Full wwPDB X-ray Structure Validation Report ⓘ

Apr 19, 2026 – 08:20 AM UTC

PDB ID	:	7LH5 / pdb_00007lh5
Title	:	Crystal structure of the Thermus thermophilus 70S ribosome in complex with plazomicin, mRNA and tRNAs
Authors	:	Golkar, T.; Berghuis, A.M.; Schmeing, T.M.
Deposited on	:	2021-01-21
Resolution	:	3.27 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

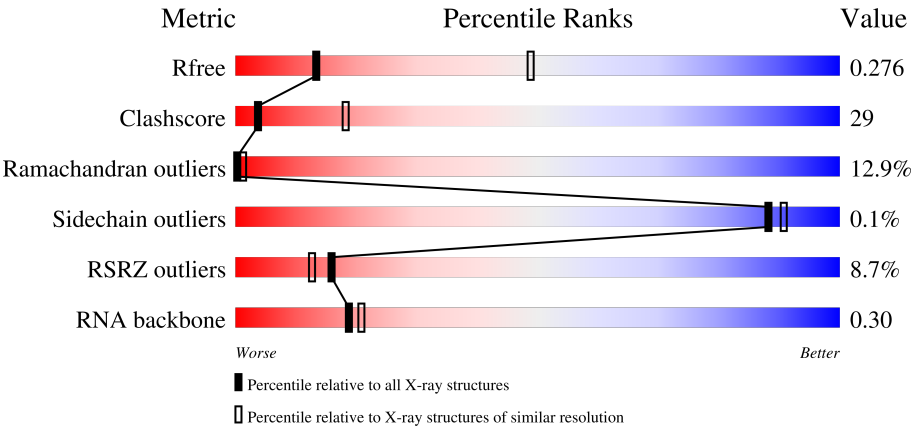
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.27 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1303 (3.30-3.26)
Clashscore	190562	1354 (3.30-3.26)
Ramachandran outliers	187476	1334 (3.30-3.26)
Sidechain outliers	187428	1333 (3.30-3.26)
RSRZ outliers	180081	1303 (3.30-3.26)
RNA backbone	3983	1020 (3.58-2.98)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=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 <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1520	3% 25% 47% 27% ··
1	CA	1520	% 25% 52% 22% ·
2	AB	256	13% 22% 57% 7% 15%
2	CB	256	5% 27% 59% 5% 9%

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Mol	Chain	Length	Quality of chain
3	AC	239	9% 37% 44% 5% 14%
3	CC	239	9% 34% 49% 13%
4	AD	209	% 35% 55% 10%
4	CD	209	16% 40% 54% 6%
5	AE	162	12% 40% 48% 5% 7%
5	CE	162	11% 40% 51% 7%
6	AF	101	2% 50% 47%
6	CF	101	13% 47% 52%
7	AG	156	12% 37% 55% 7%
7	CG	156	13% 44% 51%
8	AH	138	5% 32% 57% 11%
8	CH	138	4% 46% 49% 5%
9	AI	128	7% 34% 52% 9% 5%
9	CI	128	17% 29% 61% 9%
10	AJ	105	19% 27% 54% 12% 7%
10	CJ	105	11% 33% 51% 8% 7%
11	AK	129	18% 49% 40% 8%
11	CK	129	10% 40% 47% 5% 8%
12	AL	132	14% 37% 47% 8% 8%
12	CL	132	15% 47% 38% 8% 6%
13	AM	126	10% 24% 61% 7% 8%
13	CM	126	21% 26% 61% 7% 6%
14	AN	61	10% 20% 70% 8%
14	CN	61	7% 34% 48% 16%
15	AO	89	37% 54% 8%

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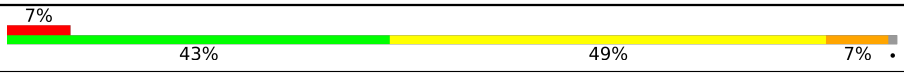
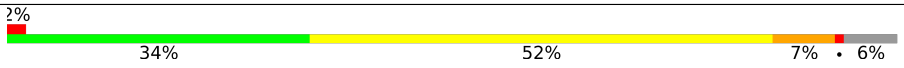
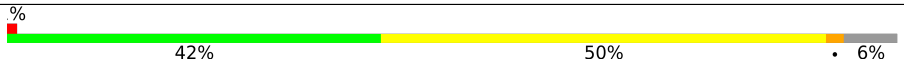
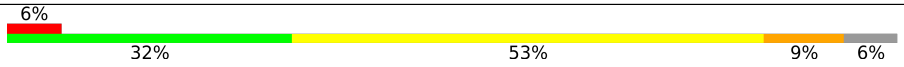
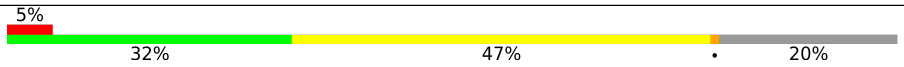
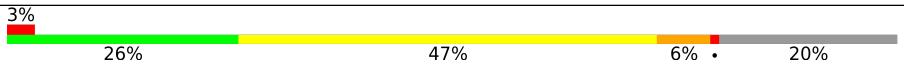
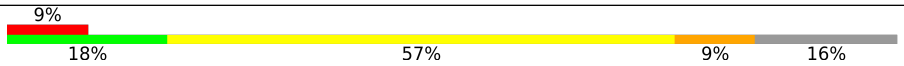
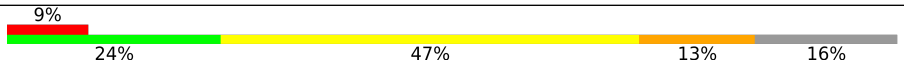
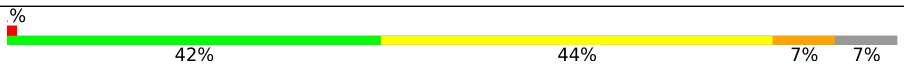
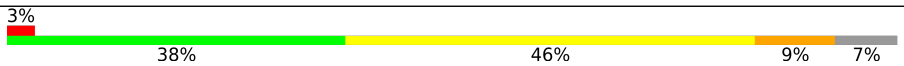
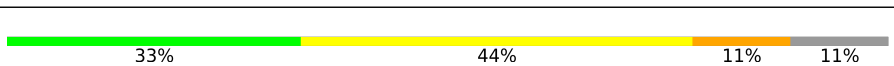
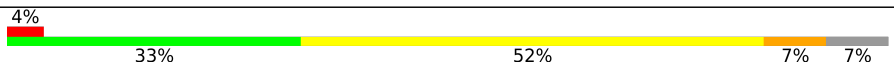
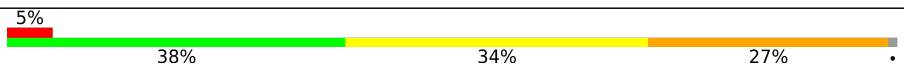
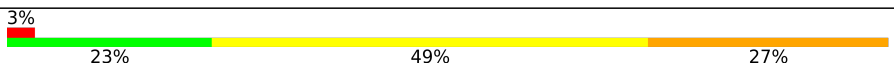
Mol	Chain	Length	Quality of chain
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	AV	77	
22	CV	77	
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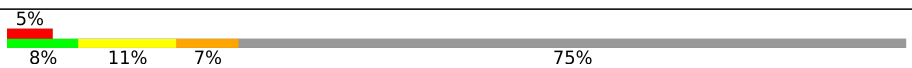
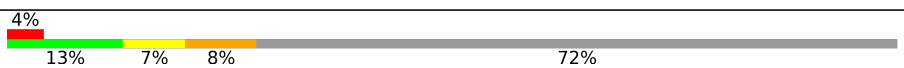
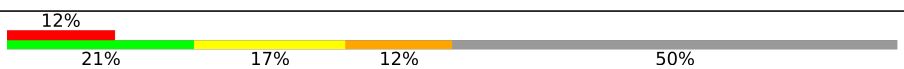
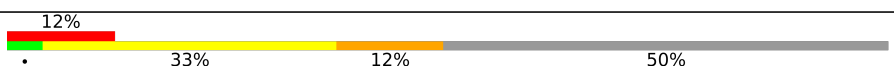
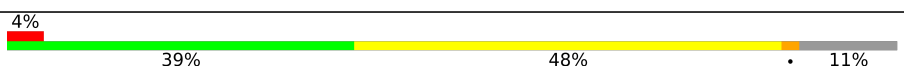
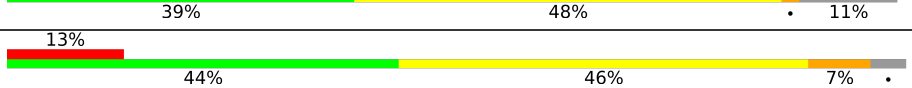
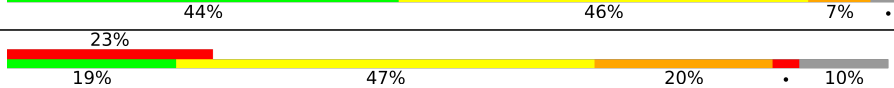
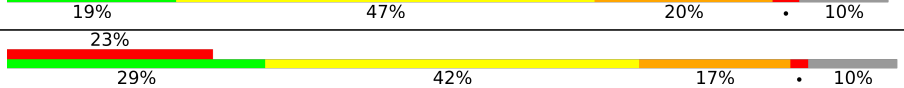
23	AY	76	
23	CW	76	
23	CY	76	
24	AX	24	
24	CX	24	
25	B0	85	
25	D0	85	
26	B1	98	
26	D1	98	

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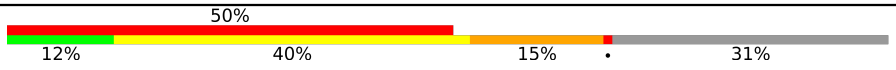
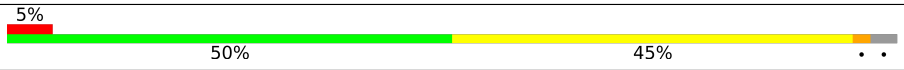
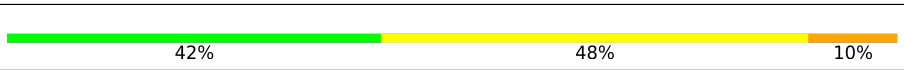
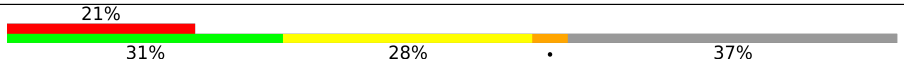
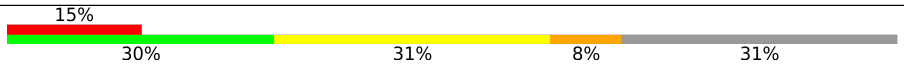
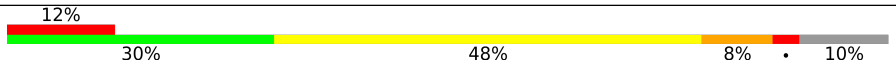
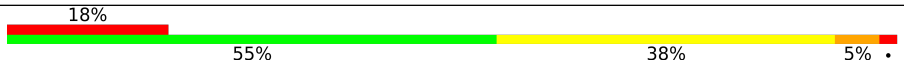
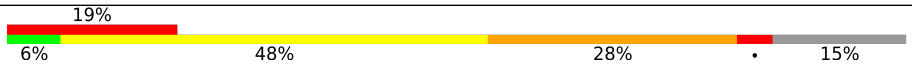
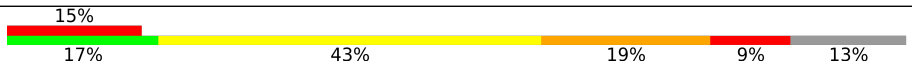
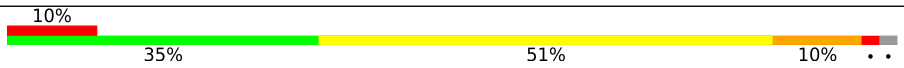
Mol	Chain	Length	Quality of chain
27	B2	72	
27	D2	72	
28	B3	60	
28	D3	60	
29	B4	71	
29	D4	71	
30	B5	60	
30	D5	60	
31	B6	54	
31	D6	54	
32	B7	49	
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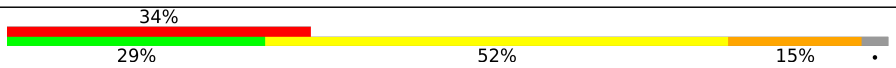
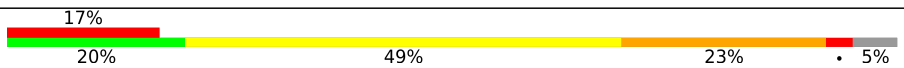
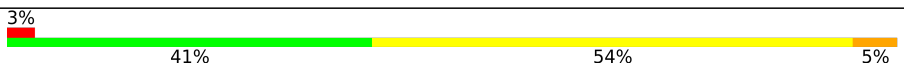
33	B8	65	
33	D8	65	
34	B9	37	
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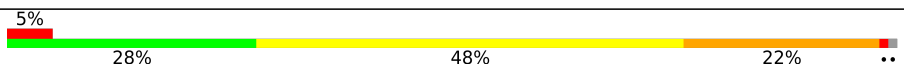
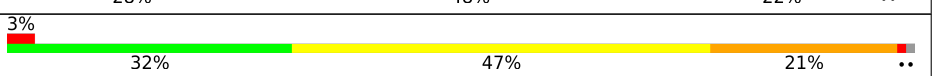
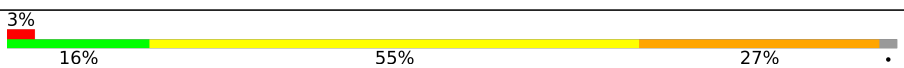
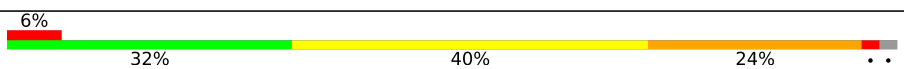
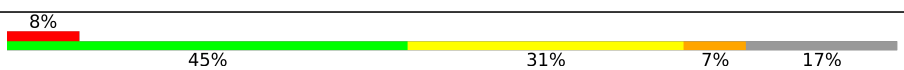
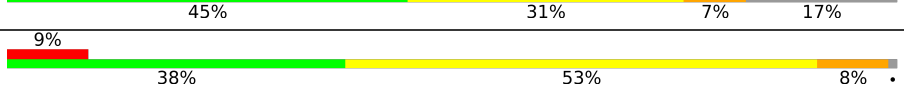
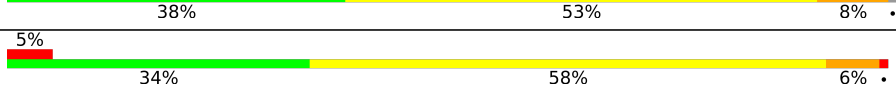
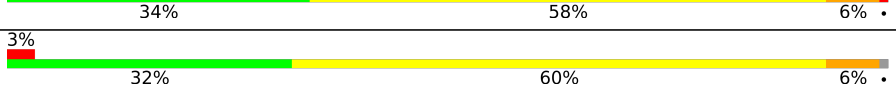
35	BA	2839	
35	DA	2839	
36	BB	122	
36	DB	122	
37	BC	229	
37	DC	229	
38	BD	276	
38	DD	276	
39	BE	206	

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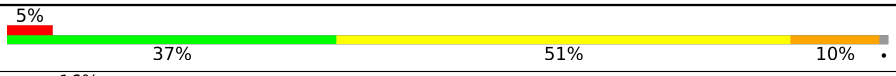
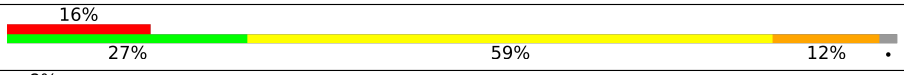
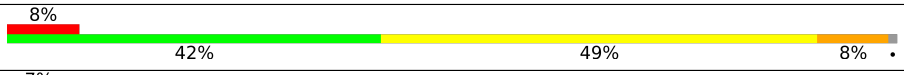
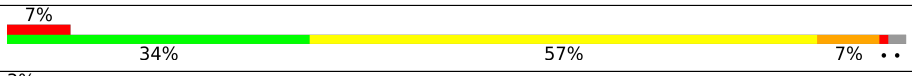
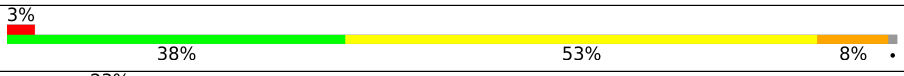
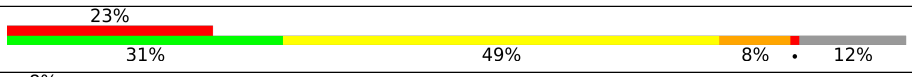
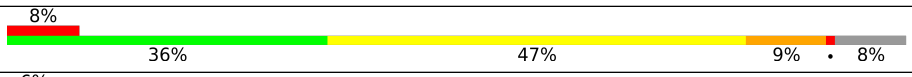
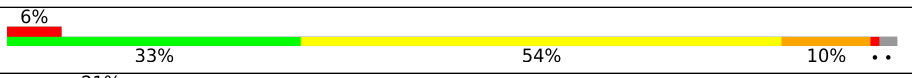
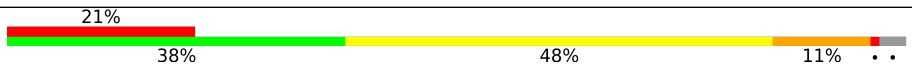
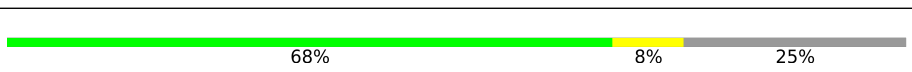
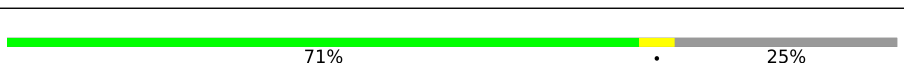
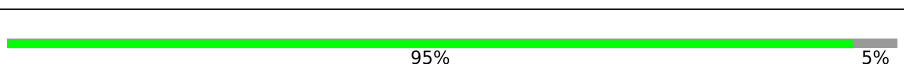
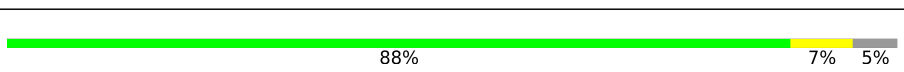
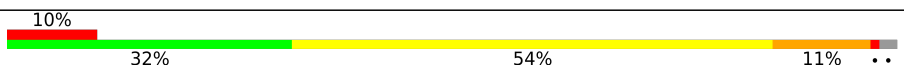
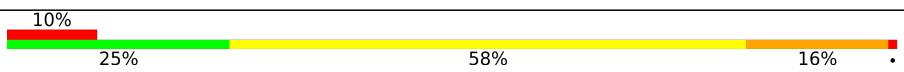
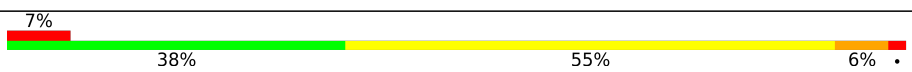
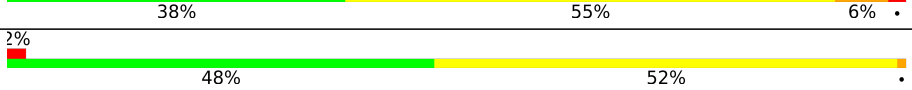
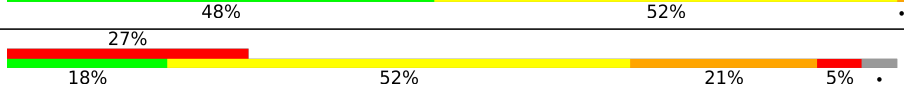
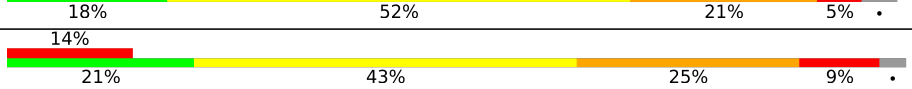
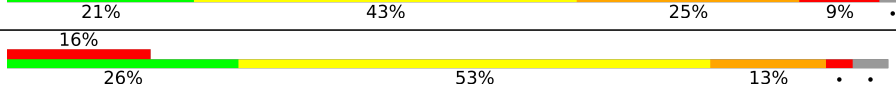
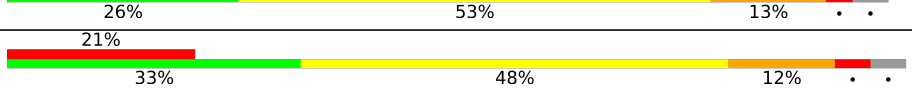
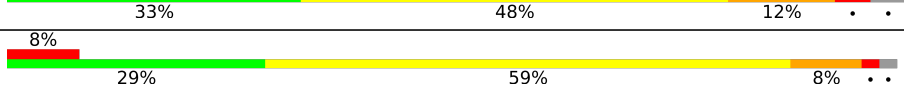
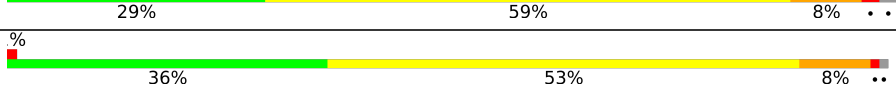
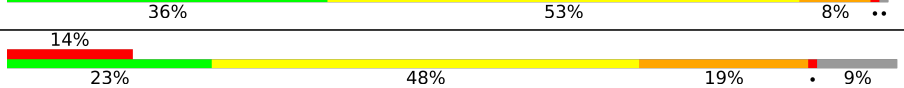
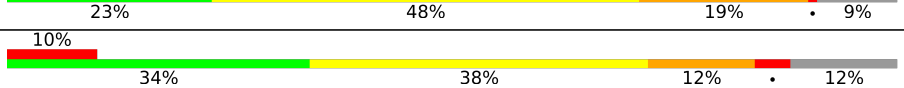
Mol	Chain	Length	Quality of chain
39	DE	206	
40	BF	210	
40	DF	210	
41	BG	182	
41	DG	182	
42	BH	180	
42	DH	180	
43	BI	148	
43	DI	148	
44	BJ	173	
44	DJ	173	
45	BK	147	
45	DK	147	
46	BN	140	
46	DN	140	
47	BO	122	
47	DO	122	
48	BP	150	
48	DP	150	
49	BQ	141	
49	DQ	141	
50	BR	118	
50	DR	118	
51	BS	112	
51	DS	112	

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Mol	Chain	Length	Quality of chain
52	BT	146	12% 18% 59% 12% 10%
52	DT	146	12% 27% 55% 11% 6%
53	BU	118	3% 37% 51% 10%
53	DU	118	5% 42% 51%
54	BV	101	27% 21% 55% 22%
54	DV	101	14% 31% 50% 14% 5%
55	BW	113	21% 34% 56% 8%
55	DW	113	6% 42% 53%
56	BX	96	39% 27% 47% 16% 7%
56	DX	96	15% 21% 53% 22%
57	BY	110	36% 24% 49% 17% 9%
57	DY	110	24% 18% 56% 24%
58	BZ	206	26% 31% 50% 15%
58	DZ	206	19% 33% 47% 5% 15%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
59	MG	AW	104	-	-	-	X
59	MG	BA	3453	-	-	-	X

2 Entry composition (i)

There are 62 unique types of molecules in this entry. The entry contains 296449 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			
1	CA	1504	Total	C	N	O	P	0	0	0
			32332	14390	5992	10446	1504			

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	218	Total	C	N	O	S	0	0	0
			1784	1139	321	319	5			
2	CB	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			
3	CC	207	Total	C	N	O	S	0	0	0
			1620	1021	315	282	2			

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
4	CD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			
5	CE	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
6	CF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
7	CG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	CH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	121	Total	C	N	O	0	0	0
			947	599	186	162			
9	CI	127	Total	C	N	O	0	0	0
			1010	639	197	174			

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CJ	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			
11	CK	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	122	Total	C	N	O	S	0	0	0
			956	603	193	159	1			
12	CL	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	116	Total	C	N	O	S	0	0	0
			922	570	189	161	2			
13	CM	119	Total	C	N	O	S	0	0	0
			946	585	195	164	2			

- Molecule 14 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			
14	CN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
15	CO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			
16	CP	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
17	CQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	70	Total	C	N	O	0	0	0
			574	367	112	95			
18	CR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			
19	CS	78	Total	C	N	O	S	0	0	0
			629	403	114	110	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
20	CT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	24	Total 208	C 128	N 50	O 30	0	0	0
21	CU	25	Total 217	C 134	N 52	O 31	0	0	0

- Molecule 22 is a RNA chain called P-site tRNA fMet.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	76	Total 1622	C 723	N 294	O 529	P 76	0	0	0
22	CV	77	Total 1643	C 732	N 297	O 537	P 77	0	0	0

- Molecule 23 is a RNA chain called E-Site tRNA Phe and A-site tRNA Phe.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AW	76	Total 1623	C 723	N 290	O 534	P 76	0	0	0
23	AY	19	Total 410	C 183	N 78	O 130	P 19	0	0	0
23	CW	76	Total 1623	C 723	N 290	O 534	P 76	0	0	0
23	CY	21	Total 453	C 202	N 86	O 144	P 21	0	0	0

- Molecule 24 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AX	12	Total 255	C 115	N 46	O 82	P 12	0	0	0
24	CX	12	Total 255	C 115	N 46	O 82	P 12	0	0	0

- Molecule 25 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	B0	76	Total 607	C 376	N 128	O 102	S 1	0	0	0
25	D0	82	Total 645	C 401	N 136	O 107	S 1	0	0	0

- Molecule 26 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	B1	88	Total 692	C 435	N 139	O 118	0	0	0
26	D1	88	Total 692	C 435	N 139	O 118	0	0	0

- Molecule 27 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	B2	50	Total 420	C 263	N 84	O 72	S 1	0	0	0
27	D2	53	Total 446	C 279	N 88	O 78	S 1	0	0	0

- Molecule 28 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	B3	58	Total 459	C 293	N 89	O 77		0	0	0
28	D3	60	Total 476	C 303	N 91	O 81	S 1	0	0	0

- Molecule 29 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
29	B4	45	Total 222	C 132	N 45	O 45	0	0	0
29	D4	49	Total 241	C 143	N 49	O 49	0	0	0

- Molecule 30 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	B5	54	Total 418	C 261	N 84	O 68	S 5	0	0	0
30	D5	60	Total 467	C 293	N 91	O 77	S 6	0	0	0

- Molecule 31 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	B6	46	Total 398	C 247	N 81	O 66	S 4	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	D6	47	Total	C	N	O	S	0	0	0
			408	253	84	67	4			

- Molecule 32 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	B7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
32	D7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 33 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	B8	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			
33	D8	62	Total	C	N	O	S	0	0	0
			495	317	100	76	2			

- Molecule 34 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	B9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
34	D9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 35 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BA	2824	Total	C	N	O	P	0	0	0
			60821	27070	11372	19556	2823			
35	DA	2824	Total	C	N	O	P	0	0	0
			60821	27070	11372	19556	2823			

- Molecule 36 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BB	120	Total	C	N	O	P	0	0	0
			2576	1146	476	834	120			
36	DB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 37 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
37	BC	190	Total	C	N	O	0	0	0
			1141	691	220	230			
37	DC	190	Total	C	N	O	0	0	0
			1141	691	220	230			

- Molecule 38 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BD	273	Total	C	N	O	S	0	0	0
			2126	1341	424	358	3			
38	DD	275	Total	C	N	O	S	0	0	0
			2144	1353	428	360	3			

- Molecule 39 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			
39	DE	204	Total	C	N	O	S	0	0	0
			1563	988	299	270	6			

- Molecule 40 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BF	206	Total	C	N	O	S	0	0	0
			1615	1030	302	281	2			
40	DF	208	Total	C	N	O	S	0	0	0
			1627	1037	304	283	3			

- Molecule 41 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BG	178	Total	C	N	O	S	0	0	0
			1449	925	264	256	4			
41	DG	181	Total	C	N	O	S	0	0	0
			1474	942	268	260	4			

- Molecule 42 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BH	159	Total	C	N	O	S	0	0	0
			1222	773	228	220	1			
42	DH	165	Total	C	N	O	S	0	0	0
			1270	806	237	226	1			

- Molecule 43 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BI	145	Total	C	N	O	S	0	0	0
			1131	723	200	207	1			
43	DI	144	Total	C	N	O	S	0	0	0
			1124	718	199	206	1			

- Molecule 44 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BJ	130	Total	C	N	O	0	0	0
			651	391	130	130			
44	DJ	130	Total	C	N	O	0	0	0
			651	391	130	130			

- Molecule 45 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
45	BK	140	Total	C	N	O	0	0	0
			700	420	140	140			
45	DK	140	Total	C	N	O	0	0	0
			700	420	140	140			

- Molecule 46 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BN	137	Total	C	N	O	S	0	0	0
			1096	707	205	181	3			
46	DN	140	Total	C	N	O	S	0	0	0
			1120	722	208	186	4			

- Molecule 47 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	DO	122	Total 933	C 588	N 171	O 170	S 4	0	0	0

- Molecule 48 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BP	144	Total 1099	C 684	N 225	O 188	S 2	0	0	0
48	DP	146	Total 1114	C 692	N 227	O 193	S 2	0	0	0

- Molecule 49 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BQ	135	Total 1074	C 686	N 205	O 178	S 5	0	0	0
49	DQ	136	Total 1083	C 691	N 206	O 181	S 5	0	0	0

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
50	BR	116	Total 949	C 593	N 198	O 158	0	0	0
50	DR	117	Total 960	C 599	N 202	O 159	0	0	0

- Molecule 51 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	BS	102	Total 813	C 512	N 164	O 137	0	0	0
51	DS	99	Total 781	C 492	N 158	O 131	0	0	0

- Molecule 52 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BT	132	Total 1100	C 686	N 227	O 186	S 1	0	0	0
52	DT	137	Total 1141	C 710	N 234	O 196	S 1	0	0	0

- Molecule 53 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	BU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			
53	DU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

- Molecule 54 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	BV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
54	DV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 55 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	BW	111	Total	C	N	O	S	0	0	0
			886	558	174	152	2			
55	DW	111	Total	C	N	O	S	0	0	0
			886	558	174	152	2			

- Molecule 56 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	BX	89	Total	C	N	O		0	0	0
			704	458	128	118				
56	DX	94	Total	C	N	O	S	0	0	0
			742	482	134	125	1			

- Molecule 57 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	BY	100	Total	C	N	O	S	0	0	0
			775	500	148	123	4			
57	DY	109	Total	C	N	O	S	0	0	0
			835	534	157	139	5			

- Molecule 58 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
58	BZ	176	Total 1403	C 897	N 252	O 252	S 2	0	0	0
58	DZ	176	Total 1403	C 897	N 252	O 252	S 2	0	0	0

- Molecule 59 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	AA	209	Total 209	Mg 209	0	0
59	AC	1	Total 1	Mg 1	0	0
59	AD	1	Total 1	Mg 1	0	0
59	AE	1	Total 1	Mg 1	0	0
59	AL	1	Total 1	Mg 1	0	0
59	AT	1	Total 1	Mg 1	0	0
59	AV	7	Total 7	Mg 7	0	0
59	AW	20	Total 20	Mg 20	0	0
59	AX	3	Total 3	Mg 3	0	0
59	B0	1	Total 1	Mg 1	0	0
59	B1	2	Total 2	Mg 2	0	0
59	B2	1	Total 1	Mg 1	0	0
59	B5	1	Total 1	Mg 1	0	0
59	B7	1	Total 1	Mg 1	0	0
59	B8	2	Total 2	Mg 2	0	0
59	BA	457	Total 457	Mg 457	0	0
59	BB	17	Total 17	Mg 17	0	0
59	BC	2	Total 2	Mg 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	BE	2	Total Mg 2 2	0	0
59	BF	3	Total Mg 3 3	0	0
59	BQ	1	Total Mg 1 1	0	0
59	BS	1	Total Mg 1 1	0	0
59	BU	5	Total Mg 5 5	0	0
59	BV	1	Total Mg 1 1	0	0
59	BX	2	Total Mg 2 2	0	0
59	CA	195	Total Mg 195 195	0	0
59	CE	1	Total Mg 1 1	0	0
59	CF	1	Total Mg 1 1	0	0
59	CG	1	Total Mg 1 1	0	0
59	CI	1	Total Mg 1 1	0	0
59	CU	1	Total Mg 1 1	0	0
59	CV	4	Total Mg 4 4	0	0
59	CW	13	Total Mg 13 13	0	0
59	CX	2	Total Mg 2 2	0	0
59	D2	2	Total Mg 2 2	0	0
59	D5	1	Total Mg 1 1	0	0
59	DA	392	Total Mg 392 392	0	0
59	DB	12	Total Mg 12 12	0	0
59	DE	1	Total Mg 1 1	0	0

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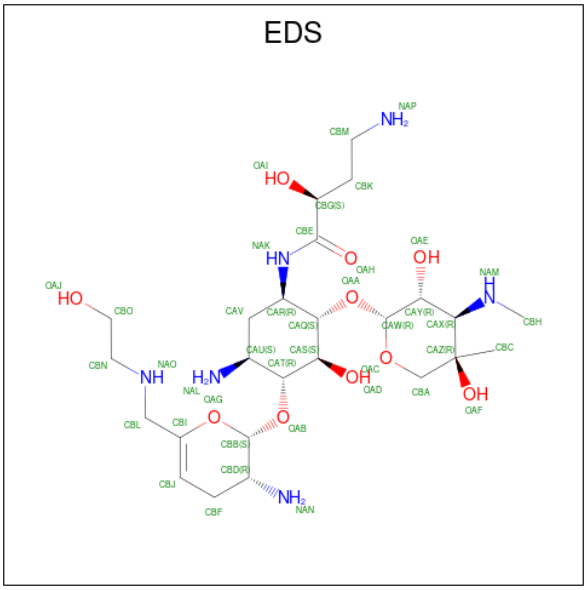
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	DF	2	Total Mg 2 2	0	0
59	DN	1	Total Mg 1 1	0	0
59	DO	2	Total Mg 2 2	0	0
59	DV	1	Total Mg 1 1	0	0

- Molecule 60 is (2S)-4-amino-N-[(1R,2S,3S,4R,5S)-5-amino-4-{[(2S,3R)-3-amino-6-{[(2-hydroxyethyl)amino]methyl}-3,4-dihydro-2H-pyran-2-y l]oxy}-2-{[3-deoxy-4-C-methyl-3-(methylamino)-beta-L-arabinopyranosyl]oxy}-3-hydroxycyclohexyl]-2-hydroxybutanamide (CCD ID: EDS) (formula: $C_{25}H_{48}N_6O_{10}$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	AA	1	Total C N O 41 25 6 10	0	0
60	CA	1	Total C N O 41 25 6 10	0	0

- Molecule 61 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	AD	1	Total Zn 1 1	0	0
61	AN	1	Total Zn 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	B9	1	Total Zn 1 1	0	0
61	CD	1	Total Zn 1 1	0	0
61	CN	1	Total Zn 1 1	0	0
61	D9	1	Total Zn 1 1	0	0

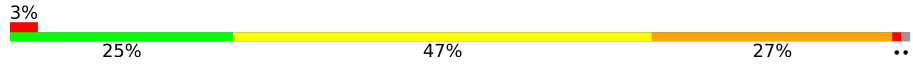
- Molecule 62 is water.

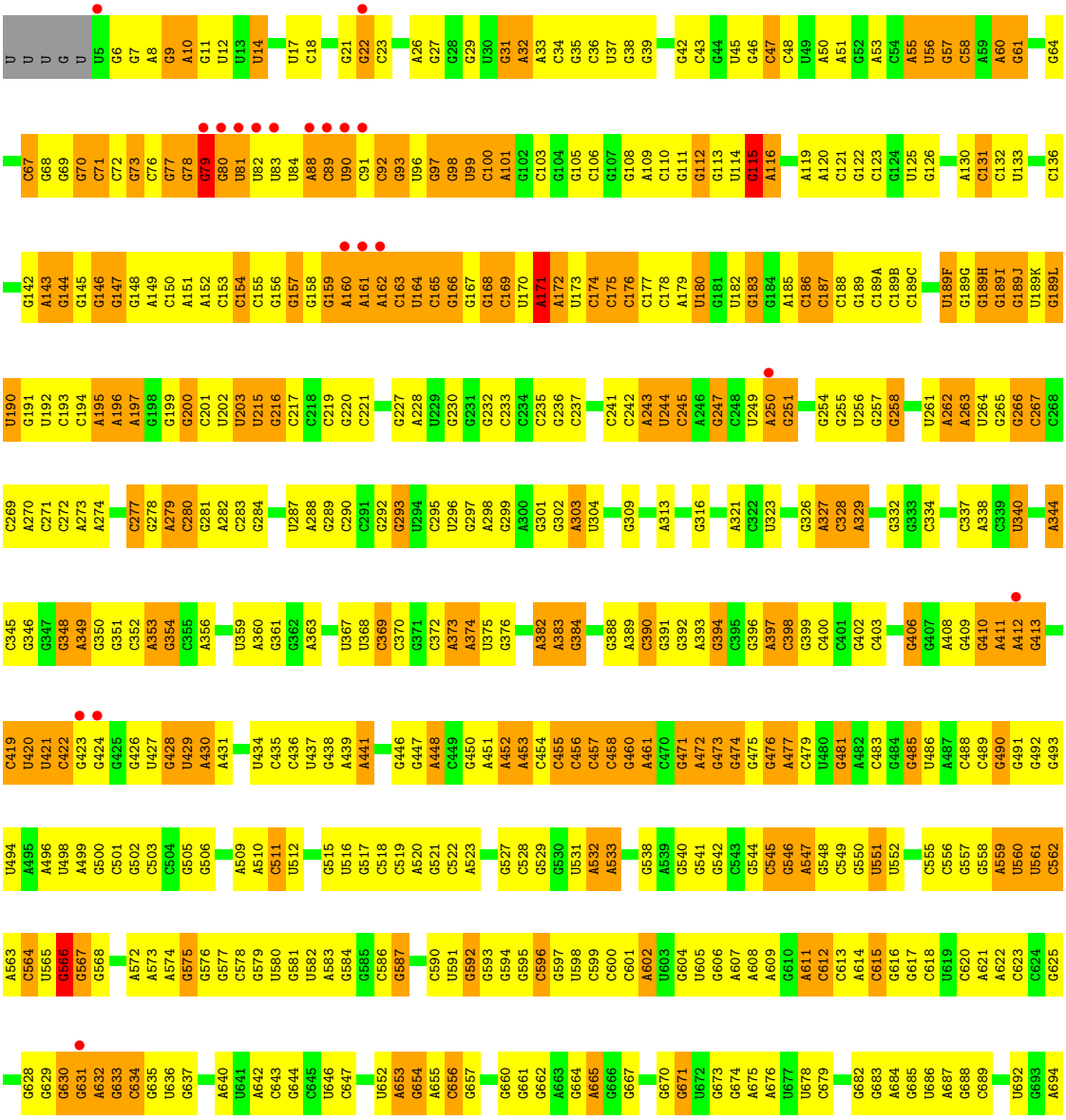
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	AA	2	Total O 2 2	0	0

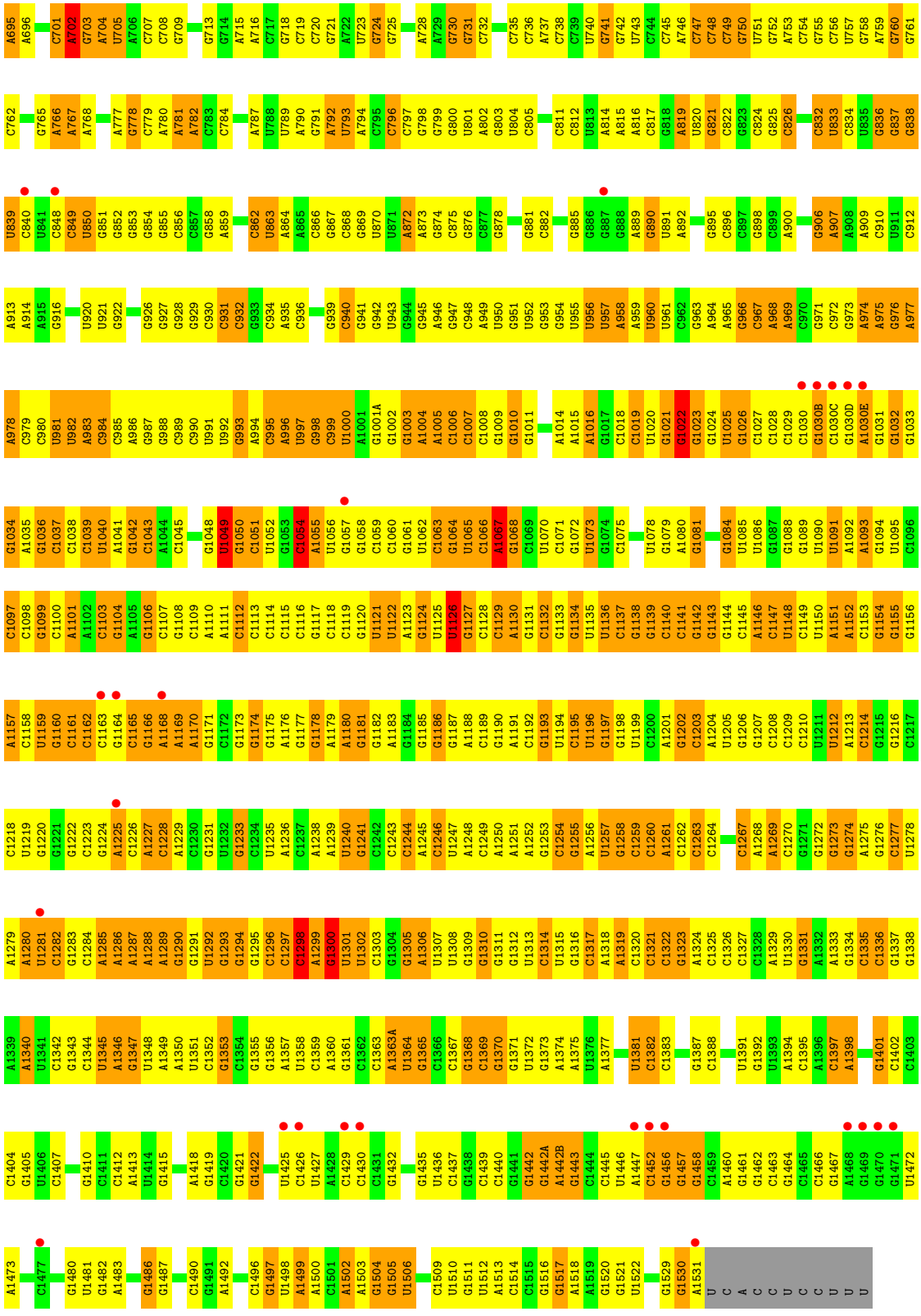
3 Residue-property plots (i)

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

- Molecule 1: 16S ribosomal RNA

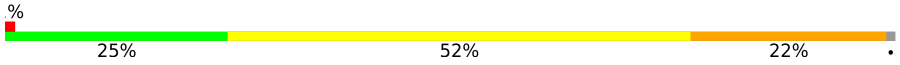
Chain AA: 

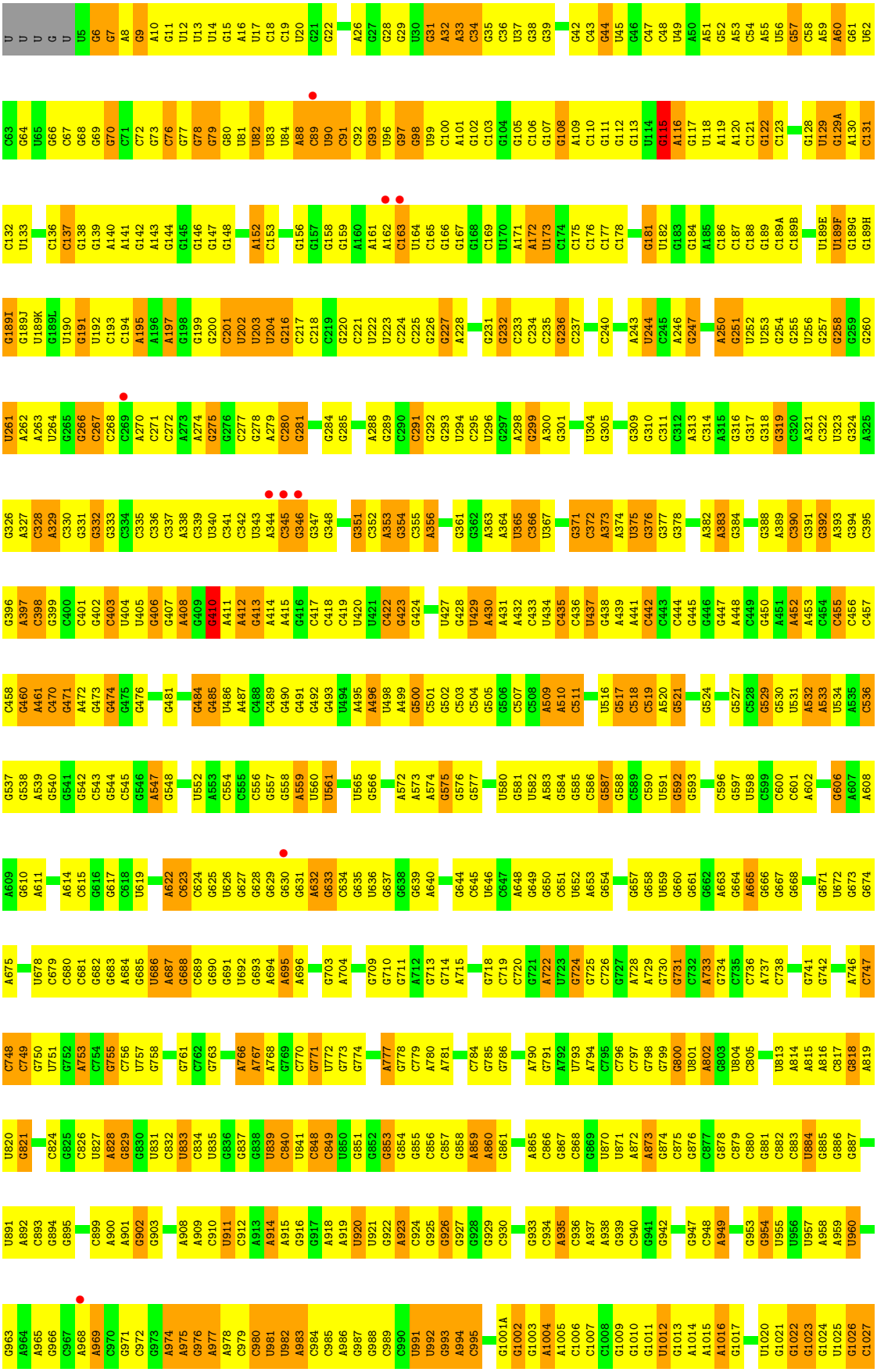


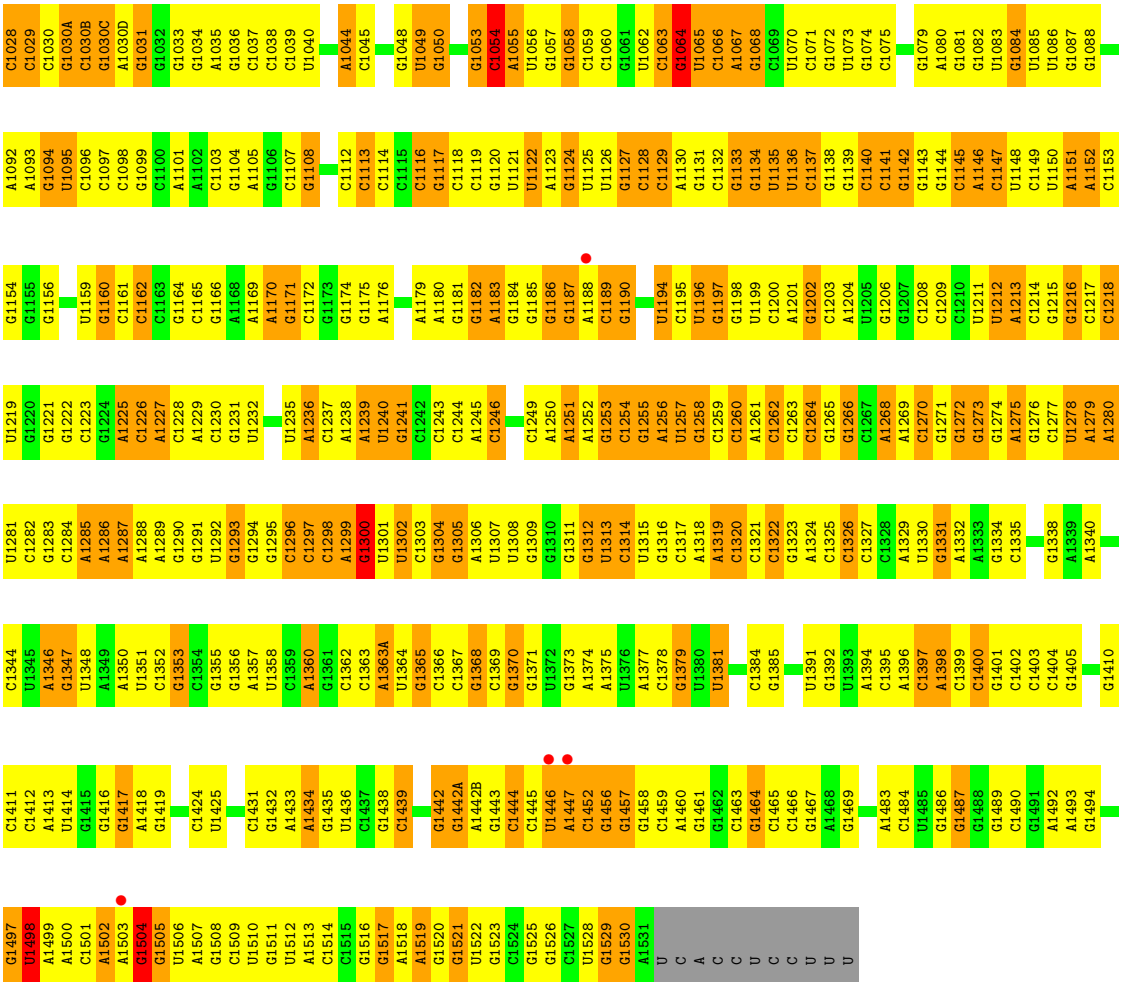


• Molecule 1: 16S ribosomal RNA

Chain CA:

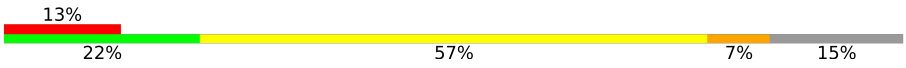


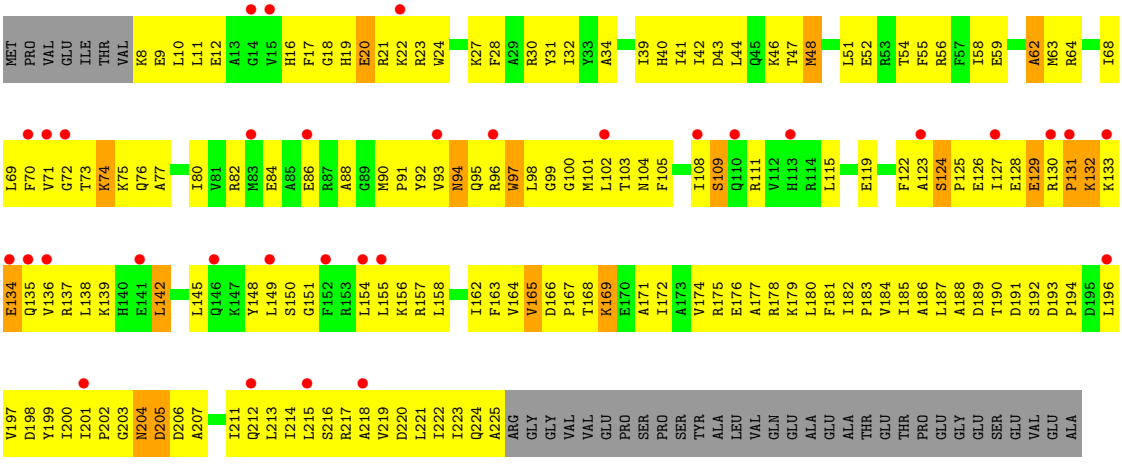




• Molecule 2: 30S ribosomal protein S2

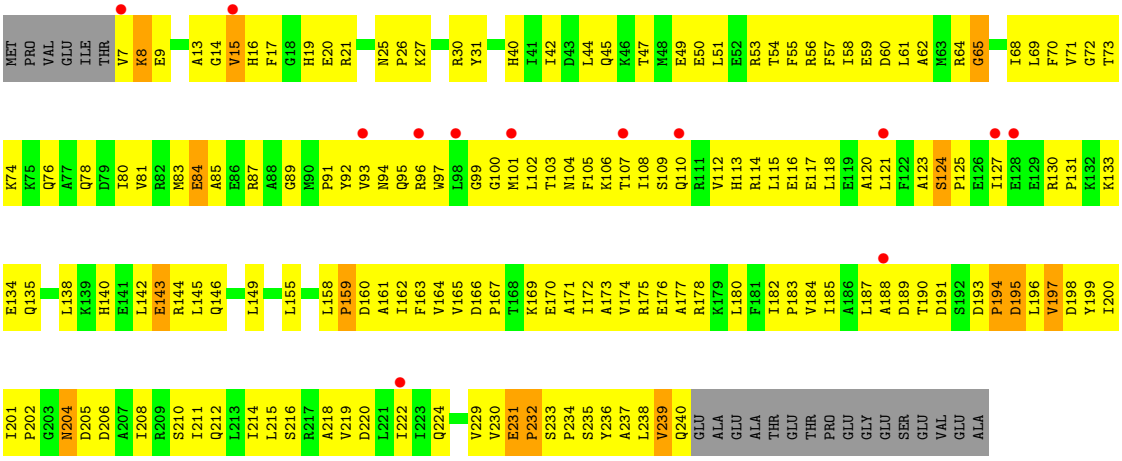
Chain AB:



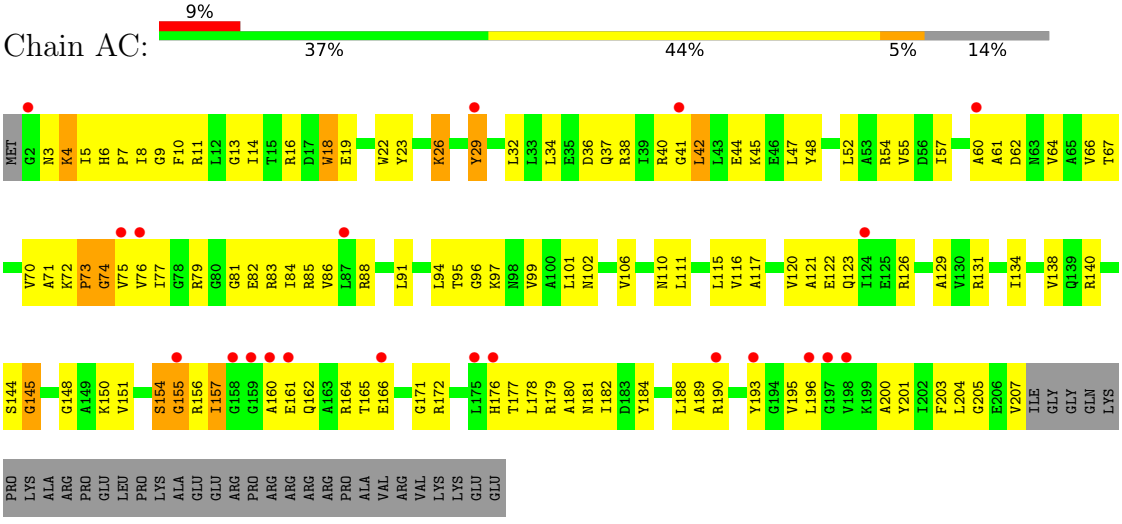


• Molecule 2: 30S ribosomal protein S2

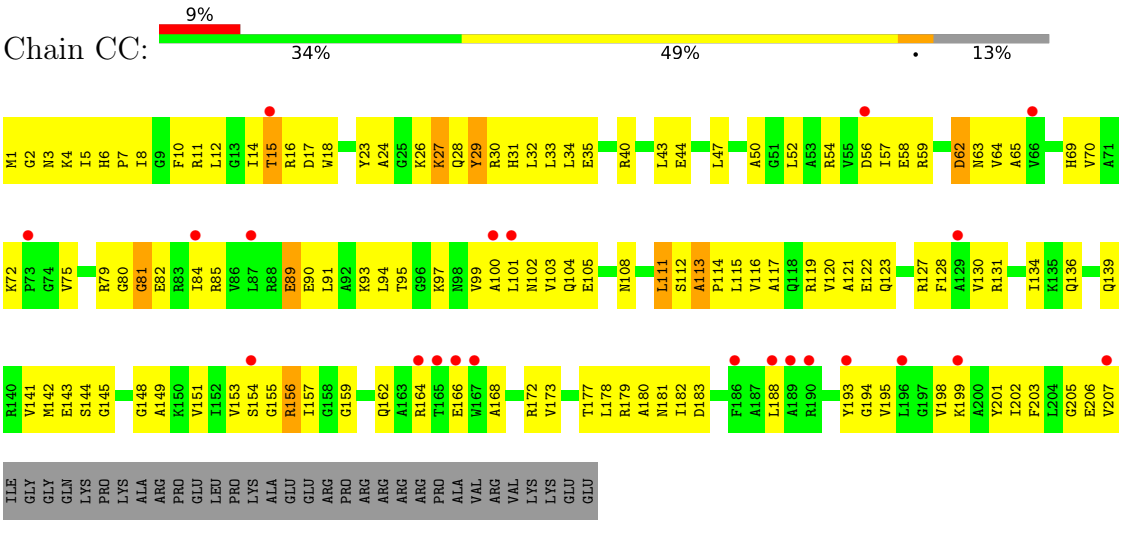
Chain CB:



• Molecule 3: 30S ribosomal protein S3

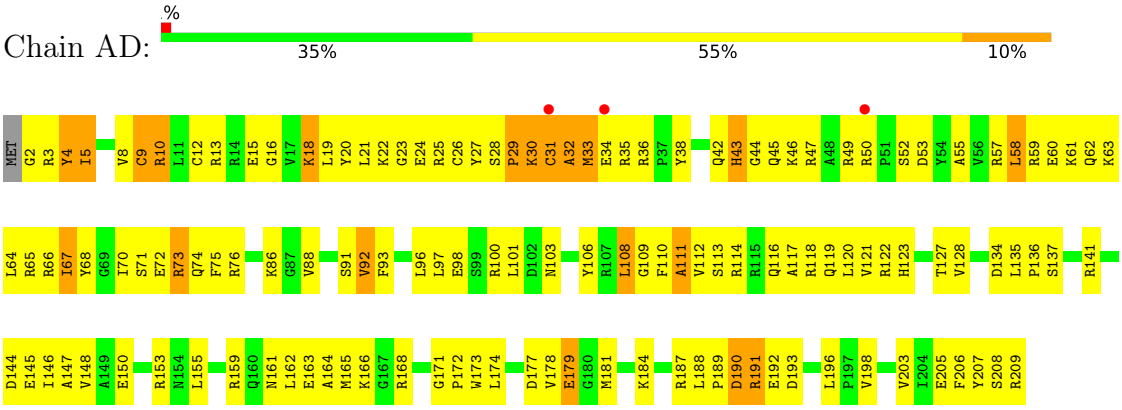


• Molecule 3: 30S ribosomal protein S3



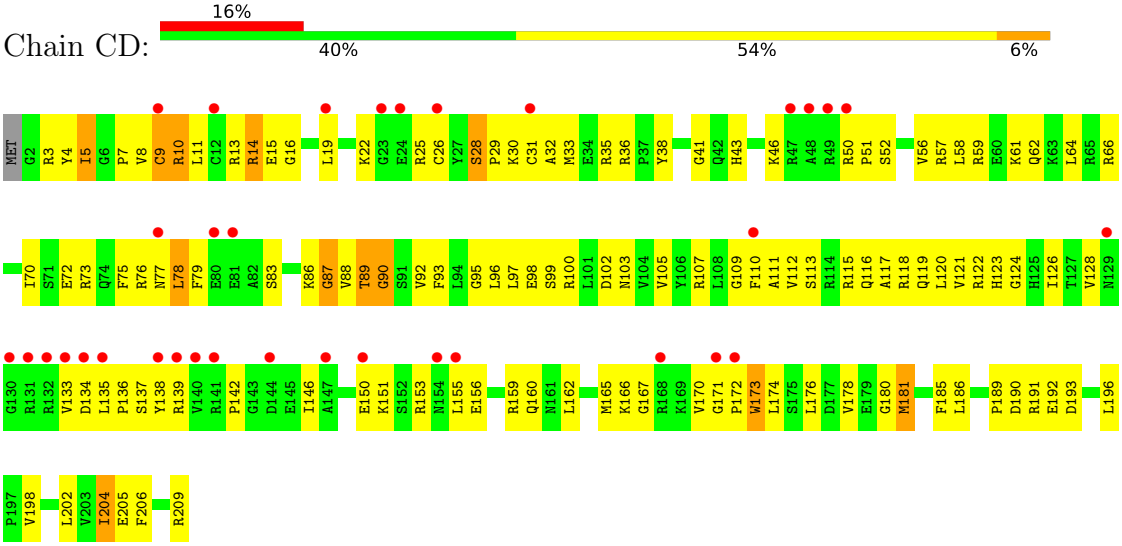
• Molecule 4: 30S ribosomal protein S4

Chain AD:



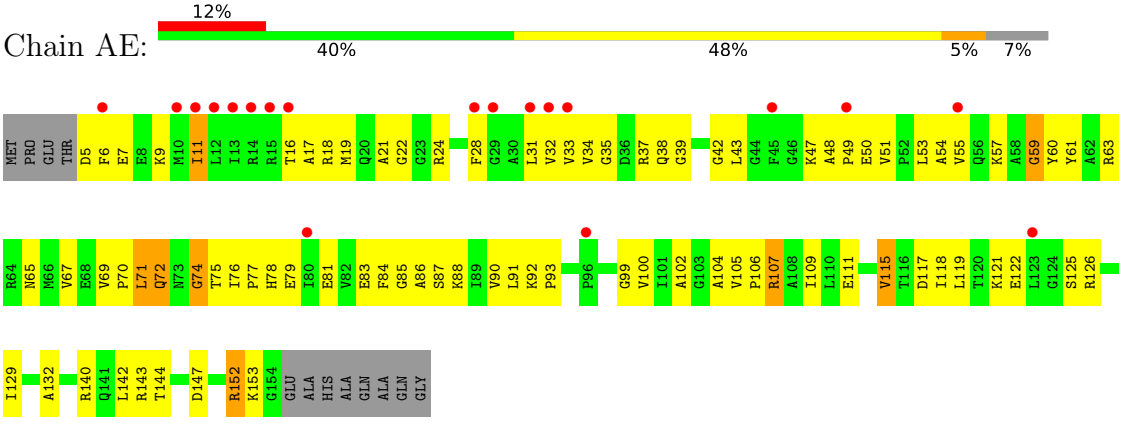
• Molecule 4: 30S ribosomal protein S4

Chain CD:



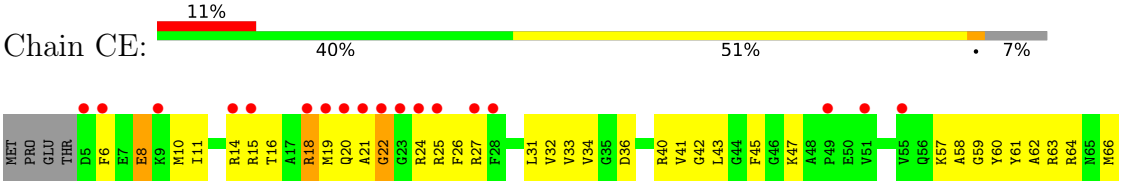
• Molecule 5: 30S ribosomal protein S5

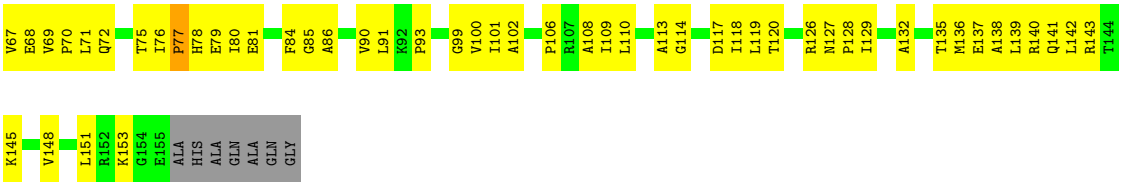
Chain AE:



• Molecule 5: 30S ribosomal protein S5

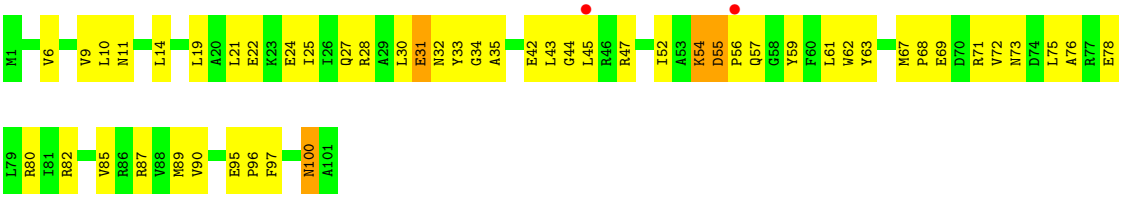
Chain CE:





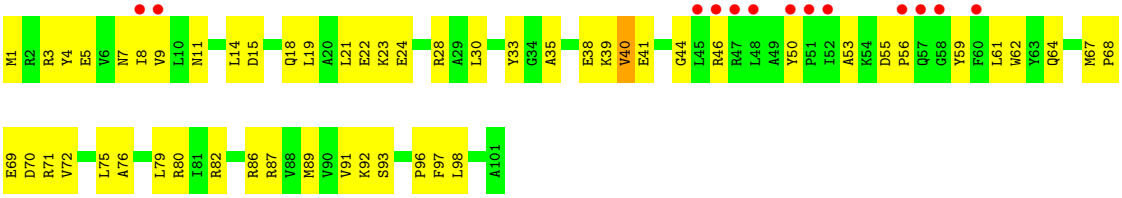
• Molecule 6: 30S ribosomal protein S6

Chain AF:



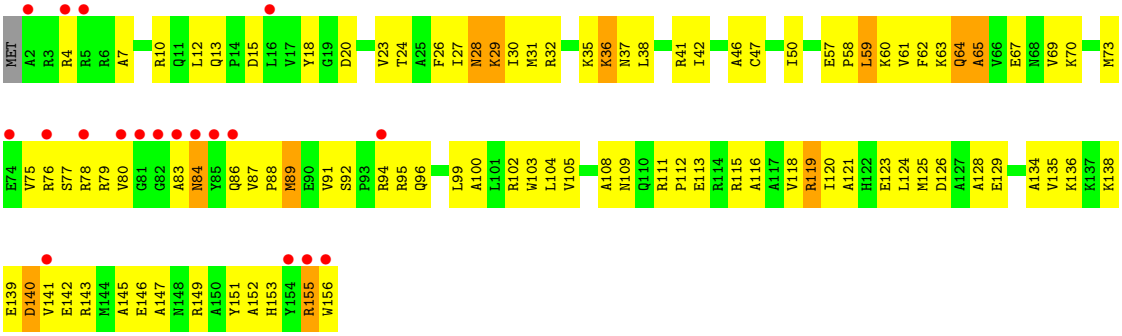
• Molecule 6: 30S ribosomal protein S6

Chain CF:



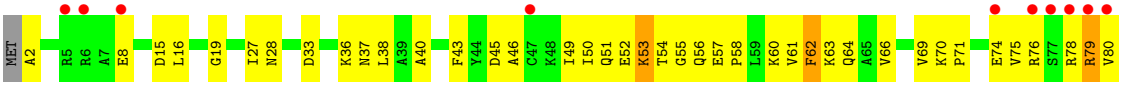
• Molecule 7: 30S ribosomal protein S7

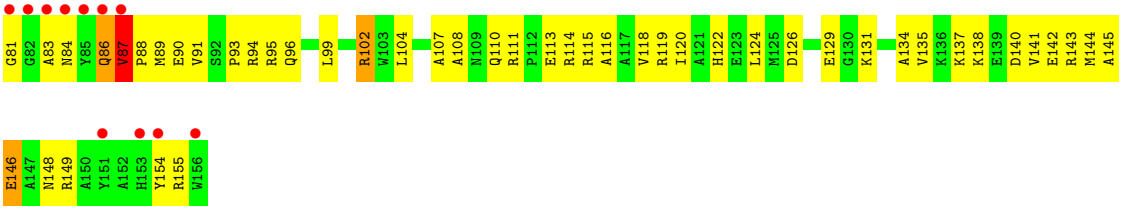
Chain AG:



• Molecule 7: 30S ribosomal protein S7

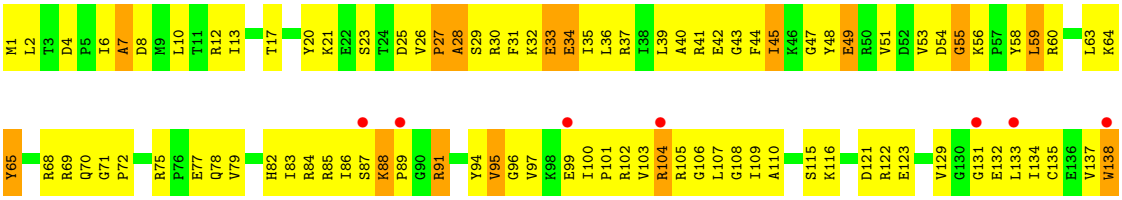
Chain CG:





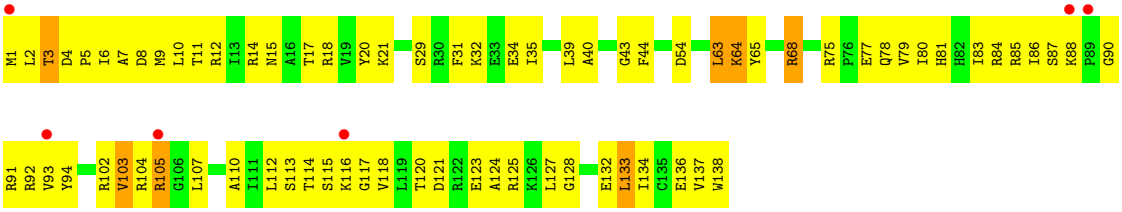
• Molecule 8: 30S ribosomal protein S8

Chain AH:



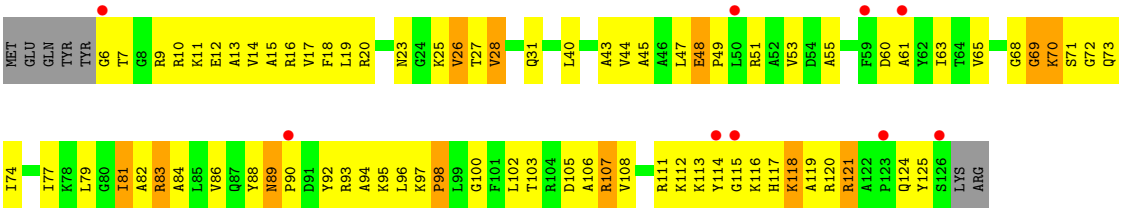
• Molecule 8: 30S ribosomal protein S8

Chain CH:



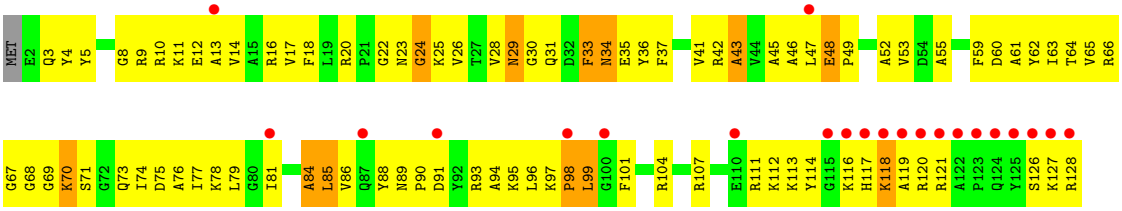
• Molecule 9: 30S ribosomal protein S9

Chain AI:



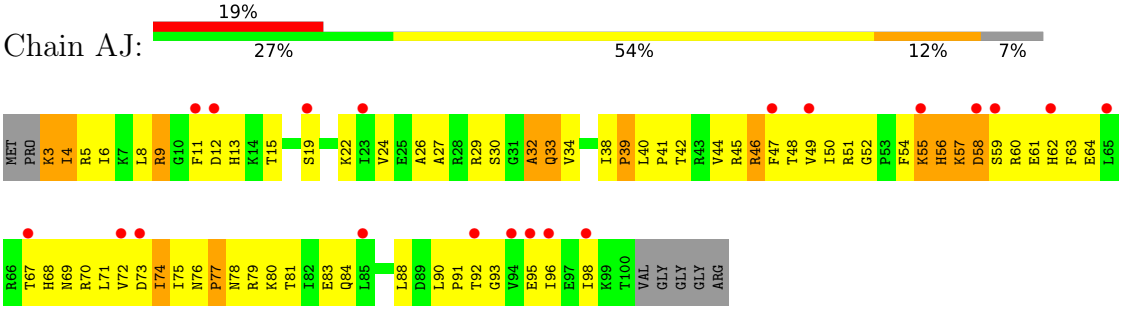
• Molecule 9: 30S ribosomal protein S9

Chain CI:



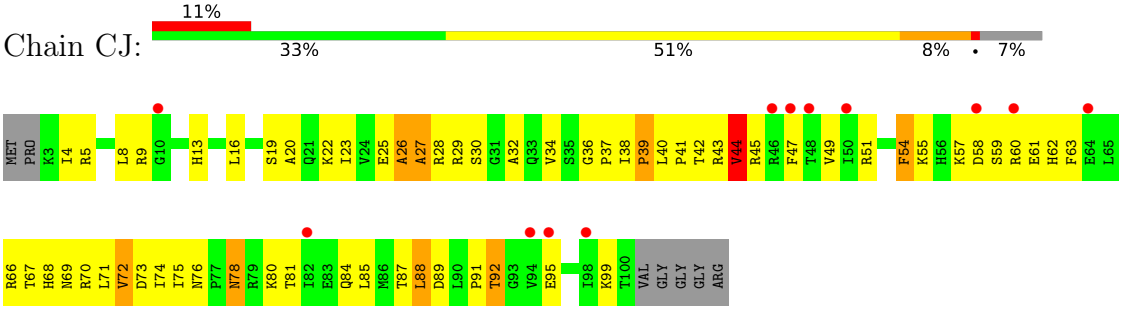
• Molecule 10: 30S ribosomal protein S10

Chain AJ:



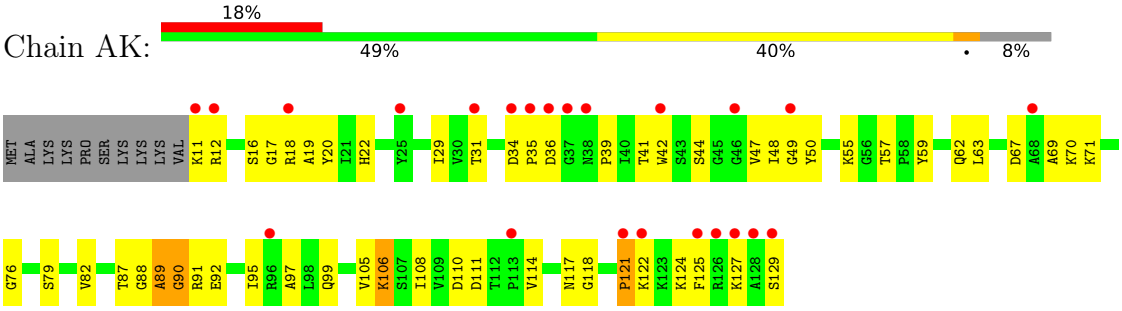
• Molecule 10: 30S ribosomal protein S10

Chain CJ:



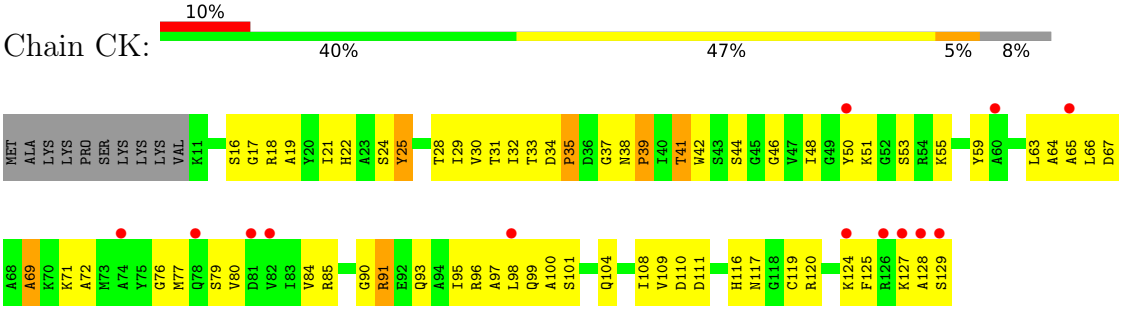
• Molecule 11: 30S ribosomal protein S11

Chain AK:



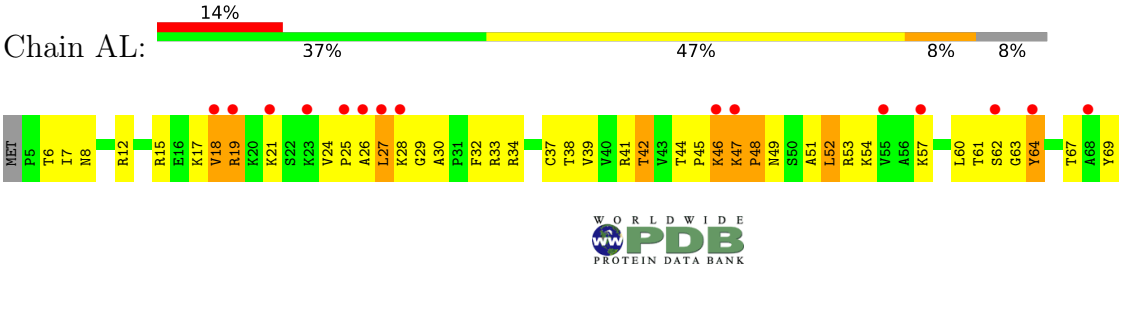
• Molecule 11: 30S ribosomal protein S11

Chain CK:



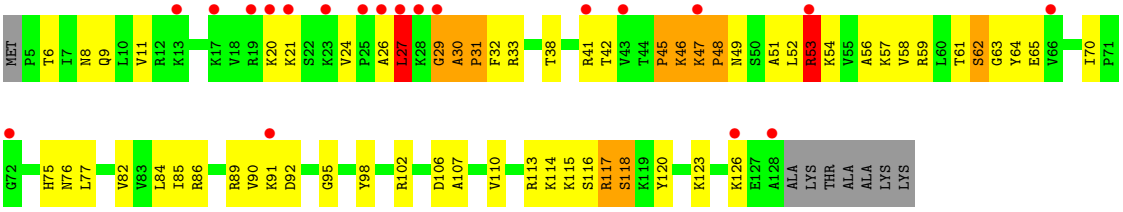
• Molecule 12: 30S ribosomal protein S12

Chain AL:



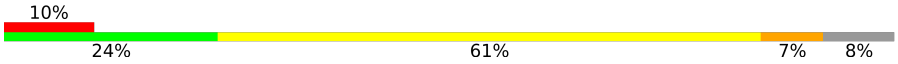
• Molecule 12: 30S ribosomal protein S12

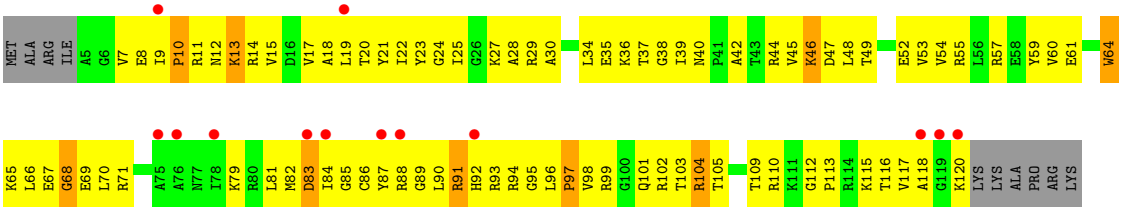
Chain CL:



• Molecule 13: 30S ribosomal protein S13

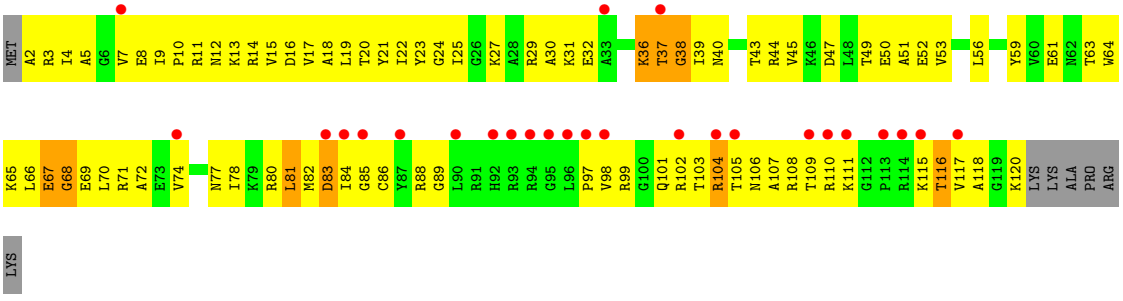
Chain AM:





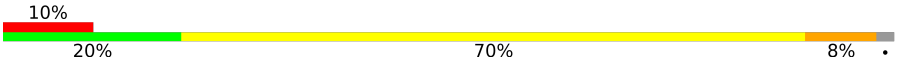
• Molecule 13: 30S ribosomal protein S13

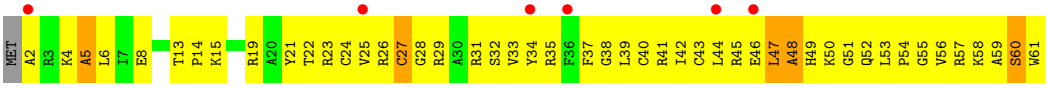
Chain CM:



• Molecule 14: 30S ribosomal protein S14 type Z

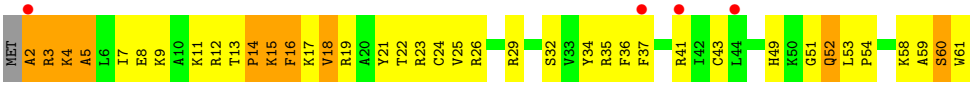
Chain AN:





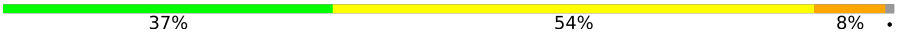
• Molecule 14: 30S ribosomal protein S14 type Z

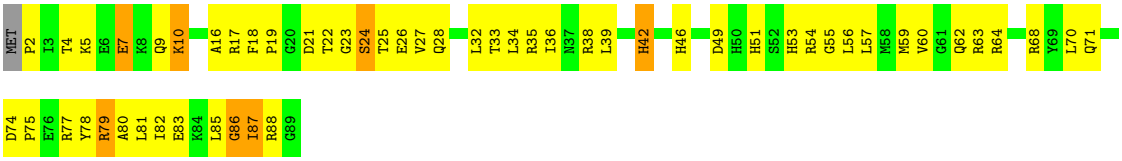
Chain CN:



• Molecule 15: 30S ribosomal protein S15

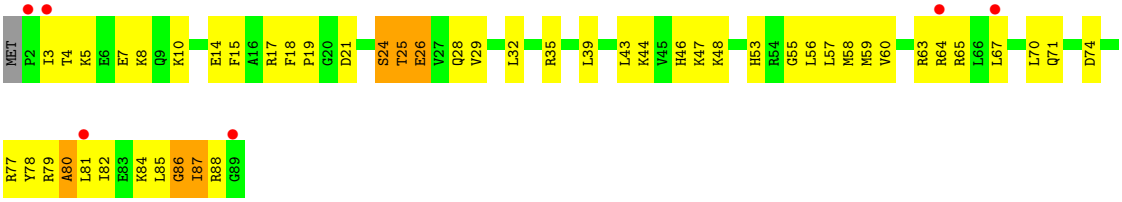
Chain AO:





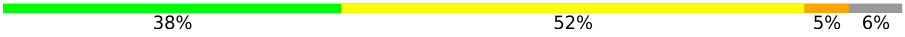
• Molecule 15: 30S ribosomal protein S15

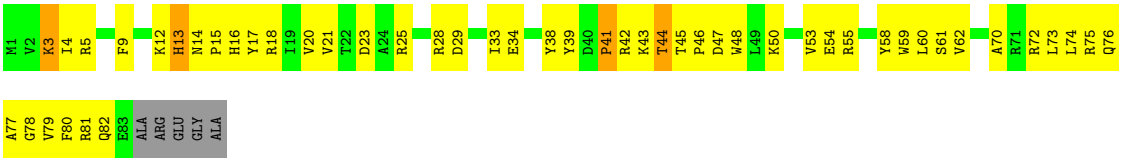
Chain CO:



• Molecule 16: 30S ribosomal protein S16

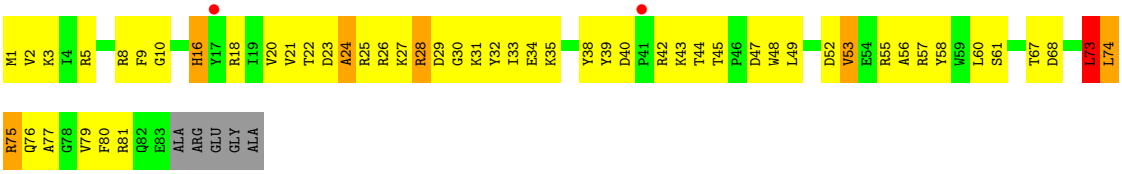
Chain AP:





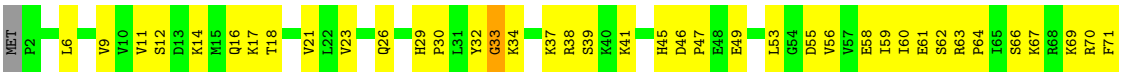
• Molecule 16: 30S ribosomal protein S16

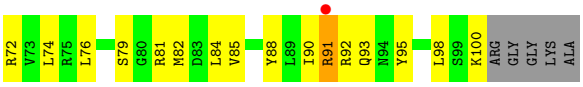
Chain CP:



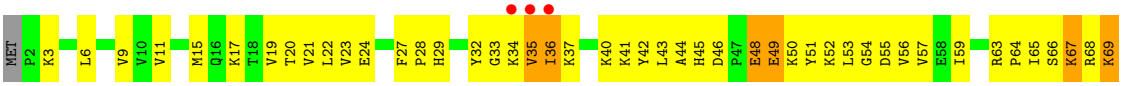
• Molecule 17: 30S ribosomal protein S17

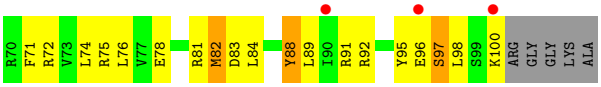
Chain AQ:



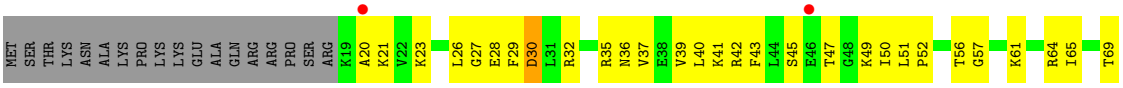


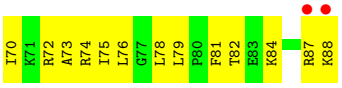
• Molecule 17: 30S ribosomal protein S17



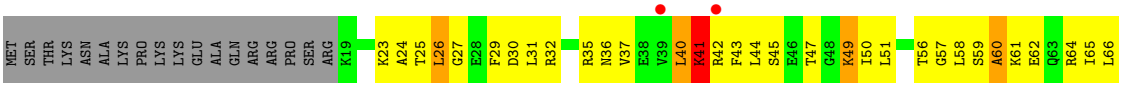


• Molecule 18: 30S ribosomal protein S18

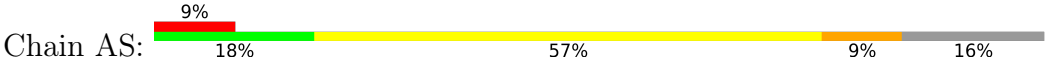


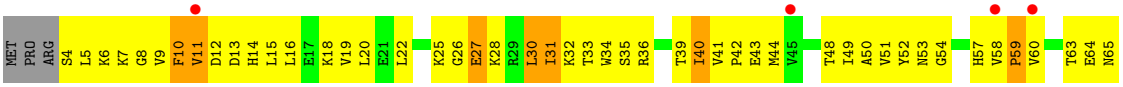


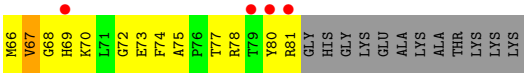
• Molecule 18: 30S ribosomal protein S18



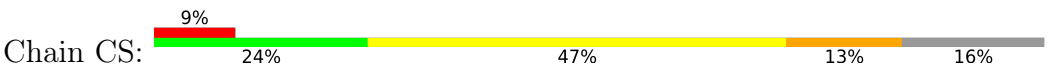
• Molecule 19: 30S ribosomal protein S19

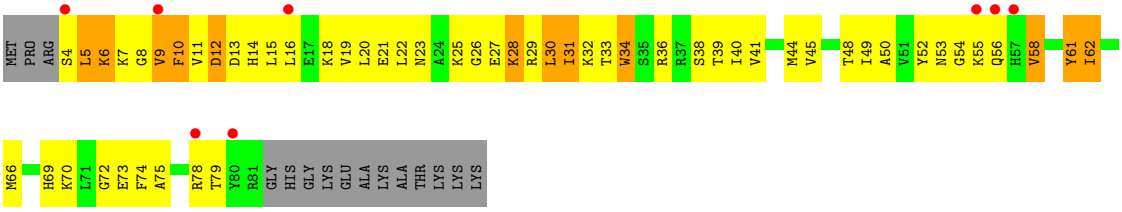




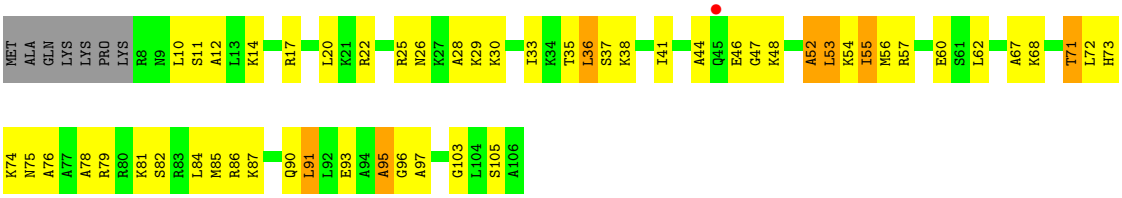


• Molecule 19: 30S ribosomal protein S19

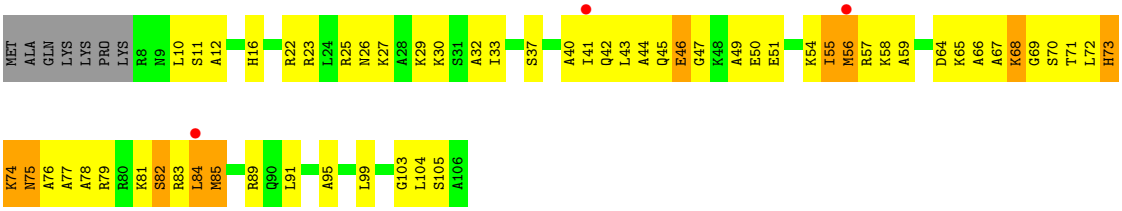




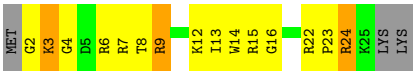
• Molecule 20: 30S ribosomal protein S20



• Molecule 20: 30S ribosomal protein S20

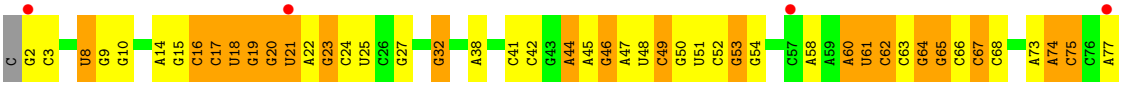


• Molecule 21: 30S ribosomal protein Thx



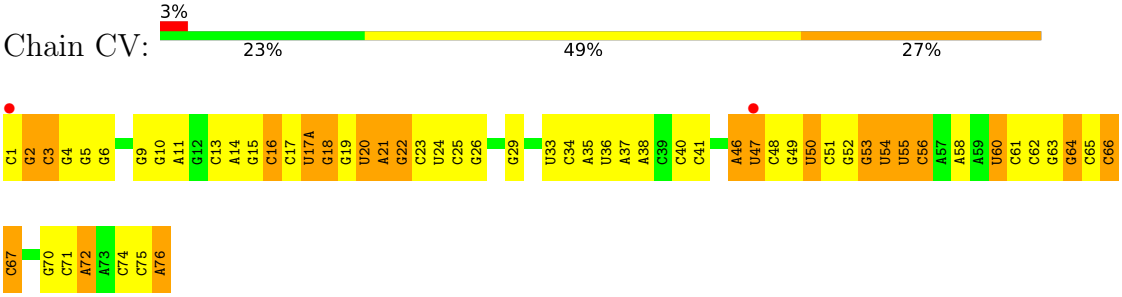
• Molecule 21: 30S ribosomal protein Thx

• Molecule 22: P-site tRNA fMet



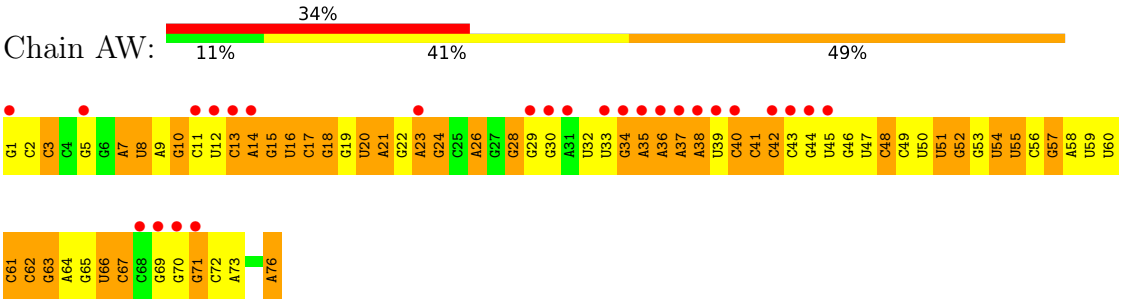
• Molecule 22: P-site tRNA fMet

Chain CV:



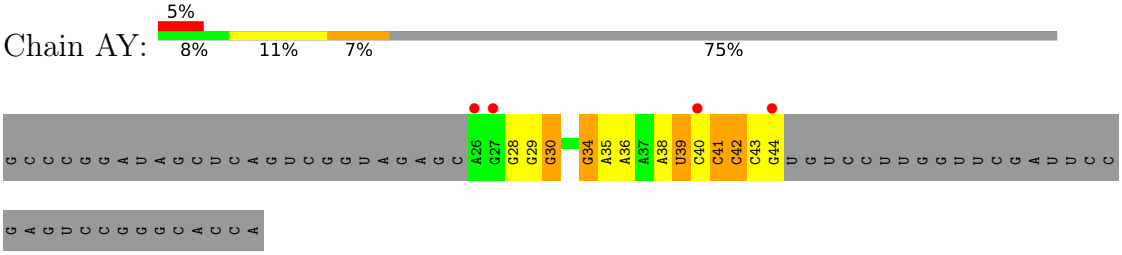
• Molecule 23: E-Site tRNA Phe and A-site tRNA Phe

Chain AW:



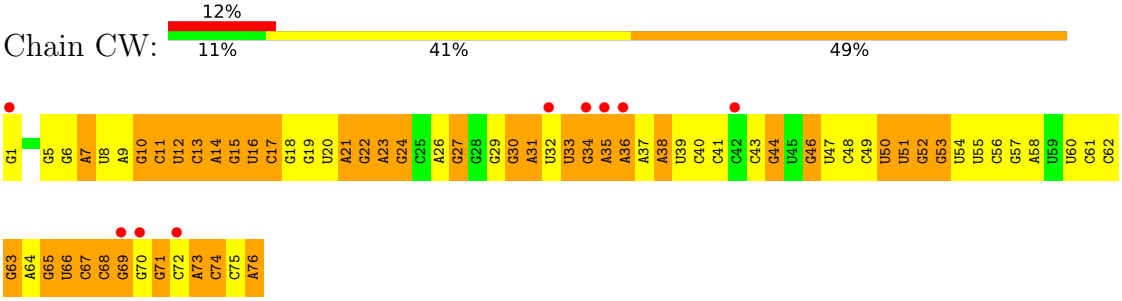
• Molecule 23: E-Site tRNA Phe and A-site tRNA Phe

Chain AY:



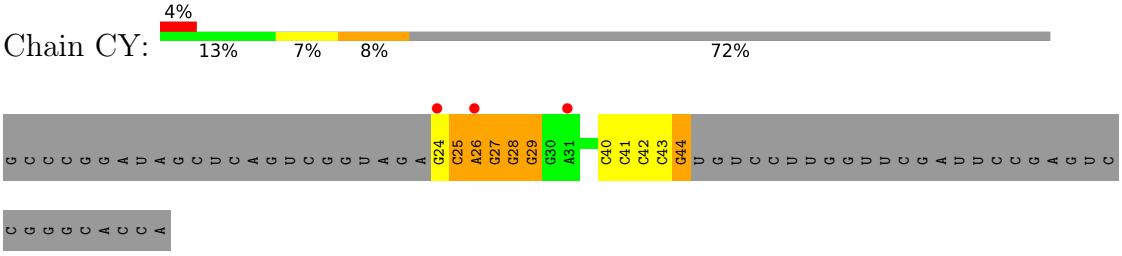
• Molecule 23: E-Site tRNA Phe and A-site tRNA Phe

Chain CW:



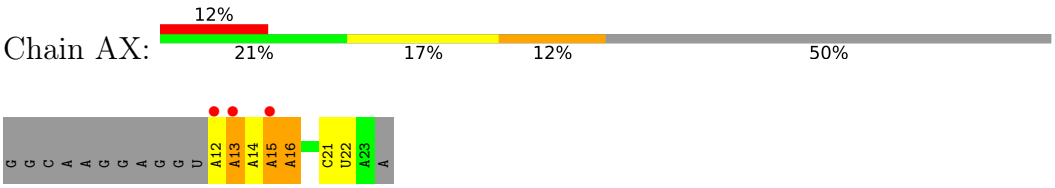
• Molecule 23: E-Site tRNA Phe and A-site tRNA Phe

Chain CY:



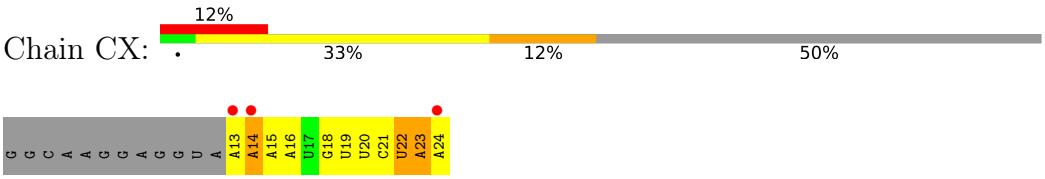
• Molecule 24: mRNA

Chain AX:



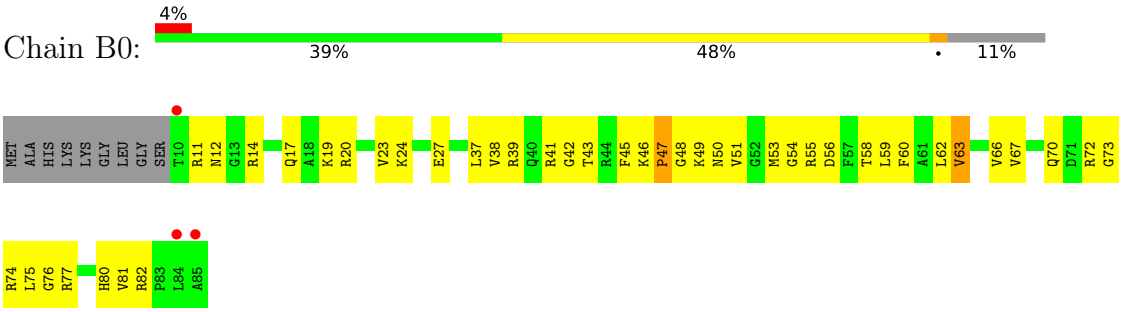
• Molecule 24: mRNA

Chain CX:



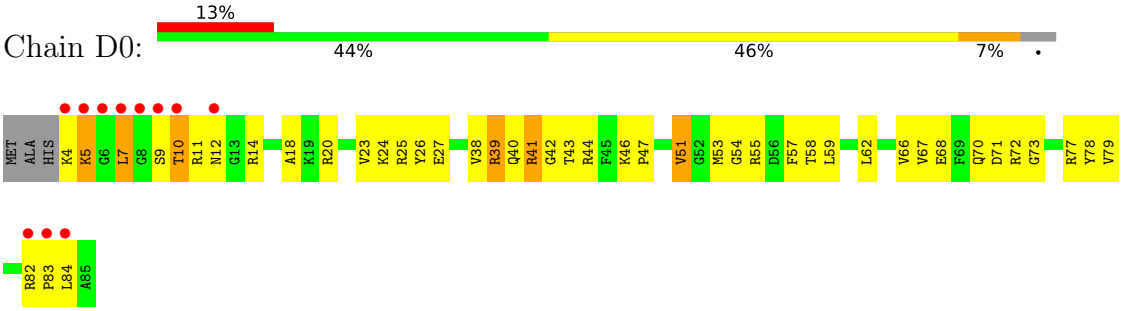
• Molecule 25: 50S ribosomal protein L27

Chain B0:



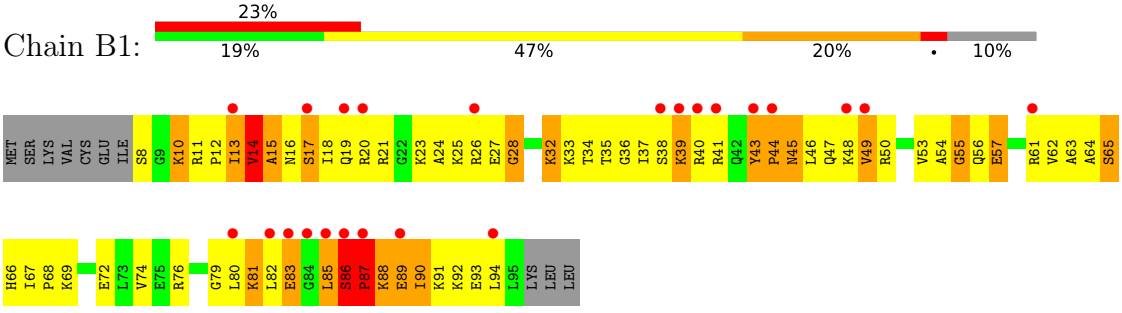
• Molecule 25: 50S ribosomal protein L27

Chain D0:



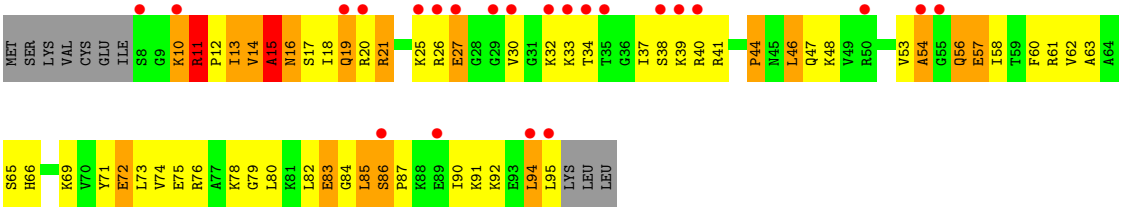
• Molecule 26: 50S ribosomal protein L28

Chain B1:



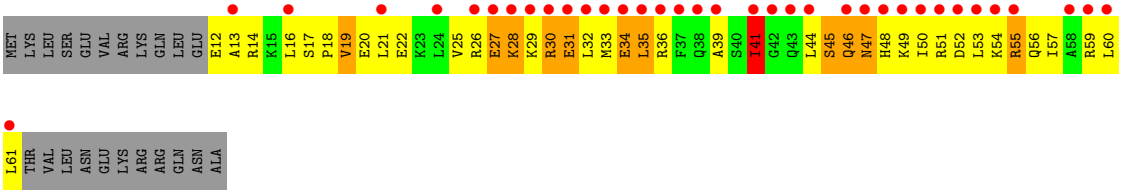
• Molecule 26: 50S ribosomal protein L28

Chain D1:



• Molecule 27: 50S ribosomal protein L29

Chain B2:



• Molecule 27: 50S ribosomal protein L29

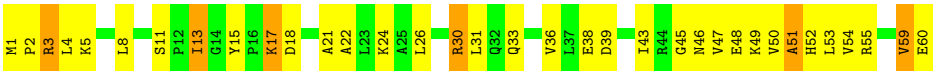
Chain D2:

• Molecule 28: 50S ribosomal protein L30

Chain B3:

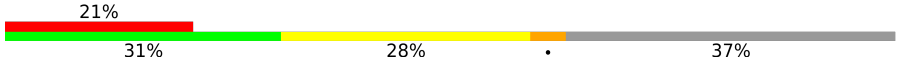
• Molecule 28: 50S ribosomal protein L30

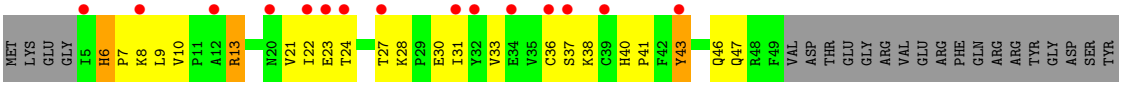
Chain D3:



• Molecule 29: 50S ribosomal protein L31

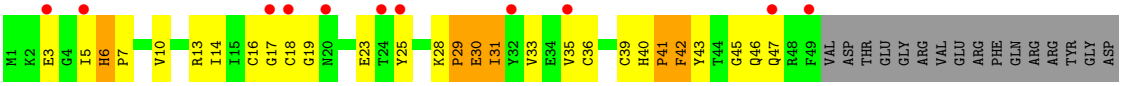
Chain B4:





• Molecule 29: 50S ribosomal protein L31

Chain D4:



• Molecule 30: 50S ribosomal protein L32

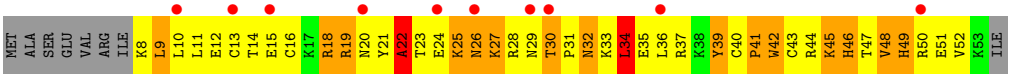
Chain B5:

• Molecule 30: 50S ribosomal protein L32

Chain D5:

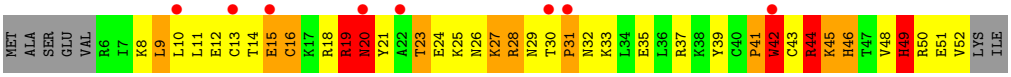
• Molecule 31: 50S ribosomal protein L33

Chain B6:



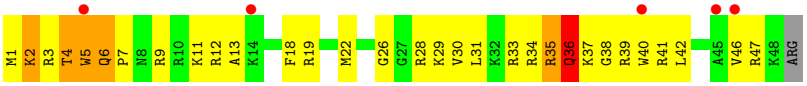
• Molecule 31: 50S ribosomal protein L33

Chain D6:



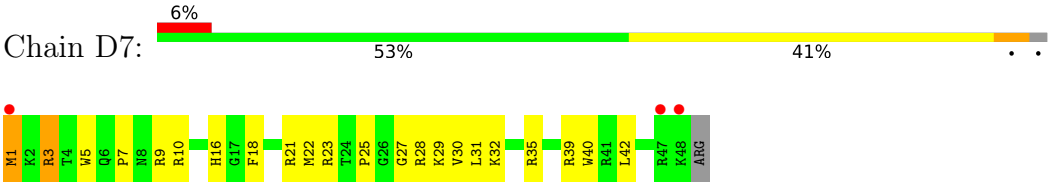
• Molecule 32: 50S ribosomal protein L34

Chain B7:



• Molecule 32: 50S ribosomal protein L34

Chain D7:



• Molecule 33: 50S ribosomal protein L35

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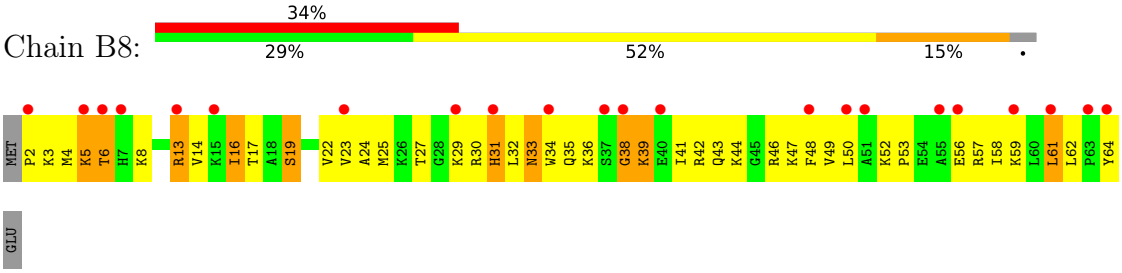

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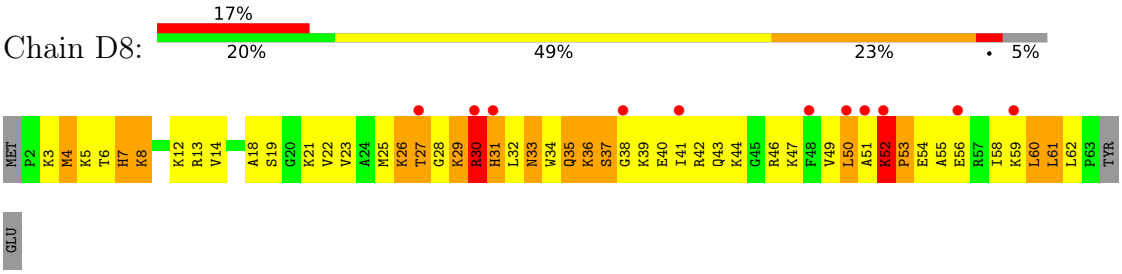

• Molecule 34: 50S ribosomal protein L36

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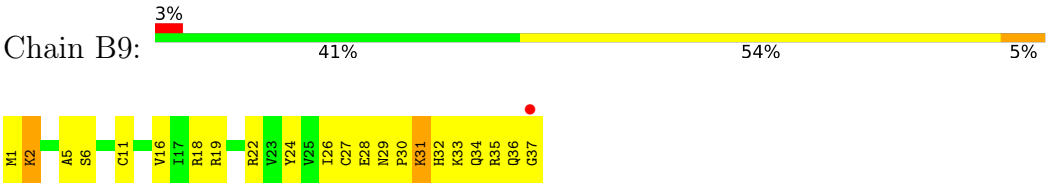

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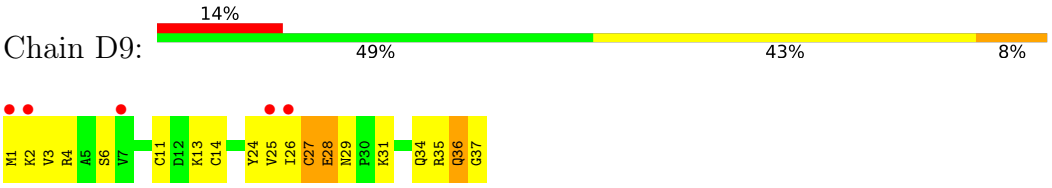

• Molecule 35: 23S ribosomal RNA

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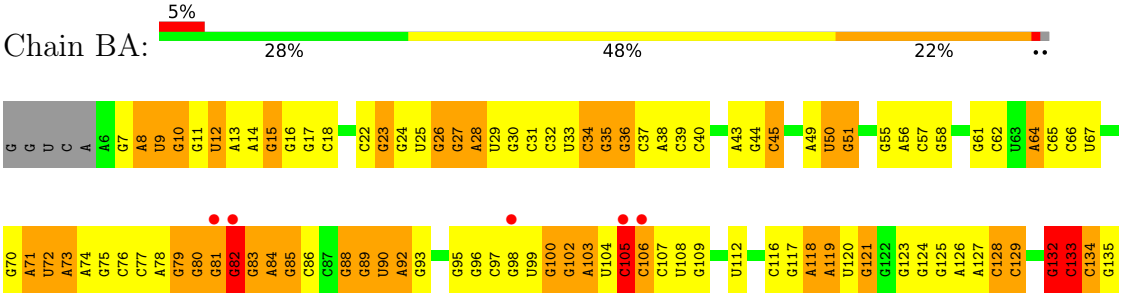

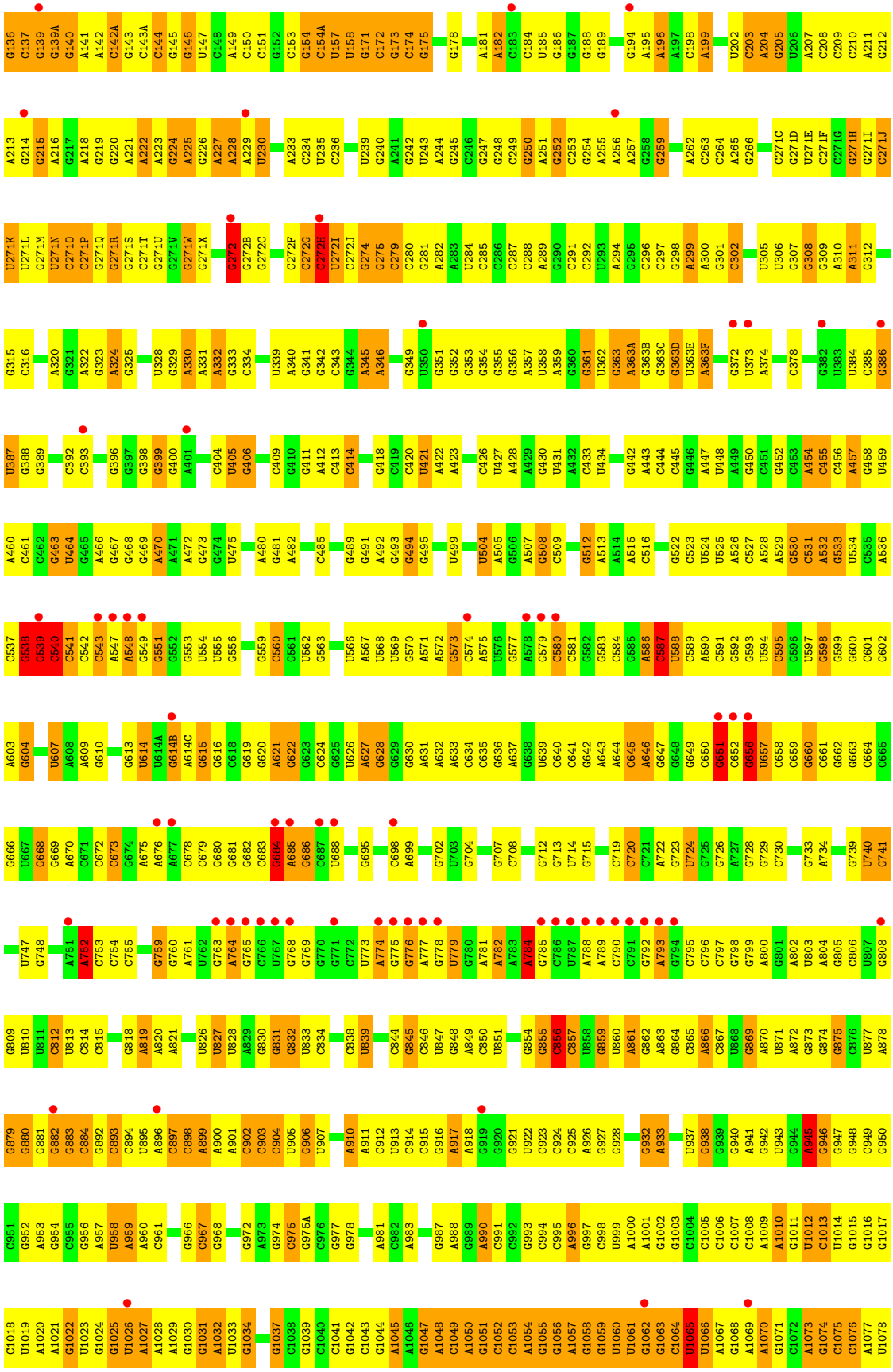
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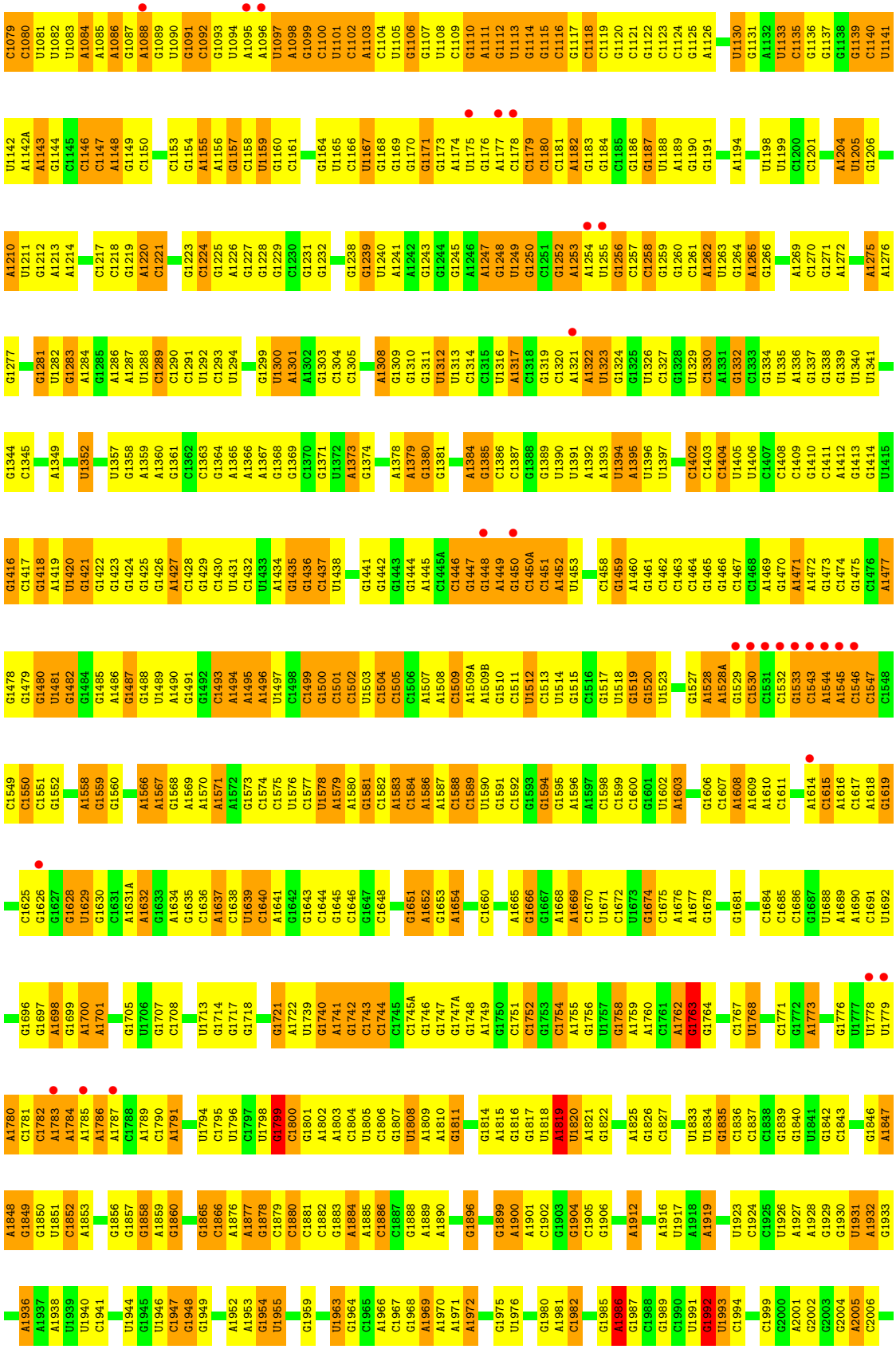

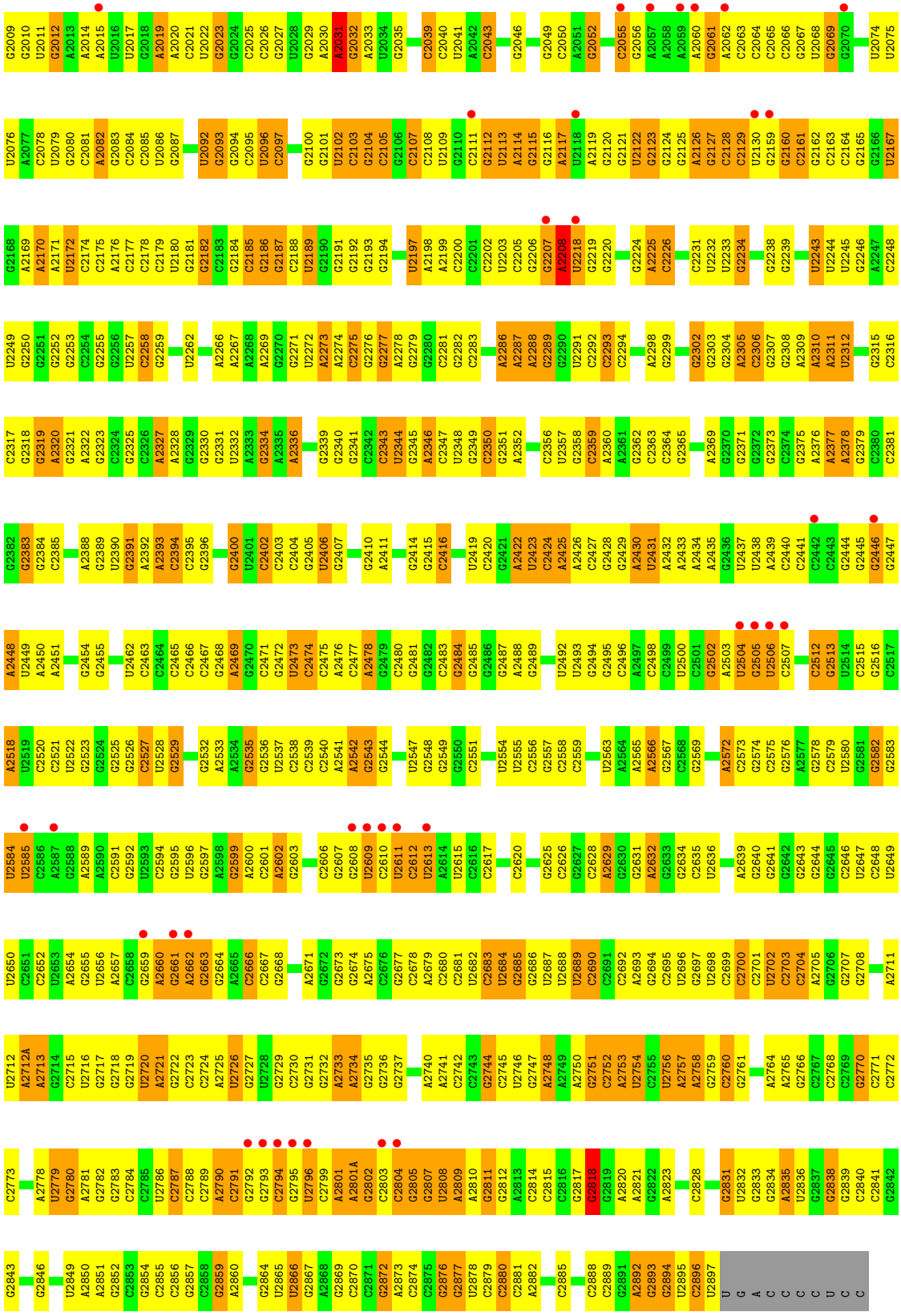

• Molecule 35: 23S ribosomal RNA

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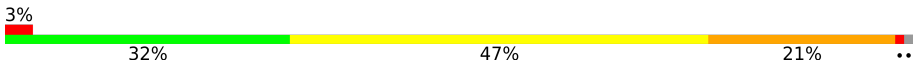

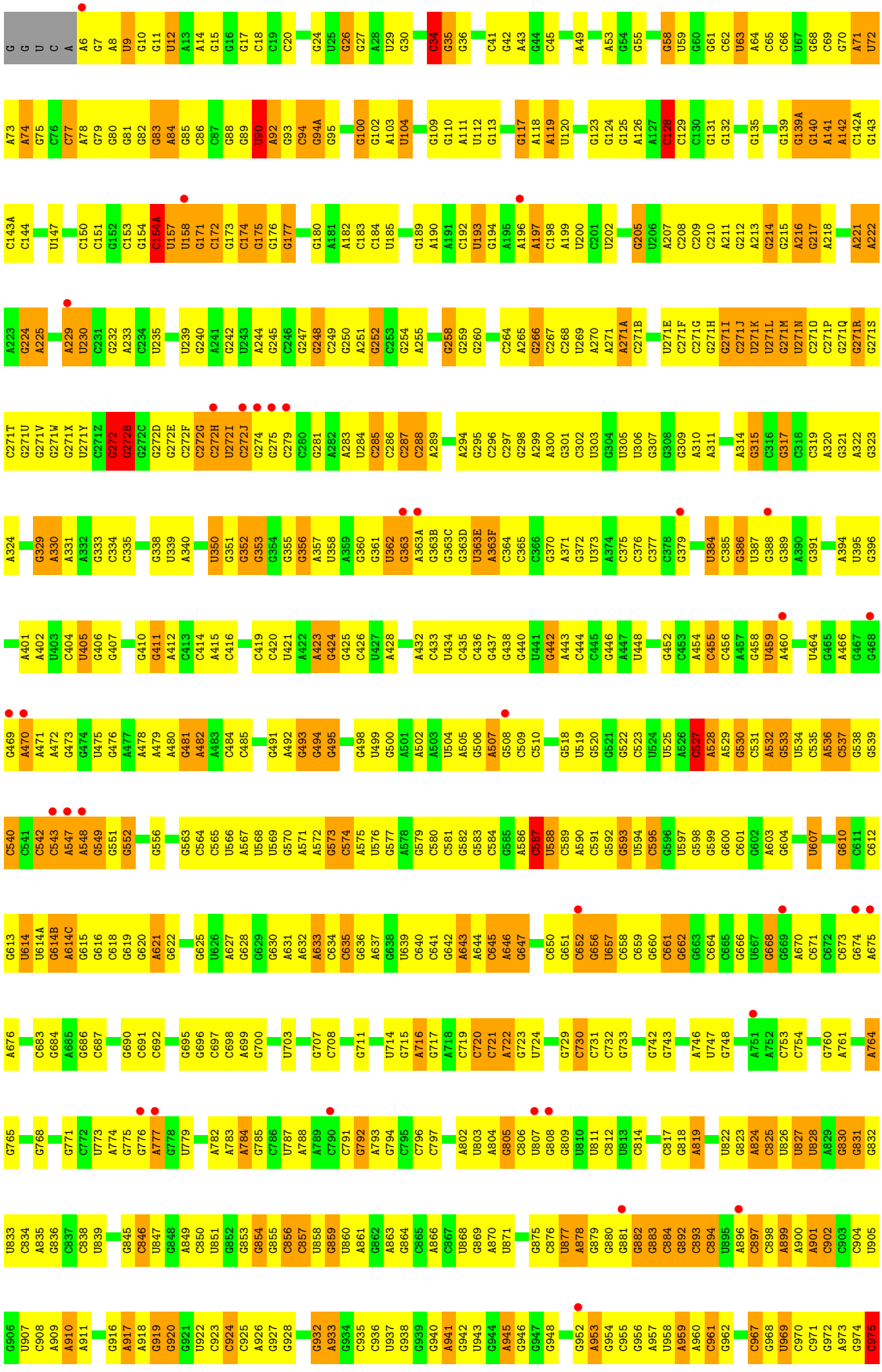
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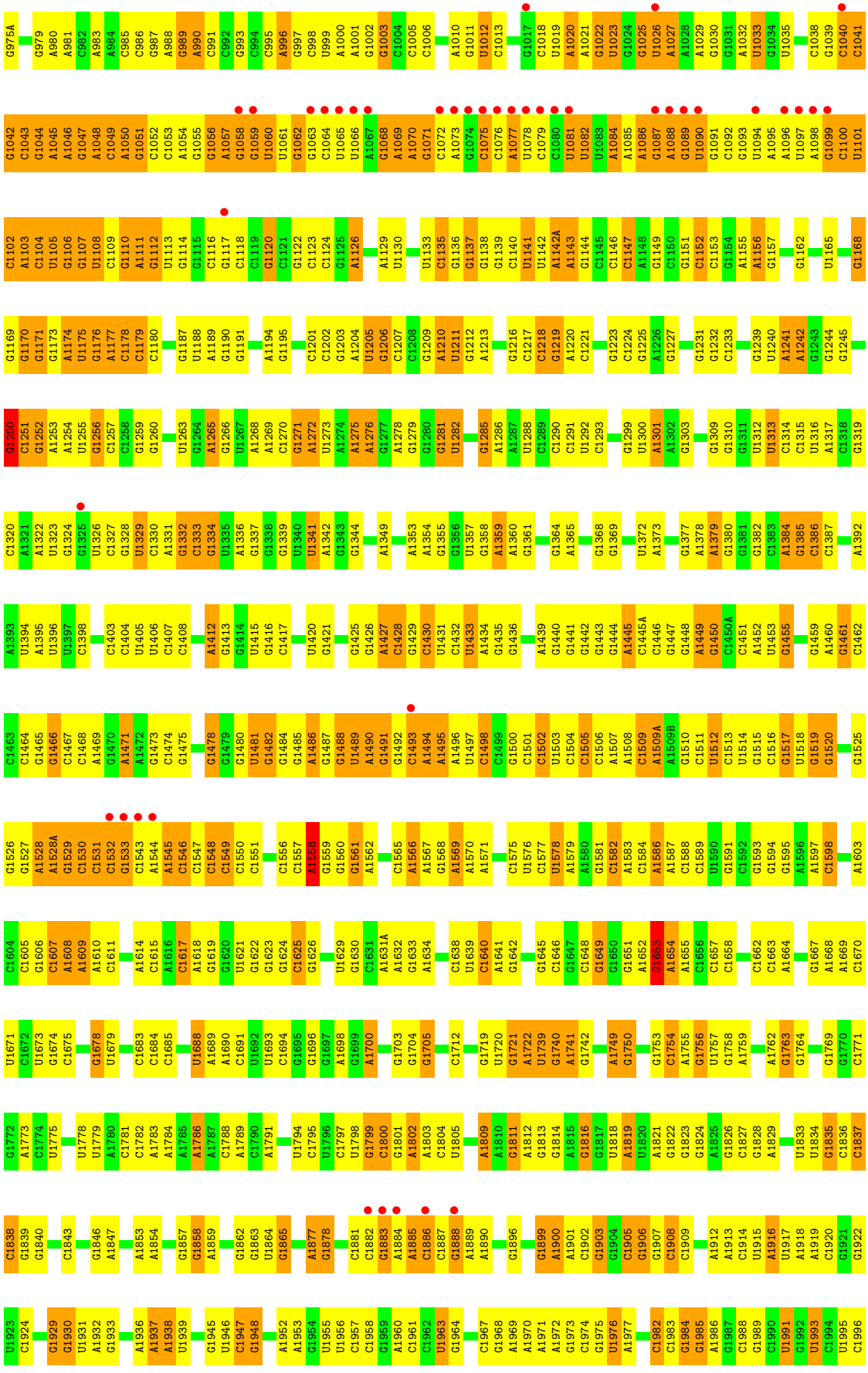
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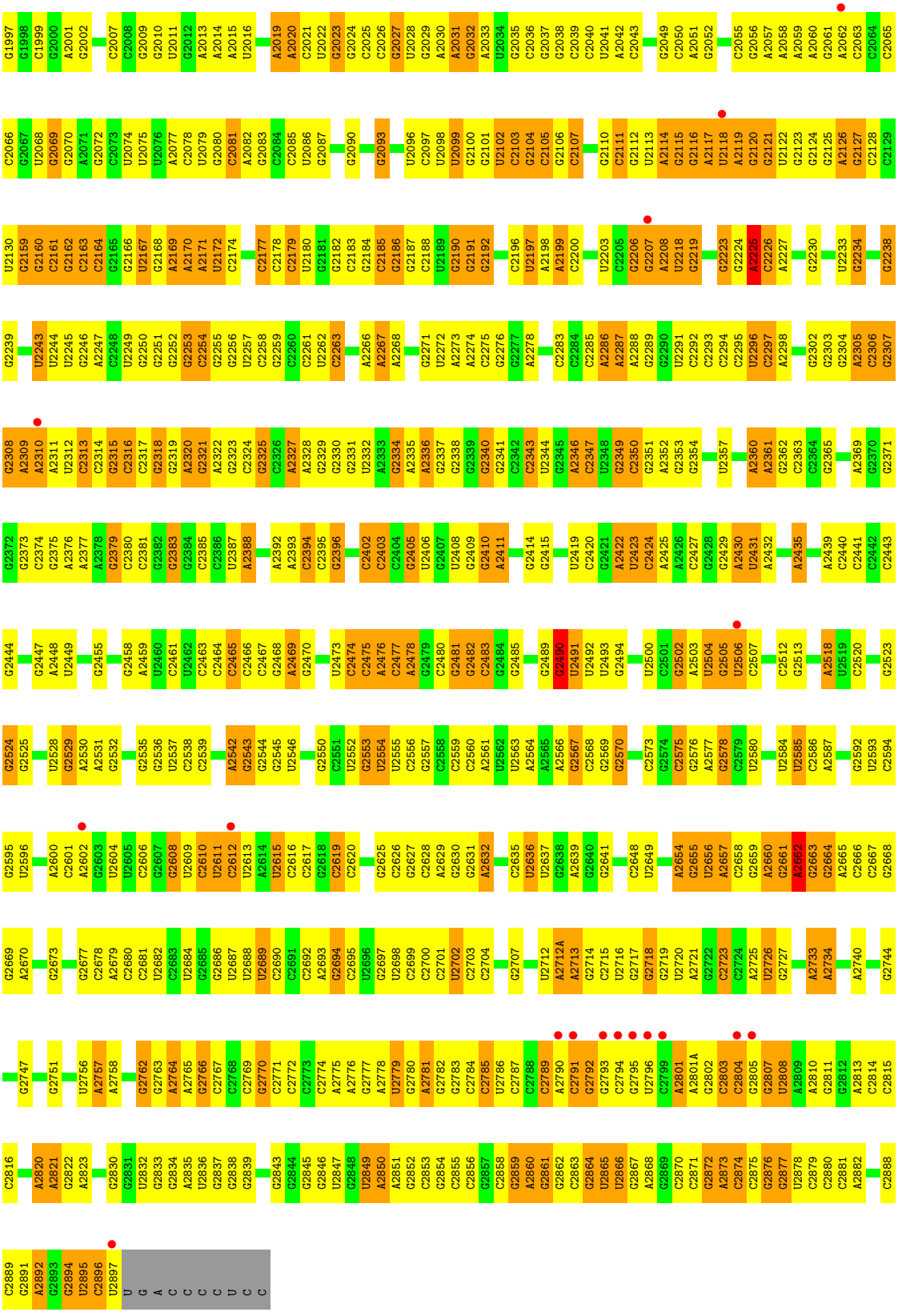

• Molecule 36: 5S ribosomal RNA

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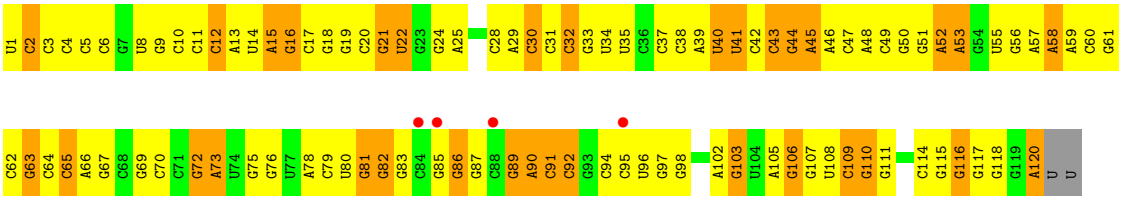

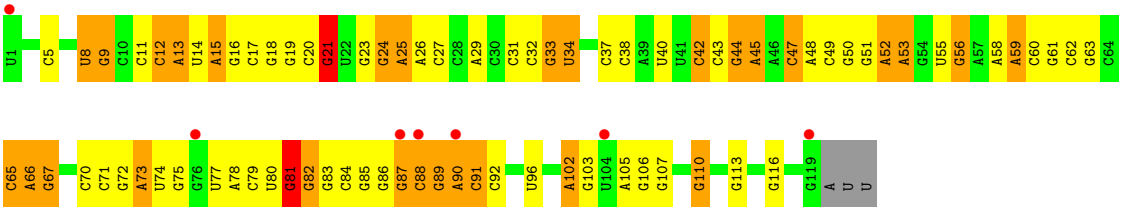

• Molecule 36: 5S ribosomal RNA

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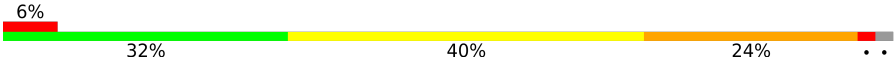
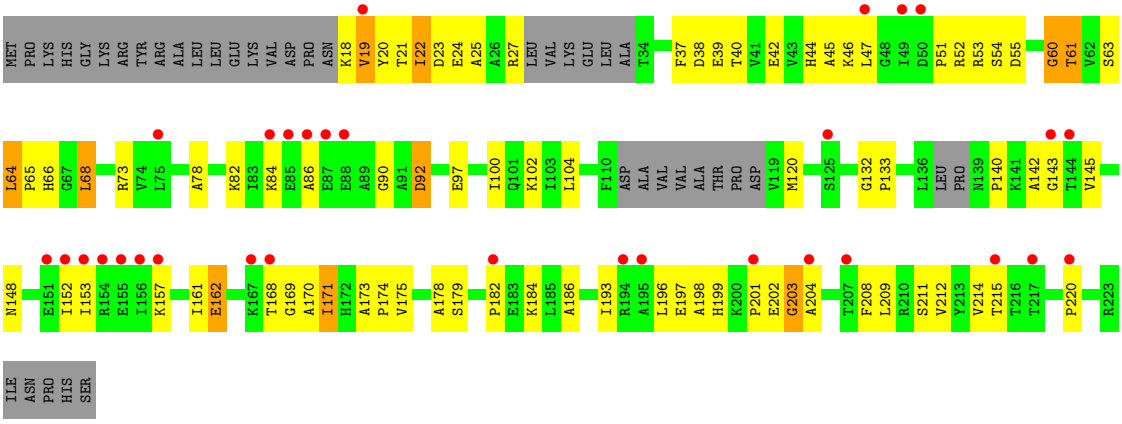


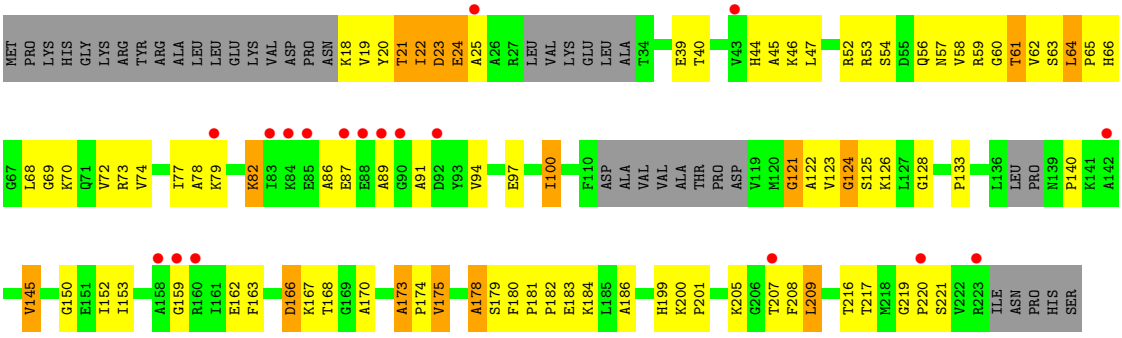
• Molecule 37: 50S ribosomal protein L1

Chain BC:



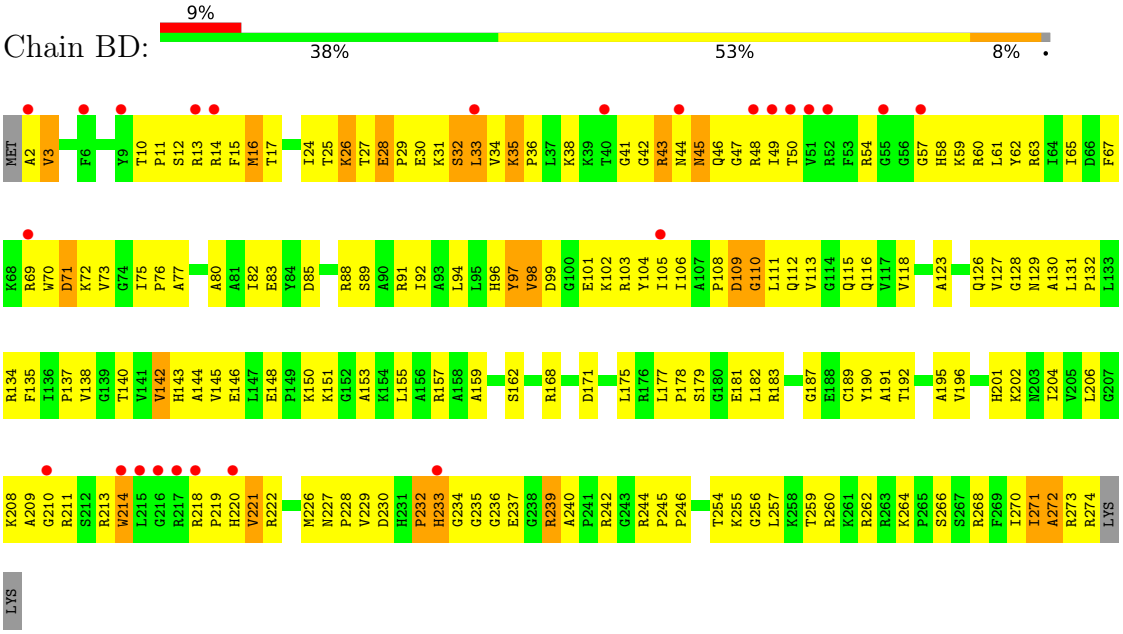
• Molecule 37: 50S ribosomal protein L1

Chain DC:



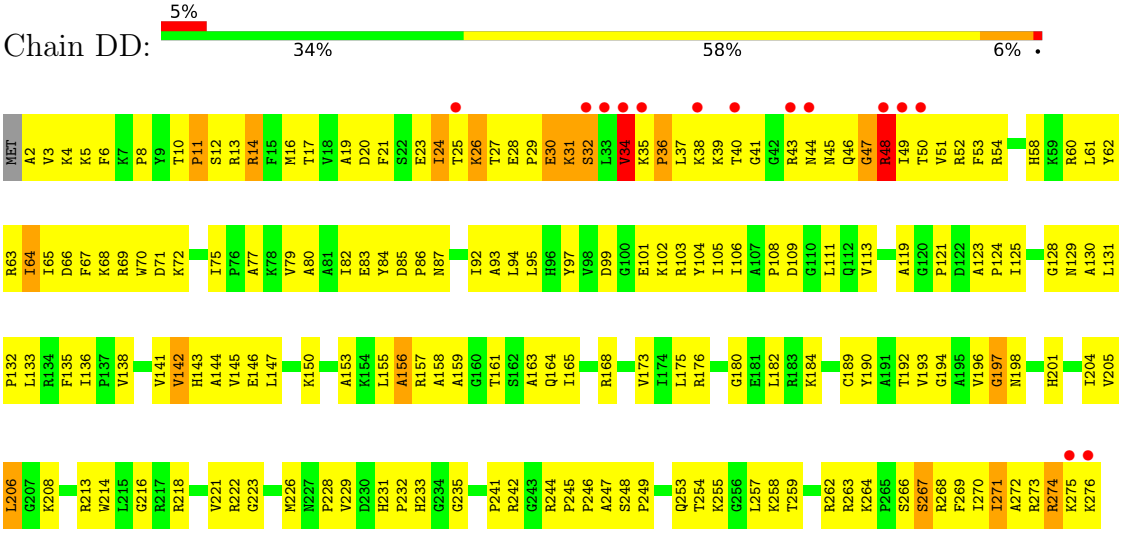
• Molecule 38: 50S ribosomal protein L2

Chain BD:



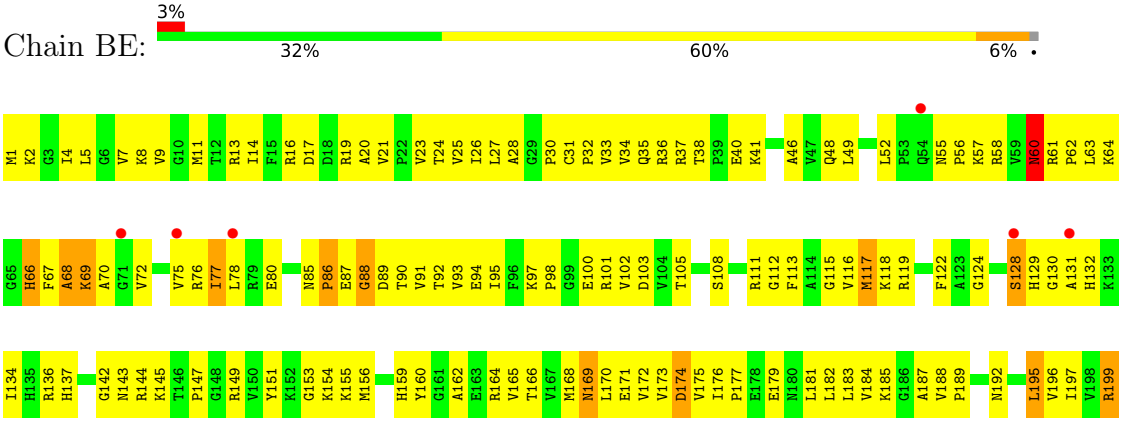
• Molecule 38: 50S ribosomal protein L2

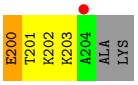
Chain DD:



• Molecule 39: 50S ribosomal protein L3

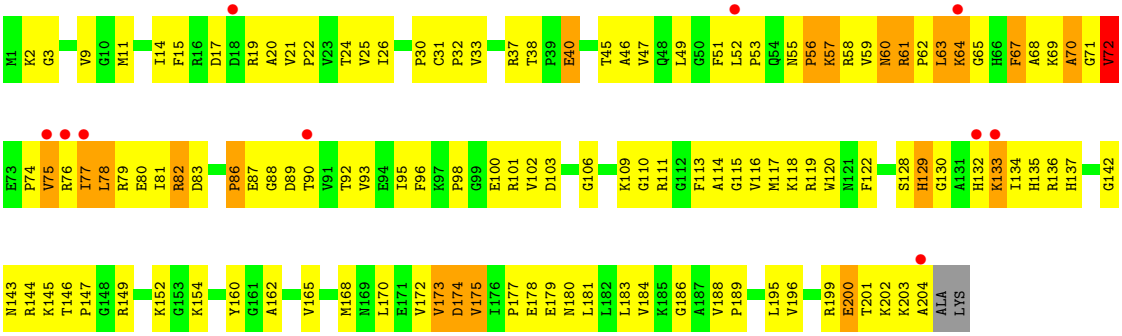
Chain BE:





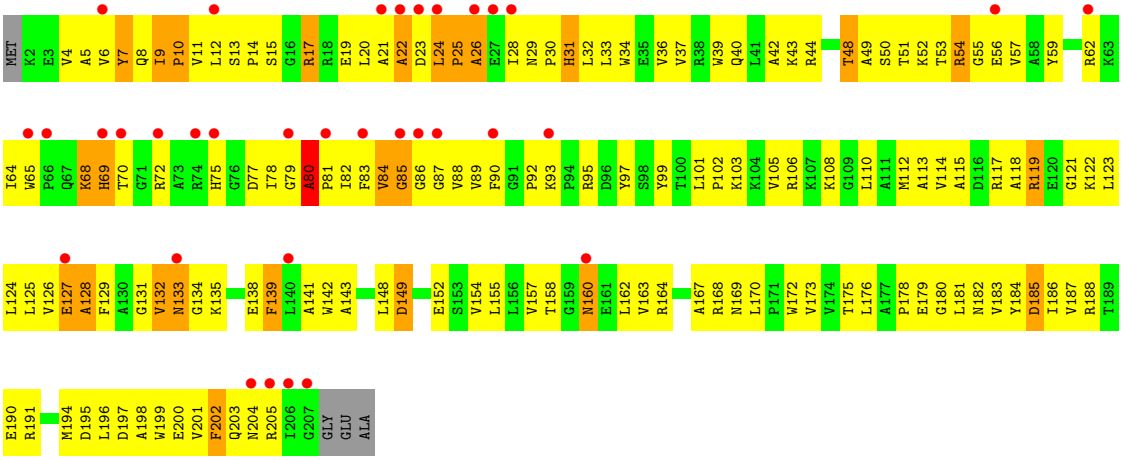
• Molecule 39: 50S ribosomal protein L3

Chain DE:



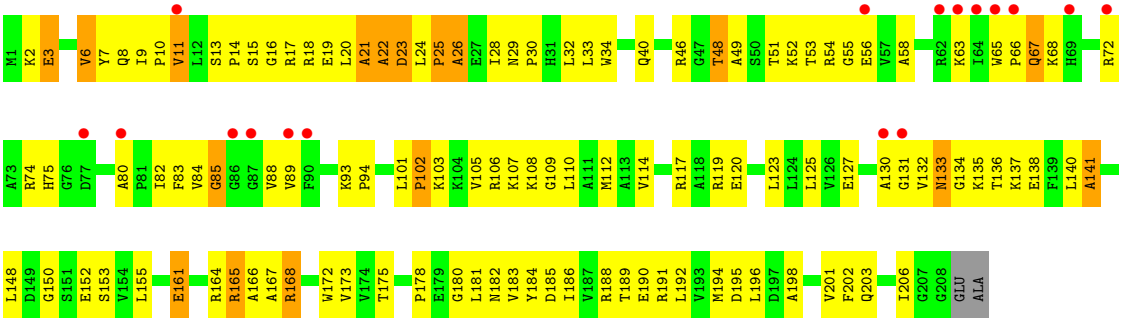
• Molecule 40: 50S ribosomal protein L4

Chain BF:



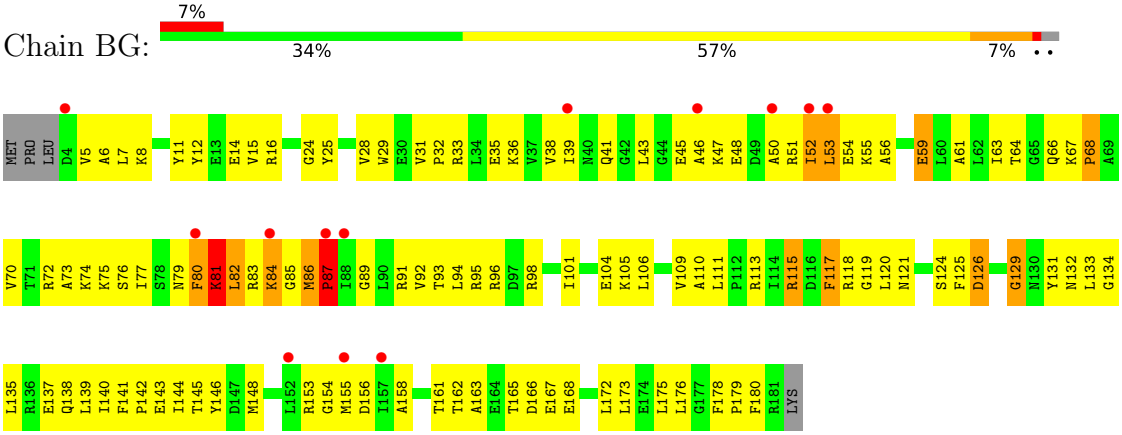
• Molecule 40: 50S ribosomal protein L4

Chain DF:



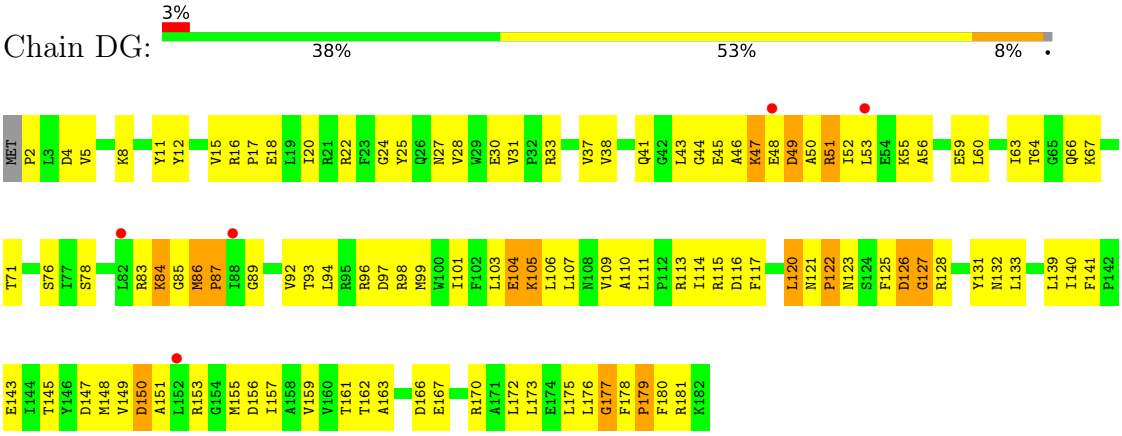
• Molecule 41: 50S ribosomal protein L5

Chain BG:



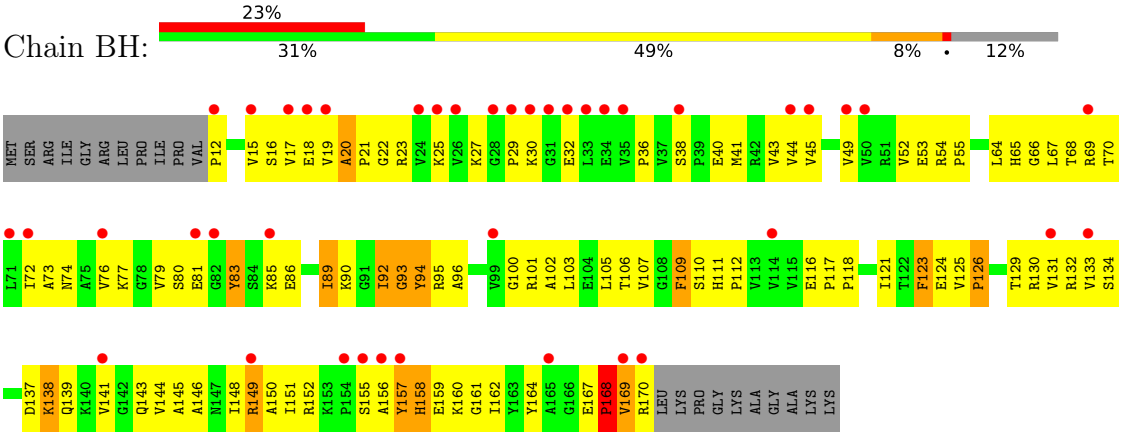
• Molecule 41: 50S ribosomal protein L5

Chain DG:



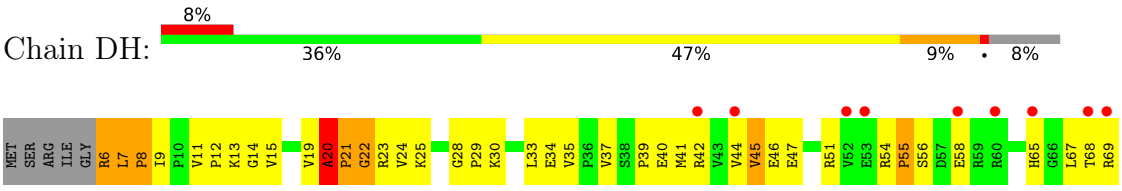
• Molecule 42: 50S ribosomal protein L6

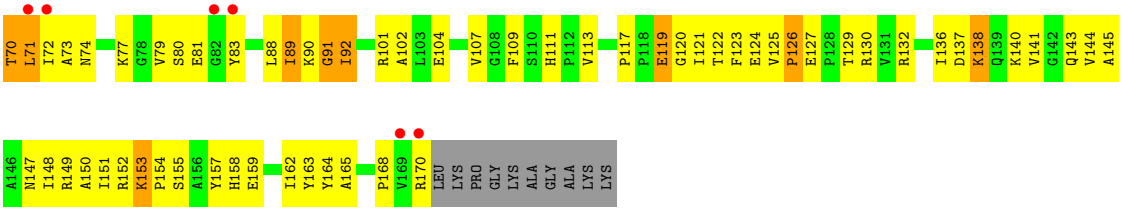
Chain BH:



• Molecule 42: 50S ribosomal protein L6

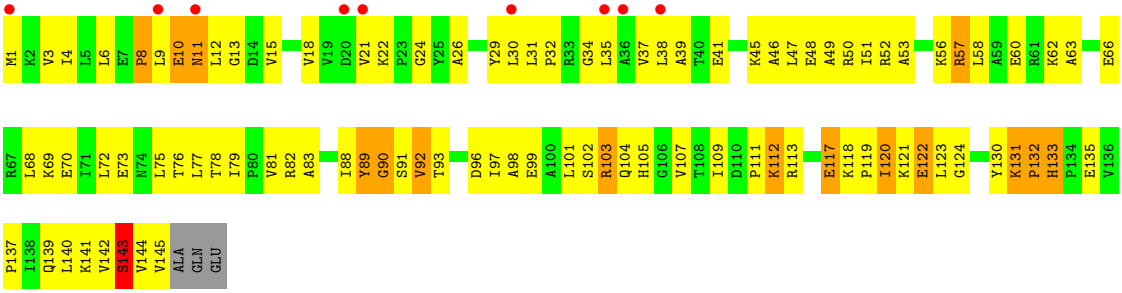
Chain DH:





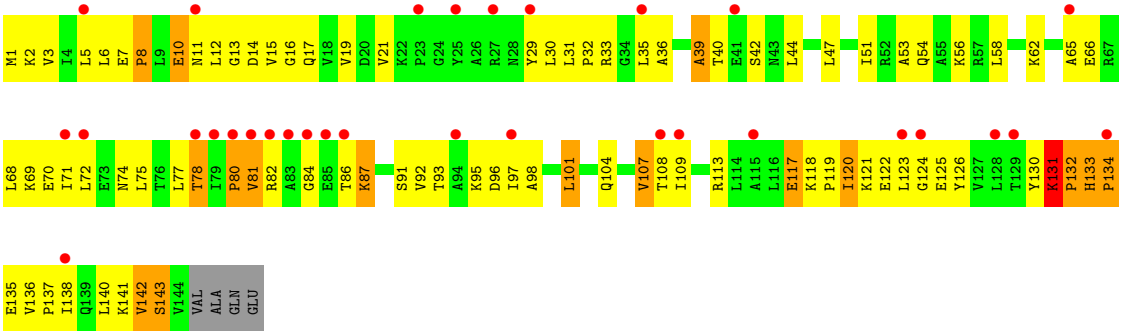
• Molecule 43: 50S ribosomal protein L9

Chain BI:



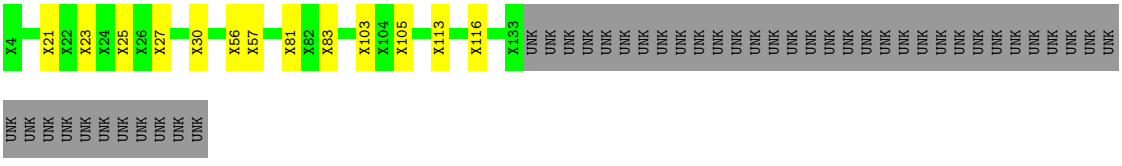
• Molecule 43: 50S ribosomal protein L9

Chain DI:



• Molecule 44: 50S ribosomal protein L10

Chain BJ:

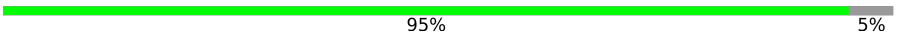


• Molecule 44: 50S ribosomal protein L10

Chain DJ:

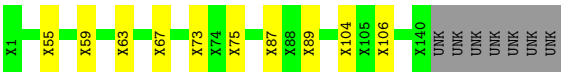
• Molecule 45: 50S ribosomal protein L11

Chain BK:



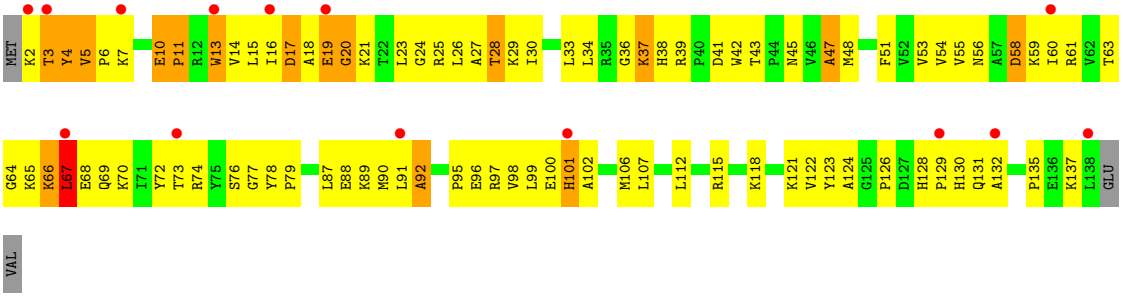
• Molecule 45: 50S ribosomal protein L11

Chain DK:



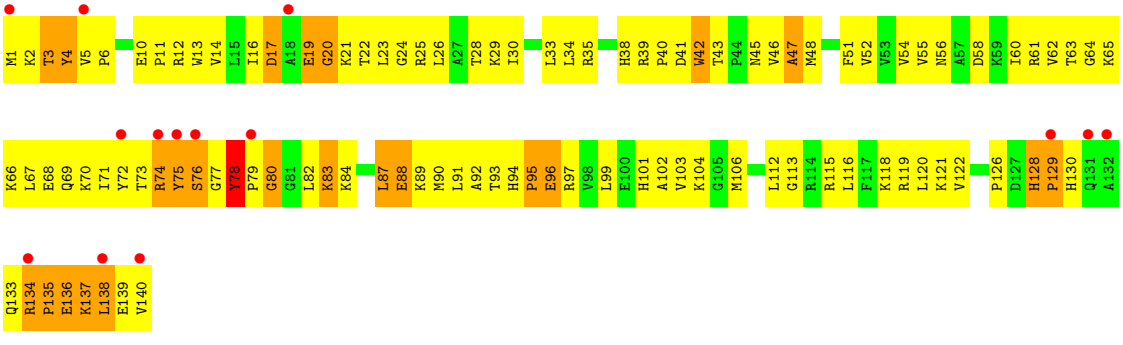
• Molecule 46: 50S ribosomal protein L13

Chain BN:



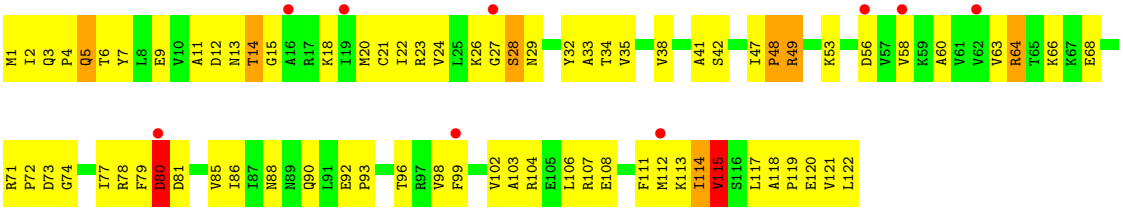
• Molecule 46: 50S ribosomal protein L13

Chain DN:



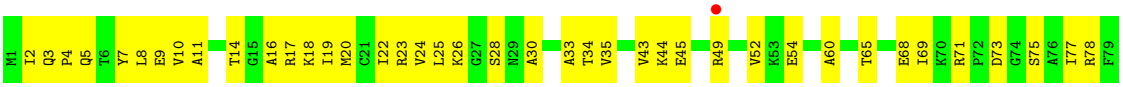
• Molecule 47: 50S ribosomal protein L14

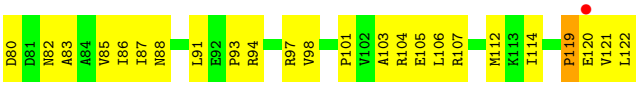
Chain BO:



• Molecule 47: 50S ribosomal protein L14

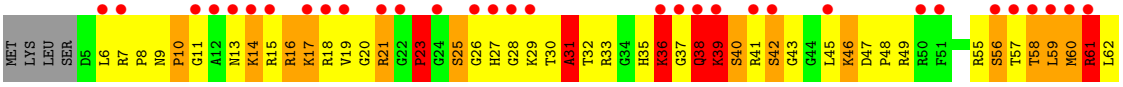
Chain DO:

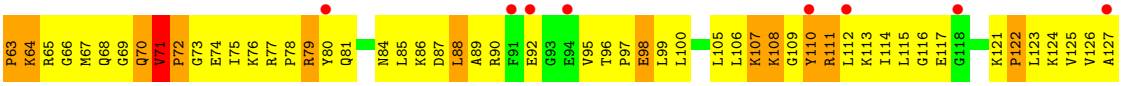


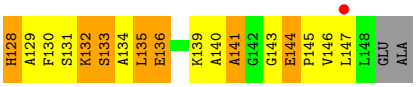


• Molecule 48: 50S ribosomal protein L15

Chain BP:

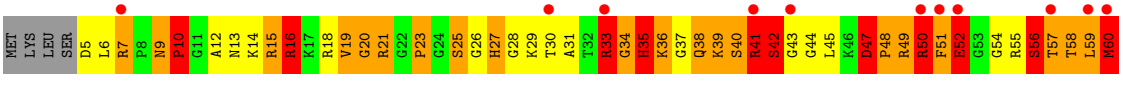


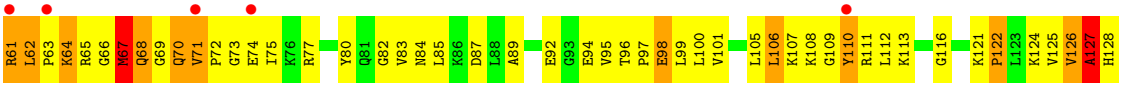


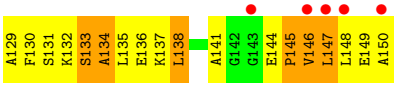


• Molecule 48: 50S ribosomal protein L15

Chain DP:

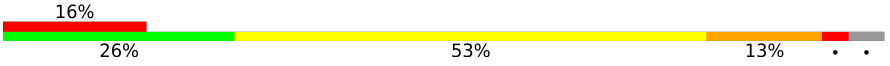


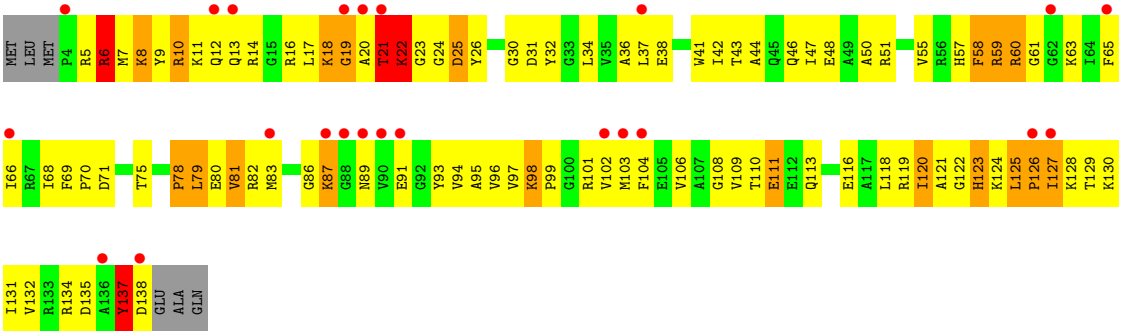




• Molecule 49: 50S ribosomal protein L16

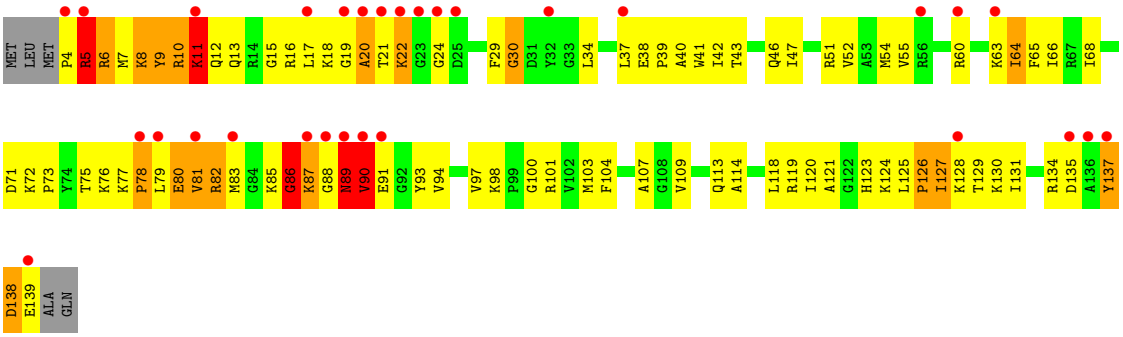
Chain BQ:





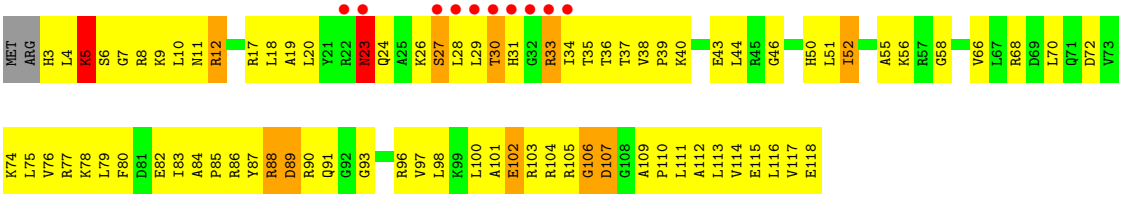
• Molecule 49: 50S ribosomal protein L16

