:CG	1:b:79:ARG:HD2	2.35	0.62
16:q:57:ARG:O	16:q:61:ILE:HG13	2.00	0.62
25:z:3:THR:HG22	25:z:38:GLU:HA	1.81	0.62
32:G:27:LYS:HB3	32:G:28:PRO:HD3	1.82	0.62
32:G:206:ILE:O	32:G:209:VAL:HG22	1.99	0.62
34:I:97:LEU:CD2	34:I:117:VAL:HG21	2.26	0.62
49:X:53:GLY:O	53:3:986:U:H1'	2.00	0.62
53:3:518:C:H4'	53:3:518:C:OP1	1.97	0.62
54:1:717:C:H2'	54:1:718:A:H5'	1.81	0.62
54:1:1893:C:H2'	54:1:1894:C:H5'	1.82	0.62
59:8:410:GLU:OE2	59:8:412:PRO:HD2	1.99	0.62
13:n:87:PHE:O	13:n:89:SER:N	2.30	0.62
40:O:41:PRO:HG3	53:3:1150:A:C2	2.35	0.62
42:Q:13:ARG:HH22	53:3:302:G:H4'	1.64	0.62
47:V:4:ILE:HG23	47:V:5:ARG:N	2.08	0.62
49:X:17:LYS:HD3	49:X:30:LEU:HD22	1.81	0.62
54:1:638:G:H2'	54:1:639:U:C6	2.35	0.62
54:1:2698:U:H2'	54:1:2699:C:C6	2.34	0.62
1:b:86:ARG:HD2	1:b:104:LEU:HD21	1.82	0.62
20:u:93:ARG:HB2	20:u:102:ILE:HD12	1.81	0.62
34:I:96:ARG:HB2	34:I:99:ASN:HB2	1.81	0.62
34:I:150:LYS:HE3	34:I:155:LYS:HD3	1.80	0.62
42:Q:65:TYR:O	42:Q:96:THR:HG22	1.99	0.62
53:3:98:A:H2'	53:3:99:C:C6	2.34	0.62
53:3:537:G:H2'	53:3:538:G:H8	1.64	0.62
53:3:1309:G:H2'	53:3:1310:G:C8	2.34	0.62
54:1:2031:A:N1	54:1:2498:C:H1'	2.14	0.62
54:1:2658:C:H2'	54:1:2659:G:O4'	1.99	0.62
7:h:61:ARG:HB3	54:1:1046:A:H4'	1.81	0.62
13:n:96:ARG:HB3	13:n:114:GLU:OE2	1.99	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:K:75:GLU:HA	36:K:78:PHE:HD2	1.65	0.62
38:M:66:GLN:C	38:M:68:LYS:H	2.08	0.62
52:a:67:HIS:NE2	52:a:187:GLU:HB2	2.13	0.62
53:3:438:U:H3	53:3:496:A:H62	1.46	0.62
53:3:1332:A:H2'	53:3:1333:A:H8	1.64	0.62
54:1:2286:G:H4'	54:1:2287:A:O4'	1.99	0.62
59:8:540:ILE:HG13	59:8:545:ILE:HD12	1.82	0.62
1:b:144:GLU:HA	1:b:151:GLY:HA2	1.80	0.62
33:H:130:ARG:NH1	33:H:133:MET:HE2	2.15	0.62
34:I:149:LYS:HG3	34:I:177:MET:HE1	1.82	0.62
36:K:18:VAL:CG1	36:K:19:PRO:HD3	2.27	0.62
40:O:33:GLY:O	40:O:34:ALA:HB3	2.00	0.62
50:Y:4:LYS:HE2	53:3:61:G:OP2	1.99	0.62
52:a:7:ARG:O	52:a:11:ILE:HG13	2.00	0.62
54:1:1095:A:O4'	59:8:632:ILE:HD12	1.98	0.62
54:1:1592:C:H2'	54:1:1593:A:H8	1.64	0.62
54:1:2758:A:H2'	54:1:2759:G:H5'	1.82	0.62
59:8:618:LYS:HE3	59:8:685:LEU:HD22	1.81	0.62
43:R:44:ILE:HA	43:R:47:LEU:HG	1.81	0.62
46:U:72:ALA:HB1	46:U:76:LYS:HZ3	1.64	0.62
47:V:11:VAL:CG1	47:V:54:ILE:HA	2.29	0.62
53:3:813:U:C2'	53:3:814:A:H5''	2.30	0.62
54:1:2626:C:O2'	54:1:2627:G:H5'	1.99	0.62
1:b:67:LYS:HE2	1:b:148:GLY:HA2	1.82	0.61
1:b:220:ARG:NH2	54:1:1788:C:OP1	2.33	0.61
5:f:71:LEU:O	5:f:75:VAL:HG23	1.99	0.61
21:v:4:ILE:HG23	21:v:63:ILE:HG23	1.81	0.61
23:x:7:THR:CB	23:x:9:LYS:HZ3	2.13	0.61
33:H:50:SER:O	33:H:69:THR:HG23	2.00	0.61
34:I:97:LEU:HB2	34:I:134:TYR:HB3	1.81	0.61
44:S:13:VAL:HA	44:S:59:GLN:NE2	2.15	0.61
46:U:70:ARG:HD3	53:3:375:U:H5''	1.82	0.61
54:1:1799:G:H4'	54:1:1800:C:H6	1.65	0.61
59:8:275:VAL:HG23	59:8:276:GLN:N	2.15	0.61
4:e:63:LYS:HD3	4:e:64:PRO:O	1.99	0.61
6:g:5:LEU:HD13	6:g:17:ASP:O	2.00	0.61
13:n:63:ARG:NH2	54:1:1454:C:H5'	2.16	0.61
31:F:16:ILE:N	31:F:16:ILE:HD12	2.15	0.61
38:M:9:MET:HE1	38:M:35:ILE:CG2	2.29	0.61
54:1:161:A:H3'	54:1:162:U:H5''	1.82	0.61
54:1:839:U:H2'	54:1:840:C:C6	2.35	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:1957:C:H2'	54:1:1958:C:H6	1.66	0.61
54:1:2247:A:H2'	54:1:2248:C:C6	2.34	0.61
1:b:141:HIS:CE1	1:b:190:THR:HB	2.34	0.61
34:I:38:GLY:CA	53:3:542:G:H5''	2.28	0.61
37:L:22:LEU:O	37:L:26:VAL:HG23	2.01	0.61
54:1:873:C:H2'	54:1:874:G:H8	1.66	0.61
54:1:874:G:H2'	54:1:875:G:H8	1.64	0.61
54:1:1152:C:H2'	54:1:1153:C:H6	1.66	0.61
54:1:1702:G:C3'	54:1:1703:G:H5''	2.30	0.61
59:8:167:VAL:HG12	59:8:262:ILE:O	2.00	0.61
59:8:547:GLY:O	59:8:550:ILE:HG13	2.00	0.61
8:i:11:GLN:HG3	8:i:56:VAL:HG12	1.81	0.61
36:K:4:TYR:O	36:K:63:ASN:HA	2.01	0.61
38:M:4:ASP:OD2	38:M:6:ILE:HB	2.00	0.61
41:P:127:ARG:HH22	53:3:1522:U:H5''	1.65	0.61
43:R:33:LEU:HA	43:R:36:ALA:HB3	1.80	0.61
53:3:326:G:H2'	53:3:327:A:H5'	1.81	0.61
53:3:1064:G:H1'	53:3:1190:G:N2	2.15	0.61
54:1:962:G:H21	54:1:2250:G:H22	1.48	0.61
54:1:1542:U:H2'	54:1:1543:G:O4'	2.00	0.61
58:4:19:C:H4'	58:4:20:C:O5'	2.00	0.61
45:T:11:VAL:O	45:T:15:GLY:N	2.33	0.61
53:3:66:A:H4'	53:3:173:U:C5	2.36	0.61
54:1:1771:C:H2'	54:1:1772:A:H8	1.66	0.61
54:1:2443:C:O2'	54:1:2444:G:H5'	2.01	0.61
4:e:169:LEU:HB3	4:e:174:PHE:HB2	1.83	0.61
6:g:8:LYS:HD3	6:g:137:GLU:OE2	2.01	0.61
16:q:108:LEU:HD23	17:r:48:LYS:HD2	1.81	0.61
33:H:112:ALA:HB2	33:H:201:ILE:CD1	2.31	0.61
33:H:151:GLU:HG2	33:H:166:TRP:CB	2.30	0.61
33:H:156:LEU:HD12	33:H:156:LEU:O	1.99	0.61
52:a:200:LYS:HZ2	52:a:204:ALA:HB3	1.65	0.61
53:3:493:A:H2'	53:3:494:G:H5'	1.82	0.61
54:1:580:U:H2'	54:1:581:C:H6	1.65	0.61
54:1:685:A:C8	54:1:773:U:C4	2.89	0.61
54:1:1467:U:H2'	54:1:1468:U:C5'	2.30	0.61
54:1:1682:G:H2'	54:1:1683:U:C6	2.35	0.61
54:1:2493:U:H3'	54:1:2494:G:H5''	1.81	0.61
59:8:536:PHE:CD1	59:8:576:ILE:HG23	2.36	0.61
5:f:82:PHE:CE1	5:f:137:LYS:HE3	2.36	0.61
14:o:16:ARG:HA	14:o:19:GLN:CG	2.30	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:p:91:VAL:HG21	15:p:96:LEU:HD21	1.83	0.61
54:1:588:U:H2'	54:1:589:U:C6	2.35	0.61
54:1:639:U:H2'	54:1:640:C:C6	2.36	0.61
54:1:2287:A:O2'	54:1:2288:A:H2'	2.01	0.61
3:d:149:ILE:HG21	3:d:188:MET:HG3	1.83	0.61
6:g:3:VAL:HA	6:g:39:ALA:H	1.65	0.61
9:j:69:ARG:O	9:j:90:GLU:HB2	2.01	0.61
10:k:87:LEU:HB3	10:k:92:GLU:O	2.00	0.61
37:L:61:PHE:CE2	37:L:123:LEU:HD22	2.36	0.61
53:3:41:G:H2'	53:3:42:G:H8	1.65	0.61
54:1:948:C:H2'	54:1:949:G:H8	1.64	0.61
54:1:962:G:H2'	54:1:963:U:C6	2.34	0.61
54:1:1022:G:H22	54:1:1142:A:H2	1.47	0.61
54:1:1310:G:H2'	54:1:1311:G:H5'	1.83	0.61
54:1:2205:A:H2'	54:1:2206:C:C6	2.35	0.61
5:f:23:ILE:HD12	5:f:23:ILE:N	2.15	0.61
34:I:67:LEU:HB2	34:I:70:GLN:HG3	1.81	0.61
37:L:99:ALA:HA	37:L:102:TRP:CE3	2.36	0.61
41:P:118:ASN:HB2	53:3:718:A:H5'	1.83	0.61
52:a:189:LEU:HD21	52:a:224:VAL:HG11	1.83	0.61
53:3:1074:G:H2'	53:3:1075:U:C6	2.36	0.61
53:3:1311:A:C2'	53:3:1312:G:H5''	2.30	0.61
53:3:1354:U:H2'	53:3:1355:G:C8	2.36	0.61
54:1:1773:A:C2'	54:1:1774:C:H5'	2.30	0.61
59:8:249:LYS:HA	59:8:285:TYR:HE1	1.65	0.61
59:8:512:ARG:HA	59:8:512:ARG:NE	2.16	0.61
24:y:24:GLU:HA	24:y:27:ASN:HB2	1.83	0.61
27:B:51:ARG:CZ	27:B:53:VAL:HG12	2.31	0.61
32:G:33:ALA:HB2	32:G:39:ILE:HG13	1.83	0.61
36:K:91:ARG:HG3	53:3:737:C:OP1	2.01	0.61
53:3:24:U:H2'	53:3:25:C:C6	2.35	0.61
53:3:297:G:H4'	53:3:557:G:H4'	1.83	0.61
53:3:1038:C:H2'	53:3:1039:G:C8	2.36	0.61
53:3:1252:A:H2'	53:3:1253:G:O4'	2.00	0.61
54:1:155:A:H2'	54:1:156:A:H8	1.66	0.61
54:1:492:A:H2'	54:1:493:G:O4'	2.01	0.61
54:1:704:G:H2'	54:1:726:G:H22	1.65	0.61
54:1:1686:C:H2'	54:1:1687:G:O4'	2.01	0.61
2:c:101:PHE:HE2	2:c:203:VAL:HG12	1.66	0.60
3:d:158:PHE:O	3:d:162:ARG:N	2.34	0.60
9:j:8:PRO:HG3	9:j:48:VAL:HG13	1.82	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B:8:THR:HG22	54:1:2020:A:H5'	1.83	0.60
33:H:23:ALA:CB	33:H:31:ASN:HD22	2.13	0.60
36:K:40:GLU:N	36:K:61:LEU:HD11	2.16	0.60
39:N:3:ASN:CG	39:N:4:GLN:H	2.09	0.60
39:N:33:SER:HB3	39:N:36:GLN:HG2	1.83	0.60
46:U:57:ILE:O	46:U:61:VAL:HG23	2.01	0.60
53:3:263:A:H2'	53:3:264:C:C6	2.36	0.60
53:3:355:C:C1'	53:3:388:G:H1'	2.30	0.60
53:3:373:A:H1'	53:3:481:G:N2	2.16	0.60
53:3:908:A:H2'	53:3:909:A:H8	1.66	0.60
54:1:2240:U:H2'	54:1:2241:A:H8	1.66	0.60
55:2:60:C:H2'	55:2:61:G:C8	2.34	0.60
57:6:37:A:C2'	57:6:38:A:H5'	2.29	0.60
12:m:24:THR:HG22	12:m:99:GLY:O	2.01	0.60
32:G:53:LEU:HB3	32:G:219:THR:HG21	1.82	0.60
39:N:125:GLN:NE2	53:3:943:U:H1'	2.14	0.60
43:R:27:THR:HG21	53:3:1328:C:H5''	1.83	0.60
54:1:351:C:H2'	54:1:352:A:H8	1.66	0.60
54:1:873:C:H2'	54:1:874:G:C8	2.36	0.60
54:1:1656:C:H2'	54:1:1657:U:H6	1.65	0.60
54:1:2230:G:H2'	54:1:2231:U:C6	2.37	0.60
54:1:2800:A:C2	54:1:2895:G:H1'	2.36	0.60
59:8:63:ILE:HD12	59:8:63:ILE:N	2.16	0.60
59:8:111:MET:HB3	59:8:139:ALA:HA	1.84	0.60
5:f:169:ARG:HA	5:f:169:ARG:NE	2.17	0.60
13:n:60:VAL:HG13	54:1:1454:C:O2'	2.01	0.60
15:p:50:ARG:HG2	15:p:52:ARG:HD2	1.82	0.60
32:G:15:PHE:HD2	32:G:39:ILE:HG12	1.65	0.60
33:H:35:ASP:OD1	33:H:56:ILE:HG13	2.02	0.60
54:1:1078:U:C4'	54:1:1079:C:H5''	2.29	0.60
54:1:2121:G:H2'	54:1:2122:U:O4'	2.01	0.60
59:8:317:PHE:HA	59:8:341:GLY:HA3	1.82	0.60
59:8:351:ASN:HB3	59:8:356:ALA:O	2.01	0.60
4:e:140:ILE:HG23	4:e:144:LYS:HB2	1.84	0.60
17:r:2:TYR:H	17:r:2:TYR:HD1	1.48	0.60
24:y:41:HIS:CD2	54:1:96:C:H4'	2.35	0.60
38:M:77:VAL:HG23	38:M:78:SER:H	1.65	0.60
46:U:12:LYS:HE2	46:U:13:LYS:HE2	1.84	0.60
46:U:53:ASP:O	46:U:57:ILE:HG12	2.01	0.60
51:Z:24:LYS:HB3	51:Z:27:VAL:H	1.67	0.60
53:3:797:C:O2'	53:3:798:U:H5'	2.01	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:f:143:VAL:O	5:f:147:LEU:HD23	2.00	0.60
7:h:34:THR:O	7:h:37:LYS:HG2	2.01	0.60
9:j:76:HIS:CE1	9:j:85:LYS:HB2	2.36	0.60
29:D:25:LYS:HA	29:D:28:ARG:NH2	2.16	0.60
34:I:36:ALA:O	34:I:38:GLY:N	2.33	0.60
52:a:6:LYS:O	52:a:7:ARG:C	2.41	0.60
54:1:210:C:H2'	54:1:211:C:C6	2.36	0.60
54:1:286:U:H2'	54:1:287:G:C8	2.36	0.60
54:1:871:U:H2'	54:1:872:U:C6	2.36	0.60
59:8:255:ARG:HB3	59:8:255:ARG:HH11	1.65	0.60
59:8:517:HIS:HB3	59:8:582:SER:OG	2.02	0.60
1:b:132:ARG:NH2	1:b:186:ASP:HA	2.16	0.60
21:v:43:ASP:O	21:v:47:VAL:HG23	2.01	0.60
32:G:128:LEU:O	32:G:128:LEU:HD23	2.00	0.60
33:H:106:ARG:HD2	33:H:106:ARG:H	1.64	0.60
39:N:87:MET:HA	39:N:90:ASP:HB3	1.84	0.60
39:N:129:ARG:HH11	39:N:129:ARG:HG3	1.66	0.60
49:X:51:HIS:ND1	53:3:1220:G:H1'	2.17	0.60
52:a:68:GLY:HA2	52:a:159:GLY:HA2	1.83	0.60
53:3:271:C:H2'	53:3:272:C:H6	1.65	0.60
53:3:760:G:H2'	53:3:761:G:H5'	1.84	0.60
53:3:1444:U:H2'	53:3:1445:U:C6	2.37	0.60
54:1:2419:U:H2'	54:1:2420:C:C6	2.36	0.60
3:d:181:ILE:HG23	11:l:2:ARG:HG3	1.83	0.60
5:f:3:VAL:HG23	54:1:2751:G:H4'	1.83	0.60
5:f:147:LEU:HA	5:f:150:TYR:HD2	1.65	0.60
7:h:81:LEU:CD1	54:1:1106:G:H21	2.14	0.60
32:G:83:ALA:O	32:G:86:CYS:O	2.19	0.60
37:L:49:LEU:HD13	37:L:123:LEU:HD13	1.84	0.60
39:N:60:LEU:HD12	39:N:60:LEU:O	2.02	0.60
48:W:62:ARG:HD2	48:W:69:TYR:HA	1.83	0.60
53:3:35:G:H2'	53:3:36:C:C6	2.37	0.60
53:3:1097:C:H2'	53:3:1098:C:C6	2.37	0.60
54:1:279:A:H2'	54:1:280:U:O4'	2.01	0.60
59:8:502:GLU:HB3	59:8:517:HIS:HE1	1.67	0.60
28:C:9:LYS:HB3	28:C:51:ALA:HB3	1.84	0.60
39:N:129:ARG:HG3	39:N:129:ARG:NH1	2.16	0.60
49:X:52:ASN:HB3	49:X:55:GLN:HE21	1.65	0.60
59:8:498:VAL:HG21	59:8:501:VAL:HG13	1.82	0.60
7:h:77:VAL:CG1	7:h:82:ILE:HD13	2.31	0.60
12:m:37:GLY:HA3	12:m:126:ILE:HB	1.83	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:o:3:LYS:NZ	55:2:46:A:H5''	2.16	0.60
18:s:79:GLY:H	18:s:101:SER:HA	1.66	0.60
38:M:77:VAL:HG23	38:M:78:SER:N	2.17	0.60
53:3:59:A:H2'	53:3:59:A:N3	2.17	0.60
53:3:271:C:H2'	53:3:272:C:C6	2.37	0.60
53:3:538:G:H2'	53:3:539:A:C8	2.37	0.60
53:3:1524:C:H2'	53:3:1525:G:C8	2.37	0.60
54:1:572:A:H5''	54:1:573:U:OP2	2.01	0.60
54:1:2839:G:H2'	54:1:2840:C:C6	2.37	0.60
59:8:249:LYS:HE2	59:8:253:ARG:HD2	1.84	0.60
3:d:119:ILE:HB	3:d:187:VAL:HG22	1.83	0.60
8:i:25:PRO:HG2	54:1:1095:A:C2	2.35	0.60
12:m:65:ILE:HG13	12:m:103:TYR:HE1	1.66	0.60
12:m:75:GLU:HG2	12:m:76:LYS:H	1.67	0.60
22:w:12:SER:HB2	54:1:2262:U:H5	1.67	0.60
34:I:72:ARG:O	34:I:76:LYS:N	2.35	0.60
34:I:125:ASN:ND2	34:I:141:VAL:O	2.35	0.60
46:U:53:ASP:OD2	46:U:56:ARG:HG2	2.02	0.60
53:3:222:C:H2'	53:3:223:A:C8	2.36	0.60
54:1:2329:U:H2'	54:1:2330:G:C8	2.36	0.60
59:8:388:LEU:HD23	59:8:391:VAL:HG11	1.83	0.60
59:8:497:LYS:HB3	59:8:523:TYR:HD1	1.67	0.60
8:i:11:GLN:CB	8:i:54:ILE:O	2.49	0.59
11:l:4:ASN:O	54:1:1243:C:H1'	2.02	0.59
17:r:21:ARG:O	17:r:22:LEU:HD23	2.02	0.59
36:K:9:MET:HE2	36:K:86:ARG:HD2	1.84	0.59
40:O:53:ILE:HG13	44:S:84:ARG:HE	1.67	0.59
45:T:31:LEU:O	45:T:35:ILE:HG13	2.02	0.59
46:U:33:ILE:N	46:U:33:ILE:HD12	2.17	0.59
53:3:438:U:O4	53:3:494:G:H2'	2.01	0.59
53:3:1063:C:H2'	53:3:1064:G:H8	1.66	0.59
53:3:1227:A:H2'	53:3:1228:C:H5'	1.83	0.59
57:6:9:G:H21	57:6:45:G:H3'	1.67	0.59
59:8:278:MET:O	59:8:282:VAL:HG13	2.02	0.59
3:d:1:MET:SD	3:d:113:VAL:HG11	2.42	0.59
4:e:99:PHE:HE2	4:e:172:PHE:CE2	2.20	0.59
8:i:33:ASN:H	8:i:64:ARG:NH2	1.98	0.59
10:k:38:ILE:N	10:k:38:ILE:HD12	2.17	0.59
26:A:22:MET:HA	26:A:22:MET:HE3	1.83	0.59
33:H:29:ALA:HB1	44:S:64:ARG:HH22	1.65	0.59
34:I:2:ARG:O	34:I:4:LEU:HG	2.02	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:M:85:TYR:HH	47:V:36:PHE:HE2	1.50	0.59
50:Y:28:ARG:HD3	53:3:1438:G:OP1	2.02	0.59
53:3:62:U:H2'	53:3:63:C:C6	2.37	0.59
53:3:525:C:H2'	53:3:526:C:C6	2.37	0.59
54:1:1999:C:O2'	54:1:2000:C:H5'	2.01	0.59
59:8:196:ALA:O	59:8:271:LYS:HA	2.02	0.59
4:e:35:LEU:HB2	4:e:88:VAL:HB	1.85	0.59
10:k:31:ARG:HG3	10:k:31:ARG:HH11	1.68	0.59
32:G:213:LEU:HA	32:G:216:VAL:HG23	1.82	0.59
44:S:81:ILE:HD13	53:3:1202:U:C2	2.37	0.59
53:3:785:G:O2'	53:3:786:G:H5'	2.02	0.59
53:3:908:A:H2'	53:3:909:A:C8	2.37	0.59
53:3:946:A:H2'	53:3:947:G:H8	1.68	0.59
54:1:1297:C:OP1	54:1:2710:C:H4'	2.02	0.59
54:1:2291:U:H2'	54:1:2292:U:C6	2.36	0.59
57:6:59:A:C2'	57:6:60:U:H5'	2.30	0.59
7:h:11:ILE:O	7:h:15:VAL:HG23	2.03	0.59
8:i:29:GLN:HB3	8:i:30:GLN:NE2	2.17	0.59
18:s:44:ALA:HA	18:s:47:VAL:HG12	1.85	0.59
32:G:212:TYR:O	32:G:216:VAL:HG23	2.02	0.59
46:U:19:VAL:O	46:U:35:ARG:HG3	2.01	0.59
53:3:947:G:H2'	53:3:948:C:C6	2.37	0.59
59:8:507:LYS:HB2	59:8:514:GLN:HB3	1.85	0.59
1:b:176:ARG:HH22	54:1:1820:U:H5	1.49	0.59
5:f:3:VAL:HG12	5:f:68:ARG:HD2	1.84	0.59
9:j:36:LEU:CD1	9:j:54:ILE:HD12	2.32	0.59
12:m:65:ILE:HG13	12:m:103:TYR:CE1	2.36	0.59
15:p:63:ILE:HA	15:p:68:GLY:HA2	1.83	0.59
31:F:36:ARG:HH21	54:1:2539:C:H4'	1.67	0.59
47:V:9:GLY:HA3	47:V:24:ILE:HD12	1.84	0.59
53:3:450:G:N2	53:3:482:A:H61	1.99	0.59
53:3:524:G:H2'	53:3:525:C:C6	2.37	0.59
54:1:629:G:H5''	54:1:650:C:O2'	2.01	0.59
54:1:1683:U:H2'	54:1:1684:G:C8	2.36	0.59
54:1:2637:U:H2'	54:1:2638:G:H5'	1.84	0.59
15:p:105:LYS:O	15:p:108:ARG:HG2	2.03	0.59
36:K:6:ILE:HG13	36:K:62:MET:HB2	1.84	0.59
37:L:21:LEU:C	37:L:21:LEU:HD23	2.27	0.59
41:P:52:ARG:HA	41:P:52:ARG:HH11	1.63	0.59
41:P:55:ARG:HH11	41:P:55:ARG:CB	2.15	0.59
43:R:44:ILE:HG23	43:R:47:LEU:CD1	2.33	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:S:92:ILE:HG21	44:S:95:LEU:HD22	1.84	0.59
53:3:134:G:H2'	53:3:135:C:O4'	2.03	0.59
54:1:741:U:H2'	54:1:742:A:H8	1.67	0.59
54:1:1487:U:H2'	54:1:1488:C:C6	2.38	0.59
54:1:2075:U:H2'	54:1:2238:G:N2	2.17	0.59
55:2:55:U:O2'	55:2:56:G:H5'	2.03	0.59
59:8:351:ASN:OD1	59:8:395:ASP:HB3	2.03	0.59
1:b:145:MET:HE1	1:b:181:ARG:HH12	1.68	0.59
5:f:3:VAL:HG21	54:1:2748:A:H5'	1.85	0.59
10:k:102:PRO:HB3	10:k:121:GLU:HB3	1.84	0.59
39:N:22:PRO:HA	39:N:60:LEU:HA	1.84	0.59
39:N:113:LYS:O	39:N:113:LYS:HD3	2.03	0.59
46:U:79:ASN:HD21	46:U:82:ALA:CB	1.98	0.59
53:3:82:G:H2'	53:3:83:C:H5'	1.84	0.59
53:3:1218:C:H2'	53:3:1219:A:C8	2.37	0.59
54:1:1000:A:H2'	54:1:1001:A:C8	2.38	0.59
54:1:1042:G:H2'	54:1:1043:C:H6	1.66	0.59
54:1:2028:U:H2'	54:1:2029:G:O4'	2.03	0.59
54:1:2248:C:C2'	54:1:2249:U:H5'	2.33	0.59
1:b:206:LYS:HG3	1:b:206:LYS:O	2.03	0.59
17:r:24:LYS:HA	17:r:94:THR:OG1	2.03	0.59
27:B:15:ARG:HH22	54:1:1264:A:H5''	1.67	0.59
34:I:10:LEU:HD23	34:I:20:LEU:HD21	1.85	0.59
38:M:29:SER:OG	38:M:32:LYS:HG3	2.02	0.59
53:3:304:U:H2'	53:3:305:G:C8	2.38	0.59
53:3:526:C:H2'	53:3:527:G:H4'	1.85	0.59
53:3:860:A:H2'	53:3:861:G:O4'	2.03	0.59
54:1:1152:C:H2'	54:1:1153:C:C6	2.37	0.59
59:8:342:VAL:HG12	59:8:379:ALA:N	2.13	0.59
2:c:70:LYS:O	2:c:70:LYS:HD3	2.02	0.59
2:c:130:GLN:NE2	2:c:142:VAL:HG22	2.17	0.59
7:h:34:THR:HG22	54:1:1085:A:N6	2.18	0.59
8:i:13:ALA:HB3	8:i:16:MET:HB2	1.84	0.59
18:s:7:HIS:ND1	18:s:10:ALA:HB2	2.17	0.59
33:H:39:ARG:HG2	33:H:54:ILE:HD11	1.85	0.59
53:3:1170:A:H2'	53:3:1171:A:O4'	2.03	0.59
53:3:1201:A:H1'	53:3:1202:U:OP2	2.03	0.59
54:1:306:U:H2'	54:1:307:G:O4'	2.03	0.59
54:1:848:C:H2'	54:1:849:A:H8	1.68	0.59
54:1:2398:U:H2'	54:1:2399:G:C8	2.37	0.59
59:8:498:VAL:HG23	59:8:607:LYS:HD2	1.85	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:149:ILE:HG23	3:d:188:MET:HA	1.85	0.59
12:m:45:GLN:HE21	54:1:2485:G:H5''	1.68	0.59
29:D:10:LEU:HD23	54:1:770:G:H5''	1.83	0.59
38:M:26:MET:HE3	38:M:32:LYS:NZ	2.17	0.59
44:S:45:LEU:HD11	49:X:12:LEU:HD21	1.85	0.59
49:X:34:SER:OG	49:X:37:SER:HB3	2.01	0.59
54:1:948:C:H2'	54:1:949:G:C8	2.37	0.59
54:1:2176:A:H2'	54:1:2177:C:H6	1.67	0.59
59:8:20:ASP:CA	62:8:801:GCP:H3B1	2.32	0.59
1:b:106:PRO:HG3	1:b:126:GLY:HA2	1.85	0.58
1:b:259:ASN:C	1:b:261:ARG:H	2.10	0.58
3:d:31:VAL:HG21	3:d:104:ALA:HB2	1.85	0.58
6:g:99:ILE:HD11	6:g:115:VAL:HG11	1.85	0.58
12:m:82:MET:HE1	54:1:956:G:H1'	1.83	0.58
13:n:102:PHE:HE1	13:n:109:PRO:HG3	1.68	0.58
41:P:126:ARG:HH12	53:3:796:C:H4'	1.68	0.58
51:Z:50:SER:HA	51:Z:53:LYS:HE2	1.85	0.58
53:3:1033:G:H2'	53:3:1034:G:C5'	2.33	0.58
54:1:1437:C:H2'	54:1:1438:U:C6	2.38	0.58
54:1:2224:G:H4'	54:1:2226:C:O2	2.02	0.58
54:1:2231:U:H2'	54:1:2232:C:C6	2.37	0.58
54:1:2743:U:C2'	54:1:2744:G:H5''	2.33	0.58
55:2:89:U:H5'	55:2:90:C:C6	2.38	0.58
57:6:19:G:O2'	57:6:20:U:H5'	2.03	0.58
59:8:99:VAL:HG12	59:8:103:MET:HG3	1.85	0.58
59:8:101:ARG:HD3	59:8:323:LYS:HG2	1.85	0.58
59:8:220:GLN:O	59:8:224:GLU:HB2	2.03	0.58
7:h:25:ALA:O	7:h:84:TYR:HA	2.03	0.58
16:q:68:ALA:HB1	16:q:73:ILE:HG23	1.85	0.58
40:O:15:HIS:ND1	40:O:16:ARG:N	2.51	0.58
53:3:250:A:H4'	53:3:252:U:C6	2.38	0.58
53:3:1004:A:H3'	53:3:1024:G:H22	1.68	0.58
54:1:1434:A:H2'	54:1:1435:G:H8	1.67	0.58
54:1:2128:G:N3	54:1:2173:A:H1'	2.18	0.58
58:4:17:U:C2'	58:4:18:G:H4'	2.25	0.58
59:8:92:HIS:CD2	59:8:464:LEU:HD21	2.39	0.58
59:8:471:ASP:HA	59:8:474:LYS:HB2	1.84	0.58
59:8:497:LYS:HG2	59:8:524:PRO:HD2	1.83	0.58
5:f:129:GLU:O	5:f:130:ILE:HD13	2.03	0.58
8:i:34:ILE:HD12	8:i:34:ILE:N	2.11	0.58
12:m:35:ALA:HB2	12:m:102:LEU:HD11	1.85	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:F:19:ARG:HH12	54:1:2755:C:H2'	1.66	0.58
32:G:22:TRP:CZ3	32:G:24:PRO:HA	2.39	0.58
34:I:148:ALA:HB1	34:I:151:GLN:NE2	2.19	0.58
35:J:105:ILE:CG1	35:J:123:LEU:HA	2.33	0.58
38:M:28:SER:HB3	38:M:58:LEU:HB2	1.85	0.58
39:N:52:GLU:HA	39:N:56:MET:HE3	1.85	0.58
40:O:43:PRO:HA	53:3:1151:A:H5'	1.86	0.58
51:Z:3:ILE:N	51:Z:3:ILE:HD12	2.19	0.58
52:a:10:VAL:O	52:a:14:LYS:HG3	2.02	0.58
53:3:374:A:H2'	53:3:375:U:C6	2.38	0.58
53:3:398:U:H2'	53:3:399:G:C8	2.37	0.58
53:3:454:G:H2'	53:3:455:G:C8	2.38	0.58
53:3:697:U:C2'	53:3:698:G:H5'	2.32	0.58
53:3:947:G:H2'	53:3:948:C:H6	1.67	0.58
54:1:503:A:H4'	54:1:505:A:H5''	1.85	0.58
54:1:1442:U:H2'	54:1:1443:U:H6	1.64	0.58
54:1:1638:C:H2'	54:1:1639:C:C5'	2.30	0.58
54:1:1847:A:O2'	54:1:1848:A:H8	1.86	0.58
1:b:224:MET:O	1:b:232:GLY:HA2	2.03	0.58
6:g:9:VAL:CG2	6:g:13:GLY:HA3	2.34	0.58
23:x:4:CYS:HA	23:x:32:LEU:HD21	1.84	0.58
25:z:10:ARG:HB3	25:z:53:MET:HB2	1.85	0.58
32:G:173:LYS:HA	32:G:176:ASN:HB2	1.86	0.58
34:I:49:ASP:O	34:I:52:VAL:HG12	2.04	0.58
51:Z:24:LYS:C	51:Z:26:GLY:N	2.61	0.58
53:3:1288:A:H2'	53:3:1289:A:O4'	2.04	0.58
53:3:1538:C:O2'	53:3:1539:C:H5'	2.03	0.58
54:1:1137:G:O2'	54:1:1138:G:H5'	2.02	0.58
54:1:1335:C:H2'	54:1:1336:A:C8	2.38	0.58
54:1:1487:U:H2'	54:1:1488:C:H6	1.68	0.58
59:8:469:ILE:HG22	59:8:473:MET:HE1	1.84	0.58
1:b:66:PHE:HB3	1:b:150:GLY:O	2.03	0.58
4:e:134:GLN:NE2	4:e:135:ILE:HG22	2.18	0.58
13:n:102:PHE:CE1	13:n:109:PRO:HG3	2.38	0.58
31:F:9:LYS:HG3	31:F:14:CYS:HB2	1.85	0.58
33:H:153:SER:CB	33:H:164:THR:HG22	2.32	0.58
37:L:129:ASN:HA	37:L:134:VAL:HG21	1.86	0.58
38:M:126:CYS:SG	38:M:127:TYR:N	2.76	0.58
42:Q:31:GLY:HA3	42:Q:56:LEU:HD23	1.85	0.58
53:3:29:U:O2'	53:3:30:U:H5'	2.04	0.58
53:3:193:C:H2'	53:3:194:C:C6	2.39	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:880:C:H2'	53:3:881:G:H8	1.67	0.58
54:1:720:U:H2'	54:1:721:A:C8	2.38	0.58
54:1:2176:A:H2'	54:1:2177:C:C6	2.39	0.58
54:1:2247:A:H2'	54:1:2248:C:H6	1.69	0.58
54:1:2671:G:H2'	54:1:2672:U:C6	2.38	0.58
3:d:21:ARG:HD2	3:d:106:LYS:HD2	1.85	0.58
9:j:113:PRO:HD2	54:1:558:U:OP1	2.03	0.58
34:I:123:MET:O	34:I:143:SER:O	2.22	0.58
34:I:180:THR:HG22	34:I:182:LYS:HD2	1.86	0.58
41:P:111:ASP:H	51:Z:3:ILE:HG23	1.68	0.58
47:V:3:LYS:HD2	47:V:6:THR:HB	1.85	0.58
50:Y:2:ASN:N	53:3:331:G:O3'	2.37	0.58
53:3:113:G:O2'	53:3:353:A:H4'	2.03	0.58
53:3:136:C:H6	53:3:136:C:H5'	1.69	0.58
53:3:545:C:H3'	53:3:546:A:H8	1.67	0.58
53:3:1060:U:H2'	53:3:1061:G:C8	2.37	0.58
54:1:2524:G:C2'	54:1:2525:G:H5''	2.32	0.58
54:1:2716:C:O2'	54:1:2717:C:H5'	2.03	0.58
2:c:40:LEU:HD12	2:c:40:LEU:N	2.18	0.58
3:d:44:ARG:NH2	3:d:87:ALA:HB3	2.18	0.58
3:d:147:LEU:HD23	3:d:148:ILE:N	2.18	0.58
31:F:27:CYS:SG	31:F:30:GLU:HB3	2.44	0.58
42:Q:30:ARG:HB2	53:3:363:A:H5'	1.85	0.58
47:V:19:SER:HB3	47:V:70:LYS:HZ2	1.68	0.58
47:V:22:VAL:HB	47:V:45:VAL:HG23	1.84	0.58
52:a:215:SER:HB2	52:a:219:GLY:HA3	1.86	0.58
53:3:1306:A:N6	53:3:1331:G:H1'	2.17	0.58
54:1:12:U:H2'	54:1:13:A:H5'	1.85	0.58
54:1:577:G:H2'	54:1:578:G:C8	2.37	0.58
54:1:1055:G:H2'	54:1:1056:G:O4'	2.04	0.58
54:1:1198:U:H2'	54:1:1199:U:C6	2.39	0.58
54:1:2637:U:C2'	54:1:2638:G:H5'	2.33	0.58
59:8:105:VAL:HG13	59:8:337:ARG:HD2	1.85	0.58
5:f:169:ARG:HE	5:f:170:THR:N	2.00	0.58
14:o:16:ARG:CA	14:o:19:GLN:HG2	2.30	0.58
23:x:42:GLU:HB3	23:x:44:ARG:HG2	1.86	0.58
34:I:69:ARG:N	53:3:546:A:OP1	2.31	0.58
43:R:23:GLY:HA3	43:R:68:LEU:CD1	2.34	0.58
50:Y:37:ALA:HA	50:Y:40:ALA:HB3	1.86	0.58
53:3:106:C:O2'	53:3:107:G:H5'	2.04	0.58
53:3:216:U:H2'	53:3:217:C:C6	2.39	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:355:C:O2'	53:3:388:G:H1'	2.03	0.58
54:1:1843:C:H2'	54:1:1844:C:C6	2.39	0.58
54:1:2464:G:H2'	54:1:2465:C:H6	1.68	0.58
59:8:11:ARG:NH2	59:8:286:LEU:HB3	2.13	0.58
11:l:110:VAL:HG21	11:l:127:VAL:HG22	1.86	0.58
15:p:96:LEU:HD22	15:p:98:TYR:HE1	1.68	0.58
17:r:18:GLN:O	17:r:98:ILE:HG22	2.03	0.58
34:I:196:GLU:O	34:I:199:ILE:HG22	2.04	0.58
43:R:44:ILE:HG23	43:R:47:LEU:HD12	1.85	0.58
47:V:45:VAL:C	47:V:70:LYS:HZ3	2.12	0.58
52:a:66:PRO:HB2	52:a:188:ASN:HA	1.86	0.58
53:3:1311:A:C3'	53:3:1312:G:H5''	2.33	0.58
54:1:679:C:H2'	54:1:680:C:H6	1.66	0.58
54:1:2074:U:H2'	54:1:2075:U:C6	2.38	0.58
7:h:73:LYS:C	7:h:73:LYS:HD3	2.29	0.58
11:l:95:LEU:HD22	11:l:100:ILE:CD1	2.34	0.58
18:s:18:ARG:HH11	54:1:518:G:H4'	1.68	0.58
21:v:3:THR:HG23	21:v:62:THR:O	2.04	0.58
27:B:4:GLN:O	54:1:2017:U:H4'	2.03	0.58
32:G:33:ALA:HB2	32:G:39:ILE:CD1	2.34	0.58
37:L:11:ILE:H	37:L:11:ILE:CD1	2.15	0.58
42:Q:41:PRO:HD2	42:Q:47:ALA:H	1.69	0.58
52:a:66:PRO:CG	52:a:191:ALA:HB3	2.33	0.58
53:3:81:A:H2'	53:3:82:G:H8	1.69	0.58
53:3:261:U:H2'	53:3:263:A:OP2	2.04	0.58
53:3:969:A:H2'	53:3:970:C:O4'	2.04	0.58
54:1:279:A:H2'	54:1:280:U:H5'	1.86	0.58
54:1:694:U:C3'	54:1:695:G:H5''	2.34	0.58
54:1:1042:G:H2'	54:1:1043:C:C6	2.38	0.58
55:2:2:G:H2'	55:2:3:C:H6	1.68	0.58
33:H:13:ILE:N	33:H:13:ILE:HD12	2.19	0.57
34:I:8:LEU:HD13	53:3:429:U:O5'	2.05	0.57
36:K:97:THR:O	36:K:98:GLU:HG2	2.04	0.57
38:M:45:ILE:HG22	38:M:46:GLU:N	2.19	0.57
47:V:16:MET:HG2	47:V:19:SER:HB2	1.85	0.57
53:3:939:G:H21	53:3:1375:A:H2	1.49	0.57
53:3:1084:G:H5'	53:3:1102:A:OP2	2.03	0.57
54:1:28:A:H2'	54:1:29:U:H6	1.69	0.57
54:1:402:A:H2'	54:1:403:U:H5'	1.85	0.57
54:1:532:A:N1	54:1:2020:A:H1'	2.18	0.57
54:1:1038:G:H2'	54:1:1039:A:C8	2.39	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2024:G:H2'	54:1:2025:C:O4'	2.04	0.57
54:1:2128:G:H1'	54:1:2173:A:N3	2.19	0.57
54:1:2278:A:C3'	54:1:2279:G:H5''	2.34	0.57
54:1:2685:G:H2'	54:1:2686:G:H8	1.68	0.57
7:h:56:ARG:HG2	7:h:83:ALA:HA	1.85	0.57
34:I:158:LEU:HD23	34:I:158:LEU:C	2.28	0.57
40:O:6:ILE:O	40:O:76:ILE:HB	2.04	0.57
44:S:39:ASP:O	44:S:43:ALA:N	2.37	0.57
50:Y:79:THR:HA	50:Y:82:ILE:CG1	2.31	0.57
53:3:355:C:H5'	53:3:355:C:H6	1.69	0.57
53:3:375:U:O2'	53:3:376:G:H8	1.86	0.57
53:3:415:A:H2'	53:3:416:G:H8	1.68	0.57
53:3:871:U:H5''	53:3:872:A:OP2	2.05	0.57
53:3:1317:C:H3'	53:3:1318:A:C8	2.38	0.57
59:8:363:ILE:HD12	59:8:363:ILE:N	2.19	0.57
1:b:121:ALA:HB1	1:b:127:ASN:HD22	1.68	0.57
3:d:148:ILE:HB	3:d:169:VAL:HG22	1.84	0.57
4:e:45:ASP:OD2	4:e:48:LEU:HB2	2.04	0.57
10:k:58:LEU:HD11	10:k:86:LEU:CD1	2.34	0.57
29:D:34:ARG:CZ	29:D:39:ARG:HD2	2.34	0.57
34:I:145:ARG:HD2	34:I:147:LYS:HE2	1.86	0.57
42:Q:23:LEU:HD22	42:Q:29:LYS:HZ2	1.67	0.57
54:1:150:U:H2'	54:1:151:C:C6	2.39	0.57
54:1:696:G:O2'	54:1:697:G:H5'	2.04	0.57
54:1:1507:C:C2'	54:1:1508:A:H4'	2.32	0.57
54:1:2105:U:H2'	54:1:2106:U:O4'	2.04	0.57
54:1:2273:A:H2'	54:1:2274:A:C8	2.39	0.57
54:1:2397:G:H2'	54:1:2398:U:C6	2.40	0.57
57:6:8:U:H2'	57:6:46:G:N2	2.19	0.57
1:b:32:LEU:C	1:b:33:LEU:HD12	2.30	0.57
5:f:88:LEU:HD13	5:f:130:ILE:HG12	1.86	0.57
8:i:48:ILE:HG13	8:i:49:GLU:H	1.70	0.57
21:v:63:ILE:O	21:v:69:GLU:HA	2.03	0.57
27:B:2:VAL:HG22	54:1:2015:A:C2	2.39	0.57
34:I:59:LYS:O	34:I:63:ILE:HG13	2.03	0.57
34:I:107:GLY:HA2	34:I:112:GLU:CG	2.34	0.57
34:I:132:ALA:H	53:3:403:C:C5'	2.14	0.57
37:L:44:SER:HA	37:L:47:GLU:OE1	2.03	0.57
41:P:92:ARG:O	41:P:96:ILE:HG13	2.03	0.57
49:X:77:ARG:HE	53:3:1225:A:H4'	1.69	0.57
52:a:30:LEU:HB2	52:a:216:THR:HG23	1.86	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:1363:A:H2'	53:3:1365:G:C8	2.39	0.57
54:1:543:G:H8	54:1:543:G:H5'	1.69	0.57
54:1:649:G:H2'	54:1:650:C:O4'	2.04	0.57
54:1:2138:G:H2'	54:1:2139:U:O4'	2.04	0.57
54:1:2389:G:H5''	54:1:2390:U:H5'	1.85	0.57
2:c:61:THR:OG1	2:c:64:GLU:HG2	2.04	0.57
2:c:190:LYS:HG2	2:c:191:GLY:N	2.20	0.57
3:d:34:ALA:HB1	3:d:94:GLN:NE2	2.20	0.57
4:e:109:ARG:HB3	4:e:136:ILE:HB	1.87	0.57
16:q:14:LYS:HD2	54:1:1217:U:OP1	2.05	0.57
24:y:7:ARG:HG3	24:y:8:GLU:HG3	1.86	0.57
25:z:3:THR:HA	25:z:38:GLU:HA	1.86	0.57
31:F:19:ARG:NH2	54:1:2755:C:H3'	2.19	0.57
34:I:97:LEU:HD21	34:I:117:VAL:CG2	2.29	0.57
35:J:24:VAL:HG22	35:J:25:LYS:N	2.17	0.57
53:3:1288:A:N1	53:3:1371:G:H1'	2.20	0.57
59:8:434:ALA:O	59:8:438:LEU:N	2.32	0.57
7:h:56:ARG:HH12	7:h:81:LEU:HD21	1.69	0.57
11:l:29:LYS:HD2	54:1:566:U:OP1	2.05	0.57
13:n:97:ILE:CG2	13:n:113:ILE:HG13	2.35	0.57
34:I:81:LEU:HD21	34:I:92:LEU:HD11	1.87	0.57
35:J:92:ARG:HB3	35:J:92:ARG:HH11	1.69	0.57
36:K:68:GLN:O	36:K:71:ILE:HG22	2.05	0.57
37:L:12:LEU:HB3	37:L:13:PRO:HD2	1.87	0.57
39:N:83:THR:HG22	39:N:97:LEU:HD11	1.87	0.57
41:P:83:VAL:O	41:P:110:THR:HG22	2.04	0.57
44:S:36:SER:HA	44:S:40:ARG:CG	2.35	0.57
50:Y:13:SER:O	50:Y:17:ARG:HG3	2.05	0.57
53:3:243:A:H2	53:3:245:U:H2'	1.69	0.57
53:3:955:U:H2'	53:3:956:U:O4'	2.04	0.57
2:c:3:GLY:O	2:c:4:LEU:HD22	2.05	0.57
2:c:26:VAL:HG21	15:p:7:LEU:HD13	1.85	0.57
2:c:77:ARG:HG2	2:c:77:ARG:NH2	2.20	0.57
2:c:202:ILE:HD12	2:c:202:ILE:N	2.19	0.57
4:e:24:VAL:O	4:e:27:VAL:HG12	2.04	0.57
8:i:57:VAL:HB	8:i:69:VAL:HB	1.86	0.57
23:x:38:TRP:HB2	23:x:45:PHE:CE1	2.40	0.57
32:G:17:HIS:HA	32:G:37:VAL:HG22	1.86	0.57
35:J:10:LEU:HD23	35:J:10:LEU:H	1.70	0.57
37:L:30:MET:HG2	37:L:35:LYS:HA	1.87	0.57
37:L:69:ARG:HD3	37:L:95:ARG:NE	2.19	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:L:91:ARG:HB2	37:L:94:ARG:HG2	1.87	0.57
40:O:12:ALA:HB3	40:O:18:ILE:HB	1.86	0.57
44:S:80:ARG:HH11	44:S:80:ARG:HG2	1.70	0.57
52:a:5:THR:O	52:a:6:LYS:C	2.48	0.57
53:3:976:G:H2'	53:3:1362:A:C2	2.40	0.57
54:1:859:G:H1'	54:1:860:U:H5	1.69	0.57
54:1:1388:G:H2'	54:1:1389:G:H8	1.68	0.57
54:1:2070:A:H2'	54:1:2071:A:O4'	2.04	0.57
55:2:30:C:C2'	55:2:31:C:H5'	2.35	0.57
34:I:75:TYR:HA	34:I:78:ALA:CB	2.34	0.57
35:J:51:LYS:O	35:J:61:LYS:HG2	2.05	0.57
35:J:133:ILE:HD12	35:J:133:ILE:N	2.20	0.57
41:P:89:GLY:C	41:P:91:GLY:H	2.13	0.57
46:U:36:VAL:HG22	46:U:53:ASP:HB3	1.85	0.57
52:a:20:GLN:HG3	52:a:223:ALA:HB3	1.85	0.57
52:a:40:GLU:HG3	52:a:178:VAL:HG11	1.87	0.57
54:1:254:G:O2'	54:1:255:A:H5''	2.05	0.57
54:1:786:C:O2'	54:1:787:C:H5'	2.04	0.57
57:6:46:G:H2'	57:6:47:U:H5'	1.87	0.57
59:8:9:ARG:HG2	59:8:82:HIS:CD2	2.40	0.57
59:8:198:GLN:C	59:8:272:ASN:HD22	2.12	0.57
59:8:223:ILE:HA	59:8:226:ALA:HB3	1.87	0.57
1:b:210:ALA:O	1:b:215:VAL:HG22	2.04	0.57
15:p:52:ARG:NH2	54:1:2720:U:H5''	2.20	0.57
19:t:63:VAL:HG21	19:t:80:TRP:CZ2	2.40	0.57
31:F:5:ALA:HB3	54:1:2466:C:H5'	1.86	0.57
34:I:90:LEU:HD23	34:I:93:LEU:HD12	1.86	0.57
34:I:117:VAL:HG12	34:I:129:VAL:O	2.05	0.57
37:L:14:ASP:H	37:L:19:SER:H	1.53	0.57
53:3:422:C:H4'	53:3:423:G:C2	2.40	0.57
53:3:613:C:H2'	53:3:614:C:C6	2.40	0.57
53:3:1412:C:H2'	53:3:1413:A:C8	2.39	0.57
54:1:1821:A:H2'	54:1:1822:C:C6	2.40	0.57
1:b:134:ILE:HD11	1:b:191:LEU:HD21	1.85	0.57
11:l:48:ARG:HB2	11:l:48:ARG:HH11	1.69	0.57
13:n:9:GLN:O	13:n:17:ARG:HD3	2.05	0.57
34:I:69:ARG:HA	34:I:72:ARG:HB2	1.86	0.57
34:I:88:ASN:O	34:I:92:LEU:HG	2.05	0.57
44:S:36:SER:CA	44:S:40:ARG:HG3	2.34	0.57
47:V:23:ALA:O	47:V:24:ILE:HD13	2.05	0.57
53:3:417:G:H2'	53:3:418:C:C6	2.40	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:127:A:H5''	54:1:128:C:O4'	2.05	0.57
54:1:1183:U:H2'	54:1:1184:U:C6	2.40	0.57
54:1:1779:U:H5''	54:1:1780:A:H5'	1.87	0.57
54:1:2397:G:H2'	54:1:2398:U:H6	1.69	0.57
54:1:2521:C:H2'	54:1:2522:U:C6	2.40	0.57
56:5:23:C:H2'	56:5:24:G:C8	2.39	0.57
59:8:59:ARG:CG	59:8:61:ILE:HG12	2.35	0.57
3:d:32:VAL:HG21	11:l:6:LEU:HD23	1.86	0.56
14:o:31:THR:HG22	14:o:32:PRO:CD	2.31	0.56
16:q:87:VAL:HG13	17:r:49:ILE:HD11	1.85	0.56
19:t:24:MET:HA	19:t:29:THR:H	1.70	0.56
53:3:1148:U:H2'	53:3:1149:C:O4'	2.05	0.56
54:1:263:G:C3'	54:1:264:C:H5''	2.35	0.56
57:6:8:U:H2'	57:6:46:G:H21	1.70	0.56
57:6:70:G:H2'	57:6:71:C:C4'	2.34	0.56
59:8:324:ILE:HG23	59:8:332:ASN:OD1	2.04	0.56
59:8:415:VAL:HG23	59:8:416:ILE:H	1.70	0.56
14:o:56:LYS:HD2	14:o:57:ALA:N	2.20	0.56
15:p:102:ARG:HG2	15:p:102:ARG:HH11	1.70	0.56
34:I:153:ARG:HH12	53:3:406:G:H22	1.54	0.56
37:L:71:THR:O	37:L:90:VAL:HG12	2.04	0.56
50:Y:47:GLN:OE1	50:Y:82:ILE:HD12	2.05	0.56
54:1:414:C:H2'	54:1:415:A:C8	2.40	0.56
54:1:1040:A:H2	54:1:1115:G:H22	1.51	0.56
54:1:2579:C:O2'	54:1:2580:U:H5'	2.04	0.56
54:1:2639:A:H2'	54:1:2640:G:O4'	2.05	0.56
59:8:501:VAL:HG11	59:8:604:GLY:N	2.20	0.56
1:b:206:LYS:HB2	54:1:729:G:N7	2.20	0.56
2:c:106:LYS:HA	2:c:175:LEU:O	2.06	0.56
3:d:4:VAL:HG22	3:d:5:LEU:N	2.20	0.56
6:g:40:THR:O	6:g:44:ILE:HG13	2.06	0.56
9:j:73:VAL:HG12	9:j:74:TYR:N	2.19	0.56
10:k:18:ARG:N	10:k:45:GLU:OE2	2.37	0.56
13:n:97:ILE:HA	13:n:112:TYR:O	2.05	0.56
33:H:133:MET:HE3	33:H:167:TYR:HB2	1.87	0.56
34:I:72:ARG:O	34:I:76:LYS:HG2	2.05	0.56
35:J:112:ALA:HA	35:J:115:GLU:HG2	1.87	0.56
41:P:22:ILE:HB	41:P:85:VAL:HA	1.88	0.56
43:R:104:ASN:O	43:R:105:ALA:HB3	2.05	0.56
46:U:12:LYS:HG2	46:U:13:LYS:HG2	1.87	0.56
53:3:195:A:H2'	53:3:196:A:C8	2.40	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:215:G:H4'	54:1:216:A:H4'	1.87	0.56
54:1:847:U:O2	54:1:847:U:H2'	2.05	0.56
54:1:1582:C:H2'	54:1:1585:C:H42	1.69	0.56
54:1:1900:A:H1'	54:1:1970:A:H2'	1.87	0.56
54:1:1922:G:H2'	54:1:1923:U:O4'	2.06	0.56
54:1:2322:A:H2'	54:1:2323:G:O4'	2.05	0.56
54:1:2393:U:O2'	54:1:2394:C:H5'	2.05	0.56
58:4:22:A:H1'	59:8:511:GLY:HA3	1.86	0.56
59:8:214:LEU:O	59:8:218:TRP:N	2.32	0.56
8:i:11:GLN:HG3	8:i:56:VAL:CG1	2.35	0.56
10:k:40:LYS:HE3	54:1:2562:U:OP1	2.06	0.56
13:n:35:LYS:HD3	13:n:112:TYR:CE1	2.40	0.56
32:G:48:MET:HG2	32:G:51:GLU:OE1	2.06	0.56
35:J:106:ALA:C	53:3:8:A:H1'	2.31	0.56
37:L:105:GLU:O	37:L:109:LYS:HG3	2.04	0.56
38:M:86:LYS:HB2	38:M:91:LEU:HD23	1.88	0.56
42:Q:20:VAL:HG23	42:Q:94:TYR:HE1	1.69	0.56
42:Q:23:LEU:HD22	42:Q:29:LYS:HZ3	1.67	0.56
44:S:27:LYS:O	44:S:31:SER:HB2	2.05	0.56
46:U:4:ILE:HB	46:U:66:THR:O	2.05	0.56
51:Z:64:ALA:HB1	51:Z:66:ARG:HH22	1.70	0.56
53:3:57:G:H2'	53:3:58:C:H6	1.69	0.56
53:3:321:A:O2'	53:3:322:C:H5'	2.06	0.56
53:3:1404:C:H2'	53:3:1405:G:C8	2.41	0.56
54:1:1073:A:H2'	54:1:1074:G:H5'	1.88	0.56
54:1:1199:U:H2'	54:1:1200:C:H6	1.68	0.56
54:1:1403:A:H2'	54:1:1404:C:C6	2.39	0.56
54:1:1798:U:H2'	54:1:1819:A:N6	2.21	0.56
54:1:2415:G:H2'	54:1:2416:C:C6	2.41	0.56
55:2:119:A:H2	55:2:120:A:H1'	1.69	0.56
59:8:256:VAL:HG23	59:8:257:LEU:HD12	1.86	0.56
59:8:366:MET:HA	59:8:371:ARG:HA	1.87	0.56
59:8:420:VAL:HG13	59:8:483:VAL:HG22	1.86	0.56
1:b:73:ILE:HG21	1:b:95:TYR:HB3	1.88	0.56
3:d:97:ASN:HD22	54:1:607:U:P	2.28	0.56
7:h:3:LEU:CD1	7:h:5:LEU:HG	2.34	0.56
11:l:69:ARG:CZ	54:1:2406:A:H1'	2.36	0.56
16:q:5:ARG:NH2	54:1:1251:C:C5	2.74	0.56
33:H:113:LYS:HG3	33:H:117:ASP:OD2	2.06	0.56
38:M:65:PHE:CD2	38:M:66:GLN:HG2	2.39	0.56
52:a:50:ILE:HG22	52:a:57:GLN:OE1	2.06	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:1436:U:H2'	53:3:1437:A:C8	2.40	0.56
54:1:1723:G:H2'	54:1:1724:G:H8	1.70	0.56
54:1:2070:A:H2'	54:1:2071:A:C8	2.40	0.56
54:1:2248:C:H2'	54:1:2249:U:H5'	1.87	0.56
1:b:86:ARG:HG3	1:b:86:ARG:NH1	2.21	0.56
8:i:14:ALA:O	8:i:45:THR:HG22	2.05	0.56
9:j:16:TYR:HB2	9:j:54:ILE:HG12	1.88	0.56
13:n:82:GLU:O	13:n:86:ARG:HG3	2.06	0.56
22:w:26:SER:HA	22:w:61:GLY:O	2.05	0.56
36:K:66:ALA:HB1	36:K:67:PRO:HD2	1.87	0.56
48:W:69:TYR:N	48:W:73:HIS:NE2	2.54	0.56
53:3:482:A:H2'	53:3:483:C:H5'	1.87	0.56
53:3:1282:C:H2'	53:3:1283:U:C6	2.39	0.56
54:1:296:U:H2'	54:1:297:G:H8	1.71	0.56
54:1:1646:C:H5'	54:1:1647:U:H5''	1.88	0.56
59:8:320:LEU:O	59:8:336:PHE:HA	2.06	0.56
4:e:65:LEU:CD1	55:2:41:G:H21	2.18	0.56
10:k:19:VAL:CG1	10:k:41:ILE:HD12	2.35	0.56
18:s:93:ALA:HB2	54:1:1614:A:C2	2.41	0.56
22:w:73:ARG:HG2	22:w:73:ARG:HH11	1.70	0.56
34:I:172:VAL:HG22	34:I:173:ASP:H	1.71	0.56
41:P:111:ASP:H	51:Z:3:ILE:HA	1.70	0.56
52:a:212:VAL:HB	52:a:224:VAL:CG2	2.33	0.56
53:3:25:C:H2'	53:3:26:A:C8	2.38	0.56
53:3:41:G:H2'	53:3:42:G:C8	2.41	0.56
53:3:68:G:O4'	53:3:171:A:H1'	2.06	0.56
53:3:695:A:H2'	53:3:696:A:C8	2.40	0.56
53:3:1299:A:N3	53:3:1301:U:H1'	2.20	0.56
54:1:1779:U:H5	54:1:1784:A:N7	2.04	0.56
54:1:2493:U:C3'	54:1:2494:G:H5''	2.36	0.56
56:5:49:G:H1	56:5:65:U:H3	1.54	0.56
59:8:243:LEU:HB2	59:8:247:GLU:OE2	2.05	0.56
30:E:30:HIS:O	30:E:32:LEU:HG	2.05	0.56
38:M:45:ILE:HD13	38:M:60:LEU:HD12	1.87	0.56
40:O:51:VAL:O	40:O:63:ASP:N	2.38	0.56
54:1:992:C:O2'	54:1:993:G:H5'	2.05	0.56
54:1:2261:C:O2'	54:1:2262:U:H5'	2.05	0.56
2:c:136:ASN:ND2	2:c:140:HIS:HA	2.21	0.56
4:e:165:GLY:O	4:e:168:LEU:HB3	2.06	0.56
12:m:52:ALA:HB1	12:m:119:LEU:HG	1.86	0.56
13:n:58:ASP:OD1	13:n:63:ARG:HD3	2.06	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:n:59:SER:HG	13:n:62:ASN:H	1.53	0.56
17:r:37:GLU:O	17:r:39:LEU:HD12	2.04	0.56
27:B:12:ARG:O	27:B:15:ARG:HG2	2.06	0.56
32:G:46:VAL:O	32:G:49:PHE:HB3	2.05	0.56
34:I:124:VAL:O	34:I:126:GLY:N	2.37	0.56
36:K:10:VAL:HB	36:K:58:HIS:HB3	1.88	0.56
36:K:22:ILE:O	36:K:26:THR:HG22	2.06	0.56
43:R:82:LEU:HD23	43:R:84:CYS:SG	2.45	0.56
46:U:21:VAL:HG23	46:U:34:GLU:H	1.71	0.56
53:3:216:U:H2'	53:3:217:C:H6	1.71	0.56
53:3:401:C:H2'	53:3:402:G:C8	2.41	0.56
53:3:415:A:H2'	53:3:416:G:C8	2.41	0.56
53:3:426:U:H2'	53:3:427:U:C5	2.39	0.56
53:3:518:C:H2'	53:3:530:G:C5	2.41	0.56
53:3:518:C:H2'	53:3:530:G:C4	2.41	0.56
53:3:1040:U:H2'	53:3:1041:G:C8	2.41	0.56
53:3:1360:A:H2'	53:3:1361:G:H5'	1.88	0.56
54:1:723:C:H2'	54:1:724:U:O4'	2.06	0.56
54:1:848:C:H2'	54:1:849:A:C8	2.40	0.56
54:1:859:G:HO2'	54:1:860:U:H5	1.44	0.56
54:1:1687:G:H21	54:1:1701:A:H62	1.54	0.56
54:1:1710:G:H2'	54:1:1711:A:H8	1.70	0.56
59:8:53:MET:SD	59:8:64:THR:HG22	2.46	0.56
59:8:464:LEU:O	59:8:468:ILE:HG13	2.05	0.56
11:l:69:ARG:NE	54:1:2406:A:N3	2.54	0.56
12:m:55:ARG:HB2	12:m:55:ARG:CZ	2.36	0.56
13:n:37:THR:HG23	13:n:40:LYS:HE2	1.87	0.56
19:t:24:MET:CE	19:t:28:ASN:HA	2.33	0.56
21:v:93:ARG:NH1	21:v:93:ARG:HB2	2.21	0.56
32:G:96:LEU:HD22	53:3:1103:C:H5''	1.88	0.56
39:N:98:ARG:HH11	39:N:103:VAL:HG21	1.71	0.56
40:O:53:ILE:HG12	53:3:1060:U:H5'	1.87	0.56
43:R:23:GLY:HA3	43:R:68:LEU:HD13	1.88	0.56
44:S:56:PRO:O	44:S:59:GLN:HB2	2.06	0.56
52:a:53:ARG:HD2	52:a:53:ARG:N	2.21	0.56
53:3:67:C:H2'	53:3:68:G:C8	2.41	0.56
53:3:346:G:H2'	53:3:347:G:H5'	1.88	0.56
53:3:1031:C:H5''	53:3:1032:G:OP2	2.05	0.56
53:3:1064:G:H1'	53:3:1190:G:H21	1.71	0.56
54:1:74:A:H4'	54:1:75:G:O5'	2.06	0.56
54:1:208:C:H2'	54:1:209:C:H6	1.70	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:235:U:H2'	54:1:236:C:H6	1.71	0.56
54:1:351:C:H2'	54:1:352:A:C8	2.40	0.56
54:1:1537:G:H5''	54:1:1537:G:N3	2.21	0.56
54:1:1625:C:H2'	54:1:1626:A:O4'	2.06	0.56
54:1:1675:C:N4	54:1:1993:U:H1'	2.21	0.56
59:8:93:VAL:CG2	59:8:122:GLN:HB3	2.36	0.56
9:j:96:ARG:HB3	9:j:99:ARG:HG2	1.87	0.55
10:k:30:ARG:HG2	10:k:30:ARG:HH11	1.70	0.55
11:l:124:GLY:C	11:l:125:LEU:HD12	2.31	0.55
33:H:113:LYS:HB2	33:H:184:ASN:ND2	2.21	0.55
37:L:100:MET:HA	37:L:103:ILE:HD12	1.88	0.55
53:3:257:G:H2'	53:3:258:G:H8	1.70	0.55
53:3:1138:G:C6	53:3:1140:C:H1'	2.40	0.55
54:1:365:U:H2'	54:1:366:C:C6	2.41	0.55
54:1:2065:C:H2'	54:1:2066:C:C6	2.41	0.55
54:1:2156:G:H2'	54:1:2157:G:H5'	1.88	0.55
57:6:56:C:O2	57:6:56:C:H2'	2.06	0.55
59:8:434:ALA:O	59:8:438:LEU:HD23	2.05	0.55
59:8:465:HIS:NE2	59:8:469:ILE:HD11	2.21	0.55
1:b:246:PRO:HB2	1:b:247:TRP:CE3	2.42	0.55
14:o:13:ARG:HD3	54:1:2335:A:OP1	2.06	0.55
20:u:31:GLY:O	20:u:66:VAL:HG23	2.05	0.55
20:u:48:VAL:HG22	20:u:50:ALA:H	1.71	0.55
20:u:80:ASP:OD2	20:u:95:PHE:HB3	2.05	0.55
40:O:31:ARG:HG3	40:O:32:THR:HG22	1.87	0.55
53:3:51:A:C6	53:3:353:A:C2	2.93	0.55
53:3:88:U:H2'	53:3:89:U:C6	2.41	0.55
53:3:167:A:C2'	53:3:168:G:H5''	2.33	0.55
54:1:1464:G:H2'	54:1:1465:G:H8	1.71	0.55
54:1:1710:G:H2'	54:1:1711:A:C8	2.41	0.55
54:1:2461:A:H2'	54:1:2462:C:C6	2.41	0.55
59:8:502:GLU:HB3	59:8:517:HIS:CE1	2.42	0.55
59:8:590:GLU:O	59:8:594:LYS:HG3	2.06	0.55
1:b:216:ARG:HB3	1:b:217:PRO:HD2	1.88	0.55
3:d:68:ALA:HA	54:1:1255:U:C5	2.41	0.55
7:h:11:ILE:CD1	7:h:63:ALA:HA	2.37	0.55
32:G:131:LYS:HG2	32:G:135:MET:HE1	1.87	0.55
43:R:93:GLY:O	43:R:108:ARG:HG3	2.05	0.55
52:a:46:VAL:O	52:a:170:ILE:HA	2.05	0.55
53:3:696:A:H2'	53:3:697:U:C6	2.41	0.55
53:3:1392:G:O2'	53:3:1393:U:H5'	2.06	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:402:A:C2'	54:1:403:U:H5'	2.37	0.55
54:1:1058:U:H2'	54:1:1059:G:C8	2.41	0.55
54:1:1516:G:O2'	54:1:1517:G:H5'	2.06	0.55
54:1:1771:C:H2'	54:1:1772:A:C8	2.41	0.55
54:1:1893:C:C2'	54:1:1894:C:H5'	2.36	0.55
57:6:14:A:H2'	57:6:15:G:O4'	2.06	0.55
59:8:30:ILE:HB	59:8:34:THR:HG23	1.88	0.55
59:8:97:ILE:HG13	59:8:101:ARG:NH1	2.15	0.55
59:8:119:VAL:HG13	59:8:121:PRO:HD3	1.88	0.55
59:8:309:ARG:HD2	59:8:318:SER:HB2	1.88	0.55
1:b:220:ARG:HD2	54:1:1827:U:OP2	2.06	0.55
6:g:41:LYS:HA	6:g:44:ILE:HD12	1.88	0.55
11:l:51:GLU:CD	30:E:56:LEU:HD21	2.31	0.55
23:x:69:GLU:O	23:x:73:ARG:N	2.40	0.55
24:y:9:LYS:HG2	24:y:10:SER:H	1.72	0.55
36:K:68:GLN:HA	36:K:71:ILE:HG22	1.89	0.55
47:V:43:LEU:HD13	47:V:72:TRP:CD1	2.42	0.55
49:X:52:ASN:HD22	49:X:55:GLN:HE21	1.52	0.55
50:Y:54:GLN:N	50:Y:55:PRO:HD2	2.21	0.55
53:3:442:G:H2'	53:3:443:C:O4'	2.06	0.55
53:3:1323:G:H2'	53:3:1324:A:C8	2.42	0.55
54:1:917:A:H5''	54:1:2268:A:N6	2.21	0.55
54:1:1467:U:H2'	54:1:1468:U:C4'	2.36	0.55
54:1:2543:G:O2'	54:1:2544:G:H5'	2.05	0.55
54:1:2700:A:H2'	54:1:2701:U:C6	2.42	0.55
55:2:4:C:H2'	55:2:5:U:C6	2.41	0.55
1:b:140:VAL:O	1:b:161:VAL:HG12	2.07	0.55
3:d:94:GLN:NE2	3:d:96:VAL:HG13	2.14	0.55
3:d:149:ILE:CG2	3:d:188:MET:HG3	2.37	0.55
4:e:107:VAL:HA	4:e:110:ILE:HG13	1.87	0.55
5:f:91:VAL:H	5:f:159:LYS:NZ	2.05	0.55
12:m:78:LEU:HD11	54:1:2459:A:N3	2.22	0.55
13:n:49:GLU:OE1	54:1:2839:G:H4'	2.07	0.55
34:I:90:LEU:HA	34:I:93:LEU:CD1	2.27	0.55
40:O:15:HIS:CE1	40:O:16:ARG:HG2	2.41	0.55
41:P:30:ILE:HG12	41:P:45:THR:CG2	2.36	0.55
46:U:25:ARG:NE	53:3:230:G:H4'	2.22	0.55
50:Y:52:GLU:OE2	50:Y:53:MET:HB2	2.06	0.55
53:3:673:A:H2'	53:3:674:G:C8	2.42	0.55
55:2:48:U:H2'	55:2:49:C:C6	2.41	0.55
57:6:68:C:H2'	57:6:69:C:H4'	1.89	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:8:617:MET:HE3	59:8:660:LEU:HB2	1.88	0.55
6:g:5:LEU:HD23	6:g:8:LYS:O	2.06	0.55
27:B:21:LEU:HD12	27:B:21:LEU:N	2.14	0.55
31:F:19:ARG:HH12	54:1:2755:C:C2'	2.20	0.55
34:I:182:LYS:N	34:I:182:LYS:HD3	2.21	0.55
43:R:19:THR:HA	43:R:24:VAL:HG13	1.88	0.55
53:3:559:A:H4'	53:3:560:A:H3'	1.89	0.55
54:1:669:G:H2'	54:1:669:G:N3	2.21	0.55
54:1:1610:A:H3'	54:1:1611:C:H5'	1.87	0.55
59:8:546:PRO:HB2	59:8:549:TYR:CD2	2.42	0.55
3:d:97:ASN:HA	54:1:607:U:OP1	2.07	0.55
5:f:93:TYR:HA	5:f:105:SER:O	2.06	0.55
6:g:99:ILE:O	6:g:103:VAL:HG23	2.06	0.55
9:j:19:ASP:OD1	9:j:58:ASN:ND2	2.34	0.55
21:v:10:LYS:HG3	21:v:11:GLU:HG3	1.89	0.55
29:D:1:MET:HE3	54:1:752:A:H5''	1.88	0.55
32:G:139:GLU:O	32:G:143:LEU:HD13	2.07	0.55
41:P:110:THR:HA	51:Z:3:ILE:O	2.06	0.55
42:Q:32:VAL:CG2	42:Q:55:ARG:H	2.20	0.55
44:S:74:ARG:HB3	53:3:1358:U:OP1	2.07	0.55
48:W:33:THR:HG23	48:W:35:SER:H	1.72	0.55
53:3:1238:A:H2	53:3:1241:G:H1'	1.66	0.55
54:1:1073:A:C2'	54:1:1074:G:H5'	2.36	0.55
54:1:2314:A:H2'	54:1:2315:G:H8	1.72	0.55
54:1:2585:U:H4'	54:1:2586:U:H5'	1.87	0.55
59:8:199:GLY:N	59:8:272:ASN:HD22	2.04	0.55
59:8:362:ARG:O	59:8:386:ILE:HG22	2.06	0.55
59:8:512:ARG:HA	59:8:512:ARG:HE	1.71	0.55
59:8:515:TYR:CD2	59:8:584:HIS:HB2	2.42	0.55
4:e:116:LEU:N	4:e:176:PHE:O	2.33	0.55
7:h:3:LEU:HD12	7:h:4:ASN:N	2.22	0.55
11:l:57:LEU:HD13	11:l:60:ARG:NH2	2.22	0.55
30:E:61:LEU:HD12	30:E:61:LEU:O	2.07	0.55
35:J:54:GLU:O	35:J:58:ALA:N	2.39	0.55
37:L:74:VAL:HG21	37:L:85:GLN:HB3	1.88	0.55
41:P:62:ALA:HB1	41:P:95:THR:HB	1.88	0.55
45:T:87:ARG:NE	45:T:87:ARG:HA	2.22	0.55
53:3:1333:A:H2'	53:3:1334:G:O4'	2.07	0.55
53:3:1522:U:H2'	53:3:1523:G:H8	1.72	0.55
54:1:807:U:H2'	54:1:808:G:H8	1.72	0.55
54:1:1020:A:H1'	54:1:1021:A:OP2	2.06	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:1275:A:C6	54:1:1296:G:H4'	2.42	0.55
54:1:1319:C:O2'	54:1:1320:C:H5'	2.06	0.55
54:1:1999:C:H5''	54:1:2723:C:O2'	2.07	0.55
54:1:2215:C:H2'	54:1:2216:G:H8	1.72	0.55
59:8:72:TRP:CD1	59:8:279:LEU:HB3	2.42	0.55
7:h:11:ILE:HG21	7:h:66:GLY:HA3	1.89	0.55
15:p:62:LYS:HE3	15:p:64:SER:CB	2.37	0.55
32:G:72:LYS:HZ2	32:G:75:ALA:HB2	1.70	0.55
33:H:107:LYS:CD	33:H:110:LEU:HD12	2.33	0.55
37:L:36:SER:HB3	53:3:1291:U:OP1	2.07	0.55
37:L:112:ASP:OD2	37:L:118:ARG:HA	2.07	0.55
38:M:73:SER:HB3	38:M:129:ALA:CB	2.37	0.55
50:Y:53:MET:SD	50:Y:56:ILE:HB	2.47	0.55
53:3:477:C:H2'	53:3:478:A:C8	2.42	0.55
53:3:1057:G:H2'	53:3:1058:G:O4'	2.07	0.55
53:3:1071:C:H2'	53:3:1072:G:H8	1.72	0.55
53:3:1238:A:H2'	53:3:1239:A:H5'	1.88	0.55
54:1:279:A:C2'	54:1:280:U:H5'	2.36	0.55
54:1:2088:A:H2'	54:1:2089:C:H6	1.70	0.55
54:1:2098:U:H2'	54:1:2099:U:C6	2.41	0.55
54:1:2648:G:H2'	54:1:2649:C:H6	1.71	0.55
54:1:2843:G:O2'	54:1:2844:G:H5'	2.07	0.55
5:f:70:LEU:HD11	54:1:2758:A:H2	1.72	0.55
7:h:73:LYS:HD3	7:h:73:LYS:O	2.07	0.55
20:u:4:ILE:HD12	20:u:4:ILE:N	2.22	0.55
36:K:12:PRO:O	36:K:15:SER:HB3	2.07	0.55
38:M:60:LEU:N	38:M:60:LEU:HD23	2.22	0.55
39:N:98:ARG:NH1	39:N:103:VAL:HG21	2.21	0.55
42:Q:28:GLN:CG	42:Q:80:LEU:HD21	2.28	0.55
43:R:22:TYR:CE2	43:R:69:ARG:HD2	2.42	0.55
43:R:73:SER:O	43:R:77:LYS:HG2	2.07	0.55
44:S:62:ARG:HH12	44:S:69:PRO:CB	2.17	0.55
54:1:279:A:H2'	54:1:280:U:C5'	2.37	0.55
54:1:616:A:H2'	54:1:617:G:O4'	2.07	0.55
54:1:688:U:H4'	54:1:1780:A:C2	2.42	0.55
54:1:1368:G:H2'	54:1:1369:G:H8	1.72	0.55
1:b:77:VAL:HG21	1:b:109:LEU:HD11	1.89	0.54
4:e:79:ARG:HG3	4:e:79:ARG:HH21	1.71	0.54
12:m:33:LEU:HD11	12:m:128:THR:OG1	2.07	0.54
32:G:19:THR:OG1	32:G:20:ARG:HG2	2.07	0.54
33:H:69:THR:HG22	33:H:70:ALA:N	2.22	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:Q:101:LEU:HD22	42:Q:101:LEU:H	1.71	0.54
43:R:25:GLY:O	43:R:29:SER:N	2.37	0.54
53:3:7:A:H5'	53:3:298:A:O4'	2.06	0.54
53:3:540:G:H2'	53:3:541:G:H8	1.70	0.54
53:3:834:U:H2'	53:3:835:U:C6	2.42	0.54
54:1:471:A:H2'	54:1:472:A:O4'	2.07	0.54
54:1:549:G:H2'	54:1:550:C:C6	2.41	0.54
54:1:1133:A:H4'	54:1:1134:A:H5''	1.89	0.54
54:1:1746:A:H2'	54:1:1747:U:C6	2.42	0.54
54:1:2861:U:H2'	54:1:2862:G:C8	2.39	0.54
59:8:616:ILE:C	59:8:617:MET:HE2	2.32	0.54
4:e:90:LEU:HD12	4:e:90:LEU:O	2.06	0.54
8:i:55:PRO:CG	8:i:71:LYS:HB2	2.37	0.54
18:s:69:LEU:HA	18:s:109:ASP:HB3	1.89	0.54
35:J:33:THR:HG22	35:J:51:LYS:CB	2.37	0.54
36:K:6:ILE:HG22	36:K:89:VAL:HG22	1.89	0.54
40:O:10:LEU:HD12	40:O:10:LEU:O	2.07	0.54
53:3:16:A:H2'	53:3:17:U:H5'	1.90	0.54
53:3:55:A:H62	53:3:357:G:H21	1.53	0.54
53:3:237:G:H2'	53:3:238:A:C8	2.43	0.54
53:3:1057:G:H2'	53:3:1058:G:H8	1.72	0.54
54:1:935:C:H2'	54:1:936:A:H8	1.72	0.54
54:1:1725:U:H2'	54:1:1726:C:C6	2.42	0.54
59:8:418:ILE:HA	59:8:486:PRO:HD3	1.89	0.54
2:c:91:THR:O	2:c:94:GLN:HG2	2.08	0.54
3:d:181:ILE:HG23	11:l:2:ARG:NE	2.22	0.54
4:e:147:ARG:HG3	4:e:149:ARG:NH1	2.22	0.54
14:o:40:ILE:HA	14:o:47:VAL:HA	1.89	0.54
16:q:5:ARG:NH1	54:1:585:G:N7	2.53	0.54
20:u:45:GLN:HB2	20:u:58:VAL:HG21	1.89	0.54
32:G:66:ILE:HB	32:G:88:GLN:OE1	2.07	0.54
34:I:56:GLU:HB2	34:I:198:LEU:CD2	2.37	0.54
34:I:109:THR:C	34:I:111:ALA:H	2.14	0.54
36:K:75:GLU:HA	36:K:78:PHE:CD2	2.43	0.54
39:N:94:ARG:HH11	39:N:94:ARG:HG2	1.72	0.54
40:O:53:ILE:HG23	53:3:1060:U:H4'	1.89	0.54
42:Q:88:ASP:C	42:Q:89:LEU:HD12	2.33	0.54
51:Z:6:ARG:O	51:Z:7:GLU:HB2	2.07	0.54
52:a:210:LYS:CG	52:a:211:LYS:H	2.20	0.54
53:3:472:U:H2'	53:3:473:U:H5'	1.89	0.54
54:1:2567:G:H2'	54:1:2568:U:C6	2.42	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2603:G:O2'	54:1:2604:U:H5'	2.07	0.54
1:b:237:ARG:HG2	1:b:237:ARG:HH11	1.73	0.54
2:c:4:LEU:HD23	2:c:101:PHE:CE1	2.42	0.54
12:m:36:VAL:HG13	21:v:82:TYR:CD2	2.43	0.54
13:n:96:ARG:NH1	13:n:116:VAL:HG13	2.23	0.54
23:x:13:THR:CG2	54:1:188:G:H5'	2.38	0.54
52:a:66:PRO:HG2	52:a:191:ALA:HB3	1.90	0.54
53:3:1524:C:H2'	53:3:1525:G:H8	1.72	0.54
54:1:578:G:H21	54:1:1252:G:N2	2.04	0.54
54:1:1609:A:H1'	54:1:1616:A:C1'	2.37	0.54
54:1:1779:U:C5	54:1:1784:A:N7	2.76	0.54
54:1:1851:U:C5'	57:6:70:G:H21	2.20	0.54
54:1:2065:C:H2'	54:1:2066:C:H6	1.72	0.54
54:1:2460:U:H2'	54:1:2461:A:H8	1.71	0.54
54:1:2734:A:H2'	54:1:2735:G:O4'	2.08	0.54
55:2:48:U:H2'	55:2:49:C:H6	1.73	0.54
2:c:61:THR:OG1	2:c:63:PRO:HD2	2.07	0.54
10:k:109:SER:HG	10:k:112:PHE:HD2	1.51	0.54
12:m:35:ALA:HA	12:m:128:THR:HG22	1.89	0.54
13:n:63:ARG:HH22	54:1:1454:C:H5'	1.69	0.54
17:r:39:LEU:O	17:r:49:ILE:HG23	2.07	0.54
23:x:36:ARG:HG2	23:x:45:PHE:HB3	1.88	0.54
26:A:66:ILE:HG13	26:A:66:ILE:O	2.07	0.54
29:D:12:ARG:HH22	54:1:464:U:H4'	1.73	0.54
37:L:27:ASN:HA	37:L:30:MET:HB2	1.89	0.54