Chain DQ:



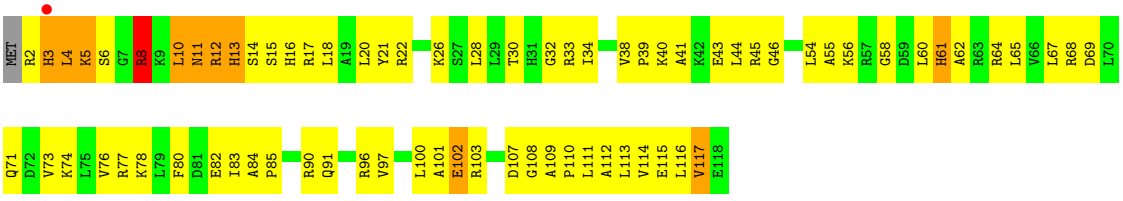
• Molecule 50: 50S ribosomal protein L17

Chain BR:



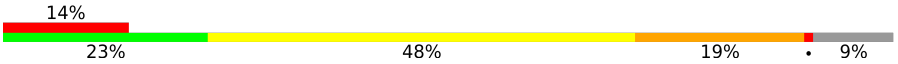
• Molecule 50: 50S ribosomal protein L17

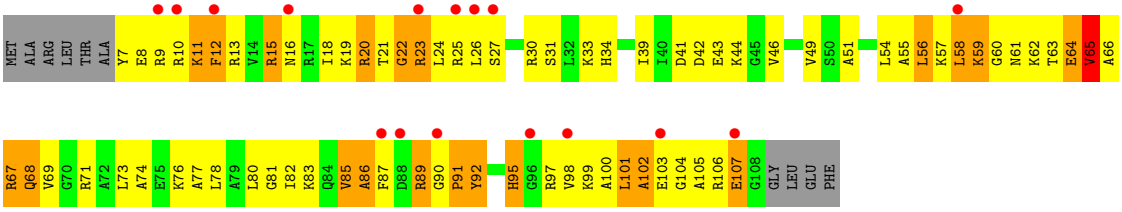
Chain DR:



• Molecule 51: 50S ribosomal protein L18

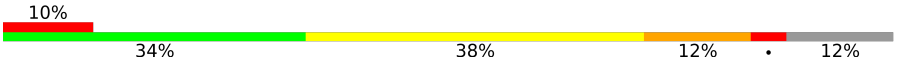
Chain BS:

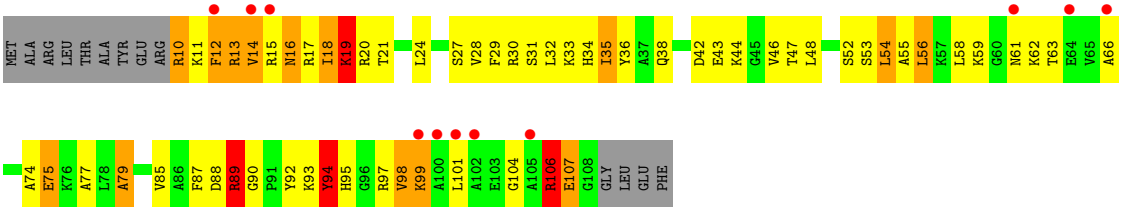




• Molecule 51: 50S ribosomal protein L18

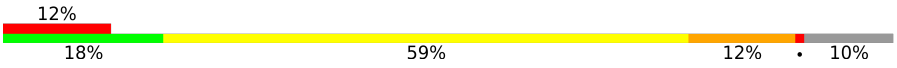
Chain DS:

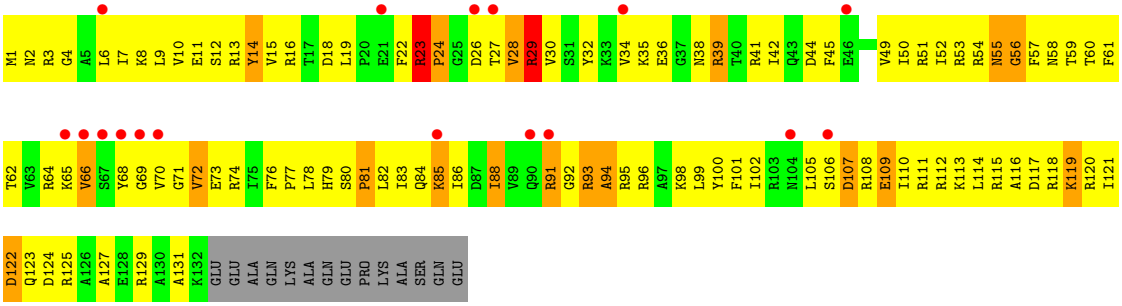




• Molecule 52: 50S ribosomal protein L19

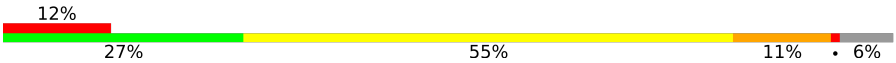
Chain BT:

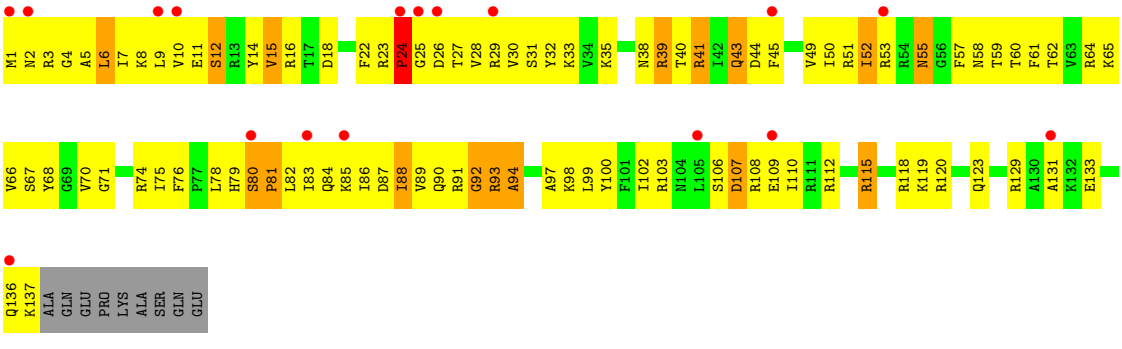




• Molecule 52: 50S ribosomal protein L19

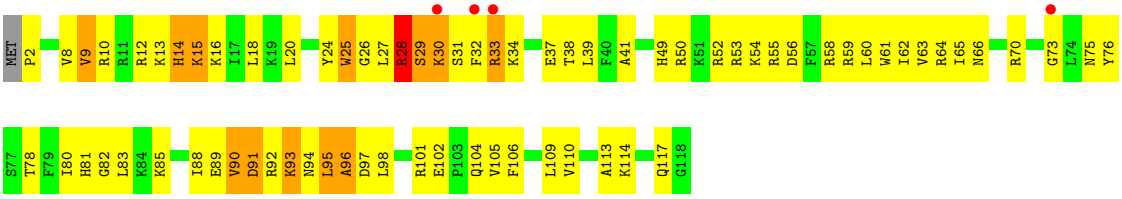
Chain DT:



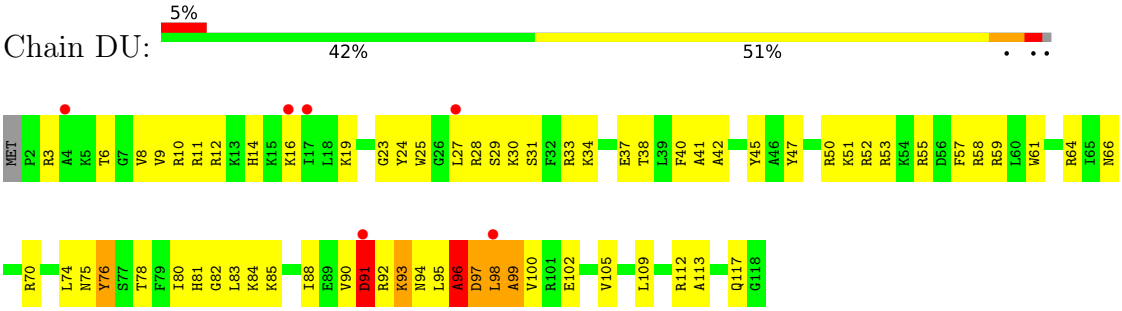


• Molecule 53: 50S ribosomal protein L20

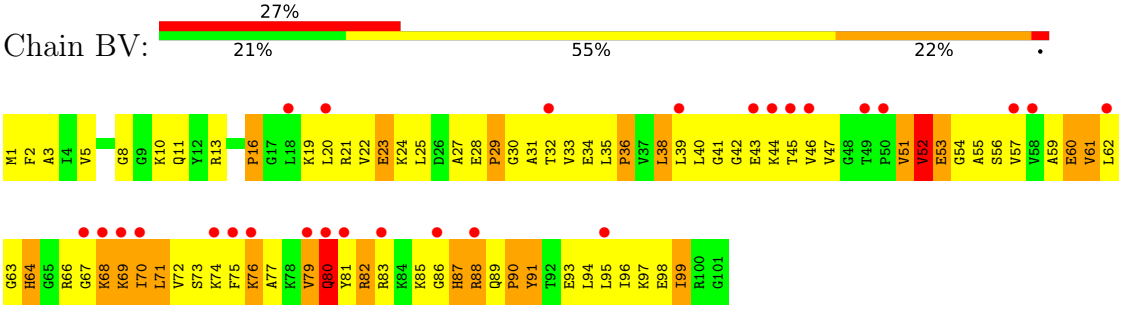
Chain BU:



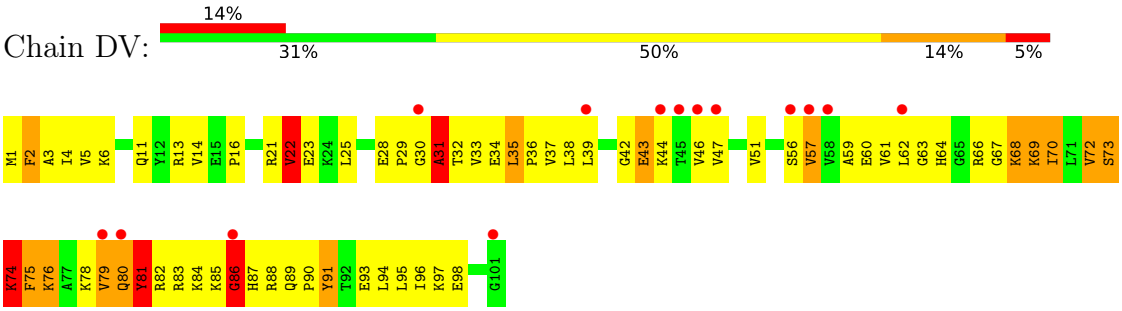
• Molecule 53: 50S ribosomal protein L20



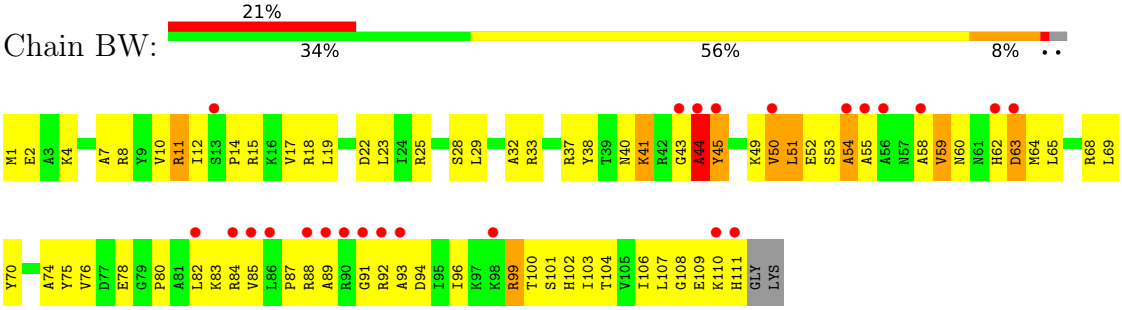
• Molecule 54: 50S ribosomal protein L21



• Molecule 54: 50S ribosomal protein L21

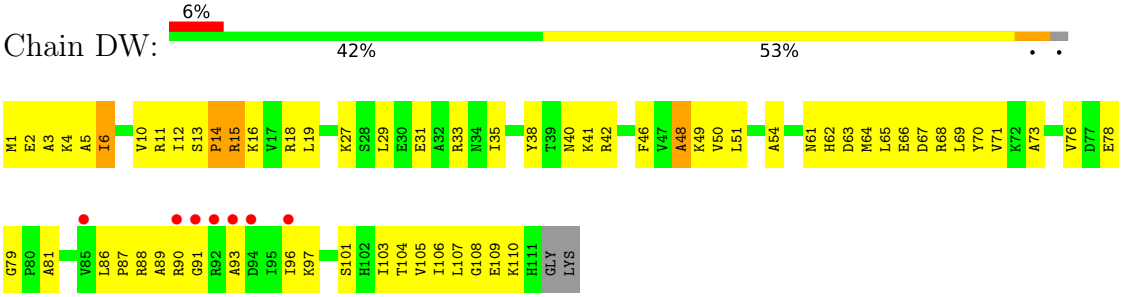


• Molecule 55: 50S ribosomal protein L22



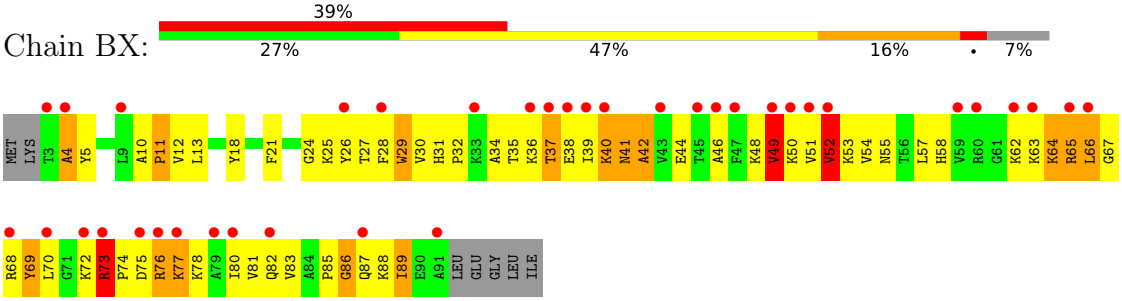
• Molecule 55: 50S ribosomal protein L22

Chain DW:



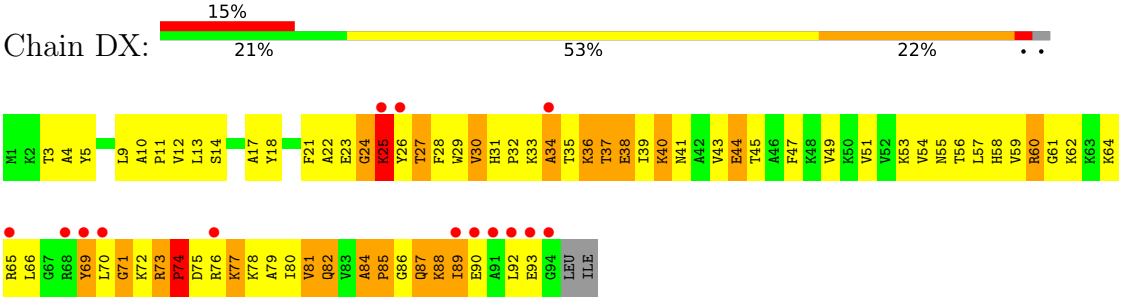
• Molecule 56: 50S ribosomal protein L23

Chain BX:



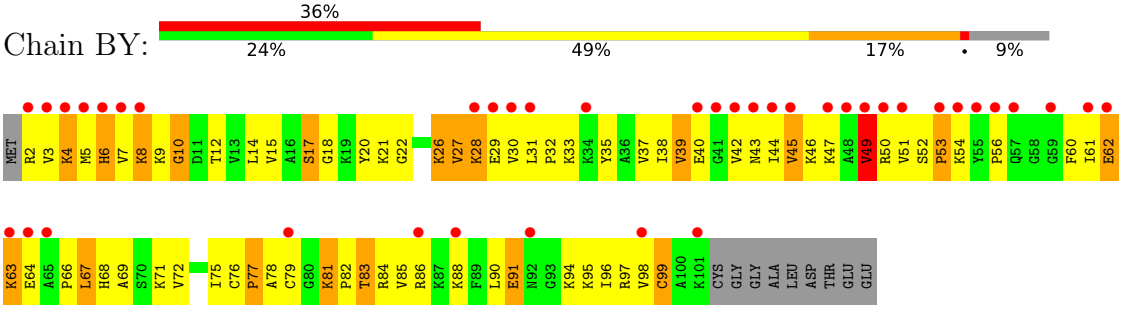
• Molecule 56: 50S ribosomal protein L23

Chain DX:



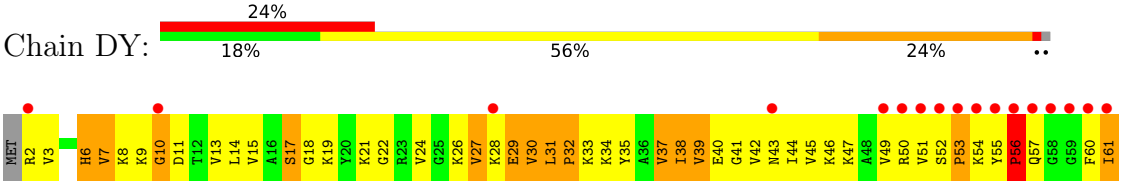
• Molecule 57: 50S ribosomal protein L24

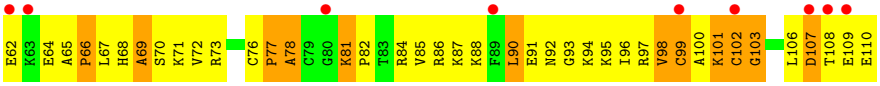
Chain BY:



• Molecule 57: 50S ribosomal protein L24

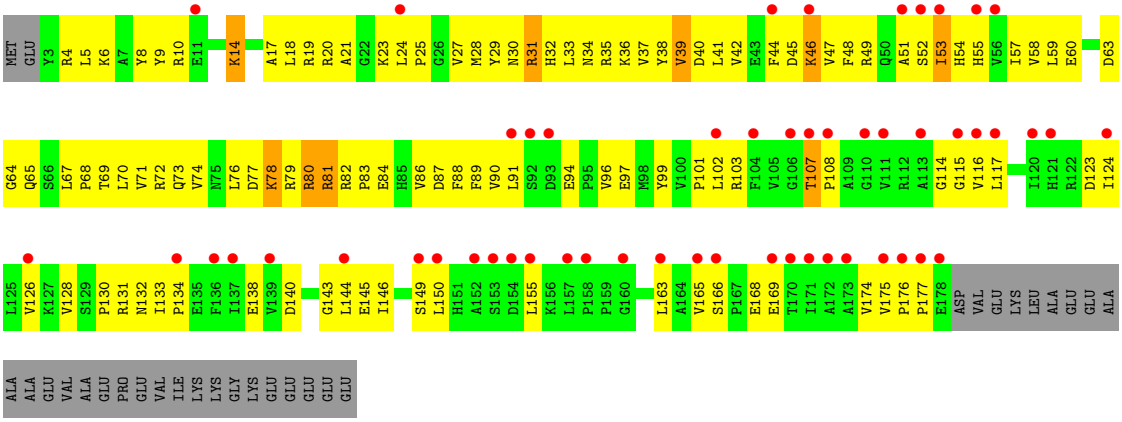
Chain DY:





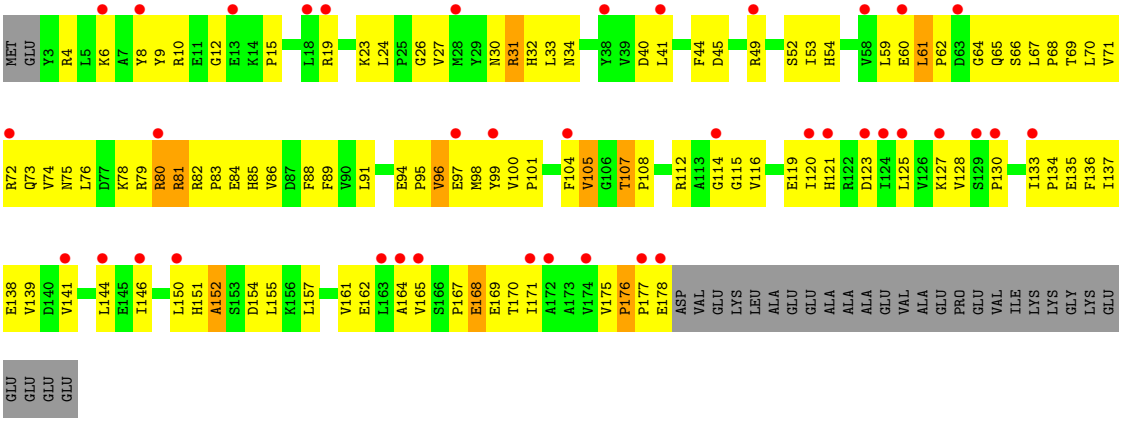
• Molecule 58: 50S ribosomal protein L25

Chain BZ:



• Molecule 58: 50S ribosomal protein L25

Chain DZ:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	209.45Å 449.38Å 619.59Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	147.06 – 3.27 147.06 – 3.27	Depositor EDS
% Data completeness (in resolution range)	99.7 (147.06-3.27) 99.8 (147.06-3.27)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.40 (at 3.26Å)	Xtriage
Refinement program	PHENIX 1.16_3549	Depositor
R, R_{free}	0.214 , 0.277 0.215 , 0.276	Depositor DCC
R_{free} test set	44321 reflections (4.96%)	wwPDB-VP
Wilson B-factor (Å^2)	85.1	Xtriage
Anisotropy	0.091	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.25 , 59.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	296449	wwPDB-VP
Average B, all atoms (Å^2)	86.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.44% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.51	0/36190	0.78	18/56486 (0.0%)
1	CA	0.49	0/36193	0.72	9/56490 (0.0%)
2	AB	0.49	1/1816 (0.1%)	0.89	4/2445 (0.2%)
2	CB	0.41	0/1935	0.71	0/2609
3	AC	0.41	0/1636	0.71	0/2205
3	CC	0.44	0/1644	0.74	0/2215
4	AD	0.56	0/1733	0.89	2/2318 (0.1%)
4	CD	0.48	0/1733	0.79	0/2318
5	AE	0.47	0/1162	0.80	3/1564 (0.2%)
5	CE	0.54	0/1171	0.83	0/1576
6	AF	0.47	0/856	0.71	0/1154
6	CF	0.48	0/856	0.68	0/1154
7	AG	0.44	0/1276	0.80	0/1709
7	CG	0.50	0/1276	0.81	4/1709 (0.2%)
8	AH	0.89	6/1136 (0.5%)	1.07	3/1527 (0.2%)
8	CH	0.50	0/1136	0.76	0/1527
9	AI	0.39	0/964	0.69	0/1294
9	CI	0.39	0/1029	0.74	0/1379
10	AJ	0.43	0/807	0.79	1/1085 (0.1%)
10	CJ	0.43	0/807	0.76	1/1085 (0.1%)
11	AK	0.51	0/900	0.82	0/1213
11	CK	0.52	0/900	0.78	0/1213
12	AL	0.62	0/972	0.97	0/1301
12	CL	0.70	0/986	1.05	2/1320 (0.2%)
13	AM	0.42	0/932	0.75	0/1249
13	CM	0.44	0/956	0.75	0/1281
14	AN	0.49	0/500	0.91	0/664
14	CN	0.51	0/501	0.97	0/664
15	AO	0.48	0/745	0.79	2/992 (0.2%)
15	CO	0.52	0/745	0.79	0/992
16	AP	0.55	0/716	0.91	0/963
16	CP	0.51	0/716	0.84	1/963 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.51	0/836	0.80	0/1117
17	CQ	0.52	0/836	0.91	0/1117
18	AR	0.47	0/579	0.82	0/768
18	CR	0.54	0/579	0.86	0/768
19	AS	0.41	0/642	0.82	0/865
19	CS	0.49	0/642	0.85	0/865
20	AT	0.49	0/765	0.81	0/1007
20	CT	0.48	0/765	0.91	1/1007 (0.1%)
21	AU	0.44	0/212	0.82	0/277
21	CU	0.58	0/221	0.83	0/288
22	AV	0.48	0/1812	0.76	0/2823
22	CV	0.52	0/1835	0.81	0/2857
23	AW	0.39	0/1813	0.76	0/2823
23	AY	0.60	0/459	0.77	0/714
23	CW	0.40	0/1813	0.74	0/2823
23	CY	0.48	0/507	0.71	0/789
24	AX	0.48	0/285	0.83	0/441
24	CX	0.60	0/285	0.97	0/441
25	B0	0.61	0/615	0.94	0/819
25	D0	0.80	0/653	1.15	3/869 (0.3%)
26	B1	1.02	0/699	1.42	7/929 (0.8%)
26	D1	1.07	3/699 (0.4%)	1.56	7/929 (0.8%)
27	B2	0.75	0/422	1.27	0/558
27	D2	1.13	0/448	1.61	5/593 (0.8%)
28	B3	0.54	0/464	0.78	0/623
28	D3	0.65	0/481	0.95	0/646
29	B4	0.67	1/221 (0.5%)	1.21	2/306 (0.7%)
29	D4	0.47	0/240	1.23	1/332 (0.3%)
30	B5	0.70	0/432	1.18	5/585 (0.9%)
30	D5	0.79	0/481	1.14	3/649 (0.5%)
31	B6	0.85	0/405	1.40	1/540 (0.2%)
31	D6	0.98	0/415	1.48	8/554 (1.4%)
32	B7	0.85	0/426	1.20	3/561 (0.5%)
32	D7	0.82	0/426	0.98	1/561 (0.2%)
33	B8	1.00	1/515 (0.2%)	1.51	6/679 (0.9%)
33	D8	1.04	1/502 (0.2%)	1.51	8/661 (1.2%)
34	B9	0.52	0/310	0.88	0/407
34	D9	0.66	0/310	1.00	0/407
35	BA	0.63	10/68122 (0.0%)	0.85	56/106350 (0.1%)
35	DA	0.70	8/68122 (0.0%)	0.90	40/106350 (0.0%)
36	BB	0.45	0/2881	0.75	1/4494 (0.0%)
36	DB	0.55	0/2853	0.82	3/4451 (0.1%)
37	BC	0.35	0/1144	0.76	2/1554 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
37	DC	0.42	1/1144 (0.1%)	0.62	0/1554
38	BD	0.77	0/2176	1.10	3/2933 (0.1%)
38	DD	0.79	0/2194	1.14	8/2955 (0.3%)
39	BE	0.68	0/1596	1.04	2/2153 (0.1%)
39	DE	0.76	0/1596	1.09	1/2153 (0.0%)
40	BF	0.65	0/1650	0.99	1/2234 (0.0%)
40	DF	0.73	0/1662	1.08	8/2249 (0.4%)
41	BG	0.43	0/1473	0.84	1/1983 (0.1%)
41	DG	0.49	0/1499	0.88	3/2016 (0.1%)
42	BH	0.39	0/1245	0.73	1/1682 (0.1%)
42	DH	0.62	0/1295	0.94	0/1753
43	BI	0.48	0/1146	0.85	1/1551 (0.1%)
43	DI	0.50	0/1139	0.93	1/1541 (0.1%)
46	BN	0.65	0/1123	0.97	2/1515 (0.1%)
46	DN	0.79	1/1147 (0.1%)	1.07	2/1547 (0.1%)
47	BO	0.64	0/943	1.00	2/1269 (0.2%)
47	DO	0.74	0/943	0.96	0/1269
48	BP	0.93	0/1116	1.47	8/1485 (0.5%)
48	DP	1.15	6/1131 (0.5%)	1.66	23/1504 (1.5%)
49	BQ	0.74	0/1095	1.15	8/1464 (0.5%)
49	DQ	0.87	0/1104	1.39	16/1476 (1.1%)
50	BR	0.81	0/963	1.15	2/1288 (0.2%)
50	DR	0.79	0/974	1.13	4/1302 (0.3%)
51	BS	0.73	3/822 (0.4%)	1.14	4/1094 (0.4%)
51	DS	0.74	1/789 (0.1%)	1.26	10/1050 (1.0%)
52	BT	0.69	0/1114	1.07	0/1488
52	DT	0.82	0/1155	1.15	2/1542 (0.1%)
53	BU	0.71	0/982	0.92	1/1306 (0.1%)
53	DU	0.81	1/982 (0.1%)	1.05	2/1306 (0.2%)
54	BV	0.71	0/790	1.31	3/1057 (0.3%)
54	DV	0.85	1/790 (0.1%)	1.41	12/1057 (1.1%)
55	BW	0.76	0/897	1.18	3/1204 (0.2%)
55	DW	0.70	0/897	0.96	1/1204 (0.1%)
56	BX	0.81	0/718	1.32	8/965 (0.8%)
56	DX	0.99	0/756	1.52	11/1014 (1.1%)
57	BY	0.66	0/788	1.09	2/1051 (0.2%)
57	DY	0.79	0/848	1.30	6/1132 (0.5%)
58	BZ	0.46	0/1435	0.80	0/1949
58	DZ	0.49	0/1435	0.87	0/1949
All	All	0.62	45/317649 (0.0%)	0.88	375/475105 (0.1%)

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
2	AB	0	1
2	CB	0	1
3	AC	0	1
3	CC	0	1
4	AD	0	2
4	CD	0	2
7	CG	0	1
8	AH	0	2
9	CI	0	1
10	AJ	0	3
10	CJ	0	2
12	AL	0	3
12	CL	0	4
14	CN	0	2
16	AP	0	2
16	CP	0	1
17	AQ	0	1
17	CQ	0	2
18	AR	0	1
18	CR	0	1
19	CS	0	1
20	AT	0	1
20	CT	0	2
26	B1	0	5
26	D1	0	4
27	B2	0	3
27	D2	0	5
29	D4	0	2
30	B5	0	2
31	B6	0	4
31	D6	0	4
32	B7	0	4
32	D7	0	1
33	B8	0	2
33	D8	0	1
37	DC	0	1
38	BD	0	4
38	DD	0	6
39	BE	0	3
39	DE	0	4
40	BF	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
40	DF	0	1
41	BG	0	4
41	DG	0	1
42	BH	0	1
42	DH	0	2
43	BI	0	2
43	DI	0	3
46	BN	0	3
46	DN	0	5
47	BO	0	3
47	DO	0	1
48	BP	0	10
48	DP	0	12
49	BQ	0	6
49	DQ	0	5
50	BR	0	3
50	DR	0	1
51	BS	0	3
51	DS	0	5
52	BT	0	4
52	DT	0	6
53	BU	0	3
53	DU	0	3
54	BV	0	5
54	DV	0	5
55	BW	0	2
56	BX	0	4
56	DX	0	5
57	BY	0	2
57	DY	0	3
58	DZ	0	1
All	All	0	209

All (45) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	AH	104	ARG	CG-CD	14.23	1.95	1.52
48	DP	16	ARG	CZ-NH1	-10.68	1.17	1.32
37	DC	163	PHE	CA-C	-10.64	1.47	1.53
8	AH	65	TYR	CA-C	-10.21	1.47	1.52
8	AH	104	ARG	CZ-NH1	-8.82	1.20	1.32
35	DA	652	C	O3'-P	8.77	1.74	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	DA	652	C	C3'-O3'	8.45	1.55	1.43
2	AB	142	LEU	CG-CD2	7.64	1.77	1.52
35	DA	652	C	P-O5'	7.48	1.71	1.59
26	D1	11	ARG	C-N	7.44	1.41	1.34
35	DA	656	G	O5'-C5'	7.40	1.53	1.42
51	DS	79	ALA	CA-C	-7.37	1.42	1.52
35	BA	539	G	O3'-P	7.28	1.72	1.61
35	DA	656	G	P-O5'	7.27	1.70	1.59
48	DP	126	VAL	CA-CB	-7.25	1.45	1.54
48	DP	16	ARG	CG-CD	7.19	1.74	1.52
8	AH	138	TRP	CE3-CZ3	-7.17	1.17	1.38
48	DP	16	ARG	CD-NE	6.77	1.55	1.46
46	DN	78	TYR	C-N	6.67	1.49	1.33
35	BA	132	G	O3'-P	6.55	1.71	1.61
35	DA	656	G	C5'-C4'	6.38	1.60	1.51
35	DA	652	C	O5'-C5'	6.32	1.52	1.42
35	BA	105	C	P-O5'	6.26	1.69	1.59
48	DP	126	VAL	C-N	6.25	1.42	1.33
29	B4	43	TYR	CA-C	6.22	1.61	1.52
51	BS	20	ARG	CZ-NH2	-6.19	1.25	1.33
35	DA	652	C	C5'-C4'	6.19	1.60	1.51
35	BA	539	G	O5'-C5'	6.14	1.51	1.42
8	AH	138	TRP	CB-CG	6.07	1.69	1.50
35	BA	539	G	P-O5'	5.82	1.68	1.59
33	B8	13	ARG	CG-CD	5.65	1.69	1.52
35	BA	272	G	O3'-P	5.61	1.67	1.61
8	AH	104	ARG	CZ-NH2	-5.58	1.26	1.33
51	BS	20	ARG	CZ-NH1	-5.55	1.25	1.32
26	D1	19	GLN	CB-CG	5.54	1.69	1.52
35	BA	133	C	P-O5'	5.50	1.68	1.59
35	BA	105	C	O3'-P	5.49	1.69	1.61
26	D1	19	GLN	CG-CD	5.47	1.65	1.52
54	DV	75	PHE	CB-CG	-5.39	1.38	1.50
48	DP	127	ALA	N-CA	-5.39	1.39	1.46
35	BA	105	C	O5'-C5'	5.23	1.50	1.42
51	BS	20	ARG	CB-CG	-5.19	1.36	1.52
53	DU	75	ASN	CB-CG	5.06	1.64	1.52
35	BA	539	G	C3'-O3'	5.04	1.49	1.42
33	D8	52	LYS	CG-CD	5.03	1.67	1.52

All (375) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	AH	104	ARG	CG-CD-NE	20.20	156.44	112.00
54	BV	38	LEU	CB-CG-CD2	-15.70	63.60	110.70
54	BV	38	LEU	CB-CG-CD1	11.78	146.03	110.70
2	AB	142	LEU	CA-CB-CG	11.45	156.36	116.30
48	DP	16	ARG	CD-NE-CZ	11.06	139.88	124.40
54	BV	38	LEU	CD1-CG-CD2	-11.01	86.58	110.80
48	BP	61	ARG	CA-C-N	-10.79	88.86	120.69
48	BP	61	ARG	C-N-CA	-10.79	88.86	120.69
1	AA	67	C	OP1-P-O3'	-10.39	76.82	108.00
48	DP	47	ASP	C-N-CD	-10.12	98.33	120.60
40	DF	67	GLN	CA-C-N	-9.83	102.77	121.54
40	DF	67	GLN	C-N-CA	-9.83	102.77	121.54
33	B8	13	ARG	NE-CZ-NH2	9.53	127.78	119.20
48	BP	61	ARG	CG-CD-NE	-9.49	91.12	112.00
29	B4	36	CYS	N-CA-C	9.15	116.28	108.78
48	DP	47	ASP	CA-C-N	9.13	148.92	127.00
48	DP	47	ASP	C-N-CA	9.13	148.92	127.00
48	DP	16	ARG	CG-CD-NE	9.06	131.93	112.00
49	DQ	5	ARG	CA-C-N	9.05	138.45	122.89
49	DQ	5	ARG	C-N-CA	9.05	138.45	122.89
35	BA	539	G	C4'-C3'-O3'	8.92	126.38	113.00
35	BA	1082	U	OP2-P-O3'	-8.92	81.24	108.00
20	CT	56	MET	N-CA-C	-8.85	103.58	112.97
35	BA	272	G	P-O3'-C3'	8.84	130.31	119.70
35	BA	1082	U	OP1-P-O3'	-8.79	81.63	108.00
26	D1	46	LEU	CB-CG-CD2	-8.71	84.58	110.70
5	AE	152	ARG	NE-CZ-NH2	-8.66	111.40	119.20
49	DQ	82	ARG	N-CA-C	8.65	122.77	107.80
35	BA	308	G	OP1-P-O3'	-8.47	82.59	108.00
35	BA	1992	G	C2'-C3'-O3'	8.41	122.12	109.50
29	D4	3	GLU	CB-CA-C	-8.27	105.98	117.23
1	AA	1298	C	O4'-C1'-N1	8.23	120.84	108.50
26	D1	21	ARG	CA-C-N	8.19	128.35	120.98
26	D1	21	ARG	C-N-CA	8.19	128.35	120.98
56	DX	27	THR	OG1-CB-CG2	8.18	125.67	109.30
35	BA	975	C	O4'-C1'-N1	8.09	120.33	108.20
43	BI	124	GLY	N-CA-C	7.98	119.62	111.56
54	DV	81	TYR	CA-CB-CG	-7.90	99.69	113.90
49	BQ	41	TRP	CA-CB-CG	7.66	128.16	113.60
35	BA	133	C	C4'-C3'-O3'	7.56	124.35	113.00
49	BQ	6	ARG	N-CA-C	7.54	126.87	110.80
33	B8	13	ARG	CB-CG-CD	7.53	128.62	111.30
29	B4	36	CYS	CB-CA-C	-7.53	106.23	117.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	B8	13	ARG	CD-NE-CZ	7.47	134.86	124.40
49	DQ	80	GLU	CA-C-N	7.44	135.35	121.97
49	DQ	80	GLU	C-N-CA	7.44	135.35	121.97
38	BD	214	TRP	CA-CB-CG	7.43	127.73	113.60
35	BA	308	G	OP2-P-O3'	-7.30	86.09	108.00
55	BW	44	ALA	CA-C-N	-7.30	106.09	121.64
55	BW	44	ALA	C-N-CA	-7.30	106.09	121.64
35	DA	656	G	C5'-C4'-C3'	7.24	126.86	116.00
30	B5	49	CYS	CB-CA-C	-7.24	102.07	111.40
30	B5	3	LYS	CA-C-N	7.20	139.38	121.80
30	B5	3	LYS	C-N-CA	7.20	139.38	121.80
48	DP	144	GLU	C-N-CD	-7.14	95.72	125.00
35	DA	975	C	O4'-C1'-N1	7.14	118.90	108.20
32	B7	5	TRP	CA-C-N	7.13	139.19	121.80
32	B7	5	TRP	C-N-CA	7.13	139.19	121.80
35	DA	652	C	O3'-P-O5'	7.11	114.67	104.00
35	BA	539	G	C5'-C4'-O4'	-7.10	99.16	109.80
1	CA	1498	U	C2'-C3'-O3'	7.09	120.13	109.50
57	DY	56	PRO	N-CA-C	7.05	127.00	112.47
35	BA	1786	A	N9-C1'-C2'	7.01	124.51	114.00
35	DA	1250	G	C2'-C3'-O3'	6.99	119.99	109.50
7	CG	86	GLN	CA-C-N	6.99	135.05	122.13
7	CG	86	GLN	C-N-CA	6.99	135.05	122.13
7	CG	79	ARG	CA-CB-CG	6.93	127.96	114.10
27	D2	55	ARG	CA-C-N	-6.91	109.72	122.09
27	D2	55	ARG	C-N-CA	-6.91	109.72	122.09
35	BA	272(H)	C	P-O3'-C3'	6.90	127.98	119.70
8	AH	104	ARG	CD-NE-CZ	6.89	134.04	124.40
31	D6	16	CYS	CA-C-N	6.88	134.68	121.54
31	D6	16	CYS	C-N-CA	6.88	134.68	121.54
35	DA	1653	G	O3'-P-O5'	6.87	114.30	104.00
35	DA	1653	G	OP1-P-O3'	-6.82	87.55	108.00
41	BG	87	PRO	N-CA-C	6.81	126.50	112.47
8	AH	138	TRP	CA-CB-CG	6.81	126.53	113.60
57	BY	91	GLU	N-CA-C	6.80	115.28	108.75
41	DG	177	GLY	CA-C-N	-6.78	114.81	122.26
41	DG	177	GLY	C-N-CA	-6.78	114.81	122.26
10	CJ	44	VAL	CG1-CB-CG2	-6.71	96.03	110.80
25	D0	39	ARG	CA-C-N	-6.68	110.60	122.42
25	D0	39	ARG	C-N-CA	-6.68	110.60	122.42
35	BA	856	C	C2'-C3'-O3'	6.66	123.69	113.70
33	B8	13	ARG	NE-CZ-NH1	-6.59	114.91	121.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	BS	20	ARG	CA-CB-CG	-6.59	100.91	114.10
52	DT	6	LEU	CA-CB-CG	6.58	139.32	116.30
35	DA	656	G	C4'-C3'-O3'	6.56	122.84	113.00
48	BP	39	LYS	CG-CD-CE	6.53	126.31	111.30
56	DX	44	GLU	CA-CB-CG	6.50	127.10	114.10
27	D2	10	LEU	CA-CB-CG	6.48	138.99	116.30
7	CG	87	VAL	N-CA-C	6.46	122.84	108.88
38	BD	234	GLY	N-CA-C	-6.44	97.92	113.18
35	DA	249	C	OP2-P-O3'	-6.44	88.69	108.00
56	BX	29	TRP	CA-CB-CG	-6.42	101.40	113.60
56	BX	4	ALA	CA-C-O	-6.41	111.34	120.51
35	BA	2031	A	C5'-C4'-C3'	-6.40	105.61	115.20
35	DA	34	C	C2'-C3'-O3'	6.37	119.06	109.50
30	D5	33	CYS	CA-CB-SG	-6.36	99.76	114.40
51	BS	20	ARG	CB-CG-CD	6.35	125.91	111.30
1	AA	1300	G	P-O3'-C3'	6.33	129.70	120.20
51	BS	95	HIS	CA-C-N	6.32	126.66	120.98
51	BS	95	HIS	C-N-CA	6.32	126.66	120.98
35	DA	652	C	P-O5'-C5'	6.30	130.35	120.90
48	DP	35	HIS	CA-C-N	6.28	133.53	121.54
48	DP	35	HIS	C-N-CA	6.28	133.53	121.54
39	DE	142	GLY	N-CA-C	6.25	120.87	111.42
32	D7	1	MET	N-CA-C	6.24	128.46	111.00
33	D8	26	LYS	N-CA-C	6.23	124.08	110.80
35	BA	1786	A	C4-N9-C1'	6.22	144.96	126.30
54	DV	81	TYR	CB-CA-C	6.22	122.79	110.42
56	DX	66	LEU	CA-CB-CG	6.21	138.02	116.30
56	DX	74	PRO	CA-C-N	6.19	132.16	121.64
56	DX	74	PRO	C-N-CA	6.19	132.16	121.64
35	BA	752	A	C2'-C3'-O3'	6.18	118.77	109.50
2	AB	142	LEU	CB-CG-CD1	-6.16	92.23	110.70
48	DP	33	ARG	CB-CG-CD	6.15	125.45	111.30
35	BA	1385	G	O4'-C1'-N9	6.15	117.42	108.20
35	DA	527	C	O4'-C1'-N1	6.13	117.39	108.20
1	AA	67	C	OP2-P-O3'	-6.12	89.63	108.00
49	BQ	123	HIS	O-C-N	6.12	132.28	122.42
56	DX	87	GLN	CA-C-N	6.12	133.23	121.54
56	DX	87	GLN	C-N-CA	6.12	133.23	121.54
35	BA	1819	A	C4'-C3'-O3'	6.12	118.57	109.40
49	DQ	78	PRO	N-CA-C	6.11	125.05	112.47
35	BA	105	C	P-O3'-C3'	6.11	129.36	120.20
38	DD	247	ALA	CA-C-N	6.11	133.94	121.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	DD	247	ALA	C-N-CA	6.11	133.94	121.48
35	DA	661	C	C5'-C4'-O4'	6.10	118.94	109.80
35	BA	133	C	P-O5'-C5'	6.09	130.03	120.90
35	DA	90	U	O4'-C1'-N1	6.07	117.31	108.20
35	BA	1992	G	P-O3'-C3'	6.07	129.31	120.20
37	BC	178	ALA	CB-CA-C	-6.07	107.61	116.53
35	DA	1250	G	P-O3'-C3'	6.06	129.29	120.20
35	BA	1326	U	OP1-P-O3'	-6.04	89.87	108.00
35	DA	975	C	C2-N1-C1'	6.04	136.93	118.80
31	D6	19	ARG	CA-C-N	6.02	133.04	121.54
31	D6	19	ARG	C-N-CA	6.02	133.04	121.54
48	DP	41	ARG	CA-C-N	6.01	133.02	121.54
48	DP	41	ARG	C-N-CA	6.01	133.02	121.54
53	BU	33	ARG	CD-NE-CZ	6.00	132.80	124.40
35	BA	2818	G	C8-N9-C1'	-5.98	109.05	127.00
16	CP	73	LEU	CD1-CG-CD2	-5.97	97.67	110.80
26	B1	55	GLY	N-CA-C	-5.95	99.08	113.18
54	DV	75	PHE	N-CA-C	5.95	123.47	110.80
53	DU	75	ASN	CA-C-N	5.95	132.90	121.54
53	DU	75	ASN	C-N-CA	5.95	132.90	121.54
57	DY	101	LYS	CD-CE-NZ	-5.95	92.87	111.90
42	BH	168	PRO	N-CA-C	5.94	124.71	112.47
35	DA	587	C	C4'-C3'-O3'	5.94	118.30	109.40
30	D5	3	LYS	CG-CD-CE	-5.93	97.67	111.30
56	BX	37	THR	CA-C-N	5.91	132.83	121.54
56	BX	37	THR	C-N-CA	5.91	132.83	121.54
35	DA	2225	A	C4'-C3'-O3'	5.91	118.27	109.40
48	DP	64	LYS	CA-C-N	-5.91	113.14	121.72
48	DP	64	LYS	C-N-CA	-5.91	113.14	121.72
49	DQ	79	LEU	CA-CB-CG	5.89	136.91	116.30
35	DA	128	C	C2'-C3'-O3'	5.87	122.50	113.70
35	DA	2318	G	O4'-C1'-N9	5.84	117.26	108.50
1	CA	1498	U	P-O3'-C3'	5.84	128.96	120.20
48	BP	23	PRO	N-CA-C	5.84	124.49	112.47
35	DA	975	C	N1-C1'-C2'	5.84	122.76	114.00
51	DS	19	LYS	N-CA-C	-5.83	98.38	110.80
48	BP	39	LYS	CB-CG-CD	-5.82	97.91	111.30
2	AB	142	LEU	CD1-CG-CD2	5.82	123.60	110.80
35	BA	656	G	C4'-C3'-O3'	5.81	121.71	113.00
1	AA	566	G	C2'-C3'-O3'	5.80	118.21	109.50
1	CA	1504	G	C4'-C3'-O3'	5.80	118.10	109.40
25	D0	7	LEU	N-CA-C	5.80	115.50	107.73

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	CA	1054	C	N1-C1'-C2'	5.79	122.69	114.00
35	DA	1653	G	P-O3'-C3'	5.79	128.88	120.20
50	DR	4	LEU	CA-C-N	-5.78	110.50	121.54
50	DR	4	LEU	C-N-CA	-5.78	110.50	121.54
30	D5	14	ALA	N-CA-C	-5.77	98.50	110.80
27	D2	50	ILE	CA-C-N	5.77	132.56	121.54
27	D2	50	ILE	C-N-CA	5.77	132.56	121.54
35	BA	2031	A	P-O3'-C3'	-5.77	111.55	120.20
49	DQ	10	ARG	CA-C-N	5.76	132.55	121.54
49	DQ	10	ARG	C-N-CA	5.76	132.55	121.54
1	AA	171	A	C4'-C3'-O3'	5.76	121.64	113.00
48	BP	58	THR	OG1-CB-CG2	5.76	120.83	109.30
54	DV	74	LYS	CA-C-N	-5.73	110.60	121.54
54	DV	74	LYS	C-N-CA	-5.73	110.60	121.54
26	B1	8	SER	CA-C-N	5.72	128.33	120.72
26	B1	8	SER	C-N-CA	5.72	128.33	120.72
33	D8	61	LEU	CA-CB-CG	-5.72	96.28	116.30
35	DA	272	G	P-O3'-C3'	5.71	126.55	119.70
10	AJ	56	HIS	N-CA-C	-5.70	100.99	109.94
32	B7	11	LYS	CA-CB-CG	5.69	125.49	114.10
35	DA	652	C	C4'-C3'-O3'	5.68	117.92	109.40
33	B8	17	THR	N-CA-C	5.67	113.43	108.78
35	DA	652	C	P-O3'-C3'	5.67	128.71	120.20
36	DB	15	A	O4'-C1'-N9	5.67	117.00	108.50
1	AA	1067	A	C2'-C3'-O3'	5.66	117.99	109.50
48	DP	10	PRO	CA-N-CD	-5.65	104.09	112.00
51	DS	13	ARG	CA-C-N	5.65	132.14	121.97
51	DS	13	ARG	C-N-CA	5.65	132.14	121.97
1	AA	1054	C	C2'-C3'-O3'	5.65	117.97	109.50
46	BN	67	LEU	CA-CB-CG	5.65	136.07	116.30
38	DD	31	LYS	CA-C-N	5.63	132.30	121.54
38	DD	31	LYS	C-N-CA	5.63	132.30	121.54
26	D1	16	ASN	N-CA-C	5.62	122.78	110.80
35	BA	133	C	OP1-P-OP2	-5.62	102.75	119.60
35	BA	1326	U	OP2-P-O3'	5.61	124.83	108.00
49	BQ	87	LYS	CA-CB-CG	5.61	125.31	114.10
55	BW	45	TYR	CA-CB-CG	5.61	123.99	113.90
35	BA	387	U	P-O3'-C3'	5.58	128.57	120.20
48	DP	67	MET	CG-SD-CE	-5.58	88.62	100.90
35	BA	106	C	O5'-P-OP1	-5.58	91.28	108.00
49	BQ	79	LEU	CA-C-N	5.56	129.88	120.81
49	BQ	79	LEU	C-N-CA	5.56	129.88	120.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	DP	16	ARG	NE-CZ-NH2	-5.56	114.19	119.20
35	DA	272(B)	G	O4'-C1'-N9	5.56	116.84	108.50
33	D8	30	ARG	CG-CD-NE	5.56	124.23	112.00
35	DA	2318	G	C4-N9-C1'	5.55	143.16	126.50
43	DI	143	SER	N-CA-C	5.55	117.48	110.33
35	BA	752	A	P-O3'-C3'	5.54	128.52	120.20
51	DS	97	ARG	CA-C-N	5.54	131.93	121.97
51	DS	97	ARG	C-N-CA	5.54	131.93	121.97
26	B1	57	GLU	CA-CB-CG	5.53	125.16	114.10
35	BA	587	C	C4'-C3'-O3'	5.53	117.69	109.40
1	AA	832	C	N1-C1'-C2'	-5.52	105.72	114.00
1	AA	115	G	C2'-C3'-O3'	5.52	117.77	109.50
26	D1	19	GLN	CB-CG-CD	5.49	121.93	112.60
50	BR	5	LYS	N-CA-C	5.48	122.47	110.80
35	DA	1544	A	C4-N9-C1'	-5.48	109.87	126.30
48	BP	135	LEU	CB-CA-C	-5.48	104.44	111.50
51	DS	89	ARG	CB-CA-C	-5.48	99.52	110.42
1	CA	1064	G	C2'-C3'-O3'	5.47	117.70	109.50
40	DF	23	ASP	CA-C-N	5.46	131.83	122.38
40	DF	23	ASP	C-N-CA	5.46	131.83	122.38
4	AD	33	MET	CA-C-N	-5.46	111.39	122.31
4	AD	33	MET	C-N-CA	-5.46	111.39	122.31
26	D1	15	ALA	CA-C-N	5.45	131.95	121.54
26	D1	15	ALA	C-N-CA	5.45	131.95	121.54
35	BA	1986	A	C5'-C4'-C3'	-5.45	107.83	116.00
35	DA	809	G	OP1-P-O3'	5.45	124.33	108.00
36	DB	21	G	O4'-C1'-N9	5.45	116.37	108.20
57	DY	77	PRO	CA-C-N	5.45	131.94	121.54
57	DY	77	PRO	C-N-CA	5.45	131.94	121.54
57	BY	91	GLU	CB-CA-C	-5.44	108.53	116.53
26	B1	43	TYR	CA-CB-CG	5.43	123.68	113.90
5	AE	152	ARG	NE-CZ-NH1	5.42	126.92	121.50
35	DA	975	C	C6-N1-C1'	-5.42	104.53	120.80
54	DV	91	TYR	CA-CB-CG	-5.42	104.14	113.90
35	BA	975	C	N1-C1'-C2'	5.42	122.12	114.00
35	BA	2506	U	C2'-C3'-O3'	5.42	117.62	109.50
35	DA	2490	G	P-O5'-C5'	-5.42	112.78	120.90
51	DS	94	TYR	CA-CB-CG	-5.41	104.16	113.90
35	BA	538	G	O3'-P-O5'	5.40	112.10	104.00
12	CL	46	LYS	CA-C-N	5.39	134.96	121.80
12	CL	46	LYS	C-N-CA	5.39	134.96	121.80
52	DT	24	PRO	N-CA-C	5.39	123.56	112.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	BE	195	LEU	CA-CB-CG	-5.38	97.47	116.30
49	DQ	89	ASN	CA-C-N	5.37	131.63	121.97
49	DQ	89	ASN	C-N-CA	5.37	131.63	121.97
54	DV	35	LEU	CA-CB-CG	5.37	135.09	116.30
31	D6	45	LYS	CA-C-N	5.36	131.78	121.54
31	D6	45	LYS	C-N-CA	5.36	131.78	121.54
51	DS	89	ARG	N-CA-C	5.35	122.20	110.80
31	D6	49	HIS	N-CA-C	5.33	122.16	110.80
51	DS	94	TYR	N-CA-C	5.33	122.16	110.80
51	DS	98	VAL	N-CA-C	-5.33	98.26	109.34
35	BA	1899	G	C8-N9-C1'	5.32	142.95	127.00
35	BA	1065	U	C2'-C3'-O3'	5.32	117.47	109.50
1	CA	410	G	C4'-C3'-O3'	5.32	120.97	113.00
35	BA	105	C	C2-N1-C1'	5.31	134.74	118.80
1	AA	1300	G	O3'-P-O5'	5.31	111.97	104.00
40	BF	80	ALA	N-CA-C	5.31	121.54	109.81
56	BX	76	ARG	CA-C-N	5.30	131.66	121.54
56	BX	76	ARG	C-N-CA	5.30	131.66	121.54
35	BA	1323	U	N1-C1'-C2'	5.29	119.93	112.00
56	BX	65	ARG	CA-C-N	5.29	131.63	121.54
56	BX	65	ARG	C-N-CA	5.29	131.63	121.54
35	DA	154(A)	C	C4'-C3'-O3'	5.29	120.93	113.00
35	BA	684	G	C2'-C3'-O3'	5.28	121.63	113.70
26	B1	14	VAL	CA-C-N	5.28	131.62	121.54
26	B1	14	VAL	C-N-CA	5.28	131.62	121.54
1	AA	1022	G	N9-C1'-C2'	-5.28	106.08	114.00
38	DD	64	ILE	CA-C-N	-5.28	114.34	122.68
38	DD	64	ILE	C-N-CA	-5.28	114.34	122.68
35	BA	1763	G	C2'-C3'-O3'	5.27	121.60	113.70
55	DW	90	ARG	CB-CG-CD	5.27	123.42	111.30
1	CA	1054	C	C1'-C2'-O2'	-5.27	103.90	111.80
35	DA	945	A	P-O3'-C3'	5.27	128.10	120.20
41	DG	120	LEU	CA-CB-CG	5.26	134.71	116.30
49	DQ	90	VAL	CA-C-N	-5.26	114.04	122.08
49	DQ	90	VAL	C-N-CA	-5.26	114.04	122.08
35	BA	651	G	C4'-C3'-O3'	5.25	117.28	109.40
48	DP	50	ARG	CA-C-N	-5.25	111.50	121.54
48	DP	50	ARG	C-N-CA	-5.25	111.50	121.54
50	DR	3	HIS	CA-C-N	-5.25	113.37	122.14
50	DR	3	HIS	C-N-CA	-5.25	113.37	122.14
1	AA	702	A	C2'-C3'-O3'	5.25	117.37	109.50
1	AA	1161	C	C4'-C3'-O3'	5.25	120.87	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	BO	80	ASP	CA-C-N	5.25	133.38	122.41
47	BO	80	ASP	C-N-CA	5.25	133.38	122.41
35	BA	105	C	O3'-P-O5'	5.24	111.86	104.00
1	CA	115	G	P-O3'-C3'	5.24	128.06	120.20
35	BA	975	C	C2-N1-C1'	5.23	134.50	118.80
50	BR	23	ASN	N-CA-C	5.23	121.94	110.80
35	BA	272(H)	C	OP1-P-O3'	5.22	116.69	105.20
35	DA	142	A	OP2-P-O3'	5.21	116.67	105.20
1	AA	1126	U	C4'-C3'-O3'	5.21	120.81	113.00
35	BA	784	A	C4'-C3'-O3'	-5.21	105.19	113.00
2	AB	142	LEU	N-CA-C	-5.20	105.73	111.71
15	AO	42	HIS	CA-C-N	-5.20	111.55	121.94
15	AO	42	HIS	C-N-CA	-5.20	111.55	121.94
35	DA	656	G	P-O5'-C5'	5.20	128.69	120.90
38	BD	221	VAL	CG1-CB-CG2	-5.19	99.38	110.80
35	DA	2662	A	P-O3'-C3'	5.19	127.99	120.20
33	D8	4	MET	CB-CG-SD	-5.18	97.16	112.70
35	BA	2818	G	O4'-C1'-N9	5.17	116.25	108.50
35	BA	1819	A	P-O3'-C3'	5.17	127.95	120.20
35	BA	2208	A	C4'-C3'-O3'	5.16	120.75	113.00
35	DA	1786	A	N9-C1'-C2'	5.16	121.73	114.00
37	BC	178	ALA	N-CA-C	5.15	113.69	108.75
48	DP	42	SER	N-CA-C	-5.15	99.83	110.80
49	DQ	11	LYS	CG-CD-CE	5.15	123.14	111.30
31	D6	42	TRP	CA-CB-CG	5.14	123.37	113.60
30	B5	50	GLY	CA-C-N	5.14	131.36	121.54
30	B5	50	GLY	C-N-CA	5.14	131.36	121.54
36	BB	40	U	P-O3'-C3'	5.14	127.91	120.20
35	BA	539	G	O3'-P-O5'	5.14	111.71	104.00
39	BE	60	ASN	N-CA-C	5.14	121.74	110.80
35	DA	2360	A	N9-C1'-C2'	-5.14	106.29	114.00
54	DV	80	GLN	CA-C-N	5.14	131.35	121.54
54	DV	80	GLN	C-N-CA	5.14	131.35	121.54
40	DF	89	VAL	CA-C-N	-5.13	114.43	122.79
40	DF	89	VAL	C-N-CA	-5.13	114.43	122.79
5	AE	60	TYR	CA-CB-CG	5.12	123.12	113.90
1	AA	160	A	O4'-C1'-N9	5.12	115.88	108.20
33	D8	35	GLN	CA-C-N	5.12	131.31	121.54
33	D8	35	GLN	C-N-CA	5.12	131.31	121.54
46	DN	75	TYR	CA-C-N	5.11	131.31	121.54
46	DN	75	TYR	C-N-CA	5.11	131.31	121.54
35	BA	1566	A	C4'-C3'-O3'	5.11	117.06	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	DP	56	SER	CA-C-N	5.11	131.30	121.54
48	DP	56	SER	C-N-CA	5.11	131.30	121.54
35	BA	945	A	N9-C1'-C2'	5.11	121.66	114.00
35	DA	527	C	C6-N1-C1'	-5.10	105.50	120.80
49	BQ	58	PHE	CA-C-N	5.10	131.28	121.54
49	BQ	58	PHE	C-N-CA	5.10	131.28	121.54
35	BA	1799	G	C2'-C3'-O3'	5.09	117.14	109.50
40	DF	68	LYS	CA-C-N	-5.09	111.93	121.81
40	DF	68	LYS	C-N-CA	-5.09	111.93	121.81
56	DX	25	LYS	N-CA-C	5.09	121.64	110.80
56	DX	30	VAL	CA-C-N	-5.09	103.57	121.59
56	DX	30	VAL	C-N-CA	-5.09	103.57	121.59
35	BA	1065	U	P-O3'-C3'	5.09	127.83	120.20
1	CA	1300	G	C2'-C3'-O3'	5.08	117.12	109.50
49	DQ	8	LYS	N-CA-C	5.08	121.63	110.80
48	DP	51	PHE	CA-C-N	5.08	131.24	121.54
48	DP	51	PHE	C-N-CA	5.08	131.24	121.54
56	DX	77	LYS	CD-CE-NZ	5.08	128.15	111.90
54	DV	75	PHE	CA-CB-CG	-5.08	108.72	113.80
1	AA	79	G	O4'-C1'-N9	5.07	115.81	108.20
35	BA	82	G	P-O3'-C3'	5.07	127.81	120.20
33	B8	38	GLY	N-CA-C	5.06	125.17	113.18
33	D8	50	LEU	CA-C-N	5.05	131.19	121.54
33	D8	50	LEU	C-N-CA	5.05	131.19	121.54
36	DB	81	G	O4'-C1'-N9	5.04	116.06	108.50
54	DV	81	TYR	CA-C-N	5.04	130.65	121.89
54	DV	81	TYR	C-N-CA	5.04	130.65	121.89
35	DA	1558	A	C2'-C3'-O3'	5.03	117.05	109.50
35	BA	540	C	OP1-P-OP2	-5.03	104.52	119.60
57	DY	29	GLU	CA-C-N	5.03	131.02	121.97
57	DY	29	GLU	C-N-CA	5.03	131.02	121.97
1	AA	1049	U	C4'-C3'-O3'	5.02	116.94	109.40
38	DD	233	HIS	CA-C-N	-5.02	111.57	121.41
38	DD	233	HIS	C-N-CA	-5.02	111.57	121.41
31	B6	39	TYR	N-CA-C	5.02	121.49	110.80
46	BN	13	TRP	CA-CB-CG	5.01	123.12	113.60
49	DQ	6	ARG	N-CA-C	5.00	115.92	108.31
35	DA	692	C	OP1-P-O3'	-5.00	92.99	108.00

There are no chirality outliers.

All (209) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	AB	109	SER	Peptide
3	AC	161	GLU	Peptide
4	AD	31	CYS	Peptide
4	AD	32	ALA	Peptide
8	AH	23	SER	Peptide
8	AH	7	ALA	Peptide
10	AJ	3	LYS	Peptide
10	AJ	55	LYS	Peptide
10	AJ	58	ASP	Peptide
12	AL	118	SER	Peptide
12	AL	61	THR	Peptide
12	AL	75	HIS	Peptide
16	AP	13	HIS	Peptide
16	AP	3	LYS	Peptide
17	AQ	12	SER	Peptide
18	AR	29	PHE	Peptide
20	AT	11	SER	Peptide
26	B1	28	GLY	Peptide
26	B1	55	GLY	Peptide
26	B1	85	LEU	Peptide
26	B1	86	SER	Peptide
26	B1	87	PRO	Peptide
27	B2	13	ALA	Peptide
27	B2	41	ILE	Peptide
27	B2	45	SER	Peptide
30	B5	35	GLU	Peptide
30	B5	4	HIS	Peptide
31	B6	22	ALA	Peptide
31	B6	25	LYS	Peptide
31	B6	34	LEU	Peptide
31	B6	45	LYS	Peptide
32	B7	36	GLN	Peptide
32	B7	4	THR	Peptide
32	B7	46	VAL	Peptide
32	B7	6	GLN	Peptide
33	B8	27	THR	Peptide
33	B8	5	LYS	Peptide
38	BD	233	HIS	Peptide
38	BD	237	GLU	Peptide
38	BD	272	ALA	Peptide
38	BD	50	THR	Peptide
39	BE	117	MET	Peptide
39	BE	128	SER	Peptide

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Mol	Chain	Res	Type	Group
39	BE	199	ARG	Peptide
40	BF	68	LYS	Peptide
40	BF	85	GLY	Peptide
41	BG	126	ASP	Peptide
41	BG	53	LEU	Peptide
41	BG	80	PHE	Peptide
41	BG	81	LYS	Peptide
42	BH	157	TYR	Peptide
43	BI	131	LYS	Peptide
43	BI	143	SER	Peptide
46	BN	10	GLU	Peptide
46	BN	3	THR	Peptide
46	BN	77	GLY	Peptide
47	BO	111	PHE	Peptide
47	BO	115	VAL	Peptide
47	BO	80	ASP	Peptide
48	BP	108	LYS	Peptide
48	BP	11	GLY	Peptide
48	BP	31	ALA	Peptide
48	BP	36	LYS	Peptide
48	BP	38	GLN	Peptide
48	BP	40	SER	Peptide
48	BP	59	LEU	Peptide
48	BP	60	MET	Peptide
48	BP	61	ARG	Peptide
48	BP	71	VAL	Peptide
49	BQ	10	ARG	Peptide
49	BQ	137	TYR	Peptide
49	BQ	21	THR	Peptide
49	BQ	22	LYS	Peptide
49	BQ	25	ASP	Peptide
49	BQ	98	LYS	Peptide
50	BR	10	LEU	Peptide
50	BR	106	GLY	Peptide
50	BR	27	SER	Peptide
51	BS	15	ARG	Peptide
51	BS	64	GLU	Peptide
51	BS	65	VAL	Peptide
52	BT	23	ARG	Peptide
52	BT	28	VAL	Peptide
52	BT	29	ARG	Peptide
52	BT	69	GLY	Peptide

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Mol	Chain	Res	Type	Group
53	BU	28	ARG	Peptide
53	BU	95	LEU	Peptide
53	BU	96	ALA	Peptide
54	BV	47	VAL	Peptide
54	BV	52	VAL	Peptide
54	BV	74	LYS	Peptide
54	BV	80	GLN	Peptide
54	BV	87	HIS	Peptide
55	BW	44	ALA	Peptide
55	BW	51	LEU	Peptide
56	BX	12	VAL	Peptide
56	BX	52	VAL	Peptide
56	BX	73	ARG	Peptide
56	BX	77	LYS	Peptide
57	BY	49	VAL	Peptide
57	BY	63	LYS	Peptide
2	CB	109	SER	Peptide
3	CC	166	GLU	Peptide
4	CD	19	LEU	Peptide
4	CD	87	GLY	Peptide
7	CG	80	VAL	Peptide
9	CI	34	ASN	Peptide
10	CJ	54	PHE	Peptide
10	CJ	72	VAL	Peptide
12	CL	118	SER	Peptide
12	CL	27	LEU	Peptide
12	CL	41	ARG	Peptide
12	CL	53	ARG	Peptide
14	CN	15	LYS	Peptide
14	CN	2	ALA	Peptide
16	CP	74	LEU	Peptide
17	CQ	35	VAL	Peptide
17	CQ	97	SER	Peptide
18	CR	41	LYS	Peptide
19	CS	9	VAL	Peptide
20	CT	11	SER	Peptide
20	CT	73	HIS	Peptide
26	D1	15	ALA	Peptide
26	D1	25	LYS	Peptide
26	D1	30	VAL	Peptide
26	D1	54	ALA	Peptide
27	D2	11	GLU	Peptide

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Mol	Chain	Res	Type	Group
27	D2	36	ARG	Peptide
27	D2	44	LEU	Peptide
27	D2	46	GLN	Peptide
27	D2	53	LEU	Peptide
29	D4	23	GLU	Peptide
29	D4	6	HIS	Peptide
31	D6	15	GLU	Peptide
31	D6	20	ASN	Peptide
31	D6	27	LYS	Peptide
31	D6	44	ARG	Peptide
32	D7	3	ARG	Peptide
33	D8	30	ARG	Peptide
37	DC	82	LYS	Peptide
38	DD	197	GLY	Peptide
38	DD	30	GLU	Peptide
38	DD	34	VAL	Peptide
38	DD	46	GLN	Peptide
38	DD	47	GLY	Peptide
38	DD	48	ARG	Peptide
39	DE	133	LYS	Peptide
39	DE	55	ASN	Peptide
39	DE	63	LEU	Peptide
39	DE	72	VAL	Peptide
40	DF	85	GLY	Peptide
41	DG	87	PRO	Peptide
42	DH	20	ALA	Peptide
42	DH	6	ARG	Peptide
43	DI	131	LYS	Peptide
43	DI	134	PRO	Peptide
43	DI	142	VAL	Peptide
46	DN	136	GLU	Peptide
46	DN	4	TYR	Peptide
46	DN	45	ASN	Peptide
46	DN	47	ALA	Peptide
46	DN	78	TYR	Peptide
47	DO	119	PRO	Peptide
48	DP	109	GLY	Peptide
48	DP	127	ALA	Peptide
48	DP	138	LEU	Peptide
48	DP	37	GLY	Peptide
48	DP	39	LYS	Peptide
48	DP	41	ARG	Peptide

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Mol	Chain	Res	Type	Group
48	DP	52	GLU	Peptide
48	DP	54	GLY	Peptide
48	DP	58	THR	Peptide
48	DP	59	LEU	Peptide
48	DP	60	MET	Peptide
48	DP	70	GLN	Peptide
49	DQ	137	TYR	Peptide
49	DQ	22	LYS	Peptide
49	DQ	86	GLY	Peptide
49	DQ	88	GLY	Peptide
49	DQ	9	TYR	Peptide
50	DR	8	ARG	Peptide
51	DS	10	ARG	Peptide
51	DS	106	ARG	Peptide
51	DS	14	VAL	Peptide
51	DS	16	ASN	Peptide
51	DS	21	THR	Peptide
52	DT	107	ASP	Peptide
52	DT	12	SER	Peptide
52	DT	43	GLN	Peptide
52	DT	5	ALA	Peptide
52	DT	90	GLN	Peptide
52	DT	93	ARG	Peptide
53	DU	91	ASP	Peptide
53	DU	96	ALA	Peptide
53	DU	97	ASP	Peptide
54	DV	22	VAL	Peptide
54	DV	28	GLU	Peptide
54	DV	31	ALA	Peptide
54	DV	69	LYS	Peptide
54	DV	86	GLY	Peptide
56	DX	24	GLY	Peptide
56	DX	38	GLU	Peptide
56	DX	61	GLY	Peptide
56	DX	64	LYS	Peptide
56	DX	73	ARG	Peptide
57	DY	31	LEU	Peptide
57	DY	56	PRO	Peptide
57	DY	6	HIS	Peptide
58	DZ	75	ASN	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32329	0	16318	1281	0
1	CA	32332	0	16317	1105	0
2	AB	1784	0	1833	175	0
2	CB	1900	0	1951	156	0
3	AC	1612	0	1677	113	0
3	CC	1620	0	1689	125	0
4	AD	1703	0	1763	158	0
4	CD	1703	0	1763	124	0
5	AE	1146	0	1207	78	0
5	CE	1155	0	1213	88	0
6	AF	843	0	857	46	0
6	CF	843	0	857	46	0
7	AG	1257	0	1296	103	0
7	CG	1257	0	1296	81	0
8	AH	1116	0	1177	118	0
8	CH	1116	0	1177	75	0
9	AI	947	0	979	95	0
9	CI	1010	0	1037	90	0
10	AJ	794	0	840	90	0
10	CJ	794	0	840	74	0
11	AK	885	0	904	48	0
11	CK	885	0	904	50	0
12	AL	956	0	1046	89	0
12	CL	970	0	1057	62	0
13	AM	922	0	979	100	0
13	CM	946	0	1008	83	0
14	AN	491	0	529	72	0
14	CN	492	0	530	58	0
15	AO	734	0	771	63	0
15	CO	734	0	771	49	0
16	AP	700	0	720	47	0
16	CP	700	0	720	57	0
17	AQ	823	0	891	58	0
17	CQ	823	0	889	69	0
18	AR	574	0	642	39	0
18	CR	574	0	644	58	0
19	AS	629	0	652	80	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CS	629	0	652	66	0
20	AT	763	0	861	56	0
20	CT	763	0	861	66	0
21	AU	208	0	221	14	0
21	CU	217	0	234	18	0
22	AV	1622	0	825	36	0
22	CV	1643	0	836	50	0
23	AW	1623	0	820	45	0
23	AY	410	0	207	18	0
23	CW	1623	0	821	66	0
23	CY	453	0	229	10	0
24	AX	255	0	129	6	0
24	CX	255	0	129	10	0
25	B0	607	0	628	52	0
25	D0	645	0	673	45	0
26	B1	692	0	764	110	0
26	D1	692	0	764	103	0
27	B2	420	0	461	72	0
27	D2	446	0	486	91	0
28	B3	459	0	512	25	0
28	D3	476	0	529	31	0
29	B4	222	0	91	4	0
29	D4	241	0	103	7	0
30	B5	418	0	432	45	0
30	D5	467	0	492	50	0
31	B6	398	0	417	61	0
31	D6	408	0	426	56	0
32	B7	418	0	467	39	0
32	D7	418	0	467	32	0
33	B8	507	0	576	96	0
33	D8	495	0	567	96	0
34	B9	307	0	336	31	0
34	D9	307	0	335	19	0
35	BA	60821	0	30654	2035	0
35	DA	60821	0	30655	1781	0
36	BB	2576	0	1305	114	0
36	DB	2551	0	1295	89	0
37	BC	1141	0	865	43	0
37	DC	1141	0	865	58	0
38	BD	2126	0	2208	202	0
38	DD	2144	0	2234	194	0
39	BE	1563	0	1629	150	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
39	DE	1563	0	1629	144	0
40	BF	1615	0	1665	172	0
40	DF	1627	0	1679	132	0
41	BG	1449	0	1503	115	0
41	DG	1474	0	1535	119	0
42	BH	1222	0	1282	93	0
42	DH	1270	0	1339	101	0
43	BI	1131	0	1218	100	0
43	DI	1124	0	1209	75	0
44	BJ	651	0	171	9	0
44	DJ	651	0	163	4	0
45	BK	700	0	166	0	0
45	DK	700	0	179	5	0
46	BN	1096	0	1168	108	0
46	DN	1120	0	1195	114	0
47	BO	933	0	996	78	0
47	DO	933	0	996	62	0
48	BP	1099	0	1176	225	0
48	DP	1114	0	1187	208	0
49	BQ	1074	0	1129	117	0
49	DQ	1083	0	1135	118	0
50	BR	949	0	1008	114	0
50	DR	960	0	1021	103	0
51	BS	813	0	873	121	0
51	DS	781	0	845	87	0
52	BT	1100	0	1164	130	0
52	DT	1141	0	1202	130	0
53	BU	964	0	1022	122	0
53	DU	964	0	1022	110	0
54	BV	779	0	852	123	0
54	DV	779	0	852	114	0
55	BW	886	0	948	95	0
55	DW	886	0	948	55	0
56	BX	704	0	758	106	0
56	DX	742	0	801	134	0
57	BY	775	0	870	93	0
57	DY	835	0	920	129	0
58	BZ	1403	0	1432	121	0
58	DZ	1403	0	1432	93	0
59	AA	209	0	0	0	0
59	AC	1	0	0	0	0
59	AD	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	AE	1	0	0	0	0
59	AL	1	0	0	0	0
59	AT	1	0	0	0	0
59	AV	7	0	0	0	0
59	AW	20	0	0	0	0
59	AX	3	0	0	0	0
59	B0	1	0	0	0	0
59	B1	2	0	0	0	0
59	B2	1	0	0	0	0
59	B5	1	0	0	0	0
59	B7	1	0	0	0	0
59	B8	2	0	0	0	0
59	BA	457	0	0	0	0
59	BB	17	0	0	0	0
59	BC	2	0	0	0	0
59	BE	2	0	0	0	0
59	BF	3	0	0	0	0
59	BQ	1	0	0	0	0
59	BS	1	0	0	0	0
59	BU	5	0	0	0	0
59	BV	1	0	0	0	0
59	BX	2	0	0	0	0
59	CA	195	0	0	0	0
59	CE	1	0	0	0	0
59	CF	1	0	0	0	0
59	CG	1	0	0	0	0
59	CI	1	0	0	0	0
59	CU	1	0	0	0	0
59	CV	4	0	0	0	0
59	CW	13	0	0	0	0
59	CX	2	0	0	0	0
59	D2	2	0	0	0	0
59	D5	1	0	0	0	0
59	DA	392	0	0	0	0
59	DB	12	0	0	0	0
59	DE	1	0	0	0	0
59	DF	2	0	0	0	0
59	DN	1	0	0	0	0
59	DO	2	0	0	0	0
59	DV	1	0	0	0	0
60	AA	41	0	0	2	0
60	CA	41	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
61	AD	1	0	0	0	0
61	AN	1	0	0	0	0
61	B9	1	0	0	0	0
61	CD	1	0	0	0	0
61	CN	1	0	0	0	0
61	D9	1	0	0	0	0
62	AA	2	0	0	1	0
All	All	296449	0	198495	13850	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 29.

All (13850) 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)
2:AB:142:LEU:CD2	2:AB:142:LEU:CG	1.77	1.58
4:AD:122:ARG:HH12	4:AD:136:PRO:CD	1.22	1.50
4:AD:122:ARG:NH1	4:AD:136:PRO:HD3	1.27	1.48
8:AH:104:ARG:CD	8:AH:104:ARG:CG	1.95	1.43
58:DZ:61:LEU:HD12	58:DZ:62:PRO:CD	1.52	1.35
56:DX:65:ARG:O	56:DX:65:ARG:NH1	1.57	1.34
58:DZ:61:LEU:CD1	58:DZ:62:PRO:CD	2.08	1.32
11:AK:92:GLU:OE2	18:AR:88:LYS:NZ	1.59	1.30
54:DV:66:ARG:NE	54:DV:68:LYS:H	1.28	1.28
54:DV:66:ARG:HE	54:DV:68:LYS:N	1.32	1.27
58:DZ:61:LEU:CD1	58:DZ:62:PRO:HD2	1.65	1.26
26:B1:25:LYS:C	26:B1:27:GLU:OE2	1.82	1.22
9:AI:53:VAL:HG22	9:AI:95:LYS:HE3	1.24	1.17
5:AE:69:VAL:O	5:AE:71:LEU:HD12	1.44	1.16
30:D5:3:LYS:O	30:D5:3:LYS:NZ	1.78	1.15
48:BP:71:VAL:HG13	48:BP:72:PRO:HD3	1.30	1.14
48:BP:62:LEU:O	48:BP:62:LEU:HD12	1.47	1.13
35:DA:2250:G:C5	49:DQ:82:ARG:HD3	1.83	1.13
35:BA:943:U:OP2	48:BP:38:GLN:HB3	1.48	1.13
25:D0:68:GLU:HG3	25:D0:82:ARG:NH1	1.64	1.13
30:D5:3:LYS:HE2	30:D5:5:PRO:CD	1.78	1.12
46:BN:66:LYS:HE3	46:BN:87:LEU:HB3	1.29	1.11
53:BU:50:ARG:O	53:BU:54:LYS:HE3	1.49	1.11
46:BN:30:ILE:O	46:BN:34:LEU:HD13	1.48	1.11
58:DZ:61:LEU:CD1	58:DZ:62:PRO:HD3	1.77	1.10
48:BP:60:MET:HE3	48:BP:61:ARG:HH21	1.11	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:9:CYS:HB3	4:AD:32:ALA:HB2	1.33	1.10
1:AA:426:G:P	4:AD:36:ARG:HH21	1.74	1.09
35:BA:2772:C:OP1	39:BE:202:LYS:NZ	1.86	1.09
48:BP:60:MET:HE3	48:BP:61:ARG:NH2	1.65	1.09
49:BQ:18:LYS:O	49:BQ:18:LYS:HD2	1.50	1.08
31:B6:15:GLU:OE2	31:B6:18:ARG:NH1	1.86	1.08
33:B8:25:MET:HB2	48:BP:62:LEU:HD11	1.29	1.08
43:DI:77:LEU:HB2	43:DI:140:LEU:HD21	1.35	1.07
35:BA:2378:A:O2'	51:BS:20:ARG:NH1	1.86	1.07
46:DN:40:PRO:O	53:DU:64:ARG:HD2	1.54	1.07
33:D8:27:THR:HG23	35:DA:2361:A:H5"	1.36	1.06
51:BS:62:LYS:HA	51:BS:65:VAL:HA	1.37	1.06
58:DZ:61:LEU:HD13	58:DZ:62:PRO:HD3	1.32	1.06
49:DQ:10:ARG:CZ	49:DQ:11:LYS:H	1.68	1.06
57:BY:27:VAL:HG13	57:BY:28:LYS:H	1.18	1.05
26:B1:26:ARG:N	26:B1:27:GLU:OE2	1.90	1.05
35:BA:139:G:H2'	35:BA:139(A):G:H5"	1.35	1.05
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.39	1.04
48:DP:126:VAL:HA	48:DP:145:PRO:HG3	1.35	1.04
35:BA:2404:C:O3'	48:BP:77:ARG:NH2	1.91	1.04
30:D5:3:LYS:HE2	30:D5:5:PRO:HD3	1.37	1.04
55:BW:25:ARG:NH1	55:BW:74:ALA:O	1.90	1.03
35:BA:1773:A:N1	38:BD:14:ARG:NH1	2.05	1.03
56:BX:44:GLU:OE2	56:BX:50:LYS:C	2.01	1.03
27:D2:55:ARG:O	27:D2:55:ARG:NH1	1.89	1.03
1:AA:162:A:H61	1:AA:334:C:P	1.81	1.02
26:B1:26:ARG:C	26:B1:27:GLU:OE2	2.00	1.02
9:AI:53:VAL:HG13	9:AI:95:LYS:HD3	1.42	1.02
54:BV:69:LYS:HZ2	54:BV:71:LEU:HG	1.24	1.02
41:DG:76:SER:HB3	41:DG:84:LYS:H	1.23	1.02
33:B8:25:MET:HG3	48:BP:64:LYS:HG2	1.42	1.01
1:AA:583:A:O2'	17:AQ:91:ARG:NH2	1.94	1.01
13:CM:23:TYR:HD2	13:CM:67:GLU:HA	1.25	1.01
33:D8:13:ARG:HD3	48:DP:61:ARG:HB3	1.43	1.00
54:BV:40:LEU:HD12	54:BV:41:GLY:H	1.25	1.00
48:BP:23:PRO:HA	48:BP:30:THR:OG1	1.60	1.00
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.26	1.00
58:BZ:144:LEU:HD12	58:BZ:149:SER:HA	1.41	0.99
31:D6:37:ARG:NH1	35:DA:2286:A:C8	2.30	0.99
35:BA:581:C:P	53:BU:33:ARG:HE	1.85	0.99
35:BA:186:G:H1	35:BA:210:C:H5	1.01	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DE:119:ARG:HD3	39:DE:160:TYR:HB2	1.42	0.99
38:BD:44:ASN:HB3	38:BD:49:ILE:HA	1.45	0.98
36:BB:65:C:N4	36:BB:109:C:H2'	1.78	0.98
35:BA:2107:C:H42	35:BA:2182:G:H1	1.07	0.98
1:AA:952:U:C4	13:AM:104:ARG:NH2	2.30	0.98
4:CD:109:GLY:HA3	4:CD:165:MET:HE3	1.43	0.98
1:AA:1345:U:N3	1:AA:1377:A:N1	2.11	0.97
35:BA:1446:C:H42	35:BA:1465:G:H1	1.05	0.97
54:DV:80:GLN:HG3	54:DV:81:TYR:CZ	1.99	0.97
19:AS:69:HIS:HB2	19:AS:73:GLU:HG3	1.45	0.97
39:DE:110:GLY:O	50:DR:2:ARG:NE	1.97	0.97
35:DA:1568:G:H5"	38:DD:61:LEU:HD13	1.42	0.97
46:BN:42:TRP:O	53:BU:64:ARG:NH2	1.96	0.97
36:BB:6:C:H42	36:BB:115:G:H1	1.03	0.97
57:DY:7:VAL:HG12	57:DY:8:LYS:HE3	1.46	0.97
3:AC:40:ARG:HE	3:AC:55:VAL:HG23	1.29	0.97
35:BA:996:A:OP2	53:BU:92:ARG:NH2	1.98	0.97
51:BS:97:ARG:O	51:BS:97:ARG:NH1	1.97	0.97
35:DA:1485:G:N3	35:DA:1505:C:N4	2.12	0.96
35:BA:1494:A:H1'	35:BA:1495:A:H5'	1.47	0.96
56:DX:77:LYS:HD3	56:DX:78:LYS:N	1.78	0.96
1:AA:1139:G:O2'	1:AA:1141:C:OP2	1.83	0.96
26:D1:60:PHE:HE2	26:D1:91:LYS:HE3	1.29	0.96
11:CK:22:HIS:HB3	11:CK:29:ILE:HG23	1.46	0.96
12:AL:27:LEU:HD13	12:AL:62:SER:CB	1.95	0.96
1:AA:1192:C:OP2	3:AC:4:LYS:NZ	1.98	0.96
8:AH:104:ARG:CD	8:AH:107:LEU:HB2	1.94	0.96
8:AH:104:ARG:HD2	8:AH:107:LEU:HB2	1.47	0.96
39:BE:36:ARG:HH22	39:BE:88:GLY:HA3	1.29	0.96
4:AD:122:ARG:HH22	4:AD:135:LEU:HA	1.27	0.95
54:BV:69:LYS:HG2	54:BV:70:ILE:H	1.27	0.95
35:DA:1899:G:N2	35:DA:1902:C:H41	1.64	0.95
27:B2:27:GLU:H	27:B2:29:LYS:HG2	1.31	0.95
49:BQ:5:ARG:HD3	49:BQ:71:ASP:HA	1.46	0.95
46:DN:4:TYR:HB2	53:DU:64:ARG:NH1	1.81	0.95
33:B8:13:ARG:HH21	48:BP:62:LEU:N	1.65	0.95
32:D7:9:ARG:NH1	35:DA:1310:G:OP2	1.99	0.95
12:AL:27:LEU:HD13	12:AL:62:SER:HB3	1.48	0.95
27:B2:51:ARG:CZ	27:B2:55:ARG:HD2	1.97	0.95
1:AA:1001(A):G:O6	1:AA:1004:A:N6	2.00	0.95
35:DA:1056:G:O2'	35:DA:1086:A:N6	2.00	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:614(B):G:C8	40:BF:44:ARG:NH2	2.35	0.95
49:BQ:124:LYS:HZ2	49:BQ:125:LEU:HD21	1.30	0.94
43:DI:80:PRO:HA	43:DI:143:SER:HA	1.47	0.94
35:BA:1048:A:OP1	35:BA:1110:G:N2	2.00	0.94
46:DN:41:ASP:HB3	46:DN:48:MET:HE2	1.49	0.94
49:BQ:18:LYS:O	49:BQ:18:LYS:CD	2.15	0.94
52:BT:29:ARG:HG3	52:BT:30:VAL:HG13	1.48	0.94
1:AA:976:G:N2	1:AA:1363:C:OP2	1.99	0.94
35:BA:2632:A:N3	39:BE:61:ARG:NH2	2.15	0.94
13:AM:104:ARG:HH11	13:AM:104:ARG:HB3	1.27	0.94
35:BA:245:G:H1	35:BA:253:C:H5	1.11	0.94
36:BB:65:C:H42	36:BB:109:C:H2'	1.33	0.94
35:DA:1332:G:N2	35:DA:1609:A:O2'	2.01	0.94
35:DA:1385:G:HO2'	35:DA:1396:U:H6	0.94	0.94
1:AA:664:G:H22	1:AA:741:G:H1	1.07	0.93
5:AE:81:GLU:HG2	5:AE:90:VAL:HG13	1.49	0.93
50:BR:72:ASP:OD1	50:BR:75:LEU:N	1.99	0.93
39:DE:59:VAL:HG21	39:DE:63:LEU:HG	1.50	0.93
39:BE:38:THR:HB	39:BE:41:LYS:HB3	1.51	0.93
38:DD:142:VAL:HG23	38:DD:193:VAL:HA	1.50	0.93
35:BA:1985:G:H2'	35:BA:1986:A:H5"	1.47	0.93
55:BW:29:LEU:HD21	55:BW:33:ARG:HH21	1.34	0.93
16:CP:8:ARG:HB2	16:CP:28:ARG:HH22	1.31	0.93
1:CA:664:G:H22	1:CA:741:G:H1	1.16	0.93
35:BA:1154:G:OP2	53:BU:58:ARG:NH1	2.01	0.93
51:BS:20:ARG:HE	51:BS:21:THR:H	0.96	0.93
1:CA:64:G:O6	1:CA:100:C:N4	2.02	0.93
35:DA:2656:U:H3	35:DA:2665:A:H2	1.11	0.93
35:DA:1092:C:H1'	35:DA:1101:U:H5	1.34	0.93
54:DV:1:MET:HG3	54:DV:44:LYS:HB2	1.47	0.93
1:AA:426:G:P	4:AD:36:ARG:NH2	2.42	0.93
1:AA:656:C:H2'	15:AO:28:GLN:NE2	1.84	0.93
26:D1:41:ARG:HH22	35:DA:205:G:H1	1.17	0.93
35:DA:2680:C:H5'	39:DE:189:PRO:HA	1.49	0.93
1:AA:1115:C:N4	1:AA:1186:G:N3	2.17	0.92
33:B8:25:MET:HB2	48:BP:62:LEU:CD1	2.00	0.92
53:BU:10:ARG:H	53:BU:13:LYS:HG2	1.33	0.92
5:AE:152:ARG:HH22	8:AH:104:ARG:HH21	1.04	0.92
54:BV:69:LYS:NZ	54:BV:71:LEU:HG	1.83	0.92
35:DA:1494:A:H2'	35:DA:1495:A:H5"	1.51	0.92
4:AD:122:ARG:CZ	4:AD:136:PRO:HD3	1.99	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1223:G:H5'	35:BA:1224:C:OP2	1.70	0.92
1:AA:692:U:HO2'	1:AA:694:A:H2	0.99	0.92
35:BA:34:C:H4'	35:BA:35:G:OP2	1.67	0.92
35:BA:2444:G:OP2	40:BF:68:LYS:HE2	1.69	0.92
48:DP:7:ARG:O	48:DP:10:PRO:HD3	1.70	0.92
56:DX:65:ARG:HH11	56:DX:65:ARG:C	1.77	0.92
56:DX:70:LEU:O	56:DX:72:LYS:N	2.01	0.92
30:B5:9:LYS:NZ	35:BA:2019:A:N7	2.17	0.92
35:BA:602:G:O2'	35:BA:604:G:O2'	1.87	0.92
1:AA:1166:G:H21	1:AA:1171:G:H22	1.13	0.91
35:BA:2701:C:H3'	35:BA:2702:U:H5"	1.49	0.91
25:D0:68:GLU:HG3	25:D0:82:ARG:HH11	1.21	0.91
35:BA:1639:U:H4'	35:BA:2699:C:H1'	1.52	0.91
1:CA:445:G:H1	1:CA:489:C:H42	1.12	0.91
50:DR:4:LEU:O	50:DR:6:SER:N	2.02	0.91
31:B6:15:GLU:HB3	31:B6:18:ARG:HB2	1.53	0.91
42:BH:167:GLU:HB2	42:BH:168:PRO:HD2	1.51	0.91
9:AI:53:VAL:CG2	9:AI:95:LYS:HE3	2.01	0.91
26:B1:25:LYS:O	26:B1:27:GLU:OE2	1.87	0.91
4:AD:122:ARG:HH22	4:AD:135:LEU:CA	1.80	0.91
35:DA:2867:G:OP2	52:DT:119:LYS:NZ	2.03	0.91
54:DV:62:LEU:HD13	54:DV:96:ILE:HD13	1.49	0.91
31:B6:18:ARG:NH1	31:B6:43:CYS:O	2.03	0.91
41:BG:161:THR:HG22	41:BG:163:ALA:H	1.33	0.91
51:BS:20:ARG:HE	51:BS:21:THR:N	1.68	0.91
53:BU:49:HIS:HA	53:BU:52:ARG:HB2	1.52	0.91
23:CW:17:C:H42	35:DA:2180:U:H4'	1.36	0.91
1:AA:1178:G:N7	9:AI:97:LYS:NZ	2.18	0.91
35:DA:1689:A:H62	35:DA:1698:A:H2	1.11	0.91
35:BA:2012:G:H4'	55:BW:96:ILE:HD11	1.51	0.91
1:AA:998:G:N2	1:AA:1043:C:N3	2.19	0.90
48:BP:62:LEU:HD12	48:BP:62:LEU:C	1.90	0.90
30:D5:34:PRO:CD	30:D5:35:GLU:OE2	2.19	0.90
53:BU:8:VAL:HG12	53:BU:12:ARG:HD2	1.52	0.90
21:AU:2:GLY:O	21:AU:4:GLY:N	2.03	0.90
35:BA:2123:G:N2	37:BC:42:GLU:OE2	2.02	0.90
35:BA:2327:A:H2'	35:BA:2328:A:C8	2.06	0.90
41:BG:61:ALA:HB2	41:BG:68:PRO:HD3	1.53	0.90
56:BX:44:GLU:HG3	56:BX:49:VAL:O	1.69	0.90
19:AS:40:ILE:HD12	19:AS:67:VAL:HG22	1.53	0.90
38:BD:260:ARG:HH22	38:BD:266:SER:HB2	1.37	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BR:38:VAL:HG22	50:BR:112:ALA:HB2	1.54	0.90
7:CG:78:ARG:NH1	7:CG:79:ARG:O	2.04	0.90
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.53	0.90
11:AK:29:ILE:HG22	11:AK:44:SER:HB2	1.53	0.90
33:B8:46:ARG:NH2	35:BA:631:A:OP2	2.03	0.90
1:CA:1125:U:H3	1:CA:1281:U:H3	1.19	0.90
20:CT:73:HIS:H	20:CT:74:LYS:HE2	1.34	0.90
53:BU:97:ASP:OD2	53:BU:101:ARG:NH2	2.05	0.90
1:AA:615:C:H5	1:AA:625:G:H1	1.18	0.90
53:DU:84:LYS:NZ	53:DU:91:ASP:OD2	2.05	0.90
54:DV:66:ARG:HD3	54:DV:67:GLY:N	1.86	0.90
1:AA:1160:G:O6	1:AA:1175:G:N1	2.05	0.90
35:BA:1434:A:H61	35:BA:1558:A:H62	1.18	0.90
35:DA:2376:A:N1	51:DS:89:ARG:NH2	2.19	0.90
35:BA:1817:G:OP1	38:BD:88:ARG:NH2	2.05	0.89
49:BQ:108:GLY:HA3	58:BZ:116:VAL:HG11	1.51	0.89
1:AA:660:G:H1	1:AA:745:C:H42	1.19	0.89
26:B1:25:LYS:HB3	26:B1:27:GLU:OE1	1.71	0.89
52:BT:91:ARG:HA	52:BT:116:ALA:HA	1.51	0.89
1:CA:585:G:H5”	17:CQ:36:ILE:HG21	1.55	0.89
35:BA:2683:C:OP1	52:BT:53:ARG:NH2	2.04	0.89
48:DP:59:LEU:HA	48:DP:61:ARG:CG	2.02	0.89
58:DZ:61:LEU:HD12	58:DZ:62:PRO:HD2	0.91	0.89
46:DN:137:LYS:O	46:DN:140:VAL:N	2.06	0.89
56:DX:60:ARG:HB3	56:DX:73:ARG:HG2	1.51	0.89
1:AA:1241:G:OP1	7:AG:32:ARG:NH1	2.04	0.89
40:BF:158:THR:HA	40:BF:195:ASP:HB2	1.52	0.89
50:BR:86:ARG:HE	50:BR:117:VAL:HG11	1.38	0.89
35:DA:2610:C:H4’	35:DA:2611:U:OP2	1.69	0.89
1:AA:152:A:N6	1:AA:170:U:O2	2.05	0.89
13:AM:104:ARG:HB3	13:AM:104:ARG:NH1	1.88	0.89
38:BD:27:THR:O	38:BD:30:GLU:N	2.03	0.89
1:AA:458:C:H41	1:AA:473:G:H1	1.21	0.89
48:BP:71:VAL:HG13	48:BP:72:PRO:CD	2.03	0.89
26:D1:41:ARG:NH2	35:DA:190:A:OP2	2.06	0.89
27:D2:56:GLN:HA	27:D2:56:GLN:OE1	1.72	0.89
35:DA:1798:U:H5’	38:DD:259:THR:HG23	1.54	0.89
1:AA:1342:C:H4’	9:AI:125:TYR:HB3	1.55	0.89
7:CG:62:PHE:HA	7:CG:124:LEU:HD21	1.53	0.89
35:DA:2305:A:H61	41:DG:43:LEU:HD13	1.36	0.89
1:AA:975:A:H4’	1:AA:976:G:H5”	1.53	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:6:ILE:HG22	10:AJ:96:ILE:HD11	1.55	0.88
35:BA:538:G:H1	35:BA:555:U:H5	1.18	0.88
53:BU:98:LEU:HD11	53:BU:105:VAL:HB	1.52	0.88
1:CA:1246:C:H42	1:CA:1291:G:H1	1.21	0.88
49:BQ:18:LYS:O	49:BQ:20:ALA:N	2.05	0.88
12:CL:45:PRO:HG3	12:CL:53:ARG:NH1	1.88	0.88
35:DA:389:G:H1	48:DP:71:VAL:HB	1.36	0.88
25:B0:53:MET:HB3	25:B0:59:LEU:HD23	1.55	0.88
31:B6:18:ARG:HH22	31:B6:44:ARG:HB2	1.37	0.88
52:BT:3:ARG:HG3	52:BT:7:ILE:HD11	1.54	0.88
18:CR:58:LEU:HD12	18:CR:62:GLU:HB3	1.55	0.88
35:BA:661:C:H1'	48:BP:15:ARG:HD2	1.55	0.88
35:BA:1771:C:HO2'	35:BA:1786:A:H8	0.96	0.88
35:DA:259:G:O2'	35:DA:621:A:O2'	1.91	0.88
32:D7:32:LYS:NZ	35:DA:180:G:OP2	2.05	0.88
35:DA:2068:U:H3	35:DA:2430:A:H2	1.18	0.88
49:DQ:37:LEU:HB2	49:DQ:128:LYS:HB3	1.55	0.88
35:DA:2787:C:H1'	39:DE:61:ARG:HD3	1.53	0.88
46:DN:74:ARG:O	46:DN:75:TYR:HD1	1.55	0.88
56:DX:56:THR:HG22	56:DX:77:LYS:HB2	1.56	0.88
1:AA:1261:A:H62	1:AA:1274:G:H21	1.22	0.88
35:BA:139:G:H5"	56:BX:41:ASN:HB3	1.56	0.88
35:BA:994:C:OP2	53:BU:54:LYS:NZ	2.07	0.88
35:BA:2839:G:H5'	50:BR:46:GLY:HA2	1.56	0.88
57:BY:95:LYS:NZ	57:BY:99:CYS:O	2.07	0.88
1:AA:563:A:O2'	1:AA:567:G:OP2	1.89	0.88
1:CA:458:C:O2	1:CA:474:G:N1	2.06	0.88
1:CA:959:A:H62	19:CS:78:ARG:HH21	1.22	0.88
26:D1:47:GLN:NE2	35:DA:2090:G:N3	2.21	0.88
35:DA:535:C:O3'	53:DU:53:ARG:NH1	2.07	0.88
35:DA:1899:G:H22	35:DA:1902:C:H41	0.93	0.88
35:DA:2662:A:H1'	35:DA:2663:G:OP2	1.74	0.88
50:DR:2:ARG:NH1	50:DR:5:LYS:HZ2	1.71	0.88
35:DA:2392:A:H2	35:DA:2424:C:H42	1.22	0.87
27:B2:46:GLN:O	27:B2:49:LYS:N	2.06	0.87
33:B8:30:ARG:NH2	35:BA:2394:C:OP1	2.06	0.87
35:DA:1899:G:H22	35:DA:1902:C:N4	1.72	0.87
35:BA:139(A):G:H22	56:BX:40:LYS:HE2	1.39	0.87
35:DA:1771:C:HO2'	35:DA:1786:A:H8	0.88	0.87
39:DE:111:ARG:HA	50:DR:2:ARG:HB2	1.56	0.87
53:DU:90:VAL:HG22	54:DV:39:LEU:HB3	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:64:ALA:HA	26:B1:67:ILE:HD13	1.56	0.87
35:DA:139(A):G:N2	56:DX:44:GLU:OE1	2.07	0.87
35:DA:2206:G:H21	35:DA:2207:G:H5'	1.38	0.87
1:AA:987:G:H1	1:AA:1218:C:H42	1.23	0.87
48:DP:23:PRO:HB3	48:DP:29:LYS:HB3	1.55	0.87
40:BF:202:PHE:O	40:BF:204:ASN:ND2	2.06	0.87
52:BT:51:ARG:NH1	52:BT:100:TYR:OH	2.07	0.87
54:DV:29:PRO:O	54:DV:31:ALA:N	2.08	0.87
4:AD:98:GLU:OE1	4:AD:103:ASN:ND2	2.08	0.87
10:AJ:74:ILE:HG13	10:AJ:75:ILE:H	1.39	0.87
35:DA:2101:G:H1	35:DA:2188:C:H42	1.20	0.87
1:AA:446:G:H1	1:AA:488:C:H42	1.23	0.87
26:B1:10:LYS:HD2	26:B1:14:VAL:HA	1.57	0.87
1:AA:1255:G:OP1	10:AJ:45:ARG:NH2	2.08	0.86
28:B3:8:LEU:HD13	28:B3:31:LEU:HD23	1.56	0.86
35:DA:2523:G:H2'	35:DA:2524:G:H5"	1.56	0.86
40:DF:134:GLY:HA2	40:DF:166:ALA:HB2	1.55	0.86
20:AT:44:ALA:HB1	20:AT:91:LEU:HB3	1.56	0.86
3:CC:79:ARG:NH2	3:CC:82:GLU:OE1	2.08	0.86
4:AD:106:TYR:OH	4:AD:114:ARG:NH1	2.08	0.86
9:AI:89:ASN:HB3	9:AI:92:TYR:HB2	1.57	0.86
46:DN:95:PRO:O	46:DN:97:ARG:N	2.07	0.86
54:DV:66:ARG:NE	54:DV:68:LYS:N	2.02	0.86
35:BA:1789:A:OP2	38:BD:222:ARG:NH2	2.09	0.86
35:BA:2699:C:H41	35:BA:2708:G:H22	1.23	0.86
54:BV:19:LYS:HG2	54:BV:96:ILE:HG22	1.56	0.86
1:CA:1086:U:H3	1:CA:1099:G:H22	1.23	0.86
58:DZ:61:LEU:HD13	58:DZ:62:PRO:CD	1.92	0.86
12:AL:46:LYS:HG3	12:AL:94:PRO:HD3	1.58	0.86
35:DA:1359:A:N6	35:DA:1372:U:O2	2.08	0.86
53:DU:90:VAL:O	53:DU:92:ARG:N	2.08	0.86
1:AA:1128:C:OP2	1:AA:1139:G:N2	2.08	0.86
1:CA:1068:G:OP2	1:CA:1068:G:H8	1.58	0.86
33:B8:13:ARG:HH21	48:BP:62:LEU:H	1.20	0.86
33:B8:32:LEU:HD12	35:BA:2392:A:OP2	1.76	0.86
46:BN:30:ILE:O	46:BN:34:LEU:CD1	2.24	0.86
48:BP:29:LYS:HG3	48:BP:30:THR:HG22	1.58	0.86
2:CB:224:GLN:HB3	2:CB:229:VAL:HG23	1.58	0.86
41:DG:67:LYS:HD2	41:DG:67:LYS:H	1.38	0.86
26:B1:76:ARG:NH2	26:B1:93:GLU:O	2.09	0.86
35:BA:942:G:H5'	48:BP:35:HIS:HB3	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:156:ALA:O	42:BH:158:HIS:N	2.08	0.86
51:BS:58:LEU:HD12	51:BS:66:ALA:HB1	1.58	0.86
35:BA:139(A):G:H5'	35:BA:140:G:OP2	1.76	0.85
35:BA:1447:G:H4'	35:BA:1546:C:H42	1.41	0.85
15:CO:55:GLY:HA2	15:CO:58:MET:HE2	1.58	0.85
35:DA:271(Q):G:O2'	35:DA:271(R):G:OP2	1.93	0.85
41:BG:82:LEU:HD13	41:BG:87:PRO:HD3	1.56	0.85
25:D0:66:VAL:HG23	25:D0:82:ARG:HB2	1.58	0.85
35:DA:662:G:H5'	48:DP:18:ARG:HB2	1.57	0.85
31:B6:15:GLU:OE2	31:B6:41:PRO:HG3	1.76	0.85
5:CE:76:ILE:HG22	5:CE:93:PRO:HB3	1.57	0.85
11:AK:44:SER:OG	11:AK:47:VAL:HG23	1.75	0.85
26:B1:25:LYS:O	26:B1:27:GLU:CD	2.19	0.85
30:B5:46:CYS:HB2	30:B5:51:TYR:CZ	2.11	0.85
35:BA:1899:G:H22	35:BA:1902:C:H5	1.24	0.85
1:CA:1305:G:N2	1:CA:1331:G:O2'	2.09	0.85
2:CB:174:VAL:HG11	2:CB:196:LEU:HD11	1.59	0.85
35:DA:995:C:O2	46:DN:4:TYR:OH	1.95	0.85
35:BA:1689:A:H62	35:BA:1698:A:H2	1.24	0.85
49:BQ:122:GLY:HA3	49:BQ:129:THR:HG21	1.56	0.85
1:AA:1502:A:H2	1:AA:1505:G:H1	1.20	0.85
35:BA:272(G):C:N3	35:BA:363(D):G:N2	2.25	0.85
36:BB:4:C:H42	36:BB:117:G:H1	1.23	0.85
58:BZ:108:PRO:HB3	58:BZ:116:VAL:HA	1.59	0.85
1:CA:1128:C:H1'	1:CA:1146:A:H61	1.42	0.85
33:D8:32:LEU:HD23	35:DA:2392:A:OP2	1.77	0.85
46:BN:17:ASP:OD1	46:BN:18:ALA:N	2.09	0.85
57:BY:81:LYS:HD3	57:BY:97:ARG:HG3	1.59	0.85
12:CL:45:PRO:HG3	12:CL:53:ARG:HH11	1.40	0.85
28:D3:3:ARG:O	28:D3:59:VAL:N	2.10	0.85
56:DX:31:HIS:O	56:DX:35:THR:OG1	1.93	0.85
7:AG:111:ARG:HG3	7:AG:112:PRO:HD2	1.57	0.85
4:CD:150:GLU:N	4:CD:150:GLU:OE2	2.10	0.85
28:D3:8:LEU:HD13	28:D3:31:LEU:HD22	1.58	0.85
1:AA:156:G:C2	1:AA:157:G:H1'	2.12	0.84
19:AS:49:ILE:HD12	19:AS:60:VAL:HG13	1.58	0.84
23:AW:52:G:H1'	23:AW:63:G:H22	1.43	0.84
48:BP:96:THR:OG1	48:BP:98:GLU:OE2	1.95	0.84
35:DA:2415:G:H4'	48:DP:67:MET:H	1.41	0.84
20:AT:37:SER:HB2	20:AT:84:LEU:HD21	1.57	0.84
35:BA:259:G:H21	35:BA:621:A:H8	1.24	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:942:G:H5'	48:DP:35:HIS:HB2	1.60	0.84
39:DE:143:ASN:HB2	39:DE:147:PRO:HD2	1.59	0.84
1:CA:366:C:H5'	1:CA:366:C:H6	1.40	0.84
26:D1:65:SER:OG	26:D1:66:HIS:ND1	2.09	0.84
35:BA:1341:U:OP2	35:BA:1394:U:O2'	1.95	0.84
11:CK:51:LYS:HA	11:CK:55:LYS:HD3	1.59	0.84
26:D1:17:SER:O	26:D1:44:PRO:HD2	1.76	0.84
30:D5:3:LYS:CE	30:D5:5:PRO:CD	2.55	0.84
33:D8:50:LEU:HD12	33:D8:51:ALA:H	1.40	0.84
35:DA:527:C:OP2	35:DA:2779:U:H5	1.60	0.84
33:B8:30:ARG:HH22	48:BP:63:PRO:HD2	1.42	0.84
35:BA:242:G:O2'	35:BA:254:G:O6	1.95	0.84
9:CI:45:ALA:O	9:CI:78:LYS:NZ	2.10	0.84
48:DP:126:VAL:CA	48:DP:145:PRO:HG3	2.08	0.84
46:DN:16:ILE:HA	46:DN:137:LYS:HG2	1.60	0.84
35:BA:1847:A:H4'	35:BA:1848:A:OP1	1.78	0.84
43:BI:57:ARG:HA	43:BI:60:GLU:HB3	1.56	0.84
35:DA:1598:C:H5'	56:DX:37:THR:HB	1.60	0.84
58:DZ:52:SER:OG	58:DZ:53:ILE:N	2.09	0.84
56:BX:85:PRO:O	56:BX:87:GLN:N	2.10	0.84
47:DO:65:THR:HA	47:DO:82:ASN:HB3	1.60	0.84
14:CN:4:LYS:HD3	14:CN:5:ALA:N	1.93	0.83
32:D7:21:ARG:HB3	32:D7:31:LEU:HD11	1.60	0.83
35:DA:335:C:H4'	57:DY:73:ARG:HE	1.41	0.83
1:AA:838:G:H22	1:AA:849:C:H1'	1.42	0.83
10:AJ:3:LYS:HB2	10:AJ:4:ILE:HG12	1.59	0.83
12:AL:82:VAL:HG12	12:AL:105:TYR:HB3	1.60	0.83
33:B8:31:HIS:HB2	35:BA:2420:C:H41	1.40	0.83
35:BA:27:G:N2	35:BA:512:G:H2'	1.93	0.83
35:BA:133:C:N4	35:BA:145:G:H1	1.76	0.83
35:BA:1899:G:N2	35:BA:1902:C:H5	1.76	0.83
27:B2:41:ILE:HD13	27:B2:44:LEU:HB3	1.61	0.83
48:BP:25:SER:OG	48:BP:26:GLY:N	2.10	0.83
27:D2:49:LYS:HD2	27:D2:54:LYS:HZ1	1.44	0.83
40:DF:24:LEU:HD22	40:DF:25:PRO:HD2	1.58	0.83
35:BA:1885:A:H5'	35:BA:1886:C:OP2	1.78	0.83
35:BA:2287:A:H62	35:BA:2344:U:H3	1.25	0.83
48:BP:81:GLN:H	48:BP:111:ARG:HB3	1.44	0.83
30:D5:34:PRO:CG	30:D5:35:GLU:OE2	2.26	0.83
35:BA:2599:G:OP2	38:BD:236:GLY:HA2	1.79	0.83
43:BI:78:THR:HA	43:BI:141:LYS:HB2	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:20:GLN:O	5:CE:22:GLY:N	2.12	0.83
19:CS:22:LEU:HD12	19:CS:27:GLU:O	1.78	0.83
28:D3:59:VAL:HG12	28:D3:60:GLU:HG2	1.60	0.83
48:DP:59:LEU:HA	48:DP:61:ARG:HG3	1.59	0.83
1:AA:172:A:H3'	1:AA:172:A:OP1	1.79	0.83
35:BA:2467:C:H1'	49:BQ:124:LYS:HG3	1.58	0.83
15:CO:26:GLU:OE2	15:CO:77:ARG:NH1	2.12	0.83
1:AA:446:G:N2	1:AA:488:C:N3	2.25	0.83
2:AB:105:PHE:HA	2:AB:108:ILE:HG22	1.60	0.83
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.12	0.83
35:BA:2287:A:N6	35:BA:2344:U:H3	1.77	0.83
39:BE:1:MET:HB3	39:BE:200:GLU:CD	2.03	0.83
27:D2:26:ARG:CZ	27:D2:29:LYS:HD3	2.07	0.83
56:DX:54:VAL:HA	56:DX:77:LYS:HE3	1.60	0.83
35:BA:676:A:H8	35:BA:2069:G:H21	1.23	0.83
35:BA:1303:G:N2	35:BA:1625:C:O2	2.10	0.83
43:DI:117:GLU:HG2	43:DI:118:LYS:H	1.43	0.83
19:AS:80:TYR:HD1	19:AS:81:ARG:H	1.27	0.83
35:BA:300:A:OP2	57:BY:84:ARG:NH1	2.11	0.83
35:DA:100:G:OP2	57:DY:106:LEU:HD22	1.78	0.83
53:DU:98:LEU:O	53:DU:100:VAL:N	2.11	0.83
10:AJ:8:LEU:HD12	10:AJ:96:ILE:HD13	1.59	0.83
16:AP:12:LYS:HD3	16:AP:13:HIS:N	1.93	0.83
35:BA:2660:A:OP2	35:BA:2661:G:N2	2.12	0.83
49:BQ:18:LYS:HD2	49:BQ:18:LYS:C	2.03	0.83
30:D5:34:PRO:HG2	30:D5:35:GLU:OE2	1.78	0.83
35:DA:2483:C:N3	49:DQ:124:LYS:NZ	2.26	0.83
52:DT:102:ILE:HD12	52:DT:110:ILE:HD11	1.59	0.83
58:DZ:30:ASN:O	58:DZ:32:HIS:N	2.11	0.83
1:AA:262:A:H5'	20:AT:74:LYS:HD3	1.59	0.82
57:BY:46:LYS:NZ	57:BY:63:LYS:O	2.12	0.82
2:AB:124:SER:HB3	2:AB:125:PRO:HD3	1.61	0.82
29:B4:13:ARG:O	41:BG:105:LYS:NZ	2.11	0.82
35:BA:508:G:H5"	35:BA:508:G:C8	2.14	0.82
57:BY:10:GLY:HA2	57:BY:27:VAL:HG13	1.59	0.82
38:DD:43:ARG:NH2	38:DD:51:VAL:O	2.10	0.82
40:DF:25:PRO:HG3	40:DF:119:ARG:HB2	1.61	0.82
33:B8:13:ARG:NH2	48:BP:61:ARG:HA	1.94	0.82
1:CA:35:G:O2'	12:CL:118:SER:O	1.96	0.82
35:DA:676:A:H8	35:DA:2069:G:H21	1.27	0.82
54:DV:79:VAL:HG13	54:DV:80:GLN:H	1.45	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:79:G:O6	1:AA:92:C:N4	2.12	0.82
36:DB:18:G:H1	36:DB:65:C:H42	1.22	0.82
41:DG:115:ARG:HH11	41:DG:116:ASP:HB2	1.42	0.82
14:AN:6:LEU:HB3	14:AN:23:ARG:HH22	1.45	0.82
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB2	1.61	0.82
35:DA:993:G:OP1	53:DU:50:ARG:NH2	2.13	0.82
35:BA:1779:U:H5	35:BA:1784:A:N7	1.77	0.82
38:BD:126:GLN:O	38:BD:129:ASN:ND2	2.13	0.82
1:CA:1134:G:H1	1:CA:1141:C:H1'	1.44	0.82
35:DA:1464:C:O2'	35:DA:1528:A:H8	1.60	0.82
42:DH:83:TYR:CD2	42:DH:141:VAL:HB	2.15	0.82
4:AD:27:TYR:OH	6:CF:15:ASP:OD2	1.97	0.82
35:BA:1037:G:H8	35:BA:1037:G:OP2	1.62	0.82
46:BN:66:LYS:CE	46:BN:87:LEU:HB3	2.08	0.82
1:CA:15:G:H1'	5:CE:19:MET:HE2	1.62	0.82
33:D8:30:ARG:HH12	35:DA:2394:C:H41	1.27	0.82
35:DA:2476:A:H2'	35:DA:2477:C:H5"	1.61	0.82
36:DB:89:G:H2'	36:DB:90:A:C8	2.15	0.82
42:DH:15:VAL:HG12	42:DH:29:PRO:HD3	1.61	0.82
46:DN:74:ARG:O	46:DN:75:TYR:CD1	2.32	0.82
8:AH:42:GLU:HG2	8:AH:109:ILE:HD12	1.62	0.82
35:BA:102:G:H5"	35:BA:103:A:H5"	1.62	0.82
35:BA:139(A):G:H22	56:BX:40:LYS:CE	1.92	0.82
56:BX:29:TRP:NE1	56:BX:74:PRO:HB2	1.95	0.82
1:AA:1289:A:N7	9:AI:70:LYS:NZ	2.26	0.82
1:AA:1505:G:O2'	1:AA:1506:U:OP2	1.97	0.82
35:BA:607:U:H3	35:BA:621:A:H2	1.24	0.82
57:BY:10:GLY:HA2	57:BY:27:VAL:CG1	2.10	0.82
14:CN:9:LYS:HD2	14:CN:12:ARG:HH12	1.44	0.82
1:AA:1060:C:H5"	10:AJ:51:ARG:HG2	1.62	0.82
35:BA:947:G:H2'	35:BA:948:G:H8	1.45	0.82
38:BD:3:VAL:HB	38:BD:17:THR:HB	1.62	0.82
42:BH:16:SER:HB2	42:BH:27:LYS:HB2	1.60	0.82
48:BP:80:TYR:HA	48:BP:111:ARG:HB2	1.61	0.82
1:CA:1129:C:H41	1:CA:1135:U:H5	1.28	0.82
35:DA:94:C:H5'	35:DA:94(A):G:OP2	1.79	0.82
35:DA:607:U:H3	35:DA:621:A:H2	1.25	0.82
35:DA:1593:G:H2'	35:DA:1594:G:C8	2.14	0.82
54:DV:66:ARG:HE	54:DV:68:LYS:H	0.86	0.82
19:AS:5:LEU:HD12	19:AS:10:PHE:HB3	1.59	0.81
42:BH:148:ILE:HG22	42:BH:162:ILE:HD12	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:78:G:N2	1:CA:79:G:O6	2.11	0.81
1:CA:1239:A:H2'	1:CA:1298:C:H42	1.44	0.81
26:D1:60:PHE:CE2	26:D1:91:LYS:HE3	2.15	0.81
38:DD:10:THR:HG23	38:DD:13:ARG:HB2	1.60	0.81
1:AA:896:C:H5'	17:AQ:100:LYS:HG3	1.62	0.81
35:BA:1628:G:H22	35:BA:1638:C:H5	1.28	0.81
35:BA:2631:G:N2	39:BE:61:ARG:HH22	1.77	0.81
38:BD:32:SER:O	38:BD:34:VAL:N	2.12	0.81
48:BP:90:ARG:HD2	48:BP:90:ARG:H	1.45	0.81
5:CE:148:VAL:HG21	8:CH:107:LEU:HD22	1.62	0.81
20:CT:42:GLN:NE2	20:CT:46:GLU:OE2	2.13	0.81
50:DR:56:LYS:NZ	50:DR:90:ARG:O	2.13	0.81
9:AI:53:VAL:HG22	9:AI:95:LYS:CE	2.09	0.81
13:AM:97:PRO:HG2	13:AM:103:THR:HG22	1.62	0.81
32:B7:1:MET:HE3	32:B7:3:ARG:HH21	1.45	0.81
35:BA:2652:C:H42	35:BA:2668:G:H1	1.27	0.81
35:BA:2770:G:H5"	35:BA:2771:C:OP2	1.81	0.81
1:CA:376:G:O3'	16:CP:5:ARG:NH1	2.13	0.81
1:CA:975:A:H8	1:CA:975:A:H5'	1.42	0.81
1:CA:1161:C:O2	1:CA:1175:G:N2	2.13	0.81
13:CM:65:LYS:HD2	13:CM:69:GLU:HG3	1.60	0.81
16:CP:28:ARG:NH1	16:CP:29:ASP:OD1	2.12	0.81
35:BA:72:U:H6	35:BA:72:U:H5"	1.45	0.81
35:BA:1190:G:H2'	35:BA:1191:G:H8	1.45	0.81
35:BA:2699:C:N4	35:BA:2708:G:H1	1.78	0.81
41:BG:106:LEU:O	41:BG:111:LEU:HD13	1.79	0.81
1:AA:1458:G:OP1	20:AT:35:THR:OG1	1.99	0.81
38:BD:27:THR:N	38:BD:28:GLU:OE2	2.13	0.81
58:BZ:40:ASP:O	58:BZ:44:PHE:N	2.13	0.81
1:CA:983:A:O2'	1:CA:1050:G:OP2	1.98	0.81
32:D7:35:ARG:HG3	32:D7:42:LEU:HD11	1.62	0.81
42:DH:70:THR:O	42:DH:72:ILE:N	2.13	0.81
1:AA:457:C:O2	1:AA:474:G:N1	2.12	0.81
5:AE:152:ARG:NH2	8:AH:104:ARG:HH21	1.77	0.81
42:DH:119:GLU:O	42:DH:121:ILE:N	2.14	0.81
46:DN:40:PRO:O	53:DU:64:ARG:CD	2.29	0.81
1:CA:960:U:O4	19:CS:78:ARG:NH1	2.13	0.81
54:DV:66:ARG:CD	54:DV:67:GLY:N	2.44	0.81
57:DY:17:SER:HB2	57:DY:71:LYS:HE2	1.62	0.81
26:B1:26:ARG:CA	26:B1:27:GLU:OE2	2.28	0.81
48:BP:88:LEU:HD12	48:BP:95:VAL:HG11	1.60	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:135:LEU:HD22	48:BP:144:GLU:OE2	1.80	0.81
23:AY:40:C:OP2	23:AY:40:C:C5	2.33	0.81
35:BA:2632:A:O2'	35:BA:2811:G:O2'	1.94	0.81
3:CC:90:GLU:HA	3:CC:93:LYS:HB2	1.62	0.81
18:CR:40:LEU:O	18:CR:42:ARG:N	2.13	0.81
56:DX:33:LYS:O	56:DX:35:THR:OG1	1.98	0.81
13:AM:84:ILE:HD11	19:AS:66:MET:HG2	1.64	0.81
26:B1:13:ILE:HG12	26:B1:14:VAL:N	1.96	0.81
26:B1:25:LYS:C	26:B1:27:GLU:CD	2.48	0.81
35:BA:1786:A:H2	35:BA:2606:C:H1'	1.45	0.81
52:BT:93:ARG:O	52:BT:95:ARG:N	2.12	0.81
57:BY:17:SER:OG	57:BY:18:GLY:N	2.13	0.81
46:DN:39:ARG:HE	46:DN:41:ASP:HB2	1.44	0.81
1:AA:356:A:N3	1:AA:368:U:O2'	2.14	0.80
35:BA:27:G:H22	35:BA:512:G:H2'	1.46	0.80
25:B0:74:ARG:NE	36:BB:13:A:OP2	2.14	0.80
35:BA:1170:G:O6	35:BA:1179:C:N4	2.14	0.80
46:BN:18:ALA:HB1	46:BN:21:LYS:HB2	1.61	0.80
33:B8:58:ILE:HA	33:B8:61:LEU:HD13	1.64	0.80
35:BA:2701:C:H3'	35:BA:2702:U:C5'	2.06	0.80
12:CL:90:VAL:O	12:CL:92:ASP:N	2.15	0.80
15:CO:74:ASP:OD1	15:CO:77:ARG:N	2.12	0.80
35:DA:2751:G:N2	35:DA:2751:G:OP1	2.14	0.80
38:DD:44:ASN:CB	38:DD:49:ILE:HA	2.10	0.80
48:DP:133:SER:O	48:DP:135:LEU:N	2.14	0.80
1:AA:192:U:H4'	20:AT:103:GLY:HA2	1.62	0.80
10:AJ:32:ALA:HB1	10:AJ:74:ILE:HG12	1.61	0.80
41:BG:15:VAL:HG22	41:BG:175:LEU:CD1	2.11	0.80
53:BU:75:ASN:ND2	53:BU:78:THR:OG1	2.12	0.80
54:BV:24:LYS:HA	54:BV:94:LEU:HD13	1.62	0.80
35:DA:192:C:H3'	35:DA:193:U:H5"	1.62	0.80
35:DA:1678:G:N2	35:DA:1989:G:H22	1.80	0.80
38:DD:44:ASN:HB3	38:DD:49:ILE:HA	1.61	0.80
51:DS:34:HIS:CD2	51:DS:54:LEU:HB2	2.16	0.80
35:BA:84:A:O4'	35:BA:103:A:N6	2.13	0.80
35:DA:2161:C:H2'	35:DA:2162:G:H2'	1.61	0.80
1:AA:147:G:N2	1:AA:176:C:O2	2.14	0.80
2:AB:142:LEU:CD2	2:AB:142:LEU:CB	2.59	0.80
3:AC:26:LYS:HD2	3:AC:26:LYS:H	1.45	0.80
9:CI:114:TYR:HE2	10:CJ:60:ARG:H	1.28	0.80
18:CR:84:LYS:O	18:CR:85:LEU:HD22	1.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:737:A:H2'	1:CA:738:C:H6	1.46	0.80
7:CG:113:GLU:HG3	7:CG:122:HIS:HE1	1.45	0.80
38:DD:180:GLY:HA3	38:DD:274:ARG:HD3	1.63	0.80
52:DT:16:ARG:NH1	52:DT:18:ASP:OD2	2.15	0.80
54:DV:70:ILE:HG13	54:DV:90:PRO:CB	2.12	0.80
57:DY:38:ILE:HA	57:DY:64:GLU:OE2	1.80	0.80
1:AA:186:C:H42	1:AA:191:G:H1	1.30	0.80
35:BA:1629:U:H5	35:BA:1637:A:N1	1.79	0.80
54:BV:8:GLY:HA3	54:BV:23:GLU:HG3	1.62	0.80
55:BW:64:MET:HA	55:BW:109:GLU:OE2	1.81	0.80
6:AF:89:MET:SD	18:AR:76:LEU:HD11	2.22	0.80
38:BD:183:ARG:HB2	38:BD:270:ILE:HG22	1.63	0.80
20:CT:40:ALA:HA	20:CT:43:LEU:HG	1.62	0.80
20:CT:40:ALA:HB3	20:CT:55:ILE:HG21	1.63	0.80
1:AA:71:C:N4	1:AA:98:G:O6	2.15	0.80
1:AA:1320:C:N3	19:AS:36:ARG:HD2	1.97	0.80
2:AB:188:ALA:HB1	2:AB:192:SER:HB2	1.63	0.80
10:AJ:61:GLU:OE2	14:AN:45:ARG:NH1	2.16	0.80
35:BA:2791:C:O2'	35:BA:2792:G:OP2	1.99	0.80
35:DA:1173:G:H5'	35:DA:1174:A:OP2	1.82	0.80
8:AH:104:ARG:HG2	8:AH:104:ARG:O	1.81	0.79
35:BA:186:G:N1	35:BA:210:C:H5	1.80	0.79
36:BB:40:U:H2'	36:BB:43:C:OP2	1.81	0.79
53:BU:92:ARG:O	53:BU:94:ASN:N	2.16	0.79
35:DA:854:G:H5'	35:DA:855:G:OP2	1.82	0.79
48:DP:47:ASP:HB3	48:DP:48:PRO:O	1.82	0.79
28:B3:39:ASP:O	28:B3:44:ARG:NH2	2.15	0.79
10:CJ:27:ALA:HB1	10:CJ:74:ILE:HD12	1.63	0.79
27:D2:53:LEU:HD22	35:DA:72:U:C4'	2.11	0.79
38:DD:69:ARG:NH2	38:DD:128:GLY:O	2.16	0.79
53:DU:98:LEU:C	53:DU:100:VAL:H	1.89	0.79
56:DX:29:TRP:CZ3	56:DX:76:ARG:HD2	2.17	0.79
1:AA:1452:C:H1'	1:AA:1456:G:OP1	1.83	0.79
35:BA:2566:A:H61	47:BO:29:ASN:HD21	1.27	0.79
38:BD:110:GLY:O	38:BD:112:GLN:OE1	2.00	0.79
35:DA:1434:A:H61	35:DA:1558:A:H62	1.30	0.79
10:AJ:33:GLN:HG3	10:AJ:74:ILE:HD11	1.65	0.79
31:B6:26:ASN:HB3	35:BA:2286:A:H2	1.46	0.79
35:BA:259:G:H2'	35:BA:621:A:O2'	1.83	0.79
35:BA:2768:C:O2'	46:BN:89:LYS:NZ	2.15	0.79
36:BB:114:C:H4'	51:BS:46:VAL:HG22	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:683:G:H21	11:CK:38:ASN:HB2	1.47	0.79
12:CL:89:ARG:HH12	12:CL:95:GLY:H	1.30	0.79
20:CT:72:LEU:HB2	20:CT:76:ALA:HB1	1.64	0.79
27:D2:11:GLU:OE1	27:D2:14:ARG:HD2	1.81	0.79
9:AI:71:SER:HA	9:AI:74:ILE:HD12	1.64	0.79
42:BH:124:GLU:OE2	42:BH:132:ARG:NH1	2.16	0.79
43:BI:88:ILE:HG22	43:BI:90:GLY:H	1.44	0.79
5:CE:8:GLU:OE1	5:CE:63:ARG:NH2	2.16	0.79
35:DA:71:A:OP2	35:DA:71:A:H3'	1.81	0.79
35:DA:863:A:OP1	49:DQ:21:THR:HB	1.81	0.79
35:DA:1042:G:H1'	35:DA:1114:G:H22	1.48	0.79
35:BA:2542:A:O2'	35:BA:2543:G:O5'	1.99	0.79
42:BH:44:VAL:HG12	42:BH:45:VAL:H	1.48	0.79
46:BN:14:VAL:HA	46:BN:135:PRO:HD2	1.65	0.79
48:BP:40:SER:OG	48:BP:40:SER:O	1.96	0.79
2:CB:187:LEU:HA	2:CB:201:ILE:HG13	1.63	0.79
35:DA:1593:G:H2'	35:DA:1594:G:H8	1.47	0.79
57:DY:53:PRO:HA	57:DY:56:PRO:HD3	1.65	0.79
11:AK:92:GLU:CD	18:AR:88:LYS:HZ2	1.91	0.79
38:BD:44:ASN:CB	38:BD:49:ILE:HA	2.13	0.79
35:DA:768:G:O2'	35:DA:1379:A:N6	2.14	0.79
1:AA:177:C:H2'	1:AA:178:C:H6	1.47	0.79
35:BA:708:C:H42	35:BA:723:G:H1	1.29	0.79
1:CA:1025:U:H2'	1:CA:1026:G:H8	1.46	0.79
25:D0:7:LEU:HD13	49:DQ:83:MET:SD	2.23	0.79
33:D8:25:MET:O	33:D8:47:LYS:NZ	2.15	0.79
56:DX:54:VAL:HG13	56:DX:77:LYS:HG3	1.64	0.79
1:AA:187:C:H5"	20:AT:86:ARG:HG3	1.65	0.79
30:B5:22:HIS:O	30:B5:24:ALA:N	2.15	0.79
35:BA:1651:G:H5'	50:BR:39:PRO:HG2	1.64	0.79
1:CA:1182:G:H4'	1:CA:1183:A:H5"	1.65	0.79
35:DA:2124:G:N2	37:DC:40:THR:OG1	2.16	0.79
35:DA:2791:C:H4'	35:DA:2792:G:H5'	1.62	0.79
1:AA:147:G:N1	1:AA:176:C:N3	2.31	0.79
40:BF:22:ALA:HA	40:BF:26:ALA:HB2	1.64	0.79
1:CA:865:A:H2	1:CA:918:A:H4'	1.48	0.79
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HG12	1.65	0.79
13:CM:24:GLY:HA3	13:CM:66:LEU:HD22	1.65	0.79
33:D8:50:LEU:HD12	33:D8:51:ALA:N	1.98	0.79
35:DA:1286:A:O2'	35:DA:1288:U:OP2	1.99	0.79
41:BG:51:ARG:HH12	41:BG:53:LEU:HD23	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:72:VAL:HG21	54:BV:88:ARG:NH1	1.98	0.78
1:CA:217:C:O2'	1:CA:470:C:N4	2.16	0.78
35:DA:857:C:H42	35:DA:920:G:H1	1.30	0.78
51:DS:24:LEU:HB3	51:DS:85:VAL:HG23	1.63	0.78
1:AA:1347:G:C8	9:AI:107:ARG:HB3	2.18	0.78
35:BA:1070:A:H2'	35:BA:1097:U:H5'	1.65	0.78
54:BV:40:LEU:CD1	54:BV:41:GLY:H	1.96	0.78
1:CA:1239:A:H62	1:CA:1299:A:H62	1.30	0.78
35:DA:882:G:H22	35:DA:894:C:H42	1.31	0.78
35:DA:1279:G:N2	35:DA:1291:C:O2	2.15	0.78
54:DV:3:ALA:HB1	54:DV:38:LEU:HD21	1.64	0.78
56:DX:84:ALA:O	56:DX:86:GLY:N	2.16	0.78
2:AB:18:GLY:H	2:AB:204:ASN:HB2	1.47	0.78
19:AS:36:ARG:HD3	19:AS:72:GLY:HA3	1.66	0.78
35:BA:1782:C:H1'	35:BA:2609:U:H5'	1.63	0.78
3:CC:141:VAL:HG11	3:CC:202:ILE:HD13	1.65	0.78
35:DA:2553:G:H5"	35:DA:2554:U:OP2	1.83	0.78
56:DX:21:PHE:HE1	56:DX:26:TYR:CD2	2.00	0.78
10:AJ:39:PRO:HA	10:AJ:70:ARG:HA	1.64	0.78
33:B8:4:MET:HE3	35:BA:666:G:H1'	1.65	0.78
1:CA:376:G:H2'	1:CA:377:G:H8	1.47	0.78
23:CW:52:G:H1	23:CW:62:C:H42	1.32	0.78
35:DA:7:G:H2'	35:DA:8:A:C8	2.19	0.78
35:DA:1210:A:H8	35:DA:1210:A:H5'	1.48	0.78
35:DA:2190:G:H2'	35:DA:2191:G:H8	1.48	0.78
54:DV:36:PRO:HD2	54:DV:60:GLU:O	1.83	0.78
1:AA:1160:G:N7	1:AA:1176:A:N6	2.30	0.78
35:BA:83:G:O2'	35:BA:84:A:OP2	2.00	0.78
51:BS:97:ARG:HH22	51:BS:100:ALA:HB2	1.45	0.78
1:CA:69:G:N2	1:CA:100:C:O2	2.16	0.78
1:CA:737:A:H2'	1:CA:738:C:C6	2.17	0.78
27:D2:49:LYS:CD	27:D2:54:LYS:HZ1	1.96	0.78
35:DA:34:C:O2'	35:DA:35:G:H5'	1.84	0.78
56:DX:26:TYR:OH	56:DX:89:ILE:HG13	1.83	0.78
8:AH:63:LEU:HD13	8:AH:64:LYS:H	1.48	0.78
26:B1:16:ASN:HB2	26:B1:44:PRO:HG2	1.65	0.78
32:B7:5:TRP:NE1	35:BA:464:U:OP1	2.16	0.78
35:BA:881:G:N2	35:BA:898:C:N3	2.31	0.78
1:CA:339:C:OP2	47:DO:97:ARG:NH1	2.17	0.78
1:CA:1296:C:H5'	1:CA:1297:C:OP2	1.83	0.78
31:D6:12:GLU:HA	31:D6:23:THR:HG22	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:2:ARG:NH2	50:DR:5:LYS:HE3	1.97	0.78
4:AD:122:ARG:NH1	4:AD:136:PRO:CD	2.06	0.78
35:BA:1798:U:H5'	38:BD:259:THR:HG22	1.64	0.78
48:BP:125:VAL:HG12	48:BP:144:GLU:HB2	1.64	0.78
35:DA:157:U:O2'	35:DA:158:U:OP2	2.01	0.78
46:DN:65:LYS:NZ	46:DN:68:GLU:HB3	1.99	0.78
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.66	0.78
48:BP:62:LEU:CD1	48:BP:62:LEU:C	2.57	0.78
55:BW:52:GLU:O	55:BW:54:ALA:N	2.15	0.78
26:B1:26:ARG:HA	26:B1:34:THR:HG23	1.66	0.78
34:B9:35:ARG:NE	34:B9:37:GLY:OXT	2.16	0.78
36:BB:44:G:O2'	36:BB:47:C:N4	2.16	0.78
35:DA:630:G:N2	35:DA:633:A:OP2	2.17	0.78
35:DA:1162:G:H21	54:DV:91:TYR:HE1	1.31	0.78
46:DN:41:ASP:O	53:DU:64:ARG:NH2	2.17	0.78
35:BA:541:C:H42	35:BA:551:G:H1	1.31	0.78
58:BZ:30:ASN:O	58:BZ:32:HIS:N	2.17	0.78
1:CA:78:G:N2	1:CA:90:U:O2	2.15	0.78
1:CA:574:A:H5"	1:CA:575:G:OP2	1.84	0.78
1:CA:1436:U:OP1	20:CT:23:ARG:NH2	2.16	0.78
39:DE:179:GLU:HB3	39:DE:181:LEU:HD23	1.65	0.78
52:DT:92:GLY:O	52:DT:94:ALA:N	2.17	0.78
48:BP:27:HIS:C	48:BP:29:LYS:H	1.92	0.77
13:CM:102:ARG:HH11	13:CM:105:THR:HG23	1.49	0.77
34:D9:14:CYS:HA	34:D9:27:CYS:HB3	1.65	0.77
35:DA:2250:G:C6	49:DQ:82:ARG:HD3	2.19	0.77
35:DA:2688:U:H5	35:DA:2720:U:OP2	1.66	0.77
47:DO:26:LYS:HB3	47:DO:30:ALA:HB2	1.64	0.77
56:DX:12:VAL:HG11	56:DX:27:THR:HG23	1.65	0.77
1:AA:426:G:OP1	4:AD:36:ARG:NH2	2.15	0.77
5:AE:37:ARG:HH12	5:AE:111:GLU:HG2	1.48	0.77
32:B7:9:ARG:NH2	35:BA:1310:G:OP2	2.17	0.77
35:BA:2700:C:H42	35:BA:2707:G:H1	1.33	0.77
1:CA:659:U:H2'	1:CA:660:G:H8	1.50	0.77
35:DA:674:G:O2'	40:DF:74:ARG:HG3	1.84	0.77
26:B1:88:LYS:O	26:B1:90:ILE:N	2.17	0.77
48:BP:57:THR:HG22	48:BP:59:LEU:H	1.48	0.77
52:BT:83:ILE:HG13	52:BT:84:GLN:H	1.49	0.77
35:DA:153:C:H2'	35:DA:154:G:C8	2.19	0.77
35:DA:1219:G:OP2	53:DU:19:LYS:HE3	1.84	0.77
35:DA:1778:U:H2'	35:DA:1784:A:N6	1.99	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DB:5:C:H42	36:DB:116:G:H1	1.28	0.77
1:AA:929:G:H1	1:AA:1388:C:H42	1.32	0.77
23:AW:28:G:O6	23:AW:42:C:N4	2.18	0.77
35:BA:182:A:N3	35:BA:433:C:O2'	2.17	0.77
16:CP:45:THR:HG22	16:CP:47:ASP:H	1.49	0.77
42:DH:9:ILE:HG12	42:DH:69:ARG:NH2	2.00	0.77
48:DP:85:LEU:HD22	48:DP:116:GLY:HA2	1.65	0.77
57:DY:39:VAL:HG23	57:DY:40:GLU:H	1.48	0.77
10:AJ:5:ARG:HG2	10:AJ:71:LEU:HD11	1.66	0.77
35:BA:1447:G:H4'	35:BA:1546:C:N4	1.98	0.77
47:BO:68:GLU:HB3	47:BO:78:ARG:HB2	1.66	0.77
38:DD:142:VAL:HA	38:DD:194:GLY:H	1.49	0.77
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.66	0.77
38:BD:206:LEU:HD22	38:BD:211:ARG:HG2	1.67	0.77
42:BH:41:MET:HG2	42:BH:54:ARG:HA	1.66	0.77
46:BN:42:TRP:HA	46:BN:48:MET:HE1	1.66	0.77
47:BO:115:VAL:HG23	47:BO:117:LEU:H	1.50	0.77
35:DA:2032:G:H21	39:DE:146:THR:HG23	1.49	0.77
35:DA:2723:C:H5'	50:DR:5:LYS:HE2	1.65	0.77
37:DC:18:LYS:N	37:DC:220:PRO:O	2.17	0.77
1:AA:346:G:OP1	52:BT:41:ARG:NH2	2.16	0.77
26:B1:53:VAL:HG21	26:B1:74:VAL:HG21	1.66	0.77
35:BA:2779:U:H4'	35:BA:2780:G:H5"	1.64	0.77
13:CM:23:TYR:CD2	13:CM:67:GLU:HA	2.16	0.77
31:D6:16:CYS:SG	31:D6:48:VAL:HG22	2.24	0.77
35:DA:379:G:N1	35:DA:395:U:O2	2.16	0.77
35:DA:1771:C:O2'	35:DA:1786:A:H8	1.68	0.77
38:DD:141:VAL:HG12	38:DD:164:GLN:HG3	1.67	0.77
39:DE:24:THR:HG21	39:DE:188:VAL:HG12	1.65	0.77
47:DO:7:TYR:HE1	47:DO:20:MET:HE3	1.49	0.77
58:DZ:108:PRO:HD3	58:DZ:116:VAL:HA	1.67	0.77
1:AA:952:U:O4	13:AM:104:ARG:NH2	2.16	0.77
31:B6:30:THR:OG1	31:B6:31:PRO:HD3	1.85	0.77
51:BS:67:ARG:HA	51:BS:98:VAL:HG11	1.66	0.77
54:BV:61:VAL:HB	54:BV:99:ILE:HB	1.66	0.77
55:BW:51:LEU:HG	55:BW:107:LEU:HD13	1.65	0.77
1:CA:1160:G:O6	1:CA:1181:G:N1	2.17	0.77
52:DT:8:LYS:HD2	52:DT:8:LYS:N	1.98	0.77
36:BB:85:G:H2'	36:BB:86:G:H5"	1.67	0.77
52:BT:109:GLU:HG2	52:BT:112:ARG:HH12	1.50	0.77
25:D0:7:LEU:CD1	49:DQ:83:MET:SD	2.73	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2461:C:H42	35:DA:2489:G:H1	1.33	0.77
5:AE:48:ALA:HB2	5:AE:57:LYS:HD3	1.66	0.77
43:BI:38:LEU:H	43:BI:38:LEU:HD12	1.49	0.77
58:BZ:143:GLY:O	58:BZ:144:LEU:HD22	1.84	0.77
22:CV:71:C:H3'	22:CV:72:A:H5"	1.68	0.77
49:DQ:16:ARG:HH12	49:DQ:18:LYS:HG3	1.50	0.77
51:DS:89:ARG:HD2	51:DS:93:LYS:HG3	1.67	0.77
35:BA:597:U:O2'	48:BP:15:ARG:NH2	2.18	0.76
50:BR:20:LEU:HA	50:BR:23:ASN:HB2	1.65	0.76
1:CA:690:G:O6	11:CK:51:LYS:NZ	2.17	0.76
1:CA:1316:G:N2	1:CA:1319:A:OP2	2.16	0.76
1:AA:1009:G:N2	1:AA:1021:G:O2'	2.15	0.76
1:AA:1166:G:H21	1:AA:1171:G:N2	1.83	0.76
4:AD:187:ARG:NH2	4:AD:193:ASP:OD2	2.18	0.76
35:BA:1558:A:H4'	35:BA:1559:G:H5'	1.67	0.76
40:BF:178:PRO:HB3	40:BF:201:VAL:HG11	1.67	0.76
1:CA:342:C:N4	1:CA:347:G:O6	2.18	0.76
27:D2:49:LYS:HD2	27:D2:54:LYS:NZ	2.00	0.76
35:DA:414:C:O2	35:DA:1864:U:O2'	2.03	0.76
35:DA:1092:C:H1'	35:DA:1101:U:C5	2.19	0.76
35:BA:1494:A:H4'	35:BA:1494:A:OP2	1.84	0.76
35:DA:1042:G:H1	35:DA:1112:G:H22	1.33	0.76
38:DD:31:LYS:O	38:DD:34:VAL:N	2.17	0.76
43:DI:77:LEU:HD21	43:DI:101:LEU:HD13	1.66	0.76
1:AA:1101:A:OP2	2:AB:96:ARG:NH2	2.18	0.76
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.68	0.76
2:AB:51:LEU:O	2:AB:54:THR:OG1	2.02	0.76
13:AM:17:VAL:HG22	13:AM:27:LYS:HE3	1.68	0.76
49:BQ:21:THR:HG23	58:BZ:78:LYS:HG3	1.65	0.76
49:BQ:97:VAL:HG11	49:BQ:103:MET:HE3	1.68	0.76
51:BS:64:GLU:HA	51:BS:67:ARG:HD3	1.67	0.76
1:CA:580:U:N3	1:CA:761:G:O6	2.18	0.76
1:CA:1002:G:H8	1:CA:1002:G:OP2	1.69	0.76
10:CJ:40:LEU:HG	10:CJ:69:ASN:HB3	1.67	0.76
28:D3:2:PRO:HA	28:D3:38:GLU:HA	1.67	0.76
35:DA:18:C:O3'	53:DU:23:GLY:HA2	1.85	0.76
35:DA:90:U:O2'	35:DA:92:A:OP2	2.01	0.76
1:AA:202:U:O2'	1:AA:203:U:O5'	2.01	0.76
2:AB:52:GLU:N	2:AB:52:GLU:OE2	2.19	0.76
39:BE:1:MET:HB3	39:BE:200:GLU:OE2	1.85	0.76
28:D3:1:MET:HB2	28:D3:3:ARG:HH11	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:548:A:N6	54:DV:95:LEU:HD21	2.01	0.76
35:DA:1143:A:OP1	46:DN:25:ARG:NH2	2.18	0.76
38:DD:4:LYS:HE3	38:DD:20:ASP:HA	1.67	0.76
48:DP:105:LEU:O	48:DP:106:LEU:HB2	1.86	0.76
46:BN:58:ASP:O	46:BN:60:ILE:N	2.19	0.76
56:BX:32:PRO:HA	56:BX:75:ASP:OD1	1.85	0.76
56:BX:35:THR:HG23	56:BX:36:LYS:H	1.51	0.76
35:DA:1486:A:H2'	35:DA:1487:G:H8	1.50	0.76
1:AA:983:A:N1	1:AA:1222:G:N2	2.32	0.76
1:AA:1090:U:N3	1:AA:1095:U:O4	2.15	0.76
35:BA:1575:C:H2'	35:BA:1576:U:O2	1.86	0.76
40:BF:132:VAL:O	40:BF:134:GLY:N	2.18	0.76
54:BV:33:VAL:HG12	54:BV:63:GLY:HA2	1.67	0.76
55:BW:88:ARG:NH1	55:BW:94:ASP:OD2	2.19	0.76
57:BY:17:SER:HB2	57:BY:71:LYS:HE2	1.65	0.76
2:CB:100:GLY:O	2:CB:104:ASN:N	2.17	0.76
33:D8:46:ARG:HH22	48:DP:65:ARG:CZ	1.98	0.76
47:DO:7:TYR:CE1	47:DO:20:MET:HE3	2.21	0.76
1:AA:363:A:OP2	12:AL:34:ARG:NH1	2.19	0.76
1:AA:1040:U:H2'	1:AA:1041:A:H8	1.49	0.76
1:AA:1392:G:H21	1:AA:1502:A:H8	1.32	0.76
35:BA:1048:A:N6	35:BA:1107:G:O6	2.19	0.76
35:BA:2810:A:C2'	39:BE:61:ARG:HH11	1.99	0.76
36:BB:90:A:H2'	36:BB:91:C:H5'	1.68	0.76
50:BR:6:SER:C	50:BR:8:ARG:HH22	1.94	0.76
5:CE:41:VAL:HG13	5:CE:113:ALA:HA	1.68	0.76
8:CH:7:ALA:HB2	8:CH:85:ARG:HD3	1.68	0.76
26:D1:40:ARG:HG3	35:DA:2081:C:H5"	1.66	0.76
39:DE:201:THR:HG22	39:DE:202:LYS:H	1.50	0.76
40:DF:152:GLU:HB3	40:DF:190:GLU:HG2	1.66	0.76
49:DQ:5:ARG:HH21	49:DQ:5:ARG:HG3	1.50	0.76
57:DY:81:LYS:NZ	57:DY:97:ARG:O	2.15	0.76
26:B1:44:PRO:HG2	26:B1:45:ASN:H	1.51	0.76
35:BA:998:C:OP2	53:BU:58:ARG:NH2	2.18	0.76
46:BN:60:ILE:HD12	46:BN:99:LEU:HD21	1.67	0.76
51:BS:73:LEU:HD12	51:BS:106:ARG:HD2	1.68	0.76
53:BU:50:ARG:O	53:BU:54:LYS:CE	2.32	0.76
1:CA:574:A:O2'	1:CA:882:C:O2'	2.03	0.76
26:D1:47:GLN:HG2	35:DA:2230:G:H1'	1.66	0.76
35:DA:1464:C:HO2'	35:DA:1528:A:H8	0.79	0.76
46:DN:1:MET:SD	46:DN:2:LYS:N	2.58	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:189(C):C:O2	1:AA:189(H):G:N2	2.19	0.76
1:AA:1314:C:OP2	19:AS:6:LYS:HE3	1.86	0.76
4:AD:122:ARG:HH12	4:AD:136:PRO:CG	1.99	0.76
7:AG:15:ASP:HA	7:AG:24:THR:HG23	1.66	0.76
30:B5:46:CYS:SG	30:B5:49:CYS:HB2	2.25	0.76
35:BA:1210:A:H5'	35:BA:1210:A:H8	1.50	0.76
50:BR:6:SER:O	50:BR:8:ARG:NH2	2.19	0.76
35:DA:2172:U:H5"	35:DA:2174:C:OP2	1.85	0.76
36:DB:89:G:N7	36:DB:90:A:N6	2.30	0.76
42:DH:44:VAL:O	42:DH:46:GLU:N	2.17	0.76
54:DV:66:ARG:NH2	54:DV:68:LYS:HA	2.00	0.76
54:DV:70:ILE:HG13	54:DV:90:PRO:HB2	1.66	0.76
9:AI:96:LEU:HB3	9:AI:102:LEU:HG	1.67	0.75
26:B1:17:SER:O	26:B1:44:PRO:HG3	1.85	0.75
35:BA:389:G:H1	48:BP:71:VAL:CG1	1.99	0.75
35:BA:2699:C:H41	35:BA:2708:G:N2	1.84	0.75
35:BA:2713:A:H4'	35:BA:2713:A:OP2	1.85	0.75
54:BV:66:ARG:NE	54:BV:94:LEU:HG	2.01	0.75
11:CK:51:LYS:HG2	11:CK:55:LYS:HZ3	1.51	0.75
26:D1:32:LYS:HB3	26:D1:33:LYS:HZ3	1.51	0.75
26:D1:37:ILE:HG21	35:DA:2080:G:P	2.27	0.75
33:D8:30:ARG:O	33:D8:32:LEU:N	2.19	0.75
42:DH:40:GLU:HG3	42:DH:55:PRO:HG2	1.67	0.75
48:DP:70:GLN:HB2	48:DP:71:VAL:HG12	1.68	0.75
4:AD:47:ARG:H	4:AD:47:ARG:HD2	1.50	0.75
25:B0:39:ARG:NH2	35:BA:2363:C:O2	2.18	0.75
35:BA:2666:C:H5"	35:BA:2667:C:OP2	1.84	0.75
46:BN:30:ILE:C	46:BN:34:LEU:HD13	2.10	0.75
35:DA:1056:G:HO2'	35:DA:1086:A:N6	1.84	0.75
49:DQ:109:VAL:CG1	49:DQ:113:GLN:HB2	2.16	0.75
57:DY:57:GLN:CD	57:DY:57:GLN:H	1.92	0.75
1:AA:215:U:OP2	1:AA:215:U:H4'	1.85	0.75
1:AA:654:G:H8	1:AA:654:G:OP2	1.68	0.75
1:AA:1445:C:H1'	1:AA:1458:G:N2	2.02	0.75
2:AB:71:VAL:HG23	2:AB:93:VAL:HG21	1.67	0.75
38:BD:44:ASN:HB2	38:BD:48:ARG:O	1.87	0.75
51:BS:100:ALA:O	51:BS:102:ALA:N	2.20	0.75
25:D0:7:LEU:HD13	49:DQ:83:MET:CG	2.16	0.75
27:D2:53:LEU:HD22	35:DA:72:U:O4'	1.86	0.75
35:DA:1488:G:H5'	35:DA:1489:U:OP2	1.86	0.75
35:DA:2360:A:O2'	35:DA:2361:A:O5'	2.04	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:53:VAL:HG13	9:AI:95:LYS:CD	2.15	0.75
25:B0:11:ARG:O	25:B0:14:ARG:NH2	2.20	0.75
13:CM:36:LYS:O	13:CM:38:GLY:N	2.17	0.75
35:DA:1494:A:H3'	35:DA:1494:A:N3	2.01	0.75
1:AA:1342:C:H1'	9:AI:124:GLN:OE1	1.87	0.75
12:AL:82:VAL:HG12	12:AL:105:TYR:CG	2.21	0.75
23:AW:8:U:O4	23:AW:13:C:N4	2.19	0.75
49:BQ:43:THR:H	49:BQ:46:GLN:HE21	1.34	0.75
1:CA:1022:G:O6	1:CA:1024:G:N2	2.19	0.75
19:CS:33:THR:OG1	19:CS:34:TRP:N	2.14	0.75
23:CY:24:G:O2'	23:CY:25:C:O4'	2.05	0.75
35:DA:412:A:H8	35:DA:412:A:OP2	1.70	0.75
35:DA:645:C:H5'	35:DA:646:A:OP2	1.86	0.75
39:DE:63:LEU:O	39:DE:65:GLY:N	2.20	0.75
48:DP:145:PRO:O	48:DP:146:VAL:HG13	1.87	0.75
3:AC:131:ARG:NH1	5:AE:50:GLU:OE2	2.17	0.75
35:BA:943:U:OP2	48:BP:38:GLN:CB	2.33	0.75
49:BQ:108:GLY:CA	58:BZ:116:VAL:HG11	2.17	0.75
51:BS:90:GLY:O	51:BS:92:TYR:N	2.20	0.75
35:DA:1057:A:H3'	35:DA:1058:G:H3'	1.68	0.75
35:DA:2294:C:O2	35:DA:2338:G:N2	2.19	0.75
1:AA:656:C:H2'	15:AO:28:GLN:HE21	1.49	0.75
1:AA:1005:A:OP2	1:AA:1025:U:N3	2.19	0.75
3:AC:40:ARG:HG2	3:AC:55:VAL:HG21	1.67	0.75
18:AR:50:ILE:HD11	18:AR:70:ILE:HG21	1.68	0.75
25:B0:23:VAL:HG21	35:BA:857:C:H4'	1.68	0.75
35:BA:1688:U:H1'	35:BA:1701:A:C6	2.21	0.75
56:BX:32:PRO:HG3	56:BX:72:LYS:HD2	1.69	0.75
1:CA:406:G:N2	1:CA:437:U:O2	2.20	0.75
1:CA:1285:A:H4'	1:CA:1286:A:H5'	1.67	0.75
35:DA:2766:G:H5"	35:DA:2767:C:OP2	1.86	0.75
54:DV:21:ARG:HG2	54:DV:95:LEU:HD13	1.68	0.75
2:AB:167:PRO:HB2	2:AB:196:LEU:HD11	1.67	0.75
13:AM:14:ARG:HE	13:AM:42:ALA:HA	1.50	0.75
35:BA:1487:G:O6	35:BA:1502:C:N4	2.19	0.75
36:BB:3:C:H42	36:BB:118:G:H1	1.33	0.75
39:BE:9:VAL:HG22	39:BE:25:VAL:O	1.86	0.75
40:BF:10:PRO:HA	40:BF:128:ALA:HB2	1.66	0.75
1:CA:484:G:O2'	1:CA:485:G:OP2	2.04	0.75
48:DP:9:ASN:H	48:DP:10:PRO:HD3	1.50	0.75
57:DY:81:LYS:HD2	57:DY:97:ARG:HB3	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:7:VAL:HG11	41:BG:115:ARG:HD3	1.67	0.75
26:B1:20:ARG:HH11	26:B1:39:LYS:HA	1.51	0.75
31:B6:15:GLU:CD	31:B6:18:ARG:HD3	2.12	0.75
57:BY:76:CYS:SG	57:BY:77:PRO:HD2	2.26	0.75
1:CA:1445:C:N4	1:CA:1457:G:O6	2.18	0.75
18:CR:40:LEU:HD22	18:CR:79:LEU:HD11	1.69	0.75
18:CR:69:THR:HA	18:CR:72:ARG:HG3	1.69	0.75
23:CW:51:U:O2'	23:CW:52:G:O4'	2.03	0.75
35:DA:2402:C:H5'	35:DA:2403:C:OP2	1.87	0.75
39:DE:128:SER:OG	39:DE:129:HIS:N	2.15	0.75
48:DP:95:VAL:HG22	48:DP:125:VAL:HA	1.68	0.75
54:DV:73:SER:OG	54:DV:74:LYS:N	2.09	0.75
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HB	1.66	0.74
10:AJ:95:GLU:N	10:AJ:95:GLU:OE2	2.20	0.74
12:AL:27:LEU:HD23	12:AL:27:LEU:H	1.52	0.74
19:AS:15:LEU:HD12	19:AS:18:LYS:HB2	1.67	0.74
37:BC:82:LYS:HD2	37:BC:86:ALA:HB2	1.67	0.74
22:CV:55:U:H5'	22:CV:56:C:OP2	1.85	0.74
38:DD:68:LYS:HB3	38:DD:70:TRP:CH2	2.22	0.74
49:DQ:55:VAL:HG12	49:DQ:64:ILE:HD12	1.69	0.74
51:DS:99:LYS:HD2	51:DS:99:LYS:H	1.51	0.74
35:BA:139:G:C5'	56:BX:41:ASN:HB3	2.17	0.74
35:BA:879:G:N1	35:BA:899:A:N1	2.35	0.74
35:BA:1501:C:H5'	35:BA:1502:C:OP2	1.87	0.74
35:BA:1589:C:H5'	35:BA:1590:U:OP2	1.87	0.74
48:BP:80:TYR:HA	48:BP:111:ARG:CB	2.16	0.74
8:CH:103:VAL:HG21	8:CH:110:ALA:HB2	1.69	0.74
23:CW:29:G:N2	23:CW:43:C:O2	2.20	0.74
35:DA:675:A:N6	35:DA:803:U:O2	2.19	0.74
41:DG:16:ARG:HB3	41:DG:17:PRO:HD3	1.68	0.74
56:DX:77:LYS:HD3	56:DX:77:LYS:C	2.12	0.74
1:AA:565:U:OP2	1:AA:566:G:O2'	2.04	0.74
1:AA:1000:U:O2	1:AA:1042:G:N2	2.20	0.74
41:BG:83:ARG:O	41:BG:85:GLY:N	2.21	0.74
42:BH:85:LYS:NZ	42:BH:141:VAL:O	2.19	0.74
1:CA:736:C:H2'	1:CA:737:A:H8	1.52	0.74
26:D1:53:VAL:HG11	26:D1:74:VAL:HG21	1.69	0.74
56:DX:27:THR:HB	56:DX:78:LYS:HB3	1.68	0.74
1:AA:348:G:H2'	1:AA:349:A:H5'	1.69	0.74
7:AG:46:ALA:HB1	7:AG:121:ALA:HB2	1.69	0.74
13:AM:65:LYS:HB3	13:AM:70:LEU:HB2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:152:GLU:HB3	40:BF:190:GLU:OE1	1.87	0.74
47:BO:7:TYR:HE1	47:BO:20:MET:HE3	1.52	0.74
1:CA:1140:C:H2'	1:CA:1142:G:OP2	1.86	0.74
5:CE:43:LEU:HD21	5:CE:132:ALA:HB1	1.69	0.74
20:CT:10:LEU:HG	20:CT:12:ALA:H	1.52	0.74
40:DF:148:LEU:HD21	40:DF:191:ARG:HE	1.51	0.74
53:DU:92:ARG:NH1	53:DU:95:LEU:HB2	2.02	0.74
32:B7:40:TRP:HD1	35:BA:459:U:H5'	1.51	0.74
56:BX:25:LYS:HG3	56:BX:26:TYR:H	1.53	0.74
41:DG:110:ALA:HB1	41:DG:140:ILE:HD12	1.69	0.74
43:DI:107:VAL:HG12	43:DI:108:THR:H	1.52	0.74
1:AA:69:G:H2'	1:AA:70:G:H8	1.53	0.74
8:AH:104:ARG:HD3	8:AH:107:LEU:HB2	1.69	0.74
35:BA:272(I):U:H3	35:BA:363(A):A:N6	1.84	0.74
35:BA:598:G:O5'	48:BP:14:LYS:NZ	2.17	0.74
35:BA:1339:G:H21	35:BA:1603:A:H1'	1.51	0.74
38:BD:42:GLY:O	38:BD:43:ARG:HG3	1.87	0.74
1:CA:29:G:H1	1:CA:554:C:H42	1.36	0.74
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.23	0.74
33:D8:36:LYS:NZ	35:DA:2347:C:OP2	2.20	0.74
39:DE:47:VAL:HG21	39:DE:86:PRO:HD3	1.69	0.74
42:DH:89:ILE:HD11	42:DH:129:THR:HB	1.69	0.74
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.66	0.74
58:BZ:19:ARG:NH1	58:BZ:84:GLU:O	2.20	0.74
42:DH:144:VAL:HA	42:DH:147:ASN:HB2	1.67	0.74
1:AA:450:G:OP1	16:AP:43:LYS:NZ	2.21	0.74
1:AA:1003:G:N7	1:AA:1039:C:N4	2.36	0.74
23:AW:51:U:N3	23:AW:63:G:O6	2.19	0.74
23:AY:28:G:O6	23:AY:29:G:N2	2.21	0.74
35:BA:615:G:OP1	40:BF:40:GLN:NE2	2.21	0.74
48:BP:15:ARG:HA	48:BP:15:ARG:NE	2.03	0.74
48:BP:130:PHE:HD2	48:BP:135:LEU:HD21	1.52	0.74
1:CA:1366:C:H2'	1:CA:1367:C:H6	1.52	0.74
16:CP:8:ARG:HB2	16:CP:28:ARG:NH2	2.01	0.74
27:D2:22:GLU:O	27:D2:26:ARG:HG2	1.88	0.74
33:D8:28:GLY:O	33:D8:30:ARG:N	2.20	0.74
39:DE:19:ARG:HA	47:DO:73:ASP:HA	1.68	0.74
46:DN:136:GLU:HG2	46:DN:137:LYS:HG3	1.68	0.74
48:DP:130:PHE:HZ	48:DP:145:PRO:HD2	1.51	0.74
35:BA:2791:C:N4	35:BA:2893:G:N7	2.36	0.74
36:BB:15:A:H5'	36:BB:16:G:H8	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:21:ALA:O	40:BF:23:ASP:N	2.21	0.74
2:CB:140:HIS:HA	2:CB:143:GLU:HG2	1.70	0.74
8:CH:21:LYS:O	8:CH:65:TYR:OH	2.06	0.74
35:DA:1568:G:OP2	38:DD:63:ARG:NH2	2.20	0.74
41:DG:71:THR:N	41:DG:89:GLY:O	2.20	0.74
1:AA:1086:U:H3	1:AA:1099:G:H22	1.36	0.74
12:AL:82:VAL:HG12	12:AL:105:TYR:CB	2.18	0.74
35:BA:542:C:C4	35:BA:543:C:H1'	2.22	0.74
36:BB:80:U:H2'	36:BB:81:G:H21	1.52	0.74
46:BN:15:LEU:HD21	46:BN:55:VAL:HG23	1.70	0.74
47:BO:66:LYS:HG3	47:BO:80:ASP:HA	1.69	0.74
1:AA:832:C:O2'	1:AA:833:U:O5'	2.05	0.73
1:AA:1504:G:H5"	1:AA:1505:G:H5'	1.69	0.73
35:BA:1247:A:OP1	40:BF:95:ARG:NH2	2.18	0.73
40:BF:127:GLU:O	40:BF:129:PHE:N	2.18	0.73
1:CA:1240:U:OP2	7:CG:116:ALA:N	2.20	0.73
27:D2:26:ARG:NH2	27:D2:29:LYS:HD3	2.02	0.73
1:AA:1279:A:OP2	10:AJ:9:ARG:NH2	2.20	0.73
35:BA:271(J):C:O2'	35:BA:271(K):U:OP1	2.06	0.73
35:BA:947:G:H2'	35:BA:948:G:C8	2.23	0.73
42:BH:102:ALA:HB2	42:BH:117:PRO:HD3	1.69	0.73
43:BI:10:GLU:O	43:BI:12:LEU:N	2.19	0.73
56:BX:52:VAL:HG21	56:BX:82:GLN:HG3	1.70	0.73
2:CB:102:LEU:HB2	2:CB:176:GLU:HG3	1.68	0.73
33:D8:30:ARG:HH12	35:DA:2394:C:N4	1.85	0.73
35:DA:1654:A:OP1	50:DR:3:HIS:HB2	1.87	0.73
1:AA:920:U:H2'	1:AA:921:U:H6	1.51	0.73
12:AL:27:LEU:HD11	12:AL:60:LEU:HB3	1.69	0.73
35:BA:2563:U:N3	35:BA:2566:A:OP2	2.14	0.73
35:BA:2882:A:P	50:BR:96:ARG:HH21	2.12	0.73
38:BD:43:ARG:HH11	38:BD:44:ASN:ND2	1.85	0.73
38:BD:181:GLU:HA	38:BD:272:ALA:HB3	1.70	0.73
39:BE:179:GLU:HB3	39:BE:181:LEU:HD23	1.69	0.73
48:BP:6:LEU:O	48:BP:9:ASN:HB2	1.87	0.73
53:BU:90:VAL:O	53:BU:92:ARG:N	2.20	0.73
35:DA:579:G:H2'	35:DA:580:C:C6	2.23	0.73
40:DF:192:LEU:HD21	40:DF:194:MET:HE3	1.70	0.73
52:DT:100:TYR:HB3	52:DT:103:ARG:HD2	1.69	0.73
52:BT:51:ARG:HG3	52:BT:98:LYS:HG3	1.69	0.73
54:BV:63:GLY:HA3	54:BV:97:LYS:HE3	1.70	0.73
7:CG:145:ALA:O	7:CG:146:GLU:HB2	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D1:94:LEU:HD23	26:D1:95:LEU:H	1.53	0.73
31:D6:27:LYS:HD3	35:DA:2286:A:OP1	1.88	0.73
35:DA:2349:G:H5"	35:DA:2350:C:OP2	1.88	0.73
10:AJ:56:HIS:NE2	10:AJ:58:ASP:O	2.21	0.73
11:AK:122:LYS:HE3	11:AK:124:LYS:HB2	1.71	0.73
1:CA:341:C:H42	1:CA:348:G:H1	1.36	0.73
43:DI:124:GLY:H	43:DI:142:VAL:HG22	1.53	0.73
48:DP:71:VAL:HG22	48:DP:72:PRO:HD3	1.69	0.73
52:DT:39:ARG:HA	52:DT:39:ARG:NE	2.03	0.73
57:DY:101:LYS:HZ2	57:DY:102:CYS:HB3	1.54	0.73
1:AA:673:G:H2'	1:AA:674:G:C8	2.22	0.73
1:AA:979:C:H2'	1:AA:980:C:H5'	1.70	0.73
1:AA:1312:G:H1	1:AA:1325:C:H42	1.36	0.73
2:AB:122:PHE:O	2:AB:127:ILE:HG13	1.87	0.73
35:BA:389:G:H1	48:BP:71:VAL:HG12	1.52	0.73
58:BZ:45:ASP:O	58:BZ:47:VAL:N	2.22	0.73
7:CG:113:GLU:HG3	7:CG:122:HIS:CE1	2.23	0.73
35:DA:548:A:H61	54:DV:95:LEU:HD21	1.54	0.73
36:DB:87:G:H3'	36:DB:88:C:H5"	1.71	0.73
41:DG:161:THR:HG22	41:DG:163:ALA:H	1.53	0.73
48:DP:66:GLY:O	48:DP:68:GLN:N	2.21	0.73
1:AA:1279:A:O2'	1:AA:1281:U:OP2	2.05	0.73
35:BA:729:G:OP2	38:BD:13:ARG:NH2	2.22	0.73
35:BA:2032:G:OP2	35:BA:2454:G:O2'	2.04	0.73
51:BS:20:ARG:NH2	51:BS:21:THR:OG1	2.21	0.73
52:BT:28:VAL:O	52:BT:29:ARG:HB2	1.89	0.73
58:BZ:99:TYR:HB3	58:BZ:123:ASP:HB3	1.70	0.73
35:DA:389:G:H22	48:DP:71:VAL:HG11	1.51	0.73
1:AA:1251:A:H5"	9:AI:12:GLU:OE2	1.89	0.73
2:AB:101:MET:SD	2:AB:102:LEU:N	2.61	0.73
10:AJ:56:HIS:CD2	10:AJ:57:LYS:H	2.07	0.73
10:AJ:57:LYS:HD3	10:AJ:60:ARG:HH12	1.54	0.73
10:AJ:74:ILE:CG1	10:AJ:75:ILE:H	2.02	0.73
47:BO:4:PRO:O	47:BO:5:GLN:HB2	1.89	0.73
52:BT:50:ILE:HG13	52:BT:62:THR:HG23	1.69	0.73
1:CA:434:U:H2'	1:CA:435:C:C6	2.24	0.73
7:CG:93:PRO:HA	7:CG:96:GLN:HB3	1.70	0.73
35:DA:1022:G:H22	35:DA:1142(A):A:H2	1.35	0.73
35:DA:1040:C:O2'	35:DA:1041:C:OP2	2.06	0.73
38:DD:11:PRO:O	38:DD:13:ARG:N	2.20	0.73
19:AS:11:VAL:HG22	19:AS:12:ASP:H	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:43:TYR:CD1	26:B1:45:ASN:ND2	2.56	0.73
35:BA:1092:C:N4	35:BA:1100:C:N3	2.36	0.73
41:BG:106:LEU:HG	41:BG:111:LEU:CD1	2.19	0.73
1:CA:651:C:H2'	1:CA:652:U:H6	1.53	0.73
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.18	0.73
13:CM:30:ALA:C	13:CM:32:GLU:H	1.97	0.73
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.54	0.73
30:D5:34:PRO:HD2	30:D5:35:GLU:OE2	1.87	0.73
1:AA:1018:C:H2'	1:AA:1019:C:H4'	1.70	0.73
1:AA:1154:G:O2'	1:AA:1155:G:OP1	2.06	0.73
35:BA:1430:C:H2'	35:BA:1431:U:H6	1.53	0.73
47:BO:11:ALA:HB3	47:BO:85:VAL:HG23	1.71	0.73
52:BT:16:ARG:HD3	52:BT:19:LEU:HD11	1.71	0.73
1:CA:406:G:O3'	4:CD:3:ARG:NH1	2.22	0.73
25:D0:71:ASP:O	25:D0:73:GLY:N	2.21	0.73
27:D2:32:LEU:O	27:D2:34:GLU:N	2.21	0.73
35:DA:620:G:H4'	35:DA:621:A:H5"	1.70	0.73
35:DA:2250:G:C4	49:DQ:82:ARG:HD3	2.23	0.73
48:DP:67:MET:O	48:DP:69:GLY:N	2.22	0.73
1:AA:559:A:H4'	1:AA:560:U:H5"	1.71	0.72
23:AY:40:C:H6	23:AY:40:C:O5'	1.72	0.72
1:CA:156:G:H1	1:CA:165:C:H42	1.33	0.72
26:D1:72:GLU:OE2	26:D1:95:LEU:HD23	1.88	0.72
47:DO:71:ARG:NH2	47:DO:122:LEU:OXT	2.22	0.72
48:DP:101:VAL:HG12	48:DP:106:LEU:HB3	1.69	0.72
52:DT:53:ARG:HB2	52:DT:60:THR:HG22	1.71	0.72
1:AA:67:C:O2'	1:AA:171:A:N1	2.21	0.72
1:AA:410:G:N1	1:AA:431:A:OP2	2.22	0.72
7:AG:31:MET:SD	7:AG:35:LYS:N	2.62	0.72
30:B5:46:CYS:HB2	30:B5:51:TYR:CE1	2.24	0.72
35:BA:245:G:N1	35:BA:253:C:H5	1.86	0.72
35:BA:600:G:H1	35:BA:657:U:H3	1.34	0.72
35:BA:1889:A:O2'	35:BA:2087:G:H5'	1.90	0.72
35:BA:2107:C:N4	35:BA:2182:G:H1	1.84	0.72
35:BA:2537:U:H2'	35:BA:2538:C:C6	2.24	0.72
35:BA:2801:A:H2'	35:BA:2895:U:H1'	1.69	0.72
38:BD:11:PRO:HA	38:BD:14:ARG:NH2	2.03	0.72
2:CB:27:LYS:HB3	2:CB:194:PRO:HD2	1.71	0.72
27:D2:23:LYS:HD2	56:DX:5:TYR:OH	1.89	0.72
29:D4:28:LYS:O	29:D4:30:GLU:N	2.22	0.72
35:DA:827:U:H4'	35:DA:828:U:O5'	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DB:87:G:H5”	36:DB:88:C:OP2	1.88	0.72
35:BA:71:A:H3’	35:BA:71:A:OP2	1.88	0.72
35:BA:1630:G:H1	35:BA:1636:C:H42	1.37	0.72
40:BF:40:GLN:HG2	40:BF:184:TYR:HB2	1.71	0.72
49:BQ:43:THR:H	49:BQ:46:GLN:NE2	1.86	0.72
57:BY:46:LYS:HG2	57:BY:63:LYS:H	1.54	0.72
2:CB:231:GLU:HB3	2:CB:232:PRO:HD3	1.70	0.72
35:DA:404:C:H4’	35:DA:405:U:H5’	1.72	0.72
35:DA:2349:G:H3’	35:DA:2350:C:H5”	1.71	0.72
50:DR:13:HIS:CD2	50:DR:16:HIS:H	2.07	0.72
1:AA:702:A:H5’	35:BA:1848:A:H1’	1.69	0.72
4:AD:122:ARG:HH12	4:AD:136:PRO:HD3	0.56	0.72
1:CA:1216:G:OP1	14:CN:4:LYS:HE2	1.88	0.72
35:DA:2102:U:H5	35:DA:2187:G:H1	1.37	0.72
39:DE:67:PHE:CD2	39:DE:70:ALA:HA	2.24	0.72
43:DI:74:ASN:O	43:DI:75:LEU:HD12	1.90	0.72
58:DZ:94:GLU:OE2	58:DZ:95:PRO:HD2	1.89	0.72
1:AA:1067:A:O2’	1:AA:1068:G:OP2	2.04	0.72
7:AG:69:VAL:HG22	7:AG:135:VAL:HG22	1.69	0.72
35:BA:1740:G:O2’	35:BA:1741:A:O5’	2.06	0.72
39:BE:111:ARG:HA	50:BR:3:HIS:CE1	2.25	0.72
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.71	0.72
16:CP:20:VAL:HG23	16:CP:35:LYS:HA	1.72	0.72
35:DA:58:G:P	56:DX:72:LYS:HB3	2.29	0.72
35:DA:534:U:H5’	53:DU:42:ALA:HB1	1.72	0.72
57:DY:96:ILE:HD11	57:DY:98:VAL:HG12	1.71	0.72
2:AB:193:ASP:OD1	2:AB:196:LEU:HD23	1.89	0.72
35:BA:1156:A:OP1	53:BU:55:ARG:NH2	2.22	0.72
35:BA:1681:G:HO2’	35:BA:1762:A:HO2’	1.31	0.72
35:BA:1985:G:C2’	35:BA:1986:A:H5”	2.19	0.72
35:DA:270:A:OP2	35:DA:271(X):G:N2	2.22	0.72
36:DB:91:C:H5’	49:DQ:18:LYS:HA	1.70	0.72
46:DN:74:ARG:HD2	46:DN:101:HIS:CE1	2.25	0.72
1:AA:411:A:H2’	1:AA:413:G:H5’	1.72	0.72
14:AN:41:ARG:HG3	14:AN:42:ILE:HG12	1.72	0.72
26:B1:32:LYS:NZ	26:B1:33:LYS:H	1.88	0.72
35:BA:2306:C:H5’	35:BA:2307:G:H2’	1.69	0.72
35:BA:2340:G:H2’	35:BA:2341:G:H8	1.55	0.72
58:BZ:30:ASN:N	58:BZ:33:LEU:O	2.18	0.72
27:D2:46:GLN:HA	27:D2:46:GLN:HE21	1.52	0.72
48:DP:61:ARG:O	48:DP:62:LEU:HB3	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.04	0.72
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.23	0.72
54:BV:70:ILE:HB	54:BV:90:PRO:HB2	1.72	0.72
55:BW:11:ARG:NH1	55:BW:99:ARG:O	2.22	0.72
1:CA:1286:A:H2'	1:CA:1287:A:H4'	1.72	0.72
26:D1:40:ARG:HE	35:DA:2081:C:P	2.12	0.72
30:D5:3:LYS:O	30:D5:5:PRO:HD3	1.90	0.72
54:DV:64:HIS:HB2	54:DV:95:LEU:O	1.88	0.72
1:AA:862:C:H1'	1:AA:874:G:H4'	1.71	0.72
1:AA:973:G:O3'	14:AN:41:ARG:NH2	2.22	0.72
23:AW:20:U:H5"	23:AW:21:A:OP2	1.89	0.72
35:BA:2203:U:H1'	38:BD:151:LYS:HE2	1.70	0.72
49:BQ:43:THR:HG22	49:BQ:46:GLN:CD	2.14	0.72
57:BY:27:VAL:HG13	57:BY:28:LYS:N	1.96	0.72
5:CE:25:ARG:HA	5:CE:25:ARG:HE	1.55	0.72
5:CE:80:ILE:HD12	5:CE:138:ALA:HB1	1.70	0.72
30:D5:3:LYS:C	30:D5:5:PRO:HD3	2.14	0.72
49:DQ:15:GLY:HA3	49:DQ:17:LEU:HD23	1.70	0.72
1:AA:1040:U:H2'	1:AA:1041:A:C8	2.25	0.72
14:AN:6:LEU:HB3	14:AN:23:ARG:NH2	2.05	0.72
27:B2:53:LEU:HB2	27:B2:54:LYS:HD2	1.71	0.72
40:BF:4:VAL:HG12	40:BF:17:ARG:HD2	1.71	0.72
41:BG:15:VAL:HG22	41:BG:175:LEU:HD13	1.72	0.72
41:BG:41:GLN:NE2	41:BG:154:GLY:O	2.23	0.72
44:BJ:21:UNK:C	44:BJ:23:UNK:H	2.01	0.72
52:BT:93:ARG:HG3	52:BT:115:ARG:HB2	1.70	0.72
2:CB:162:ILE:HD11	2:CB:177:ALA:HB2	1.72	0.72
35:DA:2593:U:H2'	35:DA:2594:C:C6	2.25	0.72
36:DB:48:A:O2'	51:DS:95:HIS:HE1	1.73	0.72
1:AA:189(L):G:H2'	1:AA:190:U:C6	2.24	0.71
1:AA:838:G:N2	1:AA:849:C:H1'	2.05	0.71
1:AA:1189:C:OP1	14:AN:58:LYS:NZ	2.22	0.71
35:BA:64:A:H2'	35:BA:65:C:H6	1.55	0.71
35:BA:2319:G:N7	51:BS:8:GLU:HB2	2.04	0.71
35:BA:2636:U:H4'	39:BE:80:GLU:OE2	1.90	0.71
48:BP:71:VAL:O	48:BP:73:GLY:N	2.23	0.71
49:BQ:22:LYS:HG3	49:BQ:24:GLY:H	1.54	0.71
27:D2:26:ARG:NH2	56:DX:9:LEU:O	2.22	0.71
35:DA:610:G:N2	35:DA:618:C:O2	2.19	0.71
35:DA:1889:A:H5'	35:DA:1890:A:OP2	1.90	0.71
48:DP:27:HIS:CD2	48:DP:28:GLY:N	2.58	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:127:ALA:H	48:DP:145:PRO:CG	2.03	0.71
50:DR:58:GLY:HA2	50:DR:80:PHE:HE1	1.54	0.71
52:DT:107:ASP:HB2	52:DT:109:GLU:H	1.54	0.71
1:AA:1358:U:OP2	14:AN:35:ARG:NH2	2.23	0.71
35:BA:995:C:OP2	53:BU:54:LYS:HG3	1.90	0.71
35:BA:2177:C:O3'	37:BC:46:LYS:HE3	1.90	0.71
48:BP:40:SER:O	48:BP:41:ARG:NH2	2.22	0.71
48:BP:61:ARG:HG3	48:BP:63:PRO:HB3	1.72	0.71
51:BS:19:LYS:O	51:BS:19:LYS:HG3	1.89	0.71
1:CA:1048:G:OP1	14:CN:3:ARG:NH1	2.23	0.71
1:CA:1195:C:H41	3:CC:1:MET:HG3	1.55	0.71
22:CV:53:G:H2'	22:CV:54:U:H6	1.54	0.71
35:DA:11:G:H22	35:DA:2628:C:P	2.13	0.71
35:DA:643:A:N1	35:DA:2369:A:O2'	2.22	0.71
38:DD:35:LYS:NZ	38:DD:35:LYS:O	2.22	0.71
2:AB:212:GLN:O	2:AB:216:SER:OG	2.05	0.71
3:AC:8:ILE:O	3:AC:11:ARG:N	2.24	0.71
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.72	0.71
35:BA:1022:G:O2'	35:BA:1024:G:O6	2.07	0.71
39:BE:4:ILE:HG12	39:BE:28:ALA:HB1	1.72	0.71
11:CK:98:LEU:O	11:CK:101:SER:OG	2.04	0.71
19:CS:6:LYS:HG2	19:CS:7:LYS:HG3	1.72	0.71
31:D6:26:ASN:HD21	31:D6:28:ARG:HH21	1.38	0.71
35:DA:17:G:H4'	53:DU:25:TRP:CZ3	2.25	0.71
35:DA:143:G:H1'	56:DX:38:GLU:HG3	1.72	0.71
35:DA:1177:A:H3'	35:DA:1177:A:OP2	1.89	0.71
41:DG:115:ARG:HD2	41:DG:116:ASP:N	2.05	0.71
51:DS:27:SER:HA	51:DS:88:ASP:HB3	1.72	0.71
52:DT:80:SER:HB2	52:DT:81:PRO:HD2	1.71	0.71
1:AA:10:A:OP2	5:AE:126:ARG:HG2	1.91	0.71
1:AA:340:U:O4	1:AA:349:A:N6	2.17	0.71
1:AA:1252:A:H61	1:AA:1285:A:H61	1.34	0.71
35:BA:663:G:OP1	48:BP:20:GLY:HA3	1.90	0.71
57:BY:9:LYS:O	57:BY:27:VAL:HG11	1.90	0.71
24:CX:14:A:H2	24:CX:15:A:C4	2.08	0.71
34:D9:4:ARG:O	34:D9:36:GLN:HA	1.91	0.71
35:DA:529:A:H62	35:DA:2041:U:H3	1.39	0.71
35:DA:1901:A:OP2	38:DD:255:LYS:HE2	1.90	0.71
1:AA:974:A:OP2	14:AN:41:ARG:NH1	2.22	0.71
10:AJ:49:VAL:HG22	14:AN:41:ARG:HB2	1.71	0.71
35:BA:71:A:H5"	35:BA:73:A:C8	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:61:ARG:HG3	39:BE:62:PRO:HD2	1.71	0.71
40:BF:42:ALA:C	40:BF:44:ARG:H	1.99	0.71
40:BF:84:VAL:HB	40:BF:86:GLY:O	1.90	0.71
42:BH:92:ILE:O	42:BH:94:TYR:N	2.23	0.71
53:BU:61:TRP:O	53:BU:65:ILE:HD12	1.90	0.71
53:BU:102:GLU:HB3	54:BV:43:GLU:HG3	1.72	0.71
4:CD:196:LEU:H	4:CD:196:LEU:HD12	1.55	0.71
35:DA:1038:C:H42	35:DA:1117:G:H1	1.39	0.71
35:DA:1798:U:H5'	38:DD:259:THR:CG2	2.20	0.71
52:DT:78:LEU:HB3	52:DT:79:HIS:CD2	2.26	0.71
2:AB:131:PRO:O	2:AB:133:LYS:N	2.24	0.71
12:AL:27:LEU:HD13	12:AL:62:SER:OG	1.89	0.71
37:BC:22:ILE:CG2	37:BC:25:ALA:HB2	2.20	0.71
56:BX:44:GLU:O	56:BX:49:VAL:N	2.23	0.71
1:CA:455:C:H42	1:CA:476:G:H1	1.38	0.71
1:CA:651:C:H2'	1:CA:652:U:C6	2.26	0.71
1:CA:685:G:O2'	1:CA:686:U:H5'	1.89	0.71
35:DA:1104:C:C4	35:DA:1105:U:H2'	2.25	0.71
40:DF:101:LEU:HD12	40:DF:102:PRO:HD2	1.71	0.71
54:DV:66:ARG:HD3	54:DV:66:ARG:C	2.16	0.71
55:DW:6:ILE:HG12	55:DW:104:THR:HG23	1.73	0.71
56:DX:36:LYS:O	56:DX:38:GLU:N	2.23	0.71
56:DX:36:LYS:HG2	56:DX:38:GLU:HG2	1.72	0.71
1:AA:192:U:H2'	1:AA:193:C:C6	2.25	0.71
1:AA:1351:U:O2	1:AA:1371:G:N1	2.19	0.71
2:AB:42:ILE:HG21	2:AB:203:GLY:HA2	1.71	0.71
2:AB:178:ARG:HH21	8:AH:68:ARG:HH22	1.36	0.71
17:AQ:29:HIS:CD2	17:AQ:30:PRO:HD2	2.25	0.71
35:BA:485:C:H42	35:BA:495:G:H1	1.38	0.71
35:BA:2699:C:H41	35:BA:2708:G:H1	1.38	0.71
39:BE:13:ARG:HD2	39:BE:20:ALA:HB1	1.72	0.71
48:BP:27:HIS:HB2	48:BP:29:LYS:HG2	1.73	0.71
54:BV:75:PHE:HB2	54:BV:87:HIS:CG	2.26	0.71
3:CC:141:VAL:HG11	3:CC:202:ILE:CD1	2.20	0.71
19:CS:6:LYS:HD3	19:CS:7:LYS:HD3	1.72	0.71
31:D6:26:ASN:ND2	31:D6:28:ARG:HH21	1.89	0.71
31:D6:35:GLU:HB3	31:D6:51:GLU:HG2	1.71	0.71
48:DP:122:PRO:HA	48:DP:141:ALA:O	1.90	0.71
57:DY:43:ASN:HD22	57:DY:44:ILE:H	1.38	0.71
1:AA:1249:C:O2	9:AI:70:LYS:HE2	1.91	0.71
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.18	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:12:PRO:HD2	26:B1:62:VAL:HG23	1.71	0.71
26:B1:92:LYS:HG2	26:B1:93:GLU:H	1.56	0.71
35:BA:1778:U:H2'	35:BA:1784:A:N6	2.05	0.71
43:BI:45:LYS:O	43:BI:48:GLU:N	2.24	0.71
1:CA:975:A:H4'	1:CA:976:G:H5"	1.73	0.71
19:CS:61:TYR:O	19:CS:62:ILE:HB	1.91	0.71
49:DQ:75:THR:HG22	49:DQ:86:GLY:HA3	1.73	0.71
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.25	0.71
38:BD:260:ARG:NH2	38:BD:266:SER:HB2	2.04	0.71
48:BP:33:ARG:HD3	48:BP:36:LYS:HE3	1.73	0.71
52:BT:3:ARG:HD3	52:BT:6:LEU:HD22	1.71	0.71
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.73	0.71
22:CV:3:C:H42	22:CV:70:G:H1	1.38	0.71
30:D5:3:LYS:CE	30:D5:5:PRO:HD2	2.19	0.71
30:D5:3:LYS:CE	30:D5:5:PRO:HD3	2.18	0.71
4:CD:8:VAL:HG23	4:CD:9:CYS:H	1.56	0.71
11:CK:22:HIS:HB3	11:CK:29:ILE:CG2	2.20	0.71
12:CL:27:LEU:HD13	12:CL:64:TYR:HE1	1.56	0.71
17:CQ:28:PRO:HA	17:CQ:34:LYS:HA	1.71	0.71
35:DA:981:A:N1	35:DA:2027:G:O2'	2.22	0.71
35:DA:2661:G:OP2	35:DA:2661:G:C8	2.44	0.71
57:DY:90:LEU:HD12	57:DY:91:GLU:HB2	1.72	0.71
1:AA:1226:C:N4	13:AM:104:ARG:HD3	2.05	0.70
1:AA:1321:C:H3'	1:AA:1322:C:H5"	1.72	0.70
2:AB:179:LYS:HA	8:AH:72:PRO:HG3	1.73	0.70
13:AM:54:VAL:HA	13:AM:57:ARG:HB3	1.72	0.70
30:B5:29:THR:HG21	35:BA:2815:C:H5'	1.74	0.70
54:BV:25:LEU:H	54:BV:94:LEU:HD22	1.55	0.70
55:BW:29:LEU:O	55:BW:33:ARG:HB2	1.90	0.70
1:CA:1095:U:P	1:CA:1108:G:H1	2.13	0.70
35:DA:879:G:C2	35:DA:899:A:H1'	2.26	0.70
46:DN:4:TYR:HB2	53:DU:64:ARG:HH12	1.52	0.70
56:DX:21:PHE:CE1	56:DX:26:TYR:CD2	2.79	0.70
11:AK:19:ALA:HB3	11:AK:82:VAL:HG22	1.73	0.70
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	1.72	0.70
35:BA:2811:G:H4'	39:BE:61:ARG:HD3	1.73	0.70
27:D2:26:ARG:HG3	56:DX:5:TYR:HB3	1.73	0.70
32:D7:40:TRP:CD2	35:DA:459:U:H5"	2.25	0.70
41:DG:71:THR:HG22	41:DG:89:GLY:HA3	1.72	0.70
7:AG:20:ASP:HB3	7:AG:23:VAL:HG23	1.72	0.70
7:AG:57:GLU:O	7:AG:59:LEU:N	2.23	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:46:LYS:NZ	12:AL:94:PRO:HB3	2.07	0.70
35:BA:660:G:H21	48:BP:15:ARG:HG2	1.57	0.70
38:BD:148:GLU:HB2	38:BD:151:LYS:HG3	1.72	0.70
2:CB:25:ASN:O	2:CB:27:LYS:N	2.24	0.70
27:D2:59:ARG:HA	27:D2:59:ARG:NE	2.05	0.70
35:DA:2312:U:H2'	35:DA:2313:C:H5"	1.71	0.70
38:DD:108:PRO:HG3	38:DD:143:HIS:CE1	2.26	0.70
40:DF:53:THR:HG23	40:DF:55:GLY:H	1.56	0.70
1:AA:1001(A):G:N2	1:AA:1040:U:O2	2.22	0.70
4:AD:91:SER:HB2	4:AD:191:ARG:HD3	1.72	0.70
9:AI:48:GLU:H	9:AI:49:PRO:HD2	1.56	0.70
17:AQ:92:ARG:O	17:AQ:95:TYR:N	2.24	0.70
35:BA:1899:G:H1	35:BA:1902:C:H41	1.37	0.70
56:BX:30:VAL:HG23	56:BX:75:ASP:HB2	1.73	0.70
19:CS:45:VAL:HA	19:CS:62:ILE:HG23	1.72	0.70
35:DA:1331:A:HO2'	35:DA:1332:G:H8	1.37	0.70
1:AA:946:A:O2'	1:AA:1333:A:N3	2.21	0.70
2:AB:72:GLY:H	2:AB:93:VAL:HB	1.56	0.70
2:AB:132:LYS:HD3	2:AB:135:GLN:HB3	1.72	0.70
3:AC:40:ARG:HE	3:AC:55:VAL:CG2	2.04	0.70
35:BA:133:C:H42	35:BA:145:G:H1	1.38	0.70
1:CA:96:U:O2'	1:CA:97:G:OP2	2.08	0.70
1:CA:1260:C:H5'	1:CA:1284:C:H4'	1.72	0.70
13:CM:99:ARG:HB2	13:CM:101:GLN:HE22	1.54	0.70
14:CN:8:GLU:O	14:CN:11:LYS:N	2.25	0.70
27:D2:21:LEU:HD21	27:D2:51:ARG:HE	1.54	0.70
35:DA:1251:C:OP2	53:DU:10:ARG:HB2	1.90	0.70
35:DA:1256:G:H5'	35:DA:1257:C:OP2	1.91	0.70
35:DA:2276:G:H4'	49:DQ:85:LYS:HE3	1.73	0.70
50:DR:2:ARG:HG2	50:DR:3:HIS:H	1.56	0.70
58:DZ:10:ARG:HH21	58:DZ:26:GLY:H	1.37	0.70
1:AA:1136:U:H5"	1:AA:1137:C:H5"	1.73	0.70
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.26	0.70
27:B2:12:GLU:O	27:B2:54:LYS:HG3	1.92	0.70
35:BA:198:C:H2'	35:BA:199:A:H5"	1.73	0.70
46:BN:30:ILE:HG22	46:BN:34:LEU:CD1	2.21	0.70
48:BP:81:GLN:N	48:BP:111:ARG:HB3	2.05	0.70
2:CB:194:PRO:O	2:CB:196:LEU:N	2.24	0.70
24:CX:13:A:N6	24:CX:15:A:N7	2.38	0.70
27:D2:26:ARG:CG	56:DX:5:TYR:HB3	2.22	0.70
35:DA:1657:C:H2'	35:DA:1658:C:C6	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:122:ARG:NH1	4:AD:136:PRO:CG	2.53	0.70
42:BH:85:LYS:HE2	42:BH:145:ALA:HB2	1.72	0.70
43:BI:144:VAL:HG12	43:BI:145:VAL:HG23	1.72	0.70
54:BV:79:VAL:HG21	54:BV:82:ARG:HD3	1.73	0.70
58:BZ:27:VAL:HG12	58:BZ:87:ASP:HB3	1.74	0.70
1:CA:97:G:HO2'	1:CA:98:G:H8	1.39	0.70
2:CB:130:ARG:HB3	2:CB:134:GLU:HB2	1.72	0.70
13:CM:11:ARG:HH21	13:CM:12:ASN:HD21	1.38	0.70
17:CQ:19:VAL:HG23	17:CQ:44:ALA:HB3	1.72	0.70
42:DH:138:LYS:H	42:DH:141:VAL:HG23	1.55	0.70
56:DX:55:ASN:O	56:DX:77:LYS:HG2	1.91	0.70
12:AL:47:LYS:HD2	12:AL:48:PRO:HD3	1.74	0.70
32:B7:19:ARG:HG3	35:BA:126:A:OP2	1.92	0.70
35:BA:1677:A:H2'	35:BA:1678:G:H8	1.57	0.70
46:BN:66:LYS:O	46:BN:69:GLN:N	2.20	0.70
48:BP:111:ARG:HH11	48:BP:129:ALA:HB2	1.55	0.70
35:DA:1877:A:H8	35:DA:1877:A:OP2	1.75	0.70
39:DE:173:VAL:HB	39:DE:183:LEU:HB3	1.72	0.70
41:DG:147:ASP:OD1	41:DG:148:MET:N	2.25	0.70
50:DR:68:ARG:NH1	50:DR:69:ASP:OD2	2.25	0.70
52:DT:107:ASP:O	52:DT:110:ILE:HG22	1.91	0.70
1:AA:171:A:N1	1:AA:172:A:H8	1.89	0.70
1:AA:1244:C:H5	1:AA:1293:G:H22	1.40	0.70
12:AL:82:VAL:CG1	12:AL:105:TYR:HB3	2.20	0.70
28:B3:29:ARG:NH1	35:BA:1183:G:O3'	2.24	0.70
35:BA:810:U:H3	48:BP:36:LYS:HZ2	1.39	0.70
35:BA:849:A:H5"	35:BA:850:C:OP2	1.91	0.70
35:BA:1051:G:N7	35:BA:1052:C:N4	2.40	0.70
51:BS:97:ARG:C	51:BS:97:ARG:HH11	2.00	0.70
1:CA:1116:C:H2'	1:CA:1117:G:H5"	1.74	0.70
7:CG:129:GLU:HB3	7:CG:131:LYS:HG3	1.72	0.70
33:D8:43:GLN:O	33:D8:43:GLN:NE2	2.25	0.70
54:DV:80:GLN:HG3	54:DV:81:TYR:CE2	2.26	0.70
1:AA:280:C:H4'	1:AA:281:G:OP2	1.92	0.70
1:AA:1165:C:H2'	1:AA:1166:G:C4	2.27	0.70
9:AI:81:ILE:O	9:AI:83:ARG:N	2.24	0.70
20:AT:10:LEU:HD12	20:AT:12:ALA:H	1.56	0.70
20:AT:67:ALA:O	20:AT:73:HIS:ND1	2.25	0.70
35:BA:897:C:H1'	35:BA:898:C:OP2	1.92	0.70
41:BG:165:THR:OG1	41:BG:167:GLU:OE1	2.09	0.70
50:BR:79:LEU:O	50:BR:83:ILE:HG22	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:44:GLU:OE2	56:BX:50:LYS:CA	2.40	0.70
1:CA:923:A:O2'	1:CA:1399:C:OP2	2.09	0.70
1:CA:1194:U:H5"	1:CA:1195:C:OP2	1.92	0.70
21:CU:19:GLY:O	21:CU:21:TYR:N	2.25	0.70
25:D0:11:ARG:O	25:D0:14:ARG:NH2	2.25	0.70
35:DA:587:C:H2'	48:DP:33:ARG:HH11	1.56	0.70
25:B0:23:VAL:HA	25:B0:38:VAL:HG22	1.74	0.69
41:BG:51:ARG:CZ	41:BG:51:ARG:HA	2.21	0.69
1:CA:166:G:H2'	1:CA:167:G:H8	1.57	0.69
1:CA:1259:C:H5"	1:CA:1260:C:OP2	1.92	0.69
9:CI:28:VAL:HA	9:CI:63:ILE:O	1.90	0.69
35:DA:2394:C:OP1	48:DP:63:PRO:HD2	1.92	0.69
53:DU:92:ARG:CZ	53:DU:95:LEU:HB2	2.22	0.69
1:AA:175:C:H4'	20:AT:25:ARG:HD3	1.74	0.69
1:AA:1189:C:H5"	3:AC:5:ILE:HG12	1.74	0.69
9:AI:79:LEU:HD22	9:AI:83:ARG:HB2	1.74	0.69
15:AO:64:ARG:HD3	15:AO:88:ARG:HH12	1.56	0.69
35:BA:271(O):C:O2'	35:BA:271(P):C:OP2	2.09	0.69
36:BB:15:A:H5'	36:BB:16:G:C8	2.27	0.69
38:BD:111:LEU:C	38:BD:112:GLN:OE1	2.35	0.69
48:BP:40:SER:H	48:BP:41:ARG:HG2	1.57	0.69
1:CA:606:G:H1'	1:CA:632:A:H61	1.57	0.69
35:DA:84:A:H5'	57:DY:9:LYS:HB3	1.73	0.69
1:AA:748:C:H4'	1:AA:749:C:O5'	1.92	0.69
4:AD:43:HIS:O	4:AD:45:GLN:N	2.25	0.69
23:AW:15:G:H1	23:AW:48:C:H5	1.39	0.69
25:B0:46:LYS:HD2	25:B0:76:GLY:HA3	1.74	0.69
32:B7:40:TRP:HD1	35:BA:459:U:C5'	2.05	0.69
41:BG:143:GLU:OE1	41:BG:143:GLU:N	2.23	0.69
48:BP:85:LEU:HA	48:BP:88:LEU:HD23	1.74	0.69
2:CB:87:ARG:NH1	2:CB:220:ASP:OD1	2.25	0.69
35:DA:811:U:H3'	48:DP:25:SER:HA	1.75	0.69
35:DA:1529:G:H2'	35:DA:1530:C:H5	1.57	0.69
37:DC:78:ALA:HA	37:DC:82:LYS:HD2	1.75	0.69
39:DE:51:PHE:HD2	39:DE:52:LEU:HD12	1.58	0.69
48:DP:35:HIS:O	48:DP:36:LYS:HG3	1.93	0.69
52:DT:29:ARG:HE	52:DT:82:LEU:CD2	2.06	0.69
52:DT:106:SER:HB2	52:DT:110:ILE:HD12	1.72	0.69
56:DX:28:PHE:O	56:DX:76:ARG:HB2	1.92	0.69
4:AD:150:GLU:OE2	4:AD:153:ARG:HD2	1.92	0.69
8:AH:63:LEU:HD12	8:AH:65:TYR:CZ	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:102:ARG:HE	8:AH:105:ARG:HD3	1.56	0.69
13:AM:90:LEU:O	13:AM:93:ARG:N	2.24	0.69
35:BA:1335:U:H5"	56:BX:65:ARG:HH22	1.57	0.69
35:BA:1999:C:O2	35:BA:2687:U:O2'	2.10	0.69
35:BA:2094:G:P	43:BI:22:LYS:HD3	2.33	0.69
40:BF:8:GLN:HG3	40:BF:9:ILE:HG22	1.74	0.69
41:BG:15:VAL:HA	41:BG:175:LEU:HD12	1.74	0.69
43:BI:6:LEU:C	43:BI:15:VAL:HG23	2.17	0.69
27:D2:41:ILE:O	27:D2:43:GLN:N	2.26	0.69
35:DA:2393:A:H4'	48:DP:61:ARG:O	1.91	0.69
38:DD:267:SER:C	38:DD:269:PHE:H	2.00	0.69
40:DF:25:PRO:HG3	40:DF:119:ARG:HD3	1.74	0.69
48:DP:71:VAL:HG13	48:DP:72:PRO:CD	2.22	0.69
52:DT:8:LYS:HD2	52:DT:8:LYS:H	1.56	0.69
1:AA:598:U:H2'	1:AA:599:C:C6	2.26	0.69
1:AA:694:A:N6	1:AA:787:A:O2'	2.25	0.69
10:AJ:9:ARG:NH1	10:AJ:69:ASN:OD1	2.25	0.69
35:BA:1276:A:N1	35:BA:1294:U:H5	1.89	0.69
35:BA:2483:C:H5'	35:BA:2484:G:OP2	1.93	0.69
35:BA:2635:C:OP1	39:BE:77:ILE:HG21	1.92	0.69
35:BA:2693:A:H2'	35:BA:2694:G:H8	1.57	0.69
38:BD:14:ARG:HD3	38:BD:14:ARG:H	1.58	0.69
51:BS:20:ARG:CZ	51:BS:22:GLY:H	2.05	0.69
1:CA:974:A:OP2	14:CN:41:ARG:NH1	2.26	0.69
20:CT:73:HIS:O	20:CT:76:ALA:N	2.26	0.69
39:DE:92:THR:O	39:DE:95:ILE:HG13	1.92	0.69
42:DH:44:VAL:H	42:DH:46:GLU:CD	1.99	0.69
48:DP:23:PRO:HB2	48:DP:33:ARG:HG3	1.75	0.69
53:DU:92:ARG:NH2	53:DU:95:LEU:HB2	2.07	0.69
17:AQ:9:VAL:HG13	17:AQ:56:VAL:HG22	1.74	0.69
35:BA:81:G:H1	35:BA:82:G:H21	1.38	0.69
35:BA:1677:A:H2'	35:BA:1678:G:C8	2.27	0.69
49:BQ:44:ALA:HA	49:BQ:47:ILE:HB	1.72	0.69
18:CR:26:LEU:HD12	18:CR:27:GLY:N	2.07	0.69
23:CY:28:G:H2'	23:CY:29:G:H8	1.56	0.69
39:DE:61:ARG:H	39:DE:62:PRO:HD2	1.57	0.69
1:AA:1363(A):A:H1'	1:AA:1365:G:N7	2.08	0.69
7:AG:35:LYS:O	7:AG:37:ASN:N	2.25	0.69
33:B8:61:LEU:HG	35:BA:593:G:H4'	1.74	0.69
35:BA:1100:C:H5	35:BA:1101:U:C4	2.10	0.69
35:BA:1231:G:H2'	35:BA:1232:G:H8	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2483:C:N3	49:BQ:124:LYS:NZ	2.32	0.69
46:BN:13:TRP:HD1	46:BN:51:PHE:HB3	1.57	0.69
54:BV:69:LYS:NZ	54:BV:71:LEU:CG	2.56	0.69
1:CA:44:G:H1	1:CA:398:C:H42	1.40	0.69
36:DB:77:U:O2'	58:DZ:78:LYS:NZ	2.25	0.69
49:DQ:97:VAL:HG11	49:DQ:103:MET:HE3	1.74	0.69
50:DR:2:ARG:HB3	50:DR:5:LYS:HZ1	1.58	0.69
51:DS:28:VAL:HG21	51:DS:99:LYS:HZ3	1.57	0.69
55:DW:1:MET:HE3	55:DW:2:GLU:H	1.58	0.69
1:AA:79:G:O2'	1:AA:80:G:O5'	2.11	0.69
1:AA:782:A:OP1	1:AA:1521:G:N2	2.26	0.69
1:AA:1372:U:H5"	9:AI:71:SER:HB2	1.72	0.69
35:BA:797:C:OP2	40:BF:62:ARG:HG3	1.92	0.69
35:BA:882:G:H4'	35:BA:883:G:OP2	1.92	0.69
35:BA:1058:G:O6	35:BA:1080:C:N4	2.19	0.69
35:BA:1245:G:OP1	48:BP:16:ARG:HD2	1.92	0.69
35:BA:1532:C:H2'	35:BA:1533:G:N2	2.08	0.69
35:BA:2632:A:C4	39:BE:61:ARG:NH2	2.59	0.69
38:BD:273:ARG:HD2	38:BD:274:ARG:N	2.08	0.69
40:BF:20:LEU:HB3	40:BF:23:ASP:OD2	1.93	0.69
48:BP:79:ARG:O	48:BP:111:ARG:HB2	1.92	0.69
52:BT:29:ARG:HD3	52:BT:86:ILE:HG22	1.74	0.69
55:BW:80:PRO:O	55:BW:100:THR:CG2	2.40	0.69
58:BZ:45:ASP:OD1	58:BZ:46:LYS:N	2.24	0.69
1:CA:152:A:H5"	1:CA:153:C:OP2	1.92	0.69
1:CA:181:G:N2	1:CA:182:U:O4	2.25	0.69
1:CA:371:G:H5"	1:CA:372:C:OP2	1.92	0.69
1:CA:539:A:H2'	1:CA:540:G:C8	2.27	0.69
1:CA:736:C:H2'	1:CA:737:A:C8	2.27	0.69
11:CK:33:THR:HA	11:CK:39:PRO:HA	1.75	0.69
25:D0:82:ARG:O	25:D0:84:LEU:N	2.25	0.69
33:D8:29:LYS:HD2	33:D8:44:LYS:HB2	1.74	0.69
35:DA:2464:C:O2'	35:DA:2465:C:O5'	2.10	0.69
46:DN:73:THR:O	46:DN:75:TYR:N	2.26	0.69
1:AA:582:U:OP1	15:AO:68:ARG:NH2	2.25	0.69
1:AA:824:C:N4	1:AA:876:G:O6	2.15	0.69
1:AA:1502:A:H2	1:AA:1505:G:N1	1.91	0.69
3:AC:22:TRP:CH2	3:AC:32:LEU:HB3	2.28	0.69
35:BA:58:G:H5'	56:BX:72:LYS:HB3	1.74	0.69
4:CD:76:ARG:O	4:CD:78:LEU:N	2.25	0.69
16:CP:3:LYS:HG3	16:CP:24:ALA:HB2	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:D8:25:MET:CG	48:DP:64:LYS:HB2	2.22	0.69
1:AA:939:G:H5"	7:AG:102:ARG:HH22	1.56	0.69
1:AA:946:A:H2'	1:AA:947:G:C8	2.28	0.69
28:B3:4:LEU:HD22	28:B3:39:ASP:OD1	1.93	0.69
33:B8:13:ARG:HH21	48:BP:61:ARG:HA	1.56	0.69
34:B9:16:VAL:HG11	35:BA:1032:A:O3'	1.92	0.69
35:BA:813:U:OP2	48:BP:26:GLY:HA2	1.93	0.69
39:BE:173:VAL:HG22	39:BE:183:LEU:HB3	1.74	0.69
49:BQ:50:ALA:HA	49:BQ:125:LEU:HD13	1.74	0.69
7:CG:93:PRO:HB2	7:CG:94:ARG:NH2	2.08	0.69
27:D2:34:GLU:N	27:D2:34:GLU:OE2	2.26	0.69
35:DA:34:C:O2'	35:DA:35:G:OP1	2.10	0.69
35:DA:255:A:O2'	35:DA:384:U:OP1	2.11	0.69
1:AA:912:C:OP1	12:AL:46:LYS:NZ	2.25	0.68
7:AG:26:PHE:CD1	7:AG:30:ILE:HD11	2.28	0.68
35:BA:2818:G:H1	35:BA:2828:C:H42	1.39	0.68
58:BZ:45:ASP:O	58:BZ:48:PHE:N	2.20	0.68
7:CG:54:THR:O	7:CG:56:GLN:N	2.25	0.68
19:CS:32:LYS:HA	19:CS:50:ALA:HB3	1.75	0.68
33:D8:33:ASN:O	33:D8:34:TRP:HB2	1.93	0.68
35:DA:185:U:H4'	35:DA:218:A:H4'	1.74	0.68
1:AA:1133:G:N2	1:AA:1134:G:O6	2.26	0.68
29:B4:6:HIS:HA	41:BG:67:LYS:HG3	1.74	0.68
30:B5:54:GLY:HA2	50:BR:33:ARG:HH12	1.58	0.68
35:BA:1485:G:H2'	35:BA:1486:A:H8	1.58	0.68
35:BA:1584:C:H4'	35:BA:1586:A:OP2	1.93	0.68
39:BE:49:LEU:O	39:BE:78:LEU:HA	1.93	0.68
53:BU:27:LEU:O	53:BU:29:SER:N	2.26	0.68
19:CS:44:MET:N	19:CS:44:MET:SD	2.66	0.68
23:CW:37:A:H3'	23:CW:38:A:H8	1.58	0.68
35:DA:2331:G:O2'	35:DA:2336:A:N1	2.24	0.68
40:DF:10:PRO:HG2	40:DF:127:GLU:HB3	1.74	0.68
41:DG:139:LEU:HD21	41:DG:149:VAL:HG11	1.74	0.68
4:AD:122:ARG:HA	4:AD:122:ARG:NE	2.08	0.68
6:AF:89:MET:SD	18:AR:76:LEU:CD1	2.81	0.68
7:AG:111:ARG:HH22	7:AG:123:GLU:HG2	1.58	0.68
25:B0:27:GLU:HB3	35:BA:856:C:H1'	1.75	0.68
26:B1:16:ASN:N	26:B1:16:ASN:OD1	2.24	0.68
1:CA:243:A:H4'	1:CA:244:U:H5'	1.74	0.68
1:CA:695:A:H2'	1:CA:696:A:C8	2.29	0.68
35:DA:2405:G:H8	35:DA:2405:G:OP2	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:10:ARG:NH1	49:DQ:11:LYS:H	1.91	0.68
51:DS:99:LYS:HD2	51:DS:99:LYS:N	2.05	0.68
57:DY:57:GLN:N	57:DY:57:GLN:OE1	2.23	0.68
21:AU:6:ARG:O	21:AU:8:THR:N	2.23	0.68
35:BA:351:G:O2'	35:BA:353:G:N7	2.25	0.68
35:BA:2591:C:OP2	38:BD:239:ARG:HB2	1.93	0.68
35:BA:2810:A:O2'	39:BE:61:ARG:NH1	2.22	0.68
40:BF:157:VAL:HG23	40:BF:194:MET:HA	1.76	0.68
46:BN:26:LEU:C	46:BN:26:LEU:HD12	2.18	0.68
51:BS:85:VAL:HG12	51:BS:86:ALA:H	1.57	0.68
52:BT:51:ARG:CZ	52:BT:100:TYR:HE1	2.07	0.68
1:CA:741:G:OP1	15:CO:35:ARG:NH1	2.27	0.68
1:CA:1399:C:H4'	1:CA:1400:C:O5'	1.94	0.68
2:CB:50:GLU:OE2	2:CB:200:ILE:HG13	1.93	0.68
11:CK:64:ALA:O	11:CK:67:ASP:N	2.27	0.68
15:CO:82:ILE:O	15:CO:86:GLY:N	2.27	0.68
26:D1:73:LEU:HD21	26:D1:94:LEU:HA	1.75	0.68
35:DA:819:A:OP2	35:DA:1187:G:N2	2.26	0.68
35:DA:2100:G:H2'	35:DA:2101:G:H8	1.59	0.68
36:DB:78:A:O2'	49:DQ:21:THR:HG21	1.93	0.68
41:DG:12:TYR:HA	41:DG:16:ARG:HB2	1.75	0.68
58:DZ:54:HIS:NE2	58:DZ:123:ASP:OD2	2.27	0.68
3:AC:40:ARG:NE	3:AC:55:VAL:HG23	2.06	0.68
26:B1:32:LYS:HG2	26:B1:33:LYS:N	2.08	0.68
35:BA:1568:G:OP2	38:BD:63:ARG:NH2	2.26	0.68
35:BA:2474:C:H5'	35:BA:2475:C:OP2	1.93	0.68
35:BA:2712:U:H1'	35:BA:2712(A):A:C8	2.29	0.68
47:BO:47:ILE:O	47:BO:49:ARG:N	2.25	0.68
54:BV:16:PRO:HA	54:BV:98:GLU:HB3	1.74	0.68
1:CA:192:U:H2'	1:CA:193:C:H6	1.59	0.68
4:CD:64:LEU:HB2	4:CD:198:VAL:HG21	1.75	0.68
8:CH:17:THR:O	8:CH:78:GLN:NE2	2.27	0.68
35:DA:1104:C:H2'	35:DA:1105:U:H5'	1.75	0.68
41:DG:5:VAL:HG13	41:DG:104:GLU:OE2	1.94	0.68
48:DP:130:PHE:CZ	48:DP:145:PRO:HD2	2.29	0.68
12:AL:25:PRO:O	12:AL:27:LEU:N	2.26	0.68
35:BA:1430:C:H2'	35:BA:1431:U:C6	2.29	0.68
39:BE:76:ARG:HG2	39:BE:195:LEU:HD22	1.76	0.68
40:BF:170:LEU:HB2	40:BF:173:VAL:HG12	1.76	0.68
1:CA:1346:A:OP1	9:CI:120:ARG:NH1	2.22	0.68
1:CA:1452:C:H4'	1:CA:1456:G:N2	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:49:VAL:HG23	14:CN:41:ARG:HB2	1.74	0.68
17:CQ:45:HIS:HD2	17:CQ:65:ILE:HG12	1.59	0.68
35:DA:173:G:H5'	35:DA:174:C:OP2	1.93	0.68
35:DA:2502:G:H5"	35:DA:2503:A:H5"	1.74	0.68
35:DA:2820:A:C8	39:DE:109:LYS:HE2	2.29	0.68
57:DY:13:VAL:HG21	57:DY:28:LYS:NZ	2.08	0.68
1:AA:279:A:H5"	1:AA:280:C:H3'	1.76	0.68
32:B7:39:ARG:NH2	35:BA:468:G:N7	2.42	0.68
35:BA:2392:A:H2	35:BA:2424:C:H42	1.39	0.68
40:BF:152:GLU:HA	40:BF:190:GLU:OE1	1.94	0.68
1:CA:1452:C:H4'	1:CA:1456:G:C2	2.28	0.68
4:CD:173:TRP:CD2	4:CD:189:PRO:HB3	2.29	0.68
16:CP:57:ARG:HA	16:CP:60:LEU:HD12	1.74	0.68
35:DA:2262:U:H2'	35:DA:2263:C:H5"	1.74	0.68
35:DA:2327:A:H2'	35:DA:2328:A:C8	2.28	0.68
35:DA:2774:C:H2'	35:DA:2775:A:O4'	1.94	0.68
52:DT:45:PHE:HD2	52:DT:76:PHE:HZ	1.41	0.68
57:DY:39:VAL:N	57:DY:64:GLU:OE2	2.26	0.68
1:AA:9:G:OP2	5:AE:121:LYS:NZ	2.22	0.68
32:B7:22:MET:O	32:B7:28:ARG:NH1	2.27	0.68
35:BA:508:G:H5"	35:BA:508:G:H8	1.58	0.68
35:BA:2492:U:H2'	35:BA:2493:U:H6	1.58	0.68
40:BF:11:VAL:O	40:BF:13:SER:N	2.26	0.68
56:BX:40:LYS:HD3	56:BX:51:VAL:HG11	1.76	0.68
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.74	0.68
22:CV:52:G:O2'	22:CV:53:G:OP2	2.09	0.68
32:D7:5:TRP:NE1	32:D7:7:PRO:HG3	2.09	0.68
33:D8:25:MET:SD	48:DP:64:LYS:HD2	2.34	0.68
33:D8:25:MET:HG3	48:DP:64:LYS:HB2	1.76	0.68
36:DB:44:G:O2'	36:DB:45:A:OP2	2.09	0.68
48:DP:48:PRO:O	48:DP:50:ARG:N	2.26	0.68
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.59	0.68
9:AI:6:GLY:HA3	9:AI:84:ALA:HB2	1.76	0.68
35:BA:538:G:N1	35:BA:555:U:H5	1.90	0.68
35:BA:956:G:H2'	35:BA:957:A:H2'	1.76	0.68
35:BA:1256:G:H5'	35:BA:1257:C:OP2	1.92	0.68
36:BB:116:G:H8	36:BB:116:G:OP2	1.76	0.68
41:BG:106:LEU:O	41:BG:111:LEU:CD1	2.41	0.68
49:BQ:17:LEU:O	49:BQ:19:GLY:N	2.26	0.68
52:BT:34:VAL:HG22	52:BT:39:ARG:HD3	1.76	0.68
4:CD:156:GLU:OE2	4:CD:160:GLN:HG3	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1044:G:H1'	35:DA:1111:A:H62	1.59	0.68
35:DA:2656:U:N3	35:DA:2665:A:H2	1.87	0.68
35:DA:2657:A:H2	35:DA:2664:G:H21	1.42	0.68
37:DC:78:ALA:HB1	37:DC:82:LYS:HB3	1.76	0.68
40:DF:40:GLN:NE2	40:DF:182:ASN:OD1	2.26	0.68
47:DO:80:ASP:OD2	52:DT:64:ARG:NH2	2.26	0.68
57:DY:37:VAL:O	57:DY:38:ILE:HG12	1.94	0.68
1:AA:664:G:N2	1:AA:741:G:H1	1.86	0.68
8:AH:116:LYS:HD3	8:AH:129:VAL:HG11	1.75	0.68
12:AL:84:LEU:HD12	12:AL:104:VAL:HG11	1.76	0.68
35:BA:830:G:H4'	35:BA:831:G:OP2	1.94	0.68
57:BY:86:ARG:O	57:BY:88:LYS:NZ	2.25	0.68
35:DA:58:G:OP2	56:DX:72:LYS:HB3	1.94	0.68
35:DA:322:A:H5'	35:DA:340:A:H1'	1.76	0.68
40:DF:185:ASP:OD1	40:DF:188:ARG:NH1	2.27	0.68
1:AA:1168:A:H4'	1:AA:1169:A:OP2	1.93	0.67
1:AA:1367:C:OP1	9:AI:115:GLY:HA2	1.94	0.67
7:AG:105:VAL:O	7:AG:109:ASN:ND2	2.26	0.67
27:B2:57:ILE:HG12	27:B2:59:ARG:HH12	1.59	0.67
35:BA:492:A:H2'	35:BA:493:G:O4'	1.94	0.67
35:BA:1763:G:H8	35:BA:1763:G:H3'	1.57	0.67
40:BF:28:ILE:HD12	40:BF:30:PRO:HD3	1.76	0.67
41:BG:39:ILE:HG23	41:BG:92:VAL:HG13	1.75	0.67
41:BG:101:ILE:O	41:BG:105:LYS:NZ	2.20	0.67
49:BQ:75:THR:HA	49:BQ:91:GLU:OE1	1.93	0.67
57:BY:4:LYS:HG3	57:BY:6:HIS:CE1	2.29	0.67
1:CA:442:C:H42	1:CA:492:G:H1	1.40	0.67
1:CA:1012:U:H2'	1:CA:1013:G:C8	2.29	0.67
20:CT:73:HIS:N	20:CT:74:LYS:HE2	2.07	0.67
35:DA:229:A:H5'	35:DA:230:U:OP2	1.92	0.67
35:DA:587:C:C6	48:DP:33:ARG:HD2	2.28	0.67
35:DA:1265:A:OP1	35:DA:1265:A:H8	1.76	0.67
35:DA:1405:U:H2'	35:DA:1406:U:C6	2.28	0.67
35:DA:2068:U:N3	35:DA:2430:A:H2	1.89	0.67
42:DH:21:PRO:O	42:DH:23:ARG:N	2.27	0.67
42:DH:77:LYS:HZ1	42:DH:138:LYS:HB2	1.59	0.67
53:DU:92:ARG:NH1	54:DV:11:GLN:HB2	2.09	0.67
57:DY:14:LEU:HG	57:DY:15:VAL:N	2.08	0.67
58:DZ:4:ARG:NH1	58:DZ:66:SER:OG	2.27	0.67
1:AA:110:C:O2'	16:AP:25:ARG:O	2.09	0.67
1:AA:1316:G:N2	1:AA:1319:A:OP2	2.23	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:69:VAL:HA	7:AG:138:LYS:HD2	1.76	0.67
16:AP:34:GLU:OE2	16:AP:55:ARG:HD3	1.93	0.67
35:BA:1054:A:H5'	35:BA:1055:G:C8	2.28	0.67
35:BA:1057:A:H2'	35:BA:1058:G:C4'	2.24	0.67
1:CA:109:A:H4'	1:CA:110:C:OP2	1.93	0.67
13:CM:49:THR:HB	13:CM:52:GLU:HG3	1.76	0.67
35:DA:620:G:H5'	35:DA:620:G:N3	2.10	0.67
35:DA:2655:G:O2'	35:DA:2664:G:N1	2.27	0.67
48:DP:21:ARG:HH12	48:DP:29:LYS:HE3	1.59	0.67
57:DY:99:CYS:SG	57:DY:100:ALA:N	2.63	0.67
33:B8:13:ARG:NH2	48:BP:62:LEU:H	1.89	0.67
35:BA:405:U:H4'	35:BA:406:G:OP2	1.93	0.67
35:BA:1578:U:H6	35:BA:1578:U:OP2	1.77	0.67
49:BQ:43:THR:O	49:BQ:46:GLN:HG2	1.95	0.67
55:BW:17:VAL:HG12	55:BW:76:VAL:HG11	1.76	0.67
56:BX:62:LYS:HZ3	56:BX:62:LYS:C	2.02	0.67
6:CF:89:MET:SD	18:CR:76:LEU:HD21	2.35	0.67
31:D6:14:THR:O	31:D6:49:HIS:HA	1.95	0.67
35:DA:363:G:H2'	35:DA:363(A):A:H8	1.59	0.67
35:DA:481:G:H4'	35:DA:482:A:H5'	1.74	0.67
35:DA:1403:C:H5"	35:DA:1471:A:H1'	1.75	0.67
38:DD:61:LEU:O	38:DD:63:ARG:NH1	2.27	0.67
58:DZ:119:GLU:O	58:DZ:121:HIS:N	2.27	0.67
1:AA:439:A:N7	1:AA:494:U:H5	1.92	0.67
1:AA:1368:G:OP2	9:AI:112:LYS:HD3	1.95	0.67
4:AD:46:LYS:HG2	4:AD:47:ARG:NH2	2.08	0.67
9:AI:17:VAL:HG11	9:AI:81:ILE:HA	1.76	0.67
26:B1:26:ARG:HD2	26:B1:34:THR:HG21	1.76	0.67
35:BA:157:U:OP2	35:BA:157:U:H6	1.77	0.67
43:BI:79:ILE:N	43:BI:141:LYS:O	2.25	0.67
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.28	0.67
35:DA:1045:A:O2'	35:DA:1046:A:OP2	2.06	0.67
35:DA:2475:C:H5"	35:DA:2476:A:OP2	1.94	0.67
41:DG:27:ASN:HB3	41:DG:30:GLU:HG3	1.75	0.67
49:DQ:109:VAL:HG13	49:DQ:113:GLN:HB2	1.76	0.67
57:DY:13:VAL:HG21	57:DY:28:LYS:HZ1	1.59	0.67
1:AA:476:G:H5"	1:AA:477:A:OP2	1.93	0.67
3:AC:154:SER:OG	3:AC:155:GLY:N	2.21	0.67
9:AI:26:VAL:HG12	9:AI:61:ALA:HB3	1.75	0.67
9:AI:95:LYS:HG3	9:AI:96:LEU:HD12	1.77	0.67
16:AP:9:PHE:CE2	16:AP:18:ARG:HD2	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:26:LEU:HD21	18:AR:42:ARG:CZ	2.24	0.67
35:BA:1568:G:P	38:BD:63:ARG:HH22	2.18	0.67
35:BA:2124:G:N2	37:BC:40:THR:OG1	2.26	0.67
40:BF:167:ALA:O	40:BF:169:ASN:N	2.28	0.67
3:CC:11:ARG:NH2	3:CC:177:THR:O	2.27	0.67
34:D9:31:LYS:HE3	35:DA:2478:A:OP1	1.95	0.67
35:DA:2314:C:H2'	35:DA:2315:G:H8	1.59	0.67
35:DA:2661:G:OP2	35:DA:2661:G:H8	1.77	0.67
38:DD:31:LYS:HB3	38:DD:35:LYS:H	1.60	0.67
1:AA:657:G:N2	15:AO:22:THR:OG1	2.28	0.67
2:AB:74:LYS:CB	2:AB:165:VAL:HG21	2.25	0.67
3:AC:7:PRO:O	3:AC:11:ARG:NH1	2.27	0.67
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.75	0.67
35:BA:35:G:H5'	35:BA:36:G:OP2	1.95	0.67
35:BA:240:G:H1'	35:BA:257:A:H61	1.60	0.67
35:BA:1495:A:C8	35:BA:1495:A:H5"	2.29	0.67
35:BA:2512:C:H5"	35:BA:2513:G:OP2	1.95	0.67
37:BC:169:GLY:O	37:BC:171:ILE:N	2.27	0.67
48:BP:41:ARG:HH12	48:BP:45:LEU:HD11	1.60	0.67
53:BU:102:GLU:HG3	54:BV:2:PHE:CE2	2.30	0.67
1:CA:1239:A:H2'	1:CA:1298:C:N4	2.08	0.67
2:CB:74:LYS:NZ	2:CB:205:ASP:HB2	2.09	0.67
43:DI:74:ASN:O	43:DI:75:LEU:CD1	2.42	0.67
49:DQ:52:VAL:HA	49:DQ:55:VAL:HG22	1.77	0.67
1:AA:191:G:H1'	20:AT:105:SER:HA	1.77	0.67
1:AA:1181:G:O2'	1:AA:1182:G:O5'	2.12	0.67
35:BA:1449:A:OP1	35:BA:1449:A:H4'	1.94	0.67
50:BR:23:ASN:O	50:BR:26:LYS:HD2	1.95	0.67
51:BS:42:ASP:O	51:BS:44:LYS:N	2.28	0.67
1:CA:1258:G:H8	1:CA:1258:G:OP2	1.77	0.67
35:DA:707:G:H2'	35:DA:708:C:O4'	1.95	0.67
35:DA:2105:C:OP2	35:DA:2105:C:H6	1.76	0.67
35:DA:2476:A:C2	35:DA:2477:C:H6	2.13	0.67
53:DU:83:LEU:HD12	53:DU:113:ALA:HB2	1.77	0.67
57:DY:17:SER:OG	57:DY:18:GLY:N	2.28	0.67
1:AA:103:C:O2'	1:AA:172:A:N1	2.24	0.67
1:AA:1203:C:H6	1:AA:1203:C:OP2	1.77	0.67
30:B5:3:LYS:NZ	30:B5:4:HIS:HB2	2.10	0.67
35:BA:1763:G:H3'	35:BA:1763:G:C8	2.30	0.67
35:BA:2160:G:H2'	35:BA:2161:C:H4'	1.75	0.67
35:BA:2734:A:H5'	35:BA:2735:G:OP2	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:105:LYS:HE3	41:BG:143:GLU:OE2	1.94	0.67
47:BO:14:THR:OG1	47:BO:15:GLY:N	2.28	0.67
51:BS:51:ALA:HB2	51:BS:76:LYS:HD2	1.76	0.67
52:BT:11:GLU:CD	52:BT:11:GLU:H	2.03	0.67
55:BW:15:ARG:O	55:BW:19:LEU:CD1	2.43	0.67
1:CA:473:G:H5"	16:CP:81:ARG:HH21	1.59	0.67
2:CB:117:GLU:O	2:CB:121:LEU:CD1	2.43	0.67
22:CV:40:C:H4'	23:CW:35:A:H1'	1.77	0.67
35:DA:2787:C:HO2'	35:DA:2810:A:HO2'	1.36	0.67
43:DI:6:LEU:HG	43:DI:36:ALA:HA	1.75	0.67
48:DP:56:SER:O	48:DP:59:LEU:HB2	1.95	0.67
56:DX:62:LYS:H	56:DX:62:LYS:HD2	1.59	0.67
57:DY:88:LYS:HZ2	57:DY:93:GLY:HA3	1.59	0.67
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.10	0.67
8:AH:63:LEU:HD13	8:AH:64:LYS:N	2.10	0.67
26:B1:32:LYS:HZ2	26:B1:33:LYS:H	1.43	0.67
39:BE:48:GLN:HB3	39:BE:80:GLU:HG2	1.77	0.67
48:BP:35:HIS:O	48:BP:36:LYS:HB3	1.93	0.67
49:BQ:124:LYS:HZ2	49:BQ:125:LEU:CD2	2.06	0.67
49:BQ:124:LYS:HG2	49:BQ:125:LEU:HG	1.77	0.67
2:CB:120:ALA:O	2:CB:121:LEU:HD12	1.94	0.67
12:CL:77:LEU:HD21	12:CL:107:ALA:HA	1.77	0.67
35:DA:2206:G:H21	35:DA:2207:G:C5'	2.06	0.67
51:DS:87:PHE:O	51:DS:89:ARG:NH1	2.27	0.67
52:DT:78:LEU:HB3	52:DT:79:HIS:HD2	1.57	0.67
53:DU:61:TRP:CZ2	53:DU:94:ASN:HB3	2.30	0.67
1:AA:675:A:H2'	1:AA:676:A:H8	1.58	0.67
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.76	0.67
12:AL:28:LYS:O	12:AL:30:ALA:N	2.27	0.67
14:AN:24:CYS:SG	14:AN:25:VAL:N	2.67	0.67
33:B8:25:MET:CB	48:BP:62:LEU:HD11	2.16	0.67
35:BA:631:A:H1'	48:BP:66:GLY:HA3	1.77	0.67
35:BA:2831:G:OP1	39:BE:58:ARG:NH2	2.20	0.67
37:BC:197:GLU:O	37:BC:199:HIS:N	2.28	0.67
1:CA:10:A:H2'	1:CA:11:G:H8	1.60	0.67
4:CD:176:LEU:HG	4:CD:178:VAL:HG22	1.77	0.67
1:AA:458:C:H3'	1:AA:460:G:H8	1.59	0.66
1:AA:1288:A:N3	1:AA:1352:C:O2'	2.28	0.66
60:AA:1805:EDS:OAH	62:AA:1901:HOH:O	2.11	0.66
2:AB:55:PHE:CZ	2:AB:221:LEU:HB3	2.30	0.66
10:AJ:78:ASN:O	10:AJ:81:THR:OG1	2.13	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:90:LEU:O	13:AM:92:HIS:N	2.29	0.66
33:B8:62:LEU:HG	35:BA:242:G:H5"	1.77	0.66
35:BA:2527:C:H5'	35:BA:2528:U:OP2	1.95	0.66
35:BA:2661:G:H3'	35:BA:2662:A:H5"	1.77	0.66
40:BF:57:VAL:HG21	40:BF:87:GLY:H	1.61	0.66
40:BF:84:VAL:HG21	40:BF:87:GLY:HA3	1.77	0.66
48:BP:26:GLY:HA3	48:BP:29:LYS:HZ2	1.60	0.66
49:BQ:110:THR:O	49:BQ:113:GLN:N	2.27	0.66
1:CA:376:G:H2'	1:CA:377:G:C8	2.29	0.66
4:CD:83:SER:HA	4:CD:89:THR:HG23	1.76	0.66
31:D6:15:GLU:OE2	31:D6:43:CYS:O	2.13	0.66
35:DA:631:A:H1'	48:DP:66:GLY:HA3	1.77	0.66
35:DA:748:G:OP2	55:DW:88:ARG:HD2	1.95	0.66
35:DA:975:C:OP2	35:DA:975:C:H4'	1.94	0.66
35:DA:1485:G:H2'	35:DA:1486:A:C8	2.30	0.66
35:DA:1877:A:H5"	35:DA:1878:G:OP2	1.95	0.66
50:DR:74:LYS:HG3	50:DR:77:ARG:HH21	1.59	0.66
1:AA:832:C:H42	1:AA:854:G:H1	1.42	0.66
31:B6:8:LYS:HB3	31:B6:29:ASN:HD21	1.60	0.66
35:BA:2566:A:H61	47:BO:29:ASN:ND2	1.92	0.66
36:BB:9:G:O5'	51:BS:25:ARG:NH2	2.29	0.66
39:BE:36:ARG:NH2	39:BE:88:GLY:HA3	2.09	0.66
41:BG:15:VAL:HG22	41:BG:175:LEU:HD12	1.76	0.66
1:CA:1302:U:OP2	13:CM:21:TYR:OH	2.10	0.66
35:DA:481:G:OP2	57:DY:46:LYS:NZ	2.28	0.66
35:DA:2101:G:H1	35:DA:2188:C:N4	1.93	0.66
8:AH:36:LEU:HB3	8:AH:48:TYR:CE1	2.31	0.66
26:B1:10:LYS:HA	26:B1:48:LYS:NZ	2.10	0.66
27:B2:47:ASN:O	27:B2:51:ARG:NE	2.23	0.66
33:B8:13:ARG:HG3	33:B8:14:VAL:HG13	1.76	0.66
35:BA:2304:G:O6	35:BA:2310:A:H2'	1.95	0.66
38:BD:92:ILE:HG22	38:BD:106:ILE:HA	1.77	0.66
48:BP:41:ARG:HH12	48:BP:45:LEU:CD1	2.08	0.66
1:CA:1150:U:H4'	10:CJ:41:PRO:HG3	1.76	0.66
14:CN:4:LYS:HD3	14:CN:4:LYS:C	2.20	0.66
35:DA:1091:G:N2	35:DA:1102:C:O2	2.27	0.66
36:DB:48:A:H2'	36:DB:49:C:C6	2.29	0.66
50:DR:103:ARG:HB2	50:DR:109:ALA:O	1.95	0.66
52:DT:27:THR:HG22	52:DT:87:ASP:HB3	1.78	0.66
1:AA:1054:C:O2'	1:AA:1055:A:OP2	2.11	0.66
1:AA:1223:C:P	19:AS:78:ARG:NH2	2.68	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1320:C:O2'	19:AS:73:GLU:OE2	2.06	0.66
11:AK:88:GLY:O	11:AK:90:GLY:N	2.29	0.66
32:B7:4:THR:HG1	32:B7:5:TRP:CD1	2.13	0.66
35:BA:1016:G:H1	35:BA:1146:C:H42	1.44	0.66
35:BA:2318:G:H22	51:BS:7:TYR:HB3	1.59	0.66
48:BP:7:ARG:C	48:BP:9:ASN:H	2.03	0.66
7:CG:78:ARG:HD2	7:CG:79:ARG:HB3	1.77	0.66
35:DA:636:G:OP1	48:DP:132:LYS:HB2	1.95	0.66
35:DA:792:G:H5"	35:DA:793:A:H5'	1.77	0.66
35:DA:1803:A:O3'	38:DD:259:THR:OG1	2.14	0.66
35:DA:2319:G:N7	51:DS:10:ARG:HD2	2.10	0.66
5:AE:83:GLU:HA	5:AE:88:LYS:HA	1.76	0.66
8:AH:88:LYS:HG3	8:AH:89:PRO:HD2	1.78	0.66
17:AQ:53:LEU:HD23	17:AQ:82:MET:HE1	1.78	0.66
23:AY:29:G:H2'	23:AY:30:G:H8	1.61	0.66
32:B7:19:ARG:NH1	35:BA:125:G:OP2	2.28	0.66
37:BC:21:THR:O	37:BC:23:ASP:N	2.29	0.66
58:BZ:53:ILE:HD13	58:BZ:71:VAL:HG23	1.76	0.66
1:CA:254:G:H5"	17:CQ:69:LYS:HE2	1.76	0.66
1:CA:969:A:H4'	10:CJ:55:LYS:HE3	1.77	0.66
35:DA:135:G:H1	35:DA:144:C:H42	1.43	0.66
38:DD:10:THR:CG2	38:DD:13:ARG:HB2	2.25	0.66
1:AA:532:A:C8	3:AC:160:ALA:HB2	2.31	0.66
1:AA:1111:A:N1	3:AC:177:THR:HG22	2.11	0.66
4:AD:30:LYS:HB2	4:AD:32:ALA:O	1.95	0.66
4:AD:128:VAL:HG22	4:AD:146:ILE:HG13	1.78	0.66
5:AE:67:VAL:HG21	5:AE:140:ARG:HA	1.77	0.66
26:B1:32:LYS:NZ	26:B1:33:LYS:O	2.27	0.66
47:BO:14:THR:HG21	47:BO:86:ILE:HG21	1.78	0.66
1:CA:975:A:O2'	14:CN:32:SER:OG	2.11	0.66
39:DE:116:VAL:O	39:DE:117:MET:HB3	1.96	0.66
56:DX:62:LYS:HA	56:DX:69:TYR:HA	1.78	0.66
1:AA:954:G:H2'	1:AA:955:U:C6	2.30	0.66
2:AB:130:ARG:HD2	2:AB:134:GLU:HB2	1.77	0.66
5:AE:144:THR:HG23	5:AE:147:ASP:H	1.60	0.66
6:AF:30:LEU:HD23	6:AF:75:LEU:HD11	1.75	0.66
26:B1:56:GLN:NE2	26:B1:57:GLU:OE1	2.25	0.66
35:BA:686:G:H21	35:BA:788:A:H61	1.42	0.66
35:BA:1434:A:N6	35:BA:1558:A:H62	1.93	0.66
49:BQ:5:ARG:NH2	49:BQ:7:MET:H	1.94	0.66
58:BZ:70:LEU:N	58:BZ:89:PHE:O	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:45:GLN:HG2	2:CB:49:GLU:OE2	1.95	0.66
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.78	0.66
3:CC:14:ILE:O	3:CC:16:ARG:N	2.28	0.66
9:CI:28:VAL:O	9:CI:31:GLN:N	2.29	0.66
27:D2:21:LEU:HD21	27:D2:51:ARG:NE	2.09	0.66
35:DA:1494:A:C2'	35:DA:1495:A:H5"	2.23	0.66
35:DA:2009:G:OP1	55:DW:41:LYS:HE2	1.95	0.66
35:DA:2031:A:N3	35:DA:2455:G:O2'	2.29	0.66
38:DD:13:ARG:NH1	38:DD:16:MET:SD	2.69	0.66
47:DO:18:LYS:HD3	47:DO:45:GLU:OE1	1.96	0.66
33:B8:4:MET:SD	33:B8:61:LEU:HD23	2.35	0.66
35:BA:993:G:OP1	53:BU:50:ARG:NH2	2.28	0.66
38:BD:25:THR:HG23	38:BD:82:ILE:H	1.61	0.66
1:CA:1038:C:H2'	1:CA:1039:C:H6	1.61	0.66
1:CA:1095:U:OP1	1:CA:1108:G:N2	2.27	0.66
6:CF:33:TYR:HB2	6:CF:75:LEU:HD12	1.76	0.66
7:CG:27:ILE:HD11	7:CG:43:PHE:CD2	2.30	0.66
11:CK:21:ILE:HG13	11:CK:84:VAL:HA	1.77	0.66
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.30	0.66
26:D1:26:ARG:CB	26:D1:34:THR:HB	2.25	0.66
35:DA:1567:A:H5'	38:DD:58:HIS:CD2	2.30	0.66
35:DA:1625:C:H5"	35:DA:1626:G:OP2	1.96	0.66
39:DE:119:ARG:HB3	39:DE:120:TRP:CD1	2.30	0.66
53:DU:8:VAL:HG13	53:DU:11:ARG:HH21	1.61	0.66
57:DY:39:VAL:HG23	57:DY:40:GLU:N	2.11	0.66
58:DZ:81:ARG:HH11	58:DZ:81:ARG:HG2	1.59	0.66
25:B0:77:ARG:NH2	35:BA:857:C:OP2	2.29	0.66
35:BA:272(G):C:H42	35:BA:363(D):G:H1	1.42	0.66
1:CA:664:G:N2	1:CA:741:G:H1	1.92	0.66
1:CA:1187:G:H5'	1:CA:1188:A:OP2	1.96	0.66
2:CB:176:GLU:O	2:CB:180:LEU:HB2	1.95	0.66
27:D2:34:GLU:O	27:D2:36:ARG:N	2.25	0.66
30:D5:44:THR:HG21	50:DR:101:ALA:HB2	1.77	0.66
35:DA:458:G:O2'	35:DA:469:G:O6	2.14	0.66
39:DE:52:LEU:HD21	52:DT:1:MET:HG3	1.77	0.66
49:DQ:89:ASN:OD1	49:DQ:90:VAL:N	2.28	0.66
51:DS:101:LEU:HD11	51:DS:104:GLY:HA3	1.77	0.66
1:AA:836:G:O6	1:AA:850:U:N3	2.28	0.66
1:AA:1110:A:OP2	3:AC:176:HIS:NE2	2.29	0.66
2:AB:178:ARG:NH2	2:AB:198:ASP:OD1	2.28	0.66
6:AF:47:ARG:NH2	6:AF:57:GLN:HG2	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:B9:35:ARG:HD3	35:BA:2742:C:OP1	1.96	0.66
35:BA:288:C:H2'	35:BA:289:A:H8	1.59	0.66
35:BA:1194:A:OP2	48:BP:17:LYS:HD2	1.96	0.66
35:BA:2128:C:H42	35:BA:2160:G:H1	1.44	0.66
35:BA:2661:G:H2'	35:BA:2662:A:N3	2.11	0.66
36:BB:42:C:O2'	41:BG:67:LYS:O	2.09	0.66
39:BE:32:PRO:HA	39:BE:90:THR:HA	1.78	0.66
55:BW:84:ARG:HH22	55:BW:85:VAL:HG22	1.61	0.66
58:BZ:29:TYR:HA	58:BZ:34:ASN:HA	1.78	0.66
1:CA:529:G:O6	12:CL:49:ASN:HA	1.96	0.66
1:CA:972:C:OP1	10:CJ:57:LYS:NZ	2.22	0.66
27:D2:53:LEU:HD22	35:DA:72:U:H4'	1.78	0.66
35:DA:2314:C:H2'	35:DA:2315:G:C8	2.31	0.66
38:DD:165:ILE:HD13	38:DD:175:LEU:HD21	1.79	0.66
42:DH:154:PRO:HB3	42:DH:163:TYR:CZ	2.31	0.66
1:AA:26:A:N6	1:AA:558:G:O2'	2.28	0.65
1:AA:1289:A:H62	9:AI:70:LYS:CE	2.09	0.65
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.31	0.65
14:AN:29:ARG:HB3	14:AN:40:CYS:SG	2.36	0.65
27:B2:26:ARG:C	27:B2:27:GLU:OE2	2.38	0.65
35:BA:2128:C:O2'	35:BA:2129:C:O5'	2.13	0.65
48:BP:32:THR:HB	48:BP:36:LYS:HD2	1.77	0.65
49:BQ:137:TYR:HB2	58:BZ:76:LEU:HD21	1.77	0.65
2:CB:189:ASP:CG	2:CB:205:ASP:HB3	2.22	0.65
7:CG:62:PHE:HD1	7:CG:124:LEU:HD11	1.60	0.65
10:CJ:80:LYS:HG3	10:CJ:84:GLN:HE22	1.61	0.65
11:CK:41:THR:HG21	11:CK:71:LYS:HB2	1.78	0.65
35:DA:607:U:N3	35:DA:621:A:H2	1.92	0.65
35:DA:796:C:H2'	35:DA:797:C:C6	2.31	0.65
35:DA:879:G:N2	35:DA:899:A:H1'	2.12	0.65
35:DA:1057:A:H2'	35:DA:1058:G:H5'	1.77	0.65
46:DN:87:LEU:HD22	46:DN:91:LEU:HD11	1.79	0.65
48:DP:23:PRO:HD2	48:DP:33:ARG:HD3	1.77	0.65
50:DR:13:HIS:HD2	50:DR:16:HIS:H	1.42	0.65
1:AA:977:A:H2'	1:AA:978:A:H5"	1.79	0.65
13:AM:84:ILE:H	13:AM:84:ILE:HD12	1.61	0.65
35:BA:892:G:H2'	35:BA:893:C:H5"	1.76	0.65
35:BA:1876:A:H2'	35:BA:1877:A:C8	2.32	0.65
36:BB:44:G:OP1	41:BG:98:ARG:NH2	2.30	0.65
39:BE:52:LEU:HB2	39:BE:75:VAL:HG12	1.77	0.65
41:BG:66:GLN:HG3	41:BG:94:LEU:HB3	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:173:LEU:O	41:BG:178:PHE:HB2	1.95	0.65
51:BS:83:LYS:O	51:BS:105:ALA:HB1	1.96	0.65
57:BY:46:LYS:NZ	57:BY:64:GLU:O	2.21	0.65
21:CU:19:GLY:C	21:CU:21:TYR:H	2.03	0.65
30:D5:3:LYS:HE3	30:D5:6:VAL:HG13	1.78	0.65
31:D6:41:PRO:HD2	31:D6:46:HIS:H	1.62	0.65
35:DA:2468:G:N2	35:DA:2481:G:O2'	2.30	0.65
41:DG:76:SER:CB	41:DG:84:LYS:H	2.03	0.65
48:DP:126:VAL:HA	48:DP:145:PRO:CG	2.21	0.65
49:DQ:4:PRO:HA	49:DQ:93:TYR:CD1	2.31	0.65
57:DY:9:LYS:O	57:DY:11:ASP:N	2.29	0.65
1:AA:995:C:H1'	14:AN:4:LYS:HE2	1.79	0.65
1:AA:1263:C:H2'	1:AA:1264:C:H6	1.60	0.65
1:AA:1280:A:H5"	10:AJ:40:LEU:HD13	1.78	0.65
1:AA:1405:G:N7	60:AA:1805:EDS:NAM	2.45	0.65
22:AV:19:G:H8	22:AV:19:G:OP2	1.78	0.65
31:B6:29:ASN:O	31:B6:30:THR:HG23	1.95	0.65
33:B8:39:LYS:NZ	35:BA:2365:G:N7	2.37	0.65
35:BA:271(E):U:H2'	35:BA:271(F):C:C6	2.30	0.65
35:BA:1981:A:H5"	35:BA:1982:C:OP2	1.97	0.65
35:BA:2801(A):A:N3	35:BA:2802:G:O2'	2.28	0.65
37:BC:22:ILE:HG22	37:BC:25:ALA:HB2	1.79	0.65
48:BP:75:ILE:HD12	48:BP:77:ARG:HH11	1.60	0.65
50:BR:87:TYR:OH	50:BR:117:VAL:HG22	1.96	0.65
54:BV:20:LEU:HB3	54:BV:21:ARG:HH11	1.61	0.65
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.31	0.65
2:CB:105:PHE:O	2:CB:107:THR:N	2.26	0.65
6:CF:23:LYS:HE3	6:CF:61:LEU:HD11	1.78	0.65
23:CW:62:C:H5'	23:CW:63:G:OP2	1.97	0.65
35:DA:548:A:H3'	35:DA:549:G:O4'	1.96	0.65
35:DA:1187:G:H5"	54:DV:82:ARG:HH11	1.61	0.65
35:DA:2481:G:O2'	35:DA:2482:G:OP2	2.12	0.65
39:DE:199:ARG:NH1	39:DE:199:ARG:HB3	2.11	0.65
46:DN:78:TYR:CE2	46:DN:79:PRO:HG3	2.31	0.65
1:AA:277:C:OP2	17:AQ:41:LYS:NZ	2.28	0.65
1:AA:737:A:H2'	1:AA:738:C:C6	2.31	0.65
1:AA:1336:C:H4'	1:AA:1336:C:OP1	1.95	0.65
14:AN:47:LEU:HA	14:AN:50:LYS:HB3	1.78	0.65
30:B5:47:PRO:HG3	50:BR:101:ALA:HB3	1.77	0.65
35:BA:203:C:OP2	35:BA:204:A:H2'	1.96	0.65
35:BA:1459:G:H5"	35:BA:1460:A:OP2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:181:LEU:HD11	40:BF:186:ILE:HD11	1.78	0.65
56:BX:27:THR:HB	56:BX:77:LYS:HD3	1.77	0.65
18:CR:45:SER:HB3	18:CR:49:LYS:HB2	1.78	0.65
23:CW:52:G:H1	23:CW:62:C:N4	1.95	0.65
25:D0:51:VAL:HG11	25:D0:79:VAL:O	1.96	0.65
27:D2:47:ASN:O	27:D2:52:ASP:HB3	1.95	0.65
35:DA:2689:U:P	35:DA:2719:G:H22	2.19	0.65
40:DF:24:LEU:O	40:DF:26:ALA:N	2.29	0.65
51:DS:33:LYS:HE3	51:DS:34:HIS:CE1	2.30	0.65
51:DS:87:PHE:CD2	51:DS:89:ARG:NH2	2.64	0.65
52:DT:43:GLN:HE21	52:DT:45:PHE:HE1	1.43	0.65
55:DW:1:MET:HB3	55:DW:64:MET:HE3	1.78	0.65
2:AB:17:PHE:CD1	2:AB:204:ASN:HB3	2.32	0.65
5:AE:50:GLU:OE1	5:AE:53:LEU:HD12	1.97	0.65
26:B1:87:PRO:HD2	26:B1:89:GLU:N	2.11	0.65
35:BA:239:U:O2'	35:BA:240:G:H5'	1.96	0.65
36:BB:58:A:H5'	36:BB:59:A:OP2	1.97	0.65
51:BS:15:ARG:HB3	51:BS:18:ILE:HG12	1.79	0.65
1:CA:1356:G:H2'	1:CA:1357:A:H8	1.61	0.65
12:CL:61:THR:O	12:CL:63:GLY:N	2.26	0.65
23:CW:69:G:H8	23:CW:69:G:OP2	1.80	0.65
35:DA:1653:G:C6	50:DR:10:LEU:HD12	2.32	0.65
48:DP:83:VAL:HG12	48:DP:112:LEU:HD21	1.78	0.65
57:DY:28:LYS:HA	57:DY:38:ILE:O	1.96	0.65
57:DY:107:ASP:OD1	57:DY:109:GLU:HG3	1.97	0.65
1:AA:951:G:C6	1:AA:1231:G:N1	2.65	0.65
4:AD:122:ARG:NH2	4:AD:135:LEU:HA	2.02	0.65
35:BA:579:G:H2'	35:BA:580:C:H6	1.59	0.65
35:BA:895:U:O2	35:BA:898:C:N4	2.30	0.65
38:BD:179:SER:HB3	38:BD:273:ARG:HD3	1.78	0.65
48:BP:126:VAL:HG12	48:BP:147:LEU:HD23	1.79	0.65
53:BU:97:ASP:OD1	54:BV:13:ARG:NH1	2.30	0.65
12:CL:32:PHE:HB3	12:CL:84:LEU:CD2	2.27	0.65
12:CL:47:LYS:HG3	12:CL:48:PRO:HG3	1.79	0.65
22:CV:17:C:H3'	22:CV:17(A):U:H5"	1.77	0.65
28:D3:2:PRO:O	28:D3:4:LEU:N	2.29	0.65
35:DA:389:G:H1	48:DP:71:VAL:CB	2.08	0.65
35:DA:957:A:N1	35:DA:2458:G:H4'	2.12	0.65
35:DA:2632:A:O2'	39:DE:61:ARG:NH2	2.30	0.65
37:DC:66:HIS:NE2	37:DC:186:ALA:O	2.30	0.65
47:DO:10:VAL:HG21	47:DO:16:ALA:O	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:736:C:H2'	1:AA:737:A:C8	2.31	0.65
1:AA:1030(B):G:H5'	1:AA:1030(E):A:H1'	1.78	0.65
1:AA:1357:A:H4'	10:AJ:47:PHE:CZ	2.30	0.65
13:AM:30:ALA:O	13:AM:34:LEU:HB2	1.97	0.65
31:B6:22:ALA:HB1	31:B6:39:TYR:CZ	2.31	0.65
33:B8:48:PHE:HZ	35:BA:650:C:H5'	1.62	0.65
35:BA:1478:G:O2'	35:BA:1558:A:H2	1.80	0.65
52:BT:92:GLY:O	52:BT:94:ALA:N	2.29	0.65
1:CA:434:U:H2'	1:CA:435:C:H6	1.61	0.65
1:CA:1127:G:O2'	1:CA:1148:U:N3	2.29	0.65
8:CH:121:ASP:HB2	8:CH:125:ARG:HH21	1.62	0.65
41:DG:83:ARG:O	41:DG:85:GLY:N	2.30	0.65
55:DW:14:PRO:O	55:DW:16:LYS:N	2.30	0.65
55:DW:18:ARG:HG2	55:DW:76:VAL:HG13	1.78	0.65
1:AA:457:C:N4	1:AA:460:G:O6	2.30	0.65
1:AA:1051:C:O2	1:AA:1207:G:N2	2.20	0.65
2:AB:211:ILE:HA	2:AB:214:ILE:HD12	1.78	0.65
17:AQ:67:LYS:O	17:AQ:69:LYS:N	2.29	0.65
35:BA:685:A:OP1	35:BA:686:G:N2	2.28	0.65
35:BA:1322:A:N7	35:BA:1323:U:C4	2.65	0.65
51:BS:99:LYS:O	51:BS:106:ARG:NH2	2.29	0.65
5:CE:78:HIS:CD2	5:CE:78:HIS:H	2.14	0.65
12:CL:32:PHE:HB3	12:CL:84:LEU:HD21	1.78	0.65
35:DA:20:C:H42	35:DA:520:G:H1	1.44	0.65
35:DA:305:U:H2'	35:DA:306:U:C6	2.31	0.65
35:DA:871:U:OP1	49:DQ:6:ARG:HB2	1.97	0.65
43:DI:10:GLU:O	43:DI:12:LEU:N	2.30	0.65
51:DS:87:PHE:HD2	51:DS:89:ARG:NH2	1.94	0.65
57:DY:81:LYS:HZ2	57:DY:98:VAL:HB	1.62	0.65
1:AA:190:U:H2'	1:AA:191:G:H8	1.60	0.65
1:AA:1483:A:H1'	35:BA:1948:G:H1'	1.77	0.65
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.79	0.65
35:BA:1190:G:H5"	48:BP:35:HIS:HA	1.77	0.65
35:BA:1478:G:HO2'	35:BA:1558:A:H2	1.44	0.65
35:BA:2101:G:H2'	35:BA:2102:U:O4'	1.96	0.65
35:BA:2674:G:H2'	35:BA:2675:A:C8	2.32	0.65
38:BD:43:ARG:HB3	38:BD:54:ARG:HB2	1.79	0.65
48:BP:63:PRO:O	48:BP:65:ARG:N	2.30	0.65
51:BS:20:ARG:NH2	51:BS:22:GLY:H	1.95	0.65
52:BT:13:ARG:HA	52:BT:13:ARG:NE	2.12	0.65
56:BX:25:LYS:CG	56:BX:26:TYR:H	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:40:LYS:O	56:BX:42:ALA:N	2.30	0.65
1:CA:1074:G:H1	1:CA:1083:U:H3	1.45	0.65
42:DH:132:ARG:HB2	42:DH:132:ARG:HH11	1.62	0.65
49:DQ:22:LYS:HD2	49:DQ:101:ARG:HH11	1.60	0.65
51:DS:53:SER:HA	51:DS:58:LEU:HD23	1.79	0.65
54:DV:72:VAL:O	54:DV:88:ARG:NH1	2.30	0.65
1:AA:1353:G:H1	1:AA:1369:C:H42	1.43	0.65
5:AE:152:ARG:O	8:AH:64:LYS:NZ	2.23	0.65
7:AG:28:ASN:O	7:AG:30:ILE:N	2.30	0.65
18:AR:74:ARG:HB3	18:AR:81:PHE:CE1	2.32	0.65
20:AT:36:LEU:HD23	20:AT:36:LEU:O	1.95	0.65
35:BA:2873:A:N3	50:BR:8:ARG:NH1	2.45	0.65
1:CA:585:G:H5"	17:CQ:36:ILE:CG2	2.26	0.65
1:CA:1299:A:H5"	1:CA:1300:G:OP2	1.97	0.65
4:CD:26:CYS:HA	4:CD:31:CYS:HB2	1.79	0.65
12:CL:89:ARG:NH1	12:CL:95:GLY:H	1.95	0.65
35:DA:587:C:H2'	48:DP:33:ARG:NH1	2.11	0.65
35:DA:2469:A:H2	35:DA:2481:G:H21	1.45	0.65
46:DN:16:ILE:HG22	46:DN:54:VAL:HA	1.78	0.65
49:DQ:134:ARG:O	49:DQ:138:ASP:HB3	1.97	0.65
52:DT:29:ARG:NE	52:DT:82:LEU:HD22	2.10	0.65
56:DX:88:LYS:HA	56:DX:88:LYS:HE3	1.78	0.65
57:DY:81:LYS:NZ	57:DY:98:VAL:HB	2.11	0.65
1:AA:1226:C:C5	13:AM:104:ARG:HG2	2.32	0.64
1:AA:1346:A:N1	1:AA:1374:A:H5"	2.12	0.64
12:AL:32:PHE:HB3	12:AL:84:LEU:HD21	1.79	0.64
22:AV:10:G:N2	22:AV:27:G:H1'	2.11	0.64
38:BD:25:THR:CG2	38:BD:82:ILE:H	2.09	0.64
39:BE:87:GLU:O	39:BE:87:GLU:HG3	1.97	0.64
40:BF:57:VAL:HG12	40:BF:59:TYR:H	1.61	0.64
40:BF:132:VAL:HG22	40:BF:133:ASN:H	1.62	0.64
1:CA:439:A:H2'	1:CA:441:A:O4'	1.97	0.64
13:CM:118:ALA:HB3	22:CV:29:G:H5"	1.79	0.64
33:D8:36:LYS:O	33:D8:37:SER:OG	2.11	0.64
35:DA:83:G:N2	35:DA:103:A:OP2	2.30	0.64
35:DA:528:A:N1	35:DA:2042:A:H2'	2.12	0.64
35:DA:1177:A:H5'	35:DA:1178:C:C6	2.32	0.64
35:DA:1528(A):A:N7	35:DA:1529:G:C8	2.65	0.64
41:DG:76:SER:HB3	41:DG:84:LYS:N	2.04	0.64
53:DU:92:ARG:HG2	54:DV:11:GLN:CD	2.22	0.64
1:AA:982:U:H4'	1:AA:983:A:H5'	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:43:ALA:O	9:AI:45:ALA:N	2.29	0.64
10:AJ:34:VAL:HA	10:AJ:74:ILE:HD13	1.78	0.64
19:AS:15:LEU:CD1	19:AS:18:LYS:HB2	2.27	0.64
35:BA:676:A:H8	35:BA:2069:G:N2	1.95	0.64
35:BA:1527:G:HO2'	35:BA:1528:A:H8	1.43	0.64
40:BF:184:TYR:CE2	40:BF:188:ARG:HD2	2.33	0.64
53:BU:83:LEU:HG	53:BU:88:ILE:HD11	1.79	0.64
54:BV:40:LEU:HD12	54:BV:41:GLY:N	2.05	0.64
4:CD:90:GLY:HA2	4:CD:204:ILE:HD11	1.80	0.64
5:CE:145:LYS:HA	5:CE:148:VAL:HB	1.78	0.64
35:DA:305:U:H2'	35:DA:306:U:H6	1.61	0.64
35:DA:370:G:H4'	35:DA:371:A:OP2	1.96	0.64
35:DA:2532:G:O2'	35:DA:2657:A:N6	2.31	0.64
48:DP:67:MET:C	48:DP:69:GLY:H	2.05	0.64
50:DR:10:LEU:HA	50:DR:17:ARG:HD3	1.79	0.64
1:AA:678:U:H2'	1:AA:679:C:C6	2.33	0.64
1:AA:1097:C:H5"	1:AA:1098:C:OP2	1.97	0.64
11:AK:99:GLN:NE2	11:AK:105:VAL:HG21	2.12	0.64
13:AM:91:ARG:NE	13:AM:97:PRO:O	2.30	0.64
19:AS:40:ILE:HG12	19:AS:69:HIS:O	1.97	0.64
35:BA:1423:G:O2'	35:BA:1499:C:O2'	2.10	0.64
40:BF:51:THR:HG21	40:BF:92:PRO:HD2	1.77	0.64
48:BP:33:ARG:HG2	48:BP:36:LYS:HB3	1.79	0.64
54:BV:66:ARG:HD2	54:BV:67:GLY:C	2.23	0.64
56:BX:57:LEU:HD12	56:BX:58:HIS:N	2.11	0.64
57:BY:27:VAL:HG22	57:BY:30:VAL:HG11	1.79	0.64
1:CA:674:G:H2'	1:CA:675:A:H8	1.62	0.64
1:CA:865:A:C2	1:CA:918:A:H4'	2.30	0.64
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.32	0.64
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.79	0.64
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.62	0.64
27:D2:53:LEU:CD2	35:DA:72:U:H4'	2.27	0.64
35:DA:2035:G:H4'	35:DA:2036:C:OP2	1.96	0.64
37:DC:24:GLU:HG2	37:DC:184:LYS:HA	1.79	0.64
40:DF:22:ALA:C	40:DF:24:LEU:H	2.05	0.64
1:AA:544:G:OP2	4:AD:66:ARG:NH2	2.31	0.64
1:AA:1100:C:OP2	2:AB:96:ARG:HD2	1.97	0.64
2:AB:28:PHE:O	2:AB:31:TYR:N	2.27	0.64
31:B6:36:LEU:O	31:B6:37:ARG:HD2	1.97	0.64
35:BA:136:G:H5"	35:BA:137:C:C5	2.32	0.64
35:BA:848:G:H2'	35:BA:849:A:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1171:G:H8	35:BA:1171:G:OP2	1.81	0.64
36:BB:64:C:H2'	36:BB:65:C:C6	2.33	0.64
40:BF:10:PRO:HB3	40:BF:127:GLU:HB3	1.78	0.64
41:BG:121:ASN:ND2	41:BG:124:SER:OG	2.27	0.64
47:BO:28:SER:O	47:BO:29:ASN:ND2	2.30	0.64
48:BP:7:ARG:O	48:BP:10:PRO:HD3	1.98	0.64
51:BS:25:ARG:HD3	51:BS:25:ARG:O	1.97	0.64
3:CC:15:THR:HG23	3:CC:181:ASN:HA	1.79	0.64
13:CM:67:GLU:O	13:CM:69:GLU:N	2.30	0.64
19:CS:53:ASN:O	19:CS:55:LYS:N	2.30	0.64