39:N:34:LEU:HD21	39:N:48:ARG:NH2	2.21	0.54
53:3:12:U:H4'	53:3:526:C:C4'	2.34	0.54
54:1:1059:G:H2'	54:1:1060:U:C6	2.43	0.54
1:b:120:ASP:CB	6:g:91:PHE:HZ	2.16	0.54
4:e:4:HIS:HB2	4:e:96:TRP:CD2	2.43	0.54
10:k:54:LYS:C	10:k:54:LYS:HD3	2.33	0.54
11:l:110:VAL:HB	11:l:127:VAL:HG13	1.89	0.54
19:t:61:LEU:C	19:t:61:LEU:HD12	2.32	0.54
38:M:53:ASP:OD2	38:M:54:THR:HG22	2.07	0.54
39:N:27:ILE:N	39:N:27:ILE:HD12	2.22	0.54
42:Q:26:CYS:HB2	42:Q:29:LYS:HD3	1.90	0.54
47:V:60:ILE:HD12	47:V:72:TRP:HB3	1.89	0.54
49:X:18:VAL:HG21	49:X:43:MET:HG2	1.90	0.54
53:3:36:C:H2'	53:3:37:U:O4'	2.08	0.54
54:1:52:A:O2'	54:1:53:A:H5'	2.07	0.54
54:1:433:C:O2'	54:1:434:U:H5'	2.08	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:580:U:O2'	54:1:581:C:H5'	2.08	0.54
54:1:1066:U:H2'	54:1:1066:U:O2	2.08	0.54
54:1:1691:C:H2'	54:1:1692:U:H6	1.72	0.54
54:1:2285:C:O2'	54:1:2287:A:H1'	2.07	0.54
55:2:2:G:H2'	55:2:3:C:C6	2.43	0.54
59:8:61:ILE:HA	62:8:801:GCP:O1G	2.08	0.54
59:8:309:ARG:NH2	59:8:405:ILE:HG21	2.23	0.54
3:d:63:LYS:HD2	54:1:2444:G:OP2	2.07	0.54
12:m:21:ALA:HB1	12:m:100:LYS:HE3	1.89	0.54
13:n:63:ARG:HA	13:n:80:PHE:CE2	2.41	0.54
24:y:10:SER:HA	24:y:13:GLU:HG2	1.89	0.54
32:G:205:ALA:O	32:G:209:VAL:HG13	2.06	0.54
34:I:52:VAL:O	34:I:198:LEU:HD23	2.08	0.54
34:I:99:ASN:O	34:I:103:ARG:HG2	2.08	0.54
41:P:125:LYS:HB2	53:3:797:C:OP1	2.08	0.54
43:R:26:LYS:C	43:R:26:LYS:HD3	2.33	0.54
44:S:63:CYS:SG	44:S:79:SER:N	2.76	0.54
48:W:53:GLN:HG2	48:W:56:ARG:NH2	2.23	0.54
53:3:227:G:H2'	53:3:228:A:O4'	2.08	0.54
53:3:825:A:H2'	53:3:826:C:H6	1.72	0.54
53:3:1033:G:C2'	53:3:1034:G:H5''	2.36	0.54
54:1:864:G:O2'	54:1:865:C:H5'	2.08	0.54
54:1:889:C:O2'	54:1:890:C:H5'	2.08	0.54
59:8:6:PRO:HG2	59:8:9:ARG:HB2	1.90	0.54
59:8:317:PHE:HD1	59:8:398:CYS:HA	1.71	0.54
16:q:40:LYS:HG3	16:q:44:TYR:CE2	2.43	0.54
19:t:30:ILE:HG23	19:t:85:VAL:HB	1.89	0.54
32:G:178:LEU:N	32:G:178:LEU:HD12	2.23	0.54
34:I:24:VAL:O	34:I:24:VAL:HG12	2.07	0.54
36:K:2:ARG:HA	36:K:92:THR:HG22	1.90	0.54
38:M:34:ALA:O	38:M:38:VAL:HG23	2.08	0.54
49:X:5:LYS:HE3	49:X:6:LYS:HE2	1.90	0.54
54:1:323:C:H2'	54:1:1205:A:N1	2.22	0.54
54:1:533:G:H2'	54:1:534:U:O4'	2.08	0.54
54:1:924:G:H2'	54:1:925:A:C8	2.43	0.54
54:1:1213:A:N6	54:1:1236:G:H1'	2.23	0.54
54:1:1361:G:H2'	54:1:1362:C:C6	2.43	0.54
56:5:43:U:H2'	56:5:44:G:C8	2.43	0.54
59:8:275:VAL:HG23	59:8:276:GLN:H	1.72	0.54
2:c:156:PHE:CD1	9:j:81:ILE:HG23	2.42	0.54
3:d:16:GLU:O	3:d:20:GLY:N	2.41	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:f:68:ARG:NH1	5:f:72:ASN:HB2	2.23	0.54
8:i:21:PRO:HB2	8:i:22:PRO:HD3	1.89	0.54
8:i:37:PHE:O	8:i:41:PHE:N	2.40	0.54
13:n:64:ARG:O	13:n:68:ALA:N	2.41	0.54
19:t:8:LEU:O	24:y:29:ARG:NH1	2.30	0.54
23:x:36:ARG:CG	23:x:45:PHE:HB3	2.38	0.54
32:G:18:GLN:HG2	32:G:189:ASN:OD1	2.08	0.54
32:G:140:LEU:O	32:G:144:GLU:N	2.39	0.54
34:I:103:ARG:CB	34:I:170:LEU:HD21	2.36	0.54
34:I:151:GLN:O	34:I:152:SER:HB2	2.07	0.54
36:K:3:HIS:CE1	36:K:95:ALA:HB2	2.42	0.54
36:K:47:LEU:HD22	36:K:51:ILE:HD12	1.90	0.54
49:X:17:LYS:HA	49:X:20:LYS:HZ3	1.72	0.54
52:a:197:LYS:HG2	52:a:209:ILE:CD1	2.38	0.54
53:3:484:G:C6	53:3:486:U:H1'	2.43	0.54
53:3:512:U:H2'	53:3:513:C:H6	1.71	0.54
53:3:821:G:H2'	53:3:822:U:C6	2.43	0.54
53:3:1256:A:H4'	53:3:1258:G:O4'	2.08	0.54
54:1:118:A:OP2	54:1:119:A:H5''	2.08	0.54
54:1:171:U:H2'	54:1:172:A:H8	1.73	0.54
54:1:506:G:H4'	54:1:509:C:O2	2.08	0.54
54:1:594:U:H2'	54:1:595:C:C6	2.43	0.54
54:1:849:A:H2'	54:1:850:U:C6	2.42	0.54
54:1:1592:C:H2'	54:1:1593:A:C8	2.43	0.54
54:1:2230:G:H2'	54:1:2231:U:H6	1.72	0.54
59:8:363:ILE:HD12	59:8:363:ILE:H	1.73	0.54
1:b:15:VAL:HG12	1:b:204:LEU:C	2.33	0.54
5:f:3:VAL:CG2	54:1:2751:G:H4'	2.38	0.54
7:h:56:ARG:NH1	7:h:81:LEU:HD21	2.22	0.54
11:l:93:ASN:C	11:l:95:LEU:H	2.15	0.54
31:F:15:LYS:C	31:F:16:ILE:HD12	2.33	0.54
40:O:51:VAL:HG22	40:O:52:LEU:N	2.22	0.54
40:O:65:TYR:CD1	44:S:97:LYS:HA	2.43	0.54
42:Q:13:ARG:NH2	53:3:302:G:H5''	2.23	0.54
53:3:394:G:H2'	53:3:395:C:C6	2.43	0.54
54:1:2555:U:C2'	54:1:2556:C:H5'	2.38	0.54
54:1:2860:A:H2'	54:1:2861:U:H5'	1.90	0.54
55:2:1:U:C5	55:2:2:G:C8	2.96	0.54
59:8:144:MET:HE2	59:8:144:MET:HA	1.90	0.54
2:c:14:ILE:HG12	2:c:24:VAL:HG21	1.89	0.53
14:o:46:GLU:OE2	14:o:48:LEU:HD22	2.08	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:K:49:TYR:O	36:K:51:ILE:HG13	2.08	0.53
42:Q:49:ARG:HH12	53:3:522:C:H41	1.55	0.53
43:R:16:ILE:HD12	43:R:16:ILE:H	1.73	0.53
47:V:11:VAL:HG12	47:V:54:ILE:HA	1.90	0.53
50:Y:66:ILE:HD12	50:Y:70:LYS:HD3	1.89	0.53
53:3:1353:G:O2'	53:3:1354:U:H5'	2.08	0.53
54:1:1803:A:H2	54:1:1823:G:O4'	1.90	0.53
54:1:2467:C:C2'	54:1:2468:A:H5'	2.38	0.53
54:1:2839:G:H2'	54:1:2840:C:H6	1.72	0.53
55:2:30:C:H2'	55:2:31:C:C5'	2.39	0.53
59:8:93:VAL:CB	59:8:122:GLN:HB3	2.38	0.53
59:8:155:VAL:C	59:8:158:ILE:HG22	2.33	0.53
59:8:520:ILE:HD11	59:8:600:ALA:C	2.33	0.53
1:b:142:ASN:H	1:b:154:ALA:HB3	1.73	0.53
3:d:6:LYS:HZ2	3:d:141:MET:HG2	1.73	0.53
5:f:48:THR:C	5:f:49:LEU:HD22	2.34	0.53
18:s:57:ASN:OD1	54:1:495:G:H1'	2.07	0.53
32:G:103:TRP:HA	32:G:106:VAL:HB	1.90	0.53
32:G:162:VAL:HB	32:G:184:ALA:HA	1.89	0.53
42:Q:49:ARG:NH1	53:3:522:C:H5	2.07	0.53
43:R:28:ARG:HH21	43:R:62:PHE:HB2	1.72	0.53
54:1:302:C:H2'	54:1:303:G:H8	1.73	0.53
54:1:910:A:H2'	54:1:911:A:C8	2.43	0.53
54:1:1924:C:H2'	54:1:1925:C:C6	2.43	0.53
54:1:2795:C:H2'	54:1:2796:U:O4'	2.09	0.53
59:8:27:THR:O	59:8:31:LEU:HG	2.08	0.53
1:b:44:ASN:OD1	54:1:1812:U:H1'	2.07	0.53
39:N:94:ARG:HA	39:N:97:LEU:HB3	1.90	0.53
41:P:117:HIS:HB3	53:3:718:A:C8	2.43	0.53
41:P:126:ARG:NH1	53:3:796:C:H4'	2.22	0.53
49:X:62:THR:HB	49:X:64:GLU:HG2	1.90	0.53
53:3:1456:A:H2'	53:3:1457:G:O4'	2.07	0.53
54:1:106:C:H2'	54:1:107:G:H8	1.72	0.53
54:1:1821:A:H2'	54:1:1822:C:H6	1.74	0.53
54:1:1833:C:O2	54:1:1969:A:H2	1.90	0.53
54:1:1958:C:O2'	54:1:1959:G:H5'	2.07	0.53
54:1:2168:G:H2'	54:1:2168:G:N3	2.22	0.53
59:8:182:VAL:HG11	59:8:266:CYS:SG	2.48	0.53
3:d:118:LEU:HD11	3:d:188:MET:SD	2.48	0.53
3:d:181:ILE:CG2	11:l:2:ARG:HG3	2.39	0.53
4:e:49:LEU:C	4:e:49:LEU:HD23	2.33	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:f:92:GLY:HA3	59:8:147:MET:HE1	1.90	0.53
9:j:73:VAL:HG12	9:j:74:TYR:H	1.74	0.53
10:k:2:ILE:HG23	10:k:6:THR:CB	2.38	0.53
32:G:62:ARG:O	32:G:63:LYS:HB3	2.08	0.53
33:H:82:ASP:HA	33:H:85:LYS:NZ	2.24	0.53
35:J:83:PRO:CG	35:J:96:GLN:HG3	2.39	0.53
37:L:70:PRO:HD3	37:L:102:TRP:HZ3	1.74	0.53
38:M:107:LYS:HG3	38:M:120:LEU:HD21	1.89	0.53
40:O:25:ILE:HD13	40:O:74:VAL:HG11	1.91	0.53
46:U:79:ASN:O	46:U:80:LYS:HD2	2.08	0.53
53:3:735:C:O2'	53:3:736:C:H5'	2.09	0.53
53:3:1356:G:H2'	53:3:1357:A:C8	2.44	0.53
54:1:7:G:H2'	54:1:8:C:C6	2.43	0.53
54:1:289:G:H2'	54:1:290:U:C6	2.43	0.53
59:8:175:ALA:O	59:8:177:GLU:N	2.42	0.53
4:e:34:THR:C	4:e:35:LEU:HD12	2.33	0.53
4:e:146:ASP:O	4:e:147:ARG:HD3	2.09	0.53
6:g:79:THR:HA	6:g:145:ASN:O	2.08	0.53
8:i:5:GLN:NE2	8:i:61:TYR:HA	2.23	0.53
23:x:9:LYS:HG2	54:1:396:G:OP1	2.08	0.53
28:C:7:LYS:HA	28:C:23:THR:HA	1.90	0.53
34:I:150:LYS:HA	34:I:154:VAL:HB	1.90	0.53
35:J:64:GLU:CD	35:J:64:GLU:H	2.16	0.53
44:S:39:ASP:HA	44:S:42:ASN:HB2	1.89	0.53
46:U:70:ARG:HD2	46:U:73:ALA:HB3	1.91	0.53
51:Z:32:ARG:HG2	51:Z:33:ARG:N	2.24	0.53
52:a:213:SER:HA	52:a:223:ALA:HA	1.91	0.53
53:3:660:C:H2'	53:3:661:G:O4'	2.08	0.53
53:3:974:A:H4'	53:3:975:A:H3'	1.91	0.53
53:3:1413:A:H2	53:3:1487:G:H22	1.55	0.53
54:1:167:A:H2'	54:1:168:G:O4'	2.09	0.53
54:1:704:G:H1'	54:1:727:A:H61	1.73	0.53
54:1:1153:C:H2'	54:1:1154:G:O4'	2.08	0.53
54:1:1299:G:H5''	54:1:1300:G:OP1	2.08	0.53
54:1:1388:G:H2'	54:1:1389:G:C8	2.43	0.53
54:1:1773:A:C8	54:1:1829:A:C8	2.96	0.53
54:1:2316:G:H2'	54:1:2317:A:H8	1.74	0.53
54:1:2712:C:OP1	54:1:2714:G:H4'	2.09	0.53
57:6:68:C:H2'	57:6:69:C:C4'	2.38	0.53
59:8:97:ILE:HG12	59:8:444:SER:HB2	1.89	0.53
21:v:61:LEU:N	21:v:72:VAL:O	2.42	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B:46:GLY:HA3	27:B:54:ILE:CG2	2.38	0.53
34:I:22:SER:O	34:I:108:ALA:HB1	2.07	0.53
34:I:110:ARG:HG2	34:I:110:ARG:HH11	1.74	0.53
40:O:6:ILE:HG22	40:O:76:ILE:HD12	1.90	0.53
44:S:8:ARG:HG2	44:S:12:ARG:HH12	1.73	0.53
53:3:708:C:H2'	53:3:709:U:C6	2.44	0.53
53:3:878:A:H2'	53:3:879:C:C6	2.44	0.53
53:3:1306:A:H2'	53:3:1307:U:O4'	2.09	0.53
54:1:368:A:C2'	54:1:369:U:H5'	2.39	0.53
54:1:807:U:H2'	54:1:808:G:C8	2.43	0.53
54:1:1336:A:H2'	54:1:1337:G:H8	1.73	0.53
54:1:1386:C:H2'	54:1:1387:A:C8	2.42	0.53
54:1:1683:U:H2'	54:1:1684:G:H8	1.73	0.53
54:1:2389:G:H5''	54:1:2390:U:O4'	2.08	0.53
54:1:2665:A:O2'	54:1:2666:C:H5'	2.09	0.53
4:e:11:VAL:HG21	4:e:172:PHE:CD1	2.43	0.53
7:h:43:LYS:O	7:h:47:GLU:N	2.40	0.53
10:k:24:VAL:HA	10:k:39:ILE:HG22	1.90	0.53
14:o:10:ARG:HD2	54:1:2294:G:OP1	2.08	0.53
15:p:62:LYS:HE3	15:p:64:SER:HB3	1.89	0.53
27:B:12:ARG:HG2	27:B:12:ARG:HH11	1.74	0.53
35:J:159:SER:O	35:J:162:GLU:HG3	2.09	0.53
36:K:11:HIS:HB2	36:K:83:ALA:HA	1.91	0.53
37:L:70:PRO:HG3	37:L:98:LEU:HD23	1.90	0.53
37:L:147:ASN:O	37:L:147:ASN:ND2	2.41	0.53
38:M:14:ARG:HD2	53:3:875:U:O2'	2.08	0.53
38:M:66:GLN:C	38:M:68:LYS:N	2.67	0.53
39:N:11:ARG:HH11	39:N:11:ARG:HG3	1.74	0.53
43:R:89:ARG:HD2	43:R:92:ARG:NH2	2.23	0.53
45:T:2:LEU:HB2	45:T:34:GLN:HG3	1.90	0.53
52:a:40:GLU:HG3	52:a:178:VAL:CG1	2.38	0.53
53:3:356:A:H2'	53:3:357:G:H8	1.74	0.53
53:3:1168:U:H5''	53:3:1169:A:OP2	2.09	0.53
53:3:1202:U:H2'	53:3:1203:C:O4'	2.08	0.53
53:3:1349:A:H2'	53:3:1350:A:O4'	2.08	0.53
54:1:235:U:H2'	54:1:236:C:C6	2.43	0.53
54:1:871:U:H2'	54:1:872:U:H6	1.74	0.53
54:1:1043:C:H2'	54:1:1044:C:O4'	2.08	0.53
54:1:2073:C:O2'	54:1:2074:U:H5'	2.09	0.53
59:8:59:ARG:HH11	59:8:59:ARG:C	2.17	0.53
59:8:327:ASP:HB3	59:8:330:VAL:CG2	2.39	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:8:387:GLY:O	59:8:389:LYS:HD3	2.09	0.53
5:f:147:LEU:HA	5:f:150:TYR:CD2	2.43	0.53
15:p:1:SER:HA	54:1:2876:G:H5'	1.91	0.53
34:I:9:LYS:HZ2	53:3:427:U:H5''	1.74	0.53
34:I:11:SER:N	34:I:20:LEU:HD11	2.24	0.53
36:K:4:TYR:HD1	36:K:90:MET:O	1.92	0.53
42:Q:49:ARG:HH12	53:3:522:C:H5	1.57	0.53
43:R:106:ARG:HA	43:R:106:ARG:HE	1.68	0.53
45:T:57:ARG:HG2	45:T:57:ARG:HH11	1.73	0.53
53:3:823:C:H2'	53:3:824:G:C8	2.43	0.53
54:1:192:C:N4	54:1:203:A:H1'	2.24	0.53
54:1:838:C:O2'	54:1:839:U:H5'	2.09	0.53
54:1:1327:A:H2'	54:1:1328:A:C8	2.43	0.53
1:b:89:ASN:OD1	1:b:196:ASN:HB2	2.09	0.53
1:b:211:ARG:HH11	1:b:211:ARG:HG3	1.74	0.53
4:e:113:PHE:HE1	4:e:116:LEU:CD1	2.21	0.53
7:h:80:THR:O	7:h:82:ILE:HG13	2.09	0.53
10:k:26:GLY:HA3	10:k:30:ARG:NH1	2.24	0.53
12:m:123:LYS:HE3	54:1:2467:C:O2	2.09	0.53
15:p:112:ARG:C	15:p:113:LEU:HD23	2.34	0.53
21:v:24:ASN:O	21:v:44:HIS:HB3	2.08	0.53
23:x:64:ASP:O	23:x:68:ALA:N	2.41	0.53
29:D:41:ARG:HB2	29:D:41:ARG:NH2	2.24	0.53
34:I:68:GLU:HB3	53:3:546:A:OP1	2.09	0.53
46:U:51:ARG:HD3	46:U:52:LEU:N	2.24	0.53
53:3:375:U:HO2'	53:3:376:G:H8	1.55	0.53
54:1:150:U:H2'	54:1:151:C:H6	1.73	0.53
54:1:1571:A:H2'	54:1:1572:A:C8	2.44	0.53
54:1:1691:C:H2'	54:1:1692:U:C6	2.44	0.53
54:1:1880:U:H2'	54:1:1881:C:C6	2.44	0.53
54:1:2447:G:C4	54:1:2500:U:C5	2.97	0.53
59:8:59:ARG:HH11	59:8:59:ARG:CA	2.22	0.53
59:8:62:THR:CG2	59:8:91:GLY:HA3	2.37	0.53
59:8:492:GLU:O	59:8:572:VAL:HG22	2.09	0.53
1:b:140:VAL:HG12	1:b:191:LEU:HD23	1.90	0.53
2:c:194:PRO:HA	54:1:2680:U:H5'	1.90	0.53
4:e:142:TYR:HE1	43:R:8:ILE:HG21	1.74	0.53
6:g:21:VAL:HB	6:g:25:TYR:HD2	1.74	0.53
11:l:32:GLY:O	54:1:1190:G:H5''	2.09	0.53
19:t:29:THR:HG23	19:t:85:VAL:O	2.09	0.53
33:H:6:PRO:HD2	33:H:183:TYR:CD2	2.42	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:H:22:PHE:HB3	40:O:97:ASP:CG	2.34	0.53
36:K:47:LEU:CD1	36:K:51:ILE:HD12	2.38	0.53
42:Q:21:PRO:HD2	42:Q:94:TYR:OH	2.09	0.53
43:R:11:HIS:N	43:R:44:ILE:HB	2.24	0.53
45:T:80:LEU:O	45:T:84:LEU:HD23	2.09	0.53
46:U:73:ALA:HB1	53:3:452:A:O2'	2.09	0.53
48:W:56:ARG:HD2	48:W:60:ARG:NH2	2.23	0.53
53:3:380:G:H2'	53:3:381:C:C5'	2.33	0.53
53:3:1386:G:O2'	53:3:1387:G:H5'	2.09	0.53
53:3:1412:C:H2'	53:3:1413:A:H8	1.73	0.53
54:1:699:A:H2'	54:1:700:G:O4'	2.08	0.53
54:1:995:C:H6	54:1:995:C:H5'	1.74	0.53
54:1:1670:C:H1'	54:1:1993:U:O2	2.09	0.53
54:1:1676:A:H2'	54:1:1677:A:O4'	2.09	0.53
54:1:2066:C:O2'	54:1:2067:G:H5'	2.09	0.53
59:8:216:ASN:O	59:8:220:GLN:HB2	2.09	0.53
59:8:322:PHE:CD2	59:8:323:LYS:HG3	2.45	0.53
9:j:37:ARG:HH11	9:j:39:LYS:HD2	1.74	0.52
17:r:1:MET:N	17:r:42:ALA:O	2.42	0.52
20:u:13:LEU:CD2	20:u:14:THR:HG23	2.38	0.52
22:w:36:GLN:NE2	22:w:41:PHE:HB2	2.21	0.52
28:C:44:GLN:NE2	54:1:2372:U:H5'	2.24	0.52
35:J:104:ILE:HA	35:J:121:ASN:O	2.09	0.52
43:R:53:ASP:HA	43:R:56:ARG:NH1	2.24	0.52
43:R:65:GLU:O	43:R:69:ARG:HG2	2.09	0.52
43:R:78:ARG:HG2	43:R:78:ARG:NH1	2.24	0.52
45:T:81:ILE:O	45:T:85:GLY:N	2.40	0.52
53:3:426:U:H2'	53:3:427:U:C6	2.43	0.52
53:3:662:U:H2'	53:3:663:A:C8	2.45	0.52
53:3:1096:C:H2'	53:3:1097:C:H6	1.74	0.52
53:3:1299:A:C2'	53:3:1300:G:H4'	2.35	0.52
53:3:1492:A:H5'	53:3:1493:A:OP1	2.09	0.52
54:1:7:G:H2'	54:1:8:C:H6	1.74	0.52
54:1:828:U:H4'	54:1:831:G:N1	2.24	0.52
54:1:1560:G:H2'	54:1:1560:G:N3	2.24	0.52
54:1:1684:G:H2'	54:1:1685:C:H6	1.74	0.52
54:1:2240:U:H2'	54:1:2241:A:C8	2.43	0.52
54:1:2391:G:H2'	54:1:2429:G:N2	2.24	0.52
59:8:492:GLU:O	59:8:572:VAL:N	2.38	0.52
59:8:616:ILE:HG22	59:8:657:GLU:HB3	1.91	0.52
6:g:132:PHE:CD2	6:g:142:VAL:HB	2.45	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:m:4:PRO:CG	12:m:70:ASP:HA	2.39	0.52
12:m:4:PRO:HD2	12:m:92:TRP:CE3	2.44	0.52
13:n:73:ASN:O	13:n:77:ALA:N	2.35	0.52
14:o:94:ARG:HB2	14:o:94:ARG:CZ	2.39	0.52
16:q:49:ARG:NH2	17:r:74:ILE:HG12	2.24	0.52
21:v:75:GLN:HB2	21:v:92:VAL:HG23	1.92	0.52
33:H:82:ASP:HA	33:H:85:LYS:HZ3	1.74	0.52
35:J:104:ILE:O	35:J:111:ARG:NH1	2.38	0.52
36:K:18:VAL:HG13	36:K:19:PRO:CD	2.33	0.52
39:N:26:LYS:HG2	39:N:61:ASP:HB2	1.90	0.52
40:O:51:VAL:HG22	44:S:80:ARG:HD2	1.90	0.52
44:S:73:LEU:HD22	44:S:83:VAL:HG21	1.91	0.52
45:T:68:TYR:O	45:T:71:ARG:HG2	2.09	0.52
47:V:61:ARG:HG2	47:V:75:VAL:CG2	2.39	0.52
50:Y:34:VAL:HG21	50:Y:78:LEU:HD12	1.91	0.52
51:Z:14:ALA:CB	51:Z:16:ARG:HH12	2.19	0.52
53:3:496:A:H2	53:3:497:G:H2'	1.74	0.52
54:1:340:A:H2'	54:1:341:C:O4'	2.09	0.52
54:1:1053:C:H6	54:1:1053:C:H5'	1.74	0.52
54:1:1146:C:H2'	54:1:1147:A:H8	1.74	0.52
54:1:1744:A:H3'	54:1:1745:A:H8	1.75	0.52
59:8:144:MET:HG3	59:8:266:CYS:HB2	1.91	0.52
2:c:124:ARG:HA	2:c:165:MET:SD	2.50	0.52
12:m:41:LEU:CD2	12:m:45:GLN:HB2	2.39	0.52
23:x:65:THR:O	23:x:68:ALA:HB3	2.09	0.52
32:G:89:PHE:HB3	32:G:150:ILE:HD13	1.91	0.52
33:H:35:ASP:O	33:H:38:VAL:HG12	2.09	0.52
37:L:64:ALA:O	37:L:68:VAL:HG13	2.09	0.52
38:M:91:LEU:O	38:M:116:ARG:NH2	2.42	0.52
40:O:15:HIS:O	40:O:19:ASP:N	2.43	0.52
40:O:75:ASP:OD1	53:3:1125:U:H5'	2.10	0.52
44:S:46:LYS:O	44:S:50:LEU:HD23	2.10	0.52
46:U:71:VAL:O	46:U:75:ILE:N	2.35	0.52
53:3:439:U:H2'	53:3:440:C:C6	2.44	0.52
53:3:993:G:H2'	53:3:995:C:N4	2.24	0.52
53:3:1057:G:H2'	53:3:1058:G:C8	2.45	0.52
53:3:1296:C:H4'	53:3:1302:C:N4	2.24	0.52
54:1:740:C:O2'	54:1:741:U:H5'	2.08	0.52
54:1:828:U:H2'	54:1:829:A:C8	2.45	0.52
54:1:1817:G:C2	54:1:1818:U:H1'	2.43	0.52
54:1:2350:C:H2'	54:1:2351:G:O4'	2.10	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2625:G:H2'	54:1:2626:C:C6	2.45	0.52
59:8:198:GLN:C	59:8:272:ASN:ND2	2.68	0.52
59:8:298:ILE:CG2	59:8:406:LEU:HD23	2.37	0.52
3:d:162:ARG:HH11	54:1:321:U:H1'	1.74	0.52
26:A:58:ASP:OD1	26:A:59:ARG:N	2.42	0.52
41:P:73:VAL:HB	41:P:76:TYR:HD2	1.75	0.52
44:S:26:LEU:O	44:S:30:ILE:HB	2.10	0.52
53:3:270:A:H2'	53:3:271:C:C6	2.44	0.52
53:3:306:A:O2'	53:3:307:C:H5'	2.09	0.52
53:3:514:C:O2'	53:3:515:G:H5'	2.09	0.52
53:3:825:A:H2'	53:3:826:C:C6	2.44	0.52
53:3:1328:C:H2'	53:3:1329:A:O4'	2.10	0.52
53:3:1468:A:C2'	53:3:1469:C:H5'	2.40	0.52
53:3:1515:G:H2'	53:3:1516:G:C8	2.38	0.52
54:1:703:U:H2'	54:1:704:G:O4'	2.09	0.52
54:1:720:U:H2'	54:1:721:A:H8	1.74	0.52
54:1:1298:C:H2'	54:1:1299:G:O4'	2.10	0.52
57:6:71:C:H2'	57:6:72:A:C8	2.44	0.52
1:b:160:TYR:HB3	1:b:193:GLU:HG2	1.91	0.52
1:b:175:LEU:HD13	54:1:1799:G:C5	2.44	0.52
3:d:24:ASN:HD22	3:d:27:LEU:HB2	1.74	0.52
3:d:44:ARG:HH22	3:d:87:ALA:CB	2.23	0.52
9:j:69:ARG:HA	9:j:89:PHE:HD2	1.75	0.52
17:r:78:ARG:NH1	54:1:990:A:N1	2.58	0.52
33:H:57:GLU:HB3	33:H:64:ARG:HB2	1.91	0.52
34:I:116:LEU:HB3	34:I:122:ILE:HG13	1.92	0.52
39:N:83:THR:HG21	39:N:102:PHE:HB3	1.91	0.52
48:W:44:THR:HG22	48:W:44:THR:O	2.10	0.52
52:a:9:ARG:O	52:a:13:GLU:HG3	2.09	0.52
53:3:219:U:H2'	53:3:220:G:H8	1.75	0.52
53:3:506:G:H2'	53:3:507:C:O4'	2.10	0.52
53:3:601:G:H2'	53:3:602:A:H8	1.74	0.52
53:3:1251:A:O2'	53:3:1370:G:H5'	2.09	0.52
53:3:1436:U:H2'	53:3:1437:A:H8	1.74	0.52
54:1:1841:U:O2'	54:1:1842:G:H5'	2.10	0.52
54:1:2647:U:O2'	54:1:2648:G:H5'	2.10	0.52
54:1:2743:U:H2'	54:1:2744:G:C5'	2.36	0.52
59:8:419:ALA:HB3	59:8:485:LYS:O	2.09	0.52
2:c:125:TRP:CD2	2:c:160:LYS:HB3	2.45	0.52
3:d:6:LYS:HZ3	3:d:141:MET:HG2	1.73	0.52
3:d:181:ILE:N	3:d:181:ILE:HD12	2.24	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:e:137:PHE:HB3	4:e:139:GLU:OE1	2.09	0.52
13:n:35:LYS:NZ	13:n:110:MET:HG3	2.25	0.52
15:p:4:ILE:HA	15:p:7:LEU:HD12	1.91	0.52
18:s:82:MET:CG	18:s:98:LYS:HB2	2.39	0.52
23:x:2:ARG:NE	23:x:29:LEU:HD23	2.24	0.52
24:y:16:THR:HA	24:y:19:LEU:HD12	1.90	0.52
33:H:70:ALA:HA	33:H:105:VAL:HB	1.91	0.52
35:J:84:VAL:HG22	35:J:85:LYS:N	2.25	0.52
36:K:4:TYR:HA	36:K:90:MET:O	2.10	0.52
37:L:140:VAL:HA	37:L:143:MET:HB2	1.91	0.52
46:U:20:VAL:HG23	46:U:34:GLU:C	2.33	0.52
50:Y:63:LYS:HB2	50:Y:65:LEU:HD13	1.92	0.52
53:3:171:A:H2'	53:3:172:A:C8	2.44	0.52
53:3:389:A:C5	53:3:390:U:H1'	2.44	0.52
53:3:1010:U:O2'	53:3:1011:C:H5'	2.10	0.52
53:3:1167:A:H2'	53:3:1167:A:N3	2.25	0.52
54:1:194:G:N2	54:1:202:U:H1'	2.25	0.52
54:1:542:C:H2'	54:1:543:G:H5''	1.91	0.52
54:1:1355:G:O2'	54:1:1356:G:H5'	2.09	0.52
54:1:1656:C:H2'	54:1:1657:U:C6	2.43	0.52
54:1:2231:U:H2'	54:1:2232:C:H6	1.73	0.52
54:1:2291:U:H2'	54:1:2292:U:H6	1.74	0.52
54:1:2348:U:O2'	54:1:2349:G:H5'	2.10	0.52
54:1:2545:G:C2	54:1:2546:U:H1'	2.44	0.52
2:c:26:VAL:HG11	15:p:7:LEU:HD11	1.89	0.52
2:c:29:VAL:O	2:c:29:VAL:HG13	2.09	0.52
5:f:90:GLY:HA2	5:f:159:LYS:HZ2	1.75	0.52
10:k:2:ILE:HG23	10:k:6:THR:HB	1.91	0.52
22:w:36:GLN:OE1	22:w:40:LYS:N	2.42	0.52
23:x:69:GLU:O	23:x:73:ARG:HB2	2.09	0.52
26:A:22:MET:HE2	26:A:24:ILE:HG23	1.92	0.52
34:I:129:VAL:HG12	34:I:130:ASN:N	2.25	0.52
39:N:87:MET:SD	39:N:94:ARG:HD2	2.49	0.52
48:W:56:ARG:HD2	48:W:60:ARG:HH22	1.75	0.52
52:a:30:LEU:HA	52:a:33:LEU:HG	1.90	0.52
53:3:123:U:OP1	53:3:312:C:H5'	2.10	0.52
53:3:594:U:H2'	53:3:595:A:O4'	2.09	0.52
53:3:1009:U:H2'	53:3:1010:U:H6	1.74	0.52
54:1:554:U:H2'	54:1:555:G:O4'	2.10	0.52
54:1:1684:G:H2'	54:1:1685:C:C6	2.44	0.52
54:1:2296:U:H5''	54:1:2297:A:OP1	2.10	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2475:C:H2'	54:1:2476:A:H5'	1.92	0.52
56:5:10:G:C2	56:5:26:A:H1'	2.45	0.52
5:f:106:LEU:HD13	5:f:151:ARG:HB2	1.92	0.52
5:f:169:ARG:HE	5:f:170:THR:H	1.57	0.52
8:i:7:TYR:CD2	8:i:57:VAL:HG13	2.44	0.52
9:j:89:PHE:CE1	9:j:93:ILE:HD11	2.45	0.52
20:u:45:GLN:HB2	20:u:58:VAL:CG2	2.40	0.52
31:F:9:LYS:CG	31:F:14:CYS:HB2	2.40	0.52
40:O:9:ARG:HB3	40:O:73:LEU:HD21	1.92	0.52
40:O:42:LEU:HD11	40:O:73:LEU:HD12	1.92	0.52
41:P:30:ILE:HG12	41:P:45:THR:HG22	1.92	0.52
52:a:10:VAL:O	52:a:14:LYS:N	2.43	0.52
53:3:256:U:H2'	53:3:257:G:C8	2.45	0.52
53:3:1284:C:H2'	53:3:1285:A:C8	2.44	0.52
54:1:1638:C:C3'	54:1:1639:C:H5''	2.39	0.52
54:1:2685:G:H2'	54:1:2686:G:C8	2.44	0.52
59:8:72:TRP:NE1	59:8:279:LEU:HB3	2.23	0.52
59:8:397:LEU:N	59:8:397:LEU:HD12	2.24	0.52
1:b:266:ILE:HG21	1:b:269:ARG:HD2	1.92	0.52
3:d:97:ASN:ND2	54:1:606:U:O3'	2.43	0.52
4:e:33:ILE:HB	4:e:90:LEU:CD1	2.39	0.52
12:m:66:ARG:HH11	12:m:66:ARG:HG3	1.74	0.52
14:o:51:ALA:HB3	14:o:78:VAL:HG12	1.91	0.52
15:p:47:ILE:HB	15:p:96:LEU:HB2	1.92	0.52
17:r:54:VAL:HG12	17:r:55:ASP:N	2.24	0.52
18:s:17:VAL:HB	18:s:76:VAL:HG11	1.90	0.52
32:G:163:ILE:HG23	32:G:185:ILE:HD11	1.92	0.52
36:K:14:GLN:O	36:K:17:GLN:N	2.43	0.52
39:N:3:ASN:ND2	39:N:4:GLN:H	2.08	0.52
40:O:63:ASP:HB3	40:O:65:TYR:CE2	2.45	0.52
40:O:67:ILE:HG13	40:O:67:ILE:O	2.10	0.52
42:Q:32:VAL:HG22	42:Q:55:ARG:O	2.09	0.52
53:3:138:G:H2'	53:3:139:A:H8	1.74	0.52
54:1:2244:U:H2'	54:1:2245:U:O4'	2.09	0.52
59:8:59:ARG:HG3	59:8:60:GLY:N	2.23	0.52
59:8:391:VAL:HG23	59:8:391:VAL:O	2.09	0.52
59:8:399:ASP:OD1	59:8:400:PRO:HD3	2.09	0.52
2:c:150:GLN:NE2	54:1:2572:A:N7	2.58	0.52
4:e:99:PHE:HE2	4:e:172:PHE:HE2	1.56	0.52
5:f:132:LEU:HD12	5:f:132:LEU:O	2.09	0.52
16:q:2:ARG:NH1	54:1:449:A:H4'	2.25	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:q:93:ILE:O	16:q:97:ILE:HG12	2.10	0.52
29:D:11:LYS:HD3	54:1:686:U:O2	2.10	0.52
32:G:25:LYS:HE2	32:G:25:LYS:HA	1.90	0.52
32:G:33:ALA:HB3	32:G:37:VAL:O	2.10	0.52
32:G:102:ASN:ND2	53:3:1074:G:H1'	2.25	0.52
33:H:71:ARG:O	33:H:75:VAL:HG23	2.10	0.52
33:H:174:LEU:HD12	33:H:200:TRP:NE1	2.25	0.52
34:I:115:GLN:NE2	53:3:406:G:C1'	2.73	0.52
42:Q:20:VAL:HG23	42:Q:94:TYR:CE1	2.44	0.52
49:X:38:THR:HA	49:X:68:HIS:O	2.10	0.52
53:3:39:G:O2'	53:3:40:C:H5'	2.09	0.52
53:3:128:G:O2'	53:3:129:A:H5'	2.10	0.52
53:3:315:A:C2	53:3:330:C:H1'	2.45	0.52
53:3:321:A:H2	53:3:332:G:H22	1.56	0.52
53:3:731:G:O2'	53:3:732:C:H5'	2.09	0.52
53:3:864:A:H2'	53:3:865:A:C8	2.45	0.52
53:3:969:A:O2'	53:3:970:C:H5'	2.10	0.52
53:3:1495:U:H2'	53:3:1496:C:H6	1.73	0.52
54:1:28:A:H2'	54:1:29:U:C6	2.43	0.52
54:1:768:G:H22	54:1:1379:U:H1'	1.73	0.52
54:1:1310:G:C2'	54:1:1311:G:H5'	2.40	0.52
54:1:2511:U:H2'	54:1:2512:C:C6	2.45	0.52
54:1:2758:A:C2'	54:1:2759:G:H5'	2.40	0.52
58:4:17:U:H3'	58:4:18:G:H5''	1.91	0.52
59:8:171:LEU:HD21	59:8:214:LEU:HD13	1.90	0.52
59:8:235:GLU:HA	59:8:238:LEU:HB2	1.91	0.52
59:8:291:ASP:O	59:8:292:VAL:HG13	2.10	0.52
13:n:72:ASP:O	13:n:76:VAL:HG23	2.10	0.51
15:p:51:ASN:O	15:p:52:ARG:HG3	2.11	0.51
20:u:10:VAL:HA	20:u:72:PHE:H	1.74	0.51
22:w:73:ARG:HG2	22:w:73:ARG:NH1	2.26	0.51
28:C:43:ARG:NH1	54:1:2370:G:H4'	2.25	0.51
32:G:129:THR:HB	32:G:132:GLU:HB2	1.92	0.51
33:H:138:GLN:HA	33:H:141:MET:HE1	1.91	0.51
35:J:112:ALA:O	35:J:115:GLU:HG2	2.10	0.51
41:P:126:ARG:C	51:Z:34:ARG:HH21	2.18	0.51
44:S:3:GLN:HG3	53:3:1047:G:H5''	1.91	0.51
45:T:26:VAL:O	45:T:30:LEU:HD13	2.10	0.51
49:X:27:LYS:NZ	49:X:28:LYS:HE3	2.24	0.51
53:3:245:U:O2'	53:3:246:A:H5'	2.10	0.51
53:3:383:A:H2'	53:3:384:G:O4'	2.10	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:485:U:H5''	53:3:486:U:OP2	2.10	0.51
53:3:505:G:H2'	53:3:506:G:C8	2.45	0.51
53:3:882:C:O2'	53:3:883:C:H5'	2.09	0.51
53:3:1261:A:H1'	53:3:1283:U:H5''	1.92	0.51
53:3:1389:C:H2'	53:3:1390:U:O4'	2.10	0.51
54:1:171:U:H2'	54:1:172:A:C8	2.45	0.51
54:1:184:C:H2'	54:1:185:G:C8	2.45	0.51
54:1:813:U:O2'	54:1:1225:G:H1'	2.10	0.51
54:1:1387:A:H5'	54:1:1469:A:H1'	1.93	0.51
54:1:1443:U:H2'	54:1:1444:G:H8	1.75	0.51
54:1:1672:A:C2	54:1:2582:G:H5'	2.45	0.51
59:8:15:ILE:N	59:8:15:ILE:HD12	2.24	0.51
59:8:255:ARG:HH11	59:8:255:ARG:CB	2.22	0.51
59:8:458:ILE:HD12	59:8:483:VAL:HG11	1.92	0.51
59:8:621:VAL:HB	59:8:654:ILE:HB	1.93	0.51
59:8:647:SER:HA	59:8:652:VAL:HA	1.91	0.51
2:c:146:ILE:HG22	2:c:159:LYS:CE	2.40	0.51
3:d:71:GLY:CA	54:1:674:G:H5''	2.40	0.51
8:i:10:LEU:O	8:i:55:PRO:HA	2.10	0.51
9:j:57:LEU:O	9:j:58:ASN:HB2	2.09	0.51
10:k:22:ILE:HD11	10:k:40:LYS:CG	2.40	0.51
10:k:70:ARG:HG2	10:k:70:ARG:HH11	1.74	0.51
30:E:41:ARG:HD3	54:1:2349:G:OP2	2.09	0.51
40:O:40:ILE:HG23	40:O:41:PRO:HD2	1.92	0.51
47:V:17:GLU:OE2	47:V:18:LYS:HG3	2.10	0.51
53:3:77:A:H2'	53:3:78:A:H8	1.74	0.51
53:3:231:U:H2'	53:3:232:G:C8	2.43	0.51
53:3:304:U:O2'	53:3:305:G:H5'	2.10	0.51
53:3:515:G:H2'	53:3:516:U:O4'	2.10	0.51
53:3:823:C:H2'	53:3:824:G:H8	1.75	0.51
53:3:1128:C:H2'	53:3:1129:C:C6	2.44	0.51
53:3:1256:A:H1'	53:3:1258:G:C4	2.45	0.51
54:1:21:A:H2'	54:1:22:C:H6	1.72	0.51
54:1:727:A:H2'	54:1:728:G:C8	2.45	0.51
54:1:1181:U:H2'	54:1:1182:G:C8	2.46	0.51
54:1:1271:G:C2	54:1:1617:C:H4'	2.46	0.51
54:1:2314:A:H2'	54:1:2315:G:C8	2.45	0.51
59:8:171:LEU:O	59:8:183:VAL:HG22	2.10	0.51
59:8:213:GLU:O	59:8:217:GLU:N	2.38	0.51
1:b:155:ARG:NH1	54:1:1818:U:C5	2.78	0.51
2:c:156:PHE:HD1	9:j:81:ILE:HG23	1.74	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:6:LYS:HG2	3:d:121:VAL:HG12	1.92	0.51
4:e:59:ILE:HD12	4:e:59:ILE:N	2.24	0.51
9:j:78:THR:HG22	54:l:2641:G:OP1	2.10	0.51
10:k:26:GLY:HA3	10:k:30:ARG:HH11	1.75	0.51
11:l:70:LYS:HD2	54:l:633:A:H5''	1.91	0.51
12:m:91:TYR:N	12:m:91:TYR:CD1	2.79	0.51
12:m:112:LEU:O	12:m:116:ALA:N	2.43	0.51
15:p:3:ILE:H	15:p:3:ILE:HD12	1.75	0.51
18:s:48:LYS:O	18:s:52:GLU:HG3	2.10	0.51
20:u:93:ARG:CB	20:u:102:ILE:HD12	2.39	0.51
30:E:32:LEU:HD13	54:l:2419:U:OP2	2.10	0.51
34:I:131:ILE:HG23	53:3:403:C:O5'	2.10	0.51
35:J:100:GLU:O	35:J:102:THR:N	2.43	0.51
35:J:140:ILE:HA	35:J:143:LEU:HD12	1.91	0.51
38:M:12:ARG:CD	38:M:26:MET:HB3	2.40	0.51
39:N:93:LEU:N	39:N:93:LEU:HD23	2.26	0.51
43:R:9:PRO:O	43:R:44:ILE:HG21	2.10	0.51
47:V:44:HIS:CG	47:V:69:THR:HG21	2.45	0.51
53:3:27:G:H2'	53:3:28:A:O4'	2.10	0.51
53:3:102:G:H2'	53:3:103:U:H6	1.75	0.51
53:3:635:A:O2'	53:3:636:U:H5'	2.10	0.51
53:3:1470:U:O2'	53:3:1471:U:H5'	2.10	0.51
54:1:1352:U:O2'	54:1:1353:A:H5'	2.10	0.51
54:1:1467:U:C2'	54:1:1468:U:H5''	2.40	0.51
54:1:2215:C:H2'	54:1:2216:G:C8	2.45	0.51
54:1:2529:G:H5''	54:1:2530:A:H5''	1.92	0.51
59:8:137:ARG:NE	59:8:262:ILE:HG21	2.25	0.51
59:8:374:ILE:HD12	59:8:374:ILE:N	2.25	0.51
59:8:519:VAL:HB	59:8:580:PHE:H	1.73	0.51
2:c:15:PHE:CE1	2:c:21:SER:HB2	2.45	0.51
5:f:76:ILE:O	5:f:81:GLY:N	2.37	0.51
5:f:113:ASP:O	5:f:115:GLN:NE2	2.43	0.51
10:k:58:LEU:C	10:k:58:LEU:HD12	2.35	0.51
12:m:50:ARG:HG2	12:m:50:ARG:NH2	2.21	0.51
14:o:40:ILE:HG22	14:o:41:ALA:N	2.26	0.51
17:r:41:ILE:N	17:r:41:ILE:HD12	2.26	0.51
17:r:89:HIS:CE1	17:r:91:GLN:HB2	2.38	0.51
26:A:12:ILE:HD11	26:A:29:GLY:H	1.76	0.51
35:J:19:ARG:HB3	35:J:32:PHE:CE1	2.46	0.51
35:J:68:ARG:NH1	35:J:68:ARG:HB2	2.24	0.51
53:3:186:C:H2'	53:3:187:G:O4'	2.11	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:339:C:H2'	53:3:340:U:H6	1.76	0.51
53:3:493:A:C2'	53:3:494:G:H5'	2.40	0.51
53:3:1215:G:N3	53:3:1215:G:H2'	2.24	0.51
54:1:409:G:H2'	54:1:410:G:C8	2.45	0.51
54:1:742:A:H2'	54:1:743:A:H8	1.75	0.51
54:1:2055:C:H5'	54:1:2056:G:O5'	2.11	0.51
54:1:2070:A:C2	54:1:2071:A:C4	2.98	0.51
54:1:2293:G:H2'	54:1:2294:G:C8	2.45	0.51
57:6:30:G:H2'	57:6:31:G:O4'	2.10	0.51
6:g:1:MET:CE	6:g:2:GLN:H	2.16	0.51
7:h:55:VAL:HA	54:1:1084:A:H5''	1.92	0.51
10:k:59:LYS:HE2	10:k:89:ASN:CG	2.36	0.51
11:l:89:VAL:HG22	11:l:91:ASP:OD2	2.10	0.51
12:m:18:ARG:HG2	55:2:90:C:H5'	1.92	0.51
13:n:10:LEU:O	13:n:12:ARG:NH2	2.43	0.51
13:n:28:LEU:HD13	13:n:113:ILE:HG23	1.93	0.51
32:G:140:LEU:CD2	32:G:144:GLU:HB2	2.40	0.51
34:I:71:PHE:O	34:I:75:TYR:N	2.38	0.51
35:J:44:ARG:HA	35:J:71:ILE:O	2.10	0.51
41:P:121:ARG:HG2	41:P:121:ARG:HH11	1.74	0.51
44:S:30:ILE:O	44:S:40:ARG:HD3	2.10	0.51
50:Y:50:PHE:O	50:Y:52:GLU:N	2.43	0.51
52:a:210:LYS:HG2	52:a:211:LYS:H	1.76	0.51
53:3:81:A:H2'	53:3:82:G:C8	2.44	0.51
53:3:90:C:H2'	53:3:91:U:C6	2.45	0.51
53:3:109:A:C8	53:3:327:A:O4'	2.64	0.51
53:3:376:G:H1	53:3:387:U:H3	1.58	0.51
53:3:855:U:H2'	53:3:856:C:C6	2.45	0.51
53:3:869:G:H4'	53:3:872:A:C8	2.46	0.51
53:3:1330:U:H2'	53:3:1331:G:O4'	2.11	0.51
54:1:225:C:H2'	54:1:226:A:O4'	2.10	0.51
54:1:693:A:H2'	54:1:694:U:C6	2.46	0.51
54:1:1175:A:H5'	54:1:1176:U:H5'	1.93	0.51
54:1:1259:G:H2'	54:1:1260:A:C8	2.46	0.51
54:1:1372:U:O2'	54:1:1373:A:H5'	2.10	0.51
54:1:2388:A:H5'	54:1:2389:G:OP2	2.11	0.51
59:8:174:GLY:CA	59:8:178:HIS:HB3	2.41	0.51
1:b:227:VAL:O	1:b:227:VAL:HG22	2.10	0.51
2:c:149:ASN:HB2	54:1:2574:G:O2'	2.11	0.51
4:e:11:VAL:HG21	4:e:172:PHE:HD1	1.75	0.51
5:f:34:ARG:HG3	5:f:35:THR:N	2.25	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:124:THR:HG22	6:g:125:THR:N	2.25	0.51
9:j:27:ARG:HD3	54:1:1143:A:H62	1.76	0.51
13:n:98:LEU:HD12	13:n:98:LEU:N	2.25	0.51
23:x:32:LEU:HD23	23:x:50:VAL:C	2.36	0.51
27:B:2:VAL:HG12	27:B:3:GLN:N	2.26	0.51
32:G:169:HIS:HA	32:G:172:ILE:HD12	1.93	0.51
33:H:56:ILE:HD13	33:H:65:VAL:HA	1.92	0.51
36:K:27:ALA:O	36:K:31:GLY:N	2.43	0.51
43:R:101:THR:CG2	53:3:1226:C:H2'	2.39	0.51
44:S:12:ARG:HG3	44:S:12:ARG:HH11	1.76	0.51
44:S:53:ASP:CG	44:S:58:ARG:HE	2.19	0.51
46:U:36:VAL:HG13	46:U:36:VAL:O	2.11	0.51
47:V:77:VAL:HG11	47:V:80:LYS:HG3	1.91	0.51
49:X:8:PRO:HB3	49:X:38:THR:HG21	1.92	0.51
53:3:852:G:H2'	53:3:853:C:C6	2.45	0.51
53:3:1442:G:H2'	53:3:1443:C:C6	2.46	0.51
54:1:49:A:H5''	54:1:50:U:H5''	1.92	0.51
54:1:2457:U:O2'	54:1:2458:G:H5'	2.11	0.51
59:8:501:VAL:HG11	59:8:604:GLY:CA	2.40	0.51
8:i:12:VAL:HG21	8:i:19:PRO:HB3	1.93	0.51
10:k:15:GLY:O	10:k:46:ALA:HB1	2.11	0.51
12:m:29:GLY:CA	12:m:106:ASP:HB2	2.40	0.51
16:q:24:TYR:HE1	54:1:17:G:H4'	1.76	0.51
21:v:12:GLN:OE1	55:2:75:G:H5''	2.10	0.51
22:w:36:GLN:HE22	22:w:41:PHE:CB	2.21	0.51
25:z:6:ILE:O	25:z:34:THR:HG23	2.10	0.51
28:C:24:LYS:HE3	28:C:26:LYS:HA	1.92	0.51
37:L:129:ASN:C	37:L:134:VAL:HG21	2.36	0.51
47:V:76:ARG:HG3	47:V:76:ARG:O	2.11	0.51
52:a:22:ASP:O	52:a:26:ALA:N	2.44	0.51
53:3:393:A:C5	53:3:394:G:C5	2.99	0.51
53:3:451:A:H4'	53:3:452:A:O4'	2.11	0.51
53:3:470:C:H2'	53:3:471:U:H6	1.75	0.51
53:3:674:G:H2'	53:3:675:A:H8	1.71	0.51
54:1:23:G:H2'	54:1:24:G:C8	2.46	0.51
54:1:64:A:H2'	54:1:65:U:C6	2.46	0.51
54:1:118:A:H2'	54:1:120:U:O4	2.10	0.51
54:1:438:G:H2'	54:1:439:A:H8	1.74	0.51
54:1:971:G:H2'	54:1:972:A:H8	1.76	0.51
59:8:137:ARG:HD3	59:8:262:ILE:HG21	1.92	0.51
59:8:139:ALA:HB3	59:8:264:VAL:HG12	1.92	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:8:235:GLU:O	59:8:239:GLY:N	2.37	0.51
59:8:557:ILE:O	59:8:560:GLN:N	2.43	0.51
5:f:15:ASP:OD2	5:f:26:LYS:HB3	2.10	0.51
6:g:3:VAL:HA	6:g:39:ALA:N	2.26	0.51
8:i:54:ILE:CG2	8:i:55:PRO:HD2	2.40	0.51
16:q:91:ARG:HG3	16:q:91:ARG:HH11	1.76	0.51
18:s:82:MET:HG2	18:s:98:LYS:HB2	1.93	0.51
35:J:20:VAL:HB	53:3:16:A:O2'	2.10	0.51
39:N:11:ARG:HB3	39:N:73:GLY:O	2.11	0.51
42:Q:34:THR:HA	42:Q:75:GLU:HA	1.91	0.51
42:Q:82:ARG:HH21	53:3:552:U:C5'	2.22	0.51
45:T:81:ILE:HG13	45:T:82:GLU:N	2.26	0.51
46:U:33:ILE:HD12	46:U:33:ILE:H	1.75	0.51
49:X:52:ASN:ND2	49:X:55:GLN:NE2	2.49	0.51
53:3:25:C:H5'	53:3:524:G:H1'	1.92	0.51
53:3:68:G:H2'	53:3:69:G:O4'	2.10	0.51
53:3:259:G:N2	53:3:260:G:H1'	2.26	0.51
53:3:394:G:H2'	53:3:395:C:H6	1.74	0.51
53:3:598:U:H2'	53:3:599:C:C6	2.46	0.51
54:1:436:C:O2'	54:1:437:U:H5'	2.11	0.51
54:1:745:G:H2'	54:1:746:U:H5'	1.91	0.51
54:1:1127:A:H2'	54:1:1128:G:H5''	1.93	0.51
54:1:1528:A:H2'	54:1:1529:G:O4'	2.11	0.51
54:1:2339:C:H2'	54:1:2340:A:C8	2.45	0.51
54:1:2609:U:O2'	54:1:2610:C:H5'	2.11	0.51
59:8:417:SER:HA	59:8:458:ILE:O	2.11	0.51
5:f:8:VAL:HG22	5:f:68:ARG:HH12	1.70	0.51
21:v:77:VAL:HG23	21:v:89:ILE:HG12	1.93	0.51
23:x:27:ARG:HG2	23:x:27:ARG:HH11	1.75	0.51
47:V:12:VAL:HB	47:V:21:VAL:O	2.11	0.51
50:Y:53:MET:O	50:Y:56:ILE:N	2.40	0.51
52:a:53:ARG:HD2	52:a:53:ARG:H	1.76	0.51
53:3:437:U:H2'	53:3:438:U:O4'	2.10	0.51
53:3:467:U:H3'	53:3:468:A:H5'	1.91	0.51
53:3:551:U:H2'	53:3:552:U:C6	2.45	0.51
53:3:692:U:H2'	53:3:694:A:OP2	2.11	0.51
53:3:1004:A:H2'	53:3:1005:A:C8	2.46	0.51
54:1:418:C:H2'	54:1:419:U:O4'	2.11	0.51
54:1:623:C:H2'	54:1:624:C:H6	1.74	0.51
54:1:1353:A:H2'	54:1:1354:A:H8	1.71	0.51
54:1:1679:A:H2'	54:1:1680:U:H6	1.73	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:5:29:U:H2'	56:5:30:G:H8	1.75	0.51
58:4:17:U:H3'	58:4:18:G:C5'	2.41	0.51
59:8:139:ALA:HB3	59:8:264:VAL:HA	1.93	0.51
3:d:71:GLY:HA3	54:1:674:G:H5''	1.92	0.51
4:e:101:ARG:HG3	4:e:105:ILE:HD11	1.92	0.51
13:n:82:GLU:O	13:n:85:PRO:HG2	2.10	0.51
20:u:10:VAL:HG12	20:u:71:ILE:HG22	1.93	0.51
20:u:39:ASN:HB2	20:u:62:ALA:H	1.76	0.51
22:w:52:ASP:O	22:w:53:HIS:HB2	2.10	0.51
27:B:24:VAL:HG23	27:B:25:THR:N	2.26	0.51
33:H:133:MET:HE3	33:H:167:TYR:CB	2.41	0.51
35:J:104:ILE:HD11	35:J:114:LEU:HD13	1.93	0.51
40:O:6:ILE:HB	40:O:76:ILE:HB	1.93	0.51
50:Y:50:PHE:C	50:Y:52:GLU:N	2.68	0.51
52:a:3:LYS:HD2	54:1:2107:G:H5''	1.92	0.51
53:3:171:A:H2'	53:3:172:A:H8	1.76	0.51
53:3:181:A:N6	53:3:194:C:H2'	2.25	0.51
53:3:1114:C:H2'	53:3:1115:U:H6	1.74	0.51
53:3:1259:C:C3'	53:3:1260:G:H5''	2.37	0.51
54:1:443:A:H1'	54:1:1201:U:O4'	2.10	0.51
54:1:952:G:H2'	54:1:953:G:O4'	2.11	0.51
54:1:2163:A:H2'	54:1:2164:C:H5'	1.93	0.51
54:1:2189:U:H2'	54:1:2190:G:H8	1.76	0.51
54:1:2221:G:O2'	54:1:2222:C:H5'	2.11	0.51
59:8:223:ILE:HD12	59:8:223:ILE:H	1.76	0.51
59:8:474:LYS:O	59:8:478:ASN:HA	2.11	0.51
4:e:84:ILE:HG21	54:1:2312:U:O4'	2.11	0.50
5:f:91:VAL:H	5:f:159:LYS:HZ3	1.58	0.50
7:h:41:LEU:HD13	54:1:1083:U:O5'	2.11	0.50
11:l:132:ARG:O	11:l:135:ILE:HG22	2.11	0.50
26:A:37:CYS:O	26:A:41:HIS:N	2.44	0.50
34:I:158:LEU:HD23	34:I:158:LEU:O	2.10	0.50
44:S:8:ARG:HG2	44:S:12:ARG:NH1	2.26	0.50
53:3:368:U:H3'	53:3:369:G:H5''	1.91	0.50
53:3:601:G:H2'	53:3:602:A:C8	2.46	0.50
53:3:817:C:H4'	53:3:818:G:C5'	2.41	0.50
54:1:1300:G:H4'	54:1:1301:A:C5'	2.40	0.50
59:8:11:ARG:N	59:8:83:ARG:O	2.41	0.50
1:b:12:ARG:NH2	54:1:728:G:H5'	2.26	0.50
1:b:206:LYS:HA	54:1:729:G:C6	2.46	0.50
1:b:246:PRO:HB2	1:b:247:TRP:CZ3	2.46	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:3:VAL:O	6:g:18:GLN:HA	2.11	0.50
15:p:102:ARG:HG2	15:p:102:ARG:NH1	2.26	0.50
22:w:77:SER:O	22:w:78:ILE:HD13	2.11	0.50
24:y:23:ARG:O	24:y:25:GLN:N	2.44	0.50
24:y:24:GLU:HG3	24:y:28:LEU:CG	2.29	0.50
32:G:17:HIS:CG	32:G:18:GLN:H	2.29	0.50
32:G:121:GLN:HG3	32:G:122:ASP:OD1	2.11	0.50
35:J:39:GLY:HA3	35:J:45:VAL:HG12	1.92	0.50
38:M:101:ALA:HB3	38:M:112:ASP:OD2	2.11	0.50
41:P:116:PRO:HB3	53:3:676:A:H1'	1.93	0.50
47:V:3:LYS:HD2	47:V:6:THR:CB	2.41	0.50
47:V:13:SER:HB3	47:V:21:VAL:CG1	2.41	0.50
48:W:44:THR:O	48:W:46:THR:HG23	2.11	0.50
51:Z:11:PHE:N	51:Z:11:PHE:CD1	2.79	0.50
51:Z:24:LYS:NZ	58:4:11:U:O2'	2.44	0.50
53:3:130:A:O2'	53:3:264:C:H5'	2.10	0.50
53:3:579:A:H2'	53:3:580:C:H6	1.75	0.50
53:3:918:A:H2'	53:3:919:A:O4'	2.11	0.50
53:3:990:C:H2'	53:3:991:U:O4'	2.11	0.50
53:3:1517:G:H1'	54:1:1919:A:O3'	2.11	0.50
54:1:622:G:H2'	54:1:623:C:C6	2.46	0.50
54:1:804:A:H2'	54:1:806:C:N4	2.26	0.50
54:1:1323:C:H2'	54:1:1324:G:H5'	1.93	0.50
54:1:1803:A:H2	54:1:1823:G:C1'	2.24	0.50
54:1:2453:A:H2'	54:1:2454:G:H8	1.77	0.50
54:1:2478:A:C2	54:1:2529:G:H2'	2.47	0.50
59:8:519:VAL:CG1	59:8:579:HIS:HB3	2.40	0.50
59:8:645:GLN:HG2	59:8:645:GLN:O	2.11	0.50
3:d:48:THR:HG23	3:d:86:ALA:CB	2.41	0.50
4:e:133:GLU:HB3	4:e:135:ILE:HG12	1.93	0.50
10:k:112:PHE:HD1	10:k:115:ILE:HD12	1.76	0.50
15:p:23:ASP:OD1	15:p:88:ARG:HA	2.11	0.50
19:t:11:LEU:N	19:t:11:LEU:HD12	2.27	0.50
26:A:58:ASP:O	26:A:61:ASN:HB2	2.11	0.50
27:B:54:ILE:HG12	27:B:56:LYS:HE3	1.93	0.50
29:D:1:MET:SD	54:1:1619:G:H1'	2.51	0.50
34:I:84:ASN:ND2	35:J:100:GLU:HG3	2.27	0.50
34:I:200:VAL:O	34:I:204:SER:N	2.44	0.50
35:J:142:GLY:HA2	35:J:145:ASN:HD21	1.76	0.50
37:L:97:ALA:HA	37:L:100:MET:HE3	1.92	0.50
38:M:74:ILE:HG23	38:M:74:ILE:O	2.11	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:Q:25:ALA:HA	53:3:553:A:O2'	2.11	0.50
42:Q:26:CYS:HB2	42:Q:29:LYS:CD	2.42	0.50
44:S:9:GLU:HG2	44:S:62:ARG:HG3	1.92	0.50
47:V:74:LEU:HD23	47:V:74:LEU:C	2.36	0.50
49:X:30:LEU:N	49:X:30:LEU:HD12	2.26	0.50
53:3:684:U:H2'	53:3:685:G:O4'	2.12	0.50
53:3:1004:A:H3'	53:3:1024:G:N2	2.26	0.50
53:3:1241:G:H2'	53:3:1242:G:C8	2.38	0.50
54:1:1657:U:O2'	54:1:1658:C:H5'	2.10	0.50
54:1:2070:A:H2'	54:1:2071:A:H8	1.74	0.50
54:1:2698:U:H2'	54:1:2699:C:H6	1.76	0.50
59:8:422:PRO:HG2	59:8:428:GLN:OE1	2.12	0.50
59:8:466:LEU:O	59:8:470:VAL:HG23	2.11	0.50
1:b:29:PHE:CE2	1:b:31:PRO:HB2	2.46	0.50
5:f:2:ARG:HD3	54:1:2751:G:C4	2.46	0.50
5:f:155:PRO:HG3	54:1:2530:A:H61	1.77	0.50
6:g:26:ALA:O	6:g:31:VAL:HG23	2.11	0.50
6:g:27:ARG:HG3	6:g:27:ARG:HH11	1.76	0.50
32:G:55:GLU:O	32:G:59:ILE:N	2.42	0.50
32:G:89:PHE:HD2	32:G:153:MET:HE3	1.75	0.50
34:I:139:ASN:O	34:I:139:ASN:ND2	2.36	0.50
35:J:80:LEU:HD12	35:J:146:MET:HG3	1.92	0.50
37:L:56:SER:O	37:L:60:ALA:N	2.41	0.50
39:N:115:VAL:HG21	40:O:62:ARG:HG3	1.93	0.50
40:O:42:LEU:HB3	40:O:71:LEU:HD11	1.93	0.50
41:P:124:LYS:HD2	41:P:124:LYS:C	2.36	0.50
43:R:39:ALA:O	43:R:42:VAL:HG22	2.10	0.50
43:R:67:ASP:O	43:R:71:GLU:N	2.44	0.50
46:U:52:LEU:HD23	46:U:53:ASP:N	2.26	0.50
52:a:217:THR:HG23	54:1:2124:G:N2	2.26	0.50
53:3:37:U:O2	53:3:397:A:N1	2.45	0.50
53:3:910:C:O2'	53:3:911:U:H5'	2.11	0.50
53:3:1496:C:H2'	53:3:1497:G:O4'	2.11	0.50
54:1:441:U:H2'	54:1:442:G:H8	1.74	0.50
54:1:666:A:H2'	54:1:667:U:C6	2.47	0.50
54:1:816:C:O2'	54:1:817:C:H5'	2.11	0.50
54:1:1715:G:O2'	54:1:1716:U:H6	1.94	0.50
54:1:1975:G:H2'	54:1:1976:U:O4'	2.11	0.50
54:1:2688:G:H1'	54:1:2721:A:N6	2.27	0.50
55:2:106:G:H2'	55:2:107:G:O4'	2.10	0.50
57:6:42:G:O2'	57:6:43:A:H5'	2.10	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:8:20:ASP:H	62:8:801:GCP:H3B1	1.75	0.50
59:8:134:LYS:HB3	59:8:259:ASN:ND2	2.26	0.50
59:8:137:ARG:CD	59:8:262:ILE:HG21	2.40	0.50
59:8:446:ARG:HB2	59:8:459:ALA:HB3	1.93	0.50
59:8:498:VAL:HG22	59:8:499:THR:H	1.76	0.50
59:8:557:ILE:CD1	59:8:597:ALA:HB1	2.42	0.50
59:8:615:PRO:HG3	59:8:687:TYR:CE1	2.46	0.50
2:c:142:VAL:HB	2:c:143:PRO:HD2	1.92	0.50
7:h:3:LEU:HD12	7:h:5:LEU:N	2.24	0.50
13:n:87:PHE:CD1	13:n:90:ARG:HD3	2.39	0.50
15:p:101:GLU:C	15:p:102:ARG:HD2	2.37	0.50
15:p:105:LYS:N	15:p:105:LYS:HZ3	2.09	0.50
23:x:60:LYS:HD3	54:1:371:A:O2'	2.11	0.50
31:F:11:CYS:HB3	31:F:33:HIS:HE1	1.77	0.50
32:G:69:VAL:HG22	32:G:168:GLU:OE2	2.11	0.50
34:I:24:VAL:HB	53:3:409:U:H5'	1.90	0.50
40:O:40:ILE:CG2	40:O:41:PRO:HD2	2.42	0.50
40:O:65:TYR:HD1	44:S:97:LYS:HA	1.77	0.50
48:W:40:PRO:HB3	53:3:720:C:H5''	1.94	0.50
53:3:62:U:H2'	53:3:63:C:H6	1.77	0.50
53:3:789:U:H2'	53:3:791:G:OP2	2.12	0.50
53:3:1238:A:N3	53:3:1241:G:H1'	2.27	0.50
54:1:575:A:O2'	54:1:576:U:H5'	2.11	0.50
2:c:1:MET:HG2	2:c:205:PRO:HG2	1.94	0.50
3:d:104:ALA:O	3:d:108:ILE:HG13	2.12	0.50
9:j:84:ILE:HG23	9:j:84:ILE:O	2.12	0.50
11:l:19:LEU:HD23	54:1:587:C:C4	2.46	0.50
12:m:125:PRO:HG2	12:m:126:ILE:H	1.76	0.50
13:n:52:ILE:HG21	13:n:94:TYR:CD1	2.47	0.50
19:t:51:PHE:O	19:t:53:VAL:HG13	2.11	0.50
33:H:24:ASN:HB2	33:H:27:GLU:OE1	2.12	0.50
33:H:181:ILE:HD12	33:H:181:ILE:N	2.26	0.50
35:J:38:VAL:CG1	35:J:63:MET:HE1	2.41	0.50
37:L:35:LYS:O	37:L:39:GLU:HG2	2.12	0.50
37:L:69:ARG:HD3	37:L:95:ARG:HE	1.77	0.50
39:N:12:LYS:O	39:N:12:LYS:HG2	2.10	0.50
44:S:1:ALA:N	44:S:6:LYS:HD2	2.26	0.50
47:V:3:LYS:HD2	47:V:6:THR:CG2	2.42	0.50
47:V:8:GLN:HG3	47:V:59:GLU:OE1	2.12	0.50
53:3:555:U:H2'	53:3:556:C:H6	1.65	0.50
53:3:829:G:O2'	53:3:830:G:H5'	2.12	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:975:A:N3	53:3:975:A:H5'	2.26	0.50
53:3:1041:G:H2'	53:3:1042:A:C8	2.45	0.50
53:3:1385:G:O2'	53:3:1386:G:H5'	2.12	0.50
53:3:1504:G:OP1	53:3:1507:A:H4'	2.12	0.50
54:1:1648:U:C3'	54:1:1649:G:H5''	2.41	0.50
54:1:2053:G:O2'	54:1:2054:A:H5'	2.12	0.50
54:1:2520:C:O2'	54:1:2521:C:H5'	2.11	0.50
59:8:561:LEU:O	59:8:570:PRO:HA	2.11	0.50
5:f:2:ARG:HH21	5:f:2:ARG:HG3	1.76	0.50
7:h:41:LEU:HB3	54:1:1083:U:OP1	2.12	0.50
11:l:89:VAL:O	11:l:89:VAL:HG13	2.12	0.50
13:n:8:ARG:HG3	13:n:8:ARG:HH21	1.76	0.50
14:o:56:LYS:O	14:o:60:GLU:HG3	2.12	0.50
18:s:49:LYS:HA	18:s:52:GLU:OE1	2.11	0.50
20:u:10:VAL:HA	20:u:71:ILE:HA	1.94	0.50
32:G:78:ALA:HB1	32:G:213:LEU:CD2	2.42	0.50
34:I:89:LEU:O	34:I:93:LEU:N	2.45	0.50
37:L:61:PHE:O	37:L:65:LEU:N	2.43	0.50
37:L:75:LYS:HG2	37:L:75:LYS:O	2.11	0.50
37:L:102:TRP:NE1	37:L:136:LYS:HG2	2.26	0.50
41:P:28:ASN:HD21	41:P:30:ILE:HG13	1.75	0.50
41:P:111:ASP:HB3	51:Z:3:ILE:HG13	1.94	0.50
48:W:28:LEU:HD23	48:W:58:ILE:HD13	1.94	0.50
50:Y:27:MET:HE2	50:Y:65:LEU:HD23	1.92	0.50
53:3:106:C:C2'	53:3:107:G:H5'	2.41	0.50
53:3:955:U:H2'	53:3:956:U:H6	1.77	0.50
53:3:1316:G:N1	53:3:1319:A:OP2	2.39	0.50
54:1:69:C:H2'	54:1:70:G:H8	1.77	0.50
54:1:687:C:H6	54:1:687:C:H5'	1.76	0.50
54:1:823:C:O2'	54:1:824:U:H5'	2.10	0.50
54:1:1071:G:H1'	54:1:1089:A:C5	2.46	0.50
54:1:1646:C:H5'	54:1:1647:U:C5'	2.41	0.50
54:1:1889:A:H2'	54:1:1890:A:H8	1.75	0.50
59:8:627:ASN:O	59:8:628:THR:C	2.55	0.50
59:8:669:GLN:O	59:8:673:LEU:HG	2.12	0.50
3:d:5:LEU:HB2	3:d:9:GLN:H	1.75	0.50
4:e:39:VAL:C	4:e:41:GLU:H	2.20	0.50
4:e:43:ILE:HG22	4:e:82:TYR:CE2	2.46	0.50
4:e:99:PHE:CE2	4:e:172:PHE:HE2	2.29	0.50
6:g:1:MET:N	6:g:21:VAL:O	2.39	0.50
9:j:37:ARG:NH1	9:j:39:LYS:HD2	2.27	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:l:19:LEU:HD11	11:l:31:GLY:O	2.11	0.50
34:I:106:PHE:O	34:I:112:GLU:HG3	2.11	0.50
37:L:11:ILE:HD12	37:L:11:ILE:N	2.18	0.50
38:M:54:THR:HG23	38:M:55:LYS:HG3	1.92	0.50
39:N:118:ARG:HB2	39:N:122:ARG:HB3	1.93	0.50
41:P:22:ILE:HB	41:P:85:VAL:HG12	1.93	0.50
49:X:40:PHE:H	49:X:43:MET:HE3	1.76	0.50
53:3:21:G:H2'	53:3:22:G:C8	2.47	0.50
53:3:269:C:H2'	53:3:270:A:C8	2.47	0.50
53:3:349:A:H2'	53:3:350:G:C8	2.46	0.50
53:3:540:G:H2'	53:3:541:G:C8	2.47	0.50
53:3:1106:G:H2'	53:3:1107:C:C6	2.47	0.50
53:3:1206:G:H2'	53:3:1207:G:O4'	2.11	0.50
54:1:2031:A:C6	54:1:2498:C:H1'	2.47	0.50
54:1:2039:U:H2'	54:1:2040:G:C8	2.46	0.50
54:1:2547:A:H2'	54:1:2548:U:C6	2.47	0.50
59:8:49:THR:HG22	59:8:51:ASP:OD2	2.12	0.50
59:8:335:PHE:CD1	59:8:384:ALA:HB2	2.46	0.50
2:c:28:GLU:OE2	2:c:185:ASN:HB2	2.11	0.50
14:o:49:VAL:HG11	14:o:82:ALA:HA	1.93	0.50
15:p:97:TYR:HB3	15:p:100:ARG:HH11	1.77	0.50
15:p:108:ARG:HD2	53:3:1463:U:OP1	2.12	0.50
32:G:213:LEU:HA	32:G:216:VAL:CG2	2.41	0.50
34:I:146:GLU:HG2	34:I:147:LYS:HD3	1.94	0.50
35:J:25:LYS:O	35:J:27:GLY:N	2.44	0.50
36:K:10:VAL:HG21	36:K:58:HIS:HD2	1.76	0.50
38:M:85:TYR:CE2	53:3:598:U:H5''	2.47	0.50
53:3:1236:A:H2'	53:3:1237:C:C6	2.46	0.50
54:1:522:A:H2'	54:1:523:C:C6	2.47	0.50
54:1:1601:G:O2'	54:1:1602:U:H5'	2.12	0.50
54:1:2398:U:H2'	54:1:2399:G:H8	1.77	0.50
54:1:2452:C:H42	54:1:2504:U:H3	1.60	0.50
59:8:59:ARG:HH11	59:8:59:ARG:HA	1.77	0.50
3:d:61:ARG:HH22	3:d:64:GLY:C	2.20	0.49
3:d:69:ARG:HG3	3:d:69:ARG:O	2.12	0.49
7:h:36:ASP:HB3	7:h:40:GLU:OE1	2.12	0.49
7:h:50:VAL:O	7:h:50:VAL:HG12	2.12	0.49
20:u:5:ARG:CD	54:1:84:A:H3'	2.40	0.49
24:y:17:GLU:CB	24:y:53:VAL:HG11	2.38	0.49
25:z:34:THR:HG22	25:z:35:VAL:N	2.27	0.49
32:G:103:TRP:CH2	32:G:107:ARG:HD2	2.46	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:Q:73:LEU:CD1	42:Q:102:ASP:HB3	2.37	0.49
42:Q:109:ARG:NH1	42:Q:109:ARG:HB3	2.26	0.49
46:U:17:TYR:HD2	46:U:41:PRO:HG3	1.77	0.49
46:U:21:VAL:O	46:U:33:ILE:HD13	2.12	0.49
49:X:14:LEU:CD1	49:X:34:SER:HB3	2.41	0.49
50:Y:61:ALA:HB1	50:Y:68:LYS:HG2	1.93	0.49
51:Z:64:ALA:O	51:Z:66:ARG:N	2.44	0.49
52:a:180:PHE:HD1	52:a:184:LYS:HB3	1.77	0.49
53:3:273:U:C2'	53:3:274:A:H5'	2.41	0.49
53:3:339:C:H2'	53:3:340:U:C6	2.47	0.49
53:3:344:A:H5''	53:3:345:C:C5	2.44	0.49
53:3:352:C:H4'	53:3:354:G:OP1	2.11	0.49
53:3:501:C:H2'	53:3:502:A:C8	2.46	0.49
53:3:987:G:O2'	53:3:988:G:H5'	2.12	0.49
54:1:925:A:O2'	54:1:926:G:H5'	2.12	0.49
54:1:1259:G:H2'	54:1:1260:A:H8	1.76	0.49
54:1:1403:A:H2'	54:1:1404:C:H6	1.74	0.49
58:4:17:U:N3	58:4:18:G:H1'	2.26	0.49
1:b:36:ASN:HB2	1:b:61:TYR:HB2	1.93	0.49
5:f:76:ILE:HG23	5:f:80:GLU:HB3	1.94	0.49
6:g:8:LYS:HD3	6:g:137:GLU:CD	2.37	0.49
8:i:44:LYS:HD2	8:i:68:PHE:CE2	2.47	0.49
21:v:20:LEU:HG	21:v:25:LYS:O	2.11	0.49
22:w:10:ARG:NH2	54:1:2279:G:N7	2.60	0.49
32:G:150:ILE:O	32:G:150:ILE:HG22	2.11	0.49
37:L:4:ARG:HG2	37:L:4:ARG:HH11	1.77	0.49
38:M:106:SER:HB3	53:3:640:A:N3	2.27	0.49
41:P:68:ARG:O	41:P:72:ALA:HB2	2.12	0.49
42:Q:26:CYS:O	42:Q:27:PRO:C	2.54	0.49
44:S:4:SER:O	44:S:8:ARG:N	2.39	0.49
53:3:373:A:C2	53:3:374:A:H1'	2.47	0.49
53:3:1324:A:H2'	53:3:1325:C:H6	1.76	0.49
53:3:1472:U:H2'	53:3:1473:G:C8	2.47	0.49
53:3:1488:G:O2'	53:3:1489:G:H5'	2.12	0.49
54:1:103:A:H2'	54:1:104:A:O4'	2.12	0.49
54:1:1111:A:H2'	54:1:1111:A:N3	2.28	0.49
54:1:2730:C:O2'	54:1:2731:G:H5'	2.12	0.49
59:8:158:ILE:HG13	59:8:164:ALA:HB3	1.93	0.49
59:8:366:MET:HB3	59:8:371:ARG:HG3	1.93	0.49
59:8:434:ALA:C	59:8:438:LEU:HD23	2.37	0.49
1:b:62:ARG:HG3	1:b:62:ARG:HH11	1.77	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:b:67:LYS:CG	1:b:69:ASN:HD22	2.17	0.49
1:b:143:VAL:HB	1:b:153:LEU:HB2	1.94	0.49
2:c:121:THR:HG21	2:c:143:PRO:HB3	1.94	0.49
4:e:142:TYR:CE1	43:R:8:ILE:HG21	2.48	0.49
5:f:104:LEU:HB2	5:f:112:VAL:HG13	1.93	0.49
8:i:19:PRO:O	8:i:23:VAL:HG12	2.12	0.49
11:l:79:LEU:C	11:l:81:ASP:H	2.21	0.49
13:n:3:HIS:CG	54:1:2820:A:H4'	2.47	0.49
20:u:66:VAL:C	20:u:68:ASN:N	2.70	0.49
36:K:24:ARG:O	36:K:28:ALA:N	2.44	0.49
36:K:51:ILE:HD11	48:W:65:SER:HB2	1.94	0.49
37:L:47:GLU:O	37:L:51:GLN:N	2.45	0.49
37:L:114:SER:HB3	37:L:117:LEU:CB	2.38	0.49
39:N:108:ARG:NH2	53:3:1347:G:C4	2.80	0.49
42:Q:35:ARG:HH11	42:Q:35:ARG:HG3	1.76	0.49
42:Q:49:ARG:NH1	53:3:522:C:H41	2.09	0.49
43:R:111:PRO:O	43:R:114:PRO:HD2	2.12	0.49
49:X:30:LEU:HD12	49:X:30:LEU:H	1.77	0.49
51:Z:29:ALA:O	51:Z:32:ARG:HD2	2.13	0.49
52:a:46:VAL:HB	52:a:171:ILE:HG22	1.93	0.49
53:3:237:G:H2'	53:3:238:A:H8	1.77	0.49
53:3:326:G:C2'	53:3:327:A:H5'	2.42	0.49
53:3:368:U:O5'	53:3:369:G:H5'	2.13	0.49
53:3:571:U:H2'	53:3:572:A:H5''	1.93	0.49
53:3:1364:U:O2'	53:3:1365:G:H5'	2.11	0.49
54:1:131:A:H2'	54:1:132:G:H8	1.77	0.49
54:1:1197:G:H2'	54:1:1198:U:C6	2.44	0.49
54:1:1469:A:H2'	54:1:1470:A:C8	2.47	0.49
54:1:2300:C:H2'	54:1:2301:C:C6	2.48	0.49
59:8:398:CYS:CB	59:8:402:ALA:HB3	2.41	0.49
59:8:618:LYS:CE	59:8:685:LEU:HD22	2.41	0.49
1:b:67:LYS:HG2	1:b:69:ASN:ND2	2.18	0.49
4:e:92:GLY:H	4:e:95:MET:HG3	1.77	0.49
5:f:97:VAL:HG22	5:f:102:ILE:HD12	1.94	0.49
8:i:4:VAL:HA	8:i:7:TYR:HE1	1.77	0.49
12:m:49:ALA:HB1	12:m:120:ALA:HB1	1.94	0.49
12:m:78:LEU:HD11	54:1:2459:A:C2	2.47	0.49
16:q:92:LYS:C	16:q:92:LYS:HD3	2.37	0.49
18:s:25:ARG:HH11	18:s:25:ARG:HG3	1.77	0.49
23:x:56:ARG:HH11	23:x:56:ARG:HG2	1.77	0.49
28:C:44:GLN:HE22	54:1:2372:U:H5'	1.77	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:J:132:PRO:O	35:J:135:VAL:HG22	2.11	0.49
36:K:2:ARG:HA	36:K:92:THR:CG2	2.43	0.49
37:L:55:LYS:HG2	37:L:56:SER:N	2.27	0.49
37:L:55:LYS:HG2	37:L:56:SER:H	1.77	0.49
37:L:110:ARG:NH1	37:L:110:ARG:HB3	2.28	0.49
40:O:71:LEU:O	40:O:71:LEU:HD12	2.12	0.49
43:R:16:ILE:HD12	43:R:16:ILE:N	2.28	0.49
44:S:61:ASN:HB3	44:S:72:PHE:CZ	2.47	0.49
47:V:16:MET:CG	47:V:19:SER:HB2	2.42	0.49
51:Z:36:PHE:C	51:Z:38:GLU:H	2.20	0.49
52:a:47:ASN:OD1	52:a:210:LYS:HD2	2.12	0.49
53:3:192:A:O2'	53:3:193:C:H5'	2.11	0.49
53:3:256:U:H2'	53:3:257:G:H8	1.77	0.49
53:3:691:G:H1'	53:3:696:A:H61	1.75	0.49
53:3:976:G:N2	53:3:1362:A:H2'	2.27	0.49
54:1:214:G:H2'	54:1:215:G:C8	2.47	0.49
54:1:318:C:O2'	54:1:319:G:H5'	2.12	0.49
54:1:1695:G:H3'	54:1:1695:G:N3	2.26	0.49
54:1:2346:A:H5'	54:1:2383:G:H1'	1.94	0.49
55:2:2:G:C6	55:2:119:A:N6	2.80	0.49
59:8:59:ARG:HG3	59:8:61:ILE:H	1.76	0.49
59:8:121:PRO:O	59:8:124:GLU:HG2	2.12	0.49
59:8:519:VAL:HG12	59:8:579:HIS:HB3	1.95	0.49
1:b:155:ARG:NH1	54:1:1818:U:H5	2.10	0.49
1:b:240:GLY:C	1:b:241:LYS:HD3	2.37	0.49
2:c:188:LEU:HD23	2:c:188:LEU:N	2.17	0.49
3:d:1:MET:N	3:d:14:VAL:O	2.44	0.49
3:d:16:GLU:CD	3:d:16:GLU:H	2.20	0.49
32:G:102:ASN:HD22	53:3:1074:G:H1'	1.78	0.49
35:J:83:PRO:CG	35:J:97:PRO:HD2	2.24	0.49
35:J:125:LYS:HD2	53:3:9:G:OP2	2.13	0.49
38:M:12:ARG:HH12	53:3:826:C:H5''	1.78	0.49
42:Q:23:LEU:CD2	42:Q:29:LYS:HD3	2.43	0.49
42:Q:114:SER:N	53:3:502:A:OP1	2.45	0.49
48:W:23:LYS:C	48:W:23:LYS:HD2	2.37	0.49
53:3:62:U:O2'	53:3:379:C:H1'	2.12	0.49
53:3:162:A:H2'	53:3:163:C:O4'	2.12	0.49
53:3:473:U:H2'	53:3:474:G:C8	2.47	0.49
53:3:1526:G:H2'	53:3:1527:U:C6	2.47	0.49
54:1:156:A:H2'	54:1:157:C:C6	2.47	0.49
54:1:445:C:H2'	54:1:446:G:O4'	2.12	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:1149:G:H2'	54:1:1150:C:C6	2.48	0.49
54:1:1748:C:H2'	54:1:1749:A:C8	2.48	0.49
54:1:2543:G:H21	54:1:2646:C:H5''	1.76	0.49
59:8:12:ASN:HD22	59:8:289:PRO:HG3	1.76	0.49
59:8:169:LEU:O	59:8:185:LEU:HB2	2.12	0.49
1:b:42:ARG:HH11	1:b:42:ARG:HG2	1.77	0.49
9:j:80:HIS:CD2	54:1:2642:G:H5'	2.48	0.49
10:k:19:VAL:HG11	10:k:41:ILE:HD12	1.95	0.49
10:k:40:LYS:NZ	10:k:57:VAL:HG12	2.28	0.49
15:p:50:ARG:CG	15:p:52:ARG:HD2	2.42	0.49
16:q:90:ASP:OD2	54:1:996:A:H4'	2.12	0.49
26:A:12:ILE:CD1	26:A:28:VAL:HB	2.42	0.49
27:B:52:LYS:HE2	27:B:55:ALA:HA	1.95	0.49
28:C:33:LEU:HD11	54:1:2286:G:N7	2.28	0.49
34:I:130:ASN:O	53:3:403:C:H4'	2.13	0.49
36:K:8:PHE:N	36:K:8:PHE:CD1	2.80	0.49
39:N:43:ALA:O	39:N:46:VAL:HG22	2.12	0.49
45:T:2:LEU:HB3	45:T:34:GLN:OE1	2.12	0.49
46:U:69:ASP:CG	46:U:70:ARG:H	2.20	0.49
50:Y:45:ALA:HA	50:Y:48:LYS:HE2	1.94	0.49
50:Y:50:PHE:C	50:Y:52:GLU:H	2.20	0.49
52:a:15:VAL:CG2	52:a:220:ALA:HB3	2.42	0.49
52:a:180:PHE:HB3	52:a:184:LYS:HB3	1.93	0.49
53:3:114:U:O2'	53:3:115:G:H5'	2.13	0.49
53:3:393:A:H3'	53:3:394:G:H8	1.78	0.49
53:3:940:C:H2'	53:3:941:G:C8	2.48	0.49
53:3:999:C:H2'	53:3:1000:A:C8	2.48	0.49
54:1:140:C:H2'	54:1:141:G:H4'	1.95	0.49
54:1:2788:C:H2'	54:1:2789:C:C6	2.48	0.49
55:2:5:U:O2'	55:2:6:G:H5'	2.12	0.49
59:8:419:ALA:O	59:8:484:GLY:N	2.41	0.49
3:d:40:ARG:HG2	54:1:443:A:N7	2.28	0.49
4:e:35:LEU:HD12	4:e:35:LEU:N	2.28	0.49
8:i:33:ASN:HB2	8:i:36:GLU:HG2	1.95	0.49
10:k:20:MET:O	10:k:42:THR:HG22	2.13	0.49
23:x:2:ARG:HG2	23:x:49:ARG:NH2	2.28	0.49
30:E:25:HIS:HB3	30:E:43:LEU:HD22	1.95	0.49
32:G:52:ALA:O	32:G:56:LEU:N	2.41	0.49
34:I:40:HIS:C	34:I:42:ALA:H	2.21	0.49
34:I:172:VAL:HG22	34:I:173:ASP:N	2.26	0.49
36:K:11:HIS:N	36:K:83:ALA:O	2.44	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:N:63:TYR:C	39:N:64:ILE:HD12	2.38	0.49
50:Y:25:SER:HB2	53:3:1458:G:H5'	1.94	0.49
52:a:44:VAL:O	52:a:172:HIS:HA	2.12	0.49
52:a:45:ALA:O	52:a:212:VAL:HA	2.12	0.49
53:3:346:G:C2'	53:3:347:G:H5'	2.42	0.49
53:3:632:U:H3'	53:3:633:G:H5'	1.93	0.49
53:3:1468:A:H2'	53:3:1469:C:H5'	1.93	0.49
54:1:1361:G:H2'	54:1:1362:C:H6	1.75	0.49
54:1:2744:G:H2'	54:1:2745:C:C6	2.47	0.49
59:8:56:GLU:HB2	59:8:63:ILE:HD13	1.95	0.49
59:8:142:ASN:O	59:8:268:SER:HA	2.12	0.49
1:b:62:ARG:HH22	54:1:1568:G:P	2.36	0.49
12:m:66:ARG:HD3	12:m:104:GLU:OE2	2.13	0.49
13:n:8:ARG:HD2	13:n:43:GLU:OE2	2.12	0.49
24:y:24:GLU:CG	24:y:28:LEU:HG	2.31	0.49
26:A:14:ALA:HB1	26:A:34:LEU:HD22	1.94	0.49
27:B:49:ARG:HG2	54:1:2884:U:C6	2.48	0.49
28:C:37:LYS:HB2	28:C:48:TYR:CE2	2.47	0.49
32:G:163:ILE:HA	32:G:185:ILE:HD11	1.95	0.49
33:H:12:GLY:C	33:H:13:ILE:HD12	2.38	0.49
34:I:33:ILE:O	34:I:34:GLU:HG3	2.12	0.49
34:I:158:LEU:HD11	34:I:174:ALA:CB	2.41	0.49
36:K:23:GLU:HA	36:K:26:THR:HG22	1.95	0.49
38:M:26:MET:SD	38:M:60:LEU:HD21	2.52	0.49
41:P:18:GLY:HA3	41:P:81:LEU:HB3	1.95	0.49
52:a:67:HIS:CD2	52:a:187:GLU:HB2	2.48	0.49
53:3:945:G:H5'	53:3:1338:G:O6	2.13	0.49
53:3:1157:A:N6	53:3:1178:G:H1'	2.26	0.49
53:3:1303:C:H2'	53:3:1304:G:H5'	1.95	0.49
54:1:215:G:C4'	54:1:216:A:H4'	2.43	0.49
54:1:397:U:H2'	54:1:398:C:C6	2.47	0.49
54:1:764:A:O2'	54:1:765:C:H5'	2.13	0.49
54:1:784:G:C5'	54:1:785:G:OP1	2.58	0.49
54:1:1198:U:H2'	54:1:1199:U:H6	1.78	0.49
54:1:1797:G:O2'	54:1:1798:U:H5'	2.13	0.49
54:1:2543:G:H2'	54:1:2544:G:H8	1.78	0.49
54:1:2811:G:H2'	54:1:2812:G:H8	1.78	0.49
55:2:77:U:O2'	55:2:78:A:H5'	2.13	0.49
59:8:595:LEU:O	59:8:599:ILE:HG12	2.13	0.49
1:b:129:LEU:N	1:b:129:LEU:HD23	2.27	0.49
2:c:1:MET:H3	2:c:205:PRO:HG2	1.78	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:f:95:ALA:HB3	5:f:130:ILE:HD11	1.95	0.49
7:h:77:VAL:HG12	7:h:77:VAL:O	2.12	0.49
32:G:31:PHE:N	32:G:39:ILE:O	2.46	0.49
33:H:102:ILE:O	33:H:102:ILE:HG13	2.13	0.49
36:K:8:PHE:CE1	36:K:60:VAL:HB	2.48	0.49
38:M:12:ARG:HD2	38:M:26:MET:HB3	1.95	0.49
41:P:22:ILE:O	41:P:86:LYS:N	2.46	0.49
53:3:376:G:C2	53:3:389:A:C2	3.01	0.49
53:3:726:C:O2'	53:3:727:G:H5'	2.13	0.49
53:3:940:C:H2'	53:3:941:G:H8	1.76	0.49
54:1:445:C:C2'	54:1:446:G:H5'	2.43	0.49
54:1:1071:G:OP1	54:1:1071:G:H3'	2.13	0.49
54:1:1335:C:H2'	54:1:1336:A:H8	1.78	0.49
54:1:2046:G:H2'	54:1:2047:C:C6	2.48	0.49
54:1:2333:A:H5''	54:1:2334:U:OP1	2.13	0.49
57:6:13:C:H2'	57:6:13:C:O2	2.13	0.49
59:8:17:ALA:CB	59:8:23:LYS:HD3	2.36	0.49
59:8:338:VAL:HG23	59:8:338:VAL:O	2.12	0.49
59:8:518:VAL:HB	59:8:578:LEU:HD11	1.95	0.49
1:b:173:LEU:HD12	1:b:173:LEU:O	2.12	0.49
3:d:118:LEU:HD12	3:d:186:VAL:HB	1.93	0.49
4:e:3:LEU:HD21	4:e:103:ILE:HD11	1.95	0.49
4:e:60:SER:HG	4:e:90:LEU:HD23	1.77	0.49
4:e:91:ARG:HA	4:e:95:MET:CG	2.43	0.49
6:g:135:HIS:CG	6:g:136:SER:N	2.80	0.49
9:j:81:ILE:HD12	9:j:81:ILE:N	2.17	0.49
12:m:42:THR:OG1	12:m:45:GLN:HG3	2.13	0.49
15:p:54:LEU:HD23	15:p:54:LEU:C	2.37	0.49
16:q:102:LYS:O	16:q:106:THR:N	2.44	0.49
16:q:109:VAL:O	16:q:113:LYS:HG2	2.13	0.49
18:s:55:ILE:CG2	18:s:66:ILE:HD12	2.42	0.49
25:z:23:LEU:CD2	25:z:28:LEU:HD12	2.39	0.49
25:z:51:SER:HA	25:z:54:VAL:HG22	1.94	0.49
35:J:33:THR:HG22	35:J:51:LYS:HB3	1.95	0.49
39:N:123:ARG:HD2	39:N:124:PRO:HD2	1.95	0.49
53:3:541:G:C2	53:3:542:G:C8	3.01	0.49
54:1:704:G:H2'	54:1:726:G:N2	2.27	0.49
54:1:1347:A:C2'	54:1:1348:C:H5'	2.43	0.49
54:1:1420:A:H5'	54:1:1421:G:OP2	2.13	0.49
54:1:1571:A:H2'	54:1:1572:A:H8	1.77	0.49
54:1:1862:G:O2'	54:1:1863:G:H5'	2.13	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:1936:A:C2	54:1:1945:G:C8	3.01	0.49
54:1:2134:A:N6	54:1:2157:G:H5''	2.28	0.49
54:1:2469:A:C2	54:1:2482:A:H1'	2.48	0.49
55:2:114:C:O2'	55:2:115:A:H5'	2.13	0.49
59:8:103:MET:HA	59:8:106:LEU:CG	2.43	0.49
59:8:354:LYS:HB2	59:8:395:ASP:CG	2.38	0.49
59:8:574:MET:HE3	59:8:575:GLY:N	2.27	0.49
1:b:1:ALA:N	1:b:19:VAL:O	2.39	0.48
1:b:159:THR:HG22	1:b:160:TYR:N	2.27	0.48
1:b:184:GLU:HG2	1:b:186:ASP:H	1.77	0.48
1:b:250:GLN:HE21	1:b:252:LYS:N	2.10	0.48
2:c:166:GLY:O	2:c:168:GLU:HG3	2.13	0.48
6:g:133:GLN:HG2	6:g:134:VAL:N	2.27	0.48
10:k:42:THR:HA	10:k:56:ASP:O	2.13	0.48
33:H:130:ARG:HH12	33:H:133:MET:HE2	1.76	0.48
34:I:109:THR:C	34:I:111:ALA:N	2.70	0.48
36:K:3:HIS:ND1	36:K:95:ALA:HB2	2.28	0.48
42:Q:94:TYR:O	42:Q:95:HIS:ND1	2.45	0.48
51:Z:30:GLU:HA	51:Z:32:ARG:HH11	1.78	0.48
53:3:371:A:H61	53:3:390:U:H3	1.60	0.48
53:3:459:A:H2'	53:3:460:A:H8	1.77	0.48
53:3:591:U:H2'	53:3:592:G:H8	1.77	0.48
53:3:1238:A:N7	53:3:1303:C:H1'	2.28	0.48
53:3:1507:A:H2'	53:3:1508:A:C8	2.48	0.48
54:1:709:U:O2'	54:1:710:U:H5'	2.13	0.48
54:1:1109:C:H2'	54:1:1110:G:O4'	2.13	0.48
54:1:1317:G:H2'	54:1:1318:U:C6	2.48	0.48
54:1:1336:A:H2'	54:1:1337:G:C8	2.48	0.48
54:1:2073:C:H2'	54:1:2074:U:C6	2.48	0.48
54:1:2627:G:H2'	54:1:2628:C:C6	2.48	0.48
54:1:2743:U:C3'	54:1:2744:G:H5''	2.43	0.48
59:8:11:ARG:HH22	59:8:286:LEU:CB	2.15	0.48
59:8:159:LYS:HE2	59:8:165:ASN:HA	1.95	0.48
59:8:469:ILE:CG2	59:8:473:MET:HE1	2.43	0.48
59:8:490:TYR:HA	59:8:613:LEU:O	2.12	0.48
59:8:501:VAL:HG23	59:8:520:ILE:HG13	1.94	0.48
1:b:244:VAL:HG12	1:b:250:GLN:CA	2.43	0.48
2:c:130:GLN:HE22	2:c:142:VAL:CG2	2.23	0.48
2:c:146:ILE:HG12	54:1:2052:A:OP1	2.13	0.48
5:f:29:ASN:HB3	5:f:78:VAL:HA	1.94	0.48
9:j:114:LEU:O	9:j:118:MET:HG2	2.13	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:m:41:LEU:HD23	12:m:45:GLN:HB2	1.95	0.48
33:H:71:ARG:HB3	33:H:74:ILE:HG22	1.95	0.48
35:J:156:ARG:NH1	38:M:99:GLY:HA2	2.27	0.48
43:R:106:ARG:NE	43:R:106:ARG:CA	2.68	0.48
44:S:52:ARG:HD3	53:3:1219:A:OP1	2.12	0.48
47:V:22:VAL:HB	47:V:45:VAL:CG2	2.43	0.48
47:V:43:LEU:HD21	53:3:236:A:OP1	2.13	0.48
49:X:36:ARG:HD3	49:X:36:ARG:H	1.77	0.48
51:Z:24:LYS:C	51:Z:26:GLY:H	2.18	0.48
51:Z:49:ALA:HA	53:3:723:U:O4	2.13	0.48
53:3:102:G:H2'	53:3:103:U:C6	2.47	0.48
53:3:425:G:H2'	53:3:426:U:C5'	2.43	0.48
53:3:879:C:O2'	53:3:880:C:H5'	2.12	0.48
53:3:922:G:H2'	53:3:923:A:H8	1.74	0.48
53:3:1348:U:H2'	53:3:1349:A:H8	1.78	0.48
54:1:713:G:C2'	54:1:714:U:H5''	2.43	0.48
54:1:799:G:H5''	54:1:800:A:C2'	2.37	0.48
54:1:825:A:H2'	54:1:826:U:O4'	2.13	0.48
54:1:1004:U:H5'	54:1:1010:A:N6	2.27	0.48
54:1:1130:U:O5'	54:1:1130:U:H6	1.97	0.48
54:1:1443:U:H2'	54:1:1444:G:C8	2.48	0.48
54:1:2742:G:O2'	54:1:2743:U:H5'	2.13	0.48
57:6:40:C:H2'	57:6:41:C:H6	1.79	0.48
2:c:25:THR:HG21	2:c:193:VAL:HG22	1.95	0.48
5:f:97:VAL:HG23	5:f:124:CYS:HB3	1.94	0.48
7:h:27:VAL:HG12	7:h:83:ALA:HB3	1.95	0.48
8:i:27:LEU:HG	8:i:28:GLY:N	2.27	0.48
11:l:36:LYS:HE2	54:1:807:U:OP2	2.13	0.48
16:q:77:LYS:HD2	16:q:116:LEU:HD11	1.94	0.48
20:u:81:ARG:NH2	20:u:96:LYS:HG3	2.28	0.48
21:v:59:GLU:OE2	21:v:61:LEU:HD23	2.12	0.48
21:v:70:ILE:HD13	21:v:93:ARG:HH21	1.78	0.48
24:y:41:HIS:NE2	54:1:96:C:H4'	2.29	0.48
29:D:15:SER:O	29:D:16:HIS:ND1	2.46	0.48
29:D:34:ARG:NE	29:D:39:ARG:HD2	2.28	0.48
32:G:42:LEU:C	32:G:42:LEU:HD12	2.39	0.48
33:H:19:SER:O	44:S:93:PRO:HG3	2.13	0.48
33:H:130:ARG:CZ	33:H:133:MET:HE2	2.43	0.48
34:I:153:ARG:HH12	53:3:406:G:N2	2.10	0.48
37:L:43:TYR:O	37:L:46:LEU:HB3	2.12	0.48
38:M:5:PRO:HA	38:M:8:ASP:HB3	1.95	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:Q:22:ALA:HB1	42:Q:56:LEU:CD1	2.38	0.48
42:Q:34:THR:HG21	42:Q:55:ARG:NH1	2.28	0.48
44:S:62:ARG:NH1	44:S:69:PRO:HB3	2.19	0.48
45:T:6:ALA:O	45:T:10:ILE:HG13	2.13	0.48
47:V:39:ARG:NH2	53:3:280:C:H1'	2.28	0.48
51:Z:16:ARG:HG3	51:Z:19:LYS:HB2	1.96	0.48
53:3:135:C:H3'	53:3:136:C:C5'	2.44	0.48
53:3:356:A:H2'	53:3:357:G:C8	2.48	0.48
53:3:518:C:H5'	53:3:530:G:N3	2.28	0.48
53:3:1192:C:H6	53:3:1192:C:O5'	1.96	0.48
54:1:106:C:H2'	54:1:107:G:C8	2.48	0.48
54:1:1957:C:C2	54:1:1958:C:C5	3.01	0.48
54:1:2649:C:H2'	54:1:2650:U:C6	2.48	0.48
58:4:19:C:O4'	58:4:19:C:OP1	2.31	0.48
59:8:62:THR:HG23	59:8:91:GLY:HA3	1.96	0.48
59:8:295:ILE:HG23	59:8:309:ARG:HH22	1.77	0.48
59:8:350:LEU:HA	59:8:357:ARG:CB	2.43	0.48
1:b:106:PRO:O	1:b:108:GLY:N	2.46	0.48
2:c:27:ILE:HG12	2:c:187:LEU:O	2.12	0.48
3:d:4:VAL:C	3:d:5:LEU:HD12	2.39	0.48
9:j:28:LEU:HD23	9:j:28:LEU:C	2.38	0.48
10:k:2:ILE:HG23	10:k:6:THR:HG21	1.93	0.48
17:r:4:VAL:O	17:r:39:LEU:N	2.34	0.48
20:u:48:VAL:O	20:u:48:VAL:HG13	2.14	0.48
30:E:3:ILE:CD1	30:E:62:PRO:HG3	2.40	0.48
30:E:55:GLY:HA2	30:E:58:ILE:HD11	1.95	0.48
32:G:33:ALA:HB2	32:G:39:ILE:CG1	2.41	0.48
40:O:26:VAL:HG23	40:O:36:VAL:CG1	2.44	0.48
41:P:120:CYS:SG	53:3:778:G:H1'	2.53	0.48
42:Q:26:CYS:O	42:Q:28:GLN:N	2.46	0.48
47:V:41:THR:HG21	53:3:236:A:H5''	1.94	0.48
53:3:779:C:H2'	53:3:780:A:O4'	2.13	0.48
53:3:858:G:H8	53:3:858:G:O5'	1.97	0.48
53:3:1360:A:C2'	53:3:1361:G:H5'	2.43	0.48
54:1:154:U:H2'	54:1:155:A:H8	1.78	0.48
54:1:325:G:H2'	54:1:326:G:C8	2.48	0.48
54:1:1787:A:H2'	54:1:1787:A:N3	2.29	0.48
54:1:2339:C:H2'	54:1:2340:A:H8	1.79	0.48
54:1:2720:U:C6	54:1:2872:A:N6	2.81	0.48
55:2:119:A:C2	55:2:120:A:C1'	2.96	0.48
56:5:23:C:H2'	56:5:24:G:H8	1.77	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:5:47:U:H2'	56:5:48:C:C5	2.49	0.48
57:6:9:G:N2	57:6:45:G:H3'	2.28	0.48
59:8:11:ARG:HD3	59:8:82:HIS:ND1	2.28	0.48
59:8:253:ARG:O	59:8:257:LEU:HD13	2.13	0.48
59:8:350:LEU:CD1	59:8:357:ARG:HB3	2.43	0.48
3:d:21:ARG:HH21	3:d:106:LYS:HD2	1.77	0.48
8:i:14:ALA:HB2	8:i:54:ILE:HG13	1.95	0.48
9:j:114:LEU:HB3	9:j:118:MET:HE2	1.94	0.48
9:j:118:MET:HA	9:j:121:LYS:NZ	2.28	0.48
10:k:76:VAL:HG12	15:p:72:VAL:CG2	2.44	0.48
20:u:66:VAL:HA	20:u:69:VAL:HG12	1.96	0.48
32:G:82:ALA:HA	32:G:85:SER:OG	2.14	0.48
42:Q:32:VAL:HG22	42:Q:55:ARG:H	1.79	0.48
47:V:16:MET:HB3	47:V:19:SER:C	2.38	0.48
50:Y:66:ILE:CG2	50:Y:70:LYS:HB3	2.43	0.48
53:3:476:U:O2'	53:3:477:C:H5'	2.14	0.48
53:3:483:C:H2'	53:3:484:G:C8	2.48	0.48
53:3:697:U:H2'	53:3:698:G:C5'	2.41	0.48
53:3:921:U:H2'	53:3:922:G:O4'	2.14	0.48
53:3:1209:C:H2'	53:3:1210:C:C6	2.49	0.48
53:3:1237:C:H4'	53:3:1334:G:N2	2.28	0.48
53:3:1379:G:O2'	53:3:1380:U:H5'	2.13	0.48
54:1:758:C:O2	54:1:758:C:H2'	2.14	0.48
54:1:1706:C:C2	54:1:1757:A:H5'	2.49	0.48
54:1:1823:G:O2'	54:1:1824:G:H5'	2.13	0.48
54:1:1997:C:O2'	54:1:1998:A:H5'	2.13	0.48
54:1:2511:U:H2'	54:1:2512:C:O4'	2.14	0.48
54:1:2524:G:C3'	54:1:2525:G:H5''	2.44	0.48
54:1:2533:U:H2'	54:1:2534:A:O4'	2.13	0.48
1:b:206:LYS:O	1:b:207:ALA:C	2.57	0.48
3:d:34:ALA:HB1	3:d:94:GLN:CD	2.38	0.48
4:e:166:ARG:O	4:e:170:ALA:N	2.40	0.48
5:f:174:LYS:HD2	54:1:2531:A:OP2	2.13	0.48
10:k:2:ILE:CD1	10:k:6:THR:HG21	2.40	0.48
16:q:49:ARG:HH21	17:r:74:ILE:HG12	1.78	0.48
17:r:40:MET:C	17:r:41:ILE:HD12	2.37	0.48
23:x:10:ARG:HH22	54:1:1365:A:H4'	1.77	0.48
27:B:47:TYR:HA	27:B:51:ARG:O	2.13	0.48
32:G:135:MET:O	32:G:139:GLU:N	2.42	0.48
42:Q:41:PRO:CG	42:Q:49:ARG:HE	2.26	0.48
43:R:22:TYR:OH	43:R:72:ILE:HD12	2.13	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:T:27:GLN:NE2	45:T:65:LEU:HD11	2.28	0.48
45:T:70:LYS:HB3	45:T:77:TYR:CG	2.49	0.48
47:V:38:LYS:HD3	53:3:585:G:OP1	2.14	0.48
53:3:59:A:H2'	53:3:60:A:OP1	2.13	0.48
53:3:108:G:H5''	53:3:109:A:N3	2.28	0.48
53:3:1070:U:H2'	53:3:1071:C:C6	2.48	0.48
53:3:1329:A:O2'	53:3:1330:U:H5'	2.14	0.48
54:1:833:A:H2'	54:1:834:G:C8	2.49	0.48
54:1:1682:G:H2'	54:1:1683:U:H6	1.77	0.48
54:1:2134:A:H62	54:1:2157:G:C5'	2.26	0.48
54:1:2521:C:H2'	54:1:2522:U:O4'	2.14	0.48
54:1:2695:U:O2'	54:1:2696:U:H5'	2.14	0.48
59:8:303:LYS:HG3	59:8:305:THR:HG23	1.95	0.48
59:8:519:VAL:C	59:8:578:LEU:HD12	2.39	0.48
59:8:590:GLU:O	59:8:594:LYS:N	2.43	0.48
1:b:75:ALA:HB2	1:b:95:TYR:CD1	2.49	0.48
1:b:244:VAL:HG12	1:b:249:VAL:C	2.38	0.48
2:c:110:THR:OG1	2:c:171:THR:HG23	2.14	0.48
4:e:9:ASP:HB2	4:e:10:GLU:OE1	2.14	0.48
9:j:17:VAL:HG23	9:j:137:PRO:HB2	1.96	0.48
9:j:25:LEU:CD1	9:j:101:ILE:HD13	2.43	0.48
11:l:132:ARG:HG3	11:l:142:ILE:CD1	2.43	0.48
25:z:13:ILE:HD12	54:1:988:A:C8	2.48	0.48
29:D:24:THR:HG23	29:D:27:GLY:H	1.78	0.48
30:E:32:LEU:O	30:E:34:LYS:N	2.46	0.48
31:F:15:LYS:HB2	31:F:26:ILE:O	2.14	0.48
33:H:113:LYS:HD3	33:H:184:ASN:HD22	1.79	0.48
34:I:7:LYS:HB2	34:I:20:LEU:HB3	1.95	0.48
39:N:29:ILE:HG23	39:N:29:ILE:O	2.12	0.48
43:R:31:ALA:O	43:R:34:ALA:HB3	2.13	0.48
47:V:4:ILE:CG2	47:V:5:ARG:H	2.14	0.48
49:X:77:ARG:HG3	49:X:77:ARG:HH11	1.78	0.48
53:3:1194:U:H2'	53:3:1195:C:C6	2.49	0.48
54:1:325:G:H2'	54:1:326:G:H8	1.79	0.48
54:1:742:A:H2'	54:1:743:A:C8	2.48	0.48
54:1:1161:C:H2'	54:1:1162:G:H8	1.77	0.48
54:1:1585:C:H3'	54:1:1586:A:H8	1.78	0.48
57:6:58:A:H1'	57:6:60:U:OP2	2.13	0.48
59:8:51:ASP:HB3	59:8:56:GLU:OE2	2.14	0.48
59:8:450:ASP:HB3	59:8:454:ASN:N	2.28	0.48
59:8:514:GLN:HA	59:8:587:ASP:OD2	2.14	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:8:536:PHE:HD1	59:8:576:ILE:HG23	1.78	0.48
59:8:646:GLU:O	59:8:652:VAL:HG13	2.13	0.48
3:d:88:ARG:HB3	3:d:89:PRO:HD2	1.96	0.48
4:e:35:LEU:HD23	4:e:56:LEU:HD21	1.95	0.48
4:e:58:ALA:O	4:e:139:GLU:HG2	2.14	0.48
6:g:79:THR:HG21	6:g:147:VAL:HG23	1.96	0.48
7:h:65:GLU:O	7:h:68:PRO:HD2	2.14	0.48
9:j:23:LYS:HG3	9:j:28:LEU:HD12	1.96	0.48
12:m:1:MET:HA	12:m:1:MET:HE3	1.95	0.48
12:m:120:ALA:O	12:m:123:LYS:N	2.44	0.48
15:p:3:ILE:HD12	15:p:3:ILE:N	2.29	0.48
27:B:38:LEU:O	27:B:41:HIS:HB2	2.13	0.48
28:C:25:ASN:OD1	28:C:28:THR:HG22	2.13	0.48
36:K:86:ARG:NH1	53:3:673:A:H4'	2.29	0.48
37:L:92:PRO:O	37:L:95:ARG:HG2	2.14	0.48
40:O:14:ASP:HB2	40:O:17:LEU:HD12	1.95	0.48
48:W:12:PHE:C	48:W:14:ALA:H	2.20	0.48
48:W:64:LEU:HB2	48:W:66:LEU:HG	1.96	0.48
50:Y:9:ARG:NH1	53:3:108:G:N7	2.61	0.48
50:Y:34:VAL:O	50:Y:38:ILE:HG13	2.13	0.48
52:a:38:PHE:HE2	52:a:217:THR:HG21	1.79	0.48
53:3:135:C:C3'	53:3:136:C:H5''	2.43	0.48
53:3:298:A:H2'	53:3:299:G:O4'	2.13	0.48
53:3:501:C:H2'	53:3:502:A:H8	1.78	0.48
53:3:714:G:H2'	53:3:715:A:H8	1.73	0.48
53:3:802:A:H2'	53:3:803:G:H5'	1.95	0.48
53:3:1015:G:O2'	53:3:1016:A:H5'	2.14	0.48
53:3:1522:U:H2'	53:3:1523:G:C8	2.48	0.48
54:1:376:G:O2'	54:1:377:G:H5'	2.13	0.48
54:1:912:C:O2'	54:1:913:U:H5'	2.14	0.48
54:1:1913:A:OP1	59:8:507:LYS:HE3	2.13	0.48
54:1:1921:G:O2'	54:1:1922:G:H5'	2.14	0.48
54:1:2039:U:H2'	54:1:2040:G:H8	1.79	0.48
54:1:2543:G:H2'	54:1:2544:G:C8	2.49	0.48
56:5:35:G:O2'	59:8:586:VAL:HG21	2.14	0.48
59:8:62:THR:HG23	59:8:91:GLY:CA	2.42	0.48
59:8:100:GLU:HA	59:8:103:MET:HB2	1.96	0.48
59:8:151:PHE:HZ	59:8:266:CYS:SG	2.36	0.48
59:8:184:ASP:OD1	59:8:186:VAL:HG12	2.13	0.48
1:b:268:ARG:HH11	1:b:268:ARG:CA	2.25	0.48
2:c:22:ILE:O	2:c:24:VAL:HG13	2.14	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:l:8:PRO:HD3	54:1:1244:A:H4'	1.94	0.48
11:l:95:LEU:HD22	11:l:100:ILE:HD11	1.95	0.48
12:m:71:LYS:HB3	12:m:93:VAL:O	2.14	0.48
20:u:42:LYS:CE	54:1:499:U:H5''	2.44	0.48
26:A:11:GLU:HB2	26:A:25:ARG:HG2	1.94	0.48
32:G:211:LEU:HD23	32:G:211:LEU:C	2.38	0.48
35:J:105:ILE:HG12	35:J:123:LEU:HA	1.96	0.48
36:K:68:GLN:C	36:K:71:ILE:HG22	2.38	0.48
38:M:60:LEU:HD23	38:M:60:LEU:H	1.79	0.48
39:N:7:GLY:N	39:N:18:VAL:O	2.46	0.48
43:R:91:ARG:HD3	54:1:888:C:H1'	1.96	0.48
47:V:17:GLU:O	47:V:18:LYS:HB2	2.13	0.48
47:V:77:VAL:HG12	47:V:80:LYS:HA	1.96	0.48
51:Z:64:ALA:C	51:Z:66:ARG:H	2.21	0.48
53:3:57:G:N2	53:3:58:C:H1'	2.29	0.48
53:3:466:A:H2'	53:3:468:A:C8	2.48	0.48
53:3:518:C:H2'	53:3:530:G:C6	2.48	0.48
53:3:807:A:H2'	53:3:808:C:C6	2.48	0.48
53:3:924:C:H2'	53:3:925:G:H8	1.79	0.48
53:3:1095:U:P	53:3:1108:G:H1	2.37	0.48
53:3:1446:A:H2'	53:3:1447:A:O4'	2.13	0.48
54:1:53:A:H2'	54:1:54:G:O4'	2.14	0.48
54:1:154:U:H2'	54:1:155:A:C8	2.48	0.48
54:1:222:A:N1	54:1:233:A:H5''	2.29	0.48
54:1:594:U:H2'	54:1:595:C:H6	1.79	0.48
54:1:898:C:H2'	54:1:899:A:O4'	2.14	0.48
54:1:1570:A:H2'	54:1:1571:A:C8	2.49	0.48
54:1:2545:G:H2'	54:1:2546:U:O4'	2.13	0.48
59:8:492:GLU:HG3	59:8:611:VAL:O	2.14	0.48
1:b:128:THR:HG22	1:b:188:ARG:HG2	1.94	0.48
5:f:84:LYS:HB2	5:f:132:LEU:HD11	1.96	0.48
6:g:9:VAL:HG21	6:g:13:GLY:HA3	1.96	0.48
9:j:89:PHE:CZ	9:j:93:ILE:HD11	2.48	0.48
12:m:9:PHE:CZ	54:1:911:A:H2'	2.49	0.48
25:z:37:ARG:CZ	54:1:929:U:H4'	2.44	0.48
32:G:83:ALA:HB1	32:G:90:PHE:CE1	2.49	0.48
38:M:9:MET:HG3	38:M:26:MET:CE	2.26	0.48
38:M:10:LEU:HD12	38:M:76:ARG:HB2	1.95	0.48
38:M:31:LEU:O	38:M:35:ILE:HG22	2.13	0.48
38:M:115:ALA:O	38:M:119:GLY:N	2.47	0.48
41:P:27:ASN:HA	41:P:57:SER:HB3	1.96	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:Q:51:VAL:HG23	42:Q:64:SER:O	2.14	0.48
44:S:3:GLN:HA	44:S:6:LYS:HD3	1.96	0.48
53:3:60:A:H5''	53:3:331:G:N2	2.29	0.48
53:3:78:A:H2'	53:3:79:G:O4'	2.14	0.48
53:3:257:G:H2'	53:3:258:G:C8	2.48	0.48
53:3:373:A:N3	53:3:374:A:H1'	2.28	0.48
53:3:711:G:O2'	53:3:712:A:H5'	2.14	0.48
53:3:741:G:H2'	53:3:742:G:O4'	2.14	0.48
53:3:1311:A:H3'	53:3:1312:G:H5''	1.96	0.48
53:3:1502:A:C8	53:3:1505:G:N2	2.64	0.48
54:1:47:C:C4	54:1:48:G:N7	2.82	0.48
54:1:438:G:H2'	54:1:439:A:C8	2.49	0.48
54:1:1467:U:C3'	54:1:1468:U:H5''	2.44	0.48
54:1:2246:G:H1'	54:1:2426:A:C2	2.49	0.48
54:1:2556:C:H2'	54:1:2557:G:O4'	2.14	0.48
54:1:2739:U:O2'	54:1:2740:A:H5'	2.14	0.48
59:8:99:VAL:HG11	59:8:129:GLN:NE2	2.28	0.48
59:8:309:ARG:NH1	59:8:309:ARG:HB2	2.29	0.48
5:f:23:ILE:HG21	5:f:71:LEU:CD2	2.44	0.47
7:h:34:THR:OG1	54:1:1057:A:H1'	2.14	0.47
10:k:54:LYS:HD3	10:k:55:GLY:N	2.28	0.47
13:n:12:ARG:HD3	13:n:16:HIS:CD2	2.49	0.47
13:n:109:PRO:C	13:n:110:MET:HE2	2.39	0.47
16:q:85:ALA:HB2	16:q:115:ALA:HB2	1.95	0.47
17:r:74:ILE:HD13	54:1:992:C:O3'	2.14	0.47
18:s:9:HIS:H	18:s:102:HIS:CE1	2.31	0.47
23:x:53:LYS:O	23:x:57:VAL:HG23	2.14	0.47
34:I:205:LYS:HB3	53:3:8:A:N6	2.29	0.47
39:N:40:ARG:O	53:3:1291:U:H4'	2.14	0.47
49:X:39:ILE:HD12	49:X:61:VAL:HG13	1.95	0.47
50:Y:29:THR:O	50:Y:32:LYS:HB3	2.14	0.47
51:Z:36:PHE:O	51:Z:38:GLU:N	2.47	0.47
53:3:45:G:H1	53:3:396:C:H42	1.61	0.47
53:3:1231:G:H2'	53:3:1232:U:C6	2.49	0.47
54:1:465:G:H2'	54:1:466:A:C8	2.48	0.47
54:1:523:C:O2'	54:1:524:G:H5'	2.13	0.47
54:1:1167:C:H2'	54:1:1168:G:H8	1.79	0.47
54:1:1368:G:H2'	54:1:1369:G:C8	2.49	0.47
54:1:1611:C:H5'	54:1:1611:C:H6	1.78	0.47
54:1:1982:U:H5'	54:1:1982:U:C6	2.47	0.47
54:1:2027:G:H2'	54:1:2028:U:C6	2.49	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2027:G:O2'	54:1:2028:U:H5'	2.14	0.47
54:1:2776:A:H4'	54:1:2778:A:OP1	2.14	0.47
55:2:95:U:H2'	55:2:96:G:H8	1.79	0.47
59:8:126:VAL:HA	59:8:129:GLN:HG2	1.95	0.47
59:8:249:LYS:O	59:8:253:ARG:N	2.44	0.47
59:8:349:VAL:HG12	59:8:399:ASP:N	2.28	0.47
1:b:16:VAL:HG23	1:b:203:VAL:HG22	1.96	0.47
3:d:4:VAL:HG22	3:d:5:LEU:H	1.79	0.47
4:e:7:TYR:O	4:e:12:VAL:HG23	2.14	0.47
13:n:17:ARG:HH21	13:n:17:ARG:HB2	1.79	0.47
13:n:72:ASP:OD1	13:n:74:GLU:HG2	2.15	0.47
17:r:80:ARG:NH1	54:1:571:U:H2'	2.29	0.47
18:s:18:ARG:NH1	54:1:518:G:H4'	2.28	0.47
18:s:29:VAL:HG23	18:s:69:LEU:O	2.14	0.47
32:G:89:PHE:CD2	32:G:153:MET:HE3	2.48	0.47
37:L:90:VAL:HG22	37:L:91:ARG:N	2.29	0.47
38:M:17:GLN:OE1	38:M:62:LEU:HD13	2.14	0.47
39:N:53:LEU:O	39:N:53:LEU:HD23	2.14	0.47
40:O:46:LYS:HD2	40:O:48:ARG:NH2	2.29	0.47
42:Q:89:LEU:HD12	42:Q:89:LEU:N	2.29	0.47
44:S:45:LEU:HD11	49:X:12:LEU:CD2	2.44	0.47
46:U:72:ALA:HB1	46:U:76:LYS:HZ1	1.77	0.47
49:X:10:ILE:HD13	49:X:40:PHE:CE2	2.45	0.47
50:Y:25:SER:CB	53:3:1458:G:H5''	2.44	0.47
53:3:29:U:H5'	53:3:296:U:OP1	2.14	0.47
53:3:118:U:H6	53:3:118:U:O5'	1.96	0.47
53:3:130:A:H2'	53:3:130:A:N3	2.29	0.47
53:3:957:U:H2'	53:3:959:A:OP2	2.13	0.47
53:3:1525:G:H2'	53:3:1526:G:H8	1.79	0.47
54:1:32:C:H2'	54:1:33:C:C6	2.49	0.47
54:1:571:U:H1'	54:1:573:U:C6	2.49	0.47
54:1:598:U:H2'	54:1:599:A:C8	2.49	0.47
54:1:817:C:H2'	54:1:818:G:O4'	2.13	0.47
54:1:1173:U:H2'	54:1:1176:U:O2	2.14	0.47
54:1:1347:A:H2'	54:1:1348:C:C5'	2.44	0.47
54:1:2149:U:H2'	54:1:2150:C:C6	2.49	0.47
55:2:39:A:H2'	55:2:40:U:C5	2.49	0.47
58:4:14:A:H2'	58:4:15:A:H5''	1.94	0.47
59:8:214:LEU:HA	59:8:217:GLU:HB3	1.96	0.47
59:8:448:TRP:CB	59:8:457:ILE:HB	2.37	0.47
59:8:608:ALA:O	59:8:609:LYS:C	2.57	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:e:91:ARG:HB2	4:e:95:MET:HE3	1.95	0.47
4:e:121:PHE:CZ	4:e:127:TYR:HB2	2.49	0.47
8:i:7:TYR:HD2	8:i:57:VAL:HG13	1.78	0.47
14:o:16:ARG:O	14:o:20:GLU:N	2.45	0.47
15:p:28:LYS:HB2	15:p:82:SER:H	1.78	0.47
16:q:90:ASP:HB2	54:1:996:A:O3'	2.15	0.47
27:B:15:ARG:HH12	54:1:1264:A:P	2.38	0.47
32:G:193:ASP:C	32:G:195:VAL:H	2.22	0.47
34:I:59:LYS:HE3	34:I:194:ILE:HG22	1.96	0.47
34:I:94:GLU:HG2	34:I:185:PRO:CG	2.37	0.47
36:K:3:HIS:CD2	36:K:95:ALA:H	2.33	0.47
37:L:114:SER:O	37:L:118:ARG:HG3	2.13	0.47
46:U:28:ARG:HG2	46:U:29:ASN:OD1	2.13	0.47
53:3:131:A:H2'	53:3:132:C:C6	2.48	0.47
53:3:165:G:H2'	53:3:166:U:C6	2.49	0.47
53:3:590:U:H2'	53:3:591:U:C6	2.50	0.47
53:3:1070:U:H2'	53:3:1071:C:H6	1.78	0.47
53:3:1234:C:H2'	53:3:1235:U:C6	2.49	0.47
54:1:799:G:C6	54:1:800:A:C6	3.03	0.47
54:1:1004:U:H4'	54:1:1010:A:N7	2.29	0.47
54:1:1727:C:H2'	54:1:1728:C:O4'	2.13	0.47
54:1:1904:G:N2	54:1:1905:C:H1'	2.30	0.47
55:2:12:C:O2	55:2:12:C:O4'	2.33	0.47
59:8:30:ILE:HG22	59:8:279:LEU:HD21	1.96	0.47
59:8:167:VAL:HG13	59:8:263:LEU:HG	1.96	0.47
59:8:396:THR:C	59:8:397:LEU:HD12	2.40	0.47
59:8:584:HIS:ND1	59:8:586:VAL:HG22	2.29	0.47
59:8:621:VAL:HG12	59:8:622:GLU:N	2.27	0.47
6:g:3:VAL:HG12	6:g:38:PRO:HA	1.96	0.47
7:h:59:LEU:HD23	7:h:62:ARG:HB2	1.95	0.47
9:j:114:LEU:HA	9:j:117:ALA:HB3	1.95	0.47
16:q:91:ARG:HG3	16:q:91:ARG:NH1	2.28	0.47
18:s:13:SER:OG	18:s:16:LYS:HG2	2.15	0.47
22:w:25:GLU:HG3	54:1:923:G:H4'	1.96	0.47
23:x:13:THR:HG23	54:1:188:G:H5'	1.96	0.47
34:I:11:SER:HB2	34:I:20:LEU:HD12	1.96	0.47
37:L:128:GLU:O	37:L:129:ASN:CG	2.57	0.47
37:L:134:VAL:HG13	37:L:137:ARG:NH2	2.28	0.47
40:O:64:GLN:O	44:S:98:ALA:HB3	2.15	0.47
40:O:66:GLU:O	44:S:95:LEU:HD12	2.15	0.47
42:Q:49:ARG:HB2	42:Q:89:LEU:HD21	1.96	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:Q:98:ARG:HD2	42:Q:106:VAL:HG13	1.93	0.47
45:T:34:GLN:HA	45:T:37:HIS:HB3	1.96	0.47
46:U:70:ARG:NE	46:U:74:LEU:HD21	2.29	0.47
51:Z:6:ARG:C	51:Z:8:ASN:H	2.23	0.47
53:3:322:C:H2'	53:3:323:U:O4'	2.13	0.47
53:3:370:C:O2'	53:3:371:A:H5'	2.14	0.47
53:3:591:U:H2'	53:3:592:G:C8	2.49	0.47
53:3:1074:G:H2'	53:3:1075:U:H6	1.76	0.47
53:3:1350:A:H2'	53:3:1351:U:C6	2.49	0.47
53:3:1514:G:O2'	53:3:1515:G:H5'	2.14	0.47
54:1:688:U:H2'	54:1:689:A:H8	1.79	0.47
54:1:1175:A:C5'	54:1:1176:U:H5'	2.43	0.47
54:1:1919:A:H2'	54:1:1920:C:H5'	1.95	0.47
55:2:86:G:HO2'	55:2:87:U:H5	1.62	0.47
57:6:56:C:H2'	57:6:57:A:H5'	1.95	0.47
59:8:85:ASN:ND2	59:8:381:ASP:OD1	2.47	0.47
59:8:97:ILE:HG23	59:8:98:GLU:N	2.30	0.47
59:8:623:THR:HG21	59:8:631:VAL:HG21	1.97	0.47
2:c:8:LYS:HA	2:c:27:ILE:HG22	1.96	0.47
2:c:179:ARG:NH1	2:c:179:ARG:HB2	2.30	0.47
4:e:3:LEU:CD2	4:e:103:ILE:HD11	2.44	0.47
4:e:104:THR:O	4:e:108:PRO:HG2	2.14	0.47
9:j:46:PRO:HG2	9:j:47:HIS:H	1.80	0.47
15:p:63:ILE:HG22	15:p:63:ILE:O	2.14	0.47
19:t:2:ILE:HD12	54:1:144:A:H4'	1.97	0.47
20:u:66:VAL:C	20:u:68:ASN:H	2.21	0.47
33:H:28:PHE:HE2	44:S:76:PHE:HE1	1.59	0.47
33:H:112:ALA:HB2	33:H:201:ILE:HG13	1.95	0.47
43:R:95:PRO:HG3	43:R:99:GLN:HB2	1.96	0.47
53:3:687:A:H2'	53:3:701:U:O4	2.15	0.47
53:3:923:A:H8	53:3:923:A:O5'	1.98	0.47
53:3:1508:A:H2'	53:3:1509:C:C6	2.49	0.47
54:1:131:A:H2'	54:1:132:G:C8	2.47	0.47
54:1:210:C:H2'	54:1:211:C:H6	1.75	0.47
54:1:254:G:C2'	54:1:255:A:H5''	2.44	0.47
54:1:466:A:H2'	54:1:467:G:H5'	1.95	0.47
54:1:589:U:O2'	54:1:590:A:H5'	2.15	0.47
54:1:725:G:H2'	54:1:726:G:O4'	2.15	0.47
54:1:2075:U:H3'	54:1:2238:G:H21	1.80	0.47
59:8:171:LEU:HB3	59:8:183:VAL:CG2	2.44	0.47
2:c:13:ARG:HH22	15:p:74:GLN:HG3	1.79	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:c:133:THR:HG23	2:c:134:HIS:N	2.30	0.47
7:h:67:THR:C	7:h:69:PHE:H	2.22	0.47
12:m:41:LEU:C	12:m:93:VAL:HG23	2.39	0.47
13:n:87:PHE:C	13:n:89:SER:H	2.21	0.47
16:q:2:ARG:HH21	16:q:2:ARG:HG3	1.80	0.47
16:q:97:ILE:HG22	16:q:105:PHE:HB2	1.97	0.47
18:s:55:ILE:HD12	18:s:55:ILE:N	2.30	0.47
23:x:69:GLU:O	23:x:70:LEU:C	2.57	0.47
34:I:64:TYR:HB2	34:I:66:VAL:HG23	1.96	0.47
34:I:66:VAL:HG12	34:I:71:PHE:N	2.29	0.47
36:K:3:HIS:CD2	36:K:95:ALA:HB2	2.49	0.47
36:K:29:ILE:CG2	36:K:66:ALA:HB2	2.43	0.47
38:M:26:MET:HE3	38:M:32:LYS:HZ3	1.79	0.47
40:O:56:HIS:CE1	53:3:963:G:H21	2.32	0.47
40:O:81:GLU:HA	40:O:84:VAL:HG12	1.97	0.47
42:Q:101:LEU:H	42:Q:101:LEU:CD2	2.28	0.47
45:T:63:ARG:NH1	45:T:87:ARG:NH1	2.56	0.47
50:Y:53:MET:CG	50:Y:56:ILE:HB	2.43	0.47
53:3:892:A:O2'	53:3:1415:G:H4'	2.14	0.47
53:3:996:A:H2'	53:3:997:U:C6	2.49	0.47
53:3:1278:G:H4'	53:3:1279:G:O4'	2.15	0.47
53:3:1414:U:H2'	53:3:1415:G:H8	1.79	0.47
54:1:833:A:H2'	54:1:834:G:H8	1.79	0.47
54:1:862:G:H2'	54:1:863:A:O4'	2.14	0.47
54:1:1717:A:H2'	54:1:1718:G:O4'	2.15	0.47
54:1:1744:A:H3'	54:1:1745:A:C8	2.49	0.47
54:1:1936:A:H2	54:1:1943:U:N3	2.10	0.47
54:1:2262:U:H2'	54:1:2263:C:H6	1.80	0.47
54:1:2293:G:H2'	54:1:2294:G:H8	1.79	0.47
54:1:2406:A:OP2	54:1:2411:A:N6	2.48	0.47
54:1:2446:G:H2'	54:1:2447:G:H5''	1.95	0.47
59:8:525:LEU:HB3	59:8:573:ASP:HA	1.95	0.47
59:8:544:VAL:HG12	59:8:581:GLY:H	1.79	0.47
59:8:591:LEU:HD23	59:8:594:LYS:NZ	2.30	0.47
59:8:620:GLU:HB2	59:8:681:THR:OG1	2.13	0.47
2:c:33:ARG:HH22	2:c:52:THR:C	2.23	0.47
5:f:88:LEU:HD21	5:f:95:ALA:HB2	1.96	0.47
8:i:7:TYR:HB3	8:i:59:THR:HA	1.96	0.47
8:i:23:VAL:CG2	8:i:26:ALA:HB3	2.42	0.47
11:l:91:ASP:OD1	11:l:123:ARG:HB3	2.14	0.47
12:m:42:THR:O	12:m:46:ILE:HG13	2.15	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:n:90:ARG:O	13:n:92:GLY:N	2.47	0.47
14:o:18:LEU:HD23	14:o:25:ARG:HB3	1.97	0.47
25:z:37:ARG:NH2	54:1:929:U:H4'	2.30	0.47
32:G:18:GLN:HG2	32:G:189:ASN:CG	2.39	0.47
34:I:129:VAL:HG11	34:I:134:TYR:CD1	2.49	0.47
34:I:171:GLU:HG3	34:I:182:LYS:NZ	2.29	0.47
36:K:9:MET:HE2	36:K:86:ARG:CD	2.45	0.47
37:L:74:VAL:HG21	37:L:85:GLN:HE21	1.80	0.47
38:M:85:TYR:OH	47:V:36:PHE:HE2	1.96	0.47
39:N:52:GLU:OE2	39:N:53:LEU:HB2	2.14	0.47
39:N:82:ILE:O	39:N:86:LEU:N	2.48	0.47
50:Y:74:HIS:O	50:Y:75:LYS:C	2.57	0.47
52:a:11:ILE:HG21	52:a:218:MET:O	2.15	0.47
53:3:57:G:H1	53:3:355:C:H42	1.63	0.47
53:3:368:U:H3'	53:3:369:G:C5'	2.44	0.47
53:3:553:A:H2'	53:3:554:A:C8	2.49	0.47
53:3:554:A:H2'	53:3:555:U:C6	2.50	0.47
53:3:738:C:H2'	53:3:739:C:H6	1.78	0.47
53:3:757:U:H2'	53:3:758:C:O4'	2.14	0.47
53:3:938:A:H1'	53:3:1376:U:O2'	2.15	0.47
53:3:1157:A:H61	53:3:1178:G:H1'	1.80	0.47
54:1:100:U:H4'	54:1:101:A:O4'	2.15	0.47
54:1:302:C:H2'	54:1:303:G:C8	2.50	0.47
54:1:384:A:O5'	54:1:384:A:H8	1.98	0.47
54:1:570:G:H2'	54:1:2030:A:N7	2.29	0.47
54:1:572:A:C2	54:1:573:U:O2	2.67	0.47
54:1:855:G:H2'	54:1:856:G:O4'	2.15	0.47
54:1:1401:G:H2'	54:1:1402:U:C6	2.49	0.47
54:1:1545:A:H2'	54:1:1546:G:O4'	2.14	0.47
54:1:1866:A:H2'	54:1:1867:G:O4'	2.15	0.47
54:1:2073:C:H2'	54:1:2074:U:H6	1.78	0.47
54:1:2184:A:H2'	54:1:2185:U:C6	2.50	0.47
54:1:2584:U:H2'	54:1:2585:U:H2'	1.96	0.47
54:1:2627:G:H2'	54:1:2628:C:O4'	2.15	0.47
54:1:2700:A:H2'	54:1:2701:U:H6	1.80	0.47
59:8:5:THR:HB	59:8:378:ARG:NE	2.30	0.47
59:8:53:MET:O	59:8:56:GLU:HB3	2.15	0.47
59:8:207:ILE:HD13	59:8:215:ALA:HB1	1.97	0.47
59:8:338:VAL:O	59:8:380:GLY:N	2.48	0.47
59:8:405:ILE:C	59:8:406:LEU:HD22	2.39	0.47
59:8:658:VAL:HG11	59:8:663:MET:HE2	1.96	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:b:211:ARG:HG3	1:b:211:ARG:NH1	2.29	0.47
3:d:143:LEU:HD22	3:d:146:VAL:HG11	1.96	0.47
9:j:47:HIS:ND1	9:j:48:VAL:HG23	2.30	0.47
11:l:29:LYS:C	11:l:30:THR:HG23	2.39	0.47
20:u:10:VAL:HG12	20:u:71:ILE:HA	1.96	0.47
21:v:30:ILE:HA	21:v:91:PHE:HB2	1.97	0.47
22:w:10:ARG:HG2	22:w:10:ARG:HH11	1.79	0.47
26:A:49:ARG:NH2	26:A:49:ARG:HB3	2.30	0.47
29:D:30:VAL:O	29:D:34:ARG:HG2	2.15	0.47
34:I:78:ALA:HA	34:I:81:LEU:HD11	1.96	0.47
37:L:57:GLU:H	37:L:57:GLU:CD	2.22	0.47
39:N:64:ILE:HD12	39:N:64:ILE:N	2.30	0.47
42:Q:109:ARG:CB	42:Q:109:ARG:CZ	2.92	0.47
44:S:68:ARG:HG2	44:S:69:PRO:HD2	1.97	0.47
48:W:12:PHE:CG	48:W:13:THR:N	2.83	0.47
53:3:138:G:H2'	53:3:139:A:C8	2.50	0.47
53:3:262:A:H2'	53:3:262:A:N3	2.30	0.47
53:3:299:G:C6	53:3:300:A:C6	3.02	0.47
53:3:397:A:H3'	53:3:397:A:N3	2.30	0.47
53:3:1400:C:O5'	53:3:1400:C:H6	1.98	0.47
54:1:296:U:H2'	54:1:297:G:C8	2.48	0.47
54:1:590:A:H2'	54:1:591:U:C6	2.50	0.47
54:1:973:A:H5'	54:1:1188:U:H1'	1.97	0.47
54:1:1347:A:H2'	54:1:1348:C:H5'	1.96	0.47
54:1:1843:C:H2'	54:1:1844:C:H6	1.78	0.47
54:1:2814:A:H2'	54:1:2815:C:C6	2.50	0.47
54:1:2898:U:H2'	54:1:2899:A:H8	1.79	0.47
56:5:1:C:H2'	56:5:2:G:H8	1.78	0.47
59:8:413:GLU:H	59:8:413:GLU:CD	2.23	0.47
59:8:519:VAL:O	59:8:578:LEU:HD12	2.15	0.47
11:l:23:ILE:H	11:l:23:ILE:CD1	2.26	0.47
12:m:4:PRO:HG2	12:m:70:ASP:HA	1.96	0.47
17:r:66:HIS:CE1	17:r:94:THR:HG23	2.50	0.47
33:H:11:LEU:HD12	33:H:15:LYS:HB2	1.96	0.47
35:J:78:GLY:O	35:J:119:VAL:HG12	2.15	0.47
36:K:68:GLN:HA	36:K:71:ILE:CG2	2.44	0.47
37:L:44:SER:HB3	37:L:116:ALA:CB	2.45	0.47
37:L:102:TRP:CD1	37:L:136:LYS:HG2	2.50	0.47
42:Q:35:ARG:H	42:Q:75:GLU:HG3	1.78	0.47
44:S:64:ARG:HH12	44:S:77:GLY:HA3	1.80	0.47
47:V:12:VAL:CG2	47:V:23:ALA:N	2.75	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y:32:LYS:HA	50:Y:35:TYR:HD2	1.79	0.47
50:Y:53:MET:SD	50:Y:53:MET:O	2.72	0.47
53:3:47:C:H4'	53:3:48:C:O5'	2.14	0.47
53:3:235:C:H2'	53:3:236:A:C8	2.49	0.47
53:3:533:A:OP1	53:3:533:A:H2'	2.15	0.47
53:3:1227:A:C2'	53:3:1228:C:H5'	2.45	0.47
53:3:1273:C:H2'	53:3:1274:A:O4'	2.15	0.47
54:1:893:C:H2'	54:1:894:U:O4'	2.15	0.47
54:1:2310:C:C2'	54:1:2311:A:H5''	2.41	0.47
54:1:2531:A:C2	54:1:2659:G:H4'	2.50	0.47
54:1:2628:C:H3'	54:1:2629:U:H5'	1.97	0.47
59:8:218:TRP:HA	59:8:221:ASN:HB2	1.96	0.47
1:b:121:ALA:HB1	1:b:127:ASN:HB3	1.96	0.47
1:b:143:VAL:HG21	1:b:161:VAL:HG11	1.97	0.47
1:b:152:GLN:HB3	54:1:1818:U:N3	2.30	0.47
7:h:33:VAL:HG23	7:h:35:VAL:HG23	1.97	0.47
15:p:27:VAL:HB	15:p:42:PHE:HB3	1.96	0.47
18:s:38:TYR:CE2	27:B:27:LEU:HD11	2.50	0.47
21:v:28:ALA:HB3	21:v:42:LEU:HD13	1.96	0.47
27:B:21:LEU:H	27:B:21:LEU:CD1	2.18	0.47
33:H:14:VAL:HG23	33:H:15:LYS:N	2.30	0.47
35:J:83:PRO:HA	35:J:95:MET:O	2.15	0.47
36:K:52:ASN:O	36:K:53:LYS:HB2	2.15	0.47
40:O:15:HIS:O	40:O:18:ILE:HG22	2.14	0.47
40:O:15:HIS:HA	40:O:18:ILE:HG22	1.96	0.47
40:O:48:ARG:HH11	40:O:48:ARG:HG3	1.80	0.47
45:T:49:HIS:CE1	53:3:764:C:H5''	2.50	0.47
53:3:117:G:N2	53:3:118:U:H1'	2.30	0.47
53:3:220:G:H2'	53:3:221:C:H6	1.80	0.47
53:3:373:A:H2'	53:3:374:A:O4'	2.15	0.47
53:3:971:G:H1'	53:3:1365:G:O2'	2.15	0.47
53:3:1502:A:H5'	53:3:1504:G:N7	2.29	0.47
54:1:542:C:C2'	54:1:543:G:H5''	2.45	0.47
54:1:1018:U:O2'	54:1:1019:U:H5'	2.16	0.47
54:1:1101:U:O2'	54:1:1102:C:H5'	2.15	0.47
54:1:1243:C:C3'	54:1:1244:A:H5''	2.44	0.47
54:1:2693:G:H2'	54:1:2694:G:H8	1.80	0.47
54:1:2853:C:H2'	54:1:2854:G:H8	1.80	0.47
1:b:174:ARG:NH1	1:b:174:ARG:HB2	2.31	0.46
2:c:135:GLY:HA2	54:1:743:A:OP1	2.15	0.46
4:e:107:VAL:HB	4:e:108:PRO:HD3	1.98	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:f:136:ASP:OD2	5:f:139:VAL:HG23	2.15	0.46
10:k:22:ILE:HG12	10:k:40:LYS:O	2.15	0.46
10:k:23:LYS:HG3	10:k:25:LEU:HD23	1.97	0.46
14:o:28:VAL:HG12	14:o:93:ASP:O	2.15	0.46
27:B:40:HIS:O	27:B:41:HIS:ND1	2.48	0.46
29:D:15:SER:C	29:D:16:HIS:ND1	2.73	0.46
34:I:68:GLU:HB3	53:3:546:A:P	2.55	0.46
36:K:38:ARG:HB2	36:K:63:ASN:HD22	1.80	0.46
36:K:44:ARG:HA	36:K:58:HIS:HA	1.97	0.46
43:R:16:ILE:HG12	53:3:1302:C:C6	2.50	0.46
52:a:10:VAL:HG12	52:a:14:LYS:HE2	1.97	0.46
52:a:59:VAL:HB	52:a:165:ASN:HD22	1.80	0.46
53:3:361:G:H2'	53:3:362:G:O4'	2.14	0.46
53:3:518:C:C5'	53:3:530:G:O4'	2.63	0.46
53:3:592:G:H2'	53:3:593:U:C6	2.50	0.46
53:3:767:A:H2'	53:3:768:A:C8	2.49	0.46
53:3:861:G:H2'	53:3:862:C:C6	2.50	0.46
53:3:1046:A:H2'	53:3:1047:G:H5'	1.97	0.46
54:1:52:A:C5	54:1:118:A:C2	3.03	0.46
54:1:178:G:O2'	54:1:179:C:H5'	2.15	0.46
54:1:804:A:H2'	54:1:806:C:C4	2.49	0.46
54:1:1073:A:H2'	54:1:1074:G:C5'	2.44	0.46
54:1:1427:A:H4'	54:1:1428:C:O4'	2.15	0.46
54:1:2642:G:O2'	54:1:2643:G:H5'	2.14	0.46
59:8:30:ILE:HD11	59:8:86:ILE:HD13	1.96	0.46
59:8:87:ILE:HD12	59:8:87:ILE:N	2.30	0.46
59:8:396:THR:OG1	59:8:405:ILE:HG12	2.15	0.46
59:8:497:LYS:CG	59:8:524:PRO:HD2	2.44	0.46
3:d:181:ILE:HD12	3:d:181:ILE:H	1.80	0.46
13:n:51:LEU:O	13:n:55:ALA:N	2.48	0.46
33:H:7:ASN:HB3	44:S:88:MET:O	2.16	0.46
34:I:97:LEU:HD11	34:I:117:VAL:HG11	1.97	0.46
37:L:65:LEU:O	37:L:68:VAL:HG22	2.16	0.46
39:N:113:LYS:HZ2	53:3:1367:C:H3'	1.80	0.46
39:N:114:LYS:HB2	39:N:117:LEU:HD12	1.97	0.46
41:P:22:ILE:HD12	41:P:85:VAL:CG1	2.45	0.46
43:R:10:ASP:HA	43:R:44:ILE:CG2	2.46	0.46
46:U:6:LEU:HB3	46:U:17:TYR:CD1	2.49	0.46
50:Y:66:ILE:HG23	50:Y:70:LYS:HB3	1.97	0.46
53:3:505:G:H4'	53:3:534:U:C5	2.50	0.46
53:3:1325:C:O2'	53:3:1326:U:H5'	2.14	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:1365:G:N2	53:3:1366:C:H1'	2.30	0.46
54:1:10:A:H2	54:1:2800:A:HO2'	1.60	0.46
54:1:123:G:O2'	54:1:124:G:H5'	2.15	0.46
54:1:1550:C:O2'	54:1:1551:A:H5'	2.15	0.46
54:1:1613:G:C5	54:1:1617:C:C4	3.03	0.46
54:1:1627:G:O2'	54:1:1628:G:H5'	2.15	0.46
54:1:1842:G:H2'	54:1:1843:C:H6	1.80	0.46
54:1:2297:A:H62	54:1:2319:G:H1'	1.81	0.46
54:1:2316:G:H2'	54:1:2317:A:C8	2.49	0.46
56:5:46:G:C2'	56:5:47:U:H4'	2.45	0.46
59:8:20:ASP:N	62:8:801:GCP:H3B1	2.30	0.46
59:8:118:GLY:O	59:8:120:GLN:HG2	2.15	0.46
59:8:327:ASP:HB3	59:8:330:VAL:HG23	1.97	0.46
59:8:557:ILE:HD12	59:8:601:PHE:HB2	1.96	0.46
1:b:11:GLY:C	1:b:13:ARG:N	2.74	0.46
6:g:80:ILE:HG22	6:g:81:ALA:N	2.30	0.46
10:k:70:ARG:HG2	10:k:70:ARG:NH1	2.30	0.46
12:m:82:MET:HE1	54:1:960:A:H61	1.79	0.46
14:o:11:ALA:HB2	14:o:96:GLY:N	2.31	0.46
30:E:54:LEU:O	30:E:58:ILE:HG12	2.15	0.46
32:G:172:ILE:HG22	32:G:176:ASN:ND2	2.31	0.46
33:H:19:SER:OG	33:H:39:ARG:NH2	2.47	0.46
38:M:3:GLN:OE1	38:M:3:GLN:HA	2.15	0.46
53:3:1307:U:H2'	53:3:1308:U:C6	2.49	0.46
53:3:1461:G:H2'	53:3:1462:C:C6	2.50	0.46
53:3:1497:G:O2'	53:3:1498:U:H5'	2.15	0.46
54:1:279:A:H2'	54:1:280:U:C4'	2.45	0.46
54:1:1387:A:H2'	54:1:1388:G:H8	1.81	0.46
54:1:1464:G:H2'	54:1:1465:G:C8	2.48	0.46
54:1:1803:A:C2	54:1:1823:G:O4'	2.68	0.46
54:1:2529:G:H5''	54:1:2530:A:C5'	2.45	0.46
54:1:2563:U:H2'	54:1:2565:A:OP2	2.15	0.46
55:2:1:U:C5	55:2:2:G:C5	3.03	0.46
55:2:108:A:H5'	55:2:109:A:O5'	2.16	0.46
59:8:519:VAL:HG21	59:8:580:PHE:CE2	2.51	0.46
59:8:617:MET:O	59:8:657:GLU:HA	2.16	0.46
2:c:13:ARG:HD2	15:p:54:LEU:HD21	1.97	0.46
3:d:40:ARG:HH12	54:1:1246:A:H4'	1.80	0.46
3:d:71:GLY:N	54:1:674:G:H5''	2.31	0.46
13:n:35:LYS:HZ1	13:n:110:MET:HG3	1.80	0.46
16:q:105:PHE:HA	16:q:108:LEU:HD12	1.97	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:r:16:GLU:HA	17:r:98:ILE:HG23	1.98	0.46
31:F:6:SER:HB2	54:1:1031:G:H4'	1.97	0.46
33:H:111:ASP:O	33:H:114:LEU:N	2.48	0.46
33:H:129:PHE:H	33:H:129:PHE:HD1	1.63	0.46
34:I:73:ASN:HA	34:I:76:LYS:CG	2.44	0.46
34:I:75:TYR:CA	34:I:78:ALA:HB3	2.42	0.46
34:I:116:LEU:HB2	34:I:122:ILE:HD11	1.98	0.46
34:I:121:ALA:O	34:I:145:ARG:HB2	2.15	0.46
35:J:89:THR:O	35:J:89:THR:HG22	2.14	0.46
36:K:43:GLY:O	36:K:59:TYR:N	2.49	0.46
39:N:74:GLN:O	39:N:78:ILE:HG12	2.16	0.46
40:O:53:ILE:HD13	53:3:1060:U:H5''	1.97	0.46
42:Q:55:ARG:HH21	42:Q:55:ARG:HG2	1.81	0.46
52:a:65:LEU:HB2	52:a:159:GLY:HA2	1.97	0.46
53:3:181:A:H2'	53:3:182:A:C8	2.51	0.46
53:3:509:A:H8	53:3:509:A:O5'	1.98	0.46
53:3:706:A:H2'	53:3:707:U:O4'	2.15	0.46
53:3:860:A:H2'	53:3:861:G:H5'	1.97	0.46
53:3:1412:C:H2'	53:3:1413:A:O4'	2.15	0.46
53:3:1442:G:H2'	53:3:1443:C:H6	1.80	0.46
54:1:246:C:H2'	54:1:247:G:H5'	1.98	0.46
54:1:1243:C:H2'	54:1:1244:A:C5'	2.26	0.46
54:1:1322:A:C5	54:1:1323:C:C5	3.03	0.46
54:1:1932:A:H2'	54:1:1933:G:O4'	2.16	0.46
54:1:2000:C:O2'	54:1:2001:C:H5'	2.15	0.46
54:1:2475:C:C2'	54:1:2476:A:H5'	2.46	0.46
57:6:45:G:H5'	57:6:46:G:OP2	2.16	0.46
59:8:131:ASN:HD21	59:8:137:ARG:CZ	2.29	0.46
59:8:686:LYS:HG3	59:8:687:TYR:N	2.29	0.46
1:b:153:LEU:HD23	54:1:1799:G:H21	1.80	0.46
6:g:4:ILE:HG22	6:g:37:VAL:O	2.16	0.46
13:n:118:ARG:C	13:n:120:GLU:H	2.21	0.46
19:t:32:LEU:HD12	19:t:32:LEU:O	2.15	0.46
34:I:123:MET:HG2	34:I:127:ARG:C	2.40	0.46
37:L:63:VAL:O	37:L:67:ASN:HB2	2.16	0.46
40:O:52:LEU:CB	44:S:80:ARG:HE	2.18	0.46
47:V:3:LYS:HD2	47:V:6:THR:HG21	1.98	0.46
50:Y:78:LEU:O	50:Y:81:GLN:HB2	2.16	0.46
53:3:518:C:H2'	53:3:530:G:C2	2.50	0.46
53:3:1473:G:O2'	53:3:1474:U:H5'	2.16	0.46
54:1:1748:C:H2'	54:1:1749:A:H8	1.79	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2024:G:H2'	54:1:2025:C:H6	1.81	0.46
54:1:2228:G:H2'	54:1:2229:U:C6	2.50	0.46
54:1:2346:A:O4'	54:1:2383:G:H1'	2.16	0.46
1:b:177:SER:HB2	54:1:1799:G:O6	2.16	0.46
1:b:259:ASN:OD1	1:b:261:ARG:HB3	2.16	0.46
5:f:92:GLY:C	5:f:93:TYR:HD1	2.23	0.46
7:h:59:LEU:HB3	7:h:62:ARG:CB	2.42	0.46
9:j:102:GLU:HG3	9:j:119:PHE:CZ	2.50	0.46
10:k:2:ILE:HG23	10:k:6:THR:CG2	2.46	0.46
15:p:50:ARG:HH11	15:p:52:ARG:CD	2.29	0.46
15:p:108:ARG:HH21	15:p:108:ARG:HG3	1.80	0.46
18:s:43:ALA:O	18:s:46:LEU:HG	2.14	0.46
31:F:19:ARG:HH22	54:1:2755:C:H3'	1.79	0.46
32:G:33:ALA:HB2	32:G:39:ILE:HD12	1.98	0.46
35:J:60:GLN:O	35:J:60:GLN:HG2	2.16	0.46
37:L:49:LEU:HD13	37:L:123:LEU:CD1	2.45	0.46
53:3:124:C:O2'	53:3:125:U:H5'	2.16	0.46
53:3:317:U:H2'	53:3:318:G:H8	1.80	0.46
53:3:423:G:H2'	53:3:424:G:H5'	1.96	0.46
53:3:467:U:H3'	53:3:468:A:C5'	2.45	0.46
53:3:483:C:H2'	53:3:484:G:H8	1.81	0.46
53:3:824:G:H2'	53:3:825:A:H8	1.80	0.46
53:3:1005:A:H2'	53:3:1006:G:O4'	2.15	0.46
53:3:1109:C:H2'	53:3:1110:A:O4'	2.15	0.46
53:3:1324:A:C4'	53:3:1362:A:H4'	2.46	0.46
53:3:1429:A:H2'	53:3:1430:A:H8	1.80	0.46
54:1:779:U:H2'	54:1:780:G:O4'	2.16	0.46
54:1:1127:A:C2'	54:1:1128:G:H5''	2.45	0.46
54:1:1526:C:H2'	54:1:1527:G:O4'	2.15	0.46
54:1:1715:G:N2	54:1:1743:G:H2'	2.30	0.46
54:1:2656:U:H4'	59:8:146:ARG:NH1	2.30	0.46
59:8:99:VAL:HG12	59:8:103:MET:HE2	1.97	0.46
59:8:495:ARG:HA	59:8:495:ARG:NE	2.20	0.46
1:b:67:LYS:HZ1	1:b:69:ASN:HB3	1.81	0.46
1:b:75:ALA:HB2	1:b:95:TYR:CE1	2.51	0.46
2:c:25:THR:HG21	2:c:193:VAL:CG2	2.45	0.46
3:d:32:VAL:HG23	3:d:33:VAL:N	2.29	0.46
5:f:169:ARG:NE	5:f:169:ARG:CA	2.79	0.46
9:j:17:VAL:CG2	9:j:137:PRO:HB2	2.46	0.46
16:q:33:VAL:HG21	54:1:2019:A:H4'	1.98	0.46
17:r:80:ARG:NH1	54:1:571:U:H3'	2.31	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:x:15:ASN:OD1	54:1:380:G:O3'	2.34	0.46
28:C:20:TYR:HH	54:1:2348:U:H5'	1.81	0.46
32:G:185:ILE:HD13	32:G:212:TYR:OH	2.15	0.46
35:J:10:LEU:O	35:J:39:GLY:N	2.44	0.46
39:N:90:ASP:CG	39:N:91:GLU:H	2.23	0.46
39:N:112:ARG:HA	53:3:1369:C:OP2	2.16	0.46
41:P:91:GLY:O	41:P:94:SER:N	2.48	0.46
44:S:61:ASN:O	44:S:72:PHE:CG	2.69	0.46
49:X:31:ARG:HB3	49:X:56:HIS:NE2	2.31	0.46
53:3:70:U:H5''	53:3:71:A:OP1	2.15	0.46
53:3:70:U:H4'	53:3:71:A:C8	2.50	0.46
53:3:518:C:H5'	53:3:530:G:O4'	2.16	0.46
54:1:609:A:H2'	54:1:610:C:O4'	2.16	0.46
54:1:964:C:O2'	54:1:2273:A:H1'	2.15	0.46
54:1:1147:A:O2'	54:1:1148:U:H5'	2.15	0.46
54:1:2134:A:H62	54:1:2157:G:H5'	1.81	0.46
54:1:2671:G:H2'	54:1:2672:U:H6	1.80	0.46
55:2:88:C:H4'	55:2:89:U:OP1	2.16	0.46
1:b:259:ASN:C	1:b:261:ARG:N	2.74	0.46
2:c:68:PHE:O	2:c:72:GLY:N	2.44	0.46
4:e:141:ASP:C	4:e:143:ASP:H	2.23	0.46
6:g:1:MET:H2	6:g:20:ASN:C	2.24	0.46
8:i:4:VAL:HA	8:i:7:TYR:CE1	2.50	0.46
12:m:91:TYR:N	12:m:91:TYR:HD1	2.13	0.46
13:n:34:ILE:HG12	13:n:113:ILE:CG2	2.33	0.46
13:n:69:ARG:C	13:n:71:ARG:H	2.23	0.46
15:p:88:ARG:HB2	15:p:88:ARG:NH2	2.31	0.46
19:t:56:GLU:HG3	19:t:57:VAL:HG12	1.97	0.46
20:u:6:ARG:NH2	20:u:26:ASN:HB3	2.31	0.46
35:J:97:PRO:O	35:J:122:VAL:HG12	2.16	0.46
36:K:30:THR:C	36:K:33:GLU:H	2.24	0.46
36:K:49:TYR:CE2	53:3:674:G:H5''	2.50	0.46
37:L:86:VAL:HG13	37:L:87:PRO:HD2	1.98	0.46
40:O:53:ILE:HG22	40:O:61:ALA:O	2.15	0.46
40:O:65:TYR:OH	44:S:84:ARG:HG3	2.15	0.46
51:Z:56:ALA:O	51:Z:59:LEU:HB3	2.15	0.46
53:3:36:C:H2'	53:3:37:U:C4'	2.45	0.46
53:3:632:U:H3'	53:3:633:G:C5'	2.46	0.46
53:3:691:G:O2'	53:3:797:C:H4'	2.16	0.46
53:3:1346:A:O2'	53:3:1347:G:H4'	2.16	0.46
54:1:121:G:H4'	54:1:149:A:H5'	1.97	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:460:A:H2'	54:1:461:C:O4'	2.15	0.46
54:1:596:U:H2'	54:1:597:G:C8	2.50	0.46
54:1:1999:C:H1'	54:1:2687:U:O2'	2.15	0.46
54:1:2286:G:H21	54:1:2287:A:N6	2.14	0.46
54:1:2756:U:H4'	54:1:2757:A:OP1	2.15	0.46
59:8:147:MET:HA	59:8:176:GLU:CG	2.38	0.46
59:8:450:ASP:CB	59:8:455:GLN:HG2	2.46	0.46
59:8:564:GLY:O	59:8:568:GLY:N	2.45	0.46
59:8:642:LEU:HA	59:8:656:ALA:HB2	1.97	0.46
1:b:73:ILE:HD12	1:b:73:ILE:N	2.31	0.46
2:c:148:GLN:CD	2:c:148:GLN:N	2.74	0.46
5:f:53:PRO:HB3	5:f:60:GLY:CA	2.46	0.46
10:k:88:ASN:HB3	10:k:91:SER:O	2.15	0.46
11:l:48:ARG:NH1	11:l:48:ARG:CB	2.79	0.46
17:r:2:TYR:CD1	17:r:2:TYR:N	2.79	0.46
17:r:33:VAL:HG23	17:r:61:ALA:HB3	1.98	0.46
23:x:27:ARG:HG2	23:x:27:ARG:NH1	2.30	0.46
24:y:5:GLU:HB2	24:y:56:LEU:HD13	1.98	0.46
34:I:107:GLY:HA2	34:I:112:GLU:HG2	1.97	0.46
46:U:16:PHE:CZ	53:3:625:U:H4'	2.51	0.46
46:U:39:PHE:O	46:U:41:PRO:HD3	2.16	0.46
46:U:40:ASN:CB	46:U:43:ALA:HB2	2.46	0.46
46:U:48:GLU:HG3	46:U:49:GLY:N	2.30	0.46
47:V:21:VAL:HA	47:V:44:HIS:HA	1.97	0.46
47:V:23:ALA:C	47:V:24:ILE:HD13	2.40	0.46
49:X:64:GLU:HG3	49:X:65:MET:N	2.31	0.46
53:3:893:C:H2'	53:3:894:G:C8	2.51	0.46
53:3:912:C:O2'	53:3:913:A:H5'	2.16	0.46
53:3:1171:A:H2'	53:3:1172:C:C6	2.50	0.46
54:1:1182:G:H2'	54:1:1183:U:O4'	2.15	0.46
54:1:2801:G:H2'	54:1:2802:G:H8	1.80	0.46
59:8:92:HIS:CG	59:8:464:LEU:HD21	2.51	0.46
59:8:188:MET:HA	59:8:207:ILE:HD11	1.97	0.46
59:8:442:ASP:O	59:8:445:PHE:HB3	2.15	0.46
1:b:118:GLY:N	1:b:128:THR:O	2.48	0.46
2:c:62:LYS:HB2	2:c:63:PRO:HD3	1.98	0.46
4:e:71:LYS:HE3	54:1:2299:U:OP1	2.16	0.46
4:e:141:ASP:HB2	4:e:144:LYS:NZ	2.31	0.46
5:f:32:LEU:HB2	5:f:74:MET:HE3	1.98	0.46
16:q:57:ARG:HA	16:q:60:TRP:CE3	2.51	0.46
20:u:32:LYS:HE2	20:u:65:GLN:OE1	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:z:19:HIS:ND1	25:z:50:VAL:HG12	2.31	0.46
25:z:40:THR:CG2	25:z:41:PRO:HD2	2.46	0.46
25:z:51:SER:HA	25:z:54:VAL:CG2	2.46	0.46
32:G:175:ALA:HB1	32:G:180:ILE:HB	1.97	0.46
33:H:69:THR:CG2	33:H:70:ALA:N	2.79	0.46
33:H:107:LYS:HD2	33:H:110:LEU:CD1	2.38	0.46
36:K:74:LEU:HG	36:K:78:PHE:CE2	2.51	0.46
37:L:4:ARG:HG2	37:L:5:VAL:N	2.31	0.46
41:P:28:ASN:HB2	41:P:56:LYS:NZ	2.31	0.46
49:X:10:ILE:HA	49:X:37:SER:HB2	1.97	0.46
52:a:215:SER:HB3	52:a:220:ALA:O	2.15	0.46
53:3:540:G:C4	53:3:541:G:C8	3.04	0.46
53:3:1106:G:H2'	53:3:1107:C:H6	1.81	0.46
53:3:1225:A:H5'	53:3:1226:C:OP2	2.15	0.46
54:1:15:G:H2'	54:1:16:C:O4'	2.16	0.46
54:1:737:C:H2'	54:1:738:G:O4'	2.16	0.46
54:1:845:A:N7	54:1:847:U:H1'	2.30	0.46
54:1:878:A:H3'	54:1:879:G:C8	2.48	0.46