24:CX:14:A:N3	24:CX:14:A:H2'	2.13	0.64
26:D1:32:LYS:O	35:DA:2396:G:H4'	1.97	0.64
35:DA:70:G:H21	35:DA:71:A:N6	1.95	0.64
35:DA:2324:C:H5"	35:DA:2325:G:H5"	1.78	0.64
39:DE:60:ASN:HB2	39:DE:62:PRO:HD2	1.79	0.64
43:DI:120:ILE:HG22	43:DI:122:GLU:H	1.61	0.64
46:DN:4:TYR:CB	53:DU:64:ARG:NH1	2.58	0.64
48:DP:55:ARG:O	48:DP:56:SER:OG	2.08	0.64
55:DW:18:ARG:HG2	55:DW:76:VAL:CG1	2.26	0.64
57:DY:32:PRO:O	57:DY:35:TYR:N	2.26	0.64
1:AA:631:G:H2'	1:AA:632:A:H8	1.62	0.64
27:B2:28:LYS:HB2	27:B2:32:LEU:HD21	1.79	0.64
35:BA:184:C:H2'	35:BA:185:U:C6	2.31	0.64
35:BA:672:C:N4	35:BA:808:G:O6	2.18	0.64
35:BA:875:G:O6	35:BA:902:C:N4	2.28	0.64
35:BA:1567:A:H5'	38:BD:58:HIS:CD2	2.32	0.64
49:BQ:126:PRO:O	49:BQ:127:ILE:HG23	1.97	0.64
57:BY:43:ASN:O	57:BY:44:ILE:HG12	1.97	0.64
1:CA:129:U:H2'	1:CA:131:C:H5	1.61	0.64
1:CA:1352:C:H2'	1:CA:1353:G:C8	2.33	0.64
5:CE:81:GLU:HB3	5:CE:90:VAL:HG12	1.79	0.64
31:D6:50:ARG:HG3	31:D6:51:GLU:H	1.63	0.64
35:DA:71:A:H4'	35:DA:72:U:H5"	1.78	0.64
35:DA:661:C:O4'	48:DP:16:ARG:HG2	1.97	0.64
40:DF:2:LYS:C	40:DF:3:GLU:OE2	2.40	0.64
48:DP:82:GLY:HA2	48:DP:113:LYS:O	1.97	0.64
1:AA:1243:C:O2	1:AA:1295:G:N2	2.30	0.64
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.28	0.64
27:B2:27:GLU:N	27:B2:29:LYS:HG2	2.10	0.64
31:B6:28:ARG:HA	31:B6:32:ASN:HB2	1.78	0.64
35:BA:80:G:N1	35:BA:81:G:O6	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1158:C:O2'	35:BA:1159:U:OP2	2.15	0.64
35:BA:1223:G:H3'	35:BA:1224:C:H5"	1.80	0.64
35:BA:2631:G:H1	35:BA:2787:C:H42	1.45	0.64
35:BA:2831:G:H5'	35:BA:2832:U:OP1	1.98	0.64
41:BG:120:LEU:HD21	41:BG:178:PHE:CE1	2.32	0.64
1:CA:130:A:C8	17:CQ:63:ARG:HG3	2.32	0.64
9:CI:31:GLN:HE21	9:CI:35:GLU:HB3	1.61	0.64
17:CQ:48:GLU:HB2	17:CQ:50:LYS:HD3	1.79	0.64
19:CS:15:LEU:HD13	19:CS:18:LYS:HB3	1.80	0.64
26:D1:40:ARG:NE	35:DA:2081:C:OP1	2.31	0.64
29:D4:41:PRO:O	29:D4:43:TYR:N	2.30	0.64
32:D7:28:ARG:NH2	35:DA:1368:G:OP1	2.30	0.64
33:D8:29:LYS:HB3	33:D8:44:LYS:HG3	1.80	0.64
38:DD:121:PRO:HB3	38:DD:135:PHE:CE2	2.33	0.64
46:DN:65:LYS:HZ1	46:DN:68:GLU:HB3	1.63	0.64
54:DV:34:GLU:HB3	54:DV:62:LEU:HB2	1.79	0.64
1:AA:182:U:OP2	1:AA:183:G:N2	2.30	0.64
1:AA:636:U:H2'	1:AA:637:G:H8	1.62	0.64
35:BA:1107:G:O2'	44:BJ:81:UNK:N	2.30	0.64
42:BH:101:ARG:O	42:BH:117:PRO:HB3	1.98	0.64
55:BW:68:ARG:O	55:BW:110:LYS:N	2.30	0.64
27:D2:18:PRO:HB2	27:D2:21:LEU:HB2	1.80	0.64
35:DA:2287:A:H2	35:DA:2346:A:N1	1.96	0.64
46:DN:82:LEU:HD12	46:DN:83:LYS:N	2.12	0.64
54:DV:66:ARG:HE	54:DV:67:GLY:C	2.03	0.64
2:AB:69:LEU:HD13	2:AB:91:PRO:HB2	1.80	0.64
8:AH:12:ARG:NH1	8:AH:27:PRO:HD3	2.12	0.64
9:AI:111:ARG:HD3	9:AI:113:LYS:HB3	1.80	0.64
14:AN:47:LEU:H	14:AN:47:LEU:HD12	1.62	0.64
30:B5:44:THR:HG22	30:B5:45:VAL:H	1.62	0.64
46:BN:58:ASP:C	46:BN:60:ILE:H	2.06	0.64
47:BO:88:ASN:ND2	47:BO:90:GLN:OE1	2.31	0.64
50:BR:78:LYS:HE2	50:BR:83:ILE:HD12	1.80	0.64
51:BS:26:LEU:HD11	51:BS:87:PHE:CG	2.33	0.64
2:CB:107:THR:HA	2:CB:110:GLN:HG3	1.80	0.64
13:CM:39:ILE:HD13	13:CM:56:LEU:HD23	1.79	0.64
19:CS:31:ILE:HG23	19:CS:49:ILE:HA	1.80	0.64
26:D1:76:ARG:O	26:D1:78:LYS:NZ	2.16	0.64
34:D9:27:CYS:SG	34:D9:27:CYS:O	2.55	0.64
35:DA:527:C:C2	35:DA:2779:U:H2'	2.31	0.64
35:DA:784:A:C5	38:DD:229:VAL:HG21	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2099:U:H3	35:DA:2190:G:H1	1.45	0.64
35:DA:2491:U:O2'	35:DA:2570:G:OP1	2.16	0.64
39:DE:51:PHE:C	39:DE:74:PRO:HB3	2.23	0.64
46:DN:17:ASP:H	46:DN:140:VAL:HG13	1.63	0.64
55:DW:4:LYS:HD3	55:DW:6:ILE:HD11	1.80	0.64
1:AA:959:A:H5"	1:AA:960:U:OP2	1.98	0.64
1:AA:1372:U:OP1	9:AI:72:GLY:N	2.31	0.64
10:AJ:98:ILE:HD12	10:AJ:98:ILE:O	1.97	0.64
19:AS:31:ILE:O	19:AS:50:ALA:HB3	1.98	0.64
26:B1:48:LYS:HZ3	26:B1:63:ALA:N	1.96	0.64
27:B2:27:GLU:C	27:B2:29:LYS:H	2.06	0.64
30:B5:29:THR:O	30:B5:29:THR:HG23	1.98	0.64
35:BA:137:C:OP2	35:BA:137:C:H6	1.81	0.64
35:BA:142:A:N6	35:BA:1595:G:O2'	2.30	0.64
35:BA:1149:G:H2'	35:BA:1150:C:C6	2.32	0.64
35:BA:2655:G:O2'	35:BA:2664:G:O6	2.13	0.64
38:BD:2:ALA:O	38:BD:3:VAL:HG22	1.98	0.64
38:BD:27:THR:HG23	38:BD:28:GLU:H	1.62	0.64
41:BG:45:GLU:O	41:BG:51:ARG:NH1	2.31	0.64
42:BH:40:GLU:C	42:BH:41:MET:HE3	2.22	0.64
48:BP:132:LYS:HG2	48:BP:136:GLU:OE2	1.98	0.64
53:BU:18:LEU:HD11	53:BU:32:PHE:CD2	2.33	0.64
56:BX:27:THR:HG22	56:BX:78:LYS:HB3	1.80	0.64
1:CA:503:C:OP2	12:CL:116:SER:HB3	1.97	0.64
5:CE:100:VAL:HA	5:CE:118:ILE:HG22	1.78	0.64
13:CM:15:VAL:HA	13:CM:18:ALA:HB3	1.80	0.64
16:CP:23:ASP:O	16:CP:25:ARG:N	2.31	0.64
26:D1:27:GLU:HB3	26:D1:33:LYS:H	1.63	0.64
26:D1:46:LEU:HD12	26:D1:46:LEU:O	1.98	0.64
35:DA:363(D):G:N2	35:DA:363(E):U:O2	2.31	0.64
35:DA:1434:A:H61	35:DA:1558:A:N6	1.96	0.64
39:DE:65:GLY:HA2	39:DE:70:ALA:HB2	1.79	0.64
42:DH:117:PRO:HB3	42:DH:123:PHE:CD2	2.33	0.64
48:DP:113:LYS:HE2	48:DP:131:SER:HB2	1.80	0.64
49:DQ:16:ARG:NH1	49:DQ:18:LYS:HG3	2.12	0.64
50:DR:10:LEU:HD12	50:DR:11:ASN:H	1.63	0.64
1:AA:460:G:H2'	1:AA:460:G:N3	2.13	0.64
1:AA:972:C:H4'	10:AJ:57:LYS:HG2	1.78	0.64
5:AE:31:LEU:HD11	5:AE:129:ILE:HA	1.79	0.64
21:AU:2:GLY:C	21:AU:4:GLY:H	2.04	0.64
35:BA:271(P):C:H2'	35:BA:271(Q):G:H5'	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:581:C:OP2	53:BU:33:ARG:NE	2.29	0.64
35:BA:861:A:N3	36:BB:79:C:O2'	2.30	0.64
35:BA:1064:C:H41	35:BA:1088:A:H61	1.46	0.64
46:BN:66:LYS:HE3	46:BN:87:LEU:CB	2.18	0.64
51:BS:26:LEU:HD21	51:BS:87:PHE:CD1	2.33	0.64
1:CA:627:G:H2'	1:CA:628:G:C8	2.32	0.64
4:CD:25:ARG:NH1	4:CD:30:LYS:O	2.31	0.64
11:CK:84:VAL:HG22	11:CK:110:ASP:HA	1.78	0.64
31:D6:46:HIS:ND1	35:DA:2371:G:O2'	2.21	0.64
35:DA:64:A:OP1	56:DX:70:LEU:HD12	1.98	0.64
37:DC:64:LEU:HG	37:DC:178:ALA:HA	1.80	0.64
49:DQ:39:PRO:C	49:DQ:127:ILE:HD11	2.23	0.64
52:DT:29:ARG:HD2	52:DT:76:PHE:CZ	2.33	0.64
1:AA:1363(A):A:H4'	1:AA:1364:U:H2'	1.80	0.63
1:AA:1442(A):G:N2	52:BT:122:ASP:HB3	2.13	0.63
26:B1:79:GLY:O	26:B1:81:LYS:N	2.31	0.63
31:B6:12:GLU:HB3	31:B6:23:THR:OG1	1.97	0.63
35:BA:480:A:O3'	57:BY:50:ARG:NH2	2.32	0.63
35:BA:1026:U:H4'	35:BA:1027:A:OP2	1.97	0.63
35:BA:1494:A:H1'	35:BA:1495:A:C5'	2.27	0.63
35:BA:1665:A:C2'	35:BA:1666:G:H5'	2.27	0.63
35:BA:2518:A:C8	35:BA:2518:A:H5'	2.33	0.63
47:BO:1:MET:HB3	47:BO:32:TYR:HB3	1.78	0.63
53:BU:28:ARG:HG3	53:BU:38:THR:OG1	1.97	0.63
54:BV:73:SER:O	54:BV:75:PHE:HD2	1.81	0.63
55:BW:1:MET:HE2	55:BW:58:ALA:HB1	1.79	0.63
1:CA:186:C:O2'	20:CT:85:MET:SD	2.53	0.63
1:CA:250:A:H4'	1:CA:251:G:O5'	1.96	0.63
1:CA:460:G:H21	1:CA:472:A:H62	1.44	0.63
1:CA:975:A:H5'	1:CA:975:A:C8	2.30	0.63
1:CA:1397:C:OP2	5:CE:24:ARG:NH2	2.31	0.63
23:CW:76:A:H5"	26:D1:33:LYS:HE3	1.78	0.63
27:D2:54:LYS:O	27:D2:55:ARG:HB2	1.98	0.63
35:DA:2629:A:H2'	35:DA:2629:A:N3	2.11	0.63
38:DD:159:ALA:HB1	38:DD:198:ASN:O	1.98	0.63
42:DH:137:ASP:O	42:DH:138:LYS:HB3	1.97	0.63
49:DQ:17:LEU:HD12	49:DQ:98:LYS:HD3	1.79	0.63
1:AA:373:A:H2'	1:AA:374:A:H8	1.62	0.63
1:AA:1103:C:H5'	2:AB:98:LEU:HD21	1.81	0.63
1:AA:1298:C:H1'	1:AA:1299:A:C2	2.31	0.63
34:B9:2:LYS:HE2	34:B9:35:ARG:HB3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1339:G:N2	35:BA:1603:A:H1'	2.13	0.63
35:BA:1360:A:H5'	35:BA:1361:G:OP2	1.98	0.63
35:BA:2305:A:H2'	35:BA:2306:C:H5"	1.78	0.63
35:BA:2704:C:H3'	35:BA:2705:A:H8	1.61	0.63
38:BD:179:SER:HB2	38:BD:181:GLU:H	1.63	0.63
43:BI:52:ARG:HG3	43:BI:53:ALA:N	2.11	0.63
50:BR:87:TYR:O	50:BR:89:ASP:N	2.31	0.63
55:BW:88:ARG:HB2	55:BW:92:ARG:HB3	1.79	0.63
5:CE:143:ARG:NH1	8:CH:77:GLU:OE1	2.32	0.63
43:DI:125:GLU:OE2	43:DI:141:LYS:HG2	1.97	0.63
1:AA:595:G:H1'	1:AA:596:C:H5	1.63	0.63
3:AC:70:VAL:HG21	3:AC:76:VAL:HG11	1.79	0.63
12:AL:76:ASN:H	12:AL:77:LEU:HD12	1.63	0.63
17:AQ:82:MET:HA	17:AQ:85:VAL:HG22	1.80	0.63
17:AQ:88:TYR:HA	17:AQ:91:ARG:HG3	1.81	0.63
27:B2:18:PRO:O	27:B2:21:LEU:N	2.29	0.63
33:B8:50:LEU:HD23	35:BA:2360:A:OP1	1.98	0.63
40:BF:170:LEU:HD12	40:BF:172:TRP:HE1	1.64	0.63
54:BV:66:ARG:HD2	54:BV:68:LYS:N	2.13	0.63
57:BY:10:GLY:HA3	57:BY:28:LYS:HE2	1.80	0.63
57:BY:81:LYS:HB3	57:BY:96:ILE:HB	1.80	0.63
1:CA:264:U:O3'	17:CQ:63:ARG:NH2	2.32	0.63
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.80	0.63
5:CE:101:ILE:HD11	5:CE:119:LEU:HD22	1.79	0.63
35:DA:17:G:H4'	53:DU:25:TRP:CH2	2.34	0.63
35:DA:1983:C:H2'	35:DA:1984:G:H5"	1.80	0.63
1:AA:943:U:H1'	9:AI:124:GLN:HE22	1.62	0.63
1:AA:1132:C:N3	1:AA:1133:G:O2'	2.23	0.63
4:AD:205:GLU:HA	4:AD:208:SER:HB3	1.79	0.63
7:AG:87:VAL:HG12	7:AG:151:TYR:O	1.99	0.63
23:AY:40:C:OP2	23:AY:40:C:C6	2.51	0.63
33:B8:59:LYS:NZ	48:BP:49:ARG:HD2	2.14	0.63
38:BD:14:ARG:HD3	38:BD:14:ARG:N	2.14	0.63
38:BD:83:GLU:HB2	38:BD:92:ILE:HD12	1.79	0.63
39:BE:14:ILE:HG13	39:BE:21:VAL:HG23	1.81	0.63
46:BN:17:ASP:OD1	46:BN:17:ASP:C	2.42	0.63
52:BT:23:ARG:HB3	52:BT:24:PRO:HD3	1.79	0.63
1:CA:819:A:H4'	1:CA:820:U:OP2	1.98	0.63
5:CE:91:LEU:HD12	5:CE:120:THR:HG22	1.81	0.63
24:CX:22:U:N3	24:CX:23:A:H2	1.96	0.63
27:D2:49:LYS:HD2	27:D2:54:LYS:CE	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:D7:1:MET:O	32:D7:1:MET:HE3	1.97	0.63
33:D8:27:THR:HG22	33:D8:28:GLY:H	1.63	0.63
35:DA:548:A:H61	54:DV:95:LEU:HD11	1.62	0.63
35:DA:1329:U:H5"	35:DA:1330:C:H5	1.63	0.63
35:DA:1654:A:P	50:DR:3:HIS:HB2	2.39	0.63
37:DC:97:GLU:HA	37:DC:100:ILE:HG12	1.78	0.63
39:DE:59:VAL:HG21	39:DE:63:LEU:CG	2.27	0.63
41:DG:41:GLN:HB3	41:DG:43:LEU:HD23	1.80	0.63
46:DN:22:THR:HG22	46:DN:61:ARG:HD2	1.79	0.63
57:DY:39:VAL:HG23	57:DY:41:GLY:H	1.62	0.63
5:AE:48:ALA:HB3	5:AE:54:ALA:HB2	1.79	0.63
9:AI:43:ALA:C	9:AI:45:ALA:H	2.05	0.63
27:B2:55:ARG:HH12	27:B2:57:ILE:HG22	1.63	0.63
35:BA:82:G:O2'	35:BA:83:G:O4'	2.13	0.63
38:BD:28:GLU:HB2	38:BD:29:PRO:HD3	1.80	0.63
39:BE:48:GLN:HA	39:BE:80:GLU:HA	1.80	0.63
39:BE:105:THR:HB	39:BE:197:ILE:HG23	1.81	0.63
2:CB:131:PRO:O	2:CB:133:LYS:N	2.29	0.63
35:DA:883:G:O6	35:DA:893:C:N4	2.30	0.63
35:DA:2271:G:H2'	35:DA:2272:U:H6	1.64	0.63
35:DA:2688:U:C5	35:DA:2720:U:OP2	2.49	0.63
35:DA:2876:G:OP1	52:DT:4:GLY:N	2.32	0.63
38:DD:168:ARG:HG2	38:DD:173:VAL:HG23	1.80	0.63
47:DO:121:VAL:O	47:DO:122:LEU:HG	1.98	0.63
49:DQ:38:GLU:OE2	49:DQ:128:LYS:HD3	1.97	0.63
52:DT:23:ARG:O	52:DT:25:GLY:N	2.31	0.63
2:AB:19:HIS:CE1	2:AB:206:ASP:HB2	2.33	0.63
35:BA:1258:C:H6	35:BA:1258:C:H5"	1.62	0.63
35:BA:1485:G:H2'	35:BA:1486:A:C8	2.34	0.63
35:BA:2273:A:H2'	35:BA:2274:A:C8	2.34	0.63
35:BA:2317:C:H2'	35:BA:2318:G:O4'	1.98	0.63
40:BF:95:ARG:HB2	40:BF:97:TYR:CE1	2.34	0.63
41:BG:51:ARG:C	41:BG:53:LEU:H	2.05	0.63
44:BJ:25:UNK:HA	44:BJ:116:UNK:HA	1.80	0.63
46:BN:24:GLY:HA2	46:BN:27:ALA:HB3	1.79	0.63
1:CA:19:C:H2'	1:CA:20:U:H6	1.64	0.63
35:DA:535:C:C2'	35:DA:536:A:H5'	2.28	0.63
35:DA:1459:G:H5"	35:DA:1460:A:OP2	1.99	0.63
35:DA:1805:U:O2	38:DD:50:THR:HB	1.97	0.63
35:DA:2823:A:OP1	39:DE:113:PHE:HB2	1.98	0.63
40:DF:185:ASP:HA	40:DF:188:ARG:HD3	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:7:LEU:HD12	42:DH:69:ARG:NH2	2.12	0.63
49:DQ:4:PRO:O	49:DQ:5:ARG:HB2	1.98	0.63
8:AH:7:ALA:CB	8:AH:85:ARG:HD2	2.29	0.63
10:AJ:77:PRO:O	10:AJ:79:ARG:NH1	2.31	0.63
26:B1:28:GLY:HA3	26:B1:32:LYS:H	1.63	0.63
33:B8:34:TRP:CE2	33:B8:35:GLN:O	2.52	0.63
35:BA:454:A:H4'	35:BA:455:C:OP2	1.98	0.63
35:BA:977:G:H2'	35:BA:978:G:H8	1.63	0.63
35:BA:2500:U:O2'	35:BA:2504:U:OP1	2.12	0.63
36:BB:52:A:N7	51:BS:33:LYS:NZ	2.45	0.63
47:BO:2:ILE:HD12	47:BO:6:THR:HG21	1.80	0.63
50:BR:33:ARG:HB3	50:BR:113:LEU:HD11	1.80	0.63
52:BT:123:GLN:O	52:BT:127:ALA:N	2.30	0.63
57:BY:2:ARG:HG2	57:BY:4:LYS:HB2	1.79	0.63
1:CA:26:A:H1'	4:CD:209:ARG:HH21	1.62	0.63
35:DA:1162:G:N2	54:DV:91:TYR:HE1	1.96	0.63
35:DA:1190:G:O5'	48:DP:35:HIS:HA	1.99	0.63
35:DA:2121:G:H1	35:DA:2177:C:H42	1.47	0.63
35:DA:2253:G:H2'	35:DA:2254:C:C6	2.34	0.63
41:DG:107:LEU:HD13	41:DG:177:GLY:O	1.98	0.63
50:DR:91:GLN:OE1	50:DR:91:GLN:N	2.28	0.63
52:DT:29:ARG:HE	52:DT:82:LEU:HD22	1.62	0.63
56:DX:21:PHE:O	56:DX:23:GLU:N	2.31	0.63
1:AA:100:C:H2'	1:AA:101:A:C8	2.34	0.63
1:AA:939:G:H5"	7:AG:102:ARG:NH2	2.14	0.63
8:AH:53:VAL:O	8:AH:55:GLY:N	2.31	0.63
17:AQ:11:VAL:HG12	17:AQ:85:VAL:HG12	1.80	0.63
26:B1:54:ALA:HA	26:B1:56:GLN:O	1.99	0.63
35:BA:1021:A:H62	35:BA:1141:U:H3	1.45	0.63
35:BA:2376:A:N6	51:BS:89:ARG:NH1	2.47	0.63
35:BA:2492:U:H2'	35:BA:2493:U:C6	2.34	0.63
41:BG:33:ARG:O	41:BG:161:THR:HG23	1.98	0.63
52:BT:118:ARG:NH1	52:BT:119:LYS:HB2	2.14	0.63
1:CA:342:C:N3	1:CA:347:G:N1	2.41	0.63
1:CA:519:C:H2'	1:CA:520:A:C8	2.34	0.63
13:CM:13:LYS:HA	13:CM:44:ARG:HH11	1.64	0.63
35:DA:142:A:H8	35:DA:1595:G:H21	1.46	0.63
35:DA:1027:A:O2'	36:DB:88:C:N4	2.32	0.63
1:AA:8:A:H61	4:AD:206:PHE:H	1.45	0.63
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.34	0.63
8:AH:13:ILE:O	8:AH:17:THR:HG23	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:480:A:O5'	57:BY:50:ARG:NH2	2.31	0.63
1:CA:72:C:O2	1:CA:98:G:N2	2.32	0.63
1:CA:1016:A:H2'	1:CA:1017:G:O4'	1.99	0.63
1:CA:1226:C:H4'	1:CA:1227:A:OP1	1.99	0.63
1:CA:1260:C:H4'	1:CA:1284:C:H5'	1.81	0.63
1:CA:1410:G:H2'	1:CA:1411:C:H6	1.64	0.63
4:CD:7:PRO:HB2	4:CD:10:ARG:HD2	1.80	0.63
26:D1:91:LYS:O	26:D1:94:LEU:HB2	1.98	0.63
28:D3:5:LYS:HB3	28:D3:36:VAL:HG12	1.81	0.63
33:D8:26:LYS:HE3	33:D8:43:GLN:HE22	1.64	0.63
35:DA:824:A:H5"	35:DA:825:C:OP2	1.98	0.63
35:DA:1607:C:H4'	35:DA:1608:A:O5'	1.99	0.63
40:DF:65:TRP:CZ3	40:DF:72:ARG:HB3	2.34	0.63
49:DQ:87:LYS:HD3	49:DQ:90:VAL:HG11	1.81	0.63
52:DT:32:TYR:HD1	52:DT:40:THR:HG21	1.64	0.63
1:AA:1254:C:H5"	10:AJ:45:ARG:HH21	1.62	0.62
1:AA:1255:G:P	10:AJ:45:ARG:HH22	2.22	0.62
7:AG:63:LYS:O	7:AG:65:ALA:N	2.31	0.62
8:AH:12:ARG:HH11	8:AH:26:VAL:HA	1.63	0.62
22:AV:41:C:H2'	22:AV:42:C:H6	1.64	0.62
35:BA:84:A:H5"	57:BY:4:LYS:NZ	2.14	0.62
35:BA:86:C:OP2	57:BY:31:LEU:HD23	1.98	0.62
35:BA:134:C:H42	35:BA:144:C:H42	1.46	0.62
35:BA:2031:A:N3	35:BA:2455:G:O2'	2.27	0.62
39:BE:117:MET:HA	39:BE:122:PHE:N	2.14	0.62
50:BR:70:LEU:HD13	50:BR:75:LEU:HD12	1.81	0.62
58:BZ:145:GLU:HG3	58:BZ:146:ILE:H	1.64	0.62
1:CA:137:C:O2'	16:CP:61:SER:O	2.15	0.62
1:CA:947:G:H5"	13:CM:109:THR:HG23	1.81	0.62
1:CA:1410:G:H2'	1:CA:1411:C:C6	2.34	0.62
3:CC:6:HIS:CD2	3:CC:7:PRO:HD2	2.34	0.62
4:CD:153:ARG:NH2	4:CD:180:GLY:O	2.32	0.62
15:CO:15:PHE:CZ	15:CO:84:LYS:HD2	2.34	0.62
35:DA:506:G:H4'	35:DA:507:A:H5'	1.81	0.62
35:DA:1545:A:O2'	35:DA:1546:C:OP1	2.15	0.62
35:DA:2316:C:O2'	41:DG:128:ARG:NH2	2.32	0.62
38:DD:43:ARG:HB2	38:DD:54:ARG:HB2	1.81	0.62
40:DF:15:SER:O	40:DF:17:ARG:HG3	1.99	0.62
58:DZ:72:ARG:HG3	58:DZ:89:PHE:HB2	1.81	0.62
1:AA:162:A:N6	1:AA:334:C:OP1	2.31	0.62
1:AA:656:C:C2'	15:AO:28:GLN:NE2	2.61	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1345:U:H2'	1:AA:1345:U:O2	1.98	0.62
1:AA:1442(A):G:N3	1:AA:1442(A):G:H2'	2.14	0.62
2:AB:136:VAL:HA	2:AB:139:LYS:HD2	1.81	0.62
2:AB:178:ARG:HG2	8:AH:71:GLY:C	2.24	0.62
5:AE:42:GLY:HA3	5:AE:65:ASN:O	1.99	0.62
23:AY:30:G:N2	23:AY:41:C:O2	2.30	0.62
26:B1:40:ARG:HG2	35:BA:2081:C:H4'	1.81	0.62
35:BA:296:C:H42	35:BA:342:G:H1	1.46	0.62
39:BE:24:THR:HG21	39:BE:188:VAL:HG12	1.81	0.62
42:BH:85:LYS:HZ2	42:BH:141:VAL:HG13	1.62	0.62
48:BP:92:GLU:CD	48:BP:92:GLU:H	2.06	0.62
54:BV:16:PRO:HB3	54:BV:99:ILE:O	1.98	0.62
1:CA:57:G:H2'	1:CA:58:C:C6	2.34	0.62
1:CA:1002:G:N2	1:CA:1039:C:O2	2.30	0.62
27:D2:26:ARG:HB3	27:D2:30:ARG:CZ	2.28	0.62
27:D2:41:ILE:C	27:D2:43:GLN:H	2.04	0.62
33:D8:61:LEU:HD21	35:DA:593:G:O2'	1.98	0.62
35:DA:197:A:H8	35:DA:197:A:H5'	1.64	0.62
35:DA:630:G:H4'	35:DA:640:C:H4'	1.80	0.62
35:DA:2485:G:O3'	49:DQ:126:PRO:HB3	1.99	0.62
39:DE:24:THR:HG23	39:DE:184:VAL:HG23	1.79	0.62
39:DE:96:PHE:HA	39:DE:100:GLU:OE1	2.00	0.62
7:AG:26:PHE:HE1	7:AG:120:ILE:HD11	1.62	0.62
16:AP:12:LYS:HD3	16:AP:13:HIS:H	1.64	0.62
35:BA:50:U:H4'	35:BA:51:G:OP2	1.97	0.62
35:BA:581:C:H42	35:BA:1259:G:H1	1.45	0.62
35:BA:1512:U:H5'	35:BA:1513:C:OP2	1.99	0.62
35:BA:2723:C:H4'	50:BR:3:HIS:HD2	1.62	0.62
50:BR:28:LEU:HD21	50:BR:114:VAL:HG12	1.80	0.62
57:BY:81:LYS:NZ	57:BY:97:ARG:O	2.26	0.62
1:CA:136:C:H42	1:CA:227:G:H1	1.45	0.62
1:CA:1284:C:H3'	1:CA:1285:A:H5"	1.81	0.62
31:D6:37:ARG:NH1	35:DA:2286:A:H8	1.89	0.62
35:DA:71:A:H5'	35:DA:71:A:C8	2.34	0.62
35:DA:953:A:OP2	49:DQ:16:ARG:HD2	2.00	0.62
35:DA:2505:G:O6	35:DA:2576:G:H2'	1.99	0.62
37:DC:59:ARG:HB2	37:DC:62:VAL:HG22	1.81	0.62
53:DU:95:LEU:O	53:DU:97:ASP:N	2.32	0.62
54:DV:66:ARG:HH21	54:DV:68:LYS:HA	1.64	0.62
57:DY:30:VAL:HG12	57:DY:32:PRO:HD3	1.81	0.62
4:AD:73:ARG:O	4:AD:76:ARG:N	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:17:VAL:HA	9:AI:63:ILE:HG22	1.80	0.62
20:AT:38:LYS:HA	20:AT:41:ILE:HG12	1.82	0.62
27:B2:33:MET:HB2	27:B2:34:GLU:OE2	2.00	0.62
35:BA:2029:G:H2'	35:BA:2031:A:OP2	1.99	0.62
38:BD:54:ARG:O	38:BD:218:ARG:NH1	2.32	0.62
42:BH:15:VAL:HB	42:BH:17:VAL:HG23	1.82	0.62
1:CA:1211:U:H5"	1:CA:1212:U:OP1	1.99	0.62
3:CC:11:ARG:O	3:CC:14:ILE:N	2.29	0.62
14:CN:26:ARG:HB3	14:CN:43:CYS:SG	2.40	0.62
16:CP:22:THR:HG22	16:CP:32:TYR:HA	1.82	0.62
20:CT:42:GLN:O	20:CT:46:GLU:HB2	1.99	0.62
35:DA:1012:U:O4	46:DN:28:THR:HG21	1.98	0.62
39:DE:32:PRO:HB2	39:DE:67:PHE:HZ	1.64	0.62
40:DF:40:GLN:NE2	40:DF:184:TYR:HB3	2.15	0.62
48:DP:23:PRO:HB2	48:DP:33:ARG:CG	2.29	0.62
1:AA:636:U:H2'	1:AA:637:G:C8	2.35	0.62
1:AA:1226:C:C4	13:AM:104:ARG:HD3	2.34	0.62
26:B1:48:LYS:O	26:B1:49:VAL:HG12	1.99	0.62
35:BA:363:G:C8	35:BA:363(A):A:H2	2.18	0.62
35:BA:594:U:H2'	35:BA:595:C:C6	2.35	0.62
35:BA:764:A:OP2	38:BD:214:TRP:HH2	1.83	0.62
40:BF:179:GLU:CD	40:BF:179:GLU:H	2.06	0.62
50:BR:27:SER:HA	50:BR:29:LEU:HG	1.82	0.62
50:BR:52:ILE:O	50:BR:55:ALA:N	2.32	0.62
53:BU:92:ARG:HD2	54:BV:11:GLN:HB2	1.82	0.62
1:CA:68:G:C2	1:CA:69:G:H1'	2.34	0.62
1:CA:1002:G:OP2	1:CA:1002:G:C8	2.51	0.62
23:CW:37:A:H5'	23:CW:38:A:OP2	1.98	0.62
35:DA:861:A:N6	35:DA:916:G:O2'	2.33	0.62
36:DB:20:C:C2'	36:DB:21:G:H5'	2.30	0.62
40:DF:132:VAL:O	40:DF:134:GLY:N	2.33	0.62
1:AA:177:C:H2'	1:AA:178:C:C6	2.33	0.62
1:AA:959:A:HO2'	1:AA:984:C:HO2'	1.46	0.62
2:AB:27:LYS:HB2	2:AB:194:PRO:HD2	1.81	0.62
5:AE:7:GLU:HG3	5:AE:37:ARG:HG3	1.81	0.62
10:AJ:63:PHE:HB2	14:AN:57:ARG:O	1.99	0.62
12:AL:45:PRO:HB3	12:AL:92:ASP:O	2.00	0.62
15:AO:16:ALA:HB1	15:AO:21:ASP:HB3	1.81	0.62
35:BA:72:U:H5"	35:BA:72:U:C6	2.33	0.62
46:BN:2:LYS:HE2	53:BU:95:LEU:HD21	1.81	0.62
49:BQ:22:LYS:HG3	49:BQ:23:GLY:N	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:102:ALA:O	51:BS:106:ARG:NH1	2.33	0.62
52:BT:122:ASP:OD1	52:BT:122:ASP:N	2.32	0.62
58:BZ:41:LEU:HA	58:BZ:44:PHE:HB2	1.81	0.62
1:CA:883:C:C2'	1:CA:884:U:H5'	2.29	0.62
1:CA:1025:U:H2'	1:CA:1026:G:C8	2.33	0.62
23:CW:52:G:N2	23:CW:63:G:N7	2.47	0.62
35:DA:1939:U:OP1	35:DA:2604:U:O2'	2.15	0.62
35:DA:2632:A:N3	39:DE:61:ARG:NH1	2.47	0.62
35:DA:2877:G:H5"	35:DA:2878:U:OP2	2.00	0.62
47:DO:43:VAL:HG12	47:DO:54:GLU:HA	1.82	0.62
47:DO:104:ARG:NH1	52:DT:35:LYS:HE2	2.14	0.62
57:DY:88:LYS:NZ	57:DY:93:GLY:HA3	2.14	0.62
1:AA:178:C:H2'	1:AA:179:A:H8	1.65	0.62
4:AD:61:LYS:HB2	4:AD:203:VAL:HG22	1.82	0.62
23:AW:3:C:N3	23:AW:71:G:N1	2.48	0.62
27:B2:46:GLN:N	27:B2:49:LYS:HG2	2.14	0.62
35:BA:2787:C:O2	39:BE:61:ARG:NH1	2.33	0.62
35:BA:2867:G:OP2	52:BT:119:LYS:NZ	2.30	0.62
40:BF:65:TRP:HE1	40:BF:72:ARG:HH21	1.47	0.62
41:BG:120:LEU:N	41:BG:179:PRO:O	2.27	0.62
43:BI:75:LEU:HD21	43:BI:105:HIS:CE1	2.34	0.62
43:BI:76:THR:HG22	43:BI:139:GLN:OE1	2.00	0.62
51:BS:20:ARG:NE	51:BS:21:THR:H	1.81	0.62
4:CD:11:LEU:HD13	4:CD:66:ARG:HD2	1.81	0.62
6:CF:35:ALA:HA	6:CF:67:MET:HB3	1.82	0.62
8:CH:31:PHE:O	8:CH:35:ILE:HG13	2.00	0.62
27:D2:46:GLN:HA	27:D2:46:GLN:NE2	2.15	0.62
30:D5:7:PRO:HG2	35:DA:2016:U:O2	1.99	0.62
35:DA:357:A:H2'	35:DA:358:U:H6	1.63	0.62
35:DA:552:G:H8	35:DA:552:G:OP2	1.83	0.62
35:DA:1312:U:OP2	56:DX:62:LYS:HE2	1.99	0.62
42:DH:7:LEU:HD12	42:DH:69:ARG:CZ	2.30	0.62
51:DS:74:ALA:O	51:DS:77:ALA:N	2.32	0.62
1:AA:287:U:H2'	1:AA:288:A:C8	2.35	0.62
1:AA:1456:G:OP1	1:AA:1456:G:N3	2.32	0.62
7:AG:60:LYS:HE3	7:AG:64:GLN:HB2	1.80	0.62
35:BA:918:A:N3	36:BB:80:U:O2'	2.33	0.62
35:BA:1158:C:O2'	35:BA:1159:U:P	2.58	0.62
35:BA:2699:C:N4	35:BA:2708:G:H22	1.94	0.62
54:BV:72:VAL:HG23	54:BV:88:ARG:HB2	1.80	0.62
1:CA:1145:C:H4'	1:CA:1146:A:H5'	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:49:THR:O	13:CM:52:GLU:N	2.32	0.62
35:DA:84:A:H5"	57:DY:9:LYS:HE2	1.81	0.62
38:DD:143:HIS:ND1	38:DD:194:GLY:O	2.32	0.62
51:DS:62:LYS:HB2	51:DS:66:ALA:HB2	1.82	0.62
57:DY:17:SER:HA	57:DY:71:LYS:HD2	1.82	0.62
1:AA:704:A:H5'	1:AA:705:U:OP2	2.00	0.62
10:AJ:71:LEU:HD12	10:AJ:72:VAL:H	1.64	0.62
13:AM:29:ARG:HD3	13:AM:64:TRP:CH2	2.34	0.62
35:BA:142:A:H3'	35:BA:142(A):C:H5"	1.81	0.62
35:BA:223:A:O2'	35:BA:420:C:O2	2.18	0.62
35:BA:1109:C:H41	35:BA:1110:G:N2	1.96	0.62
35:BA:1231:G:H2'	35:BA:1232:G:C8	2.35	0.62
40:BF:33:LEU:HD21	40:BF:112:MET:HB3	1.82	0.62
40:BF:77:ASP:O	40:BF:79:GLY:N	2.33	0.62
1:CA:1203:C:H2'	1:CA:1204:A:H8	1.65	0.62
1:CA:1459:C:H2'	1:CA:1460:A:O4'	1.99	0.62
35:DA:265:A:C8	35:DA:266:G:H1'	2.35	0.62
53:DU:8:VAL:O	53:DU:12:ARG:HG3	1.99	0.62
57:DY:27:VAL:C	57:DY:28:LYS:HD2	2.25	0.62
2:AB:12:GLU:HB2	2:AB:16:HIS:HD2	1.63	0.62
2:AB:97:TRP:HZ3	2:AB:101:MET:HG2	1.63	0.62
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.00	0.62
13:AM:46:LYS:HG3	13:AM:47:ASP:OD1	2.00	0.62
30:B5:36:CYS:HB3	30:B5:49:CYS:SG	2.39	0.62
33:B8:16:ILE:O	33:B8:16:ILE:HD12	1.99	0.62
35:BA:905:U:H2'	35:BA:906:G:H5"	1.81	0.62
35:BA:1403:C:H5"	35:BA:1471:A:H1'	1.81	0.62
1:CA:77:G:H5'	1:CA:78:G:OP2	1.99	0.62
1:CA:343:U:O2'	1:CA:346:G:O6	2.17	0.62
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.35	0.62
2:CB:27:LYS:HD2	2:CB:193:ASP:HB2	1.82	0.62
5:CE:136:MET:O	5:CE:138:ALA:N	2.33	0.62
5:CE:136:MET:C	5:CE:138:ALA:H	2.07	0.62
10:CJ:16:LEU:HD13	10:CJ:70:ARG:HG2	1.81	0.62
19:CS:40:ILE:HG12	19:CS:62:ILE:HD11	1.81	0.62
35:DA:2271:G:H2'	35:DA:2272:U:C6	2.35	0.62
35:DA:2500:U:O2'	35:DA:2504:U:OP1	2.17	0.62
39:DE:119:ARG:CD	39:DE:160:TYR:HB2	2.24	0.62
1:AA:620:C:C2	4:AD:135:LEU:HG	2.35	0.61
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.34	0.61
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:768:G:O2'	35:BA:1379:A:N6	2.33	0.61
35:BA:1019:U:H3	35:BA:1142(A):A:H62	1.48	0.61
38:BD:43:ARG:HD2	38:BD:44:ASN:CG	2.25	0.61
40:BF:29:ASN:HB3	40:BF:32:LEU:HB3	1.82	0.61
49:BQ:17:LEU:HD11	49:BQ:96:VAL:HG13	1.82	0.61
1:CA:673:G:H2'	1:CA:674:G:C8	2.35	0.61
1:CA:1010:G:H8	1:CA:1010:G:O5'	1.82	0.61
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.82	0.61
3:CC:58:GLU:HB3	3:CC:65:ALA:HB2	1.82	0.61
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.82	0.61
10:CJ:28:ARG:HG3	10:CJ:34:VAL:H	1.64	0.61
11:CK:24:SER:OG	11:CK:25:TYR:N	2.27	0.61
15:CO:86:GLY:O	15:CO:87:ILE:HD13	2.00	0.61
22:CV:21:A:H61	22:CV:46:A:H2'	1.63	0.61
25:D0:18:ALA:HB3	25:D0:20:ARG:HH21	1.64	0.61
30:D5:2:ALA:HB3	35:DA:747:U:OP2	1.99	0.61
35:DA:1721:G:H5'	35:DA:1722:A:OP2	2.00	0.61
35:DA:2100:G:H2'	35:DA:2101:G:C8	2.35	0.61
51:DS:62:LYS:HD3	51:DS:66:ALA:N	2.15	0.61
53:DU:92:ARG:NH2	53:DU:92:ARG:O	2.25	0.61
57:DY:43:ASN:HD22	57:DY:44:ILE:N	1.98	0.61
1:AA:190:U:H2'	1:AA:191:G:C8	2.35	0.61
1:AA:1360:A:OP1	1:AA:1360:A:H8	1.82	0.61
7:AG:84:ASN:ND2	23:AW:32:U:O2	2.29	0.61
15:AO:2:PRO:O	15:AO:38:ARG:NH2	2.32	0.61
35:BA:874:G:H1	35:BA:903:C:H42	1.49	0.61
35:BA:1266:G:O2'	35:BA:2012:G:O6	2.16	0.61
35:BA:1980:G:O2'	35:BA:1982:C:OP2	2.17	0.61
35:BA:2689:U:H4'	35:BA:2690:C:OP2	1.99	0.61
52:BT:106:SER:HA	52:BT:110:ILE:HD12	1.81	0.61
7:CG:71:PRO:O	7:CG:91:VAL:HG21	1.99	0.61
35:DA:1087:G:O2'	35:DA:1089:G:OP1	2.14	0.61
35:DA:1901:A:OP2	35:DA:1901:A:H4'	2.00	0.61
35:DA:2123:G:H2'	35:DA:2124:G:H8	1.65	0.61
35:DA:2523:G:C2'	35:DA:2524:G:H5"	2.30	0.61
35:DA:2655:G:O2'	35:DA:2656:U:OP2	2.18	0.61
38:DD:21:PHE:HB3	38:DD:24:ILE:HG12	1.82	0.61
38:DD:31:LYS:NZ	38:DD:32:SER:HB2	2.15	0.61
39:DE:106:GLY:HA3	39:DE:189:PRO:HG2	1.82	0.61
51:DS:17:ARG:HD3	51:DS:88:ASP:OD2	2.00	0.61
8:AH:68:ARG:NH1	8:AH:70:GLN:OE1	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:70:GLN:HE22	25:B0:72:ARG:HD3	1.66	0.61
35:BA:234:C:H2'	35:BA:235:U:H6	1.66	0.61
35:BA:2031:A:C6	35:BA:2498:C:H1'	2.36	0.61
53:BU:92:ARG:NH1	54:BV:11:GLN:O	2.33	0.61
55:BW:80:PRO:O	55:BW:100:THR:HG22	1.99	0.61
7:CG:89:MET:HE3	7:CG:90:GLU:H	1.64	0.61
13:CM:7:VAL:HB	41:DG:115:ARG:HB3	1.82	0.61
35:DA:1495:A:H2	35:DA:1496:A:C5	2.18	0.61
42:DH:88:LEU:O	42:DH:89:ILE:HG23	2.00	0.61
54:DV:70:ILE:HG13	54:DV:90:PRO:HB3	1.80	0.61
56:DX:47:PHE:O	56:DX:49:VAL:HG13	2.00	0.61
1:AA:250:A:H8	1:AA:250:A:O5'	1.83	0.61
1:AA:600:C:H2'	1:AA:601:C:C6	2.35	0.61
1:AA:1008:C:N3	1:AA:1022:G:N1	2.48	0.61
2:AB:74:LYS:HB2	2:AB:165:VAL:HG21	1.83	0.61
3:AC:155:GLY:HA3	3:AC:164:ARG:O	2.01	0.61
4:AD:177:ASP:O	4:AD:179:GLU:N	2.33	0.61
5:AE:11:ILE:HD11	5:AE:33:VAL:HG23	1.82	0.61
8:AH:17:THR:HG22	8:AH:63:LEU:HD21	1.82	0.61
23:AW:7:A:O2'	23:AW:8:U:OP1	2.16	0.61
34:B9:19:ARG:HB2	35:BA:2756:U:H5"	1.81	0.61
35:BA:1289:C:H2'	35:BA:1290:C:H6	1.66	0.61
37:BC:68:LEU:HB3	37:BC:179:SER:HA	1.81	0.61
38:BD:228:PRO:HD3	38:BD:235:GLY:HA2	1.82	0.61
39:BE:8:LYS:HG2	39:BE:192:ASN:HA	1.81	0.61
39:BE:52:LEU:O	39:BE:75:VAL:N	2.32	0.61
1:CA:91:C:H3'	1:CA:91:C:OP2	2.01	0.61
1:CA:959:A:N6	19:CS:78:ARG:HE	1.97	0.61
10:CJ:49:VAL:CG2	14:CN:41:ARG:HB2	2.31	0.61
28:D3:11:SER:OG	28:D3:13:ILE:HG12	1.99	0.61
35:DA:1252:G:OP2	53:DU:14:HIS:HE1	1.84	0.61
36:DB:88:C:H2'	36:DB:89:G:C8	2.35	0.61
37:DC:39:GLU:HG2	37:DC:180:PHE:HA	1.83	0.61
38:DD:31:LYS:HB3	38:DD:35:LYS:N	2.15	0.61
56:DX:53:LYS:N	56:DX:80:ILE:HG22	2.16	0.61
1:AA:6:G:H4'	1:AA:298:A:H4'	1.83	0.61
1:AA:156:G:O6	1:AA:165:C:C4	2.53	0.61
1:AA:620:C:H2'	1:AA:621:A:O4'	2.00	0.61
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.36	0.61
1:AA:1137:C:O4'	1:AA:1140:C:N4	2.33	0.61
8:AH:106:GLY:O	8:AH:122:ARG:NH2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:33:THR:OG1	19:AS:34:TRP:N	2.32	0.61
33:B8:6:THR:HG21	35:BA:243:U:P	2.40	0.61
35:BA:136:G:H3'	35:BA:137:C:C6	2.36	0.61
35:BA:1022:G:H22	35:BA:1142(A):A:H2	1.49	0.61
35:BA:1416:G:N2	35:BA:1583:A:N1	2.49	0.61
35:BA:1594:G:H5'	35:BA:1595:G:OP2	2.01	0.61
35:BA:2094:G:OP2	43:BI:22:LYS:NZ	2.29	0.61
35:BA:2320:A:H2'	35:BA:2320:A:N3	2.16	0.61
39:BE:25:VAL:HG12	39:BE:181:LEU:HD12	1.82	0.61
39:BE:171:GLU:HB3	39:BE:185:LYS:HB2	1.83	0.61
52:BT:51:ARG:NH1	52:BT:100:TYR:CE1	2.68	0.61
1:CA:663:A:H2'	1:CA:664:G:O4'	2.01	0.61
3:CC:7:PRO:O	3:CC:11:ARG:HD3	2.01	0.61
3:CC:114:PRO:HA	3:CC:117:ALA:HB3	1.81	0.61
7:CG:93:PRO:HA	7:CG:96:GLN:CB	2.29	0.61
8:CH:87:SER:HB2	8:CH:93:VAL:HB	1.83	0.61
11:CK:127:LYS:O	11:CK:129:SER:N	2.34	0.61
13:CM:50:GLU:HA	13:CM:53:VAL:HB	1.81	0.61
18:CR:44:LEU:HG	18:CR:49:LYS:O	2.01	0.61
26:D1:83:GLU:HG2	26:D1:86:SER:N	2.15	0.61
35:DA:1044:G:H1'	35:DA:1111:A:N6	2.14	0.61
35:DA:2023:G:H5'	35:DA:2617:C:H4'	1.81	0.61
35:DA:2864:G:H5"	35:DA:2864:G:H8	1.66	0.61
51:DS:33:LYS:HE3	51:DS:34:HIS:HE1	1.64	0.61
54:DV:2:PHE:CD1	54:DV:13:ARG:CZ	2.83	0.61
1:AA:353:A:H5'	1:AA:353:A:H8	1.65	0.61
4:AD:196:LEU:H	4:AD:196:LEU:HD12	1.65	0.61
18:AR:47:THR:HB	18:AR:49:LYS:HG3	1.82	0.61
27:B2:16:LEU:C	27:B2:18:PRO:HD3	2.25	0.61
49:BQ:38:GLU:OE2	49:BQ:128:LYS:NZ	2.25	0.61
49:BQ:124:LYS:NZ	49:BQ:125:LEU:HD21	2.12	0.61
56:BX:29:TRP:HE1	56:BX:74:PRO:HB2	1.63	0.61
1:CA:292:G:N7	1:CA:293:G:H1'	2.15	0.61
1:CA:1136:U:H5"	1:CA:1137:C:C2	2.36	0.61
3:CC:17:ASP:O	3:CC:54:ARG:NH2	2.33	0.61
7:CG:107:ALA:HA	7:CG:110:GLN:HG3	1.82	0.61
9:CI:13:ALA:HB2	9:CI:68:GLY:HA3	1.82	0.61
35:DA:572:A:H2'	35:DA:573:G:O4'	2.00	0.61
35:DA:1412:A:H2'	35:DA:1413:G:C8	2.35	0.61
36:DB:73:A:H5'	36:DB:74:U:OP2	2.01	0.61
50:DR:62:ALA:HA	50:DR:65:LEU:HD23	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:64:MET:HG2	55:DW:109:GLU:OE2	2.00	0.61
1:AA:1120:G:H2'	1:AA:1121:U:O2	1.99	0.61
2:AB:213:LEU:HA	2:AB:216:SER:HB2	1.82	0.61
11:AK:121:PRO:HB2	11:AK:125:PHE:HB2	1.82	0.61
26:B1:43:TYR:CE1	26:B1:45:ASN:ND2	2.69	0.61
35:BA:139:G:H1'	35:BA:139(A):G:N2	2.16	0.61
35:BA:922:U:H2'	35:BA:923:C:C6	2.36	0.61
35:BA:1916:A:H2'	35:BA:1917:U:O4'	2.00	0.61
35:BA:2791:C:HO2'	35:BA:2792:G:P	2.22	0.61
37:BC:18:LYS:HB2	37:BC:22:ILE:CD1	2.30	0.61
35:DA:389:G:N1	48:DP:71:VAL:HB	2.12	0.61
38:DD:132:PRO:HD3	38:DD:190:TYR:CZ	2.36	0.61
40:DF:10:PRO:HG2	40:DF:127:GLU:H	1.65	0.61
50:DR:12:ARG:HG2	50:DR:16:HIS:CG	2.35	0.61
51:DS:74:ALA:HB2	51:DS:101:LEU:HD21	1.82	0.61
1:AA:163:C:H5	1:AA:164:U:C4	2.19	0.61
1:AA:190:U:O2	20:AT:105:SER:HB2	2.00	0.61
1:AA:1443:G:H8	1:AA:1443:G:H5'	1.65	0.61
1:AA:1446:U:C2	1:AA:1447:A:H1'	2.36	0.61
35:BA:1858:G:O2'	35:BA:1884:A:N6	2.34	0.61
35:BA:2733:A:C2	39:BE:203:LYS:HG2	2.35	0.61
38:BD:132:PRO:HG3	38:BD:190:TYR:CE1	2.36	0.61
50:BR:31:HIS:O	50:BR:34:ILE:HG12	2.00	0.61
54:BV:19:LYS:HE2	54:BV:22:VAL:HG13	1.81	0.61
56:BX:82:GLN:O	56:BX:83:VAL:HG22	2.01	0.61
1:CA:68:G:N2	1:CA:69:G:H1'	2.16	0.61
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.15	0.61
1:CA:1195:C:H5"	1:CA:1196:U:O5'	2.00	0.61
12:CL:59:ARG:HA	12:CL:65:GLU:HG2	1.81	0.61
15:CO:17:ARG:HB2	15:CO:21:ASP:OD2	2.00	0.61
29:D4:17:GLY:O	29:D4:19:GLY:N	2.33	0.61
31:D6:25:LYS:HZ1	35:DA:2285:C:H41	1.49	0.61
35:DA:1068:G:O2'	35:DA:1069:A:H5'	1.99	0.61
35:DA:1449:A:H5'	35:DA:1450:G:OP2	2.00	0.61
46:DN:62:VAL:HG11	46:DN:67:LEU:HD23	1.82	0.61
47:DO:7:TYR:CZ	47:DO:44:LYS:HG3	2.35	0.61
53:DU:85:LYS:HD3	53:DU:117:GLN:HA	1.82	0.61
1:AA:77:G:N3	1:AA:77:G:O2'	2.30	0.61
1:AA:999:C:N4	1:AA:1042:G:H1	1.98	0.61
4:AD:71:SER:HB3	4:AD:74:GLN:HB2	1.83	0.61
4:AD:163:GLU:C	4:AD:165:MET:H	2.09	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.26	0.61
8:AH:102:ARG:HH21	8:AH:105:ARG:HD3	1.65	0.61
19:AS:40:ILE:HG21	19:AS:68:GLY:N	2.16	0.61
27:B2:55:ARG:HD3	27:B2:55:ARG:C	2.26	0.61
35:BA:13:A:H61	35:BA:525:U:H3'	1.66	0.61
35:BA:1773:A:C6	38:BD:14:ARG:NH1	2.67	0.61
35:BA:2050:C:H1'	39:BE:156:MET:HE1	1.82	0.61
36:BB:15:A:H1'	36:BB:110:G:C8	2.34	0.61
36:BB:20:C:O2'	36:BB:21:G:H5'	2.00	0.61
38:BD:97:TYR:O	38:BD:99:ASP:N	2.34	0.61
47:BO:71:ARG:HG2	47:BO:72:PRO:HD2	1.81	0.61
48:BP:130:PHE:CD2	48:BP:135:LEU:HD21	2.35	0.61
50:BR:7:GLY:N	50:BR:8:ARG:HH12	1.99	0.61
52:BT:35:LYS:HG3	52:BT:36:GLU:HG3	1.83	0.61
1:CA:627:G:H2'	1:CA:628:G:H8	1.66	0.61
1:CA:674:G:H2'	1:CA:675:A:C8	2.36	0.61
1:CA:1347:G:N2	1:CA:1374:A:OP2	2.30	0.61
14:CN:21:TYR:HD1	14:CN:22:THR:O	1.83	0.61
23:CW:63:G:O2'	37:DC:53:ARG:HG2	2.00	0.61
35:DA:571:A:H5'	35:DA:2030:A:H62	1.66	0.61
35:DA:787:U:H5"	35:DA:788:A:H5'	1.83	0.61
35:DA:1087:G:H2'	35:DA:1088:A:H4'	1.82	0.61
49:DQ:30:GLY:HA2	49:DQ:107:ALA:HB2	1.83	0.61
52:DT:30:VAL:HG13	52:DT:83:ILE:HG13	1.82	0.61
52:DT:62:THR:HG22	52:DT:75:ILE:HG12	1.83	0.61
53:DU:97:ASP:O	53:DU:99:ALA:N	2.34	0.61
1:AA:747:C:H5"	1:AA:748:C:OP2	2.01	0.61
1:AA:1023:G:O6	1:AA:1039:C:H5	1.83	0.61
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.36	0.61
2:AB:223:ILE:O	2:AB:225:ALA:N	2.33	0.61
5:AE:48:ALA:HB1	5:AE:49:PRO:HD2	1.83	0.61
5:AE:105:VAL:HB	5:AE:106:PRO:HD3	1.83	0.61
7:AG:143:ARG:NH1	23:AW:41:C:O3'	2.33	0.61
13:AM:22:ILE:HG22	13:AM:67:GLU:HG3	1.83	0.61
35:BA:198:C:C2'	35:BA:199:A:H5"	2.31	0.61
35:BA:686:G:N2	35:BA:788:A:H61	1.98	0.61
35:BA:2629:A:H2'	35:BA:2629:A:N3	2.15	0.61
46:BN:78:TYR:HB3	46:BN:79:PRO:HD2	1.83	0.61
1:CA:558:G:C4	1:CA:559:A:C2	2.89	0.61
1:CA:1292:U:O2'	1:CA:1293:G:H5'	2.00	0.61
13:CM:5:ALA:HA	13:CM:61:GLU:HG3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D1:32:LYS:C	26:D1:33:LYS:HG2	2.25	0.61
27:D2:49:LYS:HA	27:D2:54:LYS:NZ	2.16	0.61
37:DC:23:ASP:O	37:DC:25:ALA:N	2.33	0.61
40:DF:3:GLU:OE2	40:DF:3:GLU:N	2.34	0.61
43:DI:135:GLU:OE2	43:DI:135:GLU:N	2.23	0.61
48:DP:26:GLY:O	48:DP:27:HIS:HB3	2.00	0.61
51:DS:89:ARG:HG2	51:DS:93:LYS:NZ	2.15	0.61
53:DU:95:LEU:HD21	54:DV:13:ARG:HB3	1.81	0.61
58:DZ:151:HIS:HB2	58:DZ:169:GLU:O	2.00	0.61
58:DZ:151:HIS:HA	58:DZ:171:ILE:HG12	1.82	0.61
1:AA:256:U:H3	1:AA:270:A:H61	1.49	0.60
1:AA:489:C:C2'	1:AA:490:G:H5'	2.31	0.60
1:AA:1356:G:N2	1:AA:1367:C:O2	2.34	0.60
1:AA:1381:U:O2	7:AG:80:VAL:HB	2.01	0.60
3:AC:32:LEU:O	3:AC:36:ASP:HB2	2.00	0.60
4:AD:110:PHE:CE1	4:AD:148:VAL:CG2	2.84	0.60
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.83	0.60
7:AG:83:ALA:O	23:AW:37:A:N6	2.31	0.60
8:AH:77:GLU:HG2	8:AH:78:GLN:H	1.64	0.60
33:B8:29:LYS:NZ	35:BA:2362:G:OP1	2.34	0.60
35:BA:288:C:H2'	35:BA:289:A:C8	2.36	0.60
35:BA:626:U:H3	48:BP:105:LEU:HD23	1.66	0.60
35:BA:668:G:H2'	35:BA:670:A:H62	1.66	0.60
35:BA:1116:C:H2'	35:BA:1117:G:O4'	1.99	0.60
35:BA:1629:U:C5	35:BA:1637:A:N1	2.67	0.60
35:BA:1741:A:H2'	35:BA:1742:G:C4	2.36	0.60
35:BA:2009:G:H2'	35:BA:2010:G:H5'	1.82	0.60
35:BA:2661:G:H2'	35:BA:2662:A:C2	2.36	0.60
42:BH:86:GLU:N	42:BH:86:GLU:OE1	2.33	0.60
51:BS:102:ALA:HB3	51:BS:106:ARG:NH1	2.15	0.60
53:BU:53:ARG:HA	53:BU:56:ASP:HB2	1.82	0.60
54:BV:66:ARG:HH11	54:BV:68:LYS:HA	1.66	0.60
1:CA:130:A:N3	1:CA:263:A:O2'	2.33	0.60
1:CA:756:C:H4'	8:CH:1:MET:HE2	1.81	0.60
1:CA:1237:C:O2	1:CA:1334:G:O2'	2.16	0.60
9:CI:53:VAL:HG11	9:CI:85:LEU:HD22	1.82	0.60
26:D1:83:GLU:HG2	26:D1:85:LEU:C	2.26	0.60
38:DD:44:ASN:HB2	38:DD:49:ILE:HA	1.81	0.60
38:DD:66:ASP:OD2	38:DD:69:ARG:HG2	2.01	0.60
43:DI:77:LEU:O	43:DI:78:THR:HG22	2.01	0.60
58:DZ:24:LEU:HD21	58:DZ:86:VAL:HG23	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:920:U:H2'	1:AA:921:U:C6	2.35	0.60
4:AD:64:LEU:HB2	4:AD:198:VAL:HG11	1.84	0.60
31:B6:27:LYS:HD2	31:B6:31:PRO:HD2	1.81	0.60
35:BA:1638:C:H1'	35:BA:2698:U:O2'	2.02	0.60
35:BA:2340:G:H2'	35:BA:2341:G:C8	2.35	0.60
42:BH:43:VAL:HG11	42:BH:53:GLU:HB3	1.83	0.60
48:BP:7:ARG:NH2	48:BP:10:PRO:HB3	2.15	0.60
12:CL:58:VAL:O	12:CL:65:GLU:HA	2.01	0.60
16:CP:21:VAL:O	16:CP:33:ILE:N	2.32	0.60
20:CT:71:THR:HG22	20:CT:72:LEU:HG	1.82	0.60
39:DE:56:PRO:O	39:DE:58:ARG:N	2.34	0.60
54:DV:85:LYS:C	54:DV:87:HIS:H	2.08	0.60
1:AA:1009:G:H2'	1:AA:1010:G:C8	2.35	0.60
15:AO:18:PHE:HB2	15:AO:19:PRO:HD2	1.83	0.60
18:AR:70:ILE:HG23	18:AR:79:LEU:HD12	1.83	0.60
35:BA:656:G:H3'	35:BA:656:G:C8	2.36	0.60
35:BA:776:G:H4'	35:BA:777:A:O5'	2.00	0.60
40:BF:21:ALA:O	40:BF:24:LEU:N	2.27	0.60
51:BS:21:THR:O	51:BS:23:ARG:N	2.34	0.60
1:CA:262:A:H5'	20:CT:74:LYS:HD2	1.84	0.60
1:CA:1027:C:O2'	1:CA:1035:A:N1	2.32	0.60
8:CH:14:ARG:HD3	8:CH:18:ARG:HH22	1.65	0.60
16:CP:23:ASP:C	16:CP:25:ARG:H	2.09	0.60
18:CR:41:LYS:HA	18:CR:44:LEU:HB2	1.83	0.60
19:CS:22:LEU:HD12	19:CS:27:GLU:C	2.26	0.60
35:DA:2635:C:OP1	39:DE:77:ILE:HG21	2.01	0.60
36:DB:15:A:H1'	36:DB:110:G:C5	2.36	0.60
38:DD:16:MET:HE1	38:DD:208:LYS:HD3	1.82	0.60
39:DE:134:ILE:HB	39:DE:137:HIS:HB2	1.82	0.60
40:DF:2:LYS:O	40:DF:3:GLU:HB3	2.00	0.60
40:DF:132:VAL:C	40:DF:134:GLY:H	2.09	0.60
42:DH:11:VAL:HG13	42:DH:15:VAL:CG2	2.31	0.60
45:DK:104:UNK:O	45:DK:106:UNK:N	2.34	0.60
50:DR:2:ARG:CZ	50:DR:5:LYS:HE3	2.32	0.60
1:AA:1309:G:OP1	13:AM:88:ARG:NH1	2.33	0.60
2:AB:88:ALA:HA	2:AB:223:ILE:HD11	1.83	0.60
12:AL:76:ASN:ND2	12:AL:106:ASP:O	2.31	0.60
33:B8:2:PRO:HA	35:BA:591:C:O2	2.02	0.60
35:BA:142:A:H5'	35:BA:142(A):C:OP2	2.01	0.60
35:BA:1453:U:OP1	50:BR:77:ARG:NH1	2.35	0.60
38:BD:171:ASP:O	38:BD:187:GLY:N	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:15:LEU:HD22	46:BN:16:ILE:H	1.65	0.60
58:BZ:45:ASP:OD2	58:BZ:49:ARG:NE	2.28	0.60
1:CA:271:C:H2'	1:CA:272:C:C6	2.37	0.60
1:CA:979:C:H3'	1:CA:980:C:H5"	1.83	0.60
2:CB:84:GLU:HG3	2:CB:215:LEU:HD12	1.83	0.60
3:CC:119:ARG:O	3:CC:123:GLN:HG3	2.01	0.60
4:CD:59:ARG:HA	4:CD:62:GLN:HB2	1.83	0.60
6:CF:15:ASP:OD1	6:CF:18:GLN:N	2.34	0.60
10:CJ:51:ARG:NH2	10:CJ:60:ARG:O	2.34	0.60
27:D2:23:LYS:HB2	56:DX:5:TYR:CZ	2.35	0.60
35:DA:711:G:N2	35:DA:720:C:O2	2.18	0.60
35:DA:942:G:P	48:DP:41:ARG:HH22	2.24	0.60
35:DA:1049:C:H2'	35:DA:1050:A:N7	2.16	0.60
35:DA:1137:G:O2'	35:DA:2039:C:H5"	2.01	0.60
35:DA:1384:A:O2'	35:DA:1404:C:O2	2.19	0.60
35:DA:1607:C:N4	35:DA:1622:G:OP2	2.29	0.60
35:DA:2468:G:O2'	35:DA:2469:A:H5'	2.01	0.60
35:DA:2577:A:H5"	35:DA:2578:G:H5'	1.81	0.60
40:DF:24:LEU:HD13	40:DF:25:PRO:HG2	1.82	0.60
40:DF:202:PHE:CE1	40:DF:206:ILE:HD11	2.36	0.60
56:DX:43:VAL:HG13	56:DX:51:VAL:HG21	1.83	0.60
56:DX:55:ASN:C	56:DX:77:LYS:HG2	2.26	0.60
57:DY:84:ARG:HH12	57:DY:97:ARG:NH1	1.98	0.60
1:AA:1147:C:O2	9:AI:16:ARG:NE	2.35	0.60
1:AA:1276:G:H2'	1:AA:1277:C:H5'	1.82	0.60
2:AB:181:PHE:CZ	8:AH:70:GLN:HB2	2.37	0.60
4:AD:141:ARG:N	4:AD:144:ASP:OD2	2.28	0.60
35:BA:1091:G:N2	35:BA:1101:U:O2	2.34	0.60
35:BA:1276:A:H2	50:BR:23:ASN:HD21	1.49	0.60
35:BA:1283:G:H5'	35:BA:1284:A:OP2	2.01	0.60
39:BE:117:MET:HA	39:BE:122:PHE:H	1.67	0.60
40:BF:84:VAL:HG11	40:BF:87:GLY:N	2.16	0.60
49:BQ:80:GLU:OE2	49:BQ:81:VAL:N	2.35	0.60
52:BT:129:ARG:HH11	52:BT:131:ALA:HB2	1.66	0.60
3:CC:112:SER:OG	3:CC:115:LEU:HB2	2.01	0.60
19:CS:9:VAL:O	19:CS:11:VAL:N	2.34	0.60
25:D0:66:VAL:HG23	25:D0:82:ARG:CB	2.29	0.60
30:D5:55:ARG:NE	30:D5:55:ARG:O	2.33	0.60
35:DA:1448:G:H1'	35:DA:1528:A:H62	1.66	0.60
38:DD:133:LEU:HD13	38:DD:173:VAL:HG11	1.83	0.60
42:DH:15:VAL:HG12	42:DH:29:PRO:CD	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:71:VAL:CG2	48:DP:72:PRO:HD3	2.32	0.60
48:DP:127:ALA:N	48:DP:145:PRO:HG3	2.15	0.60
58:DZ:19:ARG:HH22	58:DZ:82:ARG:HG3	1.65	0.60
1:AA:360:A:H2'	1:AA:361:G:C8	2.36	0.60
1:AA:922:G:H1'	5:AE:19:MET:HB3	1.84	0.60
2:AB:102:LEU:HD13	2:AB:158:LEU:CD2	2.31	0.60
13:AM:84:ILE:HD11	19:AS:66:MET:CG	2.30	0.60
35:BA:627:A:H4'	35:BA:628:G:OP1	2.01	0.60
35:BA:1056:G:H1'	35:BA:1086:A:N6	2.17	0.60
35:BA:1628:G:N2	35:BA:1638:C:H5	1.99	0.60
35:BA:1810:A:H2'	35:BA:1811:G:O4'	2.02	0.60
35:BA:2298:A:N6	35:BA:2318:G:C8	2.69	0.60
35:BA:2319:G:N1	35:BA:2334:G:OP2	2.31	0.60
49:BQ:25:ASP:OD2	49:BQ:102:VAL:N	2.19	0.60
1:CA:189(G):G:H4'	1:CA:189(H):G:OP2	2.01	0.60
1:CA:499:A:H4'	1:CA:500:G:OP1	2.02	0.60
1:CA:556:C:H2'	1:CA:557:G:H8	1.65	0.60
10:CJ:37:PRO:HB3	10:CJ:72:VAL:HG22	1.84	0.60
13:CM:68:GLY:O	13:CM:72:ALA:N	2.31	0.60
28:D3:30:ARG:O	28:D3:33:GLN:HB2	2.02	0.60
35:DA:58:G:H5"	56:DX:72:LYS:HD2	1.84	0.60
35:DA:1641:A:H2'	35:DA:1642:G:O4'	2.01	0.60
37:DC:87:GLU:HG3	37:DC:94:VAL:HG23	1.83	0.60
46:DN:77:GLY:C	46:DN:78:TYR:HD1	2.09	0.60
49:DQ:130:LYS:HG3	49:DQ:131:ILE:H	1.67	0.60
56:DX:77:LYS:CD	56:DX:78:LYS:N	2.59	0.60
1:AA:1208:C:H2'	1:AA:1209:C:H6	1.66	0.60
1:AA:1238:A:H62	1:AA:1301:U:H3	1.48	0.60
8:AH:33:GLU:HG3	8:AH:59:LEU:HD11	1.84	0.60
9:AI:23:ASN:N	9:AI:60:ASP:OD2	2.34	0.60
20:AT:95:ALA:O	20:AT:97:ALA:N	2.34	0.60
26:B1:48:LYS:HZ3	26:B1:63:ALA:H	1.48	0.60
27:B2:27:GLU:HG2	27:B2:29:LYS:HE2	1.82	0.60
37:BC:46:LYS:HB2	37:BC:208:PHE:O	2.02	0.60
40:BF:42:ALA:O	40:BF:44:ARG:N	2.34	0.60
48:BP:97:PRO:O	48:BP:100:LEU:N	2.34	0.60
50:BR:103:ARG:NH1	55:BW:40:ASN:OD1	2.34	0.60
55:BW:7:ALA:HB3	55:BW:103:ILE:HG12	1.84	0.60
30:D5:3:LYS:HE3	30:D5:6:VAL:CG1	2.31	0.60
35:DA:192:C:C3'	35:DA:193:U:H5"	2.32	0.60
35:DA:806:C:OP2	48:DP:39:LYS:HB3	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DB:20:C:H2'	36:DB:21:G:H5'	1.83	0.60
37:DC:46:LYS:HE2	37:DC:46:LYS:HA	1.83	0.60
56:DX:69:TYR:OH	56:DX:73:ARG:HG3	2.02	0.60
1:AA:57:G:H2'	1:AA:58:C:C6	2.37	0.60
1:AA:1295:G:H21	1:AA:1302:U:H5	1.50	0.60
2:AB:165:VAL:HG23	2:AB:166:ASP:H	1.67	0.60
10:AJ:42:THR:HG22	10:AJ:68:HIS:HA	1.83	0.60
15:AO:32:LEU:O	15:AO:36:ILE:HG12	2.01	0.60
27:B2:47:ASN:ND2	27:B2:51:ARG:HH21	2.00	0.60
33:B8:19:SER:OG	35:BA:651:G:OP1	2.14	0.60
34:B9:36:GLN:HE22	35:BA:1031:G:H21	1.50	0.60
35:BA:1039:G:H1	35:BA:1116:C:H42	1.48	0.60
35:BA:2343:C:O2'	35:BA:2373:G:O2'	2.16	0.60
39:BE:38:THR:HG22	39:BE:40:GLU:H	1.65	0.60
40:BF:68:LYS:O	40:BF:70:THR:N	2.26	0.60
1:CA:236:G:H5"	17:CQ:42:TYR:OH	2.02	0.60
1:CA:1261:A:H1'	1:CA:1283:G:H5"	1.83	0.60
20:CT:55:ILE:O	20:CT:59:ALA:N	2.34	0.60
35:DA:1048:A:OP2	35:DA:1048:A:H4'	2.00	0.60
35:DA:2038:G:H2'	35:DA:2039:C:O4'	2.02	0.60
35:DA:2661:G:C8	35:DA:2662:A:N1	2.70	0.60
51:DS:89:ARG:HG2	51:DS:93:LYS:HZ2	1.67	0.60
52:DT:80:SER:HB2	52:DT:81:PRO:CD	2.30	0.60
1:AA:922:G:N3	1:AA:1398:A:H2	1.98	0.60
1:AA:1129:C:H41	1:AA:1132:C:H41	1.50	0.60
1:AA:1138:G:H3'	1:AA:1138:G:N3	2.16	0.60
2:AB:178:ARG:NH1	2:AB:196:LEU:O	2.29	0.60
4:AD:100:ARG:HE	4:AD:137:SER:HB3	1.67	0.60
5:AE:140:ARG:O	5:AE:143:ARG:NH2	2.35	0.60
8:AH:109:ILE:HG22	8:AH:137:VAL:HB	1.84	0.60
19:AS:66:MET:O	19:AS:68:GLY:N	2.35	0.60
22:AV:24:C:H2'	22:AV:25:U:C6	2.36	0.60
22:AV:44:A:O2'	22:AV:45:A:H5'	2.01	0.60
23:AW:35:A:H61	24:AX:13:A:H62	1.47	0.60
35:BA:108:U:H2'	35:BA:109:G:C8	2.37	0.60
35:BA:1688:U:O2	35:BA:1700:A:H5"	2.02	0.60
41:BG:134:GLY:HA2	41:BG:156:ASP:HA	1.83	0.60
46:BN:30:ILE:HG22	46:BN:34:LEU:HD13	1.82	0.60
48:BP:57:THR:HB	48:BP:60:MET:HG2	1.84	0.60
55:BW:50:VAL:C	55:BW:51:LEU:HD22	2.26	0.60
56:BX:44:GLU:OE2	56:BX:50:LYS:HA	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BY:47:LYS:HB3	57:BY:60:PHE:CD2	2.37	0.60
58:BZ:10:ARG:HB2	58:BZ:36:LYS:HB3	1.84	0.60
9:CI:42:ARG:NH1	9:CI:71:SER:OG	2.35	0.60
9:CI:93:ARG:O	9:CI:95:LYS:N	2.35	0.60
20:CT:75:ASN:O	20:CT:79:ARG:HB3	2.02	0.60
33:D8:30:ARG:NH1	35:DA:2394:C:C5	2.70	0.60
35:DA:250:G:H2'	35:DA:251:A:C8	2.37	0.60
36:DB:5:C:N4	36:DB:116:G:H1	1.99	0.60
46:DN:43:THR:HB	46:DN:46:VAL:CG1	2.32	0.60
48:DP:7:ARG:O	48:DP:9:ASN:N	2.34	0.60
48:DP:40:SER:O	48:DP:41:ARG:HG3	2.02	0.60
48:DP:49:ARG:HH21	48:DP:50:ARG:NH1	2.00	0.60
52:DT:51:ARG:HB2	52:DT:98:LYS:HG3	1.82	0.60
1:AA:633:G:H5'	1:AA:634:C:OP2	2.01	0.60
1:AA:881:G:H2'	1:AA:882:C:O4'	2.02	0.60
1:AA:1289:A:N6	1:AA:1371:G:O2'	2.35	0.60
2:AB:126:GLU:HG2	2:AB:129:GLU:HG3	1.84	0.60
10:AJ:34:VAL:HG13	10:AJ:73:ASP:O	2.02	0.60
35:BA:81:G:H1	35:BA:82:G:N2	2.00	0.60
43:BI:26:ALA:HA	43:BI:30:LEU:HB2	1.82	0.60
46:BN:30:ILE:HG22	46:BN:34:LEU:HD11	1.84	0.60
48:BP:132:LYS:C	48:BP:136:GLU:OE2	2.45	0.60
51:BS:89:ARG:HD2	51:BS:92:TYR:HA	1.84	0.60
54:BV:85:LYS:O	54:BV:87:HIS:N	2.35	0.60
58:BZ:40:ASP:C	58:BZ:44:PHE:HD2	2.10	0.60
1:CA:600:C:H2'	1:CA:601:C:H6	1.67	0.60
1:CA:625:G:H4'	16:CP:16:HIS:CG	2.37	0.60
1:CA:688:G:H2'	1:CA:689:C:H6	1.67	0.60
1:CA:1347:G:H22	1:CA:1374:A:P	2.25	0.60
35:DA:548:A:H61	54:DV:95:LEU:CD2	2.15	0.60
35:DA:1020:A:N1	35:DA:1141:U:O2'	2.24	0.60
35:DA:1050:A:H2	35:DA:1051:G:N2	1.99	0.60
35:DA:1639:U:H4'	35:DA:2699:C:H4'	1.84	0.60
43:DI:82:ARG:N	43:DI:143:SER:OG	2.35	0.60
46:DN:39:ARG:HE	46:DN:41:ASP:CB	2.14	0.60
48:DP:51:PHE:CE1	48:DP:61:ARG:NH2	2.70	0.60
49:DQ:10:ARG:HA	49:DQ:10:ARG:NE	2.15	0.60
56:DX:11:PRO:HG2	56:DX:13:LEU:HD21	1.82	0.60
4:AD:36:ARG:HB3	4:AD:38:TYR:CE2	2.37	0.59
5:AE:72:GLN:O	5:AE:74:GLY:N	2.29	0.59
16:AP:70:ALA:O	16:AP:74:LEU:HD12	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:B5:3:LYS:HB3	35:BA:747:U:H5	1.67	0.59
35:BA:2065:C:H1'	35:BA:2449:U:H3	1.67	0.59
35:BA:2327:A:H2'	35:BA:2328:A:H8	1.61	0.59
39:BE:31:CYS:HB3	39:BE:49:LEU:HB3	1.83	0.59
57:BY:20:TYR:CE2	57:BY:42:VAL:HA	2.36	0.59
58:BZ:24:LEU:HB3	58:BZ:44:PHE:CE2	2.36	0.59
1:CA:559:A:OP2	5:CE:126:ARG:NH2	2.35	0.59
3:CC:143:GLU:C	3:CC:145:GLY:H	2.10	0.59
8:CH:4:ASP:OD2	8:CH:85:ARG:NE	2.27	0.59
21:CU:9:ARG:HH11	21:CU:22:ARG:HG2	1.66	0.59
23:CW:37:A:H3'	23:CW:38:A:C8	2.37	0.59
33:D8:50:LEU:C	33:D8:53:PRO:HD2	2.27	0.59
35:DA:1517:G:H5"	35:DA:1517:G:H8	1.67	0.59
35:DA:1739:U:O2'	35:DA:1740:G:N7	2.33	0.59
37:DC:86:ALA:HA	37:DC:89:ALA:HB3	1.83	0.59
41:DG:43:LEU:HD12	41:DG:45:GLU:OE1	2.02	0.59
53:DU:92:ARG:HH12	53:DU:95:LEU:HB2	1.66	0.59
57:DY:90:LEU:CD1	57:DY:91:GLU:HB2	2.31	0.59
58:DZ:26:GLY:HA3	58:DZ:86:VAL:O	2.02	0.59
1:AA:165:C:O2'	1:AA:166:G:O4'	2.20	0.59
1:AA:991:U:HO2'	1:AA:993:G:H8	1.50	0.59
1:AA:1190:G:OP1	3:AC:5:ILE:N	2.35	0.59
1:AA:1287:A:H2	1:AA:1353:G:H1'	1.67	0.59
5:AE:79:GLU:OE1	8:AH:105:ARG:HG2	2.02	0.59
12:AL:46:LYS:HZ2	12:AL:94:PRO:HB3	1.67	0.59
35:BA:64:A:H2'	35:BA:65:C:C6	2.34	0.59
35:BA:547:A:H2'	35:BA:547:A:N3	2.17	0.59
35:BA:1341:U:H2'	35:BA:1397:U:O2	2.02	0.59
35:BA:2400:G:H5"	35:BA:2400:G:C8	2.38	0.59
35:BA:2566:A:N6	47:BO:29:ASN:HD21	1.98	0.59
53:BU:102:GLU:HG3	54:BV:2:PHE:CZ	2.37	0.59
1:CA:418:C:H2'	1:CA:419:C:H6	1.65	0.59
35:DA:248:G:H5"	35:DA:386:G:N2	2.17	0.59
35:DA:1503:U:H2'	35:DA:1504:C:H6	1.67	0.59
40:DF:93:LYS:HB3	40:DF:94:PRO:HD2	1.84	0.59
49:DQ:80:GLU:HB3	49:DQ:81:VAL:HG22	1.83	0.59
1:AA:419:C:H2'	1:AA:420:U:O2	2.01	0.59
1:AA:1220:G:H21	19:AS:54:GLY:HA2	1.67	0.59
4:AD:18:LYS:HG3	4:AD:31:CYS:HB2	1.84	0.59
4:AD:205:GLU:O	4:AD:206:PHE:HB3	2.02	0.59
10:AJ:48:THR:HB	10:AJ:62:HIS:HD2	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:52:LEU:O	12:AL:54:LYS:NZ	2.27	0.59
22:AV:67:C:H2'	22:AV:68:C:H6	1.67	0.59
23:AY:41:C:H5'	23:AY:42:C:OP2	2.01	0.59
27:B2:45:SER:O	27:B2:48:HIS:HB2	2.02	0.59
32:B7:36:GLN:H	32:B7:38:GLY:H	1.50	0.59
32:B7:40:TRP:CD1	35:BA:459:U:H5'	2.35	0.59
35:BA:139(A):G:N2	56:BX:40:LYS:HE2	2.13	0.59
38:BD:45:ASN:OD1	38:BD:46:GLN:N	2.35	0.59
49:BQ:5:ARG:CZ	49:BQ:6:ARG:H	2.16	0.59
51:BS:30:ARG:NH2	51:BS:62:LYS:HE2	2.16	0.59
56:BX:27:THR:HB	56:BX:77:LYS:HA	1.84	0.59
57:BY:47:LYS:HB3	57:BY:60:PHE:HD2	1.67	0.59
1:CA:957:U:O2'	19:CS:78:ARG:NH2	2.35	0.59
1:CA:1053:G:H3'	1:CA:1054:C:H5'	1.82	0.59
1:CA:1067:A:H1'	1:CA:1068:G:C8	2.37	0.59
8:CH:39:LEU:O	8:CH:44:PHE:N	2.35	0.59
10:CJ:23:ILE:HD12	10:CJ:23:ILE:H	1.68	0.59
10:CJ:61:GLU:OE2	14:CN:58:LYS:NZ	2.34	0.59
23:CW:31:A:N6	23:CW:40:C:N3	2.51	0.59
30:D5:20:ARG:HG2	30:D5:23:HIS:CE1	2.38	0.59
32:D7:31:LEU:HD12	32:D7:31:LEU:H	1.68	0.59
35:DA:636:G:OP1	48:DP:132:LYS:HE2	2.02	0.59
35:DA:1071:G:H1	35:DA:1092:C:H41	1.50	0.59
35:DA:1224:C:O3'	54:DV:88:ARG:HB3	2.02	0.59
35:DA:2876:G:P	52:DT:4:GLY:H	2.25	0.59
42:DH:137:ASP:HB3	42:DH:140:LYS:HB3	1.84	0.59
51:DS:106:ARG:O	51:DS:107:GLU:HB2	2.01	0.59
55:DW:10:VAL:HG12	55:DW:12:ILE:HG22	1.83	0.59
1:AA:740:U:H4'	15:AO:42:HIS:NE2	2.17	0.59
7:AG:115:ARG:O	7:AG:118:VAL:N	2.35	0.59
10:AJ:50:ILE:HD11	10:AJ:57:LYS:HE2	1.84	0.59
32:B7:34:ARG:O	32:B7:36:GLN:N	2.35	0.59
34:B9:19:ARG:HH22	34:B9:26:ILE:HD11	1.67	0.59
35:BA:614(C):A:C4	40:BF:180:GLY:HA2	2.37	0.59
35:BA:1102:C:H1'	35:BA:1103:A:C8	2.37	0.59
35:BA:1587:A:H2'	35:BA:1588:C:C6	2.38	0.59
35:BA:2094:G:OP1	43:BI:22:LYS:CD	2.50	0.59
41:BG:80:PHE:O	41:BG:81:LYS:HB2	2.01	0.59
53:BU:88:ILE:HB	53:BU:90:VAL:HG23	1.83	0.59
54:BV:85:LYS:HA	54:BV:87:HIS:HD2	1.66	0.59
1:CA:366:C:H5'	1:CA:366:C:C6	2.30	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:61:LYS:HE2	4:CD:206:PHE:CE2	2.37	0.59
6:CF:8:ILE:HD11	6:CF:79:LEU:HD13	1.83	0.59
7:CG:115:ARG:HB2	7:CG:118:VAL:HG22	1.84	0.59
20:CT:29:LYS:O	20:CT:33:ILE:HG12	2.02	0.59
32:D7:16:HIS:ND1	35:DA:684:G:OP1	2.36	0.59
35:DA:1690:A:H3'	35:DA:1691:C:H6	1.66	0.59
35:DA:2308:G:O2'	35:DA:2309:A:OP1	2.20	0.59
35:DA:2654:A:N1	35:DA:2665:A:H5"	2.17	0.59
52:DT:108:ARG:NH1	52:DT:112:ARG:HG2	2.16	0.59
54:DV:25:LEU:H	54:DV:94:LEU:HD13	1.66	0.59
58:DZ:19:ARG:NH2	58:DZ:82:ARG:HG3	2.18	0.59
1:AA:189:G:H8	1:AA:189:G:H3'	1.65	0.59
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.67	0.59
1:AA:1166:G:O2'	1:AA:1168:A:O5'	2.20	0.59
8:AH:104:ARG:HD2	8:AH:107:LEU:C	2.27	0.59
35:BA:634:C:H2'	35:BA:635:C:C6	2.38	0.59
35:BA:993:G:N2	54:BV:91:TYR:OH	2.33	0.59
35:BA:1583:A:H4'	35:BA:1584:C:O5'	2.02	0.59
35:BA:1615:C:C2	55:BW:87:PRO:HG2	2.38	0.59
35:BA:2582:G:OP2	35:BA:2583:G:OP2	2.20	0.59
38:BD:34:VAL:C	38:BD:35:LYS:HD2	2.27	0.59
40:BF:53:THR:H	40:BF:56:GLU:HB2	1.68	0.59
52:BT:107:ASP:OD1	52:BT:109:GLU:HB2	2.02	0.59
1:CA:939:G:H5"	7:CG:102:ARG:NH2	2.18	0.59
1:CA:977:A:H1'	1:CA:982:U:O4	2.03	0.59
4:CD:31:CYS:C	4:CD:33:MET:H	2.10	0.59
5:CE:11:ILE:HD11	5:CE:108:ALA:CB	2.32	0.59
13:CM:8:GLU:OE1	13:CM:23:TYR:N	2.35	0.59
13:CM:66:LEU:O	13:CM:70:LEU:N	2.22	0.59
20:CT:67:ALA:HA	20:CT:72:LEU:O	2.01	0.59
26:D1:13:ILE:HG13	26:D1:14:VAL:H	1.68	0.59
33:D8:29:LYS:HD2	33:D8:44:LYS:CB	2.32	0.59
35:DA:2273:A:O2'	35:DA:2274:A:H5'	2.02	0.59
35:DA:2464:C:O2'	35:DA:2465:C:H6	1.86	0.59
35:DA:2481:G:O2'	35:DA:2482:G:P	2.60	0.59
35:DA:2492:U:H2'	35:DA:2493:U:C6	2.38	0.59
37:DC:82:LYS:NZ	37:DC:152:ILE:H	1.99	0.59
38:DD:228:PRO:HD3	38:DD:235:GLY:CA	2.31	0.59
42:DH:149:ARG:HA	42:DH:162:ILE:HG13	1.84	0.59
48:DP:6:LEU:O	48:DP:7:ARG:HB3	2.02	0.59
51:DS:11:LYS:O	51:DS:13:ARG:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:72:ARG:CG	58:DZ:89:PHE:HB2	2.32	0.59
1:AA:1095:U:P	1:AA:1108:G:H1	2.25	0.59
1:AA:1152:A:H4'	10:AJ:13:HIS:NE2	2.18	0.59
1:AA:1245:A:H5'	1:AA:1246:C:OP2	2.03	0.59
23:AW:38:A:H5"	23:AW:38:A:C8	2.38	0.59
35:BA:1019:U:HO2'	35:BA:1021:A:H2	1.50	0.59
38:BD:25:THR:HG21	38:BD:113:VAL:HG21	1.84	0.59
39:BE:103:ASP:OD1	39:BE:201:THR:HG23	2.00	0.59
43:BI:56:LYS:C	43:BI:58:LEU:H	2.10	0.59
55:BW:110:LYS:HG3	55:BW:111:HIS:ND1	2.17	0.59
1:CA:49:U:C2	1:CA:361:G:N2	2.70	0.59
1:CA:1368:G:OP1	9:CI:111:ARG:NH2	2.36	0.59
2:CB:7:VAL:C	2:CB:8:LYS:HD3	2.27	0.59
3:CC:104:GLN:HA	3:CC:104:GLN:OE1	2.01	0.59
8:CH:121:ASP:HB2	8:CH:125:ARG:NH2	2.17	0.59
9:CI:9:ARG:HG3	9:CI:14:VAL:HG22	1.85	0.59
15:CO:3:ILE:HD12	15:CO:8:LYS:HD2	1.84	0.59
35:DA:577:G:O2'	35:DA:1254:A:OP1	2.19	0.59
35:DA:2020:A:O2'	35:DA:2021:C:H5'	2.02	0.59
41:DG:115:ARG:NH1	41:DG:117:PHE:H	2.00	0.59
46:DN:74:ARG:HD2	46:DN:101:HIS:ND1	2.17	0.59
51:DS:89:ARG:CD	51:DS:93:LYS:HG3	2.33	0.59
56:DX:69:TYR:CE1	56:DX:72:LYS:HA	2.37	0.59
56:DX:77:LYS:HD3	56:DX:78:LYS:CA	2.33	0.59
1:AA:192:U:H2'	1:AA:193:C:H6	1.65	0.59
1:AA:412:A:H5'	4:AD:35:ARG:HH22	1.68	0.59
1:AA:1176:A:N7	1:AA:1177:G:N2	2.50	0.59
1:AA:1305:G:O2'	1:AA:1306:A:OP2	2.19	0.59
7:AG:152:ALA:HB1	7:AG:155:ARG:HH21	1.67	0.59
8:AH:21:LYS:N	8:AH:65:TYR:OH	2.35	0.59
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.67	0.59
26:B1:35:THR:HG21	35:BA:2432:A:C5	2.38	0.59
27:B2:59:ARG:HD2	27:B2:59:ARG:N	2.17	0.59
34:B9:22:ARG:NH1	34:B9:24:TYR:OH	2.33	0.59
35:BA:880:G:N2	35:BA:898:C:O2	2.33	0.59
35:BA:1024:G:H8	35:BA:1024:G:O5'	1.85	0.59
35:BA:2061:G:H5"	35:BA:2503:A:C2	2.37	0.59
35:BA:2547:U:H2'	35:BA:2548:G:H8	1.68	0.59
35:BA:2753:A:O2'	35:BA:2754:U:O5'	2.20	0.59
38:BD:242:ARG:HG2	38:BD:246:PRO:HG3	1.85	0.59
39:BE:169:ASN:OD1	39:BE:201:THR:HG21	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:149:ARG:HA	42:BH:162:ILE:HG13	1.85	0.59
56:BX:40:LYS:O	56:BX:44:GLU:HB3	2.01	0.59
57:BY:47:LYS:HG3	57:BY:49:VAL:HG22	1.82	0.59
57:BY:67:LEU:HD12	57:BY:71:LYS:HD3	1.85	0.59
3:CC:149:ALA:HA	3:CC:201:TYR:O	2.02	0.59
5:CE:78:HIS:HB3	8:CH:107:LEU:HD12	1.84	0.59
30:D5:2:ALA:O	30:D5:3:LYS:HG3	2.03	0.59
35:DA:153:C:H2'	35:DA:154:G:H8	1.68	0.59
35:DA:2859:G:H3'	35:DA:2859:G:C8	2.38	0.59
35:DA:2864:G:H5"	35:DA:2864:G:C8	2.37	0.59
36:DB:44:G:H1'	36:DB:47:C:N4	2.18	0.59
42:DH:145:ALA:HB1	42:DH:164:TYR:HE1	1.68	0.59
1:AA:737:A:H2'	1:AA:738:C:H6	1.66	0.59
1:AA:1206:G:H1'	3:AC:193:TYR:O	2.03	0.59
1:AA:1505:G:H4'	1:AA:1506:U:H5"	1.85	0.59
2:AB:32:ILE:HD13	2:AB:40:HIS:CE1	2.37	0.59
11:AK:18:ARG:NH2	11:AK:36:ASP:O	2.31	0.59
11:AK:41:THR:HG21	11:AK:71:LYS:HD2	1.83	0.59
23:AW:8:U:H1'	23:AW:48:C:H1'	1.84	0.59
26:B1:43:TYR:CE1	26:B1:45:ASN:OD1	2.56	0.59
35:BA:1496:A:H8	35:BA:1578:U:HO2'	1.50	0.59
35:BA:2400:G:H5"	35:BA:2400:G:H8	1.67	0.59
35:BA:2425:A:H4'	35:BA:2426:A:H5"	1.84	0.59
35:BA:2522:U:O2'	35:BA:2647:U:H5"	2.02	0.59
35:BA:2723:C:H4'	50:BR:3:HIS:CD2	2.37	0.59
39:BE:98:PRO:HD3	39:BE:175:VAL:HG12	1.84	0.59
46:BN:91:LEU:O	46:BN:95:PRO:HB3	2.03	0.59
47:BO:58:VAL:HG21	47:BO:86:ILE:HD11	1.84	0.59
50:BR:72:ASP:O	50:BR:76:VAL:HG23	2.03	0.59
53:BU:27:LEU:HB3	53:BU:31:SER:HB3	1.85	0.59
58:BZ:29:TYR:HE1	58:BZ:87:ASP:HB2	1.68	0.59
9:CI:22:GLY:H	9:CI:60:ASP:H	1.49	0.59
9:CI:29:ASN:N	9:CI:64:THR:OG1	2.36	0.59
13:CM:66:LEU:HA	13:CM:70:LEU:HD12	1.84	0.59
19:CS:22:LEU:O	19:CS:26:GLY:HA2	2.02	0.59
23:CW:46:G:OP2	23:CW:46:G:C8	2.55	0.59
31:D6:26:ASN:HD21	31:D6:28:ARG:NH2	2.00	0.59
35:DA:1101:U:H5'	35:DA:1102:C:OP2	2.02	0.59
35:DA:1209:G:H21	35:DA:1210:A:H62	1.49	0.59
35:DA:2680:C:H2'	35:DA:2681:C:O2	2.02	0.59
39:DE:9:VAL:HG23	39:DE:25:VAL:HB	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:77:LYS:NZ	42:DH:138:LYS:HB2	2.17	0.59
46:DN:4:TYR:CB	53:DU:64:ARG:HH11	2.16	0.59
51:DS:56:LEU:HB3	51:DS:58:LEU:CD2	2.32	0.59
1:AA:976:G:H5'	1:AA:1358:U:O2'	2.03	0.59
1:AA:1036:G:H3'	1:AA:1037:C:C6	2.37	0.59
1:AA:1293:G:O2'	1:AA:1294:G:OP2	2.17	0.59
7:AG:120:ILE:O	7:AG:124:LEU:HB2	2.03	0.59
20:AT:60:GLU:HG3	20:AT:81:LYS:HE3	1.83	0.59
33:B8:42:ARG:HD3	35:BA:2350:C:OP2	2.03	0.59
35:BA:392:C:H5"	35:BA:409:C:H5"	1.84	0.59
35:BA:430:G:H5"	35:BA:431:U:OP2	2.03	0.59
35:BA:1478:G:H2'	35:BA:1479:G:H8	1.68	0.59
35:BA:1528:A:H62	35:BA:1545:A:N6	2.00	0.59
35:BA:1889:A:H3'	35:BA:1890:A:C8	2.37	0.59
37:BC:47:LEU:HD23	37:BC:47:LEU:H	1.67	0.59
38:BD:146:GLU:HB2	38:BD:189:CYS:HB3	1.85	0.59
40:BF:9:ILE:HB	40:BF:13:SER:O	2.02	0.59
54:BV:25:LEU:HD12	54:BV:94:LEU:HD22	1.85	0.59
58:BZ:39:VAL:HG23	58:BZ:44:PHE:CG	2.38	0.59
1:CA:1028:C:H42	1:CA:1033:G:H1	1.49	0.59
1:CA:1135:U:H5'	1:CA:1136:U:OP2	2.02	0.59
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.03	0.59
5:CE:57:LYS:HE2	5:CE:61:TYR:HE1	1.67	0.59
11:CK:79:SER:OG	11:CK:104:GLN:HB3	2.03	0.59
26:D1:47:GLN:NE2	35:DA:2090:G:H21	2.01	0.59
35:DA:527:C:OP2	35:DA:2779:U:C5	2.49	0.59
35:DA:2207:G:H2'	35:DA:2208:A:H5"	1.84	0.59
41:DG:173:LEU:O	41:DG:178:PHE:HB2	2.02	0.59
54:DV:85:LYS:O	54:DV:87:HIS:N	2.35	0.59
58:DZ:30:ASN:HB2	58:DZ:89:PHE:CE1	2.38	0.59
58:DZ:127:LYS:HB3	58:DZ:162:GLU:OE2	2.03	0.59
1:AA:88:A:H3'	1:AA:89:C:H3'	1.85	0.59
1:AA:461:A:H2'	1:AA:461:A:N3	2.18	0.59
1:AA:955:U:H2'	1:AA:956:U:O4'	2.03	0.59
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.38	0.59
1:AA:1319:A:OP2	19:AS:5:LEU:HG	2.02	0.59
35:BA:1000:A:C6	35:BA:1001:A:N1	2.70	0.59
43:BI:135:GLU:OE1	43:BI:135:GLU:N	2.25	0.59
48:BP:67:MET:O	48:BP:69:GLY:N	2.36	0.59
58:BZ:24:LEU:HB3	58:BZ:44:PHE:CD2	2.38	0.59
1:CA:353:A:H8	1:CA:353:A:H5'	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:953:G:H5'	1:CA:965:A:H61	1.68	0.59
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.03	0.59
4:CD:173:TRP:CZ3	4:CD:193:ASP:HB3	2.38	0.59
10:CJ:57:LYS:O	10:CJ:59:SER:N	2.36	0.59
13:CM:80:ARG:O	13:CM:82:MET:N	2.36	0.59
27:D2:33:MET:HG3	56:DX:11:PRO:HD2	1.85	0.59
33:D8:12:LYS:HB2	48:DP:68:GLN:OE1	2.03	0.59
35:DA:547:A:H2'	35:DA:547:A:N3	2.16	0.59
35:DA:714:U:O2'	35:DA:716:A:N7	2.34	0.59
35:DA:833:U:H5'	48:DP:52:GLU:CG	2.33	0.59
35:DA:943:U:OP2	48:DP:38:GLN:CD	2.46	0.59
35:DA:1786:A:H2	35:DA:2606:C:H1'	1.68	0.59
35:DA:2177:C:O3'	37:DC:46:LYS:HE3	2.02	0.59
40:DF:24:LEU:CD2	40:DF:25:PRO:HD2	2.32	0.59
52:DT:24:PRO:HA	52:DT:49:VAL:HG13	1.85	0.59
1:AA:652:U:O4	1:AA:752:G:O2'	2.19	0.58
1:AA:760:G:O2'	17:AQ:98:LEU:HD22	2.03	0.58
1:AA:878:G:OP1	8:AH:88:LYS:HG2	2.03	0.58
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.38	0.58
2:AB:187:LEU:HA	2:AB:201:ILE:O	2.02	0.58
6:AF:76:ALA:HB1	6:AF:80:ARG:HH21	1.68	0.58
14:AN:22:THR:HB	14:AN:33:VAL:HG21	1.83	0.58
26:B1:37:ILE:HG21	35:BA:2080:G:P	2.43	0.58
27:B2:45:SER:C	27:B2:49:LYS:HG2	2.28	0.58
35:BA:673:C:H5"	35:BA:673:C:H6	1.67	0.58
35:BA:1678:G:H22	35:BA:1989:G:H1	1.51	0.58
35:BA:1799:G:N7	38:BD:179:SER:OG	2.36	0.58
35:BA:2377:A:N1	51:BS:89:ARG:NH2	2.50	0.58
38:BD:108:PRO:HG2	38:BD:111:LEU:HB2	1.84	0.58
48:BP:27:HIS:O	48:BP:29:LYS:N	2.29	0.58
49:BQ:59:ARG:O	49:BQ:60:ARG:HG2	2.03	0.58
52:BT:51:ARG:CZ	52:BT:100:TYR:CE1	2.86	0.58
54:BV:93:GLU:O	54:BV:94:LEU:HD12	2.03	0.58
57:BY:83:THR:HA	57:BY:96:ILE:HA	1.85	0.58
2:CB:183:PRO:HA	2:CB:198:ASP:OD2	2.03	0.58
8:CH:8:ASP:O	8:CH:12:ARG:N	2.30	0.58
8:CH:29:SER:HB3	8:CH:32:LYS:HE3	1.85	0.58
16:CP:57:ARG:HG2	16:CP:79:VAL:HG13	1.84	0.58
23:CW:50:U:O2'	23:CW:51:U:O4'	2.18	0.58
35:DA:443:A:H1'	35:DA:1201:C:O4'	2.02	0.58
35:DA:2811:G:H4'	39:DE:61:ARG:HH21	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:11:ASP:O	57:DY:28:LYS:HD3	2.03	0.58
1:AA:189(I):G:H2'	1:AA:189(J):G:C4'	2.33	0.58
1:AA:660:G:H1	1:AA:745:C:N4	1.97	0.58
1:AA:1298:C:O2'	1:AA:1299:A:P	2.61	0.58
15:AO:82:ILE:HG12	15:AO:87:ILE:HG13	1.84	0.58
35:BA:23:G:OP1	35:BA:504:U:N3	2.37	0.58
35:BA:1118:C:O2'	58:BZ:80:ARG:NH2	2.36	0.58
35:BA:1652:A:H5'	35:BA:1653:G:OP2	2.03	0.58
35:BA:2602:A:H4'	35:BA:2603:G:O5'	2.03	0.58
36:BB:15:A:H1'	36:BB:110:G:N9	2.18	0.58
43:BI:52:ARG:HG3	43:BI:53:ALA:H	1.67	0.58
48:BP:130:PHE:HB3	48:BP:135:LEU:CG	2.33	0.58
49:BQ:86:GLY:O	49:BQ:91:GLU:OE2	2.21	0.58
51:BS:85:VAL:HG12	51:BS:86:ALA:N	2.17	0.58
55:BW:55:ALA:O	55:BW:59:VAL:HG23	2.03	0.58
1:CA:73:G:C2	1:CA:76:C:H1'	2.39	0.58
1:CA:648:A:H2'	1:CA:649:G:H8	1.66	0.58
1:CA:659:U:H2'	1:CA:660:G:C8	2.34	0.58
2:CB:105:PHE:C	2:CB:107:THR:H	2.11	0.58
14:CN:4:LYS:CE	14:CN:5:ALA:HB3	2.33	0.58
25:D0:68:GLU:HG3	25:D0:82:ARG:HH12	1.64	0.58
26:D1:83:GLU:HG2	26:D1:85:LEU:HB2	1.84	0.58
35:DA:1018:C:O3'	35:DA:1120:G:N2	2.36	0.58
35:DA:1858:G:H2'	35:DA:1883:G:H22	1.67	0.58
35:DA:2528:U:H2'	35:DA:2530:A:O5'	2.03	0.58
35:DA:2658:C:H5"	42:DH:158:HIS:CE1	2.37	0.58
36:DB:86:G:H2'	36:DB:87:G:C8	2.38	0.58
36:DB:88:C:N3	36:DB:89:G:C6	2.71	0.58
41:DG:96:ARG:O	41:DG:99:MET:HB3	2.03	0.58
43:DI:69:LYS:HD2	43:DI:70:GLU:OE2	2.02	0.58
46:DN:1:MET:SD	46:DN:2:LYS:HG2	2.44	0.58
55:DW:46:PHE:O	55:DW:50:VAL:HG12	2.02	0.58
1:AA:600:C:H2'	1:AA:601:C:H6	1.68	0.58
1:AA:1122:U:N3	1:AA:1123:A:N7	2.51	0.58
3:AC:47:LEU:HD11	3:AC:76:VAL:HG12	1.86	0.58
4:AD:122:ARG:NH2	4:AD:136:PRO:HD3	2.19	0.58
13:AM:68:GLY:H	13:AM:71:ARG:HD3	1.68	0.58
35:BA:614(B):G:H2'	40:BF:44:ARG:NH2	2.19	0.58
35:BA:2547:U:O2	47:BO:23:ARG:NH2	2.36	0.58
38:BD:70:TRP:CH2	38:BD:150:LYS:HA	2.38	0.58
50:BR:30:THR:O	50:BR:31:HIS:ND1	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:26:ASP:HB2	52:BT:88:ILE:HB	1.85	0.58
54:BV:69:LYS:HG2	54:BV:70:ILE:N	2.05	0.58
55:BW:12:ILE:HD13	55:BW:17:VAL:HG23	1.86	0.58
57:BY:14:LEU:HG	57:BY:15:VAL:N	2.18	0.58
1:CA:559:A:H4'	1:CA:560:U:O5'	2.03	0.58
1:CA:840:C:H5"	1:CA:848:C:N4	2.18	0.58
1:CA:1327:C:OP2	21:CU:12:LYS:NZ	2.37	0.58
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.84	0.58
2:CB:114:ARG:O	2:CB:118:LEU:HG	2.03	0.58
17:CQ:29:HIS:N	17:CQ:33:GLY:O	2.35	0.58
22:CV:21:A:N6	22:CV:46:A:H2'	2.18	0.58
35:DA:548:A:O2'	35:DA:549:G:OP1	2.20	0.58
35:DA:699:A:H2'	35:DA:700:G:O4'	2.03	0.58
35:DA:1156:A:C8	53:DU:51:LYS:HD2	2.38	0.58
35:DA:2057:A:H2'	35:DA:2058:A:O4'	2.03	0.58
38:DD:20:ASP:OD1	38:DD:20:ASP:C	2.44	0.58
40:DF:127:GLU:HA	40:DF:196:LEU:HD12	1.84	0.58
41:DG:115:ARG:HD2	41:DG:116:ASP:H	1.68	0.58
43:DI:77:LEU:CD2	43:DI:101:LEU:HD13	2.31	0.58
48:DP:9:ASN:H	48:DP:10:PRO:CD	2.16	0.58
48:DP:49:ARG:HH21	48:DP:50:ARG:HH11	1.51	0.58
49:DQ:10:ARG:NH1	49:DQ:11:LYS:HG2	2.17	0.58
50:DR:32:GLY:HA2	50:DR:116:LEU:HD23	1.85	0.58
52:DT:40:THR:O	52:DT:41:ARG:HB3	2.04	0.58
54:DV:36:PRO:HG3	54:DV:62:LEU:HD11	1.85	0.58
56:DX:12:VAL:CG1	56:DX:27:THR:HG23	2.31	0.58
57:DY:96:ILE:HD12	57:DY:98:VAL:H	1.68	0.58
58:DZ:53:ILE:HG22	58:DZ:71:VAL:HB	1.85	0.58
1:AA:271:C:H2'	1:AA:272:C:H6	1.69	0.58
1:AA:675:A:H2'	1:AA:676:A:C8	2.39	0.58
1:AA:689:C:OP2	11:AK:55:LYS:NZ	2.37	0.58
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.38	0.58
3:AC:40:ARG:HG2	3:AC:55:VAL:CG2	2.34	0.58
35:BA:1500:G:H5"	35:BA:1501:C:OP2	2.02	0.58
35:BA:1652:A:H3'	35:BA:1653:G:C8	2.38	0.58
35:BA:1896:G:H5"	35:BA:1896:G:H8	1.68	0.58
35:BA:2872:G:C2	35:BA:2873:A:N6	2.71	0.58
41:BG:56:ALA:HA	41:BG:153:ARG:HH12	1.67	0.58
42:BH:43:VAL:HG21	42:BH:53:GLU:H	1.68	0.58
48:BP:70:GLN:O	48:BP:71:VAL:HG12	2.03	0.58
58:BZ:24:LEU:HD23	58:BZ:44:PHE:CG	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:172:ILE:O	2:CB:175:ARG:HB2	2.03	0.58
7:CG:69:VAL:HG22	7:CG:135:VAL:HG22	1.86	0.58
20:CT:72:LEU:HB2	20:CT:76:ALA:CB	2.32	0.58
35:DA:15:G:H1	35:DA:525:U:H3	1.51	0.58
35:DA:631:A:N3	35:DA:2415:G:O2'	2.35	0.58
36:DB:8:U:H3	36:DB:113:G:H1	1.51	0.58
46:DN:19:GLU:O	46:DN:21:LYS:N	2.34	0.58
52:DT:32:TYR:CD1	52:DT:40:THR:HG21	2.39	0.58
57:DY:107:ASP:O	57:DY:108:THR:HG22	2.04	0.58
1:AA:1015:A:N3	1:AA:1218:C:O2'	2.36	0.58
1:AA:1154:G:HO2'	1:AA:1155:G:P	2.25	0.58
1:AA:1281:U:H4'	1:AA:1282:C:OP2	2.03	0.58
12:AL:47:LYS:CB	12:AL:48:PRO:HD3	2.25	0.58
22:AV:74:A:H5'	22:AV:75:C:OP1	2.04	0.58
26:B1:47:GLN:O	26:B1:47:GLN:HG3	2.03	0.58
31:B6:11:LEU:O	31:B6:23:THR:HG23	2.02	0.58
31:B6:39:TYR:HB3	31:B6:49:HIS:CE1	2.39	0.58
35:BA:448:U:O4	35:BA:583:G:H1'	2.03	0.58
35:BA:927:G:H2'	35:BA:928:G:O4'	2.03	0.58
35:BA:1048:A:N6	35:BA:1107:G:C6	2.71	0.58
35:BA:1143:A:OP1	46:BN:25:ARG:NH2	2.34	0.58
35:BA:1899:G:H22	35:BA:1902:C:H41	1.51	0.58
35:BA:2576:G:O2'	35:BA:2579:C:OP2	2.16	0.58
35:BA:2734:A:H3'	35:BA:2735:G:H8	1.68	0.58
36:BB:87:G:N2	36:BB:89:G:H5"	2.18	0.58
1:CA:757:U:O2'	1:CA:879:C:O2	2.20	0.58
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.38	0.58
3:CC:11:ARG:HH21	3:CC:180:ALA:HB3	1.67	0.58
9:CI:84:ALA:O	9:CI:86:VAL:N	2.33	0.58
9:CI:113:LYS:HG2	9:CI:119:ALA:HA	1.84	0.58
17:CQ:66:SER:HB3	17:CQ:69:LYS:NZ	2.19	0.58
25:D0:24:LYS:O	25:D0:25:ARG:HD3	2.04	0.58
33:D8:39:LYS:HG3	35:DA:2351:G:O6	2.03	0.58
35:DA:71:A:H5"	35:DA:73:A:C8	2.38	0.58
42:DH:148:ILE:HG22	42:DH:162:ILE:HD12	1.84	0.58
48:DP:23:PRO:HD2	48:DP:33:ARG:NH1	2.17	0.58
1:AA:109:A:H2'	1:AA:326:G:N2	2.19	0.58
1:AA:420:U:H2'	1:AA:422:C:O2	2.02	0.58
9:AI:111:ARG:HG3	14:AN:61:TRP:CD1	2.39	0.58
10:AJ:57:LYS:CD	10:AJ:60:ARG:HH12	2.16	0.58
12:AL:70:ILE:HD13	12:AL:77:LEU:HD22	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:13:CYS:HA	31:B6:50:ARG:O	2.03	0.58
35:BA:136:G:H2'	35:BA:136:G:N3	2.17	0.58
35:BA:530:G:C5	35:BA:2022:U:H5"	2.38	0.58
35:BA:1478:G:H2'	35:BA:1479:G:C8	2.38	0.58
35:BA:2074:U:H2'	35:BA:2075:U:C6	2.38	0.58
58:BZ:126:VAL:HG12	58:BZ:163:LEU:HA	1.84	0.58
1:CA:37:U:OP1	12:CL:123:LYS:HB3	2.04	0.58
1:CA:91:C:OP2	1:CA:91:C:H6	1.85	0.58
1:CA:1128:C:H2'	1:CA:1130:A:C8	2.38	0.58
1:CA:1289:A:N1	1:CA:1371:G:O2'	2.27	0.58
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.17	0.58
5:CE:77:PRO:HG2	5:CE:142:LEU:HD22	1.85	0.58
7:CG:15:ASP:OD1	7:CG:16:LEU:N	2.36	0.58
7:CG:146:GLU:C	7:CG:148:ASN:H	2.11	0.58
9:CI:93:ARG:HH22	9:CI:97:LYS:HD3	1.69	0.58
35:DA:588:U:O4	35:DA:670:A:H1'	2.03	0.58
35:DA:1434:A:H2'	35:DA:1435:G:C8	2.39	0.58
35:DA:1525:G:H2'	35:DA:1526:G:H8	1.68	0.58
35:DA:2376:A:OP1	35:DA:2376:A:H8	1.86	0.58
43:DI:47:LEU:O	43:DI:51:ILE:HG22	2.04	0.58
47:DO:4:PRO:O	47:DO:5:GLN:HB2	2.03	0.58
48:DP:34:GLY:O	48:DP:35:HIS:CG	2.56	0.58
48:DP:92:GLU:HG3	48:DP:121:LYS:HE2	1.86	0.58
1:AA:17:U:H1'	1:AA:1080:A:N3	2.19	0.58
1:AA:161:A:OP1	1:AA:162:A:OP1	2.21	0.58
1:AA:232:G:H1'	1:AA:262:A:N1	2.19	0.58
1:AA:316:G:OP2	1:AA:351:G:O2'	2.21	0.58
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.39	0.58
3:AC:19:GLU:HG3	3:AC:54:ARG:HD3	1.86	0.58
5:AE:39:GLY:HA2	5:AE:71:LEU:CD1	2.33	0.58
6:AF:31:GLU:O	6:AF:33:TYR:N	2.36	0.58
13:AM:36:LYS:HB3	13:AM:59:TYR:CE2	2.38	0.58
13:AM:67:GLU:HA	13:AM:71:ARG:HG3	1.85	0.58
35:BA:64:A:O2'	56:BX:68:ARG:N	2.34	0.58
35:BA:1029:A:N1	35:BA:2465:C:O2'	2.31	0.58
37:BC:64:LEU:HG	37:BC:68:LEU:HD11	1.84	0.58
38:BD:130:ALA:HB2	38:BD:192:THR:HG22	1.84	0.58
41:BG:106:LEU:HG	41:BG:111:LEU:HD11	1.86	0.58
42:BH:141:VAL:O	42:BH:144:VAL:N	2.29	0.58
48:BP:25:SER:O	48:BP:29:LYS:NZ	2.32	0.58
49:BQ:8:LYS:CG	49:BQ:9:TYR:H	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:101:LEU:O	51:BS:103:GLU:N	2.36	0.58
54:BV:34:GLU:HG2	54:BV:35:LEU:H	1.68	0.58
3:CC:62:ASP:OD1	3:CC:97:LYS:HB3	2.02	0.58
23:CY:26:A:H3'	23:CY:27:G:C5'	2.34	0.58
35:DA:1882:C:H2'	35:DA:1883:G:O4'	2.04	0.58
37:DC:62:VAL:O	37:DC:64:LEU:N	2.37	0.58
48:DP:51:PHE:CE2	48:DP:59:LEU:HD12	2.38	0.58
56:DX:88:LYS:HD2	56:DX:88:LYS:H	1.68	0.58
57:DY:101:LYS:NZ	57:DY:102:CYS:HB3	2.18	0.58
58:DZ:162:GLU:OE2	58:DZ:164:ALA:HB2	2.03	0.58
1:AA:161:A:H5'	1:AA:161:A:H8	1.68	0.58
1:AA:189(A):C:H2'	1:AA:189(B):C:H6	1.67	0.58
12:AL:69:TYR:HD2	12:AL:99:HIS:CD2	2.21	0.58
35:BA:103:A:H2'	35:BA:104:U:C1'	2.34	0.58
35:BA:528:A:H3'	35:BA:528:A:H8	1.68	0.58
35:BA:1074:G:H2'	35:BA:1075:C:H4'	1.85	0.58
35:BA:2810:A:H2'	39:BE:61:ARG:HD2	1.85	0.58
42:BH:85:LYS:HE2	42:BH:145:ALA:CB	2.34	0.58
43:BI:29:TYR:C	43:BI:32:PRO:HD2	2.28	0.58
49:BQ:23:GLY:HA2	49:BQ:101:ARG:NH1	2.19	0.58
52:BT:80:SER:N	52:BT:81:PRO:HD2	2.19	0.58
1:CA:93:G:H8	1:CA:93:G:OP2	1.87	0.58
5:CE:11:ILE:HB	5:CE:31:LEU:HD12	1.85	0.58
13:CM:120:LYS:NZ	23:CY:40:C:O2'	2.36	0.58
26:D1:48:LYS:HE3	26:D1:61:ARG:HB2	1.84	0.58
33:D8:49:VAL:HG23	33:D8:53:PRO:HB3	1.86	0.58
35:DA:960:A:H5"	35:DA:961:C:OP2	2.04	0.58
35:DA:1342:A:OP1	56:DX:55:ASN:HA	2.04	0.58
42:DH:24:VAL:O	42:DH:35:VAL:N	2.34	0.58
42:DH:70:THR:O	42:DH:73:ALA:N	2.35	0.58
48:DP:58:THR:O	48:DP:61:ARG:NE	2.37	0.58
56:DX:44:GLU:HB2	56:DX:49:VAL:O	2.03	0.58
56:DX:77:LYS:HD3	56:DX:78:LYS:C	2.29	0.58
1:AA:664:G:OP1	18:AR:64:ARG:NH2	2.32	0.58
3:AC:95:THR:O	3:AC:97:LYS:N	2.34	0.58
19:AS:14:HIS:NE2	19:AS:35:SER:OG	2.30	0.58
20:AT:33:ILE:HD13	20:AT:62:LEU:HB3	1.85	0.58
26:B1:46:LEU:C	26:B1:46:LEU:HD12	2.29	0.58
31:B6:24:GLU:OE1	33:B8:36:LYS:HA	2.04	0.58
32:B7:1:MET:HE2	35:BA:752:A:H3'	1.85	0.58
35:BA:271(P):C:OP1	43:BI:45:LYS:NZ	2.28	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:587:C:C2	48:BP:33:ARG:NH2	2.72	0.58
35:BA:1402:C:O2'	35:BA:1520:G:O6	2.22	0.58
40:BF:34:TRP:HD1	48:BP:10:PRO:HB2	1.69	0.58
56:BX:77:LYS:HG3	56:BX:78:LYS:H	1.69	0.58
1:CA:501:C:H2'	1:CA:502:G:C8	2.39	0.58
1:CA:731:G:OP1	1:CA:766:A:H1'	2.04	0.58
3:CC:162:GLN:HE22	24:CX:24:A:H4'	1.69	0.58
10:CJ:5:ARG:HD3	10:CJ:73:ASP:HB2	1.86	0.58
16:CP:20:VAL:HG21	16:CP:32:TYR:CD2	2.38	0.58
27:D2:12:GLU:H	27:D2:14:ARG:CZ	2.17	0.58
35:DA:2022:U:O2'	35:DA:2617:C:H5'	2.04	0.58
36:DB:91:C:OP2	49:DQ:16:ARG:NH2	2.36	0.58
39:DE:133:LYS:HB2	39:DE:134:ILE:CG2	2.34	0.58
51:DS:36:TYR:HD1	51:DS:52:SER:HB2	1.68	0.58
56:DX:36:LYS:C	56:DX:38:GLU:H	2.12	0.58
1:AA:194:C:H2'	1:AA:195:A:H5"	1.84	0.58
1:AA:1180:A:O2'	1:AA:1181:G:OP1	2.20	0.58
2:AB:134:GLU:O	2:AB:138:LEU:HB2	2.04	0.58
8:AH:36:LEU:HA	8:AH:39:LEU:HB2	1.86	0.58
20:AT:29:LYS:O	20:AT:33:ILE:HG12	2.03	0.58
31:B6:13:CYS:O	31:B6:21:TYR:HA	2.03	0.58
34:B9:11:CYS:HB2	34:B9:32:HIS:CE1	2.39	0.58
35:BA:185:U:H4'	35:BA:218:A:H4'	1.85	0.58
35:BA:1025:G:C4	35:BA:1135:C:H1'	2.39	0.58
35:BA:1429:G:H2'	35:BA:1430:C:C6	2.39	0.58
35:BA:2293:C:OP1	51:BS:92:TYR:OH	2.17	0.58
40:BF:128:ALA:O	40:BF:142:TRP:NE1	2.36	0.58
47:BO:119:PRO:HB3	52:BT:68:TYR:CE2	2.38	0.58
48:BP:21:ARG:HD2	48:BP:29:LYS:O	2.04	0.58
48:BP:112:LEU:HG	48:BP:127:ALA:HB1	1.86	0.58
50:BR:9:LYS:HD3	50:BR:43:GLU:HG2	1.84	0.58
54:BV:76:LYS:HZ1	54:BV:83:ARG:NE	2.02	0.58
58:BZ:103:ARG:HB2	58:BZ:138:GLU:HA	1.85	0.58
1:CA:626:U:H2'	1:CA:627:G:C8	2.39	0.58
1:CA:837:G:H1	1:CA:849:C:H42	1.51	0.58
1:CA:1152:A:OP1	10:CJ:68:HIS:NE2	2.37	0.58
1:CA:1268:A:H8	1:CA:1268:A:OP2	1.87	0.58
8:CH:113:SER:OG	8:CH:134:ILE:HD11	2.04	0.58
18:CR:37:VAL:O	18:CR:40:LEU:HD11	2.03	0.58
35:DA:910:A:N7	49:DQ:13:GLN:HG2	2.19	0.58
35:DA:2346:A:H5"	35:DA:2383:G:H1'	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DF:28:ILE:O	40:DF:30:PRO:HD3	2.03	0.58
49:DQ:22:LYS:HG2	49:DQ:101:ARG:HB2	1.86	0.58
51:DS:85:VAL:HG12	51:DS:106:ARG:HB2	1.85	0.58
1:AA:278:G:OP2	17:AQ:41:LYS:HE2	2.04	0.57
1:AA:392:G:HO2'	1:AA:483:C:HO2'	1.52	0.57
1:AA:834:C:H42	1:AA:852:G:H1	1.51	0.57
1:AA:849:C:H2'	1:AA:850:U:O4'	2.03	0.57
1:AA:929:G:N2	1:AA:1388:C:N3	2.49	0.57
1:AA:1126:U:O2'	1:AA:1281:U:O2	2.23	0.57
2:AB:175:ARG:O	2:AB:179:LYS:N	2.33	0.57
3:AC:76:VAL:HG23	3:AC:77:ILE:HG13	1.86	0.57
7:AG:138:LYS:HE2	7:AG:142:GLU:OE1	2.04	0.57
9:AI:89:ASN:CB	9:AI:92:TYR:HB2	2.33	0.57
20:AT:26:ASN:HB2	20:AT:71:THR:HG23	1.86	0.57
25:B0:70:GLN:HE22	25:B0:72:ARG:HG2	1.69	0.57
35:BA:568:U:H5'	35:BA:945:A:N1	2.19	0.57
35:BA:1514:U:H2'	35:BA:1515:G:H8	1.67	0.57
35:BA:2572:A:OP1	35:BA:2574:G:H4'	2.04	0.57
35:BA:2697:G:H2'	35:BA:2698:U:O4'	2.04	0.57
38:BD:30:GLU:HG3	38:BD:63:ARG:HH21	1.68	0.57
40:BF:114:VAL:HG21	40:BF:202:PHE:CE2	2.39	0.57
46:BN:56:ASN:HD21	46:BN:126:PRO:HB3	1.68	0.57
48:BP:133:SER:N	48:BP:136:GLU:OE2	2.37	0.57
48:BP:144:GLU:N	48:BP:144:GLU:OE1	2.37	0.57
54:BV:76:LYS:HD3	54:BV:77:ALA:N	2.18	0.57
58:BZ:57:ILE:O	58:BZ:69:THR:N	2.37	0.57
1:CA:1216:G:H5"	14:CN:4:LYS:HE3	1.86	0.57
28:D3:18:ASP:N	28:D3:18:ASP:OD1	2.37	0.57
35:DA:271(A):A:H5"	35:DA:271(B):C:OP2	2.03	0.57
35:DA:1332:G:H22	35:DA:1609:A:HO2'	1.51	0.57
35:DA:1779:U:H5	35:DA:1784:A:N7	2.02	0.57
42:DH:8:PRO:HB3	42:DH:51:ARG:HG2	1.86	0.57
42:DH:44:VAL:N	42:DH:46:GLU:OE1	2.29	0.57
58:DZ:152:ALA:HB1	58:DZ:168:GLU:HA	1.86	0.57
1:AA:152:A:N6	1:AA:170:U:C2	2.72	0.57
1:AA:586:C:O2'	1:AA:878:G:H4'	2.04	0.57
1:AA:1054:C:H5"	1:AA:1196:U:H2'	1.86	0.57
7:AG:77:SER:HB2	7:AG:86:GLN:HB3	1.86	0.57
11:AK:22:HIS:HB3	11:AK:29:ILE:HG13	1.86	0.57
13:AM:18:ALA:HB2	13:AM:45:VAL:HG21	1.86	0.57
22:AV:52:C:N4	22:AV:53:G:O6	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:10:LYS:HA	26:B1:48:LYS:CE	2.34	0.57
35:BA:528:A:O2'	35:BA:529:A:H5'	2.04	0.57
35:BA:1062:G:H1	35:BA:1075:C:H41	1.52	0.57
35:BA:1386:C:H2'	35:BA:1387:C:H6	1.68	0.57
35:BA:1486:A:N1	35:BA:1504:C:N4	2.53	0.57
35:BA:1502:C:H5'	35:BA:1503:U:OP2	2.04	0.57
38:BD:162:SER:HB3	38:BD:195:ALA:HA	1.85	0.57
57:BY:17:SER:HG	57:BY:18:GLY:H	1.51	0.57
58:BZ:77:ASP:O	58:BZ:79:ARG:N	2.37	0.57
1:CA:184:G:N2	1:CA:194:C:C2	2.72	0.57
9:CI:24:GLY:N	9:CI:60:ASP:OD1	2.19	0.57
13:CM:30:ALA:O	13:CM:32:GLU:N	2.37	0.57
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.03	0.57
18:CR:74:ARG:HD3	18:CR:81:PHE:CE1	2.39	0.57
35:DA:244:A:H4'	48:DP:74:GLU:HB2	1.86	0.57
35:DA:849:A:H3'	35:DA:850:C:H6	1.69	0.57
35:DA:2377:A:H4'	51:DS:107:GLU:HB3	1.86	0.57
43:DI:2:LYS:HB2	43:DI:39:ALA:HB3	1.85	0.57
46:DN:128:HIS:O	46:DN:130:HIS:N	2.36	0.57
52:DT:43:GLN:HG2	52:DT:45:PHE:HE1	1.67	0.57
52:DT:106:SER:HA	52:DT:110:ILE:HB	1.85	0.57
1:AA:219:C:H2'	1:AA:220:G:O4'	2.04	0.57
1:AA:824:C:O2'	8:AH:1:MET:N	2.34	0.57
2:AB:197:VAL:HG13	2:AB:200:ILE:HG13	1.85	0.57
27:B2:50:ILE:HG22	27:B2:50:ILE:O	2.02	0.57
35:BA:1404:C:H2'	35:BA:1405:U:H5'	1.86	0.57
35:BA:1899:G:O2'	35:BA:1900:A:OP2	2.17	0.57
35:BA:2690:C:H5"	35:BA:2872:G:N2	2.19	0.57
35:BA:2818:G:O6	35:BA:2828:C:N3	2.37	0.57
47:BO:92:GLU:HG3	47:BO:93:PRO:HD2	1.86	0.57
48:BP:132:LYS:O	48:BP:134:ALA:N	2.37	0.57
54:BV:64:HIS:HA	54:BV:96:ILE:HA	1.87	0.57
57:BY:2:ARG:CZ	57:BY:4:LYS:HB3	2.33	0.57
1:CA:115:G:H4'	1:CA:116:A:O5'	2.04	0.57
1:CA:974:A:P	14:CN:41:ARG:HH12	2.27	0.57
1:CA:1150:U:O2'	10:CJ:39:PRO:O	2.18	0.57
7:CG:70:LYS:O	7:CG:138:LYS:HE3	2.04	0.57
21:CU:8:THR:HA	21:CU:21:TYR:CE2	2.39	0.57
26:D1:76:ARG:HB2	26:D1:78:LYS:HZ2	1.69	0.57
36:DB:105:A:OP1	58:DZ:72:ARG:NH2	2.36	0.57
38:DD:79:VAL:HG12	38:DD:113:VAL:HA	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:33:ARG:HG3	48:DP:34:GLY:H	1.67	0.57
49:DQ:20:ALA:O	49:DQ:22:LYS:N	2.36	0.57
1:AA:1174:G:H3'	1:AA:1174:G:H8	1.69	0.57
2:AB:59:GLU:O	2:AB:63:MET:HG2	2.04	0.57
2:AB:102:LEU:HB3	2:AB:180:LEU:HD12	1.87	0.57
26:B1:43:TYR:CD1	26:B1:45:ASN:CG	2.83	0.57
26:B1:87:PRO:HG2	26:B1:88:LYS:HB3	1.85	0.57
30:B5:10:LYS:HE3	35:BA:1262:A:N3	2.19	0.57
35:BA:28:A:H61	35:BA:512:G:H1'	1.69	0.57
35:BA:1224:C:O3'	54:BV:88:ARG:HG2	2.04	0.57
35:BA:1614:A:H2'	35:BA:1615:C:H5"	1.86	0.57
35:BA:2303:G:O2'	41:BG:132:ASN:HB2	2.04	0.57
35:BA:2496:C:P	49:BQ:81:VAL:HG13	2.44	0.57
35:BA:2835:A:H4'	35:BA:2836:U:OP1	2.05	0.57
40:BF:152:GLU:CB	40:BF:190:GLU:OE1	2.51	0.57
46:BN:128:HIS:ND1	46:BN:128:HIS:O	2.37	0.57
52:BT:28:VAL:HG12	52:BT:29:ARG:HD2	1.86	0.57
52:BT:28:VAL:CG1	52:BT:29:ARG:HD2	2.34	0.57
55:BW:15:ARG:O	55:BW:19:LEU:HD12	2.05	0.57
1:CA:364:A:O2'	1:CA:365:U:H5'	2.03	0.57
1:CA:460:G:H3'	1:CA:461:A:C5'	2.34	0.57
2:CB:61:LEU:HD23	2:CB:68:ILE:HD11	1.86	0.57
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.85	0.57
17:CQ:63:ARG:HG2	17:CQ:64:PRO:HD2	1.87	0.57
18:CR:65:ILE:HD12	18:CR:66:LEU:N	2.18	0.57
35:DA:271(E):U:H2'	35:DA:271(F):C:C6	2.40	0.57
35:DA:967:C:H5"	35:DA:968:G:OP2	2.04	0.57
35:DA:1431:U:H2'	35:DA:1432:C:C6	2.39	0.57
35:DA:1915:U:OP2	35:DA:1915:U:H6	1.87	0.57
35:DA:2123:G:H2'	35:DA:2124:G:C8	2.39	0.57
47:DO:35:VAL:HG21	47:DO:69:ILE:HD11	1.85	0.57
48:DP:111:ARG:HH22	48:DP:148:LEU:HD22	1.70	0.57
56:DX:55:ASN:N	56:DX:77:LYS:HE3	2.20	0.57
1:AA:1277:C:H6	1:AA:1277:C:H3'	1.70	0.57
3:AC:37:GLN:O	3:AC:41:GLY:N	2.30	0.57
6:AF:24:GLU:HA	6:AF:27:GLN:HE21	1.69	0.57
8:AH:104:ARG:HD2	8:AH:107:LEU:CB	2.29	0.57
10:AJ:30:SER:OG	10:AJ:84:GLN:OE1	2.13	0.57
10:AJ:61:GLU:OE1	14:AN:58:LYS:NZ	2.34	0.57
13:AM:81:LEU:O	13:AM:85:GLY:HA2	2.03	0.57
16:AP:15:PRO:O	16:AP:16:HIS:ND1	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:10:LEU:HD12	20:AT:12:ALA:N	2.20	0.57
35:BA:271(C):C:H42	35:BA:271(U):G:H1	1.52	0.57
35:BA:698:C:O2'	35:BA:734:A:N6	2.36	0.57
35:BA:872:A:H2'	35:BA:873:G:C8	2.40	0.57
35:BA:1109:C:H41	35:BA:1110:G:H21	1.53	0.57
35:BA:1227:G:OP1	53:BU:13:LYS:NZ	2.26	0.57
35:BA:1340:U:H4'	35:BA:1394:U:O2'	2.04	0.57
35:BA:2114:A:N6	35:BA:2167:U:O2'	2.38	0.57
36:BB:28:C:H42	36:BB:56:G:H1	1.52	0.57
41:BG:59:GLU:HG2	41:BG:144:ILE:HD11	1.87	0.57
42:BH:167:GLU:HB2	42:BH:168:PRO:CD	2.32	0.57
48:BP:86:LYS:HG3	48:BP:87:ASP:OD1	2.04	0.57
49:BQ:119:ARG:O	49:BQ:121:ALA:N	2.37	0.57
51:BS:30:ARG:HH22	51:BS:62:LYS:HB3	1.69	0.57
53:BU:59:ARG:O	53:BU:63:VAL:HG23	2.03	0.57
53:BU:110:VAL:O	53:BU:113:ALA:HB3	2.04	0.57
56:BX:26:TYR:O	56:BX:78:LYS:HB2	2.05	0.57
56:BX:62:LYS:HA	56:BX:70:LEU:H	1.69	0.57
1:CA:1502:A:H5"	1:CA:1504:G:N7	2.19	0.57
2:CB:170:GLU:HG3	2:CB:174:VAL:HG23	1.85	0.57
3:CC:108:ASN:HB3	3:CC:111:LEU:HD12	1.85	0.57
7:CG:95:ARG:HE	7:CG:99:LEU:HD21	1.69	0.57
13:CM:97:PRO:HB3	13:CM:101:GLN:OE1	2.04	0.57
16:CP:75:ARG:O	16:CP:77:ALA:N	2.37	0.57
35:DA:271(F):C:H2'	35:DA:271(G):C:O4'	2.04	0.57
35:DA:573:G:O2'	35:DA:574:C:H3'	2.04	0.57
35:DA:1386:C:H2'	35:DA:1387:C:C6	2.38	0.57
35:DA:2392:A:H2	35:DA:2424:C:N4	1.99	0.57
41:DG:111:LEU:HD23	41:DG:117:PHE:CZ	2.40	0.57
52:DT:87:ASP:OD1	52:DT:87:ASP:N	2.35	0.57
57:DY:96:ILE:HD12	57:DY:97:ARG:N	2.20	0.57
1:AA:112:G:H21	1:AA:354:G:H5'	1.69	0.57
1:AA:616:G:OP1	4:AD:141:ARG:NH2	2.37	0.57
7:AG:31:MET:SD	7:AG:36:LYS:N	2.78	0.57
8:AH:102:ARG:NE	8:AH:105:ARG:HD3	2.20	0.57
22:AV:48:U:H2'	22:AV:51:U:OP1	2.04	0.57
25:B0:74:ARG:NH2	36:BB:13:A:OP2	2.38	0.57
35:BA:64:A:HO2'	56:BX:68:ARG:H	1.51	0.57
35:BA:64:A:HO2'	56:BX:68:ARG:N	2.02	0.57
35:BA:234:C:H2'	35:BA:235:U:C6	2.40	0.57
35:BA:1190:G:H2'	35:BA:1191:G:C8	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1991:U:H2'	35:BA:1992:G:H5"	1.86	0.57
35:BA:2721:A:H1'	35:BA:2873:A:O2'	2.05	0.57
35:BA:2851:A:H2'	35:BA:2852:G:C8	2.39	0.57
38:BD:218:ARG:O	38:BD:220:HIS:CD2	2.57	0.57
46:BN:39:ARG:HG3	46:BN:41:ASP:OD1	2.05	0.57
49:BQ:22:LYS:HG3	49:BQ:23:GLY:H	1.69	0.57
53:BU:9:VAL:HG13	53:BU:13:LYS:HE3	1.86	0.57
1:CA:131:C:O2	1:CA:231:G:N2	2.32	0.57
1:CA:374:A:C6	1:CA:375:U:C4	2.93	0.57
1:CA:390:C:H2'	1:CA:391:G:C8	2.40	0.57
1:CA:403:C:O2'	4:CD:122:ARG:NH2	2.38	0.57
14:CN:24:CYS:SG	14:CN:25:VAL:N	2.77	0.57
16:CP:53:VAL:HA	16:CP:56:ALA:HB3	1.85	0.57
25:D0:27:GLU:HG3	35:DA:856:C:H4'	1.87	0.57
27:D2:44:LEU:HD12	27:D2:45:SER:N	2.20	0.57
30:D5:45:VAL:HG22	50:DR:100:LEU:HA	1.87	0.57
35:DA:619:G:H5"	35:DA:620:G:OP2	2.04	0.57
35:DA:1210:A:H5"	35:DA:1212:G:O4'	2.04	0.57
35:DA:1549:C:H5'	35:DA:1550:C:OP2	2.04	0.57
38:DD:231:HIS:CG	38:DD:232:PRO:HD2	2.39	0.57
53:DU:92:ARG:CZ	54:DV:11:GLN:HB2	2.34	0.57
58:DZ:152:ALA:H	58:DZ:171:ILE:HG23	1.68	0.57
1:AA:70:G:H1	1:AA:99:U:H3	1.53	0.57
1:AA:555:C:H2'	1:AA:556:C:C6	2.39	0.57
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.40	0.57
1:AA:1521:G:H2'	1:AA:1522:U:H6	1.69	0.57
7:AG:135:VAL:O	7:AG:139:GLU:N	2.37	0.57
10:AJ:38:ILE:HG23	10:AJ:71:LEU:HB3	1.87	0.57
20:AT:36:LEU:HD23	20:AT:36:LEU:C	2.30	0.57
35:BA:1839:G:C8	35:BA:1927:A:H1'	2.39	0.57
36:BB:42:C:O2	41:BG:92:VAL:HA	2.05	0.57
37:BC:97:GLU:HA	37:BC:100:ILE:HG13	1.86	0.57
41:BG:145:THR:OG1	41:BG:146:TYR:N	2.37	0.57
48:BP:75:ILE:HD12	48:BP:77:ARG:NH1	2.19	0.57
49:BQ:78:PRO:HA	49:BQ:79:LEU:HD12	1.86	0.57
52:BT:35:LYS:H	52:BT:39:ARG:HB3	1.70	0.57
57:BY:84:ARG:N	57:BY:95:LYS:O	2.38	0.57
1:CA:88:A:H2'	1:CA:89:C:H5'	1.87	0.57
1:CA:832:C:N4	1:CA:855:G:O6	2.37	0.57
3:CC:159:GLY:HA3	3:CC:193:TYR:CE1	2.40	0.57
33:D8:30:ARG:HD3	33:D8:30:ARG:C	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:193:U:H6	35:DA:193:U:C5'	2.18	0.57
35:DA:248:G:H5'	35:DA:250:G:N7	2.20	0.57
35:DA:466:A:N3	35:DA:683:C:H1'	2.20	0.57
35:DA:631:A:OP1	48:DP:64:LYS:HE2	2.05	0.57
35:DA:1354:A:H2'	35:DA:1355:G:O4'	2.05	0.57
35:DA:2116:G:N7	35:DA:2171:A:N6	2.52	0.57
36:DB:32:C:C2	36:DB:51:G:N2	2.73	0.57
41:DG:120:LEU:HB3	41:DG:179:PRO:O	2.03	0.57
48:DP:127:ALA:H	48:DP:145:PRO:HG2	1.67	0.57
53:DU:82:GLY:HA3	53:DU:113:ALA:HB1	1.87	0.57
1:AA:740:U:H4'	15:AO:42:HIS:CE1	2.40	0.57
1:AA:1425:U:H2'	1:AA:1426:C:H6	1.68	0.57
2:AB:167:PRO:O	2:AB:171:ALA:N	2.38	0.57
5:AE:69:VAL:O	5:AE:71:LEU:N	2.37	0.57
7:AG:111:ARG:NH2	7:AG:119:ARG:O	2.37	0.57
13:AM:23:TYR:HB3	13:AM:67:GLU:HG2	1.87	0.57
13:AM:82:MET:HG2	13:AM:82:MET:O	2.05	0.57
27:B2:26:ARG:HD2	56:BX:5:TYR:CZ	2.40	0.57
35:BA:29:U:H2'	35:BA:30:G:C8	2.40	0.57
35:BA:832:G:H5"	48:BP:45:LEU:HD21	1.86	0.57
35:BA:1758:G:C2	35:BA:2696:U:H5'	2.39	0.57
35:BA:1860:G:H8	35:BA:1860:G:OP2	1.88	0.57
35:BA:1901:A:O2'	38:BD:255:LYS:HE3	2.03	0.57
40:BF:155:LEU:HD23	40:BF:186:ILE:HD13	1.86	0.57
42:BH:70:THR:HA	42:BH:73:ALA:HB3	1.86	0.57
48:BP:7:ARG:O	48:BP:9:ASN:N	2.36	0.57
52:BT:70:VAL:HG12	52:BT:71:GLY:H	1.70	0.57
52:BT:74:ARG:HD3	52:BT:76:PHE:CE1	2.39	0.57
1:CA:953:G:C2	1:CA:954:G:H1'	2.40	0.57
1:CA:1133:G:C8	1:CA:1134:G:N7	2.73	0.57
1:CA:1189:C:H4'	3:CC:10:PHE:CZ	2.39	0.57
9:CI:93:ARG:C	9:CI:95:LYS:H	2.12	0.57
20:CT:82:SER:O	20:CT:84:LEU:N	2.38	0.57
27:D2:49:LYS:HD2	27:D2:54:LYS:HE2	1.87	0.57
30:D5:3:LYS:O	30:D5:3:LYS:CE	2.53	0.57
35:DA:184:C:H2'	35:DA:185:U:H6	1.69	0.57
35:DA:272(H):C:H42	35:DA:363(B):G:H1	1.52	0.57
35:DA:357:A:H2'	35:DA:358:U:C6	2.39	0.57
35:DA:484:C:H2'	35:DA:485:C:C6	2.40	0.57
35:DA:1973:G:H2'	35:DA:1974:C:C6	2.39	0.57
35:DA:2661:G:N7	35:DA:2662:A:N6	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DI:93:THR:H	43:DI:96:ASP:CG	2.12	0.57
46:DN:51:PHE:CZ	46:DN:119:ARG:HD2	2.40	0.57
57:DY:50:ARG:HG2	57:DY:54:LYS:HB2	1.87	0.57
1:AA:189(I):G:H2'	1:AA:189(J):G:H4'	1.86	0.57
1:AA:280:C:C5	17:AQ:38:ARG:HA	2.40	0.57
1:AA:382:A:H2'	1:AA:383:A:C8	2.40	0.57
1:AA:1289:A:H62	9:AI:70:LYS:NZ	2.03	0.57
1:AA:1452:C:H1'	1:AA:1456:G:P	2.44	0.57
1:AA:1505:G:C8	1:AA:1505:G:OP2	2.57	0.57
8:AH:96:GLY:O	8:AH:99:GLU:N	2.36	0.57
10:AJ:6:ILE:HB	10:AJ:72:VAL:HG12	1.86	0.57
14:AN:4:LYS:C	14:AN:6:LEU:H	2.11	0.57
27:B2:51:ARG:NH1	27:B2:55:ARG:HD2	2.20	0.57
35:BA:139:G:N2	56:BX:38:GLU:HB3	2.19	0.57
35:BA:252:G:C2'	35:BA:253:C:H5'	2.35	0.57
35:BA:272(I):U:H3	35:BA:363(A):A:H61	1.50	0.57
35:BA:299:A:H8	35:BA:299:A:OP2	1.88	0.57
35:BA:363(A):A:H5'	35:BA:363(B):G:OP2	2.04	0.57
35:BA:796:C:H2'	35:BA:797:C:C6	2.39	0.57
35:BA:1057:A:H2'	35:BA:1058:G:H4'	1.86	0.57
35:BA:1579:A:H2'	35:BA:1580:A:O4'	2.05	0.57
35:BA:1798:U:H5'	38:BD:259:THR:CG2	2.33	0.57
35:BA:2532:G:H1'	35:BA:2663:G:H22	1.70	0.57
35:BA:2818:G:H1'	35:BA:2836:U:O2'	2.05	0.57
35:BA:2838:G:H5"	35:BA:2839:G:OP2	2.05	0.57
36:BB:78:A:H2'	36:BB:79:C:O4'	2.03	0.57
43:BI:81:VAL:HG22	43:BI:82:ARG:H	1.70	0.57
48:BP:113:LYS:HA	48:BP:129:ALA:O	2.05	0.57
48:BP:130:PHE:CE1	48:BP:146:VAL:HA	2.39	0.57
51:BS:67:ARG:CA	51:BS:98:VAL:HG11	2.34	0.57
54:BV:85:LYS:HA	54:BV:87:HIS:CD2	2.40	0.57
1:CA:586:C:C2'	1:CA:587:G:H5'	2.35	0.57
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.85	0.57
2:CB:51:LEU:O	2:CB:55:PHE:HD2	1.86	0.57
2:CB:118:LEU:HA	2:CB:121:LEU:HD13	1.87	0.57
4:CD:102:ASP:HB3	4:CD:136:PRO:HB3	1.85	0.57
19:CS:19:VAL:C	19:CS:21:GLU:H	2.13	0.57
19:CS:20:LEU:HA	19:CS:23:ASN:HB3	1.86	0.57
28:D3:4:LEU:HD22	28:D3:39:ASP:HB2	1.86	0.57
31:D6:10:LEU:HD11	31:D6:12:GLU:OE1	2.04	0.57
31:D6:15:GLU:HG2	31:D6:18:ARG:HE	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:330:A:HO2'	35:DA:331:A:H8	1.48	0.57
35:DA:2308:G:HO2'	35:DA:2309:A:P	2.28	0.57
35:DA:2312:U:O2'	41:DG:71:THR:HG21	2.04	0.57
35:DA:2321:G:H5"	35:DA:2322:A:OP2	2.03	0.57
38:DD:39:LYS:HB2	38:DD:62:TYR:HB2	1.85	0.57
38:DD:158:ALA:O	38:DD:161:THR:OG1	2.17	0.57
54:DV:80:GLN:C	54:DV:81:TYR:CG	2.81	0.57
55:DW:2:GLU:HA	55:DW:107:LEU:O	2.05	0.57
1:AA:519:C:H2'	1:AA:520:A:O4'	2.05	0.57
1:AA:745:C:H2'	1:AA:746:A:H8	1.70	0.57
1:AA:832:C:O2'	1:AA:833:U:P	2.63	0.57
1:AA:837:G:H2'	1:AA:837:G:N3	2.20	0.57
1:AA:1223:C:OP1	19:AS:78:ARG:NH2	2.38	0.57
1:AA:1347:G:H22	1:AA:1373:G:H2'	1.70	0.57
4:AD:173:TRP:CD2	4:AD:189:PRO:HB3	2.39	0.57
7:AG:111:ARG:HG3	7:AG:112:PRO:CD	2.34	0.57
13:AM:39:ILE:HG22	13:AM:40:ASN:H	1.70	0.57
18:AR:37:VAL:O	18:AR:40:LEU:N	2.37	0.57
25:B0:50:ASN:C	25:B0:62:LEU:HD12	2.30	0.57
35:BA:311:A:C6	35:BA:328:U:C4	2.93	0.57
35:BA:1050:A:O2'	35:BA:2752:C:H1'	2.05	0.57
35:BA:1586:A:H5"	35:BA:1587:A:C8	2.40	0.57
35:BA:1615:C:H5'	35:BA:1615:C:H6	1.69	0.57
35:BA:1999:C:H4'	35:BA:2723:C:O2	2.04	0.57
41:BG:63:ILE:HD12	41:BG:141:PHE:CE2	2.40	0.57
46:BN:30:ILE:CG2	46:BN:34:LEU:HD11	2.34	0.57
48:BP:57:THR:HG22	48:BP:59:LEU:N	2.20	0.57
54:BV:2:PHE:CE1	54:BV:13:ARG:HD3	2.40	0.57
57:BY:20:TYR:O	57:BY:22:GLY:N	2.38	0.57
1:CA:1026:G:H5'	1:CA:1027:C:OP2	2.05	0.57
7:CG:66:VAL:O	7:CG:70:LYS:HG3	2.05	0.57
18:CR:40:LEU:HA	18:CR:43:PHE:CD2	2.40	0.57
34:D9:27:CYS:O	34:D9:29:ASN:N	2.38	0.57
35:DA:154(A):C:H6	35:DA:154(A):C:OP2	1.88	0.57
35:DA:2542:A:H2'	35:DA:2542:A:N3	2.19	0.57
39:DE:51:PHE:CD2	39:DE:52:LEU:HD12	2.38	0.57
39:DE:103:ASP:OD2	39:DE:168:MET:HE3	2.04	0.57
42:DH:41:MET:HE3	42:DH:55:PRO:HD3	1.86	0.57
43:DI:95:LYS:HD3	43:DI:95:LYS:O	2.05	0.57
57:DY:38:ILE:CA	57:DY:64:GLU:OE2	2.53	0.57
1:AA:1181:G:H2'	1:AA:1182:G:N2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1445:C:H1'	1:AA:1458:G:C2	2.40	0.56
2:AB:177:ALA:O	2:AB:182:ILE:HB	2.05	0.56
3:AC:155:GLY:O	3:AC:164:ARG:N	2.37	0.56
4:AD:71:SER:OG	4:AD:73:ARG:HB2	2.04	0.56
8:AH:87:SER:HB3	8:AH:132:GLU:OE2	2.05	0.56
35:BA:139:G:H1'	35:BA:139(A):G:H21	1.69	0.56
35:BA:244:A:C2	35:BA:255:A:C4	2.92	0.56
35:BA:587:C:O2	48:BP:33:ARG:NH2	2.38	0.56
35:BA:1084:A:N6	44:BJ:30:UNK:O	2.38	0.56
35:BA:1533:G:H4'	35:BA:1543:C:H5	1.69	0.56
35:BA:1614:A:N1	55:BW:91:GLY:HA2	2.19	0.56
35:BA:1899:G:H22	35:BA:1902:C:N4	2.03	0.56
35:BA:2085:C:H4'	38:BD:262:ARG:HH22	1.69	0.56
35:BA:2535:G:H2'	35:BA:2536:G:H8	1.69	0.56
40:BF:62:ARG:HH22	40:BF:64:ILE:HD12	1.69	0.56
48:BP:90:ARG:HD2	48:BP:90:ARG:N	2.17	0.56
49:BQ:68:ILE:HD13	49:BQ:103:MET:HB3	1.86	0.56
54:BV:30:GLY:HA2	54:BV:64:HIS:CE1	2.40	0.56
56:BX:28:PHE:CE2	56:BX:39:ILE:HD11	2.40	0.56
1:CA:90:U:H5'	1:CA:91:C:OP1	2.04	0.56
1:CA:437:U:H5"	4:CD:155:LEU:HD13	1.86	0.56
2:CB:104:ASN:O	2:CB:108:ILE:HG12	2.05	0.56
26:D1:19:GLN:HE21	35:DA:379:G:H21	1.51	0.56
31:D6:32:ASN:O	31:D6:33:LYS:HG3	2.04	0.56
38:DD:70:TRP:CD1	38:DD:70:TRP:C	2.83	0.56
41:DG:20:ILE:HG23	41:DG:25:TYR:HB2	1.87	0.56
43:DI:14:ASP:H	43:DI:17:GLN:HE22	1.52	0.56
47:DO:104:ARG:HH12	52:DT:35:LYS:HE2	1.69	0.56
50:DR:73:VAL:O	50:DR:76:VAL:HG12	2.05	0.56
53:DU:102:GLU:HB3	53:DU:105:VAL:HG23	1.85	0.56
56:DX:53:LYS:HD3	56:DX:54:VAL:H	1.70	0.56
57:DY:50:ARG:HD3	57:DY:55:TYR:O	2.04	0.56
1:AA:266:G:H5"	1:AA:267:C:H5	1.69	0.56
1:AA:301:G:H2'	1:AA:302:G:H8	1.69	0.56
1:AA:1181:G:H2'	1:AA:1182:G:C2	2.40	0.56
27:B2:41:ILE:HD11	27:B2:49:LYS:NZ	2.21	0.56
35:BA:1166:C:H1'	35:BA:1184:G:N2	2.20	0.56
35:BA:1210:A:H8	35:BA:1210:A:C5'	2.17	0.56
35:BA:2543:G:H2'	35:BA:2544:G:C8	2.40	0.56
35:BA:2888:C:H2'	35:BA:2889:C:H6	1.68	0.56
38:BD:24:ILE:HD11	38:BD:91:ARG:HD2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:80:ALA:HB2	38:BD:96:HIS:CD2	2.40	0.56
48:BP:15:ARG:HA	48:BP:15:ARG:CZ	2.34	0.56
50:BR:9:LYS:HD3	50:BR:43:GLU:CG	2.35	0.56
53:BU:91:ASP:OD1	53:BU:96:ALA:N	2.38	0.56
56:BX:44:GLU:OE2	56:BX:51:VAL:N	2.37	0.56
58:BZ:18:LEU:HG	58:BZ:23:LYS:HB2	1.87	0.56
1:CA:278:G:OP2	17:CQ:41:LYS:HE2	2.05	0.56
20:CT:55:ILE:C	20:CT:57:ARG:H	2.13	0.56
22:CV:17:C:H3'	22:CV:17(A):U:C5'	2.35	0.56
23:CW:68:C:H3'	23:CW:69:G:O4'	2.05	0.56
27:D2:52:ASP:OD1	27:D2:53:LEU:N	2.38	0.56
30:D5:35:GLU:OE2	30:D5:35:GLU:N	2.38	0.56
32:D7:10:ARG:NH2	35:DA:1378:A:OP1	2.38	0.56
33:D8:29:LYS:CB	33:D8:44:LYS:HG3	2.35	0.56
35:DA:287:C:H5'	35:DA:288:C:OP2	2.05	0.56
35:DA:911:A:H2'	49:DQ:9:TYR:OH	2.03	0.56
35:DA:1206:G:H2'	35:DA:1207:C:H6	1.69	0.56
35:DA:2661:G:N7	35:DA:2662:A:C6	2.73	0.56
35:DA:2821:A:OP2	50:DR:2:ARG:CZ	2.52	0.56
39:DE:46:ALA:HB1	39:DE:81:ILE:O	2.05	0.56
42:DH:144:VAL:O	42:DH:148:ILE:HG12	2.05	0.56
43:DI:133:HIS:HB2	43:DI:134:PRO:HD2	1.86	0.56
46:DN:47:ALA:HB2	46:DN:112:LEU:HD11	1.87	0.56
57:DY:96:ILE:HG23	57:DY:101:LYS:HB2	1.87	0.56
1:AA:146:G:O2'	1:AA:147:G:OP1	2.22	0.56
1:AA:429:U:H1'	1:AA:430:A:H5"	1.87	0.56
1:AA:646:U:H2'	1:AA:647:C:C6	2.39	0.56
1:AA:867:G:H2'	1:AA:868:C:H6	1.70	0.56
1:AA:1174:G:H3'	1:AA:1174:G:C8	2.40	0.56
1:AA:1316:G:N1	19:AS:5:LEU:HD21	2.20	0.56
2:AB:84:GLU:HG2	2:AB:215:LEU:HD23	1.86	0.56
2:AB:168:THR:OG1	2:AB:191:ASP:O	2.19	0.56
11:AK:29:ILE:HG22	11:AK:44:SER:CB	2.33	0.56
19:AS:8:GLY:C	19:AS:10:PHE:H	2.12	0.56
23:AW:1:G:H1	23:AW:72:C:H42	1.53	0.56
26:B1:87:PRO:HD2	26:B1:89:GLU:H	1.70	0.56
27:B2:26:ARG:O	27:B2:27:GLU:OE2	2.23	0.56
32:B7:31:LEU:HD22	32:B7:42:LEU:HD12	1.87	0.56
35:BA:103:A:OP2	35:BA:104:U:OP2	2.22	0.56
35:BA:539:G:H3'	35:BA:539:G:N3	2.20	0.56
35:BA:547:A:OP1	35:BA:548:A:N6	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:593:G:H1	35:BA:664:C:H42	1.53	0.56
35:BA:708:C:N4	35:BA:723:G:H1	2.00	0.56
35:BA:1037:G:OP2	35:BA:1037:G:C8	2.52	0.56
35:BA:1403:C:H5"	35:BA:1471:A:C1'	2.35	0.56
35:BA:1718:G:H1	35:BA:1744:C:H42	1.53	0.56
35:BA:2859:G:H3'	35:BA:2859:G:C8	2.40	0.56
36:BB:85:G:C2'	36:BB:86:G:H5"	2.35	0.56
37:BC:64:LEU:HD13	37:BC:65:PRO:HD2	1.87	0.56
42:BH:89:ILE:HD13	42:BH:94:TYR:O	2.04	0.56
43:BI:63:ALA:HA	43:BI:66:GLU:HG2	1.88	0.56
53:BU:64:ARG:HG2	53:BU:64:ARG:HH21	1.71	0.56
54:BV:29:PRO:O	54:BV:64:HIS:HE1	1.88	0.56
54:BV:34:GLU:HG2	54:BV:35:LEU:N	2.20	0.56
54:BV:64:HIS:O	54:BV:64:HIS:CG	2.57	0.56
1:CA:130:A:N7	17:CQ:63:ARG:HG3	2.21	0.56
1:CA:413:G:H22	1:CA:429:U:H5"	1.71	0.56
1:CA:725:G:H2'	1:CA:726:C:H6	1.70	0.56
1:CA:1320:C:H5'	19:CS:70:LYS:HG3	1.87	0.56
4:CD:64:LEU:HD11	4:CD:97:LEU:HD13	1.87	0.56
23:CW:53:G:H2'	23:CW:54:U:H5'	1.88	0.56
27:D2:50:ILE:O	27:D2:50:ILE:HG13	2.04	0.56
35:DA:1190:G:H8	35:DA:1190:G:H5"	1.69	0.56
35:DA:1528(A):A:N7	35:DA:1529:G:H8	2.03	0.56
35:DA:2464:C:HO2'	35:DA:2465:C:P	2.28	0.56
35:DA:2801:A:O2'	35:DA:2895:U:H1'	2.04	0.56
36:DB:34:U:OP1	41:DG:2:PRO:HB2	2.05	0.56
36:DB:81:G:H1	36:DB:96:U:H3	1.53	0.56
40:DF:132:VAL:HG22	40:DF:133:ASN:H	1.71	0.56
42:DH:30:LYS:HB2	42:DH:79:VAL:HA	1.86	0.56
48:DP:127:ALA:H	48:DP:145:PRO:HG3	1.69	0.56
1:AA:701:C:O2	1:AA:703:G:N1	2.39	0.56
2:AB:71:VAL:HG13	2:AB:164:VAL:HG23	1.86	0.56
27:B2:55:ARG:HH11	27:B2:56:GLN:HA	1.70	0.56
35:BA:581:C:H5"	53:BU:32:PHE:CD1	2.40	0.56
35:BA:838:C:H2'	35:BA:839:U:H6	1.70	0.56
35:BA:1469:A:H2'	35:BA:1470:G:O4'	2.05	0.56
35:BA:2394:C:H6	35:BA:2394:C:OP2	1.89	0.56
36:BB:70:C:H42	36:BB:107:G:H1	1.51	0.56
41:BG:131:TYR:HE2	41:BG:133:LEU:HD22	1.70	0.56
1:CA:460:G:H3'	1:CA:461:A:H5'	1.86	0.56
1:CA:983:A:H5"	1:CA:984:C:OP2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1120:G:N2	1:CA:1153:C:N3	2.49	0.56
1:CA:1265:G:C4	1:CA:1271:G:N2	2.74	0.56
7:CG:62:PHE:O	7:CG:64:GLN:N	2.39	0.56
7:CG:111:ARG:HB3	7:CG:113:GLU:HG2	1.86	0.56
11:CK:21:ILE:HG22	11:CK:30:VAL:HG12	1.87	0.56
26:D1:47:GLN:HE22	35:DA:2090:G:H21	1.53	0.56
28:D3:50:VAL:O	28:D3:54:VAL:HG22	2.04	0.56
30:D5:5:PRO:HD2	30:D5:6:VAL:HG13	1.85	0.56
35:DA:271(A):A:N1	35:DA:272(D):G:O2'	2.29	0.56
35:DA:272(I):U:H2'	35:DA:272(J):C:C6	2.40	0.56
35:DA:476:G:N2	35:DA:478:A:H3'	2.20	0.56
35:DA:660:G:C2'	35:DA:661:C:H5'	2.36	0.56
35:DA:1210:A:H4'	35:DA:1211:U:O5'	2.05	0.56
35:DA:2254:C:H5"	35:DA:2255:G:OP2	2.04	0.56
35:DA:2531:A:H5"	42:DH:157:TYR:CZ	2.41	0.56
35:DA:2543:G:H2'	35:DA:2544:G:C8	2.40	0.56
36:DB:106:G:H5'	58:DZ:31:ARG:HG2	1.88	0.56
41:DG:117:PHE:CZ	41:DG:120:LEU:HB2	2.40	0.56
41:DG:172:LEU:O	41:DG:176:LEU:HG	2.05	0.56
43:DI:40:THR:O	43:DI:44:LEU:HB2	2.06	0.56
49:DQ:135:ASP:O	49:DQ:138:ASP:N	2.38	0.56
50:DR:58:GLY:HA2	50:DR:80:PHE:CE1	2.38	0.56
51:DS:85:VAL:O	51:DS:106:ARG:HG3	2.05	0.56
1:AA:1097:C:O2'	1:AA:1169:A:H2'	2.06	0.56
1:AA:1456:G:OP1	1:AA:1456:G:C2	2.58	0.56
2:AB:77:ALA:HA	2:AB:80:ILE:HG12	1.88	0.56
2:AB:172:ILE:H	2:AB:172:ILE:HD12	1.71	0.56
7:AG:26:PHE:HD1	7:AG:30:ILE:HD11	1.71	0.56
8:AH:36:LEU:O	8:AH:48:TYR:OH	2.23	0.56
21:AU:6:ARG:NE	21:AU:15:ARG:HH21	2.04	0.56
22:AV:73:A:H5'	22:AV:74:A:OP2	2.05	0.56
25:B0:20:ARG:NE	35:BA:2271:G:H5"	2.20	0.56
26:B1:23:LYS:O	26:B1:37:ILE:HB	2.06	0.56
26:B1:50:ARG:NH2	35:BA:1363:C:OP1	2.37	0.56
33:B8:25:MET:CG	48:BP:64:LYS:HG2	2.28	0.56
35:BA:569:U:H5"	35:BA:821:A:C2	2.40	0.56
35:BA:860:U:H5	35:BA:917:A:N7	2.04	0.56
35:BA:1289:C:H2'	35:BA:1290:C:C6	2.41	0.56
35:BA:1477:A:H5'	35:BA:1478:G:OP2	2.05	0.56
35:BA:2869:G:H2'	35:BA:2870:C:O4'	2.05	0.56
40:BF:143:ALA:HB1	40:BF:148:LEU:HB2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:27:UNK:C	44:BJ:113:UNK:HA	2.35	0.56
46:BN:19:GLU:O	46:BN:21:LYS:N	2.38	0.56
50:BR:19:ALA:O	50:BR:23:ASN:HB2	2.06	0.56
51:BS:19:LYS:O	51:BS:19:LYS:NZ	2.32	0.56
55:BW:29:LEU:HD21	55:BW:33:ARG:NH2	2.13	0.56
58:BZ:91:LEU:HB3	58:BZ:130:PRO:HG3	1.88	0.56
1:CA:814:A:N7	1:CA:816:A:C4	2.73	0.56
1:CA:939:G:H5"	7:CG:102:ARG:NH1	2.21	0.56
17:CQ:57:VAL:HG12	17:CQ:76:LEU:HD12	1.88	0.56
35:DA:494:G:O2'	55:DW:5:ALA:O	2.19	0.56
35:DA:675:A:OP1	40:DF:63:LYS:HE2	2.06	0.56
35:DA:826:U:H2'	35:DA:828:U:O4'	2.05	0.56
35:DA:2085:C:H4'	38:DD:262:ARG:NH2	2.20	0.56
37:DC:82:LYS:HD3	37:DC:86:ALA:HB2	1.88	0.56
38:DD:43:ARG:HH22	38:DD:53:PHE:N	2.02	0.56
1:AA:981:U:C5'	1:AA:982:U:H5"	2.36	0.56
1:AA:1091:U:C2	1:AA:1093:A:OP2	2.58	0.56
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.41	0.56
1:AA:1223:C:P	19:AS:78:ARG:HH22	2.29	0.56
38:BD:89:SER:HB2	38:BD:159:ALA:H	1.69	0.56
40:BF:80:ALA:H	40:BF:82:ILE:HG22	1.71	0.56
1:CA:1012:U:H6	1:CA:1012:U:OP2	1.88	0.56
1:CA:1347:G:HO2'	1:CA:1373:G:H1	1.52	0.56
8:CH:3:THR:OG1	8:CH:4:ASP:N	2.25	0.56
15:CO:25:THR:HG21	15:CO:70:LEU:HD22	1.87	0.56
31:D6:28:ARG:NH2	31:D6:51:GLU:OE2	2.37	0.56
35:DA:271(M):G:O2'	35:DA:271(N):U:H5'	2.06	0.56
35:DA:587:C:C5	48:DP:33:ARG:HD2	2.40	0.56
35:DA:2726:U:HO2'	35:DA:2727:G:H8	1.54	0.56
35:DA:2815:C:H2'	35:DA:2816:C:H6	1.69	0.56
38:DD:31:LYS:HE3	38:DD:102:LYS:HD2	1.86	0.56
40:DF:53:THR:HG22	40:DF:56:GLU:CD	2.31	0.56
43:DI:33:ARG:O	43:DI:35:LEU:HG	2.04	0.56
48:DP:51:PHE:HB3	48:DP:57:THR:HB	1.88	0.56
1:AA:78:G:H1'	1:AA:79:G:H5'	1.87	0.56
1:AA:149:A:H2'	1:AA:150:C:C6	2.40	0.56
1:AA:460:G:N2	1:AA:472:A:N6	2.53	0.56
1:AA:631:G:H2'	1:AA:632:A:C8	2.41	0.56
1:AA:1235:U:O2'	1:AA:1305:G:OP1	2.19	0.56
1:AA:1357:A:H5"	1:AA:1358:U:OP2	2.06	0.56
25:B0:70:GLN:HE22	25:B0:72:ARG:CD	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:587:C:H42	48:BP:33:ARG:HD2	1.70	0.56
35:BA:2427:C:H5"	35:BA:2428:G:OP1	2.05	0.56
35:BA:2892:A:H62	35:BA:2893:G:H21	1.53	0.56
41:BG:106:LEU:HA	41:BG:110:ALA:HB3	1.87	0.56
46:BN:19:GLU:C	46:BN:21:LYS:H	2.14	0.56
56:BX:29:TRP:CD1	56:BX:74:PRO:HB2	2.41	0.56
1:CA:10:A:H2'	1:CA:11:G:C8	2.39	0.56
1:CA:294:U:OP1	1:CA:610:G:O2'	2.24	0.56
1:CA:751:U:H4'	15:CO:24:SER:HB3	1.88	0.56
1:CA:859:A:H2'	1:CA:860:A:C8	2.40	0.56
1:CA:1132:C:O2	1:CA:1133:G:N2	2.39	0.56
12:CL:26:ALA:O	12:CL:29:GLY:N	2.39	0.56
23:CY:27:G:H2'	23:CY:28:G:C8	2.41	0.56
35:DA:2409:G:H2'	35:DA:2410:G:O4'	2.05	0.56
35:DA:2580:U:H4'	39:DE:130:GLY:HA3	1.88	0.56
55:DW:31:GLU:O	55:DW:35:ILE:HD13	2.05	0.56
56:DX:77:LYS:CD	56:DX:78:LYS:C	2.79	0.56
57:DY:6:HIS:O	57:DY:8:LYS:N	2.37	0.56
58:DZ:19:ARG:HH21	58:DZ:83:PRO:C	2.13	0.56
1:AA:654:G:OP2	1:AA:654:G:C8	2.55	0.56
2:AB:124:SER:HB3	2:AB:125:PRO:CD	2.35	0.56
7:AG:123:GLU:C	7:AG:125:MET:N	2.63	0.56
17:AQ:88:TYR:O	17:AQ:91:ARG:HB2	2.05	0.56
32:B7:7:PRO:HA	35:BA:686:G:H8	1.71	0.56
35:BA:528:A:H3'	35:BA:528:A:C8	2.40	0.56
35:BA:660:G:H5'	40:BF:99:TYR:CD2	2.41	0.56
35:BA:764:A:OP2	38:BD:214:TRP:CH2	2.58	0.56
42:BH:116:GLU:HG2	42:BH:117:PRO:HD2	1.87	0.56
43:BI:77:LEU:HD21	43:BI:101:LEU:HD13	1.87	0.56
46:BN:70:LYS:HE2	46:BN:72:TYR:CZ	2.41	0.56
48:BP:84:ASN:HD21	48:BP:117:GLU:CB	2.19	0.56
50:BR:100:LEU:HD21	50:BR:113:LEU:HD13	1.87	0.56
52:BT:51:ARG:NH1	52:BT:100:TYR:CZ	2.73	0.56
53:BU:8:VAL:CG1	53:BU:12:ARG:HD2	2.33	0.56
53:BU:14:HIS:HB3	53:BU:32:PHE:HD2	1.70	0.56
54:BV:66:ARG:HG3	54:BV:94:LEU:HA	1.88	0.56
55:BW:2:GLU:HA	55:BW:64:MET:HE1	1.88	0.56
1:CA:1318:A:H5"	19:CS:10:PHE:HB3	1.87	0.56
1:CA:1355:G:H2'	1:CA:1356:G:C8	2.41	0.56
1:CA:1434:A:H8	1:CA:1434:A:OP2	1.88	0.56
2:CB:178:ARG:NH1	2:CB:197:VAL:H	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:98:GLU:O	4:CD:103:ASN:ND2	2.38	0.56
26:D1:87:PRO:HA	26:D1:90:ILE:HB	1.88	0.56
33:D8:19:SER:OG	35:DA:651:G:OP1	2.18	0.56
35:DA:321:G:OP2	40:DF:136:THR:N	2.26	0.56
35:DA:528:A:O2'	35:DA:529:A:H5'	2.06	0.56
35:DA:1021:A:H3'	35:DA:1021:A:C8	2.40	0.56
35:DA:2200:C:H42	35:DA:2223:G:H1	1.52	0.56
35:DA:2474:C:H5'	35:DA:2475:C:C5	2.41	0.56
42:DH:148:ILE:O	42:DH:162:ILE:HD11	2.05	0.56
46:DN:12:ARG:HD2	46:DN:14:VAL:HG22	1.87	0.56
48:DP:59:LEU:HD23	48:DP:61:ARG:HG3	1.87	0.56
53:DU:97:ASP:OD1	53:DU:98:LEU:N	2.38	0.56
1:AA:1119:C:OP1	9:AI:83:ARG:NH1	2.33	0.56
1:AA:1316:G:H1	19:AS:5:LEU:HD21	1.69	0.56
4:AD:68:TYR:CD2	4:AD:97:LEU:HD13	2.41	0.56
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.12	0.56
11:AK:89:ALA:C	11:AK:91:ARG:H	2.13	0.56
15:AO:36:ILE:HD13	15:AO:59:MET:HE3	1.88	0.56
23:AW:10:G:N2	23:AW:26:A:O2'	2.39	0.56
35:BA:194:G:H2'	35:BA:195:A:O4'	2.06	0.56
35:BA:272(J):C:N4	35:BA:274:G:N7	2.54	0.56
35:BA:948:G:H2'	35:BA:949:C:C6	2.41	0.56
35:BA:1899:G:N2	35:BA:1902:C:C5	2.57	0.56
35:BA:2100:G:H1	35:BA:2189:U:H3	1.54	0.56
36:BB:17:C:H2'	36:BB:18:G:O4'	2.06	0.56
43:BI:109:ILE:HB	43:BI:130:TYR:CZ	2.41	0.56
49:BQ:5:ARG:CD	49:BQ:71:ASP:HA	2.28	0.56
53:BU:76:TYR:O	53:BU:80:ILE:HG12	2.04	0.56
1:CA:72:C:H2'	1:CA:73:G:H8	1.71	0.56
1:CA:757:U:H2'	1:CA:758:G:O4'	2.06	0.56
2:CB:236:TYR:HA	2:CB:239:VAL:HB	1.86	0.56
3:CC:155:GLY:O	3:CC:156:ARG:HB2	2.05	0.56
27:D2:44:LEU:O	27:D2:45:SER:HB3	2.05	0.56
33:D8:52:LYS:N	33:D8:53:PRO:HD2	2.19	0.56
35:DA:208:C:H2'	35:DA:209:C:C6	2.41	0.56
35:DA:363(B):G:H2'	35:DA:363(C):G:H8	1.70	0.56
35:DA:639:U:H2'	35:DA:640:C:C6	2.40	0.56
35:DA:1446:C:H42	35:DA:1465:G:H1	1.53	0.56
40:DF:20:LEU:O	40:DF:23:ASP:HB2	2.05	0.56
51:DS:88:ASP:O	51:DS:90:GLY:N	2.38	0.56
55:DW:48:ALA:O	55:DW:50:VAL:N	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:657:G:H4'	15:AO:28:GLN:HG3	1.87	0.56
1:AA:826:C:H5'	8:AH:12:ARG:HH21	1.71	0.56
5:AE:16:THR:OG1	5:AE:17:ALA:N	2.39	0.56
13:AM:13:LYS:HG3	13:AM:18:ALA:HB2	1.87	0.56
14:AN:13:THR:HG22	14:AN:15:LYS:O	2.06	0.56
31:B6:27:LYS:HG3	31:B6:29:ASN:OD1	2.06	0.56
35:BA:157:U:H5'	35:BA:171:G:H22	1.72	0.56
35:BA:1103:A:H3'	35:BA:1104:C:H6	1.70	0.56
35:BA:1952:A:OP1	47:BO:42:SER:OG	2.19	0.56
35:BA:2315:G:H2'	35:BA:2316:C:C6	2.40	0.56
36:BB:13:A:O2'	36:BB:14:U:H3'	2.05	0.56
39:BE:35:GLN:HB2	39:BE:48:GLN:HE21	1.71	0.56
42:BH:169:VAL:HG22	42:BH:170:ARG:HD3	1.87	0.56
1:CA:1305:G:OP2	1:CA:1305:G:C8	2.59	0.56
4:CD:79:PHE:HE2	4:CD:204:ILE:HD13	1.71	0.56
5:CE:132:ALA:O	5:CE:135:THR:N	2.39	0.56
7:CG:145:ALA:HB1	7:CG:149:ARG:HH22	1.71	0.56
13:CM:59:TYR:O	13:CM:63:THR:OG1	2.21	0.56
22:CV:60:U:H5"	22:CV:61:C:H5	1.70	0.56
35:DA:271(H):G:N1	35:DA:271(Q):G:N3	2.54	0.56
35:DA:1126:A:OP1	35:DA:1126:A:H8	1.88	0.56
35:DA:1750:G:O2'	35:DA:2860:A:N1	2.30	0.56
35:DA:2805:G:H2'	35:DA:2807:G:O4'	2.06	0.56
41:DG:145:THR:HG23	41:DG:147:ASP:OD1	2.06	0.56
51:DS:46:VAL:HG12	51:DS:48:LEU:HD23	1.88	0.56
1:AA:545:C:C5'	4:AD:73:ARG:HH22	2.19	0.55
1:AA:951:G:C6	1:AA:1231:G:C6	2.94	0.55
2:AB:98:LEU:HB3	2:AB:108:ILE:HD11	1.87	0.55
4:AD:127:THR:CG2	4:AD:147:ALA:HB3	2.35	0.55
8:AH:65:TYR:O	8:AH:79:VAL:HG23	2.06	0.55
10:AJ:49:VAL:O	10:AJ:60:ARG:HB3	2.07	0.55
30:B5:3:LYS:HB3	35:BA:747:U:C5	2.41	0.55
35:BA:1005:C:H2'	35:BA:1006:C:C6	2.41	0.55
35:BA:1179:C:H2'	35:BA:1180:C:H6	1.71	0.55
35:BA:1250:G:OP2	35:BA:1250:G:H8	1.89	0.55
36:BB:105:A:H2'	36:BB:106:G:O4'	2.05	0.55
36:BB:120:A:H3'	36:BB:120:A:N3	2.22	0.55
37:BC:51:PRO:HB2	37:BC:203:GLY:H	1.70	0.55
38:BD:132:PRO:HD3	38:BD:190:TYR:CZ	2.40	0.55
39:BE:90:THR:HG22	39:BE:91:VAL:H	1.71	0.55
40:BF:102:PRO:HB2	40:BF:105:VAL:HG23	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:152:GLU:CA	40:BF:190:GLU:OE1	2.54	0.55
40:BF:157:VAL:HG12	40:BF:176:LEU:HB3	1.88	0.55
41:BG:7:LEU:O	41:BG:11:TYR:N	2.31	0.55
42:BH:148:ILE:O	42:BH:151:ILE:N	2.39	0.55
43:BI:135:GLU:H	43:BI:135:GLU:CD	2.13	0.55
46:BN:20:GLY:HA3	46:BN:61:ARG:HE	1.71	0.55
57:BY:46:LYS:HB3	57:BY:62:GLU:HB3	1.89	0.55
1:CA:192:U:H2'	1:CA:193:C:C6	2.39	0.55
1:CA:552:U:H4'	12:CL:86:ARG:HD2	1.88	0.55
5:CE:15:ARG:HD2	5:CE:26:PHE:CD1	2.41	0.55
25:D0:26:TYR:HE1	35:DA:857:C:H1'	1.71	0.55
35:DA:207:A:H2'	35:DA:208:C:O4'	2.06	0.55
35:DA:548:A:H61	54:DV:95:LEU:CD1	2.18	0.55
35:DA:1557:C:OP2	35:DA:1558:A:O2'	2.22	0.55
35:DA:1800:C:OP1	38:DD:266:SER:OG	2.19	0.55
39:DE:203:LYS:HG3	39:DE:204:ALA:N	2.21	0.55
57:DY:38:ILE:HG23	57:DY:64:GLU:HG2	1.88	0.55
1:AA:69:G:H2'	1:AA:70:G:C8	2.38	0.55
1:AA:189:G:N1	1:AA:189(L):G:N1	2.55	0.55
1:AA:375:U:C4	1:AA:376:G:N7	2.74	0.55
1:AA:420:U:O2'	1:AA:421:U:H2'	2.06	0.55
1:AA:981:U:H5"	1:AA:982:U:H2'	1.87	0.55
12:AL:97:ARG:HB2	12:AL:98:TYR:CE1	2.41	0.55
35:BA:137:C:C2	35:BA:139(A):G:OP2	2.59	0.55
35:BA:2612:C:H2'	35:BA:2613:U:H5"	1.89	0.55
35:BA:2851:A:H2'	35:BA:2852:G:H8	1.72	0.55
38:BD:10:THR:CG2	38:BD:13:ARG:HG3	2.36	0.55
47:BO:35:VAL:HG11	47:BO:103:ALA:HB3	1.87	0.55
54:BV:76:LYS:H	54:BV:87:HIS:CE1	2.25	0.55
56:BX:25:LYS:HE3	56:BX:86:GLY:O	2.07	0.55
58:BZ:27:VAL:HG23	58:BZ:36:LYS:HA	1.86	0.55
1:CA:640:A:O2'	8:CH:115:SER:O	2.15	0.55
2:CB:159:PRO:O	2:CB:161:ALA:N	2.32	0.55
9:CI:5:TYR:HE2	9:CI:16:ARG:HG2	1.71	0.55
26:D1:46:LEU:HD12	26:D1:46:LEU:C	2.31	0.55
27:D2:33:MET:HB3	56:DX:13:LEU:HD11	1.87	0.55
35:DA:1322:A:H2'	35:DA:1323:U:H6	1.71	0.55
41:DG:97:ASP:O	41:DG:101:ILE:HG22	2.05	0.55
50:DR:2:ARG:NH1	50:DR:5:LYS:NZ	2.50	0.55
52:DT:29:ARG:NE	52:DT:82:LEU:CD2	2.69	0.55
57:DY:39:VAL:H	57:DY:64:GLU:CD	2.13	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:96:ILE:HD12	57:DY:98:VAL:N	2.20	0.55
1:AA:136:C:H42	1:AA:227:G:H1	1.55	0.55
1:AA:1148:U:O3'	9:AI:14:VAL:HG11	2.05	0.55
1:AA:1239:A:C4'	1:AA:1240:U:H5'	2.34	0.55
4:AD:110:PHE:CE1	4:AD:148:VAL:HG21	2.42	0.55
8:AH:82:HIS:ND1	8:AH:138:TRP:CD1	2.75	0.55
12:AL:25:PRO:C	12:AL:27:LEU:N	2.64	0.55
16:AP:48:TRP:CD1	16:AP:48:TRP:H	2.24	0.55
33:B8:13:ARG:HH21	48:BP:61:ARG:CA	2.19	0.55
35:BA:810:U:H3	48:BP:36:LYS:NZ	2.03	0.55
35:BA:1899:G:H1	35:BA:1902:C:N4	2.04	0.55
35:BA:2282:G:H4'	35:BA:2389:G:O2'	2.05	0.55
35:BA:2294:C:OP1	51:BS:92:TYR:HB2	2.07	0.55
35:BA:2547:U:H2'	35:BA:2548:G:C8	2.41	0.55
46:BN:13:TRP:CD1	46:BN:51:PHE:HB3	2.39	0.55
47:BO:34:THR:OG1	47:BO:35:VAL:N	2.38	0.55
50:BR:86:ARG:HG3	50:BR:117:VAL:HG11	1.87	0.55
51:BS:30:ARG:HH22	51:BS:62:LYS:HE2	1.71	0.55
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.06	0.55
3:CC:10:PHE:HB3	3:CC:11:ARG:HD2	1.88	0.55
4:CD:128:VAL:HG12	4:CD:146:ILE:HA	1.88	0.55
12:CL:51:ALA:HB3	12:CL:53:ARG:CZ	2.37	0.55
23:CW:66:U:H2'	23:CW:67:C:C6	2.40	0.55
25:D0:26:TYR:CE1	35:DA:857:C:H1'	2.41	0.55
26:D1:12:PRO:HD2	26:D1:62:VAL:HG23	1.88	0.55
35:DA:568:U:O4	35:DA:973:A:OP2	2.24	0.55
35:DA:764:A:O4'	38:DD:213:ARG:HG3	2.06	0.55
35:DA:996:A:O3'	53:DU:92:ARG:HB2	2.07	0.55
35:DA:1268:A:C2	35:DA:2013:A:C4	2.94	0.55
35:DA:1653:G:C6	50:DR:10:LEU:CD1	2.89	0.55
35:DA:1973:G:H2'	35:DA:1974:C:H6	1.71	0.55
35:DA:2593:U:H2'	35:DA:2594:C:H6	1.70	0.55
41:DG:56:ALA:O	41:DG:60:LEU:N	2.36	0.55
41:DG:71:THR:HG22	41:DG:89:GLY:CA	2.36	0.55
52:DT:29:ARG:HD2	52:DT:76:PHE:CE1	2.41	0.55
58:DZ:141:VAL:HG23	58:DZ:144:LEU:HD23	1.88	0.55
1:AA:413:G:N2	1:AA:428:G:H1'	2.20	0.55
2:AB:193:ASP:OD1	2:AB:193:ASP:O	2.25	0.55
7:AG:100:ALA:O	7:AG:104:LEU:HD23	2.06	0.55
10:AJ:61:GLU:OE2	14:AN:49:HIS:CE1	2.60	0.55
11:AK:57:THR:HG22	11:AK:59:TYR:N	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:4:LYS:C	14:AN:6:LEU:N	2.64	0.55
15:AO:78:TYR:CZ	15:AO:82:ILE:HD12	2.41	0.55
20:AT:56:MET:HE3	20:AT:85:MET:HE2	1.88	0.55
26:B1:25:LYS:CB	26:B1:27:GLU:OE1	2.52	0.55
30:B5:30:LEU:HD12	30:B5:40:LYS:C	2.32	0.55
35:BA:212:G:H2'	35:BA:213:A:O4'	2.07	0.55
35:BA:324:A:H2'	35:BA:325:G:O4'	2.06	0.55
35:BA:2747:G:OP1	42:BH:138:LYS:NZ	2.39	0.55
42:BH:93:GLY:O	42:BH:95:ARG:N	2.39	0.55
48:BP:9:ASN:N	48:BP:10:PRO:HD3	2.21	0.55
1:CA:1080:A:H5"	1:CA:1081:G:OP2	2.06	0.55
9:CI:23:ASN:H	9:CI:60:ASP:CG	2.13	0.55
10:CJ:5:ARG:HB2	10:CJ:73:ASP:HA	1.86	0.55
11:CK:48:ILE:HD12	11:CK:63:LEU:HD22	1.89	0.55
13:CM:3:ARG:HE	13:CM:9:ILE:HD13	1.70	0.55
13:CM:19:LEU:HD11	13:CM:56:LEU:HD11	1.87	0.55
24:CX:22:U:C4	24:CX:23:A:H2	2.24	0.55
35:DA:642:G:N2	35:DA:645:C:OP2	2.40	0.55
35:DA:1210:A:H5'	35:DA:1210:A:C8	2.36	0.55