54:1:1077:A:C2'	54:1:1078:U:H5'	2.43	0.46
54:1:1193:G:O2'	54:1:1194:A:H5'	2.16	0.46
54:1:1656:C:C2	54:1:1657:U:C5	3.04	0.46
54:1:1913:A:OP1	59:8:507:LYS:CE	2.63	0.46
54:1:2392:A:C2'	54:1:2393:U:H5'	2.46	0.46
54:1:2392:A:H2'	54:1:2393:U:H5'	1.97	0.46
54:1:2816:G:O2'	54:1:2817:U:H5'	2.16	0.46
55:2:79:G:H2'	55:2:80:U:O4'	2.15	0.46
56:5:59:A:H2'	56:5:60:U:H5'	1.98	0.46
59:8:63:ILE:HG23	59:8:95:PHE:HE1	1.80	0.46
59:8:223:ILE:HD12	59:8:223:ILE:N	2.31	0.46
59:8:400:PRO:O	59:8:401:ASP:HB2	2.16	0.46
59:8:420:VAL:HG12	59:8:422:PRO:HD3	1.97	0.46
59:8:450:ASP:HB2	59:8:455:GLN:HG2	1.97	0.46
59:8:627:ASN:C	59:8:631:VAL:HG23	2.41	0.46
5:f:98:LYS:O	5:f:98:LYS:HG3	2.16	0.45
9:j:80:HIS:O	9:j:81:ILE:C	2.58	0.45
13:n:29:VAL:HG12	13:n:78:LYS:HD2	1.98	0.45
14:o:31:THR:HB	14:o:33:ARG:O	2.16	0.45
15:p:51:ASN:O	54:1:2845:U:H5''	2.16	0.45
16:q:6:GLY:HA2	54:1:583:G:OP1	2.15	0.45
35:J:100:GLU:O	35:J:102:THR:HG23	2.16	0.45
36:K:21:MET:HB3	36:K:25:TYR:CE2	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:K:61:LEU:C	36:K:61:LEU:HD12	2.41	0.45
37:L:89:GLU:H	37:L:89:GLU:CD	2.24	0.45
42:Q:41:PRO:HB3	42:Q:88:ASP:OD1	2.16	0.45
49:X:16:LYS:HE2	49:X:20:LYS:HD3	1.98	0.45
52:a:21:TYR:HB3	52:a:26:ALA:HA	1.98	0.45
52:a:193:LEU:CB	52:a:197:LYS:HE2	2.44	0.45
53:3:167:A:H2'	53:3:168:G:H5'	1.97	0.45
53:3:783:C:O2'	53:3:784:A:H5'	2.16	0.45
53:3:837:U:H2'	53:3:838:G:H8	1.81	0.45
53:3:1222:G:O2'	53:3:1223:C:H5'	2.16	0.45
54:1:184:C:H2'	54:1:185:G:H8	1.80	0.45
54:1:341:C:O2'	54:1:342:A:H5'	2.16	0.45
54:1:368:A:H2'	54:1:369:U:H5'	1.98	0.45
54:1:622:G:H2'	54:1:623:C:H6	1.80	0.45
54:1:855:G:H2'	54:1:856:G:C4'	2.46	0.45
54:1:1206:G:H2'	54:1:1207:C:C6	2.50	0.45
54:1:1772:A:H2'	54:1:1773:A:H4'	1.97	0.45
59:8:19:ILE:HD12	59:8:92:HIS:ND1	2.27	0.45
59:8:498:VAL:CG1	59:8:522:MET:H	2.29	0.45
1:b:229:HIS:CD2	1:b:246:PRO:HA	2.50	0.45
2:c:35:THR:HG22	2:c:49:GLN:O	2.16	0.45
3:d:36:ALA:O	3:d:39:ALA:N	2.46	0.45
4:e:84:ILE:HG13	54:1:2312:U:H5'	1.98	0.45
5:f:1:SER:O	5:f:5:LYS:HG2	2.16	0.45
9:j:114:LEU:HB3	9:j:118:MET:CE	2.47	0.45
11:l:95:LEU:HD22	11:l:100:ILE:HD13	1.98	0.45
12:m:75:GLU:HG2	12:m:76:LYS:N	2.29	0.45
13:n:79:LEU:O	13:n:81:ASN:N	2.49	0.45
14:o:40:ILE:HG12	14:o:47:VAL:CG1	2.39	0.45
16:q:18:LYS:O	16:q:18:LYS:HD3	2.16	0.45
19:t:5:GLU:HG3	24:y:21:LEU:CD1	2.46	0.45
19:t:63:VAL:HG21	19:t:80:TRP:CH2	2.50	0.45
24:y:2:LYS:CG	24:y:3:ALA:H	2.25	0.45
24:y:6:LEU:HD12	24:y:60:LYS:HD3	1.98	0.45
27:B:2:VAL:CG1	54:1:2016:U:H1'	2.44	0.45
32:G:178:LEU:HD22	32:G:180:ILE:HD11	1.99	0.45
36:K:15:SER:OG	36:K:58:HIS:HB2	2.16	0.45
37:L:129:ASN:CA	37:L:134:VAL:HG21	2.46	0.45
38:M:24:VAL:O	38:M:59:GLU:HA	2.16	0.45
39:N:37:TYR:HE1	53:3:1249:C:H5'	1.82	0.45
51:Z:51:ALA:HA	51:Z:54:ARG:HE	1.80	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:61:G:H2'	53:3:62:U:C6	2.51	0.45
53:3:592:G:H2'	53:3:593:U:H6	1.80	0.45
53:3:953:G:H2'	53:3:954:G:O4'	2.15	0.45
53:3:955:U:H2'	53:3:956:U:C6	2.51	0.45
53:3:1009:U:H2'	53:3:1010:U:C6	2.50	0.45
54:1:974:G:H1'	54:1:975:A:C8	2.51	0.45
54:1:1197:G:C4	54:1:1198:U:C5	3.04	0.45
54:1:2266:A:H4'	54:1:2267:A:N3	2.32	0.45
59:8:95:PHE:HE2	59:8:465:HIS:HB2	1.80	0.45
59:8:211:MET:HB3	59:8:214:LEU:HD12	1.97	0.45
59:8:349:VAL:CG2	59:8:397:LEU:HB3	2.46	0.45
59:8:564:GLY:O	59:8:566:LEU:N	2.43	0.45
1:b:73:ILE:CG2	1:b:95:TYR:HB3	2.46	0.45
1:b:244:VAL:HG12	1:b:250:GLN:HA	1.98	0.45
3:d:8:ALA:O	3:d:9:GLN:HB2	2.17	0.45
3:d:85:PHE:CD1	54:1:588:U:H1'	2.52	0.45
4:e:141:ASP:H	4:e:144:LYS:HD3	1.81	0.45
5:f:68:ARG:HD3	5:f:68:ARG:C	2.40	0.45
9:j:47:HIS:CE1	9:j:48:VAL:HG23	2.51	0.45
11:l:79:LEU:CD1	11:l:112:LEU:HD12	2.46	0.45
13:n:3:HIS:CD2	54:1:2820:A:H4'	2.51	0.45
24:y:28:LEU:O	24:y:32:ALA:N	2.41	0.45
32:G:50:ASN:O	32:G:54:ALA:N	2.41	0.45
32:G:125:PHE:HD1	32:G:125:PHE:H	1.64	0.45
38:M:37:ASN:HD22	38:M:37:ASN:C	2.24	0.45
42:Q:88:ASP:HB2	53:3:523:A:N1	2.32	0.45
42:Q:111:GLN:HB3	53:3:538:G:OP2	2.16	0.45
46:U:44:SER:HB2	46:U:46:LYS:HG2	1.98	0.45
50:Y:66:ILE:C	50:Y:68:LYS:H	2.23	0.45
53:3:417:G:H2'	53:3:418:C:H6	1.80	0.45
53:3:1053:G:O6	53:3:1200:C:H5'	2.16	0.45
53:3:1438:G:O2'	53:3:1439:G:H5'	2.17	0.45
54:1:188:G:H2'	54:1:189:G:H5'	1.99	0.45
54:1:1138:G:H2'	54:1:1139:G:O4'	2.17	0.45
54:1:1725:U:H2'	54:1:1726:C:H6	1.81	0.45
54:1:2825:G:H2'	54:1:2826:A:H5'	1.97	0.45
59:8:414:PRO:HB2	59:8:459:ALA:HB1	1.97	0.45
1:b:16:VAL:CG2	1:b:203:VAL:HG22	2.47	0.45
1:b:83:ASP:OD2	1:b:85:ASN:HB2	2.16	0.45
3:d:79:ARG:HD3	54:1:1258:U:H4'	1.98	0.45
4:e:93:GLU:HA	4:e:96:TRP:CD1	2.51	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:f:163:TYR:HB2	5:f:166:GLU:CG	2.46	0.45
6:g:4:ILE:HG22	6:g:37:VAL:H	1.81	0.45
6:g:132:PHE:CE2	6:g:142:VAL:HB	2.51	0.45
8:i:25:PRO:HA	59:8:647:SER:HB3	1.98	0.45
9:j:36:LEU:HD12	9:j:54:ILE:HD12	1.98	0.45
12:m:11:LYS:HE3	12:m:86:LYS:HB3	1.97	0.45
12:m:51:ARG:HD2	12:m:51:ARG:C	2.42	0.45
14:o:10:ARG:NH2	54:1:2294:G:H5''	2.28	0.45
18:s:49:LYS:HE2	54:1:491:G:O6	2.15	0.45
33:H:9:ILE:HG13	33:H:9:ILE:O	2.17	0.45
33:H:91:ALA:O	33:H:95:GLY:N	2.49	0.45
34:I:54:LEU:C	34:I:54:LEU:HD23	2.42	0.45
34:I:73:ASN:CA	34:I:76:LYS:HG2	2.44	0.45
34:I:96:ARG:O	34:I:99:ASN:HB3	2.16	0.45
34:I:169:TRP:CD1	34:I:170:LEU:HG	2.51	0.45
34:I:200:VAL:HG11	35:J:102:THR:O	2.16	0.45
38:M:95:MET:O	38:M:98:LEU:HG	2.17	0.45
41:P:51:PHE:HA	41:P:55:ARG:HD2	1.99	0.45
43:R:64:VAL:HB	43:R:65:GLU:H	1.65	0.45
43:R:91:ARG:HD3	54:1:888:C:C1'	2.47	0.45
47:V:59:GLU:HG2	47:V:78:VAL:HG22	1.97	0.45
53:3:167:A:C2'	53:3:168:G:C5'	2.93	0.45
53:3:292:G:N2	53:3:608:A:H61	2.10	0.45
53:3:327:A:O2'	53:3:328:C:H4'	2.16	0.45
53:3:951:G:C6	53:3:1231:G:C6	3.05	0.45
53:3:1411:C:O2'	53:3:1412:C:H5'	2.16	0.45
54:1:1052:C:H2'	54:1:1053:C:C5'	2.36	0.45
54:1:1060:U:H1'	54:1:1062:G:OP2	2.17	0.45
54:1:1409:U:H2'	54:1:1410:G:C8	2.52	0.45
54:1:1416:G:H2'	54:1:1417:C:C6	2.52	0.45
54:1:1551:A:H2'	54:1:1552:A:O4'	2.16	0.45
54:1:2037:A:H2'	54:1:2038:G:C8	2.51	0.45
54:1:2585:U:C5	56:5:76:A:H3'	2.51	0.45
54:1:2845:U:O2'	54:1:2846:G:H5'	2.15	0.45
59:8:33:TYR:HB3	59:8:72:TRP:HZ3	1.82	0.45
1:b:241:LYS:HD3	1:b:241:LYS:N	2.30	0.45
2:c:175:LEU:HD13	2:c:175:LEU:HA	1.86	0.45
3:d:21:ARG:HD3	3:d:106:LYS:HB3	1.98	0.45
4:e:95:MET:O	4:e:99:PHE:N	2.38	0.45
5:f:154:GLU:OE1	5:f:156:TYR:HB2	2.15	0.45
14:o:3:LYS:HZ1	55:2:46:A:H5''	1.79	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:u:39:ASN:CB	20:u:62:ALA:H	2.29	0.45
21:v:30:ILE:HD11	21:v:63:ILE:HD12	1.99	0.45
24:y:41:HIS:CE1	54:1:96:C:H4'	2.51	0.45
28:C:9:LYS:O	28:C:51:ALA:N	2.48	0.45
32:G:95:TRP:NE1	32:G:99:MET:HG2	2.32	0.45
37:L:48:THR:CG2	37:L:52:ARG:HD2	2.47	0.45
37:L:110:ARG:HB2	37:L:118:ARG:HB3	1.98	0.45
42:Q:20:VAL:O	42:Q:20:VAL:HG13	2.16	0.45
44:S:73:LEU:O	44:S:77:GLY:N	2.46	0.45
47:V:28:VAL:O	47:V:36:PHE:HA	2.16	0.45
48:W:21:ASP:OD2	48:W:23:LYS:HB3	2.15	0.45
50:Y:80:ALA:HB1	50:Y:84:LYS:NZ	2.31	0.45
52:a:189:LEU:HD21	52:a:224:VAL:HG12	1.98	0.45
53:3:211:G:H2'	53:3:212:G:H5'	1.98	0.45
53:3:1253:G:H2'	53:3:1254:A:C8	2.52	0.45
54:1:230:G:O2'	54:1:231:A:H5'	2.16	0.45
54:1:242:G:N2	54:1:255:A:OP2	2.42	0.45
54:1:818:G:N1	54:1:1187:G:H2'	2.31	0.45
54:1:819:A:C4	54:1:1189:A:C2	3.04	0.45
54:1:1461:C:H2'	54:1:1462:C:C6	2.52	0.45
54:1:1579:A:H2'	54:1:1580:A:C8	2.51	0.45
54:1:2391:G:H2'	54:1:2429:G:H21	1.81	0.45
54:1:2566:A:H4'	54:1:2567:G:H5''	1.97	0.45
56:5:5:G:O2'	56:5:6:A:H8	1.99	0.45
59:8:234:MET:HE2	59:8:238:LEU:HG	1.98	0.45
59:8:450:ASP:CG	59:8:453:SER:HB3	2.42	0.45
59:8:605:PHE:CZ	59:8:610:PRO:HB3	2.51	0.45
2:c:60:VAL:HG23	2:c:64:GLU:HG3	1.99	0.45
4:e:134:GLN:HE21	4:e:135:ILE:CG2	2.27	0.45
5:f:132:LEU:HD12	5:f:132:LEU:C	2.41	0.45
6:g:130:VAL:HB	6:g:132:PHE:HE2	1.80	0.45
7:h:1:MET:HE2	7:h:7:ASP:HA	1.98	0.45
13:n:49:GLU:HB2	13:n:50:PRO:HD3	1.99	0.45
14:o:14:ALA:O	14:o:18:LEU:HD13	2.16	0.45
19:t:5:GLU:HG3	24:y:21:LEU:HD13	1.98	0.45
20:u:28:LEU:HD12	20:u:32:LYS:HB2	1.98	0.45
24:y:60:LYS:O	24:y:62:GLY:N	2.43	0.45
32:G:177:ASN:C	32:G:178:LEU:HD12	2.41	0.45
33:H:42:LEU:HG	33:H:46:LEU:HD22	1.98	0.45
34:I:16:THR:HG22	34:I:17:ASP:N	2.32	0.45
35:J:159:SER:HB2	35:J:162:GLU:HG2	1.97	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:L:110:ARG:NH1	37:L:112:ASP:OD2	2.49	0.45
39:N:53:LEU:HD23	39:N:53:LEU:C	2.42	0.45
45:T:57:ARG:HG2	45:T:57:ARG:NH1	2.32	0.45
48:W:37:LYS:HB3	53:3:719:C:O2'	2.16	0.45
50:Y:8:LYS:HA	50:Y:11:ILE:HD11	1.99	0.45
50:Y:58:ASP:O	50:Y:61:ALA:HB3	2.16	0.45
52:a:174:THR:O	52:a:174:THR:HG23	2.16	0.45
53:3:891:U:O2'	53:3:892:A:H5'	2.17	0.45
53:3:1064:G:H4'	53:3:1065:U:OP1	2.16	0.45
54:1:141:G:H3'	54:1:142:A:O4'	2.16	0.45
54:1:811:U:O2	54:1:1250:G:H2'	2.17	0.45
54:1:935:C:H2'	54:1:936:A:C8	2.52	0.45
54:1:1188:U:O2'	54:1:1189:A:H5'	2.16	0.45
54:1:1317:G:H2'	54:1:1318:U:H6	1.80	0.45
54:1:2061:G:H5'	54:1:2503:A:C2	2.52	0.45
54:1:2186:G:H2'	54:1:2187:U:H6	1.82	0.45
54:1:2391:G:H2'	54:1:2391:G:N3	2.32	0.45
54:1:2544:G:H5''	54:1:2645:G:N2	2.31	0.45
54:1:2809:A:C8	54:1:2890:G:N2	2.85	0.45
54:1:2814:A:H2'	54:1:2815:C:H6	1.82	0.45
55:2:6:G:O2'	55:2:7:G:H5'	2.16	0.45
57:6:54:U:H3	57:6:58:A:H62	1.65	0.45
59:8:93:VAL:HB	59:8:122:GLN:HB3	1.99	0.45
59:8:119:VAL:HG22	59:8:121:PRO:HD3	1.97	0.45
59:8:134:LYS:HB3	59:8:259:ASN:HD21	1.81	0.45
59:8:191:ILE:HG23	59:8:193:TRP:CH2	2.50	0.45
1:b:11:GLY:C	1:b:13:ARG:H	2.24	0.45
2:c:180:VAL:O	2:c:180:VAL:HG12	2.17	0.45
8:i:37:PHE:CE2	8:i:41:PHE:HB2	2.51	0.45
11:l:90:VAL:HG13	11:l:95:LEU:HD21	1.98	0.45
13:n:54:LEU:HD23	13:n:54:LEU:C	2.42	0.45
16:q:77:LYS:HD2	16:q:116:LEU:CD1	2.47	0.45
32:G:132:GLU:O	32:G:136:ARG:HD3	2.17	0.45
34:I:90:LEU:O	34:I:93:LEU:HB2	2.16	0.45
35:J:85:LYS:HG2	35:J:94:PHE:HD1	1.81	0.45
37:L:14:ASP:HB3	37:L:17:PHE:O	2.17	0.45
37:L:119:LEU:O	37:L:119:LEU:HD23	2.17	0.45
39:N:35:GLU:O	39:N:39:GLY:HA3	2.16	0.45
40:O:12:ALA:O	40:O:70:HIS:N	2.48	0.45
44:S:63:CYS:O	44:S:67:GLY:HA2	2.16	0.45
49:X:76:THR:O	49:X:78:THR:N	2.50	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:a:163:TYR:HB2	52:a:171:ILE:CD1	2.44	0.45
52:a:208:TYR:CD2	52:a:209:ILE:HG13	2.52	0.45
53:3:69:G:H2'	53:3:69:G:N3	2.31	0.45
53:3:252:U:O2	53:3:253:A:C8	2.70	0.45
53:3:272:C:O2'	53:3:273:U:H5'	2.17	0.45
53:3:429:U:O4'	53:3:430:A:H8	2.00	0.45
53:3:915:A:C2'	53:3:916:U:H5'	2.47	0.45
53:3:1032:G:H3'	53:3:1032:G:N3	2.32	0.45
53:3:1073:U:H2'	53:3:1074:G:O4'	2.17	0.45
54:1:704:G:C2	54:1:726:G:C2	3.05	0.45
54:1:1639:C:O2'	54:1:1640:A:H5'	2.16	0.45
54:1:1704:C:H2'	54:1:1705:A:C8	2.52	0.45
54:1:1801:A:H5''	54:1:2203:U:C2'	2.39	0.45
54:1:1946:U:H2'	54:1:1947:C:H6	1.82	0.45
2:c:23:PRO:HB3	54:1:2682:A:C2	2.51	0.45
2:c:51:THR:OG1	2:c:52:THR:N	2.50	0.45
9:j:125:TYR:OH	9:j:132:HIS:NE2	2.48	0.45
10:k:30:ARG:HD2	54:1:2674:G:H4'	1.98	0.45
14:o:109:ALA:O	14:o:113:ALA:N	2.48	0.45
16:q:61:ILE:HG23	16:q:75:TYR:CE1	2.52	0.45
17:r:85:LYS:HE2	54:1:815:C:OP2	2.16	0.45
23:x:7:THR:HG21	23:x:9:LYS:NZ	2.31	0.45
33:H:23:ALA:HB1	33:H:27:GLU:HG2	1.99	0.45
39:N:98:ARG:HH22	53:3:1180:A:P	2.40	0.45
41:P:111:ASP:N	51:Z:3:ILE:HG23	2.32	0.45
43:R:93:GLY:C	43:R:109:LYS:HE2	2.41	0.45
47:V:66:LEU:HB2	47:V:70:LYS:HB2	1.95	0.45
53:3:602:A:O2'	53:3:603:U:H5'	2.17	0.45
53:3:1461:G:H2'	53:3:1462:C:H6	1.82	0.45
54:1:12:U:C2'	54:1:13:A:H5'	2.45	0.45
54:1:528:A:C2	54:1:2042:A:H2'	2.52	0.45
54:1:769:U:H6	54:1:769:U:O5'	2.00	0.45
54:1:949:G:H2'	54:1:950:G:H8	1.82	0.45
54:1:2455:G:H2'	54:1:2456:C:C6	2.52	0.45
59:8:226:ALA:O	59:8:233:LEU:HD23	2.17	0.45
59:8:627:ASN:O	59:8:631:VAL:N	2.47	0.45
3:d:117:ARG:HH12	11:l:2:ARG:HD3	1.82	0.45
5:f:136:ASP:OD2	5:f:138:GLN:HB3	2.17	0.45
7:h:58:THR:HG21	7:h:82:ILE:CG2	2.47	0.45
12:m:36:VAL:HG13	21:v:82:TYR:CE2	2.52	0.45
19:t:39:THR:O	19:t:43:ILE:HG13	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:t:59:ASN:HB3	54:1:1341:G:H1'	1.98	0.45
21:v:47:VAL:O	21:v:50:MET:N	2.46	0.45
33:H:137:VAL:HG12	33:H:141:MET:CE	2.44	0.45
41:P:22:ILE:HD12	41:P:85:VAL:HG12	1.99	0.45
43:R:74:MET:HA	43:R:77:LYS:HG2	1.99	0.45
53:3:230:G:O2'	53:3:231:U:H5'	2.17	0.45
53:3:622:A:C8	53:3:623:C:C6	3.05	0.45
53:3:694:A:H1'	57:6:38:A:O2'	2.16	0.45
53:3:768:A:C2'	53:3:769:G:H5'	2.47	0.45
53:3:1237:C:H2'	53:3:1336:C:H5	1.82	0.45
54:1:562:U:H2'	54:1:572:A:O4'	2.16	0.45
54:1:693:A:H2'	54:1:694:U:H6	1.82	0.45
54:1:1165:A:O2'	54:1:1166:G:H5'	2.17	0.45
54:1:2812:G:H2'	54:1:2813:A:C8	2.52	0.45
55:2:109:A:H2'	55:2:110:C:O4'	2.17	0.45
56:5:15:G:H2'	56:5:59:A:N1	2.32	0.45
56:5:19:G:C4	56:5:57:G:N2	2.85	0.45
1:b:174:ARG:HB2	1:b:174:ARG:HH11	1.82	0.45
3:d:146:VAL:CG1	3:d:185:LYS:HB2	2.47	0.45
4:e:74:ALA:C	4:e:76:PHE:N	2.75	0.45
5:f:2:ARG:HG3	5:f:2:ARG:NH2	2.32	0.45
6:g:47:PHE:C	6:g:49:ALA:H	2.25	0.45
7:h:41:LEU:HB3	54:1:1083:U:P	2.57	0.45
12:m:20:LEU:HD12	12:m:20:LEU:O	2.17	0.45
14:o:110:ALA:O	14:o:115:LEU:HB3	2.17	0.45
19:t:28:ASN:O	19:t:28:ASN:OD1	2.35	0.45
22:w:70:PRO:HD3	55:2:12:C:N4	2.32	0.45
33:H:141:MET:HE3	33:H:169:GLU:HG3	1.98	0.45
33:H:196:GLY:H	53:3:1057:G:H4'	1.82	0.45
46:U:20:VAL:HG21	46:U:32:PHE:CD2	2.52	0.45
49:X:33:TRP:O	49:X:35:ARG:N	2.50	0.45
50:Y:77:ASN:OD1	50:Y:78:LEU:N	2.49	0.45
52:a:44:VAL:HG21	52:a:175:ILE:HG21	1.98	0.45
53:3:1238:A:H2	53:3:1241:G:N3	2.15	0.45
53:3:1439:G:H2'	53:3:1440:U:O4'	2.17	0.45
54:1:172:A:H2'	54:1:173:A:H8	1.82	0.45
54:1:347:A:H2'	54:1:348:A:C8	2.52	0.45
54:1:586:A:N1	54:1:809:G:O2'	2.48	0.45
54:1:1841:U:H2'	54:1:1842:G:O4'	2.17	0.45
54:1:1945:G:H2'	54:1:1946:U:C6	2.52	0.45
54:1:2461:A:H2'	54:1:2462:C:H6	1.81	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:8:498:VAL:HG22	59:8:499:THR:N	2.32	0.45
59:8:614:GLU:O	59:8:687:TYR:HA	2.17	0.45
1:b:167:ASP:O	1:b:169:ALA:N	2.50	0.44
6:g:118:PRO:HD3	6:g:131:SER:H	1.82	0.44
10:k:24:VAL:HG13	10:k:33:ALA:HB2	1.99	0.44
10:k:40:LYS:HZ3	10:k:57:VAL:HG12	1.81	0.44
11:l:8:PRO:CD	54:1:1244:A:H4'	2.47	0.44
11:l:110:VAL:HG23	11:l:126:ARG:O	2.17	0.44
17:r:5:PHE:HA	17:r:39:LEU:HD13	1.99	0.44
17:r:21:ARG:HH21	17:r:21:ARG:HG2	1.82	0.44
25:z:50:VAL:O	25:z:54:VAL:HG22	2.17	0.44
26:A:16:CYS:SG	26:A:20:ASN:HB3	2.57	0.44
27:B:54:ILE:CG2	27:B:56:LYS:HG3	2.47	0.44
30:E:56:LEU:N	30:E:56:LEU:HD12	2.32	0.44
31:F:25:VAL:CG2	31:F:35:GLN:HB2	2.47	0.44
33:H:138:GLN:HA	33:H:141:MET:CE	2.47	0.44
36:K:52:ASN:C	36:K:54:LEU:H	2.25	0.44
36:K:71:ILE:O	36:K:74:LEU:HB3	2.17	0.44
39:N:94:ARG:HG3	39:N:97:LEU:HD23	1.98	0.44
45:T:6:ALA:O	45:T:10:ILE:N	2.43	0.44
45:T:63:ARG:NH1	45:T:87:ARG:HH11	2.09	0.44
46:U:8:ARG:NH1	53:3:374:A:H2	2.14	0.44
48:W:23:LYS:O	48:W:25:ILE:N	2.50	0.44
48:W:48:ALA:HA	48:W:51:GLN:HB3	2.00	0.44
50:Y:54:GLN:HA	50:Y:57:VAL:HG12	1.98	0.44
50:Y:74:HIS:HA	50:Y:77:ASN:ND2	2.32	0.44
53:3:49:U:O2	53:3:362:G:H1'	2.18	0.44
53:3:419:C:H2'	53:3:420:U:H5'	1.99	0.44
53:3:597:G:C8	53:3:598:U:C5	3.05	0.44
53:3:810:C:O2'	53:3:811:C:H5'	2.17	0.44
53:3:853:C:H2'	53:3:854:U:C6	2.52	0.44
53:3:945:G:H2'	53:3:945:G:N3	2.31	0.44
54:1:694:U:H3'	54:1:695:G:H5''	1.99	0.44
54:1:1416:G:H2'	54:1:1417:C:H6	1.81	0.44
54:1:1439:A:H3'	54:1:1440:U:H6	1.82	0.44
54:1:1565:C:O2'	54:1:1566:A:C8	2.70	0.44
54:1:1993:U:O2	54:1:1993:U:H2'	2.17	0.44
54:1:2043:C:C2	54:1:2044:C:C5	3.04	0.44
54:1:2697:G:H2'	54:1:2698:U:C6	2.51	0.44
59:8:151:PHE:HE1	59:8:172:ALA:HB2	1.82	0.44
59:8:151:PHE:O	59:8:155:VAL:N	2.48	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:8:323:LYS:HB2	59:8:335:PHE:HD2	1.81	0.44
59:8:618:LYS:NZ	59:8:685:LEU:HD22	2.32	0.44
1:b:131:MET:HE3	1:b:163:ILE:HD11	1.99	0.44
1:b:212:TRP:CD1	1:b:212:TRP:C	2.94	0.44
3:d:143:LEU:HB3	3:d:146:VAL:HG11	1.99	0.44
4:e:55:ASP:OD1	4:e:145:VAL:HG11	2.17	0.44
7:h:26:VAL:HG12	7:h:82:ILE:CG2	2.44	0.44
15:p:25:VAL:HG13	15:p:84:SER:O	2.17	0.44
16:q:57:ARG:HG2	16:q:57:ARG:HH11	1.81	0.44
19:t:51:PHE:O	19:t:52:GLU:HG2	2.17	0.44
25:z:5:LYS:HA	25:z:35:VAL:O	2.18	0.44
25:z:26:LEU:HD21	25:z:46:MET:HB2	2.00	0.44
26:A:64:PHE:HB2	49:X:8:PRO:HD2	1.98	0.44
32:G:185:ILE:HG22	32:G:199:ILE:HG21	1.98	0.44
34:I:67:LEU:O	34:I:70:GLN:HB2	2.17	0.44
34:I:75:TYR:CD1	34:I:78:ALA:HB3	2.51	0.44
36:K:47:LEU:HD13	36:K:51:ILE:CD1	2.39	0.44
37:L:41:ILE:HG21	37:L:115:MET:HG3	1.98	0.44
38:M:107:LYS:CG	38:M:120:LEU:HD21	2.48	0.44
41:P:98:ALA:O	41:P:102:ALA:N	2.50	0.44
41:P:124:LYS:HE3	53:3:780:A:OP1	2.16	0.44
42:Q:19:ASN:C	42:Q:21:PRO:HD3	2.42	0.44
46:U:6:LEU:HD11	46:U:39:PHE:HB2	1.98	0.44
46:U:46:LYS:HG3	46:U:47:GLU:N	2.25	0.44
53:3:315:A:N3	53:3:330:C:H1'	2.31	0.44
53:3:411:A:N3	53:3:412:A:N7	2.66	0.44
53:3:690:G:O2'	53:3:691:G:H5'	2.18	0.44
53:3:865:A:O2'	53:3:866:C:H5'	2.18	0.44
53:3:1097:C:H2'	53:3:1098:C:H6	1.80	0.44
54:1:663:G:H2'	54:1:664:G:H5''	1.99	0.44
54:1:755:U:H2'	54:1:756:A:C8	2.52	0.44
54:1:772:C:O2'	54:1:773:U:H5'	2.17	0.44
54:1:1562:U:H2'	54:1:1563:U:C6	2.52	0.44
54:1:1687:G:N2	54:1:1701:A:H62	2.13	0.44
54:1:2811:G:H2'	54:1:2812:G:C8	2.51	0.44
54:1:2812:G:H2'	54:1:2813:A:H8	1.80	0.44
55:2:56:G:H4'	55:2:57:A:H8	1.82	0.44
55:2:96:G:O2'	55:2:97:C:H5'	2.18	0.44
59:8:351:ASN:HD21	59:8:354:LYS:CB	2.29	0.44
59:8:353:VAL:O	59:8:353:VAL:HG22	2.18	0.44
1:b:156:SER:O	1:b:194:VAL:HG11	2.17	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:164:LEU:HD23	3:d:167:VAL:CG2	2.46	0.44
3:d:189:THR:H	3:d:192:ALA:HB3	1.82	0.44
5:f:53:PRO:HB3	5:f:60:GLY:HA3	1.99	0.44
5:f:64:ALA:HA	5:f:67:ALA:HB3	1.99	0.44
15:p:28:LYS:HB3	15:p:39:LEU:HD11	1.99	0.44
15:p:89:GLY:HA3	15:p:109:ILE:HD12	1.99	0.44
30:E:2:LYS:HG3	54:1:242:G:N7	2.32	0.44
32:G:65:LYS:HD2	32:G:89:PHE:HE2	1.82	0.44
33:H:19:SER:HB3	33:H:21:TRP:HE1	1.82	0.44
40:O:10:LEU:HB3	40:O:98:VAL:HG23	1.99	0.44
41:P:119:GLY:HA2	53:3:716:A:N3	2.32	0.44
43:R:113:LYS:N	43:R:114:PRO:HD2	2.32	0.44
47:V:30:HIS:CD2	47:V:33:TYR:HD2	2.35	0.44
49:X:49:ALA:HB1	49:X:56:HIS:CB	2.45	0.44
50:Y:56:ILE:O	50:Y:60:GLN:HG2	2.17	0.44
53:3:404:G:H2'	53:3:405:U:C6	2.52	0.44
53:3:769:G:H2'	53:3:770:C:C6	2.53	0.44
53:3:915:A:H2'	53:3:916:U:H5'	2.00	0.44
53:3:1054:C:H5'	53:3:1196:A:H2'	2.00	0.44
53:3:1158:C:H3'	53:3:1158:C:O2	2.17	0.44
53:3:1221:G:H2'	53:3:1222:G:C8	2.53	0.44
53:3:1314:C:H2'	53:3:1315:U:C6	2.52	0.44
54:1:566:U:O2'	54:1:567:U:H5'	2.18	0.44
54:1:570:G:H2'	54:1:2030:A:C8	2.52	0.44
54:1:705:A:N6	54:1:726:G:H1'	2.32	0.44
54:1:721:A:H2'	54:1:722:A:H8	1.81	0.44
54:1:779:U:O2'	54:1:780:G:H5'	2.17	0.44
54:1:1028:A:H2'	54:1:1029:A:H8	1.79	0.44
54:1:1097:U:H2'	54:1:1098:A:O4'	2.17	0.44
54:1:1187:G:HO2'	54:1:1188:U:H6	1.63	0.44
54:1:1676:A:H8	54:1:1676:A:O5'	2.00	0.44
54:1:2224:G:H4'	54:1:2226:C:C2	2.52	0.44
54:1:2331:G:H2'	54:1:2332:C:H6	1.76	0.44
59:8:228:GLU:OE1	59:8:255:ARG:HD3	2.17	0.44
1:b:16:VAL:HB	1:b:203:VAL:HG22	2.00	0.44
3:d:24:ASN:ND2	3:d:27:LEU:HB2	2.33	0.44
4:e:65:LEU:O	4:e:87:LYS:N	2.44	0.44
5:f:94:ARG:H	5:f:105:SER:HB2	1.82	0.44
6:g:117:LEU:HD13	6:g:121:VAL:HA	1.99	0.44
8:i:44:LYS:HD2	8:i:68:PHE:CD2	2.52	0.44
11:l:50:PHE:HZ	54:1:196:A:C2	2.35	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:n:59:SER:O	13:n:63:ARG:HG2	2.18	0.44
13:n:63:ARG:CZ	54:1:1454:C:H5'	2.47	0.44
32:G:19:THR:O	32:G:37:VAL:HA	2.18	0.44
32:G:100:LEU:HD11	32:G:160:LEU:HD11	1.98	0.44
33:H:130:ARG:NH2	33:H:133:MET:HE2	2.33	0.44
40:O:30:LYS:HG3	40:O:31:ARG:N	2.33	0.44
41:P:28:ASN:HB2	41:P:56:LYS:HZ2	1.82	0.44
42:Q:41:PRO:HB3	42:Q:88:ASP:CG	2.43	0.44
42:Q:107:LYS:H	42:Q:107:LYS:HG2	1.59	0.44
42:Q:113:ARG:NH2	42:Q:120:ARG:HG3	2.20	0.44
52:a:180:PHE:CD1	52:a:184:LYS:HB3	2.52	0.44
53:3:166:U:H2'	53:3:167:A:C8	2.52	0.44
53:3:193:C:H2'	53:3:194:C:H6	1.81	0.44
53:3:860:A:C2'	53:3:861:G:H5'	2.48	0.44
53:3:1023:U:H2'	53:3:1024:G:C8	2.53	0.44
53:3:1033:G:H2'	53:3:1034:G:C4'	2.47	0.44
53:3:1212:U:H5''	53:3:1213:A:C8	2.52	0.44
53:3:1429:A:H2'	53:3:1430:A:C8	2.53	0.44
53:3:1499:A:C2	53:3:1500:A:C8	3.06	0.44
53:3:1513:A:O2'	53:3:1514:G:H5'	2.17	0.44
54:1:11:C:H2'	54:1:12:U:H5''	1.99	0.44
54:1:357:C:H2'	54:1:358:U:C6	2.52	0.44
54:1:402:A:H2'	54:1:403:U:C5'	2.46	0.44
54:1:548:G:H2'	54:1:549:G:O4'	2.17	0.44
54:1:803:U:C2	54:1:804:A:C8	3.06	0.44
54:1:831:G:O2'	54:1:832:U:H5'	2.17	0.44
54:1:856:G:H2'	54:1:857:G:C8	2.53	0.44
54:1:859:G:O2'	54:1:860:U:C6	2.65	0.44
54:1:924:G:H2'	54:1:925:A:H8	1.82	0.44
54:1:1166:G:O2'	54:1:1167:C:H5'	2.17	0.44
54:1:1893:C:H2'	54:1:1894:C:C5'	2.47	0.44
54:1:2485:G:O2'	54:1:2486:C:H5'	2.17	0.44
54:1:2849:U:H3	54:1:2867:G:H5''	1.83	0.44
58:4:22:A:H1'	59:8:511:GLY:CA	2.47	0.44
59:8:364:VAL:CG1	59:8:371:ARG:HB3	2.47	0.44
2:c:32:ASN:HD22	2:c:52:THR:HB	1.81	0.44
4:e:42:ALA:HB1	4:e:49:LEU:HB2	1.98	0.44
15:p:59:THR:CG2	15:p:72:VAL:HG12	2.44	0.44
18:s:42:LYS:HB2	54:1:2010:G:H5''	1.98	0.44
20:u:13:LEU:C	20:u:13:LEU:HD23	2.43	0.44
32:G:15:PHE:O	32:G:40:ILE:N	2.49	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:J:160:VAL:HG13	35:J:161:GLU:N	2.32	0.44
39:N:21:LYS:O	39:N:61:ASP:N	2.50	0.44
41:P:35:ASP:OD2	41:P:37:GLN:HB2	2.18	0.44
41:P:122:PRO:CB	51:Z:33:ARG:HA	2.46	0.44
42:Q:23:LEU:O	42:Q:26:CYS:HB3	2.17	0.44
42:Q:109:ARG:HB3	53:3:538:G:OP1	2.18	0.44
42:Q:109:ARG:NH2	42:Q:113:ARG:HA	2.32	0.44
43:R:21:ILE:HB	43:R:24:VAL:CG1	2.48	0.44
46:U:3:THR:HG23	46:U:22:ALA:HB3	1.99	0.44
46:U:72:ALA:O	46:U:73:ALA:C	2.60	0.44
49:X:27:LYS:HG2	49:X:28:LYS:H	1.83	0.44
49:X:51:HIS:CE1	53:3:1220:G:H1'	2.52	0.44
49:X:69:LYS:O	49:X:72:GLU:HG2	2.18	0.44
50:Y:59:ARG:HH12	53:3:177:G:H5'	1.81	0.44
51:Z:28:LEU:HD23	51:Z:28:LEU:C	2.42	0.44
51:Z:43:GLU:O	51:Z:47:ALA:N	2.39	0.44
52:a:69:THR:C	52:a:176:GLY:HA2	2.42	0.44
53:3:560:A:H5'	53:3:566:G:N2	2.32	0.44
53:3:626:G:H2'	53:3:627:G:C8	2.53	0.44
53:3:855:U:H2'	53:3:856:C:H6	1.81	0.44
53:3:973:G:H3'	53:3:974:A:H8	1.82	0.44
53:3:1400:C:H5'	58:4:22:A:N6	2.33	0.44
53:3:1466:C:H2'	53:3:1467:C:O4'	2.16	0.44
54:1:67:U:H2'	54:1:68:G:H8	1.83	0.44
54:1:146:A:H2'	54:1:147:C:H6	1.81	0.44
54:1:553:G:H2'	54:1:554:U:O4'	2.17	0.44
54:1:792:A:H2'	54:1:2440:C:O2	2.18	0.44
54:1:804:A:H5''	54:1:805:G:OP1	2.17	0.44
54:1:1067:A:H3'	54:1:1068:G:H5''	2.00	0.44
54:1:1857:G:H2'	54:1:1884:G:H22	1.82	0.44
54:1:1934:C:O2'	54:1:1935:G:H5'	2.17	0.44
54:1:2020:A:O2'	54:1:2021:C:H5'	2.17	0.44
54:1:2162:G:H5''	54:1:2171:A:N7	2.33	0.44
54:1:2179:C:H2'	54:1:2180:U:C5	2.53	0.44
54:1:2342:C:H2'	54:1:2343:U:O4'	2.17	0.44
54:1:2489:U:C4	54:1:2490:G:C6	3.05	0.44
54:1:2555:U:H2'	54:1:2556:C:C5'	2.47	0.44
55:2:88:C:H5''	55:2:89:U:OP1	2.17	0.44
59:8:252:LEU:O	59:8:255:ARG:HG2	2.16	0.44
1:b:67:LYS:HG3	1:b:69:ASN:HB3	1.99	0.44
33:H:192:TYR:N	33:H:192:TYR:CD1	2.85	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:I:30:LYS:HE2	53:3:413:G:C6	2.53	0.44
34:I:31:CYS:C	34:I:32:LYS:HG2	2.42	0.44
34:I:32:LYS:HB2	34:I:35:GLN:HG3	2.00	0.44
34:I:32:LYS:NZ	34:I:35:GLN:HG3	2.32	0.44
35:J:156:ARG:NH1	38:M:98:LEU:O	2.51	0.44
38:M:13:ILE:HG23	38:M:62:LEU:HD21	1.99	0.44
38:M:46:GLU:CG	38:M:63:LYS:HG2	2.37	0.44
39:N:30:ASN:C	39:N:32:ARG:H	2.26	0.44
39:N:83:THR:O	39:N:87:MET:HE3	2.17	0.44
39:N:123:ARG:HD2	39:N:124:PRO:CD	2.48	0.44
41:P:109:ILE:HG22	41:P:110:THR:N	2.33	0.44
46:U:4:ILE:HG12	46:U:21:VAL:HA	1.98	0.44
47:V:16:MET:HB3	47:V:19:SER:O	2.17	0.44
48:W:59:LYS:HD3	53:3:734:G:O2'	2.18	0.44
53:3:53:A:H2'	53:3:54:C:H4'	1.99	0.44
53:3:861:G:H2'	53:3:862:C:H6	1.82	0.44
53:3:868:C:O4'	53:3:873:A:C2	2.70	0.44
53:3:932:C:H2'	53:3:933:G:C8	2.53	0.44
53:3:1316:G:N2	53:3:1318:A:H3'	2.32	0.44
54:1:1146:C:H2'	54:1:1147:A:C8	2.51	0.44
54:1:1739:A:H2'	54:1:1740:G:O4'	2.18	0.44
54:1:2121:G:O2'	54:1:2122:U:H5'	2.18	0.44
54:1:2617:U:H2'	54:1:2618:G:O4'	2.18	0.44
59:8:174:GLY:HA3	59:8:178:HIS:HB3	2.00	0.44
59:8:184:ASP:H	59:8:190:ALA:HA	1.83	0.44
59:8:644:GLY:H	59:8:655:HIS:HB2	1.83	0.44
1:b:119:VAL:HG23	6:g:91:PHE:CE2	2.53	0.44
3:d:5:LEU:N	3:d:5:LEU:HD12	2.32	0.44
3:d:63:LYS:HD2	54:1:2444:G:P	2.58	0.44
3:d:146:VAL:HG12	3:d:185:LYS:HB2	2.00	0.44
4:e:45:ASP:OD1	4:e:47:LYS:HG2	2.17	0.44
4:e:122:ASP:CG	4:e:123:GLY:N	2.75	0.44
5:f:122:ALA:HB2	5:f:132:LEU:HB3	1.99	0.44
7:h:67:THR:C	7:h:69:PHE:N	2.75	0.44
12:m:52:ALA:O	12:m:119:LEU:HD23	2.17	0.44
12:m:57:VAL:CG1	12:m:105:MET:HE2	2.42	0.44
15:p:24:THR:HB	15:p:87:ARG:HB2	2.00	0.44
18:s:44:ALA:HA	18:s:47:VAL:CG1	2.47	0.44
20:u:64:ILE:HG13	20:u:65:GLN:N	2.33	0.44
22:w:13:GLU:HG3	22:w:14:ALA:O	2.18	0.44
23:x:70:LEU:HD22	23:x:75:GLU:HG3	1.99	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:D:29:GLN:O	29:D:32:ALA:HB3	2.18	0.44
32:G:52:ALA:HB1	32:G:183:PHE:CD1	2.53	0.44
33:H:39:ARG:CG	33:H:54:ILE:HD11	2.47	0.44
34:I:7:LYS:O	34:I:20:LEU:HB3	2.18	0.44
34:I:72:ARG:C	34:I:76:LYS:HG2	2.43	0.44
35:J:110:MET:O	35:J:113:VAL:HG12	2.16	0.44
37:L:4:ARG:HG2	37:L:5:VAL:H	1.82	0.44
37:L:12:LEU:HD12	37:L:12:LEU:N	2.33	0.44
38:M:116:ARG:HG3	38:M:116:ARG:HH11	1.82	0.44
43:R:14:ALA:HB3	43:R:40:GLU:HA	2.00	0.44
44:S:65:GLN:HG2	44:S:78:LEU:HB3	2.00	0.44
45:T:44:GLU:HG3	45:T:45:HIS:ND1	2.33	0.44
49:X:49:ALA:HA	49:X:57:VAL:O	2.17	0.44
49:X:62:THR:HG22	49:X:63:ASP:N	2.33	0.44
50:Y:4:LYS:O	50:Y:7:LYS:HG3	2.18	0.44
53:3:509:A:H2'	53:3:510:A:C8	2.53	0.44
53:3:852:G:H2'	53:3:853:C:H6	1.83	0.44
53:3:925:G:C2	53:3:927:G:C8	3.05	0.44
53:3:1508:A:H2'	53:3:1509:C:H6	1.83	0.44
54:1:69:C:H2'	54:1:70:G:C8	2.52	0.44
54:1:839:U:H2'	54:1:840:C:H6	1.82	0.44
54:1:1175:A:H3'	54:1:1176:U:H5'	2.00	0.44
54:1:1538:G:O2'	54:1:1539:U:H5'	2.17	0.44
54:1:1948:G:O2'	54:1:1949:G:H5'	2.18	0.44
54:1:2250:G:H8	54:1:2250:G:O5'	2.01	0.44
54:1:2649:C:H2'	54:1:2650:U:H6	1.82	0.44
54:1:2715:C:H2'	54:1:2716:C:O4'	2.17	0.44
59:8:11:ARG:HB2	59:8:84:ILE:HG12	1.98	0.44
59:8:312:SER:HB2	59:8:315:GLU:HG2	1.99	0.44
59:8:498:VAL:CG2	59:8:501:VAL:HG13	2.48	0.44
2:c:53:GLY:HA3	2:c:77:ARG:HD2	1.99	0.44
4:e:39:VAL:O	4:e:41:GLU:N	2.51	0.44
5:f:97:VAL:HG21	5:f:122:ALA:O	2.18	0.44
11:l:16:GLY:HA2	54:1:662:G:O3'	2.17	0.44
14:o:94:ARG:NH2	14:o:94:ARG:CB	2.79	0.44
16:q:108:LEU:HA	17:r:48:LYS:HD2	1.99	0.44
18:s:59:GLU:OE2	18:s:60:HIS:HB2	2.18	0.44
19:t:58:VAL:CG1	19:t:83:ALA:HB1	2.48	0.44
19:t:80:TRP:HZ3	19:t:82:LYS:HB3	1.83	0.44
20:u:25:LYS:C	20:u:25:LYS:HD3	2.43	0.44
22:w:12:SER:HB2	54:1:2262:U:C5	2.49	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:w:62:LYS:HB2	22:w:79:GLU:CG	2.48	0.44
38:M:5:PRO:O	38:M:9:MET:N	2.48	0.44
39:N:119:LYS:H	39:N:122:ARG:HB3	1.83	0.44
44:S:2:LYS:O	44:S:3:GLN:C	2.60	0.44
45:T:49:HIS:ND1	53:3:764:C:H5''	2.32	0.44
45:T:78:THR:O	45:T:81:ILE:HG12	2.17	0.44
48:W:53:GLN:HG2	48:W:56:ARG:HH21	1.82	0.44
53:3:112:G:H22	53:3:315:A:H2	1.64	0.44
53:3:529:G:O4'	53:3:533:A:C2	2.71	0.44
53:3:768:A:H2'	53:3:769:G:H5'	2.00	0.44
53:3:1399:C:H1'	53:3:1401:G:C8	2.53	0.44
53:3:1405:G:H2'	53:3:1406:U:H6	1.82	0.44
54:1:195:A:O5'	54:1:196:A:H4'	2.18	0.44
54:1:234:U:O2'	54:1:235:U:H5'	2.18	0.44
54:1:1837:C:H2'	54:1:1899:A:H61	1.83	0.44
54:1:2024:G:H2'	54:1:2025:C:C6	2.52	0.44
54:1:2137:U:H2'	54:1:2138:G:C8	2.53	0.44
54:1:2464:G:H2'	54:1:2465:C:C6	2.52	0.44
54:1:2494:G:O2'	54:1:2495:G:H5'	2.17	0.44
54:1:2565:A:C2'	54:1:2566:A:H5'	2.48	0.44
54:1:2825:G:H3'	54:1:2826:A:H8	1.82	0.44
59:8:30:ILE:CG2	59:8:279:LEU:HD21	2.47	0.44
6:g:103:VAL:O	6:g:107:GLY:N	2.51	0.44
6:g:125:THR:O	6:g:146:VAL:HB	2.18	0.44
9:j:32:LEU:O	9:j:36:LEU:HD13	2.17	0.44
14:o:67:ASN:OD1	14:o:69:ASP:HB3	2.18	0.44
17:r:21:ARG:HD2	17:r:93:PHE:CB	2.46	0.44
17:r:57:GLY:HA2	17:r:102:SER:O	2.18	0.44
19:t:80:TRP:CZ3	19:t:82:LYS:HB3	2.53	0.44
21:v:42:LEU:HD12	21:v:42:LEU:N	2.33	0.44
23:x:17:ARG:HD3	23:x:17:ARG:HA	1.87	0.44
24:y:13:GLU:OE2	24:y:57:LEU:HA	2.18	0.44
27:B:8:THR:CG2	54:1:2020:A:H5'	2.47	0.44
32:G:138:ARG:O	32:G:142:LYS:N	2.41	0.44
33:H:39:ARG:HD3	44:S:89:ARG:NH2	2.33	0.44
33:H:129:PHE:CD1	33:H:129:PHE:N	2.85	0.44
39:N:82:ILE:HA	39:N:85:ALA:HB3	2.00	0.44
41:P:66:ALA:O	41:P:70:ALA:N	2.35	0.44
44:S:33:VAL:O	44:S:33:VAL:HG23	2.18	0.44
46:U:78:VAL:O	46:U:78:VAL:HG13	2.17	0.44
49:X:73:PHE:O	49:X:75:PRO:HD3	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:429:U:H4'	53:3:430:A:C5'	2.48	0.44
53:3:484:G:C6	53:3:486:U:C1'	3.01	0.44
53:3:1054:C:OP2	53:3:1197:A:OP2	2.36	0.44
53:3:1171:A:H2'	53:3:1172:C:H6	1.82	0.44
54:1:147:C:O2'	54:1:148:U:H5'	2.18	0.44
54:1:575:A:C2'	54:1:576:U:H5'	2.47	0.44
54:1:631:A:H2'	54:1:632:A:O4'	2.18	0.44
54:1:1365:A:N3	54:1:1365:A:H2'	2.33	0.44
54:1:2721:A:H2'	54:1:2722:G:O4'	2.17	0.44
59:8:138:ILE:HG12	59:8:286:LEU:HD13	2.00	0.44
59:8:337:ARG:HH12	59:8:380:GLY:C	2.26	0.44
59:8:400:PRO:HG2	59:8:402:ALA:HB2	1.99	0.44
59:8:599:ILE:HG13	59:8:600:ALA:N	2.33	0.44
59:8:698:VAL:O	59:8:698:VAL:HG22	2.17	0.44
1:b:181:ARG:HE	1:b:265:PHE:CB	2.31	0.43
4:e:99:PHE:O	4:e:103:ILE:HG12	2.18	0.43
5:f:102:ILE:HG12	5:f:116:LEU:HD11	2.00	0.43
8:i:12:VAL:HG11	8:i:19:PRO:HB3	2.00	0.43
9:j:99:ARG:CZ	9:j:102:GLU:OE1	2.66	0.43
10:k:17:ARG:O	10:k:18:ARG:HD3	2.17	0.43
10:k:105:ARG:HG2	10:k:105:ARG:HH11	1.83	0.43
14:o:34:HIS:HA	14:o:53:THR:OG1	2.18	0.43
15:p:83:ILE:O	15:p:84:SER:C	2.61	0.43
16:q:2:ARG:HD3	54:1:446:G:P	2.57	0.43
21:v:7:GLU:O	21:v:41:GLU:N	2.48	0.43
21:v:40:ILE:HG22	21:v:41:GLU:H	1.82	0.43
23:x:47:THR:O	23:x:48:LEU:HD23	2.18	0.43
33:H:76:ILE:HA	33:H:82:ASP:HB2	1.99	0.43
35:J:80:LEU:O	35:J:97:PRO:HB3	2.18	0.43
36:K:12:PRO:HB3	36:K:44:ARG:HH21	1.83	0.43
36:K:12:PRO:HG3	36:K:57:ALA:HB2	2.00	0.43
38:M:26:MET:HA	38:M:27:PRO:HD3	1.87	0.43
40:O:20:GLN:HA	40:O:23:ALA:HB3	1.99	0.43
42:Q:38:THR:CG2	42:Q:50:LYS:HD2	2.48	0.43
43:R:69:ARG:O	43:R:73:SER:N	2.44	0.43
47:V:43:LEU:HD13	47:V:72:TRP:CG	2.53	0.43
48:W:58:ILE:O	48:W:62:ARG:N	2.49	0.43
49:X:17:LYS:CD	49:X:30:LEU:HD22	2.47	0.43
50:Y:67:HIS:C	50:Y:69:ASN:H	2.26	0.43
50:Y:73:ARG:C	50:Y:77:ASN:ND2	2.76	0.43
53:3:412:A:N1	53:3:414:A:H1'	2.32	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:1404:C:H2'	53:3:1405:G:H8	1.81	0.43
54:1:274:C:H2'	54:1:275:C:O4'	2.17	0.43
54:1:551:G:H2'	54:1:552:U:C6	2.52	0.43
54:1:551:G:O2'	54:1:552:U:H5'	2.18	0.43
54:1:1150:C:H2'	54:1:1151:A:H8	1.83	0.43
54:1:1176:U:H2'	54:1:1177:G:C8	2.53	0.43
54:1:1437:C:H2'	54:1:1438:U:H6	1.83	0.43
54:1:2312:U:H2'	54:1:2313:C:H5'	2.00	0.43
54:1:2405:G:H2'	54:1:2411:A:H62	1.83	0.43
54:1:2772:C:H2'	54:1:2773:C:H6	1.83	0.43
54:1:2801:G:H2'	54:1:2802:G:C8	2.53	0.43
55:2:66:A:N6	55:2:107:G:H2'	2.22	0.43
59:8:251:ALA:HB1	59:8:255:ARG:HH21	1.82	0.43
59:8:618:LYS:HB3	59:8:683:GLU:HG2	2.00	0.43
1:b:77:VAL:HG21	1:b:109:LEU:HD21	2.00	0.43
3:d:23:PHE:CD1	3:d:111:GLU:HG2	2.53	0.43
4:e:65:LEU:HD12	55:2:41:G:H21	1.83	0.43
4:e:147:ARG:CG	4:e:149:ARG:HH12	2.28	0.43
5:f:23:ILE:HG21	5:f:71:LEU:HD21	2.00	0.43
7:h:37:LYS:O	7:h:41:LEU:HB2	2.18	0.43
21:v:75:GLN:N	21:v:90:ASP:O	2.49	0.43
33:H:130:ARG:NH1	33:H:133:MET:HB3	2.32	0.43
34:I:96:ARG:NE	34:I:133:SER:HA	2.25	0.43
36:K:3:HIS:HB2	36:K:92:THR:HA	1.99	0.43
40:O:42:LEU:HA	40:O:43:PRO:HD2	1.84	0.43
40:O:44:THR:HG22	40:O:45:ARG:N	2.32	0.43
40:O:62:ARG:HH11	53:3:1367:C:H5'	1.83	0.43
42:Q:55:ARG:HD3	42:Q:55:ARG:N	2.33	0.43
42:Q:98:ARG:HD3	42:Q:104:SER:O	2.18	0.43
42:Q:101:LEU:HD22	42:Q:101:LEU:N	2.33	0.43
43:R:106:ARG:HB3	53:3:947:G:OP1	2.17	0.43
44:S:27:LYS:C	44:S:31:SER:HB2	2.43	0.43
45:T:11:VAL:HG13	45:T:15:GLY:HA3	2.00	0.43
46:U:6:LEU:CD1	46:U:17:TYR:HB3	2.45	0.43
46:U:36:VAL:HG22	46:U:53:ASP:CB	2.48	0.43
50:Y:81:GLN:O	50:Y:85:LEU:HG	2.18	0.43
53:3:101:A:H2'	53:3:102:G:H8	1.82	0.43
53:3:349:A:H2'	53:3:350:G:H8	1.83	0.43
53:3:499:A:N3	53:3:500:G:H1'	2.33	0.43
53:3:556:C:O2'	53:3:557:G:H5'	2.17	0.43
53:3:902:G:H2'	53:3:903:G:H8	1.83	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:1071:C:H2'	53:3:1072:G:C8	2.53	0.43
53:3:1165:U:C2'	53:3:1166:G:H5'	2.48	0.43
53:3:1304:G:H2'	53:3:1305:G:C1'	2.48	0.43
54:1:571:U:H1'	54:1:573:U:H6	1.83	0.43
54:1:1167:C:H2'	54:1:1168:G:C8	2.53	0.43
54:1:1301:A:H2'	54:1:1301:A:N3	2.32	0.43
54:1:1499:C:H2'	54:1:1500:G:H8	1.83	0.43
54:1:1601:G:C2'	54:1:1602:U:H5'	2.48	0.43
54:1:2364:C:H2'	54:1:2365:G:O4'	2.18	0.43
54:1:2457:U:C2'	54:1:2458:G:H5'	2.48	0.43
54:1:2460:U:H2'	54:1:2461:A:C8	2.52	0.43
59:8:141:VAL:HG21	59:8:154:VAL:HG11	2.01	0.43
59:8:317:PHE:HB3	59:8:398:CYS:HA	1.99	0.43
1:b:70:LYS:HD3	1:b:95:TYR:CD2	2.52	0.43
2:c:190:LYS:CG	2:c:191:GLY:N	2.81	0.43
4:e:120:SER:HB3	4:e:128:SER:O	2.19	0.43
15:p:83:ILE:O	15:p:83:ILE:HG22	2.18	0.43
16:q:40:LYS:HG3	16:q:44:TYR:CD2	2.54	0.43
23:x:2:ARG:NH1	54:1:1365:A:OP1	2.49	0.43
26:A:1:MET:HE2	55:2:43:C:O3'	2.18	0.43
26:A:13:THR:HA	26:A:23:LYS:HA	2.00	0.43
30:E:36:ALA:O	30:E:40:LYS:HG2	2.18	0.43
31:F:2:LYS:HB3	31:F:4:ARG:HH12	1.84	0.43
34:I:74:TYR:O	34:I:77:GLU:HB3	2.18	0.43
35:J:95:MET:N	35:J:95:MET:SD	2.91	0.43
35:J:111:ARG:HH11	35:J:111:ARG:HG3	1.83	0.43
36:K:17:GLN:OE1	36:K:17:GLN:HA	2.18	0.43
37:L:36:SER:O	37:L:39:GLU:CG	2.67	0.43
38:M:45:ILE:HG22	38:M:46:GLU:H	1.83	0.43
40:O:71:LEU:HD12	40:O:71:LEU:C	2.43	0.43
41:P:97:ARG:HH11	41:P:97:ARG:HG3	1.84	0.43
42:Q:13:ARG:HH22	53:3:302:G:C4'	2.31	0.43
42:Q:83:GLY:HA3	53:3:552:U:O3'	2.18	0.43
42:Q:114:SER:HB2	53:3:502:A:OP1	2.18	0.43
44:S:38:GLU:O	44:S:41:TRP:HB3	2.19	0.43
49:X:17:LYS:HA	49:X:20:LYS:NZ	2.34	0.43
53:3:696:A:H2'	53:3:697:U:H6	1.83	0.43
53:3:864:A:H2	53:3:917:G:N3	2.16	0.43
53:3:967:C:O5'	53:3:967:C:H6	2.01	0.43
54:1:194:G:C2	54:1:202:U:H1'	2.52	0.43
54:1:473:G:C2'	54:1:474:G:H5'	2.49	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:820:A:O2'	54:1:821:A:H5'	2.17	0.43
54:1:1461:C:H2'	54:1:1462:C:H6	1.83	0.43
54:1:1822:C:O2'	54:1:1823:G:H5'	2.17	0.43
54:1:2447:G:C8	54:1:2501:C:C6	3.06	0.43
54:1:2661:G:C5'	59:8:19:ILE:HD13	2.47	0.43
54:1:2898:U:H2'	54:1:2899:A:C8	2.53	0.43
59:8:537:ILE:HG13	59:8:577:ARG:HG3	1.99	0.43
59:8:546:PRO:HB2	59:8:549:TYR:HD2	1.80	0.43
59:8:583:TYR:N	59:8:583:TYR:CD1	2.86	0.43
1:b:149:LYS:HD3	54:1:2204:G:H4'	2.00	0.43
4:e:144:LYS:N	4:e:144:LYS:HD2	2.33	0.43
4:e:172:PHE:O	4:e:173:ASP:C	2.61	0.43
5:f:140:ILE:HG13	5:f:141:GLY:N	2.33	0.43
6:g:6:LEU:HB2	6:g:35:LYS:C	2.44	0.43
11:l:111:ILE:HD12	11:l:111:ILE:H	1.83	0.43
13:n:23:ASN:ND2	54:1:1277:G:H1'	2.33	0.43
16:q:81:GLY:O	16:q:85:ALA:N	2.51	0.43
18:s:86:MET:HE3	18:s:87:PRO:HD2	2.01	0.43
25:z:4:ILE:N	25:z:37:ARG:O	2.49	0.43
34:I:52:VAL:HG22	34:I:198:LEU:HD21	2.01	0.43
34:I:98:ASP:OD2	34:I:114:ARG:HD2	2.18	0.43
34:I:137:SER:HB3	34:I:138:PRO:CD	2.49	0.43
35:J:148:SER:O	35:J:152:VAL:HG23	2.18	0.43
35:J:155:LYS:HE3	38:M:70:VAL:HG13	1.99	0.43
38:M:92:PRO:O	38:M:116:ARG:NH2	2.51	0.43
39:N:94:ARG:HG2	39:N:94:ARG:NH1	2.33	0.43
41:P:13:LYS:HD2	41:P:13:LYS:HA	1.76	0.43
41:P:60:PHE:O	41:P:63:GLN:N	2.51	0.43
43:R:7:ASN:ND2	43:R:20:SER:HB2	2.34	0.43
43:R:21:ILE:HB	43:R:24:VAL:HG12	2.01	0.43
53:3:122:G:O2'	53:3:123:U:H5'	2.17	0.43
53:3:148:G:H1	53:3:174:A:H61	1.66	0.43
53:3:373:A:H61	53:3:391:G:H1'	1.83	0.43
53:3:922:G:C2	53:3:923:A:C4	3.07	0.43
54:1:19:A:H2'	54:1:20:C:C6	2.53	0.43
54:1:52:A:H2'	54:1:53:A:C8	2.53	0.43
54:1:768:G:N2	54:1:1379:U:H1'	2.33	0.43
54:1:1161:C:H2'	54:1:1162:G:C8	2.52	0.43
54:1:1246:A:H2'	54:1:1247:A:O4'	2.18	0.43
54:1:1577:C:H2'	54:1:1578:U:C6	2.53	0.43
54:1:1682:G:C8	54:1:1757:A:C2	3.06	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:1827:U:C2'	54:1:1828:G:H5'	2.48	0.43
54:1:2047:C:O2'	54:1:2048:G:H5'	2.17	0.43
54:1:2636:C:H2'	54:1:2637:U:C6	2.54	0.43
54:1:2673:G:H2'	54:1:2674:G:H8	1.82	0.43
57:6:40:C:H2'	57:6:41:C:C6	2.53	0.43
59:8:30:ILE:O	59:8:34:THR:N	2.37	0.43
59:8:223:ILE:HG12	59:8:243:LEU:HD13	2.00	0.43
59:8:346:GLY:HA2	59:8:360:PHE:O	2.19	0.43
59:8:451:GLU:CG	59:8:452:GLU:H	2.28	0.43
1:b:220:ARG:HE	1:b:220:ARG:HB2	1.67	0.43
2:c:194:PRO:HA	54:1:2680:U:C5'	2.48	0.43
4:e:134:GLN:HE22	4:e:140:ILE:HG21	1.82	0.43
7:h:78:GLY:N	7:h:79:PRO:HD2	2.33	0.43
10:k:76:VAL:H	15:p:72:VAL:HG22	1.82	0.43
10:k:107:LEU:O	10:k:109:SER:N	2.50	0.43
11:l:120:VAL:HB	11:l:135:ILE:HD11	2.01	0.43
15:p:88:ARG:CB	15:p:88:ARG:HH21	2.30	0.43
16:q:111:LYS:NZ	17:r:48:LYS:HE3	2.34	0.43
17:r:3:ALA:HA	17:r:40:MET:O	2.19	0.43
21:v:29:ILE:HG12	21:v:30:ILE:N	2.34	0.43
28:C:5:ARG:HG3	28:C:5:ARG:HH11	1.84	0.43
29:D:35:ARG:HG3	29:D:42:LEU:HD11	2.01	0.43
32:G:113:LEU:HD13	32:G:143:LEU:HB3	2.00	0.43
36:K:47:LEU:HD22	36:K:51:ILE:CD1	2.47	0.43
41:P:121:ARG:HG2	41:P:121:ARG:NH1	2.33	0.43
44:S:6:LYS:O	44:S:10:VAL:HG23	2.17	0.43
44:S:13:VAL:HG13	44:S:59:GLN:HE22	1.82	0.43
44:S:73:LEU:HD23	44:S:76:PHE:HD2	1.84	0.43
47:V:11:VAL:HG11	47:V:54:ILE:HA	2.00	0.43
52:a:38:PHE:CE2	52:a:217:THR:HG21	2.54	0.43
53:3:294:U:O5'	53:3:294:U:H6	2.01	0.43
53:3:444:G:H2'	53:3:445:G:H8	1.82	0.43
53:3:1222:G:C2'	53:3:1223:C:H5'	2.49	0.43
53:3:1316:G:C2	53:3:1318:A:H3'	2.54	0.43
54:1:15:G:O2'	54:1:16:C:H5'	2.19	0.43
54:1:1720:U:H2'	54:1:1721:G:O4'	2.18	0.43
54:1:1945:G:C4	54:1:1946:U:C5	3.07	0.43
54:1:1977:A:H2'	54:1:1978:A:O4'	2.18	0.43
54:1:2007:U:H4'	54:1:2824:C:H4'	2.00	0.43
54:1:2014:A:H2'	54:1:2015:A:C8	2.54	0.43
54:1:2147:A:H2'	54:1:2148:G:H4'	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2759:G:H2'	54:1:2760:C:C6	2.53	0.43
54:1:2836:U:H2'	54:1:2837:A:C8	2.53	0.43
59:8:21:ALA:N	62:8:801:GCP:O1B	2.51	0.43
59:8:174:GLY:HA2	59:8:178:HIS:HB3	1.99	0.43
59:8:263:LEU:N	59:8:263:LEU:HD12	2.33	0.43
2:c:13:ARG:HH22	15:p:74:GLN:CG	2.31	0.43
3:d:27:LEU:O	3:d:31:VAL:HG23	2.19	0.43
4:e:111:ARG:HD2	43:R:6:ILE:HG22	2.00	0.43
7:h:43:LYS:O	7:h:47:GLU:HG2	2.19	0.43
17:r:22:LEU:CD1	17:r:96:VAL:HG21	2.49	0.43
22:w:11:ASP:CG	22:w:12:SER:H	2.27	0.43
22:w:12:SER:OG	54:1:2261:C:H3'	2.18	0.43
26:A:10:GLU:CD	26:A:11:GLU:H	2.27	0.43
31:F:3:VAL:CG1	31:F:36:ARG:HE	2.30	0.43
32:G:94:ARG:NH1	53:3:1101:A:OP2	2.50	0.43
32:G:129:THR:CG2	32:G:132:GLU:H	2.31	0.43
33:H:39:ARG:HA	33:H:54:ILE:HD11	2.00	0.43
34:I:68:GLU:HB3	53:3:545:C:H5'	1.96	0.43
42:Q:30:ARG:HB3	53:3:363:A:OP2	2.18	0.43
43:R:94:LEU:CD2	43:R:109:LYS:HE3	2.48	0.43
45:T:77:TYR:O	45:T:81:ILE:HG23	2.18	0.43
46:U:17:TYR:HD2	46:U:41:PRO:CG	2.32	0.43
49:X:57:VAL:O	49:X:57:VAL:HG23	2.18	0.43
53:3:181:A:H62	53:3:194:C:H2'	1.83	0.43
53:3:868:C:O2'	53:3:869:G:H5'	2.19	0.43
53:3:1406:U:H2'	53:3:1407:C:O4'	2.19	0.43
53:3:1477:U:O2'	53:3:1478:U:H5'	2.19	0.43
54:1:78:U:H2'	54:1:79:C:C6	2.53	0.43
54:1:192:C:H2'	54:1:193:U:H5'	2.00	0.43
54:1:1035:U:H2'	54:1:1036:G:C8	2.53	0.43
54:1:1287:A:O2'	54:1:1288:G:H5'	2.19	0.43
54:1:1709:U:O2'	54:1:2859:G:H1'	2.19	0.43
54:1:1824:G:O2'	54:1:1825:U:H5'	2.18	0.43
54:1:2134:A:C2	54:1:2158:A:H5'	2.54	0.43
54:1:2440:C:H5''	54:1:2587:A:H4'	1.99	0.43
54:1:2543:G:N1	54:1:2765:A:C8	2.86	0.43
59:8:500:ASP:O	59:8:502:GLU:HG3	2.18	0.43
1:b:32:LEU:O	1:b:33:LEU:HD12	2.18	0.43
1:b:204:LEU:N	1:b:204:LEU:CD2	2.80	0.43
1:b:227:VAL:HG11	54:1:784:G:N1	2.34	0.43
8:i:59:THR:O	8:i:66:PHE:HA	2.19	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:k:58:LEU:HD12	10:k:58:LEU:O	2.18	0.43
10:k:66:LYS:HE2	54:1:1665:A:H5''	2.00	0.43
12:m:21:ALA:HB2	12:m:97:GLN:HB2	2.01	0.43
13:n:84:GLY:N	13:n:85:PRO:HD2	2.34	0.43
14:o:77:ALA:O	14:o:81:ARG:HG2	2.17	0.43
15:p:94:ALA:HB2	54:1:2848:G:C8	2.53	0.43
19:t:2:ILE:O	19:t:5:GLU:HB3	2.19	0.43
21:v:30:ILE:HB	21:v:38:LEU:HB3	2.00	0.43
24:y:24:GLU:O	24:y:25:GLN:C	2.61	0.43
32:G:98:GLY:HA2	32:G:174:GLU:CD	2.43	0.43
34:I:75:TYR:CE2	34:I:203:TYR:HB3	2.53	0.43
34:I:103:ARG:HG3	34:I:169:TRP:NE1	2.24	0.43
37:L:9:ARG:HB2	37:L:11:ILE:HD11	2.01	0.43
37:L:119:LEU:O	37:L:123:LEU:HG	2.17	0.43
39:N:17:ARG:NH2	53:3:1129:C:H4'	2.34	0.43
40:O:26:VAL:HG13	40:O:27:GLU:N	2.34	0.43
42:Q:2:THR:O	42:Q:5:GLN:N	2.51	0.43
42:Q:27:PRO:HG3	53:3:553:A:H1'	1.99	0.43
43:R:96:VAL:CG2	53:3:1308:U:H5''	2.49	0.43
46:U:44:SER:HB2	46:U:46:LYS:HE2	2.01	0.43
52:a:166:ASP:OD1	52:a:170:ILE:O	2.36	0.43
53:3:1489:G:H2'	53:3:1490:U:C6	2.54	0.43
54:1:563:A:H2'	54:1:564:C:H6	1.82	0.43
54:1:633:A:H2'	54:1:634:C:H5'	2.01	0.43
54:1:974:G:C5	54:1:989:G:C2	3.06	0.43
54:1:1145:C:O2'	54:1:1146:C:H5'	2.18	0.43
54:1:1177:G:H2'	54:1:1178:C:O4'	2.18	0.43
54:1:1343:G:O4'	54:1:1597:A:H2'	2.18	0.43
54:1:1662:U:H2'	54:1:1663:G:O4'	2.18	0.43
54:1:2145:C:H3'	54:1:2146:C:C5'	2.47	0.43
59:8:209:ALA:O	59:8:212:VAL:HG12	2.18	0.43
59:8:416:ILE:HD12	59:8:417:SER:H	1.84	0.43
3:d:18:THR:CG2	3:d:200:LEU:HD23	2.39	0.43
3:d:47:LYS:HA	3:d:51:GLU:OE2	2.17	0.43
7:h:1:MET:HE1	7:h:6:GLN:HG3	1.99	0.43
14:o:41:ALA:HB2	14:o:46:GLU:OE2	2.18	0.43
19:t:71:GLY:C	19:t:72:GLN:OE1	2.62	0.43
23:x:31:ASN:ND2	54:1:2230:G:H1'	2.33	0.43
24:y:9:LYS:HG2	24:y:10:SER:N	2.33	0.43
25:z:38:GLU:O	25:z:43:ILE:HG13	2.18	0.43
33:H:21:TRP:HZ2	33:H:32:LEU:HD23	1.84	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:I:28:ASP:HB2	34:I:31:CYS:SG	2.59	0.43
34:I:55:ARG:HA	34:I:55:ARG:HD3	1.78	0.43
38:M:74:ILE:HD12	38:M:127:TYR:O	2.19	0.43
43:R:89:ARG:NH2	43:R:95:PRO:HG2	2.34	0.43
44:S:100:TRP:O	53:3:1186:G:N2	2.38	0.43
46:U:8:ARG:NH1	53:3:391:G:H5'	2.34	0.43
46:U:21:VAL:HG23	46:U:33:ILE:HB	1.99	0.43
53:3:201:G:H2'	53:3:202:G:O4'	2.18	0.43
53:3:388:G:C8	53:3:388:G:O5'	2.72	0.43
53:3:487:A:C5	53:3:488:C:H1'	2.53	0.43
53:3:681:A:O2'	53:3:682:G:H5'	2.18	0.43
53:3:736:C:H2'	53:3:737:C:C6	2.54	0.43
53:3:738:C:H2'	53:3:739:C:C6	2.53	0.43
53:3:801:U:H2'	53:3:802:A:C8	2.53	0.43
54:1:818:G:C2'	54:1:819:A:H5''	2.49	0.43
54:1:1283:G:H1'	54:1:1329:U:O2	2.18	0.43
54:1:1842:G:H2'	54:1:1843:C:C6	2.53	0.43
54:1:1979:U:O2'	54:1:1980:G:H5'	2.18	0.43
54:1:2109:U:O2	54:1:2180:U:O4	2.36	0.43
54:1:2134:A:N6	54:1:2157:G:C5'	2.82	0.43
54:1:2205:A:H2'	54:1:2206:C:H6	1.80	0.43
54:1:2297:A:N6	54:1:2319:G:H1'	2.33	0.43
54:1:2370:G:H2'	54:1:2371:G:O4'	2.19	0.43
54:1:2577:A:O4'	54:1:2612:C:N4	2.51	0.43
54:1:2725:A:H2'	54:1:2726:A:H2'	1.99	0.43
57:6:23:C:H2'	57:6:24:U:C6	2.54	0.43
58:4:22:A:C1'	59:8:511:GLY:HA3	2.49	0.43
59:8:317:PHE:CD1	59:8:398:CYS:HA	2.53	0.43
1:b:11:GLY:O	1:b:13:ARG:N	2.52	0.43
7:h:80:THR:OG1	7:h:81:LEU:N	2.50	0.43
12:m:46:ILE:HD12	12:m:69:PRO:HG3	2.01	0.43
20:u:86:PHE:CE1	20:u:91:LYS:HE2	2.54	0.43
23:x:9:LYS:HE3	54:1:397:U:OP2	2.19	0.43
23:x:15:ASN:HD21	23:x:17:ARG:NE	2.16	0.43
26:A:43:PHE:O	26:A:47:LYS:HG3	2.19	0.43
34:I:25:ARG:HG3	34:I:26:ALA:H	1.84	0.43
34:I:85:THR:C	34:I:87:GLU:H	2.27	0.43
34:I:101:VAL:HG12	34:I:106:PHE:HB2	2.01	0.43
36:K:36:ILE:CD1	36:K:64:VAL:HB	2.49	0.43
42:Q:113:ARG:HG2	42:Q:113:ARG:HH11	1.83	0.43
46:U:3:THR:HG22	46:U:23:ASP:C	2.44	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:U:12:LYS:C	46:U:14:ARG:H	2.27	0.43
46:U:12:LYS:O	46:U:14:ARG:N	2.52	0.43
47:V:23:ALA:HA	47:V:42:LYS:HA	2.01	0.43
48:W:12:PHE:C	48:W:14:ALA:N	2.77	0.43
49:X:72:GLU:CD	53:3:1320:C:H4'	2.44	0.43
52:a:8:MET:HA	52:a:11:ILE:HD12	2.01	0.43
53:3:524:G:H2'	53:3:525:C:H6	1.82	0.43
53:3:663:A:H2'	53:3:664:G:O4'	2.19	0.43
53:3:1269:A:H2	53:3:1312:G:N3	2.17	0.43
53:3:1507:A:H2'	53:3:1508:A:H8	1.84	0.43
54:1:250:G:C6	54:1:251:A:C6	3.07	0.43
54:1:263:G:H2'	54:1:264:C:C4'	2.49	0.43
54:1:263:G:H1'	54:1:430:A:N3	2.34	0.43
54:1:717:C:C2'	54:1:718:A:H5'	2.46	0.43
54:1:1637:A:H2'	54:1:1638:C:C6	2.53	0.43
54:1:2175:C:O2'	54:1:2176:A:H5'	2.19	0.43
54:1:2725:A:O2'	54:1:2726:A:C8	2.72	0.43
59:8:65:SER:HA	59:8:88:ASP:O	2.19	0.43
59:8:275:VAL:CG2	59:8:276:GLN:N	2.82	0.43
59:8:555:LYS:HA	59:8:558:GLN:HB3	2.00	0.43
59:8:616:ILE:CG2	59:8:657:GLU:HB3	2.49	0.43
1:b:196:ASN:O	1:b:198:GLU:N	2.51	0.43
3:d:16:GLU:HG2	3:d:17:THR:H	1.83	0.43
9:j:102:GLU:HG3	9:j:119:PHE:HZ	1.84	0.43
10:k:48:PRO:HG2	10:k:49:ARG:H	1.83	0.43
21:v:61:LEU:HD13	21:v:91:PHE:HE1	1.84	0.43
23:x:2:ARG:CD	23:x:29:LEU:HD23	2.49	0.43
24:y:39:GLN:HB3	24:y:41:HIS:CE1	2.53	0.43
34:I:153:ARG:CZ	53:3:436:C:O2	2.67	0.43
35:J:40:ASP:OD2	35:J:44:ARG:HB3	2.19	0.43
37:L:69:ARG:HA	37:L:99:ALA:HB2	2.01	0.43
38:M:50:VAL:O	38:M:50:VAL:HG13	2.18	0.43
39:N:11:ARG:HG3	39:N:11:ARG:NH1	2.33	0.43
39:N:15:ALA:O	39:N:66:VAL:HA	2.19	0.43
40:O:57:VAL:CG2	40:O:58:ASN:H	2.28	0.43
40:O:89:ARG:HG2	40:O:90:LEU:HD12	2.00	0.43
44:S:18:LYS:HD2	53:3:1007:U:OP1	2.19	0.43
50:Y:8:LYS:HA	50:Y:11:ILE:CG1	2.49	0.43
52:a:194:VAL:HA	52:a:197:LYS:HE3	2.00	0.43
53:3:65:A:H5'	53:3:200:G:C5'	2.48	0.43
53:3:459:A:H2'	53:3:460:A:C8	2.53	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:1221:G:H2'	53:3:1222:G:H8	1.84	0.43
53:3:1360:A:H2'	53:3:1361:G:C5'	2.48	0.43
53:3:1417:G:C6	53:3:1482:G:C6	3.07	0.43
53:3:1515:G:N3	53:3:1516:G:C8	2.87	0.43
54:1:419:U:H2'	54:1:420:C:C6	2.54	0.43
54:1:870:U:O2'	54:1:871:U:H5'	2.19	0.43
54:1:1035:U:H2'	54:1:1036:G:H8	1.84	0.43
54:1:1180:U:H2'	54:1:1181:U:H5'	2.01	0.43
54:1:1486:U:H2'	54:1:1487:U:C6	2.54	0.43
54:1:1486:U:H2'	54:1:1487:U:H6	1.83	0.43
54:1:1854:A:C2'	54:1:1855:U:H5'	2.49	0.43
54:1:1877:A:H2'	54:1:1878:G:O4'	2.19	0.43
54:1:2194:U:H2'	54:1:2195:U:C6	2.53	0.43
54:1:2521:C:H2'	54:1:2522:U:H6	1.80	0.43
55:2:95:U:H2'	55:2:96:G:C8	2.53	0.43
59:8:166:PRO:HB2	59:8:264:VAL:HG22	2.00	0.43
59:8:612:LEU:HG	59:8:698:VAL:HG11	2.00	0.43
1:b:30:ALA:C	1:b:32:LEU:H	2.26	0.42
2:c:83:ARG:HG3	2:c:83:ARG:HH21	1.84	0.42
3:d:173:THR:HA	3:d:199:MET:HE1	2.00	0.42
7:h:28:ALA:CB	7:h:81:LEU:HB3	2.49	0.42
10:k:10:VAL:HG21	10:k:16:ALA:HB3	2.00	0.42
11:l:135:ILE:HG23	11:l:136:GLU:N	2.34	0.42
14:o:102:ARG:O	14:o:106:LEU:N	2.42	0.42
16:q:105:PHE:O	16:q:108:LEU:HB2	2.19	0.42
19:t:58:VAL:HG13	19:t:84:TYR:O	2.19	0.42
22:w:39:THR:HG21	54:1:2336:A:H61	1.84	0.42
34:I:97:LEU:HA	34:I:136:VAL:CG2	2.48	0.42
34:I:131:ILE:HD12	34:I:134:TYR:HD1	1.83	0.42
39:N:77:ALA:O	39:N:80:HIS:N	2.52	0.42
39:N:118:ARG:HB2	39:N:122:ARG:CG	2.49	0.42
39:N:129:ARG:HH11	39:N:129:ARG:CG	2.31	0.42
49:X:64:GLU:HG3	49:X:65:MET:H	1.83	0.42
50:Y:79:THR:CA	50:Y:82:ILE:HG12	2.40	0.42
51:Z:16:ARG:HG3	51:Z:19:LYS:HD3	2.01	0.42
53:3:428:G:H5'	53:3:430:A:H1'	2.00	0.42
53:3:675:A:H2'	53:3:676:A:C8	2.54	0.42
53:3:1346:A:N6	53:3:1374:A:H5''	2.34	0.42
53:3:1457:G:O2'	53:3:1458:G:H5'	2.19	0.42
54:1:23:G:H2'	54:1:24:G:H8	1.81	0.42
54:1:75:G:H2'	54:1:75:G:N3	2.34	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:128:C:H2'	54:1:129:C:C6	2.53	0.42
54:1:374:A:H2'	54:1:375:G:O4'	2.18	0.42
54:1:981:A:N1	54:1:2027:G:O2'	2.50	0.42
54:1:2207:C:O2'	54:1:2208:C:H5'	2.19	0.42
54:1:2241:A:O2'	54:1:2242:G:H5'	2.19	0.42
54:1:2282:G:C6	54:1:2425:A:C2	3.07	0.42
54:1:2547:A:H2'	54:1:2548:U:H6	1.83	0.42
54:1:2591:C:H2'	54:1:2592:G:C8	2.54	0.42
54:1:2616:C:O2'	54:1:2617:U:H5'	2.19	0.42
54:1:2632:A:O2'	54:1:2633:G:H5'	2.19	0.42
54:1:2819:G:H2'	54:1:2821:A:N7	2.33	0.42
54:1:2853:C:H2'	54:1:2854:G:C8	2.53	0.42
59:8:4:THR:HG23	59:8:5:THR:HG23	2.01	0.42
59:8:162:LEU:HD22	59:8:164:ALA:HB2	2.00	0.42
59:8:494:ILE:HG21	59:8:522:MET:HE1	2.00	0.42
3:d:141:MET:HB3	3:d:143:LEU:HG	2.01	0.42
6:g:4:ILE:N	6:g:37:VAL:O	2.49	0.42
9:j:108:MET:SD	54:1:1138:G:N3	2.92	0.42
10:k:108:ARG:HH11	10:k:108:ARG:HG3	1.83	0.42
15:p:52:ARG:HH22	54:1:2721:A:P	2.42	0.42
21:v:40:ILE:HG22	21:v:41:GLU:N	2.34	0.42
27:B:3:GLN:HA	54:1:2615:U:C2	2.54	0.42
27:B:10:SER:HB2	54:1:17:G:OP1	2.18	0.42
29:D:1:MET:HG3	54:1:1619:G:O2'	2.20	0.42
34:I:142:VAL:HG22	34:I:143:SER:N	2.34	0.42
35:J:28:ARG:HB3	35:J:28:ARG:CZ	2.48	0.42
37:L:9:ARG:HG3	37:L:9:ARG:HH11	1.84	0.42
39:N:11:ARG:HG2	39:N:76:GLY:HA3	2.01	0.42
41:P:12:ARG:C	41:P:14:GLN:H	2.27	0.42
42:Q:49:ARG:HG3	42:Q:89:LEU:HD11	2.01	0.42
46:U:21:VAL:HG22	46:U:34:GLU:O	2.19	0.42
46:U:63:GLN:HG3	53:3:228:A:H4'	2.00	0.42
53:3:184:G:H4'	53:3:224:U:O3'	2.20	0.42
53:3:1053:G:C6	53:3:1199:U:H2'	2.53	0.42
54:1:863:A:O2'	54:1:864:G:H5'	2.19	0.42
54:1:942:G:H2'	54:1:943:A:O4'	2.19	0.42
54:1:1328:A:H2'	54:1:1330:C:C5	2.54	0.42
54:1:1610:A:H3'	54:1:1611:C:C5'	2.47	0.42
54:1:1841:U:HO2'	54:1:1842:G:H5'	1.84	0.42
54:1:1889:A:C6	54:1:1890:A:C6	3.08	0.42
54:1:1999:C:H2'	54:1:2000:C:O4'	2.18	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2184:A:H2'	54:1:2185:U:H6	1.84	0.42
54:1:2447:G:C8	54:1:2501:C:C5	3.06	0.42
54:1:2605:U:H2'	54:1:2606:C:C6	2.54	0.42
59:8:55:GLN:HG2	59:8:56:GLU:N	2.34	0.42
59:8:304:ASP:O	59:8:305:THR:C	2.61	0.42
59:8:497:LYS:HB3	59:8:523:TYR:CD1	2.51	0.42
1:b:62:ARG:HD2	1:b:83:ASP:OD1	2.18	0.42
1:b:146:LYS:O	1:b:148:GLY:N	2.52	0.42
3:d:28:VAL:HB	11:l:6:LEU:HD11	2.01	0.42
3:d:65:THR:HB	3:d:67:ARG:HG2	2.00	0.42
3:d:75:SER:OG	3:d:76:PRO:HD2	2.19	0.42
3:d:75:SER:OG	3:d:77:ILE:HG12	2.20	0.42
4:e:39:VAL:HG13	4:e:40:GLY:N	2.34	0.42
4:e:172:PHE:C	4:e:173:ASP:OD2	2.62	0.42
11:l:124:GLY:N	11:l:144:GLU:HA	2.22	0.42
12:m:82:MET:HE1	54:1:956:G:C1'	2.47	0.42
13:n:3:HIS:C	13:n:5:LYS:N	2.77	0.42
13:n:12:ARG:NE	13:n:20:MET:HE1	2.34	0.42
13:n:45:ARG:HG2	13:n:95:THR:HG21	2.01	0.42
19:t:6:ARG:HB2	19:t:6:ARG:HH11	1.84	0.42
28:C:5:ARG:NH1	28:C:25:ASN:HB2	2.35	0.42
32:G:17:HIS:O	32:G:18:GLN:HB3	2.19	0.42
34:I:106:PHE:CZ	34:I:144:ILE:HG13	2.53	0.42
34:I:184:LYS:O	34:I:186:GLU:OE2	2.37	0.42
38:M:91:LEU:C	38:M:116:ARG:NH2	2.77	0.42
39:N:98:ARG:NH1	39:N:103:VAL:CG2	2.82	0.42
43:R:91:ARG:HH11	43:R:91:ARG:HG3	1.84	0.42
43:R:104:ASN:O	43:R:105:ALA:CB	2.66	0.42
49:X:27:LYS:HZ1	49:X:28:LYS:HE3	1.84	0.42
49:X:47:THR:HA	49:X:60:PHE:HA	2.00	0.42
53:3:53:A:N3	53:3:54:C:H1'	2.33	0.42
53:3:223:A:O2'	53:3:224:U:H5'	2.19	0.42
53:3:515:G:H2'	53:3:516:U:C6	2.54	0.42
53:3:647:C:H2'	53:3:648:A:C8	2.54	0.42
53:3:768:A:C5	53:3:769:G:C8	3.07	0.42
53:3:1217:C:H2'	53:3:1218:C:H6	1.78	0.42
54:1:96:C:H2'	54:1:97:C:H6	1.85	0.42
54:1:711:G:H2'	54:1:712:G:O4'	2.18	0.42
54:1:893:C:C2'	54:1:894:U:H5'	2.49	0.42
54:1:1067:A:H3'	54:1:1068:G:C5'	2.50	0.42
54:1:1357:C:H2'	54:1:1358:G:O4'	2.20	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:1548:A:H2'	54:1:1549:A:H8	1.77	0.42
54:1:1749:A:H2'	54:1:1750:G:H8	1.84	0.42
54:1:2296:U:H4'	54:1:2297:A:O5'	2.18	0.42
54:1:2803:G:H2'	54:1:2804:U:C6	2.55	0.42
59:8:127:TRP:O	59:8:131:ASN:HB2	2.19	0.42
59:8:255:ARG:O	59:8:260:GLU:HB2	2.20	0.42
59:8:319:ALA:O	59:8:396:THR:HA	2.19	0.42
59:8:645:GLN:OE1	59:8:645:GLN:N	2.53	0.42
1:b:211:ARG:HA	1:b:211:ARG:HD2	1.76	0.42
2:c:77:ARG:HG2	2:c:77:ARG:O	2.18	0.42
5:f:84:LYS:HB2	5:f:132:LEU:CD1	2.50	0.42
7:h:56:ARG:NH2	54:1:1106:G:H1'	2.34	0.42
15:p:105:LYS:HA	15:p:105:LYS:HZ2	1.85	0.42
17:r:51:VAL:O	17:r:52:PRO:C	2.60	0.42
25:z:40:THR:HB	25:z:43:ILE:CG1	2.42	0.42
30:E:30:HIS:CD2	30:E:31:ILE:HG23	2.54	0.42
32:G:78:ALA:O	32:G:81:ASP:OD1	2.35	0.42
32:G:129:THR:HG22	32:G:132:GLU:H	1.83	0.42
32:G:195:VAL:HG12	32:G:196:ASP:N	2.35	0.42
32:G:208:ALA:O	32:G:211:LEU:N	2.52	0.42
34:I:10:LEU:HD23	34:I:20:LEU:CD2	2.49	0.42
34:I:142:VAL:HG12	34:I:179:GLY:N	2.35	0.42
39:N:113:LYS:NZ	53:3:1367:C:H3'	2.34	0.42
42:Q:109:ARG:HH22	42:Q:113:ARG:HA	1.84	0.42
43:R:106:ARG:HE	43:R:106:ARG:CA	2.30	0.42
46:U:70:ARG:NH2	46:U:74:LEU:HD21	2.35	0.42
50:Y:67:HIS:O	50:Y:69:ASN:N	2.52	0.42
50:Y:74:HIS:HA	50:Y:77:ASN:OD1	2.19	0.42
50:Y:79:THR:HA	50:Y:82:ILE:CD1	2.50	0.42
53:3:157:U:O2'	53:3:158:G:H5'	2.19	0.42
53:3:216:U:H2'	53:3:217:C:O4'	2.19	0.42
53:3:431:A:H2'	53:3:432:A:H8	1.85	0.42
53:3:648:A:H2'	53:3:649:A:H8	1.84	0.42
53:3:1468:A:O2'	53:3:1469:C:H5'	2.18	0.42
54:1:319:G:O2'	54:1:320:A:H5'	2.19	0.42
54:1:414:C:H2'	54:1:415:A:H8	1.80	0.42
54:1:481:G:H2'	54:1:507:A:N1	2.33	0.42
54:1:699:A:H4'	54:1:1634:A:N7	2.34	0.42
54:1:1038:G:H2'	54:1:1039:A:H8	1.83	0.42
54:1:1337:G:O2'	54:1:1338:G:H5'	2.20	0.42
54:1:1409:U:H2'	54:1:1410:G:H8	1.84	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:1790:C:H2'	54:1:1791:A:C5	2.55	0.42
54:1:2590:A:H61	54:1:2604:U:H3	1.67	0.42
55:2:59:A:H2'	55:2:60:C:C6	2.54	0.42
56:5:57:G:H2'	56:5:58:A:H5'	2.01	0.42
59:8:363:ILE:H	59:8:363:ILE:CD1	2.31	0.42
59:8:472:ARG:HH11	59:8:472:ARG:HG3	1.85	0.42
2:c:188:LEU:H	2:c:188:LEU:CD2	2.17	0.42
5:f:17:LYS:HB2	5:f:24:THR:CB	2.40	0.42
6:g:4:ILE:CG2	6:g:37:VAL:HB	2.49	0.42
10:k:70:ARG:O	10:k:71:ARG:HD2	2.20	0.42
17:r:86:GLN:OE1	17:r:86:GLN:HA	2.19	0.42
19:t:25:GLU:HG3	19:t:26:LYS:HD2	2.02	0.42
31:F:17:VAL:HG12	31:F:19:ARG:HG3	2.02	0.42
32:G:185:ILE:HG13	32:G:185:ILE:O	2.19	0.42
33:H:23:ALA:HB1	33:H:31:ASN:HD22	1.83	0.42
33:H:122:GLN:HA	33:H:125:ARG:CG	2.50	0.42
34:I:99:ASN:HA	34:I:110:ARG:NH1	2.35	0.42
34:I:101:VAL:HB	34:I:113:ALA:HB1	2.01	0.42
37:L:106:ALA:HA	37:L:109:LYS:HD2	2.02	0.42
46:U:79:ASN:CG	46:U:80:LYS:H	2.27	0.42
47:V:10:ARG:C	47:V:22:VAL:HG13	2.44	0.42
50:Y:43:LYS:O	50:Y:46:ALA:HB3	2.20	0.42
52:a:182:ALA:O	52:a:186:LYS:HB2	2.19	0.42
53:3:1149:C:H2'	53:3:1150:A:C8	2.54	0.42
53:3:1269:A:C2	53:3:1312:G:N3	2.88	0.42
53:3:1349:A:H1'	53:3:1374:A:H62	1.84	0.42
54:1:20:C:O2'	54:1:21:A:H5'	2.20	0.42
54:1:133:U:H2'	54:1:134:G:O4'	2.19	0.42
54:1:233:A:C2'	54:1:234:U:H5'	2.49	0.42
54:1:435:C:H2'	54:1:436:C:H5'	2.00	0.42
54:1:1048:A:H2	54:1:1112:G:N3	2.18	0.42
54:1:1344:U:H3'	54:1:1345:C:H5'	2.00	0.42
54:1:1351:C:O2'	54:1:1571:A:H1'	2.20	0.42
54:1:1831:G:H2'	54:1:1832:C:C6	2.55	0.42
54:1:2079:U:C2	54:1:2080:A:C8	3.07	0.42
54:1:2656:U:O2	54:1:2656:U:H2'	2.18	0.42
54:1:2874:C:H2'	54:1:2875:C:C6	2.55	0.42
59:8:105:VAL:HG13	59:8:337:ARG:CD	2.49	0.42
59:8:162:LEU:HD23	59:8:162:LEU:O	2.19	0.42
59:8:350:LEU:HD12	59:8:357:ARG:HB3	2.02	0.42
1:b:106:PRO:C	1:b:108:GLY:H	2.27	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:c:99:GLU:C	2:c:101:PHE:N	2.77	0.42
2:c:133:THR:HG23	2:c:134:HIS:CD2	2.54	0.42
4:e:107:VAL:O	4:e:110:ILE:HG13	2.20	0.42
7:h:33:VAL:C	7:h:35:VAL:N	2.78	0.42
7:h:60:LEU:HA	7:h:64:VAL:HB	2.00	0.42
8:i:48:ILE:HG13	8:i:49:GLU:N	2.33	0.42
10:k:58:LEU:HD11	10:k:86:LEU:HD12	2.01	0.42
15:p:6:GLN:O	15:p:10:GLU:HG2	2.20	0.42
18:s:11:ARG:NH2	18:s:98:LYS:HE2	2.34	0.42
21:v:29:ILE:HD13	55:2:74:U:O2	2.19	0.42
24:y:28:LEU:HB3	24:y:43:LEU:HD21	2.01	0.42
26:A:2:LYS:O	26:A:5:ILE:HG12	2.20	0.42
33:H:69:THR:HG22	33:H:71:ARG:H	1.85	0.42
39:N:37:TYR:CE1	53:3:1249:C:H5'	2.55	0.42
43:R:89:ARG:HH21	43:R:95:PRO:HG2	1.84	0.42
46:U:4:ILE:HD12	46:U:65:ALA:HB1	2.00	0.42
48:W:23:LYS:HB3	48:W:23:LYS:HE3	1.91	0.42
52:a:5:THR:HB	52:a:6:LYS:H	1.49	0.42
53:3:113:G:H2'	53:3:114:U:C6	2.54	0.42
53:3:834:U:C2	53:3:835:U:C5	3.08	0.42
53:3:1288:A:H1'	53:3:1353:G:H4'	2.02	0.42
54:1:259:G:O2'	54:1:260:G:H5'	2.20	0.42
54:1:1485:U:H2'	54:1:1486:U:C6	2.54	0.42
54:1:1702:G:H2'	54:1:1703:G:C5'	2.36	0.42
54:1:1891:G:H2'	54:1:1892:C:C6	2.55	0.42
54:1:2519:U:C6	54:1:2542:A:N6	2.87	0.42
54:1:2772:C:H2'	54:1:2773:C:C6	2.55	0.42
59:8:252:LEU:O	59:8:256:VAL:HG22	2.20	0.42
59:8:495:ARG:N	59:8:609:LYS:O	2.42	0.42
59:8:587:ASP:CG	59:8:588:SER:N	2.75	0.42
1:b:175:LEU:HD13	54:1:1799:G:C4	2.54	0.42
2:c:5:VAL:HB	2:c:32:ASN:ND2	2.32	0.42
4:e:68:LYS:HE3	4:e:83:PRO:HB3	2.01	0.42
4:e:111:ARG:HG3	4:e:112:ASP:OD2	2.20	0.42
9:j:36:LEU:O	9:j:51:GLY:HA3	2.20	0.42
10:k:92:GLU:HB2	10:k:111:LYS:CD	2.45	0.42
12:m:23:GLY:O	12:m:100:LYS:HD3	2.19	0.42
12:m:51:ARG:NH2	54:1:2483:C:O2	2.52	0.42
13:n:63:ARG:NH1	54:1:1454:C:H5'	2.34	0.42
15:p:57:ALA:HA	15:p:75:THR:HG23	2.02	0.42
17:r:35:PHE:HB2	17:r:59:ILE:HB	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:s:7:HIS:HB2	18:s:50:VAL:CG2	2.48	0.42
18:s:75:PHE:CD1	18:s:75:PHE:N	2.87	0.42
21:v:44:HIS:ND1	21:v:44:HIS:C	2.77	0.42
21:v:82:TYR:O	21:v:84:PRO:HD3	2.20	0.42
27:B:29:VAL:HG12	27:B:36:LYS:HD2	2.01	0.42
31:F:1:MET:O	31:F:2:LYS:HD3	2.20	0.42
32:G:163:ILE:HA	32:G:185:ILE:CD1	2.50	0.42
39:N:5:TYR:CE1	39:N:87:MET:HB2	2.54	0.42
42:Q:43:LYS:N	42:Q:44:PRO:HD2	2.35	0.42
46:U:3:THR:HG23	46:U:3:THR:O	2.19	0.42
46:U:78:VAL:O	46:U:79:ASN:C	2.62	0.42
53:3:604:G:H2'	53:3:605:U:C6	2.55	0.42
53:3:895:G:H2'	53:3:896:C:C6	2.54	0.42
53:3:1238:A:C2'	53:3:1239:A:H5'	2.50	0.42
53:3:1374:A:H2'	53:3:1375:A:C8	2.55	0.42
53:3:1471:U:O2'	53:3:1472:U:H5'	2.20	0.42
54:1:845:A:N3	54:1:845:A:H3'	2.35	0.42
54:1:1137:G:H2'	54:1:1138:G:H8	1.85	0.42
54:1:1219:U:H2'	54:1:1220:G:C8	2.55	0.42
54:1:1356:G:O2'	54:1:1357:C:H5'	2.20	0.42
54:1:1501:G:O2'	54:1:1502:A:H5'	2.19	0.42
54:1:1561:C:H2'	54:1:1562:U:C6	2.55	0.42
54:1:1657:U:H2'	54:1:1658:C:C6	2.54	0.42
54:1:2114:A:N6	54:1:2117:A:H62	2.11	0.42
54:1:2599:G:H2'	54:1:2600:A:H8	1.85	0.42
54:1:2704:C:H2'	54:1:2705:A:O4'	2.19	0.42
54:1:2845:U:H2'	54:1:2846:G:C8	2.54	0.42
59:8:184:ASP:N	59:8:189:LYS:O	2.51	0.42
59:8:198:GLN:O	59:8:199:GLY:C	2.62	0.42
1:b:144:GLU:HG2	1:b:151:GLY:N	2.35	0.42
2:c:184:ARG:HB2	2:c:186:LEU:HG	2.01	0.42
9:j:8:PRO:HG3	9:j:48:VAL:HG11	1.99	0.42
10:k:44:LYS:HD3	10:k:44:LYS:HA	1.82	0.42
11:l:100:ILE:HG13	11:l:101:ILE:N	2.33	0.42
11:l:135:ILE:HG12	11:l:140:GLY:HA3	2.01	0.42
14:o:106:LEU:O	14:o:106:LEU:HD23	2.20	0.42
15:p:32:VAL:CG2	15:p:37:LYS:HG2	2.50	0.42
20:u:56:GLY:N	54:1:483:A:O2'	2.53	0.42
22:w:39:THR:H	54:1:2331:G:H4'	1.85	0.42
25:z:56:VAL:HG22	25:z:58:GLU:HG3	2.01	0.42
32:G:18:GLN:HB2	32:G:187:ASP:OD2	2.20	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:G:68:PHE:O	32:G:90:PHE:HB2	2.19	0.42
32:G:70:GLY:O	32:G:92:ASN:HA	2.20	0.42
34:I:150:LYS:H	34:I:154:VAL:HG21	1.83	0.42
35:J:81:GLN:OE1	35:J:148:SER:HA	2.20	0.42
38:M:7:ALA:HA	38:M:76:ARG:HD2	2.02	0.42
39:N:118:ARG:HG3	39:N:124:PRO:HG3	2.02	0.42
42:Q:81:ILE:HG22	42:Q:82:ARG:N	2.35	0.42
43:R:11:HIS:H	43:R:44:ILE:HB	1.83	0.42
52:a:193:LEU:O	52:a:197:LYS:N	2.45	0.42
53:3:493:A:C3'	53:3:494:G:H5'	2.50	0.42
53:3:540:G:C2	53:3:541:G:C4	3.07	0.42
53:3:673:A:H2'	53:3:674:G:H8	1.84	0.42
53:3:849:G:H2'	53:3:850:U:O4'	2.19	0.42
53:3:1065:U:H5	53:3:1190:G:C5	2.38	0.42
53:3:1088:G:H21	53:3:1167:A:H61	1.66	0.42
53:3:1348:U:C2	53:3:1349:A:C8	3.08	0.42
53:3:1426:G:H2'	53:3:1427:C:C6	2.55	0.42
54:1:578:G:H21	54:1:1252:G:H21	1.67	0.42
54:1:1108:U:H2'	54:1:1109:C:C6	2.55	0.42
54:1:2493:U:H2'	54:1:2494:G:H5''	2.01	0.42
54:1:2511:U:C4	54:1:2512:C:C4	3.08	0.42
54:1:2657:A:H1'	54:1:2665:A:N6	2.35	0.42
54:1:2689:U:O2	54:1:2713:U:H5''	2.20	0.42
54:1:2694:G:H2'	54:1:2695:U:C6	2.55	0.42
54:1:2875:C:H2'	54:1:2876:G:H8	1.85	0.42
55:2:4:C:H2'	55:2:5:U:H6	1.83	0.42
59:8:63:ILE:O	59:8:95:PHE:HD1	2.03	0.42
4:e:125:GLY:O	4:e:157:THR:OG1	2.24	0.42
4:e:148:VAL:O	4:e:148:VAL:HG22	2.20	0.42
6:g:108:VAL:HG12	6:g:110:VAL:H	1.84	0.42
7:h:14:GLU:O	7:h:18:VAL:HG23	2.19	0.42
8:i:71:LYS:HD3	54:1:1059:G:OP1	2.20	0.42
13:n:79:LEU:C	13:n:81:ASN:H	2.28	0.42
16:q:56:PHE:CZ	54:1:536:G:H4'	2.55	0.42
18:s:54:ALA:O	18:s:58:ALA:N	2.49	0.42
19:t:13:ALA:HA	24:y:30:MET:HE1	2.01	0.42
22:w:37:ARG:NH1	54:1:2387:U:H4'	2.35	0.42
32:G:14:HIS:ND1	32:G:14:HIS:N	2.68	0.42
32:G:88:GLN:NE2	32:G:220:VAL:HG11	2.34	0.42
33:H:155:ARG:O	33:H:156:LEU:C	2.63	0.42
41:P:19:VAL:HG13	41:P:82:GLU:OE1	2.20	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:P:105:ARG:HG2	41:P:105:ARG:HH11	1.85	0.42
43:R:89:ARG:NH1	43:R:94:LEU:HD13	2.35	0.42
45:T:25:GLU:HG3	45:T:80:LEU:CD2	2.44	0.42
46:U:67:ILE:HG22	46:U:68:SER:N	2.34	0.42
48:W:31:TYR:O	48:W:39:VAL:HG23	2.20	0.42
53:3:374:A:C4	53:3:375:U:C5	3.08	0.42
53:3:865:A:H2'	53:3:866:C:O4'	2.20	0.42
53:3:1165:U:H2'	53:3:1166:G:O4'	2.19	0.42
53:3:1192:C:H2'	53:3:1193:G:O4'	2.20	0.42
53:3:1254:A:H2'	53:3:1255:G:C8	2.55	0.42
53:3:1347:G:N2	53:3:1373:G:H2'	2.35	0.42
54:1:84:A:H4'	54:1:85:G:O5'	2.19	0.42
54:1:277:G:H4'	54:1:278:A:N7	2.35	0.42
54:1:383:C:H2'	54:1:385:C:N4	2.30	0.42
54:1:518:G:H2'	54:1:519:U:H6	1.84	0.42
54:1:744:U:C2'	54:1:745:G:H5'	2.50	0.42
54:1:1277:G:H2'	54:1:1278:C:C6	2.55	0.42
54:1:1287:A:C2'	54:1:1288:G:H5'	2.49	0.42
54:1:1294:U:C2'	54:1:1295:C:H5'	2.50	0.42
54:1:1877:A:O2'	54:1:1878:G:H5'	2.20	0.42
54:1:2037:A:H2'	54:1:2038:G:H8	1.85	0.42
54:1:2105:U:O2'	54:1:2106:U:H5'	2.19	0.42
59:8:131:ASN:HD21	59:8:137:ARG:NH2	2.17	0.42
59:8:167:VAL:CG1	59:8:263:LEU:HG	2.49	0.42
1:b:227:VAL:HG11	54:1:784:G:C2	2.55	0.42
5:f:37:ASN:OD1	5:f:38:ASP:N	2.53	0.42
6:g:3:VAL:HG22	6:g:19:VAL:O	2.19	0.42
9:j:36:LEU:HD11	9:j:54:ILE:HD12	2.02	0.42
15:p:111:GLU:HB2	15:p:113:LEU:CD2	2.50	0.42
22:w:52:ASP:O	22:w:53:HIS:CB	2.68	0.42
33:H:22:PHE:HZ	40:O:11:LYS:HE2	1.85	0.42
34:I:74:TYR:N	34:I:74:TYR:CD1	2.88	0.42
35:J:133:ILE:H	35:J:133:ILE:CD1	2.28	0.42
36:K:55:HIS:ND1	36:K:55:HIS:N	2.68	0.42
37:L:110:ARG:HD2	37:L:122:GLU:HG2	2.02	0.42
42:Q:109:ARG:CZ	42:Q:109:ARG:HB2	2.50	0.42
44:S:79:SER:HB3	44:S:82:LYS:HG2	2.02	0.42
46:U:12:LYS:HE3	53:3:392:C:OP2	2.19	0.42
53:3:32:A:H2'	53:3:33:A:H8	1.84	0.42
53:3:33:A:H2'	53:3:34:C:H6	1.84	0.42
53:3:201:G:H2'	53:3:202:G:C8	2.55	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:355:C:C4	53:3:356:A:N7	2.88	0.42
53:3:560:A:P	53:3:566:G:H22	2.43	0.42
53:3:572:A:C2	53:3:864:A:C2	3.08	0.42
53:3:594:U:H2'	53:3:595:A:C8	2.54	0.42
53:3:842:U:H6	53:3:842:U:O5'	2.03	0.42
53:3:924:C:H4'	53:3:1399:C:C5'	2.49	0.42
53:3:1051:C:H2'	53:3:1052:U:O4'	2.19	0.42
53:3:1125:U:H2'	53:3:1126:U:H2'	2.02	0.42
54:1:520:G:H2'	54:1:521:U:C6	2.55	0.42
54:1:852:U:H2'	54:1:853:C:C6	2.54	0.42
54:1:860:U:O2'	54:1:861:A:H5'	2.19	0.42
54:1:1045:C:P	54:1:1047:G:H5'	2.60	0.42
54:1:1175:A:C3'	54:1:1176:U:H5'	2.50	0.42
54:1:1469:A:H2'	54:1:1470:A:H8	1.84	0.42
54:1:1668:A:O2'	54:1:1674:G:N7	2.47	0.42
54:1:1785:A:C4	54:1:1787:A:C8	3.07	0.42
54:1:1826:G:H2'	54:1:1827:U:H6	1.83	0.42
54:1:2783:U:H2'	54:1:2784:U:C6	2.55	0.42
55:2:24:G:H1'	55:2:27:C:H42	1.85	0.42
59:8:267:GLY:HA2	59:8:274:GLY:HA3	2.02	0.42
59:8:298:ILE:HG13	59:8:304:ASP:O	2.20	0.42
59:8:659:PRO:O	59:8:663:MET:HG2	2.20	0.42
59:8:671:ARG:HB2	59:8:676:GLY:HA2	2.02	0.42
4:e:116:LEU:HD22	4:e:175:PRO:HG2	2.02	0.41
4:e:175:PRO:HB2	4:e:176:PHE:H	1.60	0.41
9:j:61:LYS:HE2	9:j:61:LYS:CA	2.41	0.41
9:j:132:HIS:O	9:j:135:GLN:HB2	2.20	0.41
13:n:39:PRO:HG2	54:1:1651:G:H4'	2.01	0.41
15:p:27:VAL:N	15:p:42:PHE:O	2.52	0.41
15:p:96:LEU:CD2	15:p:98:TYR:HE1	2.33	0.41
20:u:23:LYS:HG2	20:u:36:GLU:OE1	2.20	0.41
22:w:45:ALA:O	22:w:47:VAL:HG23	2.20	0.41
25:z:29:ARG:HH12	54:1:930:G:H5''	1.85	0.41
32:G:16:GLY:HA3	32:G:40:ILE:H	1.85	0.41
34:I:97:LEU:CB	34:I:134:TYR:HB3	2.47	0.41
38:M:106:SER:OG	53:3:599:C:H1'	2.20	0.41
40:O:39:PRO:HD2	53:3:1123:U:H4'	2.00	0.41
40:O:64:GLN:H	40:O:64:GLN:HE21	1.61	0.41
41:P:53:GLY:HA2	53:3:695:A:P	2.60	0.41
42:Q:42:LYS:HZ2	42:Q:89:LEU:N	2.18	0.41
44:S:25:GLU:OE1	44:S:29:ILE:HG12	2.19	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:U:3:THR:OG1	46:U:5:ARG:HD3	2.19	0.41
53:3:114:U:H2'	53:3:115:G:C8	2.55	0.41
53:3:135:C:C3'	53:3:136:C:C5'	2.98	0.41
53:3:389:A:C2	53:3:390:U:H4'	2.55	0.41
53:3:502:A:H61	53:3:543:U:H3	1.67	0.41
53:3:553:A:N6	53:3:554:A:N6	2.67	0.41
53:3:980:C:H2'	53:3:981:U:O4'	2.20	0.41
53:3:1165:U:H2'	53:3:1166:G:C5'	2.50	0.41
53:3:1231:G:H2'	53:3:1232:U:H6	1.84	0.41
53:3:1392:G:H2'	53:3:1393:U:C6	2.56	0.41
54:1:609:A:N6	54:1:619:G:H1'	2.35	0.41
54:1:645:C:H2'	54:1:647:G:N7	2.34	0.41
54:1:675:A:C6	54:1:676:A:C6	3.08	0.41
54:1:859:G:O2'	54:1:860:U:P	2.77	0.41
54:1:1066:U:O2	54:1:1066:U:C2'	2.67	0.41
54:1:1431:A:O2'	54:1:1432:G:H5'	2.20	0.41
54:1:1648:U:H2'	54:1:1649:G:H5''	2.01	0.41
54:1:1682:G:C2	54:1:1757:A:O4'	2.73	0.41
55:2:59:A:H2'	55:2:60:C:H6	1.85	0.41
59:8:28:GLU:HA	59:8:31:LEU:HD12	2.01	0.41
8:i:15:GLY:N	8:i:51:GLY:H	2.18	0.41
9:j:24:THR:HB	9:j:27:ARG:HG2	2.01	0.41
13:n:86:ARG:HH22	13:n:117:ASP:HB3	1.85	0.41
16:q:27:ARG:HH21	54:1:532:A:H2'	1.84	0.41
18:s:6:LYS:CG	54:1:494:G:H4'	2.47	0.41
19:t:6:ARG:HH11	19:t:6:ARG:CB	2.33	0.41
24:y:19:LEU:O	24:y:23:ARG:N	2.36	0.41
24:y:61:ALA:O	24:y:63:ALA:N	2.50	0.41
34:I:97:LEU:N	34:I:134:TYR:O	2.53	0.41
34:I:201:GLU:C	34:I:203:TYR:N	2.78	0.41
36:K:10:VAL:O	36:K:57:ALA:HB1	2.20	0.41
38:M:17:GLN:HE21	38:M:71:VAL:H	1.66	0.41
42:Q:23:LEU:O	42:Q:24:GLU:C	2.62	0.41
42:Q:115:LYS:O	42:Q:116:TYR:HB2	2.20	0.41
46:U:23:ASP:OD2	46:U:33:ILE:HD11	2.20	0.41
53:3:53:A:H2'	53:3:54:C:C4'	2.49	0.41
53:3:66:A:C2	53:3:104:G:H1'	2.55	0.41
53:3:231:U:C2	53:3:232:G:C8	3.08	0.41
53:3:234:C:H2'	53:3:235:C:C6	2.55	0.41
53:3:573:A:N1	53:3:574:A:C2	2.88	0.41
53:3:895:G:H2'	53:3:896:C:H6	1.85	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:1261:A:H4'	53:3:1284:C:OP1	2.20	0.41
53:3:1326:U:O2'	53:3:1327:C:H5'	2.21	0.41
54:1:144:A:H2'	54:1:145:C:C6	2.55	0.41
54:1:1275:A:C6	54:1:1296:G:C4'	3.03	0.41
54:1:1440:U:H2'	54:1:1441:G:O4'	2.20	0.41
54:1:1467:U:H3'	54:1:1468:U:H5''	2.02	0.41
54:1:1569:A:N1	54:1:1570:A:C2	2.88	0.41
54:1:1579:A:H2'	54:1:1580:A:H8	1.84	0.41
54:1:1854:A:H2'	54:1:1855:U:O4'	2.19	0.41
54:1:2570:G:H2'	54:1:2571:U:O4'	2.19	0.41
54:1:2662:A:OP1	59:8:61:ILE:HG22	2.20	0.41
54:1:2686:G:H2'	54:1:2687:U:O4'	2.20	0.41
55:2:32:U:H2'	55:2:33:G:O4'	2.20	0.41
59:8:98:GLU:CD	59:8:101:ARG:HD2	2.46	0.41
59:8:138:ILE:CG2	59:8:263:LEU:HD13	2.42	0.41
59:8:150:ASN:O	59:8:154:VAL:HG23	2.20	0.41
59:8:521:ASP:HB2	59:8:577:ARG:HB3	2.02	0.41
59:8:534:TYR:HA	59:8:574:MET:O	2.20	0.41
59:8:616:ILE:HG13	59:8:688:ASP:OD2	2.19	0.41
2:c:136:ASN:OD1	2:c:137:SER:N	2.54	0.41
4:e:21:TYR:CE2	4:e:27:VAL:HA	2.55	0.41
5:f:88:LEU:HB2	5:f:128:THR:HA	2.02	0.41
7:h:53:ARG:HB3	7:h:55:VAL:HG13	2.02	0.41
8:i:18:ASN:C	8:i:20:SER:H	2.28	0.41
9:j:91:GLU:C	9:j:91:GLU:CD	2.88	0.41
9:j:115:GLY:N	9:j:118:MET:HE3	2.35	0.41
10:k:61:VAL:O	10:k:61:VAL:HG13	2.19	0.41
11:l:131:ALA:O	11:l:135:ILE:N	2.44	0.41
13:n:34:ILE:CG1	13:n:113:ILE:HG22	2.32	0.41
13:n:37:THR:CG2	13:n:40:LYS:HE2	2.50	0.41
16:q:24:TYR:CE1	54:1:17:G:H4'	2.55	0.41
16:q:68:ALA:O	16:q:72:GLY:N	2.50	0.41
27:B:4:GLN:OE1	27:B:4:GLN:HA	2.20	0.41
28:C:43:ARG:HH11	54:1:2370:G:H4'	1.84	0.41
32:G:124:THR:HG22	32:G:127:LYS:HD2	2.03	0.41
32:G:163:ILE:CG2	32:G:185:ILE:HD11	2.49	0.41
34:I:2:ARG:HH11	34:I:2:ARG:HG3	1.85	0.41
34:I:13:ARG:NE	53:3:543:U:OP1	2.52	0.41
34:I:33:ILE:C	34:I:34:GLU:HG3	2.45	0.41
34:I:85:THR:O	34:I:87:GLU:N	2.53	0.41
34:I:116:LEU:HB2	34:I:122:ILE:CD1	2.51	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:J:135:VAL:HG23	35:J:136:VAL:N	2.36	0.41
36:K:88:MET:SD	36:K:90:MET:HG2	2.60	0.41
38:M:17:GLN:CD	38:M:69:ALA:HB1	2.44	0.41
38:M:82:LEU:HD13	47:V:35:LYS:HD2	2.03	0.41
39:N:90:ASP:CG	39:N:91:GLU:N	2.78	0.41
41:P:30:ILE:HG12	41:P:45:THR:HG21	2.02	0.41
41:P:81:LEU:C	41:P:81:LEU:HD12	2.45	0.41
42:Q:113:ARG:HG2	42:Q:113:ARG:NH1	2.34	0.41
46:U:78:VAL:O	46:U:78:VAL:HG22	2.20	0.41
52:a:10:VAL:HA	52:a:13:GLU:HB2	2.02	0.41
52:a:54:LYS:O	52:a:57:GLN:HG3	2.20	0.41
53:3:928:G:H2'	53:3:929:G:H8	1.85	0.41
53:3:1213:A:H2'	53:3:1215:G:C8	2.55	0.41
53:3:1489:G:O2'	53:3:1490:U:H5'	2.21	0.41
53:3:1493:A:N7	59:8:591:LEU:HD11	2.35	0.41
54:1:30:G:O2'	54:1:31:C:H5'	2.20	0.41
54:1:112:U:H2'	54:1:113:U:H5'	2.01	0.41
54:1:132:G:H2'	54:1:133:U:C6	2.56	0.41
54:1:255:A:H2'	54:1:256:A:O4'	2.19	0.41
54:1:679:C:C2	54:1:680:C:C5	3.09	0.41
54:1:1169:A:H2'	54:1:1170:C:O4'	2.19	0.41
54:1:1327:A:C5	54:1:1328:A:C5	3.08	0.41
54:1:2139:U:H2'	54:1:2140:G:C8	2.55	0.41
54:1:2599:G:O2'	54:1:2600:A:H5'	2.20	0.41
54:1:2855:C:H2'	54:1:2856:A:C8	2.56	0.41
57:6:44:A:H2'	57:6:45:G:O4'	2.20	0.41
59:8:15:ILE:HD12	59:8:15:ILE:H	1.84	0.41
59:8:99:VAL:O	59:8:103:MET:HG3	2.20	0.41
59:8:190:ALA:O	59:8:205:GLU:N	2.54	0.41
59:8:323:LYS:HB2	59:8:335:PHE:CD2	2.56	0.41
59:8:602:LYS:O	59:8:606:LYS:HG3	2.21	0.41
62:8:801:GCP:H8	62:8:801:GCP:H2'	1.77	0.41
1:b:99:GLU:HG2	1:b:100:ARG:O	2.19	0.41
1:b:140:VAL:HG12	1:b:191:LEU:HA	2.00	0.41
1:b:236:GLY:O	1:b:237:ARG:HB2	2.20	0.41
12:m:55:ARG:NH2	12:m:55:ARG:CB	2.81	0.41
18:s:46:LEU:C	18:s:46:LEU:HD12	2.45	0.41
21:v:50:MET:HE2	21:v:50:MET:HA	2.02	0.41
27:B:1:ALA:N	54:1:2056:G:N2	2.68	0.41
30:E:21:PHE:N	30:E:48:MET:SD	2.87	0.41
32:G:95:TRP:HZ2	32:G:100:LEU:HG	1.85	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:H:108:PRO:HA	33:H:114:LEU:CD1	2.50	0.41
34:I:53:GLN:HG3	34:I:198:LEU:HA	2.01	0.41
34:I:201:GLU:OE2	35:J:103:GLY:C	2.64	0.41
34:I:204:SER:OG	35:J:105:ILE:HG21	2.20	0.41
37:L:112:ASP:HB2	37:L:118:ARG:CG	2.50	0.41
43:R:47:LEU:HD22	43:R:52:ILE:HG12	2.03	0.41
47:V:66:LEU:HD12	47:V:70:LYS:HB3	2.03	0.41
49:X:79:TYR:CZ	53:3:1226:C:H4'	2.55	0.41
53:3:373:A:N6	53:3:391:G:O2'	2.54	0.41
53:3:491:G:O2'	53:3:492:C:H5'	2.20	0.41
53:3:615:G:C6	53:3:626:G:C6	3.08	0.41
53:3:672:U:H2'	53:3:673:A:H8	1.84	0.41
53:3:722:G:H3'	53:3:722:G:N3	2.36	0.41
53:3:1095:U:H2'	53:3:1096:C:C6	2.56	0.41
53:3:1306:A:H62	53:3:1331:G:H1'	1.82	0.41
53:3:1486:G:H2'	53:3:1487:G:C8	2.55	0.41
54:1:445:C:N4	54:1:446:G:C6	2.89	0.41
54:1:615:U:H5''	54:1:616:A:OP2	2.20	0.41
54:1:745:G:C2'	54:1:746:U:H5'	2.50	0.41
54:1:1549:A:H2'	54:1:1550:C:C6	2.56	0.41
54:1:1594:U:H2'	54:1:1595:C:C6	2.54	0.41
54:1:1752:C:H2'	54:1:1753:G:C8	2.56	0.41
54:1:2386:A:H2'	54:1:2387:U:C6	2.56	0.41
54:1:2440:C:H2'	54:1:2441:U:H4'	2.02	0.41
54:1:2693:G:C2	54:1:2694:G:C5	3.09	0.41
55:2:112:G:H2'	55:2:113:C:C6	2.54	0.41
59:8:446:ARG:HH11	59:8:446:ARG:HG3	1.84	0.41
59:8:634:ASP:OD2	59:8:669:GLN:HG2	2.20	0.41
3:d:79:ARG:C	3:d:81:GLY:H	2.28	0.41
4:e:7:TYR:HA	4:e:11:VAL:HB	2.03	0.41
5:f:173:ALA:O	5:f:174:LYS:C	2.61	0.41
6:g:9:VAL:HG11	6:g:12:LEU:O	2.20	0.41
7:h:37:LYS:NZ	54:1:1082:U:H1'	2.36	0.41
10:k:31:ARG:HG3	10:k:31:ARG:NH1	2.34	0.41
10:k:117:SER:C	10:k:118:LEU:HD12	2.45	0.41
14:o:10:ARG:HD2	54:1:2294:G:P	2.60	0.41
14:o:29:HIS:CD2	55:2:7:G:H5''	2.56	0.41
14:o:94:ARG:CB	14:o:94:ARG:HH21	2.33	0.41
16:q:95:ALA:O	16:q:99:VAL:HG23	2.21	0.41
22:w:71:LYS:HD2	22:w:73:ARG:NE	2.35	0.41
25:z:35:VAL:HG21	25:z:37:ARG:CZ	2.50	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:G:26:MET:HE1	32:G:186:VAL:HB	2.01	0.41
34:I:69:ARG:HH11	34:I:72:ARG:HH22	1.69	0.41
35:J:82:HIS:HA	38:M:96:ALA:HB2	2.02	0.41
37:L:12:LEU:HD12	37:L:12:LEU:H	1.86	0.41
37:L:17:PHE:CZ	37:L:22:LEU:HD13	2.56	0.41
43:R:28:ARG:HH12	43:R:32:ILE:HD13	1.86	0.41
43:R:53:ASP:HA	43:R:56:ARG:HH12	1.85	0.41
47:V:30:HIS:ND1	47:V:31:PRO:HD2	2.36	0.41
47:V:63:CYS:SG	47:V:73:THR:HB	2.60	0.41
47:V:74:LEU:HD11	47:V:77:VAL:CG2	2.50	0.41
49:X:18:VAL:O	49:X:22:VAL:HG23	2.20	0.41
50:Y:11:ILE:H	50:Y:11:ILE:HG12	1.66	0.41
51:Z:36:PHE:C	51:Z:38:GLU:N	2.78	0.41
52:a:15:VAL:HG12	52:a:16:ASP:N	2.35	0.41
52:a:197:LYS:HG2	52:a:209:ILE:HD11	2.01	0.41
53:3:36:C:O2'	53:3:37:U:H5'	2.20	0.41
53:3:90:C:H2'	53:3:91:U:H6	1.84	0.41
53:3:307:C:C5	53:3:308:C:C5	3.08	0.41
53:3:439:U:H2'	53:3:439:U:O2	2.19	0.41
53:3:704:A:C2	53:3:705:G:H1'	2.55	0.41
53:3:792:A:H1'	53:3:794:A:C8	2.56	0.41
54:1:971:G:H2'	54:1:972:A:O4'	2.21	0.41
54:1:1560:G:N2	54:1:1561:C:H1'	2.35	0.41
54:1:2150:C:H2'	54:1:2151:U:H5'	2.03	0.41
54:1:2521:C:C4	54:1:2522:U:C4	3.08	0.41
54:1:2662:A:H8	54:1:2662:A:O5'	2.03	0.41
59:8:9:ARG:HA	59:8:82:HIS:CD2	2.54	0.41
59:8:271:LYS:O	59:8:273:LYS:HG3	2.20	0.41
59:8:321:ALA:O	59:8:393:THR:HA	2.20	0.41
59:8:660:LEU:HD23	59:8:660:LEU:C	2.45	0.41
1:b:24:HIS:HB2	1:b:79:ARG:HD2	2.02	0.41
1:b:237:ARG:N	1:b:237:ARG:HD2	2.36	0.41
2:c:11:MET:HB2	2:c:25:THR:HA	2.02	0.41
2:c:136:ASN:OD1	2:c:136:ASN:C	2.63	0.41
6:g:23:ALA:O	6:g:27:ARG:N	2.42	0.41
6:g:99:ILE:CD1	6:g:115:VAL:HG11	2.50	0.41
7:h:58:THR:HG21	7:h:82:ILE:HG22	2.02	0.41
18:s:70:LYS:O	18:s:107:VAL:HG23	2.20	0.41
19:t:3:ARG:HH11	19:t:3:ARG:HG3	1.84	0.41
23:x:9:LYS:HZ1	23:x:53:LYS:HB3	1.85	0.41
34:I:78:ALA:HA	34:I:81:LEU:CD1	2.51	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:I:197:HIS:HD1	34:I:197:HIS:H	1.67	0.41
39:N:27:ILE:HG13	39:N:62:LEU:HD21	2.03	0.41
39:N:85:ALA:C	39:N:87:MET:H	2.29	0.41
45:T:27:GLN:O	45:T:31:LEU:HG	2.20	0.41
46:U:6:LEU:HD12	46:U:17:TYR:CB	2.47	0.41
47:V:9:GLY:CA	47:V:24:ILE:HD12	2.48	0.41
50:Y:53:MET:SD	50:Y:57:VAL:N	2.94	0.41
53:3:24:U:H2'	53:3:25:C:H6	1.81	0.41
53:3:360:G:O2'	53:3:361:G:H5'	2.20	0.41
53:3:425:G:C2'	53:3:426:U:H5'	2.49	0.41
53:3:581:G:O2'	53:3:582:C:H6	2.02	0.41
53:3:657:U:H2'	53:3:658:C:C6	2.55	0.41
53:3:864:A:H2'	53:3:865:A:O4'	2.21	0.41
53:3:931:C:O2'	53:3:932:C:H5'	2.20	0.41
53:3:977:A:H2'	53:3:1223:C:N4	2.34	0.41
53:3:1134:G:H2'	53:3:1135:U:O4'	2.21	0.41
54:1:859:G:O2'	54:1:860:U:C5	2.62	0.41
54:1:1387:A:H2'	54:1:1388:G:C8	2.55	0.41
54:1:1599:U:H2'	54:1:1600:C:H6	1.84	0.41
54:1:1604:C:H2'	54:1:1605:C:C6	2.56	0.41
54:1:1649:G:O2'	54:1:1650:A:H5'	2.20	0.41
54:1:1808:A:H3'	54:1:1809:A:C8	2.55	0.41
54:1:1854:A:H2'	54:1:1855:U:H5'	2.03	0.41
59:8:103:MET:HA	59:8:106:LEU:CD2	2.50	0.41
59:8:112:VAL:HG13	59:8:140:PHE:O	2.20	0.41
59:8:404:ILE:O	59:8:404:ILE:HG13	2.21	0.41
4:e:110:ILE:HD12	4:e:113:PHE:CD1	2.55	0.41
5:f:49:LEU:HD22	5:f:49:LEU:N	2.35	0.41
5:f:102:ILE:CG1	5:f:116:LEU:HD11	2.51	0.41
6:g:80:ILE:HG22	6:g:81:ALA:H	1.84	0.41
7:h:30:SER:O	54:1:1055:G:H5'	2.19	0.41
11:l:33:ARG:O	11:l:33:ARG:HG3	2.20	0.41
13:n:117:ASP:O	13:n:118:ARG:HB2	2.21	0.41
14:o:15:ARG:HH12	14:o:25:ARG:HE	1.68	0.41
14:o:76:LYS:O	14:o:80:GLU:HG3	2.21	0.41
16:q:20:ALA:HA	16:q:23:TYR:CE2	2.56	0.41
19:t:8:LEU:HD13	24:y:21:LEU:C	2.45	0.41
25:z:20:LYS:O	25:z:24:LEU:HD23	2.20	0.41
32:G:15:PHE:CD2	32:G:39:ILE:HG12	2.52	0.41
33:H:130:ARG:O	33:H:134:LYS:HG2	2.21	0.41
34:I:131:ILE:HD12	34:I:134:TYR:CD1	2.56	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:J:137:ARG:O	35:J:140:ILE:HG22	2.20	0.41
37:L:36:SER:O	37:L:39:GLU:HG2	2.20	0.41
38:M:78:SER:HB2	38:M:124:ILE:O	2.20	0.41
39:N:34:LEU:HD21	39:N:48:ARG:HE	1.85	0.41
40:O:44:THR:HG23	40:O:69:THR:O	2.20	0.41
41:P:49:SER:OG	41:P:68:ARG:HD3	2.21	0.41
42:Q:11:ARG:HG3	53:3:564:C:OP1	2.21	0.41
43:R:28:ARG:HH21	43:R:62:PHE:CB	2.33	0.41
43:R:96:VAL:HG23	53:3:1308:U:H5''	2.02	0.41
45:T:11:VAL:O	45:T:14:PHE:N	2.52	0.41
53:3:105:G:H2'	53:3:106:C:H6	1.74	0.41
53:3:119:A:H4'	53:3:120:A:C8	2.56	0.41
53:3:386:C:C3'	53:3:387:U:H5''	2.50	0.41
53:3:388:G:H4'	53:3:390:U:C4	2.56	0.41
53:3:394:G:C4	53:3:395:C:C5	3.08	0.41
53:3:440:C:N4	53:3:441:A:N3	2.69	0.41
53:3:448:A:N6	53:3:487:A:C1'	2.79	0.41
53:3:499:A:H61	53:3:546:A:H2'	1.86	0.41
53:3:517:G:HO2'	53:3:530:G:H4'	1.85	0.41
53:3:638:U:H2'	53:3:639:G:O4'	2.20	0.41
53:3:1402:C:H6	53:3:1402:C:C5'	2.33	0.41
54:1:138:U:H2'	54:1:139:U:H5'	2.02	0.41
54:1:694:U:H2'	54:1:695:G:H5''	2.02	0.41
54:1:1641:A:H2'	54:1:1642:G:O4'	2.21	0.41
54:1:1661:G:H2'	54:1:1662:U:C6	2.55	0.41
54:1:1680:U:H2'	54:1:1681:G:O4'	2.20	0.41
54:1:1794:A:H2'	54:1:1795:C:C6	2.55	0.41
54:1:1808:A:H3'	54:1:1809:A:H8	1.84	0.41
54:1:1917:U:O2'	54:1:1918:A:H5'	2.20	0.41
54:1:1926:U:O2	54:1:1929:G:C2	2.74	0.41
54:1:2214:C:O5'	54:1:2214:C:H6	2.04	0.41
54:1:2287:A:C2'	54:1:2288:A:H2'	2.50	0.41
54:1:2660:A:N7	59:8:672:SER:HA	2.35	0.41
54:1:2688:G:H1'	54:1:2721:A:H61	1.85	0.41
55:2:19:C:H2'	55:2:20:G:O4'	2.21	0.41
59:8:473:MET:HB3	59:8:479:VAL:HG23	2.01	0.41
59:8:505:HIS:HB3	59:8:516:GLY:H	1.85	0.41
1:b:62:ARG:O	1:b:64:VAL:HG23	2.21	0.41
3:d:26:ALA:HB2	11:l:9:ALA:HB2	2.02	0.41
4:e:74:ALA:C	4:e:76:PHE:H	2.29	0.41
4:e:108:PRO:HA	26:A:41:HIS:CD2	2.55	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:f:63:GLN:O	5:f:67:ALA:N	2.44	0.41
5:f:110:HIS:ND1	5:f:110:HIS:O	2.54	0.41
6:g:9:VAL:HG11	6:g:12:LEU:C	2.45	0.41
10:k:15:GLY:O	10:k:47:ILE:HG12	2.20	0.41
14:o:35:ILE:HG12	14:o:36:TYR:N	2.36	0.41
15:p:2:ASN:HA	15:p:5:LYS:HB3	2.03	0.41
15:p:88:ARG:NH2	15:p:88:ARG:CB	2.84	0.41
16:q:91:ARG:HB2	54:1:997:G:OP1	2.20	0.41
17:r:38:VAL:O	17:r:53:PHE:HA	2.20	0.41
23:x:31:ASN:ND2	54:1:2230:G:N3	2.68	0.41
24:y:42:LEU:O	24:y:46:VAL:HG23	2.21	0.41
26:A:11:GLU:CA	26:A:25:ARG:HG2	2.51	0.41
28:C:38:PHE:HA	28:C:45:HIS:HA	2.02	0.41
30:E:20:GLY:HA3	30:E:48:MET:SD	2.61	0.41
32:G:31:PHE:HB2	32:G:41:ASN:HB2	2.03	0.41
32:G:165:ALA:HA	32:G:172:ILE:HD11	2.03	0.41
33:H:59:PRO:O	33:H:60:ALA:C	2.64	0.41
33:H:137:VAL:O	33:H:141:MET:SD	2.78	0.41
37:L:119:LEU:HD23	37:L:123:LEU:HG	2.02	0.41
39:N:5:TYR:CZ	39:N:87:MET:HB2	2.56	0.41
39:N:56:MET:O	39:N:57:VAL:C	2.63	0.41
47:V:45:VAL:C	47:V:70:LYS:NZ	2.77	0.41
53:3:377:G:H1	53:3:386:C:H42	1.67	0.41
53:3:938:A:H2'	53:3:939:G:O4'	2.20	0.41
53:3:1046:A:C2'	53:3:1047:G:H5'	2.51	0.41
53:3:1072:G:H2'	53:3:1073:U:C6	2.56	0.41
54:1:232:G:OP2	54:1:232:G:H8	2.03	0.41
54:1:2078:C:C1'	54:1:2434:A:H1'	2.50	0.41
54:1:2186:G:H2'	54:1:2187:U:C6	2.56	0.41
54:1:2400:G:O2'	54:1:2401:U:H5'	2.21	0.41
55:2:24:G:N1	55:2:56:G:C2	2.89	0.41
56:5:16:C:O2	56:5:60:U:H4'	2.20	0.41
59:8:5:THR:N	59:8:6:PRO:CD	2.83	0.41
59:8:67:ALA:HA	59:8:87:ILE:HA	2.02	0.41
59:8:168:PRO:HA	59:8:264:VAL:HG23	2.03	0.41
59:8:226:ALA:O	59:8:228:GLU:N	2.53	0.41
59:8:319:ALA:HB3	59:8:397:LEU:HB2	2.02	0.41
1:b:75:ALA:O	1:b:114:GLN:HG3	2.21	0.41
1:b:176:ARG:HG2	1:b:176:ARG:HH11	1.86	0.41
1:b:179:GLU:OE2	1:b:180:MET:O	2.38	0.41
1:b:250:GLN:NE2	1:b:252:LYS:N	2.69	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:c:11:MET:CB	2:c:25:THR:HA	2.51	0.41
2:c:99:GLU:C	2:c:101:PHE:H	2.27	0.41
2:c:101:PHE:O	2:c:104:VAL:HG22	2.19	0.41
2:c:116:LYS:HA	13:n:1:MET:HE1	2.03	0.41
3:d:164:LEU:HD23	3:d:167:VAL:HG21	2.02	0.41
4:e:51:ASN:O	4:e:52:ALA:C	2.64	0.41
4:e:65:LEU:HD23	4:e:87:LYS:HD3	2.03	0.41
4:e:107:VAL:N	4:e:108:PRO:CD	2.84	0.41
4:e:117:SER:HB2	4:e:177:ARG:NH2	2.36	0.41
5:f:32:LEU:HD12	5:f:74:MET:HG2	2.02	0.41
7:h:7:ASP:OD1	7:h:62:ARG:HG3	2.20	0.41
8:i:54:ILE:HG22	8:i:55:PRO:CD	2.46	0.41
9:j:40:HIS:CE1	9:j:41:LYS:HG3	2.56	0.41
10:k:30:ARG:HD2	10:k:30:ARG:HA	1.87	0.41
13:n:73:ASN:HA	13:n:76:VAL:CG2	2.51	0.41
19:t:21:SER:O	19:t:25:GLU:HG2	2.21	0.41
20:u:85:ARG:HD2	20:u:87:GLU:OE2	2.21	0.41
21:v:29:ILE:HD12	55:2:75:G:O4'	2.21	0.41
26:A:17:SER:OG	26:A:40:CYS:SG	2.77	0.41
28:C:8:ILE:HB	28:C:51:ALA:O	2.20	0.41
31:F:25:VAL:HG23	31:F:35:GLN:HB2	2.02	0.41
32:G:128:LEU:HD23	32:G:128:LEU:C	2.46	0.41
32:G:169:HIS:ND1	32:G:169:HIS:C	2.79	0.41
34:I:1:ALA:N	53:3:405:U:O4	2.53	0.41
35:J:32:PHE:N	35:J:52:ALA:O	2.54	0.41
35:J:80:LEU:HD23	35:J:122:VAL:CG1	2.35	0.41
36:K:68:GLN:CA	36:K:71:ILE:HG22	2.50	0.41
37:L:1:PRO:HB3	53:3:1379:G:N7	2.36	0.41
37:L:115:MET:O	37:L:118:ARG:HB2	2.21	0.41
38:M:37:ASN:O	38:M:37:ASN:ND2	2.52	0.41
38:M:59:GLU:C	38:M:59:GLU:CD	2.89	0.41
38:M:63:LYS:O	38:M:70:VAL:HG23	2.21	0.41
39:N:7:GLY:HA3	39:N:18:VAL:HB	2.01	0.41
39:N:83:THR:OG1	39:N:102:PHE:O	2.34	0.41
41:P:127:ARG:CB	51:Z:34:ARG:HH22	2.26	0.41
43:R:67:ASP:O	43:R:71:GLU:HG2	2.21	0.41
43:R:92:ARG:HE	43:R:94:LEU:CD1	2.15	0.41
44:S:17:ASP:HA	44:S:21:ALA:HB2	2.03	0.41
44:S:53:ASP:HA	44:S:58:ARG:CD	2.50	0.41
46:U:40:ASN:O	46:U:41:PRO:C	2.63	0.41
48:W:64:LEU:O	48:W:65:SER:HB3	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y:66:ILE:HG21	50:Y:71:ALA:N	2.32	0.41
51:Z:11:PHE:C	51:Z:13:VAL:H	2.29	0.41
51:Z:50:SER:O	51:Z:53:LYS:HG2	2.21	0.41
51:Z:65:ARG:HH11	51:Z:67:THR:HB	1.85	0.41
52:a:16:ASP:HB3	52:a:21:TYR:HE1	1.86	0.41
53:3:16:A:H2'	53:3:17:U:C5'	2.50	0.41
53:3:54:C:O2	53:3:54:C:H2'	2.21	0.41
53:3:109:A:C6	53:3:326:G:C6	3.09	0.41
53:3:371:A:H2'	53:3:372:C:O4'	2.21	0.41
53:3:505:G:P	53:3:535:A:H5'	2.61	0.41
53:3:522:C:H2'	53:3:523:A:H8	1.86	0.41
53:3:678:U:H2'	53:3:679:C:H6	1.86	0.41
53:3:769:G:H2'	53:3:770:C:H6	1.85	0.41
53:3:893:C:O5'	53:3:893:C:H6	2.04	0.41
53:3:1251:A:H2'	53:3:1252:A:O4'	2.21	0.41
53:3:1259:C:H3'	53:3:1260:G:C5'	2.41	0.41
54:1:221:A:H2'	54:1:266:G:N7	2.35	0.41
54:1:256:A:C2	54:1:257:C:C2	3.09	0.41
54:1:381:G:O2'	54:1:382:A:H5'	2.21	0.41
54:1:412:A:N6	54:1:2412:A:O4'	2.54	0.41
54:1:565:C:H2'	54:1:566:U:O4'	2.20	0.41
54:1:638:G:H2'	54:1:639:U:H6	1.81	0.41
54:1:760:G:H2'	54:1:761:A:O4'	2.21	0.41
54:1:903:C:H2'	54:1:904:G:C8	2.56	0.41
54:1:1213:A:C1'	54:1:1237:A:C2	3.04	0.41
54:1:1327:A:C5	54:1:1328:A:C6	3.09	0.41
54:1:1593:A:H2'	54:1:1594:U:O4'	2.21	0.41
54:1:1655:A:C8	54:1:1656:C:C5	3.09	0.41
54:1:1662:U:O2'	54:1:2687:U:OP1	2.39	0.41
54:1:1713:A:H61	54:1:1745:A:H61	1.68	0.41
54:1:1956:U:C4	54:1:1957:C:C5	3.09	0.41
54:1:2229:U:H2'	54:1:2230:G:H8	1.86	0.41
54:1:2266:A:H4'	54:1:2267:A:O5'	2.21	0.41
54:1:2785:C:H2'	54:1:2786:U:O4'	2.21	0.41
59:8:195:ASP:HB2	59:8:200:VAL:H	1.86	0.41
59:8:351:ASN:HA	59:8:396:THR:O	2.20	0.41
59:8:389:LYS:HD3	59:8:389:LYS:N	2.35	0.41
59:8:393:THR:HG21	59:8:443:PRO:HG3	2.02	0.41
59:8:501:VAL:CG2	59:8:520:ILE:HG13	2.51	0.41
59:8:613:LEU:N	59:8:613:LEU:HD12	2.36	0.41
1:b:143:VAL:CG2	1:b:161:VAL:HG11	2.51	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:b:184:GLU:CD	1:b:186:ASP:OD2	2.64	0.41
4:e:124:ARG:O	4:e:126:ASN:OD1	2.39	0.41
6:g:4:ILE:C	6:g:5:LEU:HD12	2.45	0.41
8:i:41:PHE:CZ	8:i:45:THR:HG21	2.56	0.41
11:l:132:ARG:HA	11:l:142:ILE:HD11	2.02	0.41
12:m:48:ALA:O	12:m:51:ARG:HG3	2.21	0.41
12:m:82:MET:CE	54:1:960:A:H61	2.34	0.41
12:m:84:LYS:N	12:m:84:LYS:HD2	2.36	0.41
13:n:30:ARG:HA	13:n:78:LYS:NZ	2.36	0.41
17:r:80:ARG:HH12	54:1:571:U:C3'	2.31	0.41
20:u:5:ARG:HG3	20:u:6:ARG:H	1.86	0.41
30:E:32:LEU:HA	30:E:35:LYS:HE2	2.03	0.41
30:E:44:ARG:N	30:E:45:PRO:HD2	2.35	0.41
32:G:102:ASN:OD1	32:G:105:THR:HG22	2.21	0.41
33:H:5:HIS:CE1	33:H:7:ASN:HB2	2.56	0.41
34:I:21:LYS:O	34:I:23:GLY:N	2.48	0.41
34:I:30:LYS:HG2	53:3:413:G:O6	2.21	0.41
39:N:98:ARG:NH1	53:3:1179:A:H5''	2.27	0.41
40:O:26:VAL:HG23	40:O:36:VAL:HG13	2.03	0.41
42:Q:88:ASP:HB3	42:Q:89:LEU:HD12	2.03	0.41
50:Y:65:LEU:O	50:Y:66:ILE:HD13	2.21	0.41
52:a:192:LEU:O	52:a:195:ALA:HB3	2.20	0.41
53:3:271:C:C2	53:3:272:C:C5	3.09	0.41
53:3:376:G:C6	53:3:377:G:N7	2.89	0.41
53:3:428:G:H4'	53:3:429:U:H5''	2.02	0.41
53:3:708:C:H2'	53:3:709:U:H6	1.83	0.41
53:3:938:A:H8	53:3:938:A:O5'	2.04	0.41
53:3:959:A:C2	53:3:1222:G:O4'	2.74	0.41
53:3:1184:G:C2	53:3:1185:G:C8	3.09	0.41
54:1:59:U:O2'	54:1:60:G:H5'	2.21	0.41
54:1:659:G:H2'	54:1:660:C:C6	2.56	0.41
54:1:680:C:H2'	54:1:681:G:C8	2.55	0.41
54:1:708:G:O2'	54:1:709:U:H5'	2.20	0.41
54:1:2489:U:O2'	54:1:2490:G:H5'	2.21	0.41
54:1:2543:G:C6	54:1:2544:G:C5	3.09	0.41
59:8:303:LYS:HE3	59:8:305:THR:CG2	2.51	0.41
59:8:396:THR:HB	59:8:404:ILE:HB	2.02	0.41
59:8:638:ARG:NH1	59:8:666:TYR:HB2	2.29	0.41
59:8:692:SER:HA	59:8:695:ALA:HB3	2.03	0.41
2:c:77:ARG:H	2:c:77:ARG:HD3	1.85	0.40
3:d:21:ARG:CD	3:d:106:LYS:HD2	2.50	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:147:LEU:HD12	3:d:179:SER:HB3	2.03	0.40
9:j:35:ARG:HA	9:j:40:HIS:CD2	2.56	0.40
12:m:65:ILE:HD12	12:m:65:ILE:N	2.35	0.40
14:o:64:TYR:O	14:o:67:ASN:ND2	2.54	0.40
15:p:69:VAL:C	15:p:70:GLU:CD	2.88	0.40
21:v:75:GLN:OE1	55:2:103:U:O2'	2.39	0.40
22:w:67:VAL:HG13	22:w:67:VAL:O	2.21	0.40
30:E:23:HIS:HD2	30:E:49:VAL:HG22	1.86	0.40
31:F:33:HIS:O	31:F:35:GLN:HG3	2.20	0.40
32:G:117:GLU:HA	32:G:140:LEU:HD11	2.01	0.40
33:H:174:LEU:HD12	33:H:200:TRP:HE1	1.86	0.40
35:J:152:VAL:HA	35:J:155:LYS:HG2	2.03	0.40
36:K:38:ARG:HB2	36:K:63:ASN:HB2	2.04	0.40
37:L:100:MET:HA	37:L:103:ILE:CD1	2.52	0.40
38:M:14:ARG:HB3	38:M:14:ARG:HH11	1.85	0.40
40:O:23:ALA:O	40:O:27:GLU:HG3	2.22	0.40
41:P:115:ILE:H	48:W:72:ARG:NH2	2.14	0.40
45:T:48:ASP:O	45:T:51:SER:N	2.55	0.40
50:Y:27:MET:HA	50:Y:53:MET:HE2	2.02	0.40
53:3:411:A:C2	53:3:412:A:N7	2.89	0.40
53:3:628:G:H2'	53:3:629:A:O4'	2.21	0.40
53:3:629:A:H2'	53:3:630:A:O4'	2.22	0.40
53:3:866:C:H2'	53:3:867:G:O4'	2.21	0.40
54:1:415:A:H2'	54:1:416:U:C6	2.56	0.40
54:1:688:U:H4'	54:1:1780:A:N1	2.36	0.40
54:1:952:G:H3'	54:1:953:G:H5''	2.02	0.40
54:1:958:U:H5''	54:1:959:A:O5'	2.20	0.40
54:1:1857:G:H1'	54:1:1885:A:H61	1.79	0.40
54:1:2078:C:O4'	54:1:2434:A:H1'	2.21	0.40
54:1:2152:G:H2'	54:1:2153:C:O4'	2.21	0.40
54:1:2359:C:O2'	54:1:2360:G:H5'	2.21	0.40
54:1:2585:U:H4'	54:1:2586:U:C5'	2.50	0.40
54:1:2602:A:H5'	54:1:2603:G:OP1	2.21	0.40
54:1:2693:G:H2'	54:1:2694:G:C8	2.56	0.40
54:1:2728:U:H2'	54:1:2729:G:H8	1.86	0.40
59:8:33:TYR:HB3	59:8:72:TRP:CZ3	2.55	0.40
59:8:61:ILE:HB	59:8:92:HIS:NE2	2.36	0.40
59:8:168:PRO:HA	59:8:264:VAL:O	2.22	0.40
59:8:493:THR:OG1	59:8:494:ILE:N	2.55	0.40
1:b:12:ARG:C	1:b:15:VAL:HG22	2.46	0.40
1:b:181:ARG:HE	1:b:265:PHE:HB2	1.86	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:b:226:PRO:HD3	1:b:233:GLY:CA	2.49	0.40
4:e:100:GLU:HG3	4:e:101:ARG:N	2.36	0.40
5:f:3:VAL:CG1	5:f:68:ARG:HD2	2.51	0.40
5:f:97:VAL:HG11	5:f:122:ALA:O	2.21	0.40
7:h:5:LEU:O	7:h:9:GLN:NE2	2.53	0.40
9:j:91:GLU:OE2	9:j:95:ARG:HB2	2.21	0.40
20:u:96:LYS:C	20:u:98:ASN:H	2.29	0.40
23:x:60:LYS:HD2	54:1:372:G:H5''	2.03	0.40
33:H:168:ARG:HD2	33:H:168:ARG:C	2.46	0.40
34:I:10:LEU:HD21	34:I:62:ARG:HB3	2.03	0.40
34:I:25:ARG:HD2	34:I:25:ARG:HA	1.72	0.40
34:I:97:LEU:O	34:I:101:VAL:HG23	2.20	0.40
34:I:171:GLU:HB2	34:I:180:THR:HB	2.02	0.40
35:J:134:ASN:O	35:J:138:ALA:N	2.47	0.40
39:N:6:TYR:OH	53:3:1148:U:H5'	2.21	0.40
39:N:121:ARG:NE	53:3:1348:U:H4'	2.26	0.40
40:O:50:THR:HG22	40:O:62:ARG:HB3	2.03	0.40
43:R:66:GLY:O	43:R:69:ARG:HB2	2.21	0.40
44:S:5:MET:HB3	44:S:62:ARG:HH21	1.86	0.40
45:T:59:VAL:O	45:T:62:ARG:N	2.54	0.40
45:T:87:ARG:HA	45:T:87:ARG:HE	1.86	0.40
46:U:1:MET:HG3	46:U:2:VAL:N	2.36	0.40
50:Y:53:MET:C	50:Y:55:PRO:HD2	2.45	0.40
52:a:12:ARG:HA	52:a:220:ALA:HB2	2.03	0.40
52:a:217:THR:HG23	54:1:2124:G:H21	1.85	0.40
53:3:56:U:H2'	53:3:57:G:O4'	2.22	0.40
53:3:130:A:H2'	53:3:263:A:HO2'	1.87	0.40
53:3:515:G:C5	53:3:516:U:C4	3.09	0.40
53:3:588:G:N2	53:3:589:U:H1'	2.35	0.40
53:3:1028:C:H2'	53:3:1029:U:O4'	2.20	0.40
53:3:1195:C:H2'	53:3:1197:A:O4'	2.22	0.40
53:3:1348:U:H2'	53:3:1349:A:C8	2.57	0.40
53:3:1484:C:H2'	53:3:1485:U:O4'	2.22	0.40
54:1:308:G:N2	54:1:329:G:H1'	2.37	0.40
54:1:366:C:H2'	54:1:367:G:O4'	2.21	0.40
54:1:582:A:H2'	54:1:583:G:H8	1.86	0.40
54:1:671:C:H2'	54:1:672:C:C6	2.57	0.40
54:1:809:G:O2'	54:1:810:U:H5'	2.21	0.40
54:1:880:G:H2'	54:1:881:G:C8	2.56	0.40
54:1:1648:U:H2'	54:1:1649:G:O4'	2.21	0.40
54:1:1648:U:H3'	54:1:1649:G:H5''	2.02	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:2075:U:C2'	54:1:2238:G:N2	2.84	0.40
54:1:2127:G:N2	54:1:2162:G:H1'	2.36	0.40
54:1:2786:U:H2'	54:1:2787:C:H6	1.86	0.40
59:8:217:GLU:OE2	59:8:221:ASN:CG	2.64	0.40
59:8:315:GLU:HB3	59:8:316:PRO:HD2	2.04	0.40
59:8:507:LYS:HE2	59:8:507:LYS:HB3	1.89	0.40
59:8:695:ALA:C	59:8:697:ALA:H	2.28	0.40
5:f:39:ALA:HB3	5:f:63:GLN:HG3	2.02	0.40
5:f:71:LEU:O	5:f:75:VAL:N	2.51	0.40
6:g:41:LYS:HA	6:g:44:ILE:CD1	2.51	0.40
7:h:8:LYS:HD3	7:h:8:LYS:HA	1.93	0.40
7:h:54:VAL:O	7:h:54:VAL:HG22	2.21	0.40
10:k:60:ALA:HB1	10:k:84:CYS:SG	2.61	0.40
16:q:20:ALA:HB1	16:q:23:TYR:HD2	1.86	0.40
23:x:1:SER:HA	54:1:1364:G:OP2	2.21	0.40
25:z:43:ILE:HD13	25:z:46:MET:HE1	2.03	0.40
26:A:47:LYS:O	26:A:51:VAL:HG23	2.22	0.40
33:H:5:HIS:CE1	33:H:183:TYR:HD2	2.38	0.40
33:H:111:ASP:O	33:H:113:LYS:N	2.53	0.40
33:H:147:GLY:HA3	33:H:171:ARG:O	2.21	0.40
33:H:175:HIS:HB2	53:3:1108:G:OP1	2.21	0.40
34:I:165:GLU:O	34:I:166:LYS:HB2	2.21	0.40
35:J:38:VAL:HG22	35:J:66:ALA:HB1	2.04	0.40
37:L:2:ARG:HD2	53:3:933:G:OP2	2.21	0.40
37:L:142:ARG:NE	57:6:41:C:O2'	2.53	0.40
38:M:4:ASP:HB2	38:M:80:PRO:HD3	2.03	0.40
42:Q:86:VAL:C	42:Q:88:ASP:N	2.80	0.40
42:Q:98:ARG:HB2	42:Q:116:TYR:HA	2.04	0.40
45:T:53:ARG:HH21	53:3:579:A:H4'	1.87	0.40
46:U:18:GLN:HB2	46:U:35:ARG:HD2	2.01	0.40
47:V:74:LEU:HD21	47:V:77:VAL:HG23	2.02	0.40
53:3:61:G:H2'	53:3:62:U:O4'	2.21	0.40
53:3:78:A:H61	53:3:91:U:H3	1.69	0.40
53:3:487:A:C6	53:3:488:C:H1'	2.56	0.40
53:3:603:U:H2'	53:3:604:G:C8	2.57	0.40
53:3:836:G:C6	53:3:851:G:C6	3.09	0.40
54:1:1045:C:OP1	54:1:1047:G:H5'	2.22	0.40
54:1:1117:C:O2'	54:1:1118:C:H5'	2.21	0.40
54:1:1448:G:H2'	54:1:1449:G:C8	2.57	0.40
54:1:1798:U:C4	54:1:1819:A:C2	3.10	0.40
54:1:1866:A:H2'	54:1:1867:G:H5'	2.02	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:1912:A:C8	54:1:1918:A:C2	3.09	0.40
54:1:2302:U:H2'	54:1:2303:G:C8	2.56	0.40
54:1:2467:C:O2'	54:1:2468:A:H5'	2.22	0.40
54:1:2521:C:O2'	54:1:2522:U:H5'	2.21	0.40
57:6:30:G:O2'	57:6:31:G:H5'	2.22	0.40
59:8:102:SER:O	59:8:106:LEU:N	2.46	0.40
59:8:158:ILE:O	59:8:163:GLY:N	2.54	0.40
2:c:99:GLU:O	2:c:101:PHE:N	2.54	0.40
3:d:43:THR:HB	54:1:38:A:H1'	2.04	0.40
3:d:58:LYS:HG2	3:d:60:TRP:O	2.21	0.40
6:g:110:VAL:HG22	6:g:111:ALA:N	2.36	0.40
10:k:109:SER:OG	10:k:112:PHE:HD2	2.04	0.40
11:l:111:ILE:N	11:l:111:ILE:CD1	2.83	0.40
12:m:36:VAL:HG23	12:m:129:THR:HG22	2.02	0.40
13:n:38:LEU:HD13	13:n:111:ALA:HB2	2.04	0.40
15:p:8:GLU:O	15:p:11:GLN:N	2.49	0.40
17:r:60:LYS:HE2	17:r:100:GLY:HA3	2.02	0.40
17:r:84:ARG:HH21	17:r:84:ARG:HG3	1.86	0.40
22:w:55:LEU:CD1	22:w:76:ILE:HD12	2.51	0.40
32:G:140:LEU:HD23	32:G:140:LEU:O	2.21	0.40
33:H:112:ALA:HB2	33:H:201:ILE:CG1	2.52	0.40
34:I:13:ARG:HA	34:I:37:PRO:HG2	2.03	0.40
34:I:21:LYS:NZ	53:3:429:U:O2'	2.54	0.40
34:I:181:PHE:C	34:I:182:LYS:HD3	2.46	0.40
48:W:62:ARG:HG3	48:W:69:TYR:CE1	2.56	0.40
49:X:79:TYR:CG	49:X:80:ARG:N	2.87	0.40
50:Y:43:LYS:HG3	50:Y:44:ALA:N	2.37	0.40
51:Z:30:GLU:C	51:Z:32:ARG:H	2.28	0.40
51:Z:66:ARG:HG3	53:3:1098:C:O2'	2.21	0.40
53:3:518:C:H3'	53:3:530:G:C2	2.57	0.40
53:3:743:A:O2'	53:3:744:C:H5'	2.21	0.40
53:3:915:A:H2'	53:3:916:U:C5'	2.51	0.40
53:3:1220:G:O2'	53:3:1221:G:H5'	2.21	0.40
53:3:1256:A:N6	53:3:1278:G:C2	2.89	0.40
54:1:3:U:H2'	54:1:4:U:C6	2.56	0.40
54:1:38:A:H2'	54:1:39:G:O4'	2.20	0.40
54:1:277:G:H4'	54:1:278:A:C8	2.56	0.40
54:1:357:C:H2'	54:1:358:U:H6	1.87	0.40
54:1:1170:C:H2'	54:1:1171:G:H8	1.83	0.40
54:1:1213:A:H62	54:1:1236:G:H1'	1.85	0.40
54:1:1607:C:H4'	54:1:1608:A:O5'	2.22	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1:1736:U:H2'	54:1:1737:G:O4'	2.21	0.40
54:1:1900:A:C2	54:1:1970:A:C6	3.09	0.40
54:1:2022:U:O2'	54:1:2617:U:H5'	2.22	0.40
54:1:2460:U:C2	54:1:2461:A:C8	3.09	0.40
54:1:2874:C:H2'	54:1:2875:C:H6	1.86	0.40
55:2:112:G:H2'	55:2:113:C:H6	1.86	0.40
59:8:11:ARG:HG2	59:8:82:HIS:HB3	2.03	0.40
59:8:167:VAL:N	59:8:262:ILE:O	2.55	0.40
59:8:519:VAL:HG21	59:8:580:PHE:CZ	2.56	0.40
59:8:520:ILE:HD11	59:8:600:ALA:O	2.21	0.40
6:g:33:GLN:OE1	6:g:33:GLN:HA	2.21	0.40
9:j:27:ARG:HD3	9:j:27:ARG:HA	1.93	0.40
11:l:23:ILE:N	11:l:23:ILE:CD1	2.78	0.40
11:l:48:ARG:HB2	11:l:48:ARG:NH1	2.35	0.40
13:n:66:ALA:HB3	13:n:80:PHE:HE2	1.86	0.40
18:s:10:ALA:HB3	18:s:101:SER:O	2.22	0.40
21:v:9:ARG:HH12	55:2:76:G:C5'	2.34	0.40
27:B:15:ARG:NH1	54:1:1265:A:H3'	2.36	0.40
32:G:55:GLU:O	32:G:58:LYS:HB2	2.21	0.40
32:G:69:VAL:HG12	32:G:161:PHE:O	2.21	0.40
33:H:11:LEU:HD23	33:H:17:TRP:CE2	2.56	0.40
33:H:24:ASN:O	33:H:28:PHE:N	2.54	0.40
34:I:90:LEU:HD23	34:I:93:LEU:CD1	2.50	0.40
35:J:10:LEU:HD23	35:J:10:LEU:N	2.35	0.40
36:K:42:TRP:CZ2	36:K:61:LEU:HD23	2.56	0.40
36:K:54:LEU:HD12	36:K:54:LEU:C	2.47	0.40
37:L:149:ALA:HA	41:P:60:PHE:CD2	2.56	0.40
42:Q:26:CYS:HB2	42:Q:29:LYS:HG2	2.04	0.40
43:R:22:TYR:CE2	43:R:68:LEU:HD22	2.56	0.40
43:R:79:LEU:HD11	53:3:1309:G:H5''	2.02	0.40
47:V:7:LEU:N	47:V:7:LEU:HD12	2.37	0.40
50:Y:28:ARG:HG3	50:Y:28:ARG:HH11	1.86	0.40
52:a:181:ASP:N	52:a:184:LYS:HB2	2.37	0.40
52:a:210:LYS:CG	52:a:211:LYS:N	2.83	0.40
53:3:232:G:H2'	53:3:233:C:H6	1.85	0.40
53:3:380:G:N2	53:3:383:A:H62	2.13	0.40
53:3:383:A:H2'	53:3:384:G:C4'	2.51	0.40
53:3:514:C:C2	53:3:515:G:C8	3.10	0.40
53:3:581:G:N2	53:3:582:C:N4	2.69	0.40
53:3:656:G:O2'	53:3:657:U:H5'	2.21	0.40
53:3:945:G:C2	53:3:946:A:C8	3.09	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:3:1049:U:O4'	53:3:1201:A:C8	2.74	0.40
53:3:1130:A:H62	53:3:1143:G:N2	2.20	0.40
53:3:1237:C:H4'	53:3:1300:G:N2	2.25	0.40
54:1:281:C:N4	54:1:359:G:O6	2.54	0.40
54:1:1184:U:O2'	54:1:1185:G:H5'	2.22	0.40
54:1:1658:C:O2'	54:1:1659:G:H5'	2.22	0.40
54:1:1664:A:H61	54:1:1996:C:H42	1.69	0.40
54:1:1909:C:H2'	54:1:1910:G:H8	1.87	0.40
54:1:2077:A:O2'	54:1:2078:C:H5'	2.21	0.40
54:1:2341:G:H2'	54:1:2342:C:C6	2.55	0.40
54:1:2543:G:C6	54:1:2544:G:C6	3.09	0.40
54:1:2742:G:H2'	54:1:2743:U:H6	1.86	0.40
59:8:119:VAL:O	59:8:120:GLN:C	2.64	0.40
59:8:540:ILE:HD11	59:8:578:LEU:HG	2.02	0.40
59:8:563:ALA:O	59:8:602:LYS:NZ	2.50	0.40
59:8:602:LYS:O	59:8:606:LYS:N	2.49	0.40