35:DA:1688:U:O2	35:DA:1700:A:H8	1.89	0.55
39:DE:76:ARG:O	39:DE:77:ILE:C	2.48	0.55
42:DH:154:PRO:HB3	42:DH:163:TYR:CE1	2.42	0.55
1:AA:189:G:H3'	1:AA:189:G:C8	2.40	0.55
1:AA:413:G:H21	1:AA:428:G:H1'	1.71	0.55
1:AA:702:A:H62	35:BA:1846:G:H21	1.55	0.55
34:B9:5:ALA:O	35:BA:1030:G:N2	2.39	0.55
35:BA:539:G:N2	35:BA:540:C:OP1	2.33	0.55
35:BA:672:C:H2'	35:BA:673:C:H5"	1.87	0.55
35:BA:942:G:H5'	48:BP:35:HIS:CB	2.32	0.55
35:BA:1789:A:H5'	38:BD:221:VAL:HG12	1.88	0.55
39:BE:38:THR:HG22	39:BE:40:GLU:N	2.20	0.55
40:BF:198:ALA:O	40:BF:201:VAL:HG12	2.06	0.55
43:BI:9:LEU:HD21	43:BI:35:LEU:HD13	1.89	0.55
51:BS:15:ARG:O	51:BS:18:ILE:HG12	2.07	0.55
1:CA:264:U:H4'	17:CQ:63:ARG:HE	1.71	0.55
1:CA:1278:U:H5"	1:CA:1279:A:O4'	2.06	0.55
1:CA:1305:G:H5"	21:CU:4:GLY:HA3	1.87	0.55
2:CB:162:ILE:HD11	2:CB:177:ALA:CB	2.37	0.55
4:CD:13:ARG:O	4:CD:15:GLU:N	2.39	0.55
35:DA:806:C:P	48:DP:39:LYS:HB3	2.46	0.55
36:DB:71:C:H2'	36:DB:72:G:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:20:ARG:HA	51:DS:20:ARG:HE	1.72	0.55
51:DS:94:TYR:O	51:DS:95:HIS:HB3	2.05	0.55
58:DZ:74:VAL:HG22	58:DZ:86:VAL:HG13	1.88	0.55
1:AA:189(H):G:C8	1:AA:189(H):G:H5"	2.42	0.55
9:AI:6:GLY:HA3	9:AI:84:ALA:CB	2.36	0.55
11:AK:17:GLY:N	11:AK:79:SER:O	2.35	0.55
19:AS:40:ILE:HD12	19:AS:67:VAL:CG2	2.32	0.55
30:B5:25:LEU:HD12	55:BW:19:LEU:HB3	1.87	0.55
30:B5:33:CYS:HB2	30:B5:51:TYR:OH	2.07	0.55
35:BA:38:A:H5'	40:BF:50:SER:HB3	1.89	0.55
35:BA:134:C:N4	35:BA:144:C:H42	2.04	0.55
35:BA:139:G:H8	35:BA:139(A):G:H5"	1.71	0.55
35:BA:1048:A:H4'	35:BA:1049:C:OP1	2.05	0.55
35:BA:1070:A:H2'	35:BA:1097:U:C5'	2.37	0.55
35:BA:1140:C:O3'	46:BN:25:ARG:NH1	2.40	0.55
35:BA:2299:G:N1	35:BA:2318:G:C8	2.75	0.55
36:BB:21:G:O2'	36:BB:22:U:OP2	2.16	0.55
39:BE:173:VAL:CG2	39:BE:183:LEU:HB3	2.36	0.55
49:BQ:36:ALA:HB2	49:BQ:103:MET:SD	2.45	0.55
50:BR:26:LYS:HD3	50:BR:27:SER:H	1.71	0.55
55:BW:43:GLY:O	55:BW:45:TYR:HB3	2.06	0.55
1:CA:199:G:H2'	1:CA:200:G:C8	2.41	0.55
1:CA:724:G:C2	1:CA:725:G:C8	2.95	0.55
1:CA:1133:G:H2'	1:CA:1134:G:H8	1.72	0.55
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.07	0.55
26:D1:90:ILE:HG22	26:D1:91:LYS:HD3	1.88	0.55
27:D2:49:LYS:HA	27:D2:54:LYS:HZ3	1.71	0.55
31:D6:19:ARG:HH21	31:D6:20:ASN:HD21	1.53	0.55
35:DA:296:C:H2'	35:DA:297:C:H6	1.71	0.55
35:DA:582:G:OP1	53:DU:14:HIS:HD2	1.90	0.55
35:DA:1664:A:H61	35:DA:1996:C:H42	1.54	0.55
35:DA:2393:A:H5'	48:DP:62:LEU:HB3	1.89	0.55
37:DC:44:HIS:HE1	37:DC:175:VAL:H	1.54	0.55
40:DF:34:TRP:CZ2	48:DP:12:ALA:HB2	2.42	0.55
40:DF:135:LYS:HB3	40:DF:138:GLU:HG3	1.87	0.55
1:AA:215:U:H5'	1:AA:216:G:H5'	1.87	0.55
1:AA:472:A:O2'	16:AP:82:GLN:HG2	2.06	0.55
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.06	0.55
1:AA:1346:A:H61	1:AA:1374:A:H3'	1.72	0.55
3:AC:19:GLU:O	3:AC:40:ARG:NH2	2.39	0.55
5:AE:5:ASP:HB2	5:AE:6:PHE:CE1	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:100:VAL:HG22	5:AE:118:ILE:HG22	1.89	0.55
10:AJ:63:PHE:HB2	14:AN:57:ARG:C	2.32	0.55
17:AQ:76:LEU:HD21	17:AQ:79:SER:HB2	1.88	0.55
26:B1:10:LYS:HA	26:B1:48:LYS:HZ1	1.69	0.55
31:B6:46:HIS:ND1	35:BA:2371:G:O2'	2.39	0.55
33:B8:34:TRP:CZ2	33:B8:36:LYS:HD2	2.41	0.55
35:BA:271(E):U:H3	35:BA:271(S):G:H1	1.53	0.55
35:BA:443:A:H1'	35:BA:1201:C:O4'	2.07	0.55
35:BA:815:C:H5	48:BP:27:HIS:CE1	2.25	0.55
35:BA:827:U:H2'	35:BA:2430:A:C2	2.41	0.55
35:BA:1434:A:H61	35:BA:1558:A:N6	1.98	0.55
35:BA:1448:G:H21	35:BA:1544:A:H61	1.55	0.55
35:BA:2810:A:C2'	39:BE:61:ARG:HD2	2.37	0.55
39:BE:11:MET:HB2	39:BE:23:VAL:O	2.06	0.55
40:BF:117:ARG:HH21	40:BF:187:VAL:HA	1.72	0.55
41:BG:120:LEU:CD2	41:BG:178:PHE:CE1	2.89	0.55
42:BH:38:SER:HB3	42:BH:41:MET:HE1	1.88	0.55
48:BP:66:GLY:O	48:BP:67:MET:HG2	2.07	0.55
52:BT:13:ARG:HA	52:BT:13:ARG:CZ	2.36	0.55
52:BT:28:VAL:CG2	52:BT:88:ILE:HD11	2.37	0.55
54:BV:19:LYS:CG	54:BV:96:ILE:HG22	2.33	0.55
54:BV:69:LYS:HB3	54:BV:93:GLU:HG2	1.89	0.55
57:BY:51:VAL:HB	57:BY:53:PRO:HD3	1.88	0.55
57:BY:82:PRO:HD2	57:BY:97:ARG:HG2	1.89	0.55
1:CA:452:A:O2'	1:CA:453:A:OP2	2.19	0.55
1:CA:626:U:H2'	1:CA:627:G:H8	1.70	0.55
1:CA:1181:G:H2'	1:CA:1182:G:C4	2.42	0.55
1:CA:1250:A:H2'	1:CA:1251:A:C8	2.41	0.55
4:CD:8:VAL:O	4:CD:10:ARG:N	2.39	0.55
5:CE:69:VAL:O	5:CE:71:LEU:HG	2.07	0.55
30:D5:57:VAL:HG23	50:DR:33:ARG:HH22	1.71	0.55
33:D8:6:THR:HG22	33:D8:7:HIS:O	2.07	0.55
33:D8:36:LYS:HG3	33:D8:37:SER:H	1.70	0.55
35:DA:899:A:H2'	35:DA:899:A:N3	2.21	0.55
35:DA:1889:A:O2'	35:DA:2087:G:H5'	2.07	0.55
35:DA:2873:A:C2	50:DR:6:SER:HB2	2.41	0.55
39:DE:173:VAL:HG12	39:DE:174:ASP:H	1.71	0.55
53:DU:92:ARG:HH12	53:DU:95:LEU:HD22	1.70	0.55
57:DY:90:LEU:HD12	57:DY:91:GLU:N	2.22	0.55
1:AA:73:G:OP1	1:AA:73:G:H4'	2.05	0.55
1:AA:383:A:H2'	1:AA:384:G:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:499:A:H4'	1:AA:500:G:H5'	1.88	0.55
1:AA:745:C:H2'	1:AA:746:A:C8	2.41	0.55
3:AC:181:ASN:OD1	3:AC:204:LEU:HD12	2.07	0.55
4:AD:191:ARG:O	4:AD:191:ARG:NH1	2.36	0.55
7:AG:84:ASN:ND2	23:AW:38:A:H61	2.05	0.55
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.21	0.55
12:AL:7:ILE:HG13	12:AL:8:ASN:H	1.70	0.55
12:AL:25:PRO:O	12:AL:27:LEU:HD23	2.07	0.55
12:AL:28:LYS:C	12:AL:30:ALA:H	2.14	0.55
31:B6:27:LYS:HG2	31:B6:27:LYS:O	2.05	0.55
33:B8:41:ILE:HD11	35:BA:2419:U:OP2	2.07	0.55
33:B8:52:LYS:NZ	35:BA:833:U:O2'	2.40	0.55
35:BA:537:C:N4	35:BA:538:G:O6	2.39	0.55
35:BA:863:A:H2'	35:BA:864:G:C8	2.42	0.55
35:BA:1024:G:H1	35:BA:1140:C:H42	1.54	0.55
35:BA:1851:U:H2'	35:BA:1852:C:O4'	2.07	0.55
36:BB:39:A:O2'	36:BB:46:A:N1	2.38	0.55
43:BI:78:THR:OG1	43:BI:141:LYS:HD2	2.06	0.55
52:BT:108:ARG:O	52:BT:111:ARG:N	2.30	0.55
54:BV:39:LEU:HD12	54:BV:53:GLU:O	2.07	0.55
1:CA:831:U:O2'	1:CA:832:C:H5'	2.05	0.55
1:CA:1007:C:H42	1:CA:1024:G:N2	2.05	0.55
1:CA:1203:C:H2'	1:CA:1204:A:C8	2.40	0.55
1:CA:1268:A:O2'	21:CU:19:GLY:HA2	2.07	0.55
1:CA:1377:A:N6	7:CG:8:GLU:OE2	2.40	0.55
4:CD:79:PHE:CE2	4:CD:204:ILE:HD13	2.41	0.55
7:CG:15:ASP:HB3	7:CG:19:GLY:N	2.22	0.55
10:CJ:54:PHE:HD1	10:CJ:55:LYS:HB3	1.70	0.55
26:D1:72:GLU:HG2	26:D1:72:GLU:O	2.04	0.55
35:DA:109:G:H2'	35:DA:110:G:O4'	2.07	0.55
35:DA:307:G:N2	35:DA:309:G:H3'	2.22	0.55
35:DA:1051:G:H3'	35:DA:1051:G:C8	2.42	0.55
35:DA:1206:G:H2'	35:DA:1207:C:C6	2.42	0.55
35:DA:1209:G:N2	35:DA:1210:A:H62	2.05	0.55
35:DA:1403:C:C5'	35:DA:1471:A:H1'	2.36	0.55
35:DA:2464:C:O2'	35:DA:2465:C:P	2.65	0.55
40:DF:3:GLU:HB3	40:DF:24:LEU:HG	1.88	0.55
41:DG:50:ALA:O	41:DG:52:ILE:N	2.40	0.55
42:DH:132:ARG:HB2	42:DH:132:ARG:NH1	2.21	0.55
1:AA:392:G:O2'	1:AA:483:C:O2'	2.25	0.55
1:AA:427:U:H5"	1:AA:428:G:H2'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1148:U:H5'	1:AA:1149:C:OP2	2.07	0.55
20:AT:30:LYS:NZ	20:AT:72:LEU:HD21	2.21	0.55
35:BA:78:A:H2'	35:BA:79:G:C8	2.42	0.55
35:BA:1010:A:H1'	35:BA:1153:C:H1'	1.88	0.55
35:BA:2415:G:H4'	48:BP:67:MET:N	2.22	0.55
39:BE:143:ASN:OD1	39:BE:147:PRO:HD3	2.07	0.55
46:BN:36:GLY:H	46:BN:42:TRP:HZ3	1.54	0.55
1:CA:15:G:C1'	5:CE:19:MET:HE2	2.34	0.55
1:CA:271:C:H2'	1:CA:272:C:H6	1.72	0.55
1:CA:584:G:H5'	17:CQ:91:ARG:HH22	1.71	0.55
6:CF:4:TYR:CE2	6:CF:72:VAL:HG11	2.42	0.55
10:CJ:25:GLU:O	10:CJ:29:ARG:HB3	2.07	0.55
26:D1:48:LYS:NZ	26:D1:61:ARG:HD2	2.22	0.55
26:D1:71:TYR:O	26:D1:74:VAL:N	2.40	0.55
29:D4:42:PHE:O	29:D4:45:GLY:N	2.35	0.55
30:D5:34:PRO:HD2	30:D5:35:GLU:CD	2.32	0.55
35:DA:330:A:O2'	35:DA:331:A:H8	1.90	0.55
35:DA:658:C:H2'	35:DA:659:C:C6	2.42	0.55
35:DA:1550:C:OP1	35:DA:1720:U:O2'	2.19	0.55
35:DA:1653:G:H3'	50:DR:4:LEU:HD23	1.89	0.55
35:DA:2316:C:H5'	35:DA:2317:C:OP2	2.07	0.55
35:DA:2895:U:C6	35:DA:2895:U:OP2	2.59	0.55
38:DD:82:ILE:HD11	38:DD:111:LEU:HD22	1.87	0.55
40:DF:34:TRP:HB2	48:DP:10:PRO:HB2	1.87	0.55
40:DF:67:GLN:HG3	40:DF:67:GLN:O	2.06	0.55
47:DO:69:ILE:H	47:DO:69:ILE:HD12	1.72	0.55
57:DY:60:PHE:O	57:DY:62:GLU:N	2.39	0.55
1:AA:257:G:H2'	1:AA:258:G:H8	1.72	0.55
1:AA:929:G:H1	1:AA:1388:C:N4	2.02	0.55
2:AB:98:LEU:HD13	2:AB:99:GLY:N	2.22	0.55
2:AB:166:ASP:OD2	2:AB:206:ASP:OD1	2.25	0.55
3:AC:18:TRP:NE1	14:AN:55:GLY:H	2.05	0.55
3:AC:120:VAL:HA	3:AC:123:GLN:HG3	1.89	0.55
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.87	0.55
15:AO:53:HIS:CE1	15:AO:57:LEU:HD21	2.40	0.55
35:BA:89:G:H21	35:BA:90:U:H5'	1.72	0.55
35:BA:499:U:H4'	57:BY:45:VAL:HG21	1.88	0.55
35:BA:541:C:N4	35:BA:551:G:H1	2.03	0.55
35:BA:2694:G:H2'	35:BA:2695:C:H6	1.71	0.55
38:BD:201:HIS:O	38:BD:204:ILE:HG12	2.07	0.55
47:BO:9:GLU:OE2	47:BO:18:LYS:NZ	2.28	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BZ:72:ARG:HH22	58:BZ:97:GLU:HG3	1.72	0.55
1:CA:147:G:H1	1:CA:175:C:H42	1.55	0.55
3:CC:193:TYR:HD1	3:CC:193:TYR:O	1.89	0.55
5:CE:63:ARG:HA	5:CE:66:MET:HE2	1.89	0.55
5:CE:106:PRO:O	5:CE:110:LEU:HG	2.06	0.55
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.88	0.55
9:CI:49:PRO:HA	9:CI:95:LYS:HZ2	1.70	0.55
11:CK:108:ILE:HB	18:CR:88:LYS:H	1.71	0.55
26:D1:33:LYS:HD3	35:DA:2395:C:O2'	2.06	0.55
35:DA:143(A):C:H4'	56:DX:36:LYS:HE3	1.89	0.55
35:DA:252:G:OP2	48:DP:50:ARG:NH2	2.40	0.55
36:DB:71:C:H2'	36:DB:72:G:H8	1.71	0.55
41:DG:11:TYR:HA	41:DG:15:VAL:CG1	2.37	0.55
41:DG:38:VAL:HG22	41:DG:93:THR:HG23	1.88	0.55
43:DI:123:LEU:HA	43:DI:142:VAL:CG2	2.37	0.55
46:DN:13:TRP:O	46:DN:135:PRO:HD2	2.07	0.55
47:DO:104:ARG:NE	52:DT:33:LYS:HD2	2.21	0.55
48:DP:84:ASN:O	48:DP:87:ASP:HB2	2.07	0.55
49:DQ:4:PRO:HA	49:DQ:93:TYR:CE1	2.41	0.55
50:DR:116:LEU:O	50:DR:117:VAL:HG22	2.07	0.55
52:DT:129:ARG:NH1	52:DT:131:ALA:HB3	2.22	0.55
1:AA:551:U:H5"	1:AA:552:U:OP2	2.07	0.54
1:AA:974:A:N7	14:AN:31:ARG:NH1	2.54	0.54
1:AA:1063:C:H5"	1:AA:1064:G:H2'	1.88	0.54
1:AA:1344:C:H4'	9:AI:120:ARG:HB3	1.88	0.54
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.07	0.54
4:AD:92:VAL:O	4:AD:96:LEU:N	2.28	0.54
12:AL:37:CYS:SG	12:AL:81:SER:HB2	2.47	0.54
13:AM:11:ARG:O	13:AM:13:LYS:HG2	2.07	0.54
14:AN:22:THR:OG1	14:AN:33:VAL:HG11	2.07	0.54
15:AO:33:THR:O	15:AO:36:ILE:N	2.40	0.54
19:AS:16:LEU:O	19:AS:20:LEU:N	2.39	0.54
26:B1:69:LYS:HE3	35:BA:372:G:OP2	2.06	0.54
27:B2:28:LYS:HD2	27:B2:32:LEU:HD21	1.88	0.54
33:B8:39:LYS:O	33:B8:43:GLN:HG3	2.07	0.54
35:BA:103:A:H2'	35:BA:104:U:N1	2.23	0.54
35:BA:249:C:OP2	35:BA:2394:C:O2'	2.23	0.54
35:BA:1103:A:H3'	35:BA:1104:C:C6	2.42	0.54
35:BA:1420:U:O2'	35:BA:1421:G:OP1	2.23	0.54
35:BA:2291:U:H2'	35:BA:2292:C:C6	2.43	0.54
35:BA:2376:A:C2	35:BA:2377:A:H1'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2747:G:O2'	35:BA:2748:A:O4'	2.22	0.54
38:BD:77:ALA:HB2	38:BD:97:TYR:CD1	2.42	0.54
40:BF:29:ASN:HB2	40:BF:112:MET:HE2	1.87	0.54
53:BU:12:ARG:HB2	53:BU:13:LYS:HD3	1.89	0.54
54:BV:72:VAL:CG2	54:BV:88:ARG:HB2	2.37	0.54
55:BW:59:VAL:HG22	55:BW:64:MET:H	1.72	0.54
58:BZ:102:LEU:HD21	58:BZ:124:ILE:HD11	1.89	0.54
1:CA:275:G:O2'	17:CQ:15:MET:HE3	2.07	0.54
1:CA:351:G:H8	1:CA:351:G:OP2	1.90	0.54
1:CA:1120:G:H2'	1:CA:1121:U:C6	2.42	0.54
12:CL:38:THR:HG21	12:CL:65:GLU:OE1	2.07	0.54
35:DA:1003:G:N2	35:DA:1153:C:C2	2.75	0.54
35:DA:1331:A:O2'	35:DA:1332:G:H8	1.90	0.54
35:DA:2564:A:OP1	35:DA:2648:C:H4'	2.07	0.54
35:DA:2718:G:O2'	35:DA:2847:U:OP1	2.25	0.54
36:DB:15:A:H1'	36:DB:110:G:C8	2.42	0.54
39:DE:133:LYS:HB2	39:DE:134:ILE:HG22	1.89	0.54
40:DF:132:VAL:C	40:DF:134:GLY:N	2.65	0.54
40:DF:178:PRO:HB3	40:DF:198:ALA:HA	1.88	0.54
41:DG:37:VAL:HG21	41:DG:103:LEU:HD11	1.88	0.54
41:DG:166:ASP:O	41:DG:170:ARG:N	2.40	0.54
42:DH:44:VAL:C	42:DH:46:GLU:H	2.14	0.54
50:DR:28:LEU:HD13	50:DR:116:LEU:HD21	1.89	0.54
56:DX:21:PHE:HE1	56:DX:26:TYR:CG	2.25	0.54
1:AA:392:G:H2'	1:AA:393:A:H8	1.72	0.54
1:AA:458:C:N4	1:AA:473:G:H1	1.99	0.54
1:AA:930:C:H2'	1:AA:931:C:O4'	2.06	0.54
1:AA:1208:C:H2'	1:AA:1209:C:C6	2.42	0.54
7:AG:50:ILE:HD13	7:AG:125:MET:HE2	1.89	0.54
10:AJ:4:ILE:HD12	10:AJ:74:ILE:C	2.32	0.54
19:AS:49:ILE:HG22	19:AS:58:VAL:O	2.06	0.54
26:B1:46:LEU:HD11	26:B1:48:LYS:HG2	1.88	0.54
35:BA:555:U:O2'	35:BA:556:G:N7	2.39	0.54
35:BA:2009:G:C2'	35:BA:2010:G:H5'	2.37	0.54
38:BD:30:GLU:HA	38:BD:83:GLU:OE1	2.07	0.54
40:BF:25:PRO:HB3	40:BF:119:ARG:CZ	2.37	0.54
42:BH:12:PRO:HG2	42:BH:49:VAL:HA	1.89	0.54
50:BR:7:GLY:C	50:BR:8:ARG:NH1	2.66	0.54
51:BS:64:GLU:HB2	51:BS:67:ARG:HB2	1.89	0.54
55:BW:18:ARG:NH2	55:BW:22:ASP:OD2	2.41	0.54
1:CA:520:A:H61	1:CA:529:G:H1'	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:728:A:H2'	1:CA:729:A:C8	2.42	0.54
1:CA:926:G:H3'	1:CA:1505:G:H21	1.71	0.54
1:CA:1231:G:H5'	9:CI:128:ARG:HD3	1.90	0.54
1:CA:1235:U:H2'	1:CA:1236:A:O4'	2.07	0.54
12:CL:48:PRO:C	12:CL:49:ASN:HD22	2.15	0.54
13:CM:74:VAL:O	13:CM:78:ILE:HG12	2.07	0.54
27:D2:34:GLU:HG2	27:D2:36:ARG:HB2	1.89	0.54
35:DA:455:C:N3	35:DA:472:A:H2'	2.22	0.54
35:DA:2115:G:N2	35:DA:2117:A:N7	2.56	0.54
39:DE:111:ARG:HD2	39:DE:160:TYR:CE2	2.42	0.54
40:DF:34:TRP:HH2	48:DP:16:ARG:HD3	1.72	0.54
46:DN:16:ILE:HG12	46:DN:140:VAL:HG13	1.87	0.54
46:DN:89:LYS:O	46:DN:93:THR:HG22	2.07	0.54
57:DY:52:SER:O	57:DY:54:LYS:N	2.40	0.54
58:DZ:19:ARG:NH1	58:DZ:82:ARG:HD2	2.22	0.54
1:AA:188:C:N3	1:AA:189:G:N1	2.54	0.54
1:AA:393:A:C2'	1:AA:394:G:H5'	2.36	0.54
1:AA:1148:U:O5'	9:AI:7:THR:HG21	2.07	0.54
8:AH:20:TYR:HD1	8:AH:65:TYR:CE2	2.25	0.54
13:AM:49:THR:OG1	13:AM:52:GLU:HB3	2.06	0.54
13:AM:86:CYS:HB2	13:AM:89:GLY:H	1.73	0.54
24:AX:12:A:H3'	24:AX:12:A:N3	2.22	0.54
26:B1:20:ARG:NH1	26:B1:39:LYS:HA	2.18	0.54
27:B2:26:ARG:HB3	56:BX:5:TYR:CD2	2.41	0.54
31:B6:27:LYS:CD	31:B6:31:PRO:HD2	2.37	0.54
31:B6:42:TRP:CZ2	35:BA:642:G:O3'	2.60	0.54
32:B7:34:ARG:HH11	32:B7:42:LEU:HA	1.72	0.54
35:BA:83:G:N1	35:BA:102:G:O2'	2.40	0.54
35:BA:460:A:H2'	35:BA:461:C:O4'	2.06	0.54
35:BA:2128:C:N4	35:BA:2160:G:H1	2.05	0.54
35:BA:2536:G:C6	35:BA:2537:U:C4	2.96	0.54
38:BD:137:PRO:O	38:BD:140:THR:HG23	2.07	0.54
38:BD:273:ARG:HH11	38:BD:274:ARG:HA	1.72	0.54
39:BE:111:ARG:HG2	50:BR:3:HIS:CE1	2.42	0.54
40:BF:37:VAL:O	40:BF:40:GLN:HB3	2.08	0.54
43:BI:56:LYS:O	43:BI:58:LEU:N	2.40	0.54
49:BQ:34:LEU:HB2	49:BQ:118:LEU:HD22	1.89	0.54
54:BV:73:SER:O	54:BV:75:PHE:CD2	2.60	0.54
55:BW:80:PRO:O	55:BW:100:THR:HG21	2.07	0.54
58:BZ:101:PRO:HA	58:BZ:123:ASP:HA	1.89	0.54
1:CA:33:A:H2'	1:CA:34:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:559:A:N3	1:CA:559:A:H2'	2.22	0.54
1:CA:1015:A:N3	1:CA:1218:C:O2'	2.36	0.54
2:CB:93:VAL:HG11	2:CB:97:TRP:HD1	1.72	0.54
3:CC:28:GLN:HG3	3:CC:31:HIS:HB3	1.90	0.54
8:CH:114:THR:HG23	8:CH:116:LYS:H	1.72	0.54
9:CI:11:LYS:H	9:CI:104:ARG:HH21	1.56	0.54
13:CM:30:ALA:C	13:CM:32:GLU:N	2.62	0.54
13:CM:81:LEU:HD13	13:CM:88:ARG:HB3	1.89	0.54
27:D2:17:SER:O	27:D2:17:SER:OG	2.24	0.54
35:DA:1106:G:H4'	35:DA:1107:G:OP1	2.05	0.54
35:DA:2287:A:O2'	35:DA:2288:A:H3'	2.08	0.54
40:DF:67:GLN:O	40:DF:67:GLN:CG	2.55	0.54
41:DG:76:SER:HB3	41:DG:83:ARG:HA	1.89	0.54
47:DO:5:GLN:O	47:DO:20:MET:HE2	2.07	0.54
47:DO:14:THR:HG22	47:DO:52:VAL:HG22	1.90	0.54
57:DY:10:GLY:CA	57:DY:27:VAL:HG13	2.37	0.54
58:DZ:80:ARG:HG2	58:DZ:82:ARG:NH1	2.23	0.54
2:AB:142:LEU:CD2	2:AB:142:LEU:HG	2.19	0.54
32:B7:34:ARG:CZ	32:B7:39:ARG:HG3	2.37	0.54
33:B8:59:LYS:HZ1	48:BP:49:ARG:HB2	1.73	0.54
35:BA:614(B):G:C2'	40:BF:44:ARG:NH2	2.70	0.54
35:BA:1047:G:C8	35:BA:1110:G:C6	2.96	0.54
35:BA:1336:A:H2'	35:BA:1337:G:C8	2.43	0.54
35:BA:1847:A:O2'	35:BA:1848:A:H5"	2.07	0.54
35:BA:2473:U:H5'	35:BA:2475:C:H41	1.71	0.54
35:BA:2483:C:C5'	35:BA:2484:G:OP2	2.55	0.54
40:BF:15:SER:HB2	40:BF:17:ARG:HH22	1.72	0.54
41:BG:109:VAL:O	41:BG:113:ARG:HG3	2.07	0.54
48:BP:7:ARG:C	48:BP:9:ASN:N	2.65	0.54
48:BP:130:PHE:HB3	48:BP:135:LEU:HD11	1.88	0.54
49:BQ:19:GLY:HA2	49:BQ:98:LYS:HE2	1.89	0.54
52:BT:93:ARG:HH21	52:BT:115:ARG:NH1	2.05	0.54
53:BU:27:LEU:C	53:BU:29:SER:N	2.66	0.54
54:BV:51:VAL:HG12	54:BV:54:GLY:HA2	1.89	0.54
57:BY:2:ARG:C	57:BY:4:LYS:H	2.16	0.54
1:CA:407:G:O4'	4:CD:119:GLN:NE2	2.41	0.54
1:CA:959:A:H62	19:CS:78:ARG:NH2	1.99	0.54
1:CA:963:G:H21	10:CJ:54:PHE:HE1	1.55	0.54
1:CA:1140:C:O2'	1:CA:1141:C:H5'	2.08	0.54
2:CB:54:THR:O	2:CB:58:ILE:HG12	2.07	0.54
2:CB:163:PHE:CD1	2:CB:185:ILE:HG13	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:25:ARG:O	4:CD:28:SER:HB2	2.07	0.54
4:CD:105:VAL:HG13	4:CD:110:PHE:HB2	1.89	0.54
5:CE:72:GLN:O	5:CE:75:THR:HG22	2.08	0.54
11:CK:19:ALA:HA	11:CK:32:ILE:HA	1.90	0.54
11:CK:91:ARG:O	11:CK:95:ILE:HG13	2.07	0.54
19:CS:72:GLY:C	19:CS:74:PHE:H	2.15	0.54
22:CV:23:C:H2'	22:CV:24:U:C6	2.42	0.54
23:CW:72:C:H2'	23:CW:73:A:O4'	2.06	0.54
27:D2:29:LYS:O	27:D2:32:LEU:N	2.40	0.54
33:D8:25:MET:HG2	48:DP:64:LYS:HB2	1.89	0.54
35:DA:1433:U:H6	35:DA:1433:U:H5"	1.71	0.54
35:DA:1827:C:OP2	38:DD:222:ARG:NH1	2.40	0.54
35:DA:2252:G:H2'	35:DA:2253:G:O4'	2.08	0.54
39:DE:76:ARG:HG2	39:DE:195:LEU:HD22	1.88	0.54
49:DQ:37:LEU:HB2	49:DQ:128:LYS:CB	2.33	0.54
52:DT:28:VAL:HG12	52:DT:86:ILE:HG13	1.88	0.54
54:DV:75:PHE:CD2	54:DV:76:LYS:N	2.76	0.54
1:AA:79:G:HO2'	1:AA:80:G:P	2.31	0.54
1:AA:159:G:H1'	1:AA:160:A:C8	2.43	0.54
1:AA:271:C:H2'	1:AA:272:C:C6	2.43	0.54
1:AA:953:G:C6	1:AA:954:G:C5	2.95	0.54
1:AA:1128:C:H2'	1:AA:1129:C:C4'	2.38	0.54
26:B1:13:ILE:CG1	26:B1:14:VAL:N	2.70	0.54
31:B6:8:LYS:CG	31:B6:29:ASN:HD21	2.19	0.54
33:B8:34:TRP:HZ2	33:B8:36:LYS:HD2	1.73	0.54
33:B8:48:PHE:HZ	35:BA:650:C:C5'	2.20	0.54
35:BA:581:C:H5"	53:BU:32:PHE:HD1	1.73	0.54
35:BA:2094:G:OP1	43:BI:22:LYS:HD3	2.06	0.54
35:BA:2689:U:H5"	35:BA:2690:C:H5'	1.88	0.54
38:BD:138:VAL:CG1	38:BD:168:ARG:HE	2.20	0.54
43:BI:68:LEU:O	43:BI:70:GLU:N	2.40	0.54
43:BI:102:SER:C	43:BI:104:GLN:H	2.15	0.54
47:BO:22:ILE:HG12	47:BO:42:SER:N	2.22	0.54
52:BT:29:ARG:HG2	52:BT:84:GLN:HG3	1.89	0.54
52:BT:77:PRO:HG2	52:BT:81:PRO:HG3	1.90	0.54
58:BZ:40:ASP:OD2	58:BZ:42:VAL:HG22	2.06	0.54
1:CA:186:C:H2'	1:CA:187:C:C6	2.41	0.54
1:CA:254:G:H5"	17:CQ:69:LYS:CE	2.38	0.54
1:CA:376:G:OP1	16:CP:5:ARG:HB2	2.07	0.54
2:CB:7:VAL:N	2:CB:8:LYS:HD3	2.23	0.54
2:CB:73:THR:HB	2:CB:96:ARG:HH22	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:188:ALA:HB3	2:CB:202:PRO:HA	1.90	0.54
3:CC:70:VAL:HG12	3:CC:72:LYS:N	2.09	0.54
4:CD:9:CYS:SG	4:CD:22:LYS:HD2	2.48	0.54
13:CM:70:LEU:O	13:CM:74:VAL:HG23	2.08	0.54
26:D1:37:ILE:HG21	35:DA:2080:G:O5'	2.07	0.54
35:DA:171:G:O2'	35:DA:172:C:OP1	2.25	0.54
35:DA:454:A:H4'	35:DA:455:C:OP2	2.05	0.54
35:DA:774:A:H2	35:DA:787:U:O2'	1.90	0.54
35:DA:2024:G:H2'	35:DA:2025:C:C6	2.43	0.54
35:DA:2190:G:H2'	35:DA:2191:G:C8	2.37	0.54
35:DA:2293:C:H5"	51:DS:93:LYS:HD2	1.88	0.54
38:DD:44:ASN:HB2	38:DD:48:ARG:C	2.32	0.54
38:DD:267:SER:C	38:DD:269:PHE:N	2.66	0.54
39:DE:75:VAL:O	39:DE:77:ILE:N	2.30	0.54
40:DF:25:PRO:CG	40:DF:119:ARG:HB2	2.36	0.54
42:DH:70:THR:HG22	42:DH:71:LEU:H	1.71	0.54
57:DY:6:HIS:HB2	57:DY:7:VAL:HG23	1.89	0.54
1:AA:130:A:O2'	1:AA:131:C:O5'	2.17	0.54
1:AA:964:A:O3'	10:AJ:55:LYS:NZ	2.36	0.54
11:AK:91:ARG:HG3	11:AK:92:GLU:N	2.23	0.54
12:AL:110:VAL:HG12	12:AL:120:TYR:O	2.08	0.54
15:AO:71:GLN:HB2	15:AO:78:TYR:CE1	2.43	0.54
21:AU:6:ARG:C	21:AU:8:THR:H	2.12	0.54
28:B3:26:LEU:HD21	28:B3:46:ASN:HB2	1.88	0.54
30:B5:3:LYS:HD3	30:B5:3:LYS:C	2.33	0.54
35:BA:35:G:H1'	35:BA:454:A:N3	2.23	0.54
35:BA:247:G:H4'	35:BA:386:G:C5	2.42	0.54
35:BA:307:G:H21	35:BA:330:A:H62	1.56	0.54
35:BA:529:A:H62	35:BA:2041:U:H3	1.55	0.54
35:BA:1258:C:H5"	35:BA:1258:C:C6	2.43	0.54
35:BA:1405:U:H2'	35:BA:1406:U:C6	2.43	0.54
35:BA:2612:C:H2'	35:BA:2613:U:C5'	2.38	0.54
37:BC:51:PRO:HB3	37:BC:204:ALA:H	1.72	0.54
40:BF:21:ALA:C	40:BF:23:ASP:H	2.14	0.54
42:BH:169:VAL:HG22	42:BH:170:ARG:H	1.73	0.54
1:CA:813:U:H5"	1:CA:903:G:O3'	2.08	0.54
1:CA:1512:U:H3	1:CA:1523:G:H1	1.55	0.54
2:CB:97:TRP:HH2	2:CB:176:GLU:OE2	1.90	0.54
13:CM:12:ASN:H	13:CM:45:VAL:HB	1.72	0.54
14:CN:13:THR:N	14:CN:14:PRO:HD2	2.23	0.54
27:D2:23:LYS:HD2	56:DX:5:TYR:CZ	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1140:C:OP2	46:DN:66:LYS:NZ	2.37	0.54
35:DA:1532:C:O2'	35:DA:1533:G:N2	2.41	0.54
35:DA:2287:A:N6	35:DA:2344:U:H3	2.06	0.54
42:DH:89:ILE:C	42:DH:89:ILE:HD12	2.33	0.54
43:DI:65:ALA:HB1	43:DI:132:PRO:HG2	1.90	0.54
46:DN:96:GLU:HB2	46:DN:122:VAL:HG12	1.89	0.54
48:DP:75:ILE:HD12	48:DP:77:ARG:HH22	1.70	0.54
50:DR:2:ARG:CZ	50:DR:5:LYS:HZ2	2.21	0.54
53:DU:109:LEU:HA	53:DU:112:ARG:HB2	1.90	0.54
1:AA:280:C:H5	17:AQ:39:SER:N	2.04	0.54
1:AA:374:A:OP1	1:AA:452:A:N6	2.33	0.54
1:AA:562:C:H1'	12:AL:15:ARG:HG3	1.89	0.54
1:AA:951:G:N1	1:AA:1231:G:C6	2.76	0.54
1:AA:1346:A:C4	7:AG:10:ARG:NH1	2.75	0.54
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.07	0.54
4:AD:150:GLU:OE2	4:AD:150:GLU:HA	2.04	0.54
4:AD:159:ARG:HA	4:AD:162:LEU:HD23	1.89	0.54
12:AL:32:PHE:HE1	12:AL:86:ARG:HG3	1.71	0.54
15:AO:70:LEU:HD11	15:AO:77:ARG:HG2	1.89	0.54
35:BA:81:G:H2'	35:BA:81:G:N3	2.22	0.54
35:BA:363:G:C8	35:BA:363(A):A:C2	2.95	0.54
35:BA:442:G:N2	40:BF:48:THR:HB	2.22	0.54
35:BA:678:C:H2'	35:BA:679:C:C6	2.43	0.54
35:BA:1097:U:H2'	35:BA:1098:A:H8	1.72	0.54
43:BI:79:ILE:O	43:BI:142:VAL:HA	2.08	0.54
51:BS:77:ALA:O	51:BS:80:LEU:N	2.38	0.54
53:BU:88:ILE:C	53:BU:90:VAL:H	2.15	0.54
56:BX:37:THR:HG22	56:BX:39:ILE:HB	1.89	0.54
1:CA:88:A:H5'	1:CA:90:U:C2	2.42	0.54
1:CA:328:C:H2'	1:CA:328:C:O2	2.07	0.54
1:CA:584:G:H5'	17:CQ:91:ARG:HH12	1.72	0.54
1:CA:892:A:H2'	1:CA:893:C:C6	2.43	0.54
1:CA:1117:G:O3'	9:CI:104:ARG:HG2	2.08	0.54
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.43	0.54
2:CB:103:THR:OG1	2:CB:176:GLU:HB3	2.07	0.54
3:CC:6:HIS:HD2	3:CC:8:ILE:H	1.55	0.54
12:CL:59:ARG:CZ	12:CL:63:GLY:HA2	2.37	0.54
13:CM:47:ASP:OD1	13:CM:47:ASP:N	2.40	0.54
35:DA:579:G:H2'	35:DA:580:C:H6	1.72	0.54
35:DA:687:C:H42	35:DA:787:U:H4'	1.73	0.54
35:DA:690:G:H2'	35:DA:691:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1171:G:H1	35:DA:1178:C:H42	1.56	0.54
35:DA:1257:C:H4'	40:DF:83:PHE:CE1	2.43	0.54
35:DA:2107:C:H42	35:DA:2182:G:H1	1.55	0.54
35:DA:2244:U:H2'	35:DA:2245:U:O4'	2.08	0.54
35:DA:2266:A:H4'	35:DA:2267:A:C4	2.43	0.54
36:DB:102:A:H2'	36:DB:103:G:O4'	2.07	0.54
42:DH:9:ILE:HG12	42:DH:69:ARG:HH21	1.69	0.54
52:DT:74:ARG:HB3	52:DT:76:PHE:CZ	2.42	0.54
57:DY:7:VAL:CG1	57:DY:8:LYS:HE3	2.30	0.54
1:AA:643:C:OP1	8:AH:30:ARG:NH2	2.39	0.54
1:AA:1224:G:H1	1:AA:1363:C:H42	1.54	0.54
4:AD:8:VAL:O	4:AD:10:ARG:N	2.40	0.54
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HB3	1.90	0.54
18:AR:61:LYS:O	18:AR:65:ILE:HG12	2.08	0.54
25:B0:72:ARG:HB2	25:B0:75:LEU:HB2	1.89	0.54
35:BA:228:A:H2'	35:BA:230:U:O4'	2.07	0.54
35:BA:328:U:H4'	57:BY:68:HIS:ND1	2.23	0.54
35:BA:892:G:H2'	35:BA:893:C:C5'	2.38	0.54
35:BA:1277:G:O2'	50:BR:24:GLN:OE1	2.20	0.54
35:BA:2684:U:OP1	52:BT:60:THR:OG1	2.24	0.54
39:BE:8:LYS:HD2	39:BE:188:VAL:HG13	1.90	0.54
46:BN:20:GLY:CA	46:BN:61:ARG:HE	2.20	0.54
47:BO:22:ILE:HG12	47:BO:41:ALA:HA	1.90	0.54
48:BP:114:ILE:HD11	48:BP:130:PHE:CD2	2.43	0.54
48:BP:132:LYS:O	48:BP:135:LEU:N	2.34	0.54
49:BQ:31:ASP:N	49:BQ:106:VAL:O	2.37	0.54
1:CA:9:G:C6	1:CA:26:A:N6	2.76	0.54
1:CA:176:C:OP1	20:CT:29:LYS:NZ	2.40	0.54
1:CA:371:G:O2'	1:CA:373:A:N7	2.39	0.54
1:CA:686:U:O4	1:CA:703:G:H1'	2.06	0.54
1:CA:918:A:H2'	1:CA:919:A:C8	2.43	0.54
10:CJ:62:HIS:HB3	14:CN:59:ALA:HB3	1.89	0.54
12:CL:21:LYS:HD3	12:CL:21:LYS:H	1.73	0.54
26:D1:74:VAL:C	26:D1:76:ARG:H	2.16	0.54
31:D6:41:PRO:HD2	31:D6:45:LYS:HA	1.89	0.54
35:DA:1190:G:H5"	35:DA:1190:G:C8	2.43	0.54
35:DA:1669:A:H2'	35:DA:1670:C:H5'	1.90	0.54
35:DA:2029:G:H2'	35:DA:2031:A:OP1	2.08	0.54
37:DC:124:GLY:O	37:DC:126:LYS:N	2.40	0.54
53:DU:93:LYS:HA	53:DU:96:ALA:HB3	1.89	0.54
1:AA:11:G:O2'	1:AA:506:G:N2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:515:G:H2'	1:AA:516:U:O4'	2.07	0.54
1:AA:792:A:H4'	1:AA:793:U:O5'	2.08	0.54
8:AH:4:ASP:OD1	8:AH:7:ALA:HB3	2.06	0.54
16:AP:28:ARG:HG2	16:AP:29:ASP:OD1	2.07	0.54
19:AS:72:GLY:HA2	19:AS:75:ALA:HB3	1.89	0.54
26:B1:17:SER:N	26:B1:44:PRO:HG3	2.23	0.54
27:B2:53:LEU:HD13	27:B2:54:LYS:HD2	1.90	0.54
35:BA:859:G:O2'	35:BA:916:G:O6	2.22	0.54
35:BA:2012:G:H4'	55:BW:96:ILE:CD1	2.33	0.54
35:BA:2124:G:H21	37:BC:40:THR:HG1	1.55	0.54
35:BA:2298:A:H2'	35:BA:2299:G:O4'	2.07	0.54
40:BF:42:ALA:C	40:BF:44:ARG:N	2.66	0.54
50:BR:86:ARG:HG2	50:BR:117:VAL:HG21	1.90	0.54
1:CA:406:G:H2'	1:CA:407:G:H8	1.73	0.54
1:CA:448:A:OP2	1:CA:485:G:N2	2.34	0.54
2:CB:195:ASP:O	8:CH:68:ARG:NH2	2.33	0.54
33:D8:31:HIS:HB3	35:DA:2420:C:H41	1.73	0.54
35:DA:363(B):G:H2'	35:DA:363(C):G:C8	2.43	0.54
35:DA:625:G:N7	48:DP:107:LYS:NZ	2.55	0.54
35:DA:1533:G:N3	35:DA:1533:G:OP2	2.41	0.54
35:DA:1916:A:C8	35:DA:1916:A:H5"	2.42	0.54
37:DC:72:VAL:O	37:DC:74:VAL:N	2.40	0.54
53:DU:93:LYS:HD3	53:DU:93:LYS:H	1.72	0.54
1:AA:8:A:N6	4:AD:206:PHE:H	2.05	0.54
1:AA:78:G:O2'	1:AA:79:G:OP2	2.24	0.54
1:AA:262:A:C5'	20:AT:74:LYS:HD3	2.36	0.54
1:AA:782:A:C6	1:AA:801:U:C2	2.96	0.54
1:AA:791:G:C6	1:AA:792:A:N7	2.75	0.54
1:AA:1124:G:N2	1:AA:1126:U:OP1	2.39	0.54
1:AA:1148:U:H3'	1:AA:1149:C:C6	2.43	0.54
3:AC:47:LEU:HD12	3:AC:83:ARG:HH21	1.74	0.54
11:AK:48:ILE:HD12	11:AK:48:ILE:H	1.72	0.54
17:AQ:29:HIS:O	17:AQ:33:GLY:N	2.37	0.54
17:AQ:59:ILE:HG21	17:AQ:71:PHE:HB3	1.90	0.54
23:AY:39:U:O2	23:AY:39:U:H2'	2.07	0.54
25:B0:53:MET:HG3	25:B0:54:GLY:H	1.73	0.54
25:B0:66:VAL:HG12	25:B0:67:VAL:H	1.72	0.54
26:B1:85:LEU:HD13	26:B1:87:PRO:HB3	1.90	0.54
29:B4:6:HIS:CB	41:BG:67:LYS:HE3	2.38	0.54
30:B5:3:LYS:HD3	30:B5:4:HIS:N	2.22	0.54
33:B8:8:LYS:NZ	35:BA:243:U:OP2	2.28	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:35:G:O2'	35:BA:454:A:O4'	2.19	0.54
35:BA:134:C:H42	35:BA:144:C:N4	2.05	0.54
35:BA:586:A:N1	35:BA:809:G:O2'	2.36	0.54
35:BA:1421:G:C2	35:BA:1422:G:C8	2.95	0.54
35:BA:2121:G:H2'	35:BA:2122:U:C6	2.43	0.54
35:BA:2364:C:H2'	35:BA:2365:G:O4'	2.08	0.54
35:BA:2661:G:C8	35:BA:2662:A:C6	2.96	0.54
41:BG:25:TYR:CZ	41:BG:32:PRO:HD3	2.43	0.54
46:BN:36:GLY:O	46:BN:38:HIS:N	2.40	0.54
48:BP:7:ARG:HA	48:BP:7:ARG:HE	1.72	0.54
50:BR:56:LYS:HE2	50:BR:91:GLN:HA	1.90	0.54
55:BW:84:ARG:NH2	55:BW:85:VAL:HG22	2.22	0.54
58:BZ:5:LEU:O	58:BZ:59:LEU:HA	2.08	0.54
58:BZ:128:VAL:CG2	58:BZ:132:ASN:HB2	2.38	0.54
1:CA:69:G:N1	1:CA:70:G:O6	2.41	0.54
1:CA:129(A):G:N3	1:CA:189(F):U:H5'	2.23	0.54
1:CA:880:C:OP1	12:CL:8:ASN:ND2	2.41	0.54
1:CA:924:C:H5'	1:CA:1399:C:OP2	2.08	0.54
2:CB:231:GLU:HB3	2:CB:232:PRO:CD	2.35	0.54
7:CG:95:ARG:O	7:CG:99:LEU:HD22	2.08	0.54
18:CR:40:LEU:HA	18:CR:43:PHE:HD2	1.73	0.54
25:D0:40:GLN:OE1	25:D0:44:ARG:N	2.41	0.54
26:D1:32:LYS:HD3	35:DA:2396:G:O2'	2.08	0.54
26:D1:40:ARG:CG	35:DA:2081:C:H5"	2.35	0.54
31:D6:8:LYS:HD3	31:D6:25:LYS:HE2	1.90	0.54
31:D6:12:GLU:OE2	31:D6:52:VAL:C	2.50	0.54
34:D9:1:MET:HE1	34:D9:31:LYS:O	2.07	0.54
35:DA:24:G:O2'	55:DW:78:GLU:O	2.26	0.54
35:DA:1257:C:O2'	40:DF:83:PHE:O	2.25	0.54
35:DA:1427:A:H4'	35:DA:1428:C:O5'	2.08	0.54
35:DA:1916:A:H5'	35:DA:1917:U:OP2	2.07	0.54
35:DA:2682:U:C6	39:DE:11:MET:HE2	2.43	0.54
39:DE:61:ARG:H	39:DE:62:PRO:CD	2.19	0.54
41:DG:55:LYS:NZ	41:DG:148:MET:HB3	2.23	0.54
46:DN:1:MET:HA	53:DU:95:LEU:HD11	1.89	0.54
52:DT:61:PHE:CE1	52:DT:76:PHE:HB2	2.43	0.54
56:DX:33:LYS:O	56:DX:34:ALA:C	2.49	0.54
1:AA:159:G:H2'	1:AA:344:A:C5	2.42	0.53
1:AA:426:G:OP1	4:AD:38:TYR:OH	2.21	0.53
1:AA:1429:C:H2'	1:AA:1430:C:H6	1.73	0.53
4:AD:72:GLU:O	4:AD:76:ARG:N	2.36	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:100:VAL:HA	5:AE:118:ILE:HG22	1.91	0.53
28:B3:5:LYS:O	28:B3:56:VAL:HA	2.07	0.53
33:B8:33:ASN:HD21	33:B8:41:ILE:HD12	1.72	0.53
35:BA:252:G:O2'	35:BA:253:C:H5'	2.08	0.53
35:BA:719:C:O2'	35:BA:720:C:H5'	2.07	0.53
35:BA:827:U:H2'	35:BA:2430:A:H2	1.73	0.53
35:BA:1818:U:O2'	38:BD:155:LEU:HA	2.07	0.53
50:BR:104:ARG:HG3	50:BR:109:ALA:HB3	1.91	0.53
51:BS:97:ARG:N	51:BS:97:ARG:HD3	2.22	0.53
56:BX:57:LEU:O	56:BX:75:ASP:HA	2.07	0.53
58:BZ:94:GLU:O	58:BZ:130:PRO:HD3	2.08	0.53
1:CA:105:G:H2'	1:CA:106:C:C6	2.44	0.53
1:CA:509:A:H3'	1:CA:509:A:C8	2.43	0.53
1:CA:1306:A:H61	1:CA:1331:G:H1'	1.73	0.53
4:CD:128:VAL:HG22	4:CD:133:VAL:HG21	1.90	0.53
7:CG:89:MET:HE1	7:CG:155:ARG:HE	1.73	0.53
8:CH:9:MET:O	8:CH:12:ARG:N	2.41	0.53
10:CJ:45:ARG:HB2	10:CJ:45:ARG:NH1	2.23	0.53
25:D0:41:ARG:HH11	35:DA:2330:G:H4'	1.72	0.53
26:D1:21:ARG:HB2	26:D1:40:ARG:HH11	1.72	0.53
35:DA:1329:U:H5"	35:DA:1330:C:C5	2.42	0.53
35:DA:1386:C:H2'	35:DA:1387:C:H6	1.72	0.53
35:DA:1835:G:H2'	35:DA:1835:G:N3	2.22	0.53
42:DH:155:SER:HB3	42:DH:158:HIS:O	2.08	0.53
47:DO:11:ALA:O	47:DO:98:VAL:HA	2.08	0.53
49:DQ:22:LYS:NZ	49:DQ:101:ARG:HD3	2.23	0.53
56:DX:44:GLU:HB3	56:DX:51:VAL:HG23	1.89	0.53
1:AA:575:G:O2'	1:AA:821:G:H5'	2.08	0.53
1:AA:1030(E):A:O2'	1:AA:1032:G:N2	2.40	0.53
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.43	0.53
1:AA:1190:G:H3'	3:AC:3:ASN:OD1	2.08	0.53
2:AB:74:LYS:O	2:AB:76:GLN:N	2.41	0.53
2:AB:74:LYS:CE	2:AB:206:ASP:HA	2.38	0.53
3:AC:144:SER:O	3:AC:144:SER:OG	2.22	0.53
4:AD:9:CYS:CB	4:AD:32:ALA:HB2	2.23	0.53
12:AL:70:ILE:HG12	12:AL:100:ILE:HD12	1.91	0.53
13:AM:20:THR:C	13:AM:22:ILE:H	2.16	0.53
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.07	0.53
35:BA:8:A:H2'	35:BA:9:U:C5	2.44	0.53
35:BA:79:G:H1	35:BA:107:C:H42	1.55	0.53
35:BA:507:A:H5"	35:BA:508:G:H5'	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:614(B):G:N9	40:BF:44:ARG:NH2	2.46	0.53
35:BA:2376:A:N6	51:BS:89:ARG:CZ	2.71	0.53
35:BA:2790:A:H1'	35:BA:2893:G:N2	2.23	0.53
35:BA:2808:U:H5'	35:BA:2809:A:OP2	2.08	0.53
42:BH:85:LYS:HB3	42:BH:133:VAL:O	2.08	0.53
47:BO:68:GLU:CB	47:BO:78:ARG:HB2	2.37	0.53
53:BU:55:ARG:HH11	53:BU:55:ARG:HB3	1.73	0.53
53:BU:110:VAL:HG12	53:BU:114:LYS:NZ	2.23	0.53
54:BV:56:SER:O	54:BV:56:SER:OG	2.22	0.53
1:CA:6:G:O2'	1:CA:7:G:O5'	2.25	0.53
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.72	0.53
23:CW:23:A:H5"	23:CW:24:G:OP2	2.08	0.53
35:DA:922:U:H2'	35:DA:923:C:C6	2.43	0.53
35:DA:1266:G:O5'	55:DW:15:ARG:NH2	2.41	0.53
35:DA:1278:A:H61	35:DA:1292:U:H3	1.55	0.53
35:DA:2104:G:H8	35:DA:2186:G:H22	1.56	0.53
35:DA:2334:G:H1'	51:DS:18:ILE:HD11	1.90	0.53
35:DA:2415:G:H4'	48:DP:67:MET:N	2.16	0.53
35:DA:2422:A:H4'	35:DA:2423:U:OP1	2.08	0.53
35:DA:2693:A:H2'	35:DA:2694:G:H8	1.73	0.53
41:DG:139:LEU:HD11	41:DG:149:VAL:HB	1.89	0.53
42:DH:89:ILE:HG22	42:DH:162:ILE:HG22	1.90	0.53
42:DH:102:ALA:HA	42:DH:117:PRO:HD3	1.89	0.53
43:DI:5:LEU:CD1	43:DI:13:GLY:HA3	2.38	0.53
46:DN:76:SER:OG	46:DN:78:TYR:CE1	2.61	0.53
50:DR:18:LEU:HD11	50:DR:22:ARG:CZ	2.38	0.53
53:DU:61:TRP:CH2	53:DU:94:ASN:HB3	2.42	0.53
1:AA:616:G:C2	1:AA:617:G:C8	2.97	0.53
1:AA:765:G:N1	1:AA:812:C:O2'	2.39	0.53
1:AA:1466:C:H2'	1:AA:1467:G:O4'	2.08	0.53
2:AB:9:GLU:HG3	2:AB:10:LEU:N	2.22	0.53
2:AB:164:VAL:O	2:AB:186:ALA:HB1	2.09	0.53
4:AD:18:LYS:HG3	4:AD:31:CYS:CB	2.38	0.53
5:AE:59:GLY:O	5:AE:63:ARG:HG2	2.08	0.53
8:AH:94:TYR:CE1	8:AH:132:GLU:HB2	2.44	0.53
9:AI:28:VAL:HA	9:AI:63:ILE:O	2.09	0.53
11:AK:89:ALA:O	11:AK:91:ARG:N	2.41	0.53
12:AL:27:LEU:HD11	12:AL:60:LEU:CB	2.38	0.53
31:B6:8:LYS:CB	31:B6:29:ASN:HD21	2.21	0.53
35:BA:26:G:H1'	35:BA:515:A:H61	1.73	0.53
35:BA:567:A:H2'	35:BA:568:U:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1167:U:H3	35:BA:1182:A:N6	2.05	0.53
35:BA:1827:C:OP2	38:BD:222:ARG:HD3	2.09	0.53
38:BD:228:PRO:CD	38:BD:235:GLY:HA2	2.38	0.53
43:BI:77:LEU:HD21	43:BI:101:LEU:CD1	2.38	0.53
48:BP:95:VAL:CG1	48:BP:100:LEU:HD21	2.37	0.53
52:BT:102:ILE:HB	52:BT:110:ILE:HG13	1.90	0.53
54:BV:52:VAL:O	54:BV:54:GLY:N	2.42	0.53
1:CA:14:U:N3	1:CA:17:U:OP2	2.32	0.53
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.44	0.53
1:CA:1447:A:N3	1:CA:1447:A:H2'	2.23	0.53
2:CB:92:TYR:HE1	2:CB:94:ASN:HB2	1.73	0.53
3:CC:56:ASP:O	3:CC:57:ILE:HD12	2.09	0.53
10:CJ:26:ALA:HA	10:CJ:29:ARG:NH2	2.24	0.53
27:D2:46:GLN:OE1	27:D2:50:ILE:HG12	2.09	0.53
32:D7:10:ARG:HG3	35:DA:125:G:C6	2.43	0.53
35:DA:142:A:C8	35:DA:1408:C:H1'	2.43	0.53
35:DA:221:A:H4'	35:DA:222:A:O5'	2.08	0.53
35:DA:1276:A:O2'	50:DR:12:ARG:NH1	2.41	0.53
35:DA:2762:G:H5'	35:DA:2763:G:OP2	2.08	0.53
37:DC:22:ILE:HG22	37:DC:25:ALA:HB2	1.88	0.53
37:DC:44:HIS:CE1	37:DC:175:VAL:H	2.26	0.53
42:DH:22:GLY:HA2	42:DH:37:VAL:H	1.72	0.53
46:DN:77:GLY:C	46:DN:78:TYR:CD1	2.86	0.53
48:DP:27:HIS:NE2	48:DP:28:GLY:HA3	2.22	0.53
51:DS:56:LEU:HD23	51:DS:58:LEU:HD21	1.90	0.53
52:DT:45:PHE:HD2	52:DT:76:PHE:CZ	2.22	0.53
56:DX:84:ALA:HB3	56:DX:85:PRO:HD3	1.90	0.53
1:AA:458:C:C6	1:AA:460:G:C8	2.97	0.53
2:AB:82:ARG:HG3	2:AB:92:TYR:CE2	2.43	0.53
4:AD:12:CYS:SG	4:AD:31:CYS:SG	3.06	0.53
19:AS:36:ARG:HD3	19:AS:72:GLY:CA	2.37	0.53
35:BA:89:G:N2	35:BA:90:U:O4'	2.40	0.53
35:BA:485:C:N4	35:BA:495:G:H1	2.05	0.53
35:BA:631:A:H2'	35:BA:632:A:O4'	2.07	0.53
35:BA:1277:G:H5"	50:BR:40:LYS:HZ3	1.74	0.53
35:BA:2419:U:H2'	35:BA:2420:C:C6	2.43	0.53
37:BC:64:LEU:HB2	37:BC:162:GLU:CB	2.38	0.53
37:BC:66:HIS:HE2	37:BC:186:ALA:HB1	1.74	0.53
42:BH:156:ALA:C	42:BH:158:HIS:H	2.10	0.53
52:BT:11:GLU:O	52:BT:13:ARG:N	2.38	0.53
53:BU:49:HIS:CA	53:BU:52:ARG:HB2	2.33	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:102:GLU:HB3	54:BV:43:GLU:CG	2.39	0.53
58:BZ:54:HIS:HD2	58:BZ:101:PRO:HG2	1.74	0.53
1:CA:8:A:C6	4:CD:209:ARG:HB2	2.43	0.53
1:CA:36:C:O2'	12:CL:117:ARG:NH2	2.39	0.53
1:CA:59:A:H1'	1:CA:354:G:N2	2.23	0.53
1:CA:176:C:H1'	1:CA:1447:A:H61	1.73	0.53
1:CA:262:A:C6	1:CA:263:A:C6	2.96	0.53
1:CA:436:C:O2'	1:CA:437:U:P	2.66	0.53
1:CA:665:A:H1'	1:CA:733:A:O4'	2.09	0.53
1:CA:1321:C:H5'	1:CA:1322:C:H5"	1.90	0.53
6:CF:39:LYS:O	6:CF:40:VAL:HB	2.08	0.53
27:D2:55:ARG:O	27:D2:55:ARG:HD2	2.07	0.53
35:DA:722:A:C2	35:DA:723:G:C4	2.96	0.53
35:DA:1946:U:O2'	35:DA:1947:C:H5'	2.08	0.53
35:DA:2524:G:H8	35:DA:2524:G:H5'	1.72	0.53
36:DB:89:G:H2'	36:DB:90:A:N7	2.24	0.53
38:DD:145:VAL:HG12	38:DD:146:GLU:O	2.09	0.53
40:DF:51:THR:O	40:DF:93:LYS:NZ	2.41	0.53
43:DI:62:LYS:O	43:DI:66:GLU:HB2	2.08	0.53
48:DP:33:ARG:O	48:DP:35:HIS:N	2.41	0.53
56:DX:58:HIS:HA	56:DX:75:ASP:HA	1.89	0.53
1:AA:472:A:O2'	16:AP:81:ARG:HA	2.08	0.53
4:AD:30:LYS:HB2	4:AD:32:ALA:C	2.34	0.53
6:AF:97:PHE:HB2	18:AR:32:ARG:NH1	2.24	0.53
12:AL:27:LEU:HD23	12:AL:27:LEU:N	2.21	0.53
15:AO:4:THR:H	15:AO:7:GLU:HB2	1.74	0.53
22:AV:17:C:H3'	22:AV:18:U:H5"	1.91	0.53
32:B7:30:VAL:O	32:B7:34:ARG:HG3	2.08	0.53
35:BA:1146:C:H5'	35:BA:1147:C:OP2	2.08	0.53
35:BA:1448:G:H21	35:BA:1544:A:N6	2.06	0.53
35:BA:1787:A:O4'	35:BA:2589:A:H4'	2.09	0.53
35:BA:2343:C:HO2'	35:BA:2373:G:HO2'	1.52	0.53
43:BI:10:GLU:CD	43:BI:11:ASN:H	2.17	0.53
43:BI:123:LEU:HD22	43:BI:143:SER:HA	1.90	0.53
51:BS:21:THR:OG1	51:BS:22:GLY:N	2.41	0.53
54:BV:36:PRO:HD2	54:BV:60:GLU:N	2.23	0.53
1:CA:143:A:H2	1:CA:220:G:H1	1.55	0.53
2:CB:165:VAL:HA	2:CB:187:LEU:HD21	1.89	0.53
12:CL:59:ARG:HG2	12:CL:65:GLU:HG2	1.89	0.53
20:CT:89:ARG:HD2	20:CT:104:LEU:HD21	1.90	0.53
23:CW:6:G:H1'	23:CW:68:C:N4	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:634:C:H2'	35:DA:635:C:H6	1.74	0.53
35:DA:1575:C:H2'	35:DA:1576:U:O4'	2.08	0.53
35:DA:2692:C:OP1	35:DA:2871:C:H5'	2.09	0.53
38:DD:142:VAL:O	38:DD:163:ALA:N	2.36	0.53
38:DD:201:HIS:O	38:DD:204:ILE:HG13	2.08	0.53
46:DN:33:LEU:HD12	46:DN:38:HIS:ND1	2.24	0.53
51:DS:89:ARG:HG3	51:DS:92:TYR:O	2.08	0.53
54:DV:43:GLU:HA	54:DV:46:VAL:O	2.07	0.53
54:DV:67:GLY:O	54:DV:93:GLU:HG2	2.08	0.53
56:DX:54:VAL:CG1	56:DX:77:LYS:HG3	2.37	0.53
1:AA:9:G:H2'	1:AA:10:A:H8	1.73	0.53
1:AA:303:A:H2'	1:AA:304:U:O4'	2.09	0.53
1:AA:323:U:O3'	20:AT:22:ARG:HD3	2.09	0.53
1:AA:819:A:H4'	1:AA:820:U:OP2	2.09	0.53
1:AA:1233:G:OP2	9:AI:124:GLN:HG3	2.08	0.53
2:AB:12:GLU:O	2:AB:16:HIS:NE2	2.41	0.53
16:AP:21:VAL:HG11	16:AP:59:TRP:CG	2.44	0.53
35:BA:1021:A:H3'	35:BA:1021:A:C8	2.44	0.53
35:BA:1022:G:P	46:BN:69:GLN:HE22	2.32	0.53
35:BA:1213:A:H2'	35:BA:1214:A:C8	2.44	0.53
35:BA:1628:G:H1	35:BA:1638:C:H41	1.56	0.53
35:BA:2287:A:H2	35:BA:2346:A:N1	2.07	0.53
35:BA:2302:G:N1	35:BA:2303:G:C5	2.76	0.53
36:BB:45:A:H1'	41:BG:95:ARG:NH2	2.24	0.53
38:BD:145:VAL:HG11	38:BD:175:LEU:HD11	1.90	0.53
39:BE:174:ASP:O	39:BE:183:LEU:HB2	2.09	0.53
46:BN:43:THR:H	46:BN:48:MET:CE	2.21	0.53
46:BN:96:GLU:CD	46:BN:96:GLU:H	2.17	0.53
48:BP:33:ARG:HD3	48:BP:36:LYS:CE	2.38	0.53
50:BR:27:SER:OG	50:BR:29:LEU:HD12	2.09	0.53
52:BT:92:GLY:C	52:BT:94:ALA:N	2.67	0.53
57:BY:6:HIS:O	57:BY:8:LYS:N	2.39	0.53
58:BZ:128:VAL:HG11	58:BZ:134:PRO:HD2	1.90	0.53
1:CA:187:C:H2'	1:CA:188:C:C6	2.43	0.53
1:CA:854:G:H3'	1:CA:871:U:O4	2.08	0.53
2:CB:117:GLU:O	2:CB:121:LEU:HD12	2.08	0.53
9:CI:49:PRO:HA	9:CI:95:LYS:NZ	2.23	0.53
21:CU:23:PRO:HG2	21:CU:24:ARG:NH2	2.24	0.53
35:DA:1212:G:O2'	35:DA:1213:A:OP2	2.25	0.53
35:DA:1490:A:H2	38:DD:75:ILE:HD13	1.74	0.53
35:DA:1819:A:OP1	38:DD:156:ALA:HA	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2771:C:H2'	35:DA:2772:C:C6	2.44	0.53
39:DE:38:THR:HG22	39:DE:40:GLU:H	1.73	0.53
40:DF:3:GLU:OE1	40:DF:19:GLU:HB2	2.08	0.53
42:DH:44:VAL:C	42:DH:46:GLU:N	2.66	0.53
43:DI:3:VAL:HG23	43:DI:19:VAL:HG23	1.90	0.53
52:DT:12:SER:O	52:DT:15:VAL:HG13	2.08	0.53
53:DU:47:TYR:HA	53:DU:50:ARG:CZ	2.39	0.53
1:AA:790:A:H2'	1:AA:791:G:C8	2.43	0.53
1:AA:1289:A:N3	1:AA:1289:A:H2'	2.24	0.53
3:AC:29:TYR:OH	14:AN:54:PRO:HD2	2.09	0.53
8:AH:4:ASP:OD1	8:AH:7:ALA:N	2.42	0.53
14:AN:13:THR:C	14:AN:15:LYS:H	2.17	0.53
26:B1:50:ARG:HE	26:B1:61:ARG:HD2	1.72	0.53
35:BA:141:A:C8	35:BA:1408:C:O2'	2.52	0.53
35:BA:1109:C:H5	35:BA:1110:G:N3	2.06	0.53
35:BA:2126:A:H1'	35:BA:2127:G:OP2	2.08	0.53
38:BD:83:GLU:HB2	38:BD:92:ILE:CD1	2.38	0.53
40:BF:65:TRP:HZ3	40:BF:75:HIS:HD1	1.53	0.53
49:BQ:121:ALA:HA	49:BQ:125:LEU:HD12	1.90	0.53
50:BR:51:LEU:HD13	50:BR:66:VAL:HG13	1.91	0.53
55:BW:28:SER:HA	55:BW:70:TYR:HA	1.90	0.53
56:BX:63:LYS:O	56:BX:68:ARG:HA	2.09	0.53
56:BX:65:ARG:NE	56:BX:65:ARG:HA	2.24	0.53
58:BZ:39:VAL:C	58:BZ:44:PHE:CE2	2.87	0.53
1:CA:202:U:H4'	1:CA:203:U:OP2	2.09	0.53
1:CA:1258:G:OP2	1:CA:1258:G:C8	2.59	0.53
2:CB:80:ILE:H	2:CB:80:ILE:HD12	1.73	0.53
2:CB:231:GLU:CB	2:CB:232:PRO:HD3	2.37	0.53
3:CC:58:GLU:O	3:CC:64:VAL:HA	2.09	0.53
5:CE:139:LEU:HA	5:CE:142:LEU:HD12	1.90	0.53
8:CH:17:THR:HG22	8:CH:63:LEU:HG	1.89	0.53
31:D6:9:LEU:HD11	31:D6:26:ASN:OD1	2.09	0.53
35:DA:495:G:O2'	55:DW:62:HIS:HE1	1.92	0.53
35:DA:580:C:H2'	35:DA:581:C:C6	2.44	0.53
35:DA:1533:G:OP2	35:DA:1533:G:C4	2.61	0.53
36:DB:89:G:H2'	36:DB:90:A:H8	1.71	0.53
48:DP:18:ARG:C	48:DP:20:GLY:N	2.66	0.53
50:DR:2:ARG:CZ	50:DR:5:LYS:NZ	2.71	0.53
52:DT:66:VAL:HA	52:DT:71:GLY:HA2	1.91	0.53
53:DU:95:LEU:C	53:DU:97:ASP:H	2.17	0.53
57:DY:56:PRO:HB3	57:DY:57:GLN:OE1	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1009:G:C2	1:AA:1022:G:N7	2.77	0.53
1:AA:1061:G:C4	1:AA:1197:G:N2	2.77	0.53
4:AD:206:PHE:O	4:AD:209:ARG:HB3	2.08	0.53
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.09	0.53
6:AF:55:ASP:C	6:AF:57:GLN:H	2.17	0.53
6:AF:76:ALA:HB1	6:AF:80:ARG:NH2	2.24	0.53
11:AK:16:SER:OG	11:AK:106:LYS:NZ	2.42	0.53
13:AM:93:ARG:N	13:AM:93:ARG:HD2	2.24	0.53
17:AQ:82:MET:HA	17:AQ:85:VAL:CG2	2.39	0.53
35:BA:630:G:N2	35:BA:633:A:OP2	2.40	0.53
35:BA:1283:G:H5"	35:BA:1283:G:H8	1.72	0.53
35:BA:2532:G:O2'	35:BA:2657:A:N6	2.41	0.53
36:BB:91:C:O2'	36:BB:92:C:P	2.67	0.53
39:BE:37:ARG:HB2	39:BE:46:ALA:O	2.09	0.53
39:BE:117:MET:HE1	39:BE:136:ARG:CA	2.39	0.53
41:BG:176:LEU:HD13	41:BG:176:LEU:O	2.09	0.53
46:BN:15:LEU:HD22	46:BN:16:ILE:N	2.24	0.53
48:BP:63:PRO:C	48:BP:65:ARG:H	2.16	0.53
51:BS:20:ARG:NE	51:BS:21:THR:N	2.47	0.53
56:BX:52:VAL:HG12	56:BX:53:LYS:CB	2.39	0.53
1:CA:1118:C:H2'	1:CA:1119:C:C6	2.44	0.53
2:CB:55:PHE:HE1	2:CB:218:ALA:HA	1.72	0.53
5:CE:57:LYS:O	5:CE:61:TYR:HD1	1.92	0.53
7:CG:111:ARG:NH2	7:CG:126:ASP:OD2	2.39	0.53
9:CI:93:ARG:C	9:CI:95:LYS:N	2.67	0.53
19:CS:40:ILE:HD12	19:CS:69:HIS:O	2.08	0.53
20:CT:27:LYS:HZ2	20:CT:30:LYS:HD3	1.73	0.53
35:DA:1385:G:H4'	35:DA:1386:C:OP1	2.08	0.53
35:DA:1982:C:H5"	35:DA:1983:C:OP2	2.09	0.53
36:DB:75:G:H1'	58:DZ:27:VAL:HG21	1.91	0.53
38:DD:84:TYR:HE1	38:DD:86:PRO:HB3	1.73	0.53
57:DY:42:VAL:HG12	57:DY:65:ALA:HB3	1.90	0.53
1:AA:541:G:N2	1:AA:542:G:H1'	2.23	0.53
1:AA:583:A:O3'	17:AQ:91:ARG:NE	2.42	0.53
2:AB:189:ASP:C	2:AB:191:ASP:H	2.17	0.53
4:AD:173:TRP:CZ3	4:AD:193:ASP:HB3	2.44	0.53
7:AG:146:GLU:O	7:AG:149:ARG:HB2	2.09	0.53
8:AH:4:ASP:HB2	8:AH:89:PRO:HG3	1.90	0.53
11:AK:48:ILE:O	11:AK:50:TYR:N	2.42	0.53
16:AP:28:ARG:NH1	16:AP:29:ASP:OD1	2.42	0.53
19:AS:30:LEU:H	19:AS:48:THR:HG21	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:31:GLU:O	27:B2:36:ARG:HG2	2.08	0.53
33:B8:31:HIS:HB2	35:BA:2420:C:N4	2.18	0.53
35:BA:426:C:O2'	35:BA:427:U:H5'	2.09	0.53
35:BA:1826:G:H2'	35:BA:1827:C:O4'	2.09	0.53
35:BA:1856:G:H2'	35:BA:1857:G:O4'	2.09	0.53
35:BA:2103:C:H5'	35:BA:2104:G:OP2	2.08	0.53
36:BB:50:G:OP1	51:BS:63:THR:N	2.42	0.53
40:BF:10:PRO:CB	40:BF:127:GLU:HB3	2.38	0.53
40:BF:40:GLN:O	40:BF:44:ARG:HD3	2.08	0.53
40:BF:133:ASN:O	40:BF:162:LEU:HD12	2.08	0.53
40:BF:164:ARG:HG2	40:BF:175:THR:OG1	2.09	0.53
41:BG:178:PHE:CD1	41:BG:179:PRO:HD2	2.44	0.53
48:BP:32:THR:HB	48:BP:36:LYS:CD	2.38	0.53
50:BR:4:LEU:O	50:BR:6:SER:N	2.42	0.53
52:BT:53:ARG:O	52:BT:59:THR:HB	2.09	0.53
54:BV:69:LYS:HZ1	54:BV:71:LEU:CG	2.21	0.53
55:BW:43:GLY:C	55:BW:45:TYR:HB3	2.33	0.53
1:CA:62:U:H6	1:CA:62:U:O5'	1.91	0.53
1:CA:1165:C:H2'	1:CA:1166:G:O4'	2.09	0.53
2:CB:210:SER:O	2:CB:214:ILE:HG12	2.09	0.53
3:CC:40:ARG:NH1	14:CN:52:GLN:HG2	2.23	0.53
3:CC:141:VAL:CG1	3:CC:202:ILE:CD1	2.86	0.53
11:CK:18:ARG:HG3	11:CK:33:THR:OG1	2.08	0.53
13:CM:17:VAL:HG22	13:CM:27:LYS:HE3	1.89	0.53
30:D5:55:ARG:NH2	50:DR:115:GLU:OE2	2.41	0.53
33:D8:14:VAL:HG21	33:D8:56:GLU:OE2	2.09	0.53
35:DA:1103:A:C4	35:DA:1104:C:H1'	2.44	0.53
35:DA:1478:G:N2	35:DA:1558:A:OP1	2.41	0.53
35:DA:1588:C:H2'	35:DA:1589:C:H6	1.73	0.53
35:DA:2820:A:O2'	35:DA:2821:A:OP1	2.25	0.53
38:DD:28:GLU:N	38:DD:28:GLU:OE1	2.42	0.53
39:DE:93:VAL:HG21	39:DE:180:ASN:HA	1.90	0.53
47:DO:75:SER:OG	52:DT:74:ARG:NH1	2.42	0.53
47:DO:86:ILE:HG22	47:DO:94:ARG:HG3	1.90	0.53
52:DT:67:SER:N	52:DT:70:VAL:O	2.41	0.53
52:DT:102:ILE:O	52:DT:106:SER:HB3	2.09	0.53
1:AA:56:U:C2'	1:AA:57:G:H5'	2.39	0.53
1:AA:113:G:O2'	1:AA:354:G:H5"	2.09	0.53
1:AA:349:A:O2'	1:AA:350:G:H5'	2.08	0.53
1:AA:692:U:H5'	1:AA:797:C:H5"	1.90	0.53
7:AG:46:ALA:HB1	7:AG:121:ALA:CB	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:67:ASP:O	11:AK:71:LYS:HG3	2.08	0.53
21:AU:3:LYS:HB3	21:AU:14:TRP:CG	2.44	0.53
28:B3:7:LYS:HG3	28:B3:34:GLU:HG3	1.89	0.53
30:B5:47:PRO:HG2	55:BW:38:TYR:OH	2.09	0.53
31:B6:36:LEU:HB3	31:B6:50:ARG:HG2	1.90	0.53
33:B8:13:ARG:NH2	48:BP:62:LEU:N	2.47	0.53
35:BA:17:G:H4'	53:BU:25:TRP:CH2	2.44	0.53
35:BA:330:A:H2	35:BA:1210:A:H2'	1.74	0.53
35:BA:581:C:H5"	53:BU:33:ARG:HH21	1.73	0.53
35:BA:719:C:H6	35:BA:719:C:O5'	1.91	0.53
35:BA:1060:U:O2'	35:BA:1061:U:OP2	2.23	0.53
35:BA:1952:A:C5	47:BO:22:ILE:HD12	2.44	0.53
38:BD:70:TRP:O	38:BD:71:ASP:C	2.52	0.53
41:BG:7:LEU:HD13	41:BG:176:LEU:HD11	1.91	0.53
46:BN:4:TYR:CG	46:BN:5:VAL:N	2.74	0.53
50:BR:97:VAL:HA	50:BR:113:LEU:O	2.09	0.53
53:BU:16:LYS:O	53:BU:20:LEU:HD23	2.08	0.53
57:BY:75:ILE:HD12	57:BY:76:CYS:H	1.74	0.53
5:CE:8:GLU:HG3	5:CE:34:VAL:HG22	1.91	0.53
6:CF:46:ARG:HH12	18:CR:37:VAL:HG21	1.73	0.53
10:CJ:45:ARG:HB2	10:CJ:45:ARG:HH11	1.74	0.53
19:CS:52:TYR:OH	19:CS:55:LYS:HA	2.09	0.53
30:D5:55:ARG:CZ	50:DR:115:GLU:OE2	2.58	0.53
35:DA:128:C:C6	35:DA:128:C:H3'	2.43	0.53
35:DA:200:U:O2	35:DA:386:G:N2	2.42	0.53
35:DA:805:G:H4'	35:DA:806:C:OP2	2.09	0.53
35:DA:1759:A:H4'	35:DA:2715:C:O4'	2.08	0.53
35:DA:2304:G:O2'	41:DG:156:ASP:OD1	2.17	0.53
35:DA:2619:C:H5"	39:DE:152:LYS:HA	1.90	0.53
40:DF:51:THR:OG1	40:DF:88:VAL:HG11	2.09	0.53
47:DO:9:GLU:O	47:DO:83:ALA:HA	2.09	0.53
50:DR:33:ARG:HA	50:DR:114:VAL:O	2.08	0.53
52:DT:29:ARG:CZ	52:DT:31:SER:OG	2.57	0.53
53:DU:28:ARG:HH11	53:DU:38:THR:HG23	1.74	0.53
1:AA:143:A:H5"	1:AA:144:G:H5'	1.91	0.52
1:AA:374:A:C6	1:AA:375:U:C4	2.97	0.52
1:AA:611:A:H61	1:AA:629:G:H1	1.57	0.52
1:AA:974:A:P	14:AN:41:ARG:HH12	2.31	0.52
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.44	0.52
1:AA:1291:G:H5"	7:AG:41:ARG:NH2	2.23	0.52
4:AD:22:LYS:HB2	4:AD:26:CYS:SG	2.49	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.90	0.52
7:AG:138:LYS:O	7:AG:138:LYS:HG2	2.09	0.52
9:AI:10:ARG:HG3	9:AI:11:LYS:HG3	1.91	0.52
35:BA:475:U:C4	35:BA:481:G:O6	2.62	0.52
35:BA:1599:C:H2'	35:BA:1600:C:H6	1.74	0.52
35:BA:1808:U:H5"	35:BA:1809:A:OP2	2.09	0.52
35:BA:2752:C:H3'	35:BA:2753:A:H8	1.74	0.52
38:BD:16:MET:HE3	38:BD:211:ARG:HE	1.75	0.52
38:BD:143:HIS:HD2	38:BD:144:ALA:HB2	1.74	0.52
38:BD:244:ARG:HB2	38:BD:245:PRO:HD2	1.90	0.52
50:BR:90:ARG:HH12	50:BR:118:GLU:HB2	1.74	0.52
52:BT:54:ARG:HA	52:BT:59:THR:HB	1.91	0.52
58:BZ:69:THR:HA	58:BZ:90:VAL:HB	1.91	0.52
1:CA:1414:U:H3	1:CA:1486:G:H1	1.57	0.52
4:CD:95:GLY:O	4:CD:99:SER:OG	2.19	0.52
4:CD:190:ASP:O	4:CD:193:ASP:HB2	2.10	0.52
9:CI:17:VAL:HA	9:CI:63:ILE:HG13	1.91	0.52
30:D5:35:GLU:HG3	30:D5:49:CYS:SG	2.49	0.52
33:D8:12:LYS:HB2	48:DP:68:GLN:CD	2.35	0.52
35:DA:1170:G:N2	35:DA:1180:C:O2	2.42	0.52
35:DA:1690:A:H5"	35:DA:1691:C:OP2	2.09	0.52
35:DA:1985:G:O2'	35:DA:1986:A:H5'	2.09	0.52
36:DB:14:U:H4'	36:DB:15:A:OP2	2.08	0.52
38:DD:30:GLU:OE2	38:DD:83:GLU:HB3	2.09	0.52
39:DE:25:VAL:HG12	39:DE:181:LEU:HD12	1.92	0.52
41:DG:48:GLU:O	41:DG:49:ASP:HB2	2.09	0.52
45:DK:59:UNK:HA	45:DK:63:UNK:HA	1.90	0.52
53:DU:92:ARG:HH22	53:DU:95:LEU:HB2	1.73	0.52
53:DU:95:LEU:C	53:DU:97:ASP:N	2.66	0.52
57:DY:94:LYS:HG3	57:DY:103:GLY:HA3	1.90	0.52
1:AA:283:C:C2	1:AA:284:G:C8	2.97	0.52
1:AA:348:G:C2'	1:AA:349:A:H5'	2.38	0.52
1:AA:682:G:H1	1:AA:708:C:H42	1.57	0.52
1:AA:1269:A:H5"	1:AA:1270:C:OP2	2.10	0.52
1:AA:1395:C:O2'	1:AA:1401:G:O2'	2.23	0.52
3:AC:88:ARG:HA	3:AC:91:LEU:HD12	1.89	0.52
10:AJ:80:LYS:O	10:AJ:83:GLU:HB3	2.09	0.52
11:AK:44:SER:CB	11:AK:47:VAL:HG23	2.38	0.52
13:AM:8:GLU:HG2	13:AM:9:ILE:N	2.24	0.52
33:B8:58:ILE:O	48:BP:49:ARG:NH1	2.42	0.52
35:BA:833:U:H2'	35:BA:834:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1025:G:O2'	35:BA:1026:U:OP1	2.21	0.52
35:BA:2318:G:N2	51:BS:7:TYR:O	2.42	0.52
35:BA:2351:G:H8	35:BA:2351:G:O5'	1.93	0.52
35:BA:2694:G:C4	35:BA:2695:C:C5	2.97	0.52
36:BB:10:C:C4	36:BB:11:C:C5	2.97	0.52
39:BE:34:VAL:HG23	39:BE:48:GLN:HG3	1.91	0.52
43:BI:111:PRO:O	43:BI:113:ARG:N	2.41	0.52
47:BO:12:ASP:OD1	47:BO:14:THR:HG23	2.08	0.52
47:BO:26:LYS:O	47:BO:28:SER:N	2.42	0.52
47:BO:64:ARG:HG2	47:BO:79:PHE:CG	2.44	0.52
52:BT:30:VAL:HB	52:BT:42:ILE:HB	1.91	0.52
1:CA:195:A:OP1	20:CT:68:LYS:NZ	2.34	0.52
1:CA:255:G:H2'	1:CA:256:U:C6	2.45	0.52
1:CA:771:G:H2'	1:CA:772:U:C6	2.43	0.52
1:CA:920:U:H5"	1:CA:921:U:OP2	2.10	0.52
2:CB:178:ARG:HH22	8:CH:68:ARG:NH2	2.07	0.52
4:CD:98:GLU:OE2	4:CD:103:ASN:ND2	2.39	0.52
7:CG:50:ILE:HD12	7:CG:61:VAL:HG11	1.90	0.52
10:CJ:49:VAL:HG12	10:CJ:61:GLU:O	2.10	0.52
15:CO:74:ASP:CG	15:CO:77:ARG:HG2	2.34	0.52
16:CP:53:VAL:HG12	16:CP:79:VAL:HG22	1.92	0.52
27:D2:26:ARG:HG2	56:DX:5:TYR:HB3	1.91	0.52
28:D3:26:LEU:HD21	28:D3:46:ASN:HB2	1.91	0.52
35:DA:272(J):C:H42	35:DA:363(A):A:N6	2.07	0.52
35:DA:363(C):G:H2'	35:DA:363(D):G:C8	2.43	0.52
35:DA:2291:U:H5"	35:DA:2380:C:O2'	2.09	0.52
35:DA:2592:G:N7	35:DA:2593:U:C5	2.78	0.52
35:DA:2771:C:H2'	35:DA:2772:C:H6	1.75	0.52
36:DB:8:U:O2	36:DB:113:G:N2	2.39	0.52
54:DV:67:GLY:O	54:DV:69:LYS:N	2.42	0.52
1:AA:1249:C:N4	1:AA:1287:A:H5'	2.24	0.52
2:AB:102:LEU:O	2:AB:158:LEU:HD21	2.10	0.52
7:AG:13:GLN:O	7:AG:24:THR:HG21	2.10	0.52
7:AG:60:LYS:HZ2	7:AG:63:LYS:HB3	1.74	0.52
7:AG:60:LYS:HD2	7:AG:63:LYS:HB2	1.92	0.52
10:AJ:22:LYS:HE2	10:AJ:88:LEU:HD21	1.92	0.52
13:AM:83:ASP:OD2	13:AM:84:ILE:HD12	2.10	0.52
17:AQ:60:ILE:HG23	17:AQ:61:GLU:O	2.09	0.52
22:AV:14:A:H1'	22:AV:23:G:N2	2.24	0.52
26:B1:23:LYS:HB2	26:B1:38:SER:CB	2.39	0.52
27:B2:29:LYS:N	27:B2:29:LYS:HD3	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:B6:45:LYS:O	31:B6:46:HIS:HB2	2.09	0.52
35:BA:66:C:H2'	35:BA:67:U:O4'	2.09	0.52
35:BA:274:G:P	35:BA:274:G:H3'	2.50	0.52
35:BA:656:G:C8	35:BA:656:G:C3'	2.92	0.52
35:BA:1223:G:C5'	35:BA:1224:C:OP2	2.52	0.52
38:BD:112:GLN:HB2	38:BD:115:GLN:NE2	2.24	0.52
39:BE:34:VAL:CG2	39:BE:78:LEU:HD12	2.40	0.52
46:BN:30:ILE:CG2	46:BN:34:LEU:CD1	2.88	0.52
46:BN:100:GLU:C	46:BN:102:ALA:N	2.66	0.52
50:BR:77:ARG:O	50:BR:80:PHE:N	2.42	0.52
54:BV:27:ALA:HB1	54:BV:64:HIS:CE1	2.44	0.52
1:CA:560:U:H5"	1:CA:561:U:O5'	2.09	0.52
1:CA:1169:A:C6	1:CA:1170:A:N6	2.78	0.52
1:CA:1189:C:H4'	3:CC:10:PHE:CE1	2.45	0.52
1:CA:1308:U:OP1	13:CM:98:VAL:HG22	2.08	0.52
1:CA:1438:G:H2'	1:CA:1439:C:H6	1.75	0.52
13:CM:50:GLU:CD	13:CM:50:GLU:H	2.17	0.52
19:CS:39:THR:HA	19:CS:70:LYS:HA	1.92	0.52
20:CT:55:ILE:CG2	20:CT:56:MET:N	2.71	0.52
20:CT:75:ASN:HA	20:CT:78:ALA:HB3	1.90	0.52
28:D3:43:ILE:O	28:D3:47:VAL:HG23	2.08	0.52
33:D8:38:GLY:C	33:D8:40:GLU:H	2.16	0.52
35:DA:150:C:H42	35:DA:176:G:H1	1.58	0.52
35:DA:860:U:H5	35:DA:917:A:N7	2.08	0.52
35:DA:883:G:H5"	35:DA:884:C:OP2	2.09	0.52
35:DA:1240:U:O2'	35:DA:1241:A:H5'	2.09	0.52
35:DA:1333:C:H2'	35:DA:1334:G:H8	1.74	0.52
35:DA:1788:C:OP1	38:DD:222:ARG:NH2	2.42	0.52
35:DA:1916:A:H3'	35:DA:1917:U:H6	1.74	0.52
35:DA:2276:G:H4'	49:DQ:85:LYS:CE	2.37	0.52
38:DD:65:ILE:HD11	38:DD:67:PHE:CZ	2.44	0.52
40:DF:155:LEU:HB2	40:DF:189:THR:HG21	1.91	0.52
41:DG:161:THR:HG22	41:DG:163:ALA:N	2.23	0.52
52:DT:108:ARG:HH12	52:DT:112:ARG:HG2	1.74	0.52
54:DV:79:VAL:HG13	54:DV:80:GLN:N	2.21	0.52
57:DY:86:ARG:HG2	57:DY:88:LYS:HE3	1.90	0.52
1:AA:149:A:H2'	1:AA:150:C:H6	1.74	0.52
1:AA:448:A:H62	1:AA:486:U:H3	1.57	0.52
1:AA:523:A:N1	12:AL:92:ASP:HB2	2.25	0.52
1:AA:735:C:H2'	1:AA:736:C:H6	1.73	0.52
1:AA:751:U:H4'	15:AO:24:SER:HA	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1244:C:H5	1:AA:1293:G:N2	2.08	0.52
1:AA:1268:A:H2'	1:AA:1269:A:C8	2.44	0.52
1:AA:1300:G:H4'	1:AA:1301:U:O5'	2.09	0.52
4:AD:60:GLU:HG3	4:AD:198:VAL:HG13	1.91	0.52
9:AI:77:ILE:HG22	9:AI:81:ILE:HG13	1.91	0.52
14:AN:25:VAL:HG23	14:AN:38:GLY:O	2.10	0.52
19:AS:25:LYS:N	19:AS:27:GLU:OE2	2.42	0.52
35:BA:309:G:O3'	57:BY:18:GLY:HA2	2.09	0.52
35:BA:958:U:OP1	35:BA:958:U:H3'	2.09	0.52
35:BA:1130:U:O2	39:BE:149:ARG:NH2	2.43	0.52
35:BA:1394:U:H5"	35:BA:1395:A:OP2	2.10	0.52
35:BA:2180:U:H2'	35:BA:2181:G:C8	2.45	0.52
35:BA:2752:C:H3'	35:BA:2753:A:C8	2.44	0.52
39:BE:129:HIS:O	39:BE:131:ALA:N	2.40	0.52
52:BT:11:GLU:N	52:BT:11:GLU:OE2	2.40	0.52
53:BU:10:ARG:N	53:BU:13:LYS:HG2	2.13	0.52
55:BW:51:LEU:HB3	55:BW:107:LEU:HD22	1.91	0.52
56:BX:52:VAL:HG21	56:BX:82:GLN:H	1.73	0.52
58:BZ:87:ASP:OD1	58:BZ:87:ASP:N	2.41	0.52
58:BZ:128:VAL:HG22	58:BZ:132:ASN:HB2	1.91	0.52
1:CA:623:C:H5"	1:CA:624:C:OP2	2.10	0.52
1:CA:648:A:H2'	1:CA:649:G:C8	2.43	0.52
1:CA:929:G:C6	1:CA:930:C:N4	2.77	0.52
1:CA:1003:G:C6	1:CA:1004:A:H1'	2.43	0.52
1:CA:1023:G:H2'	1:CA:1023:G:N3	2.23	0.52
1:CA:1113:C:H2'	1:CA:1114:C:H6	1.74	0.52
5:CE:127:ASN:OD1	5:CE:128:PRO:HD2	2.09	0.52
10:CJ:25:GLU:C	10:CJ:27:ALA:H	2.16	0.52
25:D0:73:GLY:HA3	36:DB:12:C:H2'	1.91	0.52
26:D1:27:GLU:HG2	26:D1:32:LYS:HB2	1.91	0.52
35:DA:272:G:H4'	35:DA:272(B):G:OP1	2.09	0.52
35:DA:1019:U:H3	35:DA:1142(A):A:H62	1.55	0.52
35:DA:1019:U:O2'	35:DA:1021:A:H2	1.92	0.52
35:DA:1639:U:C2'	35:DA:1640:C:H5"	2.40	0.52
35:DA:1762:A:H8	35:DA:1762:A:O5'	1.92	0.52
35:DA:2360:A:O2'	35:DA:2361:A:P	2.67	0.52
36:DB:40:U:C2	36:DB:43:C:OP2	2.63	0.52
37:DC:39:GLU:OE1	37:DC:70:LYS:HE3	2.10	0.52
46:DN:28:THR:HG23	46:DN:29:LYS:H	1.73	0.52
1:AA:123:C:O2'	1:AA:290:C:O2	2.27	0.52
1:AA:255:G:H2'	1:AA:256:U:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1443:G:H5'	1:AA:1443:G:C8	2.45	0.52
22:AV:9:G:N3	22:AV:46:G:H2'	2.25	0.52
26:B1:32:LYS:HZ2	26:B1:33:LYS:N	2.07	0.52
30:B5:30:LEU:HD12	30:B5:41:PRO:N	2.25	0.52
32:B7:18:PHE:O	32:B7:22:MET:HG2	2.09	0.52
34:B9:22:ARG:NH2	35:BA:2741:A:OP1	2.43	0.52
35:BA:26:G:OP1	55:BW:80:PRO:HB3	2.08	0.52
35:BA:204:A:OP1	35:BA:204:A:H8	1.93	0.52
35:BA:1028:A:N6	35:BA:1125:G:H2'	2.24	0.52
35:BA:1405:U:H2'	35:BA:1406:U:H6	1.75	0.52
35:BA:1503:U:C2'	35:BA:1504:C:H5'	2.39	0.52
35:BA:1509:C:OP2	35:BA:1509:C:H4'	2.09	0.52
35:BA:2019:A:H4'	53:BU:34:LYS:HD3	1.91	0.52
35:BA:2535:G:H2'	35:BA:2536:G:C8	2.44	0.52
35:BA:2701:C:C3'	35:BA:2702:U:H5"	2.30	0.52
36:BB:15:A:H3'	36:BB:16:G:H5'	1.90	0.52
36:BB:52:A:H62	51:BS:33:LYS:HE2	1.74	0.52
38:BD:10:THR:HG21	38:BD:13:ARG:HG3	1.91	0.52
38:BD:71:ASP:CG	38:BD:103:ARG:HH21	2.18	0.52
40:BF:21:ALA:C	40:BF:23:ASP:N	2.64	0.52
40:BF:34:TRP:CD1	48:BP:10:PRO:HB2	2.44	0.52
41:BG:51:ARG:O	41:BG:53:LEU:N	2.43	0.52
49:BQ:5:ARG:HG3	49:BQ:93:TYR:CG	2.44	0.52
50:BR:117:VAL:O	50:BR:118:GLU:OXT	2.27	0.52
51:BS:62:LYS:O	51:BS:65:VAL:HG22	2.09	0.52
52:BT:53:ARG:HB3	52:BT:60:THR:O	2.08	0.52
52:BT:55:ASN:H	52:BT:59:THR:HG22	1.74	0.52
1:CA:322:C:H5	1:CA:328:C:H5	1.58	0.52
1:CA:1298:C:H2'	7:CG:114:ARG:HH21	1.74	0.52
2:CB:85:ALA:O	2:CB:89:GLY:N	2.42	0.52
8:CH:112:LEU:HA	8:CH:134:ILE:HG12	1.90	0.52
15:CO:17:ARG:NH2	15:CO:77:ARG:HD2	2.25	0.52
18:CR:62:GLU:O	18:CR:65:ILE:HD12	2.10	0.52
19:CS:4:SER:O	19:CS:5:LEU:HB2	2.10	0.52
31:D6:39:TYR:OH	35:DA:2347:C:OP1	2.22	0.52
35:DA:834:C:H2'	35:DA:835:A:O4'	2.10	0.52
35:DA:1326:U:HO2'	35:DA:2010:G:HO2'	1.55	0.52
35:DA:1436:G:H1	35:DA:1556:C:H42	1.57	0.52
35:DA:2343:C:O2'	35:DA:2373:G:O2'	2.06	0.52
36:DB:37:C:H2'	36:DB:38:C:O4'	2.10	0.52
39:DE:51:PHE:O	39:DE:74:PRO:HB3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DF:181:LEU:HD11	40:DF:186:ILE:HD11	1.90	0.52
41:DG:105:LYS:HD2	41:DG:143:GLU:OE2	2.09	0.52
49:DQ:4:PRO:O	49:DQ:5:ARG:CB	2.58	0.52
49:DQ:19:GLY:C	49:DQ:21:THR:H	2.17	0.52
52:DT:11:GLU:OE2	52:DT:11:GLU:C	2.53	0.52
56:DX:55:ASN:H	56:DX:77:LYS:CG	2.23	0.52
57:DY:26:LYS:O	57:DY:28:LYS:HD2	2.10	0.52
1:AA:473:G:OP2	16:AP:80:PHE:HB2	2.08	0.52
1:AA:601:C:H2'	1:AA:602:A:C8	2.44	0.52
1:AA:1185:G:H2'	1:AA:1186:G:O4'	2.09	0.52
1:AA:1321:C:H5"	1:AA:1322:C:H5"	1.92	0.52
2:AB:19:HIS:HE1	2:AB:207:ALA:H	1.57	0.52
2:AB:95:GLN:HG3	2:AB:96:ARG:N	2.23	0.52
5:AE:75:THR:HA	5:AE:115:VAL:HG13	1.90	0.52
12:AL:6:THR:HG22	12:AL:7:ILE:HG13	1.91	0.52
12:AL:62:SER:OG	12:AL:64:TYR:HB2	2.10	0.52
14:AN:52:GLN:O	14:AN:53:LEU:HD23	2.09	0.52
14:AN:60:SER:OG	14:AN:61:TRP:N	2.41	0.52
31:B6:15:GLU:CD	31:B6:41:PRO:HG3	2.34	0.52
32:B7:37:LYS:HD2	35:BA:458:G:N7	2.25	0.52
35:BA:195:A:H2'	35:BA:198:C:N4	2.25	0.52
35:BA:256:A:H2'	35:BA:257:A:C8	2.44	0.52
35:BA:568:U:H2'	35:BA:570:G:OP2	2.09	0.52
35:BA:581:C:P	53:BU:33:ARG:NE	2.70	0.52
35:BA:733:G:O6	35:BA:761:A:C8	2.62	0.52
35:BA:869:G:C2	35:BA:870:A:C8	2.98	0.52
35:BA:2681:C:H5	35:BA:2725:A:H62	1.56	0.52
38:BD:155:LEU:HD13	38:BD:177:LEU:HD22	1.91	0.52
38:BD:268:ARG:NH2	38:BD:268:ARG:HB3	2.25	0.52
43:BI:92:VAL:O	43:BI:92:VAL:HG13	2.09	0.52
43:BI:92:VAL:CG1	43:BI:120:ILE:HB	2.40	0.52
48:BP:63:PRO:C	48:BP:65:ARG:N	2.67	0.52
48:BP:130:PHE:HB3	48:BP:135:LEU:CD1	2.40	0.52
50:BR:37:THR:OG1	50:BR:39:PRO:HD2	2.09	0.52
55:BW:51:LEU:CB	55:BW:107:LEU:HD22	2.40	0.52
58:BZ:25:PRO:HA	58:BZ:38:TYR:HB3	1.90	0.52
1:CA:172:A:H8	1:CA:172:A:OP2	1.92	0.52
1:CA:394:G:H2'	1:CA:395:C:H6	1.74	0.52
1:CA:746:A:H4'	1:CA:837:G:O2'	2.10	0.52
1:CA:799:G:C2'	1:CA:800:G:H5'	2.38	0.52
4:CD:43:HIS:CD2	4:CD:46:LYS:NZ	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	2.09	0.52
14:CN:52:GLN:O	14:CN:53:LEU:HD23	2.09	0.52
27:D2:57:ILE:HG22	27:D2:59:ARG:HG2	1.90	0.52
32:D7:1:MET:SD	32:D7:3:ARG:NH2	2.83	0.52
32:D7:40:TRP:CZ3	35:DA:459:U:H4'	2.44	0.52
35:DA:928:G:H8	35:DA:928:G:O5'	1.92	0.52
35:DA:1209:G:H21	35:DA:1210:A:N6	2.08	0.52
35:DA:1693:U:H4'	35:DA:1694:C:OP2	2.10	0.52
35:DA:1906:G:H1	35:DA:1924:C:N4	2.08	0.52
35:DA:2681:C:H5	35:DA:2725:A:H62	1.57	0.52
36:DB:18:G:H1	36:DB:65:C:N4	2.01	0.52
52:DT:11:GLU:C	52:DT:11:GLU:CD	2.77	0.52
54:DV:6:LYS:HB2	54:DV:39:LEU:HD21	1.92	0.52
1:AA:266:G:H5"	1:AA:267:C:C5	2.45	0.52
1:AA:392:G:H2'	1:AA:393:A:C8	2.45	0.52
1:AA:949:A:OP1	13:AM:101:GLN:HB3	2.09	0.52
1:AA:1014:A:H2'	1:AA:1015:A:C8	2.45	0.52
2:AB:32:ILE:HD13	2:AB:40:HIS:HE1	1.75	0.52
12:AL:32:PHE:HB3	12:AL:84:LEU:CD2	2.40	0.52
16:AP:70:ALA:HA	16:AP:73:LEU:HD12	1.90	0.52
26:B1:10:LYS:HB2	26:B1:14:VAL:N	2.24	0.52
28:B3:18:ASP:OD1	28:B3:18:ASP:N	2.41	0.52
33:B8:39:LYS:HE3	35:BA:2365:G:O6	2.10	0.52
35:BA:62:C:H42	35:BA:93:G:H1	1.58	0.52
35:BA:272(I):U:N3	35:BA:363(A):A:N6	2.58	0.52
35:BA:581:C:C5'	53:BU:33:ARG:HH21	2.22	0.52
35:BA:729:G:C5	38:BD:208:LYS:HB2	2.45	0.52
35:BA:958:U:OP2	49:BQ:14:ARG:NH1	2.41	0.52
35:BA:1261:C:OP2	55:BW:83:LYS:NZ	2.26	0.52
35:BA:1287:A:N7	50:BR:107:ASP:HB2	2.25	0.52
35:BA:1586:A:H5"	35:BA:1587:A:N7	2.24	0.52
35:BA:1681:G:O2'	35:BA:1762:A:O2'	2.12	0.52
35:BA:1899:G:N2	35:BA:1902:C:H41	2.08	0.52
38:BD:227:ASN:O	38:BD:230:ASP:N	2.40	0.52
47:BO:35:VAL:HG13	47:BO:63:VAL:C	2.35	0.52
47:BO:98:VAL:CG2	47:BO:118:ALA:HA	2.39	0.52
48:BP:38:GLN:HG2	48:BP:38:GLN:O	2.10	0.52
1:CA:130:A:OP2	1:CA:189(F):U:C2	2.63	0.52
1:CA:444:C:H42	1:CA:490:G:H1	1.55	0.52
10:CJ:81:THR:O	10:CJ:85:LEU:HG	2.10	0.52
12:CL:54:LYS:N	12:CL:54:LYS:HD2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D1:21:ARG:O	26:D1:39:LYS:HA	2.10	0.52
26:D1:26:ARG:HB3	26:D1:34:THR:HB	1.91	0.52
26:D1:47:GLN:NE2	35:DA:2090:G:C2	2.78	0.52
26:D1:47:GLN:HE22	35:DA:2090:G:N2	2.07	0.52
31:D6:26:ASN:HD21	31:D6:28:ARG:HE	1.58	0.52
35:DA:143(A):C:C4'	56:DX:36:LYS:HE3	2.39	0.52
35:DA:673:C:H5'	40:DF:54:ARG:HH12	1.75	0.52
35:DA:1455:G:O2'	35:DA:2853:C:OP1	2.20	0.52
35:DA:1749:A:H5'	35:DA:1750:G:OP2	2.09	0.52
35:DA:1833:U:O2'	35:DA:1969:A:N1	2.42	0.52
35:DA:2295:C:OP2	51:DS:12:PHE:HE1	1.91	0.52
35:DA:2552:U:H2'	35:DA:2554:U:H5"	1.92	0.52
38:DD:138:VAL:HA	38:DD:165:ILE:HG21	1.91	0.52
40:DF:13:SER:O	40:DF:15:SER:N	2.43	0.52
46:DN:115:ARG:HA	46:DN:118:LYS:HE2	1.92	0.52
51:DS:89:ARG:CG	51:DS:93:LYS:HG3	2.40	0.52
1:AA:547:A:OP2	4:AD:2:GLY:HA2	2.10	0.52
1:AA:1312:G:H1	1:AA:1325:C:N4	2.05	0.52
2:AB:74:LYS:NZ	2:AB:206:ASP:HA	2.25	0.52
8:AH:102:ARG:NH2	8:AH:105:ARG:HD3	2.25	0.52
10:AJ:48:THR:HB	10:AJ:62:HIS:CD2	2.44	0.52
23:AW:61:C:H3'	23:AW:62:C:H5"	1.91	0.52
25:B0:56:ASP:OD2	35:BA:2364:C:H5'	2.10	0.52
27:B2:19:VAL:C	27:B2:21:LEU:H	2.17	0.52
35:BA:918:A:H5"	36:BB:98:G:O2'	2.10	0.52
35:BA:1005:C:H2'	35:BA:1006:C:H6	1.72	0.52
35:BA:1131:G:O6	35:BA:2040:C:H1'	2.10	0.52
35:BA:1171:G:OP2	35:BA:1171:G:C8	2.62	0.52
35:BA:1546:C:C4	35:BA:1546:C:OP1	2.63	0.52
35:BA:2532:G:H1'	35:BA:2663:G:N2	2.25	0.52
35:BA:2634:G:O3'	39:BE:77:ILE:HG12	2.10	0.52
35:BA:2835:A:N6	35:BA:2879:C:O5'	2.43	0.52
35:BA:2856:C:H5'	35:BA:2857:G:OP2	2.10	0.52
36:BB:21:G:O2'	36:BB:22:U:P	2.68	0.52
43:BI:1:MET:N	43:BI:21:VAL:O	2.43	0.52
55:BW:59:VAL:HA	55:BW:63:ASP:H	1.75	0.52
56:BX:87:GLN:HG2	56:BX:89:ILE:HG22	1.92	0.52
58:BZ:45:ASP:CG	58:BZ:46:LYS:N	2.68	0.52
58:BZ:51:ALA:O	58:BZ:54:HIS:HB2	2.10	0.52
1:CA:1463:C:C5'	52:DT:115:ARG:HH22	2.23	0.52
3:CC:62:ASP:O	3:CC:63:ASN:ND2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:142:MET:HE1	3:CC:148:GLY:H	1.74	0.52
3:CC:153:VAL:HG22	3:CC:198:VAL:HG22	1.92	0.52
8:CH:102:ARG:HD3	8:CH:102:ARG:H	1.75	0.52
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	1.90	0.52
9:CI:86:VAL:HG23	9:CI:93:ARG:HB2	1.92	0.52
10:CJ:43:ARG:HB2	10:CJ:67:THR:O	2.10	0.52
17:CQ:27:PHE:O	17:CQ:35:VAL:HG12	2.10	0.52
20:CT:56:MET:HE2	20:CT:104:LEU:H	1.75	0.52
35:DA:330:A:H2	35:DA:1210:A:H2'	1.74	0.52
35:DA:1719:G:H2'	35:DA:1720:U:O4'	2.10	0.52
35:DA:2307:G:N2	35:DA:2308:G:H5"	2.24	0.52
35:DA:2376:A:C6	51:DS:89:ARG:NH2	2.78	0.52
35:DA:2476:A:N3	35:DA:2477:C:H5"	2.24	0.52
37:DC:45:ALA:O	37:DC:46:LYS:HE2	2.09	0.52
38:DD:39:LYS:HG3	38:DD:62:TYR:HB2	1.92	0.52
38:DD:93:ALA:HB3	38:DD:105:ILE:HG22	1.91	0.52
38:DD:146:GLU:HB2	38:DD:189:CYS:HB3	1.91	0.52
40:DF:63:LYS:HE3	40:DF:67:GLN:HB3	1.91	0.52
40:DF:195:ASP:O	40:DF:198:ALA:N	2.42	0.52
42:DH:90:LYS:HD2	42:DH:159:GLU:HG2	1.92	0.52
47:DO:68:GLU:CD	47:DO:68:GLU:H	2.18	0.52
54:DV:82:ARG:O	54:DV:82:ARG:HG3	2.09	0.52
54:DV:83:ARG:HH11	54:DV:83:ARG:HG2	1.75	0.52
56:DX:55:ASN:H	56:DX:77:LYS:HE3	1.75	0.52
56:DX:56:THR:C	56:DX:57:LEU:HD12	2.35	0.52
1:AA:892:A:O2'	1:AA:1415:G:H4'	2.09	0.52
1:AA:1202:G:C2'	1:AA:1203:C:H5'	2.40	0.52
1:AA:1407:C:O2'	35:BA:1912:A:N1	2.32	0.52
2:AB:19:HIS:ND1	2:AB:206:ASP:HB2	2.25	0.52
5:AE:129:ILE:O	5:AE:132:ALA:HB3	2.09	0.52
7:AG:111:ARG:CZ	7:AG:123:GLU:HB3	2.39	0.52
16:AP:53:VAL:HG12	16:AP:79:VAL:HG22	1.92	0.52
17:AQ:63:ARG:NH1	17:AQ:64:PRO:O	2.43	0.52
35:BA:89:G:OP2	35:BA:90:U:O2'	2.24	0.52
35:BA:760:G:H2'	35:BA:761:A:O4'	2.09	0.52
35:BA:1092:C:C5	35:BA:1093:G:C8	2.97	0.52
35:BA:2584:U:H2'	35:BA:2585:U:H5'	1.92	0.52
38:BD:112:GLN:OE1	38:BD:112:GLN:N	2.42	0.52
40:BF:6:VAL:HG21	40:BF:19:GLU:OE2	2.10	0.52
40:BF:135:LYS:HB2	40:BF:138:GLU:HG2	1.91	0.52
48:BP:47:ASP:O	48:BP:48:PRO:C	2.52	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:30:ARG:HD2	51:BS:31:SER:O	2.09	0.52
53:BU:31:SER:OG	53:BU:32:PHE:N	2.41	0.52
57:BY:8:LYS:NZ	57:BY:94:LYS:HG3	2.24	0.52
2:CB:120:ALA:C	2:CB:121:LEU:HD12	2.34	0.52
18:CR:29:PHE:CE1	18:CR:31:LEU:HB3	2.45	0.52
22:CV:2:G:H1	22:CV:71:C:H42	1.58	0.52
23:CW:38:A:C6	23:CW:39:U:C5	2.98	0.52
23:CY:26:A:H3'	23:CY:27:G:H5'	1.91	0.52
27:D2:49:LYS:NZ	27:D2:54:LYS:HE2	2.25	0.52
35:DA:142:A:H5'	35:DA:142(A):C:OP2	2.10	0.52
35:DA:272(G):C:C2	35:DA:363(D):G:N2	2.78	0.52
35:DA:576:U:H2'	35:DA:577:G:C8	2.45	0.52
35:DA:1517:G:H5"	35:DA:1517:G:C8	2.44	0.52
35:DA:1769:G:O2'	35:DA:1958:C:OP1	2.16	0.52
35:DA:2352:A:H2'	35:DA:2353:G:O4'	2.09	0.52
35:DA:2863:C:H2'	35:DA:2864:G:H8	1.75	0.52
36:DB:73:A:C4	36:DB:105:A:C2	2.97	0.52
43:DI:113:ARG:HE	43:DI:132:PRO:HB3	1.75	0.52
48:DP:51:PHE:HE2	48:DP:59:LEU:CD1	2.22	0.52
48:DP:127:ALA:N	48:DP:145:PRO:CG	2.71	0.52
51:DS:20:ARG:HA	51:DS:20:ARG:NE	2.25	0.52
53:DU:92:ARG:NH2	53:DU:92:ARG:HG3	2.25	0.52
55:DW:96:ILE:O	55:DW:96:ILE:HG13	2.10	0.52
57:DY:101:LYS:HZ2	57:DY:110:GLU:HB2	1.75	0.52
58:DZ:26:GLY:HA2	58:DZ:85:HIS:CD2	2.45	0.52
1:AA:393:A:O2'	1:AA:394:G:H5'	2.10	0.52
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.75	0.52
1:AA:1169:A:H5"	1:AA:1171:G:H22	1.75	0.52
1:AA:1353:G:C2	1:AA:1370:G:C2	2.98	0.52
4:AD:30:LYS:HA	4:AD:34:GLU:H	1.75	0.52
4:AD:209:ARG:HG2	4:AD:209:ARG:O	2.08	0.52
6:AF:21:LEU:O	6:AF:25:ILE:HG12	2.10	0.52
6:AF:100:ASN:HD21	18:AR:23:LYS:HG3	1.75	0.52
10:AJ:63:PHE:HA	14:AN:59:ALA:HB2	1.92	0.52
12:AL:7:ILE:HG13	12:AL:8:ASN:N	2.25	0.52
13:AM:66:LEU:O	13:AM:70:LEU:HB3	2.10	0.52
27:B2:46:GLN:OE1	27:B2:46:GLN:HA	2.09	0.52
35:BA:80:G:C2	35:BA:81:G:N7	2.78	0.52
35:BA:532:A:C2	53:BU:28:ARG:NH2	2.78	0.52
35:BA:577:G:O2'	35:BA:1254:A:OP1	2.27	0.52
35:BA:1257:C:OP1	40:BF:75:HIS:HE1	1.93	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1276:A:N1	35:BA:1294:U:C5	2.75	0.52
35:BA:2801(A):A:H1'	35:BA:2802:G:H2'	1.92	0.52
36:BB:13:A:H2'	36:BB:70:C:O2'	2.10	0.52
43:BI:58:LEU:O	43:BI:62:LYS:HB2	2.10	0.52
44:BJ:56:UNK:HA	44:BJ:83:UNK:HA	1.92	0.52
49:BQ:43:THR:HG22	49:BQ:46:GLN:NE2	2.25	0.52
54:BV:69:LYS:HE3	54:BV:71:LEU:HD11	1.91	0.52
58:BZ:144:LEU:CD1	58:BZ:149:SER:HA	2.27	0.52
1:CA:44:G:H1	1:CA:398:C:N4	2.07	0.52
1:CA:584:G:H5'	17:CQ:91:ARG:NH2	2.25	0.52
1:CA:585:G:OP1	17:CQ:36:ILE:HB	2.10	0.52
1:CA:1397:C:H4'	1:CA:1398:A:OP2	2.10	0.52
10:CJ:55:LYS:HG3	10:CJ:55:LYS:O	2.10	0.52
19:CS:9:VAL:O	19:CS:11:VAL:HG13	2.10	0.52
23:CW:12:U:C2	23:CW:13:C:H5	2.28	0.52
30:D5:2:ALA:HA	35:DA:2611:U:O2	2.10	0.52
35:DA:1049:C:N4	35:DA:1111:A:N1	2.57	0.52
35:DA:1887:C:H5"	35:DA:1888:G:OP2	2.09	0.52
35:DA:2030:A:H4'	35:DA:2031:A:C8	2.44	0.52
35:DA:2163:C:H3'	35:DA:2164:C:H4'	1.92	0.52
35:DA:2295:C:OP2	51:DS:12:PHE:CE1	2.63	0.52
35:DA:2461:C:N4	35:DA:2489:G:H1	2.03	0.52
35:DA:2467:C:H4'	49:DQ:123:HIS:ND1	2.25	0.52
35:DA:2845:G:H2'	35:DA:2846:G:H8	1.75	0.52
38:DD:109:ASP:HB2	38:DD:197:GLY:HA3	1.92	0.52
40:DF:114:VAL:HG22	40:DF:192:LEU:HD11	1.92	0.52
42:DH:47:GLU:OE2	42:DH:51:ARG:HD3	2.10	0.52
47:DO:77:ILE:HB	52:DT:74:ARG:HD3	1.92	0.52
55:DW:65:LEU:O	55:DW:67:ASP:N	2.43	0.52
58:DZ:59:LEU:HB3	58:DZ:61:LEU:HD23	1.92	0.52
1:AA:99:U:O2'	1:AA:100:C:H5'	2.09	0.51
1:AA:186:C:H2'	1:AA:186:C:O2	2.08	0.51
1:AA:189(B):C:H42	1:AA:189(I):G:H1	1.57	0.51
1:AA:765:G:H1	1:AA:812:C:HO2'	1.59	0.51
1:AA:956:U:H2'	1:AA:957:U:C6	2.44	0.51
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.10	0.51
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.74	0.51
1:AA:1349:A:OP1	9:AI:120:ARG:HB2	2.10	0.51
2:AB:54:THR:HB	2:AB:185:ILE:HD11	1.92	0.51
2:AB:174:VAL:HG13	2:AB:184:VAL:HG11	1.92	0.51
3:AC:181:ASN:ND2	3:AC:204:LEU:HB2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:48:GLU:HG3	9:AI:51:ARG:HD2	1.92	0.51
10:AJ:32:ALA:O	10:AJ:34:VAL:N	2.43	0.51
23:AW:66:U:HO2'	23:AW:67:C:P	2.33	0.51
26:B1:26:ARG:O	26:B1:27:GLU:OE2	2.27	0.51
31:B6:26:ASN:CB	35:BA:2286:A:H2	2.18	0.51
32:B7:35:ARG:O	32:B7:36:GLN:HB2	2.10	0.51
35:BA:1005:C:C2	35:BA:1143:A:C5	2.98	0.51
35:BA:1204:A:O2'	35:BA:1205:U:OP2	2.25	0.51
35:BA:2351:G:O2'	35:BA:2352:A:H8	1.93	0.51
46:BN:66:LYS:NZ	46:BN:87:LEU:HD22	2.25	0.51
52:BT:77:PRO:O	52:BT:79:HIS:N	2.43	0.51
55:BW:18:ARG:NH1	55:BW:25:ARG:NH2	2.58	0.51
1:CA:72:C:H2'	1:CA:73:G:C8	2.45	0.51
1:CA:161:A:H2'	1:CA:162:A:O4'	2.11	0.51
1:CA:234:C:H2'	1:CA:235:C:H6	1.74	0.51
1:CA:804:U:H5"	1:CA:805:C:OP2	2.10	0.51
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.10	0.51
13:CM:8:GLU:OE1	13:CM:22:ILE:HA	2.10	0.51
31:D6:41:PRO:CD	31:D6:46:HIS:H	2.23	0.51
35:DA:600:G:H2'	35:DA:601:C:O4'	2.10	0.51
35:DA:863:A:H2'	35:DA:864:G:H8	1.74	0.51
35:DA:1041:C:H5'	35:DA:1042:G:OP2	2.10	0.51
35:DA:1495:A:O2'	35:DA:1496:A:H5'	2.10	0.51
35:DA:1763:G:H4'	35:DA:1763:G:OP1	2.09	0.51
35:DA:1859:A:N6	35:DA:1883:G:O2'	2.44	0.51
35:DA:1932:A:H2'	35:DA:1933:G:O4'	2.09	0.51
35:DA:2567:G:H2'	35:DA:2568:C:C6	2.45	0.51
35:DA:2679:A:H4'	39:DE:165:VAL:HG11	1.92	0.51
41:DG:41:GLN:HA	41:DG:155:MET:HB2	1.91	0.51
41:DG:55:LYS:HZ1	41:DG:148:MET:HB3	1.75	0.51
42:DH:33:LEU:HD21	42:DH:136:ILE:HG13	1.91	0.51
43:DI:53:ALA:HA	43:DI:56:LYS:HB3	1.93	0.51
48:DP:38:GLN:HG3	48:DP:39:LYS:N	2.24	0.51
53:DU:92:ARG:NE	54:DV:11:GLN:HB2	2.25	0.51
57:DY:26:LYS:HG2	57:DY:27:VAL:H	1.75	0.51
57:DY:101:LYS:NZ	57:DY:110:GLU:HB2	2.25	0.51
1:AA:1008:C:N3	1:AA:1022:G:C6	2.78	0.51
1:AA:1160:G:H22	1:AA:1182:G:N2	2.08	0.51
12:AL:57:LYS:HG3	12:AL:67:THR:HG22	1.90	0.51
17:AQ:6:LEU:HD22	17:AQ:23:VAL:HG11	1.91	0.51
18:AR:72:ARG:HA	18:AR:75:ILE:HD12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:63:C:H2'	22:AV:64:G:C8	2.45	0.51
25:B0:74:ARG:HG2	36:BB:12:C:O2'	2.11	0.51
26:B1:17:SER:C	26:B1:44:PRO:HG3	2.34	0.51
35:BA:1025:G:C5	35:BA:1135:C:H1'	2.45	0.51
35:BA:1926:U:H2'	35:BA:1928:A:OP2	2.10	0.51
35:BA:2318:G:H22	51:BS:7:TYR:CB	2.23	0.51
35:BA:2356:C:H2'	35:BA:2357:U:O4'	2.10	0.51
35:BA:2639:A:O3'	46:BN:97:ARG:NH2	2.39	0.51
39:BE:111:ARG:HA	50:BR:3:HIS:HE1	1.74	0.51
40:BF:101:LEU:HD12	40:BF:102:PRO:HD2	1.91	0.51
46:BN:33:LEU:HD21	46:BN:137:LYS:HE2	1.91	0.51
49:BQ:7:MET:HG2	49:BQ:8:LYS:N	2.25	0.51
49:BQ:23:GLY:CA	49:BQ:101:ARG:HD2	2.41	0.51
49:BQ:42:ILE:HG13	49:BQ:97:VAL:HG21	1.91	0.51
49:BQ:119:ARG:C	49:BQ:121:ALA:H	2.19	0.51
50:BR:9:LYS:HD3	50:BR:43:GLU:OE2	2.10	0.51
51:BS:10:ARG:O	51:BS:12:PHE:N	2.42	0.51
51:BS:62:LYS:CA	51:BS:65:VAL:HA	2.26	0.51
51:BS:67:ARG:HA	51:BS:98:VAL:CG1	2.38	0.51
52:BT:28:VAL:HG21	52:BT:88:ILE:HD11	1.93	0.51
56:BX:44:GLU:HA	56:BX:49:VAL:HG23	1.91	0.51
57:BY:10:GLY:HA3	57:BY:28:LYS:CE	2.39	0.51
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.75	0.51
3:CC:40:ARG:CZ	14:CN:52:GLN:HG2	2.40	0.51
11:CK:30:VAL:HG21	11:CK:65:ALA:HA	1.92	0.51
16:CP:2:VAL:HG23	16:CP:22:THR:O	2.10	0.51
18:CR:88:LYS:HD2	18:CR:88:LYS:OXT	2.10	0.51
25:D0:27:GLU:HG3	35:DA:856:C:C4'	2.40	0.51
26:D1:20:ARG:HH21	26:D1:41:ARG:HB2	1.74	0.51
34:D9:14:CYS:HA	34:D9:27:CYS:CB	2.36	0.51
35:DA:1059:G:O2'	35:DA:1070:A:O2'	2.05	0.51
35:DA:1170:G:C2	35:DA:1171:G:H1'	2.45	0.51
35:DA:1464:C:O2'	35:DA:1528:A:C8	2.47	0.51
35:DA:2690:C:H5"	35:DA:2872:G:N2	2.24	0.51
36:DB:52:A:O2'	36:DB:53:A:OP2	2.25	0.51
39:DE:63:LEU:O	39:DE:64:LYS:C	2.53	0.51
43:DI:80:PRO:CA	43:DI:143:SER:HA	2.30	0.51
52:DT:24:PRO:HB3	52:DT:99:LEU:HD21	1.91	0.51
57:DY:60:PHE:O	57:DY:62:GLU:HG3	2.10	0.51
1:AA:667:G:O2'	15:AO:49:ASP:OD1	2.25	0.51
3:AC:131:ARG:HD3	5:AE:50:GLU:OE2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:35:A:H5'	23:AW:36:A:OP2	2.10	0.51
25:B0:20:ARG:HE	35:BA:2271:G:H5"	1.76	0.51
25:B0:43:THR:CG2	35:BA:2336:A:H61	2.23	0.51
25:B0:70:GLN:NE2	25:B0:72:ARG:HD3	2.25	0.51
27:B2:46:GLN:O	27:B2:48:HIS:N	2.44	0.51
35:BA:154(A):C:H41	35:BA:172:C:H42	1.58	0.51
35:BA:271(Q):G:O2'	35:BA:271(R):G:OP2	2.23	0.51
35:BA:297:C:H5"	57:BY:85:VAL:HG21	1.92	0.51
35:BA:494:G:H5"	35:BA:494:G:H8	1.75	0.51
35:BA:675:A:N6	35:BA:676:A:N6	2.58	0.51
35:BA:1277:G:H5"	50:BR:40:LYS:NZ	2.25	0.51
35:BA:1283:G:N2	35:BA:1286:A:OP2	2.42	0.51
35:BA:1931:U:H5'	35:BA:1931:U:H6	1.76	0.51
35:BA:2468:G:O2'	35:BA:2481:G:N2	2.44	0.51
35:BA:2894:G:H5"	35:BA:2895:U:H5'	1.91	0.51
36:BB:57:A:N3	41:BG:29:TRP:HB3	2.24	0.51
41:BG:119:GLY:HA3	41:BG:180:PHE:O	2.10	0.51
50:BR:78:LYS:O	50:BR:82:GLU:HB3	2.10	0.51
51:BS:26:LEU:HD11	51:BS:87:PHE:CD2	2.45	0.51
55:BW:59:VAL:HG22	55:BW:64:MET:C	2.36	0.51
55:BW:68:ARG:NH1	55:BW:111:HIS:O	2.43	0.51
57:BY:86:ARG:C	57:BY:88:LYS:HZ3	2.17	0.51
1:CA:939:G:H5"	7:CG:102:ARG:CZ	2.39	0.51
1:CA:1013:G:H2'	1:CA:1015:A:OP2	2.10	0.51
3:CC:64:VAL:O	3:CC:100:ALA:HB3	2.09	0.51
4:CD:35:ARG:HB3	4:CD:36:ARG:HG3	1.92	0.51
13:CM:84:ILE:HD12	19:CS:66:MET:HE1	1.92	0.51
28:D3:3:ARG:HH12	28:D3:60:GLU:HA	1.75	0.51
35:DA:528:A:H3'	35:DA:528:A:C8	2.46	0.51
35:DA:2354:G:H1	35:DA:2363:C:H42	1.58	0.51
35:DA:2415:G:H4'	48:DP:66:GLY:HA2	1.93	0.51
35:DA:2723:C:H4'	50:DR:2:ARG:O	2.10	0.51
38:DD:138:VAL:HA	38:DD:165:ILE:CG2	2.40	0.51
1:AA:109:A:H2'	1:AA:326:G:H21	1.75	0.51
1:AA:179:A:H2'	1:AA:180:U:H6	1.75	0.51
1:AA:528:C:H5"	1:AA:529:G:OP2	2.11	0.51
1:AA:605:U:H2'	1:AA:606:G:H8	1.74	0.51
1:AA:837:G:H2'	1:AA:838:G:H5"	1.91	0.51
1:AA:1305:G:H5"	21:AU:4:GLY:HA3	1.92	0.51
7:AG:31:MET:HE2	7:AG:31:MET:HA	1.93	0.51
23:AW:51:U:H2'	23:AW:52:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:72:ARG:CB	25:B0:75:LEU:HB2	2.41	0.51
25:B0:74:ARG:CZ	36:BB:13:A:OP2	2.57	0.51
28:B3:20:LYS:NZ	28:B3:20:LYS:HB3	2.25	0.51
34:B9:18:ARG:HD2	35:BA:1034:G:H5'	1.93	0.51
35:BA:389:G:H1	48:BP:71:VAL:HG11	1.76	0.51
35:BA:447:A:N1	35:BA:454:A:O2'	2.43	0.51
35:BA:581:C:N4	35:BA:1259:G:H1	2.09	0.51
35:BA:813:U:H2'	35:BA:814:C:C6	2.45	0.51
35:BA:1357:U:H2'	35:BA:1358:G:O4'	2.11	0.51
35:BA:2231:C:H2'	35:BA:2232:U:O4'	2.10	0.51
35:BA:2393:A:C2'	35:BA:2394:C:H5'	2.41	0.51
39:BE:119:ARG:HG2	39:BE:160:TYR:HB2	1.93	0.51
48:BP:75:ILE:O	48:BP:77:ARG:N	2.44	0.51
50:BR:11:ASN:OD1	50:BR:12:ARG:N	2.31	0.51
57:BY:27:VAL:CG2	57:BY:30:VAL:HG11	2.40	0.51
1:CA:128:G:H4'	17:CQ:3:LYS:HG2	1.92	0.51
1:CA:329:A:C4	1:CA:332:G:C5	2.99	0.51
1:CA:966:G:O2'	9:CI:127:LYS:HB3	2.10	0.51
1:CA:977:A:O2'	1:CA:981:U:N3	2.41	0.51
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.10	0.51
1:CA:1344:C:HO2'	1:CA:1348:U:HO2'	1.53	0.51
2:CB:155:LEU:HD21	2:CB:159:PRO:HB3	1.92	0.51
4:CD:78:LEU:HD21	4:CD:139:ARG:HH22	1.76	0.51
5:CE:11:ILE:HD11	5:CE:108:ALA:HB3	1.92	0.51
15:CO:43:LEU:HD11	15:CO:53:HIS:HA	1.91	0.51
19:CS:41:VAL:HB	19:CS:44:MET:SD	2.51	0.51
27:D2:49:LYS:HD3	27:D2:54:LYS:HZ1	1.74	0.51
35:DA:435:C:O5'	35:DA:435:C:H6	1.93	0.51
35:DA:1107:G:O2'	44:DJ:81:UNK:HA	2.11	0.51
35:DA:1441:G:H2'	35:DA:1442:G:H8	1.76	0.51
35:DA:1486:A:H2'	35:DA:1487:G:C8	2.39	0.51
35:DA:1588:C:H2'	35:DA:1589:C:C6	2.45	0.51
35:DA:2111:C:O2'	35:DA:2118:U:H4'	2.11	0.51
35:DA:2701:C:H2'	35:DA:2702:U:H2'	1.92	0.51
41:DG:94:LEU:HD22	41:DG:98:ARG:HB2	1.92	0.51
49:DQ:138:ASP:N	49:DQ:138:ASP:OD1	2.41	0.51
49:DQ:139:GLU:OE2	58:DZ:54:HIS:CE1	2.63	0.51
52:DT:35:LYS:HE3	52:DT:41:ARG:HE	1.76	0.51
52:DT:89:VAL:HG23	52:DT:91:ARG:HD2	1.93	0.51
55:DW:11:ARG:O	55:DW:11:ARG:HG3	2.10	0.51
56:DX:70:LEU:C	56:DX:72:LYS:H	2.16	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:191:G:C4	20:AT:105:SER:HB3	2.46	0.51
1:AA:692:U:N3	1:AA:695:A:OP2	2.37	0.51
1:AA:821:G:H2'	1:AA:822:C:C6	2.46	0.51
1:AA:1111:A:N6	3:AC:176:HIS:O	2.44	0.51
1:AA:1421:G:C2'	1:AA:1422:G:H5'	2.40	0.51
2:AB:84:GLU:O	2:AB:219:VAL:HG11	2.11	0.51
3:AC:6:HIS:ND1	3:AC:7:PRO:HD2	2.25	0.51
5:AE:50:GLU:HG2	5:AE:53:LEU:HB2	1.93	0.51
8:AH:97:VAL:HG12	8:AH:129:VAL:O	2.10	0.51
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.10	0.51
22:AV:17:C:H2'	22:AV:17:C:O2	2.09	0.51
33:B8:43:GLN:O	33:B8:44:LYS:HD2	2.10	0.51
35:BA:1545:A:N3	35:BA:1546:C:H5	2.09	0.51
35:BA:1948:G:H5'	35:BA:1949:G:OP2	2.11	0.51
35:BA:2668:G:H8	35:BA:2668:G:O5'	1.94	0.51
43:BI:77:LEU:HD12	43:BI:140:LEU:HD13	1.92	0.51
48:BP:85:LEU:HB2	48:BP:116:GLY:HA2	1.93	0.51
48:BP:110:TYR:C	48:BP:110:TYR:HD1	2.19	0.51
52:BT:92:GLY:HA3	52:BT:120:ARG:NH2	2.26	0.51
55:BW:65:LEU:HD13	55:BW:68:ARG:HE	1.76	0.51
1:CA:26:A:N6	1:CA:558:G:O2'	2.43	0.51
1:CA:60:A:N1	1:CA:107:G:O2'	2.40	0.51
1:CA:118:U:H3'	1:CA:288:A:H61	1.75	0.51
1:CA:189(J):G:H2'	1:CA:189(K):U:O4'	2.11	0.51
1:CA:625:G:H4'	16:CP:16:HIS:CD2	2.45	0.51
1:CA:1186:G:O3'	9:CI:113:LYS:HE2	2.10	0.51
1:CA:1435:G:H8	1:CA:1435:G:O5'	1.94	0.51
2:CB:166:ASP:OD2	2:CB:169:LYS:HB2	2.11	0.51
3:CC:180:ALA:HB1	3:CC:182:ILE:HG13	1.92	0.51
8:CH:114:THR:HG22	8:CH:117:GLY:O	2.11	0.51
12:CL:51:ALA:CB	12:CL:53:ARG:NH2	2.74	0.51
13:CM:82:MET:HG3	13:CM:83:ASP:H	1.75	0.51
16:CP:39:TYR:CG	16:CP:40:ASP:N	2.79	0.51
20:CT:27:LYS:NZ	20:CT:30:LYS:HD3	2.26	0.51
20:CT:45:GLN:HB2	20:CT:91:LEU:HD13	1.92	0.51
26:D1:19:GLN:CD	26:D1:44:PRO:HG3	2.36	0.51
35:DA:376:C:H2'	35:DA:377:C:C6	2.46	0.51
35:DA:1568:G:P	38:DD:63:ARG:HH22	2.31	0.51
35:DA:1570:A:H2'	35:DA:1571:A:C8	2.45	0.51
35:DA:1952:A:C6	47:DO:22:ILE:HD12	2.45	0.51
35:DA:2262:U:H4'	35:DA:2328:A:C2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2489:G:H2'	35:DA:2490:G:H5"	1.91	0.51
35:DA:2808:U:H5"	35:DA:2891:G:O6	2.10	0.51
36:DB:25:A:H2'	36:DB:26:A:C8	2.46	0.51
43:DI:91:SER:OG	43:DI:119:PRO:O	2.18	0.51
49:DQ:77:LYS:NZ	49:DQ:82:ARG:HA	2.26	0.51
55:DW:18:ARG:NH1	55:DW:76:VAL:O	2.44	0.51
56:DX:10:ALA:HB1	56:DX:11:PRO:HD2	1.92	0.51
57:DY:27:VAL:O	57:DY:29:GLU:OE2	2.29	0.51
58:DZ:128:VAL:HB	58:DZ:161:VAL:HG22	1.91	0.51
1:AA:811:C:H4'	1:AA:900:A:N6	2.25	0.51
1:AA:1321:C:H5'	13:AM:87:TYR:CE1	2.45	0.51
2:AB:162:ILE:HG22	2:AB:184:VAL:HA	1.93	0.51
3:AC:134:ILE:HD12	3:AC:151:VAL:HB	1.92	0.51
4:AD:19:LEU:HD13	4:AD:21:LEU:HD21	1.91	0.51
4:AD:57:ARG:NH1	4:AD:205:GLU:OE2	2.44	0.51
5:AE:143:ARG:NH1	8:AH:77:GLU:OE2	2.44	0.51
25:B0:66:VAL:O	25:B0:81:VAL:HA	2.10	0.51
26:B1:10:LYS:HD2	26:B1:14:VAL:CA	2.36	0.51
35:BA:108:U:H2'	35:BA:109:G:H8	1.76	0.51
35:BA:271(K):U:H1'	43:BI:50:ARG:CZ	2.41	0.51
35:BA:594:U:H2'	35:BA:595:C:H6	1.75	0.51
35:BA:937:U:H2'	35:BA:938:G:O4'	2.11	0.51
35:BA:1056:G:O2'	35:BA:1057:A:O4'	2.28	0.51
35:BA:1102:C:H1'	35:BA:1103:A:N7	2.26	0.51
35:BA:2199:A:H3'	35:BA:2200:C:H6	1.76	0.51
35:BA:2274:A:C5	35:BA:2276:G:C8	2.99	0.51
35:BA:2542:A:O2'	35:BA:2543:G:P	2.69	0.51
38:BD:11:PRO:HA	38:BD:14:ARG:HH21	1.73	0.51
39:BE:108:SER:O	39:BE:162:ALA:HA	2.11	0.51
42:BH:70:THR:HG22	42:BH:74:ASN:OD1	2.11	0.51
51:BS:7:TYR:HB2	51:BS:8:GLU:CD	2.36	0.51
52:BT:45:PHE:CD2	52:BT:74:ARG:HD2	2.46	0.51
53:BU:25:TRP:CD1	53:BU:26:GLY:N	2.78	0.51
57:BY:6:HIS:C	57:BY:8:LYS:H	2.18	0.51
1:CA:407:G:H5"	4:CD:115:ARG:HB3	1.93	0.51
1:CA:826:C:H4'	8:CH:12:ARG:HG2	1.92	0.51
1:CA:1028:C:N4	1:CA:1033:G:H1	2.08	0.51
2:CB:165:VAL:HA	2:CB:187:LEU:CD2	2.41	0.51
4:CD:31:CYS:O	4:CD:31:CYS:SG	2.67	0.51
8:CH:112:LEU:HD12	8:CH:113:SER:N	2.26	0.51
12:CL:59:ARG:NH2	12:CL:63:GLY:HA2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:23:LYS:HB2	18:CR:57:GLY:HA3	1.93	0.51
26:D1:38:SER:HB2	35:DA:2080:G:H4'	1.91	0.51
35:DA:583:G:OP2	53:DU:10:ARG:NH1	2.43	0.51
35:DA:2783:G:H2'	35:DA:2784:C:C6	2.46	0.51
37:DC:46:LYS:O	37:DC:207:THR:HA	2.10	0.51
38:DD:274:ARG:HG2	38:DD:275:LYS:H	1.75	0.51
40:DF:150:GLY:HA2	40:DF:172:TRP:CD2	2.46	0.51
40:DF:161:GLU:HG2	40:DF:164:ARG:HH12	1.76	0.51
41:DG:64:THR:OG1	41:DG:94:LEU:HD11	2.09	0.51
48:DP:27:HIS:CD2	48:DP:28:GLY:HA3	2.45	0.51
51:DS:38:GLN:HG2	51:DS:47:THR:HG21	1.92	0.51
54:DV:34:GLU:OE1	54:DV:35:LEU:N	2.43	0.51
55:DW:5:ALA:HB2	55:DW:54:ALA:HB2	1.92	0.51
1:AA:175:C:H2'	1:AA:176:C:C5'	2.41	0.51
1:AA:1075:C:H5"	2:AB:179:LYS:HE3	1.93	0.51
1:AA:1243:C:H5'	21:AU:8:THR:HB	1.92	0.51
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.46	0.51
3:AC:121:ALA:HB1	3:AC:188:LEU:O	2.11	0.51
10:AJ:46:ARG:HB2	10:AJ:64:GLU:HG2	1.92	0.51
14:AN:45:ARG:O	14:AN:49:HIS:ND1	2.41	0.51
17:AQ:21:VAL:HG11	17:AQ:59:ILE:HD11	1.92	0.51
18:AR:36:ASN:O	18:AR:39:VAL:HB	2.11	0.51
20:AT:14:LYS:HG3	20:AT:17:ARG:NH2	2.26	0.51
30:B5:47:PRO:HB3	50:BR:102:GLU:OE1	2.11	0.51
34:B9:27:CYS:SG	34:B9:28:GLU:N	2.84	0.51
35:BA:528:A:C2	35:BA:2043:C:H4'	2.45	0.51
35:BA:1301:A:C8	35:BA:1303:G:C8	2.97	0.51
35:BA:1341:U:OP1	35:BA:1397:U:N3	2.40	0.51
35:BA:1865:G:H5'	35:BA:1866:C:OP2	2.09	0.51
35:BA:2445:G:C2'	35:BA:2446:G:H5'	2.41	0.51
35:BA:2557:G:O2'	35:BA:2558:C:H5'	2.11	0.51
35:BA:2677:G:H2'	35:BA:2678:C:C6	2.46	0.51
35:BA:2759:G:H2'	35:BA:2760:C:H5'	1.93	0.51
36:BB:43:C:H5'	36:BB:44:G:OP2	2.11	0.51
39:BE:26:ILE:HB	39:BE:182:LEU:HB3	1.93	0.51
49:BQ:66:ILE:HG22	49:BQ:104:PHE:CE2	2.46	0.51
50:BR:20:LEU:O	50:BR:24:GLN:N	2.44	0.51
52:BT:10:VAL:O	52:BT:13:ARG:HD2	2.09	0.51
52:BT:36:GLU:OE2	52:BT:38:ASN:O	2.28	0.51
1:CA:284:G:H2'	1:CA:285:G:H8	1.76	0.51
1:CA:412:A:C6	4:CD:35:ARG:HG3	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:517:G:H5'	1:CA:519:C:C2	2.46	0.51
1:CA:574:A:N3	1:CA:883:C:H1'	2.25	0.51
1:CA:590:C:H2'	1:CA:591:U:H6	1.76	0.51
1:CA:690:G:H2'	1:CA:691:G:O4'	2.10	0.51
1:CA:1313:U:O4	19:CS:4:SER:N	2.44	0.51
3:CC:116:VAL:O	3:CC:120:VAL:HG22	2.11	0.51
4:CD:78:LEU:HD21	4:CD:139:ARG:NH2	2.25	0.51
12:CL:51:ALA:HB3	12:CL:53:ARG:NH2	2.26	0.51
13:CM:3:ARG:HH21	13:CM:9:ILE:CD1	2.23	0.51
13:CM:66:LEU:C	13:CM:70:LEU:HB2	2.36	0.51
23:CW:33:U:H5	23:CW:35:A:OP1	1.93	0.51
31:D6:18:ARG:HB3	31:D6:19:ARG:HG2	1.93	0.51
35:DA:20:C:N4	35:DA:520:G:H1	2.09	0.51
35:DA:140:G:H8	35:DA:140:G:OP2	1.94	0.51
35:DA:415:A:H2'	35:DA:416:C:C6	2.45	0.51
35:DA:588:U:H2'	35:DA:589:C:C6	2.45	0.51
35:DA:1050:A:C2	35:DA:1051:G:N2	2.78	0.51
35:DA:1205:U:H4'	35:DA:1206:G:OP2	2.11	0.51
35:DA:1582:C:O2'	35:DA:1583:A:O5'	2.29	0.51
35:DA:2295:C:OP2	51:DS:15:ARG:NH1	2.44	0.51
35:DA:2758:A:C4	42:DH:67:LEU:HD21	2.45	0.51
35:DA:2811:G:OP1	39:DE:60:ASN:HA	2.11	0.51
46:DN:39:ARG:NE	46:DN:41:ASP:HB2	2.20	0.51
49:DQ:63:LYS:O	49:DQ:63:LYS:HD2	2.10	0.51
49:DQ:90:VAL:O	49:DQ:91:GLU:HG2	2.10	0.51
50:DR:100:LEU:HD11	50:DR:113:LEU:HD13	1.92	0.51
52:DT:25:GLY:HA2	52:DT:91:ARG:HB3	1.92	0.51
1:AA:454:C:N4	1:AA:479:C:O2	2.44	0.51
1:AA:511:C:C2	1:AA:512:U:C5	2.99	0.51
1:AA:1249:C:O2'	9:AI:69:GLY:O	2.29	0.51
9:AI:96:LEU:HD23	9:AI:102:LEU:HG	1.93	0.51
12:AL:45:PRO:HG3	12:AL:53:ARG:HD2	1.93	0.51
12:AL:84:LEU:C	12:AL:85:ILE:HD12	2.36	0.51
16:AP:9:PHE:HE2	16:AP:18:ARG:HD2	1.75	0.51
17:AQ:32:TYR:O	17:AQ:34:LYS:N	2.40	0.51
18:AR:37:VAL:HG11	18:AR:78:LEU:HB3	1.92	0.51
18:AR:73:ALA:HB1	18:AR:79:LEU:HG	1.92	0.51
35:BA:10:G:C6	35:BA:2629:A:N6	2.78	0.51
35:BA:226:G:O2'	35:BA:227:A:OP2	2.25	0.51
35:BA:289:A:H61	35:BA:351:G:H1'	1.76	0.51
35:BA:997:G:OP1	53:BU:93:LYS:HD3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1825:A:O3'	38:BD:233:HIS:NE2	2.43	0.51
35:BA:2684:U:C2'	35:BA:2685:G:H5'	2.41	0.51
42:BH:17:VAL:O	42:BH:45:VAL:HG21	2.11	0.51
48:BP:27:HIS:CB	48:BP:29:LYS:HG2	2.39	0.51
54:BV:85:LYS:C	54:BV:87:HIS:CD2	2.89	0.51
57:BY:39:VAL:HG12	57:BY:40:GLU:H	1.75	0.51
1:CA:83:U:H2'	1:CA:84:U:C6	2.46	0.51
1:CA:337:C:H2'	1:CA:338:A:C8	2.46	0.51
1:CA:355:C:H2'	1:CA:356:A:O4'	2.10	0.51
1:CA:1027:C:H5"	1:CA:1028:C:OP2	2.11	0.51
1:CA:1068:G:OP2	1:CA:1068:G:C8	2.50	0.51
3:CC:143:GLU:O	3:CC:145:GLY:N	2.44	0.51
4:CD:113:SER:O	4:CD:117:ALA:N	2.44	0.51
10:CJ:87:THR:O	10:CJ:89:ASP:N	2.44	0.51
15:CO:24:SER:O	15:CO:25:THR:C	2.54	0.51
17:CQ:69:LYS:NZ	17:CQ:69:LYS:HB3	2.24	0.51
27:D2:44:LEU:HD12	27:D2:45:SER:H	1.75	0.51
30:D5:3:LYS:HB3	35:DA:747:U:C5	2.46	0.51
33:D8:31:HIS:CA	35:DA:2420:C:H41	2.24	0.51
35:DA:245:G:O5'	48:DP:73:GLY:HA2	2.11	0.51
35:DA:760:G:H2'	35:DA:761:A:O4'	2.10	0.51
35:DA:793:A:O2'	35:DA:794:G:OP2	2.25	0.51
35:DA:918:A:N3	36:DB:80:U:O2'	2.42	0.51
35:DA:2200:C:O2	35:DA:2226:C:N4	2.44	0.51
37:DC:78:ALA:HB1	37:DC:82:LYS:CB	2.39	0.51
38:DD:21:PHE:HB3	38:DD:24:ILE:CG1	2.40	0.51
39:DE:77:ILE:HD12	39:DE:79:ARG:HH12	1.76	0.51
41:DG:125:PHE:HB2	41:DG:166:ASP:HB3	1.93	0.51
46:DN:137:LYS:HB2	46:DN:140:VAL:HA	1.92	0.51
54:DV:51:VAL:HG11	54:DV:56:SER:CB	2.41	0.51
56:DX:43:VAL:HG23	56:DX:47:PHE:CD2	2.45	0.51
1:AA:56:U:H2'	1:AA:57:G:H5'	1.93	0.51
1:AA:473:G:OP2	16:AP:75:ARG:HG2	2.10	0.51
1:AA:485:G:H1'	1:AA:486:U:H5	1.76	0.51
1:AA:1014:A:H4'	19:AS:14:HIS:CE1	2.46	0.51
1:AA:1321:C:H5"	1:AA:1322:C:C5'	2.40	0.51
1:AA:1442:G:N7	1:AA:1442(B):A:C6	2.79	0.51
3:AC:18:TRP:CD1	14:AN:54:PRO:HA	2.46	0.51
3:AC:156:ARG:O	3:AC:157:ILE:HB	2.10	0.51
6:AF:33:TYR:OH	6:AF:78:GLU:OE2	2.22	0.51
6:AF:100:ASN:O	18:AR:28:GLU:HA	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:86:GLY:O	15:AO:87:ILE:HG23	2.11	0.51
23:AW:23:A:N6	23:AW:24:G:O6	2.44	0.51
31:B6:46:HIS:CE1	35:BA:2371:G:O2'	2.64	0.51
33:B8:52:LYS:N	33:B8:53:PRO:HD2	2.26	0.51
35:BA:328:U:H4'	57:BY:68:HIS:CE1	2.45	0.51
35:BA:910:A:H62	49:BQ:12:GLN:HA	1.76	0.51
35:BA:1062:G:H2'	35:BA:1062:G:N3	2.25	0.51
35:BA:1100:C:OP1	35:BA:1100:C:H4'	2.11	0.51
35:BA:1473:G:H2'	35:BA:1474:C:O4'	2.10	0.51
35:BA:1638:C:H6	35:BA:2698:U:O2'	1.94	0.51
35:BA:1690:A:H3'	35:BA:1691:C:H6	1.75	0.51
35:BA:1889:A:N1	35:BA:2234:G:H1'	2.26	0.51
35:BA:2377:A:H2'	35:BA:2378:A:O4'	2.11	0.51
35:BA:2881:C:O3'	50:BR:96:ARG:NH2	2.36	0.51
37:BC:66:HIS:NE2	37:BC:186:ALA:O	2.43	0.51
42:BH:148:ILE:O	42:BH:150:ALA:N	2.44	0.51
46:BN:18:ALA:CB	46:BN:26:LEU:HD22	2.41	0.51
49:BQ:42:ILE:HG13	49:BQ:97:VAL:CG2	2.41	0.51
49:BQ:78:PRO:HD3	49:BQ:87:LYS:HB3	1.93	0.51
50:BR:28:LEU:HD23	50:BR:34:ILE:HG21	1.92	0.51
52:BT:51:ARG:NH2	52:BT:100:TYR:HE1	2.09	0.51
58:BZ:10:ARG:HH21	58:BZ:36:LYS:HD2	1.76	0.51
58:BZ:17:ALA:HA	58:BZ:20:ARG:HB2	1.93	0.51
1:CA:139:G:C6	1:CA:140:A:N7	2.79	0.51
1:CA:158:G:H2'	1:CA:159:G:C8	2.46	0.51
1:CA:574:A:H1'	1:CA:883:C:O4'	2.11	0.51
2:CB:74:LYS:HZ2	2:CB:205:ASP:HB2	1.75	0.51
2:CB:99:GLY:O	2:CB:101:MET:N	2.44	0.51
3:CC:24:ALA:HB1	3:CC:28:GLN:O	2.10	0.51
4:CD:30:LYS:C	4:CD:32:ALA:H	2.16	0.51
11:CK:29:ILE:HD13	11:CK:44:SER:HB3	1.93	0.51
14:CN:59:ALA:O	14:CN:60:SER:OG	2.23	0.51
16:CP:52:ASP:O	16:CP:55:ARG:N	2.44	0.51
23:CW:6:G:H1'	23:CW:68:C:H41	1.76	0.51
25:D0:5:LYS:HA	49:DQ:80:GLU:OE1	2.11	0.51
25:D0:27:GLU:HA	25:D0:67:VAL:O	2.10	0.51
33:D8:25:MET:HG2	48:DP:64:LYS:CB	2.40	0.51
35:DA:607:U:OP1	40:DF:102:PRO:HA	2.11	0.51
35:DA:732:C:H2'	35:DA:733:G:O4'	2.11	0.51
35:DA:1412:A:H2'	35:DA:1413:G:H8	1.76	0.51
35:DA:2167:U:H2'	35:DA:2169:A:OP2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2207:G:H2'	35:DA:2207:G:N3	2.25	0.51
35:DA:2295:C:O2'	35:DA:2296:U:H5'	2.11	0.51
35:DA:2305:A:H61	41:DG:43:LEU:CD1	2.18	0.51
35:DA:2335:A:C8	35:DA:2337:G:C5	2.98	0.51
35:DA:2544:G:H8	35:DA:2544:G:O5'	1.94	0.51
40:DF:3:GLU:CB	40:DF:24:LEU:HG	2.41	0.51
40:DF:34:TRP:CH2	48:DP:16:ARG:HD3	2.46	0.51
42:DH:113:VAL:HG11	42:DH:151:ILE:HD12	1.93	0.51
48:DP:27:HIS:CG	48:DP:28:GLY:N	2.76	0.51
58:DZ:138:GLU:O	58:DZ:155:LEU:HD21	2.11	0.51
1:AA:195:A:OP1	20:AT:68:LYS:NZ	2.44	0.51
1:AA:730:G:C5	1:AA:731:G:H1'	2.46	0.51
1:AA:1114:C:H42	1:AA:1186:G:H22	1.59	0.51
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.75	0.51
8:AH:29:SER:H	8:AH:32:LYS:HB2	1.76	0.51
30:B5:3:LYS:HZ2	30:B5:4:HIS:HB2	1.75	0.51
30:B5:49:CYS:O	30:B5:50:GLY:C	2.53	0.51
33:B8:5:LYS:HG2	35:BA:242:G:C8	2.46	0.51
35:BA:1373:A:H5"	35:BA:1374:G:OP2	2.11	0.51
35:BA:1583:A:N3	35:BA:1583:A:OP2	2.44	0.51
35:BA:2303:G:H5'	41:BG:126:ASP:HB2	1.92	0.51
36:BB:9:G:P	51:BS:25:ARG:NH2	2.84	0.51
37:BC:100:ILE:HG23	37:BC:132:GLY:HA3	1.93	0.51
38:BD:30:GLU:HG3	38:BD:63:ARG:NH2	2.26	0.51
38:BD:35:LYS:HG2	38:BD:104:TYR:CD2	2.46	0.51
39:BE:117:MET:HE1	39:BE:136:ARG:HA	1.92	0.51
40:BF:53:THR:HG22	40:BF:56:GLU:HB2	1.92	0.51
41:BG:125:PHE:HB3	41:BG:166:ASP:HB2	1.93	0.51
43:BI:6:LEU:O	43:BI:15:VAL:HG23	2.11	0.51
49:BQ:108:GLY:N	49:BQ:109:VAL:HG22	2.26	0.51
53:BU:32:PHE:CD1	53:BU:32:PHE:N	2.79	0.51
56:BX:38:GLU:CD	56:BX:38:GLU:H	2.19	0.51
1:CA:584:G:H5'	17:CQ:91:ARG:NH1	2.25	0.51
1:CA:790:A:C6	1:CA:791:G:C6	2.99	0.51
1:CA:1054:C:OP2	1:CA:1197:G:OP2	2.28	0.51
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.46	0.51
2:CB:60:ASP:O	2:CB:64:ARG:HG2	2.10	0.51
2:CB:76:GLN:O	2:CB:211:ILE:HD12	2.10	0.51
3:CC:11:ARG:HG2	3:CC:15:THR:HG21	1.93	0.51
9:CI:33:PHE:O	9:CI:36:TYR:N	2.44	0.51
9:CI:55:ALA:HB1	9:CI:59:PHE:CD1	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:93:ARG:HH12	9:CI:97:LYS:HD3	1.76	0.51
18:CR:47:THR:O	18:CR:83:GLU:N	2.43	0.51
18:CR:56:THR:OG1	18:CR:57:GLY:N	2.44	0.51
19:CS:28:LYS:HD2	19:CS:29:ARG:HG2	1.92	0.51
28:D3:11:SER:OG	35:DA:989:G:OP2	2.14	0.51
35:DA:2261:C:H1'	35:DA:2388:A:N3	2.26	0.51
36:DB:51:G:P	51:DS:63:THR:HG23	2.50	0.51
38:DD:43:ARG:HH22	38:DD:52:ARG:C	2.19	0.51
40:DF:21:ALA:C	40:DF:23:ASP:N	2.69	0.51
44:DJ:22:UNK:HA	44:DJ:119:UNK:CB	2.41	0.51
46:DN:78:TYR:CG	46:DN:79:PRO:HD3	2.46	0.51
56:DX:87:GLN:OE1	56:DX:88:LYS:HG2	2.11	0.51
1:AA:538:G:H5"	12:AL:114:LYS:HB2	1.93	0.50
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.46	0.50
1:AA:1375:A:OP1	7:AG:28:ASN:ND2	2.45	0.50
2:AB:68:ILE:HB	2:AB:70:PHE:CE1	2.47	0.50
3:AC:19:GLU:HA	3:AC:54:ARG:NH1	2.26	0.50
14:AN:46:GLU:O	14:AN:48:ALA:N	2.44	0.50
16:AP:17:TYR:HE1	16:AP:41:PRO:HG3	1.76	0.50
34:B9:31:LYS:HD3	35:BA:2478:A:H5'	1.93	0.50
35:BA:588:U:H1'	40:BF:90:PHE:HB3	1.93	0.50
35:BA:1629:U:H2'	35:BA:1630:G:O4'	2.11	0.50
35:BA:1799:G:H5'	35:BA:1819:A:N6	2.26	0.50
39:BE:4:ILE:HD13	39:BE:91:VAL:HG12	1.92	0.50
47:BO:119:PRO:HB3	52:BT:68:TYR:CZ	2.46	0.50
49:BQ:37:LEU:HD11	49:BQ:130:LYS:HB2	1.93	0.50
50:BR:85:PRO:HA	50:BR:88:ARG:HB3	1.93	0.50
51:BS:26:LEU:HD12	51:BS:27:SER:N	2.26	0.50
51:BS:74:ALA:HA	51:BS:106:ARG:HG2	1.93	0.50
52:BT:11:GLU:CD	52:BT:11:GLU:N	2.68	0.50
52:BT:16:ARG:HH11	52:BT:16:ARG:HB2	1.75	0.50
52:BT:60:THR:HG22	52:BT:77:PRO:HA	1.93	0.50
54:BV:66:ARG:NH1	54:BV:67:GLY:O	2.44	0.50
56:BX:37:THR:CG2	56:BX:39:ILE:HB	2.41	0.50
58:BZ:123:ASP:O	58:BZ:124:ILE:HG23	2.10	0.50
1:CA:97:G:O2'	1:CA:98:G:H8	1.92	0.50
1:CA:136:C:N4	1:CA:227:G:H1	2.09	0.50
1:CA:373:A:H2'	1:CA:374:A:H8	1.76	0.50
1:CA:511:C:O3'	4:CD:43:HIS:NE2	2.43	0.50
1:CA:682:G:N2	1:CA:709:G:C4	2.79	0.50
7:CG:75:VAL:HA	7:CG:88:PRO:HA	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.41	0.50
20:CT:49:ALA:HB3	20:CT:99:LEU:HD12	1.92	0.50
25:D0:43:THR:H	35:DA:2331:G:H4'	1.76	0.50
26:D1:76:ARG:HB2	26:D1:78:LYS:NZ	2.25	0.50
33:D8:13:ARG:NH2	35:DA:250:G:OP2	2.45	0.50
35:DA:861:A:C2	35:DA:917:A:C4	2.99	0.50
35:DA:1218:C:H2'	35:DA:1219:G:H5"	1.93	0.50
35:DA:1245:G:OP1	48:DP:16:ARG:NH2	2.40	0.50
35:DA:1360:A:H2'	35:DA:1361:G:O4'	2.11	0.50
35:DA:1560:G:C2'	35:DA:1561:G:H5'	2.41	0.50
35:DA:2104:G:H3'	35:DA:2105:C:C6	2.46	0.50
35:DA:2627:G:N2	35:DA:2777:G:OP2	2.44	0.50
41:DG:83:ARG:H	41:DG:86:MET:HG3	1.76	0.50
42:DH:6:ARG:HB3	42:DH:69:ARG:HG3	1.94	0.50
56:DX:25:LYS:HB3	56:DX:26:TYR:O	2.11	0.50
57:DY:14:LEU:HD12	57:DY:24:VAL:HG22	1.93	0.50
58:DZ:68:PRO:O	58:DZ:91:LEU:HB2	2.11	0.50
58:DZ:82:ARG:HH21	58:DZ:82:ARG:HB3	1.76	0.50
1:AA:35:G:O2'	12:AL:118:SER:O	2.28	0.50
1:AA:179:A:O2'	1:AA:180:U:H5'	2.11	0.50
1:AA:814:A:N7	1:AA:816:A:C4	2.79	0.50
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.47	0.50
7:AG:47:CYS:O	7:AG:50:ILE:HB	2.12	0.50
14:AN:37:PHE:HB3	14:AN:39:LEU:HD12	1.92	0.50
25:B0:70:GLN:HE22	25:B0:72:ARG:CG	2.25	0.50
28:B3:43:ILE:O	28:B3:47:VAL:HG23	2.11	0.50
35:BA:117:G:C6	35:BA:119:A:C6	3.00	0.50
35:BA:271(P):C:C2'	35:BA:271(Q):G:H5'	2.41	0.50
35:BA:463:G:H5"	35:BA:464:U:OP2	2.11	0.50
35:BA:899:A:H2'	35:BA:899:A:N3	2.26	0.50
35:BA:1064:C:H3'	35:BA:1065:U:H5"	1.93	0.50
35:BA:1221:C:H42	35:BA:1229:G:H1	1.59	0.50
35:BA:2225:A:H1'	35:BA:2226:C:OP2	2.10	0.50
35:BA:2602:A:H4'	35:BA:2603:G:C5'	2.41	0.50
35:BA:2788:C:O2'	35:BA:2809:A:N3	2.40	0.50
40:BF:36:VAL:O	40:BF:40:GLN:HB2	2.12	0.50
42:BH:20:ALA:HB1	42:BH:21:PRO:HD2	1.92	0.50
43:BI:6:LEU:CA	43:BI:15:VAL:HG23	2.42	0.50
46:BN:115:ARG:O	46:BN:118:LYS:HB3	2.11	0.50
47:BO:63:VAL:HG23	47:BO:64:ARG:HB2	1.94	0.50
50:BR:7:GLY:O	50:BR:8:ARG:HG3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:1:MET:O	52:BT:3:ARG:HG2	2.12	0.50
52:BT:65:LYS:HG3	52:BT:66:VAL:H	1.75	0.50
53:BU:14:HIS:HB3	53:BU:32:PHE:CD2	2.46	0.50
53:BU:38:THR:O	53:BU:41:ALA:HB3	2.11	0.50
54:BV:20:LEU:HB3	54:BV:21:ARG:NH1	2.25	0.50
1:CA:122:G:H2'	1:CA:123:C:O4'	2.11	0.50
1:CA:430:A:OP2	4:CD:8:VAL:HG22	2.12	0.50
1:CA:486:U:H2'	1:CA:487:A:H8	1.76	0.50
1:CA:742:G:P	15:CO:35:ARG:HH22	2.33	0.50
1:CA:1273:G:C2	1:CA:1274:G:H1'	2.46	0.50
1:CA:1396:A:C4'	1:CA:1398:A:H1'	2.41	0.50
4:CD:13:ARG:HD2	4:CD:38:TYR:O	2.11	0.50
16:CP:18:ARG:HD3	16:CP:35:LYS:HD2	1.93	0.50
18:CR:25:THR:HG21	18:CR:42:ARG:HH12	1.74	0.50
27:D2:53:LEU:HD13	35:DA:72:U:H1'	1.93	0.50
35:DA:214:G:O2'	35:DA:216:A:O2'	2.15	0.50
35:DA:814:C:H5"	54:DV:86:GLY:HA3	1.92	0.50
35:DA:1218:C:N3	35:DA:1231:G:N2	2.56	0.50
35:DA:1503:U:H2'	35:DA:1504:C:C6	2.46	0.50
35:DA:1512:U:H6	35:DA:1512:U:H5"	1.75	0.50
35:DA:1789:A:OP1	38:DD:221:VAL:HA	2.11	0.50
35:DA:2243:U:H2'	35:DA:2244:U:C6	2.46	0.50
49:DQ:34:LEU:HD11	49:DQ:129:THR:OG1	2.11	0.50
52:DT:30:VAL:HG12	52:DT:84:GLN:O	2.11	0.50
52:DT:129:ARG:HH11	52:DT:131:ALA:HB3	1.75	0.50
58:DZ:6:LYS:HE3	58:DZ:8:TYR:CD2	2.46	0.50
1:AA:165:C:H2'	1:AA:165:C:O2	2.10	0.50
1:AA:167:G:H2'	1:AA:168:G:C8	2.46	0.50
1:AA:892:A:C2	1:AA:907:A:C4	2.99	0.50
1:AA:1165:C:OP2	1:AA:1165:C:C6	2.64	0.50
1:AA:1202:G:H2'	1:AA:1203:C:H5'	1.93	0.50
1:AA:1247:U:H2'	1:AA:1248:A:O4'	2.11	0.50
3:AC:117:ALA:HB2	3:AC:200:ALA:HB2	1.93	0.50
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.92	0.50
7:AG:26:PHE:CE1	7:AG:30:ILE:HD11	2.47	0.50
7:AG:28:ASN:C	7:AG:30:ILE:H	2.19	0.50
23:AY:40:C:C6	23:AY:40:C:P	3.05	0.50
27:B2:28:LYS:HD2	27:B2:32:LEU:CD2	2.41	0.50
35:BA:11:G:H2'	35:BA:12:U:H6	1.76	0.50
35:BA:123:G:H2'	35:BA:124:G:O4'	2.11	0.50
35:BA:577:G:OP1	35:BA:2502:G:O2'	2.21	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1420:U:HO2'	35:BA:1421:G:P	2.35	0.50
38:BD:260:ARG:NH2	38:BD:264:LYS:HE3	2.26	0.50
39:BE:171:GLU:O	39:BE:184:VAL:HA	2.10	0.50
40:BF:148:LEU:O	40:BF:149:ASP:HB2	2.11	0.50
43:BI:75:LEU:HD11	43:BI:105:HIS:NE2	2.26	0.50
47:BO:48:PRO:O	47:BO:49:ARG:NE	2.44	0.50
48:BP:20:GLY:O	48:BP:21:ARG:HB2	2.11	0.50
48:BP:110:TYR:C	48:BP:110:TYR:CD1	2.89	0.50
53:BU:60:LEU:HD23	53:BU:64:ARG:HG3	1.92	0.50
56:BX:77:LYS:CG	56:BX:78:LYS:H	2.23	0.50
57:BY:27:VAL:HA	57:BY:39:VAL:H	1.75	0.50
58:BZ:28:MET:HE1	58:BZ:59:LEU:HD12	1.93	0.50
1:CA:14:U:H2'	1:CA:16:A:OP2	2.11	0.50
1:CA:624:C:O3'	16:CP:10:GLY:HA2	2.11	0.50
1:CA:756:C:C4'	8:CH:1:MET:HE2	2.42	0.50
1:CA:976:G:H5'	1:CA:1358:U:O2'	2.12	0.50
1:CA:1174:G:H2'	1:CA:1175:G:H8	1.76	0.50
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.26	0.50
5:CE:11:ILE:CB	5:CE:31:LEU:HD12	2.41	0.50
6:CF:97:PHE:HB3	18:CR:32:ARG:NE	2.27	0.50
12:CL:21:LYS:H	12:CL:21:LYS:CD	2.23	0.50
17:CQ:59:ILE:HG23	17:CQ:71:PHE:HB3	1.93	0.50
23:CY:41:C:H2'	23:CY:42:C:H6	1.76	0.50
35:DA:86:C:H4'	35:DA:104:U:H1'	1.93	0.50
35:DA:1645:G:H5"	35:DA:1646:C:H5'	1.93	0.50
35:DA:1916:A:H5"	35:DA:1916:A:H8	1.76	0.50
35:DA:2262:U:C2'	35:DA:2263:C:H5"	2.42	0.50
35:DA:2287:A:H62	35:DA:2344:U:H3	1.58	0.50
35:DA:2723:C:C5'	50:DR:5:LYS:HE2	2.38	0.50
40:DF:202:PHE:O	40:DF:206:ILE:HG13	2.12	0.50
41:DG:55:LYS:HZ1	41:DG:148:MET:C	2.20	0.50
56:DX:40:LYS:O	56:DX:44:GLU:HG2	2.11	0.50
56:DX:51:VAL:HG13	56:DX:79:ALA:HB1	1.92	0.50
57:DY:88:LYS:O	57:DY:90:LEU:HG	2.11	0.50
1:AA:170:U:O2'	1:AA:171:A:N7	2.39	0.50
1:AA:266:G:H2'	1:AA:266:G:N3	2.27	0.50
1:AA:446:G:H1	1:AA:488:C:N4	2.02	0.50
1:AA:454:C:H3'	1:AA:455:C:C6	2.46	0.50
1:AA:941:G:C2	1:AA:1343:G:C2	3.00	0.50
1:AA:1269:A:C2	1:AA:1313:U:H1'	2.46	0.50
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:26:PHE:O	7:AG:30:ILE:HG13	2.12	0.50
8:AH:20:TYR:HA	8:AH:65:TYR:CZ	2.46	0.50
11:AK:42:TRP:HZ3	11:AK:44:SER:HB3	1.76	0.50
15:AO:79:ARG:O	15:AO:82:ILE:HG22	2.12	0.50
25:B0:43:THR:HG22	35:BA:2331:G:O2'	2.11	0.50
27:B2:28:LYS:O	27:B2:32:LEU:HD21	2.11	0.50
27:B2:33:MET:SD	27:B2:33:MET:N	2.84	0.50
35:BA:49:A:H4'	35:BA:50:U:H5'	1.92	0.50
35:BA:128:C:O2'	35:BA:129:C:OP1	2.23	0.50
35:BA:142:A:C8	35:BA:1408:C:H1'	2.47	0.50
35:BA:422:A:H2'	35:BA:423:A:C8	2.47	0.50
35:BA:683:C:H2'	35:BA:684:G:H5"	1.92	0.50
35:BA:866:A:H5"	35:BA:867:C:OP2	2.11	0.50
35:BA:1429:G:C4	35:BA:1568:G:C2	2.99	0.50
35:BA:2690:C:OP1	50:BR:17:ARG:NH1	2.40	0.50
36:BB:44:G:C2	36:BB:48:A:C2	3.00	0.50
38:BD:42:GLY:C	38:BD:43:ARG:HG3	2.36	0.50
39:BE:188:VAL:HG23	39:BE:189:PRO:HD2	1.94	0.50
46:BN:89:LYS:O	46:BN:92:ALA:HB3	2.11	0.50
53:BU:90:VAL:HG13	54:BV:39:LEU:HG	1.93	0.50
56:BX:25:LYS:HG3	56:BX:87:GLN:HE21	1.76	0.50
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.93	0.50
1:CA:658:G:H2'	1:CA:659:U:C6	2.46	0.50
1:CA:799:G:H2'	1:CA:800:G:H5'	1.93	0.50
2:CB:219:VAL:HA	2:CB:222:ILE:HD12	1.92	0.50
28:D3:18:ASP:HA	28:D3:21:ALA:HB3	1.92	0.50
34:D9:11:CYS:SG	34:D9:13:LYS:N	2.84	0.50
35:DA:247:G:H4'	35:DA:386:G:C5	2.47	0.50
35:DA:481:G:H1'	35:DA:507:A:N1	2.25	0.50
35:DA:1104:C:H2'	35:DA:1105:U:C5'	2.41	0.50
35:DA:1468:C:H2'	35:DA:1469:A:H8	1.75	0.50
35:DA:1614:A:N1	55:DW:91:GLY:HA2	2.27	0.50
35:DA:1864:U:C3'	35:DA:1865:G:H5"	2.42	0.50
35:DA:2317:C:H2'	35:DA:2318:G:O4'	2.11	0.50
47:DO:119:PRO:HB2	52:DT:68:TYR:CD2	2.46	0.50
49:DQ:19:GLY:O	49:DQ:21:THR:HG23	2.12	0.50
52:DT:88:ILE:O	52:DT:89:VAL:C	2.54	0.50
56:DX:12:VAL:HG12	56:DX:27:THR:O	2.10	0.50
56:DX:88:LYS:HD2	56:DX:88:LYS:N	2.26	0.50
1:AA:165:C:H4'	1:AA:166:G:OP1	2.11	0.50
1:AA:1023:G:O6	1:AA:1039:C:C5	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1057:G:H5"	3:AC:154:SER:OG	2.11	0.50
1:AA:1059:C:H42	1:AA:1198:G:H1	1.60	0.50
3:AC:44:GLU:HG3	3:AC:52:LEU:HD11	1.93	0.50
4:AD:72:GLU:HA	4:AD:75:PHE:HB3	1.92	0.50
15:AO:64:ARG:HH21	35:BA:715:G:P	2.34	0.50
16:AP:39:TYR:OH	16:AP:41:PRO:HB3	2.11	0.50
19:AS:6:LYS:N	19:AS:6:LYS:HD3	2.26	0.50
19:AS:30:LEU:N	19:AS:48:THR:HG21	2.27	0.50
25:B0:43:THR:HG23	25:B0:43:THR:O	2.11	0.50
33:B8:64:TYR:CE2	35:BA:594:U:OP1	2.64	0.50
35:BA:102:G:H5"	35:BA:103:A:C5'	2.37	0.50
35:BA:1016:G:H1	35:BA:1146:C:N4	2.08	0.50
35:BA:1312:U:H5	35:BA:1340:U:O4	1.95	0.50
35:BA:1763:G:C8	35:BA:1763:G:C3'	2.91	0.50
46:BN:100:GLU:C	46:BN:102:ALA:H	2.19	0.50
47:BO:72:PRO:C	47:BO:74:GLY:H	2.19	0.50
48:BP:95:VAL:HB	48:BP:125:VAL:HG23	1.92	0.50
52:BT:15:VAL:HG23	52:BT:79:HIS:CE1	2.46	0.50
52:BT:57:PHE:C	52:BT:59:THR:H	2.19	0.50
53:BU:8:VAL:O	53:BU:12:ARG:HG3	2.11	0.50
58:BZ:14:LYS:HB3	58:BZ:17:ALA:HB3	1.93	0.50
1:CA:190:U:O2	20:CT:105:SER:HB2	2.12	0.50
1:CA:435:C:N3	1:CA:436:C:N4	2.60	0.50
1:CA:501:C:H2'	1:CA:502:G:H8	1.77	0.50
1:CA:502:G:OP1	12:CL:118:SER:HB2	2.10	0.50
1:CA:665:A:N6	1:CA:725:G:O6	2.44	0.50
1:CA:1153:C:OP1	10:CJ:13:HIS:NE2	2.44	0.50
1:CA:1444:C:H42	1:CA:1458:G:H1	1.60	0.50
2:CB:19:HIS:CG	2:CB:204:ASN:HD21	2.30	0.50
8:CH:91:ARG:HG3	17:CQ:32:TYR:O	2.11	0.50
18:CR:43:PHE:O	18:CR:51:LEU:HD12	2.12	0.50
20:CT:50:GLU:HG3	20:CT:51:GLU:N	2.27	0.50
21:CU:8:THR:HA	21:CU:21:TYR:CD2	2.47	0.50
23:CW:57:G:H2'	23:CW:57:G:N3	2.27	0.50
27:D2:54:LYS:HE3	35:DA:77:C:OP1	2.12	0.50
33:D8:5:LYS:HG2	35:DA:254:G:O6	2.12	0.50
33:D8:53:PRO:HG2	33:D8:54:GLU:H	1.75	0.50
35:DA:411:G:C5	48:DP:72:PRO:HG3	2.46	0.50
35:DA:1836:C:C2'	35:DA:1837:C:H5'	2.42	0.50
35:DA:2021:C:H4'	35:DA:2022:U:OP2	2.11	0.50
35:DA:2316:C:O2	35:DA:2316:C:H2'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2686:G:H2'	35:DA:2687:U:C6	2.46	0.50
39:DE:59:VAL:HG21	39:DE:63:LEU:CB	2.41	0.50
42:DH:22:GLY:CA	42:DH:37:VAL:H	2.25	0.50
51:DS:28:VAL:HG11	51:DS:99:LYS:NZ	2.27	0.50
58:DZ:10:ARG:NH2	58:DZ:26:GLY:O	2.44	0.50
1:AA:264:U:O2'	17:AQ:64:PRO:O	2.30	0.50
1:AA:864:A:H5'	5:AE:86:ALA:HB2	1.94	0.50
1:AA:1128:C:H2'	1:AA:1129:C:H4'	1.94	0.50
2:AB:84:GLU:OE2	2:AB:216:SER:HA	2.11	0.50
7:AG:26:PHE:CE1	7:AG:120:ILE:HD11	2.45	0.50
9:AI:70:LYS:N	9:AI:73:GLN:HB2	2.26	0.50
11:AK:129:SER:O	11:AK:129:SER:OG	2.24	0.50
13:AM:15:VAL:O	13:AM:19:LEU:HD23	2.11	0.50
23:AW:28:G:H2'	23:AW:29:G:H5'	1.94	0.50
35:BA:271(W):G:H5"	35:BA:271(X):G:OP2	2.12	0.50
35:BA:522:G:C6	35:BA:523:C:C4	2.99	0.50
35:BA:769:G:H5'	35:BA:1379:A:H61	1.74	0.50
35:BA:2012:G:O3'	55:BW:96:ILE:HG13	2.11	0.50
35:BA:2052:G:O4'	39:BE:142:GLY:HA3	2.12	0.50
38:BD:110:GLY:C	38:BD:112:GLN:OE1	2.54	0.50
39:BE:151:TYR:CZ	39:BE:154:LYS:HD2	2.47	0.50
41:BG:73:ALA:HB3	41:BG:85:GLY:HA2	1.94	0.50
51:BS:26:LEU:HD22	51:BS:39:ILE:HD13	1.93	0.50
1:CA:1081:G:H5"	5:CE:18:ARG:HG2	1.93	0.50
3:CC:29:TYR:H	3:CC:32:LEU:H	1.58	0.50
12:CL:82:VAL:HG23	12:CL:106:ASP:OD2	2.12	0.50
23:CW:27:G:H8	23:CW:27:G:OP2	1.95	0.50
23:CW:52:G:H2'	23:CW:53:G:N9	2.27	0.50
35:DA:1038:C:N3	35:DA:1117:G:N2	2.44	0.50
35:DA:1906:G:H1	35:DA:1924:C:H42	1.58	0.50
35:DA:2330:G:H2'	35:DA:2331:G:O4'	2.11	0.50
38:DD:223:GLY:HA3	38:DD:231:HIS:CE1	2.47	0.50
38:DD:258:LYS:HD2	38:DD:273:ARG:HH22	1.77	0.50
38:DD:267:SER:O	38:DD:269:PHE:N	2.44	0.50
41:DG:60:LEU:O	41:DG:64:THR:HG22	2.11	0.50
42:DH:152:ARG:HH11	42:DH:153:LYS:NZ	2.09	0.50
48:DP:134:ALA:O	48:DP:138:LEU:HG	2.11	0.50
1:AA:408:A:C4	1:AA:409:G:C8	3.00	0.50
1:AA:460:G:H3'	1:AA:461:A:C5'	2.41	0.50
1:AA:634:C:O2'	1:AA:635:G:H5'	2.12	0.50
1:AA:1286:A:O2'	1:AA:1287:A:H4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1300:G:O6	1:AA:1335:C:H5"	2.11	0.50
2:AB:102:LEU:HD11	2:AB:182:ILE:HG13	1.93	0.50
9:AI:17:VAL:HG11	9:AI:81:ILE:HG12	1.94	0.50
9:AI:27:THR:HG23	9:AI:31:GLN:O	2.12	0.50
10:AJ:24:VAL:O	10:AJ:27:ALA:HB3	2.12	0.50
12:AL:69:TYR:HD2	12:AL:99:HIS:HD2	1.59	0.50
14:AN:21:TYR:HE1	14:AN:23:ARG:HD3	1.77	0.50
15:AO:39:LEU:HD12	15:AO:56:LEU:HD22	1.94	0.50
22:AV:19:G:OP2	22:AV:19:G:O4'	2.29	0.50
27:B2:27:GLU:C	27:B2:29:LYS:N	2.68	0.50
34:B9:1:MET:O	34:B9:2:LYS:HB2	2.12	0.50
35:BA:263:C:H2'	35:BA:264:C:O4'	2.12	0.50
35:BA:271(M):G:H2'	35:BA:271(N):U:H4'	1.93	0.50
35:BA:551:G:O2'	35:BA:1220:A:N3	2.43	0.50
35:BA:688:U:H5'	35:BA:1780:A:C2	2.46	0.50
35:BA:1291:C:H2'	35:BA:1292:U:C6	2.47	0.50
35:BA:1607:C:H4'	35:BA:1608:A:H5"	1.94	0.50
35:BA:1932:A:H2'	35:BA:1933:G:O4'	2.11	0.50
35:BA:2065:C:H2'	35:BA:2066:C:H6	1.76	0.50
35:BA:2376:A:H2'	35:BA:2376:A:N3	2.27	0.50
36:BB:118:G:H8	36:BB:118:G:O5'	1.95	0.50
38:BD:25:THR:O	38:BD:26:LYS:C	2.54	0.50
38:BD:57:GLY:HA3	38:BD:213:ARG:O	2.12	0.50
48:BP:116:GLY:HA3	48:BP:134:ALA:HB2	1.94	0.50
50:BR:84:ALA:N	50:BR:85:PRO:HD2	2.26	0.50
52:BT:45:PHE:CE2	52:BT:74:ARG:HD2	2.46	0.50
1:CA:201:C:N4	1:CA:216:G:H1	2.09	0.50
1:CA:920:U:H2'	1:CA:920:U:O2	2.12	0.50
1:CA:1199:U:H4'	10:CJ:54:PHE:CD2	2.46	0.50
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.12	0.50
4:CD:8:VAL:HG11	4:CD:115:ARG:CZ	2.42	0.50
6:CF:19:LEU:O	6:CF:23:LYS:HG3	2.12	0.50
25:D0:53:MET:HG3	25:D0:59:LEU:HD23	1.92	0.50
26:D1:46:LEU:C	26:D1:46:LEU:CD1	2.84	0.50
30:D5:34:PRO:N	30:D5:35:GLU:OE2	2.45	0.50
32:D7:5:TRP:CZ3	35:DA:464:U:H4'	2.47	0.50
35:DA:320:A:H5"	35:DA:321:G:OP1	2.12	0.50
35:DA:919:G:H4'	36:DB:81:G:H4'	1.93	0.50
35:DA:1062:G:N3	35:DA:1062:G:H2'	2.27	0.50
35:DA:2302:G:H2'	35:DA:2303:G:H8	1.77	0.50
35:DA:2619:C:O2'	35:DA:2620:C:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2836:U:H2'	35:DA:2837:G:C8	2.46	0.50
36:DB:44:G:O2'	36:DB:45:A:P	2.70	0.50
40:DF:3:GLU:HG3	40:DF:20:LEU:H	1.76	0.50
41:DG:53:LEU:HD23	41:DG:53:LEU:H	1.76	0.50
48:DP:21:ARG:NH1	48:DP:29:LYS:HE3	2.25	0.50
52:DT:26:ASP:OD1	52:DT:91:ARG:HD3	2.12	0.50
57:DY:50:ARG:HD3	57:DY:55:TYR:C	2.36	0.50
57:DY:96:ILE:CG2	57:DY:101:LYS:HB2	2.41	0.50
58:DZ:130:PRO:HA	58:DZ:133:ILE:HD11	1.94	0.50
1:AA:254:G:H21	17:AQ:16:GLN:HE22	1.60	0.50
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.92	0.50
1:AA:716:A:N3	11:AK:118:GLY:HA2	2.26	0.50
1:AA:799:G:C6	1:AA:800:G:C4	2.99	0.50
1:AA:1128:C:C2'	1:AA:1129:C:H4'	2.42	0.50
1:AA:1326:C:H2'	1:AA:1327:C:C6	2.47	0.50
3:AC:73:PRO:O	3:AC:76:VAL:N	2.32	0.50
5:AE:84:PHE:O	5:AE:86:ALA:N	2.41	0.50
8:AH:33:GLU:O	8:AH:35:ILE:N	2.44	0.50
10:AJ:61:GLU:OE2	14:AN:49:HIS:HE1	1.95	0.50
35:BA:1000:A:C6	35:BA:1155:A:C8	2.99	0.50
35:BA:1391:U:H2'	35:BA:1393:A:OP2	2.12	0.50
35:BA:1480:G:C6	35:BA:1481:U:N3	2.79	0.50
35:BA:1570:A:C4'	38:BD:38:LYS:HE2	2.42	0.50
35:BA:1754:C:OP1	52:BT:96:ARG:NH1	2.45	0.50
35:BA:2092:U:H5	35:BA:2226:C:OP1	1.95	0.50
35:BA:2873:A:C2	50:BR:8:ARG:HD3	2.47	0.50
39:BE:176:ILE:HB	39:BE:181:LEU:HB2	1.94	0.50
40:BF:82:ILE:O	40:BF:84:VAL:N	2.40	0.50
42:BH:73:ALA:O	42:BH:76:VAL:N	2.38	0.50
56:BX:24:GLY:HA3	56:BX:80:ILE:HG13	1.94	0.50
56:BX:52:VAL:CG2	56:BX:82:GLN:H	2.25	0.50
1:CA:1064:G:O2'	1:CA:1065:U:OP2	2.30	0.50
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.47	0.50