There are no symmetry-related clashes.

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 PDB entries followed by that with respect to all EM entries.

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	
1	b	269/271 (99%)	223 (83%)	40 (15%)	6 (2%)	5	26
2	c	207/209 (99%)	179 (86%)	28 (14%)	0	100	100
3	d	199/201 (99%)	168 (84%)	30 (15%)	1 (0%)	24	55
4	e	175/177 (99%)	143 (82%)	28 (16%)	4 (2%)	5	25
5	f	174/176 (99%)	145 (83%)	27 (16%)	2 (1%)	11	39
6	g	121/149 (81%)	93 (77%)	24 (20%)	4 (3%)	3	19
7	h	82/131 (63%)	59 (72%)	18 (22%)	5 (6%)	1	9

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	i	72/141 (51%)	60 (83%)	11 (15%)	1 (1%)	9	33
9	j	140/142 (99%)	119 (85%)	20 (14%)	1 (1%)	18	49
10	k	120/122 (98%)	101 (84%)	19 (16%)	0	100	100
11	l	141/143 (99%)	124 (88%)	16 (11%)	1 (1%)	18	49
12	m	134/136 (98%)	120 (90%)	12 (9%)	2 (2%)	8	32
13	n	118/120 (98%)	98 (83%)	18 (15%)	2 (2%)	7	30
14	o	114/116 (98%)	101 (89%)	13 (11%)	0	100	100
15	p	112/114 (98%)	96 (86%)	16 (14%)	0	100	100
16	q	115/117 (98%)	112 (97%)	3 (3%)	0	100	100
17	r	101/103 (98%)	83 (82%)	16 (16%)	2 (2%)	6	27
18	s	108/110 (98%)	93 (86%)	14 (13%)	1 (1%)	14	43
19	t	91/93 (98%)	78 (86%)	13 (14%)	0	100	100
20	u	100/102 (98%)	78 (78%)	21 (21%)	1 (1%)	12	40
21	v	92/94 (98%)	83 (90%)	8 (9%)	1 (1%)	11	39
22	w	73/75 (97%)	63 (86%)	9 (12%)	1 (1%)	9	33
23	x	75/77 (97%)	66 (88%)	9 (12%)	0	100	100
24	y	61/63 (97%)	54 (88%)	6 (10%)	1 (2%)	7	31
25	z	56/58 (97%)	51 (91%)	5 (9%)	0	100	100
26	A	64/66 (97%)	54 (84%)	10 (16%)	0	100	100
27	B	54/56 (96%)	42 (78%)	12 (22%)	0	100	100
28	C	48/50 (96%)	39 (81%)	9 (19%)	0	100	100
29	D	44/46 (96%)	42 (96%)	2 (4%)	0	100	100
30	E	62/64 (97%)	48 (77%)	9 (14%)	5 (8%)	1	5
31	F	36/38 (95%)	29 (81%)	6 (17%)	1 (3%)	4	21
32	G	216/225 (96%)	177 (82%)	35 (16%)	4 (2%)	6	28
33	H	204/206 (99%)	183 (90%)	20 (10%)	1 (0%)	24	55
34	I	203/205 (99%)	151 (74%)	48 (24%)	4 (2%)	6	27
35	J	155/157 (99%)	122 (79%)	26 (17%)	7 (4%)	2	13
36	K	98/100 (98%)	81 (83%)	15 (15%)	2 (2%)	6	27
37	L	149/151 (99%)	124 (83%)	24 (16%)	1 (1%)	18	49
38	M	127/129 (98%)	109 (86%)	18 (14%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	N	125/127 (98%)	97 (78%)	28 (22%)	0	100	100
40	O	96/98 (98%)	75 (78%)	18 (19%)	3 (3%)	3	20
41	P	114/116 (98%)	92 (81%)	20 (18%)	2 (2%)	6	29
42	Q	121/123 (98%)	95 (78%)	24 (20%)	2 (2%)	7	30
43	R	112/114 (98%)	94 (84%)	17 (15%)	1 (1%)	14	43
44	S	98/100 (98%)	77 (79%)	20 (20%)	1 (1%)	12	40
45	T	86/88 (98%)	73 (85%)	13 (15%)	0	100	100
46	U	80/82 (98%)	53 (66%)	24 (30%)	3 (4%)	2	16
47	V	78/80 (98%)	54 (69%)	21 (27%)	3 (4%)	2	16
48	W	63/65 (97%)	49 (78%)	11 (18%)	3 (5%)	2	12
49	X	77/79 (98%)	60 (78%)	17 (22%)	0	100	100
50	Y	83/85 (98%)	73 (88%)	9 (11%)	1 (1%)	10	37
51	Z	63/65 (97%)	41 (65%)	18 (29%)	4 (6%)	1	8
52	a	130/223 (58%)	104 (80%)	19 (15%)	7 (5%)	1	10
59	8	681/711 (96%)	558 (82%)	108 (16%)	15 (2%)	5	26
All	All	6517/6889 (95%)	5386 (83%)	1025 (16%)	106 (2%)	10	31