1:CA:1277:C:H3'	1:CA:1277:C:H6	1.77	0.50
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.47	0.50
2:CB:142:LEU:HA	2:CB:145:LEU:HB2	1.94	0.50
3:CC:28:GLN:O	3:CC:29:TYR:HB2	2.11	0.50
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.11	0.50
6:CF:98:LEU:HB3	18:CR:30:ASP:HA	1.92	0.50
7:CG:57:GLU:O	7:CG:60:LYS:N	2.41	0.50
9:CI:10:ARG:HG2	9:CI:75:ASP:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:13:ALA:HA	9:CI:67:GLY:HA3	1.93	0.50
13:CM:66:LEU:O	13:CM:70:LEU:HB2	2.12	0.50
22:CV:66:C:H5'	22:CV:67:C:OP2	2.11	0.50
32:D7:40:TRP:CG	35:DA:459:U:H5"	2.46	0.50
33:D8:58:ILE:O	33:D8:61:LEU:HD22	2.11	0.50
35:DA:309:G:N3	35:DA:329:G:O2'	2.44	0.50
35:DA:335:C:H5'	57:DY:73:ARG:HH21	1.77	0.50
35:DA:2120:G:H2'	35:DA:2120:G:N3	2.26	0.50
35:DA:2294:C:OP1	51:DS:93:LYS:HE2	2.11	0.50
35:DA:2849:U:H4'	35:DA:2868:A:C2	2.47	0.50
39:DE:9:VAL:HG22	39:DE:25:VAL:O	2.12	0.50
41:DG:63:ILE:HD12	41:DG:141:PHE:CE2	2.46	0.50
58:DZ:9:TYR:CE1	58:DZ:62:PRO:HD3	2.47	0.50
1:AA:45:U:H2'	1:AA:46:G:C8	2.47	0.50
1:AA:131:C:H2'	1:AA:132:C:C6	2.47	0.50
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.11	0.50
1:AA:1260:C:P	1:AA:1284:C:H4'	2.52	0.50
1:AA:1275:A:H2'	1:AA:1276:G:N9	2.27	0.50
2:AB:102:LEU:HD13	2:AB:158:LEU:HD23	1.93	0.50
3:AC:73:PRO:O	3:AC:75:VAL:N	2.44	0.50
12:AL:33:ARG:HB3	12:AL:60:LEU:HD12	1.94	0.50
12:AL:71:PRO:O	12:AL:102:ARG:HD3	2.12	0.50
17:AQ:67:LYS:C	17:AQ:69:LYS:H	2.19	0.50
23:AW:18:G:H22	23:AW:55:U:H5"	1.76	0.50
35:BA:71:A:C2	56:BX:31:HIS:CE1	3.00	0.50
35:BA:559:G:C2'	35:BA:560:C:H5'	2.41	0.50
35:BA:897:C:H4'	35:BA:898:C:O5'	2.12	0.50
35:BA:903:C:H2'	35:BA:904:C:H5"	1.92	0.50
35:BA:1379:A:O2'	35:BA:1380:G:P	2.70	0.50
35:BA:1889:A:H3'	35:BA:1890:A:H8	1.77	0.50
35:BA:2318:G:H22	51:BS:7:TYR:CA	2.25	0.50
36:BB:80:U:H2'	36:BB:81:G:N2	2.25	0.50
37:BC:73:ARG:HB3	37:BC:92:ASP:OD2	2.12	0.50
41:BG:115:ARG:NH1	41:BG:137:GLU:OE2	2.45	0.50
41:BG:125:PHE:HD1	41:BG:131:TYR:HB2	1.76	0.50
42:BH:144:VAL:O	42:BH:148:ILE:HG12	2.12	0.50
43:BI:113:ARG:HB2	43:BI:130:TYR:CE1	2.47	0.50
54:BV:59:ALA:O	54:BV:61:VAL:N	2.45	0.50
55:BW:84:ARG:CZ	55:BW:85:VAL:H	2.25	0.50
1:CA:509:A:O2'	1:CA:510:A:OP1	2.28	0.50
1:CA:639:G:H2'	1:CA:640:A:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:720:C:H5'	18:CR:50:ILE:O	2.11	0.50
1:CA:730:G:H5"	1:CA:731:G:OP2	2.12	0.50
1:CA:939:G:H5"	7:CG:102:ARG:HH22	1.77	0.50
2:CB:92:TYR:CE1	2:CB:94:ASN:HB2	2.47	0.50
3:CC:5:ILE:HD12	14:CN:58:LYS:HE3	1.93	0.50
3:CC:34:LEU:HD11	14:CN:25:VAL:HG11	1.92	0.50
4:CD:196:LEU:C	4:CD:198:VAL:H	2.19	0.50
6:CF:5:GLU:HG3	6:CF:93:SER:OG	2.12	0.50
8:CH:20:TYR:HE2	8:CH:75:ARG:HD2	1.77	0.50
14:CN:15:LYS:O	14:CN:17:LYS:N	2.45	0.50
23:CY:43:C:H5'	23:CY:44:G:OP1	2.12	0.50
26:D1:41:ARG:NH1	35:DA:205:G:O6	2.41	0.50
32:D7:1:MET:HE1	35:DA:1619:G:H21	1.76	0.50
35:DA:258:G:H5"	35:DA:259:G:OP2	2.10	0.50
35:DA:271(U):G:C2	35:DA:271(V):G:C8	3.00	0.50
35:DA:954:G:O2'	35:DA:2274:A:N1	2.41	0.50
35:DA:1075:C:H2'	35:DA:1076:C:H2'	1.93	0.50
35:DA:1218:C:H42	35:DA:1231:G:H1	1.59	0.50
35:DA:1406:U:H2'	35:DA:1407:C:C6	2.47	0.50
35:DA:1614:A:C6	55:DW:91:GLY:HA2	2.46	0.50
35:DA:2306:C:O2	41:DG:45:GLU:OE2	2.30	0.50
35:DA:2323:G:C6	35:DA:2324:C:C4	3.00	0.50
38:DD:65:ILE:HD11	38:DD:67:PHE:CE1	2.47	0.50
41:DG:33:ARG:H	41:DG:162:THR:HB	1.76	0.50
50:DR:11:ASN:O	50:DR:12:ARG:HB2	2.11	0.50
54:DV:79:VAL:O	54:DV:80:GLN:OE1	2.29	0.50
1:AA:719:C:H1'	18:AR:49:LYS:HB3	1.93	0.49
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.47	0.49
1:AA:1291:G:H2'	1:AA:1292:U:C6	2.47	0.49
1:AA:1323:G:H5"	1:AA:1363:C:N3	2.27	0.49
1:AA:1340:A:O2'	22:AV:32:G:O2'	2.19	0.49
2:AB:101:MET:HA	2:AB:108:ILE:HG21	1.93	0.49
2:AB:101:MET:HE1	2:AB:102:LEU:HD22	1.93	0.49
8:AH:45:ILE:HD12	8:AH:48:TYR:HE1	1.75	0.49
32:B7:29:LYS:HE2	32:B7:33:ARG:HE	1.76	0.49
35:BA:222:A:H3'	35:BA:421:U:H5'	1.94	0.49
35:BA:601:C:OP1	40:BF:108:LYS:HE2	2.12	0.49
35:BA:952:G:C6	35:BA:966:G:C6	3.00	0.49
35:BA:1133:U:H5"	35:BA:1135:C:OP2	2.10	0.49
35:BA:1188:U:O2'	35:BA:1189:A:H5'	2.12	0.49
35:BA:1332:G:N2	35:BA:1609:A:H2'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1833:U:O2'	35:BA:1969:A:N1	2.45	0.49
35:BA:1946:U:H2'	35:BA:1947:C:H6	1.78	0.49
35:BA:2450:A:C2	35:BA:2451:A:C4	2.99	0.49
35:BA:2661:G:O2'	35:BA:2662:A:OP1	2.28	0.49
36:BB:10:C:N3	36:BB:111:G:N2	2.53	0.49
36:BB:60:C:H2'	36:BB:61:G:C8	2.47	0.49
39:BE:64:LYS:O	39:BE:70:ALA:HB2	2.12	0.49
48:BP:97:PRO:O	48:BP:99:LEU:N	2.45	0.49
49:BQ:78:PRO:HG3	49:BQ:87:LYS:HG2	1.94	0.49
49:BQ:121:ALA:O	49:BQ:125:LEU:N	2.45	0.49
52:BT:34:VAL:HA	52:BT:39:ARG:HB3	1.94	0.49
56:BX:25:LYS:O	56:BX:78:LYS:HD3	2.11	0.49
57:BY:4:LYS:HA	57:BY:6:HIS:ND1	2.27	0.49
1:CA:177:C:H2'	1:CA:178:C:C6	2.47	0.49
1:CA:374:A:H5"	1:CA:375:U:OP2	2.12	0.49
1:CA:658:G:H2'	1:CA:659:U:H6	1.77	0.49
1:CA:673:G:H5"	6:CF:87:ARG:NH1	2.27	0.49
1:CA:987:G:H1	1:CA:1218:C:H42	1.60	0.49
2:CB:20:GLU:OE2	2:CB:191:ASP:N	2.38	0.49
3:CC:54:ARG:HG2	3:CC:56:ASP:OD2	2.12	0.49
3:CC:131:ARG:HD3	3:CC:131:ARG:C	2.36	0.49
8:CH:9:MET:SD	8:CH:32:LYS:HB3	2.51	0.49
13:CM:20:THR:C	13:CM:22:ILE:H	2.20	0.49
16:CP:28:ARG:NH1	16:CP:28:ARG:HG2	2.25	0.49
23:CW:1:G:C2	23:CW:73:A:C2	3.00	0.49
23:CW:15:G:H2'	23:CW:16:U:H4'	1.94	0.49
23:CW:40:C:H6	23:CW:40:C:H3'	1.76	0.49
25:D0:46:LYS:HG3	25:D0:47:PRO:HD2	1.93	0.49
35:DA:833:U:H5"	48:DP:48:PRO:HB3	1.94	0.49
35:DA:858:U:O2	35:DA:2268:A:H2'	2.12	0.49
35:DA:1241:A:H2'	35:DA:1242:A:O5'	2.12	0.49
35:DA:1405:U:H2'	35:DA:1406:U:H6	1.75	0.49
35:DA:1485:G:N2	35:DA:1504:C:C4	2.80	0.49
38:DD:77:ALA:HB2	38:DD:97:TYR:CD2	2.47	0.49
42:DH:101:ARG:HD3	42:DH:122:THR:HG23	1.94	0.49
43:DI:123:LEU:HG	43:DI:142:VAL:HG23	1.94	0.49
46:DN:22:THR:HA	46:DN:61:ARG:HB3	1.94	0.49
48:DP:97:PRO:HG3	48:DP:127:ALA:HA	1.94	0.49
52:DT:29:ARG:HE	52:DT:82:LEU:HD21	1.77	0.49
53:DU:40:PHE:CG	54:DV:78:LYS:HD3	2.46	0.49
1:AA:742:G:OP2	15:AO:35:ARG:NH2	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.47	0.49
1:AA:1151:A:H5"	10:AJ:42:THR:HG23	1.95	0.49
1:AA:1367:C:O2'	10:AJ:48:THR:HG21	2.12	0.49
1:AA:1435:G:H8	1:AA:1435:G:O5'	1.95	0.49
6:AF:31:GLU:O	6:AF:34:GLY:N	2.44	0.49
9:AI:47:LEU:HD23	9:AI:47:LEU:H	1.77	0.49
13:AM:99:ARG:HB2	13:AM:101:GLN:OE1	2.12	0.49
23:AW:38:A:H5"	23:AW:38:A:H8	1.77	0.49
25:B0:43:THR:HG21	35:BA:2336:A:H61	1.76	0.49
25:B0:45:PHE:HD1	25:B0:77:ARG:HB2	1.76	0.49
28:B3:16:PRO:HB2	28:B3:18:ASP:OD1	2.12	0.49
34:B9:30:PRO:HG2	35:BA:2528:U:OP1	2.12	0.49
35:BA:272(G):C:O2'	35:BA:272(H):C:OP1	2.22	0.49
35:BA:1410:G:H2'	35:BA:1411:C:C6	2.47	0.49
37:BC:37:PHE:O	37:BC:39:GLU:N	2.45	0.49
40:BF:6:VAL:HG23	40:BF:17:ARG:HA	1.95	0.49
52:BT:29:ARG:HG2	52:BT:84:GLN:CG	2.41	0.49
53:BU:92:ARG:NH2	54:BV:10:LYS:HB3	2.28	0.49
55:BW:15:ARG:O	55:BW:19:LEU:HD13	2.12	0.49
56:BX:35:THR:HG23	56:BX:36:LYS:N	2.25	0.49
2:CB:170:GLU:CG	2:CB:173:ALA:HB3	2.42	0.49
4:CD:138:TYR:C	4:CD:138:TYR:CD1	2.89	0.49
7:CG:50:ILE:HG21	7:CG:58:PRO:HA	1.95	0.49
8:CH:11:THR:HG22	8:CH:15:ASN:ND2	2.27	0.49
9:CI:91:ASP:OD1	9:CI:91:ASP:N	2.38	0.49
22:CV:53:G:H2'	22:CV:54:U:C6	2.42	0.49
28:D3:15:TYR:OH	36:DB:84:C:OP1	2.23	0.49
31:D6:19:ARG:NH2	31:D6:42:TRP:CE3	2.80	0.49
32:D7:9:ARG:NH1	35:DA:1309:G:H3'	2.27	0.49
33:D8:59:LYS:O	33:D8:61:LEU:N	2.45	0.49
35:DA:484:C:OP1	57:DY:51:VAL:HG22	2.12	0.49
35:DA:535:C:O2'	35:DA:536:A:H5'	2.12	0.49
35:DA:2492:U:H2'	35:DA:2493:U:H6	1.76	0.49
35:DA:2791:C:H4'	35:DA:2792:G:C5'	2.39	0.49
40:DF:3:GLU:HB3	40:DF:24:LEU:HB2	1.94	0.49
54:DV:43:GLU:HG3	54:DV:44:LYS:H	1.76	0.49
57:DY:29:GLU:CD	57:DY:29:GLU:N	2.71	0.49
58:DZ:81:ARG:HG2	58:DZ:81:ARG:NH1	2.27	0.49
58:DZ:96:VAL:HG11	58:DZ:130:PRO:HG3	1.94	0.49
1:AA:171:A:H2'	1:AA:171:A:N3	2.27	0.49
1:AA:435:C:H2'	1:AA:436:C:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1060:C:OP1	14:AN:45:ARG:NH2	2.44	0.49
1:AA:1207:G:H2'	1:AA:1208:C:H6	1.77	0.49
1:AA:1308:U:H5"	13:AM:98:VAL:HG22	1.93	0.49
2:AB:220:ASP:O	2:AB:222:ILE:N	2.45	0.49
3:AC:70:VAL:O	3:AC:106:VAL:HG23	2.12	0.49
3:AC:77:ILE:HG23	3:AC:84:ILE:HG21	1.93	0.49
3:AC:155:GLY:HA3	3:AC:164:ARG:C	2.37	0.49
10:AJ:56:HIS:HD2	10:AJ:57:LYS:H	1.59	0.49
16:AP:45:THR:HG22	16:AP:47:ASP:H	1.78	0.49
26:B1:72:GLU:HG2	26:B1:72:GLU:O	2.11	0.49
34:B9:29:ASN:HA	42:BH:170:ARG:HH22	1.77	0.49
35:BA:157:U:H5'	35:BA:171:G:N2	2.27	0.49
35:BA:204:A:O3'	35:BA:205:G:H4'	2.12	0.49
35:BA:704:G:H1'	35:BA:726:G:N2	2.27	0.49
35:BA:1047:G:H21	35:BA:1111:A:N6	2.10	0.49
35:BA:1327:C:O3'	50:BR:105:ARG:NH2	2.45	0.49
35:BA:1638:C:H6	35:BA:2698:U:HO2'	1.59	0.49
35:BA:1820:U:H4'	35:BA:1821:A:OP2	2.12	0.49
35:BA:2575:C:H6	35:BA:2575:C:O5'	1.95	0.49
35:BA:2865:U:H5"	35:BA:2866:U:H2'	1.95	0.49
38:BD:10:THR:C	38:BD:12:SER:H	2.20	0.49
40:BF:29:ASN:O	40:BF:31:HIS:N	2.44	0.49
40:BF:114:VAL:HG21	40:BF:202:PHE:HE2	1.76	0.49
41:BG:35:GLU:N	41:BG:35:GLU:OE2	2.45	0.49
1:CA:1199:U:H4'	10:CJ:54:PHE:CE2	2.48	0.49
2:CB:20:GLU:OE2	2:CB:189:ASP:HB3	2.11	0.49
3:CC:119:ARG:O	3:CC:122:GLU:HB3	2.11	0.49
5:CE:32:VAL:HB	5:CE:58:ALA:HB1	1.94	0.49
6:CF:76:ALA:HB1	6:CF:80:ARG:HH21	1.78	0.49
10:CJ:99:LYS:HE2	10:CJ:99:LYS:HA	1.94	0.49
16:CP:1:MET:HG2	16:CP:2:VAL:O	2.11	0.49
19:CS:38:SER:OG	19:CS:39:THR:N	2.44	0.49
20:CT:56:MET:HE1	20:CT:104:LEU:HB2	1.94	0.49
23:CW:35:A:H2'	23:CW:36:A:H5"	1.94	0.49
25:D0:66:VAL:O	25:D0:82:ARG:N	2.38	0.49
32:D7:27:GLY:O	32:D7:30:VAL:HB	2.12	0.49
33:D8:34:TRP:CH2	33:D8:40:GLU:OE2	2.65	0.49
35:DA:1088:A:H3'	35:DA:1088:A:N3	2.27	0.49
35:DA:1466:G:H1'	35:DA:1545:A:C2	2.47	0.49
35:DA:1518:U:H2'	35:DA:1519:G:O4'	2.12	0.49
38:DD:108:PRO:HD2	38:DD:111:LEU:HD12	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:30:ILE:HD12	46:DN:99:LEU:HD11	1.94	0.49
46:DN:78:TYR:CD1	46:DN:79:PRO:HD3	2.46	0.49
53:DU:92:ARG:HH11	54:DV:11:GLN:HB2	1.75	0.49
58:DZ:19:ARG:HH21	58:DZ:84:GLU:HA	1.77	0.49
1:AA:162:A:H4'	1:AA:162:A:OP2	2.12	0.49
1:AA:216:G:O2'	1:AA:217:C:O4'	2.27	0.49
1:AA:737:A:H1'	6:AF:73:ASN:HD21	1.76	0.49
1:AA:1368:G:C2'	1:AA:1369:C:H5'	2.42	0.49
1:AA:1371:G:H5"	9:AI:69:GLY:HA2	1.95	0.49
2:AB:130:ARG:O	2:AB:132:LYS:N	2.45	0.49
13:AM:117:VAL:HG22	13:AM:118:ALA:H	1.76	0.49
25:B0:49:LYS:HB2	25:B0:82:ARG:HH22	1.76	0.49
32:B7:9:ARG:HH22	35:BA:1310:G:P	2.35	0.49
35:BA:55:G:C2	35:BA:116:C:C2	3.00	0.49
35:BA:81:G:N2	35:BA:82:G:H1'	2.27	0.49
35:BA:157:U:OP2	35:BA:157:U:C6	2.62	0.49
35:BA:339:U:H2'	35:BA:340:A:H5'	1.94	0.49
35:BA:573:G:O2'	35:BA:574:C:H3'	2.12	0.49
35:BA:579:G:H2'	35:BA:580:C:C6	2.44	0.49
35:BA:855:G:H5"	35:BA:856:C:P	2.52	0.49
35:BA:1057:A:H2'	35:BA:1058:G:O4'	2.12	0.49
35:BA:1259:G:H2'	35:BA:1260:G:C8	2.46	0.49
35:BA:2082:A:H2'	35:BA:2083:G:O4'	2.11	0.49
38:BD:27:THR:O	38:BD:29:PRO:N	2.45	0.49
38:BD:142:VAL:HG23	38:BD:192:THR:O	2.11	0.49
40:BF:118:ALA:O	40:BF:121:GLY:N	2.28	0.49
48:BP:30:THR:OG1	48:BP:31:ALA:N	2.46	0.49
48:BP:130:PHE:HB3	48:BP:135:LEU:HG	1.93	0.49
55:BW:70:TYR:HD1	55:BW:108:GLY:O	1.94	0.49
1:CA:730:G:C5	1:CA:731:G:H1'	2.47	0.49
1:CA:1055:A:N7	1:CA:1200:C:N4	2.60	0.49
1:CA:1164:G:H1	1:CA:1172:C:H42	1.59	0.49
1:CA:1398:A:OP2	1:CA:1398:A:H8	1.95	0.49
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.11	0.49
5:CE:11:ILE:CG2	5:CE:31:LEU:HD12	2.42	0.49
10:CJ:84:GLN:HA	10:CJ:88:LEU:HD13	1.94	0.49
22:CV:25:C:H2'	22:CV:26:G:O4'	2.13	0.49
22:CV:64:G:H2'	22:CV:65:C:O4'	2.12	0.49
35:DA:17:G:H2'	35:DA:18:C:C6	2.48	0.49
35:DA:229:A:OP1	48:DP:150:ALA:OXT	2.31	0.49
35:DA:271(W):G:C6	35:DA:271(X):G:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:386:G:H4'	35:DA:387:U:OP2	2.12	0.49
35:DA:775:G:O5'	35:DA:777:A:H1'	2.13	0.49
35:DA:990:A:OP2	35:DA:991:C:OP2	2.30	0.49
35:DA:1930:G:O2'	35:DA:1968:G:O6	2.25	0.49
35:DA:1983:C:C2'	35:DA:1984:G:H5"	2.43	0.49
36:DB:88:C:C2	36:DB:89:G:C6	3.00	0.49
38:DD:80:ALA:HB3	38:DD:94:LEU:HD13	1.94	0.49
38:DD:106:ILE:O	38:DD:108:PRO:HD3	2.13	0.49
46:DN:43:THR:HB	46:DN:46:VAL:HG11	1.93	0.49
48:DP:35:HIS:O	48:DP:36:LYS:CG	2.59	0.49
48:DP:51:PHE:HE2	48:DP:59:LEU:HD12	1.77	0.49
49:DQ:77:LYS:NZ	49:DQ:83:MET:H	2.09	0.49
53:DU:83:LEU:CD1	53:DU:113:ALA:HB2	2.42	0.49
55:DW:12:ILE:O	55:DW:101:SER:OG	2.29	0.49
1:AA:147:G:C6	1:AA:176:C:N3	2.81	0.49
1:AA:262:A:H2'	1:AA:263:A:C8	2.47	0.49
1:AA:957:U:H5"	1:AA:958:A:OP2	2.12	0.49
1:AA:1151:A:OP2	1:AA:1151:A:H2'	2.13	0.49
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.12	0.49
2:AB:97:TRP:CZ3	2:AB:101:MET:HG2	2.46	0.49
2:AB:166:ASP:HB3	2:AB:169:LYS:HB3	1.94	0.49
3:AC:181:ASN:HD21	3:AC:204:LEU:HB2	1.77	0.49
7:AG:18:TYR:HD1	7:AG:18:TYR:H	1.59	0.49
11:AK:91:ARG:NH1	11:AK:110:ASP:OD2	2.44	0.49
11:AK:92:GLU:HA	11:AK:95:ILE:HG12	1.94	0.49
26:B1:82:LEU:HD22	26:B1:83:GLU:H	1.78	0.49
28:B3:26:LEU:HB2	28:B3:28:LEU:HD12	1.95	0.49
28:B3:49:LYS:NZ	35:BA:851:U:OP1	2.41	0.49
30:B5:31:VAL:HG22	30:B5:32:PRO:HD3	1.94	0.49
35:BA:55:G:O2'	35:BA:127:A:N1	2.43	0.49
35:BA:220:G:H2'	35:BA:427:U:O4	2.12	0.49
35:BA:651:G:H2'	35:BA:651:G:N3	2.27	0.49
35:BA:1164:G:H2'	35:BA:1165:U:C6	2.47	0.49
35:BA:2094:G:OP1	43:BI:22:LYS:HD2	2.13	0.49
35:BA:2233:U:H2'	35:BA:2234:G:C8	2.48	0.49
36:BB:2:C:C4	36:BB:120:A:N6	2.81	0.49
38:BD:10:THR:HG23	38:BD:13:ARG:H	1.77	0.49
38:BD:36:PRO:HA	38:BD:62:TYR:O	2.11	0.49
38:BD:109:ASP:C	38:BD:111:LEU:H	2.21	0.49
39:BE:7:VAL:HG23	39:BE:27:LEU:HB3	1.94	0.49
41:BG:161:THR:HG22	41:BG:163:ALA:N	2.14	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:53:ALA:O	43:BI:56:LYS:N	2.45	0.49
44:BJ:103:UNK:O	44:BJ:105:UNK:N	2.45	0.49
52:BT:61:PHE:CE1	52:BT:76:PHE:HB2	2.48	0.49
54:BV:53:GLU:CD	54:BV:54:GLY:H	2.20	0.49
55:BW:59:VAL:HG13	55:BW:64:MET:H	1.77	0.49
56:BX:26:TYR:OH	56:BX:89:ILE:O	2.13	0.49
1:CA:1264:C:H2'	1:CA:1265:G:O4'	2.12	0.49
3:CC:52:LEU:HD23	3:CC:52:LEU:H	1.78	0.49
5:CE:136:MET:C	5:CE:138:ALA:N	2.69	0.49
8:CH:64:LYS:HD2	8:CH:79:VAL:HG21	1.93	0.49
12:CL:45:PRO:CG	12:CL:53:ARG:HH11	2.18	0.49
19:CS:78:ARG:HA	19:CS:78:ARG:NE	2.27	0.49
35:DA:321:G:O4'	40:DF:165:ARG:HG3	2.12	0.49
35:DA:634:C:H2'	35:DA:635:C:C6	2.48	0.49
35:DA:1217:C:H2'	35:DA:1218:C:H5"	1.93	0.49
35:DA:1916:A:H3'	35:DA:1917:U:C6	2.47	0.49
36:DB:32:C:H2'	36:DB:33:G:O4'	2.11	0.49
39:DE:24:THR:HG22	39:DE:186:GLY:O	2.13	0.49
46:DN:39:ARG:NH2	46:DN:41:ASP:OD2	2.39	0.49
49:DQ:19:GLY:O	49:DQ:21:THR:N	2.46	0.49
52:DT:7:ILE:HB	52:DT:8:LYS:NZ	2.26	0.49
52:DT:108:ARG:HG3	52:DT:109:GLU:N	2.25	0.49
53:DU:57:PHE:O	53:DU:58:ARG:C	2.56	0.49
56:DX:43:VAL:HG23	56:DX:47:PHE:HD2	1.76	0.49
57:DY:50:ARG:HB3	57:DY:56:PRO:HA	1.95	0.49
1:AA:9:G:H2'	1:AA:10:A:C8	2.47	0.49
1:AA:502:G:OP1	12:AL:118:SER:OG	2.22	0.49
1:AA:642:A:N6	8:AH:115:SER:OG	2.46	0.49
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.28	0.49
1:AA:947:G:O3'	13:AM:109:THR:OG1	2.30	0.49
1:AA:981:U:H5'	1:AA:982:U:H5"	1.93	0.49
1:AA:1442(A):G:O6	52:BT:118:ARG:HA	2.12	0.49
2:AB:165:VAL:HG23	2:AB:166:ASP:N	2.27	0.49
3:AC:95:THR:HG22	3:AC:97:LYS:HB2	1.92	0.49
13:AM:81:LEU:HD11	13:AM:88:ARG:NH2	2.27	0.49
20:AT:86:ARG:O	20:AT:90:GLN:HG2	2.13	0.49
31:B6:28:ARG:HB3	31:B6:32:ASN:HB3	1.94	0.49
35:BA:29:U:O5'	35:BA:29:U:H6	1.95	0.49
35:BA:776:G:O6	35:BA:793:A:H2'	2.13	0.49
35:BA:1478:G:O2'	35:BA:1558:A:C2	2.61	0.49
35:BA:1639:U:H4'	35:BA:2699:C:C1'	2.34	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2780:G:H4'	35:BA:2781:A:OP2	2.12	0.49
35:BA:2882:A:OP1	50:BR:96:ARG:NH2	2.46	0.49
39:BE:105:THR:O	39:BE:196:VAL:HG23	2.12	0.49
41:BG:46:ALA:HB1	41:BG:82:LEU:HD12	1.95	0.49
42:BH:29:PRO:HB2	42:BH:30:LYS:HZ2	1.77	0.49
50:BR:20:LEU:CA	50:BR:23:ASN:HB2	2.40	0.49
54:BV:51:VAL:HG13	54:BV:52:VAL:N	2.28	0.49
54:BV:79:VAL:CG2	54:BV:82:ARG:HD3	2.39	0.49
1:CA:291:C:H42	1:CA:309:G:H1	1.60	0.49
1:CA:1012:U:OP2	1:CA:1012:U:C6	2.65	0.49
1:CA:1272:G:H5'	1:CA:1273:G:OP2	2.12	0.49
2:CB:20:GLU:OE2	2:CB:190:THR:N	2.45	0.49
3:CC:134:ILE:HG23	3:CC:151:VAL:HB	1.95	0.49
4:CD:162:LEU:HD13	4:CD:181:MET:HB3	1.95	0.49
5:CE:59:GLY:HA2	5:CE:62:ALA:HB3	1.94	0.49
6:CF:11:ASN:HB3	6:CF:14:LEU:HG	1.95	0.49
35:DA:271(B):C:O2'	35:DA:272(F):C:H5'	2.12	0.49
35:DA:361:G:H5"	35:DA:362:U:OP2	2.12	0.49
35:DA:924:C:H5"	35:DA:925:C:OP2	2.13	0.49
35:DA:1179:C:H2'	35:DA:1180:C:H6	1.78	0.49
35:DA:1652:A:H2'	35:DA:1653:G:H5'	1.94	0.49
35:DA:1721:G:H3'	35:DA:1722:A:H5"	1.94	0.49
35:DA:1899:G:N2	35:DA:1902:C:N4	2.44	0.49
35:DA:2184:G:H2'	35:DA:2185:C:O4'	2.11	0.49
36:DB:82:G:O2'	36:DB:83:G:H5'	2.12	0.49
37:DC:181:PRO:O	37:DC:183:GLU:N	2.46	0.49
40:DF:52:LYS:HG3	40:DF:56:GLU:HB2	1.95	0.49
40:DF:184:TYR:O	40:DF:188:ARG:HG3	2.13	0.49
40:DF:198:ALA:O	40:DF:201:VAL:HG12	2.12	0.49
46:DN:51:PHE:CE2	46:DN:119:ARG:HD2	2.48	0.49
50:DR:4:LEU:O	50:DR:4:LEU:HD12	2.13	0.49
56:DX:80:ILE:O	56:DX:81:VAL:HG12	2.12	0.49
1:AA:261:U:OP2	20:AT:79:ARG:NH2	2.40	0.49
1:AA:544:G:P	4:AD:62:GLN:HE21	2.36	0.49
1:AA:939:G:C6	1:AA:940:C:N4	2.81	0.49
1:AA:1006:C:H2'	1:AA:1007:C:C4	2.48	0.49
1:AA:1034:G:O2'	1:AA:1035:A:H5'	2.13	0.49
1:AA:1113:C:H1'	3:AC:178:LEU:HD13	1.93	0.49
3:AC:164:ARG:CZ	3:AC:164:ARG:HB2	2.43	0.49
4:AD:163:GLU:O	4:AD:165:MET:N	2.45	0.49
8:AH:40:ALA:O	8:AH:43:GLY:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:12:ASP:HB3	10:AJ:15:THR:CG2	2.43	0.49
10:AJ:49:VAL:CG2	14:AN:41:ARG:HB2	2.43	0.49
12:AL:110:VAL:HG11	12:AL:120:TYR:HB3	1.95	0.49
30:B5:40:LYS:HD2	30:B5:41:PRO:O	2.13	0.49
35:BA:71:A:C8	35:BA:71:A:H5'	2.47	0.49
35:BA:1188:U:C2'	35:BA:1189:A:H5'	2.42	0.49
35:BA:1496:A:H8	35:BA:1578:U:O2'	1.96	0.49
35:BA:1509(A):A:H2'	35:BA:1509(B):A:C8	2.48	0.49
35:BA:1759:A:H4'	35:BA:2715:C:O4'	2.12	0.49
35:BA:1819:A:H3'	38:BD:178:PRO:HB3	1.93	0.49
35:BA:2378:A:C2'	51:BS:20:ARG:NH1	2.74	0.49
35:BA:2795:G:N2	35:BA:2796:U:H2'	2.28	0.49
37:BC:19:VAL:HG12	37:BC:20:TYR:H	1.77	0.49
39:BE:134:ILE:HB	39:BE:137:HIS:HB2	1.95	0.49
43:BI:31:LEU:HD21	43:BI:38:LEU:HG	1.93	0.49
46:BN:15:LEU:HD23	46:BN:53:VAL:HB	1.93	0.49
55:BW:59:VAL:HA	55:BW:63:ASP:N	2.28	0.49
58:BZ:96:VAL:HG22	58:BZ:97:GLU:HG2	1.95	0.49
1:CA:437:U:C5	1:CA:438:G:C5	3.01	0.49
1:CA:859:A:H2'	1:CA:860:A:O4'	2.13	0.49
1:CA:881:G:H2'	1:CA:882:C:O4'	2.13	0.49
1:CA:988:G:C2	1:CA:989:C:H1'	2.48	0.49
1:CA:1290:G:C6	1:CA:1291:G:C5	3.01	0.49
1:CA:1529:G:H4'	1:CA:1530:G:OP2	2.13	0.49
2:CB:231:GLU:CD	2:CB:232:PRO:HD3	2.37	0.49
5:CE:11:ILE:HG21	5:CE:31:LEU:HD12	1.95	0.49
9:CI:18:PHE:HB2	9:CI:62:TYR:O	2.13	0.49
17:CQ:63:ARG:HG2	17:CQ:64:PRO:CD	2.43	0.49
35:DA:919:G:C2'	35:DA:920:G:H5'	2.42	0.49
35:DA:1021:A:H2'	35:DA:1023:U:H5"	1.95	0.49
35:DA:1103:A:H3'	35:DA:1104:C:C6	2.48	0.49
35:DA:1107:G:H2'	35:DA:1107:G:N3	2.27	0.49
35:DA:1918:A:O2'	35:DA:1920:C:N4	2.45	0.49
35:DA:2102:U:H5	35:DA:2187:G:N1	2.07	0.49
35:DA:2127:G:O6	35:DA:2161:C:H1'	2.13	0.49
35:DA:2308:G:N7	35:DA:2310:A:H3'	2.28	0.49
36:DB:44:G:H1'	36:DB:47:C:H42	1.77	0.49
38:DD:108:PRO:HG3	38:DD:143:HIS:HE1	1.75	0.49
39:DE:52:LEU:O	39:DE:74:PRO:HA	2.13	0.49
41:DG:115:ARG:NH1	41:DG:116:ASP:HB2	2.21	0.49
48:DP:23:PRO:O	48:DP:33:ARG:NE	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DP:89:ALA:HA	48:DP:121:LYS:HD2	1.95	0.49
1:AA:50:A:N1	1:AA:360:A:O2'	2.38	0.49
1:AA:396:G:O2'	1:AA:398:C:OP1	2.27	0.49
1:AA:724:G:C2	1:AA:725:G:C8	3.01	0.49
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.13	0.49
1:AA:1169:A:C8	1:AA:1170:A:N7	2.80	0.49
1:AA:1326:C:H2'	1:AA:1327:C:H6	1.77	0.49
4:AD:29:PRO:C	4:AD:30:LYS:HD3	2.38	0.49
7:AG:12:LEU:HD11	7:AG:28:ASN:HD21	1.77	0.49
14:AN:21:TYR:CE1	14:AN:23:ARG:HD3	2.48	0.49
14:AN:59:ALA:HB1	14:AN:61:TRP:HZ3	1.78	0.49
15:AO:74:ASP:OD2	15:AO:77:ARG:NE	2.39	0.49
18:AR:21:LYS:HD2	18:AR:57:GLY:HA3	1.93	0.49
19:AS:49:ILE:HD11	19:AS:66:MET:CE	2.42	0.49
20:AT:75:ASN:HA	20:AT:78:ALA:HB3	1.93	0.49
34:B9:22:ARG:HH22	35:BA:2741:A:H5"	1.78	0.49
35:BA:271(J):C:OP2	35:BA:271(J):C:C6	2.65	0.49
35:BA:911:A:H2'	49:BQ:9:TYR:OH	2.12	0.49
35:BA:977:G:H2'	35:BA:978:G:C8	2.47	0.49
35:BA:1499:C:H5'	35:BA:1500:G:OP2	2.12	0.49
35:BA:2112:G:O2'	35:BA:2113:U:O5'	2.31	0.49
35:BA:2698:U:C5	35:BA:2699:C:N3	2.80	0.49
36:BB:44:G:HO2'	36:BB:47:C:H41	1.56	0.49
39:BE:38:THR:HG22	39:BE:41:LYS:H	1.77	0.49
39:BE:101:ARG:CZ	39:BE:171:GLU:HB2	2.42	0.49
40:BF:19:GLU:HG3	40:BF:24:LEU:HD13	1.94	0.49
41:BG:120:LEU:HD23	41:BG:131:TYR:OH	2.13	0.49
46:BN:4:TYR:O	46:BN:5:VAL:HG12	2.13	0.49
48:BP:85:LEU:N	48:BP:115:LEU:O	2.46	0.49
51:BS:59:LYS:HE2	51:BS:60:GLY:H	1.78	0.49
53:BU:14:HIS:O	53:BU:16:LYS:N	2.45	0.49
58:BZ:145:GLU:OE1	58:BZ:174:VAL:HG11	2.13	0.49
1:CA:418:C:H1'	1:CA:540:G:O2'	2.13	0.49
1:CA:460:G:H8	1:CA:460:G:OP2	1.96	0.49
3:CC:35:GLU:OE1	3:CC:97:LYS:NZ	2.38	0.49
16:CP:74:LEU:HB3	16:CP:79:VAL:HG21	1.93	0.49
21:CU:9:ARG:HD2	21:CU:22:ARG:HG2	1.94	0.49
23:CW:43:C:H2'	23:CW:44:G:H8	1.76	0.49
33:D8:30:ARG:HH11	35:DA:2395:C:N4	2.10	0.49
35:DA:570:G:H2'	35:DA:2030:A:C5	2.48	0.49
35:DA:860:U:C5	35:DA:917:A:N7	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DB:89:G:C5	36:DB:90:A:N6	2.79	0.49
38:DD:125:ILE:HD13	38:DD:131:LEU:HD21	1.95	0.49
39:DE:30:PRO:HB3	39:DE:92:THR:HG22	1.93	0.49
41:DG:11:TYR:CZ	41:DG:16:ARG:HD3	2.48	0.49
43:DI:66:GLU:O	43:DI:69:LYS:HB2	2.12	0.49
47:DO:87:ILE:HG23	47:DO:91:LEU:HA	1.95	0.49
49:DQ:10:ARG:NE	49:DQ:10:ARG:CA	2.75	0.49
52:DT:98:LYS:HD2	52:DT:98:LYS:H	1.77	0.49
55:DW:50:VAL:HG22	55:DW:105:VAL:HG23	1.94	0.49
1:AA:682:G:N3	1:AA:709:G:C2	2.80	0.49
1:AA:996:A:H5"	1:AA:997:U:OP2	2.13	0.49
1:AA:1004:A:C8	1:AA:1039:C:N4	2.81	0.49
1:AA:1095:U:OP1	1:AA:1108:G:N2	2.39	0.49
1:AA:1267:C:H5"	1:AA:1268:A:OP2	2.13	0.49
1:AA:1277:C:H3'	1:AA:1277:C:C6	2.47	0.49
1:AA:1317:C:H5"	1:AA:1318:A:OP2	2.12	0.49
2:AB:123:ALA:HA	2:AB:127:ILE:HA	1.95	0.49
4:AD:31:CYS:C	4:AD:33:MET:H	2.20	0.49
4:AD:113:SER:O	4:AD:117:ALA:N	2.40	0.49
4:AD:127:THR:HG23	4:AD:147:ALA:HB3	1.93	0.49
5:AE:79:GLU:HA	5:AE:91:LEU:O	2.12	0.49
10:AJ:69:ASN:HD22	10:AJ:70:ARG:N	2.11	0.49
12:AL:38:THR:HG23	12:AL:57:LYS:HB3	1.95	0.49
16:AP:58:TYR:O	16:AP:60:LEU:N	2.46	0.49
35:BA:28:A:N6	35:BA:512:G:H1'	2.27	0.49
35:BA:125:G:H4'	35:BA:126:A:OP2	2.13	0.49
35:BA:881:G:H22	35:BA:895:U:H3	1.58	0.49
35:BA:1045:A:H4'	35:BA:1047:G:H1'	1.93	0.49
35:BA:1064:C:N4	35:BA:1088:A:H61	2.08	0.49
35:BA:1106:G:N2	35:BA:1107:G:N7	2.61	0.49
35:BA:1643:G:N2	35:BA:1644:C:H1'	2.28	0.49
35:BA:1885:A:H3'	35:BA:1886:C:C6	2.47	0.49
43:BI:78:THR:CA	43:BI:141:LYS:HB2	2.38	0.49
47:BO:113:LYS:O	47:BO:117:LEU:HD12	2.13	0.49
48:BP:81:GLN:O	48:BP:111:ARG:O	2.31	0.49
51:BS:68:GLN:O	51:BS:71:ARG:N	2.45	0.49
55:BW:52:GLU:C	55:BW:54:ALA:N	2.71	0.49
56:BX:25:LYS:CG	56:BX:87:GLN:HE21	2.25	0.49
1:CA:163:C:H2'	1:CA:164:U:C6	2.48	0.49
1:CA:558:G:C4	1:CA:559:A:H2	2.30	0.49
1:CA:667:G:H8	1:CA:667:G:O5'	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:833:U:H2'	1:CA:834:C:C6	2.48	0.49
1:CA:1087:G:H2'	1:CA:1088:G:H8	1.77	0.49
1:CA:1330:U:C5	1:CA:1331:G:C5	3.01	0.49
3:CC:123:GLN:O	3:CC:128:PHE:HB2	2.13	0.49
6:CF:3:ARG:HB3	6:CF:93:SER:HB2	1.95	0.49
7:CG:51:GLN:O	7:CG:53:LYS:N	2.37	0.49
8:CH:94:TYR:HD1	8:CH:132:GLU:HA	1.78	0.49
13:CM:15:VAL:O	13:CM:19:LEU:HD23	2.13	0.49
22:CV:19:G:N2	41:DG:78:SER:OG	2.45	0.49
31:D6:15:GLU:CD	31:D6:44:ARG:HG2	2.38	0.49
35:DA:658:C:H2'	35:DA:659:C:H6	1.78	0.49
35:DA:1044:G:H2'	35:DA:1044:G:N3	2.28	0.49
39:DE:14:ILE:HG13	39:DE:15:PHE:N	2.27	0.49
46:DN:75:TYR:O	46:DN:76:SER:O	2.30	0.49
48:DP:59:LEU:O	48:DP:60:MET:HG3	2.12	0.49
52:DT:92:GLY:HA3	52:DT:115:ARG:N	2.27	0.49
54:DV:35:LEU:HB3	54:DV:59:ALA:HB1	1.93	0.49
56:DX:32:PRO:HA	56:DX:75:ASP:HB3	1.95	0.49
1:AA:257:G:H2'	1:AA:258:G:C8	2.47	0.49
1:AA:472:A:N7	1:AA:473:G:H1'	2.28	0.49
1:AA:596:C:H5'	1:AA:596:C:H6	1.78	0.49
1:AA:1051:C:H2'	1:AA:1052:U:H6	1.77	0.49
3:AC:6:HIS:CG	14:AN:49:HIS:HB3	2.48	0.49
16:AP:3:LYS:O	16:AP:21:VAL:HA	2.12	0.49
27:B2:28:LYS:O	27:B2:29:LYS:C	2.56	0.49
34:B9:26:ILE:HG12	34:B9:33:LYS:HE2	1.93	0.49
35:BA:100:G:H5"	35:BA:102:G:O5'	2.13	0.49
35:BA:681:G:H2'	35:BA:682:G:O4'	2.12	0.49
35:BA:1225:G:O2'	35:BA:1226:A:H5'	2.13	0.49
35:BA:1472:A:H2'	35:BA:1473:G:O4'	2.13	0.49
35:BA:1517:G:C6	35:BA:1518:U:C4	3.00	0.49
35:BA:1527:G:O2'	35:BA:1528:A:H8	1.96	0.49
35:BA:2274:A:N1	35:BA:2276:G:H1'	2.28	0.49
35:BA:2395:C:H2'	35:BA:2396:G:O4'	2.13	0.49
35:BA:2666:C:H3'	35:BA:2667:C:C6	2.48	0.49
35:BA:2697:G:N1	35:BA:2698:U:N3	2.61	0.49
40:BF:53:THR:HG23	40:BF:55:GLY:H	1.78	0.49
40:BF:178:PRO:CB	40:BF:201:VAL:HG11	2.39	0.49
43:BI:66:GLU:O	43:BI:70:GLU:HB2	2.11	0.49
49:BQ:6:ARG:HA	49:BQ:6:ARG:NE	2.28	0.49
54:BV:38:LEU:C	54:BV:39:LEU:HD22	2.38	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BW:4:LYS:HB2	55:BW:106:ILE:HG22	1.95	0.49
56:BX:83:VAL:C	56:BX:85:PRO:HD3	2.37	0.49
1:CA:59:A:N6	1:CA:331:G:H1'	2.27	0.49
1:CA:436:C:O2'	1:CA:437:U:O5'	2.31	0.49
1:CA:520:A:H2'	1:CA:521:G:O4'	2.13	0.49
1:CA:692:U:H2'	1:CA:694:A:OP2	2.13	0.49
1:CA:860:A:H5"	1:CA:861:G:OP2	2.13	0.49
3:CC:89:GLU:O	3:CC:91:LEU:N	2.45	0.49
9:CI:116:LYS:NZ	9:CI:120:ARG:O	2.45	0.49
18:CR:59:SER:OG	18:CR:60:ALA:N	2.46	0.49
22:CV:52:G:N3	22:CV:53:G:C8	2.81	0.49
23:CW:76:A:H5"	26:D1:33:LYS:CE	2.41	0.49
26:D1:39:LYS:O	26:D1:39:LYS:HD2	2.12	0.49
34:D9:26:ILE:O	34:D9:28:GLU:N	2.46	0.49
35:DA:68:G:H2'	35:DA:69:C:O4'	2.13	0.49
35:DA:271(H):G:N1	35:DA:271(Q):G:C2	2.81	0.49
35:DA:271(S):G:C6	35:DA:271(T):C:C4	3.01	0.49
35:DA:548:A:N6	54:DV:95:LEU:HD11	2.26	0.49
35:DA:882:G:H22	35:DA:894:C:N4	2.04	0.49
35:DA:1170:G:N2	35:DA:1180:C:C2	2.81	0.49
35:DA:1292:U:H2'	35:DA:1293:C:C6	2.48	0.49
35:DA:1485:G:H2'	35:DA:1486:A:H8	1.77	0.49
35:DA:1662:C:O2'	35:DA:2687:U:OP1	2.29	0.49
35:DA:1858:G:H1'	35:DA:1884:A:N6	2.28	0.49
35:DA:2166:G:H1	35:DA:2171:A:H62	1.60	0.49
35:DA:2200:C:N4	35:DA:2223:G:H1	2.10	0.49
35:DA:2659:G:H2'	35:DA:2661:G:H1'	1.93	0.49
35:DA:2693:A:H2'	35:DA:2694:G:C8	2.48	0.49
35:DA:2698:U:H2'	35:DA:2699:C:C6	2.48	0.49
36:DB:87:G:C3'	36:DB:88:C:H5"	2.42	0.49
41:DG:123:ASN:C	41:DG:125:PHE:H	2.21	0.49
42:DH:83:TYR:HD2	42:DH:141:VAL:HB	1.70	0.49
50:DR:2:ARG:HH22	50:DR:5:LYS:HE3	1.72	0.49
50:DR:45:ARG:HD3	50:DR:97:VAL:HG21	1.94	0.49
58:DZ:107:THR:OG1	58:DZ:108:PRO:HD2	2.13	0.49
1:AA:6:G:O2'	1:AA:7:G:O5'	2.26	0.48
1:AA:17:U:O2'	1:AA:1079:G:N3	2.37	0.48
1:AA:273:A:C2'	1:AA:274:A:H5'	2.43	0.48
1:AA:452:A:H4'	1:AA:453:A:OP1	2.13	0.48
1:AA:1060:C:H5"	10:AJ:51:ARG:CG	2.38	0.48
1:AA:1097:C:H1'	1:AA:1170:A:H1'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1128:C:O2'	1:AA:1146:A:N6	2.45	0.48
3:AC:13:GLY:HA2	3:AC:18:TRP:CZ3	2.48	0.48
4:AD:9:CYS:HB3	4:AD:32:ALA:CB	2.24	0.48
4:AD:12:CYS:O	4:AD:16:GLY:N	2.38	0.48
5:AE:74:GLY:O	5:AE:115:VAL:HA	2.12	0.48
8:AH:36:LEU:C	8:AH:48:TYR:OH	2.56	0.48
8:AH:36:LEU:C	8:AH:48:TYR:HH	2.20	0.48
11:AK:57:THR:HG22	11:AK:59:TYR:H	1.77	0.48
11:AK:99:GLN:HE21	11:AK:105:VAL:HG21	1.75	0.48
15:AO:16:ALA:HA	15:AO:27:VAL:HG22	1.95	0.48
18:AR:50:ILE:HG12	18:AR:74:ARG:HH12	1.78	0.48
19:AS:49:ILE:HB	19:AS:60:VAL:H	1.78	0.48
23:AW:54:U:H4'	23:AW:55:U:OP2	2.12	0.48
25:B0:37:LEU:HG	25:B0:60:PHE:HA	1.94	0.48
33:B8:4:MET:O	33:B8:62:LEU:HD23	2.13	0.48
33:B8:33:ASN:HB3	35:BA:2420:C:OP2	2.13	0.48
35:BA:139:G:C2'	35:BA:139(A):G:H5"	2.25	0.48
35:BA:143(A):C:H2'	35:BA:144:C:H6	1.78	0.48
35:BA:494:G:H5"	35:BA:494:G:C8	2.48	0.48
35:BA:614:U:O2'	35:BA:614(C):A:N7	2.46	0.48
35:BA:981:A:N1	35:BA:2027:G:O2'	2.42	0.48
35:BA:1021:A:H3'	35:BA:1021:A:H8	1.78	0.48
35:BA:1742:G:N7	35:BA:1743:C:N3	2.61	0.48
35:BA:2312:U:OP1	41:BG:74:LYS:N	2.44	0.48
38:BD:77:ALA:HA	38:BD:97:TYR:HA	1.95	0.48
42:BH:110:SER:OG	42:BH:111:HIS:N	2.46	0.48
46:BN:73:THR:O	46:BN:73:THR:OG1	2.31	0.48
48:BP:26:GLY:HA3	48:BP:29:LYS:NZ	2.28	0.48
48:BP:73:GLY:O	48:BP:75:ILE:N	2.46	0.48
1:CA:79:G:H1'	1:CA:80:G:C8	2.48	0.48
1:CA:407:G:N1	1:CA:436:C:N4	2.59	0.48
1:CA:438:G:O2'	1:CA:493:G:C2	2.66	0.48
1:CA:592:G:C2	1:CA:593:G:C8	3.01	0.48
1:CA:1060:C:H4'	10:CJ:51:ARG:HG3	1.94	0.48
7:CG:90:GLU:OE1	7:CG:91:VAL:N	2.46	0.48
11:CK:28:THR:OG1	11:CK:90:GLY:HA3	2.13	0.48
35:DA:363(C):G:H2'	35:DA:363(D):G:H8	1.78	0.48
35:DA:988:A:H8	35:DA:988:A:O5'	1.96	0.48
35:DA:1239:G:H2'	35:DA:1240:U:O4'	2.13	0.48
35:DA:1271:G:O3'	35:DA:1272:A:H4'	2.12	0.48
35:DA:1529:G:H5'	35:DA:1530:C:OP2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1683:C:H42	35:DA:1705:G:H1	1.61	0.48
35:DA:1779:U:C5	35:DA:1784:A:N7	2.80	0.48
35:DA:2616:C:H2'	35:DA:2617:C:H6	1.78	0.48
35:DA:2744:G:N2	42:DH:143:GLN:HE22	2.10	0.48
37:DC:219:GLY:O	37:DC:221:SER:N	2.40	0.48
51:DS:56:LEU:O	51:DS:58:LEU:HD22	2.12	0.48
52:DT:45:PHE:CE2	52:DT:74:ARG:NE	2.80	0.48
53:DU:95:LEU:CD2	54:DV:13:ARG:HB3	2.42	0.48
54:DV:33:VAL:HG13	54:DV:61:VAL:HG13	1.93	0.48
54:DV:36:PRO:O	54:DV:60:GLU:HB2	2.13	0.48
1:AA:784:C:H4'	35:BA:1837:C:OP1	2.14	0.48
1:AA:994:A:H2'	1:AA:994:A:N3	2.28	0.48
1:AA:1067:A:H8	1:AA:1067:A:O5'	1.96	0.48
1:AA:1068:G:N2	1:AA:1191:A:N3	2.58	0.48
1:AA:1159:U:H5	1:AA:1182:G:C2	2.31	0.48
5:AE:102:ALA:O	5:AE:107:ARG:NH1	2.46	0.48
9:AI:19:LEU:C	9:AI:20:ARG:HD2	2.39	0.48
11:AK:69:ALA:O	11:AK:70:LYS:C	2.55	0.48
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.94	0.48
19:AS:69:HIS:CB	19:AS:73:GLU:HG3	2.29	0.48
26:B1:43:TYR:CE1	26:B1:45:ASN:CG	2.91	0.48
33:B8:62:LEU:HD21	35:BA:592:G:O2'	2.13	0.48
35:BA:132:G:N2	35:BA:147:U:O2	2.45	0.48
35:BA:310:A:P	57:BY:18:GLY:HA2	2.54	0.48
35:BA:458:G:N2	35:BA:470:A:OP2	2.46	0.48
35:BA:838:C:H2'	35:BA:839:U:C6	2.47	0.48
35:BA:1051:G:C8	35:BA:1052:C:H5	2.31	0.48
35:BA:1157:G:C6	35:BA:1158:C:N4	2.81	0.48
35:BA:1449:A:H2'	35:BA:1450:G:O5'	2.13	0.48
35:BA:1790:C:H2'	35:BA:1791:A:C5	2.49	0.48
35:BA:2085:C:H4'	38:BD:262:ARG:NH2	2.27	0.48
35:BA:2281:C:C2'	35:BA:2282:G:H5'	2.43	0.48
35:BA:2334:G:H5'	51:BS:13:ARG:CG	2.43	0.48
35:BA:2690:C:OP2	35:BA:2690:C:H6	1.95	0.48
38:BD:206:LEU:CD2	38:BD:211:ARG:HG2	2.41	0.48
42:BH:43:VAL:HG21	42:BH:52:VAL:HG13	1.95	0.48
49:BQ:55:VAL:HG23	49:BQ:61:GLY:HA2	1.95	0.48
50:BR:86:ARG:NE	50:BR:117:VAL:HG11	2.17	0.48
54:BV:51:VAL:HG22	54:BV:52:VAL:H	1.78	0.48
56:BX:82:GLN:OE1	56:BX:83:VAL:HG13	2.14	0.48
1:CA:64:G:N2	1:CA:68:G:O6	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:98:G:H2'	1:CA:99:U:O4'	2.13	0.48
1:CA:688:G:H2'	1:CA:689:C:C6	2.46	0.48
1:CA:883:C:H2'	1:CA:884:U:H5'	1.94	0.48
1:CA:1118:C:O4'	1:CA:1179:A:H1'	2.13	0.48
1:CA:1265:G:H5'	1:CA:1266:G:OP2	2.13	0.48
4:CD:15:GLU:HG2	4:CD:59:ARG:HB2	1.95	0.48
4:CD:100:ARG:HG2	4:CD:137:SER:HA	1.95	0.48
4:CD:162:LEU:HA	4:CD:165:MET:HB2	1.95	0.48
7:CG:74:GLU:HG2	7:CG:141:VAL:HG11	1.94	0.48
26:D1:47:GLN:NE2	35:DA:2090:G:N2	2.61	0.48
33:D8:29:LYS:HD2	33:D8:44:LYS:CG	2.43	0.48
35:DA:389:G:N2	48:DP:71:VAL:HG21	2.28	0.48
35:DA:587:C:C2'	48:DP:33:ARG:HH11	2.23	0.48
35:DA:1047:G:H8	35:DA:1110:G:N1	2.11	0.48
35:DA:1071:G:H1	35:DA:1092:C:N4	2.11	0.48
35:DA:1329:U:H3'	35:DA:1330:C:H6	1.76	0.48
35:DA:1741:A:N7	35:DA:1742:G:C5	2.81	0.48
35:DA:2127:G:N1	35:DA:2161:C:O2'	2.42	0.48
35:DA:2167:U:C5	35:DA:2170:A:OP2	2.66	0.48
39:DE:200:GLU:HG2	39:DE:201:THR:H	1.78	0.48
41:DG:147:ASP:OD1	41:DG:148:MET:HG3	2.13	0.48
49:DQ:76:LYS:HB2	49:DQ:91:GLU:HG3	1.95	0.48
53:DU:34:LYS:HD3	53:DU:34:LYS:HA	1.51	0.48
1:AA:146:G:H5'	1:AA:146:G:H8	1.77	0.48
1:AA:295:C:H2'	1:AA:296:U:O4'	2.13	0.48
1:AA:523:A:H61	12:AL:53:ARG:NH1	2.11	0.48
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.48	0.48
1:AA:1117:G:H5'	1:AA:1118:C:OP2	2.13	0.48
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.48	0.48
2:AB:58:ILE:O	2:AB:62:ALA:N	2.27	0.48
4:AD:191:ARG:HB3	4:AD:192:GLU:OE2	2.13	0.48
8:AH:69:ARG:HD3	8:AH:75:ARG:O	2.13	0.48
11:AK:62:GLN:HG3	11:AK:97:ALA:HB2	1.95	0.48
19:AS:39:THR:O	19:AS:41:VAL:N	2.46	0.48
32:B7:12:ARG:HG2	35:BA:686:G:O6	2.13	0.48
35:BA:30:G:C6	35:BA:31:C:C4	3.00	0.48
35:BA:485:C:N3	35:BA:495:G:N2	2.59	0.48
35:BA:620:G:H8	35:BA:622:G:O6	1.96	0.48
35:BA:1392:A:N6	35:BA:1393:A:N6	2.62	0.48
35:BA:1820:U:O2	38:BD:201:HIS:HB3	2.13	0.48
35:BA:1946:U:H2'	35:BA:1947:C:C6	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2287:A:C2	35:BA:2346:A:N1	2.81	0.48
35:BA:2392:A:H2	35:BA:2424:C:N4	2.08	0.48
35:BA:2716:U:O2'	35:BA:2717:G:H5'	2.13	0.48
36:BB:4:C:N4	36:BB:117:G:H1	2.01	0.48
36:BB:70:C:N3	36:BB:107:G:N2	2.56	0.48
40:BF:128:ALA:C	40:BF:142:TRP:HE1	2.21	0.48
40:BF:182:ASN:O	40:BF:186:ILE:HG12	2.13	0.48
41:BG:59:GLU:OE1	41:BG:138:GLN:NE2	2.31	0.48
42:BH:25:LYS:HB3	42:BH:32:GLU:OE2	2.13	0.48
42:BH:83:TYR:CG	42:BH:134:SER:HB3	2.48	0.48
42:BH:94:TYR:HE2	42:BH:161:GLY:H	1.61	0.48
43:BI:3:VAL:O	43:BI:18:VAL:HA	2.13	0.48
43:BI:57:ARG:HA	43:BI:60:GLU:CB	2.37	0.48
46:BN:55:VAL:HG22	46:BN:128:HIS:HB3	1.96	0.48
47:BO:113:LYS:O	47:BO:115:VAL:HG22	2.13	0.48
47:BO:120:GLU:OE1	47:BO:122:LEU:HD11	2.13	0.48
49:BQ:109:VAL:HA	49:BQ:113:GLN:OE1	2.12	0.48
51:BS:89:ARG:HG3	51:BS:90:GLY:O	2.12	0.48
53:BU:66:ASN:CG	53:BU:70:ARG:HE	2.21	0.48
54:BV:66:ARG:HE	54:BV:94:LEU:HG	1.77	0.48
55:BW:69:LEU:HA	55:BW:108:GLY:O	2.12	0.48
57:BY:75:ILE:HG12	57:BY:79:CYS:HA	1.95	0.48
1:CA:433:C:H2'	1:CA:434:U:C6	2.48	0.48
1:CA:536:C:H2'	1:CA:537:G:C8	2.48	0.48
1:CA:586:C:H2'	1:CA:587:G:H5'	1.95	0.48
1:CA:718:G:C4	11:CK:116:HIS:CD2	3.01	0.48
1:CA:958:A:C6	1:CA:959:A:C6	3.01	0.48
1:CA:1405:G:N7	60:CA:1787:EDS:NAM	2.61	0.48
4:CD:31:CYS:C	4:CD:33:MET:N	2.71	0.48
4:CD:165:MET:C	4:CD:167:GLY:H	2.22	0.48
6:CF:19:LEU:HD21	6:CF:59:TYR:CZ	2.48	0.48
7:CG:108:ALA:HB1	7:CG:120:ILE:HD13	1.95	0.48
9:CI:14:VAL:O	9:CI:65:VAL:HG23	2.13	0.48
10:CJ:92:THR:O	10:CJ:92:THR:OG1	2.22	0.48
14:CN:34:TYR:HE1	14:CN:41:ARG:HB3	1.78	0.48
18:CR:66:LEU:HD23	18:CR:67:ALA:N	2.28	0.48
27:D2:9:GLN:O	27:D2:9:GLN:NE2	2.47	0.48
33:D8:31:HIS:CE1	35:DA:2419:U:O4	2.66	0.48
35:DA:80:G:C2'	35:DA:81:G:H5'	2.43	0.48
35:DA:1021:A:H3'	35:DA:1021:A:H8	1.78	0.48
35:DA:1060:U:H5'	35:DA:1070:A:C2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1241:A:C2'	35:DA:1242:A:O5'	2.61	0.48
35:DA:1481:U:H5'	35:DA:1482:G:OP2	2.11	0.48
37:DC:58:VAL:HG21	37:DC:166:ASP:N	2.28	0.48
37:DC:59:ARG:HG3	37:DC:62:VAL:HG13	1.94	0.48
41:DG:150:ASP:OD1	41:DG:150:ASP:N	2.42	0.48
49:DQ:51:ARG:O	49:DQ:55:VAL:HG13	2.13	0.48
56:DX:53:LYS:H	56:DX:80:ILE:HG22	1.79	0.48
1:AA:189:G:C8	1:AA:189:G:C3'	2.95	0.48
1:AA:909:A:H2'	1:AA:910:C:O4'	2.14	0.48
4:AD:88:VAL:O	4:AD:92:VAL:HG12	2.14	0.48
4:AD:91:SER:OG	4:AD:191:ARG:HB2	2.13	0.48
5:AE:38:GLN:HG2	5:AE:38:GLN:O	2.12	0.48
6:AF:19:LEU:HD11	6:AF:59:TYR:CD2	2.48	0.48
10:AJ:32:ALA:HA	10:AJ:76:ASN:HB2	1.96	0.48
17:AQ:6:LEU:HD23	17:AQ:6:LEU:HA	1.59	0.48
25:B0:56:ASP:OD2	35:BA:2364:C:H4'	2.13	0.48
35:BA:271(K):U:O2'	43:BI:50:ARG:HD3	2.13	0.48
35:BA:279:C:OP2	35:BA:279:C:C6	2.66	0.48
35:BA:859:G:N2	35:BA:917:A:OP2	2.46	0.48
35:BA:1486:A:C6	35:BA:1504:C:N4	2.80	0.48
35:BA:2390:U:O2'	35:BA:2391:G:H5'	2.14	0.48
39:BE:102:VAL:N	39:BE:201:THR:OG1	2.46	0.48
39:BE:108:SER:HB3	39:BE:165:VAL:HG21	1.95	0.48
39:BE:116:VAL:O	39:BE:118:LYS:N	2.45	0.48
52:BT:13:ARG:C	52:BT:15:VAL:H	2.22	0.48
54:BV:35:LEU:HB2	54:BV:59:ALA:HB1	1.94	0.48
55:BW:18:ARG:HH11	55:BW:25:ARG:NH2	2.12	0.48
56:BX:49:VAL:HG13	56:BX:88:LYS:NZ	2.28	0.48
58:BZ:114:GLY:HA2	58:BZ:175:VAL:O	2.13	0.48
1:CA:299:G:H2'	1:CA:300:A:C8	2.48	0.48
1:CA:410:G:N1	1:CA:429:U:O2	2.45	0.48
1:CA:511:C:H4'	4:CD:43:HIS:CD2	2.48	0.48
1:CA:666:G:H5'	1:CA:726:C:H1'	1.94	0.48
1:CA:828:A:H2'	1:CA:829:G:O4'	2.13	0.48
1:CA:1153:C:P	10:CJ:13:HIS:HE2	2.37	0.48
1:CA:1171:G:H2'	1:CA:1172:C:C6	2.49	0.48
2:CB:174:VAL:HG22	2:CB:184:VAL:HG11	1.95	0.48
5:CE:57:LYS:HE2	5:CE:61:TYR:CE1	2.48	0.48
9:CI:65:VAL:O	9:CI:66:ARG:HG3	2.13	0.48
28:D3:17:LYS:HG3	35:DA:969:U:OP1	2.12	0.48
32:D7:1:MET:HE2	35:DA:1619:G:C2'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:26:G:C6	35:DA:27:G:N1	2.81	0.48
35:DA:773:U:H4'	38:DD:47:GLY:HA2	1.95	0.48
35:DA:833:U:H5'	48:DP:52:GLU:HG3	1.95	0.48
35:DA:2097:C:H2'	35:DA:2098:U:O4'	2.13	0.48
37:DC:79:LYS:H	37:DC:82:LYS:HB2	1.79	0.48
43:DI:5:LEU:O	43:DI:6:LEU:HD23	2.13	0.48
55:DW:13:SER:HB3	55:DW:16:LYS:HD2	1.94	0.48
56:DX:70:LEU:C	56:DX:72:LYS:N	2.70	0.48
1:AA:79:G:C2	1:AA:80:G:N7	2.80	0.48
1:AA:662:G:H1	1:AA:743:U:H3	1.62	0.48
1:AA:1179:A:H2'	1:AA:1180:A:H5'	1.95	0.48
2:AB:24:TRP:N	2:AB:24:TRP:CD1	2.80	0.48
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.13	0.48
15:AO:33:THR:HG22	15:AO:63:ARG:HH11	1.79	0.48
27:B2:22:GLU:HA	27:B2:25:VAL:HG12	1.95	0.48
35:BA:802:A:H2'	35:BA:803:U:C6	2.48	0.48
35:BA:994:C:OP1	53:BU:53:ARG:NH2	2.46	0.48
35:BA:1045:A:H4'	35:BA:1047:G:C1'	2.43	0.48
35:BA:1064:C:O2'	35:BA:1065:U:OP1	2.28	0.48
35:BA:1288:U:C2	35:BA:1327:C:O2	2.67	0.48
35:BA:1412:A:H2'	35:BA:1413:G:C8	2.49	0.48
35:BA:1865:G:N2	35:BA:1877:A:OP2	2.45	0.48
35:BA:2415:G:C6	35:BA:2416:C:C4	3.02	0.48
36:BB:52:A:O2'	36:BB:53:A:C8	2.67	0.48
38:BD:108:PRO:HA	38:BD:196:VAL:O	2.13	0.48
39:BE:105:THR:HG21	39:BE:164:ARG:HH21	1.77	0.48
41:BG:124:SER:HB2	41:BG:131:TYR:CE1	2.49	0.48
47:BO:22:ILE:HG12	47:BO:42:SER:H	1.78	0.48
48:BP:110:TYR:CE1	48:BP:128:HIS:CD2	3.02	0.48
52:BT:50:ILE:CG1	52:BT:62:THR:HG23	2.39	0.48
52:BT:82:LEU:H	52:BT:82:LEU:HG	1.31	0.48
52:BT:113:LYS:O	52:BT:114:LEU:HD23	2.14	0.48
54:BV:75:PHE:HB2	54:BV:87:HIS:ND1	2.29	0.48
55:BW:75:TYR:CZ	55:BW:104:THR:HG21	2.48	0.48
58:BZ:67:LEU:HD23	58:BZ:68:PRO:HD2	1.96	0.48
1:CA:223:U:H2'	1:CA:224:C:H6	1.78	0.48
1:CA:260:G:OP2	20:CT:79:ARG:NH2	2.46	0.48
1:CA:277:C:OP2	17:CQ:41:LYS:NZ	2.44	0.48
1:CA:544:G:OP1	4:CD:62:GLN:NE2	2.26	0.48
1:CA:575:G:O2'	1:CA:821:G:H5'	2.13	0.48
1:CA:619:U:C2	4:CD:135:LEU:HD21	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:694:A:H5"	11:CK:53:SER:CB	2.42	0.48
3:CC:6:HIS:CD2	3:CC:8:ILE:HB	2.48	0.48
5:CE:27:ARG:HH11	5:CE:27:ARG:HG2	1.79	0.48
17:CQ:6:LEU:HD22	17:CQ:23:VAL:HG11	1.95	0.48
22:CV:47:U:H6	22:CV:47:U:O5'	1.96	0.48
25:D0:53:MET:HA	25:D0:58:THR:O	2.13	0.48
35:DA:271:A:N3	35:DA:365:C:O2'	2.41	0.48
35:DA:979:G:N2	35:DA:985:C:C4	2.82	0.48
35:DA:1190:G:O3'	48:DP:35:HIS:HB3	2.14	0.48
35:DA:1430:C:H2'	35:DA:1431:U:C6	2.49	0.48
35:DA:1431:U:H2'	35:DA:1432:C:H6	1.77	0.48
35:DA:1473:G:H2'	35:DA:1474:C:O4'	2.13	0.48
35:DA:1529:G:H22	35:DA:1531:C:N4	2.11	0.48
35:DA:1802:A:N1	35:DA:1822:G:H1'	2.28	0.48
35:DA:1835:G:H5'	35:DA:1836:C:OP2	2.14	0.48
37:DC:39:GLU:CG	37:DC:180:PHE:HA	2.43	0.48
38:DD:23:GLU:C	38:DD:25:THR:H	2.22	0.48
38:DD:43:ARG:HH22	38:DD:52:ARG:HA	1.77	0.48
38:DD:54:ARG:O	38:DD:218:ARG:HD3	2.14	0.48
38:DD:80:ALA:HB3	38:DD:94:LEU:CD1	2.43	0.48
40:DF:65:TRP:CD1	40:DF:72:ARG:HH21	2.31	0.48
41:DG:117:PHE:HZ	41:DG:120:LEU:HB2	1.77	0.48
41:DG:147:ASP:CG	41:DG:148:MET:N	2.72	0.48
47:DO:7:TYR:CE1	47:DO:20:MET:HB2	2.48	0.48
54:DV:16:PRO:HA	54:DV:98:GLU:HB3	1.95	0.48
57:DY:32:PRO:O	57:DY:34:LYS:N	2.46	0.48
57:DY:65:ALA:HA	57:DY:66:PRO:HD2	1.63	0.48
1:AA:32:A:C2	1:AA:33:A:C4	3.01	0.48
1:AA:34:C:H2'	1:AA:35:G:C8	2.47	0.48
1:AA:77:G:OP2	1:AA:77:G:H3'	2.14	0.48
1:AA:580:U:H2'	1:AA:581:G:O4'	2.13	0.48
1:AA:952:U:C5	13:AM:104:ARG:NH2	2.80	0.48
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.48	0.48
2:AB:21:ARG:HG3	2:AB:23:ARG:NH1	2.28	0.48
3:AC:71:ALA:HA	3:AC:106:VAL:H	1.79	0.48
5:AE:76:ILE:HG23	5:AE:142:LEU:HD22	1.96	0.48
8:AH:12:ARG:NH1	8:AH:26:VAL:HA	2.28	0.48
8:AH:51:VAL:HG11	8:AH:60:ARG:NH1	2.29	0.48
13:AM:49:THR:O	13:AM:53:VAL:N	2.39	0.48
15:AO:70:LEU:HD21	15:AO:78:TYR:HA	1.95	0.48
19:AS:5:LEU:HD12	19:AS:10:PHE:CB	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:44:PRO:CG	26:B1:45:ASN:H	2.24	0.48
28:B3:18:ASP:O	28:B3:22:ALA:N	2.37	0.48
30:B5:3:LYS:HE2	35:BA:2612:C:C5'	2.43	0.48
32:B7:29:LYS:CD	32:B7:33:ARG:HE	2.27	0.48
32:B7:33:ARG:HD2	35:BA:467:G:OP1	2.13	0.48
35:BA:455:C:N3	35:BA:472:A:H2'	2.28	0.48
35:BA:782:A:C2	38:BD:226:MET:HE2	2.48	0.48
35:BA:1218:C:OP2	53:BU:15:LYS:HE3	2.14	0.48
35:BA:1607:C:H4'	35:BA:1608:A:C5'	2.44	0.48
35:BA:2647:U:H2'	35:BA:2648:C:C6	2.49	0.48
37:BC:42:GLU:HB3	37:BC:44:HIS:CE1	2.48	0.48
38:BD:31:LYS:O	38:BD:36:PRO:HD3	2.13	0.48
38:BD:43:ARG:HD2	38:BD:44:ASN:OD1	2.13	0.48
39:BE:55:ASN:O	39:BE:55:ASN:ND2	2.47	0.48
53:BU:92:ARG:HH21	54:BV:10:LYS:HB3	1.78	0.48
1:CA:232:G:H1'	1:CA:262:A:N1	2.28	0.48
1:CA:430:A:H2'	1:CA:431:A:O4'	2.13	0.48
1:CA:565:U:H3'	1:CA:566:G:H2'	1.95	0.48
1:CA:1206:G:H4'	3:CC:193:TYR:HA	1.96	0.48
9:CI:25:LYS:HG2	9:CI:60:ASP:HB3	1.96	0.48
9:CI:46:ALA:O	9:CI:48:GLU:N	2.46	0.48
9:CI:95:LYS:HG3	9:CI:96:LEU:N	2.29	0.48
10:CJ:9:ARG:HB2	10:CJ:95:GLU:HB3	1.95	0.48
11:CK:72:ALA:HB1	11:CK:77:MET:HB3	1.94	0.48
12:CL:27:LEU:HB2	12:CL:62:SER:HB3	1.93	0.48
13:CM:99:ARG:CB	13:CM:101:GLN:HE22	2.22	0.48
14:CN:51:GLY:C	14:CN:53:LEU:H	2.22	0.48
15:CO:43:LEU:HD13	15:CO:53:HIS:CD2	2.48	0.48
26:D1:13:ILE:HD12	26:D1:13:ILE:HA	1.57	0.48
34:D9:1:MET:HG2	34:D9:2:LYS:H	1.78	0.48
35:DA:839:U:O2'	35:DA:1191:G:N3	2.46	0.48
35:DA:1327:C:H2'	35:DA:1328:G:O4'	2.14	0.48
35:DA:1639:U:H2'	35:DA:1640:C:H5"	1.96	0.48
35:DA:2740:A:C6	35:DA:2764:A:C8	3.01	0.48
35:DA:2747:G:C2	35:DA:2756:U:C5	3.01	0.48
35:DA:2850:A:OP2	35:DA:2866:U:C5	2.67	0.48
37:DC:18:LYS:HB2	37:DC:220:PRO:C	2.39	0.48
38:DD:182:LEU:HB2	38:DD:271:ILE:O	2.12	0.48
47:DO:35:VAL:HG11	47:DO:103:ALA:HB3	1.95	0.48
48:DP:57:THR:C	48:DP:59:LEU:H	2.21	0.48
49:DQ:137:TYR:C	49:DQ:139:GLU:H	2.22	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DS:101:LEU:CD1	51:DS:104:GLY:HA3	2.43	0.48
56:DX:53:LYS:HE2	56:DX:53:LYS:HA	1.96	0.48
1:AA:17:U:H2'	1:AA:18:C:C6	2.48	0.48
1:AA:618:C:O2	1:AA:622:A:N6	2.47	0.48
1:AA:1235:U:H2'	1:AA:1236:A:O4'	2.13	0.48
1:AA:1286:A:OP1	21:AU:24:ARG:NH1	2.47	0.48
1:AA:1512:U:H2'	1:AA:1513:A:C8	2.49	0.48
5:AE:78:HIS:HA	8:AH:105:ARG:HG3	1.96	0.48
10:AJ:26:ALA:O	10:AJ:30:SER:OG	2.31	0.48
13:AM:14:ARG:NE	13:AM:42:ALA:HA	2.23	0.48
17:AQ:58:GLU:O	17:AQ:74:LEU:N	2.40	0.48
20:AT:54:LYS:CG	20:AT:57:ARG:HH22	2.26	0.48
26:B1:41:ARG:HD3	26:B1:41:ARG:N	2.29	0.48
26:B1:48:LYS:NZ	26:B1:63:ALA:H	2.10	0.48
34:B9:6:SER:HB2	35:BA:2466:C:H5"	1.95	0.48
35:BA:636:G:OP1	48:BP:132:LYS:NZ	2.46	0.48
35:BA:1790:C:H5"	35:BA:1791:A:OP1	2.14	0.48
35:BA:1866:C:H6	35:BA:1866:C:O5'	1.97	0.48
35:BA:2185:C:OP2	35:BA:2185:C:H6	1.97	0.48
35:BA:2666:C:H3'	35:BA:2667:C:H6	1.77	0.48
35:BA:2773:C:OP1	39:BE:166:THR:OG1	2.31	0.48
39:BE:35:GLN:CB	39:BE:48:GLN:HE21	2.27	0.48
40:BF:65:TRP:NE1	40:BF:72:ARG:HH21	2.11	0.48
40:BF:170:LEU:HB2	40:BF:173:VAL:CG1	2.43	0.48
43:BI:60:GLU:C	43:BI:62:LYS:H	2.22	0.48
47:BO:71:ARG:HH22	47:BO:77:ILE:HG21	1.78	0.48
55:BW:54:ALA:O	55:BW:64:MET:HB3	2.13	0.48
58:BZ:145:GLU:HG3	58:BZ:146:ILE:N	2.28	0.48
1:CA:55:A:C5	1:CA:56:U:C5	3.02	0.48
1:CA:295:C:H2'	1:CA:296:U:H6	1.78	0.48
1:CA:491:G:H2'	1:CA:492:G:C8	2.49	0.48
1:CA:658:G:C2	1:CA:749:C:N3	2.82	0.48
1:CA:687:A:H4'	1:CA:688:G:O5'	2.13	0.48
1:CA:1152:A:H2'	1:CA:1153:C:H6	1.78	0.48
2:CB:93:VAL:HG11	2:CB:97:TRP:CD1	2.49	0.48
3:CC:120:VAL:O	3:CC:123:GLN:N	2.47	0.48
3:CC:159:GLY:HA3	3:CC:193:TYR:HE1	1.78	0.48
6:CF:76:ALA:O	6:CF:80:ARG:HG3	2.13	0.48
7:CG:107:ALA:HB3	7:CG:134:ALA:HB2	1.95	0.48
15:CO:53:HIS:O	15:CO:56:LEU:HB3	2.14	0.48
15:CO:64:ARG:HH12	15:CO:88:ARG:NE	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:40:LEU:C	18:CR:42:ARG:N	2.72	0.48
19:CS:72:GLY:C	19:CS:74:PHE:N	2.72	0.48
23:CW:73:A:H5"	23:CW:74:C:P	2.53	0.48
33:D8:30:ARG:C	33:D8:32:LEU:N	2.70	0.48
35:DA:287:C:O2	35:DA:287:C:H2'	2.12	0.48
35:DA:307:G:H8	35:DA:307:G:O5'	1.96	0.48
35:DA:412:A:OP2	35:DA:412:A:C8	2.60	0.48
35:DA:1357:U:H2'	35:DA:1358:G:O4'	2.13	0.48
35:DA:1525:G:H2'	35:DA:1526:G:C8	2.48	0.48
39:DE:67:PHE:CG	39:DE:70:ALA:HA	2.48	0.48
47:DO:88:ASN:HB3	47:DO:94:ARG:HE	1.79	0.48
48:DP:23:PRO:CB	48:DP:33:ARG:HG3	2.43	0.48
50:DR:2:ARG:HG2	50:DR:3:HIS:N	2.26	0.48
50:DR:2:ARG:CZ	50:DR:5:LYS:CE	2.91	0.48
52:DT:68:TYR:N	52:DT:68:TYR:CD1	2.81	0.48
1:AA:1060:C:O2	1:AA:1198:G:C2	2.66	0.48
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.29	0.48
1:AA:1349:A:H2'	1:AA:1350:A:O4'	2.14	0.48
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.48	0.48
4:AD:93:PHE:O	4:AD:97:LEU:HB2	2.13	0.48
4:AD:145:GLU:HG3	4:AD:184:LYS:HG2	1.96	0.48
6:AF:21:LEU:HD13	6:AF:24:GLU:HB3	1.95	0.48
9:AI:7:THR:O	9:AI:83:ARG:NH2	2.46	0.48
23:AW:1:G:N3	23:AW:1:G:O2'	2.46	0.48
26:B1:32:LYS:HZ2	26:B1:33:LYS:HG3	1.79	0.48
33:B8:23:VAL:HG22	33:B8:48:PHE:HE1	1.78	0.48
35:BA:158:U:H1'	35:BA:171:G:C8	2.48	0.48
35:BA:597:U:H2'	35:BA:598:G:C8	2.48	0.48
35:BA:644:A:O3'	35:BA:645:C:N3	2.47	0.48
35:BA:946:G:H2'	35:BA:947:G:C8	2.49	0.48
35:BA:959:A:C6	35:BA:960:A:N1	2.82	0.48
35:BA:1158:C:O2'	35:BA:1159:U:O5'	2.32	0.48
35:BA:1654:A:H1'	35:BA:2823:A:H5'	1.96	0.48
35:BA:2273:A:H2'	35:BA:2274:A:H8	1.77	0.48
35:BA:2607:G:H2'	35:BA:2608:G:O4'	2.14	0.48
35:BA:2713:A:OP2	35:BA:2713:A:C4'	2.61	0.48
38:BD:76:PRO:HA	38:BD:118:VAL:HB	1.96	0.48
43:BI:118:LYS:O	43:BI:120:ILE:N	2.42	0.48
46:BN:68:GLU:N	46:BN:88:GLU:OE1	2.41	0.48
50:BR:87:TYR:HA	50:BR:90:ARG:HD2	1.95	0.48
50:BR:100:LEU:HD21	50:BR:113:LEU:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BV:23:GLU:OE2	54:BV:23:GLU:HA	2.14	0.48
56:BX:81:VAL:O	56:BX:85:PRO:HD2	2.14	0.48
1:CA:68:G:H5'	1:CA:171:A:O2'	2.14	0.48
1:CA:173:U:H5"	1:CA:197:A:O4'	2.14	0.48
1:CA:649:G:C2	1:CA:650:G:C8	3.02	0.48
1:CA:1030(B):C:N4	1:CA:1030(C):G:N3	2.61	0.48
1:CA:1241:G:H1	1:CA:1296:C:H42	1.62	0.48
1:CA:1463:C:H5'	52:DT:115:ARG:HH22	1.78	0.48
2:CB:69:LEU:HD11	2:CB:93:VAL:HG23	1.95	0.48
2:CB:189:ASP:OD1	2:CB:205:ASP:HB3	2.14	0.48
17:CQ:53:LEU:C	17:CQ:55:ASP:H	2.22	0.48
17:CQ:66:SER:H	17:CQ:69:LYS:HZ2	1.62	0.48
20:CT:42:GLN:HG3	20:CT:43:LEU:HD23	1.94	0.48
22:CV:18:G:O2'	22:CV:19:G:H5'	2.14	0.48
26:D1:53:VAL:HG12	26:D1:54:ALA:H	1.78	0.48
33:D8:38:GLY:O	33:D8:40:GLU:N	2.47	0.48
33:D8:60:LEU:HD12	33:D8:60:LEU:N	2.28	0.48
35:DA:153:C:O5'	35:DA:153:C:H6	1.97	0.48
35:DA:863:A:H2'	35:DA:864:G:C8	2.48	0.48
35:DA:1903:G:OP2	38:DD:241:PRO:HB2	2.12	0.48
35:DA:2295:C:C2'	35:DA:2296:U:H5'	2.44	0.48
35:DA:2563:U:H4'	47:DO:28:SER:HA	1.95	0.48
35:DA:2712:U:H1'	35:DA:2712(A):A:C8	2.49	0.48
35:DA:2726:U:O2'	35:DA:2727:G:H8	1.96	0.48
35:DA:2843:G:N2	35:DA:2875:C:C2	2.82	0.48
35:DA:2845:G:H2'	35:DA:2846:G:C8	2.49	0.48
35:DA:2847:U:OP2	52:DT:98:LYS:NZ	2.45	0.48
40:DF:185:ASP:HA	40:DF:188:ARG:CD	2.44	0.48
43:DI:69:LYS:HA	43:DI:136:VAL:HG21	1.96	0.48
48:DP:113:LYS:CE	48:DP:131:SER:HB2	2.43	0.48
49:DQ:22:LYS:HZ3	49:DQ:101:ARG:HD3	1.79	0.48
57:DY:28:LYS:HE2	57:DY:39:VAL:HG12	1.95	0.48
1:AA:97:G:H2'	1:AA:98:G:O4'	2.14	0.48
1:AA:216:G:H2'	1:AA:217:C:C6	2.48	0.48
1:AA:353:A:O2'	1:AA:354:G:OP2	2.29	0.48
1:AA:403:C:OP1	4:AD:136:PRO:HD2	2.14	0.48
1:AA:411:A:C3'	1:AA:412:A:H5"	2.44	0.48
1:AA:461:A:H2	1:AA:471:G:C4	2.30	0.48
1:AA:686:U:C2	1:AA:687:A:N7	2.82	0.48
1:AA:1170:A:N7	1:AA:1171:G:N2	2.56	0.48
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:145:LEU:O	2:AB:149:LEU:N	2.46	0.48
3:AC:79:ARG:NH1	11:CK:99:GLN:OE1	2.47	0.48
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.14	0.48
4:AD:103:ASN:OD1	4:AD:106:TYR:HE1	1.96	0.48
10:AJ:64:GLU:O	14:AN:56:VAL:HA	2.14	0.48
10:AJ:74:ILE:HG13	10:AJ:75:ILE:N	2.20	0.48
35:BA:38:A:H2'	35:BA:39:C:C6	2.49	0.48
35:BA:139(A):G:N2	56:BX:40:LYS:CE	2.71	0.48
35:BA:1631(A):A:C2'	35:BA:1632:A:H5'	2.44	0.48
35:BA:2652:C:N4	35:BA:2668:G:H1	2.05	0.48
40:BF:204:ASN:ND2	40:BF:205:ARG:HH21	2.11	0.48
43:BI:111:PRO:C	43:BI:113:ARG:H	2.21	0.48
51:BS:23:ARG:HB3	51:BS:24:LEU:HD22	1.94	0.48
53:BU:65:ILE:HD11	53:BU:96:ALA:HB3	1.96	0.48
54:BV:38:LEU:HD23	54:BV:60:GLU:OE2	2.13	0.48
58:BZ:40:ASP:C	58:BZ:44:PHE:CD2	2.91	0.48
58:BZ:140:ASP:CG	58:BZ:155:LEU:HD21	2.39	0.48
1:CA:166:G:H2'	1:CA:167:G:C8	2.45	0.48
1:CA:445:G:H1	1:CA:489:C:N4	1.95	0.48
1:CA:632:A:H2'	1:CA:633:G:O4'	2.14	0.48
1:CA:975:A:H4'	1:CA:976:G:C5'	2.42	0.48
1:CA:1057:G:H5"	3:CC:154:SER:OG	2.14	0.48
1:CA:1122:U:H2'	1:CA:1123:A:O4'	2.13	0.48
2:CB:80:ILE:HG12	2:CB:208:ILE:HG23	1.95	0.48
8:CH:17:THR:HG21	8:CH:80:ILE:HD12	1.95	0.48
8:CH:112:LEU:HA	8:CH:134:ILE:H	1.78	0.48
11:CK:17:GLY:C	11:CK:80:VAL:HG12	2.38	0.48
12:CL:54:LYS:HG2	12:CL:75:HIS:HE2	1.78	0.48
14:CN:3:ARG:O	14:CN:5:ALA:N	2.47	0.48
15:CO:71:GLN:HG3	15:CO:78:TYR:CD2	2.48	0.48
18:CR:66:LEU:O	18:CR:70:ILE:HG13	2.14	0.48
19:CS:19:VAL:O	19:CS:23:ASN:N	2.45	0.48
28:D3:13:ILE:HD12	35:DA:989:G:C5	2.49	0.48
28:D3:24:LYS:HG2	35:DA:849:A:C2	2.49	0.48
31:D6:11:LEU:O	31:D6:23:THR:HB	2.14	0.48
31:D6:27:LYS:CD	35:DA:2286:A:OP1	2.54	0.48
35:DA:111:A:C2	35:DA:112:U:C2	3.02	0.48
35:DA:350:U:H5"	35:DA:351:G:OP2	2.13	0.48
35:DA:631:A:H2'	35:DA:632:A:O4'	2.13	0.48
35:DA:1678:G:N2	35:DA:1989:G:N2	2.56	0.48
35:DA:1690:A:H3'	35:DA:1691:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DC:56:GLN:NE2	37:DC:168:THR:HA	2.29	0.48
38:DD:146:GLU:HA	38:DD:153:ALA:HA	1.95	0.48
39:DE:14:ILE:HG12	39:DE:21:VAL:HG22	1.96	0.48
42:DH:88:LEU:HA	42:DH:88:LEU:HD13	1.64	0.48
46:DN:55:VAL:CG1	46:DN:126:PRO:HA	2.44	0.48
47:DO:26:LYS:HB3	47:DO:30:ALA:CB	2.40	0.48
48:DP:27:HIS:CD2	48:DP:28:GLY:CA	2.97	0.48
51:DS:74:ALA:O	51:DS:75:GLU:C	2.56	0.48
1:AA:406:G:N2	1:AA:437:U:O2	2.47	0.48
1:AA:640:A:O2'	8:AH:115:SER:HB3	2.14	0.48
1:AA:778:G:H2'	1:AA:779:C:O4'	2.14	0.48
1:AA:1160:G:N2	1:AA:1182:G:N2	2.61	0.48
1:AA:1168:A:H3'	1:AA:1169:A:O4'	2.13	0.48
1:AA:1238:A:OP2	1:AA:1335:C:C6	2.67	0.48
1:AA:1247:U:C2	1:AA:1291:G:N2	2.82	0.48
3:AC:40:ARG:CG	3:AC:55:VAL:HG21	2.40	0.48
5:AE:39:GLY:HA2	5:AE:71:LEU:HD11	1.95	0.48
7:AG:27:ILE:HA	7:AG:30:ILE:HD12	1.96	0.48
8:AH:21:LYS:O	8:AH:65:TYR:OH	2.30	0.48
13:AM:24:GLY:C	13:AM:25:ILE:HD12	2.39	0.48
13:AM:79:LYS:HD2	13:AM:82:MET:HE1	1.96	0.48
13:AM:84:ILE:HD13	19:AS:74:PHE:CD2	2.48	0.48
18:AR:73:ALA:CB	18:AR:79:LEU:HG	2.44	0.48
26:B1:23:LYS:HB2	26:B1:38:SER:HB3	1.95	0.48
28:B3:52:HIS:CG	36:BB:83:G:H4'	2.49	0.48
35:BA:996:A:H4'	53:BU:92:ARG:HG2	1.96	0.48
35:BA:1707:G:H2'	35:BA:1708:C:C6	2.49	0.48
35:BA:1800:C:OP2	38:BD:183:ARG:NH2	2.47	0.48
35:BA:2686:G:C2	35:BA:2724:C:O2	2.67	0.48
35:BA:2694:G:H2'	35:BA:2695:C:C6	2.48	0.48
35:BA:2781:A:H5"	35:BA:2782:G:H5'	1.96	0.48
35:BA:2807:G:H2'	35:BA:2808:U:O4'	2.14	0.48
36:BB:31:C:C2'	36:BB:32:C:H5'	2.44	0.48
37:BC:66:HIS:NE2	37:BC:186:ALA:HB1	2.29	0.48
39:BE:4:ILE:HG13	39:BE:5:LEU:O	2.14	0.48
40:BF:31:HIS:O	40:BF:34:TRP:N	2.47	0.48
41:BG:64:THR:HB	41:BG:94:LEU:HD13	1.95	0.48
48:BP:110:TYR:O	48:BP:112:LEU:N	2.47	0.48
51:BS:67:ARG:O	51:BS:69:VAL:N	2.47	0.48
51:BS:78:LEU:C	51:BS:81:GLY:H	2.21	0.48
52:BT:28:VAL:HG12	52:BT:44:ASP:OD1	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:57:PHE:HA	52:BT:79:HIS:CD2	2.49	0.48
1:CA:341:C:N4	1:CA:348:G:H1	2.08	0.48
1:CA:418:C:H2'	1:CA:419:C:C6	2.47	0.48
1:CA:580:U:C4	1:CA:581:G:C6	3.01	0.48
1:CA:1015:A:H8	1:CA:1015:A:O5'	1.96	0.48
2:CB:180:LEU:O	2:CB:182:ILE:HG13	2.14	0.48
4:CD:150:GLU:CD	4:CD:151:LYS:H	2.22	0.48
13:CM:80:ARG:O	13:CM:82:MET:HG2	2.14	0.48
30:D5:57:VAL:CG2	50:DR:33:ARG:HH22	2.27	0.48
31:D6:25:LYS:HZ1	35:DA:2285:C:N4	2.12	0.48
35:DA:154(A):C:OP2	35:DA:154(A):C:C6	2.67	0.48
35:DA:389:G:N2	48:DP:71:VAL:HG11	2.25	0.48
35:DA:1468:C:H2'	35:DA:1469:A:C8	2.49	0.48
35:DA:2811:G:C4'	39:DE:61:ARG:HH21	2.27	0.48
41:DG:110:ALA:HB1	41:DG:140:ILE:CD1	2.42	0.48
46:DN:87:LEU:O	46:DN:88:GLU:C	2.57	0.48
48:DP:18:ARG:HG2	48:DP:19:VAL:N	2.29	0.48
52:DT:8:LYS:O	52:DT:9:LEU:C	2.57	0.48
54:DV:66:ARG:HH21	54:DV:68:LYS:CA	2.26	0.48
54:DV:73:SER:HB3	54:DV:88:ARG:HH11	1.79	0.48
54:DV:80:GLN:HG3	54:DV:81:TYR:CE1	2.48	0.48
54:DV:85:LYS:C	54:DV:87:HIS:N	2.69	0.48
1:AA:281:G:O5'	1:AA:281:G:H8	1.98	0.47
1:AA:631:G:C2'	1:AA:632:A:H8	2.25	0.47
1:AA:1126:U:H2'	1:AA:1127:G:OP1	2.13	0.47
1:AA:1219:U:OP1	14:AN:19:ARG:NH1	2.26	0.47
1:AA:1306:A:H2'	1:AA:1307:U:O4'	2.14	0.47
3:AC:88:ARG:HE	3:AC:101:LEU:HD22	1.79	0.47
26:B1:90:ILE:HG23	26:B1:91:LYS:H	1.77	0.47
32:B7:39:ARG:C	32:B7:41:ARG:N	2.72	0.47
33:B8:34:TRP:CD2	33:B8:35:GLN:O	2.67	0.47
33:B8:59:LYS:HZ1	48:BP:49:ARG:HD2	1.79	0.47
35:BA:146:G:H8	35:BA:146:G:H5"	1.79	0.47
35:BA:154(A):C:N4	35:BA:172:C:H42	2.12	0.47
35:BA:1057:A:H3'	35:BA:1057:A:C8	2.49	0.47
35:BA:1091:G:H2'	35:BA:1092:C:H5"	1.96	0.47
35:BA:1140:C:H1'	35:BA:1143:A:C2	2.49	0.47
35:BA:1420:U:O2'	35:BA:1421:G:P	2.72	0.47
35:BA:2281:C:O2'	35:BA:2282:G:H5'	2.14	0.47
35:BA:2850:A:OP2	35:BA:2866:U:H5	1.97	0.47
38:BD:134:ARG:HG3	38:BD:135:PHE:CD2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:19:ARG:HA	47:BO:73:ASP:HA	1.96	0.47
39:BE:76:ARG:HG2	39:BE:195:LEU:CD2	2.44	0.47
39:BE:182:LEU:HD12	39:BE:183:LEU:H	1.78	0.47
40:BF:53:THR:HG23	40:BF:54:ARG:N	2.29	0.47
47:BO:104:ARG:O	47:BO:107:ARG:HG3	2.14	0.47
1:CA:109:A:H2'	1:CA:326:G:N2	2.29	0.47
1:CA:300:A:H1'	1:CA:565:U:O2	2.14	0.47
1:CA:390:C:H2'	1:CA:391:G:H8	1.79	0.47
1:CA:875:C:H1'	8:CH:15:ASN:OD1	2.14	0.47
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.49	0.47
1:CA:1266:G:N2	1:CA:1270:C:C2	2.82	0.47
1:CA:1303:C:C2'	1:CA:1304:G:H5'	2.44	0.47
1:CA:1365:G:C2	1:CA:1366:C:C2	3.01	0.47
2:CB:72:GLY:HA2	2:CB:165:VAL:HG22	1.95	0.47
2:CB:123:ALA:HA	2:CB:127:ILE:HG21	1.96	0.47
4:CD:92:VAL:O	4:CD:96:LEU:HD22	2.14	0.47
19:CS:11:VAL:HG11	19:CS:39:THR:CB	2.44	0.47
33:D8:18:ALA:HB3	35:DA:651:G:H4'	1.96	0.47
33:D8:47:LYS:HE2	35:DA:2361:A:OP2	2.14	0.47
35:DA:251:A:H2'	35:DA:252:G:O4'	2.14	0.47
35:DA:284:U:H2'	35:DA:285:C:C6	2.49	0.47
35:DA:535:C:H2'	35:DA:536:A:H5'	1.96	0.47
35:DA:971:C:H2'	35:DA:972:G:O4'	2.14	0.47
35:DA:1257:C:H4'	40:DF:83:PHE:CD1	2.49	0.47
35:DA:1444:G:N2	35:DA:1548:C:C2	2.82	0.47
35:DA:1794:U:H2'	35:DA:1795:C:H6	1.77	0.47
35:DA:1826:G:H4'	38:DD:242:ARG:NH1	2.29	0.47
35:DA:1902:C:H2'	35:DA:1903:G:O5'	2.13	0.47
35:DA:1952:A:C6	35:DA:1953:A:N1	2.82	0.47
35:DA:2262:U:H4'	35:DA:2328:A:H2	1.79	0.47
36:DB:59:A:H5"	36:DB:60:C:OP2	2.13	0.47
39:DE:9:VAL:O	52:DT:8:LYS:HE2	2.14	0.47
48:DP:23:PRO:HB2	48:DP:33:ARG:CD	2.43	0.47
50:DR:20:LEU:HD21	50:DR:40:LYS:HD3	1.96	0.47
52:DT:6:LEU:HG	52:DT:7:ILE:HG12	1.96	0.47
52:DT:78:LEU:C	52:DT:79:HIS:CD2	2.93	0.47
54:DV:66:ARG:CD	54:DV:67:GLY:H	2.23	0.47
55:DW:6:ILE:HA	55:DW:103:ILE:O	2.14	0.47
55:DW:48:ALA:O	55:DW:51:LEU:N	2.47	0.47
57:DY:45:VAL:HA	57:DY:61:ILE:HA	1.95	0.47
57:DY:84:ARG:HH22	57:DY:97:ARG:HH11	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:101:PRO:HA	58:DZ:123:ASP:HB3	1.95	0.47
1:AA:171:A:N1	1:AA:172:A:C8	2.77	0.47
1:AA:236:G:C5	1:AA:237:C:C4	3.02	0.47
1:AA:402:G:O2'	1:AA:620:C:N3	2.47	0.47
1:AA:683:G:H2'	1:AA:684:A:C8	2.49	0.47
1:AA:832:C:N4	1:AA:854:G:H1	2.10	0.47
1:AA:1015:A:C6	1:AA:1016:A:C5	3.02	0.47
1:AA:1175:G:C6	1:AA:1176:A:C6	3.02	0.47
1:AA:1241:G:OP2	7:AG:38:LEU:HD21	2.14	0.47
3:AC:82:GLU:O	3:AC:86:VAL:HG22	2.14	0.47
4:AD:110:PHE:CE1	4:AD:148:VAL:HG23	2.48	0.47
5:AE:9:LYS:HE3	5:AE:111:GLU:CD	2.39	0.47
6:AF:54:LYS:HD3	6:AF:54:LYS:HA	1.60	0.47
9:AI:106:ALA:O	9:AI:108:VAL:N	2.47	0.47
13:AM:8:GLU:OE2	13:AM:10:PRO:HB3	2.14	0.47
15:AO:23:GLY:O	15:AO:27:VAL:HB	2.14	0.47
19:AS:36:ARG:NH2	19:AS:53:ASN:HA	2.29	0.47
22:AV:16:C:HO2'	22:AV:62:C:P	2.37	0.47
22:AV:63:C:C2	22:AV:64:G:C8	3.02	0.47
32:B7:7:PRO:HA	35:BA:686:G:C8	2.50	0.47
32:B7:35:ARG:O	32:B7:35:ARG:HG2	2.13	0.47
32:B7:39:ARG:C	32:B7:41:ARG:H	2.22	0.47
35:BA:173:G:C8	35:BA:173:G:OP2	2.67	0.47
35:BA:198:C:H2'	35:BA:199:A:C5'	2.43	0.47
35:BA:1110:G:H5'	35:BA:1111:A:OP1	2.13	0.47
35:BA:1286:A:H1'	35:BA:1288:U:OP2	2.14	0.47
35:BA:1299:G:H8	35:BA:1299:G:O5'	1.98	0.47
35:BA:1424:G:H3'	35:BA:1425:G:H8	1.80	0.47
35:BA:2208:A:H8	35:BA:2218:U:OP2	1.96	0.47
35:BA:2250:G:O2'	35:BA:2496:C:OP1	2.20	0.47
35:BA:2584:U:C2'	35:BA:2585:U:H5'	2.44	0.47
35:BA:2740:A:H2'	35:BA:2741:A:C8	2.50	0.47
38:BD:218:ARG:HB2	38:BD:219:PRO:HD2	1.96	0.47
41:BG:117:PHE:HE1	41:BG:119:GLY:C	2.22	0.47
43:BI:98:ALA:O	43:BI:101:LEU:N	2.47	0.47
50:BR:28:LEU:O	50:BR:29:LEU:HD23	2.14	0.47
52:BT:45:PHE:CE1	52:BT:65:LYS:HB2	2.49	0.47
53:BU:26:GLY:O	53:BU:29:SER:HB2	2.15	0.47
53:BU:55:ARG:HB3	53:BU:55:ARG:NH1	2.29	0.47
53:BU:106:PHE:O	53:BU:110:VAL:HG23	2.14	0.47
56:BX:25:LYS:HE3	56:BX:86:GLY:HA2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:57:LEU:HD12	56:BX:57:LEU:C	2.39	0.47
1:CA:266:G:H5'	1:CA:268:C:H41	1.79	0.47
1:CA:445:G:N2	1:CA:489:C:N3	2.43	0.47
1:CA:693:G:H2'	1:CA:694:A:C8	2.49	0.47
1:CA:824:C:O2'	8:CH:2:LEU:HD22	2.14	0.47
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.49	0.47
2:CB:47:THR:O	2:CB:51:LEU:N	2.33	0.47
6:CF:24:GLU:HG2	6:CF:28:ARG:CZ	2.44	0.47
22:CV:65:C:H5'	22:CV:66:C:OP2	2.14	0.47
33:D8:26:LYS:HG2	33:D8:44:LYS:HD2	1.96	0.47
35:DA:224:G:H2'	35:DA:225:A:O4'	2.14	0.47
35:DA:1003:G:H1	35:DA:1152:C:H42	1.61	0.47
35:DA:1029:A:N1	35:DA:2465:C:O2'	2.42	0.47
35:DA:1146:C:C2'	35:DA:1147:C:H5'	2.45	0.47
35:DA:2065:C:H2'	35:DA:2066:C:H6	1.79	0.47
35:DA:2734:A:H5"	35:DA:2734:A:H8	1.79	0.47
40:DF:83:PHE:O	40:DF:84:VAL:HB	2.14	0.47
40:DF:148:LEU:HD23	40:DF:148:LEU:HA	1.79	0.47
41:DG:71:THR:HG22	41:DG:89:GLY:C	2.38	0.47
43:DI:5:LEU:HD23	43:DI:5:LEU:HA	1.68	0.47
43:DI:92:VAL:CG2	43:DI:120:ILE:HG13	2.44	0.47
43:DI:93:THR:O	43:DI:97:ILE:HG13	2.14	0.47
49:DQ:66:ILE:HA	49:DQ:104:PHE:HB3	1.96	0.47
55:DW:73:ALA:HB3	55:DW:106:ILE:HG12	1.96	0.47
56:DX:14:SER:H	56:DX:17:ALA:HB3	1.79	0.47
56:DX:40:LYS:HG3	56:DX:41:ASN:N	2.29	0.47
56:DX:89:ILE:HD13	56:DX:92:LEU:HD21	1.95	0.47
1:AA:14:U:O2	1:AA:17:U:H5	1.97	0.47
1:AA:34:C:H2'	1:AA:35:G:H8	1.79	0.47
1:AA:197:A:N6	1:AA:221:C:H4'	2.30	0.47
1:AA:434:U:C4	1:AA:435:C:N4	2.82	0.47
1:AA:780:A:O2'	1:AA:781:A:H5"	2.14	0.47
1:AA:967:C:H3'	1:AA:968:A:H2'	1.96	0.47
1:AA:990:C:C2	1:AA:1216:G:C2	3.02	0.47
1:AA:1010:G:H2'	1:AA:1010:G:N3	2.29	0.47
1:AA:1086:U:O5'	1:AA:1086:U:H6	1.98	0.47
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.15	0.47
1:AA:1472:U:H2'	1:AA:1473:A:O4'	2.14	0.47
5:AE:78:HIS:O	5:AE:93:PRO:HD3	2.14	0.47
8:AH:110:ALA:HB3	8:AH:121:ASP:HB3	1.96	0.47
10:AJ:92:THR:HG23	10:AJ:93:GLY:H	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:84:LEU:HD23	12:AL:85:ILE:N	2.29	0.47
13:AM:84:ILE:CD1	19:AS:66:MET:HE2	2.44	0.47
26:B1:26:ARG:HD2	26:B1:34:THR:CG2	2.43	0.47
26:B1:41:ARG:HD3	26:B1:41:ARG:H	1.79	0.47
31:B6:41:PRO:HD2	31:B6:45:LYS:HA	1.95	0.47
35:BA:282:A:C5	35:BA:359:A:C2	3.02	0.47
35:BA:662:G:P	48:BP:18:ARG:HH21	2.38	0.47
35:BA:779:U:OP1	38:BD:49:ILE:HG23	2.14	0.47
35:BA:1054:A:H3'	35:BA:1055:G:H8	1.80	0.47
35:BA:1063:G:H1	35:BA:1076:C:N4	2.12	0.47
35:BA:1464:C:H2'	35:BA:1465:G:O4'	2.14	0.47
35:BA:1707:G:C6	35:BA:1708:C:C4	3.02	0.47
35:BA:1877:A:H5'	35:BA:1878:G:OP2	2.14	0.47
35:BA:2050:C:H1'	39:BE:156:MET:CE	2.44	0.47
35:BA:2393:A:C5'	48:BP:62:LEU:HB3	2.44	0.47
35:BA:2750:A:OP1	35:BA:2750:A:H8	1.97	0.47
39:BE:61:ARG:CG	39:BE:62:PRO:HD2	2.42	0.47
40:BF:53:THR:O	40:BF:54:ARG:HB3	2.14	0.47
40:BF:82:ILE:C	40:BF:84:VAL:H	2.22	0.47
43:BI:56:LYS:C	43:BI:58:LEU:N	2.72	0.47
43:BI:88:ILE:HG22	43:BI:89:TYR:N	2.30	0.47
47:BO:7:TYR:CE1	47:BO:20:MET:HE3	2.42	0.47
57:BY:37:VAL:HG21	57:BY:72:VAL:HG11	1.95	0.47
1:CA:455:C:N4	1:CA:476:G:H1	2.10	0.47
3:CC:179:ARG:O	3:CC:206:GLU:HA	2.14	0.47
17:CQ:68:ARG:HG3	17:CQ:68:ARG:O	2.13	0.47
17:CQ:95:TYR:O	17:CQ:97:SER:N	2.47	0.47
19:CS:8:GLY:HA3	19:CS:10:PHE:CE1	2.49	0.47
33:D8:21:LYS:NZ	35:DA:650:C:OP1	2.46	0.47
35:DA:142:A:H8	35:DA:1408:C:H1'	1.79	0.47
35:DA:730:C:OP2	35:DA:731:C:OP2	2.33	0.47
35:DA:1190:G:H4'	48:DP:35:HIS:HB3	1.96	0.47
35:DA:1398:C:OP1	56:DX:55:ASN:ND2	2.48	0.47
35:DA:1657:C:OP2	39:DE:136:ARG:HG3	2.14	0.47
35:DA:2815:C:H2'	35:DA:2816:C:C6	2.49	0.47
36:DB:42:C:O2	41:DG:92:VAL:HA	2.14	0.47
36:DB:88:C:N3	36:DB:89:G:N1	2.62	0.47
38:DD:26:LYS:HD2	38:DD:26:LYS:N	2.28	0.47
40:DF:3:GLU:CD	40:DF:19:GLU:HB2	2.39	0.47
40:DF:21:ALA:C	40:DF:23:ASP:H	2.22	0.47
41:DG:151:ALA:HB3	41:DG:153:ARG:HH11	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DO:25:LEU:HD23	47:DO:25:LEU:HA	1.58	0.47
47:DO:77:ILE:CD1	47:DO:122:LEU:HB3	2.44	0.47
48:DP:75:ILE:HD12	48:DP:77:ARG:NH2	2.29	0.47
52:DT:120:ARG:HA	52:DT:123:GLN:HG2	1.95	0.47
55:DW:86:LEU:HD12	55:DW:87:PRO:HD2	1.94	0.47
56:DX:71:GLY:O	56:DX:72:LYS:HB2	2.14	0.47
58:DZ:104:PHE:HD1	58:DZ:105:VAL:H	1.62	0.47
1:AA:81:U:O4	1:AA:89:C:N4	2.47	0.47
1:AA:872:A:C4	1:AA:874:G:N7	2.83	0.47
2:AB:8:LYS:HA	2:AB:11:LEU:HG	1.96	0.47
2:AB:68:ILE:H	2:AB:90:MET:HE3	1.79	0.47
4:AD:121:VAL:HG12	4:AD:134:ASP:HA	1.96	0.47
5:AE:9:LYS:HE3	5:AE:111:GLU:OE2	2.13	0.47
10:AJ:6:ILE:CG2	10:AJ:96:ILE:HD11	2.34	0.47
15:AO:42:HIS:O	15:AO:46:HIS:N	2.45	0.47
19:AS:63:THR:HG23	19:AS:66:MET:HB2	1.96	0.47
23:AW:34:G:H3'	23:AW:35:A:O4'	2.15	0.47
26:B1:92:LYS:HG2	26:B1:93:GLU:N	2.28	0.47
35:BA:530:G:O4'	35:BA:530:G:N3	2.45	0.47
35:BA:636:G:O5'	35:BA:636:G:H8	1.96	0.47
35:BA:945:A:C4	35:BA:2448:A:C2	3.02	0.47
35:BA:1260:G:H2'	35:BA:1261:C:C6	2.49	0.47
35:BA:2688:U:H1'	35:BA:2721:A:N6	2.30	0.47
36:BB:52:A:O2'	36:BB:53:A:N7	2.48	0.47
36:BB:87:G:O2'	36:BB:89:G:N2	2.48	0.47
41:BG:43:LEU:HD22	41:BG:89:GLY:HA2	1.96	0.47
42:BH:107:VAL:HG21	42:BH:152:ARG:HB2	1.95	0.47
48:BP:124:LYS:HA	48:BP:143:GLY:O	2.13	0.47
48:BP:126:VAL:HG12	48:BP:147:LEU:CD2	2.43	0.47
51:BS:55:ALA:O	51:BS:56:LEU:HG	2.14	0.47
52:BT:55:ASN:N	52:BT:59:THR:HG22	2.29	0.47
55:BW:51:LEU:HG	55:BW:107:LEU:HD22	1.97	0.47
56:BX:18:TYR:HA	56:BX:21:PHE:CE2	2.50	0.47
58:BZ:63:ASP:OD1	58:BZ:65:GLN:HB3	2.15	0.47
58:BZ:94:GLU:C	58:BZ:130:PRO:HD3	2.39	0.47
1:CA:460:G:H21	1:CA:472:A:N6	2.11	0.47
1:CA:689:C:H2'	1:CA:690:G:O4'	2.14	0.47
1:CA:957:U:H4'	19:CS:79:THR:HG23	1.95	0.47
1:CA:1489:G:H2'	1:CA:1490:C:O4'	2.15	0.47
2:CB:174:VAL:HG11	2:CB:196:LEU:CD1	2.39	0.47
3:CC:32:LEU:HD21	3:CC:59:ARG:HD3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:70:LYS:O	9:CI:74:ILE:HG13	2.15	0.47
16:CP:43:LYS:HG2	16:CP:48:TRP:CE2	2.49	0.47
18:CR:41:LYS:N	18:CR:43:PHE:H	2.12	0.47
20:CT:67:ALA:O	20:CT:73:HIS:CD2	2.68	0.47
26:D1:10:LYS:HG3	26:D1:13:ILE:O	2.15	0.47
27:D2:21:LEU:HA	27:D2:21:LEU:HD23	1.53	0.47
31:D6:25:LYS:NZ	35:DA:2285:C:H41	2.13	0.47
35:DA:11:G:C2'	35:DA:12:U:H5'	2.44	0.47
35:DA:272(D):G:N2	35:DA:365:C:C2	2.82	0.47
35:DA:877:U:H2'	35:DA:878:A:H5"	1.96	0.47
35:DA:1442:G:H1	35:DA:1549:C:H42	1.62	0.47
35:DA:1623:G:C2	35:DA:1624:G:C8	3.02	0.47
35:DA:1963:U:H4'	35:DA:1964:G:OP1	2.14	0.47
35:DA:2199:A:OP2	35:DA:2200:C:H5	1.98	0.47
35:DA:2218:U:H4'	35:DA:2219:G:OP2	2.15	0.47
35:DA:2360:A:O2'	35:DA:2361:A:H8	1.97	0.47
35:DA:2575:C:H5'	39:DE:144:ARG:HG3	1.95	0.47
36:DB:47:C:OP1	51:DS:13:ARG:NH2	2.47	0.47
36:DB:86:G:H2'	36:DB:87:G:H8	1.79	0.47
38:DD:164:GLN:OE1	38:DD:176:ARG:NH2	2.48	0.47
41:DG:110:ALA:HA	41:DG:140:ILE:O	2.14	0.47
42:DH:101:ARG:O	42:DH:123:PHE:HB2	2.14	0.47
43:DI:92:VAL:HA	43:DI:96:ASP:OD2	2.14	0.47
46:DN:67:LEU:HA	46:DN:87:LEU:HD13	1.96	0.47
47:DO:107:ARG:NH2	52:DT:35:LYS:HG3	2.30	0.47
50:DR:111:LEU:N	50:DR:111:LEU:HD12	2.29	0.47
54:DV:73:SER:HB3	54:DV:88:ARG:NH1	2.29	0.47
55:DW:29:LEU:HA	55:DW:29:LEU:HD12	1.66	0.47
56:DX:12:VAL:HG13	56:DX:17:ALA:HB2	1.96	0.47
1:AA:186:C:O3'	20:AT:82:SER:HB3	2.14	0.47
1:AA:189(L):G:H2'	1:AA:190:U:C5	2.48	0.47
1:AA:256:U:H3	1:AA:270:A:N6	2.12	0.47
1:AA:652:U:C5	1:AA:752:G:C4	3.02	0.47
1:AA:1005:A:H3'	1:AA:1006:C:C5'	2.44	0.47
1:AA:1005:A:C8	1:AA:1006:C:H4'	2.50	0.47
1:AA:1228:C:H4'	13:AM:116:THR:HA	1.96	0.47
1:AA:1316:G:C6	19:AS:5:LEU:HD21	2.48	0.47
2:AB:18:GLY:HA2	2:AB:42:ILE:HG12	1.97	0.47
2:AB:102:LEU:HD13	2:AB:158:LEU:HD22	1.96	0.47
5:AE:7:GLU:N	5:AE:35:GLY:O	2.47	0.47
5:AE:32:VAL:HG12	5:AE:33:VAL:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:34:LEU:O	13:AM:38:GLY:N	2.46	0.47
26:B1:10:LYS:HB2	26:B1:14:VAL:H	1.79	0.47
26:B1:66:HIS:O	26:B1:67:ILE:C	2.57	0.47
27:B2:53:LEU:CB	27:B2:54:LYS:HD2	2.44	0.47
31:B6:8:LYS:O	31:B6:9:LEU:HB3	2.13	0.47
33:B8:59:LYS:HZ2	48:BP:49:ARG:HD2	1.80	0.47
35:BA:49:A:H5"	35:BA:51:G:O4'	2.13	0.47
35:BA:207:A:H2'	35:BA:208:C:O4'	2.14	0.47
35:BA:528:A:H2	35:BA:2043:C:H5'	1.80	0.47
35:BA:1169:G:N2	35:BA:1181:C:O2	2.47	0.47
35:BA:2114:A:N1	35:BA:2167:U:H4'	2.29	0.47
35:BA:2404:C:C3'	48:BP:77:ARG:HH22	2.19	0.47
41:BG:91:ARG:HG2	41:BG:92:VAL:N	2.29	0.47
47:BO:64:ARG:HG2	47:BO:79:PHE:CD2	2.50	0.47
48:BP:16:ARG:NE	48:BP:16:ARG:HA	2.29	0.47
48:BP:95:VAL:HG12	48:BP:95:VAL:O	2.13	0.47
50:BR:44:LEU:HD23	50:BR:44:LEU:HA	1.60	0.47
53:BU:81:HIS:O	53:BU:85:LYS:HB2	2.15	0.47
54:BV:1:MET:HG3	54:BV:42:GLY:CA	2.44	0.47
58:BZ:27:VAL:HG12	58:BZ:87:ASP:CB	2.43	0.47
1:CA:279:A:H4'	1:CA:280:C:H5"	1.96	0.47
1:CA:324:G:O2'	1:CA:326:G:N7	2.33	0.47
1:CA:865:A:H2'	1:CA:866:C:C6	2.50	0.47
2:CB:71:VAL:HG22	2:CB:93:VAL:HB	1.97	0.47
3:CC:79:ARG:O	3:CC:81:GLY:N	2.39	0.47
12:CL:21:LYS:HD3	12:CL:21:LYS:N	2.28	0.47
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.96	0.47
19:CS:16:LEU:HD12	19:CS:41:VAL:HG21	1.97	0.47
20:CT:54:LYS:HG3	20:CT:58:LYS:CD	2.45	0.47
20:CT:74:LYS:O	20:CT:75:ASN:HB2	2.15	0.47
27:D2:59:ARG:HA	27:D2:59:ARG:HE	1.75	0.47
33:D8:25:MET:CG	48:DP:64:LYS:CB	2.92	0.47
33:D8:27:THR:HA	35:DA:2361:A:OP1	2.15	0.47
35:DA:184:C:H2'	35:DA:185:U:C6	2.49	0.47
35:DA:218:A:C2	35:DA:235:U:H4'	2.49	0.47
35:DA:784:A:C8	35:DA:792:G:C5	3.03	0.47
37:DC:45:ALA:HA	37:DC:209:LEU:O	2.15	0.47
38:DD:60:ARG:HG3	38:DD:86:PRO:HG2	1.96	0.47
46:DN:68:GLU:HB2	46:DN:88:GLU:OE2	2.14	0.47
53:DU:8:VAL:HG13	53:DU:11:ARG:NH2	2.26	0.47
56:DX:57:LEU:O	56:DX:75:ASP:HA	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:26:LYS:CG	57:DY:27:VAL:H	2.27	0.47
58:DZ:23:LYS:HD3	58:DZ:40:ASP:HA	1.95	0.47
58:DZ:33:LEU:HG	58:DZ:34:ASN:N	2.29	0.47
1:AA:37:U:O2'	1:AA:500:G:H4'	2.15	0.47
1:AA:731:G:OP1	1:AA:766:A:H1'	2.14	0.47
1:AA:945:G:C2	1:AA:946:A:C8	3.03	0.47
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.49	0.47
3:AC:8:ILE:O	3:AC:9:GLY:C	2.55	0.47
4:AD:108:LEU:HB3	4:AD:109:GLY:H	1.61	0.47
5:AE:6:PHE:HA	5:AE:34:VAL:HG13	1.97	0.47
8:AH:102:ARG:HH21	8:AH:105:ARG:CD	2.28	0.47
14:AN:34:TYR:HD2	14:AN:44:LEU:HD22	1.79	0.47
19:AS:49:ILE:O	19:AS:59:PRO:HA	2.14	0.47
20:AT:95:ALA:C	20:AT:97:ALA:H	2.23	0.47
26:B1:46:LEU:CD1	26:B1:48:LYS:HG2	2.44	0.47
33:B8:25:MET:SD	48:BP:64:LYS:HD3	2.54	0.47
35:BA:315:G:H2'	35:BA:316:C:O4'	2.13	0.47
35:BA:1170:G:N1	35:BA:1180:C:C2	2.83	0.47
35:BA:1221:C:N4	35:BA:1229:G:H1	2.12	0.47
35:BA:1332:G:C8	35:BA:1332:G:H5'	2.49	0.47
35:BA:2471:C:H2'	35:BA:2472:G:O4'	2.15	0.47
35:BA:2745:C:H2'	35:BA:2746:U:O4'	2.15	0.47
35:BA:2756:U:H1'	35:BA:2757:A:H5"	1.97	0.47
39:BE:129:HIS:C	39:BE:131:ALA:H	2.23	0.47
40:BF:19:GLU:CG	40:BF:24:LEU:HD13	2.44	0.47
40:BF:65:TRP:CD1	40:BF:70:THR:HG21	2.49	0.47
41:BG:132:ASN:OD1	41:BG:158:ALA:HA	2.14	0.47
42:BH:101:ARG:HD2	42:BH:117:PRO:HB2	1.97	0.47
47:BO:66:LYS:HE2	47:BO:80:ASP:C	2.40	0.47
48:BP:18:ARG:O	48:BP:19:VAL:C	2.57	0.47
51:BS:7:TYR:HB2	51:BS:8:GLU:OE1	2.14	0.47
53:BU:92:ARG:NH1	53:BU:94:ASN:OD1	2.48	0.47
54:BV:53:GLU:CD	54:BV:54:GLY:N	2.73	0.47
58:BZ:54:HIS:CG	58:BZ:55:HIS:H	2.33	0.47
1:CA:102:G:H2'	1:CA:103:C:H6	1.80	0.47
1:CA:343:U:H2'	1:CA:345:C:C5	2.48	0.47
1:CA:957:U:H2'	1:CA:959:A:OP2	2.14	0.47
1:CA:1020:U:H2'	1:CA:1021:G:H8	1.79	0.47
1:CA:1320:C:H42	19:CS:36:ARG:HG3	1.79	0.47
2:CB:174:VAL:O	2:CB:178:ARG:HB2	2.14	0.47
3:CC:102:ASN:O	3:CC:103:VAL:HG23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:162:GLN:NE2	24:CX:24:A:H4'	2.29	0.47
4:CD:170:VAL:HG22	4:CD:171:GLY:H	1.80	0.47
5:CE:32:VAL:O	5:CE:43:LEU:HD12	2.14	0.47
11:CK:32:ILE:HD12	11:CK:72:ALA:HB2	1.96	0.47
20:CT:55:ILE:HG22	20:CT:56:MET:N	2.29	0.47
20:CT:65:LYS:HD3	20:CT:68:LYS:HE2	1.95	0.47
26:D1:26:ARG:O	26:D1:27:GLU:HB2	2.13	0.47
33:D8:31:HIS:CG	35:DA:2419:U:O4	2.68	0.47
33:D8:50:LEU:CD1	33:D8:51:ALA:N	2.74	0.47
35:DA:587:C:H4'	35:DA:588:U:OP2	2.15	0.47
35:DA:882:G:N2	35:DA:894:C:H42	2.08	0.47
35:DA:901:A:C2'	35:DA:902:C:H5'	2.45	0.47
35:DA:1272:A:O2'	35:DA:1273:U:H5'	2.15	0.47
35:DA:1813:G:H1'	38:DD:50:THR:OG1	2.14	0.47
35:DA:1952:A:C5	47:DO:22:ILE:CD1	2.97	0.47
35:DA:2013:A:N3	55:DW:88:ARG:NH2	2.62	0.47
42:DH:107:VAL:HG11	42:DH:152:ARG:HB3	1.95	0.47
46:DN:2:LYS:HG3	46:DN:3:THR:OG1	2.15	0.47
51:DS:42:ASP:O	51:DS:44:LYS:N	2.45	0.47
52:DT:88:ILE:H	52:DT:88:ILE:HG13	1.17	0.47
58:DZ:138:GLU:O	58:DZ:139:VAL:HG23	2.15	0.47
1:AA:38:G:H1	1:AA:397:A:H5"	1.78	0.47
1:AA:429:U:H2'	4:AD:25:ARG:NH1	2.29	0.47
1:AA:435:C:H2'	1:AA:436:C:C6	2.50	0.47
1:AA:457:C:H2'	1:AA:458:C:C2	2.49	0.47
1:AA:557:G:H2'	1:AA:558:G:O4'	2.15	0.47
1:AA:750:G:C2	15:AO:23:GLY:HA3	2.48	0.47
1:AA:839:U:H3'	1:AA:839:U:OP2	2.15	0.47
1:AA:881:G:P	12:AL:12:ARG:NH2	2.88	0.47
1:AA:981:U:C3'	1:AA:982:U:H5"	2.44	0.47
1:AA:996:A:H2'	1:AA:996:A:N3	2.29	0.47
1:AA:997:U:H4'	1:AA:998:G:OP1	2.13	0.47
1:AA:1169:A:C8	1:AA:1170:A:C8	3.02	0.47
1:AA:1281:U:C4'	1:AA:1282:C:OP2	2.62	0.47
1:AA:1289:A:H62	9:AI:70:LYS:HE3	1.78	0.47
1:AA:1316:G:H1	19:AS:5:LEU:HD11	1.79	0.47
1:AA:1346:A:C8	1:AA:1348:U:C2	3.03	0.47
1:AA:1382:C:H2'	1:AA:1383:C:C6	2.50	0.47
2:AB:20:GLU:OE2	2:AB:20:GLU:HA	2.14	0.47
2:AB:21:ARG:HG3	2:AB:23:ARG:HH11	1.80	0.47
4:AD:29:PRO:O	4:AD:30:LYS:HD3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:55:ALA:O	4:AD:59:ARG:HB2	2.13	0.47
4:AD:118:ARG:HG3	4:AD:136:PRO:HB3	1.96	0.47
4:AD:163:GLU:C	4:AD:165:MET:N	2.73	0.47
6:AF:9:VAL:HA	6:AF:59:TYR:O	2.15	0.47
8:AH:12:ARG:HH12	8:AH:27:PRO:HD3	1.77	0.47
10:AJ:48:THR:CG2	10:AJ:62:HIS:HD2	2.28	0.47
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.78	0.47
13:AM:95:GLY:HA2	13:AM:110:ARG:HH21	1.78	0.47
14:AN:45:ARG:HH11	14:AN:45:ARG:HG3	1.78	0.47
15:AO:35:ARG:O	15:AO:39:LEU:HB2	2.15	0.47
15:AO:55:GLY:O	15:AO:59:MET:HG3	2.15	0.47
16:AP:12:LYS:C	16:AP:14:ASN:H	2.23	0.47
23:AW:34:G:H5"	23:AW:35:A:OP2	2.14	0.47
25:B0:47:PRO:HB3	25:B0:51:VAL:O	2.15	0.47
27:B2:51:ARG:NE	27:B2:55:ARG:HD2	2.29	0.47
35:BA:81:G:O6	35:BA:82:G:N2	2.47	0.47
35:BA:139:G:H2'	35:BA:139(A):G:C5'	2.25	0.47
35:BA:184:C:H2'	35:BA:185:U:H6	1.79	0.47
35:BA:236:C:O2'	35:BA:431:U:H4'	2.15	0.47
35:BA:253:C:H2'	35:BA:254:G:O4'	2.15	0.47
35:BA:754:C:H2'	35:BA:755:C:H6	1.80	0.47
35:BA:864:G:C6	35:BA:865:C:N4	2.83	0.47
35:BA:1155:A:C2	35:BA:1157:G:C8	3.02	0.47
35:BA:1276:A:H2	50:BR:23:ASN:ND2	2.12	0.47
35:BA:1429:G:O2'	35:BA:1430:C:H5'	2.15	0.47
35:BA:1431:U:H2'	35:BA:1432:C:C6	2.50	0.47
35:BA:1435:G:H21	35:BA:1478:G:H5'	1.80	0.47
35:BA:2643:G:H2'	35:BA:2644:G:O4'	2.14	0.47
35:BA:2753:A:O2'	35:BA:2754:U:P	2.72	0.47
35:BA:2760:C:H1'	42:BH:139:GLN:NE2	2.30	0.47
36:BB:21:G:HO2'	36:BB:22:U:P	2.37	0.47
38:BD:27:THR:HG23	38:BD:28:GLU:N	2.30	0.47
38:BD:109:ASP:O	38:BD:111:LEU:N	2.47	0.47
39:BE:182:LEU:O	39:BE:183:LEU:HD12	2.15	0.47
40:BF:20:LEU:CD1	40:BF:203:GLN:HE22	2.28	0.47
40:BF:202:PHE:O	40:BF:205:ARG:NH2	2.48	0.47
41:BG:55:LYS:NZ	41:BG:148:MET:HE2	2.30	0.47
41:BG:56:ALA:HA	41:BG:153:ARG:NH1	2.29	0.47
41:BG:178:PHE:HD1	41:BG:179:PRO:HD2	1.79	0.47
42:BH:146:ALA:C	42:BH:148:ILE:H	2.23	0.47
46:BN:53:VAL:HA	46:BN:121:LYS:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:66:LYS:CE	46:BN:87:LEU:HD22	2.45	0.47
48:BP:37:GLY:C	48:BP:39:LYS:H	2.23	0.47
48:BP:55:ARG:O	48:BP:56:SER:C	2.57	0.47
49:BQ:63:LYS:HE3	49:BQ:65:PHE:CZ	2.49	0.47
49:BQ:116:GLU:CD	49:BQ:119:ARG:HH21	2.23	0.47
50:BR:85:PRO:O	50:BR:87:TYR:N	2.48	0.47
51:BS:22:GLY:O	51:BS:24:LEU:N	2.48	0.47
52:BT:118:ARG:HH12	52:BT:119:LYS:HB2	1.78	0.47
56:BX:29:TRP:CD1	56:BX:75:ASP:O	2.68	0.47
56:BX:51:VAL:CG1	56:BX:52:VAL:N	2.77	0.47
57:BY:29:GLU:O	57:BY:38:ILE:HG13	2.15	0.47
57:BY:81:LYS:HD3	57:BY:97:ARG:HE	1.78	0.47
57:BY:88:LYS:HE2	57:BY:88:LYS:HB2	1.55	0.47
58:BZ:74:VAL:HA	58:BZ:86:VAL:HG12	1.96	0.47
1:CA:93:G:OP2	1:CA:93:G:C8	2.68	0.47
1:CA:266:G:H5"	1:CA:267:C:C5	2.50	0.47
1:CA:461:A:H2'	1:CA:471:G:N7	2.30	0.47
1:CA:602:A:C2	1:CA:637:G:C2	3.02	0.47
1:CA:671:G:H2'	1:CA:672:U:O4'	2.15	0.47
1:CA:771:G:H2'	1:CA:772:U:H6	1.80	0.47
1:CA:859:A:H2'	1:CA:860:A:H8	1.78	0.47
1:CA:880:C:P	12:CL:8:ASN:HD22	2.38	0.47
1:CA:1030:C:H2'	1:CA:1030(A):G:H5'	1.97	0.47
1:CA:1213:A:C8	1:CA:1215:G:C5	3.03	0.47
2:CB:104:ASN:ND2	2:CB:107:THR:OG1	2.48	0.47
4:CD:62:GLN:O	4:CD:66:ARG:HG2	2.15	0.47
5:CE:79:GLU:N	5:CE:79:GLU:OE1	2.47	0.47
10:CJ:13:HIS:HB3	10:CJ:68:HIS:CE1	2.49	0.47
10:CJ:72:VAL:HG12	10:CJ:73:ASP:H	1.80	0.47
13:CM:59:TYR:CZ	13:CM:63:THR:HG21	2.50	0.47
17:CQ:11:VAL:HG23	17:CQ:20:THR:HB	1.97	0.47
20:CT:89:ARG:HD2	20:CT:104:LEU:CD2	2.45	0.47
25:D0:9:SER:O	25:D0:10:THR:HB	2.15	0.47
26:D1:21:ARG:HB2	26:D1:40:ARG:HD3	1.96	0.47
27:D2:26:ARG:HA	27:D2:26:ARG:NE	2.28	0.47
27:D2:41:ILE:C	27:D2:43:GLN:N	2.70	0.47
30:D5:40:LYS:HG3	30:D5:41:PRO:O	2.14	0.47
34:D9:13:LYS:O	34:D9:27:CYS:HB2	2.15	0.47
35:DA:71:A:H3'	35:DA:71:A:P	2.55	0.47
35:DA:176:G:C2'	35:DA:177:G:H5'	2.45	0.47
35:DA:330:A:C2	35:DA:1210:A:H2'	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:478:A:N1	35:DA:500:G:H4'	2.29	0.47
35:DA:498:G:C6	35:DA:499:U:C4	3.02	0.47
35:DA:552:G:OP2	35:DA:552:G:C8	2.65	0.47
35:DA:657:U:O2'	35:DA:658:C:H5'	2.15	0.47
35:DA:676:A:H1'	35:DA:2443:C:H1'	1.97	0.47
35:DA:818:G:OP2	35:DA:1187:G:O6	2.32	0.47
35:DA:932:G:H4'	35:DA:933:A:O5'	2.14	0.47
35:DA:997:G:OP1	53:DU:93:LYS:HE3	2.14	0.47
35:DA:1797:C:O3'	38:DD:259:THR:HG22	2.14	0.47
35:DA:1952:A:C5	47:DO:22:ILE:HD12	2.50	0.47
35:DA:2250:G:H5"	35:DA:2250:G:N3	2.29	0.47
35:DA:2506:U:H4'	35:DA:2507:C:OP1	2.13	0.47
35:DA:2612:C:C5	35:DA:2613:U:H5	2.32	0.47
35:DA:2619:C:OP1	39:DE:152:LYS:HD3	2.14	0.47
38:DD:64:ILE:HD13	38:DD:64:ILE:HG21	1.67	0.47
38:DD:92:ILE:HD12	38:DD:104:TYR:CE1	2.48	0.47
40:DF:82:ILE:HD13	40:DF:82:ILE:HG21	1.36	0.47
40:DF:181:LEU:HA	40:DF:181:LEU:HD12	1.73	0.47
41:DG:59:GLU:OE1	41:DG:153:ARG:NH2	2.48	0.47
42:DH:83:TYR:CG	42:DH:138:LYS:HA	2.50	0.47
42:DH:104:GLU:HA	42:DH:113:VAL:O	2.15	0.47
42:DH:170:ARG:HD3	42:DH:170:ARG:C	2.40	0.47
43:DI:78:THR:HB	43:DI:141:LYS:NZ	2.30	0.47
47:DO:2:ILE:HG23	47:DO:8:LEU:HD21	1.96	0.47
48:DP:41:ARG:HE	48:DP:45:LEU:HD12	1.78	0.47
48:DP:59:LEU:CA	48:DP:61:ARG:HG3	2.36	0.47
52:DT:38:ASN:O	52:DT:39:ARG:C	2.58	0.47
56:DX:82:GLN:CG	56:DX:85:PRO:HD2	2.45	0.47
58:DZ:69:THR:HB	58:DZ:88:PHE:HB3	1.96	0.47
58:DZ:137:ILE:HG22	58:DZ:138:GLU:H	1.79	0.47
1:AA:31:G:N2	1:AA:47:C:O5'	2.48	0.47
1:AA:113:G:H1'	1:AA:354:G:H5'	1.95	0.47
1:AA:131:C:H2'	1:AA:132:C:H6	1.79	0.47
1:AA:1018:C:C2'	1:AA:1019:C:H4'	2.42	0.47
2:AB:82:ARG:O	2:AB:86:GLU:OE2	2.32	0.47
2:AB:94:ASN:HB2	2:AB:148:TYR:O	2.15	0.47
2:AB:102:LEU:HD12	2:AB:180:LEU:HD12	1.97	0.47
2:AB:115:LEU:HD13	2:AB:145:LEU:HD12	1.96	0.47
13:AM:92:HIS:CE1	13:AM:110:ARG:HH22	2.32	0.47
16:AP:76:GLN:C	16:AP:78:GLY:N	2.73	0.47
23:AY:40:C:C6	23:AY:40:C:H3'	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:49:LYS:O	25:B0:50:ASN:HB2	2.14	0.47
26:B1:37:ILE:HG21	35:BA:2080:G:O5'	2.14	0.47
26:B1:79:GLY:O	26:B1:81:LYS:HG3	2.14	0.47
29:B4:22:ILE:O	29:B4:24:THR:N	2.47	0.47
32:B7:33:ARG:NH1	35:BA:466:A:O3'	2.47	0.47
33:B8:13:ARG:NH2	48:BP:61:ARG:CA	2.71	0.47
34:B9:1:MET:H2	35:BA:2526:G:N2	2.13	0.47
35:BA:203:C:H3'	35:BA:204:A:H5"	1.95	0.47
35:BA:728:G:H4'	38:BD:13:ARG:HH21	1.80	0.47
35:BA:871:U:OP2	35:BA:871:U:H6	1.98	0.47
35:BA:2784:C:O5'	35:BA:2784:C:H6	1.97	0.47
39:BE:97:LYS:N	39:BE:100:GLU:OE2	2.22	0.47
40:BF:197:ASP:O	40:BF:200:GLU:HB3	2.15	0.47
43:BI:118:LYS:NZ	43:BI:119:PRO:HG2	2.29	0.47
47:BO:7:TYR:CE1	47:BO:20:MET:HB2	2.50	0.47
47:BO:68:GLU:OE2	47:BO:78:ARG:NH1	2.48	0.47
48:BP:127:ALA:O	48:BP:129:ALA:N	2.48	0.47
49:BQ:132:VAL:HG11	58:BZ:81:ARG:HD3	1.97	0.47
50:BR:29:LEU:HB2	50:BR:31:HIS:HE1	1.79	0.47
52:BT:51:ARG:NH1	52:BT:100:TYR:HE1	2.11	0.47
56:BX:31:HIS:HB3	56:BX:34:ALA:HB2	1.96	0.47
57:BY:20:TYR:HE2	57:BY:42:VAL:HA	1.79	0.47
1:CA:773:G:N2	1:CA:774:G:H1'	2.30	0.47
1:CA:900:A:H2'	1:CA:901:A:C8	2.49	0.47
1:CA:1060:C:C5	3:CC:2:GLY:HA3	2.50	0.47
1:CA:1156:G:O2'	1:CA:1179:A:N6	2.47	0.47
1:CA:1320:C:N4	19:CS:36:ARG:HG3	2.30	0.47
5:CE:41:VAL:O	5:CE:67:VAL:HG12	2.15	0.47
13:CM:86:CYS:O	13:CM:89:GLY:N	2.47	0.47
20:CT:27:LYS:HD2	20:CT:27:LYS:HA	1.55	0.47
35:DA:103:A:C2'	35:DA:104:U:H5'	2.45	0.47
35:DA:1299:G:H3'	35:DA:1639:U:O4	2.15	0.47
35:DA:1608:A:H1'	35:DA:1610:A:OP2	2.15	0.47
35:DA:2314:C:H5'	41:DG:38:VAL:HG11	1.97	0.47
37:DC:46:LYS:HA	37:DC:46:LYS:CE	2.45	0.47
50:DR:103:ARG:HB2	50:DR:109:ALA:C	2.40	0.47
54:DV:21:ARG:HG2	54:DV:95:LEU:CD1	2.42	0.47
56:DX:55:ASN:H	56:DX:77:LYS:CE	2.27	0.47
57:DY:73:ARG:NH1	57:DY:81:LYS:N	2.63	0.47
1:AA:245:C:O2	1:AA:283:C:N3	2.48	0.47
1:AA:359:U:H2'	1:AA:360:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1004:A:C8	1:AA:1038:C:C4	3.03	0.47
1:AA:1022:G:O2'	1:AA:1023:G:H5"	2.15	0.47
1:AA:1112:C:N4	3:AC:176:HIS:O	2.48	0.47
1:AA:1216:G:OP1	14:AN:2:ALA:HA	2.15	0.47
1:AA:1267:C:H5	1:AA:1268:A:C6	2.33	0.47
1:AA:1309:G:H2'	1:AA:1310:G:O4'	2.14	0.47
2:AB:115:LEU:HD22	2:AB:145:LEU:HD11	1.95	0.47
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.97	0.47
4:AD:57:ARG:O	4:AD:58:LEU:C	2.56	0.47
5:AE:99:GLY:N	5:AE:117:ASP:OD1	2.45	0.47
6:AF:6:VAL:HG22	6:AF:90:VAL:HG22	1.96	0.47
9:AI:43:ALA:HA	9:AI:74:ILE:HG21	1.95	0.47
13:AM:84:ILE:HG12	19:AS:66:MET:HE2	1.97	0.47
14:AN:33:VAL:O	14:AN:33:VAL:HG13	2.15	0.47
17:AQ:17:LYS:HA	17:AQ:46:ASP:O	2.14	0.47
23:AY:30:G:C5	23:AY:42:C:N4	2.82	0.47
27:B2:44:LEU:C	27:B2:44:LEU:HD13	2.39	0.47
27:B2:47:ASN:HD21	27:B2:51:ARG:HH21	1.62	0.47
31:B6:42:TRP:HZ2	35:BA:642:G:O3'	1.98	0.47
32:B7:26:GLY:O	32:B7:30:VAL:HG23	2.15	0.47
35:BA:83:G:N2	35:BA:103:A:OP2	2.48	0.47
35:BA:118:A:H1'	35:BA:178:G:O4'	2.15	0.47
35:BA:581:C:N3	35:BA:1259:G:N2	2.51	0.47
35:BA:845:G:OP2	35:BA:845:G:C8	2.68	0.47
35:BA:1576:U:C5	35:BA:1577:C:C6	3.02	0.47
35:BA:1849:G:H2'	35:BA:1849:G:N3	2.28	0.47
35:BA:1853:A:N3	35:BA:2233:U:O2'	2.45	0.47
35:BA:2093:G:O5'	43:BI:24:GLY:HA3	2.15	0.47
35:BA:2600:A:H2'	35:BA:2601:C:C6	2.50	0.47
35:BA:2660:A:C5'	35:BA:2661:G:H21	2.28	0.47
35:BA:2690:C:H5"	35:BA:2872:G:H21	1.80	0.47
35:BA:2843:G:H1	35:BA:2874:C:H42	1.61	0.47
40:BF:31:HIS:C	40:BF:33:LEU:N	2.72	0.47
40:BF:126:VAL:O	40:BF:196:LEU:HB2	2.15	0.47
54:BV:19:LYS:CE	54:BV:22:VAL:HG13	2.45	0.47
54:BV:69:LYS:HZ1	54:BV:71:LEU:HD21	1.80	0.47
55:BW:49:LYS:HE2	55:BW:49:LYS:HB3	1.56	0.47
55:BW:58:ALA:C	55:BW:62:HIS:HB3	2.40	0.47
57:BY:27:VAL:CG1	57:BY:28:LYS:H	2.06	0.47
1:CA:332:G:OP2	20:CT:10:LEU:HD22	2.15	0.47
1:CA:457:C:O5'	1:CA:457:C:H6	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:937:A:C5	1:CA:938:A:N7	2.83	0.47
1:CA:984:C:H2'	1:CA:985:C:C6	2.50	0.47
1:CA:985:C:C2	1:CA:1221:G:N2	2.83	0.47
1:CA:1125:U:H2'	1:CA:1125:U:O2	2.13	0.47
4:CD:111:ALA:HB2	4:CD:120:LEU:HD12	1.97	0.47
5:CE:60:TYR:OH	5:CE:64:ARG:NH2	2.48	0.47
13:CM:14:ARG:HB3	13:CM:16:ASP:OD1	2.15	0.47
13:CM:81:LEU:HA	13:CM:81:LEU:HD23	1.66	0.47
13:CM:107:ALA:H	13:CM:108:ARG:HD2	1.79	0.47
15:CO:82:ILE:HG23	15:CO:87:ILE:H	1.80	0.47
22:CV:52:G:C6	22:CV:63:G:C6	3.03	0.47
23:CW:21:A:N1	23:CW:46:G:N1	2.63	0.47
30:D5:37:LYS:HD2	30:D5:37:LYS:HA	1.81	0.47
35:DA:594:U:H2'	35:DA:595:C:C6	2.49	0.47
35:DA:1632:A:C6	35:DA:1633:G:C6	3.03	0.47
35:DA:2027:G:H2'	35:DA:2028:U:O4'	2.14	0.47
35:DA:2776:A:H4'	35:DA:2777:G:H5"	1.97	0.47
37:DC:82:LYS:HZ1	37:DC:152:ILE:H	1.63	0.47
38:DD:83:GLU:HB2	38:DD:92:ILE:HG13	1.97	0.47
38:DD:142:VAL:HA	38:DD:194:GLY:N	2.26	0.47
38:DD:270:ILE:O	38:DD:271:ILE:HG23	2.14	0.47
46:DN:76:SER:HG	46:DN:78:TYR:HE1	1.58	0.47
46:DN:82:LEU:O	46:DN:83:LYS:HB2	2.15	0.47
53:DU:6:THR:O	53:DU:9:VAL:HG23	2.15	0.47
54:DV:62:LEU:HA	54:DV:97:LYS:O	2.15	0.47
57:DY:35:TYR:CE2	57:DY:69:ALA:HB3	2.50	0.47
57:DY:68:HIS:O	57:DY:70:SER:N	2.48	0.47
57:DY:73:ARG:NH1	57:DY:81:LYS:H	2.13	0.47
1:AA:981:U:OP2	1:AA:981:U:H6	1.98	0.47
1:AA:999:C:H42	1:AA:1042:G:H1	1.63	0.47
1:AA:1103:C:N3	1:AA:1104:G:C8	2.83	0.47
1:AA:1113:C:H4'	3:AC:14:ILE:HD12	1.96	0.47
1:AA:1432:G:OP1	52:BT:108:ARG:HG3	2.15	0.47
3:AC:156:ARG:NH1	3:AC:193:TYR:HB3	2.30	0.47
3:AC:180:ALA:HB1	3:AC:182:ILE:HG13	1.97	0.47
4:AD:52:SER:O	4:AD:53:ASP:C	2.58	0.47
15:AO:74:ASP:OD1	15:AO:74:ASP:C	2.58	0.47
19:AS:11:VAL:HG22	19:AS:12:ASP:N	2.25	0.47
20:AT:54:LYS:CD	20:AT:57:ARG:HH22	2.27	0.47
24:AX:15:A:H5"	24:AX:16:A:OP1	2.15	0.47
31:B6:20:ASN:ND2	31:B6:21:TYR:O	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:171:G:C5	35:BA:172:C:C4	3.03	0.47
35:BA:856:C:OP2	35:BA:856:C:H6	1.98	0.47
35:BA:1155:A:C4	35:BA:1157:G:C8	3.03	0.47
35:BA:1217:C:OP1	53:BU:15:LYS:NZ	2.31	0.47
35:BA:1580:A:C8	35:BA:1581:G:H1'	2.50	0.47
35:BA:2394:C:H5"	48:BP:61:ARG:NH1	2.29	0.47
36:BB:32:C:N4	36:BB:33:G:O6	2.48	0.47
37:BC:45:ALA:C	37:BC:46:LYS:HE2	2.40	0.47
42:BH:89:ILE:O	42:BH:90:LYS:HG2	2.14	0.47
43:BI:135:GLU:N	43:BI:135:GLU:CD	2.73	0.47
46:BN:13:TRP:HA	46:BN:51:PHE:HB2	1.97	0.47
48:BP:7:ARG:HA	48:BP:7:ARG:NE	2.29	0.47
51:BS:8:GLU:OE1	51:BS:10:ARG:HD3	2.15	0.47
56:BX:50:LYS:O	56:BX:51:VAL:HG23	2.14	0.47
1:CA:29:G:N2	1:CA:554:C:N3	2.52	0.47
1:CA:741:G:H2'	1:CA:742:G:O4'	2.15	0.47
1:CA:786:G:C2	1:CA:797:C:C2	3.02	0.47
2:CB:15:VAL:C	2:CB:17:PHE:H	2.22	0.47
2:CB:69:LEU:HD13	2:CB:91:PRO:HB2	1.97	0.47
3:CC:120:VAL:CG2	3:CC:198:VAL:HG11	2.45	0.47
3:CC:205:GLY:O	3:CC:206:GLU:HG3	2.15	0.47
5:CE:100:VAL:HG13	5:CE:118:ILE:CG2	2.45	0.47
6:CF:33:TYR:HD1	6:CF:71:ARG:HD2	1.80	0.47
9:CI:84:ALA:C	9:CI:86:VAL:H	2.21	0.47
9:CI:111:ARG:HG3	14:CN:61:TRP:NE1	2.30	0.47
9:CI:126:SER:OG	9:CI:128:ARG:NH1	2.48	0.47
12:CL:59:ARG:HG2	12:CL:65:GLU:CG	2.45	0.47
18:CR:65:ILE:HD12	18:CR:66:LEU:H	1.80	0.47
22:CV:76:A:OP1	22:CV:76:A:H4'	2.10	0.47
25:D0:25:ARG:HH11	25:D0:25:ARG:HG2	1.80	0.47
34:D9:4:ARG:O	34:D9:37:GLY:N	2.43	0.47
35:DA:272(G):C:N3	35:DA:363(D):G:C2	2.83	0.47
35:DA:580:C:H2'	35:DA:581:C:H6	1.80	0.47
35:DA:697:C:O2'	35:DA:698:C:H5'	2.14	0.47
35:DA:937:U:H2'	35:DA:938:G:O4'	2.14	0.47
35:DA:1581:G:H2'	35:DA:1582:C:O4'	2.15	0.47
35:DA:1877:A:C5'	35:DA:1878:G:OP2	2.63	0.47
35:DA:2658:C:O3'	42:DH:158:HIS:HE1	1.98	0.47
35:DA:2807:G:H22	35:DA:2892:A:N6	2.12	0.47
37:DC:46:LYS:HB2	37:DC:208:PHE:O	2.15	0.47
38:DD:69:ARG:HH21	38:DD:192:THR:HB	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DD:132:PRO:HD3	38:DD:190:TYR:CE2	2.49	0.47
38:DD:264:LYS:HG2	38:DD:266:SER:HB3	1.97	0.47
40:DF:33:LEU:HD11	40:DF:112:MET:HB2	1.97	0.47
42:DH:37:VAL:HG22	42:DH:68:THR:HG23	1.97	0.47
48:DP:59:LEU:HA	48:DP:61:ARG:HG2	1.91	0.47
51:DS:106:ARG:HH11	51:DS:106:ARG:HB3	1.80	0.47
53:DU:98:LEU:C	53:DU:100:VAL:N	2.59	0.47
54:DV:3:ALA:HB3	54:DV:14:VAL:HG23	1.96	0.47
54:DV:46:VAL:HG12	54:DV:47:VAL:H	1.79	0.47
55:DW:81:ALA:HB1	55:DW:97:LYS:HB3	1.97	0.47
56:DX:88:LYS:O	56:DX:89:ILE:HG12	2.15	0.47
57:DY:47:LYS:HD2	57:DY:47:LYS:H	1.79	0.47
58:DZ:76:LEU:HD11	58:DZ:81:ARG:HD2	1.97	0.47
1:AA:116:A:H61	1:AA:313:A:H1'	1.80	0.46
1:AA:675:A:C4	1:AA:676:A:C8	3.04	0.46
1:AA:1216:G:H5"	14:AN:5:ALA:CB	2.45	0.46
7:AG:69:VAL:HG11	7:AG:134:ALA:HB1	1.97	0.46
8:AH:87:SER:OG	8:AH:132:GLU:HG3	2.14	0.46
17:AQ:45:HIS:CD2	17:AQ:47:PRO:HD3	2.50	0.46
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.41	0.46
22:AV:67:C:H2'	22:AV:68:C:C6	2.50	0.46
28:B3:6:VAL:HG22	28:B3:56:VAL:HG12	1.96	0.46
35:BA:81:G:N1	35:BA:82:G:N3	2.62	0.46
35:BA:154:G:C6	35:BA:154(A):C:N4	2.83	0.46
35:BA:209:C:H2'	35:BA:210:C:O2	2.15	0.46
35:BA:469:G:H2'	35:BA:470:A:OP2	2.15	0.46
35:BA:861:A:H2'	35:BA:862:G:O4'	2.14	0.46
35:BA:1065:U:H1'	35:BA:1066:U:OP1	2.14	0.46
35:BA:1161:C:H4'	54:BV:8:GLY:HA2	1.96	0.46
35:BA:1291:C:H2'	35:BA:1292:U:H6	1.80	0.46
35:BA:1441:G:H1	35:BA:1550:C:H42	1.64	0.46
35:BA:2096:U:H3	35:BA:2193:G:H1	1.63	0.46
35:BA:2115:G:N7	35:BA:2117:A:H2'	2.30	0.46
35:BA:2358:G:C4	35:BA:2359:C:C6	3.03	0.46
35:BA:2817:G:N2	35:BA:2836:U:O2'	2.48	0.46
38:BD:70:TRP:HA	38:BD:73:VAL:HG13	1.97	0.46
38:BD:97:TYR:C	38:BD:99:ASP:N	2.72	0.46
40:BF:181:LEU:CD1	40:BF:186:ILE:HD11	2.44	0.46
41:BG:77:ILE:HG22	41:BG:79:ASN:H	1.80	0.46
47:BO:71:ARG:CG	47:BO:72:PRO:HD2	2.43	0.46
48:BP:131:SER:OG	48:BP:132:LYS:N	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BU:64:ARG:HH21	53:BU:64:ARG:CG	2.27	0.46
54:BV:28:GLU:HB2	54:BV:29:PRO:HD3	1.97	0.46
55:BW:82:LEU:HD12	55:BW:84:ARG:HG2	1.97	0.46
58:BZ:39:VAL:N	58:BZ:44:PHE:CZ	2.83	0.46
1:CA:52:G:H2'	1:CA:53:A:H8	1.80	0.46
1:CA:253:U:O2	1:CA:275:G:O2'	2.19	0.46
1:CA:538:G:OP1	12:CL:113:ARG:HD3	2.16	0.46
1:CA:1225:A:C2	1:CA:1226:C:N3	2.83	0.46
1:CA:1251:A:H2'	1:CA:1252:A:O4'	2.14	0.46
7:CG:89:MET:CE	7:CG:90:GLU:H	2.28	0.46
9:CI:28:VAL:O	9:CI:30:GLY:N	2.47	0.46
11:CK:72:ALA:O	11:CK:76:GLY:N	2.48	0.46
17:CQ:24:GLU:OE1	17:CQ:37:LYS:HD3	2.15	0.46
23:CW:30:G:C6	23:CW:41:C:N4	2.83	0.46
35:DA:908:C:O2'	35:DA:909:A:H5'	2.15	0.46
35:DA:1051:G:C8	35:DA:1051:G:C3'	2.98	0.46
35:DA:1341:U:O3'	56:DX:55:ASN:HB3	2.15	0.46
35:DA:1864:U:C2'	35:DA:1865:G:H5"	2.45	0.46
35:DA:2107:C:OP2	35:DA:2107:C:H6	1.98	0.46
35:DA:2276:G:OP2	49:DQ:85:LYS:NZ	2.47	0.46
42:DH:19:VAL:HG12	42:DH:20:ALA:H	1.79	0.46
43:DI:123:LEU:HD23	43:DI:124:GLY:N	2.31	0.46
46:DN:120:LEU:HD11	46:DN:122:VAL:HG23	1.97	0.46
48:DP:13:ASN:O	48:DP:15:ARG:N	2.48	0.46
48:DP:138:LEU:HA	48:DP:138:LEU:HD23	1.44	0.46
49:DQ:19:GLY:C	49:DQ:21:THR:N	2.73	0.46
56:DX:54:VAL:CA	56:DX:77:LYS:HE3	2.37	0.46
1:AA:88:A:H5'	1:AA:90:U:H5"	1.97	0.46
1:AA:109:A:C6	1:AA:326:G:C6	3.03	0.46
1:AA:376:G:O3'	16:AP:5:ARG:HD2	2.15	0.46
1:AA:1084:G:C5	1:AA:1085:U:C4	3.03	0.46
4:AD:111:ALA:HB1	4:AD:116:GLN:HG2	1.97	0.46
4:AD:122:ARG:NE	4:AD:122:ARG:CA	2.76	0.46
7:AG:79:ARG:HG2	7:AG:79:ARG:O	2.14	0.46
8:AH:63:LEU:HD12	8:AH:65:TYR:CE1	2.50	0.46
9:AI:25:LYS:HB2	9:AI:60:ASP:HB3	1.97	0.46
12:AL:49:ASN:HD22	12:AL:53:ARG:HH12	1.63	0.46
16:AP:21:VAL:HG11	16:AP:59:TRP:CD2	2.50	0.46
17:AQ:62:SER:OG	17:AQ:72:ARG:HG3	2.15	0.46
19:AS:53:ASN:HB2	19:AS:77:THR:HG22	1.97	0.46
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:516:C:O5'	35:BA:516:C:H6	1.98	0.46
35:BA:527:C:OP2	35:BA:2779:U:H5	1.98	0.46
35:BA:860:U:C5	35:BA:917:A:N7	2.82	0.46
35:BA:1300:U:H4'	35:BA:1301:A:H5'	1.98	0.46
35:BA:1366:A:H2'	35:BA:1367:A:O4'	2.16	0.46
35:BA:1480:G:H5'	35:BA:1481:U:OP2	2.16	0.46
35:BA:1767:C:H2'	35:BA:1768:U:H5"	1.96	0.46
35:BA:1842:G:H2'	35:BA:1843:C:C6	2.50	0.46
35:BA:2473:U:H2'	35:BA:2474:C:H6	1.80	0.46
38:BD:14:ARG:HB2	38:BD:15:PHE:H	1.53	0.46
38:BD:145:VAL:HG13	38:BD:191:ALA:HB2	1.96	0.46
38:BD:273:ARG:HD2	38:BD:273:ARG:C	2.40	0.46
39:BE:116:VAL:O	39:BE:117:MET:HB3	2.15	0.46
41:BG:29:TRP:C	41:BG:31:VAL:N	2.72	0.46
43:BI:105:HIS:C	43:BI:107:VAL:H	2.22	0.46
46:BN:100:GLU:O	46:BN:102:ALA:N	2.48	0.46
49:BQ:8:LYS:HG3	49:BQ:9:TYR:H	1.79	0.46
49:BQ:59:ARG:O	49:BQ:61:GLY:N	2.37	0.46
50:BR:102:GLU:OE2	55:BW:37:ARG:NH1	2.48	0.46
1:CA:1013:G:N2	1:CA:1015:A:H3'	2.30	0.46
1:CA:1038:C:H2'	1:CA:1039:C:C6	2.48	0.46
1:CA:1442:G:H1	1:CA:1461:G:H21	1.63	0.46
2:CB:187:LEU:H	2:CB:187:LEU:HD23	1.81	0.46
4:CD:8:VAL:O	4:CD:11:LEU:N	2.42	0.46
4:CD:14:ARG:C	4:CD:16:GLY:H	2.22	0.46
4:CD:90:GLY:O	4:CD:93:PHE:N	2.47	0.46
10:CJ:57:LYS:C	10:CJ:59:SER:H	2.22	0.46
15:CO:43:LEU:HD13	15:CO:53:HIS:HD2	1.80	0.46
17:CQ:48:GLU:CB	17:CQ:50:LYS:HD3	2.44	0.46
26:D1:19:GLN:OE1	26:D1:44:PRO:HB3	2.15	0.46
31:D6:23:THR:O	33:D8:36:LYS:HB2	2.16	0.46
35:DA:26:G:C6	35:DA:27:G:C6	3.03	0.46
35:DA:823:G:H2'	35:DA:824:A:C8	2.51	0.46
35:DA:943:U:OP2	48:DP:38:GLN:NE2	2.47	0.46
35:DA:969:U:H5"	35:DA:970:C:OP2	2.15	0.46
35:DA:1155:A:C4	35:DA:1157:G:C8	3.03	0.46
35:DA:1202:C:N4	35:DA:1203:G:C6	2.84	0.46
35:DA:1218:C:N4	35:DA:1231:G:H1	2.13	0.46
35:DA:1652:A:C2'	35:DA:1653:G:H5'	2.46	0.46
35:DA:2292:C:O2'	35:DA:2293:C:H5'	2.15	0.46
36:DB:17:C:H2'	36:DB:18:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DD:19:ALA:HB3	38:DD:21:PHE:CZ	2.50	0.46
39:DE:168:MET:HE2	39:DE:168:MET:HB3	1.78	0.46
40:DF:117:ARG:HD3	40:DF:117:ARG:HA	1.68	0.46
40:DF:161:GLU:HG2	40:DF:164:ARG:NH1	2.29	0.46
40:DF:175:THR:O	40:DF:175:THR:HG23	2.14	0.46
42:DH:119:GLU:C	42:DH:121:ILE:H	2.19	0.46
47:DO:104:ARG:HE	52:DT:33:LYS:HD2	1.80	0.46
49:DQ:38:GLU:HG3	49:DQ:128:LYS:HB2	1.97	0.46
52:DT:50:ILE:CD1	52:DT:64:ARG:HB3	2.45	0.46
55:DW:78:GLU:HG3	55:DW:79:GLY:N	2.30	0.46
58:DZ:162:GLU:CD	58:DZ:164:ALA:HB2	2.40	0.46
1:AA:72:C:H2'	1:AA:73:G:O4'	2.15	0.46
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.40	0.46
1:AA:460:G:H3'	1:AA:461:A:H5'	1.97	0.46
1:AA:575:G:C6	1:AA:821:G:N7	2.83	0.46
1:AA:612:C:H2'	1:AA:613:C:C6	2.50	0.46
1:AA:685:G:H5'	11:AK:39:PRO:O	2.16	0.46
1:AA:895:G:H2'	1:AA:896:C:C6	2.50	0.46
1:AA:977:A:H2'	1:AA:978:A:C5'	2.45	0.46
1:AA:1065:U:H1'	1:AA:1066:C:OP2	2.16	0.46
1:AA:1148:U:P	9:AI:7:THR:HG21	2.55	0.46
1:AA:1353:G:C2	1:AA:1370:G:N2	2.83	0.46
2:AB:127:ILE:HG12	2:AB:128:GLU:HG2	1.97	0.46
3:AC:34:LEU:HG	3:AC:38:ARG:HH21	1.80	0.46
6:AF:72:VAL:HG13	6:AF:73:ASN:H	1.81	0.46
9:AI:88:TYR:CD1	9:AI:89:ASN:HB2	2.50	0.46
10:AJ:50:ILE:HG12	10:AJ:60:ARG:HH11	1.81	0.46
14:AN:22:THR:CB	14:AN:33:VAL:HG11	2.46	0.46
16:AP:58:TYR:O	16:AP:61:SER:N	2.48	0.46
26:B1:16:ASN:C	26:B1:44:PRO:HG3	2.41	0.46
26:B1:37:ILE:HD11	35:BA:2432:A:C2	2.50	0.46
31:B6:10:LEU:HB2	33:B8:35:GLN:HG2	1.97	0.46
33:B8:13:ARG:HB2	48:BP:61:ARG:CB	2.44	0.46
35:BA:271(M):G:C2	35:BA:271(O):C:C2	3.03	0.46
35:BA:620:G:N3	35:BA:620:G:H5'	2.30	0.46
35:BA:773:U:H4'	38:BD:47:GLY:CA	2.46	0.46
35:BA:991:C:O2	35:BA:1164:G:C2	2.69	0.46
35:BA:1133:U:H2'	35:BA:1137:G:OP1	2.15	0.46
35:BA:1142(A):A:C4	35:BA:1144:G:C8	3.03	0.46
35:BA:1308:A:H2'	35:BA:1309:G:O4'	2.15	0.46
35:BA:1509(B):A:H2'	35:BA:1510:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1814:G:H2'	35:BA:1815:A:C8	2.50	0.46
35:BA:2358:G:C5	35:BA:2359:C:C5	3.03	0.46
35:BA:2715:C:H2'	35:BA:2716:U:O4'	2.14	0.46
35:BA:2882:A:P	50:BR:96:ARG:NH2	2.85	0.46
39:BE:101:ARG:C	39:BE:201:THR:OG1	2.58	0.46
40:BF:160:ASN:HB3	40:BF:163:VAL:HB	1.96	0.46
42:BH:106:THR:O	42:BH:106:THR:OG1	2.33	0.46
52:BT:7:ILE:C	52:BT:9:LEU:N	2.72	0.46
53:BU:88:ILE:HG22	54:BV:51:VAL:O	2.14	0.46
58:BZ:19:ARG:H	58:BZ:19:ARG:HG2	1.52	0.46
1:CA:243:A:C4'	1:CA:244:U:H5'	2.45	0.46
1:CA:419:C:H2'	1:CA:420:U:H5'	1.97	0.46
1:CA:820:U:H4'	1:CA:821:G:OP2	2.14	0.46
1:CA:929:G:C6	1:CA:930:C:C4	3.04	0.46
1:CA:1152:A:H2'	1:CA:1153:C:C6	2.50	0.46
1:CA:1198:G:H2'	1:CA:1199:U:O4'	2.15	0.46
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.50	0.46
11:CK:37:GLY:O	11:CK:38:ASN:HB3	2.15	0.46
13:CM:107:ALA:HB3	13:CM:111:LYS:HB2	1.98	0.46
15:CO:82:ILE:O	15:CO:85:LEU:N	2.41	0.46
16:CP:27:LYS:O	16:CP:28:ARG:C	2.58	0.46
17:CQ:45:HIS:HB3	17:CQ:72:ARG:HG2	1.97	0.46
20:CT:45:GLN:C	20:CT:47:GLY:H	2.23	0.46
30:D5:11:THR:OG1	35:DA:1263:U:O3'	2.33	0.46
33:D8:3:LYS:HD2	35:DA:242:G:O5'	2.15	0.46
35:DA:92:A:H3'	35:DA:93:G:H8	1.80	0.46
35:DA:537:C:H2'	35:DA:538:G:C8	2.51	0.46
35:DA:569:U:C4	35:DA:570:G:C6	3.04	0.46
35:DA:775:G:C5	35:DA:794:G:C8	3.03	0.46
35:DA:1141:U:H2'	46:DN:63:THR:HG21	1.96	0.46
35:DA:2785:C:H2'	35:DA:2786:U:O4'	2.15	0.46
36:DB:11:C:OP2	36:DB:12:C:N4	2.38	0.46
38:DD:35:LYS:HZ3	38:DD:64:ILE:HG22	1.80	0.46
41:DG:126:ASP:O	41:DG:127:GLY:C	2.57	0.46
43:DI:56:LYS:O	43:DI:56:LYS:HG3	2.14	0.46
43:DI:140:LEU:HA	43:DI:140:LEU:HD23	1.30	0.46
50:DR:97:VAL:HA	50:DR:113:LEU:O	2.14	0.46
54:DV:66:ARG:CG	54:DV:67:GLY:N	2.79	0.46
57:DY:14:LEU:HG	57:DY:15:VAL:H	1.81	0.46
57:DY:85:VAL:HG12	57:DY:92:ASN:OD1	2.15	0.46
1:AA:337:C:H2'	1:AA:338:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:760:G:H3'	1:AA:761:G:H8	1.80	0.46
1:AA:1240:U:O2'	7:AG:32:ARG:NH1	2.44	0.46
1:AA:1257:U:H1'	1:AA:1258:G:OP1	2.16	0.46
1:AA:1432:G:OP1	52:BT:107:ASP:HB2	2.16	0.46
2:AB:32:ILE:HG21	2:AB:40:HIS:HE1	1.80	0.46
2:AB:211:ILE:HA	2:AB:214:ILE:CD1	2.45	0.46
3:AC:88:ARG:NE	3:AC:101:LEU:HB3	2.31	0.46
7:AG:67:GLU:HA	7:AG:70:LYS:HD2	1.97	0.46
9:AI:95:LYS:HG3	9:AI:96:LEU:CD1	2.43	0.46
15:AO:64:ARG:HD3	15:AO:88:ARG:NH1	2.28	0.46
18:AR:36:ASN:O	18:AR:40:LEU:HD12	2.16	0.46
19:AS:5:LEU:CD1	19:AS:10:PHE:HB3	2.40	0.46
30:B5:11:THR:OG1	35:BA:1263:U:O3'	2.34	0.46
33:B8:24:ALA:O	33:B8:47:LYS:HG3	2.15	0.46
35:BA:17:G:H2'	35:BA:18:C:C6	2.51	0.46
35:BA:614(B):G:C1'	40:BF:44:ARG:HH21	2.29	0.46
35:BA:966:G:H2'	35:BA:967:C:C6	2.50	0.46
35:BA:1485:G:H1	35:BA:1504:C:N4	2.13	0.46
35:BA:1665:A:H2'	35:BA:1666:G:O4'	2.15	0.46
35:BA:1975:G:H5"	35:BA:1975:G:H8	1.80	0.46
35:BA:2122:U:H2'	35:BA:2123:G:O4'	2.16	0.46
35:BA:2696:U:H3	35:BA:2711:A:H62	1.64	0.46
35:BA:2760:C:H1'	42:BH:139:GLN:HE22	1.79	0.46
36:BB:28:C:N4	36:BB:56:G:H1	2.12	0.46
38:BD:46:GLN:N	38:BD:46:GLN:CD	2.74	0.46
39:BE:24:THR:HG23	39:BE:184:VAL:HG23	1.97	0.46
41:BG:51:ARG:C	41:BG:53:LEU:N	2.73	0.46
41:BG:72:ARG:HB3	41:BG:85:GLY:O	2.15	0.46
51:BS:67:ARG:HD2	51:BS:98:VAL:CG2	2.44	0.46
52:BT:56:GLY:C	52:BT:57:PHE:O	2.58	0.46
54:BV:2:PHE:HB2	54:BV:42:GLY:H	1.80	0.46
57:BY:63:LYS:HD3	57:BY:64:GLU:OE2	2.16	0.46
1:CA:784:C:H2'	1:CA:785:G:H8	1.80	0.46
1:CA:839:U:O2'	1:CA:840:C:OP1	2.33	0.46
1:CA:924:C:H2'	1:CA:925:G:C8	2.50	0.46
1:CA:933:G:N2	1:CA:935:A:O4'	2.49	0.46
1:CA:1067:A:O2'	1:CA:1094:G:H5'	2.15	0.46
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.50	0.46
1:CA:1121:U:H2'	1:CA:1122:U:H6	1.79	0.46
1:CA:1122:U:C4	1:CA:1123:A:C5	3.03	0.46
1:CA:1266:G:N2	1:CA:1270:C:O2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:68:GLU:O	5:CE:68:GLU:HG3	2.15	0.46
5:CE:71:LEU:O	5:CE:72:GLN:HG3	2.15	0.46
10:CJ:5:ARG:HD2	10:CJ:71:LEU:HD11	1.98	0.46
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.81	0.46
20:CT:64:ASP:OD1	20:CT:81:LYS:HE3	2.15	0.46
20:CT:73:HIS:N	20:CT:76:ALA:HB3	2.30	0.46
25:D0:46:LYS:HG2	25:D0:78:TYR:CE2	2.50	0.46
26:D1:79:GLY:O	26:D1:80:LEU:HD22	2.15	0.46
31:D6:15:GLU:CG	31:D6:18:ARG:HE	2.27	0.46
35:DA:271(K):U:H3'	35:DA:271(L):U:C6	2.51	0.46
35:DA:581:C:H2'	35:DA:582:G:C8	2.50	0.46
35:DA:636:G:O5'	48:DP:131:SER:OG	2.33	0.46
35:DA:803:U:C2'	35:DA:804:A:H5'	2.44	0.46
35:DA:1108:U:H2'	35:DA:1108:U:O2	2.16	0.46
35:DA:1331:A:O2'	35:DA:1332:G:C8	2.67	0.46
35:DA:1864:U:H2'	35:DA:1865:G:H5"	1.97	0.46
35:DA:2119:A:H2	35:DA:2169:A:H61	1.62	0.46
37:DC:20:TYR:HE2	37:DC:23:ASP:OD2	1.98	0.46
38:DD:222:ARG:H	38:DD:222:ARG:HG3	1.48	0.46
41:DG:94:LEU:HD23	41:DG:94:LEU:HA	1.51	0.46
46:DN:17:ASP:N	46:DN:137:LYS:HE2	2.31	0.46
1:AA:163:C:H5	1:AA:164:U:C5	2.34	0.46
1:AA:167:G:H2'	1:AA:168:G:H8	1.81	0.46
1:AA:678:U:H2'	1:AA:679:C:H6	1.80	0.46
1:AA:825:G:H1	1:AA:875:C:H42	1.64	0.46
1:AA:1159:U:H6	1:AA:1181:G:C2	2.34	0.46
1:AA:1289:A:H5"	1:AA:1290:G:C8	2.51	0.46
2:AB:17:PHE:HD1	2:AB:204:ASN:HB3	1.81	0.46
6:AF:22:GLU:HA	6:AF:22:GLU:OE2	2.14	0.46
7:AG:99:LEU:HD22	7:AG:103:TRP:CH2	2.51	0.46
9:AI:111:ARG:NH2	10:AJ:62:HIS:CE1	2.84	0.46
17:AQ:18:THR:HG23	17:AQ:69:LYS:HD3	1.97	0.46
20:AT:30:LYS:HZ3	20:AT:72:LEU:HD21	1.80	0.46
21:AU:6:ARG:CZ	21:AU:15:ARG:HH21	2.29	0.46
35:BA:1213:A:N3	35:BA:1238:G:O2'	2.44	0.46
35:BA:1429:G:H2'	35:BA:1430:C:H6	1.78	0.46
35:BA:1444:G:H1	35:BA:1547:C:N4	2.12	0.46
35:BA:1948:G:H5"	35:BA:1948:G:C8	2.51	0.46
35:BA:2466:C:C2	35:BA:2485:G:C2	3.03	0.46
35:BA:2698:U:C4	35:BA:2699:C:N3	2.84	0.46
35:BA:2753:A:HO2'	35:BA:2754:U:C5'	2.26	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:61:G:C6	36:BB:62:C:C4	3.03	0.46
39:BE:14:ILE:HB	52:BT:14:TYR:CZ	2.51	0.46
41:BG:51:ARG:O	41:BG:54:GLU:HG2	2.15	0.46
43:BI:10:GLU:CD	43:BI:11:ASN:N	2.73	0.46
43:BI:101:LEU:HD12	43:BI:101:LEU:HA	1.74	0.46
43:BI:143:SER:OG	43:BI:144:VAL:HG23	2.16	0.46
46:BN:10:GLU:HG2	46:BN:11:PRO:HD3	1.98	0.46
50:BR:29:LEU:HB2	50:BR:31:HIS:CE1	2.51	0.46
51:BS:83:LYS:HB3	51:BS:83:LYS:HE2	1.55	0.46
54:BV:38:LEU:CD2	54:BV:60:GLU:OE2	2.63	0.46
58:BZ:24:LEU:HD23	58:BZ:44:PHE:CD1	2.50	0.46
58:BZ:53:ILE:HD13	58:BZ:71:VAL:CG2	2.45	0.46
1:CA:164:U:H2'	1:CA:165:C:C6	2.50	0.46
1:CA:257:G:H2'	1:CA:258:G:O4'	2.16	0.46
1:CA:1194:U:H3'	1:CA:1195:C:H6	1.79	0.46
1:CA:1274:G:N2	1:CA:1275:A:H62	2.13	0.46
2:CB:80:ILE:HD11	2:CB:208:ILE:HD13	1.98	0.46
5:CE:10:MET:SD	5:CE:10:MET:N	2.80	0.46
9:CI:126:SER:O	9:CI:127:LYS:HG3	2.15	0.46
16:CP:43:LYS:HG2	16:CP:48:TRP:CZ2	2.51	0.46
21:CU:6:ARG:HG2	21:CU:15:ARG:NE	2.29	0.46
25:D0:39:ARG:NH2	35:DA:2363:C:O2	2.39	0.46
26:D1:18:ILE:HG21	26:D1:41:ARG:HD2	1.97	0.46
27:D2:59:ARG:NE	27:D2:59:ARG:CA	2.78	0.46
33:D8:36:LYS:C	33:D8:37:SER:HG	2.16	0.46
34:D9:1:MET:O	34:D9:3:VAL:N	2.37	0.46
34:D9:2:LYS:O	34:D9:34:GLN:HA	2.16	0.46
35:DA:64:A:H8	35:DA:64:A:O5'	1.99	0.46
35:DA:125:G:H4'	35:DA:126:A:OP2	2.16	0.46
35:DA:197:A:H5'	35:DA:197:A:C8	2.46	0.46
35:DA:587:C:C4'	35:DA:588:U:OP2	2.64	0.46
35:DA:773:U:O2'	38:DD:48:ARG:HG3	2.14	0.46
35:DA:814:C:H41	48:DP:27:HIS:HD2	1.63	0.46
35:DA:1496:A:H8	35:DA:1577:C:HO2'	1.61	0.46
35:DA:1549:C:O2'	35:DA:1742:G:N2	2.48	0.46
35:DA:1621:U:H5"	35:DA:1622:G:OP1	2.16	0.46
35:DA:1704:G:C2'	35:DA:1705:G:H5'	2.45	0.46
35:DA:2099:U:O2	35:DA:2190:G:N2	2.46	0.46
36:DB:9:G:H5"	36:DB:9:G:H8	1.80	0.46
38:DD:85:ASP:OD1	38:DD:87:ASN:N	2.47	0.46
40:DF:18:ARG:HG2	40:DF:19:GLU:HG2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:87:LEU:O	46:DN:91:LEU:HD12	2.15	0.46
46:DN:90:MET:O	46:DN:93:THR:O	2.34	0.46
49:DQ:10:ARG:NH1	49:DQ:11:LYS:N	2.63	0.46
49:DQ:127:ILE:HD13	49:DQ:127:ILE:HA	1.73	0.46
51:DS:42:ASP:C	51:DS:44:LYS:N	2.73	0.46
54:DV:35:LEU:HA	54:DV:60:GLU:O	2.15	0.46
54:DV:75:PHE:HD2	54:DV:76:LYS:H	1.63	0.46
55:DW:14:PRO:O	55:DW:15:ARG:C	2.58	0.46
58:DZ:9:TYR:CE1	58:DZ:61:LEU:HD13	2.51	0.46
1:AA:192:U:H4'	20:AT:103:GLY:CA	2.38	0.46
1:AA:533:A:H8	1:AA:533:A:OP2	1.99	0.46
1:AA:670:G:C6	1:AA:671:G:C5	3.04	0.46
1:AA:707:C:H4'	11:AK:20:TYR:CD2	2.50	0.46
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.98	0.46
2:AB:218:ALA:C	2:AB:220:ASP:H	2.24	0.46
8:AH:48:TYR:O	8:AH:49:GLU:HB3	2.15	0.46
9:AI:15:ALA:HA	9:AI:65:VAL:HA	1.97	0.46
22:AV:16:C:O2'	22:AV:61:U:O3'	2.33	0.46
26:B1:86:SER:OG	26:B1:87:PRO:N	2.49	0.46
27:B2:51:ARG:HD3	27:B2:55:ARG:HB3	1.97	0.46
31:B6:48:VAL:O	31:B6:49:HIS:ND1	2.49	0.46
35:BA:32:C:O2'	35:BA:33:U:H5'	2.15	0.46
35:BA:222:A:N6	35:BA:224:G:C2	2.84	0.46
35:BA:259:G:N2	35:BA:621:A:H8	2.03	0.46
35:BA:932:G:H4'	35:BA:933:A:O5'	2.16	0.46
35:BA:1213:A:H2'	35:BA:1214:A:H8	1.81	0.46
35:BA:1316:U:H2'	35:BA:1317:A:C8	2.50	0.46
35:BA:1441:G:H2'	35:BA:1442:G:H8	1.80	0.46
35:BA:1509(A):A:H2'	35:BA:1509(B):A:H8	1.80	0.46
35:BA:1518:U:H2'	35:BA:1519:G:O4'	2.15	0.46
35:BA:1754:C:H5'	52:BT:101:PHE:CE1	2.51	0.46
35:BA:2005:A:H5"	35:BA:2006:C:OP2	2.16	0.46
35:BA:2291:U:OP1	35:BA:2381:C:H5'	2.16	0.46
35:BA:2542:A:HO2'	35:BA:2543:G:P	2.35	0.46
35:BA:2702:U:H5	35:BA:2704:C:H41	1.64	0.46
35:BA:2722:G:O2'	50:BR:5:LYS:HB2	2.14	0.46
38:BD:260:ARG:HH12	38:BD:264:LYS:HB3	1.81	0.46
39:BE:34:VAL:HG23	39:BE:78:LEU:HD12	1.96	0.46
42:BH:125:VAL:HB	42:BH:131:VAL:HG22	1.98	0.46
43:BI:38:LEU:H	43:BI:38:LEU:CD1	2.22	0.46
43:BI:99:GLU:HB3	43:BI:103:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:139:LYS:C	48:BP:141:ALA:H	2.24	0.46
56:BX:26:TYR:HB3	56:BX:28:PHE:CE2	2.50	0.46
56:BX:62:LYS:HB2	56:BX:69:TYR:HA	1.97	0.46
1:CA:250:A:H8	1:CA:250:A:O5'	1.99	0.46
1:CA:724:G:O2'	1:CA:725:G:H5'	2.15	0.46
1:CA:986:A:H2'	1:CA:987:G:C8	2.51	0.46
1:CA:1075:C:O3'	2:CB:175:ARG:NH2	2.41	0.46
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.51	0.46
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.51	0.46
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.15	0.46
1:CA:1517:G:H1'	35:DA:1919:A:O3'	2.15	0.46
3:CC:113:ALA:HB3	3:CC:183:ASP:OD1	2.15	0.46
13:CM:29:ARG:HD3	13:CM:64:TRP:CZ2	2.50	0.46
16:CP:34:GLU:OE1	16:CP:55:ARG:NH1	2.48	0.46
16:CP:42:ARG:O	16:CP:44:THR:HG23	2.16	0.46
17:CQ:88:TYR:CD2	17:CQ:89:LEU:N	2.84	0.46
18:CR:72:ARG:O	18:CR:76:LEU:HD23	2.16	0.46
25:D0:20:ARG:NH1	35:DA:2357:U:OP1	2.46	0.46
30:D5:20:ARG:HG2	30:D5:23:HIS:ND1	2.29	0.46
33:D8:52:LYS:HD3	33:D8:55:ALA:HB3	1.97	0.46
35:DA:267:C:O2'	35:DA:268:C:H5'	2.15	0.46
35:DA:271(Q):G:C2	35:DA:271(R):G:C5	3.04	0.46
35:DA:597:U:H2'	35:DA:598:G:C8	2.51	0.46
35:DA:607:U:N3	35:DA:621:A:C2	2.81	0.46
35:DA:719:C:H2'	35:DA:720:C:C6	2.51	0.46
35:DA:1025:G:O2'	35:DA:1026:U:OP1	2.31	0.46
35:DA:1649:G:O2'	50:DR:107:ASP:OD2	2.28	0.46
35:DA:1658:C:O5'	35:DA:1658:C:H6	1.99	0.46
35:DA:1811:G:H2'	35:DA:1812:A:O4'	2.16	0.46
39:DE:11:MET:HB3	39:DE:24:THR:HA	1.97	0.46
39:DE:98:PRO:HG3	39:DE:175:VAL:HG12	1.97	0.46
43:DI:124:GLY:H	43:DI:142:VAL:CG2	2.24	0.46
46:DN:28:THR:HG23	46:DN:29:LYS:N	2.31	0.46
49:DQ:71:ASP:OD1	49:DQ:71:ASP:N	2.49	0.46
51:DS:34:HIS:NE2	51:DS:54:LEU:HB2	2.31	0.46
52:DT:53:ARG:O	52:DT:59:THR:HA	2.16	0.46
1:AA:273:A:H2'	1:AA:274:A:H5'	1.97	0.46
1:AA:301:G:H2'	1:AA:302:G:C8	2.48	0.46
1:AA:328:C:H4'	1:AA:329:A:H5"	1.98	0.46
1:AA:438:G:H4'	4:AD:123:HIS:HD1	1.81	0.46
1:AA:1010:G:N2	1:AA:1011:G:O4'	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1293:G:H2'	1:AA:1293:G:OP2	2.16	0.46
6:AF:24:GLU:OE2	6:AF:28:ARG:HG3	2.15	0.46
8:AH:41:ARG:HH22	8:AH:123:GLU:CD	2.23	0.46
20:AT:54:LYS:HG2	20:AT:57:ARG:HH22	1.80	0.46
20:AT:87:LYS:HA	20:AT:87:LYS:HD2	1.42	0.46
22:AV:73:A:C6	22:AV:74:A:C5	3.04	0.46
26:B1:87:PRO:O	26:B1:90:ILE:HG22	2.16	0.46
33:B8:50:LEU:C	33:B8:53:PRO:HD2	2.40	0.46
33:B8:64:TYR:HE2	35:BA:594:U:OP1	1.99	0.46
35:BA:49:A:C3'	35:BA:50:U:H5'	2.45	0.46
35:BA:174:C:H5'	35:BA:175:G:OP2	2.16	0.46
35:BA:990:A:H8	35:BA:990:A:H5'	1.80	0.46
35:BA:1158:C:HO2'	35:BA:1159:U:P	2.37	0.46
35:BA:1257:C:H4'	40:BF:82:ILE:HG13	1.96	0.46
35:BA:1551:C:H2'	35:BA:1552:G:O4'	2.16	0.46
35:BA:1669:A:H5"	35:BA:1670:C:OP2	2.16	0.46
35:BA:1896:G:H5"	35:BA:1896:G:C8	2.49	0.46
35:BA:2556:C:H2'	35:BA:2557:G:O4'	2.15	0.46
35:BA:2646:C:H6	35:BA:2646:C:O5'	1.97	0.46
36:BB:44:G:HO2'	36:BB:47:C:N4	2.11	0.46
38:BD:69:ARG:NH2	38:BD:128:GLY:O	2.48	0.46
38:BD:143:HIS:CD2	38:BD:144:ALA:HB2	2.51	0.46
38:BD:268:ARG:HB3	38:BD:268:ARG:HH21	1.80	0.46
40:BF:53:THR:HG22	40:BF:56:GLU:H	1.80	0.46
41:BG:135:LEU:HB2	41:BG:155:MET:HE3	1.97	0.46
42:BH:74:ASN:HB3	42:BH:138:LYS:HD2	1.97	0.46
43:BI:37:VAL:HG12	43:BI:38:LEU:H	1.80	0.46
46:BN:4:TYR:HD2	53:BU:64:ARG:HH11	1.64	0.46
47:BO:12:ASP:CG	47:BO:14:THR:HG23	2.41	0.46
49:BQ:22:LYS:HG3	49:BQ:24:GLY:N	2.27	0.46
49:BQ:119:ARG:C	49:BQ:121:ALA:N	2.74	0.46
50:BR:24:GLN:HE22	50:BR:36:THR:HG21	1.80	0.46
51:BS:61:ASN:HB2	51:BS:64:GLU:OE2	2.16	0.46
51:BS:66:ALA:O	51:BS:68:GLN:N	2.49	0.46
55:BW:59:VAL:HG22	55:BW:64:MET:O	2.16	0.46
1:CA:323:U:H5'	20:CT:23:ARG:HB2	1.98	0.46
1:CA:410:G:H3'	1:CA:410:G:C8	2.51	0.46
1:CA:565:U:OP2	1:CA:566:G:O2'	2.32	0.46
1:CA:631:G:H8	1:CA:631:G:O5'	1.98	0.46
1:CA:1010:G:H2'	1:CA:1011:G:C8	2.50	0.46
1:CA:1326:C:H2'	1:CA:1327:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:69:HIS:HA	3:CC:104:GLN:O	2.15	0.46
4:CD:173:TRP:CE3	4:CD:189:PRO:HB3	2.50	0.46
7:CG:146:GLU:C	7:CG:148:ASN:N	2.73	0.46
13:CM:16:ASP:HA	13:CM:30:ALA:HB1	1.97	0.46
13:CM:37:THR:O	13:CM:39:ILE:N	2.40	0.46
16:CP:27:LYS:O	16:CP:30:GLY:N	2.47	0.46
27:D2:37:PHE:HD2	27:D2:39:ALA:H	1.64	0.46
30:D5:3:LYS:HD3	35:DA:2015:A:H1'	1.97	0.46
35:DA:78:A:H2'	35:DA:79:G:H8	1.79	0.46
35:DA:176:G:O2'	35:DA:177:G:H5'	2.15	0.46
35:DA:198:C:H5'	35:DA:2244:U:OP1	2.15	0.46
35:DA:475:U:C4	35:DA:481:G:O6	2.69	0.46
35:DA:1175:U:OP2	35:DA:1176:G:H5'	2.15	0.46
35:DA:1465:G:H21	35:DA:1545:A:H2	1.63	0.46
35:DA:1491:G:N2	35:DA:1500:G:H1'	2.31	0.46
35:DA:1498:C:O4'	35:DA:1577:C:H4'	2.15	0.46
35:DA:1812:A:O2'	38:DD:45:ASN:HB2	2.16	0.46
35:DA:1877:A:C5	35:DA:1878:G:H1'	2.51	0.46
35:DA:2065:C:H2'	35:DA:2066:C:C6	2.51	0.46
35:DA:2661:G:N7	35:DA:2662:A:N1	2.63	0.46
39:DE:3:GLY:HA2	39:DE:199:ARG:HA	1.97	0.46
39:DE:9:VAL:HB	52:DT:8:LYS:CE	2.46	0.46
39:DE:25:VAL:C	39:DE:26:ILE:HD13	2.40	0.46
40:DF:8:GLN:O	40:DF:10:PRO:HD3	2.15	0.46
42:DH:89:ILE:HD12	42:DH:89:ILE:O	2.16	0.46
46:DN:35:ARG:HB2	46:DN:42:TRP:CZ3	2.50	0.46
48:DP:136:GLU:C	48:DP:138:LEU:H	2.23	0.46
51:DS:93:LYS:O	51:DS:94:TYR:O	2.33	0.46
52:DT:25:GLY:HA2	52:DT:91:ARG:CB	2.46	0.46
1:AA:55:A:H2'	1:AA:56:U:O4'	2.16	0.46
1:AA:280:C:C5	17:AQ:39:SER:N	2.83	0.46
1:AA:441:A:H8	1:AA:441:A:OP2	1.98	0.46
1:AA:532:A:H2	1:AA:1207:G:O4'	1.99	0.46
1:AA:561:U:H5'	1:AA:561:U:H6	1.81	0.46
1:AA:1349:A:C2	1:AA:1350:A:H1'	2.51	0.46
2:AB:9:GLU:HG3	2:AB:10:LEU:H	1.79	0.46
4:AD:205:GLU:C	4:AD:207:TYR:N	2.73	0.46
6:AF:42:GLU:C	6:AF:44:GLY:H	2.23	0.46
13:AM:84:ILE:HD11	19:AS:66:MET:SD	2.55	0.46
20:AT:46:GLU:O	20:AT:48:LYS:N	2.49	0.46
33:B8:13:ARG:HH21	48:BP:61:ARG:C	2.18	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:83:G:H22	35:BA:103:A:P	2.39	0.46
35:BA:105:C:H6	35:BA:105:C:H2'	1.25	0.46
35:BA:684:G:H5"	35:BA:684:G:H8	1.80	0.46
35:BA:729:G:C8	38:BD:208:LYS:HD3	2.51	0.46
35:BA:1614:A:H62	55:BW:93:ALA:HB2	1.80	0.46
35:BA:1645:G:H5"	35:BA:1646:C:H5'	1.97	0.46
35:BA:2068:U:N3	35:BA:2430:A:C2	2.78	0.46
38:BD:69:ARG:HE	38:BD:105:ILE:HD13	1.80	0.46
40:BF:22:ALA:HA	40:BF:26:ALA:CB	2.41	0.46
40:BF:112:MET:O	40:BF:115:ALA:HB3	2.15	0.46
43:BI:77:LEU:HB2	43:BI:140:LEU:HA	1.98	0.46
49:BQ:57:HIS:O	49:BQ:57:HIS:CG	2.68	0.46
50:BR:20:LEU:HA	50:BR:23:ASN:CB	2.42	0.46
52:BT:22:PHE:N	52:BT:22:PHE:CD1	2.83	0.46
53:BU:96:ALA:HA	53:BU:98:LEU:HB3	1.97	0.46
58:BZ:60:GLU:OE2	58:BZ:64:GLY:HA2	2.16	0.46
58:BZ:96:VAL:HG22	58:BZ:97:GLU:H	1.80	0.46
1:CA:9:G:H2'	1:CA:10:A:H8	1.81	0.46
1:CA:263:A:OP1	20:CT:75:ASN:HB3	2.16	0.46
1:CA:414:A:H2'	1:CA:415:A:C8	2.51	0.46
1:CA:520:A:C2	1:CA:536:C:H1'	2.50	0.46
1:CA:626:U:H5"	16:CP:38:TYR:CD2	2.51	0.46
1:CA:755:G:H21	8:CH:1:MET:HB3	1.79	0.46
1:CA:1030:C:H42	1:CA:1031:G:H1	1.64	0.46
1:CA:1424:C:H2'	1:CA:1425:U:O4'	2.16	0.46
3:CC:84:ILE:HG13	3:CC:101:LEU:HD13	1.98	0.46
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.16	0.46
8:CH:83:ILE:HA	8:CH:136:GLU:O	2.16	0.46
12:CL:110:VAL:HG23	12:CL:120:TYR:HB3	1.96	0.46
13:CM:23:TYR:OH	13:CM:71:ARG:HG3	2.15	0.46
17:CQ:46:ASP:OD1	17:CQ:50:LYS:HE2	2.16	0.46
26:D1:26:ARG:HB2	26:D1:34:THR:HB	1.96	0.46
26:D1:57:GLU:H	26:D1:58:ILE:HD12	1.80	0.46
27:D2:21:LEU:HD21	27:D2:51:ARG:NH1	2.31	0.46
33:D8:40:GLU:O	33:D8:41:ILE:C	2.57	0.46
35:DA:423:A:H5"	35:DA:424:G:O5'	2.15	0.46
35:DA:589:C:H2'	35:DA:590:A:C8	2.51	0.46
35:DA:1322:A:C5	35:DA:1323:U:C5	3.03	0.46
35:DA:1671:U:H2'	35:DA:1673:U:OP2	2.15	0.46
35:DA:1771:C:H1'	35:DA:1786:A:C8	2.50	0.46
35:DA:2011:U:OP1	55:DW:42:ARG:NH1	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DB:15:A:H1'	36:DB:110:G:N7	2.31	0.46
44:DJ:23:UNK:HA	44:DJ:118:UNK:HA	1.98	0.46
46:DN:56:ASN:CG	46:DN:126:PRO:HG3	2.40	0.46
46:DN:71:ILE:HG21	46:DN:84:LYS:HE3	1.97	0.46
48:DP:51:PHE:HE1	48:DP:61:ARG:NH2	2.13	0.46
52:DT:44:ASP:C	52:DT:45:PHE:CD1	2.94	0.46
53:DU:61:TRP:CE2	53:DU:94:ASN:HB3	2.51	0.46
58:DZ:10:ARG:HH21	58:DZ:26:GLY:N	2.08	0.46
1:AA:586:C:HO2'	1:AA:878:G:H4'	1.81	0.46
1:AA:590:C:H2'	1:AA:591:U:H6	1.81	0.46
1:AA:814:A:C8	1:AA:816:A:C8	3.04	0.46
1:AA:1259:C:O2'	1:AA:1284:C:O4'	2.32	0.46
1:AA:1363(A):A:C8	1:AA:1365:G:C4	3.04	0.46
1:AA:1397:C:H6	1:AA:1397:C:H3'	1.79	0.46
3:AC:82:GLU:HA	3:AC:85:ARG:HB2	1.98	0.46
5:AE:92:LYS:N	5:AE:119:LEU:O	2.48	0.46
10:AJ:56:HIS:O	10:AJ:57:LYS:HB2	2.16	0.46
13:AM:94:ARG:O	13:AM:96:LEU:HG	2.16	0.46
15:AO:75:PRO:O	15:AO:79:ARG:HG3	2.16	0.46
17:AQ:29:HIS:ND1	17:AQ:32:TYR:HB2	2.30	0.46
35:BA:39:C:H2'	35:BA:40:C:C6	2.50	0.46
35:BA:71:A:H4'	35:BA:72:U:H5'	1.98	0.46
35:BA:949:C:H2'	35:BA:950:G:C8	2.51	0.46
35:BA:1039:G:C2	35:BA:1117:G:N2	2.84	0.46
35:BA:1368:G:O2'	35:BA:1369:G:H5'	2.15	0.46
35:BA:1435:G:H5"	35:BA:1436:G:OP2	2.16	0.46
35:BA:1577:C:C4	35:BA:1578:U:C4	3.04	0.46
35:BA:1602:U:H3'	35:BA:1603:A:H5'	1.98	0.46
35:BA:1768:U:H5"	35:BA:1768:U:H6	1.80	0.46
35:BA:2758:A:H2'	35:BA:2759:G:O4'	2.16	0.46
37:BC:51:PRO:CB	37:BC:204:ALA:H	2.29	0.46
38:BD:108:PRO:HD2	38:BD:111:LEU:HG	1.98	0.46
40:BF:62:ARG:NH2	40:BF:64:ILE:HA	2.31	0.46
42:BH:27:LYS:O	42:BH:79:VAL:HG21	2.16	0.46
46:BN:128:HIS:O	46:BN:128:HIS:CG	2.69	0.46
48:BP:105:LEU:O	48:BP:107:LYS:N	2.48	0.46
50:BR:85:PRO:C	50:BR:87:TYR:N	2.72	0.46
51:BS:97:ARG:HG2	51:BS:99:LYS:H	1.80	0.46
55:BW:70:TYR:O	55:BW:107:LEU:HG	2.16	0.46
56:BX:62:LYS:HZ3	56:BX:63:LYS:N	2.13	0.46
58:BZ:115:GLY:N	58:BZ:175:VAL:O	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:429:U:OP2	4:CD:36:ARG:NH1	2.49	0.46
1:CA:447:G:O6	1:CA:485:G:O2'	2.23	0.46
1:CA:448:A:P	1:CA:485:G:H22	2.39	0.46
1:CA:991:U:O2	1:CA:991:U:H2'	2.14	0.46
1:CA:1014:A:OP1	1:CA:1014:A:H8	1.98	0.46
1:CA:1058:G:C5	1:CA:1059:C:C4	3.04	0.46
2:CB:189:ASP:OD2	2:CB:205:ASP:HB3	2.15	0.46
3:CC:120:VAL:HG23	3:CC:121:ALA:H	1.81	0.46
4:CD:105:VAL:HG21	4:CD:126:ILE:HG13	1.96	0.46
5:CE:76:ILE:HG22	5:CE:93:PRO:CB	2.38	0.46
6:CF:97:PHE:HB3	18:CR:32:ARG:HE	1.80	0.46
7:CG:8:GLU:HG2	7:CG:8:GLU:O	2.15	0.46
9:CI:117:HIS:HB2	9:CI:121:ARG:O	2.15	0.46
12:CL:38:THR:HG23	12:CL:57:LYS:HB3	1.98	0.46
19:CS:11:VAL:HG11	19:CS:39:THR:HB	1.97	0.46
28:D3:55:ARG:HE	28:D3:55:ARG:HA	1.80	0.46
35:DA:384:U:H2'	35:DA:385:C:H6	1.81	0.46
35:DA:394:A:O2'	35:DA:395:U:H5'	2.16	0.46
35:DA:779:U:OP1	38:DD:49:ILE:HG23	2.16	0.46
35:DA:1048:A:OP1	35:DA:1110:G:N2	2.38	0.46
38:DD:28:GLU:N	38:DD:28:GLU:CD	2.72	0.46
38:DD:130:ALA:O	38:DD:131:LEU:HD12	2.16	0.46
39:DE:172:VAL:HG12	39:DE:173:VAL:O	2.16	0.46
41:DG:44:GLY:O	41:DG:47:LYS:HG3	2.16	0.46
42:DH:44:VAL:HG12	42:DH:45:VAL:H	1.81	0.46
44:DJ:116:UNK:O	44:DJ:123:UNK:N	2.49	0.46
45:DK:55:UNK:C	45:DK:67:UNK:HA	2.46	0.46
50:DR:26:LYS:O	50:DR:30:THR:OG1	2.23	0.46
51:DS:30:ARG:NH1	51:DS:92:TYR:CD1	2.84	0.46
54:DV:80:GLN:NE2	54:DV:81:TYR:CE1	2.84	0.46
58:DZ:30:ASN:C	58:DZ:32:HIS:H	2.21	0.46
1:AA:247:G:OP2	17:AQ:100:LYS:N	2.49	0.46
1:AA:398:C:H2'	1:AA:399:G:C8	2.51	0.46
1:AA:521:G:H5'	12:AL:72:GLY:O	2.16	0.46
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.51	0.46
1:AA:1129:C:H41	1:AA:1143:G:H22	1.63	0.46
1:AA:1432:G:H8	1:AA:1432:G:O5'	1.99	0.46
5:AE:54:ALA:HA	5:AE:57:LYS:HB2	1.98	0.46
6:AF:95:GLU:HA	6:AF:96:PRO:HD3	1.84	0.46
7:AG:18:TYR:N	7:AG:18:TYR:CD1	2.84	0.46
19:AS:22:LEU:O	19:AS:27:GLU:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:16:U:N3	23:AW:20:U:C4	2.84	0.46
28:B3:8:LEU:HD21	28:B3:23:LEU:HD21	1.98	0.46
33:B8:41:ILE:HG21	33:B8:41:ILE:HD13	1.71	0.46
35:BA:24:G:O2'	55:BW:78:GLU:O	2.25	0.46
35:BA:275:G:O4'	35:BA:275:G:N3	2.48	0.46
35:BA:649:G:H2'	35:BA:650:C:C6	2.51	0.46
35:BA:864:G:OP2	49:BQ:22:LYS:NZ	2.49	0.46
35:BA:1002:G:H2'	35:BA:1003:G:O4'	2.16	0.46
35:BA:1423:G:C4	35:BA:1424:G:C8	3.04	0.46
35:BA:1494:A:O2'	35:BA:1495:A:O5'	2.29	0.46
35:BA:1547:C:O2	35:BA:1547:C:H5"	2.16	0.46
35:BA:2334:G:H5'	51:BS:13:ARG:HG3	1.98	0.46
36:BB:102:A:H8	36:BB:102:A:OP2	1.98	0.46
38:BD:15:PHE:O	38:BD:16:MET:HB2	2.16	0.46
38:BD:28:GLU:OE2	38:BD:28:GLU:N	2.48	0.46
38:BD:28:GLU:N	38:BD:28:GLU:CD	2.73	0.46
38:BD:116:GLN:H	38:BD:116:GLN:HG2	1.56	0.46
39:BE:111:ARG:HD2	39:BE:160:TYR:CD2	2.51	0.46
41:BG:67:LYS:CD	41:BG:67:LYS:H	2.29	0.46
43:BI:132:PRO:O	43:BI:133:HIS:HB3	2.16	0.46
48:BP:36:LYS:HG2	48:BP:37:GLY:H	1.81	0.46
48:BP:37:GLY:O	48:BP:39:LYS:N	2.45	0.46
48:BP:109:GLY:O	48:BP:111:ARG:N	2.49	0.46
48:BP:121:LYS:HG2	48:BP:122:PRO:CD	2.46	0.46
49:BQ:5:ARG:HH11	49:BQ:5:ARG:HA	1.80	0.46
56:BX:51:VAL:HA	56:BX:81:VAL:HG13	1.97	0.46
56:BX:66:LEU:HA	56:BX:66:LEU:HD23	1.34	0.46
56:BX:67:GLY:O	56:BX:68:ARG:NH1	2.49	0.46
57:BY:90:LEU:HB2	57:BY:91:GLU:OE2	2.15	0.46
1:CA:110:C:H2'	1:CA:111:G:O4'	2.16	0.46
1:CA:224:C:H2'	1:CA:225:C:C6	2.51	0.46
1:CA:246:A:N3	1:CA:247:G:H1'	2.31	0.46
1:CA:470:C:O2'	1:CA:471:G:O5'	2.32	0.46
1:CA:622:A:H2'	1:CA:623:C:O4'	2.16	0.46
1:CA:749:C:O2'	1:CA:750:G:H5'	2.16	0.46
2:CB:99:GLY:C	2:CB:101:MET:H	2.23	0.46
3:CC:40:ARG:O	3:CC:44:GLU:HG3	2.16	0.46
3:CC:50:ALA:HB2	3:CC:75:VAL:HB	1.97	0.46
5:CE:101:ILE:O	5:CE:101:ILE:HG13	2.16	0.46
16:CP:8:ARG:C	16:CP:9:PHE:CD1	2.94	0.46
22:CV:37:A:C2	24:CX:16:A:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:67:C:C2'	23:CW:68:C:H5"	2.46	0.46
27:D2:25:VAL:HG13	27:D2:26:ARG:HD2	1.97	0.46
33:D8:46:ARG:HH22	48:DP:65:ARG:NH2	2.14	0.46
34:D9:24:TYR:CE1	34:D9:35:ARG:HG3	2.51	0.46
35:DA:132:G:H1	35:DA:147:U:H3	1.63	0.46
35:DA:825:C:N4	35:DA:826:U:C4	2.84	0.46
35:DA:1155:A:O2'	35:DA:1156:A:H2'	2.16	0.46
35:DA:1528:A:O2'	35:DA:1528(A):A:C8	2.57	0.46
36:DB:13:A:N6	36:DB:70:C:H5'	2.30	0.46
41:DG:11:TYR:O	41:DG:16:ARG:N	2.39	0.46
41:DG:145:THR:CG2	41:DG:147:ASP:OD1	2.64	0.46
48:DP:98:GLU:C	48:DP:100:LEU:N	2.72	0.46
50:DR:100:LEU:HD22	50:DR:112:ALA:HA	1.97	0.46
51:DS:19:LYS:O	51:DS:20:ARG:NH1	2.49	0.46
53:DU:47:TYR:HA	53:DU:50:ARG:NH2	2.32	0.46
57:DY:2:ARG:NH1	57:DY:3:VAL:HB	2.29	0.46
1:AA:90:U:H5'	1:AA:90:U:H6	1.80	0.45
1:AA:429:U:H4'	1:AA:430:A:OP1	2.16	0.45
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.17	0.45
1:AA:1261:A:C6	1:AA:1275:A:H1'	2.51	0.45
1:AA:1359:C:H6	14:AN:35:ARG:HH12	1.64	0.45
1:AA:1368:G:OP1	10:AJ:62:HIS:CE1	2.69	0.45
4:AD:86:LYS:H	4:AD:86:LYS:HG2	1.48	0.45
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	2.16	0.45
4:AD:173:TRP:CE2	4:AD:189:PRO:HB3	2.51	0.45
4:AD:189:PRO:O	4:AD:190:ASP:C	2.59	0.45
5:AE:84:PHE:N	5:AE:87:SER:O	2.44	0.45
11:AK:63:LEU:HD23	11:AK:63:LEU:HA	1.75	0.45
11:AK:82:VAL:HB	11:AK:108:ILE:HG12	1.98	0.45
12:AL:69:TYR:HB2	12:AL:90:VAL:HG21	1.96	0.45
13:AM:37:THR:HG22	13:AM:59:TYR:CD1	2.51	0.45
13:AM:91:ARG:HB2	13:AM:98:VAL:HG12	1.98	0.45
20:AT:56:MET:HB3	20:AT:56:MET:HE2	1.80	0.45
21:AU:13:ILE:HG12	21:AU:22:ARG:NH1	2.31	0.45
26:B1:19:GLN:OE1	26:B1:44:PRO:HA	2.16	0.45
32:B7:9:ARG:NH2	35:BA:1309:G:H3'	2.31	0.45
35:BA:84:A:O4'	35:BA:103:A:C6	2.69	0.45
35:BA:118:A:OP2	35:BA:119:A:H2'	2.15	0.45
35:BA:182:A:H61	35:BA:215:G:H1	1.64	0.45
35:BA:306:U:H2'	35:BA:307:G:O4'	2.16	0.45
35:BA:533:G:H2'	35:BA:534:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:583:G:C5	35:BA:584:C:C5	3.04	0.45
35:BA:999:U:O2'	35:BA:1000:A:H5'	2.16	0.45
35:BA:1103:A:H4'	35:BA:1104:C:OP2	2.15	0.45
35:BA:1224:C:O2'	54:BV:87:HIS:O	2.25	0.45
35:BA:1324:G:H1	35:BA:1330:C:H42	1.63	0.45
35:BA:1479:G:H5'	35:BA:1558:A:C2	2.51	0.45
35:BA:1665:A:O2'	35:BA:1666:G:H5'	2.15	0.45
35:BA:1674:G:H1'	35:BA:1676:A:N6	2.31	0.45
35:BA:1833:U:O2	35:BA:1969:A:H2	1.99	0.45
35:BA:2422:A:H4'	35:BA:2423:U:OP1	2.15	0.45
40:BF:7:TYR:HE1	40:BF:10:PRO:HD3	1.81	0.45
40:BF:39:TRP:CH2	40:BF:106:ARG:HD3	2.51	0.45
47:BO:104:ARG:HA	47:BO:121:VAL:HG12	1.98	0.45
52:BT:57:PHE:C	52:BT:59:THR:N	2.73	0.45
58:BZ:70:LEU:HD23	58:BZ:70:LEU:HA	1.81	0.45
58:BZ:72:ARG:NH2	58:BZ:97:GLU:HG3	2.30	0.45
1:CA:818:G:O2'	1:CA:819:A:H5'	2.15	0.45
1:CA:834:C:C2	1:CA:853:G:C2	3.04	0.45
1:CA:953:G:C5'	1:CA:965:A:H61	2.28	0.45
1:CA:1118:C:OP1	9:CI:9:ARG:NH1	2.49	0.45
1:CA:1171:G:O2'	1:CA:1172:C:H5'	2.16	0.45
1:CA:1315:U:O2'	1:CA:1360:A:N3	2.48	0.45
3:CC:130:VAL:HG21	3:CC:157:ILE:HG23	1.97	0.45
3:CC:159:GLY:CA	3:CC:193:TYR:HE1	2.29	0.45
4:CD:73:ARG:O	4:CD:76:ARG:HG3	2.16	0.45
16:CP:40:ASP:OD1	16:CP:40:ASP:C	2.59	0.45
16:CP:45:THR:HG22	16:CP:47:ASP:N	2.26	0.45
17:CQ:88:TYR:O	17:CQ:91:ARG:HB3	2.16	0.45
22:CV:40:C:H2'	22:CV:41:C:H6	1.80	0.45
27:D2:55:ARG:HD2	27:D2:55:ARG:C	2.41	0.45
28:D3:5:LYS:HD2	28:D3:59:VAL:HG21	1.98	0.45
35:DA:212:G:H2'	35:DA:213:A:O4'	2.15	0.45
35:DA:528:A:C2	35:DA:2042:A:H2'	2.50	0.45
35:DA:676:A:H2	35:DA:802:A:H61	1.64	0.45
35:DA:753:C:H6	35:DA:753:C:O5'	1.98	0.45
35:DA:775:G:C4	35:DA:794:G:C8	3.04	0.45
35:DA:1001:A:H2'	35:DA:1002:G:O4'	2.16	0.45
35:DA:1057:A:H5"	35:DA:1059:G:OP2	2.16	0.45
35:DA:1652:A:H3'	35:DA:1653:G:C8	2.51	0.45
35:DA:2164:C:OP2	35:DA:2166:G:O6	2.34	0.45
35:DA:2249:U:H4'	35:DA:2250:G:OP2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2287:A:H2	35:DA:2346:A:C2	2.34	0.45
35:DA:2375:G:O2'	35:DA:2377:A:N7	2.43	0.45
35:DA:2863:C:H2'	35:DA:2864:G:H5"	1.98	0.45
41:DG:66:GLN:HG3	41:DG:98:ARG:HD3	1.98	0.45
45:DK:73:UNK:O	45:DK:75:UNK:N	2.49	0.45
46:DN:19:GLU:HG3	46:DN:20:GLY:H	1.81	0.45
53:DU:92:ARG:NH1	53:DU:95:LEU:HD22	2.31	0.45
57:DY:13:VAL:HB	57:DY:28:LYS:HE3	1.97	0.45
58:DZ:44:PHE:CZ	58:DZ:86:VAL:HG21	2.51	0.45
1:AA:485:G:H1'	1:AA:486:U:C5	2.51	0.45
1:AA:611:A:H5"	1:AA:612:C:OP2	2.16	0.45
1:AA:657:G:O4'	15:AO:28:GLN:NE2	2.50	0.45
1:AA:759:A:H3'	1:AA:760:G:H5"	1.98	0.45
1:AA:834:C:N4	1:AA:852:G:H1	2.13	0.45
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.52	0.45
1:AA:1360:A:H2'	1:AA:1361:G:C8	2.51	0.45
1:AA:1392:G:N2	1:AA:1502:A:H8	2.08	0.45
2:AB:155:LEU:HB3	2:AB:157:ARG:HG2	1.98	0.45
3:AC:138:VAL:HG23	3:AC:151:VAL:HG23	1.98	0.45
3:AC:156:ARG:HB2	3:AC:196:LEU:HD11	1.97	0.45
4:AD:114:ARG:HA	4:AD:117:ALA:HB3	1.98	0.45
9:AI:96:LEU:HB3	9:AI:102:LEU:CG	2.43	0.45
11:AK:89:ALA:C	11:AK:91:ARG:N	2.73	0.45
13:AM:81:LEU:HD23	13:AM:81:LEU:HA	1.64	0.45
20:AT:53:LEU:O	20:AT:56:MET:N	2.49	0.45
21:AU:12:LYS:O	21:AU:16:GLY:N	2.48	0.45
35:BA:526:A:N1	35:BA:2625:G:O2'	2.43	0.45
35:BA:797:C:H2'	35:BA:798:G:O4'	2.16	0.45
35:BA:997:G:O2'	35:BA:998:C:H5'	2.16	0.45
35:BA:1141:U:OP1	46:BN:25:ARG:NH1	2.48	0.45
35:BA:1287:A:C5	35:BA:1288:U:C4	3.04	0.45
35:BA:1292:U:H2'	35:BA:1293:C:C6	2.51	0.45
35:BA:1638:C:OP1	35:BA:2711:A:H5'	2.17	0.45
35:BA:2339:G:N2	35:BA:2340:G:C4	2.84	0.45
38:BD:49:ILE:HG21	38:BD:49:ILE:HD13	1.45	0.45
39:BE:87:GLU:O	39:BE:89:ASP:N	2.49	0.45
41:BG:52:ILE:O	41:BG:53:LEU:HD13	2.15	0.45
47:BO:53:LYS:HD2	47:BO:53:LYS:N	2.31	0.45
51:BS:67:ARG:HD2	51:BS:98:VAL:HG23	1.97	0.45
54:BV:45:THR:OG1	54:BV:46:VAL:N	2.49	0.45
54:BV:69:LYS:HZ1	54:BV:71:LEU:CD2	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:137:C:H6	1:CA:137:C:H5"	1.82	0.45
1:CA:146:G:C6	1:CA:147:G:C5	3.05	0.45
1:CA:295:C:H2'	1:CA:296:U:C6	2.51	0.45
1:CA:309:G:H2'	1:CA:310:G:H8	1.81	0.45
1:CA:353:A:H5'	1:CA:353:A:C8	2.50	0.45
1:CA:491:G:H2'	1:CA:492:G:H8	1.82	0.45
1:CA:974:A:OP1	1:CA:974:A:H8	1.99	0.45
1:CA:1202:G:H2'	1:CA:1203:C:H6	1.80	0.45
4:CD:159:ARG:HD2	4:CD:159:ARG:HA	1.83	0.45
6:CF:50:TYR:OH	18:CR:74:ARG:O	2.25	0.45
7:CG:76:ARG:O	7:CG:87:VAL:HG13	2.15	0.45
8:CH:94:TYR:HE1	8:CH:132:GLU:HB2	1.81	0.45
9:CI:69:GLY:O	9:CI:70:LYS:C	2.59	0.45
15:CO:25:THR:O	15:CO:29:VAL:N	2.41	0.45
15:CO:25:THR:O	15:CO:28:GLN:N	2.48	0.45
22:CV:49:G:N2	22:CV:66:C:C2	2.84	0.45
23:CW:65:G:N3	23:CW:66:U:H1'	2.30	0.45
25:D0:18:ALA:HB3	25:D0:20:ARG:NH2	2.29	0.45
33:D8:31:HIS:CB	35:DA:2420:C:H41	2.29	0.45
33:D8:33:ASN:O	35:DA:2420:C:OP2	2.33	0.45
35:DA:210:C:H2'	35:DA:211:A:H8	1.81	0.45
35:DA:492:A:H2'	35:DA:493:G:O4'	2.16	0.45
35:DA:1252:G:O4'	53:DU:33:ARG:HD2	2.15	0.45
35:DA:1865:G:C5'	35:DA:1865:G:H8	2.29	0.45
35:DA:1999:C:O2	35:DA:2687:U:O2'	2.30	0.45
35:DA:2468:G:OP1	49:DQ:119:ARG:NH1	2.42	0.45
36:DB:31:C:N4	51:DS:32:LEU:HD13	2.32	0.45
36:DB:66:A:O2'	36:DB:67:G:P	2.74	0.45
37:DC:64:LEU:HD13	37:DC:65:PRO:HD2	1.98	0.45
40:DF:53:THR:HG22	40:DF:56:GLU:OE2	2.17	0.45
42:DH:148:ILE:O	42:DH:149:ARG:C	2.59	0.45
48:DP:59:LEU:HA	48:DP:61:ARG:HE	1.81	0.45
48:DP:59:LEU:O	48:DP:60:MET:CB	2.64	0.45
51:DS:94:TYR:CZ	51:DS:98:VAL:HG13	2.51	0.45
52:DT:29:ARG:CZ	52:DT:31:SER:CB	2.93	0.45
52:DT:30:VAL:HB	52:DT:44:ASP:OD1	2.16	0.45
1:AA:67:C:H2'	1:AA:68:G:C8	2.51	0.45
1:AA:389:A:C6	1:AA:390:C:H1'	2.51	0.45
1:AA:560:U:H5"	1:AA:561:U:OP1	2.16	0.45
1:AA:1162:C:N4	1:AA:1174:G:C6	2.84	0.45
1:AA:1166:G:C4	1:AA:1169:A:OP2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1375:A:O2'	7:AG:29:LYS:NZ	2.49	0.45
1:AA:1381:U:H2'	1:AA:1382:C:H5"	1.98	0.45
2:AB:18:GLY:HA2	2:AB:42:ILE:N	2.31	0.45
2:AB:216:SER:O	2:AB:218:ALA:N	2.44	0.45
8:AH:95:VAL:HG22	8:AH:131:GLY:O	2.17	0.45
14:AN:59:ALA:HB1	14:AN:61:TRP:CZ3	2.52	0.45
16:AP:45:THR:C	16:AP:47:ASP:H	2.25	0.45
26:B1:10:LYS:O	26:B1:48:LYS:NZ	2.49	0.45
30:B5:19:ARG:NH1	35:BA:1265:A:H3'	2.31	0.45
32:B7:2:LYS:HB2	32:B7:2:LYS:HE3	1.75	0.45
33:B8:59:LYS:HA	33:B8:59:LYS:HD3	1.44	0.45
35:BA:35:G:H1'	35:BA:454:A:C4	2.51	0.45
35:BA:158:U:H1'	35:BA:171:G:N7	2.31	0.45
35:BA:946:G:H2'	35:BA:947:G:H8	1.81	0.45
35:BA:959:A:C6	35:BA:960:A:C6	3.05	0.45
35:BA:997:G:C2	35:BA:998:C:C6	3.04	0.45
35:BA:1142(A):A:H8	35:BA:1142(A):A:H5'	1.80	0.45
35:BA:1532:C:H2'	35:BA:1533:G:H21	1.81	0.45
35:BA:2193:G:H2'	35:BA:2194:G:H8	1.81	0.45
35:BA:2339:G:C2	35:BA:2340:G:C4	3.04	0.45
36:BB:116:G:OP2	36:BB:116:G:C8	2.64	0.45
40:BF:25:PRO:HG3	40:BF:119:ARG:HA	1.97	0.45
43:BI:77:LEU:CD1	43:BI:97:ILE:HG23	2.47	0.45
52:BT:3:ARG:HH11	52:BT:6:LEU:HD13	1.81	0.45
53:BU:91:ASP:OD2	53:BU:96:ALA:HB2	2.16	0.45
54:BV:76:LYS:NZ	54:BV:83:ARG:NE	2.65	0.45
58:BZ:4:ARG:HH22	58:BZ:60:GLU:HB2	1.81	0.45
58:BZ:8:TYR:HB2	58:BZ:38:TYR:CE1	2.51	0.45
58:BZ:24:LEU:O	58:BZ:25:PRO:C	2.59	0.45
1:CA:407:G:C2	1:CA:436:C:N3	2.85	0.45
1:CA:410:G:C2	1:CA:429:U:C2	3.04	0.45
1:CA:457:C:H2'	1:CA:458:C:O4'	2.17	0.45
1:CA:779:C:H2'	1:CA:780:A:O4'	2.16	0.45
1:CA:1379:G:O6	7:CG:2:ALA:HA	2.17	0.45
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.52	0.45
4:CD:78:LEU:HD23	4:CD:78:LEU:HA	1.68	0.45
10:CJ:4:ILE:HG23	10:CJ:99:LYS:O	2.17	0.45
17:CQ:66:SER:HB3	17:CQ:69:LYS:HZ1	1.79	0.45
19:CS:6:LYS:HD2	19:CS:6:LYS:N	2.31	0.45
20:CT:73:HIS:O	20:CT:75:ASN:N	2.41	0.45
23:CW:13:C:H2'	23:CW:13:C:O2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:70:G:H2'	23:CW:71:G:C8	2.51	0.45
27:D2:12:GLU:N	27:D2:14:ARG:CZ	2.80	0.45
29:D4:29:PRO:O	29:D4:31:ILE:N	2.45	0.45
33:D8:5:LYS:HE2	35:DA:254:G:N7	2.32	0.45
35:DA:154:G:C6	35:DA:154(A):C:N4	2.84	0.45
35:DA:300:A:H2'	35:DA:334:C:H1'	1.98	0.45
35:DA:494:G:H8	35:DA:494:G:H5"	1.81	0.45
35:DA:729:G:OP1	38:DD:10:THR:HG21	2.17	0.45
35:DA:1667:G:O2'	35:DA:1991:U:O4	2.29	0.45
35:DA:2411:A:H8	35:DA:2411:A:OP2	1.99	0.45
35:DA:2666:C:H42	42:DH:109:PHE:HA	1.81	0.45
36:DB:105:A:H2'	36:DB:106:G:O4'	2.16	0.45
38:DD:173:VAL:O	38:DD:184:LYS:HA	2.15	0.45
40:DF:137:LYS:HZ2	40:DF:141:ALA:H	1.65	0.45
42:DH:70:THR:HG22	42:DH:71:LEU:N	2.31	0.45
43:DI:86:THR:O	43:DI:87:LYS:HB2	2.16	0.45
1:AA:132:C:H4'	20:AT:74:LYS:HE2	1.98	0.45
1:AA:199:G:H2'	1:AA:200:G:O4'	2.16	0.45
1:AA:583:A:H2'	1:AA:584:G:O4'	2.16	0.45
1:AA:604:G:H2'	1:AA:605:U:O4'	2.17	0.45
1:AA:1055:A:N6	1:AA:1206:G:C5	2.85	0.45
4:AD:111:ALA:HA	4:AD:161:ASN:HD22	1.82	0.45
5:AE:69:VAL:O	5:AE:71:LEU:CD1	2.38	0.45
13:AM:18:ALA:CB	13:AM:45:VAL:HG21	2.47	0.45
13:AM:84:ILE:HD13	19:AS:74:PHE:CG	2.52	0.45
25:B0:56:ASP:OD1	25:B0:58:THR:N	2.49	0.45
33:B8:23:VAL:HG22	33:B8:48:PHE:CE1	2.51	0.45
35:BA:574:C:H1'	35:BA:2055:C:C6	2.52	0.45
35:BA:818:G:C2	35:BA:1190:G:C6	3.04	0.45
35:BA:1341:U:P	35:BA:1397:U:H3	2.39	0.45
35:BA:1529:G:H1	35:BA:1533:G:P	2.39	0.45
35:BA:1606:G:H8	35:BA:1606:G:O5'	2.00	0.45
35:BA:1904:G:H2'	35:BA:1905:C:O4'	2.17	0.45
35:BA:2271:G:C5	35:BA:2272:U:C4	3.04	0.45
35:BA:2330:G:H2'	35:BA:2331:G:O4'	2.16	0.45
36:BB:28:C:H2'	36:BB:29:A:C8	2.51	0.45
38:BD:10:THR:O	38:BD:12:SER:N	2.41	0.45
38:BD:59:LYS:C	38:BD:60:ARG:HG3	2.42	0.45
40:BF:110:LEU:HD23	40:BF:110:LEU:HA	1.66	0.45
42:BH:85:LYS:NZ	42:BH:144:VAL:HB	2.32	0.45
42:BH:89:ILE:HG12	42:BH:129:THR:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BO:98:VAL:HG22	47:BO:118:ALA:HA	1.98	0.45
49:BQ:22:LYS:CG	49:BQ:24:GLY:H	2.26	0.45
53:BU:106:PHE:HA	53:BU:109:LEU:HB2	1.99	0.45
58:BZ:24:LEU:O	58:BZ:44:PHE:CZ	2.70	0.45
1:CA:79:G:N1	1:CA:91:C:O2	2.38	0.45
1:CA:147:G:H2'	1:CA:148:G:H8	1.82	0.45
1:CA:291:C:N4	1:CA:309:G:H1	2.14	0.45
1:CA:693:G:O2'	7:CG:84:ASN:ND2	2.48	0.45
1:CA:867:G:O2'	1:CA:873:A:N1	2.47	0.45
2:CB:144:ARG:HG3	2:CB:145:LEU:N	2.30	0.45
5:CE:45:PHE:CZ	5:CE:47:LYS:HD2	2.51	0.45
6:CF:44:GLY:HA2	6:CF:59:TYR:CZ	2.52	0.45
10:CJ:8:LEU:CD1	10:CJ:70:ARG:HB2	2.47	0.45
13:CM:2:ALA:O	13:CM:4:ILE:HG13	2.16	0.45
13:CM:29:ARG:HD3	13:CM:64:TRP:CE2	2.51	0.45
13:CM:115:LYS:O	13:CM:116:THR:C	2.60	0.45
19:CS:53:ASN:OD1	19:CS:56:GLN:HB3	2.16	0.45
22:CV:37:A:H3'	22:CV:38:A:H8	1.81	0.45
26:D1:19:GLN:HE22	35:DA:396:G:H1'	1.82	0.45
26:D1:72:GLU:HA	26:D1:75:GLU:HG2	1.97	0.45
27:D2:21:LEU:HD21	27:D2:51:ARG:CZ	2.47	0.45
27:D2:47:ASN:OD1	27:D2:47:ASN:C	2.58	0.45
33:D8:35:GLN:O	33:D8:35:GLN:HG2	2.14	0.45
33:D8:61:LEU:HG	35:DA:593:G:H4'	1.97	0.45
35:DA:7:G:H1	35:DA:2896:C:N4	2.14	0.45
35:DA:193:U:H5"	35:DA:193:U:H6	1.81	0.45
35:DA:271(I):G:H2'	35:DA:271(J):C:H1'	1.98	0.45
35:DA:587:C:C5	35:DA:671:C:H1'	2.51	0.45
35:DA:1459:G:C8	35:DA:1461:G:H1'	2.51	0.45
35:DA:1461:G:C5	35:DA:1462:C:C5	3.05	0.45
35:DA:1494:A:OP1	35:DA:1494:A:H4'	2.16	0.45
35:DA:1804:C:H2'	35:DA:1805:U:H6	1.81	0.45
35:DA:1993:U:H4'	39:DE:128:SER:HB3	1.99	0.45
35:DA:2014:A:H2'	35:DA:2015:A:C8	2.51	0.45
35:DA:2025:C:OP1	39:DE:149:ARG:HD3	2.16	0.45
35:DA:2291:U:O2'	35:DA:2374:C:O2	2.33	0.45
35:DA:2334:G:H1'	51:DS:18:ILE:CD1	2.46	0.45
36:DB:79:C:H2'	36:DB:80:U:O4'	2.17	0.45
38:DD:221:VAL:HG22	38:DD:226:MET:HE3	1.97	0.45
39:DE:52:LEU:HD21	52:DT:1:MET:SD	2.56	0.45
39:DE:71:GLY:O	39:DE:72:VAL:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DO:85:VAL:HG11	47:DO:114:ILE:CD1	2.46	0.45
52:DT:55:ASN:ND2	52:DT:58:ASN:HB2	2.31	0.45
52:DT:65:LYS:HA	52:DT:65:LYS:HD2	1.74	0.45
56:DX:88:LYS:HA	56:DX:88:LYS:CE	2.45	0.45
57:DY:15:VAL:HG12	57:DY:17:SER:H	1.80	0.45
1:AA:230:G:H5'	16:AP:23:ASP:OD2	2.16	0.45
1:AA:247:G:OP2	17:AQ:100:LYS:HB3	2.16	0.45
1:AA:664:G:P	18:AR:64:ARG:HH21	2.39	0.45
1:AA:862:C:H2'	1:AA:862:C:O2	2.16	0.45
1:AA:1174:G:C8	1:AA:1174:G:C3'	2.99	0.45
1:AA:1206:G:C5	1:AA:1207:G:N7	2.85	0.45
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.51	0.45
1:AA:1345:U:C2	1:AA:1377:A:N1	2.83	0.45
1:AA:1355:G:H2'	1:AA:1356:G:O4'	2.15	0.45
2:AB:171:ALA:HA	2:AB:174:VAL:HG23	1.97	0.45
4:AD:67:ILE:HD13	4:AD:196:LEU:HD23	1.99	0.45
4:AD:73:ARG:O	4:AD:74:GLN:C	2.59	0.45
8:AH:82:HIS:CE1	8:AH:84:ARG:HD3	2.52	0.45
12:AL:102:ARG:HE	12:AL:102:ARG:HB3	1.62	0.45
17:AQ:14:LYS:HA	17:AQ:14:LYS:HD2	1.69	0.45
18:AR:21:LYS:HD3	18:AR:21:LYS:HA	1.63	0.45
19:AS:44:MET:SD	19:AS:44:MET:N	2.90	0.45
26:B1:62:VAL:HG13	26:B1:67:ILE:HD12	1.97	0.45
35:BA:528:A:C8	35:BA:528:A:C3'	2.99	0.45
35:BA:809:G:O6	48:BP:36:LYS:NZ	2.44	0.45
35:BA:1169:G:H2'	35:BA:1170:G:O4'	2.16	0.45
35:BA:1619:G:OP2	35:BA:1619:G:C8	2.70	0.45
35:BA:1748:G:C2	35:BA:1749:A:C4	3.05	0.45
35:BA:1779:U:C5	35:BA:1784:A:N7	2.68	0.45
35:BA:2543:G:H21	35:BA:2646:C:H5"	1.82	0.45
35:BA:2563:U:O2	35:BA:2565:A:H8	1.99	0.45
38:BD:43:ARG:HH11	38:BD:44:ASN:HD21	1.60	0.45
39:BE:66:HIS:ND1	39:BE:66:HIS:C	2.75	0.45
40:BF:68:LYS:HB3	40:BF:69:HIS:ND1	2.32	0.45
40:BF:185:ASP:HA	40:BF:188:ARG:HD3	1.98	0.45
43:BI:77:LEU:HA	43:BI:77:LEU:HD23	1.34	0.45
46:BN:65:LYS:HE3	46:BN:65:LYS:HB3	1.43	0.45
51:BS:67:ARG:C	51:BS:69:VAL:N	2.74	0.45
52:BT:117:ASP:O	52:BT:121:ILE:HG13	2.16	0.45
56:BX:75:ASP:C	56:BX:76:ARG:HG2	2.41	0.45
1:CA:113:G:O4'	1:CA:354:G:H4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:177:C:OP1	20:CT:65:LYS:NZ	2.43	0.45
1:CA:236:G:C5	1:CA:237:C:C4	3.05	0.45
1:CA:397:A:C6	1:CA:548:G:N7	2.85	0.45
1:CA:495:A:H4'	1:CA:496:A:OP1	2.16	0.45
1:CA:622:A:C8	1:CA:623:C:C6	3.04	0.45
1:CA:840:C:H5"	1:CA:848:C:H41	1.81	0.45
1:CA:991:U:H5"	1:CA:1212:U:H3	1.82	0.45
1:CA:994:A:O2'	1:CA:995:C:O5'	2.28	0.45
1:CA:1073:U:O2'	2:CB:104:ASN:OD1	2.28	0.45
1:CA:1175:G:H2'	1:CA:1176:A:C8	2.52	0.45
1:CA:1273:G:H2'	1:CA:1274:G:O4'	2.17	0.45
1:CA:1511:G:H2'	1:CA:1512:U:O4'	2.17	0.45
2:CB:20:GLU:OE2	2:CB:189:ASP:CB	2.65	0.45
3:CC:148:GLY:HA3	3:CC:203:PHE:HB3	1.97	0.45
7:CG:69:VAL:HG21	7:CG:104:LEU:HD11	1.98	0.45
14:CN:9:LYS:HD2	14:CN:12:ARG:NH1	2.23	0.45
16:CP:21:VAL:O	16:CP:33:ILE:HG12	2.16	0.45
18:CR:40:LEU:C	18:CR:43:PHE:H	2.24	0.45
22:CV:10:G:N2	22:CV:26:G:H1'	2.32	0.45
25:D0:54:GLY:O	25:D0:57:PHE:N	2.49	0.45
27:D2:26:ARG:NH1	27:D2:29:LYS:HD3	2.30	0.45
30:D5:25:LEU:HD12	55:DW:19:LEU:HB3	1.97	0.45
32:D7:1:MET:HE2	35:DA:1619:G:H2'	1.98	0.45
35:DA:174:C:H3'	35:DA:175:G:H5"	1.98	0.45
35:DA:259:G:H21	35:DA:621:A:H8	1.60	0.45
35:DA:387:U:H4'	35:DA:388:G:O5'	2.15	0.45
35:DA:536:A:H5"	53:DU:53:ARG:HD3	1.98	0.45
35:DA:845:G:H21	35:DA:846:C:N4	2.14	0.45
35:DA:1448:G:HO2'	35:DA:1528(A):A:N6	2.15	0.45
35:DA:1689:A:N6	35:DA:1698:A:H2	1.94	0.45
35:DA:1794:U:H2'	35:DA:1795:C:C6	2.51	0.45
35:DA:1837:C:H2'	35:DA:1838:C:H5"	1.97	0.45
35:DA:1957:C:H2'	35:DA:1958:C:C6	2.52	0.45
35:DA:2105:C:OP2	35:DA:2105:C:C6	2.65	0.45
35:DA:2106:G:N2	35:DA:2184:G:C2	2.84	0.45
38:DD:124:PRO:HG2	38:DD:129:ASN:ND2	2.31	0.45
39:DE:31:CYS:HB3	39:DE:49:LEU:HB3	1.98	0.45
40:DF:3:GLU:CA	40:DF:24:LEU:HG	2.47	0.45
41:DG:122:PRO:HB3	41:DG:180:PHE:CD2	2.51	0.45
43:DI:40:THR:OG1	43:DI:42:SER:HB3	2.17	0.45
43:DI:72:LEU:HB3	43:DI:138:ILE:HG12	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:10:GLU:CD	46:DN:11:PRO:HD2	2.41	0.45
49:DQ:51:ARG:HH22	58:DZ:178:GLU:CD	2.25	0.45
51:DS:27:SER:CA	51:DS:88:ASP:HB3	2.44	0.45
56:DX:26:TYR:CZ	56:DX:89:ILE:HG13	2.52	0.45
1:AA:195:A:C6	1:AA:196:A:N1	2.85	0.45
1:AA:940:C:H2'	1:AA:941:G:C8	2.52	0.45
1:AA:972:C:O3'	10:AJ:57:LYS:HE3	2.16	0.45
1:AA:1252:A:H8	1:AA:1252:A:OP2	2.00	0.45
8:AH:6:ILE:HD12	8:AH:32:LYS:HG2	1.97	0.45
10:AJ:24:VAL:HG23	10:AJ:34:VAL:CG1	2.47	0.45
10:AJ:48:THR:CB	10:AJ:62:HIS:HD2	2.28	0.45
12:AL:62:SER:OG	12:AL:63:GLY:N	2.48	0.45
13:AM:13:LYS:O	13:AM:45:VAL:HG23	2.17	0.45
22:AV:17:C:C3'	22:AV:18:U:H5"	2.47	0.45
31:B6:9:LEU:HD12	31:B6:10:LEU:H	1.80	0.45
35:BA:24:G:C6	35:BA:25:U:N3	2.85	0.45
35:BA:36:G:C5	35:BA:37:C:C5	3.04	0.45
35:BA:154(A):C:H5	35:BA:171:G:N1	2.14	0.45
35:BA:202:U:H2'	35:BA:203:C:O4'	2.16	0.45
35:BA:634:C:H2'	35:BA:635:C:H6	1.80	0.45
35:BA:948:G:H2'	35:BA:949:C:H6	1.82	0.45
35:BA:1114:G:H2'	35:BA:1115:G:O4'	2.16	0.45
35:BA:1857:G:H8	35:BA:1857:G:O5'	2.00	0.45
35:BA:2779:U:O2	35:BA:2779:U:O4'	2.35	0.45
38:BD:10:THR:OG1	38:BD:11:PRO:HD2	2.17	0.45
42:BH:146:ALA:C	42:BH:148:ILE:N	2.73	0.45
47:BO:47:ILE:HA	47:BO:47:ILE:HD12	1.74	0.45
48:BP:13:ASN:O	48:BP:14:LYS:HB3	2.17	0.45
50:BR:35:THR:CG2	50:BR:111:LEU:HD12	2.46	0.45
55:BW:12:ILE:O	55:BW:101:SER:HB2	2.17	0.45
1:CA:438:G:H4'	4:CD:123:HIS:CE1	2.51	0.45
1:CA:901:A:H5"	1:CA:902:G:OP2	2.16	0.45
1:CA:974:A:OP2	14:CN:29:ARG:NH2	2.49	0.45
1:CA:1087:G:H2'	1:CA:1088:G:C8	2.51	0.45
8:CH:64:LYS:CD	8:CH:79:VAL:HG21	2.47	0.45
9:CI:71:SER:O	9:CI:74:ILE:HB	2.17	0.45
10:CJ:32:ALA:HB1	10:CJ:75:ILE:CG1	2.41	0.45
15:CO:18:PHE:CD1	15:CO:18:PHE:O	2.69	0.45
26:D1:83:GLU:C	26:D1:85:LEU:N	2.74	0.45
27:D2:53:LEU:HB2	27:D2:54:LYS:H	1.69	0.45
28:D3:3:ARG:NH1	28:D3:60:GLU:HA	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:D5:19:ARG:O	30:D5:19:ARG:HG2	2.16	0.45
32:D7:18:PHE:CD2	35:DA:126:A:C5	3.05	0.45
32:D7:25:PRO:HA	32:D7:28:ARG:CZ	2.46	0.45
35:DA:593:G:C6	35:DA:594:U:C4	3.05	0.45
35:DA:675:A:C8	35:DA:804:A:C6	3.05	0.45
35:DA:870:A:H5"	49:DQ:7:MET:O	2.17	0.45
35:DA:879:G:C6	35:DA:880:G:C4	3.05	0.45
35:DA:1269:A:H2'	35:DA:1270:C:H6	1.81	0.45
35:DA:1452:A:C4	35:DA:2702:U:C5	3.05	0.45
35:DA:2258:C:H4'	35:DA:2259:G:OP2	2.16	0.45
35:DA:2312:U:C2'	35:DA:2313:C:H5"	2.43	0.45
35:DA:2473:U:C2	35:DA:2474:C:H5"	2.52	0.45
35:DA:2561:A:H2	47:DO:23:ARG:NH1	2.14	0.45
35:DA:2595:G:H5"	35:DA:2596:U:OP2	2.17	0.45
35:DA:2694:G:C5	35:DA:2695:C:C5	3.05	0.45
35:DA:2851:A:H2'	35:DA:2852:G:O4'	2.17	0.45
35:DA:2859:G:C8	35:DA:2859:G:C3'	3.00	0.45
35:DA:2864:G:OP1	52:DT:119:LYS:HD2	2.17	0.45
36:DB:89:G:C8	36:DB:90:A:N7	2.83	0.45
39:DE:102:VAL:HG22	39:DE:170:LEU:O	2.17	0.45
41:DG:46:ALA:O	41:DG:50:ALA:HA	2.17	0.45
41:DG:122:PRO:HB3	41:DG:180:PHE:CE2	2.51	0.45
48:DP:20:GLY:O	48:DP:21:ARG:HB2	2.16	0.45
49:DQ:22:LYS:HE3	49:DQ:98:LYS:HG3	1.98	0.45
50:DR:34:ILE:HD13	50:DR:34:ILE:HA	1.82	0.45
50:DR:76:VAL:O	50:DR:80:PHE:HB2	2.16	0.45
51:DS:24:LEU:HD23	51:DS:24:LEU:HA	1.60	0.45
52:DT:44:ASP:C	52:DT:45:PHE:HD1	2.25	0.45
55:DW:51:LEU:HD23	55:DW:105:VAL:HG11	1.97	0.45
56:DX:82:GLN:NE2	56:DX:85:PRO:HG2	2.32	0.45
58:DZ:30:ASN:C	58:DZ:32:HIS:N	2.75	0.45
1:AA:858:G:O6	1:AA:869:G:H3'	2.17	0.45
1:AA:862:C:H5'	1:AA:863:U:OP2	2.16	0.45
1:AA:991:U:O2'	1:AA:993:G:C8	2.69	0.45
1:AA:1037:C:O5'	1:AA:1037:C:H6	1.99	0.45
1:AA:1078:U:H5"	1:AA:1079:G:OP2	2.17	0.45
1:AA:1106:G:H4'	3:AC:171:GLY:O	2.16	0.45
1:AA:1504:G:C5'	1:AA:1505:G:H5'	2.41	0.45
3:AC:178:LEU:O	3:AC:180:ALA:N	2.48	0.45
3:AC:181:ASN:HB3	3:AC:205:GLY:O	2.16	0.45
4:AD:97:LEU:HD23	4:AD:97:LEU:HA	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:45:LEU:HD21	6:AF:57:GLN:OE1	2.17	0.45
7:AG:108:ALA:O	7:AG:119:ARG:HD2	2.17	0.45
7:AG:113:GLU:O	7:AG:119:ARG:NH1	2.40	0.45
8:AH:29:SER:HB2	8:AH:30:ARG:HH11	1.82	0.45
22:AV:17:C:H5"	22:AV:17:C:C2	2.52	0.45
23:AY:28:G:C6	23:AY:29:G:N3	2.84	0.45
27:B2:44:LEU:C	27:B2:46:GLN:H	2.24	0.45
31:B6:21:TYR:O	31:B6:22:ALA:HB2	2.15	0.45
35:BA:142:A:H8	35:BA:1595:G:H21	1.64	0.45
35:BA:143:G:H5"	35:BA:1598:C:O2'	2.17	0.45
35:BA:173:G:N3	35:BA:173:G:H2'	2.32	0.45
35:BA:708:C:H6	35:BA:708:C:OP2	2.00	0.45
35:BA:1022:G:C6	35:BA:1140:C:C4	3.05	0.45
35:BA:1221:C:H5'	35:BA:1221:C:H6	1.81	0.45
35:BA:1742:G:N7	35:BA:1743:C:C4	2.85	0.45
35:BA:1784:A:H4'	35:BA:1785:A:H5"	1.99	0.45
35:BA:1835:G:H5"	35:BA:1836:C:OP2	2.16	0.45
35:BA:2205:C:C2	35:BA:2220:G:C2	3.04	0.45
35:BA:2287:A:C4	35:BA:2289:G:C8	3.04	0.45
35:BA:2582:G:H21	35:BA:2583:G:H1'	1.81	0.45
35:BA:2628:C:H1'	35:BA:2781:A:H2'	1.99	0.45
35:BA:2741:A:H2'	35:BA:2742:C:O4'	2.16	0.45
35:BA:2807:G:N2	35:BA:2893:G:C2	2.84	0.45
35:BA:2873:A:C2	50:BR:8:ARG:NH1	2.84	0.45
38:BD:59:LYS:HB3	38:BD:59:LYS:HE2	1.83	0.45
38:BD:270:ILE:O	38:BD:271:ILE:HG23	2.16	0.45
39:BE:100:GLU:O	39:BE:172:VAL:HG23	2.17	0.45
39:BE:101:ARG:O	39:BE:102:VAL:HG13	2.17	0.45
46:BN:56:ASN:ND2	46:BN:126:PRO:HB3	2.31	0.45
55:BW:50:VAL:O	55:BW:50:VAL:HG12	2.17	0.45
57:BY:96:ILE:HG13	57:BY:99:CYS:HB2	1.99	0.45
58:BZ:68:PRO:O	58:BZ:69:THR:HG23	2.16	0.45
1:CA:232:G:C5	1:CA:233:C:C5	3.05	0.45
1:CA:422:C:H4'	1:CA:423:G:O5'	2.17	0.45
1:CA:797:C:O2'	1:CA:798:G:H5'	2.17	0.45
1:CA:826:C:O5'	1:CA:826:C:H6	2.00	0.45
1:CA:885:G:O2'	1:CA:886:G:H5'	2.16	0.45
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.52	0.45
1:CA:1269:A:H2	1:CA:1312:G:N3	2.15	0.45
1:CA:1402:C:O2	1:CA:1500:A:N1	2.50	0.45
2:CB:17:PHE:O	2:CB:42:ILE:HG22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:99:GLY:O	5:CE:117:ASP:HA	2.17	0.45
6:CF:91:VAL:HG22	6:CF:92:LYS:O	2.17	0.45
14:CN:4:LYS:HE3	14:CN:5:ALA:HB3	1.99	0.45
20:CT:26:ASN:O	20:CT:30:LYS:HB2	2.16	0.45
35:DA:208:C:H2'	35:DA:209:C:H6	1.81	0.45
35:DA:216:A:C4	35:DA:432:A:C2	3.05	0.45
35:DA:338:G:C5	35:DA:339:U:C5	3.05	0.45
35:DA:411:G:C4	48:DP:72:PRO:HG3	2.51	0.45
35:DA:564:C:O2'	35:DA:565:C:H5'	2.16	0.45
35:DA:644:A:N6	35:DA:2349:G:O2'	2.50	0.45
35:DA:660:G:O2'	35:DA:661:C:H5'	2.16	0.45
35:DA:911:A:C5	49:DQ:9:TYR:HE1	2.35	0.45
35:DA:1310:G:H1'	35:DA:1611:C:H5'	1.99	0.45
35:DA:1529:G:C5	35:DA:1530:C:N4	2.85	0.45
35:DA:1945:G:C6	35:DA:1946:U:C4	3.05	0.45
35:DA:2308:G:H2'	35:DA:2309:A:H3'	1.98	0.45
35:DA:2315:G:H5"	35:DA:2316:C:OP2	2.17	0.45
35:DA:2524:G:H5'	35:DA:2524:G:C8	2.51	0.45
38:DD:28:GLU:HB2	38:DD:29:PRO:HD3	1.99	0.45
38:DD:31:LYS:HD3	38:DD:31:LYS:C	2.42	0.45
38:DD:147:LEU:HD22	38:DD:155:LEU:HD11	1.97	0.45
38:DD:245:PRO:HA	38:DD:246:PRO:HD3	1.83	0.45
41:DG:133:LEU:CD1	41:DG:157:ILE:HG12	2.46	0.45
48:DP:126:VAL:C	48:DP:145:PRO:HG3	2.42	0.45
50:DR:33:ARG:HD2	50:DR:115:GLU:OE2	2.17	0.45
52:DT:16:ARG:NH2	52:DT:82:LEU:O	2.50	0.45
52:DT:50:ILE:HD13	52:DT:64:ARG:HB3	1.99	0.45
58:DZ:70:LEU:HA	58:DZ:70:LEU:HD23	1.47	0.45
1:AA:114:U:O2'	1:AA:115:G:H5'	2.17	0.45
1:AA:434:U:H2'	1:AA:435:C:C6	2.51	0.45
1:AA:949:A:C6	1:AA:950:U:N3	2.85	0.45
1:AA:1175:G:O6	1:AA:1176:A:N6	2.49	0.45
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.16	0.45
2:AB:56:ARG:HD2	2:AB:56:ARG:HA	1.61	0.45
2:AB:69:LEU:HD23	2:AB:101:MET:HE3	1.99	0.45
3:AC:16:ARG:HH22	3:AC:182:ILE:N	2.15	0.45
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.52	0.45
6:AF:9:VAL:HB	6:AF:87:ARG:HB3	1.98	0.45
7:AG:59:LEU:HG	7:AG:63:LYS:HZ3	1.82	0.45
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.52	0.45
9:AI:28:VAL:HG13	9:AI:63:ILE:HD12	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:39:TYR:CZ	16:AP:41:PRO:HB3	2.51	0.45
25:B0:54:GLY:O	25:B0:56:ASP:N	2.50	0.45
26:B1:32:LYS:CG	26:B1:33:LYS:N	2.75	0.45
26:B1:34:THR:HG22	26:B1:35:THR:H	1.82	0.45
34:B9:27:CYS:SG	34:B9:29:ASN:N	2.87	0.45
35:BA:43:A:H8	35:BA:43:A:O5'	2.00	0.45
35:BA:1109:C:C5	35:BA:1110:G:N3	2.83	0.45
35:BA:1944:U:C2	35:BA:1955:U:O4'	2.70	0.45
35:BA:2025:C:H2'	35:BA:2026:C:C6	2.51	0.45
35:BA:2104:G:H5'	35:BA:2105:C:OP2	2.16	0.45
35:BA:2169:A:C5	35:BA:2170:A:N1	2.85	0.45
35:BA:2250:G:C4	49:BQ:82:ARG:HG3	2.52	0.45
35:BA:2521:C:H2'	35:BA:2522:U:C6	2.51	0.45
35:BA:2804:C:H2'	35:BA:2805:G:C8	2.51	0.45
36:BB:96:U:N3	36:BB:97:G:N7	2.63	0.45
38:BD:31:LYS:O	38:BD:32:SER:O	2.35	0.45
39:BE:78:LEU:CD2	39:BE:78:LEU:H	2.29	0.45
43:BI:93:THR:O	43:BI:96:ASP:HB2	2.17	0.45
47:BO:13:ASN:O	47:BO:14:THR:C	2.60	0.45
47:BO:28:SER:C	47:BO:29:ASN:ND2	2.75	0.45
50:BR:56:LYS:HZ3	50:BR:87:TYR:HB3	1.81	0.45
56:BX:62:LYS:CB	56:BX:69:TYR:HA	2.47	0.45
1:CA:322:C:H5	1:CA:328:C:C5	2.35	0.45
1:CA:431:A:C2	1:CA:432:A:H1'	2.50	0.45
1:CA:545:C:H5"	4:CD:72:GLU:HG2	1.99	0.45
1:CA:680:C:H2'	1:CA:681:C:H6	1.81	0.45
1:CA:983:A:H1'	1:CA:1049:U:O2	2.17	0.45
5:CE:8:GLU:CG	5:CE:34:VAL:HG22	2.47	0.45
6:CF:30:LEU:HD23	6:CF:75:LEU:HD11	1.99	0.45
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	1.99	0.45
9:CI:52:ALA:HB3	9:CI:95:LYS:NZ	2.32	0.45
14:CN:15:LYS:HG2	14:CN:16:PHE:CD2	2.52	0.45
15:CO:35:ARG:NH2	15:CO:59:MET:HE2	2.31	0.45
17:CQ:53:LEU:O	17:CQ:55:ASP:N	2.50	0.45
23:CW:16:U:N3	23:CW:60:U:O2	2.48	0.45
23:CW:27:G:OP2	23:CW:27:G:C8	2.70	0.45
31:D6:37:ARG:HG2	35:DA:2344:U:O2'	2.17	0.45
35:DA:298:G:OP2	57:DY:85:VAL:HG23	2.16	0.45
35:DA:419:C:H2'	35:DA:420:C:O4'	2.16	0.45
35:DA:646:A:H2'	35:DA:647:G:O4'	2.16	0.45
35:DA:1494:A:N3	35:DA:1494:A:C3'	2.77	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1550:C:H2'	35:DA:1551:C:H6	1.82	0.45
35:DA:2639:A:O2'	46:DN:97:ARG:NH2	2.50	0.45
35:DA:2860:A:N7	35:DA:2861:G:H1'	2.31	0.45
38:DD:79:VAL:HG11	38:DD:111:LEU:HD21	1.99	0.45
38:DD:109:ASP:HB2	38:DD:197:GLY:CA	2.47	0.45
40:DF:65:TRP:O	40:DF:67:GLN:N	2.50	0.45
48:DP:6:LEU:O	48:DP:6:LEU:HD12	2.15	0.45
48:DP:71:VAL:HG13	48:DP:72:PRO:HD2	1.97	0.45
48:DP:112:LEU:O	48:DP:128:HIS:HB3	2.17	0.45
50:DR:55:ALA:HA	50:DR:80:PHE:CZ	2.51	0.45
1:AA:191:G:C2	1:AA:192:U:C2	3.05	0.45
1:AA:455:C:N3	1:AA:477:A:N1	2.64	0.45
1:AA:456:C:H4'	1:AA:457:C:O5'	2.14	0.45
1:AA:488:C:O5'	1:AA:488:C:H6	2.00	0.45
1:AA:686:U:H1'	1:AA:687:A:C8	2.51	0.45
1:AA:1122:U:O4	1:AA:1123:A:N6	2.47	0.45
1:AA:1347:G:O2'	1:AA:1373:G:O6	2.32	0.45
1:AA:1442(A):G:N3	1:AA:1442(A):G:C2'	2.80	0.45
1:AA:1505:G:OP2	1:AA:1505:G:H3'	2.17	0.45
2:AB:30:ARG:O	2:AB:46:LYS:HG3	2.17	0.45
2:AB:103:THR:OG1	2:AB:176:GLU:HB3	2.17	0.45
6:AF:42:GLU:O	6:AF:44:GLY:N	2.49	0.45
15:AO:36:ILE:HG23	15:AO:56:LEU:HD11	1.97	0.45
35:BA:250:G:C6	35:BA:251:A:C6	3.04	0.45
35:BA:568:U:H5'	35:BA:945:A:C6	2.51	0.45
35:BA:607:U:H5"	40:BF:103:LYS:HE2	1.99	0.45
35:BA:819:A:OP2	35:BA:1187:G:N2	2.49	0.45
35:BA:977:G:C6	35:BA:987:G:C6	3.05	0.45
35:BA:1012:U:H5	46:BN:28:THR:HG21	1.82	0.45
35:BA:1178:C:H2'	35:BA:1179:C:C5	2.52	0.45
35:BA:1249:U:H5'	35:BA:1249:U:O2	2.17	0.45
35:BA:1249:U:O2	35:BA:1249:U:O4'	2.34	0.45
35:BA:1252:G:H5'	53:BU:33:ARG:NH1	2.31	0.45
35:BA:1312:U:OP1	35:BA:1312:U:H4'	2.17	0.45
35:BA:1466:G:N2	35:BA:1547:C:C5	2.84	0.45
35:BA:1782:C:H2'	35:BA:1783:A:H5"	1.99	0.45
35:BA:2487:G:H2'	35:BA:2488:A:C8	2.51	0.45
35:BA:2687:U:C4	35:BA:2688:U:C5	3.04	0.45
35:BA:2721:A:H2'	35:BA:2722:G:O4'	2.16	0.45
36:BB:75:G:H1	36:BB:103:G:N2	2.15	0.45
39:BE:63:LEU:HD23	39:BE:63:LEU:HA	1.74	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:32:PRO:HB2	41:BG:172:LEU:HD12	1.97	0.45
42:BH:148:ILE:O	42:BH:162:ILE:HD11	2.17	0.45
46:BN:66:LYS:HD2	46:BN:87:LEU:HD22	1.98	0.45
46:BN:72:TYR:OH	46:BN:98:VAL:HG13	2.17	0.45
49:BQ:18:LYS:O	49:BQ:18:LYS:HD3	2.09	0.45
49:BQ:110:THR:O	49:BQ:111:GLU:C	2.60	0.45
1:CA:17:U:H2'	1:CA:18:C:C6	2.51	0.45
1:CA:117:G:H8	1:CA:117:G:O5'	1.99	0.45
1:CA:221:C:H2'	1:CA:222:U:H6	1.80	0.45
1:CA:225:C:H2'	1:CA:226:G:H8	1.81	0.45
1:CA:407:G:C2	1:CA:408:A:C4	3.05	0.45
1:CA:581:G:N2	1:CA:582:U:C4	2.85	0.45
1:CA:781:A:OP1	1:CA:1523:G:H5'	2.17	0.45
1:CA:1270:C:O3'	1:CA:1314:C:H5'	2.17	0.45
1:CA:1374:A:C4	1:CA:1375:A:C8	3.04	0.45
2:CB:194:PRO:C	2:CB:196:LEU:N	2.74	0.45
4:CD:57:ARG:HB3	4:CD:206:PHE:HB2	1.98	0.45
6:CF:69:GLU:O	6:CF:71:ARG:N	2.48	0.45
8:CH:14:ARG:NH2	8:CH:83:ILE:O	2.50	0.45
9:CI:48:GLU:HB3	9:CI:49:PRO:HD3	1.99	0.45
15:CO:18:PHE:O	15:CO:19:PRO:C	2.59	0.45
22:CV:33:U:O2'	22:CV:35:A:N7	2.46	0.45
23:CW:52:G:H2'	23:CW:53:G:C8	2.52	0.45
26:D1:19:GLN:NE2	35:DA:396:G:H1'	2.31	0.45
26:D1:73:LEU:HD23	26:D1:73:LEU:HA	1.79	0.45
33:D8:59:LYS:HZ1	48:DP:50:ARG:HE	1.65	0.45
34:D9:25:VAL:HB	34:D9:34:GLN:HB2	1.99	0.45
35:DA:85:G:OP1	57:DY:9:LYS:HA	2.17	0.45
35:DA:150:C:H2'	35:DA:151:C:C6	2.52	0.45
35:DA:1038:C:N4	35:DA:1117:G:H1	2.12	0.45
35:DA:2786:U:O2'	39:DE:61:ARG:O	2.34	0.45
35:DA:2789:C:N3	35:DA:2894:G:O6	2.50	0.45
35:DA:2820:A:O3'	50:DR:2:ARG:NH1	2.49	0.45
38:DD:68:LYS:HB3	38:DD:70:TRP:CZ2	2.51	0.45
39:DE:75:VAL:C	39:DE:77:ILE:H	2.20	0.45
40:DF:20:LEU:HD12	40:DF:203:GLN:OE1	2.17	0.45
42:DH:91:GLY:O	42:DH:92:ILE:C	2.59	0.45
46:DN:43:THR:HB	46:DN:46:VAL:HG12	1.99	0.45
46:DN:137:LYS:O	46:DN:138:LEU:C	2.59	0.45
51:DS:89:ARG:HG2	51:DS:93:LYS:HG3	1.98	0.45
52:DT:133:GLU:CD	52:DT:137:LYS:HG3	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:66:ASN:OD1	53:DU:76:TYR:HB2	2.17	0.45
53:DU:76:TYR:CE1	53:DU:80:ILE:HG13	2.51	0.45
1:AA:187:C:H2'	1:AA:188:C:C6	2.52	0.45
1:AA:243:A:O2'	1:AA:244:U:OP2	2.28	0.45
1:AA:735:C:H2'	1:AA:736:C:C6	2.52	0.45
1:AA:821:G:H2'	1:AA:822:C:H6	1.81	0.45
1:AA:1498:U:OP2	24:AX:16:A:O2'	2.32	0.45
2:AB:185:ILE:HG13	2:AB:199:TYR:O	2.17	0.45
4:AD:122:ARG:CZ	4:AD:122:ARG:HA	2.47	0.45
5:AE:76:ILE:HG23	5:AE:77:PRO:HD2	1.98	0.45
26:B1:15:ALA:C	26:B1:46:LEU:HD23	2.42	0.45
26:B1:24:ALA:HA	26:B1:36:GLY:HA2	1.99	0.45
35:BA:245:G:O2'	35:BA:384:U:O2	2.25	0.45
35:BA:599:G:H4'	40:BF:31:HIS:HD2	1.82	0.45
35:BA:639:U:H2'	35:BA:640:C:C6	2.51	0.45
35:BA:664:C:H4'	35:BA:940:G:O3'	2.17	0.45
35:BA:672:C:H2'	35:BA:673:C:H6	1.82	0.45
35:BA:1198:U:C2	35:BA:1199:U:C5	3.05	0.45
35:BA:1480:G:C2	35:BA:1481:U:O2	2.70	0.45
35:BA:1494:A:HO2'	35:BA:1495:A:P	2.40	0.45
35:BA:1954:G:N3	35:BA:2551:C:H5'	2.32	0.45
35:BA:2431:U:H2'	35:BA:2433:A:OP2	2.16	0.45
35:BA:2480:C:H2'	35:BA:2481:G:H5'	1.99	0.45
35:BA:2625:G:H2'	35:BA:2626:C:O4'	2.17	0.45
35:BA:2892:A:H62	35:BA:2893:G:N2	2.14	0.45
38:BD:28:GLU:H	38:BD:28:GLU:CD	2.20	0.45
39:BE:40:GLU:O	39:BE:40:GLU:HG2	2.17	0.45
42:BH:23:ARG:HB3	42:BH:36:PRO:HA	1.99	0.45
47:BO:3:GLN:O	47:BO:21:CYS:HB3	2.16	0.45
48:BP:95:VAL:HG12	48:BP:100:LEU:HD21	1.98	0.45
48:BP:100:LEU:HA	48:BP:100:LEU:HD22	1.80	0.45
52:BT:13:ARG:NE	52:BT:13:ARG:CA	2.79	0.45
53:BU:117:GLN:C	53:BU:117:GLN:CD	2.84	0.45
55:BW:59:VAL:HG22	55:BW:64:MET:N	2.31	0.45
56:BX:73:ARG:O	56:BX:74:PRO:C	2.59	0.45
57:BY:8:LYS:HG3	57:BY:9:LYS:H	1.83	0.45
1:CA:342:C:H2'	1:CA:343:U:O4'	2.17	0.45
1:CA:827:U:O2'	1:CA:859:A:N1	2.43	0.45
1:CA:920:U:H1'	1:CA:1080:A:C2	2.52	0.45
2:CB:164:VAL:HG12	2:CB:166:ASP:H	1.82	0.45
3:CC:3:ASN:OD1	3:CC:3:ASN:N	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:70:ILE:HG23	4:CD:75:PHE:HB2	1.98	0.45
4:CD:98:GLU:OE2	4:CD:107:ARG:HD2	2.16	0.45
7:CG:37:ASN:OD1	9:CI:41:VAL:N	2.50	0.45
7:CG:40:ALA:HB1	9:CI:41:VAL:HG11	1.99	0.45
8:CH:6:ILE:HD11	8:CH:31:PHE:CE2	2.52	0.45
8:CH:114:THR:OG1	8:CH:115:SER:N	2.50	0.45
9:CI:3:GLN:C	9:CI:4:TYR:HD1	2.25	0.45
9:CI:69:GLY:O	9:CI:73:GLN:HG3	2.16	0.45
13:CM:77:ASN:O	13:CM:80:ARG:HB2	2.17	0.45
14:CN:15:LYS:HE3	14:CN:16:PHE:HE2	1.82	0.45
22:CV:14:A:H1'	22:CV:22:G:N2	2.32	0.45
28:D3:50:VAL:HA	28:D3:52:HIS:CE1	2.51	0.45
30:D5:45:VAL:HG21	50:DR:100:LEU:HD12	1.98	0.45
34:D9:13:LYS:C	34:D9:27:CYS:HB2	2.42	0.45
35:DA:141:A:H8	35:DA:1408:C:HO2'	1.65	0.45
35:DA:1099:G:C8	35:DA:1100:C:H5	2.35	0.45
35:DA:1206:G:C4	35:DA:1207:C:C5	3.05	0.45
35:DA:1216:G:P	53:DU:12:ARG:HH21	2.40	0.45
35:DA:1569:A:O2'	38:DD:38:LYS:HD3	2.17	0.45
35:DA:2075:U:H2'	35:DA:2238:G:N2	2.32	0.45
35:DA:2324:C:H5"	35:DA:2325:G:C5'	2.46	0.45
35:DA:2328:A:H2'	35:DA:2329:G:O4'	2.17	0.45
35:DA:2340:G:H2'	35:DA:2341:G:C8	2.52	0.45
35:DA:2666:C:H5"	35:DA:2667:C:OP2	2.16	0.45
39:DE:203:LYS:HG3	39:DE:204:ALA:H	1.81	0.45
40:DF:9:ILE:HG22	40:DF:11:VAL:O	2.16	0.45
46:DN:23:LEU:HB3	46:DN:60:ILE:HD13	1.98	0.45
47:DO:69:ILE:HG21	47:DO:105:GLU:OE2	2.17	0.45
48:DP:23:PRO:HD2	48:DP:33:ARG:HH11	1.82	0.45
48:DP:45:LEU:HD23	48:DP:45:LEU:HA	1.60	0.45
48:DP:111:ARG:HG3	48:DP:128:HIS:CE1	2.52	0.45
50:DR:38:VAL:HB	50:DR:39:PRO:HD3	1.99	0.45
51:DS:36:TYR:CD1	51:DS:52:SER:HB2	2.50	0.45
53:DU:27:LEU:O	53:DU:30:LYS:N	2.32	0.45
53:DU:92:ARG:HG3	53:DU:92:ARG:HH21	1.81	0.45
54:DV:31:ALA:O	54:DV:32:THR:C	2.60	0.45
1:AA:148:G:H1	1:AA:174:C:H5	1.64	0.44
1:AA:163:C:H2'	1:AA:164:U:O4'	2.17	0.44
1:AA:1008:C:H6	1:AA:1008:C:H3'	1.81	0.44
1:AA:1190:G:OP1	3:AC:5:ILE:HG13	2.17	0.44
1:AA:1261:A:H2'	1:AA:1261:A:N3	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1280:A:OP2	1:AA:1280:A:H4'	2.16	0.44
1:AA:1358:U:H5"	14:AN:33:VAL:O	2.17	0.44
2:AB:101:MET:O	2:AB:105:PHE:HB2	2.17	0.44
3:AC:62:ASP:OD1	3:AC:62:ASP:N	2.38	0.44
3:AC:64:VAL:CG1	3:AC:66:VAL:HG23	2.47	0.44
3:AC:79:ARG:C	3:AC:81:GLY:H	2.25	0.44
4:AD:8:VAL:HG23	4:AD:9:CYS:H	1.82	0.44
4:AD:111:ALA:HB2	4:AD:120:LEU:HD12	1.99	0.44
7:AG:123:GLU:O	7:AG:126:ASP:N	2.50	0.44
8:AH:84:ARG:O	8:AH:135:CYS:HB2	2.17	0.44
10:AJ:38:ILE:N	10:AJ:71:LEU:O	2.47	0.44
21:AU:23:PRO:O	21:AU:24:ARG:HB2	2.16	0.44
23:AY:34:G:H2'	23:AY:35:A:C8	2.52	0.44
26:B1:48:LYS:HA	26:B1:48:LYS:HD3	1.33	0.44
35:BA:30:G:H2'	35:BA:31:C:C6	2.52	0.44
35:BA:1009:A:OP2	46:BN:37:LYS:NZ	2.50	0.44
35:BA:1098:A:O2'	35:BA:1099:G:O5'	2.31	0.44
35:BA:1309:G:O2'	35:BA:1611:C:O2'	2.29	0.44
35:BA:1544:A:C4	35:BA:1545:A:N7	2.85	0.44
35:BA:1740:G:O2'	35:BA:1741:A:O4'	2.34	0.44
35:BA:1799:G:O6	38:BD:178:PRO:HB2	2.16	0.44
35:BA:2086:U:H2'	35:BA:2087:G:C8	2.52	0.44
35:BA:2286:A:N3	35:BA:2286:A:H5"	2.32	0.44
35:BA:2795:G:N3	35:BA:2795:G:H2'	2.32	0.44
35:BA:2895:U:H3'	35:BA:2896:C:O4'	2.17	0.44
36:BB:94:C:H2'	36:BB:95:C:H6	1.83	0.44
40:BF:167:ALA:HB1	40:BF:173:VAL:HG11	2.00	0.44
42:BH:106:THR:HA	42:BH:112:PRO:HB3	1.98	0.44
48:BP:132:LYS:CG	48:BP:136:GLU:OE2	2.63	0.44
57:BY:26:LYS:O	57:BY:27:VAL:HB	2.17	0.44
58:BZ:27:VAL:O	58:BZ:87:ASP:HA	2.18	0.44
58:BZ:71:VAL:HG13	58:BZ:88:PHE:CE1	2.52	0.44
1:CA:266:G:C5'	1:CA:268:C:H41	2.31	0.44
1:CA:892:A:H2'	1:CA:893:C:H6	1.82	0.44
1:CA:1030(D):A:N7	1:CA:1031:G:H1'	2.32	0.44
1:CA:1044:A:C5	1:CA:1045:C:H1'	2.51	0.44
1:CA:1151:A:C4	1:CA:1152:A:C8	3.04	0.44
1:CA:1255:G:C2	1:CA:1283:G:C2	3.04	0.44
1:CA:1346:A:N1	1:CA:1374:A:H5"	2.32	0.44
1:CA:1525:G:OP2	11:CK:120:ARG:NH2	2.49	0.44
2:CB:20:GLU:HG3	2:CB:190:THR:OG1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:69:LEU:HA	2:CB:91:PRO:O	2.17	0.44
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.84	0.44
15:CO:67:LEU:HD12	15:CO:67:LEU:HA	1.62	0.44
17:CQ:63:ARG:HG2	17:CQ:64:PRO:N	2.32	0.44
23:CW:7:A:O2'	23:CW:49:C:OP2	2.32	0.44
26:D1:57:GLU:C	26:D1:58:ILE:HD12	2.43	0.44
27:D2:40:SER:O	27:D2:44:LEU:N	2.44	0.44
28:D3:2:PRO:CA	28:D3:38:GLU:HA	2.44	0.44
28:D3:45:GLY:O	28:D3:49:LYS:HG2	2.17	0.44
35:DA:78:A:H2'	35:DA:79:G:C8	2.52	0.44
35:DA:542:C:N4	35:DA:543:C:H42	2.13	0.44
35:DA:666:G:H5"	48:DP:47:ASP:OD1	2.17	0.44
35:DA:811:U:O2	35:DA:1250:G:H3'	2.17	0.44
35:DA:1039:G:C2'	35:DA:1040:C:H5'	2.47	0.44
35:DA:1259:G:H2'	35:DA:1260:G:C8	2.52	0.44
35:DA:1275:A:C8	50:DR:16:HIS:ND1	2.85	0.44
35:DA:1315:C:O2'	35:DA:1392:A:H1'	2.17	0.44
35:DA:1452:A:O2'	35:DA:1453:U:H2'	2.17	0.44
35:DA:2317:C:N4	35:DA:2318:G:C5	2.86	0.44
35:DA:2679:A:H5'	39:DE:165:VAL:HG21	1.99	0.44
35:DA:2873:A:O2'	35:DA:2874:C:H5'	2.17	0.44
53:DU:27:LEU:HD22	53:DU:31:SER:HB3	1.99	0.44
55:DW:27:LYS:HB3	55:DW:31:GLU:HB3	1.99	0.44
55:DW:29:LEU:HD23	55:DW:33:ARG:NH1	2.32	0.44
57:DY:17:SER:HB2	57:DY:71:LYS:CE	2.40	0.44
57:DY:27:VAL:HG12	57:DY:29:GLU:OE1	2.17	0.44
57:DY:28:LYS:HD2	57:DY:28:LYS:N	2.32	0.44
1:AA:77:G:N1	1:AA:93:G:C5	2.83	0.44
1:AA:157:G:H1	1:AA:164:U:H3	1.65	0.44
1:AA:247:G:C6	1:AA:278:G:C2	3.04	0.44
1:AA:250:A:H4'	1:AA:251:G:O5'	2.17	0.44
1:AA:402:G:C6	1:AA:403:C:C5	3.06	0.44
1:AA:838:G:H22	1:AA:849:C:C1'	2.23	0.44
1:AA:1128:C:H2'	1:AA:1129:C:O4'	2.17	0.44
1:AA:1128:C:P	1:AA:1139:G:H22	2.40	0.44
1:AA:1330:U:H4'	13:AM:23:TYR:CE2	2.52	0.44
10:AJ:56:HIS:CD2	10:AJ:57:LYS:N	2.82	0.44
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.31	0.44
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.17	0.44
16:AP:21:VAL:HG23	16:AP:33:ILE:HB	2.00	0.44
19:AS:80:TYR:HD1	19:AS:81:ARG:N	2.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:17:C:H5'	22:AV:18:U:H5"	2.00	0.44
25:B0:48:GLY:O	25:B0:49:LYS:C	2.60	0.44
27:B2:26:ARG:HB3	56:BX:5:TYR:CE2	2.52	0.44
27:B2:35:LEU:HA	27:B2:35:LEU:HD12	1.73	0.44
32:B7:34:ARG:O	32:B7:37:LYS:N	2.50	0.44
35:BA:70:G:H5"	35:BA:112:U:O2	2.18	0.44
35:BA:83:G:O5'	57:BY:5:MET:HE3	2.18	0.44
35:BA:171:G:HO2'	35:BA:172:C:P	2.40	0.44
35:BA:284:U:H2'	35:BA:285:C:C6	2.53	0.44
35:BA:450:G:OP2	40:BF:85:GLY:O	2.36	0.44
35:BA:569:U:H5"	35:BA:821:A:N1	2.32	0.44
35:BA:1178:C:H2'	35:BA:1179:C:C6	2.52	0.44
35:BA:1210:A:C5'	35:BA:1210:A:C8	2.99	0.44
35:BA:1412:A:H2'	35:BA:1413:G:H8	1.82	0.44
35:BA:1803:A:O2'	38:BD:259:THR:HG21	2.18	0.44
35:BA:2181:G:H2'	35:BA:2182:G:O4'	2.17	0.44
35:BA:2218:U:H3'	35:BA:2218:U:H6	1.82	0.44
35:BA:2315:G:H2'	35:BA:2316:C:H6	1.79	0.44
35:BA:2794:C:H42	35:BA:2801(A):A:N6	2.14	0.44
38:BD:33:LEU:O	38:BD:34:VAL:C	2.60	0.44
38:BD:65:ILE:HD11	38:BD:67:PHE:CZ	2.52	0.44
39:BE:105:THR:HG21	39:BE:164:ARG:HE	1.82	0.44
40:BF:17:ARG:O	40:BF:19:GLU:N	2.45	0.44
46:BN:16:ILE:HG23	46:BN:54:VAL:HG22	2.00	0.44
49:BQ:23:GLY:HA2	49:BQ:101:ARG:HD2	1.99	0.44
50:BR:35:THR:HA	50:BR:112:ALA:O	2.17	0.44
54:BV:69:LYS:HB3	54:BV:93:GLU:OE2	2.17	0.44
55:BW:103:ILE:HG21	55:BW:103:ILE:HD13	1.62	0.44
56:BX:31:HIS:ND1	56:BX:32:PRO:HD2	2.32	0.44
56:BX:62:LYS:HA	56:BX:70:LEU:N	2.31	0.44
57:BY:2:ARG:NE	57:BY:4:LYS:HB3	2.32	0.44
58:BZ:41:LEU:N	58:BZ:44:PHE:HD2	2.15	0.44
58:BZ:73:GLN:O	58:BZ:86:VAL:HA	2.17	0.44
1:CA:176:C:O2'	1:CA:1447:A:N1	2.45	0.44
1:CA:611:A:H61	1:CA:629:G:H1	1.64	0.44
1:CA:948:C:O2'	1:CA:949:A:H5'	2.18	0.44
1:CA:954:G:H5"	1:CA:955:U:OP2	2.17	0.44
2:CB:130:ARG:HA	2:CB:134:GLU:OE2	2.17	0.44
11:CK:34:ASP:HB2	11:CK:35:PRO:CD	2.47	0.44
15:CO:57:LEU:HD23	15:CO:57:LEU:HA	1.68	0.44
16:CP:8:ARG:H	16:CP:28:ARG:HH12	1.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:54:LYS:HG3	20:CT:58:LYS:HD3	1.98	0.44
23:CW:10:G:H2'	23:CW:10:G:N3	2.32	0.44
23:CW:63:G:H2'	23:CW:63:G:N3	2.32	0.44
27:D2:46:GLN:HE21	27:D2:46:GLN:CA	2.28	0.44
33:D8:32:LEU:HA	33:D8:32:LEU:HD12	1.58	0.44
35:DA:65:C:H2'	35:DA:66:C:H6	1.83	0.44
35:DA:154:G:H8	35:DA:154:G:O5'	2.00	0.44
35:DA:299:A:C5	35:DA:322:A:C2	3.06	0.44
35:DA:847:U:C4	35:DA:933:A:N6	2.86	0.44
35:DA:1042:G:N2	35:DA:1043:C:O2'	2.50	0.44
35:DA:1135:C:H5"	35:DA:1135:C:H6	1.82	0.44
35:DA:1465:G:C4	35:DA:1466:G:C8	3.05	0.44
35:DA:1797:C:H4'	38:DD:257:LEU:O	2.17	0.44
35:DA:1828:G:O6	38:DD:222:ARG:HD3	2.18	0.44
35:DA:2352:A:N6	35:DA:2365:G:O2'	2.50	0.44
36:DB:50:G:O3'	51:DS:63:THR:HG23	2.17	0.44
38:DD:17:THR:HG22	38:DD:205:VAL:N	2.31	0.44
38:DD:49:ILE:HG21	38:DD:49:ILE:HD13	1.54	0.44
38:DD:123:ALA:HB3	38:DD:131:LEU:HG	1.99	0.44
38:DD:182:LEU:HB2	38:DD:271:ILE:HG13	1.99	0.44
40:DF:125:LEU:CD2	40:DF:194:MET:HG3	2.47	0.44
41:DG:155:MET:HG2	41:DG:156:ASP:N	2.32	0.44
42:DH:74:ASN:O	42:DH:77:LYS:HG2	2.17	0.44
43:DI:78:THR:HB	43:DI:141:LYS:HZ3	1.82	0.44
43:DI:96:ASP:OD1	43:DI:96:ASP:N	2.49	0.44
47:DO:9:GLU:HB3	47:DO:83:ALA:HB2	1.99	0.44
49:DQ:40:ALA:HB3	49:DQ:127:ILE:HG12	1.98	0.44
51:DS:10:ARG:HH21	51:DS:10:ARG:HG3	1.82	0.44
51:DS:87:PHE:HB3	51:DS:89:ARG:NH1	2.32	0.44
52:DT:45:PHE:CD1	52:DT:45:PHE:N	2.84	0.44
52:DT:81:PRO:O	52:DT:82:LEU:HD23	2.17	0.44
55:DW:14:PRO:C	55:DW:16:LYS:N	2.73	0.44
57:DY:26:LYS:CD	57:DY:27:VAL:HG23	2.47	0.44
58:DZ:97:GLU:HB2	58:DZ:125:LEU:HD21	1.98	0.44
1:AA:142:G:O2'	1:AA:195:A:N6	2.49	0.44
1:AA:146:G:O6	1:AA:176:C:N4	2.50	0.44
1:AA:457:C:H1'	1:AA:475:G:N2	2.32	0.44
1:AA:952:U:H4'	1:AA:964:A:N1	2.32	0.44
1:AA:991:U:H3	1:AA:1212:U:HO2'	1.62	0.44
1:AA:1072:G:C6	1:AA:1073:U:C4	3.06	0.44
1:AA:1336:C:O2	1:AA:1336:C:H2'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1457:G:H2'	1:AA:1458:G:H5"	1.99	0.44
3:AC:11:ARG:NE	3:AC:180:ALA:HB3	2.33	0.44
3:AC:42:LEU:HD23	3:AC:42:LEU:O	2.17	0.44
3:AC:71:ALA:HB2	3:AC:106:VAL:HB	1.98	0.44
4:AD:60:GLU:O	4:AD:63:LYS:HB3	2.17	0.44
4:AD:67:ILE:HG21	4:AD:196:LEU:HD23	1.98	0.44
7:AG:136:LYS:C	7:AG:138:LYS:H	2.25	0.44
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	1.97	0.44
8:AH:26:VAL:O	8:AH:28:ALA:N	2.50	0.44
9:AI:117:HIS:O	9:AI:118:LYS:HG3	2.18	0.44
15:AO:39:LEU:HD22	15:AO:39:LEU:HA	1.74	0.44
15:AO:53:HIS:CE1	15:AO:57:LEU:HD11	2.53	0.44
18:AR:50:ILE:HD13	18:AR:50:ILE:HA	1.61	0.44
19:AS:4:SER:OG	19:AS:5:LEU:N	2.49	0.44
23:AW:76:A:H2'	35:BA:2394:C:N3	2.33	0.44
25:B0:45:PHE:CD1	25:B0:77:ARG:HB2	2.52	0.44
30:B5:9:LYS:HA	30:B5:9:LYS:HD3	1.59	0.44
30:B5:43:HIS:HE1	35:BA:2815:C:O2	1.99	0.44
31:B6:27:LYS:CE	31:B6:31:PRO:HD2	2.47	0.44
33:B8:13:ARG:CB	48:BP:61:ARG:HB2	2.47	0.44
35:BA:24:G:H2'	35:BA:25:U:O4'	2.17	0.44
35:BA:79:G:H1	35:BA:107:C:N4	2.14	0.44
35:BA:88:G:H2'	35:BA:89:G:H5'	1.98	0.44
35:BA:320:A:H4'	35:BA:322:A:C8	2.52	0.44
35:BA:615:G:H5'	40:BF:40:GLN:HE22	1.82	0.44
35:BA:748:G:C8	55:BW:89:ALA:HB1	2.53	0.44
35:BA:966:G:H2'	35:BA:967:C:H6	1.82	0.44
35:BA:1049:C:N3	35:BA:1050:A:N6	2.66	0.44
35:BA:1106:G:H2'	35:BA:1106:G:N3	2.32	0.44
35:BA:1493:C:C4	35:BA:2206:G:O2'	2.68	0.44
35:BA:1969:A:O2'	35:BA:1972:A:N3	2.46	0.44
35:BA:2014:A:H2'	35:BA:2015:A:C8	2.53	0.44
35:BA:2023:G:H5'	35:BA:2617:C:H4'	1.99	0.44
35:BA:2294:C:OP1	51:BS:92:TYR:CB	2.65	0.44
35:BA:2495:G:H5"	49:BQ:81:VAL:HG22	2.00	0.44
35:BA:2542:A:O2'	35:BA:2543:G:H8	2.00	0.44
35:BA:2698:U:H2'	35:BA:2699:C:O2	2.18	0.44
36:BB:65:C:N4	36:BB:109:C:C6	2.86	0.44
39:BE:200:GLU:O	39:BE:200:GLU:HG3	2.16	0.44
40:BF:28:ILE:O	40:BF:30:PRO:HD3	2.18	0.44
40:BF:113:ALA:HB1	40:BF:186:ILE:HG21	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BH:101:ARG:O	42:BH:123:PHE:HD2	2.00	0.44
46:BN:47:ALA:HB2	46:BN:112:LEU:HD11	1.99	0.44
47:BO:98:VAL:HG11	47:BO:114:ILE:HG23	1.99	0.44
49:BQ:130:LYS:HZ2	58:BZ:80:ARG:HH11	1.65	0.44
50:BR:9:LYS:HB2	50:BR:43:GLU:OE2	2.18	0.44
52:BT:84:GLN:HG3	52:BT:85:LYS:N	2.32	0.44
55:BW:59:VAL:HA	55:BW:63:ASP:CA	2.48	0.44
58:BZ:23:LYS:HB3	58:BZ:38:TYR:CD2	2.52	0.44
1:CA:190:U:H2'	1:CA:191:G:H8	1.82	0.44
1:CA:597:G:H1'	1:CA:644:G:N2	2.33	0.44
1:CA:939:G:H5"	7:CG:102:ARG:HH12	1.81	0.44
1:CA:1053:G:N7	1:CA:1199:U:H3'	2.32	0.44
1:CA:1092:A:C6	1:CA:1093:A:C6	3.05	0.44
1:CA:1206:G:C4'	3:CC:194:GLY:H	2.30	0.44
1:CA:1434:A:H61	1:CA:1467:G:H1'	1.81	0.44
2:CB:74:LYS:HZ1	2:CB:205:ASP:HB2	1.82	0.44
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.18	0.44
6:CF:53:ALA:HB3	6:CF:86:ARG:CZ	2.46	0.44
7:CG:45:ASP:O	7:CG:49:ILE:HG12	2.17	0.44
8:CH:114:THR:C	8:CH:116:LYS:H	2.24	0.44
9:CI:95:LYS:HG3	9:CI:96:LEU:H	1.82	0.44
10:CJ:42:THR:HG21	10:CJ:66:ARG:HD2	1.98	0.44
12:CL:51:ALA:C	12:CL:52:LEU:HD12	2.42	0.44
18:CR:85:LEU:HB3	18:CR:86:VAL:H	1.67	0.44
35:DA:14:A:H8	35:DA:14:A:O5'	2.00	0.44
35:DA:310:A:P	57:DY:18:GLY:HA2	2.58	0.44
35:DA:948:G:N2	35:DA:985:C:OP2	2.51	0.44
35:DA:1087:G:H2'	35:DA:1088:A:C4'	2.48	0.44
35:DA:1278:A:O2'	35:DA:1279:G:H5'	2.17	0.44
35:DA:1448:G:N3	35:DA:1528(A):A:H2	2.14	0.44
35:DA:1663:C:O2'	35:DA:2686:G:H4'	2.17	0.44
35:DA:1783:A:N1	35:DA:2587:A:H2'	2.32	0.44
35:DA:1995:U:H1'	47:DO:3:GLN:HE22	1.83	0.44
35:DA:2030:A:H4'	35:DA:2031:A:H8	1.81	0.44
38:DD:40:THR:HG22	38:DD:41:GLY:O	2.17	0.44
38:DD:205:VAL:O	38:DD:206:LEU:C	2.60	0.44
39:DE:17:ASP:OD1	39:DE:17:ASP:N	2.50	0.44
41:DG:15:VAL:O	41:DG:16:ARG:C	2.60	0.44
46:DN:30:ILE:HG22	46:DN:34:LEU:CD2	2.47	0.44
46:DN:65:LYS:HZ3	46:DN:68:GLU:HB3	1.77	0.44
48:DP:33:ARG:HG3	48:DP:34:GLY:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DQ:10:ARG:CZ	49:DQ:11:LYS:N	2.54	0.44
52:DT:11:GLU:OE2	52:DT:12:SER:N	2.50	0.44
53:DU:76:TYR:CZ	53:DU:80:ILE:HG13	2.52	0.44
57:DY:46:LYS:HD3	57:DY:46:LYS:C	2.42	0.44
57:DY:94:LYS:HD2	57:DY:103:GLY:HA3	1.99	0.44
58:DZ:115:GLY:HA2	58:DZ:146:ILE:HG12	2.00	0.44
1:AA:437:U:C5	1:AA:438:G:C5	3.05	0.44
1:AA:475:G:H2'	1:AA:476:G:O4'	2.17	0.44
1:AA:696:A:N6	1:AA:797:C:O2'	2.43	0.44
1:AA:730:G:O6	15:AO:51:HIS:NE2	2.50	0.44
1:AA:932:C:O2	1:AA:932:C:H2'	2.18	0.44
1:AA:952:U:H2'	1:AA:953:G:H8	1.83	0.44
1:AA:1027:C:H3'	1:AA:1027:C:O2	2.17	0.44
1:AA:1055:A:C5	1:AA:1206:G:C2	3.05	0.44
1:AA:1130:A:H2'	1:AA:1130:A:N3	2.32	0.44
1:AA:1158:C:N4	1:AA:1160:G:O2'	2.50	0.44
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.17	0.44
2:AB:205:ASP:OD1	2:AB:206:ASP:N	2.50	0.44
3:AC:16:ARG:HH22	3:AC:182:ILE:H	1.65	0.44
7:AG:75:VAL:HG12	7:AG:88:PRO:HB3	1.98	0.44
12:AL:47:LYS:HD2	12:AL:48:PRO:CD	2.44	0.44
12:AL:85:ILE:N	12:AL:85:ILE:CD1	2.80	0.44
17:AQ:6:LEU:O	17:AQ:59:ILE:N	2.41	0.44
26:B1:82:LEU:HD22	26:B1:83:GLU:N	2.33	0.44
27:B2:27:GLU:HB2	27:B2:28:LYS:H	1.45	0.44
30:B5:4:HIS:HB3	30:B5:5:PRO:CD	2.48	0.44
33:B8:22:VAL:HB	33:B8:53:PRO:HB3	2.00	0.44
34:B9:5:ALA:HB3	35:BA:2466:C:H5'	2.00	0.44
35:BA:493:G:O3'	55:BW:8:ARG:HG3	2.18	0.44
35:BA:1059:G:H3'	35:BA:1060:U:C6	2.52	0.44
35:BA:1120:G:H2'	35:BA:1121:C:O4'	2.17	0.44
35:BA:1684:C:C2	35:BA:1705:G:N2	2.86	0.44
35:BA:1790:C:O2'	38:BD:209:ALA:HB2	2.17	0.44
35:BA:2506:U:H4'	35:BA:2507:C:OP1	2.16	0.44
36:BB:16:G:C6	36:BB:69:G:C2	3.06	0.44
38:BD:218:ARG:O	38:BD:220:HIS:HD2	1.98	0.44
39:BE:175:VAL:O	39:BE:177:PRO:HD3	2.17	0.44
40:BF:95:ARG:HB2	40:BF:97:TYR:HE1	1.81	0.44
40:BF:122:LYS:NZ	40:BF:152:GLU:HG2	2.32	0.44
46:BN:47:ALA:HB2	46:BN:112:LEU:CD1	2.47	0.44
46:BN:54:VAL:HB	46:BN:122:VAL:HG22	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BP:40:SER:N	48:BP:41:ARG:HG2	2.30	0.44
49:BQ:70:PRO:HA	49:BQ:94:VAL:O	2.18	0.44
51:BS:77:ALA:HB1	51:BS:82:ILE:HB	2.00	0.44
54:BV:38:LEU:O	54:BV:39:LEU:HD13	2.17	0.44
57:BY:75:ILE:HD11	57:BY:79:CYS:N	2.32	0.44
57:BY:96:ILE:CG1	57:BY:99:CYS:HB2	2.48	0.44
58:BZ:45:ASP:HA	58:BZ:48:PHE:HB3	1.98	0.44
1:CA:318:G:H2'	1:CA:319:G:H8	1.82	0.44
1:CA:959:A:C2	1:CA:1222:G:O4'	2.71	0.44
1:CA:1186:G:C2	1:CA:1187:G:H1'	2.52	0.44
1:CA:1366:C:O2'	1:CA:1367:C:H5'	2.17	0.44
2:CB:62:ALA:C	2:CB:65:GLY:H	2.25	0.44
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.17	0.44
3:CC:43:LEU:HB3	3:CC:47:LEU:HD22	1.98	0.44
4:CD:142:PRO:HA	4:CD:185:PHE:HD2	1.82	0.44
7:CG:43:PHE:O	7:CG:46:ALA:HB3	2.18	0.44
10:CJ:42:THR:HG23	10:CJ:68:HIS:CD2	2.52	0.44
13:CM:3:ARG:HE	13:CM:9:ILE:HB	1.82	0.44
16:CP:49:LEU:HD21	16:CP:73:LEU:HG	1.99	0.44
18:CR:25:THR:HG21	18:CR:42:ARG:NH1	2.32	0.44
26:D1:15:ALA:O	26:D1:16:ASN:OD1	2.34	0.44
27:D2:53:LEU:CD2	35:DA:72:U:C4'	2.84	0.44
31:D6:19:ARG:NH1	31:D6:43:CYS:SG	2.91	0.44
35:DA:286:C:H2'	35:DA:287:C:C6	2.53	0.44
35:DA:405:U:H4'	35:DA:406:G:OP2	2.18	0.44
35:DA:532:A:OP1	53:DU:45:TYR:OH	2.21	0.44
35:DA:635:C:O2'	35:DA:639:U:OP1	2.29	0.44
35:DA:807:U:H2'	35:DA:808:G:O4'	2.16	0.44
35:DA:849:A:H3'	35:DA:850:C:C6	2.50	0.44
35:DA:1493:C:H4'	35:DA:1494:A:OP1	2.18	0.44
35:DA:1629:U:H2'	35:DA:1630:G:C8	2.52	0.44
35:DA:2078:C:C4	35:DA:2079:U:C4	3.06	0.44
35:DA:2171:A:O2'	35:DA:2172:U:OP1	2.34	0.44
35:DA:2207:G:H21	35:DA:2208:A:H5'	1.81	0.44
35:DA:2262:U:OP1	35:DA:2387:U:O2'	2.30	0.44
36:DB:40:U:C2	36:DB:43:C:H5"	2.52	0.44
38:DD:71:ASP:HB2	38:DD:103:ARG:NH2	2.32	0.44
40:DF:153:SER:OG	40:DF:190:GLU:HB2	2.17	0.44
40:DF:180:GLY:O	40:DF:181:LEU:C	2.60	0.44
48:DP:60:MET:O	48:DP:61:ARG:O	2.35	0.44
48:DP:122:PRO:HB3	48:DP:141:ALA:CB	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DW:61:ASN:HB2	55:DW:62:HIS:CE1	2.53	0.44
56:DX:21:PHE:CE1	56:DX:26:TYR:HB3	2.53	0.44
57:DY:45:VAL:CG1	57:DY:61:ILE:HB	2.48	0.44
58:DZ:19:ARG:HH12	58:DZ:82:ARG:HD2	1.81	0.44
1:AA:575:G:OP1	1:AA:575:G:H4'	2.17	0.44
1:AA:719:C:C5	1:AA:720:C:C4	3.05	0.44
1:AA:866:C:O5'	1:AA:866:C:H6	2.00	0.44
1:AA:1155:G:H5"	1:AA:1156:G:OP2	2.17	0.44
1:AA:1179:A:O3'	9:AI:103:THR:HG23	2.17	0.44
2:AB:19:HIS:HE1	2:AB:207:ALA:N	2.15	0.44
2:AB:41:ILE:HD12	2:AB:42:ILE:O	2.17	0.44
6:AF:62:TRP:CG	18:AR:35:ARG:NH1	2.86	0.44
8:AH:36:LEU:HD13	8:AH:59:LEU:HD21	2.00	0.44
10:AJ:88:LEU:O	10:AJ:90:LEU:HD13	2.17	0.44
11:AK:111:ASP:OD2	18:AR:84:LYS:HE2	2.18	0.44
19:AS:39:THR:HA	19:AS:70:LYS:HA	1.99	0.44
23:AW:54:U:O2'	23:AW:55:U:OP1	2.31	0.44
27:B2:30:ARG:NH2	56:BX:28:PHE:HE1	2.15	0.44
27:B2:44:LEU:HD22	27:B2:44:LEU:O	2.17	0.44
28:B3:37:LEU:H	28:B3:37:LEU:HG	1.44	0.44
30:B5:20:ARG:HG2	30:B5:23:HIS:ND1	2.32	0.44
33:B8:25:MET:HE3	33:B8:25:MET:HB3	1.72	0.44
33:B8:41:ILE:HD11	35:BA:2419:U:P	2.58	0.44
34:B9:36:GLN:HE22	35:BA:1031:G:N2	2.13	0.44
35:BA:345:A:H1'	35:BA:346:A:N7	2.32	0.44
35:BA:832:G:H2'	35:BA:833:U:C6	2.53	0.44
35:BA:910:A:C5	49:BQ:13:GLN:HG3	2.52	0.44
35:BA:1131:G:OP2	35:BA:2515:C:H4'	2.18	0.44
35:BA:1543:C:O5'	35:BA:1543:C:H6	2.01	0.44
35:BA:1586:A:H5'	35:BA:1587:A:OP2	2.17	0.44
35:BA:1759:A:H5'	35:BA:2715:C:H1'	1.99	0.44
35:BA:2336:A:H8	35:BA:2336:A:O5'	2.00	0.44
35:BA:2527:C:H42	35:BA:2536:G:H1	1.66	0.44
35:BA:2850:A:OP2	35:BA:2866:U:C5	2.70	0.44
36:BB:1:U:O2	36:BB:1:U:H2'	2.16	0.44
36:BB:19:G:H2'	36:BB:20:C:H5'	1.98	0.44
38:BD:75:ILE:HG21	38:BD:99:ASP:HB2	1.99	0.44
41:BG:51:ARG:HA	41:BG:51:ARG:NE	2.32	0.44
41:BG:145:THR:HG23	41:BG:148:MET:H	1.83	0.44
43:BI:75:LEU:HD21	43:BI:105:HIS:ND1	2.33	0.44
48:BP:19:VAL:C	48:BP:21:ARG:H	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:7:ILE:H	52:BT:7:ILE:HD12	1.83	0.44
57:BY:61:ILE:O	57:BY:62:GLU:HB2	2.18	0.44
1:CA:201:C:H42	1:CA:216:G:H1	1.65	0.44
1:CA:266:G:H5"	1:CA:267:C:H5	1.83	0.44
1:CA:392:G:H2'	1:CA:393:A:C8	2.52	0.44
1:CA:509:A:C8	1:CA:509:A:C3'	3.01	0.44
1:CA:855:G:OP2	1:CA:871:U:N3	2.47	0.44
1:CA:933:G:C2	1:CA:935:A:O4'	2.71	0.44
1:CA:1190:G:OP1	3:CC:5:ILE:HG12	2.18	0.44
1:CA:1249:C:O2'	9:CI:69:GLY:HA2	2.17	0.44
1:CA:1269:A:H2	1:CA:1312:G:H21	1.66	0.44
3:CC:112:SER:O	3:CC:114:PRO:HD2	2.18	0.44
12:CL:47:LYS:HB3	12:CL:48:PRO:HD3	2.00	0.44
14:CN:11:LYS:N	14:CN:11:LYS:HD2	2.33	0.44
23:CW:43:C:H2'	23:CW:44:G:C8	2.53	0.44
25:D0:46:LYS:HG3	25:D0:47:PRO:N	2.33	0.44
27:D2:56:GLN:O	27:D2:57:ILE:C	2.56	0.44
31:D6:26:ASN:HD21	31:D6:28:ARG:NE	2.15	0.44
32:D7:3:ARG:HD3	32:D7:3:ARG:HA	1.65	0.44
35:DA:217:G:H2'	35:DA:218:A:O4'	2.17	0.44
35:DA:591:C:H42	35:DA:666:G:H1	1.66	0.44
35:DA:857:C:N4	35:DA:920:G:H1	2.07	0.44
35:DA:1081:U:O2'	35:DA:1082:U:H5'	2.17	0.44
35:DA:1191:G:OP1	48:DP:35:HIS:ND1	2.49	0.44
35:DA:1216:G:OP2	53:DU:12:ARG:NH2	2.45	0.44
35:DA:1668:A:N3	35:DA:1670:C:C4	2.85	0.44
35:DA:1818:U:H2'	38:DD:157:ARG:HG3	1.99	0.44
35:DA:2025:C:H2'	35:DA:2026:C:C6	2.52	0.44
35:DA:2185:C:N4	35:DA:2186:G:O6	2.51	0.44
35:DA:2627:G:N3	35:DA:2781:A:H2	2.16	0.44
35:DA:2684:U:OP1	52:DT:60:THR:HG21	2.17	0.44
35:DA:2865:U:C4	35:DA:2866:U:C4	3.05	0.44
38:DD:63:ARG:HD3	38:DD:92:ILE:HD11	1.99	0.44
38:DD:271:ILE:O	38:DD:272:ALA:HB3	2.18	0.44
40:DF:7:TYR:CD1	40:DF:7:TYR:C	2.95	0.44
40:DF:9:ILE:HG13	40:DF:15:SER:OG	2.17	0.44
40:DF:63:LYS:NZ	40:DF:75:HIS:O	2.39	0.44
41:DG:18:GLU:OE1	41:DG:22:ARG:HB2	2.18	0.44
43:DI:68:LEU:HA	43:DI:71:ILE:HD12	1.99	0.44
46:DN:22:THR:CG2	46:DN:61:ARG:HD2	2.48	0.44
49:DQ:29:PHE:N	49:DQ:29:PHE:CD1	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DR:78:LYS:O	50:DR:82:GLU:HB2	2.18	0.44
50:DR:103:ARG:CZ	55:DW:40:ASN:HB2	2.48	0.44
51:DS:31:SER:OG	51:DS:32:LEU:N	2.51	0.44
51:DS:101:LEU:HD13	51:DS:101:LEU:O	2.17	0.44
54:DV:22:VAL:HG12	54:DV:23:GLU:CB	2.47	0.44
58:DZ:41:LEU:HD23	58:DZ:41:LEU:HA	1.66	0.44
1:AA:175:C:H2'	1:AA:176:C:H5"	1.98	0.44
1:AA:587:G:N2	1:AA:754:C:OP2	2.50	0.44
1:AA:596:C:H2'	1:AA:597:G:O4'	2.17	0.44
1:AA:1150:U:O2'	10:AJ:41:PRO:HG3	2.17	0.44
1:AA:1305:G:C2	1:AA:1331:G:N3	2.86	0.44
1:AA:1509:C:H2'	1:AA:1510:U:O4'	2.18	0.44
2:AB:145:LEU:HD13	2:AB:145:LEU:C	2.42	0.44
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.83	0.44
4:AD:205:GLU:H	4:AD:205:GLU:HG2	1.62	0.44
5:AE:28:PHE:O	5:AE:47:LYS:HA	2.17	0.44
15:AO:4:THR:N	15:AO:7:GLU:HB2	2.32	0.44
19:AS:63:THR:OG1	19:AS:64:GLU:N	2.49	0.44
19:AS:70:LYS:H	19:AS:73:GLU:HG3	1.82	0.44
35:BA:15:G:C6	35:BA:16:G:N7	2.86	0.44
35:BA:89:G:H21	35:BA:90:U:C5'	2.31	0.44
35:BA:139(A):G:H22	56:BX:40:LYS:NZ	2.16	0.44
35:BA:195:A:H2'	35:BA:198:C:H41	1.83	0.44
35:BA:754:C:H2'	35:BA:755:C:C6	2.53	0.44
35:BA:1000:A:N6	35:BA:1155:A:C8	2.86	0.44
35:BA:1054:A:H5'	35:BA:1055:G:N7	2.31	0.44
35:BA:1806:C:H2'	35:BA:1807:G:O4'	2.18	0.44
35:BA:1966:A:OP1	35:BA:1966:A:H8	2.01	0.44
35:BA:2406:U:H3	48:BP:73:GLY:H	1.66	0.44
35:BA:2697:G:C6	35:BA:2698:U:N3	2.85	0.44
35:BA:2805:G:H2'	35:BA:2807:G:H1'	1.99	0.44
36:BB:46:A:C5	36:BB:47:C:C4	3.05	0.44
39:BE:48:GLN:CD	39:BE:78:LEU:HG	2.42	0.44
39:BE:144:ARG:HB3	39:BE:145:LYS:H	1.57	0.44
39:BE:181:LEU:HA	39:BE:181:LEU:HD13	1.69	0.44
40:BF:126:VAL:HG22	40:BF:194:MET:O	2.18	0.44
40:BF:183:VAL:O	40:BF:187:VAL:HG22	2.17	0.44
41:BG:12:TYR:HA	41:BG:16:ARG:HG2	1.98	0.44
41:BG:106:LEU:C	41:BG:111:LEU:HD13	2.41	0.44
43:BI:73:GLU:OE2	43:BI:137:PRO:O	2.35	0.44
46:BN:19:GLU:C	46:BN:21:LYS:N	2.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:74:ARG:NH2	46:BN:101:HIS:HB3	2.32	0.44
48:BP:71:VAL:HG13	48:BP:72:PRO:N	2.33	0.44
49:BQ:58:PHE:O	49:BQ:59:ARG:O	2.35	0.44
51:BS:49:VAL:HG21	51:BS:77:ALA:HA	1.99	0.44
51:BS:106:ARG:O	51:BS:107:GLU:C	2.60	0.44
52:BT:27:THR:OG1	52:BT:28:VAL:N	2.50	0.44
54:BV:2:PHE:C	54:BV:41:GLY:HA2	2.43	0.44
54:BV:76:LYS:H	54:BV:87:HIS:CD2	2.36	0.44
1:CA:431:A:H2'	1:CA:432:A:O4'	2.17	0.44
1:CA:557:G:C6	1:CA:558:G:C6	3.06	0.44
1:CA:1003:G:H8	1:CA:1003:G:O5'	2.00	0.44
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.53	0.44
1:CA:1240:U:H4'	1:CA:1241:G:OP2	2.17	0.44
1:CA:1279:A:O2'	1:CA:1281:U:OP2	2.29	0.44
1:CA:1465:C:H2'	1:CA:1466:C:O4'	2.17	0.44
2:CB:17:PHE:HB3	2:CB:44:LEU:HD11	1.99	0.44
2:CB:236:TYR:HB3	2:CB:237:ALA:H	1.59	0.44
11:CK:50:TYR:N	11:CK:50:TYR:CD1	2.84	0.44
26:D1:39:LYS:HD2	26:D1:39:LYS:C	2.43	0.44
26:D1:56:GLN:HE21	26:D1:84:GLY:HA2	1.82	0.44
27:D2:36:ARG:O	27:D2:37:PHE:HB2	2.18	0.44
33:D8:46:ARG:HH22	48:DP:65:ARG:NH1	2.15	0.44
35:DA:271(E):U:H2'	35:DA:271(F):C:H6	1.83	0.44
35:DA:271(J):C:H5'	35:DA:271(K):U:OP2	2.17	0.44
35:DA:742:G:H2'	35:DA:743:G:C8	2.52	0.44
35:DA:892:G:C8	35:DA:893:C:C5	3.05	0.44
35:DA:1084:A:C2	35:DA:1085:A:N1	2.86	0.44
35:DA:1412:A:H8	35:DA:1412:A:OP2	2.00	0.44
35:DA:1507:A:O2'	35:DA:1509(A):A:N1	2.44	0.44
35:DA:1803:A:N1	35:DA:1822:G:O2'	2.44	0.44
35:DA:2334:G:N3	51:DS:18:ILE:HD13	2.32	0.44
39:DE:101:ARG:C	39:DE:201:THR:OG1	2.61	0.44
39:DE:201:THR:HG22	39:DE:202:LYS:N	2.25	0.44
42:DH:126:PRO:HD2	42:DH:130:ARG:O	2.18	0.44
43:DI:122:GLU:HB3	43:DI:126:TYR:OH	2.17	0.44
48:DP:107:LYS:C	48:DP:108:LYS:HG2	2.41	0.44
53:DU:33:ARG:O	53:DU:37:GLU:HG3	2.18	0.44
54:DV:56:SER:O	54:DV:57:VAL:HG23	2.18	0.44
54:DV:63:GLY:C	54:DV:97:LYS:HB2	2.41	0.44
56:DX:72:LYS:O	56:DX:74:PRO:HD3	2.18	0.44
1:AA:148:G:H22	1:AA:174:C:H5	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:170:U:O3'	1:AA:171:A:H8	2.01	0.44
1:AA:170:U:O3'	1:AA:171:A:C8	2.71	0.44
1:AA:653:A:O5'	8:AH:56:LYS:NZ	2.49	0.44
1:AA:1138:G:H22	1:AA:1140:C:C1'	2.31	0.44
1:AA:1210:C:H5'	1:AA:1214:C:N4	2.33	0.44
1:AA:1238:A:H2	1:AA:1241:G:N3	2.15	0.44
4:AD:65:ARG:NH1	4:AD:70:ILE:O	2.51	0.44
4:AD:119:GLN:HG3	4:AD:123:HIS:NE2	2.32	0.44
6:AF:52:ILE:HD12	6:AF:87:ARG:NH2	2.33	0.44
6:AF:61:LEU:HD23	6:AF:63:TYR:CE1	2.53	0.44
12:AL:70:ILE:HG21	12:AL:75:HIS:CE1	2.53	0.44
16:AP:58:TYR:CZ	16:AP:62:VAL:HG11	2.52	0.44
19:AS:64:GLU:HG3	19:AS:65:ASN:N	2.33	0.44
23:AW:30:G:N2	23:AW:40:C:C2	2.82	0.44
23:AW:66:U:O2'	23:AW:67:C:OP1	2.31	0.44
28:B3:22:ALA:HB2	28:B3:49:LYS:HD3	2.00	0.44
35:BA:224:G:N7	35:BA:420:C:H4'	2.32	0.44
35:BA:572:A:H2'	35:BA:573:G:O4'	2.17	0.44
35:BA:860:U:C2'	35:BA:861:A:O5'	2.66	0.44
35:BA:1247:A:O2'	35:BA:1248:G:H5"	2.17	0.44
35:BA:1264:G:H2'	35:BA:2014:A:N6	2.33	0.44
35:BA:1450(A):C:C2'	35:BA:1451:C:H5'	2.47	0.44
35:BA:1577:C:N4	35:BA:1578:U:C4	2.86	0.44
35:BA:1786:A:C2	35:BA:2606:C:H1'	2.36	0.44
35:BA:1799:G:H8	35:BA:1799:G:H2'	1.63	0.44
35:BA:1975:G:H2'	35:BA:1976:U:O4'	2.16	0.44
35:BA:2299:G:C2	35:BA:2318:G:H8	2.35	0.44
35:BA:2305:A:C2'	35:BA:2306:C:H5"	2.46	0.44
35:BA:2526:G:C6	35:BA:2527:C:C4	3.06	0.44
35:BA:2882:A:OP1	50:BR:96:ARG:HD3	2.17	0.44
36:BB:63:G:C6	36:BB:64:C:C4	3.06	0.44
51:BS:30:ARG:CZ	51:BS:62:LYS:HE2	2.48	0.44
54:BV:5:VAL:CG2	54:BV:36:PRO:HB2	2.47	0.44
56:BX:25:LYS:HG3	56:BX:87:GLN:NE2	2.32	0.44
1:CA:32:A:H2'	1:CA:33:A:C8	2.53	0.44
1:CA:433:C:H2'	1:CA:434:U:H6	1.83	0.44
1:CA:980:C:H5'	1:CA:981:U:C5	2.53	0.44
1:CA:1265:G:N3	1:CA:1265:G:H2'	2.33	0.44
4:CD:83:SER:HA	4:CD:89:THR:CG2	2.47	0.44
5:CE:81:GLU:CB	5:CE:90:VAL:HG12	2.48	0.44
6:CF:41:GLU:CD	18:CR:35:ARG:HH22	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:73:GLN:O	9:CI:77:ILE:HG13	2.17	0.44
9:CI:90:PRO:HA	9:CI:93:ARG:HG2	1.99	0.44
10:CJ:47:PHE:CZ	14:CN:37:PHE:HE1	2.36	0.44
15:CO:78:TYR:O	15:CO:79:ARG:C	2.61	0.44
15:CO:86:GLY:C	15:CO:87:ILE:HD13	2.43	0.44
22:CV:60:U:H5"	22:CV:61:C:C5	2.50	0.44
26:D1:19:GLN:NE2	26:D1:44:PRO:HG3	2.32	0.44
33:D8:4:MET:SD	33:D8:61:LEU:HD23	2.57	0.44
35:DA:34:C:O2'	35:DA:35:G:P	2.76	0.44
35:DA:335:C:H5'	57:DY:73:ARG:NH2	2.33	0.44
35:DA:471:A:N6	35:DA:472:A:C2	2.86	0.44
35:DA:1042:G:C1'	35:DA:1114:G:H22	2.26	0.44
35:DA:1232:G:C6	35:DA:1233:C:C4	3.05	0.44
35:DA:1290:C:H2'	35:DA:1291:C:C6	2.53	0.44
35:DA:1322:A:H2'	35:DA:1323:U:C6	2.52	0.44
35:DA:1344:G:H4'	35:DA:1384:A:C5	2.52	0.44
37:DC:18:LYS:HD2	37:DC:22:ILE:HG13	2.00	0.44
40:DF:148:LEU:HD21	40:DF:191:ARG:NE	2.25	0.44
43:DI:77:LEU:HB2	43:DI:140:LEU:CD2	2.24	0.44
47:DO:22:ILE:HD12	47:DO:22:ILE:HG23	1.60	0.44
53:DU:30:LYS:HD3	53:DU:30:LYS:HA	1.62	0.44
53:DU:92:ARG:HH11	54:DV:11:GLN:C	2.26	0.44
54:DV:85:LYS:O	54:DV:87:HIS:O	2.36	0.44
1:AA:29:G:H5'	1:AA:296:U:OP1	2.17	0.44
1:AA:78:G:O2'	1:AA:79:G:H5'	2.17	0.44
1:AA:500:G:N2	1:AA:546:G:H1'	2.33	0.44
1:AA:730:G:O2'	1:AA:766:A:H5'	2.18	0.44
1:AA:1048:G:O3'	1:AA:1049:U:H3'	2.18	0.44
1:AA:1151:A:C4	1:AA:1152:A:C8	3.06	0.44
1:AA:1296:C:H5'	1:AA:1297:C:OP2	2.18	0.44
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.52	0.44
2:AB:189:ASP:C	2:AB:191:ASP:N	2.75	0.44
7:AG:104:LEU:HD22	7:AG:134:ALA:HB1	1.99	0.44
7:AG:156:TRP:OXT	7:AG:156:TRP:CG	2.70	0.44
8:AH:104:ARG:CG	8:AH:104:ARG:HD2	2.28	0.44
13:AM:21:TYR:HD1	13:AM:21:TYR:HA	1.71	0.44
16:AP:38:TYR:CZ	16:AP:50:LYS:HB2	2.53	0.44
16:AP:58:TYR:C	16:AP:60:LEU:N	2.76	0.44
22:AV:8:U:H1'	22:AV:49:C:O2	2.18	0.44
25:B0:50:ASN:HB3	25:B0:63:VAL:HG22	1.99	0.44
31:B6:30:THR:OG1	31:B6:31:PRO:CD	2.59	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:49:A:C4'	35:BA:50:U:H5'	2.47	0.44
35:BA:271(R):G:H2'	35:BA:271(S):G:C8	2.53	0.44
35:BA:355:G:H2'	35:BA:356:G:H8	1.83	0.44
35:BA:1018:C:H2'	35:BA:1019:U:H6	1.83	0.44
35:BA:1529:G:N3	35:BA:1530:C:C5	2.86	0.44
35:BA:1688:U:O2	35:BA:1700:A:H8	2.00	0.44
35:BA:1821:A:H2'	35:BA:1822:G:H8	1.82	0.44
35:BA:1992:G:O5'	35:BA:1992:G:C8	2.71	0.44
35:BA:2065:C:H1'	35:BA:2449:U:N3	2.30	0.44
35:BA:2115:G:O2'	35:BA:2117:A:OP2	2.31	0.44
35:BA:2736:G:H2'	35:BA:2737:G:O4'	2.18	0.44
35:BA:2787:C:H1'	39:BE:61:ARG:O	2.18	0.44
35:BA:2864:G:H2'	35:BA:2865:U:O4'	2.16	0.44
42:BH:18:GLU:O	42:BH:19:VAL:HG23	2.17	0.44
43:BI:72:LEU:HD11	43:BI:101:LEU:HD21	1.99	0.44
49:BQ:21:THR:O	49:BQ:99:PRO:O	2.36	0.44
53:BU:29:SER:O	53:BU:30:LYS:HD3	2.18	0.44
55:BW:11:ARG:HA	55:BW:11:ARG:HD2	1.91	0.44
58:BZ:76:LEU:HA	58:BZ:83:PRO:HA	1.99	0.44
1:CA:119:A:H4'	1:CA:120:A:C8	2.53	0.44
1:CA:129(A):G:N2	1:CA:189(E):U:H1'	2.33	0.44
1:CA:460:G:N2	1:CA:472:A:H62	2.15	0.44
1:CA:645:C:C4	1:CA:646:U:C4	3.06	0.44
1:CA:719:C:H1'	18:CR:49:LYS:HG2	2.00	0.44
1:CA:1037:C:H2'	1:CA:1038:C:C6	2.52	0.44
1:CA:1170:A:H2'	1:CA:1170:A:N3	2.33	0.44
1:CA:1189:C:H5"	1:CA:1190:G:OP2	2.18	0.44
1:CA:1525:G:H2'	1:CA:1526:G:O4'	2.17	0.44
2:CB:212:GLN:HG3	2:CB:235:SER:HA	1.99	0.44
4:CD:32:ALA:HA	4:CD:35:ARG:HB2	2.00	0.44
6:CF:19:LEU:HD11	6:CF:59:TYR:CD1	2.53	0.44
8:CH:84:ARG:CZ	8:CH:84:ARG:HB3	2.48	0.44
9:CI:77:ILE:HG22	9:CI:81:ILE:HD11	2.00	0.44
10:CJ:20:ALA:O	10:CJ:22:LYS:N	2.44	0.44
11:CK:85:ARG:HD3	11:CK:111:ASP:O	2.16	0.44
21:CU:3:LYS:HB3	21:CU:14:TRP:CD1	2.52	0.44
23:CY:44:G:H3'	23:CY:44:G:N3	2.32	0.44
26:D1:11:ARG:HH12	26:D1:61:ARG:NH2	2.15	0.44
35:DA:42:G:H2'	35:DA:43:A:O4'	2.18	0.44
35:DA:614(A):U:H4'	35:DA:614(B):G:OP1	2.18	0.44
35:DA:1432:C:H2'	35:DA:1433:U:H5"	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2100:G:C6	35:DA:2190:G:C6	3.06	0.44
35:DA:2668:G:C2	35:DA:2669:G:C8	3.05	0.44
38:DD:71:ASP:OD2	38:DD:103:ARG:NH2	2.50	0.44
39:DE:56:PRO:O	39:DE:57:LYS:C	2.61	0.44
40:DF:32:LEU:HD21	40:DF:109:GLY:N	2.33	0.44
42:DH:21:PRO:C	42:DH:23:ARG:N	2.76	0.44
49:DQ:39:PRO:HA	49:DQ:97:VAL:O	2.18	0.44
49:DQ:63:LYS:O	49:DQ:64:ILE:C	2.60	0.44
50:DR:17:ARG:HG2	50:DR:21:TYR:CE2	2.53	0.44
51:DS:15:ARG:HG2	51:DS:16:ASN:H	1.83	0.44
56:DX:35:THR:C	56:DX:36:LYS:HD3	2.42	0.44
1:AA:189(L):G:H2'	1:AA:190:U:H6	1.81	0.44
1:AA:242:C:C3'	1:AA:243:A:H5"	2.48	0.44
1:AA:391:G:C6	1:AA:392:G:C5	3.06	0.44
1:AA:500:G:H2'	1:AA:501:C:C6	2.53	0.44
1:AA:574:A:H5"	1:AA:575:G:OP2	2.18	0.44
1:AA:1014:A:H4'	19:AS:14:HIS:ND1	2.33	0.44
1:AA:1055:A:N7	1:AA:1206:G:N1	2.66	0.44
1:AA:1073:U:O2	2:AB:104:ASN:ND2	2.51	0.44
1:AA:1124:G:H3'	1:AA:1145:C:H5	1.83	0.44
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.17	0.44
2:AB:32:ILE:HD11	2:AB:190:THR:HG22	2.00	0.44
2:AB:63:MET:HE2	2:AB:63:MET:HB3	1.58	0.44
2:AB:134:GLU:C	2:AB:138:LEU:HB2	2.43	0.44
5:AE:104:ALA:O	5:AE:107:ARG:HB3	2.18	0.44
6:AF:100:ASN:HB2	18:AR:27:GLY:O	2.18	0.44
7:AG:59:LEU:HG	7:AG:63:LYS:NZ	2.33	0.44
7:AG:78:ARG:HD3	7:AG:78:ARG:H	1.81	0.44
8:AH:34:GLU:HA	8:AH:37:ARG:CZ	2.48	0.44
9:AI:48:GLU:H	9:AI:49:PRO:CD	2.28	0.44
11:AK:122:LYS:HE3	11:AK:124:LYS:H	1.83	0.44
12:AL:45:PRO:HD2	12:AL:51:ALA:H	1.83	0.44
13:AM:91:ARG:HH11	13:AM:91:ARG:HG2	1.83	0.44
23:AW:7:A:H8	23:AW:7:A:O5'	2.01	0.44
25:B0:17:GLN:O	25:B0:19:LYS:NZ	2.41	0.44
33:B8:6:THR:HG21	35:BA:243:U:OP1	2.18	0.44
33:B8:61:LEU:HA	33:B8:61:LEU:HD12	1.66	0.44
35:BA:16:G:H2'	35:BA:17:G:H8	1.83	0.44
35:BA:84:A:H5"	57:BY:4:LYS:CE	2.48	0.44
35:BA:373:U:H2'	35:BA:374:A:H8	1.83	0.44
35:BA:781:A:H2	35:BA:1776:G:N3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:804:A:H2'	35:BA:806:C:C4	2.53	0.44
35:BA:1099:G:N7	35:BA:1100:C:C4	2.86	0.44
35:BA:1367:A:H5'	35:BA:1368:G:OP2	2.18	0.44
35:BA:1755:A:N6	35:BA:2694:G:O2'	2.51	0.44
35:BA:2584:U:H5	35:BA:2585:U:C4	2.36	0.44
35:BA:2652:C:N3	35:BA:2668:G:N2	2.65	0.44
35:BA:2748:A:H4'	42:BH:66:GLY:C	2.43	0.44
38:BD:54:ARG:C	38:BD:218:ARG:HH11	2.23	0.44
38:BD:101:GLU:HG3	38:BD:102:LYS:H	1.83	0.44
39:BE:93:VAL:HG23	39:BE:182:LEU:HD22	2.00	0.44
46:BN:66:LYS:O	46:BN:67:LEU:C	2.60	0.44
47:BO:14:THR:HG21	47:BO:86:ILE:CG2	2.47	0.44
49:BQ:5:ARG:CZ	49:BQ:6:ARG:N	2.79	0.44
52:BT:108:ARG:O	52:BT:110:ILE:N	2.51	0.44
53:BU:80:ILE:O	53:BU:83:LEU:N	2.51	0.44
54:BV:60:GLU:O	54:BV:61:VAL:C	2.60	0.44
54:BV:69:LYS:HE3	54:BV:71:LEU:CD1	2.46	0.44
58:BZ:63:ASP:C	58:BZ:65:GLN:H	2.25	0.44
58:BZ:67:LEU:HD23	58:BZ:67:LEU:HA	1.84	0.44
1:CA:142:G:O2'	1:CA:195:A:N6	2.51	0.44
1:CA:458:C:H3'	1:CA:460:G:C8	2.52	0.44
1:CA:657:G:C2	1:CA:658:G:C8	3.06	0.44
1:CA:718:G:H5'	11:CK:117:ASN:HB2	2.00	0.44
1:CA:870:U:H4'	1:CA:871:U:H5"	2.00	0.44
1:CA:1145:C:O2'	1:CA:1146:A:O5'	2.35	0.44
1:CA:1245:A:H8	1:CA:1245:A:O5'	2.01	0.44
8:CH:64:LYS:HD2	8:CH:79:VAL:HG11	2.00	0.44
16:CP:31:LYS:HB2	16:CP:31:LYS:HE3	1.78	0.44
22:CV:58:A:C6	22:CV:61:C:C2	3.06	0.44
23:CW:6:G:N3	23:CW:68:C:N4	2.66	0.44
23:CW:40:C:H2'	23:CW:41:C:C5	2.52	0.44
23:CW:76:A:N6	35:DA:2422:A:O4'	2.51	0.44
26:D1:19:GLN:NE2	35:DA:379:G:H21	2.15	0.44
27:D2:13:ALA:O	27:D2:14:ARG:HG3	2.18	0.44
27:D2:26:ARG:HB3	27:D2:30:ARG:NH2	2.32	0.44
31:D6:27:LYS:CE	35:DA:2286:A:H5'	2.08	0.44
31:D6:30:THR:HG23	31:D6:31:PRO:HD2	2.00	0.44
35:DA:286:C:H2'	35:DA:287:C:H6	1.83	0.44
35:DA:530:G:N1	35:DA:2022:U:OP1	2.50	0.44
35:DA:1071:G:N3	35:DA:1089:G:N2	2.65	0.44
35:DA:1485:G:H22	35:DA:1504:C:N4	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2208:A:H1'	35:DA:2219:G:C5	2.53	0.44
35:DA:2287:A:C2	35:DA:2346:A:N1	2.83	0.44
35:DA:2463:C:O2'	35:DA:2464:C:H5'	2.18	0.44
35:DA:2631:G:C5	35:DA:2632:A:C8	3.06	0.44
35:DA:2793:G:O6	35:DA:2804:C:C2	2.71	0.44
37:DC:18:LYS:N	37:DC:221:SER:HA	2.32	0.44
40:DF:74:ARG:O	40:DF:75:HIS:CG	2.71	0.44
43:DI:29:TYR:O	43:DI:33:ARG:HD2	2.18	0.44
51:DS:89:ARG:HE	51:DS:89:ARG:HB2	1.32	0.44
56:DX:36:LYS:HE2	56:DX:38:GLU:HB2	1.99	0.44
56:DX:39:ILE:O	56:DX:43:VAL:HG12	2.17	0.44
58:DZ:26:GLY:HA2	58:DZ:85:HIS:NE2	2.33	0.44
1:AA:144:G:H2'	1:AA:145:G:O4'	2.18	0.43
1:AA:429:U:O2'	4:AD:22:LYS:HE3	2.18	0.43
1:AA:493:G:H2'	1:AA:494:U:O2	2.18	0.43
1:AA:545:C:O2'	1:AA:549:C:H5"	2.18	0.43
1:AA:628:G:H2'	1:AA:629:G:C8	2.54	0.43
1:AA:804:U:H5"	1:AA:805:C:OP2	2.18	0.43
1:AA:815:A:N7	1:AA:1509:C:O2'	2.49	0.43
1:AA:1260:C:H3'	1:AA:1260:C:H6	1.83	0.43
1:AA:1418:A:H2	35:BA:1948:G:N3	2.15	0.43
2:AB:44:LEU:O	2:AB:48:MET:HG3	2.18	0.43
4:AD:188:LEU:O	4:AD:190:ASP:N	2.51	0.43
9:AI:86:VAL:HA	9:AI:92:TYR:CD2	2.53	0.43
9:AI:93:ARG:C	9:AI:95:LYS:H	2.26	0.43
20:AT:48:LYS:HB2	20:AT:52:ALA:HB2	1.99	0.43
20:AT:53:LEU:C	20:AT:55:ILE:N	2.74	0.43
26:B1:50:ARG:NE	26:B1:61:ARG:HD2	2.32	0.43
32:B7:13:ALA:HB1	35:BA:125:G:H1'	1.99	0.43
33:B8:59:LYS:HZ3	33:B8:59:LYS:HG2	1.43	0.43
35:BA:44:G:O3'	35:BA:45:C:H4'	2.18	0.43
35:BA:492:A:C2	35:BA:493:G:H1'	2.53	0.43
35:BA:1386:C:C2	35:BA:1387:C:C5	3.06	0.43
35:BA:2012:G:C4'	55:BW:96:ILE:HD11	2.37	0.43
35:BA:2697:G:C2	35:BA:2698:U:C2	3.06	0.43
35:BA:2708:G:H5'	50:BR:68:ARG:HB2	2.00	0.43
36:BB:40:U:H5"	36:BB:41:U:OP2	2.18	0.43
39:BE:105:THR:HG21	39:BE:164:ARG:NH2	2.33	0.43
40:BF:53:THR:O	40:BF:54:ARG:CB	2.66	0.43
40:BF:135:LYS:HB2	40:BF:138:GLU:CG	2.48	0.43
41:BG:47:LYS:HB3	41:BG:48:GLU:H	1.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BN:23:LEU:HD11	46:BN:98:VAL:HG12	1.98	0.43
48:BP:45:LEU:HB3	48:BP:46:LYS:H	1.44	0.43
48:BP:64:LYS:O	48:BP:65:ARG:C	2.61	0.43
48:BP:87:ASP:O	48:BP:89:ALA:N	2.51	0.43
51:BS:34:HIS:CD2	51:BS:54:LEU:HB2	2.53	0.43
1:CA:66:G:C2	1:CA:67:C:C6	3.06	0.43
1:CA:152:A:C8	1:CA:153:C:C5	3.06	0.43
1:CA:322:C:H2'	1:CA:323:U:O4'	2.18	0.43
1:CA:499:A:C6	1:CA:547:A:C8	3.05	0.43
1:CA:659:U:C2	1:CA:660:G:C8	3.06	0.43
1:CA:977:A:C8	1:CA:1223:C:N3	2.86	0.43
1:CA:1290:G:C4	1:CA:1291:G:C8	3.06	0.43
1:CA:1305:G:OP2	1:CA:1305:G:H8	2.01	0.43
1:CA:1373:G:H5"	7:CG:36:LYS:HD2	1.99	0.43
2:CB:68:ILE:O	2:CB:91:PRO:HD2	2.17	0.43
5:CE:15:ARG:HG3	5:CE:16:THR:N	2.33	0.43
5:CE:67:VAL:HG22	5:CE:68:GLU:O	2.18	0.43
6:CF:38:GLU:OE1	6:CF:64:GLN:HG2	2.17	0.43
12:CL:6:THR:HG23	12:CL:9:GLN:OE1	2.18	0.43
12:CL:33:ARG:O	12:CL:85:ILE:HG22	2.18	0.43
12:CL:42:THR:HG22	12:CL:54:LYS:HG3	2.00	0.43
17:CQ:81:ARG:O	17:CQ:84:LEU:N	2.50	0.43
18:CR:31:LEU:HG	18:CR:65:ILE:HD13	1.99	0.43
19:CS:8:GLY:HA3	19:CS:10:PHE:HE1	1.83	0.43
21:CU:6:ARG:HD3	21:CU:15:ARG:HE	1.81	0.43
23:CW:40:C:H3'	23:CW:40:C:C6	2.52	0.43
28:D3:5:LYS:HB3	28:D3:36:VAL:CG1	2.48	0.43
29:D4:6:HIS:CA	41:DG:67:LYS:HE3	2.48	0.43
31:D6:8:LYS:HE2	35:DA:2285:C:OP2	2.18	0.43
31:D6:25:LYS:CD	33:D8:35:GLN:HE21	2.30	0.43
35:DA:117:G:C6	35:DA:119:A:C6	3.06	0.43
35:DA:271(M):G:C4	35:DA:271(O):C:N3	2.86	0.43
35:DA:438:G:O2'	35:DA:440:G:H5'	2.17	0.43
35:DA:664:C:H4'	35:DA:941:A:OP1	2.18	0.43
35:DA:719:C:O2'	35:DA:720:C:H5'	2.18	0.43
35:DA:871:U:H6	35:DA:871:U:O5'	2.01	0.43
35:DA:879:G:C2	35:DA:880:G:H1'	2.52	0.43
35:DA:1301:A:C8	35:DA:1303:G:C8	3.06	0.43
35:DA:1445(A):C:H42	35:DA:1466:G:H1	1.66	0.43
35:DA:1688:U:O2	35:DA:1700:A:H5"	2.17	0.43
35:DA:2125:G:OP1	37:DC:70:LYS:HE2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2443:C:O2'	35:DA:2444:G:H5'	2.17	0.43
35:DA:2524:G:H8	35:DA:2524:G:C5'	2.30	0.43
35:DA:2556:C:H2'	35:DA:2557:G:O4'	2.17	0.43
37:DC:47:LEU:HD11	37:DC:173:ALA:H	1.83	0.43
37:DC:57:ASN:CG	37:DC:58:VAL:H	2.26	0.43
37:DC:74:VAL:O	37:DC:91:ALA:HB2	2.18	0.43
39:DE:52:LEU:HD21	52:DT:1:MET:CG	2.44	0.43
40:DF:46:ARG:HG2	40:DF:48:THR:HG23	2.00	0.43
41:DG:114:ILE:HG12	41:DG:140:ILE:HG21	2.00	0.43
41:DG:121:ASN:HA	41:DG:122:PRO:HD3	1.87	0.43
48:DP:18:ARG:C	48:DP:20:GLY:H	2.24	0.43
49:DQ:41:TRP:HB3	49:DQ:94:VAL:HB	2.00	0.43
49:DQ:68:ILE:HD13	49:DQ:103:MET:HE2	2.00	0.43
52:DT:8:LYS:N	52:DT:8:LYS:CD	2.77	0.43
58:DZ:100:VAL:O	58:DZ:123:ASP:HB2	2.18	0.43
1:AA:79:G:H1'	1:AA:80:G:OP1	2.19	0.43
1:AA:113:G:H1'	1:AA:354:G:C5'	2.48	0.43
1:AA:125:U:H2'	1:AA:126:G:C8	2.53	0.43
1:AA:461:A:C2	1:AA:471:G:C2	3.06	0.43
1:AA:546:G:OP1	4:AD:73:ARG:NE	2.50	0.43
1:AA:715:A:H2'	1:AA:716:A:C8	2.53	0.43
1:AA:867:G:H2'	1:AA:868:C:C6	2.53	0.43
1:AA:936:C:O2	1:AA:1382:C:N4	2.51	0.43
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.82	0.43
2:AB:54:THR:O	2:AB:58:ILE:HG12	2.18	0.43
3:AC:67:THR:HG23	3:AC:102:ASN:HB3	2.00	0.43
4:AD:13:ARG:HB3	4:AD:38:TYR:O	2.18	0.43
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.33	0.43
7:AG:15:ASP:HB2	7:AG:20:ASP:O	2.18	0.43
11:AK:48:ILE:C	11:AK:50:TYR:H	2.25	0.43
13:AM:91:ARG:HG2	13:AM:91:ARG:NH1	2.33	0.43
15:AO:17:ARG:HD3	15:AO:26:GLU:HG3	2.00	0.43
27:B2:36:ARG:HA	27:B2:36:ARG:HD2	1.85	0.43
33:B8:49:VAL:HB	33:B8:53:PRO:HD3	2.00	0.43
35:BA:225:A:C2'	35:BA:226:G:H5'	2.48	0.43
35:BA:685:A:OP1	35:BA:788:A:N6	2.51	0.43
35:BA:707:G:H1	35:BA:724:U:H3	1.66	0.43
35:BA:1269:A:H2'	35:BA:1270:C:C6	2.53	0.43
35:BA:1389:G:H2'	35:BA:1390:U:C6	2.53	0.43
35:BA:1409:C:H2'	35:BA:1410:G:C8	2.53	0.43
35:BA:1678:G:H22	35:BA:1989:G:H22	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1794:U:H1'	35:BA:1900:A:N3	2.32	0.43
35:BA:2011:U:H2'	35:BA:2012:G:H5'	1.99	0.43
35:BA:2485:G:H2'	35:BA:2485:G:N3	2.32	0.43
35:BA:2661:G:H2'	35:BA:2662:A:C4	2.53	0.43
35:BA:2680:C:O2'	39:BE:187:ALA:HB1	2.19	0.43
35:BA:2783:G:H2'	35:BA:2784:C:C6	2.52	0.43
35:BA:2840:C:H2'	35:BA:2841:C:C6	2.53	0.43
35:BA:2854:G:H2'	35:BA:2855:C:C6	2.53	0.43
38:BD:123:ALA:HB3	38:BD:131:LEU:HD11	2.00	0.43
38:BD:233:HIS:CD2	38:BD:233:HIS:O	2.72	0.43
40:BF:196:LEU:HD13	40:BF:196:LEU:O	2.19	0.43
42:BH:29:PRO:HB2	42:BH:30:LYS:NZ	2.34	0.43
43:BI:102:SER:C	43:BI:104:GLN:N	2.77	0.43
48:BP:30:THR:O	48:BP:31:ALA:HB3	2.17	0.43
49:BQ:23:GLY:HA2	49:BQ:101:ARG:HH11	1.83	0.43
50:BR:79:LEU:HD12	50:BR:83:ILE:HG21	1.99	0.43
50:BR:98:LEU:HD12	50:BR:113:LEU:HD23	2.00	0.43
53:BU:14:HIS:O	53:BU:15:LYS:C	2.61	0.43
53:BU:50:ARG:C	53:BU:54:LYS:HE3	2.35	0.43
54:BV:39:LEU:HD12	54:BV:53:GLU:C	2.42	0.43
58:BZ:29:TYR:CE1	58:BZ:87:ASP:HB2	2.51	0.43
1:CA:64:G:N2	1:CA:67:C:N4	2.66	0.43
1:CA:115:G:H1'	1:CA:116:A:N7	2.33	0.43
1:CA:141:A:H2'	1:CA:142:G:O4'	2.19	0.43
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.19	0.43
1:CA:1075:C:OP1	2:CB:103:THR:HG21	2.18	0.43
1:CA:1085:U:C2	1:CA:1094:G:O6	2.71	0.43
1:CA:1145:C:O2'	1:CA:1146:A:P	2.75	0.43
1:CA:1253:G:C2'	1:CA:1254:C:H5'	2.48	0.43
1:CA:1350:A:HO2'	7:CG:33:ASP:CG	2.25	0.43
2:CB:142:LEU:HD21	2:CB:146:GLN:OE1	2.17	0.43
3:CC:29:TYR:O	3:CC:33:LEU:HB3	2.18	0.43
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	2.01	0.43
9:CI:76:ALA:O	9:CI:79:LEU:HB3	2.18	0.43
19:CS:11:VAL:HG11	19:CS:39:THR:OG1	2.19	0.43
19:CS:32:LYS:HB2	19:CS:32:LYS:HE3	1.83	0.43
22:CV:2:G:H2'	22:CV:2:G:N3	2.33	0.43
22:CV:4:G:O6	22:CV:70:G:C6	2.70	0.43
26:D1:41:ARG:HH21	35:DA:190:A:P	2.40	0.43
26:D1:56:GLN:O	26:D1:57:GLU:HB2	2.18	0.43
26:D1:75:GLU:O	26:D1:75:GLU:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:D1:94:LEU:HD23	26:D1:95:LEU:N	2.27	0.43
30:D5:56:LYS:HD2	30:D5:56:LYS:HA	1.77	0.43
31:D6:24:GLU:OE1	33:D8:36:LYS:HG2	2.18	0.43
35:DA:11:G:H8	35:DA:11:G:O5'	2.01	0.43
35:DA:80:G:H2'	35:DA:81:G:H5'	2.00	0.43
35:DA:90:U:O2'	35:DA:92:A:P	2.76	0.43
35:DA:193:U:C5'	35:DA:193:U:C6	3.00	0.43
35:DA:720:C:H2'	35:DA:721:C:H6	1.83	0.43
35:DA:814:C:C5'	54:DV:86:GLY:HA3	2.48	0.43
35:DA:827:U:H2'	35:DA:2068:U:C2	2.54	0.43
35:DA:1089:G:O2'	35:DA:1090:U:OP2	2.31	0.43
35:DA:1368:G:O2'	35:DA:1369:G:H5'	2.18	0.43
35:DA:2114:A:H62	35:DA:2117:A:N6	2.16	0.43
35:DA:2126:A:H1'	35:DA:2127:G:OP2	2.18	0.43
35:DA:2787:C:O4'	39:DE:61:ARG:HB2	2.18	0.43
39:DE:144:ARG:HB3	39:DE:145:LYS:H	1.37	0.43
41:DG:167:GLU:HA	41:DG:170:ARG:HB3	2.01	0.43
42:DH:121:ILE:HD11	42:DH:141:VAL:HA	2.00	0.43
42:DH:145:ALA:HB1	42:DH:164:TYR:CE1	2.51	0.43
43:DI:123:LEU:HA	43:DI:142:VAL:HG21	1.99	0.43
46:DN:24:GLY:O	46:DN:28:THR:HG22	2.17	0.43
46:DN:133:GLN:C	46:DN:134:ARG:HD3	2.43	0.43
48:DP:83:VAL:CG1	48:DP:112:LEU:HD21	2.48	0.43
52:DT:88:ILE:HG22	52:DT:89:VAL:H	1.83	0.43
58:DZ:98:MET:HE3	58:DZ:98:MET:HB2	1.87	0.43
1:AA:185:A:C5	1:AA:186:C:H5	2.37	0.43
1:AA:189(B):C:C2	1:AA:189(I):G:N2	2.85	0.43
1:AA:278:G:O4'	1:AA:282:A:H1'	2.18	0.43
1:AA:598:U:O2'	1:AA:599:C:H5'	2.17	0.43
1:AA:678:U:H3	1:AA:713:G:N2	2.16	0.43
1:AA:767:A:H2'	1:AA:768:A:O4'	2.17	0.43
1:AA:980:C:H3'	1:AA:981:U:C6	2.53	0.43
1:AA:1065:U:C5	1:AA:1190:G:H1'	2.53	0.43
1:AA:1142:G:H2'	1:AA:1143:G:C8	2.53	0.43
1:AA:1149:C:H5'	9:AI:14:VAL:HG21	2.00	0.43
1:AA:1250:A:H4'	9:AI:68:GLY:O	2.18	0.43
2:AB:31:TYR:CE2	2:AB:194:PRO:HB3	2.53	0.43
3:AC:94:LEU:HD12	3:AC:95:THR:H	1.82	0.43
7:AG:152:ALA:HB1	7:AG:155:ARG:NH2	2.34	0.43
7:AG:152:ALA:O	7:AG:155:ARG:N	2.51	0.43
8:AH:91:ARG:NH1	17:AQ:33:GLY:HA3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:108:GLY:O	8:AH:122:ARG:NH2	2.52	0.43
12:AL:41:ARG:HG2	12:AL:42:THR:N	2.32	0.43
15:AO:24:SER:OG	15:AO:27:VAL:HG23	2.19	0.43
16:AP:42:ARG:C	16:AP:44:THR:H	2.27	0.43
20:AT:20:LEU:HA	20:AT:20:LEU:HD23	1.74	0.43
23:AW:17:C:N4	35:BA:2180:U:O3'	2.38	0.43
26:B1:46:LEU:O	26:B1:47:GLN:HB3	2.18	0.43
26:B1:92:LYS:C	26:B1:94:LEU:N	2.75	0.43
31:B6:9:LEU:HD23	31:B6:28:ARG:HG3	2.00	0.43
35:BA:195:A:H5"	35:BA:196:A:OP2	2.17	0.43
35:BA:323:G:C6	35:BA:333:G:C4	3.06	0.43
35:BA:712:G:H2'	35:BA:713:G:O4'	2.18	0.43
35:BA:844:C:H3'	35:BA:845:G:C8	2.53	0.43
35:BA:848:G:C4	35:BA:933:A:H8	2.36	0.43
35:BA:1047:G:O2'	35:BA:1048:A:OP2	2.30	0.43
35:BA:1301:A:N1	35:BA:1626:G:O2'	2.41	0.43
35:BA:1339:G:N2	35:BA:1603:A:N3	2.66	0.43
35:BA:1450:G:OP2	35:BA:1450:G:C8	2.71	0.43
35:BA:2377:A:H2'	35:BA:2378:A:C8	2.53	0.43
35:BA:2504:U:H5"	35:BA:2505:G:OP2	2.18	0.43
35:BA:2719:G:H2'	35:BA:2720:U:OP2	2.18	0.43
38:BD:12:SER:OG	38:BD:208:LYS:HB3	2.17	0.43
39:BE:2:LYS:HD2	39:BE:95:ILE:HG23	2.00	0.43
39:BE:67:PHE:O	39:BE:68:ALA:C	2.61	0.43
39:BE:111:ARG:CA	50:BR:3:HIS:HE1	2.30	0.43
40:BF:84:VAL:HG12	40:BF:86:GLY:H	1.82	0.43
42:BH:64:LEU:O	42:BH:68:THR:OG1	2.34	0.43
46:BN:43:THR:H	46:BN:48:MET:HE3	1.82	0.43
47:BO:78:ARG:O	52:BT:72:VAL:HA	2.18	0.43
50:BR:26:LYS:HD3	50:BR:26:LYS:N	2.33	0.43
52:BT:28:VAL:CG1	52:BT:44:ASP:OD1	2.65	0.43
53:BU:80:ILE:C	53:BU:82:GLY:N	2.76	0.43
53:BU:91:ASP:O	53:BU:95:LEU:HB2	2.18	0.43
55:BW:110:LYS:HD2	55:BW:110:LYS:HA	1.68	0.43
1:CA:582:U:H2'	1:CA:583:A:O4'	2.18	0.43
1:CA:635:G:C5	1:CA:636:U:C5	3.06	0.43
1:CA:914:A:H2'	1:CA:915:A:O4'	2.18	0.43
1:CA:1079:G:C6	1:CA:1080:A:N6	2.86	0.43
1:CA:1350:A:O2'	7:CG:33:ASP:CG	2.60	0.43
1:CA:1431:C:H2'	1:CA:1432:G:O4'	2.18	0.43
4:CD:28:SER:HB3	4:CD:30:LYS:HG2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:63:LEU:O	8:CH:64:LYS:HB3	2.17	0.43
8:CH:91:ARG:HG3	17:CQ:33:GLY:HA3	1.99	0.43
9:CI:8:GLY:HA2	9:CI:79:LEU:HD12	2.00	0.43
9:CI:45:ALA:O	9:CI:48:GLU:HB2	2.17	0.43
18:CR:29:PHE:C	18:CR:29:PHE:CD1	2.96	0.43
18:CR:58:LEU:HD13	18:CR:58:LEU:HA	1.81	0.43
18:CR:61:LYS:O	18:CR:65:ILE:HG13	2.18	0.43
21:CU:7:ARG:O	21:CU:21:TYR:CE2	2.71	0.43
23:CW:76:A:H3'	23:CW:76:A:OP2	2.18	0.43
26:D1:15:ALA:HA	26:D1:46:LEU:CD2	2.49	0.43
26:D1:83:GLU:CG	26:D1:85:LEU:HB2	2.47	0.43
33:D8:60:LEU:HD12	33:D8:60:LEU:H	1.83	0.43
35:DA:90:U:H1'	35:DA:92:A:H5"	2.01	0.43
35:DA:90:U:O2	35:DA:92:A:H5"	2.18	0.43
35:DA:271(I):G:H1	35:DA:271(M):G:H22	1.66	0.43
35:DA:1087:G:H2'	35:DA:1088:A:C5'	2.48	0.43
35:DA:1188:U:C2'	35:DA:1189:A:H5'	2.48	0.43
35:DA:1653:G:H8	35:DA:1653:G:O5'	2.02	0.43
35:DA:2019:A:O4'	53:DU:34:LYS:HE3	2.19	0.43
35:DA:2408:U:O5'	35:DA:2408:U:H6	2.01	0.43
35:DA:2751:G:N3	35:DA:2751:G:H2'	2.33	0.43
35:DA:2871:C:H5"	35:DA:2872:G:OP1	2.18	0.43
40:DF:6:VAL:HG22	40:DF:17:ARG:NH2	2.33	0.43
43:DI:62:LYS:HE2	43:DI:62:LYS:HB3	1.90	0.43
48:DP:65:ARG:HD2	48:DP:65:ARG:HA	1.51	0.43
49:DQ:82:ARG:O	49:DQ:82:ARG:HG3	2.19	0.43
50:DR:115:GLU:C	50:DR:116:LEU:HD22	2.44	0.43
52:DT:118:ARG:HA	52:DT:118:ARG:HD3	1.71	0.43
54:DV:43:GLU:HA	54:DV:43:GLU:OE2	2.18	0.43
54:DV:66:ARG:CD	54:DV:66:ARG:C	2.86	0.43
1:AA:105:G:C5	1:AA:106:C:C5	3.07	0.43
1:AA:898:G:O2'	1:AA:900:A:N7	2.43	0.43
2:AB:76:GLN:NE2	2:AB:206:ASP:O	2.51	0.43
4:AD:49:ARG:O	4:AD:50:ARG:C	2.61	0.43
4:AD:173:TRP:CE3	4:AD:193:ASP:HB3	2.53	0.43
7:AG:59:LEU:O	7:AG:63:LYS:HD3	2.18	0.43
7:AG:62:PHE:HA	7:AG:124:LEU:HD21	1.99	0.43
7:AG:92:SER:HG	7:AG:95:ARG:H	1.65	0.43
9:AI:20:ARG:O	9:AI:60:ASP:N	2.50	0.43
13:AM:22:ILE:CG2	13:AM:67:GLU:HG3	2.47	0.43
18:AR:74:ARG:HG3	18:AR:79:LEU:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:44:ALA:O	20:AT:91:LEU:HD22	2.18	0.43
25:B0:74:ARG:O	25:B0:75:LEU:HD23	2.18	0.43
26:B1:21:ARG:HA	26:B1:21:ARG:HD2	1.69	0.43
31:B6:23:THR:O	33:B8:36:LYS:N	2.51	0.43
35:BA:121:G:H5"	35:BA:149:A:O4'	2.19	0.43
35:BA:196:A:N3	35:BA:196:A:H2'	2.34	0.43
35:BA:571:A:C8	35:BA:2030:A:N6	2.86	0.43
35:BA:812:C:H2'	35:BA:813:U:H6	1.83	0.43
35:BA:1771:C:H1'	35:BA:1786:A:C8	2.53	0.43
35:BA:1865:G:C2	35:BA:1878:G:C5	3.06	0.43
35:BA:1963:U:H2'	35:BA:1963:U:O2	2.17	0.43
35:BA:2100:G:C2	35:BA:2101:G:C4	3.06	0.43
35:BA:2180:U:H2'	35:BA:2181:G:H8	1.84	0.43
35:BA:2601:C:H2'	35:BA:2603:G:C8	2.52	0.43
35:BA:2726:U:O2'	35:BA:2727:G:H8	2.02	0.43
39:BE:199:ARG:HG3	39:BE:200:GLU:HG3	2.00	0.43
42:BH:18:GLU:OE2	42:BH:25:LYS:HD2	2.19	0.43
42:BH:65:HIS:HE1	42:BH:69:ARG:NH1	2.17	0.43
42:BH:126:PRO:HD2	42:BH:130:ARG:O	2.18	0.43
43:BI:6:LEU:O	43:BI:15:VAL:CG2	2.66	0.43
50:BR:27:SER:HA	50:BR:29:LEU:CG	2.48	0.43
51:BS:9:ARG:C	51:BS:11:LYS:H	2.26	0.43
51:BS:41:ASP:OD1	51:BS:42:ASP:N	2.51	0.43
52:BT:27:THR:HG21	52:BT:49:VAL:HG22	2.00	0.43
52:BT:57:PHE:CG	52:BT:58:ASN:N	2.86	0.43
56:BX:81:VAL:HG12	56:BX:85:PRO:HD2	1.99	0.43
57:BY:53:PRO:HB2	57:BY:54:LYS:H	1.65	0.43
58:BZ:99:TYR:HA	58:BZ:124:ILE:O	2.18	0.43
1:CA:713:G:H2'	1:CA:714:G:C8	2.53	0.43
1:CA:1125:U:OP2	1:CA:1145:C:N4	2.47	0.43
1:CA:1370:G:H5'	9:CI:12:GLU:HG3	2.01	0.43
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.82	0.43
9:CI:111:ARG:HG3	14:CN:61:TRP:CD1	2.53	0.43
10:CJ:54:PHE:CD1	10:CJ:55:LYS:HB3	2.51	0.43
17:CQ:81:ARG:NH2	17:CQ:83:ASP:OD2	2.51	0.43
17:CQ:100:LYS:HE3	17:CQ:100:LYS:HB2	1.65	0.43
19:CS:15:LEU:O	19:CS:19:VAL:HG23	2.19	0.43
19:CS:30:LEU:HD23	19:CS:30:LEU:HA	1.83	0.43
22:CV:36:U:H2'	22:CV:37:A:O4'	2.19	0.43
32:D7:29:LYS:O	32:D7:32:LYS:HB3	2.17	0.43
33:D8:59:LYS:HE3	33:D8:59:LYS:HB3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:100:G:H5”	35:DA:100:G:N3	2.34	0.43
35:DA:1006:C:C2	35:DA:1138:G:N2	2.86	0.43
35:DA:1051:G:H3’	35:DA:1051:G:H8	1.83	0.43
35:DA:1168:G:H2’	35:DA:1169:G:O4’	2.18	0.43
35:DA:1578:U:O2	35:DA:1578:U:H2’	2.17	0.43
35:DA:1857:G:H8	35:DA:1857:G:O5’	2.00	0.43
35:DA:2159:G:O2’	35:DA:2160:G:OP2	2.27	0.43
35:DA:2303:G:O4’	41:DG:126:ASP:HB3	2.19	0.43
35:DA:2689:U:H5”	35:DA:2713:A:C2	2.54	0.43
35:DA:2720:U:H2’	35:DA:2721:A:C8	2.54	0.43
38:DD:158:ALA:O	38:DD:159:ALA:C	2.61	0.43
39:DE:67:PHE:C	39:DE:69:LYS:H	2.27	0.43
39:DE:101:ARG:O	39:DE:201:THR:OG1	2.36	0.43
40:DF:120:GLU:OE2	48:DP:5:ASP:OD2	2.35	0.43
43:DI:91:SER:OG	43:DI:121:LYS:N	2.51	0.43
46:DN:133:GLN:O	46:DN:134:ARG:HB3	2.19	0.43
48:DP:105:LEU:O	48:DP:106:LEU:CB	2.62	0.43
51:DS:27:SER:OG	51:DS:88:ASP:OD2	2.31	0.43
1:AA:389:A:H2’	1:AA:390:C:H5’	1.99	0.43
1:AA:686:U:O4	1:AA:703:G:O2’	2.28	0.43
1:AA:980:C:H2’	14:AN:21:TYR:HE2	1.84	0.43
1:AA:1192:C:C5	1:AA:1193:G:C8	3.06	0.43
1:AA:1243:C:H6	1:AA:1243:C:OP2	2.01	0.43
1:AA:1313:U:H5’	19:AS:6:LYS:HG3	1.99	0.43
1:AA:1392:G:O2’	1:AA:1502:A:H4’	2.18	0.43
2:AB:102:LEU:HA	2:AB:158:LEU:HD23	1.99	0.43
2:AB:119:GLU:H	2:AB:119:GLU:HG3	1.59	0.43
2:AB:137:ARG:HA	2:AB:137:ARG:HD2	1.81	0.43
5:AE:118:ILE:HA	5:AE:118:ILE:HD12	1.71	0.43
6:AF:68:PRO:HG2	6:AF:71:ARG:HG3	1.99	0.43
8:AH:2:LEU:HD21	8:AH:27:PRO:HG2	2.00	0.43
9:AI:9:ARG:HA	9:AI:13:ALA:O	2.19	0.43
17:AQ:92:ARG:O	17:AQ:93:GLN:C	2.62	0.43
23:AW:37:A:H2’	23:AW:38:A:O4’	2.19	0.43
24:AX:21:C:N4	24:AX:22:U:C4	2.86	0.43
25:B0:27:GLU:HB3	35:BA:856:C:C1’	2.47	0.43
31:B6:25:LYS:O	31:B6:26:ASN:HB2	2.17	0.43
33:B8:33:ASN:HB3	33:B8:34:TRP:H	1.27	0.43
35:BA:531:C:C5	35:BA:2035:G:C2	3.06	0.43
35:BA:581:C:P	53:BU:33:ARG:HH21	2.41	0.43
35:BA:642:G:H21	35:BA:646:A:H2	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:747:U:O2	35:BA:2014:A:H1'	2.18	0.43
35:BA:773:U:H4'	38:BD:47:GLY:HA3	1.99	0.43
35:BA:993:G:C1'	54:BV:89:GLN:HE21	2.31	0.43
35:BA:1022:G:N2	35:BA:1142(A):A:C2	2.82	0.43
35:BA:1052:C:H2'	35:BA:1052:C:O2	2.18	0.43
35:BA:1079:C:H2'	35:BA:1080:C:C6	2.54	0.43
35:BA:1084:A:H8	44:BJ:57:UNK:HA	1.84	0.43
35:BA:1166:C:O2	35:BA:1183:G:N2	2.39	0.43
35:BA:2001:A:H2'	35:BA:2002:G:C8	2.53	0.43
35:BA:2179:C:H1'	37:BC:171:ILE:CB	2.49	0.43
36:BB:4:C:C4	36:BB:118:G:N2	2.86	0.43
36:BB:49:C:H2'	36:BB:50:G:C8	2.54	0.43
38:BD:112:GLN:HB2	38:BD:115:GLN:HE22	1.82	0.43
40:BF:7:TYR:HA	40:BF:125:LEU:HB2	1.99	0.43
41:BG:129:GLY:HA2	41:BG:163:ALA:HB3	2.00	0.43
43:BI:3:VAL:HA	43:BI:39:ALA:HB2	2.00	0.43
48:BP:130:PHE:CB	48:BP:135:LEU:HD11	2.48	0.43
49:BQ:32:TYR:CZ	49:BQ:111:GLU:HA	2.53	0.43
51:BS:69:VAL:O	51:BS:73:LEU:HB2	2.19	0.43
52:BT:51:ARG:CB	52:BT:62:THR:HG22	2.49	0.43
54:BV:64:HIS:CD2	54:BV:66:ARG:HB2	2.54	0.43
54:BV:79:VAL:HG23	54:BV:80:GLN:H	1.83	0.43
56:BX:13:LEU:HD23	56:BX:18:TYR:OH	2.19	0.43
57:BY:26:LYS:O	57:BY:39:VAL:HA	2.18	0.43
1:CA:91:C:OP2	1:CA:91:C:C6	2.68	0.43
1:CA:191:G:H1'	20:CT:105:SER:HA	1.99	0.43
1:CA:316:G:C2	1:CA:317:G:C8	3.07	0.43
1:CA:406:G:H2'	1:CA:407:G:C8	2.51	0.43
1:CA:617:G:C2	1:CA:624:C:O2	2.72	0.43
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.83	0.43
1:CA:1303:C:H2'	1:CA:1304:G:H5'	2.00	0.43
1:CA:1394:A:C6	1:CA:1501:C:H4'	2.53	0.43
1:CA:1399:C:C2	1:CA:1401:G:C5	3.07	0.43
1:CA:1438:G:H2'	1:CA:1439:C:C6	2.54	0.43
5:CE:43:LEU:HD12	5:CE:43:LEU:HA	1.63	0.43
5:CE:100:VAL:HG13	5:CE:118:ILE:HG21	1.98	0.43
7:CG:16:LEU:HD13	9:CI:45:ALA:HB2	2.00	0.43
7:CG:94:ARG:H	7:CG:94:ARG:HG2	1.57	0.43
10:CJ:9:ARG:CB	10:CJ:95:GLU:HB3	2.48	0.43
13:CM:3:ARG:NE	13:CM:9:ILE:HD13	2.33	0.43
19:CS:7:LYS:HB2	19:CS:7:LYS:HE2	1.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:D0:27:GLU:HB2	35:DA:856:C:H1'	2.01	0.43
26:D1:37:ILE:HD13	35:DA:2432:A:N1	2.33	0.43
26:D1:87:PRO:O	26:D1:90:ILE:N	2.51	0.43
35:DA:64:A:H2'	35:DA:65:C:O4'	2.19	0.43
35:DA:112:U:C5	35:DA:113:G:C5	3.06	0.43
35:DA:310:A:OP1	57:DY:17:SER:O	2.37	0.43
35:DA:375:C:H2'	35:DA:376:C:C6	2.53	0.43
35:DA:470:A:H2'	35:DA:470:A:N3	2.33	0.43
35:DA:613:G:C6	35:DA:614:U:C4	3.07	0.43
35:DA:616:G:H2'	35:DA:618:C:H6	1.83	0.43
35:DA:1519:G:H5'	35:DA:1520:G:P	2.57	0.43
35:DA:1641:A:N6	35:DA:1642:G:C2	2.87	0.43
35:DA:1865:G:H8	35:DA:1865:G:H5'	1.83	0.43
35:DA:2660:A:H5'	35:DA:2661:G:C2	2.54	0.43
38:DD:16:MET:HE3	38:DD:16:MET:HB2	1.91	0.43
38:DD:72:LYS:NZ	38:DD:101:GLU:OE2	2.45	0.43
38:DD:119:ALA:HA	38:DD:130:ALA:O	2.18	0.43
38:DD:214:TRP:C	38:DD:216:GLY:H	2.27	0.43
39:DE:116:VAL:HG21	39:DE:122:PHE:CD2	2.53	0.43
40:DF:53:THR:HG23	40:DF:55:GLY:N	2.28	0.43
41:DG:5:VAL:HG12	41:DG:8:LYS:H	1.83	0.43
48:DP:23:PRO:HD2	48:DP:33:ARG:CZ	2.48	0.43
48:DP:98:GLU:O	48:DP:99:LEU:C	2.61	0.43
48:DP:130:PHE:N	48:DP:130:PHE:CD1	2.87	0.43
52:DT:22:PHE:CE1	52:DT:85:LYS:HE2	2.53	0.43
56:DX:24:GLY:HA3	56:DX:80:ILE:HD12	2.01	0.43
56:DX:41:ASN:O	56:DX:45:THR:HG23	2.18	0.43
1:AA:60:A:H4'	1:AA:61:G:O5'	2.18	0.43
1:AA:168:G:N2	1:AA:169:C:C2	2.86	0.43
1:AA:528:C:C5'	1:AA:529:G:OP2	2.67	0.43
1:AA:948:C:H2'	1:AA:949:A:C8	2.54	0.43
1:AA:1462:G:H2'	1:AA:1463:C:C6	2.54	0.43
15:AO:17:ARG:HB2	15:AO:18:PHE:CD2	2.53	0.43
15:AO:80:ALA:HA	15:AO:83:GLU:HB2	1.99	0.43
23:AY:40:C:O5'	23:AY:40:C:C6	2.62	0.43
26:B1:35:THR:HG21	35:BA:2432:A:C4	2.53	0.43
27:B2:41:ILE:HD11	27:B2:49:LYS:HZ1	1.83	0.43
33:B8:33:ASN:CB	35:BA:2420:C:OP2	2.67	0.43
35:BA:272:G:H1	35:BA:404:C:H42	1.67	0.43
35:BA:413:C:H2'	35:BA:414:C:C6	2.53	0.43
35:BA:658:C:N4	35:BA:659:C:N4	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:764:A:P	38:BD:214:TRP:CH2	3.11	0.43
35:BA:860:U:C6	35:BA:861:A:C8	3.07	0.43
35:BA:993:G:H2'	35:BA:994:C:H6	1.83	0.43
35:BA:1223:G:O6	54:BV:88:ARG:NH2	2.51	0.43
35:BA:1239:G:H2'	35:BA:1240:U:O4'	2.19	0.43
35:BA:1299:G:H3'	35:BA:1639:U:O4	2.18	0.43
35:BA:1360:A:C8	35:BA:1361:G:C8	3.06	0.43
35:BA:1386:C:H2'	35:BA:1387:C:C6	2.52	0.43
35:BA:1452:A:O2'	35:BA:1453:U:C6	2.71	0.43
35:BA:1847:A:H1'	35:BA:1848:A:H8	1.83	0.43
35:BA:2298:A:C2	35:BA:2299:G:H1'	2.54	0.43
41:BG:113:ARG:NH1	41:BG:139:LEU:O	2.51	0.43
43:BI:29:TYR:O	43:BI:32:PRO:HD2	2.18	0.43
43:BI:46:ALA:HA	43:BI:49:ALA:HB3	1.99	0.43
46:BN:42:TRP:C	53:BU:64:ARG:HH22	2.12	0.43
48:BP:33:ARG:CD	48:BP:36:LYS:HE3	2.45	0.43
49:BQ:98:LYS:HB2	49:BQ:99:PRO:HD3	2.00	0.43
50:BR:88:ARG:HG3	50:BR:89:ASP:HB2	2.01	0.43
52:BT:64:ARG:HD2	52:BT:73:GLU:OE1	2.19	0.43
53:BU:90:VAL:HG12	53:BU:91:ASP:N	2.33	0.43
54:BV:36:PRO:HG3	54:BV:62:LEU:HG	1.99	0.43
55:BW:49:LYS:C	55:BW:51:LEU:H	2.27	0.43
58:BZ:9:TYR:HD2	58:BZ:35:ARG:HD2	1.84	0.43
58:BZ:28:MET:CE	58:BZ:59:LEU:HD12	2.49	0.43
58:BZ:107:THR:HA	58:BZ:108:PRO:HD3	1.88	0.43
1:CA:31:G:OP1	1:CA:31:G:H8	2.00	0.43
1:CA:97:G:O2'	1:CA:98:G:H5"	2.18	0.43
1:CA:109:A:C6	1:CA:326:G:C6	3.06	0.43
1:CA:736:C:H5"	18:CR:72:ARG:NH2	2.32	0.43
1:CA:770:C:O2'	1:CA:899:C:N3	2.45	0.43
1:CA:1185:G:C6	1:CA:1186:G:C5	3.07	0.43
1:CA:1202:G:O3'	14:CN:2:ALA:HB3	2.18	0.43
1:CA:1363(A):A:C4	1:CA:1365:G:C6	3.07	0.43
1:CA:1417:G:H8	1:CA:1417:G:OP2	2.01	0.43
6:CF:18:GLN:O	6:CF:21:LEU:N	2.51	0.43
8:CH:83:ILE:HB	8:CH:137:VAL:HG13	2.00	0.43
8:CH:124:ALA:O	8:CH:128:GLY:N	2.51	0.43
10:CJ:25:GLU:C	10:CJ:27:ALA:N	2.76	0.43
11:CK:124:LYS:C	11:CK:125:PHE:HD1	2.27	0.43
12:CL:90:VAL:C	12:CL:92:ASP:N	2.76	0.43
17:CQ:22:LEU:HD12	17:CQ:40:LYS:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:51:TYR:HE2	17:CQ:76:LEU:HB2	1.84	0.43
17:CQ:66:SER:H	17:CQ:69:LYS:NZ	2.16	0.43
28:D3:48:GLU:O	28:D3:51:ALA:HB2	2.17	0.43
35:DA:41:C:H42	35:DA:437:G:H1	1.66	0.43
35:DA:71:A:H5"	35:DA:73:A:N7	2.34	0.43
35:DA:363(E):U:H5	35:DA:363(F):A:C4	2.36	0.43
35:DA:518:G:H2'	35:DA:519:U:C6	2.53	0.43
35:DA:817:C:H4'	35:DA:932:G:C5	2.53	0.43
35:DA:822:U:O2'	35:DA:823:G:H5'	2.18	0.43
35:DA:859:G:H5'	35:DA:2268:A:O2'	2.19	0.43
35:DA:910:A:C5	49:DQ:13:GLN:HG2	2.54	0.43
35:DA:1441:G:O2'	35:DA:1442:G:H5'	2.18	0.43
35:DA:1510:G:H2'	35:DA:1511:C:O4'	2.18	0.43
35:DA:1632:A:C5	35:DA:1633:G:C6	3.06	0.43
35:DA:1794:U:H1'	35:DA:1900:A:N3	2.34	0.43
35:DA:2040:C:OP1	46:DN:74:ARG:NE	2.49	0.43
35:DA:2233:U:H2'	35:DA:2234:G:C8	2.53	0.43
35:DA:2690:C:H5"	35:DA:2872:G:H21	1.82	0.43
35:DA:2850:A:H2'	35:DA:2851:A:O4'	2.19	0.43
38:DD:228:PRO:HD3	38:DD:235:GLY:HA3	2.00	0.43
40:DF:123:LEU:HD13	40:DF:192:LEU:HD13	1.99	0.43
42:DH:25:LYS:HB3	42:DH:25:LYS:HE2	1.82	0.43
46:DN:134:ARG:HG2	46:DN:134:ARG:O	2.18	0.43
49:DQ:24:GLY:HA2	49:DQ:100:GLY:C	2.43	0.43
50:DR:2:ARG:C	50:DR:3:HIS:CG	2.97	0.43
50:DR:84:ALA:HB3	50:DR:85:PRO:HD3	2.01	0.43
53:DU:52:ARG:O	53:DU:55:ARG:HG2	2.18	0.43
53:DU:90:VAL:O	53:DU:91:ASP:C	2.62	0.43
53:DU:95:LEU:HD21	54:DV:13:ARG:N	2.34	0.43
54:DV:2:PHE:HD2	54:DV:42:GLY:HA3	1.84	0.43
54:DV:66:ARG:CD	54:DV:68:LYS:H	2.19	0.43
56:DX:3:THR:CG2	56:DX:5:TYR:HD2	2.32	0.43
56:DX:60:ARG:HD3	56:DX:73:ARG:HH11	1.84	0.43
58:DZ:135:GLU:O	58:DZ:136:PHE:HB3	2.19	0.43
1:AA:79:G:N1	1:AA:90:U:C2	2.87	0.43
1:AA:189(I):G:H2'	1:AA:189(J):G:O4'	2.19	0.43
1:AA:359:U:H2'	1:AA:360:A:H8	1.83	0.43
1:AA:419:C:H3'	1:AA:419:C:C6	2.54	0.43
1:AA:1115:C:H41	1:AA:1186:G:N2	2.14	0.43
2:AB:63:MET:O	2:AB:64:ARG:HG2	2.19	0.43
2:AB:135:GLN:HG2	2:AB:136:VAL:HG23	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:77:SER:HA	7:AG:86:GLN:HA	2.00	0.43
8:AH:104:ARG:CG	8:AH:104:ARG:HD3	2.28	0.43
10:AJ:49:VAL:HG21	14:AN:41:ARG:HA	2.00	0.43
10:AJ:57:LYS:HD3	10:AJ:60:ARG:NH1	2.27	0.43
12:AL:46:LYS:HZ1	12:AL:94:PRO:HB3	1.80	0.43
13:AM:28:ALA:C	13:AM:30:ALA:H	2.25	0.43
13:AM:61:GLU:CD	13:AM:61:GLU:H	2.27	0.43
13:AM:83:ASP:N	13:AM:83:ASP:OD1	2.50	0.43
20:AT:74:LYS:HB2	20:AT:76:ALA:H	1.84	0.43
23:AY:29:G:H2'	23:AY:30:G:C8	2.47	0.43
27:B2:19:VAL:C	27:B2:21:LEU:N	2.75	0.43
31:B6:10:LEU:CB	33:B8:35:GLN:HG2	2.48	0.43
32:B7:4:THR:OG1	32:B7:5:TRP:CD1	2.71	0.43
35:BA:22:C:H2'	35:BA:23:G:O4'	2.19	0.43
35:BA:675:A:C6	35:BA:676:A:C6	3.06	0.43
35:BA:910:A:C6	35:BA:911:A:C6	3.06	0.43
35:BA:977:G:C6	35:BA:987:G:C5	3.07	0.43
35:BA:1027:A:C6	35:BA:1126:A:C4	3.07	0.43
35:BA:1092:C:N4	35:BA:1100:C:C4	2.87	0.43
35:BA:1155:A:O2'	35:BA:1156:A:H2'	2.19	0.43
35:BA:1587:A:H2'	35:BA:1588:C:H6	1.82	0.43
35:BA:1668:A:C8	35:BA:1674:G:C6	3.06	0.43
35:BA:1717:G:C2	35:BA:1745(A):C:O2	2.72	0.43
35:BA:1817:G:C5'	38:BD:88:ARG:HH21	2.32	0.43
35:BA:2095:C:H2'	35:BA:2096:U:O4'	2.19	0.43
35:BA:2312:U:H5'	41:BG:72:ARG:O	2.18	0.43
35:BA:2539:C:N3	35:BA:2540:C:C5	2.86	0.43
36:BB:81:G:C6	36:BB:82:G:C5	3.07	0.43
36:BB:91:C:OP2	49:BQ:16:ARG:CG	2.66	0.43
39:BE:9:VAL:HG22	39:BE:25:VAL:HB	2.00	0.43
42:BH:96:ALA:O	42:BH:125:VAL:HG11	2.18	0.43
46:BN:28:THR:HG22	46:BN:29:LYS:N	2.34	0.43
46:BN:128:HIS:O	46:BN:130:HIS:N	2.52	0.43
47:BO:102:VAL:HB	47:BO:106:LEU:HD22	2.00	0.43
48:BP:36:LYS:HG2	48:BP:37:GLY:N	2.33	0.43
48:BP:121:LYS:HE2	48:BP:123:LEU:HD21	1.99	0.43
50:BR:96:ARG:HG3	50:BR:97:VAL:N	2.32	0.43
51:BS:18:ILE:O	51:BS:18:ILE:HG13	2.19	0.43