All (106) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	b	107	LYS
3	d	83	VAL
4	e	176	PHE
7	h	80	THR
8	i	11	GLN
13	n	88	ALA
17	r	54	VAL
30	E	31	ILE
32	G	19	THR
34	I	125	ASN
35	J	26	GLY
37	L	6	ILE
41	P	92	ARG
46	U	79	ASN
47	V	15	LYS
47	V	70	LYS
51	Z	24	LYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
51	Z	65	ARG
52	a	6	LYS
52	a	7	ARG
59	8	379	ALA
59	8	624	PRO
1	b	205	GLY
1	b	206	LYS
4	e	173	ASP
5	f	174	LYS
9	j	81	ILE
24	y	24	GLU
30	E	33	THR
31	F	27	CYS
32	G	18	GLN
35	J	93	VAL
35	J	101	GLY
35	J	122	VAL
43	R	65	GLU
44	S	3	GLN
51	Z	37	TYR
59	8	35	GLY
59	8	50	MET
59	8	78	GLN
59	8	628	THR
4	e	40	GLY
4	e	175	PRO
7	h	58	THR
7	h	81	LEU
12	m	59	ARG
30	E	27	ASN
32	G	99	MET
33	H	112	ALA
40	O	34	ALA
46	U	69	ASP
51	Z	9	GLU
52	a	17	ALA
52	a	55	SER
52	a	202	THR
52	a	221	GLY
59	8	345	SER
59	8	527	PRO
1	b	232	GLY

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	g	90	LEU
7	h	79	PRO
11	l	80	SER
12	m	70	ASP
21	v	84	PRO
22	w	80	ALA
30	E	32	LEU
35	J	25	LYS
36	K	95	ALA
48	W	71	ASP
50	Y	68	LYS
59	8	60	GLY
59	8	482	ASN
1	b	119	VAL
1	b	207	ALA
5	f	175	LYS
6	g	15	LEU
13	n	80	PHE
30	E	18	LYS
34	I	4	LEU
36	K	92	THR
41	P	89	GLY
46	U	13	LYS
47	V	50	ASN
48	W	24	ASP
52	a	219	GLY
59	8	54	GLU
59	8	229	ALA
59	8	306	PRO
6	g	9	VAL
17	r	46	GLU
18	s	3	THR
35	J	87	VAL
40	O	43	PRO
42	Q	23	LEU
59	8	451	GLU
34	I	167	PRO
48	W	45	GLY
6	g	118	PRO
20	u	54	PRO
34	I	126	GLY
42	Q	27	PRO

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
59	8	565	PRO
7	h	55	VAL
32	G	97	GLY
35	J	83	PRO
40	O	42	LEU

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 PDB entries followed by that with respect to all EM entries.

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	
1	b	216/216 (100%)	210 (97%)	6 (3%)	38	62
2	c	164/164 (100%)	160 (98%)	4 (2%)	43	65
3	d	165/165 (100%)	162 (98%)	3 (2%)	51	70
4	e	148/148 (100%)	146 (99%)	2 (1%)	59	73
5	f	137/137 (100%)	134 (98%)	3 (2%)	45	66
6	g	98/114 (86%)	98 (100%)	0	100	100
7	h	66/100 (66%)	65 (98%)	1 (2%)	57	72
8	i	60/109 (55%)	57 (95%)	3 (5%)	22	50
9	j	116/116 (100%)	112 (97%)	4 (3%)	32	59
10	k	103/103 (100%)	102 (99%)	1 (1%)	68	76
11	l	102/102 (100%)	100 (98%)	2 (2%)	48	68
12	m	109/109 (100%)	106 (97%)	3 (3%)	38	62
13	n	100/100 (100%)	96 (96%)	4 (4%)	28	56
14	o	86/86 (100%)	81 (94%)	5 (6%)	18	47
15	p	99/99 (100%)	98 (99%)	1 (1%)	68	76
16	q	89/89 (100%)	89 (100%)	0	100	100
17	r	84/84 (100%)	81 (96%)	3 (4%)	31	58
18	s	93/93 (100%)	92 (99%)	1 (1%)	65	76
19	t	80/80 (100%)	79 (99%)	1 (1%)	61	74
20	u	83/83 (100%)	80 (96%)	3 (4%)	31	58

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	v	78/78 (100%)	77 (99%)	1 (1%)	61	74
22	w	57/57 (100%)	57 (100%)	0	100	100
23	x	67/67 (100%)	67 (100%)	0	100	100
24	y	55/55 (100%)	55 (100%)	0	100	100
25	z	48/48 (100%)	47 (98%)	1 (2%)	47	67
26	A	59/59 (100%)	58 (98%)	1 (2%)	53	71
27	B	47/47 (100%)	45 (96%)	2 (4%)	26	54
28	C	45/45 (100%)	45 (100%)	0	100	100
29	D	38/38 (100%)	38 (100%)	0	100	100
30	E	51/51 (100%)	50 (98%)	1 (2%)	48	68
31	F	34/34 (100%)	34 (100%)	0	100	100
32	G	180/186 (97%)	178 (99%)	2 (1%)	65	76
33	H	170/170 (100%)	166 (98%)	4 (2%)	43	65
34	I	172/172 (100%)	166 (96%)	6 (4%)	32	58
35	J	119/119 (100%)	116 (98%)	3 (2%)	42	64
36	K	87/87 (100%)	82 (94%)	5 (6%)	18	47
37	L	124/124 (100%)	124 (100%)	0	100	100
38	M	104/104 (100%)	102 (98%)	2 (2%)	50	68
39	N	105/105 (100%)	100 (95%)	5 (5%)	23	52
40	O	86/86 (100%)	84 (98%)	2 (2%)	44	66
41	P	89/89 (100%)	89 (100%)	0	100	100
42	Q	103/103 (100%)	98 (95%)	5 (5%)	22	51
43	R	92/92 (100%)	91 (99%)	1 (1%)	65	76
44	S	83/83 (100%)	82 (99%)	1 (1%)	63	75
45	T	76/76 (100%)	75 (99%)	1 (1%)	61	74
46	U	65/65 (100%)	63 (97%)	2 (3%)	35	60
47	V	74/74 (100%)	74 (100%)	0	100	100
48	W	56/56 (100%)	55 (98%)	1 (2%)	51	70
49	X	70/70 (100%)	67 (96%)	3 (4%)	26	54
50	Y	65/65 (100%)	64 (98%)	1 (2%)	57	72
51	Z	55/55 (100%)	53 (96%)	2 (4%)	31	58

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
52	a	110/174 (63%)	109 (99%)	1 (1%)	70	78
59	8	566/585 (97%)	552 (98%)	14 (2%)	42	64
All	All	5428/5616 (97%)	5311 (98%)	117 (2%)	45	66

All (117) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	b	86	ARG
1	b	129	LEU
1	b	142	ASN
1	b	202	ARG
1	b	219	VAL
1	b	262	THR
2	c	40	LEU
2	c	88	GLU
2	c	151	THR
2	c	197	THR
3	d	46	GLN
3	d	77	ILE
3	d	155	GLU
4	e	24	VAL
4	e	152	ASP
5	f	9	VAL
5	f	151	ARG
5	f	154	GLU
7	h	81	LEU
8	i	12	VAL
8	i	27	LEU
8	i	34	ILE
9	j	62	VAL
9	j	84	ILE
9	j	128	ASN
9	j	138	GLN
10	k	40	LYS
11	l	23	ILE
11	l	106	GLU
12	m	42	THR
12	m	91	TYR
12	m	136	MET
13	n	2	ARG
13	n	37	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
13	n	98	LEU
13	n	114	GLU
14	o	24	THR
14	o	31	THR
14	o	32	PRO
14	o	46	GLU
14	o	95	SER
15	p	105	LYS
17	r	2	TYR
17	r	43	ASN
17	r	46	GLU
18	s	76	VAL
19	t	72	GLN
20	u	27	VAL
20	u	36	GLU
20	u	87	GLU
21	v	59	GLU
25	z	36	GLU
26	A	51	VAL
27	B	8	THR
27	B	21	LEU
30	E	61	LEU
32	G	19	THR
32	G	169	HIS
33	H	65	VAL
33	H	155	ARG
33	H	161	ILE
33	H	192	TYR
34	I	34	GLU
34	I	88	ASN
34	I	97	LEU
34	I	112	GLU
34	I	117	VAL
34	I	139	ASN
35	J	37	VAL
35	J	92	ARG
35	J	162	GLU
36	K	6	ILE
36	K	8	PHE
36	K	52	ASN
36	K	60	VAL
36	K	97	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
38	M	37	ASN
38	M	60	LEU
39	N	8	THR
39	N	38	PHE
39	N	54	VAL
39	N	93	LEU
39	N	129	ARG
40	O	64	GLN
40	O	78	GLU
42	Q	27	PRO
42	Q	66	ILE
42	Q	78	VAL
42	Q	96	THR
42	Q	103	CYS
43	R	107	THR
44	S	34	ASN
45	T	86	LEU
46	U	21	VAL
46	U	67	ILE
48	W	18	GLN
49	X	39	ILE
49	X	47	THR
49	X	65	MET
50	Y	11	ILE
51	Z	3	ILE
51	Z	24	LYS
52	a	213	SER
59	8	59	ARG
59	8	62	THR
59	8	138	ILE
59	8	141	VAL
59	8	220	GLN
59	8	263	LEU
59	8	292	VAL
59	8	298	ILE
59	8	372	GLU
59	8	535	GLU
59	8	583	TYR
59	8	623	THR
59	8	624	PRO
59	8	680	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (98)

such sidechains are listed below:

Mol	Chain	Res	Type
1	b	24	HIS
1	b	36	ASN
1	b	69	ASN
1	b	127	ASN
1	b	238	ASN
1	b	250	GLN
2	c	36	GLN
2	c	130	GLN
2	c	150	GLN
2	c	167	ASN
2	c	185	ASN
3	d	94	GLN
4	e	51	ASN
4	e	62	GLN
4	e	134	GLN
5	f	63	GLN
5	f	87	GLN
5	f	138	GLN
6	g	2	GLN
6	g	20	ASN
7	h	6	GLN
8	i	5	GLN
9	j	86	GLN
10	k	29	HIS
10	k	88	ASN
10	k	93	GLN
11	l	38	GLN
13	n	16	HIS
13	n	107	ASN
15	p	55	HIS
16	q	51	GLN
17	r	87	GLN
17	r	89	HIS
18	s	9	HIS
18	s	31	GLN
19	t	91	GLN
20	u	45	GLN
21	v	51	GLN
21	v	78	GLN
23	x	15	ASN
23	x	19	HIS
23	x	33	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
24	y	36	GLN
25	z	33	HIS
26	A	61	ASN
27	B	4	GLN
28	C	44	GLN
30	E	23	HIS
32	G	17	HIS
32	G	18	GLN
32	G	121	GLN
33	H	7	ASN
33	H	31	ASN
33	H	139	ASN
33	H	184	ASN
34	I	84	ASN
34	I	115	GLN
34	I	130	ASN
34	I	135	GLN
35	J	69	ASN
35	J	145	ASN
36	K	3	HIS
36	K	11	HIS
36	K	14	GLN
36	K	37	HIS
36	K	63	ASN
36	K	81	ASN
37	L	51	GLN
37	L	67	ASN
37	L	121	ASN
39	N	3	ASN
39	N	125	GLN
40	O	64	GLN
41	P	23	HIS
43	R	7	ASN
43	R	99	GLN
44	S	3	GLN
44	S	48	GLN
44	S	59	GLN
45	T	27	GLN
45	T	37	HIS
45	T	79	GLN
47	V	30	HIS
48	W	53	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	X	55	GLN
50	Y	12	GLN
50	Y	69	ASN
50	Y	83	ASN
52	a	24	ASN
52	a	203	GLN
59	8	12	ASN
59	8	170	GLN
59	8	221	ASN
59	8	259	ASN
59	8	272	ASN
59	8	365	GLN
59	8	367	HIS
59	8	514	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
53	3	1538/1539 (99%)	198 (12%)	5 (0%)
54	1	2902/2903 (99%)	368 (12%)	12 (0%)
55	2	119/120 (99%)	13 (10%)	2 (1%)
56	5	76/77 (98%)	12 (15%)	1 (1%)
57	6	76/77 (98%)	21 (27%)	0
58	4	15/16 (93%)	5 (33%)	0
All	All	4726/4732 (99%)	617 (13%)	20 (0%)

All (617) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
53	3	6	G
53	3	8	A
53	3	9	G
53	3	22	G
53	3	32	A
53	3	39	G
53	3	48	C
53	3	50	A
53	3	51	A
53	3	54	C
53	3	60	A
53	3	61	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	3	64	G
53	3	71	A
53	3	85	U
53	3	87	C
53	3	98	A
53	3	110	C
53	3	127	G
53	3	130	A
53	3	136	C
53	3	144	G
53	3	168	G
53	3	173	U
53	3	183	C
53	3	184	G
53	3	197	A
53	3	210	C
53	3	214	C
53	3	247	G
53	3	251	G
53	3	253	A
53	3	266	G
53	3	267	C
53	3	281	G
53	3	282	A
53	3	289	G
53	3	309	A
53	3	345	C
53	3	351	G
53	3	352	C
53	3	353	A
53	3	355	C
53	3	365	U
53	3	367	U
53	3	368	U
53	3	369	G
53	3	372	C
53	3	373	A
53	3	376	G
53	3	381	C
53	3	387	U
53	3	389	A
53	3	390	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	3	396	C
53	3	406	G
53	3	413	G
53	3	422	C
53	3	423	G
53	3	429	U
53	3	454	G
53	3	467	U
53	3	485	U
53	3	486	U
53	3	488	C
53	3	495	A
53	3	497	G
53	3	499	A
53	3	509	A
53	3	512	U
53	3	517	G
53	3	518	C
53	3	524	G
53	3	527	G
53	3	532	A
53	3	534	U
53	3	547	A
53	3	561	U
53	3	563	A
53	3	564	C
53	3	571	U
53	3	572	A
53	3	573	A
53	3	575	G
53	3	576	C
53	3	577	G
53	3	633	G
53	3	665	A
53	3	688	G
53	3	703	G
53	3	713	G
53	3	724	G
53	3	733	G
53	3	753	A
53	3	755	G
53	3	777	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	3	793	U
53	3	794	A
53	3	809	G
53	3	814	A
53	3	817	C
53	3	818	G
53	3	819	A
53	3	842	U
53	3	843	U
53	3	844	G
53	3	846	G
53	3	873	A
53	3	887	G
53	3	890	G
53	3	902	G
53	3	926	G
53	3	934	C
53	3	935	A
53	3	960	U
53	3	961	U
53	3	966	G
53	3	969	A
53	3	975	A
53	3	976	G
53	3	977	A
53	3	978	A
53	3	992	U
53	3	993	G
53	3	1003	G
53	3	1004	A
53	3	1028	C
53	3	1031	C
53	3	1032	G
53	3	1033	G
53	3	1034	G
53	3	1054	C
53	3	1055	A
53	3	1065	U
53	3	1094	G
53	3	1095	U
53	3	1101	A
53	3	1127	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	3	1136	C
53	3	1137	C
53	3	1138	G
53	3	1139	G
53	3	1159	U
53	3	1160	G
53	3	1168	U
53	3	1182	G
53	3	1184	G
53	3	1191	A
53	3	1196	A
53	3	1197	A
53	3	1201	A
53	3	1202	U
53	3	1213	A
53	3	1224	U
53	3	1225	A
53	3	1238	A
53	3	1241	G
53	3	1257	A
53	3	1258	G
53	3	1260	G
53	3	1261	A
53	3	1275	A
53	3	1280	A
53	3	1282	C
53	3	1285	A
53	3	1286	U
53	3	1287	A
53	3	1300	G
53	3	1312	G
53	3	1317	C
53	3	1336	C
53	3	1345	U
53	3	1346	A
53	3	1348	U
53	3	1363	A
53	3	1364	U
53	3	1381	U
53	3	1395	C
53	3	1398	A
53	3	1399	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
53	3	1400	C
53	3	1402	C
53	3	1419	G
53	3	1441	A
53	3	1446	A
53	3	1448	C
53	3	1451	U
53	3	1452	C
53	3	1493	A
53	3	1494	G
53	3	1503	A
53	3	1505	G
53	3	1506	U
53	3	1517	G
53	3	1529	G
53	3	1530	G
53	3	1533	C
53	3	1535	C
54	1	10	A
54	1	12	U
54	1	35	G
54	1	46	G
54	1	51	G
54	1	63	A
54	1	71	A
54	1	74	A
54	1	75	G
54	1	119	A
54	1	120	U
54	1	137	U
54	1	139	U
54	1	140	C
54	1	141	G
54	1	142	A
54	1	162	U
54	1	163	C
54	1	196	A
54	1	216	A
54	1	221	A
54	1	222	A
54	1	228	C
54	1	248	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	1	255	A
54	1	264	C
54	1	265	A
54	1	266	G
54	1	276	U
54	1	281	C
54	1	285	G
54	1	294	A
54	1	301	G
54	1	311	A
54	1	322	A
54	1	323	C
54	1	329	G
54	1	330	A
54	1	333	G
54	1	334	C
54	1	361	G
54	1	362	A
54	1	371	A
54	1	372	G
54	1	386	G
54	1	387	U
54	1	404	A
54	1	405	U
54	1	406	G
54	1	411	G
54	1	424	G
54	1	481	G
54	1	491	G
54	1	504	A
54	1	505	A
54	1	508	A
54	1	529	A
54	1	531	C
54	1	532	A
54	1	533	G
54	1	543	G
54	1	545	U
54	1	547	A
54	1	548	G
54	1	549	G
54	1	550	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	1	563	A
54	1	573	U
54	1	574	A
54	1	575	A
54	1	603	A
54	1	614	A
54	1	615	U
54	1	616	A
54	1	627	A
54	1	637	A
54	1	646	U
54	1	654	A
54	1	664	G
54	1	669	G
54	1	686	U
54	1	687	C
54	1	695	G
54	1	714	U
54	1	730	A
54	1	747	C
54	1	748	G
54	1	757	G
54	1	764	A
54	1	775	G
54	1	776	G
54	1	782	A
54	1	784	G
54	1	785	G
54	1	805	G
54	1	812	C
54	1	819	A
54	1	827	U
54	1	828	U
54	1	830	G
54	1	845	A
54	1	846	U
54	1	847	U
54	1	856	G
54	1	860	U
54	1	878	A
54	1	886	A
54	1	888	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	1	896	A
54	1	897	C
54	1	910	A
54	1	915	C
54	1	931	U
54	1	932	U
54	1	941	A
54	1	945	A
54	1	946	C
54	1	953	G
54	1	961	C
54	1	962	G
54	1	974	G
54	1	975	A
54	1	983	A
54	1	995	C
54	1	996	A
54	1	1005	C
54	1	1012	U
54	1	1013	C
54	1	1021	A
54	1	1022	G
54	1	1026	G
54	1	1033	U
54	1	1045	C
54	1	1046	A
54	1	1047	G
54	1	1053	C
54	1	1060	U
54	1	1062	G
54	1	1063	G
54	1	1065	U
54	1	1066	U
54	1	1067	A
54	1	1068	G
54	1	1069	A
54	1	1070	A
54	1	1071	G
54	1	1072	C
54	1	1079	C
54	1	1084	A
54	1	1088	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	1	1104	C
54	1	1111	A
54	1	1131	G
54	1	1132	U
54	1	1133	A
54	1	1135	C
54	1	1172	C
54	1	1174	U
54	1	1175	A
54	1	1177	G
54	1	1180	U
54	1	1212	G
54	1	1238	G
54	1	1244	A
54	1	1253	A
54	1	1256	G
54	1	1271	G
54	1	1272	A
54	1	1275	A
54	1	1289	C
54	1	1301	A
54	1	1345	C
54	1	1365	A
54	1	1378	A
54	1	1379	U
54	1	1383	A
54	1	1395	A
54	1	1416	G
54	1	1419	A
54	1	1420	A
54	1	1427	A
54	1	1428	C
54	1	1454	C
54	1	1461	C
54	1	1467	U
54	1	1468	U
54	1	1476	U
54	1	1482	G
54	1	1490	A
54	1	1493	C
54	1	1504	A
54	1	1515	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	1	1524	G
54	1	1535	A
54	1	1536	C
54	1	1537	G
54	1	1555	G
54	1	1560	G
54	1	1569	A
54	1	1578	U
54	1	1581	G
54	1	1584	U
54	1	1608	A
54	1	1610	A
54	1	1611	C
54	1	1616	A
54	1	1639	C
54	1	1646	C
54	1	1647	U
54	1	1648	U
54	1	1649	G
54	1	1654	A
54	1	1674	G
54	1	1703	G
54	1	1715	G
54	1	1729	U
54	1	1730	C
54	1	1732	C
54	1	1738	G
54	1	1758	U
54	1	1764	C
54	1	1773	A
54	1	1780	A
54	1	1781	U
54	1	1791	A
54	1	1800	C
54	1	1801	A
54	1	1808	A
54	1	1816	C
54	1	1821	A
54	1	1829	A
54	1	1858	A
54	1	1901	A
54	1	1906	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	1	1913	A
54	1	1929	G
54	1	1930	G
54	1	1937	A
54	1	1938	A
54	1	1944	U
54	1	1955	U
54	1	1966	A
54	1	1967	C
54	1	1970	A
54	1	1971	U
54	1	1972	G
54	1	1982	U
54	1	1991	U
54	1	1993	U
54	1	1997	C
54	1	2022	U
54	1	2023	C
54	1	2030	A
54	1	2031	A
54	1	2036	C
54	1	2043	C
54	1	2052	A
54	1	2055	C
54	1	2056	G
54	1	2060	A
54	1	2061	G
54	1	2062	A
54	1	2068	U
54	1	2069	G
54	1	2072	C
54	1	2096	C
54	1	2110	G
54	1	2111	U
54	1	2112	G
54	1	2113	U
54	1	2114	A
54	1	2115	G
54	1	2118	U
54	1	2119	A
54	1	2127	G
54	1	2131	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	1	2132	U
54	1	2133	G
54	1	2134	A
54	1	2145	C
54	1	2148	G
54	1	2149	U
54	1	2156	G
54	1	2166	U
54	1	2172	U
54	1	2173	A
54	1	2198	A
54	1	2204	G
54	1	2211	A
54	1	2225	A
54	1	2239	G
54	1	2268	A
54	1	2279	G
54	1	2283	C
54	1	2287	A
54	1	2297	A
54	1	2305	U
54	1	2309	A
54	1	2325	G
54	1	2327	A
54	1	2334	U
54	1	2335	A
54	1	2350	C
54	1	2357	G
54	1	2383	G
54	1	2385	C
54	1	2402	U
54	1	2403	C
54	1	2406	A
54	1	2423	U
54	1	2425	A
54	1	2427	C
54	1	2429	G
54	1	2430	A
54	1	2434	A
54	1	2435	A
54	1	2441	U
54	1	2448	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	1	2470	G
54	1	2476	A
54	1	2494	G
54	1	2502	G
54	1	2504	U
54	1	2505	G
54	1	2518	A
54	1	2525	G
54	1	2547	A
54	1	2554	U
54	1	2567	G
54	1	2573	C
54	1	2582	G
54	1	2602	A
54	1	2603	G
54	1	2609	U
54	1	2613	U
54	1	2629	U
54	1	2646	C
54	1	2655	G
54	1	2682	A
54	1	2684	U
54	1	2689	U
54	1	2690	U
54	1	2714	G
54	1	2716	C
54	1	2733	A
54	1	2744	G
54	1	2748	A
54	1	2750	A
54	1	2755	C
54	1	2757	A
54	1	2764	A
54	1	2765	A
54	1	2777	G
54	1	2778	A
54	1	2779	U
54	1	2797	U
54	1	2798	U
54	1	2800	A
54	1	2801	G
54	1	2820	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	1	2821	A
54	1	2833	U
54	1	2849	U
54	1	2867	G
54	1	2868	A
54	1	2872	A
54	1	2880	C
54	1	2884	U
55	2	4	C
55	2	12	C
55	2	26	C
55	2	35	C
55	2	41	G
55	2	42	C
55	2	44	G
55	2	67	G
55	2	88	C
55	2	89	U
55	2	108	A
55	2	109	A
55	2	116	G
56	5	3	G
56	5	4	C
56	5	5	G
56	5	9	A
56	5	19	G
56	5	20	U
56	5	21	A
56	5	22	G
56	5	47	U
56	5	61	C
56	5	73	A
56	5	76	A
57	6	2	G
57	6	3	C
57	6	8	U
57	6	9	G
57	6	14	A
57	6	18	G
57	6	19	G
57	6	21	A
57	6	22	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
57	6	28	C
57	6	33	U
57	6	35	A
57	6	37	A
57	6	48	C
57	6	56	C
57	6	61	C
57	6	64	G
57	6	70	G
57	6	71	C
57	6	72	A
57	6	76	A
58	4	9	G
58	4	15	A
58	4	16	A
58	4	18	G
58	4	19	C

All (20) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
53	3	413	G
53	3	890	G
53	3	1190	G
53	3	1201	A
53	3	1347	G
54	1	227	A
54	1	490	C
54	1	546	U
54	1	784	G
54	1	859	G
54	1	1020	A
54	1	1130	U
54	1	1475	G
54	1	1857	G
54	1	2296	U
54	1	2326	C
54	1	2756	U
55	2	66	A
55	2	88	C
56	5	2	G

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

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](#)

Of 4 ligands modelled in this entry, 1 is monoatomic - leaving 3 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
62	GCP	8	801	63	32,34,34	2.09	7 (21%)	49,54,54	2.44	16 (32%)
60	FME	1	3001	61	8,9,10	0.54	0	8,9,11	0.73	0
61	PRO	5	101	60,56	6,7,8	0.52	0	7,8,10	1.20	1 (14%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
62	GCP	8	801	63	-	9/19/38/38	0/3/3/3
60	FME	1	3001	61	-	1/7/9/11	-
61	PRO	5	101	60,56	-	0/0/9/11	0/1/1/1

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	8	801	GCP	PA-O3A	-7.32	1.51	1.59
62	8	801	GCP	PB-O3A	-5.80	1.51	1.58
62	8	801	GCP	PB-O2B	-3.17	1.48	1.56
62	8	801	GCP	C1'-N9	2.37	1.54	1.47

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	8	801	GCP	PG-O3G	-2.26	1.49	1.55
62	8	801	GCP	PG-O2G	-2.26	1.49	1.55
62	8	801	GCP	O4'-C1'	2.12	1.46	1.42

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	8	801	GCP	C1'-N9-C4	8.09	150.38	126.49
62	8	801	GCP	C1'-N9-C8	-7.98	104.05	126.73
62	8	801	GCP	O3G-PG-O2G	4.31	120.25	107.96
62	8	801	GCP	O2G-PG-C3B	-4.29	95.99	106.40
62	8	801	GCP	O3A-PA-O1A	-4.18	98.13	110.70
62	8	801	GCP	O2B-PB-O1B	3.80	122.31	109.95
62	8	801	GCP	O4'-C1'-C2'	-3.59	98.94	106.62
62	8	801	GCP	O3'-C3'-C4'	-3.33	101.52	111.08
62	8	801	GCP	O2A-PA-O5'	-3.17	93.21	107.57
62	8	801	GCP	PB-O3A-PA	2.90	141.85	132.37
62	8	801	GCP	C3'-C2'-C1'	-2.43	96.87	101.46
62	8	801	GCP	O2A-PA-O1A	2.36	123.44	112.44
61	5	101	PRO	O-C-CA	-2.35	118.73	124.77
62	8	801	GCP	O3G-PG-O1G	-2.26	106.53	112.39
62	8	801	GCP	O4'-C4'-C5'	2.22	116.44	109.33
62	8	801	GCP	O2A-PA-O3A	2.05	112.82	107.27
62	8	801	GCP	O1B-PB-C3B	2.04	114.42	109.05

There are no chirality outliers.

All (10) torsion outliers are listed below:

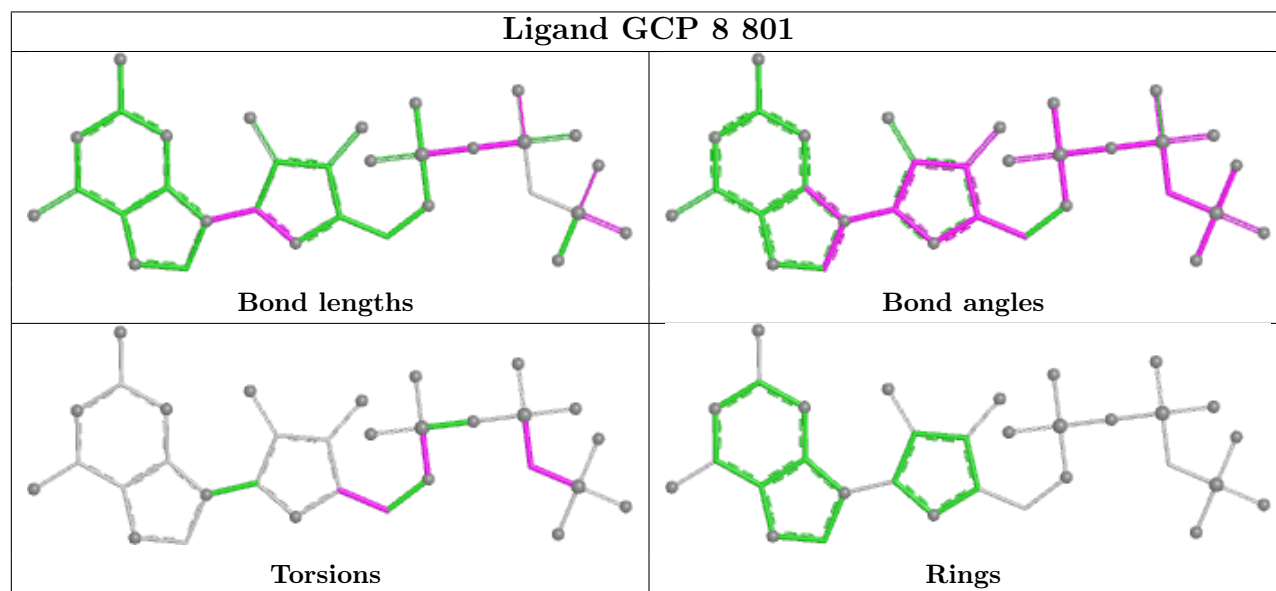
Mol	Chain	Res	Type	Atoms
60	1	3001	FME	O1-CN-N-CA
62	8	801	GCP	PB-C3B-PG-O1G
62	8	801	GCP	PB-C3B-PG-O2G
62	8	801	GCP	PG-C3B-PB-O1B
62	8	801	GCP	C5'-O5'-PA-O1A
62	8	801	GCP	O4'-C4'-C5'-O5'
62	8	801	GCP	C3'-C4'-C5'-O5'
62	8	801	GCP	PB-C3B-PG-O3G
62	8	801	GCP	C5'-O5'-PA-O3A
62	8	801	GCP	C5'-O5'-PA-O2A

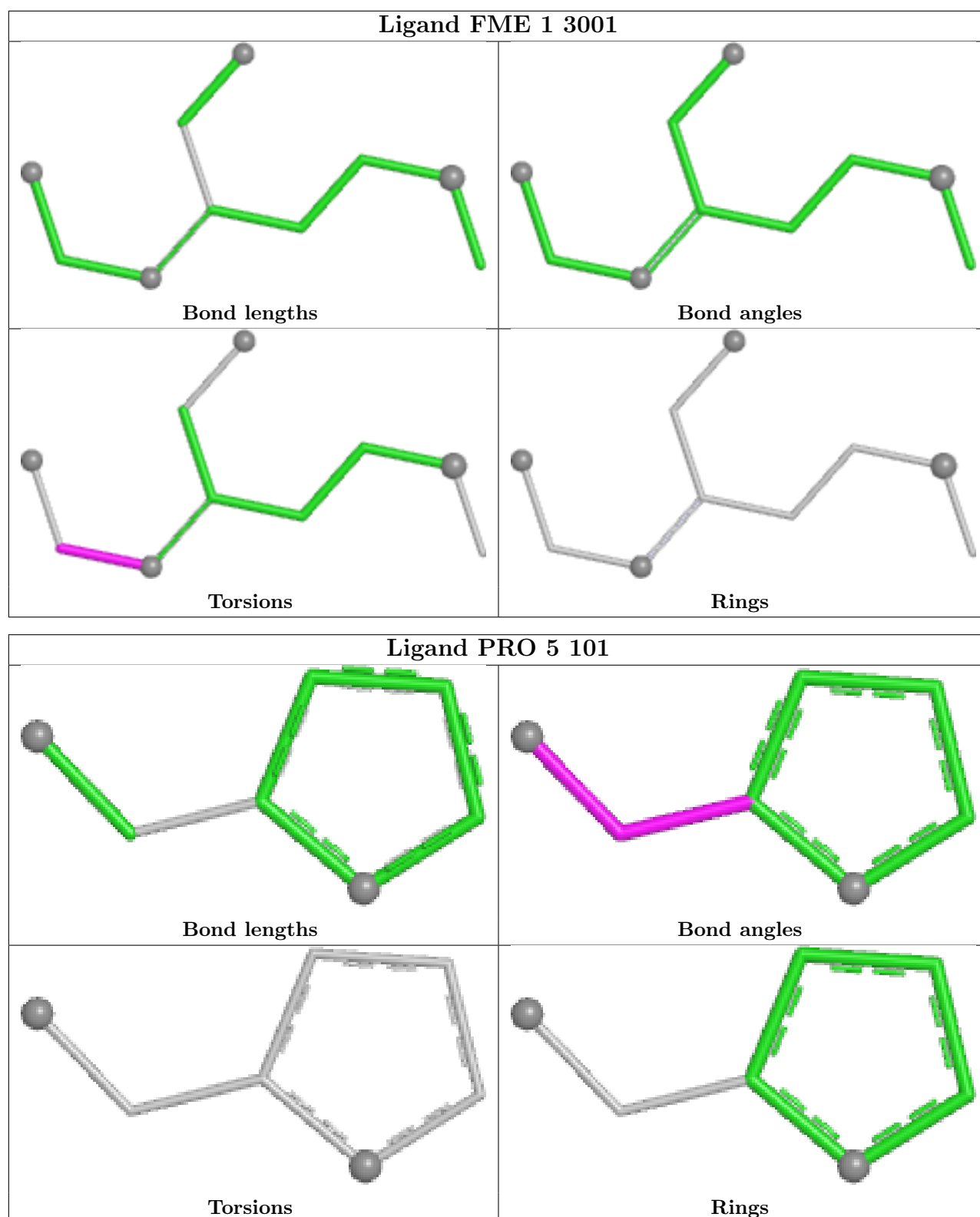
There are no ring outliers.

1 monomer is involved in 8 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
62	8	801	GCP	8	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

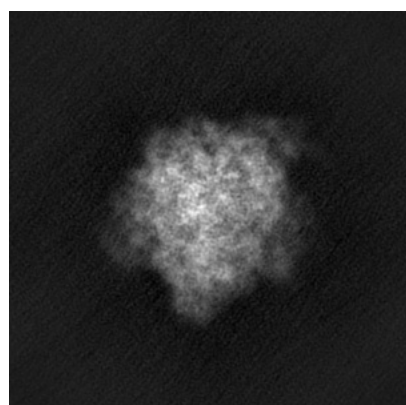
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-22674. These allow visual inspection of the internal detail of the map and identification of artifacts.

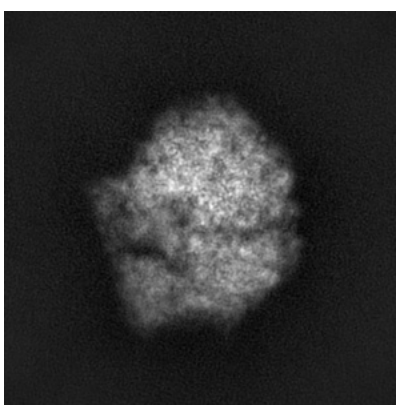
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

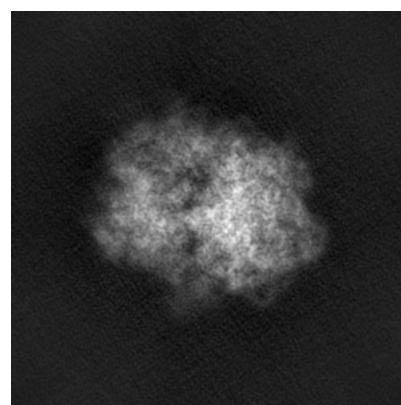
6.1.1 Primary map



X



Y

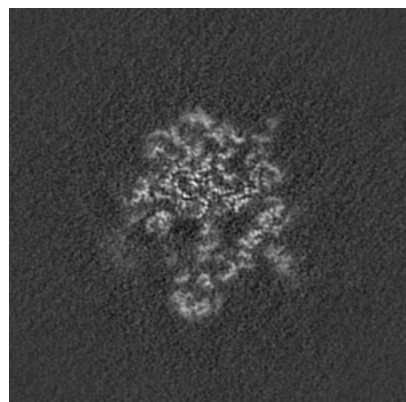


Z

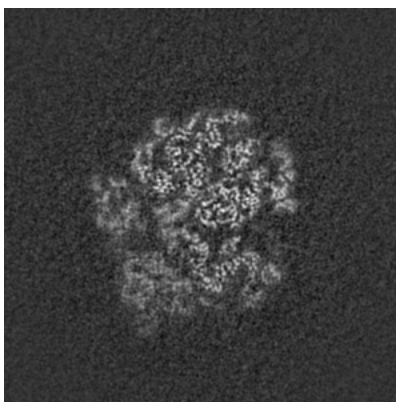
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

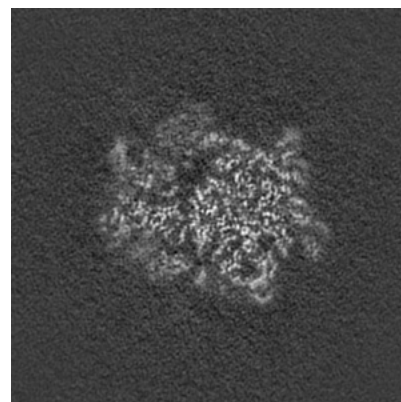
6.2.1 Primary map



X Index: 200



Y Index: 200

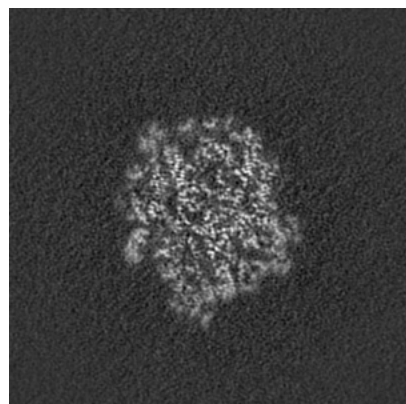


Z Index: 200

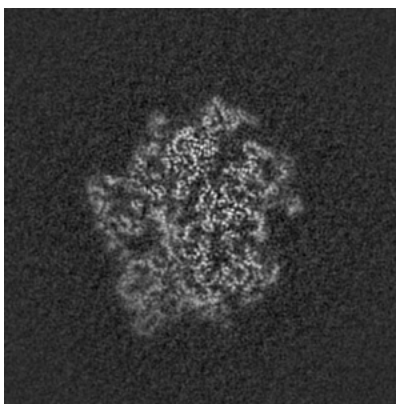
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

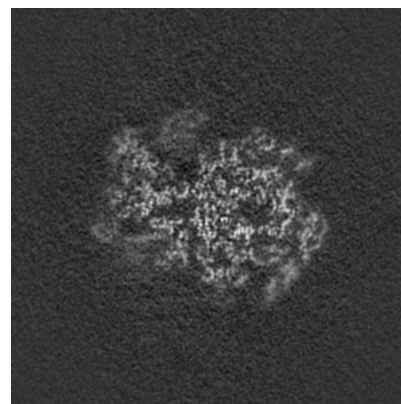
6.3.1 Primary map



X Index: 223



Y Index: 192

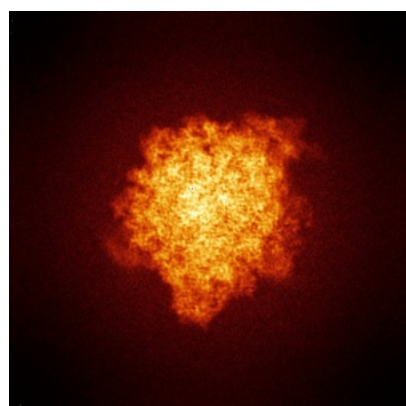


Z Index: 214

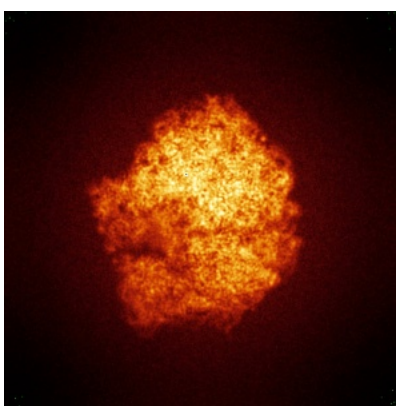
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

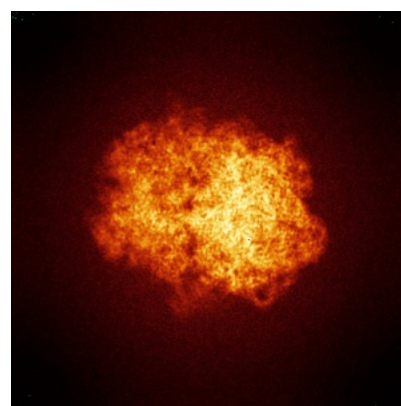
6.4.1 Primary map



X



Y

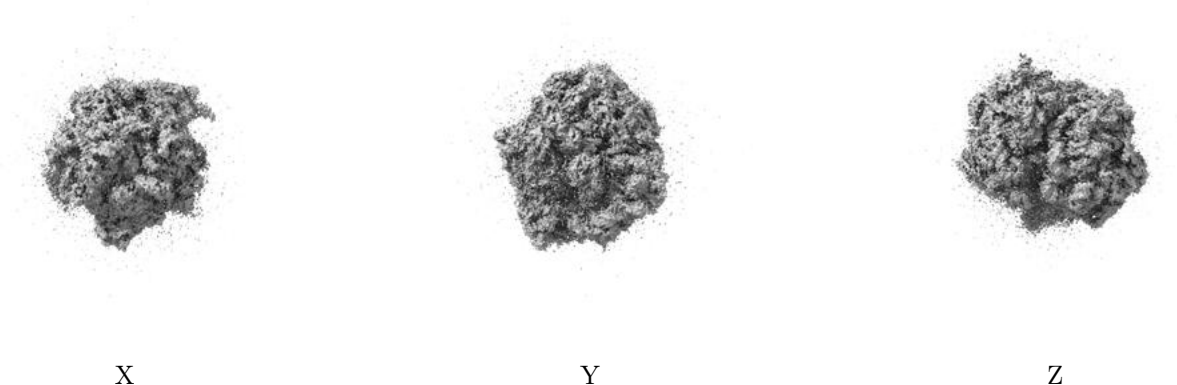


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 3.3. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

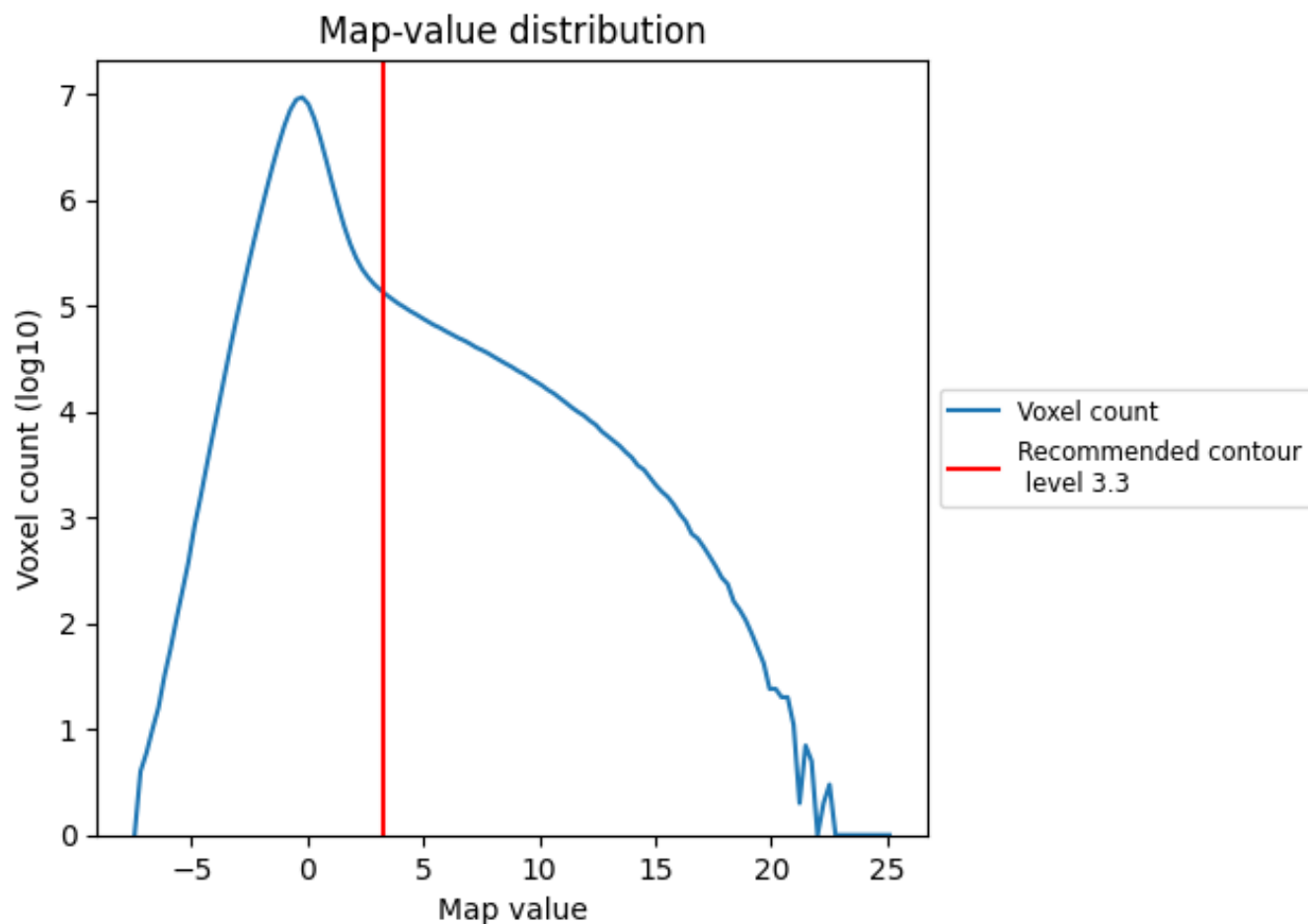
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

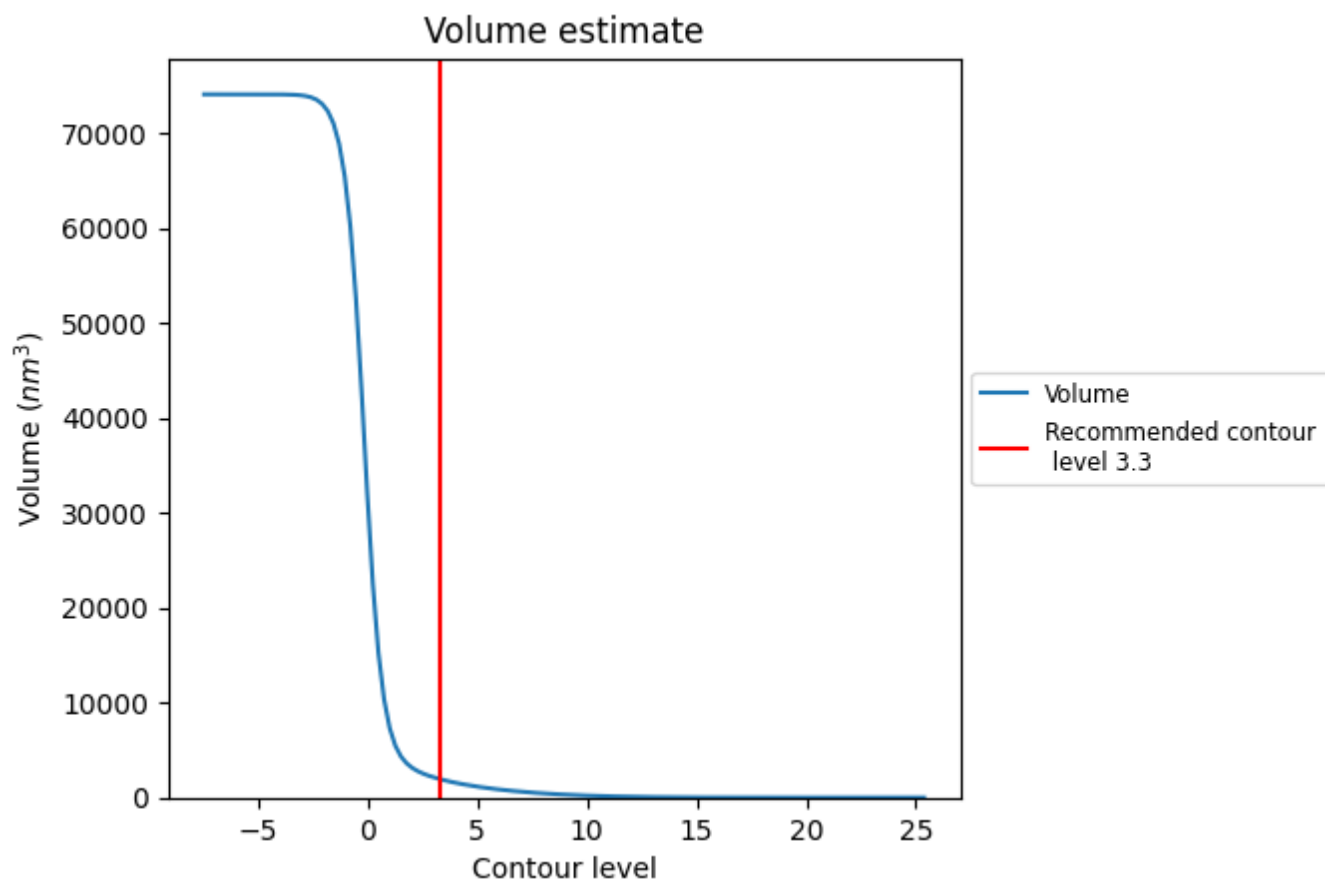
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

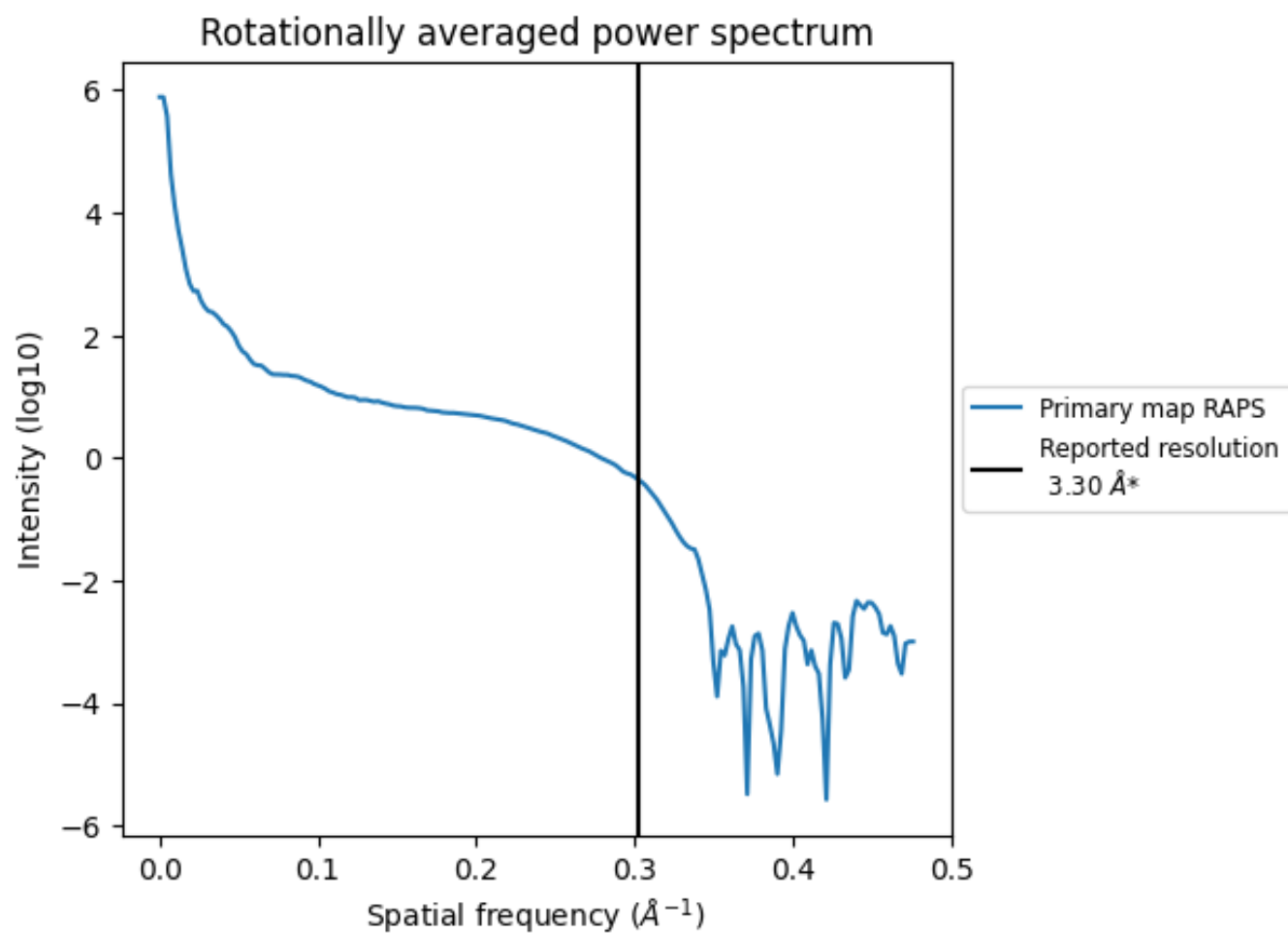
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1936 nm³; this corresponds to an approximate mass of 1749 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.303 Å⁻¹

8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

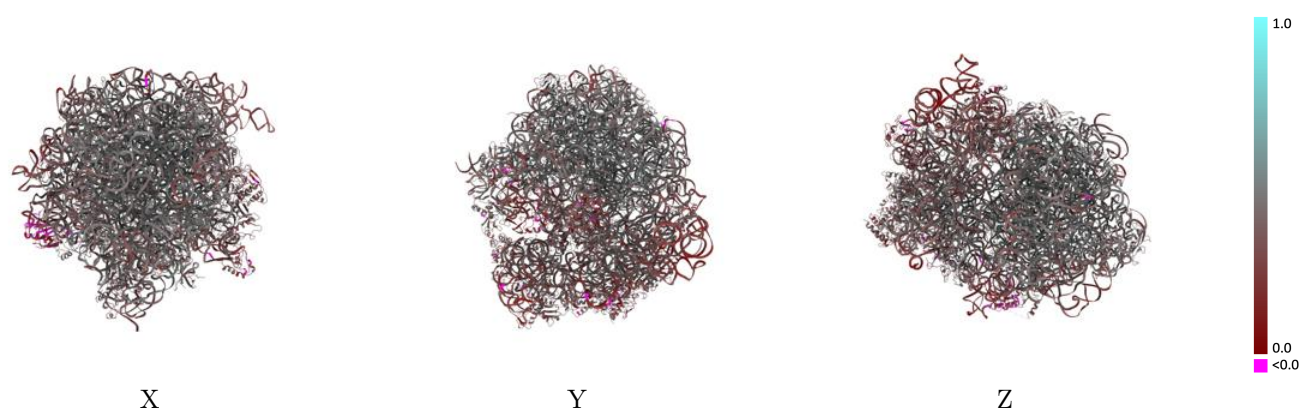
9 Map-model fit [i](#)

This section contains information regarding the fit between EMD map EMD-22674 and PDB model 7K55. Per-residue inclusion information can be found in section 3 on page 17.

9.1 Map-model overlay [i](#)

This section was not generated.

9.2 Q-score mapped to coordinate model [i](#)

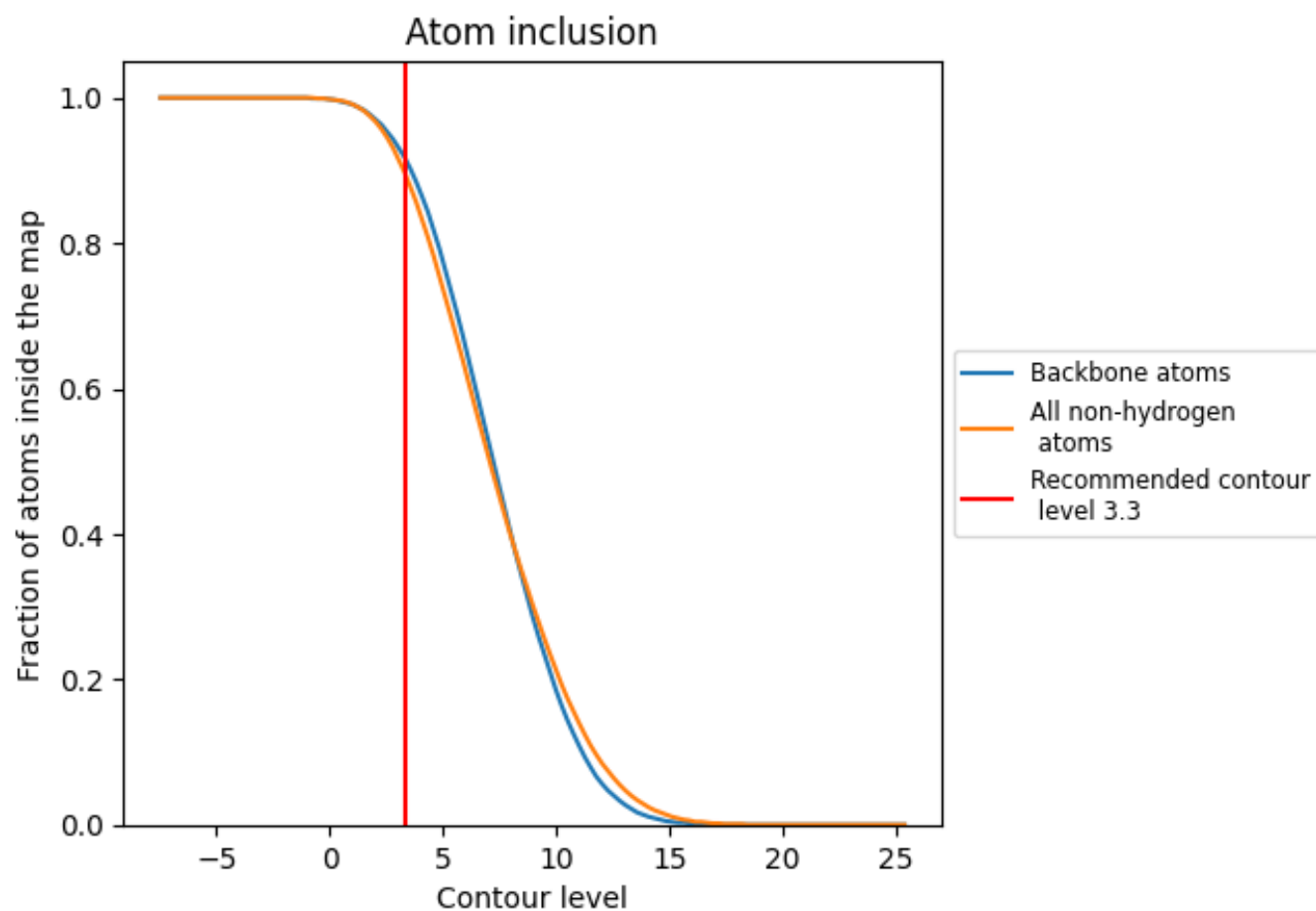


The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)

This section was not generated.

9.4 Atom inclusion [i](#)



At the recommended contour level, 92% of all backbone atoms, 90% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (3.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8980	 0.3940
1	 0.9720	 0.4270
2	 0.9790	 0.4050
3	 0.9270	 0.3600
4	 0.7490	 0.2820
5	 0.9760	 0.3440
6	 0.4840	 0.1950
8	 0.6460	 0.3170
A	 0.7210	 0.3380
B	 0.8950	 0.4420
C	 0.7710	 0.4190
D	 0.9440	 0.4800
E	 0.9590	 0.4870
F	 0.8840	 0.4600
G	 0.6780	 0.3610
H	 0.7040	 0.3840
I	 0.7650	 0.2950
J	 0.8930	 0.4190
K	 0.8760	 0.3790
L	 0.7060	 0.3390
M	 0.8840	 0.4080
N	 0.7910	 0.3440
O	 0.6170	 0.3330
P	 0.9070	 0.4160
Q	 0.8780	 0.4030
R	 0.8040	 0.3370
S	 0.8440	 0.3560
T	 0.9220	 0.4050
U	 0.8500	 0.3650
V	 0.8960	 0.3680
W	 0.9220	 0.4050
X	 0.7120	 0.3320
Y	 0.8280	 0.3630
Z	 0.7280	 0.3170
a	 0.1060	 0.0370



Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
b	 0.9440	 0.4720
c	 0.9230	 0.4590
d	 0.8200	 0.4300
e	 0.8930	 0.3720
f	 0.8570	 0.3950
g	 0.3050	 0.3150
h	 0.2240	 0.2420
i	 0.2430	 0.2320
j	 0.9380	 0.4560
k	 0.9120	 0.4700
l	 0.9280	 0.4580
m	 0.9230	 0.4500
n	 0.9370	 0.4490
o	 0.9150	 0.4170
p	 0.9100	 0.4580
q	 0.9390	 0.4600
r	 0.9070	 0.4550
s	 0.9020	 0.4570
t	 0.9070	 0.4480
u	 0.8850	 0.4210
v	 0.9000	 0.4260
w	 0.9210	 0.4750
x	 0.9150	 0.4440
y	 0.8830	 0.3940
z	 0.9130	 0.4430