54:BV:1:MET:HG3	54:BV:42:GLY:HA2	2.00	0.43
55:BW:18:ARG:HD3	55:BW:18:ARG:C	2.43	0.43
58:BZ:155:LEU:HA	58:BZ:155:LEU:HD23	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:337:C:H2'	1:CA:338:A:H8	1.81	0.43
1:CA:840:C:C5'	1:CA:848:C:H41	2.31	0.43
1:CA:1258:G:H2'	1:CA:1259:C:C5	2.54	0.43
5:CE:36:ASP:OD2	5:CE:40:ARG:HG3	2.19	0.43
8:CH:20:TYR:HA	8:CH:65:TYR:CZ	2.53	0.43
9:CI:22:GLY:HA3	9:CI:60:ASP:CG	2.44	0.43
12:CL:56:ALA:HB2	12:CL:70:ILE:HD11	2.01	0.43
15:CO:39:LEU:HD13	15:CO:56:LEU:HB2	2.00	0.43
17:CQ:66:SER:N	17:CQ:69:LYS:NZ	2.67	0.43
18:CR:23:LYS:HG3	18:CR:24:ALA:N	2.33	0.43
30:D5:18:ALA:C	30:D5:20:ARG:N	2.73	0.43
32:D7:39:ARG:NH1	35:DA:469:G:O6	2.52	0.43
33:D8:52:LYS:HE3	48:DP:57:THR:HG21	2.00	0.43
35:DA:269:U:N3	35:DA:424:G:C6	2.87	0.43
35:DA:818:G:H4'	35:DA:838:C:O3'	2.19	0.43
35:DA:871:U:P	49:DQ:6:ARG:HB2	2.58	0.43
35:DA:935:C:H2'	35:DA:936:C:C6	2.54	0.43
35:DA:968:G:C6	35:DA:969:U:C4	3.06	0.43
35:DA:1394:U:C5	35:DA:1395:A:C5	3.07	0.43
35:DA:1651:G:P	50:DR:40:LYS:HZ3	2.42	0.43
35:DA:1862:G:O2'	35:DA:1863:G:H5'	2.18	0.43
35:DA:2287:A:C2	35:DA:2346:A:C2	3.07	0.43
35:DA:2586:C:C5	35:DA:2608:G:N2	2.87	0.43
39:DE:67:PHE:O	39:DE:69:LYS:N	2.51	0.43
43:DI:7:GLU:HG2	43:DI:8:PRO:HD2	2.00	0.43
47:DO:22:ILE:HA	47:DO:22:ILE:HD13	1.59	0.43
49:DQ:5:ARG:HG3	49:DQ:5:ARG:NH2	2.23	0.43
49:DQ:65:PHE:O	49:DQ:104:PHE:HB2	2.19	0.43
50:DR:45:ARG:O	50:DR:46:GLY:C	2.62	0.43
57:DY:41:GLY:O	57:DY:64:GLU:OE1	2.36	0.43
58:DZ:45:ASP:O	58:DZ:49:ARG:HB2	2.19	0.43
1:AA:232:G:H2'	1:AA:233:C:O4'	2.19	0.43
1:AA:1088:G:H2'	1:AA:1089:G:O4'	2.19	0.43
1:AA:1138:G:N2	1:AA:1140:C:O4'	2.52	0.43
1:AA:1311:G:C6	1:AA:1312:G:C5	3.07	0.43
2:AB:69:LEU:HD12	2:AB:91:PRO:O	2.18	0.43
2:AB:101:MET:HE1	2:AB:102:LEU:CD2	2.48	0.43
4:AD:13:ARG:O	4:AD:15:GLU:N	2.47	0.43
4:AD:61:LYS:NZ	4:AD:72:GLU:OE1	2.46	0.43
5:AE:71:LEU:HD12	5:AE:71:LEU:H	1.84	0.43
8:AH:44:PHE:HA	8:AH:79:VAL:HG11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:97:VAL:HA	8:AH:100:ILE:HD12	2.00	0.43
10:AJ:8:LEU:HD21	10:AJ:19:SER:O	2.19	0.43
13:AM:81:LEU:O	13:AM:89:GLY:HA3	2.19	0.43
14:AN:43:CYS:O	14:AN:47:LEU:HD12	2.18	0.43
17:AQ:90:ILE:C	17:AQ:92:ARG:H	2.26	0.43
18:AR:43:PHE:HA	18:AR:51:LEU:HD12	2.01	0.43
22:AV:60:A:H5"	22:AV:60:A:H8	1.83	0.43
33:B8:30:ARG:HD2	33:B8:31:HIS:CD2	2.53	0.43
35:BA:227:A:C2	35:BA:2407:G:H1'	2.54	0.43
35:BA:251:A:C5	35:BA:252:G:H1'	2.54	0.43
35:BA:272(G):C:H3'	35:BA:272(G):C:H6	1.83	0.43
35:BA:398:G:H2'	35:BA:399:G:O4'	2.18	0.43
35:BA:454:A:H3'	35:BA:455:C:H5'	2.00	0.43
35:BA:614(B):G:C1'	40:BF:44:ARG:NH2	2.82	0.43
35:BA:799:G:H3'	35:BA:800:A:H2'	2.00	0.43
35:BA:1210:A:H5'	35:BA:1210:A:C8	2.39	0.43
35:BA:1889:A:H2'	35:BA:2086:U:O2'	2.19	0.43
35:BA:1936:A:C8	35:BA:1940:U:O2	2.72	0.43
35:BA:2127:G:O2'	35:BA:2172:U:O2	2.37	0.43
35:BA:2199:A:H3'	35:BA:2200:C:C6	2.54	0.43
35:BA:2394:C:H5"	48:BP:61:ARG:HH12	1.84	0.43
35:BA:2579:C:C2'	35:BA:2580:U:H5'	2.49	0.43
35:BA:2699:C:O2	35:BA:2699:C:C5'	2.67	0.43
36:BB:11:C:H2'	36:BB:12:C:H5'	2.01	0.43
37:BC:102:LYS:C	37:BC:104:LEU:H	2.26	0.43
38:BD:182:LEU:H	38:BD:272:ALA:HB3	1.84	0.43
39:BE:1:MET:HB3	39:BE:200:GLU:OE1	2.19	0.43
39:BE:68:ALA:O	39:BE:69:LYS:C	2.61	0.43
40:BF:202:PHE:C	40:BF:202:PHE:CD1	2.96	0.43
41:BG:129:GLY:HA3	41:BG:161:THR:O	2.18	0.43
46:BN:26:LEU:C	46:BN:26:LEU:CD1	2.86	0.43
46:BN:66:LYS:HZ1	46:BN:87:LEU:HD22	1.82	0.43
47:BO:115:VAL:HG23	47:BO:117:LEU:N	2.24	0.43
48:BP:36:LYS:CG	48:BP:37:GLY:H	2.32	0.43
48:BP:41:ARG:HD3	48:BP:41:ARG:HA	1.36	0.43
57:BY:51:VAL:HG12	57:BY:52:SER:H	1.84	0.43
1:CA:382:A:H2'	1:CA:383:A:H8	1.84	0.43
1:CA:460:G:O6	1:CA:470:C:H3'	2.18	0.43
1:CA:499:A:N6	1:CA:547:A:C8	2.86	0.43
1:CA:679:C:H6	1:CA:679:C:O5'	2.02	0.43
1:CA:784:C:H2'	1:CA:785:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1063:C:H3'	1:CA:1064:G:H2'	2.00	0.43
1:CA:1161:C:N3	1:CA:1175:G:N1	2.58	0.43
1:CA:1253:G:OP2	10:CJ:44:VAL:HG21	2.18	0.43
1:CA:1321:C:C5	1:CA:1322:C:C4	3.06	0.43
1:CA:1502:A:H5"	1:CA:1504:G:C8	2.53	0.43
3:CC:113:ALA:O	3:CC:116:VAL:N	2.52	0.43
4:CD:14:ARG:C	4:CD:16:GLY:N	2.77	0.43
8:CH:127:LEU:HD13	8:CH:127:LEU:HA	1.69	0.43
10:CJ:19:SER:O	10:CJ:22:LYS:HB3	2.18	0.43
11:CK:16:SER:OG	11:CK:35:PRO:HG3	2.18	0.43
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.54	0.43
12:CL:30:ALA:HB3	12:CL:31:PRO:HD3	2.00	0.43
15:CO:24:SER:C	15:CO:28:GLN:HG3	2.43	0.43
16:CP:75:ARG:C	16:CP:77:ALA:H	2.27	0.43
23:CW:14:A:C5	23:CW:15:G:N7	2.86	0.43
26:D1:83:GLU:O	26:D1:85:LEU:N	2.49	0.43
27:D2:11:GLU:HA	27:D2:14:ARG:HH22	1.84	0.43
27:D2:21:LEU:HD21	27:D2:51:ARG:HH11	1.84	0.43
30:D5:59:GLU:O	30:D5:60:VAL:HG12	2.19	0.43
31:D6:15:GLU:CD	31:D6:18:ARG:HE	2.27	0.43
35:DA:302:C:H2'	35:DA:303:U:H6	1.84	0.43
35:DA:534:U:H5'	53:DU:42:ALA:CB	2.46	0.43
35:DA:1353:A:H62	35:DA:1377:G:H2'	1.84	0.43
35:DA:1658:C:OP1	39:DE:135:HIS:NE2	2.51	0.43
35:DA:1905:C:O2'	35:DA:1929:G:H1'	2.19	0.43
35:DA:2093:G:N7	35:DA:2225:A:H2'	2.34	0.43
35:DA:2127:G:OP2	35:DA:2127:G:H8	2.01	0.43
35:DA:2179:C:O2	35:DA:2179:C:H2'	2.18	0.43
35:DA:2803:C:C4	35:DA:2804:C:C5	3.07	0.43
35:DA:2881:C:C2	35:DA:2882:A:C8	3.06	0.43
36:DB:78:A:H2'	36:DB:79:C:O4'	2.18	0.43
37:DC:69:GLY:C	37:DC:70:LYS:HD3	2.44	0.43
38:DD:10:THR:HG23	38:DD:11:PRO:O	2.18	0.43
39:DE:51:PHE:CD2	39:DE:52:LEU:N	2.87	0.43
43:DI:97:ILE:HD13	43:DI:140:LEU:HD12	2.00	0.43
50:DR:54:LEU:O	50:DR:62:ALA:HB1	2.19	0.43
52:DT:8:LYS:C	52:DT:10:VAL:N	2.77	0.43
53:DU:38:THR:O	53:DU:41:ALA:HB3	2.19	0.43
55:DW:18:ARG:O	55:DW:19:LEU:C	2.59	0.43
57:DY:76:CYS:SG	57:DY:96:ILE:HD13	2.59	0.43
58:DZ:134:PRO:HG3	58:DZ:161:VAL:HG21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:42:G:H2'	1:AA:43:C:O4'	2.19	0.43
1:AA:162:A:N6	1:AA:334:C:P	2.67	0.43
1:AA:702:A:O2'	1:AA:703:G:O5'	2.32	0.43
1:AA:920:U:C2	1:AA:921:U:C5	3.07	0.43
1:AA:1005:A:OP2	1:AA:1025:U:C4	2.71	0.43
1:AA:1202:G:O5'	1:AA:1202:G:H8	2.02	0.43
1:AA:1205:U:H4'	3:AC:195:VAL:HG13	2.01	0.43
2:AB:47:THR:HA	2:AB:202:PRO:HD2	2.01	0.43
2:AB:220:ASP:C	2:AB:222:ILE:H	2.26	0.43
4:AD:18:LYS:HG2	4:AD:20:TYR:CZ	2.54	0.43
14:AN:27:CYS:SG	14:AN:28:GLY:N	2.92	0.43
15:AO:32:LEU:HD11	15:AO:62:GLN:HB3	2.00	0.43
16:AP:75:ARG:HG3	16:AP:80:PHE:CD2	2.54	0.43
19:AS:63:THR:O	19:AS:66:MET:HB3	2.18	0.43
24:AX:21:C:C4	24:AX:22:U:C4	3.07	0.43
28:B3:5:LYS:HA	28:B3:36:VAL:HG12	2.01	0.43
31:B6:19:ARG:O	31:B6:20:ASN:C	2.60	0.43
32:B7:47:ARG:NH1	35:BA:1311:G:OP2	2.51	0.43
33:B8:29:LYS:HE2	33:B8:44:LYS:NZ	2.34	0.43
35:BA:57:C:H6	35:BA:57:C:O5'	2.01	0.43
35:BA:609:A:H2'	35:BA:610:G:O4'	2.19	0.43
35:BA:614(B):G:C2'	40:BF:44:ARG:CZ	2.97	0.43
35:BA:778:G:H5"	38:BD:48:ARG:HD3	1.99	0.43
35:BA:1423:G:H2'	35:BA:1424:G:H8	1.83	0.43
35:BA:1447:G:H2'	35:BA:1447:G:N3	2.34	0.43
35:BA:2445:G:H2'	35:BA:2446:G:H5'	2.00	0.43
35:BA:2719:G:O2'	35:BA:2720:U:H5'	2.19	0.43
35:BA:2880:C:O2	50:BR:93:GLY:N	2.41	0.43
36:BB:72:G:O2'	36:BB:105:A:N6	2.50	0.43
38:BD:43:ARG:CB	38:BD:54:ARG:HB2	2.48	0.43
42:BH:19:VAL:CG2	42:BH:44:VAL:HG13	2.49	0.43
43:BI:112:LYS:H	43:BI:112:LYS:HG3	1.61	0.43
46:BN:41:ASP:C	53:BU:64:ARG:NH2	2.77	0.43
50:BR:50:HIS:ND1	50:BR:50:HIS:O	2.52	0.43
50:BR:110:PRO:C	50:BR:111:LEU:HD22	2.43	0.43
52:BT:24:PRO:HA	52:BT:49:VAL:HB	2.00	0.43
52:BT:105:LEU:O	52:BT:107:ASP:CG	2.62	0.43
53:BU:33:ARG:O	53:BU:37:GLU:HG3	2.18	0.43
57:BY:33:LYS:HA	57:BY:33:LYS:HE3	2.00	0.43
58:BZ:58:VAL:O	58:BZ:59:LEU:HD23	2.19	0.43
58:BZ:117:LEU:HD23	58:BZ:117:LEU:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:138:G:H2'	1:CA:139:G:O4'	2.19	0.43
1:CA:186:C:H5'	20:CT:78:ALA:HB1	2.01	0.43
1:CA:394:G:H2'	1:CA:395:C:C6	2.52	0.43
1:CA:472:A:H4'	16:CP:80:PHE:O	2.18	0.43
1:CA:872:A:C4	1:CA:874:G:N7	2.87	0.43
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.19	0.43
1:CA:1084:G:C8	1:CA:1085:U:C5	3.07	0.43
1:CA:1413:A:H2	1:CA:1487:G:H22	1.66	0.43
4:CD:8:VAL:HG23	4:CD:9:CYS:N	2.27	0.43
4:CD:36:ARG:HB3	4:CD:38:TYR:CZ	2.54	0.43
4:CD:134:ASP:O	4:CD:136:PRO:HD3	2.19	0.43
5:CE:11:ILE:HA	5:CE:11:ILE:HD13	1.63	0.43
5:CE:118:ILE:O	5:CE:119:LEU:HD23	2.18	0.43
10:CJ:27:ALA:O	10:CJ:30:SER:N	2.51	0.43
27:D2:53:LEU:HD21	35:DA:72:U:H4'	2.01	0.43
31:D6:8:LYS:O	31:D6:9:LEU:O	2.37	0.43
35:DA:64:A:H1'	56:DX:65:ARG:H	1.83	0.43
35:DA:154(A):C:N4	35:DA:171:G:H1	2.17	0.43
35:DA:614(C):A:C4	40:DF:180:GLY:HA2	2.54	0.43
35:DA:729:G:H2'	35:DA:1775:U:H1'	2.00	0.43
35:DA:1332:G:N2	35:DA:1610:A:C8	2.87	0.43
35:DA:1511:C:H2'	35:DA:1512:U:O4'	2.19	0.43
35:DA:1786:A:H1'	35:DA:1938:A:N6	2.33	0.43
35:DA:2206:G:H3'	35:DA:2206:G:N3	2.34	0.43
35:DA:2302:G:C4	35:DA:2303:G:C8	3.07	0.43
35:DA:2592:G:C5	35:DA:2593:U:C5	3.07	0.43
36:DB:106:G:C2	36:DB:107:G:C8	3.07	0.43
38:DD:130:ALA:C	38:DD:131:LEU:HD12	2.43	0.43
38:DD:242:ARG:N	38:DD:242:ARG:HD3	2.34	0.43
39:DE:188:VAL:HG23	39:DE:189:PRO:HD2	1.99	0.43
41:DG:71:THR:HG22	41:DG:89:GLY:O	2.19	0.43
41:DG:121:ASN:HB2	41:DG:181:ARG:NH2	2.34	0.43
42:DH:89:ILE:HG12	42:DH:129:THR:HA	2.01	0.43
51:DS:87:PHE:HB2	51:DS:106:ARG:HD2	2.01	0.43
57:DY:76:CYS:O	57:DY:78:ALA:N	2.37	0.43
1:AA:159:G:H2'	1:AA:344:A:C4	2.54	0.43
1:AA:189:G:C2	1:AA:189(L):G:N1	2.86	0.43
1:AA:489:C:H2'	1:AA:490:G:H5'	2.01	0.43
1:AA:1134:G:H22	1:AA:1141:C:H1'	1.83	0.43
1:AA:1282:C:O5'	1:AA:1282:C:H6	2.02	0.43
1:AA:1347:G:H5"	9:AI:107:ARG:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1418:A:H1'	35:BA:1959:G:O4'	2.18	0.43
1:AA:1512:U:H2'	1:AA:1513:A:H8	1.83	0.43
2:AB:97:TRP:CZ3	2:AB:101:MET:CG	3.02	0.43
6:AF:10:LEU:H	6:AF:10:LEU:HD12	1.84	0.43
8:AH:30:ARG:O	8:AH:34:GLU:HG3	2.19	0.43
10:AJ:33:GLN:C	10:AJ:74:ILE:HD13	2.44	0.43
13:AM:19:LEU:O	13:AM:22:ILE:HG13	2.19	0.43
19:AS:9:VAL:O	19:AS:11:VAL:N	2.52	0.43
25:B0:70:GLN:HB3	25:B0:80:HIS:HE2	1.84	0.43
30:B5:3:LYS:HE2	35:BA:2612:C:H5'	2.00	0.43
31:B6:51:GLU:HG2	31:B6:52:VAL:N	2.33	0.43
34:B9:2:LYS:O	34:B9:34:GLN:HA	2.19	0.43
34:B9:29:ASN:HD22	42:BH:170:ARG:HH21	1.67	0.43
35:BA:142(A):C:H2'	35:BA:143:G:O4'	2.19	0.43
35:BA:171:G:O2'	35:BA:172:C:OP1	2.33	0.43
35:BA:299:A:OP2	35:BA:299:A:C8	2.70	0.43
35:BA:864:G:O2'	35:BA:865:C:H5'	2.19	0.43
35:BA:996:A:H4'	53:BU:92:ARG:NE	2.34	0.43
35:BA:1006:C:H1'	46:BN:106:MET:HB3	2.01	0.43
35:BA:1275:A:H4'	35:BA:1276:A:O5'	2.19	0.43
35:BA:1403:C:H2'	35:BA:1404:C:O4'	2.19	0.43
35:BA:1452:A:N6	35:BA:2702:U:O2'	2.52	0.43
35:BA:1857:G:C6	35:BA:1858:G:N1	2.87	0.43
35:BA:2252:G:H2'	35:BA:2253:G:O4'	2.19	0.43
35:BA:2322:A:H2'	35:BA:2323:G:O4'	2.19	0.43
35:BA:2469:A:H2	35:BA:2481:G:H21	1.66	0.43
35:BA:2611:U:H5'	35:BA:2611:U:H6	1.84	0.43
35:BA:2805:G:H2'	35:BA:2807:G:C1'	2.49	0.43
35:BA:2889:C:H2'	35:BA:2889:C:O2	2.18	0.43
36:BB:41:U:N3	41:BG:70:VAL:O	2.51	0.43
39:BE:112:GLY:O	39:BE:159:HIS:HA	2.19	0.43
40:BF:9:ILE:HG13	40:BF:11:VAL:O	2.18	0.43
40:BF:52:LYS:O	40:BF:88:VAL:HG12	2.19	0.43
41:BG:7:LEU:O	41:BG:8:LYS:C	2.62	0.43
41:BG:98:ARG:O	41:BG:101:ILE:HG12	2.18	0.43
42:BH:156:ALA:C	42:BH:158:HIS:N	2.75	0.43
46:BN:123:TYR:OH	46:BN:130:HIS:ND1	2.39	0.43
48:BP:60:MET:CE	48:BP:61:ARG:HH21	2.03	0.43
49:BQ:66:ILE:HG22	49:BQ:104:PHE:CD2	2.54	0.43
50:BR:111:LEU:HA	50:BR:111:LEU:HD13	1.65	0.43
57:BY:39:VAL:HG12	57:BY:40:GLU:N	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:26:A:H1'	4:CD:209:ARG:NH2	2.31	0.43
1:CA:204:U:H4'	1:CA:216:G:OP1	2.19	0.43
1:CA:311:C:OP1	16:CP:26:ARG:NH2	2.41	0.43
1:CA:516:U:C4	1:CA:517:G:C6	3.06	0.43
1:CA:755:G:N2	8:CH:1:MET:HB3	2.34	0.43
1:CA:1315:U:C5	1:CA:1316:G:C5	3.07	0.43
1:CA:1384:C:C2	1:CA:1385:G:C8	3.07	0.43
2:CB:55:PHE:O	2:CB:59:GLU:N	2.50	0.43
3:CC:188:LEU:HD12	3:CC:195:VAL:HG13	2.01	0.43
7:CG:50:ILE:HB	7:CG:58:PRO:HB3	2.01	0.43
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.99	0.43
17:CQ:88:TYR:OH	17:CQ:92:ARG:NH1	2.52	0.43
22:CV:16:C:O2'	22:CV:61:C:OP1	2.30	0.43
22:CV:51:C:C4	22:CV:52:G:N7	2.87	0.43
22:CV:51:C:N3	22:CV:52:G:N7	2.67	0.43
25:D0:42:GLY:HA2	25:D0:57:PHE:CD2	2.54	0.43
35:DA:9:U:O4	35:DA:2629:A:N7	2.52	0.43
35:DA:59:U:O2'	35:DA:74:A:OP2	2.25	0.43
35:DA:140:G:N3	35:DA:142:A:N1	2.66	0.43
35:DA:719:C:H2'	35:DA:720:C:H6	1.82	0.43
35:DA:1142(A):A:C4	35:DA:1144:G:C8	3.06	0.43
35:DA:1448:G:HO2'	35:DA:1528(A):A:H61	1.67	0.43
35:DA:1484:G:H22	35:DA:1505:C:N4	2.17	0.43
35:DA:1816:G:H8	38:DD:62:TYR:CZ	2.37	0.43
35:DA:1945:G:H1	35:DA:1961:C:H42	1.66	0.43
35:DA:2124:G:N3	37:DC:40:THR:OG1	2.40	0.43
35:DA:2308:G:O2'	35:DA:2309:A:P	2.77	0.43
36:DB:61:G:C6	36:DB:62:C:C4	3.07	0.43
41:DG:43:LEU:HD11	41:DG:153:ARG:HB3	2.00	0.43
41:DG:101:ILE:O	41:DG:105:LYS:HE2	2.17	0.43
43:DI:14:ASP:HB3	43:DI:15:VAL:H	1.54	0.43
46:DN:21:LYS:NZ	46:DN:139:GLU:HG3	2.34	0.43
48:DP:96:THR:O	48:DP:98:GLU:N	2.52	0.43
51:DS:59:LYS:O	51:DS:59:LYS:HD2	2.19	0.43
54:DV:60:GLU:OE2	54:DV:60:GLU:HA	2.08	0.43
57:DY:84:ARG:HH12	57:DY:97:ARG:HH11	1.67	0.43
1:AA:32:A:H2'	1:AA:32:A:N3	2.34	0.42
1:AA:189(I):G:C2'	1:AA:189(J):G:H4'	2.47	0.42
1:AA:889:A:H4'	1:AA:890:G:OP1	2.19	0.42
1:AA:1115:C:C2	14:AN:61:TRP:HA	2.53	0.42
1:AA:1321:C:C4	1:AA:1322:C:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:218:ALA:C	2:AB:220:ASP:N	2.76	0.42
5:AE:63:ARG:HG2	5:AE:63:ARG:H	1.56	0.42
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	2.00	0.42
8:AH:100:ILE:HG23	8:AH:101:PRO:HD2	2.00	0.42
15:AO:81:LEU:O	15:AO:85:LEU:HD12	2.19	0.42
17:AQ:90:ILE:O	17:AQ:92:ARG:N	2.52	0.42
27:B2:30:ARG:HD2	56:BX:11:PRO:HB3	2.01	0.42
31:B6:15:GLU:OE2	31:B6:18:ARG:HD3	2.17	0.42
35:BA:11:G:O2'	35:BA:12:U:H5'	2.19	0.42
35:BA:85:G:C4	35:BA:103:A:H2	2.37	0.42
35:BA:142:A:N6	35:BA:1596:A:H5'	2.33	0.42
35:BA:672:C:H2'	35:BA:673:C:C6	2.54	0.42
35:BA:1073:A:H8	35:BA:1074:G:C8	2.36	0.42
35:BA:1546:C:O2	35:BA:1546:C:O4'	2.37	0.42
35:BA:1713:U:O2'	35:BA:1714:G:H5'	2.19	0.42
35:BA:2271:G:C6	35:BA:2272:U:C4	3.07	0.42
35:BA:2540:C:H5"	35:BA:2541:A:OP2	2.19	0.42
35:BA:2646:C:H2'	35:BA:2647:U:O4'	2.19	0.42
35:BA:2679:A:H2'	35:BA:2680:C:H6	1.84	0.42
35:BA:2689:U:P	35:BA:2719:G:H22	2.41	0.42
36:BB:14:U:O3'	36:BB:108:U:O2'	2.36	0.42
36:BB:33:G:O2'	36:BB:34:U:H5'	2.18	0.42
38:BD:210:GLY:O	38:BD:213:ARG:HB2	2.19	0.42
42:BH:77:LYS:O	42:BH:80:SER:N	2.51	0.42
48:BP:77:ARG:HB3	48:BP:80:TYR:CE1	2.55	0.42
51:BS:90:GLY:O	51:BS:91:PRO:C	2.62	0.42
57:BY:46:LYS:HB3	57:BY:62:GLU:HG2	2.01	0.42
58:BZ:80:ARG:O	58:BZ:82:ARG:N	2.52	0.42
1:CA:52:G:H2'	1:CA:53:A:C8	2.54	0.42
1:CA:472:A:H5"	16:CP:80:PHE:HB3	1.99	0.42
1:CA:518:C:H2'	1:CA:530:G:C4	2.53	0.42
1:CA:684:A:N6	1:CA:685:G:C6	2.87	0.42
1:CA:778:G:H1'	11:CK:119:CYS:HB3	2.01	0.42
1:CA:1313:U:OP2	19:CS:6:LYS:HB3	2.19	0.42
1:CA:1458:G:H5'	20:CT:32:ALA:HB2	1.99	0.42
2:CB:19:HIS:ND1	2:CB:206:ASP:HB2	2.33	0.42
2:CB:30:ARG:HG3	2:CB:31:TYR:CE2	2.54	0.42
4:CD:59:ARG:HE	4:CD:59:ARG:HB3	1.29	0.42
13:CM:40:ASN:HB3	13:CM:43:THR:HG23	2.01	0.42
15:CO:48:LYS:HD3	15:CO:48:LYS:HA	1.68	0.42
17:CQ:9:VAL:O	17:CQ:21:VAL:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:37:LYS:HE2	17:CQ:37:LYS:HB3	1.76	0.42
22:CV:50:U:H2'	22:CV:51:C:C6	2.53	0.42
26:D1:21:ARG:NH2	35:DA:2233:U:OP2	2.50	0.42
35:DA:401:A:H2'	35:DA:402:A:O4'	2.19	0.42
35:DA:779:U:OP1	38:DD:48:ARG:HB2	2.19	0.42
35:DA:995:C:C5	53:DU:57:PHE:CZ	3.07	0.42
35:DA:1022:G:C5	35:DA:1140:C:C4	3.07	0.42
35:DA:1480:G:C2	35:DA:1512:U:O2	2.72	0.42
35:DA:1509:C:OP1	35:DA:1509:C:H4'	2.19	0.42
35:DA:2250:G:C6	49:DQ:82:ARG:CD	2.96	0.42
35:DA:2250:G:C2	49:DQ:82:ARG:HG3	2.54	0.42
35:DA:2854:G:H1	35:DA:2863:C:H42	1.67	0.42
35:DA:2870:C:H2'	35:DA:2871:C:O4'	2.19	0.42
38:DD:5:LYS:HG3	38:DD:6:PHE:N	2.33	0.42
38:DD:131:LEU:HD22	38:DD:136:ILE:HG12	2.01	0.42
38:DD:165:ILE:H	38:DD:165:ILE:HG12	1.66	0.42
39:DE:175:VAL:O	39:DE:177:PRO:HD3	2.19	0.42
42:DH:24:VAL:HG13	42:DH:35:VAL:HB	2.00	0.42
42:DH:125:VAL:HG13	42:DH:127:GLU:O	2.18	0.42
48:DP:124:LYS:HE3	48:DP:124:LYS:HB3	1.92	0.42
49:DQ:118:LEU:HD23	49:DQ:118:LEU:HA	1.56	0.42
52:DT:33:LYS:HE2	52:DT:74:ARG:HH22	1.84	0.42
57:DY:38:ILE:HG23	57:DY:64:GLU:CG	2.48	0.42
1:AA:451:A:OP1	1:AA:481:G:N2	2.30	0.42
1:AA:949:A:C2	1:AA:1233:G:N3	2.87	0.42
1:AA:1054:C:OP2	1:AA:1197:G:OP2	2.36	0.42
1:AA:1143:G:C8	1:AA:1143:G:OP2	2.72	0.42
1:AA:1260:C:H3'	1:AA:1260:C:C6	2.54	0.42
1:AA:1313:U:OP1	19:AS:6:LYS:HB2	2.20	0.42
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.18	0.42
3:AC:9:GLY:CA	14:AN:49:HIS:HA	2.49	0.42
3:AC:42:LEU:HA	3:AC:45:LYS:HD2	2.01	0.42
9:AI:114:TYR:C	9:AI:116:LYS:H	2.27	0.42
12:AL:21:LYS:N	12:AL:21:LYS:HD2	2.34	0.42
12:AL:126:LYS:N	12:AL:126:LYS:HD2	2.34	0.42
13:AM:90:LEU:HD23	13:AM:90:LEU:HA	1.74	0.42
20:AT:87:LYS:O	20:AT:91:LEU:HB2	2.19	0.42
25:B0:42:GLY:HA2	35:BA:2330:G:H21	1.84	0.42
27:B2:45:SER:HB2	27:B2:49:LYS:HE3	2.01	0.42
31:B6:22:ALA:HB1	31:B6:39:TYR:OH	2.19	0.42
35:BA:90:U:O2'	35:BA:92:A:P	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:362:U:H6	35:BA:362:U:H2'	1.60	0.42
35:BA:1064:C:C3'	35:BA:1065:U:H5"	2.49	0.42
35:BA:1168:G:N2	35:BA:1182:A:N7	2.68	0.42
35:BA:1639:U:C2'	35:BA:1640:C:H5'	2.49	0.42
35:BA:1826:G:C5	35:BA:1827:C:C5	3.07	0.42
35:BA:2415:G:H4'	48:BP:66:GLY:HA2	2.00	0.42
35:BA:2528:U:O3'	35:BA:2529:G:H8	2.02	0.42
35:BA:2692:C:C2	35:BA:2693:A:C8	3.07	0.42
35:BA:2693:A:H2'	35:BA:2694:G:C8	2.46	0.42
35:BA:2718:G:C6	35:BA:2719:G:C5	3.07	0.42
35:BA:2731:G:C6	35:BA:2732:G:O6	2.73	0.42
35:BA:2841:C:H42	35:BA:2876:G:H1	1.67	0.42
36:BB:37:C:H2'	36:BB:38:C:O4'	2.19	0.42
38:BD:85:ASP:HB2	38:BD:92:ILE:HG13	2.00	0.42
38:BD:232:PRO:HB3	38:BD:244:ARG:CZ	2.48	0.42
40:BF:5:ALA:O	40:BF:6:VAL:C	2.62	0.42
40:BF:65:TRP:HZ3	40:BF:75:HIS:ND1	2.16	0.42
42:BH:117:PRO:HA	42:BH:118:PRO:HD3	1.89	0.42
43:BI:41:GLU:O	43:BI:45:LYS:HG3	2.19	0.42
48:BP:132:LYS:O	48:BP:133:SER:C	2.61	0.42
49:BQ:69:PHE:HA	49:BQ:70:PRO:HD2	1.84	0.42
52:BT:16:ARG:CD	52:BT:19:LEU:HD11	2.47	0.42
53:BU:104:GLN:HB3	54:BV:43:GLU:OE2	2.18	0.42
56:BX:75:ASP:OD1	56:BX:75:ASP:N	2.52	0.42
1:CA:44:G:H2'	1:CA:45:U:O4'	2.18	0.42
1:CA:503:C:O2'	1:CA:504:C:H5'	2.18	0.42
1:CA:746:A:O2'	1:CA:747:C:H5'	2.19	0.42
1:CA:1030:C:N4	1:CA:1031:G:H1	2.17	0.42
1:CA:1309:G:N2	1:CA:1329:A:H1'	2.35	0.42
1:CA:1314:C:OP2	19:CS:6:LYS:HE2	2.19	0.42
1:CA:1326:C:O5'	21:CU:12:LYS:NZ	2.50	0.42
2:CB:73:THR:OG1	2:CB:169:LYS:HD2	2.19	0.42
3:CC:29:TYR:OH	14:CN:54:PRO:HD2	2.19	0.42
3:CC:159:GLY:CA	3:CC:193:TYR:CE1	3.02	0.42
5:CE:41:VAL:CG1	5:CE:113:ALA:HA	2.45	0.42
7:CG:86:GLN:OE1	7:CG:148:ASN:ND2	2.47	0.42
9:CI:95:LYS:HZ3	9:CI:101:PHE:HD2	1.60	0.42
10:CJ:8:LEU:HD12	10:CJ:8:LEU:O	2.18	0.42
13:CM:32:GLU:O	13:CM:36:LYS:HB2	2.18	0.42
15:CO:43:LEU:HD23	15:CO:43:LEU:HA	1.83	0.42
26:D1:72:GLU:O	26:D1:75:GLU:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:D6:15:GLU:OE1	31:D6:18:ARG:NE	2.49	0.42
33:D8:56:GLU:HA	33:D8:59:LYS:HG3	2.01	0.42
35:DA:117:G:C6	35:DA:119:A:N6	2.87	0.42
35:DA:271(F):C:C4	35:DA:271(G):C:C5	3.07	0.42
35:DA:433:C:H2'	35:DA:434:U:C6	2.53	0.42
35:DA:478:A:C6	35:DA:480:A:C6	3.07	0.42
35:DA:1032:A:H61	35:DA:1122:G:H1	1.66	0.42
35:DA:1049:C:C4	35:DA:1111:A:N1	2.87	0.42
35:DA:1515:G:H2'	35:DA:1516:C:C6	2.53	0.42
35:DA:1565:C:O3'	35:DA:1566:A:H8	2.02	0.42
35:DA:2040:C:H2'	35:DA:2041:U:C6	2.54	0.42
35:DA:2068:U:C2	35:DA:2430:A:H2	2.36	0.42
35:DA:2227:A:H5"	38:DD:263:ARG:HG3	2.00	0.42
35:DA:2377:A:C2	51:DS:89:ARG:NH1	2.87	0.42
35:DA:2592:G:H2'	35:DA:2593:U:O4'	2.19	0.42
35:DA:2612:C:OP2	39:DE:133:LYS:NZ	2.51	0.42
35:DA:2777:G:H3'	35:DA:2777:G:H8	1.84	0.42
38:DD:8:PRO:HB3	38:DD:14:ARG:HA	2.01	0.42
38:DD:94:LEU:HD22	38:DD:95:LEU:N	2.34	0.42
48:DP:57:THR:C	48:DP:59:LEU:N	2.75	0.42
48:DP:59:LEU:HA	48:DP:61:ARG:CD	2.48	0.42
48:DP:61:ARG:O	48:DP:62:LEU:CB	2.57	0.42
50:DR:116:LEU:HD13	50:DR:116:LEU:HA	1.81	0.42
55:DW:68:ARG:O	55:DW:110:LYS:N	2.37	0.42
1:AA:110:C:H2'	1:AA:111:G:O4'	2.19	0.42
1:AA:147:G:N1	1:AA:176:C:C2	2.87	0.42
1:AA:369:C:H42	1:AA:392:G:H1	1.66	0.42
1:AA:564:C:H5'	1:AA:564:C:H6	1.83	0.42
1:AA:1176:A:C8	1:AA:1177:G:C2	3.07	0.42
1:AA:1499:A:H5'	1:AA:1499:A:H8	1.84	0.42
2:AB:27:LYS:HD2	2:AB:193:ASP:HB2	2.01	0.42
2:AB:100:GLY:HA2	2:AB:176:GLU:OE2	2.19	0.42
3:AC:9:GLY:HA3	14:AN:49:HIS:HD2	1.85	0.42
3:AC:23:TYR:HD1	10:AJ:11:PHE:CE2	2.38	0.42
5:AE:72:GLN:C	5:AE:74:GLY:H	2.21	0.42
8:AH:8:ASP:O	8:AH:12:ARG:HB2	2.19	0.42
9:AI:71:SER:O	9:AI:74:ILE:HB	2.18	0.42
12:AL:33:ARG:HD3	12:AL:33:ARG:HA	1.63	0.42
18:AR:36:ASN:ND2	18:AR:39:VAL:HG21	2.35	0.42
18:AR:50:ILE:HD11	18:AR:70:ILE:CG2	2.44	0.42
23:AW:52:G:H1'	23:AW:63:G:N2	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:B1:92:LYS:CG	26:B1:93:GLU:H	2.26	0.42
31:B6:27:LYS:HE2	31:B6:27:LYS:HB3	1.80	0.42
35:BA:9:U:O2'	35:BA:10:G:H8	2.02	0.42
35:BA:1012:U:C5	46:BN:28:THR:HG21	2.54	0.42
35:BA:1252:G:C2	35:BA:1253:A:C2	3.07	0.42
35:BA:1338:G:N3	35:BA:1393:A:H2	2.17	0.42
35:BA:1352:U:O2	35:BA:1570:A:H2	2.02	0.42
35:BA:1573:G:C8	35:BA:1574:C:C5	3.07	0.42
35:BA:2067:G:O2'	35:BA:2069:G:H5'	2.19	0.42
36:BB:61:G:C6	36:BB:62:C:N4	2.87	0.42
37:BC:55:ASP:OD1	37:BC:55:ASP:N	2.52	0.42
38:BD:33:LEU:O	38:BD:35:LYS:N	2.52	0.42
40:BF:32:LEU:HD11	40:BF:105:VAL:HG13	2.00	0.42
40:BF:204:ASN:HD22	40:BF:205:ARG:HH21	1.67	0.42
41:BG:67:LYS:H	41:BG:67:LYS:HD2	1.83	0.42
42:BH:17:VAL:C	42:BH:45:VAL:HG21	2.44	0.42
43:BI:121:LYS:O	43:BI:122:GLU:HB2	2.19	0.42
46:BN:58:ASP:C	46:BN:60:ILE:N	2.69	0.42
49:BQ:9:TYR:O	49:BQ:9:TYR:CG	2.72	0.42
49:BQ:124:LYS:C	49:BQ:125:LEU:HG	2.45	0.42
52:BT:30:VAL:CG2	52:BT:84:GLN:HG2	2.49	0.42
1:CA:117:G:O5'	1:CA:117:G:C8	2.72	0.42
1:CA:450:G:N7	1:CA:481:G:C6	2.87	0.42
1:CA:484:G:HO2'	1:CA:485:G:P	2.34	0.42
1:CA:538:G:H2'	1:CA:539:A:O4'	2.18	0.42
1:CA:654:G:C2	1:CA:753:A:C4	3.07	0.42
1:CA:1240:U:OP2	7:CG:116:ALA:HB2	2.18	0.42
1:CA:1396:A:O4'	1:CA:1398:A:H1'	2.18	0.42
1:CA:1418:A:C2	1:CA:1483:A:C2	3.07	0.42
2:CB:30:ARG:H	2:CB:30:ARG:HG2	1.56	0.42
6:CF:69:GLU:C	6:CF:71:ARG:H	2.26	0.42
8:CH:40:ALA:C	8:CH:43:GLY:H	2.26	0.42
10:CJ:5:ARG:O	10:CJ:99:LYS:HB2	2.18	0.42
17:CQ:48:GLU:O	17:CQ:49:GLU:HB2	2.20	0.42
18:CR:59:SER:N	18:CR:62:GLU:HB2	2.34	0.42
19:CS:62:ILE:HA	19:CS:66:MET:SD	2.59	0.42
22:CV:18:G:C4	22:CV:58:A:C2	3.08	0.42
33:D8:27:THR:HG21	35:DA:2362:G:P	2.59	0.42
35:DA:8:A:OP1	46:DN:121:LYS:NZ	2.52	0.42
35:DA:143:G:H2'	35:DA:143(A):C:C6	2.54	0.42
35:DA:248:G:C2	35:DA:2431:U:H4'	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:271(J):C:C4	35:DA:271(L):U:H1'	2.54	0.42
35:DA:363(B):G:O2'	35:DA:363(C):G:H5'	2.20	0.42
35:DA:819:A:N3	35:DA:819:A:H2'	2.34	0.42
35:DA:830:G:H4'	35:DA:831:G:OP2	2.19	0.42
35:DA:955:C:O3'	49:DQ:85:LYS:HD2	2.19	0.42
35:DA:986:C:C2'	35:DA:987:G:H5'	2.49	0.42
35:DA:993:G:C1'	54:DV:89:GLN:HE22	2.32	0.42
35:DA:1324:G:C4	35:DA:1328:G:O6	2.72	0.42
35:DA:1336:A:H2'	35:DA:1337:G:C8	2.55	0.42
35:DA:1684:C:H2'	35:DA:1685:C:O4'	2.20	0.42
35:DA:1762:A:O5'	35:DA:1762:A:C8	2.69	0.42
35:DA:1956:U:H1'	35:DA:2552:U:OP1	2.18	0.42
35:DA:2019:A:O3'	53:DU:27:LEU:HD12	2.20	0.42
35:DA:2085:C:H4'	38:DD:262:ARG:HH21	1.83	0.42
35:DA:2636:U:H4'	39:DE:80:GLU:OE2	2.19	0.42
35:DA:2733:A:H2'	35:DA:2734:A:O4'	2.19	0.42
41:DG:20:ILE:O	41:DG:24:GLY:N	2.46	0.42
41:DG:175:LEU:C	41:DG:177:GLY:H	2.27	0.42
42:DH:111:HIS:CD2	42:DH:111:HIS:H	2.37	0.42
46:DN:102:ALA:O	46:DN:106:MET:HG3	2.19	0.42
48:DP:98:GLU:O	48:DP:101:VAL:HG22	2.20	0.42
52:DT:39:ARG:NE	52:DT:39:ARG:CA	2.79	0.42
53:DU:93:LYS:H	53:DU:93:LYS:CD	2.30	0.42
54:DV:34:GLU:OE2	54:DV:34:GLU:HA	2.11	0.42
56:DX:54:VAL:HA	56:DX:77:LYS:CE	2.42	0.42
1:AA:189(H):G:N2	1:AA:189(I):G:N3	2.68	0.42
1:AA:461:A:H2	1:AA:471:G:N3	2.16	0.42
1:AA:472:A:H3'	1:AA:473:G:O4'	2.19	0.42
1:AA:503:C:O2	1:AA:542:G:N2	2.45	0.42
1:AA:529:G:O6	12:AL:49:ASN:HA	2.19	0.42
1:AA:549:C:H2'	1:AA:550:G:O4'	2.19	0.42
1:AA:618:C:C2	1:AA:622:A:N6	2.87	0.42
1:AA:665:A:N3	1:AA:732:C:H2'	2.35	0.42
1:AA:1358:U:OP2	14:AN:35:ARG:CZ	2.67	0.42
3:AC:101:LEU:HD23	3:AC:102:ASN:N	2.35	0.42
7:AG:23:VAL:O	7:AG:27:ILE:HG12	2.19	0.42
8:AH:91:ARG:HD3	12:AL:7:ILE:HG21	2.01	0.42
13:AM:66:LEU:O	13:AM:70:LEU:N	2.51	0.42
16:AP:76:GLN:C	16:AP:78:GLY:H	2.27	0.42
17:AQ:81:ARG:NH1	17:AQ:84:LEU:HG	2.34	0.42
19:AS:32:LYS:HE2	19:AS:32:LYS:HB2	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:36:LEU:C	20:AT:36:LEU:CD2	2.92	0.42
23:AW:34:G:C5'	23:AW:35:A:OP2	2.67	0.42
27:B2:14:ARG:NH2	27:B2:17:SER:O	2.52	0.42
27:B2:59:ARG:O	27:B2:61:LEU:N	2.52	0.42
30:B5:3:LYS:HZ3	35:BA:2611:U:H2'	1.84	0.42
33:B8:14:VAL:HG21	33:B8:56:GLU:OE2	2.20	0.42
35:BA:305:U:H2'	35:BA:306:U:C6	2.54	0.42
35:BA:445:C:OP1	53:BU:2:PRO:HA	2.19	0.42
35:BA:636:G:C5	48:BP:115:LEU:HD11	2.55	0.42
35:BA:649:G:C5	35:BA:650:C:C4	3.08	0.42
35:BA:1179:C:H2'	35:BA:1180:C:C6	2.52	0.42
35:BA:1312:U:C5	35:BA:1340:U:O4	2.72	0.42
35:BA:1500:G:H5"	35:BA:1501:C:P	2.59	0.42
35:BA:2225:A:H4'	35:BA:2226:C:H5'	2.00	0.42
35:BA:2375:G:N2	35:BA:2378:A:C8	2.87	0.42
35:BA:2394:C:O2'	35:BA:2395:C:H5'	2.18	0.42
35:BA:2823:A:OP1	39:BE:113:PHE:HB2	2.20	0.42
39:BE:151:TYR:CE1	39:BE:154:LYS:HD2	2.54	0.42
40:BF:65:TRP:NE1	40:BF:72:ARG:HE	2.17	0.42
43:BI:117:GLU:H	43:BI:117:GLU:HG2	1.50	0.42
46:BN:66:LYS:HZ1	46:BN:87:LEU:CD2	2.33	0.42
48:BP:62:LEU:HA	48:BP:63:PRO:HD3	1.77	0.42
48:BP:95:VAL:HG13	48:BP:100:LEU:HD21	2.00	0.42
49:BQ:23:GLY:HA3	49:BQ:101:ARG:HD2	2.01	0.42
49:BQ:119:ARG:HA	49:BQ:123:HIS:ND1	2.34	0.42
51:BS:8:GLU:C	51:BS:10:ARG:H	2.27	0.42
51:BS:51:ALA:HB3	51:BS:73:LEU:HD23	2.01	0.42
52:BT:7:ILE:C	52:BT:9:LEU:H	2.27	0.42
54:BV:24:LYS:CA	54:BV:94:LEU:HD13	2.40	0.42
55:BW:14:PRO:HG3	55:BW:78:GLU:HA	2.01	0.42
55:BW:51:LEU:HG	55:BW:107:LEU:CD1	2.45	0.42
58:BZ:58:VAL:HA	58:BZ:68:PRO:HA	2.01	0.42
1:CA:227:G:H2'	1:CA:228:A:O4'	2.19	0.42
1:CA:299:G:C6	1:CA:300:A:C6	3.07	0.42
1:CA:545:C:OP1	4:CD:61:LYS:NZ	2.51	0.42
1:CA:592:G:C6	1:CA:648:A:C6	3.08	0.42
1:CA:664:G:P	18:CR:64:ARG:HH21	2.43	0.42
1:CA:1124:G:O5'	10:CJ:36:GLY:N	2.52	0.42
1:CA:1208:C:H2'	1:CA:1209:C:O4'	2.19	0.42
1:CA:1285:A:C8	1:CA:1285:A:OP1	2.72	0.42
2:CB:97:TRP:CZ3	2:CB:172:ILE:HB	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:167:PRO:C	2:CB:170:GLU:OE2	2.63	0.42
3:CC:142:MET:HE1	3:CC:148:GLY:N	2.34	0.42
4:CD:50:ARG:HA	4:CD:51:PRO:HD3	1.85	0.42
4:CD:172:PRO:C	4:CD:174:LEU:H	2.26	0.42
6:CF:1:MET:HA	6:CF:67:MET:O	2.19	0.42
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	2.02	0.42
15:CO:25:THR:O	15:CO:26:GLU:C	2.63	0.42
17:CQ:66:SER:O	17:CQ:67:LYS:C	2.62	0.42
20:CT:33:ILE:O	20:CT:37:SER:OG	2.31	0.42
20:CT:66:ALA:O	20:CT:71:THR:HB	2.19	0.42
20:CT:84:LEU:HD23	20:CT:84:LEU:HA	1.73	0.42
32:D7:1:MET:HE1	35:DA:1619:G:N3	2.34	0.42
35:DA:18:C:H6	35:DA:18:C:O5'	2.02	0.42
35:DA:43:A:H61	35:DA:434:U:H3	1.67	0.42
35:DA:128:C:C6	35:DA:128:C:C3'	3.02	0.42
35:DA:536:A:H2'	35:DA:537:C:C6	2.54	0.42
35:DA:960:A:C8	35:DA:962:G:C8	3.07	0.42
35:DA:998:C:H2'	35:DA:999:U:O4'	2.19	0.42
35:DA:1344:G:H5'	35:DA:1384:A:C6	2.54	0.42
35:DA:1443:G:N2	35:DA:1549:C:C2	2.87	0.42
35:DA:1502:C:H6	35:DA:1502:C:H5"	1.84	0.42
35:DA:2600:A:H2'	35:DA:2601:C:C6	2.54	0.42
35:DA:2677:G:H2'	35:DA:2678:C:C6	2.53	0.42
35:DA:2807:G:H1	35:DA:2892:A:H62	1.66	0.42
38:DD:143:HIS:CD2	38:DD:144:ALA:HB2	2.55	0.42
40:DF:202:PHE:CZ	40:DF:206:ILE:HD11	2.54	0.42
43:DI:81:VAL:N	43:DI:143:SER:OG	2.43	0.42
46:DN:2:LYS:HG3	46:DN:2:LYS:O	2.18	0.42
46:DN:30:ILE:HG23	46:DN:52:VAL:HG11	2.00	0.42
49:DQ:120:ILE:O	49:DQ:121:ALA:C	2.62	0.42
49:DQ:128:LYS:HD2	49:DQ:128:LYS:HA	1.77	0.42
50:DR:12:ARG:HG2	50:DR:16:HIS:CD2	2.54	0.42
52:DT:51:ARG:C	52:DT:52:ILE:HG13	2.44	0.42
1:AA:132:C:H2'	1:AA:133:U:O4'	2.19	0.42
1:AA:151:A:C5	1:AA:152:A:C8	3.07	0.42
1:AA:157:G:H2'	1:AA:157:G:N3	2.34	0.42
1:AA:617:G:H1	1:AA:623:C:H42	1.65	0.42
1:AA:965:A:C2	1:AA:969:A:C2	3.07	0.42
1:AA:1057:G:C4	1:AA:1204:A:C2	3.07	0.42
1:AA:1142:G:H2'	1:AA:1143:G:H8	1.84	0.42
1:AA:1170:A:C8	1:AA:1171:G:N2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1291:G:C2	1:AA:1292:U:C4	3.07	0.42
1:AA:1480:G:C6	1:AA:1481:U:N3	2.87	0.42
4:AD:166:LYS:C	4:AD:168:ARG:H	2.27	0.42
7:AG:57:GLU:H	7:AG:57:GLU:HG2	1.56	0.42
7:AG:145:ALA:O	7:AG:147:ALA:N	2.49	0.42
8:AH:20:TYR:CE2	8:AH:75:ARG:HB3	2.54	0.42
8:AH:32:LYS:O	8:AH:36:LEU:HD12	2.19	0.42
13:AM:44:ARG:HB3	13:AM:46:LYS:HG2	2.02	0.42
13:AM:120:LYS:HE3	13:AM:120:LYS:HB3	1.81	0.42
27:B2:18:PRO:O	27:B2:20:GLU:N	2.52	0.42
30:B5:29:THR:O	30:B5:29:THR:CG2	2.67	0.42
31:B6:24:GLU:HA	33:B8:36:LYS:H	1.84	0.42
33:B8:61:LEU:HD21	35:BA:593:G:O2'	2.20	0.42
35:BA:357:A:H2'	35:BA:358:U:C6	2.55	0.42
35:BA:542:C:N3	35:BA:543:C:H1'	2.34	0.42
35:BA:590:A:H2'	35:BA:591:C:C6	2.53	0.42
35:BA:774:A:OP1	38:BD:48:ARG:NH2	2.52	0.42
35:BA:906:G:H5'	35:BA:906:G:H8	1.85	0.42
35:BA:1051:G:C8	35:BA:1052:C:C5	3.07	0.42
35:BA:1638:C:H2'	35:BA:1639:U:O4'	2.19	0.42
35:BA:1718:G:H1	35:BA:1744:C:N4	2.16	0.42
35:BA:2206:G:N3	35:BA:2207:G:H5'	2.34	0.42
35:BA:2472:G:H1	35:BA:2477:C:P	2.41	0.42
35:BA:2805:G:H5"	35:BA:2807:G:OP2	2.20	0.42
35:BA:2810:A:C2'	39:BE:61:ARG:NH1	2.76	0.42
35:BA:2851:A:C5	35:BA:2852:G:C5	3.07	0.42
36:BB:42:C:H4'	41:BG:67:LYS:HB2	2.02	0.42
38:BD:138:VAL:HG12	38:BD:168:ARG:HE	1.82	0.42
40:BF:179:GLU:OE1	40:BF:179:GLU:N	2.44	0.42
43:BI:4:ILE:HG22	43:BI:18:VAL:HG22	2.02	0.42
43:BI:120:ILE:HG22	43:BI:121:LYS:N	2.34	0.42
46:BN:66:LYS:HA	46:BN:69:GLN:HB2	2.01	0.42
47:BO:1:MET:HB3	47:BO:32:TYR:CB	2.44	0.42
47:BO:96:THR:O	47:BO:117:LEU:HD21	2.19	0.42
48:BP:59:LEU:H	48:BP:59:LEU:HG	1.50	0.42
49:BQ:137:TYR:CD1	49:BQ:138:ASP:HA	2.54	0.42
58:BZ:10:ARG:HD3	58:BZ:37:VAL:O	2.20	0.42
1:CA:22:G:H4'	1:CA:885:G:C8	2.53	0.42
1:CA:397:A:C5	1:CA:548:G:N7	2.87	0.42
1:CA:519:C:H2'	1:CA:520:A:H8	1.83	0.42
1:CA:675:A:H61	1:CA:715:A:H61	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1104:G:H2'	1:CA:1105:A:H8	1.85	0.42
1:CA:1228:C:O2'	13:CM:118:ALA:HB2	2.20	0.42
1:CA:1268:A:H2'	1:CA:1269:A:C8	2.55	0.42
1:CA:1367:C:C5'	10:CJ:60:ARG:HE	2.32	0.42
2:CB:16:HIS:HD2	2:CB:210:SER:HA	1.84	0.42
2:CB:50:GLU:HG2	2:CB:202:PRO:HD3	2.02	0.42
4:CD:4:TYR:CG	4:CD:5:ILE:N	2.85	0.42
4:CD:190:ASP:OD1	4:CD:191:ARG:N	2.53	0.42
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.54	0.42
9:CI:112:LYS:HG3	9:CI:118:LYS:HA	2.01	0.42
13:CM:118:ALA:HB3	22:CV:29:G:C5'	2.46	0.42
14:CN:15:LYS:HG2	14:CN:16:PHE:H	1.84	0.42
19:CS:22:LEU:HD13	19:CS:27:GLU:HB2	2.01	0.42
20:CT:73:HIS:HB2	20:CT:74:LYS:HG3	2.01	0.42
26:D1:85:LEU:O	26:D1:86:SER:HB2	2.18	0.42
35:DA:71:A:N1	56:DX:33:LYS:HE3	2.34	0.42
35:DA:140:G:N2	35:DA:142:A:N1	2.66	0.42
35:DA:143:G:H5"	35:DA:1598:C:O2'	2.20	0.42
35:DA:272(H):C:N4	35:DA:363(C):G:N1	2.68	0.42
35:DA:868:U:H2'	35:DA:869:G:O4'	2.19	0.42
35:DA:1077:A:H2'	35:DA:1077:A:N3	2.34	0.42
35:DA:1151:G:O3'	53:DU:81:HIS:HB2	2.19	0.42
35:DA:1265:A:OP1	35:DA:1265:A:C8	2.65	0.42
35:DA:1316:U:O2'	35:DA:1317:A:H5'	2.19	0.42
35:DA:2206:G:N2	35:DA:2207:G:H5'	2.19	0.42
35:DA:2298:A:N6	35:DA:2318:G:O2'	2.52	0.42
35:DA:2584:U:H2'	35:DA:2585:U:H2'	2.01	0.42
35:DA:2655:G:O2'	35:DA:2656:U:P	2.78	0.42
35:DA:2740:A:N6	35:DA:2764:A:C8	2.88	0.42
35:DA:2838:G:C6	35:DA:2839:G:C5	3.08	0.42
38:DD:39:LYS:HE3	38:DD:39:LYS:HB3	1.92	0.42
39:DE:76:ARG:HD2	39:DE:79:ARG:NH1	2.35	0.42
40:DF:188:ARG:HG3	40:DF:188:ARG:H	1.61	0.42
41:DG:131:TYR:HB3	41:DG:159:VAL:HG13	2.00	0.42
42:DH:11:VAL:HG13	42:DH:15:VAL:HG22	2.01	0.42
46:DN:65:LYS:O	46:DN:65:LYS:HD2	2.19	0.42
46:DN:65:LYS:O	46:DN:69:GLN:HB2	2.19	0.42
46:DN:137:LYS:HB2	46:DN:140:VAL:CA	2.49	0.42
51:DS:28:VAL:HG11	51:DS:99:LYS:HZ3	1.84	0.42
56:DX:3:THR:HG22	56:DX:5:TYR:H	1.84	0.42
56:DX:69:TYR:CD1	56:DX:69:TYR:C	2.97	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DZ:24:LEU:C	58:DZ:24:LEU:HD23	2.44	0.42
1:AA:868:C:H2'	1:AA:869:G:O4'	2.20	0.42
1:AA:945:G:C6	1:AA:1337:G:C5	3.07	0.42
1:AA:1036:G:OP1	1:AA:1037:C:N4	2.52	0.42
1:AA:1235:U:O2'	1:AA:1305:G:H5'	2.19	0.42
1:AA:1329:A:P	13:AM:28:ALA:HB3	2.59	0.42
1:AA:1446:U:N3	1:AA:1447:A:N3	2.68	0.42
3:AC:110:ASN:CG	3:AC:140:ARG:HG2	2.45	0.42
5:AE:24:ARG:H	5:AE:24:ARG:HG2	1.51	0.42
6:AF:11:ASN:O	6:AF:14:LEU:HG	2.20	0.42
8:AH:86:ILE:C	8:AH:88:LYS:H	2.27	0.42
11:AK:122:LYS:CE	11:AK:124:LYS:HB2	2.47	0.42
12:AL:70:ILE:CD1	12:AL:77:LEU:HD22	2.49	0.42
13:AM:23:TYR:CD1	13:AM:71:ARG:HG2	2.55	0.42
14:AN:13:THR:N	14:AN:14:PRO:HD3	2.35	0.42
16:AP:38:TYR:CE2	16:AP:50:LYS:HB2	2.54	0.42
17:AQ:53:LEU:C	17:AQ:55:ASP:H	2.27	0.42
17:AQ:90:ILE:C	17:AQ:92:ARG:N	2.77	0.42
25:B0:43:THR:CG2	35:BA:2332:U:H5'	2.50	0.42
31:B6:26:ASN:ND2	31:B6:27:LYS:H	2.17	0.42
35:BA:142:A:H3'	35:BA:142(A):C:C5'	2.48	0.42
35:BA:150:C:H2'	35:BA:151:C:H6	1.84	0.42
35:BA:528:A:H2	35:BA:2043:C:C5'	2.31	0.42
35:BA:579:G:O2'	35:BA:580:C:H5'	2.19	0.42
35:BA:684:G:H3'	35:BA:684:G:C8	2.55	0.42
35:BA:1000:A:N1	35:BA:1155:A:C4	2.88	0.42
35:BA:1182:A:OP1	35:BA:1182:A:H4'	2.19	0.42
35:BA:2078:C:C4	35:BA:2079:U:C4	3.07	0.42
35:BA:2310:A:H5'	35:BA:2311:A:OP1	2.20	0.42
35:BA:2700:C:N4	35:BA:2707:G:H1	2.08	0.42
35:BA:2716:U:C2'	35:BA:2717:G:H5'	2.50	0.42
35:BA:2747:G:O2'	42:BH:67:LEU:HD12	2.19	0.42
35:BA:2854:G:O2'	35:BA:2855:C:H5'	2.20	0.42
36:BB:21:G:C2	36:BB:22:U:C2	3.07	0.42
39:BE:92:THR:HB	39:BE:94:GLU:HB2	2.01	0.42
41:BG:5:VAL:HG11	41:BG:101:ILE:HG22	2.00	0.42
41:BG:86:MET:N	41:BG:87:PRO:HD2	2.34	0.42
42:BH:12:PRO:HD2	42:BH:49:VAL:HG12	2.00	0.42
42:BH:121:ILE:HG23	42:BH:134:SER:O	2.20	0.42
48:BP:59:LEU:N	48:BP:59:LEU:HD23	2.35	0.42
48:BP:78:PRO:O	48:BP:80:TYR:CE1	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:97:ARG:HG2	51:BS:99:LYS:HB3	2.01	0.42
52:BT:124:ASP:OD2	52:BT:125:ARG:NH2	2.53	0.42
57:BY:33:LYS:N	57:BY:33:LYS:HD2	2.34	0.42
57:BY:46:LYS:C	57:BY:62:GLU:HG2	2.44	0.42
58:BZ:24:LEU:O	58:BZ:24:LEU:HG	2.20	0.42
1:CA:107:G:C2	1:CA:108:G:H1'	2.54	0.42
1:CA:200:G:H2'	1:CA:201:C:O4'	2.19	0.42
1:CA:458:C:H3'	1:CA:460:G:H8	1.85	0.42
1:CA:1297:C:O2'	7:CG:114:ARG:NH1	2.51	0.42
1:CA:1416:G:O2'	1:CA:1417:G:H5'	2.19	0.42
2:CB:21:ARG:HA	2:CB:40:HIS:H	1.84	0.42
3:CC:18:TRP:H	3:CC:18:TRP:HE3	1.67	0.42
3:CC:188:LEU:HD13	3:CC:188:LEU:HA	1.81	0.42
4:CD:173:TRP:C	4:CD:186:LEU:HB2	2.44	0.42
6:CF:40:VAL:HA	6:CF:62:TRP:O	2.20	0.42
7:CG:51:GLN:C	7:CG:53:LYS:H	2.26	0.42
8:CH:105:ARG:HD3	8:CH:105:ARG:HA	1.91	0.42
9:CI:96:LEU:HA	9:CI:99:LEU:O	2.20	0.42
11:CK:98:LEU:HA	11:CK:98:LEU:HD23	1.78	0.42
14:CN:37:PHE:CE2	14:CN:53:LEU:HD13	2.55	0.42
26:D1:15:ALA:HA	26:D1:46:LEU:HD21	2.02	0.42
31:D6:42:TRP:HB3	31:D6:43:CYS:H	1.77	0.42
35:DA:82:G:C6	35:DA:83:G:N1	2.88	0.42
35:DA:259:G:C2'	35:DA:621:A:O2'	2.68	0.42
35:DA:322:A:C5	35:DA:340:A:C2	3.08	0.42
35:DA:352:G:O2'	35:DA:353:G:H5"	2.19	0.42
35:DA:494:G:H5"	35:DA:494:G:C8	2.54	0.42
35:DA:833:U:O2	48:DP:55:ARG:NH2	2.41	0.42
35:DA:1091:G:N2	35:DA:1102:C:C2	2.87	0.42
35:DA:1975:G:C2	35:DA:1976:U:C2	3.08	0.42
35:DA:2103:C:H5'	35:DA:2104:G:OP2	2.19	0.42
35:DA:2320:A:N3	35:DA:2320:A:H2'	2.35	0.42
35:DA:2658:C:H2'	35:DA:2659:G:O4'	2.20	0.42
36:DB:44:G:C2	36:DB:48:A:C2	3.08	0.42
36:DB:72:G:H2'	36:DB:73:A:OP2	2.19	0.42
39:DE:38:THR:HG21	39:DE:40:GLU:HG3	2.01	0.42
40:DF:194:MET:HE2	40:DF:194:MET:HB3	1.66	0.42
41:DG:16:ARG:HH22	41:DG:28:VAL:HG12	1.84	0.42
47:DO:112:MET:HE2	47:DO:112:MET:HB3	1.84	0.42
50:DR:2:ARG:HB3	50:DR:2:ARG:CZ	2.47	0.42
51:DS:29:PHE:HD2	51:DS:36:TYR:CD2	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:29:ARG:NE	52:DT:31:SER:HB2	2.33	0.42
52:DT:43:GLN:HG2	52:DT:45:PHE:CE1	2.52	0.42
54:DV:21:ARG:HH11	54:DV:93:GLU:CD	2.27	0.42
56:DX:18:TYR:N	56:DX:18:TYR:CD1	2.86	0.42
1:AA:182:U:OP2	1:AA:183:G:C2	2.73	0.42
1:AA:359:U:OP1	43:DI:87:LYS:HD2	2.20	0.42
1:AA:796:C:OP2	1:AA:796:C:H6	2.02	0.42
1:AA:1070:U:C2	1:AA:1071:C:C5	3.08	0.42
1:AA:1226:C:O2'	13:AM:103:THR:O	2.25	0.42
1:AA:1289:A:H62	9:AI:70:LYS:HZ1	1.66	0.42
1:AA:1342:C:C2'	1:AA:1343:G:H5'	2.50	0.42
1:AA:1530:G:O6	1:AA:1531:A:N6	2.52	0.42
2:AB:74:LYS:HB2	2:AB:165:VAL:CG2	2.48	0.42
2:AB:98:LEU:HD13	2:AB:99:GLY:H	1.84	0.42
2:AB:176:GLU:HA	2:AB:179:LYS:HB3	2.02	0.42
3:AC:73:PRO:O	3:AC:76:VAL:HG13	2.19	0.42
7:AG:20:ASP:HB3	7:AG:23:VAL:CG2	2.46	0.42
8:AH:20:TYR:HD1	8:AH:65:TYR:CD2	2.37	0.42
14:AN:39:LEU:HB3	14:AN:40:CYS:H	1.69	0.42
14:AN:40:CYS:O	14:AN:44:LEU:HB3	2.19	0.42
23:AW:57:G:H2'	23:AW:57:G:N3	2.35	0.42
33:B8:36:LYS:HD3	35:BA:2383:G:N7	2.34	0.42
35:BA:30:G:C5	35:BA:31:C:C4	3.07	0.42
35:BA:66:C:O2	35:BA:89:G:C8	2.73	0.42
35:BA:189:G:H2'	35:BA:205:G:N2	2.35	0.42
35:BA:333:G:H2'	35:BA:333:G:N3	2.34	0.42
35:BA:539:G:H3'	35:BA:539:G:C4	2.54	0.42
35:BA:740:U:H2'	35:BA:741:G:H8	1.83	0.42
35:BA:1252:G:H5'	53:BU:33:ARG:HH11	1.85	0.42
35:BA:1381:G:H1'	35:BA:1571:A:N1	2.35	0.42
35:BA:1639:U:H2'	35:BA:1640:C:H5'	2.00	0.42
35:BA:1953:A:O2'	35:BA:2559:C:O2	2.37	0.42
35:BA:2688:U:H5	35:BA:2720:U:OP2	2.03	0.42
37:BC:82:LYS:HB3	37:BC:86:ALA:CB	2.50	0.42
40:BF:154:VAL:HG22	40:BF:191:ARG:HB2	2.01	0.42
43:BI:68:LEU:C	43:BI:70:GLU:N	2.76	0.42
46:BN:65:LYS:O	46:BN:69:GLN:HG3	2.20	0.42
46:BN:106:MET:H	46:BN:106:MET:HG2	1.69	0.42
51:BS:67:ARG:C	51:BS:98:VAL:HG21	2.44	0.42
55:BW:7:ALA:O	55:BW:102:HIS:HA	2.20	0.42
56:BX:36:LYS:C	56:BX:38:GLU:OE2	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:50:LYS:HB3	56:BX:85:PRO:CB	2.50	0.42
56:BX:52:VAL:HG12	56:BX:53:LYS:N	2.35	0.42
56:BX:54:VAL:HG12	56:BX:55:ASN:N	2.35	0.42
1:CA:44:G:N3	1:CA:399:G:C2	2.86	0.42
1:CA:119:A:C5	1:CA:240:C:C4	3.08	0.42
1:CA:243:A:N6	1:CA:281:G:H1'	2.35	0.42
1:CA:532:A:H61	3:CC:193:TYR:CB	2.32	0.42
1:CA:558:G:C5	1:CA:559:A:C2	3.08	0.42
1:CA:1066:C:O2'	1:CA:1067:A:H5'	2.19	0.42
1:CA:1285:A:OP1	1:CA:1285:A:H8	2.02	0.42
1:CA:1317:C:C6	14:CN:16:PHE:HB3	2.54	0.42
1:CA:1504:G:H3'	1:CA:1504:G:P	2.60	0.42
3:CC:8:ILE:HG22	14:CN:49:HIS:O	2.20	0.42
3:CC:182:ILE:HG12	3:CC:203:PHE:HD1	1.84	0.42
3:CC:206:GLU:HB3	3:CC:207:VAL:H	1.69	0.42
4:CD:32:ALA:O	4:CD:36:ARG:N	2.41	0.42
4:CD:58:LEU:O	4:CD:61:LYS:HB3	2.19	0.42
6:CF:22:GLU:OE1	6:CF:82:ARG:NH2	2.53	0.42
8:CH:91:ARG:HA	17:CQ:34:LYS:NZ	2.35	0.42
15:CO:32:LEU:HD13	15:CO:63:ARG:HB3	2.00	0.42
27:D2:23:LYS:HB2	56:DX:5:TYR:CE1	2.55	0.42
35:DA:92:A:H4'	35:DA:92:A:OP1	2.19	0.42
35:DA:218:A:N1	35:DA:235:U:H4'	2.35	0.42
35:DA:265:A:H1'	35:DA:266:G:O4'	2.19	0.42
35:DA:460:A:C2	35:DA:470:A:C4	3.07	0.42
35:DA:851:U:O2	35:DA:927:G:C2	2.72	0.42
35:DA:875:G:H2'	35:DA:876:C:O4'	2.20	0.42
35:DA:1339:G:N2	35:DA:1603:A:H1'	2.34	0.42
35:DA:1756:G:H4'	35:DA:1758:G:O4'	2.19	0.42
35:DA:1816:G:O6	38:DD:37:LEU:HD11	2.20	0.42
35:DA:1858:G:H1'	35:DA:1884:A:H61	1.85	0.42
35:DA:2023:G:H4'	35:DA:2617:C:O3'	2.20	0.42
35:DA:2040:C:H2'	35:DA:2041:U:O4'	2.19	0.42
35:DA:2114:A:N6	35:DA:2117:A:H61	2.18	0.42
35:DA:2860:A:C8	35:DA:2861:G:H1'	2.55	0.42
40:DF:110:LEU:HA	40:DF:183:VAL:HG12	2.01	0.42
42:DH:28:GLY:HA3	42:DH:79:VAL:HB	2.00	0.42
42:DH:117:PRO:HB3	42:DH:123:PHE:CE2	2.55	0.42
43:DI:78:THR:HA	43:DI:141:LYS:O	2.20	0.42
46:DN:16:ILE:HG13	46:DN:137:LYS:HG2	2.01	0.42
48:DP:135:LEU:HD23	48:DP:135:LEU:HA	1.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:110:ILE:HD13	52:DT:110:ILE:HG21	1.62	0.42
52:DT:112:ARG:O	52:DT:112:ARG:HD2	2.20	0.42
54:DV:64:HIS:O	54:DV:64:HIS:CG	2.72	0.42
56:DX:21:PHE:C	56:DX:23:GLU:H	2.28	0.42
56:DX:36:LYS:C	56:DX:38:GLU:N	2.75	0.42
58:DZ:54:HIS:HD2	58:DZ:99:TYR:O	2.03	0.42
1:AA:194:C:C2'	1:AA:195:A:H5"	2.50	0.42
1:AA:408:A:H2'	1:AA:409:G:H8	1.85	0.42
1:AA:450:G:N7	1:AA:481:G:C6	2.88	0.42
1:AA:578:C:O2'	1:AA:728:A:N3	2.46	0.42
1:AA:758:G:H8	1:AA:758:G:O5'	2.02	0.42
1:AA:989:C:H2'	1:AA:990:C:C6	2.55	0.42
2:AB:149:LEU:HD23	2:AB:149:LEU:HA	1.78	0.42
2:AB:166:ASP:HB3	2:AB:169:LYS:CB	2.50	0.42
7:AG:76:ARG:HB2	7:AG:89:MET:SD	2.60	0.42
7:AG:145:ALA:C	7:AG:147:ALA:N	2.78	0.42
8:AH:26:VAL:HG22	8:AH:32:LYS:HD3	2.01	0.42
10:AJ:49:VAL:C	10:AJ:60:ARG:HB3	2.45	0.42
16:AP:23:ASP:C	16:AP:25:ARG:N	2.78	0.42
20:AT:73:HIS:HB3	20:AT:74:LYS:HG3	2.02	0.42
23:AY:38:A:C5	23:AY:39:U:C6	3.08	0.42
26:B1:48:LYS:NZ	26:B1:63:ALA:N	2.63	0.42
35:BA:104:U:C4	35:BA:105:C:N4	2.87	0.42
35:BA:764:A:P	38:BD:214:TRP:HH2	2.43	0.42
35:BA:847:U:OP2	35:BA:928:G:O6	2.38	0.42
35:BA:1015:G:C6	35:BA:1148:A:N1	2.88	0.42
35:BA:1107:G:H2'	35:BA:1107:G:N3	2.34	0.42
35:BA:1137:G:H1'	35:BA:2039:C:OP1	2.20	0.42
35:BA:1204:A:N1	35:BA:1241:A:C2	2.88	0.42
35:BA:1341:U:O2	56:BX:77:LYS:HG2	2.19	0.42
35:BA:1452:A:C6	35:BA:2702:U:H1'	2.55	0.42
35:BA:1462:C:O2'	35:BA:2703:C:H5'	2.19	0.42
35:BA:1784:A:H4'	35:BA:1785:A:C5'	2.50	0.42
35:BA:2065:C:H2'	35:BA:2066:C:C6	2.55	0.42
35:BA:2202:C:O2'	38:BD:151:LYS:NZ	2.49	0.42
35:BA:2206:G:N2	35:BA:2207:G:O3'	2.53	0.42
35:BA:2698:U:C6	35:BA:2699:C:O2	2.73	0.42
35:BA:2702:U:HO2'	35:BA:2703:C:H5	1.65	0.42
37:BC:100:ILE:HG23	37:BC:132:GLY:CA	2.50	0.42
38:BD:72:LYS:HD3	38:BD:97:TYR:CD1	2.55	0.42
40:BF:93:LYS:HA	40:BF:93:LYS:HD2	1.92	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:84:LYS:HD2	41:BG:84:LYS:N	2.34	0.42
43:BI:81:VAL:HG11	43:BI:88:ILE:CD1	2.50	0.42
43:BI:83:ALA:HB2	43:BI:88:ILE:HA	2.01	0.42
47:BO:4:PRO:HA	47:BO:21:CYS:O	2.19	0.42
49:BQ:122:GLY:HA2	49:BQ:126:PRO:CD	2.50	0.42
51:BS:20:ARG:CZ	51:BS:22:GLY:N	2.79	0.42
51:BS:89:ARG:NH1	51:BS:92:TYR:CZ	2.87	0.42
51:BS:90:GLY:C	51:BS:92:TYR:N	2.77	0.42
53:BU:25:TRP:CG	53:BU:26:GLY:N	2.85	0.42
56:BX:25:LYS:CG	56:BX:26:TYR:N	2.82	0.42
57:BY:9:LYS:HD2	57:BY:10:GLY:H	1.85	0.42
1:CA:12:U:H2'	1:CA:13:U:H5"	2.01	0.42
1:CA:88:A:OP2	1:CA:90:U:C2	2.73	0.42
1:CA:189:G:H2'	1:CA:189(A):C:C6	2.55	0.42
1:CA:516:U:O4	1:CA:533:A:OP2	2.38	0.42
1:CA:557:G:H2'	1:CA:558:G:C8	2.55	0.42
1:CA:1048:G:OP1	14:CN:4:LYS:HA	2.20	0.42
1:CA:1128:C:O5'	1:CA:1128:C:H6	2.02	0.42
1:CA:1161:C:H2'	1:CA:1162:C:C6	2.55	0.42
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.20	0.42
1:CA:1332:A:H8	1:CA:1332:A:O5'	2.02	0.42
1:CA:1397:C:O2	1:CA:1397:C:O4'	2.38	0.42
5:CE:71:LEU:HD13	5:CE:114:GLY:O	2.20	0.42
9:CI:36:TYR:HD2	9:CI:37:PHE:CE2	2.37	0.42
15:CO:4:THR:O	15:CO:5:LYS:C	2.62	0.42
15:CO:80:ALA:O	15:CO:81:LEU:C	2.63	0.42
20:CT:44:ALA:HB1	20:CT:91:LEU:HB2	2.02	0.42
23:CW:40:C:H2'	23:CW:41:C:C6	2.55	0.42
23:CW:73:A:H5"	23:CW:74:C:OP2	2.18	0.42
27:D2:22:GLU:O	27:D2:25:VAL:HG12	2.20	0.42
30:D5:25:LEU:HA	30:D5:25:LEU:HD23	1.81	0.42
31:D6:30:THR:O	31:D6:31:PRO:C	2.63	0.42
33:D8:22:VAL:HB	33:D8:53:PRO:HB2	2.02	0.42
35:DA:29:U:H2'	35:DA:30:G:C8	2.55	0.42
35:DA:90:U:HO2'	35:DA:92:A:P	2.34	0.42
35:DA:239:U:H2'	35:DA:240:G:O4'	2.19	0.42
35:DA:301:G:C6	35:DA:317:G:C6	3.08	0.42
35:DA:314:A:C2'	35:DA:315:G:H5'	2.50	0.42
35:DA:628:G:H4'	35:DA:651:G:O2'	2.20	0.42
35:DA:729:G:C6	38:DD:208:LYS:HB2	2.54	0.42
35:DA:956:G:N2	35:DA:959:A:H3'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1022:G:C6	35:DA:1140:C:C4	3.08	0.42
35:DA:1444:G:O2'	35:DA:1445:A:H8	2.03	0.42
35:DA:1639:U:O2'	35:DA:1640:C:H5"	2.19	0.42
35:DA:1655:A:H4'	39:DE:115:GLY:N	2.34	0.42
35:DA:1721:G:N1	35:DA:1739:U:OP2	2.53	0.42
35:DA:2077:A:H1'	35:DA:2435:A:O4'	2.20	0.42
35:DA:2415:G:C4'	48:DP:67:MET:H	2.23	0.42
36:DB:55:U:C2	36:DB:56:G:C8	3.08	0.42
37:DC:82:LYS:HZ2	37:DC:152:ILE:H	1.68	0.42
39:DE:133:LYS:HB2	39:DE:134:ILE:HG23	2.01	0.42
41:DG:131:TYR:O	41:DG:159:VAL:HG12	2.19	0.42
48:DP:96:THR:HG22	48:DP:126:VAL:HB	2.01	0.42
48:DP:146:VAL:O	48:DP:147:LEU:HB2	2.19	0.42
49:DQ:42:ILE:HD11	49:DQ:127:ILE:HG13	2.02	0.42
52:DT:3:ARG:O	52:DT:7:ILE:HG13	2.20	0.42
53:DU:58:ARG:O	53:DU:59:ARG:C	2.62	0.42
55:DW:64:MET:CE	55:DW:109:GLU:HG3	2.49	0.42
56:DX:11:PRO:CB	56:DX:26:TYR:HE1	2.33	0.42
1:AA:77:G:O6	1:AA:93:G:C8	2.73	0.42
1:AA:185:A:C5	1:AA:186:C:C5	3.07	0.42
1:AA:197:A:C6	1:AA:221:C:H4'	2.55	0.42
1:AA:616:G:N3	1:AA:617:G:C8	2.88	0.42
1:AA:862:C:H42	1:AA:867:G:H1	1.67	0.42
1:AA:1305:G:HO2'	1:AA:1306:A:P	2.43	0.42
2:AB:30:ARG:O	2:AB:31:TYR:CD1	2.72	0.42
2:AB:32:ILE:HA	2:AB:43:ASP:HB2	2.02	0.42
3:AC:126:ARG:HA	3:AC:126:ARG:HD3	1.95	0.42
3:AC:184:TYR:HA	3:AC:200:ALA:O	2.20	0.42
4:AD:72:GLU:HB3	4:AD:73:ARG:NH2	2.34	0.42
15:AO:9:GLN:O	15:AO:10:LYS:C	2.63	0.42
26:B1:32:LYS:HE3	26:B1:32:LYS:HB3	1.75	0.42
30:B5:54:GLY:HA2	50:BR:33:ARG:NH1	2.31	0.42
31:B6:21:TYR:HE1	31:B6:52:VAL:HG11	1.84	0.42
35:BA:332:A:O2'	35:BA:334:C:OP2	2.27	0.42
35:BA:977:G:O2'	35:BA:978:G:H5'	2.20	0.42
35:BA:1281:G:H5"	35:BA:1282:U:OP2	2.19	0.42
35:BA:1493:C:H4'	35:BA:1494:A:OP1	2.20	0.42
35:BA:1580:A:N7	35:BA:1581:G:O2'	2.53	0.42
35:BA:1636:C:H2'	35:BA:1637:A:H8	1.85	0.42
35:BA:2064:C:H2'	35:BA:2065:C:C6	2.55	0.42
35:BA:2248:C:H3'	35:BA:2249:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2462:U:H2'	35:BA:2463:C:C6	2.55	0.42
36:BB:55:U:H2'	36:BB:56:G:C8	2.55	0.42
38:BD:219:PRO:C	38:BD:220:HIS:HD2	2.28	0.42
38:BD:254:THR:O	38:BD:254:THR:OG1	2.34	0.42
39:BE:117:MET:HB3	39:BE:117:MET:HE2	1.84	0.42
39:BE:153:GLY:O	39:BE:154:LYS:C	2.63	0.42
40:BF:53:THR:HG22	40:BF:56:GLU:CB	2.50	0.42
41:BG:35:GLU:OE2	41:BG:36:LYS:N	2.53	0.42
42:BH:20:ALA:HB1	42:BH:21:PRO:CD	2.50	0.42
46:BN:34:LEU:HD23	46:BN:107:LEU:HD11	2.02	0.42
47:BO:104:ARG:HA	47:BO:121:VAL:CG1	2.50	0.42
51:BS:56:LEU:HB3	51:BS:57:LYS:H	1.63	0.42
52:BT:24:PRO:HG2	52:BT:94:ALA:HB1	2.01	0.42
52:BT:56:GLY:O	52:BT:57:PHE:HB3	2.19	0.42
53:BU:104:GLN:HB3	54:BV:43:GLU:OE1	2.20	0.42
1:CA:8:A:N6	4:CD:205:GLU:O	2.52	0.42
1:CA:60:A:H4'	1:CA:61:G:O5'	2.20	0.42
1:CA:333:G:H4'	20:CT:16:HIS:NE2	2.35	0.42
1:CA:668:G:O2'	15:CO:46:HIS:HB3	2.20	0.42
1:CA:748:C:H1'	1:CA:749:C:OP2	2.19	0.42
1:CA:976:G:C8	1:CA:1362:C:N4	2.88	0.42
1:CA:1134:G:N2	1:CA:1135:U:O2'	2.52	0.42
2:CB:159:PRO:C	2:CB:161:ALA:H	2.23	0.42
10:CJ:49:VAL:O	10:CJ:60:ARG:HB3	2.19	0.42
14:CN:15:LYS:HE3	14:CN:16:PHE:CE2	2.55	0.42
15:CO:18:PHE:CE1	15:CO:21:ASP:HB2	2.55	0.42
18:CR:59:SER:N	18:CR:62:GLU:OE1	2.43	0.42
20:CT:56:MET:HG2	20:CT:85:MET:HE2	2.01	0.42
22:CV:1:C:O5'	49:DQ:87:LYS:HE3	2.20	0.42
25:D0:53:MET:HE3	25:D0:57:PHE:HD1	1.85	0.42
30:D5:34:PRO:C	30:D5:35:GLU:OE2	2.63	0.42
31:D6:15:GLU:HG2	31:D6:18:ARG:NE	2.34	0.42
35:DA:62:C:H5"	35:DA:63:U:OP2	2.20	0.42
35:DA:363(E):U:O2'	35:DA:363(F):A:OP1	2.32	0.42
35:DA:723:G:C6	35:DA:724:U:C4	3.08	0.42
35:DA:956:G:H2'	35:DA:957:A:H2'	2.01	0.42
35:DA:1033:U:H6	35:DA:1033:U:H2'	1.63	0.42
35:DA:1368:G:C2	35:DA:1369:G:C8	3.08	0.42
35:DA:1440:G:H2'	35:DA:1441:G:O4'	2.19	0.42
35:DA:1510:G:C6	35:DA:1511:C:C4	3.08	0.42
35:DA:1826:G:H2'	35:DA:1827:C:O4'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1854:A:C2	35:DA:2087:G:N3	2.88	0.42
35:DA:1885:A:H5"	35:DA:1886:C:OP2	2.20	0.42
35:DA:1907:G:C6	35:DA:1908:C:C4	3.08	0.42
35:DA:2182:G:C2	35:DA:2183:C:N3	2.88	0.42
35:DA:2226:C:H6	35:DA:2226:C:OP2	2.02	0.42
35:DA:2648:C:H2'	35:DA:2649:U:C6	2.55	0.42
39:DE:15:PHE:CE1	39:DE:20:ALA:HB2	2.55	0.42
39:DE:37:ARG:O	39:DE:45:THR:HA	2.20	0.42
39:DE:98:PRO:HB3	39:DE:173:VAL:O	2.20	0.42
39:DE:152:LYS:HB3	46:DN:79:PRO:HB3	2.02	0.42
42:DH:7:LEU:HA	42:DH:8:PRO:HD3	1.91	0.42
46:DN:16:ILE:HG12	46:DN:140:VAL:CG1	2.49	0.42
47:DO:87:ILE:HD13	47:DO:93:PRO:HA	2.02	0.42
48:DP:128:HIS:HE1	48:DP:148:LEU:HB3	1.84	0.42
51:DS:28:VAL:HG21	51:DS:99:LYS:NZ	2.30	0.42
53:DU:117:GLN:N	53:DU:117:GLN:OE1	2.52	0.42
57:DY:21:LYS:HD2	57:DY:22:GLY:N	2.35	0.42
57:DY:31:LEU:HD13	57:DY:31:LEU:HA	1.85	0.42
57:DY:97:ARG:HA	57:DY:97:ARG:HD2	1.72	0.42
57:DY:108:THR:C	57:DY:110:GLU:H	2.27	0.42
1:AA:115:G:O2'	1:AA:116:A:OP2	2.31	0.42
1:AA:283:C:H2'	1:AA:284:G:O4'	2.19	0.42
1:AA:327:A:C5	1:AA:329:A:C5	3.07	0.42
1:AA:486:U:O2	1:AA:486:U:H2'	2.20	0.42
1:AA:789:U:O2'	1:AA:791:G:N7	2.46	0.42
1:AA:982:U:O2	1:AA:1222:G:N1	2.50	0.42
1:AA:986:A:N3	19:AS:52:TYR:OH	2.41	0.42
1:AA:1132:C:H41	1:AA:1143:G:N2	2.17	0.42
1:AA:1263:C:H2'	1:AA:1264:C:C6	2.45	0.42
2:AB:105:PHE:CE1	2:AB:109:SER:HB2	2.55	0.42
4:AD:205:GLU:C	4:AD:207:TYR:H	2.28	0.42
5:AE:18:ARG:O	5:AE:24:ARG:HA	2.20	0.42
5:AE:87:SER:HB3	5:AE:125:SER:HB3	2.01	0.42
5:AE:144:THR:N	5:AE:147:ASP:HB2	2.35	0.42
15:AO:17:ARG:HG3	15:AO:17:ARG:HH11	1.85	0.42
18:AR:78:LEU:C	18:AR:79:LEU:HD23	2.43	0.42
30:B5:15:ARG:HD2	35:BA:2021:C:OP2	2.19	0.42
31:B6:15:GLU:HG2	31:B6:16:CYS:H	1.84	0.42
33:B8:30:ARG:HD2	33:B8:31:HIS:HD2	1.85	0.42
35:BA:103:A:C8	35:BA:103:A:H3'	2.55	0.42
35:BA:361:G:H2'	35:BA:362:U:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1099:G:H5”	35:BA:1100:C:O5’	2.19	0.42
35:BA:1301:A:N3	35:BA:1301:A:H2’	2.35	0.42
35:BA:1580:A:H3’	35:BA:1581:G:O4’	2.20	0.42
35:BA:1636:C:H2’	35:BA:1637:A:C8	2.55	0.42
35:BA:1751:C:O2’	35:BA:1752:C:H5’	2.20	0.42
35:BA:2193:G:H2’	35:BA:2194:G:C8	2.55	0.42
35:BA:2257:U:C4	35:BA:2258:C:N4	2.88	0.42
35:BA:2437:U:H2’	35:BA:2438:U:C6	2.55	0.42
35:BA:2484:G:H1’	49:BQ:125:LEU:HD23	2.02	0.42
35:BA:2661:G:H8	35:BA:2662:A:C5	2.38	0.42
35:BA:2699:C:O2	35:BA:2699:C:O4’	2.37	0.42
38:BD:76:PRO:HG2	38:BD:98:VAL:HG21	2.01	0.42
39:BE:30:PRO:O	39:BE:32:PRO:HD3	2.20	0.42
39:BE:92:THR:HB	39:BE:94:GLU:H	1.84	0.42
41:BG:126:ASP:OD1	41:BG:126:ASP:N	2.53	0.42
41:BG:173:LEU:HD13	41:BG:178:PHE:CD2	2.55	0.42
46:BN:65:LYS:HB3	46:BN:69:GLN:HG3	2.01	0.42
47:BO:24:VAL:HG23	47:BO:33:ALA:HB2	2.01	0.42
48:BP:85:LEU:HD23	48:BP:88:LEU:HD23	2.02	0.42
57:BY:35:TYR:CD2	57:BY:69:ALA:HB3	2.54	0.42
58:BZ:132:ASN:C	58:BZ:133:ILE:HG13	2.43	0.42
1:CA:129(A):G:O3’	1:CA:189(F):U:H2’	2.20	0.42
1:CA:153:C:H42	1:CA:169:C:N4	2.17	0.42
1:CA:200:G:C2	1:CA:218:C:O2	2.73	0.42
1:CA:313:A:C2	1:CA:314:C:C2	3.08	0.42
1:CA:600:C:H2’	1:CA:601:C:C6	2.51	0.42
1:CA:687:A:C2	1:CA:704:A:C6	3.07	0.42
1:CA:957:U:O2’	1:CA:959:A:N7	2.51	0.42
1:CA:1004:A:H5”	1:CA:1025:U:O4	2.19	0.42
1:CA:1351:U:H3	1:CA:1371:G:H1	1.68	0.42
2:CB:219:VAL:HA	2:CB:222:ILE:CD1	2.50	0.42
3:CC:43:LEU:O	3:CC:47:LEU:N	2.40	0.42
3:CC:64:VAL:CG2	3:CC:99:VAL:HA	2.50	0.42
3:CC:85:ARG:HD2	3:CC:85:ARG:HA	1.76	0.42
4:CD:3:ARG:HG2	4:CD:118:ARG:NH1	2.35	0.42
5:CE:140:ARG:O	5:CE:140:ARG:HG2	2.20	0.42
7:CG:62:PHE:HA	7:CG:124:LEU:CD2	2.37	0.42
9:CI:26:VAL:HG13	9:CI:61:ALA:HB3	2.02	0.42
11:CK:53:SER:C	11:CK:55:LYS:H	2.27	0.42
13:CM:9:ILE:O	13:CM:9:ILE:HG13	2.19	0.42
13:CM:10:PRO:HB3	13:CM:18:ALA:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:81:LEU:HD22	13:CM:86:CYS:SG	2.59	0.42
16:CP:26:ARG:O	16:CP:27:LYS:C	2.63	0.42
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD2	1.85	0.42
25:D0:46:LYS:HG3	25:D0:47:PRO:CD	2.49	0.42
31:D6:12:GLU:O	31:D6:51:GLU:HA	2.20	0.42
31:D6:20:ASN:OD1	31:D6:42:TRP:HB3	2.20	0.42
35:DA:322:A:OP1	40:DF:168:ARG:HD2	2.19	0.42
35:DA:415:A:H2'	35:DA:416:C:H6	1.85	0.42
35:DA:676:A:H8	35:DA:2069:G:N2	2.06	0.42
35:DA:1281:G:H5'	35:DA:1282:U:OP2	2.20	0.42
35:DA:1313:U:H4'	35:DA:1332:G:H4'	2.01	0.42
35:DA:1333:C:H2'	35:DA:1334:G:C8	2.55	0.42
35:DA:1448:G:H1'	35:DA:1528:A:N6	2.33	0.42
35:DA:1495:A:C2	35:DA:1496:A:C5	3.05	0.42
35:DA:1506:C:H5'	35:DA:1507:A:OP2	2.19	0.42
35:DA:1823:G:P	38:DD:54:ARG:HH21	2.43	0.42
35:DA:2476:A:C2'	35:DA:2477:C:H5"	2.43	0.42
35:DA:2630:G:C8	35:DA:2894:G:C2	3.08	0.42
38:DD:35:LYS:NZ	38:DD:64:ILE:HG22	2.35	0.42
40:DF:178:PRO:HB3	40:DF:198:ALA:CB	2.48	0.42
41:DG:17:PRO:O	41:DG:18:GLU:C	2.63	0.42
41:DG:104:GLU:O	41:DG:106:LEU:N	2.53	0.42
41:DG:121:ASN:O	41:DG:131:TYR:OH	2.34	0.42
42:DH:41:MET:CE	42:DH:54:ARG:HA	2.49	0.42
43:DI:1:MET:O	43:DI:21:VAL:HG22	2.20	0.42
49:DQ:10:ARG:NH1	49:DQ:11:LYS:HA	2.35	0.42
52:DT:1:MET:HB3	52:DT:2:ASN:H	1.61	0.42
53:DU:93:LYS:HD3	53:DU:93:LYS:N	2.34	0.42
53:DU:95:LEU:HD23	54:DV:4:ILE:CD1	2.50	0.42
56:DX:84:ALA:O	56:DX:85:PRO:C	2.61	0.42
57:DY:60:PHE:O	57:DY:61:ILE:C	2.62	0.42
1:AA:244:U:O4	1:AA:906:G:H1'	2.20	0.41
1:AA:350:G:O2'	1:AA:351:G:H5'	2.20	0.41
1:AA:428:G:O4'	1:AA:430:A:C8	2.73	0.41
1:AA:675:A:O2'	11:AK:114:VAL:O	2.38	0.41
1:AA:692:U:H1'	1:AA:694:A:C2	2.55	0.41
1:AA:736:C:H2'	1:AA:737:A:H8	1.84	0.41
1:AA:801:U:H2'	1:AA:802:A:C8	2.55	0.41
1:AA:889:A:H5'	1:AA:891:U:H1'	2.02	0.41
1:AA:1183:A:OP2	1:AA:1183:A:H4'	2.20	0.41
1:AA:1272:G:H2'	1:AA:1273:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1291:G:OP1	7:AG:41:ARG:NH2	2.50	0.41
1:AA:1320:C:OP1	19:AS:70:LYS:HE2	2.20	0.41
2:AB:102:LEU:CD1	2:AB:182:ILE:HG13	2.49	0.41
2:AB:155:LEU:O	2:AB:157:ARG:N	2.41	0.41
3:AC:73:PRO:O	3:AC:74:GLY:C	2.63	0.41
4:AD:75:PHE:CZ	4:AD:93:PHE:HZ	2.38	0.41
7:AG:4:ARG:HH11	7:AG:4:ARG:HB3	1.84	0.41
7:AG:111:ARG:NH2	7:AG:123:GLU:HB3	2.35	0.41
8:AH:6:ILE:CD1	8:AH:32:LYS:HG2	2.49	0.41
9:AI:90:PRO:C	9:AI:92:TYR:H	2.28	0.41
17:AQ:26:GLN:HG2	17:AQ:37:LYS:HG2	2.01	0.41
23:AY:40:C:H2'	23:AY:41:C:O4'	2.20	0.41
27:B2:27:GLU:CD	27:B2:29:LYS:HE2	2.45	0.41
35:BA:271(M):G:O2'	35:BA:271(N):U:H5'	2.20	0.41
35:BA:489:G:C5	35:BA:1284:A:C2	3.08	0.41
35:BA:527:C:OP2	35:BA:2779:U:C5	2.73	0.41
35:BA:679:C:H2'	35:BA:680:G:H8	1.85	0.41
35:BA:1392:A:C6	35:BA:1393:A:C6	3.08	0.41
35:BA:1485:G:C6	35:BA:1505:C:N4	2.88	0.41
35:BA:1493:C:N4	35:BA:2206:G:O2'	2.53	0.41
35:BA:1746:G:C2	35:BA:1747:G:C5	3.08	0.41
35:BA:2188:C:H2'	35:BA:2189:U:C6	2.55	0.41
35:BA:2274:A:C6	35:BA:2276:G:C8	3.07	0.41
35:BA:2814:C:C5	35:BA:2815:C:C5	3.08	0.41
36:BB:120:A:OP1	36:BB:120:A:H4'	2.19	0.41
37:BC:24:GLU:HG3	37:BC:27:ARG:HE	1.85	0.41
38:BD:97:TYR:O	38:BD:98:VAL:C	2.62	0.41
38:BD:130:ALA:HA	38:BD:192:THR:HA	2.01	0.41
42:BH:68:THR:O	42:BH:72:ILE:HG13	2.20	0.41
46:BN:2:LYS:HD2	54:BV:13:ARG:H	1.85	0.41
46:BN:23:LEU:HB2	46:BN:60:ILE:HG21	2.02	0.41
48:BP:41:ARG:HA	48:BP:41:ARG:HH21	1.84	0.41
48:BP:87:ASP:OD1	48:BP:87:ASP:N	2.52	0.41
49:BQ:8:LYS:HB3	49:BQ:10:ARG:CD	2.50	0.41
49:BQ:20:ALA:C	49:BQ:98:LYS:HZ2	2.27	0.41
50:BR:26:LYS:CD	50:BR:27:SER:H	2.33	0.41
50:BR:28:LEU:O	50:BR:28:LEU:HD13	2.20	0.41
51:BS:89:ARG:NH1	51:BS:92:TYR:CE1	2.88	0.41
52:BT:11:GLU:C	52:BT:13:ARG:H	2.23	0.41
54:BV:60:GLU:N	54:BV:60:GLU:OE2	2.53	0.41
1:CA:614:A:C6	1:CA:615:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:639:G:C2	1:CA:640:A:C8	3.08	0.41
1:CA:857:C:H2'	1:CA:858:G:O4'	2.19	0.41
1:CA:957:U:O2	1:CA:960:U:C2	2.73	0.41
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.20	0.41
1:CA:1107:C:OP1	3:CC:173:VAL:N	2.51	0.41
3:CC:94:LEU:HD12	3:CC:95:THR:OG1	2.21	0.41
4:CD:25:ARG:O	4:CD:28:SER:N	2.53	0.41
4:CD:30:LYS:C	4:CD:32:ALA:N	2.77	0.41
7:CG:36:LYS:C	7:CG:38:LEU:N	2.78	0.41
8:CH:113:SER:HB3	8:CH:118:VAL:HG22	2.03	0.41
11:CK:46:GLY:C	11:CK:48:ILE:H	2.28	0.41
11:CK:93:GLN:HA	11:CK:96:ARG:HB2	2.02	0.41
28:D3:15:TYR:CE2	28:D3:53:LEU:HD21	2.54	0.41
35:DA:271(Q):G:C2	35:DA:271(R):G:C6	3.08	0.41
35:DA:271(Q):G:HO2'	35:DA:271(R):G:P	2.33	0.41
35:DA:425:G:H2'	35:DA:426:C:H6	1.84	0.41
35:DA:528:A:H3'	35:DA:528:A:H8	1.85	0.41
35:DA:533:G:H5'	53:DU:24:TYR:CE1	2.55	0.41
35:DA:566:U:H2'	35:DA:567:A:O4'	2.20	0.41
35:DA:1512:U:H2'	35:DA:1513:C:C6	2.55	0.41
35:DA:1814:G:H4'	38:DD:51:VAL:HG21	2.01	0.41
35:DA:1863:G:H2'	35:DA:1864:U:C6	2.55	0.41
35:DA:2414:G:N2	48:DP:67:MET:HE1	2.35	0.41
36:DB:70:C:C4	36:DB:71:C:C5	3.07	0.41
38:DD:161:THR:O	38:DD:196:VAL:HG23	2.20	0.41
40:DF:9:ILE:HG23	40:DF:13:SER:O	2.20	0.41
42:DH:19:VAL:HG21	42:DH:44:VAL:HG13	2.02	0.41
42:DH:137:ASP:O	42:DH:138:LYS:CB	2.65	0.41
43:DI:40:THR:O	43:DI:44:LEU:N	2.34	0.41
43:DI:54:GLN:O	43:DI:58:LEU:HB2	2.20	0.41
46:DN:113:GLY:HA2	46:DN:116:LEU:HD12	2.01	0.41
47:DO:17:ARG:HD2	47:DO:17:ARG:HA	1.56	0.41
49:DQ:13:GLN:HG2	49:DQ:13:GLN:H	1.48	0.41
49:DQ:54:MET:HB2	49:DQ:64:ILE:HD13	2.02	0.41
49:DQ:130:LYS:HD2	49:DQ:130:LYS:HA	1.79	0.41
52:DT:74:ARG:HB3	52:DT:76:PHE:CE1	2.55	0.41
54:DV:38:LEU:HA	54:DV:38:LEU:HD23	1.77	0.41
57:DY:8:LYS:HB3	57:DY:8:LYS:HE2	1.30	0.41
57:DY:28:LYS:HB2	57:DY:30:VAL:CG2	2.50	0.41
57:DY:42:VAL:CG1	57:DY:65:ALA:HB3	2.50	0.41
1:AA:105:G:C6	1:AA:106:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:153:C:H2'	1:AA:154:C:C6	2.55	0.41
1:AA:179:A:C2'	1:AA:180:U:H5'	2.50	0.41
1:AA:426:G:H4'	4:AD:42:GLN:HA	2.01	0.41
1:AA:555:C:H2'	1:AA:556:C:H6	1.82	0.41
1:AA:988:G:C6	1:AA:989:C:C4	3.08	0.41
1:AA:1072:G:C5	1:AA:1073:U:C5	3.08	0.41
1:AA:1206:G:C4	1:AA:1207:G:C8	3.08	0.41
1:AA:1352:C:O2	1:AA:1371:G:C2	2.73	0.41
1:AA:1418:A:N3	35:BA:1959:G:H1'	2.35	0.41
2:AB:193:ASP:OD1	2:AB:193:ASP:C	2.63	0.41
4:AD:100:ARG:NE	4:AD:137:SER:HB3	2.33	0.41
4:AD:120:LEU:HD23	4:AD:120:LEU:HA	1.75	0.41
4:AD:159:ARG:O	4:AD:162:LEU:N	2.53	0.41
5:AE:76:ILE:HG22	5:AE:78:HIS:H	1.85	0.41
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.20	0.41
10:AJ:5:ARG:NE	10:AJ:71:LEU:HD21	2.35	0.41
13:AM:13:LYS:O	13:AM:44:ARG:HA	2.20	0.41
20:AT:82:SER:O	20:AT:86:ARG:HB2	2.20	0.41
22:AV:3:C:H5'	35:BA:2255:G:O2'	2.20	0.41
22:AV:15:G:H2'	22:AV:60:A:N1	2.34	0.41
22:AV:21:U:OP1	22:AV:21:U:H3'	2.20	0.41
25:B0:24:LYS:HA	25:B0:24:LYS:HD3	1.85	0.41
30:B5:8:LYS:O	35:BA:2017:U:H4'	2.20	0.41
33:B8:30:ARG:NH2	48:BP:63:PRO:HD2	2.23	0.41
34:B9:29:ASN:ND2	34:B9:30:PRO:HD2	2.35	0.41
35:BA:39:C:H2'	35:BA:40:C:H6	1.85	0.41
35:BA:71:A:H2	56:BX:31:HIS:CE1	2.38	0.41
35:BA:566:U:O5'	35:BA:566:U:H6	2.03	0.41
35:BA:784:A:N6	38:BD:229:VAL:HG21	2.35	0.41
35:BA:956:G:N2	35:BA:959:A:H3'	2.35	0.41
35:BA:1322:A:C5	35:BA:1323:U:C4	3.08	0.41
35:BA:1570:A:H4'	38:BD:38:LYS:HE2	2.01	0.41
35:BA:1684:C:C2	35:BA:1705:G:C2	3.08	0.41
35:BA:1991:U:C2'	35:BA:1992:G:H5"	2.49	0.41
37:BC:24:GLU:OE2	37:BC:27:ARG:HG2	2.20	0.41
37:BC:100:ILE:HD13	37:BC:132:GLY:HA3	2.02	0.41
38:BD:63:ARG:H	38:BD:63:ARG:HD2	1.85	0.41
39:BE:105:THR:CG2	39:BE:164:ARG:HE	2.34	0.41
39:BE:115:GLY:O	39:BE:119:ARG:HB2	2.20	0.41
42:BH:109:PHE:HB3	42:BH:110:SER:H	1.41	0.41
48:BP:27:HIS:C	48:BP:29:LYS:N	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:64:GLU:O	51:BS:67:ARG:HB2	2.20	0.41
57:BY:32:PRO:O	57:BY:35:TYR:N	2.51	0.41
57:BY:44:ILE:O	57:BY:46:LYS:HE3	2.20	0.41
1:CA:189(A):C:N3	1:CA:189(J):G:N2	2.65	0.41
1:CA:428:G:C5	1:CA:430:A:C6	3.08	0.41
1:CA:558:G:H2'	1:CA:559:A:H2	1.85	0.41
1:CA:768:A:N3	1:CA:1512:U:O2'	2.53	0.41
1:CA:901:A:C5	1:CA:902:G:H1'	2.55	0.41
1:CA:911:U:H2'	1:CA:912:C:C6	2.55	0.41
1:CA:1054:C:OP1	1:CA:1198:G:OP2	2.38	0.41
1:CA:1522:U:H2'	1:CA:1523:G:C8	2.55	0.41
2:CB:14:GLY:H	2:CB:16:HIS:CE1	2.38	0.41
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.72	0.41
3:CC:136:GLN:HA	3:CC:139:GLN:HB3	2.01	0.41
3:CC:164:ARG:N	3:CC:164:ARG:HD2	2.34	0.41
4:CD:190:ASP:OD1	4:CD:192:GLU:N	2.47	0.41
5:CE:6:PHE:CE2	5:CE:66:MET:HE1	2.55	0.41
5:CE:79:GLU:OE1	8:CH:104:ARG:HA	2.20	0.41
5:CE:84:PHE:O	5:CE:86:ALA:N	2.53	0.41
5:CE:129:ILE:O	5:CE:132:ALA:N	2.53	0.41
6:CF:55:ASP:OD1	6:CF:56:PRO:HD2	2.20	0.41
7:CG:95:ARG:NE	7:CG:99:LEU:HD21	2.35	0.41
8:CH:5:PRO:HB2	8:CH:32:LYS:HE2	2.01	0.41
17:CQ:50:LYS:O	17:CQ:52:LYS:HE3	2.20	0.41
18:CR:26:LEU:HD22	18:CR:29:PHE:CD2	2.55	0.41
19:CS:78:ARG:HA	19:CS:78:ARG:CZ	2.51	0.41
20:CT:67:ALA:O	20:CT:69:GLY:N	2.53	0.41
23:CW:11:C:OP2	23:CW:11:C:H6	2.03	0.41
25:D0:66:VAL:HG23	25:D0:82:ARG:CG	2.50	0.41
26:D1:69:LYS:NZ	26:D1:95:LEU:HG	2.35	0.41
32:D7:22:MET:O	32:D7:28:ARG:NH1	2.54	0.41
33:D8:26:LYS:CG	33:D8:27:THR:H	2.33	0.41
35:DA:746:A:C5	35:DA:2611:U:H5"	2.55	0.41
35:DA:1021:A:C8	35:DA:1021:A:C3'	3.01	0.41
35:DA:2196:C:C2'	35:DA:2197:U:H5'	2.50	0.41
35:DA:2302:G:H2'	35:DA:2303:G:C8	2.55	0.41
35:DA:2664:G:H8	35:DA:2664:G:O5'	2.03	0.41
37:DC:18:LYS:O	37:DC:20:TYR:N	2.53	0.41
38:DD:108:PRO:HD2	38:DD:111:LEU:CD1	2.49	0.41
39:DE:11:MET:HE3	39:DE:11:MET:HB2	1.61	0.41
40:DF:80:ALA:O	40:DF:83:PHE:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DH:40:GLU:HG3	42:DH:55:PRO:CG	2.43	0.41
48:DP:40:SER:O	48:DP:45:LEU:HG	2.20	0.41
48:DP:108:LYS:O	48:DP:110:TYR:N	2.53	0.41
50:DR:18:LEU:HD11	50:DR:22:ARG:NE	2.35	0.41
50:DR:60:LEU:O	50:DR:64:ARG:HG3	2.19	0.41
50:DR:65:LEU:O	50:DR:68:ARG:HB3	2.20	0.41
52:DT:14:TYR:HB2	52:DT:57:PHE:CE2	2.55	0.41
52:DT:45:PHE:HE2	52:DT:74:ARG:NE	2.17	0.41
53:DU:16:LYS:O	53:DU:16:LYS:HD3	2.19	0.41
58:DZ:6:LYS:HA	58:DZ:60:GLU:HB2	2.02	0.41
1:AA:598:U:H2'	1:AA:599:C:H6	1.77	0.41
1:AA:604:G:C6	1:AA:605:U:C4	3.08	0.41
1:AA:757:U:H2'	1:AA:758:G:O4'	2.21	0.41
1:AA:946:A:H2'	1:AA:947:G:H8	1.82	0.41
1:AA:1081:G:N7	5:AE:47:LYS:HE2	2.35	0.41
1:AA:1227:A:O3'	13:AM:115:LYS:HD2	2.20	0.41
1:AA:1261:A:N7	1:AA:1275:A:C8	2.89	0.41
1:AA:1277:C:C6	1:AA:1277:C:C3'	3.03	0.41
1:AA:1356:G:N2	1:AA:1367:C:C2	2.88	0.41
1:AA:1447:A:H2'	1:AA:1452:C:C5'	2.50	0.41
2:AB:47:THR:HG22	2:AB:202:PRO:O	2.20	0.41
2:AB:126:GLU:OE2	2:AB:131:PRO:HD3	2.20	0.41
4:AD:162:LEU:O	4:AD:165:MET:HB2	2.19	0.41
13:AM:35:GLU:O	13:AM:38:GLY:N	2.54	0.41
27:B2:30:ARG:O	27:B2:32:LEU:N	2.54	0.41
33:B8:6:THR:HG22	35:BA:242:G:O2'	2.19	0.41
35:BA:150:C:H2'	35:BA:151:C:C6	2.55	0.41
35:BA:524:U:H2'	35:BA:525:U:C6	2.56	0.41
35:BA:643:A:N1	35:BA:2369:A:O2'	2.50	0.41
35:BA:977:G:C4	35:BA:978:G:C8	3.08	0.41
35:BA:1050:A:N1	35:BA:2751:G:C5	2.88	0.41
35:BA:1148:A:H2'	35:BA:1149:G:H8	1.85	0.41
35:BA:1384:A:O2'	35:BA:1404:C:O2	2.36	0.41
35:BA:1437:C:C2	35:BA:1438:U:C5	3.09	0.41
35:BA:1482:G:C2	35:BA:1507:A:H1'	2.56	0.41
35:BA:1491:G:OP2	35:BA:1494:A:H2	2.03	0.41
35:BA:1678:G:N2	35:BA:1989:G:H1	2.17	0.41
35:BA:2344:U:OP2	35:BA:2344:U:H6	2.03	0.41
35:BA:2594:C:H2'	35:BA:2595:G:C8	2.56	0.41
35:BA:2699:C:N4	35:BA:2708:G:N1	2.55	0.41
35:BA:2720:U:O4	35:BA:2872:G:C6	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:2772:C:H2'	35:BA:2773:C:C6	2.55	0.41
37:BC:53:ARG:HE	37:BC:53:ARG:HB2	1.74	0.41
37:BC:60:GLY:O	37:BC:61:THR:OG1	2.21	0.41
42:BH:103:LEU:HD11	42:BH:105:LEU:HD13	2.01	0.41
43:BI:10:GLU:OE1	43:BI:11:ASN:N	2.48	0.41
43:BI:88:ILE:HG13	43:BI:121:LYS:HA	2.03	0.41
43:BI:133:HIS:ND1	43:BI:133:HIS:O	2.53	0.41
47:BO:13:ASN:OD1	47:BO:14:THR:N	2.45	0.41
48:BP:110:TYR:HE1	48:BP:128:HIS:HB3	1.85	0.41
52:BT:115:ARG:H	52:BT:115:ARG:HG2	1.60	0.41
53:BU:88:ILE:C	53:BU:90:VAL:N	2.78	0.41
54:BV:66:ARG:HG3	54:BV:95:LEU:N	2.36	0.41
55:BW:12:ILE:HD13	55:BW:17:VAL:CG2	2.50	0.41
55:BW:59:VAL:O	55:BW:60:ASN:HB2	2.20	0.41
1:CA:42:G:H2'	1:CA:43:C:C6	2.55	0.41
1:CA:316:G:N3	1:CA:317:G:C8	2.88	0.41
1:CA:336:C:O5'	1:CA:336:C:H6	2.04	0.41
1:CA:417:C:H2'	1:CA:418:C:C6	2.55	0.41
1:CA:658:G:H8	1:CA:658:G:O5'	2.04	0.41
1:CA:722:A:N1	1:CA:724:G:C6	2.88	0.41
1:CA:1026:G:H2'	1:CA:1026:G:N3	2.34	0.41
1:CA:1243:C:C2	1:CA:1295:G:N2	2.89	0.41
1:CA:1256:A:O2'	1:CA:1257:U:O3'	2.37	0.41
1:CA:1276:G:N1	1:CA:1277:C:O2	2.53	0.41
1:CA:1311:G:H2'	1:CA:1312:G:O4'	2.20	0.41
1:CA:1350:A:H2'	1:CA:1351:U:C6	2.55	0.41
1:CA:1352:C:OP1	21:CU:3:LYS:NZ	2.51	0.41
2:CB:42:ILE:CD1	2:CB:202:PRO:HB2	2.50	0.41
3:CC:26:LYS:O	3:CC:27:LYS:HG2	2.19	0.41
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.21	0.41
4:CD:202:LEU:HA	4:CD:205:GLU:HB2	2.02	0.41
7:CG:154:TYR:HD1	7:CG:154:TYR:HA	1.77	0.41
12:CL:8:ASN:O	12:CL:11:VAL:N	2.52	0.41
12:CL:53:ARG:H	12:CL:54:LYS:HZ1	1.67	0.41
13:CM:23:TYR:HB3	13:CM:67:GLU:HB3	2.01	0.41
14:CN:3:ARG:HD2	14:CN:4:LYS:N	2.34	0.41
22:CV:62:C:H2'	22:CV:63:G:C8	2.55	0.41
25:D0:51:VAL:N	25:D0:62:LEU:HD12	2.36	0.41
31:D6:41:PRO:HG2	31:D6:43:CYS:O	2.20	0.41
35:DA:183:C:H1'	35:DA:433:C:H1'	2.02	0.41
35:DA:272(I):U:C6	35:DA:272(I):U:OP2	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:363(D):G:C2	35:DA:363(E):U:O2	2.73	0.41
35:DA:1021:A:O2'	35:DA:1123:C:H5"	2.20	0.41
35:DA:1500:G:N2	38:DD:99:ASP:O	2.50	0.41
35:DA:1678:G:N2	35:DA:1989:G:H1	2.17	0.41
35:DA:2001:A:H2'	35:DA:2002:G:C8	2.56	0.41
35:DA:2224:G:H4'	35:DA:2226:C:C2	2.55	0.41
35:DA:2529:G:OP2	35:DA:2530:A:H5"	2.20	0.41
35:DA:2584:U:H5	35:DA:2585:U:C5	2.38	0.41
35:DA:2757:A:H5"	35:DA:2757:A:H8	1.85	0.41
35:DA:2791:C:H41	35:DA:2803:C:H42	1.67	0.41
35:DA:2822:G:H8	35:DA:2822:G:O5'	2.03	0.41
35:DA:2888:C:H2'	35:DA:2889:C:H6	1.86	0.41
37:DC:77:ILE:HB	37:DC:121:GLY:HA3	2.02	0.41
40:DF:25:PRO:HG3	40:DF:119:ARG:CD	2.48	0.41
40:DF:167:ALA:HB1	40:DF:173:VAL:HG11	2.01	0.41
42:DH:124:GLU:O	42:DH:132:ARG:HB3	2.20	0.41
43:DI:31:LEU:N	43:DI:32:PRO:HD2	2.35	0.41
45:DK:87:UNK:C	45:DK:89:UNK:H	2.32	0.41
49:DQ:10:ARG:HH11	49:DQ:11:LYS:HG2	1.83	0.41
50:DR:8:ARG:HD3	50:DR:8:ARG:HA	1.80	0.41
52:DT:57:PHE:CD1	52:DT:57:PHE:C	2.97	0.41
54:DV:5:VAL:HG23	54:DV:37:VAL:O	2.21	0.41
54:DV:37:VAL:H	54:DV:37:VAL:HG22	1.62	0.41
54:DV:66:ARG:CZ	54:DV:68:LYS:N	2.80	0.41
54:DV:67:GLY:O	54:DV:68:LYS:C	2.63	0.41
56:DX:82:GLN:HG3	56:DX:85:PRO:HD2	2.02	0.41
56:DX:88:LYS:C	56:DX:89:ILE:HG12	2.46	0.41
57:DY:37:VAL:HG21	57:DY:72:VAL:HG21	2.02	0.41
1:AA:27:G:N2	1:AA:297:G:OP1	2.39	0.41
1:AA:45:U:H2'	1:AA:46:G:H8	1.84	0.41
1:AA:55:A:H2'	1:AA:56:U:C6	2.55	0.41
1:AA:189(H):G:H3'	1:AA:189(I):G:C8	2.55	0.41
1:AA:411:A:H3'	1:AA:412:A:H5"	2.02	0.41
1:AA:591:U:H2'	1:AA:592:G:O4'	2.20	0.41
1:AA:951:G:C2	1:AA:1231:G:C2	3.09	0.41
1:AA:978:A:C6	1:AA:1318:A:C6	3.08	0.41
1:AA:1127:G:H1'	1:AA:1148:U:C4	2.55	0.41
1:AA:1129:C:N4	1:AA:1132:C:C5	2.89	0.41
1:AA:1302:U:H5'	13:AM:17:VAL:HG11	2.01	0.41
1:AA:1402:C:O2	1:AA:1500:A:N1	2.53	0.41
1:AA:1427:U:H6	1:AA:1427:U:O5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1504:G:H4'	1:AA:1505:G:OP2	2.19	0.41
2:AB:130:ARG:O	2:AB:131:PRO:C	2.63	0.41
3:AC:111:LEU:HD11	3:AC:145:GLY:O	2.21	0.41
4:AD:46:LYS:HG2	4:AD:47:ARG:HH21	1.84	0.41
4:AD:47:ARG:HD2	4:AD:47:ARG:N	2.25	0.41
4:AD:172:PRO:HG3	6:CF:24:GLU:CD	2.44	0.41
4:AD:190:ASP:O	4:AD:191:ARG:C	2.62	0.41
8:AH:31:PHE:HZ	8:AH:134:ILE:HD12	1.85	0.41
8:AH:47:GLY:C	8:AH:48:TYR:CD1	2.99	0.41
13:AM:66:LEU:HB2	13:AM:67:GLU:H	1.63	0.41
15:AO:5:LYS:O	15:AO:9:GLN:HG2	2.20	0.41
31:B6:28:ARG:HD3	31:B6:51:GLU:OE2	2.21	0.41
33:B8:32:LEU:O	33:B8:33:ASN:C	2.63	0.41
35:BA:195:A:N6	35:BA:198:C:H3'	2.35	0.41
35:BA:363(A):A:C8	35:BA:363(B):G:N7	2.88	0.41
35:BA:460:A:C2	35:BA:470:A:C4	3.08	0.41
35:BA:864:G:N2	35:BA:913:U:C2	2.88	0.41
35:BA:911:A:C6	49:BQ:9:TYR:HE1	2.39	0.41
35:BA:1039:G:H22	35:BA:1116:C:H42	1.66	0.41
35:BA:1084:A:H5'	44:BJ:56:UNK:O	2.20	0.41
35:BA:1599:C:H2'	35:BA:1600:C:C6	2.55	0.41
35:BA:1721:G:H5"	35:BA:1721:G:N3	2.36	0.41
35:BA:1857:G:H2'	35:BA:1858:G:C1'	2.50	0.41
35:BA:2533:A:H8	35:BA:2533:A:O5'	2.02	0.41
35:BA:2640:G:P	46:BN:97:ARG:HH22	2.42	0.41
35:BA:2681:C:H5	35:BA:2725:A:N6	2.17	0.41
35:BA:2857:G:C5	35:BA:2859:G:OP2	2.74	0.41
35:BA:2872:G:N1	35:BA:2873:A:N6	2.69	0.41
36:BB:91:C:OP2	49:BQ:16:ARG:HG3	2.20	0.41
48:BP:143:GLY:O	48:BP:144:GLU:HB3	2.19	0.41
52:BT:29:ARG:CG	52:BT:30:VAL:HG22	2.50	0.41
53:BU:80:ILE:O	53:BU:82:GLY:N	2.53	0.41
55:BW:8:ARG:HA	55:BW:102:HIS:ND1	2.35	0.41
56:BX:67:GLY:O	56:BX:68:ARG:CZ	2.68	0.41
58:BZ:4:ARG:NH2	58:BZ:60:GLU:HB2	2.35	0.41
1:CA:132:C:H2'	1:CA:133:U:O4'	2.20	0.41
1:CA:222:U:H2'	1:CA:223:U:C6	2.55	0.41
1:CA:318:G:H1	1:CA:335:C:H42	1.69	0.41
1:CA:633:G:H5'	1:CA:634:C:OP2	2.21	0.41
1:CA:756:C:OP2	15:CO:65:ARG:NH2	2.54	0.41
1:CA:878:G:C6	1:CA:879:C:N4	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:885:G:H1'	1:CA:914:A:N1	2.36	0.41
1:CA:894:G:C6	1:CA:895:G:C5	3.09	0.41
1:CA:986:A:H2'	1:CA:987:G:O4'	2.19	0.41
1:CA:1171:G:H2'	1:CA:1172:C:H6	1.84	0.41
5:CE:25:ARG:HA	5:CE:25:ARG:NE	2.30	0.41
5:CE:139:LEU:HA	5:CE:142:LEU:CD1	2.49	0.41
6:CF:7:ASN:OD1	6:CF:62:TRP:HD1	2.03	0.41
7:CG:146:GLU:HA	7:CG:149:ARG:HG2	2.02	0.41
11:CK:32:ILE:HG12	11:CK:41:THR:O	2.21	0.41
11:CK:59:TYR:CE1	11:CK:63:LEU:HD12	2.55	0.41
11:CK:66:LEU:HD11	11:CK:97:ALA:HB1	2.02	0.41
12:CL:102:ARG:HB2	12:CL:120:TYR:HA	2.02	0.41
16:CP:67:THR:O	16:CP:68:ASP:C	2.64	0.41
18:CR:40:LEU:HB2	18:CR:41:LYS:H	1.72	0.41
23:CW:17:C:H5"	23:CW:17:C:H6	1.86	0.41
26:D1:21:ARG:HB2	26:D1:40:ARG:NH1	2.34	0.41
27:D2:40:SER:O	27:D2:41:ILE:C	2.63	0.41
33:D8:29:LYS:NZ	33:D8:44:LYS:HB2	2.34	0.41
33:D8:58:ILE:HD12	33:D8:58:ILE:HG23	1.70	0.41
35:DA:232:G:H8	35:DA:232:G:OP2	2.04	0.41
35:DA:272(E):G:H2'	35:DA:272(F):C:O4'	2.20	0.41
35:DA:697:C:H2'	35:DA:698:C:C6	2.55	0.41
35:DA:1178:C:H2'	35:DA:1179:C:C6	2.56	0.41
35:DA:1209:G:N2	35:DA:1210:A:N6	2.68	0.41
35:DA:1369:G:H1'	35:DA:1809:A:N1	2.35	0.41
35:DA:1382:G:H8	35:DA:1382:G:O5'	2.03	0.41
35:DA:1824:G:N3	38:DD:254:THR:OG1	2.54	0.41
35:DA:2636:U:OP1	39:DE:79:ARG:HG3	2.20	0.41
36:DB:55:U:N3	36:DB:56:G:N7	2.68	0.41
36:DB:61:G:C2	36:DB:62:C:C2	3.08	0.41
36:DB:74:U:C4	36:DB:75:G:C5	3.08	0.41
38:DD:248:SER:O	38:DD:249:PRO:C	2.62	0.41
40:DF:3:GLU:HG2	40:DF:19:GLU:CB	2.51	0.41
40:DF:21:ALA:O	40:DF:23:ASP:N	2.53	0.41
40:DF:123:LEU:HA	40:DF:123:LEU:HD12	1.80	0.41
47:DO:34:THR:OG1	47:DO:35:VAL:N	2.48	0.41
49:DQ:47:ILE:HD13	49:DQ:47:ILE:HA	1.75	0.41
50:DR:13:HIS:CD2	50:DR:16:HIS:CB	3.03	0.41
51:DS:42:ASP:O	51:DS:43:GLU:HB2	2.20	0.41
56:DX:62:LYS:HE3	56:DX:62:LYS:HB3	1.79	0.41
1:AA:203:U:O2'	1:AA:215:U:P	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:373:A:C2	1:AA:374:A:C8	3.09	0.41
1:AA:833:U:O2'	1:AA:834:C:H5'	2.20	0.41
1:AA:951:G:OP2	13:AM:102:ARG:NH1	2.53	0.41
3:AC:64:VAL:HB	3:AC:99:VAL:HA	2.03	0.41
3:AC:131:ARG:NE	3:AC:166:GLU:OE2	2.52	0.41
7:AG:47:CYS:HA	7:AG:50:ILE:HG13	2.02	0.41
7:AG:50:ILE:HD12	7:AG:61:VAL:HG11	2.03	0.41
8:AH:25:ASP:HB3	8:AH:58:TYR:CD2	2.56	0.41
8:AH:34:GLU:HG2	8:AH:37:ARG:NH1	2.36	0.41
8:AH:34:GLU:HG2	8:AH:37:ARG:NH2	2.35	0.41
23:AY:41:C:H6	23:AY:41:C:H3'	1.84	0.41
27:B2:27:GLU:CG	27:B2:29:LYS:HE2	2.49	0.41
28:B3:4:LEU:HD12	28:B3:4:LEU:HA	1.77	0.41
30:B5:29:THR:HG21	35:BA:2815:C:C5'	2.46	0.41
31:B6:29:ASN:O	31:B6:30:THR:CG2	2.66	0.41
35:BA:55:G:H2'	35:BA:56:A:C8	2.55	0.41
35:BA:142:A:C5'	35:BA:142(A):C:OP2	2.68	0.41
35:BA:607:U:OP1	40:BF:103:LYS:N	2.36	0.41
35:BA:723:G:H2'	35:BA:724:U:O4'	2.20	0.41
35:BA:912:C:O2	35:BA:912:C:H2'	2.20	0.41
35:BA:1112:G:O2'	35:BA:1113:U:H6	2.03	0.41
35:BA:1528:A:C2	35:BA:1528(A):A:C6	3.08	0.41
35:BA:1993:U:H2'	35:BA:1994:C:O4'	2.21	0.41
35:BA:2515:C:O2'	35:BA:2516:G:H5'	2.21	0.41
35:BA:2721:A:H5"	35:BA:2722:G:OP2	2.20	0.41
35:BA:2888:C:H2'	35:BA:2889:C:C6	2.53	0.41
36:BB:44:G:N1	36:BB:48:A:C2	2.89	0.41
41:BG:28:VAL:O	41:BG:31:VAL:HB	2.21	0.41
41:BG:111:LEU:HB3	41:BG:117:PHE:HE2	1.86	0.41
42:BH:65:HIS:CE1	42:BH:69:ARG:HD3	2.56	0.41
43:BI:8:PRO:HA	43:BI:15:VAL:H	1.85	0.41
48:BP:58:THR:C	48:BP:59:LEU:HD23	2.46	0.41
49:BQ:5:ARG:HH22	49:BQ:7:MET:H	1.65	0.41
49:BQ:9:TYR:O	49:BQ:9:TYR:CD1	2.73	0.41
50:BR:115:GLU:HB2	50:BR:116:LEU:H	1.60	0.41
53:BU:88:ILE:HD13	53:BU:88:ILE:HG21	1.77	0.41
54:BV:69:LYS:HB3	54:BV:93:GLU:CG	2.50	0.41
55:BW:18:ARG:CG	55:BW:76:VAL:HG22	2.51	0.41
55:BW:51:LEU:HA	55:BW:51:LEU:HD13	1.50	0.41
1:CA:11:G:C6	1:CA:12:U:C4	3.08	0.41
1:CA:304:U:H2'	1:CA:305:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:490:G:H2'	1:CA:491:G:C8	2.55	0.41
1:CA:1054:C:O2'	1:CA:1055:A:H5"	2.20	0.41
1:CA:1137:C:C6	1:CA:1137:C:OP2	2.74	0.41
2:CB:78:GLN:O	2:CB:81:VAL:HG12	2.20	0.41
2:CB:83:MET:H	2:CB:83:MET:HG2	1.64	0.41
3:CC:30:ARG:HD2	14:CN:35:ARG:O	2.21	0.41
3:CC:120:VAL:HG23	3:CC:198:VAL:HG11	2.03	0.41
5:CE:57:LYS:HE2	5:CE:57:LYS:HB3	1.93	0.41
7:CG:138:LYS:HE2	7:CG:142:GLU:CD	2.46	0.41
9:CI:79:LEU:HD13	9:CI:79:LEU:C	2.46	0.41
11:CK:31:THR:OG1	11:CK:42:TRP:HB3	2.20	0.41
11:CK:109:VAL:HG11	18:CR:84:LYS:HD3	2.02	0.41
15:CO:44:LYS:O	15:CO:47:LYS:HE2	2.20	0.41
19:CS:48:THR:O	19:CS:48:THR:OG1	2.35	0.41
23:CW:12:U:H2'	23:CW:13:C:C6	2.55	0.41
23:CW:74:C:H2'	23:CW:75:C:H5'	2.03	0.41
27:D2:57:ILE:C	27:D2:59:ARG:HD2	2.46	0.41
31:D6:19:ARG:HH22	31:D6:42:TRP:HZ3	1.64	0.41
32:D7:27:GLY:O	32:D7:31:LEU:HD12	2.21	0.41
35:DA:189:G:H1'	35:DA:207:A:H61	1.86	0.41
35:DA:222:A:N6	35:DA:224:G:C2	2.89	0.41
35:DA:565:C:O2'	35:DA:566:U:H5'	2.20	0.41
35:DA:869:G:C4	35:DA:870:A:C8	3.08	0.41
35:DA:897:C:OP1	58:DZ:176:PRO:HB2	2.20	0.41
35:DA:1141:U:H2'	46:DN:63:THR:CG2	2.50	0.41
35:DA:1174:A:H5"	35:DA:1175:U:OP1	2.20	0.41
35:DA:1441:G:H2'	35:DA:1442:G:C8	2.55	0.41
35:DA:1448:G:H21	35:DA:1528(A):A:H2	1.68	0.41
35:DA:1863:G:H2'	35:DA:1864:U:H6	1.86	0.41
35:DA:2538:C:N3	35:DA:2539:C:C5	2.89	0.41
35:DA:2784:C:O2	39:DE:37:ARG:NH2	2.53	0.41
37:DC:122:ALA:HB3	37:DC:145:VAL:N	2.36	0.41
38:DD:44:ASN:ND2	38:DD:48:ARG:HA	2.34	0.41
38:DD:70:TRP:CH2	38:DD:150:LYS:HA	2.54	0.41
39:DE:110:GLY:O	50:DR:2:ARG:HB2	2.20	0.41
40:DF:20:LEU:HA	40:DF:20:LEU:HD23	1.70	0.41
42:DH:12:PRO:HD2	42:DH:15:VAL:CG2	2.49	0.41
43:DI:77:LEU:HD11	43:DI:101:LEU:HB2	2.03	0.41
46:DN:20:GLY:O	46:DN:61:ARG:NH2	2.46	0.41
46:DN:69:GLN:O	46:DN:71:ILE:HG13	2.21	0.41
49:DQ:10:ARG:HH22	49:DQ:73:PRO:HG2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DT:2:ASN:HB2	52:DT:3:ARG:H	1.57	0.41
53:DU:9:VAL:HG23	53:DU:9:VAL:H	1.43	0.41
53:DU:40:PHE:CD1	54:DV:78:LYS:HD3	2.56	0.41
56:DX:25:LYS:HA	56:DX:25:LYS:HD2	1.63	0.41
56:DX:30:VAL:HG22	56:DX:76:ARG:HA	2.03	0.41
58:DZ:70:LEU:HD11	58:DZ:98:MET:HE3	2.03	0.41
58:DZ:169:GLU:HB3	58:DZ:170:THR:H	1.70	0.41
1:AA:393:A:H5'	1:AA:483:C:O2'	2.20	0.41
1:AA:453:A:C6	1:AA:454:C:C4	3.08	0.41
1:AA:803:G:C6	1:AA:804:U:C4	3.09	0.41
1:AA:855:G:C6	1:AA:856:C:C4	3.09	0.41
1:AA:930:C:C4	1:AA:931:C:C5	3.08	0.41
1:AA:940:C:OP1	7:AG:102:ARG:HD3	2.21	0.41
1:AA:1004:A:O2'	1:AA:1036:G:O6	2.39	0.41
1:AA:1063:C:H6	1:AA:1063:C:OP2	2.03	0.41
1:AA:1166:G:HO2'	1:AA:1168:A:P	2.42	0.41
1:AA:1397:C:H3'	1:AA:1397:C:C6	2.55	0.41
3:AC:8:ILE:C	3:AC:10:PHE:N	2.77	0.41
6:AF:35:ALA:HA	6:AF:67:MET:HB3	2.01	0.41
7:AG:75:VAL:HA	7:AG:88:PRO:HA	2.02	0.41
11:AK:11:LYS:HB3	11:AK:12:ARG:H	1.54	0.41
16:AP:12:LYS:C	16:AP:14:ASN:N	2.78	0.41
25:B0:12:ASN:ND2	35:BA:2277:G:H3'	2.35	0.41
26:B1:90:ILE:HG23	26:B1:91:LYS:N	2.36	0.41
35:BA:57:C:H2'	35:BA:58:G:O4'	2.20	0.41
35:BA:271(H):G:N3	35:BA:271(H):G:H2'	2.36	0.41
35:BA:734:A:O2'	35:BA:1635:G:H5'	2.21	0.41
35:BA:1112:G:HO2'	35:BA:1113:U:H6	1.69	0.41
35:BA:1204:A:HO2'	35:BA:1205:U:P	2.41	0.41
35:BA:1923:U:H2'	35:BA:1924:C:C6	2.55	0.41
35:BA:2292:C:C2'	35:BA:2293:C:H5'	2.50	0.41
35:BA:2392:A:N1	35:BA:2424:C:N3	2.69	0.41
35:BA:2584:U:C5	35:BA:2585:U:C4	3.09	0.41
36:BB:59:A:C6	36:BB:60:C:C2	3.09	0.41
40:BF:155:LEU:HD22	40:BF:185:ASP:O	2.20	0.41
48:BP:9:ASN:N	48:BP:10:PRO:CD	2.83	0.41
48:BP:15:ARG:C	48:BP:15:ARG:HD3	2.46	0.41
48:BP:16:ARG:HB3	48:BP:17:LYS:H	1.61	0.41
49:BQ:22:LYS:HZ2	49:BQ:22:LYS:HG2	1.79	0.41
49:BQ:48:GLU:HA	49:BQ:51:ARG:HB3	2.03	0.41
51:BS:24:LEU:CB	51:BS:85:VAL:HG13	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BT:16:ARG:NH1	52:BT:80:SER:HA	2.36	0.41
53:BU:80:ILE:C	53:BU:82:GLY:H	2.28	0.41
54:BV:62:LEU:HD22	54:BV:96:ILE:HD13	2.01	0.41
55:BW:84:ARG:HD2	55:BW:84:ARG:HA	1.83	0.41
1:CA:456:C:N3	1:CA:457:C:N4	2.68	0.41
1:CA:767:A:H2'	1:CA:768:A:O4'	2.20	0.41
1:CA:872:A:C2	1:CA:874:G:C6	3.08	0.41
1:CA:1027:C:H2'	1:CA:1028:C:C5	2.56	0.41
1:CA:1147:C:O2	9:CI:16:ARG:NH1	2.53	0.41
1:CA:1243:C:H2'	1:CA:1244:C:C6	2.56	0.41
1:CA:1277:C:H3'	1:CA:1277:C:C6	2.54	0.41
1:CA:1309:G:C2	1:CA:1329:A:N3	2.89	0.41
1:CA:1504:G:H8	1:CA:1504:G:H2'	1.67	0.41
2:CB:105:PHE:C	2:CB:107:THR:N	2.75	0.41
3:CC:14:ILE:HG13	3:CC:15:THR:H	1.84	0.41
5:CE:76:ILE:HD13	5:CE:76:ILE:HG21	1.82	0.41
7:CG:137:LYS:O	7:CG:141:VAL:HG23	2.21	0.41
9:CI:111:ARG:O	9:CI:113:LYS:HE3	2.20	0.41
11:CK:69:ALA:O	11:CK:71:LYS:N	2.54	0.41
15:CO:10:LYS:HG3	15:CO:14:GLU:OE1	2.20	0.41
16:CP:75:ARG:C	16:CP:77:ALA:N	2.79	0.41
17:CQ:56:VAL:HG21	17:CQ:78:GLU:HG3	2.03	0.41
19:CS:12:ASP:C	19:CS:14:HIS:H	2.29	0.41
20:CT:22:ARG:HH12	20:CT:25:ARG:HE	1.67	0.41
22:CV:19:G:H4'	22:CV:20:U:OP2	2.21	0.41
23:CW:46:G:OP2	23:CW:46:G:H8	2.00	0.41
26:D1:80:LEU:HD13	26:D1:80:LEU:HA	1.76	0.41
33:D8:27:THR:HG22	33:D8:28:GLY:N	2.34	0.41
33:D8:39:LYS:HA	33:D8:42:ARG:HE	1.85	0.41
33:D8:61:LEU:HD21	35:DA:593:G:HO2'	1.84	0.41
35:DA:255:A:N3	35:DA:255:A:H2'	2.35	0.41
35:DA:319:C:C2	35:DA:333:G:N2	2.88	0.41
35:DA:530:G:C6	35:DA:2022:U:OP1	2.73	0.41
35:DA:839:U:H1'	35:DA:1191:G:H1'	2.02	0.41
35:DA:1057:A:N6	35:DA:1058:G:C5	2.88	0.41
35:DA:1225:G:C4'	54:DV:86:GLY:HA2	2.51	0.41
35:DA:1417:C:H4'	35:DA:1587:A:H2	1.85	0.41
35:DA:1843:C:H5'	38:DD:253:GLN:OE1	2.21	0.41
35:DA:2296:U:O2'	35:DA:2297:C:OP2	2.29	0.41
35:DA:2716:U:C2	35:DA:2717:G:C8	3.09	0.41
35:DA:2862:G:H2'	35:DA:2863:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DB:43:C:O4'	41:DG:66:GLN:NE2	2.53	0.41
37:DC:21:THR:O	37:DC:23:ASP:N	2.54	0.41
38:DD:39:LYS:CG	38:DD:62:TYR:HB2	2.50	0.41
38:DD:43:ARG:HH22	38:DD:52:ARG:CA	2.32	0.41
39:DE:11:MET:HB3	39:DE:24:THR:HB	2.02	0.41
39:DE:110:GLY:HA2	39:DE:162:ALA:N	2.36	0.41
40:DF:29:ASN:HB3	40:DF:112:MET:HE1	2.01	0.41
40:DF:101:LEU:HD12	40:DF:101:LEU:HA	1.70	0.41
42:DH:25:LYS:HA	42:DH:34:GLU:HA	2.03	0.41
43:DI:131:LYS:HA	43:DI:135:GLU:HB2	2.02	0.41
49:DQ:71:ASP:O	49:DQ:73:PRO:HD3	2.21	0.41
50:DR:60:LEU:O	50:DR:61:HIS:C	2.63	0.41
51:DS:35:ILE:HD11	51:DS:99:LYS:HE3	2.01	0.41
52:DT:136:GLN:HG3	52:DT:136:GLN:O	2.20	0.41
53:DU:98:LEU:O	53:DU:100:VAL:HG22	2.20	0.41
56:DX:60:ARG:HA	56:DX:73:ARG:HA	2.01	0.41
57:DY:28:LYS:C	57:DY:30:VAL:N	2.79	0.41
58:DZ:67:LEU:HA	58:DZ:67:LEU:HD23	1.73	0.41
1:AA:23:C:OP2	1:AA:561:U:N3	2.34	0.41
1:AA:186:C:H5'	1:AA:187:C:OP2	2.21	0.41
1:AA:309:G:O2'	1:AA:607:A:N1	2.51	0.41
1:AA:403:C:N4	1:AA:547:A:H5'	2.36	0.41
1:AA:457:C:OP2	1:AA:457:C:H4'	2.21	0.41
1:AA:538:G:O3'	12:AL:114:LYS:HE3	2.21	0.41
1:AA:977:A:C2	1:AA:1223:C:H2'	2.55	0.41
1:AA:1132:C:C4	1:AA:1133:G:H1'	2.55	0.41
4:AD:73:ARG:NE	4:AD:73:ARG:H	2.19	0.41
12:AL:44:THR:HA	12:AL:45:PRO:HD3	1.75	0.41
13:AM:48:LEU:HD12	13:AM:53:VAL:HA	2.01	0.41
13:AM:104:ARG:HB3	13:AM:105:THR:H	1.64	0.41
22:AV:15:G:C2	22:AV:60:A:C4	3.09	0.41
22:AV:41:C:H2'	22:AV:42:C:C6	2.49	0.41
23:AW:61:C:H3'	23:AW:62:C:C5'	2.49	0.41
23:AW:63:G:C8	23:AW:63:G:OP2	2.73	0.41
26:B1:67:ILE:N	26:B1:68:PRO:HD2	2.35	0.41
27:B2:48:HIS:CD2	35:BA:73:A:OP1	2.74	0.41
35:BA:84:A:H5"	57:BY:4:LYS:HE3	2.01	0.41
35:BA:210:C:O2	35:BA:210:C:O4'	2.39	0.41
35:BA:777:A:C2	35:BA:778:G:C5	3.09	0.41
35:BA:1179:C:H6	35:BA:1179:C:OP2	2.03	0.41
35:BA:1225:G:P	54:BV:88:ARG:HE	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1511:C:H2'	35:BA:1512:U:O4'	2.21	0.41
35:BA:1814:G:H2'	35:BA:1815:A:N7	2.36	0.41
35:BA:1835:G:H1'	35:BA:1931:U:C2	2.56	0.41
35:BA:2258:C:O2'	35:BA:2427:C:OP2	2.29	0.41
35:BA:2402:C:OP2	35:BA:2402:C:C2	2.74	0.41
35:BA:2473:U:H2'	35:BA:2474:C:C6	2.55	0.41
35:BA:2572:A:C8	39:BE:144:ARG:HD2	2.55	0.41
35:BA:2683:C:P	52:BT:53:ARG:NH2	2.94	0.41
35:BA:2744:G:C2	35:BA:2761:G:C4	3.08	0.41
35:BA:2859:G:C8	35:BA:2859:G:C3'	3.03	0.41
38:BD:10:THR:C	38:BD:12:SER:N	2.79	0.41
39:BE:86:PRO:O	39:BE:88:GLY:N	2.54	0.41
39:BE:181:LEU:HD21	52:BT:7:ILE:HG21	2.02	0.41
40:BF:117:ARG:HD3	40:BF:117:ARG:HA	1.59	0.41
41:BG:33:ARG:H	41:BG:162:THR:HB	1.84	0.41
42:BH:64:LEU:O	42:BH:67:LEU:HB3	2.20	0.41
43:BI:118:LYS:HD3	43:BI:118:LYS:C	2.46	0.41
49:BQ:132:VAL:HG21	58:BZ:81:ARG:HD2	2.01	0.41
50:BR:85:PRO:O	50:BR:88:ARG:HB3	2.20	0.41
51:BS:62:LYS:HB3	51:BS:65:VAL:HG13	2.03	0.41
52:BT:32:TYR:CE1	52:BT:81:PRO:C	2.99	0.41
52:BT:34:VAL:HA	52:BT:39:ARG:CB	2.51	0.41
54:BV:2:PHE:HD1	54:BV:2:PHE:HA	1.76	0.41
54:BV:31:ALA:O	54:BV:32:THR:HG23	2.21	0.41
55:BW:32:ALA:O	55:BW:33:ARG:C	2.64	0.41
57:BY:82:PRO:CD	57:BY:97:ARG:HG2	2.48	0.41
58:BZ:9:TYR:CD2	58:BZ:35:ARG:HD2	2.55	0.41
58:BZ:53:ILE:CD1	58:BZ:70:LEU:HD22	2.50	0.41
1:CA:36:C:N4	1:CA:37:U:C4	2.89	0.41
1:CA:371:G:H2'	1:CA:372:C:O4'	2.21	0.41
1:CA:437:U:O2'	4:CD:123:HIS:CD2	2.74	0.41
1:CA:543:C:OP1	4:CD:14:ARG:NE	2.45	0.41
1:CA:685:G:N2	1:CA:686:U:C4	2.89	0.41
1:CA:835:U:OP2	18:CR:60:ALA:HB3	2.20	0.41
1:CA:1029:C:H2'	1:CA:1030:C:H5	1.86	0.41
1:CA:1149:C:H2'	1:CA:1150:U:O4'	2.21	0.41
1:CA:1216:G:O2'	1:CA:1217:C:H5'	2.21	0.41
1:CA:1320:C:OP2	19:CS:70:LYS:HE3	2.20	0.41
2:CB:161:ALA:HA	2:CB:183:PRO:O	2.20	0.41
8:CH:6:ILE:O	8:CH:7:ALA:C	2.62	0.41
10:CJ:34:VAL:HG13	10:CJ:73:ASP:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:33:ARG:HB3	12:CL:85:ILE:HG22	2.02	0.41
14:CN:4:LYS:HD3	14:CN:5:ALA:CA	2.50	0.41
17:CQ:74:LEU:HB3	17:CQ:75:ARG:H	1.74	0.41
18:CR:78:LEU:HA	18:CR:78:LEU:HD23	1.61	0.41
19:CS:52:TYR:HH	19:CS:55:LYS:HA	1.86	0.41
22:CV:60:U:H3'	22:CV:61:C:H6	1.86	0.41
23:CW:5:G:C2	23:CW:69:G:N2	2.88	0.41
24:CX:22:U:N3	24:CX:23:A:C2	2.83	0.41
30:D5:3:LYS:HE2	30:D5:5:PRO:CG	2.45	0.41
32:D7:9:ARG:HH11	35:DA:1309:G:H3'	1.84	0.41
35:DA:143:G:O2'	56:DX:38:GLU:HG3	2.21	0.41
35:DA:271(H):G:O2'	35:DA:271(I):G:H8	2.04	0.41
35:DA:271(J):C:N4	35:DA:271(L):U:O2	2.53	0.41
35:DA:363(A):A:C2	35:DA:363(B):G:C5	3.08	0.41
35:DA:476:G:H4'	35:DA:502:A:N1	2.36	0.41
35:DA:543:C:O2'	35:DA:543:C:H6	2.04	0.41
35:DA:581:C:OP1	53:DU:31:SER:HB2	2.21	0.41
35:DA:783:A:H8	35:DA:784:A:H4'	1.85	0.41
35:DA:980:A:N3	35:DA:2037:G:O2'	2.45	0.41
35:DA:1070:A:H2'	35:DA:1070:A:N3	2.36	0.41
35:DA:1332:G:N2	35:DA:1610:A:H8	2.18	0.41
35:DA:1912:A:C2	35:DA:1919:A:C6	3.08	0.41
35:DA:1952:A:C6	35:DA:1953:A:C6	3.09	0.41
35:DA:1957:C:H2'	35:DA:1958:C:H6	1.84	0.41
35:DA:2075:U:C4	35:DA:2238:G:C6	3.08	0.41
35:DA:2086:U:H2'	35:DA:2087:G:C8	2.56	0.41
35:DA:2256:G:H2'	35:DA:2257:U:O4'	2.21	0.41
35:DA:2787:C:C1'	39:DE:61:ARG:HB2	2.51	0.41
38:DD:2:ALA:N	38:DD:20:ASP:HB3	2.36	0.41
38:DD:36:PRO:HB2	38:DD:62:TYR:O	2.21	0.41
39:DE:47:VAL:O	39:DE:80:GLU:HA	2.21	0.41
40:DF:137:LYS:HD2	40:DF:137:LYS:HA	1.85	0.41
41:DG:63:ILE:HD12	41:DG:141:PHE:CD2	2.55	0.41
46:DN:4:TYR:HB3	53:DU:64:ARG:HH11	1.85	0.41
46:DN:128:HIS:O	46:DN:129:PRO:C	2.63	0.41
47:DO:24:VAL:CG2	47:DO:33:ALA:HB2	2.51	0.41
47:DO:106:LEU:O	47:DO:107:ARG:C	2.63	0.41
50:DR:41:ALA:O	50:DR:44:LEU:N	2.53	0.41
50:DR:96:ARG:O	50:DR:114:VAL:HA	2.21	0.41
50:DR:100:LEU:HD21	50:DR:113:LEU:HD13	2.02	0.41
53:DU:70:ARG:HA	53:DU:74:LEU:H	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DU:97:ASP:OD1	53:DU:98:LEU:CA	2.68	0.41
54:DV:61:VAL:O	54:DV:62:LEU:HD23	2.20	0.41
57:DY:84:ARG:NH2	57:DY:97:ARG:HD3	2.36	0.41
1:AA:189(H):G:N2	1:AA:189(I):G:C4	2.89	0.41
1:AA:200:G:OP1	1:AA:200:G:H4'	2.21	0.41
1:AA:241:C:H6	1:AA:241:C:O5'	2.04	0.41
1:AA:373:A:H2'	1:AA:374:A:C8	2.48	0.41
1:AA:632:A:N3	1:AA:632:A:H2'	2.35	0.41
1:AA:702:A:N6	35:BA:1846:G:H21	2.16	0.41
1:AA:998:G:H1	1:AA:1043:C:H42	1.68	0.41
1:AA:1025:U:O2	1:AA:1026:G:N2	2.54	0.41
1:AA:1187:G:H2'	1:AA:1187:G:N3	2.36	0.41
1:AA:1261:A:C5	1:AA:1275:A:H8	2.39	0.41
1:AA:1311:G:O6	1:AA:1312:G:C6	2.74	0.41
1:AA:1410:G:H1	1:AA:1490:C:H42	1.67	0.41
2:AB:142:LEU:CD2	2:AB:142:LEU:HB3	2.45	0.41
3:AC:115:LEU:O	3:AC:116:VAL:C	2.64	0.41
4:AD:31:CYS:C	4:AD:33:MET:N	2.79	0.41
8:AH:95:VAL:HG11	8:AH:133:LEU:HD12	2.02	0.41
9:AI:86:VAL:HG21	9:AI:96:LEU:HD21	2.03	0.41
10:AJ:3:LYS:HD3	10:AJ:77:PRO:HG3	2.03	0.41
11:AK:31:THR:HA	11:AK:42:TRP:HA	2.02	0.41
16:AP:12:LYS:HD3	16:AP:12:LYS:C	2.45	0.41
25:B0:53:MET:HA	25:B0:58:THR:O	2.21	0.41
26:B1:35:THR:CG2	35:BA:2432:A:C5	3.04	0.41
26:B1:64:ALA:O	26:B1:65:SER:HB3	2.20	0.41
33:B8:34:TRP:CZ2	33:B8:36:LYS:HB2	2.56	0.41
35:BA:15:G:C6	35:BA:16:G:C5	3.09	0.41
35:BA:128:C:HO2'	35:BA:129:C:P	2.44	0.41
35:BA:175:G:H5"	35:BA:175:G:H8	1.85	0.41
35:BA:459:U:OP2	35:BA:469:G:N2	2.49	0.41
35:BA:534:U:O2'	53:BU:49:HIS:ND1	2.41	0.41
35:BA:818:G:OP2	35:BA:1187:G:O6	2.39	0.41
35:BA:881:G:H8	35:BA:881:G:OP2	2.03	0.41
35:BA:1029:A:H2'	35:BA:1030:G:O4'	2.21	0.41
35:BA:1133:U:H5"	35:BA:1135:C:P	2.61	0.41
35:BA:1322:A:C5	35:BA:1323:U:O4	2.74	0.41
35:BA:1421:G:C2	35:BA:1422:G:N7	2.89	0.41
35:BA:1487:G:C2	35:BA:1503:U:O2	2.74	0.41
35:BA:1529:G:N3	35:BA:1529:G:O2'	2.48	0.41
35:BA:1577:C:H2'	35:BA:1578:U:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1615:C:C5	35:BA:1617:C:C4	3.09	0.41
35:BA:2083:G:C6	35:BA:2084:C:C4	3.08	0.41
35:BA:2695:C:O2'	35:BA:2696:U:O5'	2.37	0.41
35:BA:2719:G:C2'	35:BA:2720:U:OP2	2.68	0.41
36:BB:21:G:O6	36:BB:62:C:N3	2.54	0.41
36:BB:105:A:O2'	58:BZ:31:ARG:HA	2.21	0.41
40:BF:7:TYR:CD1	40:BF:8:GLN:N	2.88	0.41
41:BG:25:TYR:OH	41:BG:168:GLU:HG2	2.21	0.41
46:BN:45:ASN:OD1	46:BN:45:ASN:C	2.64	0.41
46:BN:90:MET:HG2	46:BN:98:VAL:HG22	2.03	0.41
47:BO:108:GLU:H	47:BO:108:GLU:HG3	1.65	0.41
49:BQ:42:ILE:O	49:BQ:95:ALA:N	2.52	0.41
54:BV:85:LYS:O	54:BV:87:HIS:CD2	2.74	0.41
57:BY:8:LYS:HZ2	57:BY:94:LYS:HG3	1.84	0.41
1:CA:112:G:O2'	1:CA:113:G:H5'	2.20	0.41
1:CA:840:C:H6	1:CA:840:C:H2'	1.67	0.41
1:CA:1060:C:C4	3:CC:2:GLY:HA3	2.55	0.41
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.56	0.41
1:CA:1300:G:C6	1:CA:1334:G:C5	3.09	0.41
1:CA:1433:A:C8	1:CA:1467:G:N2	2.89	0.41
1:CA:1483:A:H1'	35:DA:1948:G:H1'	2.03	0.41
2:CB:113:HIS:HA	2:CB:116:GLU:HG2	2.02	0.41
4:CD:107:ARG:HA	4:CD:107:ARG:HE	1.86	0.41
4:CD:122:ARG:C	4:CD:124:GLY:H	2.29	0.41
5:CE:139:LEU:C	5:CE:141:GLN:H	2.27	0.41
8:CH:9:MET:O	8:CH:10:LEU:C	2.63	0.41
8:CH:86:ILE:HD13	8:CH:86:ILE:HA	1.88	0.41
10:CJ:78:ASN:HB2	10:CJ:81:THR:OG1	2.20	0.41
16:CP:39:TYR:CG	16:CP:73:LEU:HD21	2.55	0.41
16:CP:58:TYR:C	16:CP:58:TYR:CD1	2.98	0.41
17:CQ:20:THR:HG23	17:CQ:43:LEU:HD23	2.03	0.41
29:D4:5:ILE:CB	41:DG:67:LYS:HG2	2.50	0.41
31:D6:13:CYS:O	31:D6:21:TYR:HD2	2.04	0.41
35:DA:355:G:C6	35:DA:356:G:N7	2.89	0.41
35:DA:442:G:H21	40:DF:48:THR:HB	1.86	0.41
35:DA:897:C:P	58:DZ:176:PRO:HB2	2.61	0.41
35:DA:1071:G:H22	35:DA:1092:C:H41	1.68	0.41
35:DA:1586:A:H3'	35:DA:1587:A:H8	1.86	0.41
35:DA:1693:U:O2'	38:DD:14:ARG:NH2	2.54	0.41
35:DA:2178:C:O5'	37:DC:46:LYS:HD2	2.20	0.41
35:DA:2292:C:H42	35:DA:2340:G:H1	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2518:A:H5'	35:DA:2518:A:C8	2.55	0.41
35:DA:2552:U:H5"	35:DA:2553:G:OP2	2.19	0.41
36:DB:23:G:C2	36:DB:24:G:O6	2.73	0.41
36:DB:44:G:C2'	36:DB:45:A:OP2	2.68	0.41
38:DD:30:GLU:HG3	38:DD:63:ARG:NH2	2.36	0.41
38:DD:43:ARG:NE	38:DD:54:ARG:HB2	2.36	0.41
39:DE:65:GLY:C	39:DE:67:PHE:N	2.76	0.41
39:DE:93:VAL:HG12	39:DE:175:VAL:HG23	2.03	0.41
40:DF:103:LYS:HA	40:DF:106:ARG:HG3	2.02	0.41
40:DF:140:LEU:HD12	40:DF:140:LEU:HA	1.74	0.41
47:DO:24:VAL:HG23	47:DO:33:ALA:HB2	2.02	0.41
48:DP:51:PHE:CE2	48:DP:59:LEU:CD1	3.00	0.41
57:DY:13:VAL:CG1	57:DY:72:VAL:HB	2.51	0.41
57:DY:94:LYS:CG	57:DY:103:GLY:HA3	2.49	0.41
1:AA:21:G:H2'	1:AA:22:G:C8	2.56	0.41
1:AA:156:G:N3	1:AA:157:G:H1'	2.35	0.41
1:AA:353:A:C2'	1:AA:354:G:OP2	2.68	0.41
1:AA:373:A:N3	1:AA:374:A:C8	2.88	0.41
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.69	0.41
1:AA:545:C:C4'	4:AD:73:ARG:HH22	2.32	0.41
1:AA:596:C:N4	1:AA:644:G:H1	2.19	0.41
1:AA:635:G:C6	1:AA:636:U:C4	3.08	0.41
1:AA:704:A:H5"	1:AA:704:A:C8	2.56	0.41
1:AA:872:A:H2'	1:AA:872:A:N3	2.35	0.41
1:AA:948:C:H2'	1:AA:949:A:H8	1.86	0.41
1:AA:966:G:H8	1:AA:966:G:OP2	2.04	0.41
1:AA:1106:G:C6	1:AA:1107:C:C4	3.09	0.41
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.85	0.41
2:AB:142:LEU:O	2:AB:145:LEU:HB3	2.21	0.41
3:AC:55:VAL:O	3:AC:57:ILE:HG13	2.21	0.41
6:AF:10:LEU:HD12	6:AF:10:LEU:N	2.35	0.41
6:AF:30:LEU:H	6:AF:30:LEU:HG	1.61	0.41
7:AG:136:LYS:C	7:AG:138:LYS:N	2.78	0.41
12:AL:39:VAL:HG11	12:AL:41:ARG:CZ	2.51	0.41
12:AL:47:LYS:HD2	12:AL:48:PRO:HG3	2.02	0.41
14:AN:4:LYS:O	14:AN:6:LEU:N	2.53	0.41
15:AO:33:THR:O	15:AO:34:LEU:C	2.64	0.41
19:AS:19:VAL:HG12	19:AS:22:LEU:HB2	2.03	0.41
21:AU:9:ARG:O	21:AU:13:ILE:HG13	2.20	0.41
22:AV:2:G:C6	22:AV:73:A:C2	3.09	0.41
22:AV:20:G:C4	22:AV:58:A:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AV:73:A:N6	22:AV:74:A:C6	2.89	0.41
23:AW:14:A:N6	23:AW:23:A:H1'	2.36	0.41
23:AW:63:G:C8	23:AW:63:G:H3'	2.55	0.41
25:B0:42:GLY:CA	35:BA:2330:G:H21	2.34	0.41
28:B3:7:LYS:HA	28:B3:33:GLN:O	2.21	0.41
30:B5:49:CYS:O	30:B5:51:TYR:N	2.54	0.41
33:B8:13:ARG:CZ	48:BP:61:ARG:HA	2.51	0.41
35:BA:11:G:O5'	35:BA:11:G:H8	2.04	0.41
35:BA:137:C:H2'	35:BA:139:G:H3'	2.03	0.41
35:BA:282:A:C6	35:BA:359:A:C2	3.09	0.41
35:BA:310:A:OP1	57:BY:18:GLY:HA2	2.21	0.41
35:BA:363(E):U:H5'	35:BA:363(F):A:OP2	2.20	0.41
35:BA:422:A:C6	35:BA:423:A:C6	3.09	0.41
35:BA:433:C:C4	35:BA:434:U:O4	2.74	0.41
35:BA:507:A:H5"	35:BA:508:G:H3'	2.02	0.41
35:BA:1021:A:O2'	35:BA:1123:C:H5"	2.21	0.41
35:BA:1048:A:N6	35:BA:1053:C:H42	2.19	0.41
35:BA:1303:G:H1'	35:BA:1641:A:N1	2.35	0.41
35:BA:1304:C:O2'	35:BA:1305:C:H5'	2.21	0.41
35:BA:1418:G:N3	35:BA:1580:A:N6	2.69	0.41
35:BA:1425:G:H2'	35:BA:1426:G:C8	2.56	0.41
35:BA:1580:A:H8	35:BA:1581:G:H1'	1.86	0.41
35:BA:1668:A:H4'	35:BA:1669:A:O5'	2.20	0.41
35:BA:1747:G:C2	35:BA:1747(A):G:C8	3.09	0.41
35:BA:1809:A:C6	35:BA:1810:A:N1	2.89	0.41
35:BA:1821:A:H2'	35:BA:1822:G:C8	2.55	0.41
35:BA:1834:U:H4'	35:BA:1969:A:C6	2.56	0.41
35:BA:2078:C:H2'	35:BA:2079:U:O4'	2.21	0.41
35:BA:2105:C:H42	35:BA:2184:G:H1	1.68	0.41
35:BA:2287:A:O2'	35:BA:2288:A:H5"	2.20	0.41
35:BA:2649:U:H2'	35:BA:2650:U:C6	2.56	0.41
35:BA:2697:G:C6	35:BA:2698:U:C2	3.09	0.41
35:BA:2841:C:C2	35:BA:2877:G:N2	2.89	0.41
36:BB:32:C:H2'	36:BB:33:G:C8	2.56	0.41
36:BB:85:G:C2	36:BB:86:G:C8	3.08	0.41
37:BC:22:ILE:HG22	37:BC:25:ALA:CB	2.49	0.41
37:BC:51:PRO:HB3	37:BC:204:ALA:O	2.21	0.41
38:BD:80:ALA:HB3	38:BD:94:LEU:HB3	2.03	0.41
38:BD:108:PRO:HB3	38:BD:143:HIS:CE1	2.56	0.41
38:BD:204:ILE:HG12	38:BD:204:ILE:H	1.64	0.41
39:BE:60:ASN:O	39:BE:63:LEU:HG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:171:GLU:CB	39:BE:185:LYS:HB2	2.49	0.41
40:BF:118:ALA:O	40:BF:119:ARG:C	2.64	0.41
40:BF:124:LEU:HD23	40:BF:126:VAL:HG12	2.02	0.41
40:BF:125:LEU:HD21	40:BF:199:TRP:CD1	2.56	0.41
40:BF:170:LEU:HD12	40:BF:172:TRP:NE1	2.32	0.41
41:BG:75:LYS:O	41:BG:76:SER:HB3	2.21	0.41
43:BI:81:VAL:HG12	43:BI:143:SER:O	2.21	0.41
47:BO:81:ASP:OD1	47:BO:81:ASP:C	2.63	0.41
47:BO:99:PHE:CD1	47:BO:99:PHE:C	2.98	0.41
48:BP:42:SER:OG	48:BP:43:GLY:N	2.51	0.41
48:BP:121:LYS:HG2	48:BP:122:PRO:HD2	2.03	0.41
48:BP:140:ALA:O	48:BP:141:ALA:HB2	2.21	0.41
49:BQ:21:THR:O	49:BQ:22:LYS:O	2.39	0.41
49:BQ:116:GLU:O	49:BQ:120:ILE:HG12	2.21	0.41
51:BS:26:LEU:HD21	51:BS:87:PHE:CE1	2.55	0.41
51:BS:42:ASP:C	51:BS:44:LYS:N	2.78	0.41
51:BS:106:ARG:NH1	51:BS:106:ARG:O	2.54	0.41
52:BT:83:ILE:HG13	52:BT:84:GLN:N	2.24	0.41
56:BX:24:GLY:HA2	56:BX:80:ILE:O	2.20	0.41
56:BX:40:LYS:HD3	56:BX:51:VAL:CG1	2.46	0.41
56:BX:64:LYS:O	56:BX:64:LYS:HG3	2.21	0.41
58:BZ:39:VAL:HG23	58:BZ:44:PHE:CD1	2.56	0.41
1:CA:6:G:C4	5:CE:119:LEU:HD11	2.55	0.41
1:CA:8:A:N6	4:CD:209:ARG:HB2	2.36	0.41
1:CA:36:C:O3'	12:CL:123:LYS:HA	2.21	0.41
1:CA:38:G:C2	1:CA:397:A:C2	3.09	0.41
1:CA:82:U:H3'	1:CA:82:U:OP2	2.21	0.41
1:CA:189(B):C:N4	1:CA:189(I):G:H1	2.18	0.41
1:CA:195:A:H2	1:CA:223:U:H1'	1.85	0.41
1:CA:329:A:C5	1:CA:332:G:C6	3.09	0.41
1:CA:442:C:N4	1:CA:492:G:H1	2.13	0.41
1:CA:874:G:C4	1:CA:875:C:C5	3.09	0.41
1:CA:1034:G:H2'	1:CA:1035:A:H8	1.85	0.41
1:CA:1113:C:H2'	1:CA:1114:C:C6	2.55	0.41
1:CA:1144:G:H8	1:CA:1144:G:O5'	2.04	0.41
1:CA:1228:C:O3'	13:CM:116:THR:HA	2.20	0.41
1:CA:1229:A:H2'	1:CA:1230:C:H6	1.84	0.41
1:CA:1280:A:C8	10:CJ:41:PRO:HD3	2.55	0.41
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.55	0.41
1:CA:1374:A:O2'	7:CG:28:ASN:HB3	2.21	0.41
1:CA:1401:G:N2	1:CA:1402:C:H1'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1416:G:C2'	1:CA:1417:G:H5'	2.50	0.41
2:CB:20:GLU:H	2:CB:20:GLU:HG2	1.41	0.41
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.36	0.41
2:CB:124:SER:HB2	2:CB:125:PRO:CD	2.51	0.41
2:CB:184:VAL:N	2:CB:198:ASP:OD2	2.45	0.41
2:CB:187:LEU:HB3	2:CB:201:ILE:HD11	2.03	0.41
3:CC:90:GLU:CA	3:CC:93:LYS:HB2	2.42	0.41
3:CC:101:LEU:HA	3:CC:101:LEU:HD23	1.77	0.41
6:CF:19:LEU:HD21	6:CF:59:TYR:CE2	2.56	0.41
7:CG:74:GLU:HB2	7:CG:91:VAL:HG13	2.02	0.41
8:CH:81:HIS:HB2	8:CH:138:TRP:CE3	2.56	0.41
9:CI:126:SER:C	9:CI:127:LYS:HG3	2.46	0.41
10:CJ:20:ALA:C	10:CJ:22:LYS:H	2.29	0.41
12:CL:85:ILE:HD13	12:CL:85:ILE:HG21	1.78	0.41
13:CM:103:THR:O	13:CM:104:ARG:C	2.64	0.41
14:CN:18:VAL:O	14:CN:18:VAL:HG12	2.21	0.41
15:CO:71:GLN:HG2	15:CO:71:GLN:O	2.21	0.41
15:CO:77:ARG:HA	15:CO:80:ALA:HB3	2.02	0.41
24:CX:20:U:H2'	24:CX:21:C:C6	2.55	0.41
26:D1:62:VAL:HG13	26:D1:63:ALA:O	2.21	0.41
27:D2:11:GLU:HA	27:D2:14:ARG:NH2	2.36	0.41
32:D7:23:ARG:HA	32:D7:23:ARG:HD2	1.98	0.41
33:D8:40:GLU:C	33:D8:42:ARG:N	2.78	0.41
35:DA:193:U:H2'	35:DA:194:G:H5'	2.02	0.41
35:DA:271(K):U:O2'	35:DA:271(L):U:P	2.79	0.41
35:DA:373:U:H1'	35:DA:423:A:N3	2.36	0.41
35:DA:389:G:H1	48:DP:71:VAL:CG1	2.33	0.41
35:DA:641:C:C5	35:DA:642:G:C5	3.09	0.41
35:DA:642:G:H2'	35:DA:644:A:OP2	2.21	0.41
35:DA:748:G:C8	55:DW:89:ALA:HB1	2.56	0.41
35:DA:863:A:C2	35:DA:864:G:C4	3.09	0.41
35:DA:904:C:C4	35:DA:905:U:C4	3.09	0.41
35:DA:1039:G:H1	35:DA:1116:C:H42	1.69	0.41
35:DA:1050:A:N3	35:DA:1050:A:H2'	2.36	0.41
35:DA:1091:G:C2	35:DA:1102:C:C2	3.09	0.41
35:DA:1285:G:N2	35:DA:1329:U:OP1	2.35	0.41
35:DA:1341:U:O4'	56:DX:57:LEU:HD11	2.21	0.41
35:DA:1514:U:O2'	35:DA:1557:C:H5"	2.20	0.41
35:DA:1818:U:H4'	35:DA:1821:A:H1'	2.03	0.41
35:DA:1840:G:H1	35:DA:1902:C:H42	1.67	0.41
35:DA:1930:G:N2	35:DA:1968:G:H2'	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:2082:A:H2'	35:DA:2083:G:O4'	2.20	0.41
35:DA:2208:A:H1'	35:DA:2219:G:C4	2.56	0.41
35:DA:2246:G:H2'	35:DA:2247:A:C8	2.55	0.41
35:DA:2303:G:O2'	41:DG:132:ASN:HB2	2.21	0.41
35:DA:2308:G:C2	35:DA:2309:A:N6	2.89	0.41
35:DA:2335:A:C8	35:DA:2337:G:N7	2.89	0.41
35:DA:2493:U:H2'	35:DA:2494:G:O4'	2.21	0.41
35:DA:2512:C:H2'	35:DA:2513:G:O4'	2.21	0.41
35:DA:2536:G:C6	35:DA:2537:U:C4	3.08	0.41
35:DA:2661:G:C8	35:DA:2662:A:C6	3.09	0.41
35:DA:2697:G:H2'	35:DA:2698:U:O4'	2.20	0.41
35:DA:2713:A:OP1	50:DR:14:SER:HB3	2.21	0.41
35:DA:2813:A:H2'	35:DA:2814:C:O4'	2.20	0.41
35:DA:2855:C:H2'	35:DA:2856:C:H6	1.86	0.41
36:DB:52:A:O2'	36:DB:53:A:P	2.79	0.41
38:DD:63:ARG:O	38:DD:65:ILE:HG23	2.21	0.41
38:DD:77:ALA:HB2	38:DD:97:TYR:HA	2.03	0.41
38:DD:276:LYS:HB2	38:DD:276:LYS:HE2	1.93	0.41
39:DE:14:ILE:HG12	39:DE:21:VAL:CG2	2.50	0.41
39:DE:67:PHE:C	39:DE:69:LYS:N	2.79	0.41
39:DE:77:ILE:HG22	39:DE:78:LEU:HG	2.02	0.41
39:DE:114:ALA:HB3	39:DE:119:ARG:HG2	2.02	0.41
39:DE:128:SER:O	39:DE:130:GLY:N	2.54	0.41
39:DE:195:LEU:HG	39:DE:196:VAL:N	2.34	0.41
41:DG:41:GLN:OE1	41:DG:155:MET:HB3	2.21	0.41
41:DG:51:ARG:HD2	41:DG:51:ARG:HA	1.72	0.41
42:DH:162:ILE:HD13	42:DH:162:ILE:HG21	1.63	0.41
46:DN:26:LEU:HD11	46:DN:140:VAL:HG12	2.02	0.41
46:DN:103:VAL:O	46:DN:104:LYS:C	2.64	0.41
47:DO:8:LEU:HB2	47:DO:19:ILE:HG13	2.03	0.41
47:DO:60:ALA:HA	47:DO:85:VAL:O	2.21	0.41
47:DO:101:PRO:HA	47:DO:120:GLU:O	2.21	0.41
48:DP:51:PHE:CZ	48:DP:61:ARG:NH2	2.89	0.41
48:DP:80:TYR:CD1	48:DP:111:ARG:HB3	2.56	0.41
49:DQ:8:LYS:HB2	49:DQ:9:TYR:H	1.63	0.41
49:DQ:77:LYS:HZ1	49:DQ:83:MET:H	1.69	0.41
50:DR:13:HIS:CD2	50:DR:13:HIS:C	2.99	0.41
50:DR:14:SER:OG	50:DR:15:SER:N	2.53	0.41
50:DR:61:HIS:CD2	50:DR:65:LEU:HD21	2.56	0.41
52:DT:39:ARG:HA	52:DT:39:ARG:HE	1.80	0.41
52:DT:98:LYS:H	52:DT:98:LYS:CD	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DV:97:LYS:HD2	54:DV:97:LYS:HA	1.83	0.41
55:DW:1:MET:HB3	55:DW:64:MET:CE	2.49	0.41
55:DW:3:ALA:O	55:DW:106:ILE:HA	2.21	0.41
57:DY:19:LYS:C	57:DY:21:LYS:H	2.29	0.41
57:DY:45:VAL:HA	57:DY:61:ILE:CA	2.51	0.41
1:AA:174:C:O2	1:AA:174:C:O4'	2.38	0.41
1:AA:446:G:H2'	1:AA:447:G:C8	2.56	0.41
1:AA:447:G:C6	1:AA:485:G:O2'	2.74	0.41
1:AA:540:G:H2'	1:AA:541:G:O4'	2.21	0.41
1:AA:977:A:H3'	1:AA:977:A:C8	2.56	0.41
1:AA:1104:G:O5'	2:AB:111:ARG:HD2	2.21	0.41
1:AA:1124:G:H21	1:AA:1126:U:P	2.43	0.41
1:AA:1194:U:H4'	5:AE:22:GLY:CA	2.51	0.41
1:AA:1202:G:N2	14:AN:42:ILE:HG22	2.36	0.41
1:AA:1205:U:H5"	3:AC:190:ARG:NE	2.35	0.41
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.36	0.41
1:AA:1456:G:C4	1:AA:1456:G:OP2	2.73	0.41
4:AD:24:GLU:HB2	4:AD:112:VAL:HG21	2.03	0.41
4:AD:153:ARG:HE	4:AD:181:MET:CG	2.34	0.41
7:AG:92:SER:HB2	7:AG:94:ARG:CZ	2.50	0.41
8:AH:36:LEU:O	8:AH:37:ARG:C	2.63	0.41
9:AI:53:VAL:HG13	9:AI:95:LYS:CE	2.50	0.41
9:AI:117:HIS:HB2	9:AI:121:ARG:O	2.21	0.41
12:AL:110:VAL:CG1	12:AL:120:TYR:HB3	2.50	0.41
19:AS:5:LEU:HD23	19:AS:5:LEU:HA	1.64	0.41
19:AS:6:LYS:HE2	19:AS:7:LYS:HG3	2.01	0.41
23:AW:16:U:H3'	23:AW:17:C:C5'	2.51	0.41
26:B1:18:ILE:CD1	35:BA:188:G:H5'	2.51	0.41
27:B2:41:ILE:CD1	27:B2:44:LEU:H	2.34	0.41
27:B2:53:LEU:HB2	27:B2:54:LYS:NZ	2.36	0.41
28:B3:4:LEU:HD12	28:B3:57:GLU:O	2.21	0.41
31:B6:34:LEU:HD23	31:B6:34:LEU:HA	1.69	0.41
33:B8:58:ILE:HD13	33:B8:58:ILE:HG21	1.88	0.41
35:BA:103:A:H5'	35:BA:103:A:H8	1.86	0.41
35:BA:136:G:H5"	35:BA:137:C:C6	2.56	0.41
35:BA:301:G:O2'	35:BA:302:C:H5"	2.21	0.41
35:BA:363(A):A:C8	35:BA:363(B):G:C8	3.09	0.41
35:BA:452:G:N3	35:BA:457:A:H2	2.19	0.41
35:BA:826:U:H5"	35:BA:827:U:OP2	2.20	0.41
35:BA:1204:A:C2	35:BA:1241:A:N1	2.89	0.41
35:BA:1344:G:H4'	35:BA:1384:A:C5	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1441:G:C2	35:BA:1442:G:C5	3.09	0.41
35:BA:1441:G:O3'	35:BA:1628:G:H5'	2.21	0.41
35:BA:1480:G:N1	35:BA:1481:U:O2	2.54	0.41
35:BA:1544:A:C4	35:BA:1545:A:C8	3.09	0.41
35:BA:1799:G:H3'	35:BA:1799:G:P	2.60	0.41
35:BA:2225:A:C1'	35:BA:2226:C:OP2	2.69	0.41
35:BA:2346:A:H5"	35:BA:2383:G:H1'	2.02	0.41
35:BA:2494:G:H2'	35:BA:2495:G:H8	1.86	0.41
35:BA:2557:G:C2'	35:BA:2558:C:H5'	2.51	0.41
35:BA:2744:G:H21	42:BH:143:GLN:HG2	1.86	0.41
36:BB:30:C:C4	36:BB:31:C:C2	3.09	0.41
36:BB:116:G:N3	36:BB:116:G:H2'	2.35	0.41
39:BE:33:VAL:HG11	39:BE:88:GLY:C	2.45	0.41
39:BE:168:MET:O	39:BE:170:LEU:N	2.54	0.41
40:BF:123:LEU:HD12	40:BF:124:LEU:H	1.85	0.41
42:BH:20:ALA:HB3	42:BH:23:ARG:CG	2.51	0.41
42:BH:92:ILE:C	42:BH:94:TYR:H	2.29	0.41
46:BN:4:TYR:HD2	53:BU:64:ARG:NH1	2.19	0.41
46:BN:18:ALA:HB2	46:BN:26:LEU:HD22	2.03	0.41
49:BQ:130:LYS:HG2	49:BQ:131:ILE:N	2.36	0.41
50:BR:18:LEU:HA	50:BR:18:LEU:HD22	1.74	0.41
52:BT:28:VAL:HG11	52:BT:29:ARG:HH11	1.86	0.41
55:BW:10:VAL:O	55:BW:12:ILE:N	2.54	0.41
57:BY:15:VAL:HG13	57:BY:17:SER:HB3	2.02	0.41
1:CA:28:G:C4	1:CA:29:G:C8	3.09	0.41
1:CA:59:A:H61	1:CA:331:G:H1'	1.85	0.41
1:CA:329:A:O2'	1:CA:332:G:N7	2.52	0.41
1:CA:376:G:H5"	16:CP:5:ARG:HD2	2.03	0.41
1:CA:625:G:O5'	1:CA:625:G:H8	2.04	0.41
1:CA:710:G:H2'	1:CA:711:G:O4'	2.21	0.41
1:CA:914:A:C4	1:CA:915:A:C8	3.09	0.41
1:CA:992:U:H1'	1:CA:993:G:OP2	2.20	0.41
1:CA:1058:G:OP1	3:CC:199:LYS:HE2	2.21	0.41
2:CB:55:PHE:C	2:CB:57:PHE:N	2.79	0.41
2:CB:216:SER:O	2:CB:219:VAL:HG12	2.19	0.41
3:CC:179:ARG:O	3:CC:179:ARG:HG3	2.21	0.41
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	2.03	0.41
8:CH:88:LYS:O	8:CH:92:ARG:HD2	2.20	0.41
9:CI:3:GLN:HG2	9:CI:20:ARG:HD2	2.03	0.41
9:CI:114:TYR:HD1	9:CI:114:TYR:H	1.68	0.41
12:CL:45:PRO:HB2	12:CL:46:LYS:H	1.62	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:36:LYS:HE2	13:CM:36:LYS:HB3	1.88	0.41
14:CN:3:ARG:O	14:CN:7:ILE:HG12	2.21	0.41
16:CP:23:ASP:OD1	16:CP:25:ARG:NH1	2.54	0.41
17:CQ:48:GLU:HB3	17:CQ:49:GLU:H	1.52	0.41
17:CQ:63:ARG:HD3	17:CQ:63:ARG:C	2.46	0.41
19:CS:19:VAL:C	19:CS:21:GLU:N	2.78	0.41
26:D1:79:GLY:C	26:D1:80:LEU:HD22	2.45	0.41
27:D2:20:GLU:H	27:D2:20:GLU:HG3	1.32	0.41
30:D5:7:PRO:HA	35:DA:2615:U:N1	2.35	0.41
32:D7:5:TRP:HE1	32:D7:7:PRO:HG3	1.81	0.41
33:D8:23:VAL:HG13	33:D8:46:ARG:HB3	2.02	0.41
35:DA:391:G:O2'	35:DA:410:G:OP1	2.24	0.41
35:DA:414:C:O2'	35:DA:415:A:H5'	2.21	0.41
35:DA:436:C:H2'	35:DA:437:G:C8	2.56	0.41
35:DA:481:G:H8	35:DA:481:G:H2'	1.73	0.41
35:DA:539:G:H2'	35:DA:540:C:C6	2.56	0.41
35:DA:616:G:H2'	35:DA:618:C:C6	2.56	0.41
35:DA:668:G:H2'	35:DA:670:A:H62	1.86	0.41
35:DA:729:G:OP2	38:DD:208:LYS:NZ	2.52	0.41
35:DA:1368:G:N2	35:DA:1369:G:C4	2.89	0.41
35:DA:1425:G:H2'	35:DA:1426:G:C8	2.56	0.41
35:DA:1547:C:H2'	35:DA:1548:C:C6	2.56	0.41
35:DA:1664:A:H61	35:DA:1996:C:N4	2.17	0.41
35:DA:1799:G:H8	35:DA:1799:G:H2'	1.61	0.41
35:DA:2100:G:C5	35:DA:2190:G:C6	3.09	0.41
35:DA:2625:G:H2'	35:DA:2626:C:O4'	2.20	0.41
37:DC:122:ALA:O	37:DC:124:GLY:N	2.54	0.41
39:DE:82:ARG:HG3	39:DE:83:ASP:N	2.36	0.41
39:DE:134:ILE:O	39:DE:134:ILE:HG13	2.21	0.41
41:DG:43:LEU:HD22	41:DG:43:LEU:H	1.85	0.41
42:DH:56:SER:HB2	42:DH:58:GLU:HG3	2.01	0.41
42:DH:153:LYS:O	42:DH:153:LYS:HG2	2.20	0.41
47:DO:7:TYR:OH	47:DO:44:LYS:HG3	2.20	0.41
48:DP:42:SER:O	48:DP:44:GLY:N	2.54	0.41
48:DP:50:ARG:C	48:DP:51:PHE:CD1	2.99	0.41
48:DP:70:GLN:C	48:DP:71:VAL:HG12	2.46	0.41
48:DP:137:LYS:HD3	48:DP:137:LYS:HA	1.75	0.41
50:DR:100:LEU:HD11	50:DR:113:LEU:CD1	2.50	0.41
50:DR:103:ARG:H	50:DR:103:ARG:HD2	1.86	0.41
54:DV:6:LYS:HG3	54:DV:11:GLN:HG2	2.02	0.41
54:DV:64:HIS:CB	54:DV:96:ILE:HA	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DY:26:LYS:HD3	57:DY:27:VAL:HG23	2.01	0.41
58:DZ:72:ARG:O	58:DZ:73:GLN:HB2	2.21	0.41
1:AA:189(F):U:C4	17:AQ:72:ARG:CZ	3.04	0.40
1:AA:236:G:C6	1:AA:237:C:C4	3.10	0.40
1:AA:561:U:O2'	1:AA:562:C:P	2.80	0.40
1:AA:949:A:C2	1:AA:1233:G:C4	3.09	0.40
1:AA:958:A:H5"	1:AA:959:A:OP2	2.21	0.40
1:AA:1058:G:C5	1:AA:1059:C:C4	3.09	0.40
1:AA:1437:C:H42	1:AA:1464:G:H1	1.69	0.40
2:AB:92:TYR:O	2:AB:151:GLY:HA3	2.21	0.40
4:AD:61:LYS:HD3	4:AD:62:GLN:N	2.36	0.40
4:AD:101:LEU:HD12	4:AD:101:LEU:C	2.46	0.40
6:AF:55:ASP:O	6:AF:57:GLN:N	2.54	0.40
9:AI:96:LEU:N	9:AI:98:PRO:HD2	2.36	0.40
12:AL:39:VAL:HG11	12:AL:41:ARG:NH2	2.37	0.40
17:AQ:81:ARG:HH12	17:AQ:84:LEU:HG	1.86	0.40
19:AS:63:THR:CG2	19:AS:66:MET:HB2	2.51	0.40
19:AS:67:VAL:HG13	19:AS:67:VAL:O	2.21	0.40
33:B8:64:TYR:OH	35:BA:594:U:OP1	2.37	0.40
34:B9:36:GLN:NE2	35:BA:1124:C:O2	2.54	0.40
35:BA:26:G:C6	35:BA:27:G:N1	2.89	0.40
35:BA:340:A:H2'	35:BA:341:G:O4'	2.21	0.40
35:BA:399:G:H5"	35:BA:400:G:OP2	2.22	0.40
35:BA:733:G:C6	35:BA:761:A:N7	2.89	0.40
35:BA:790:C:H6	35:BA:790:C:H2'	1.54	0.40
35:BA:884:C:O2'	35:BA:892:G:O4'	2.37	0.40
35:BA:1602:U:H3'	35:BA:1603:A:C5'	2.51	0.40
35:BA:1826:G:C4	35:BA:1827:C:C6	3.09	0.40
35:BA:2123:G:N2	35:BA:2176:A:C2	2.90	0.40
35:BA:2250:G:OP2	35:BA:2275:C:H2'	2.21	0.40
35:BA:2271:G:H2'	35:BA:2272:U:C6	2.56	0.40
35:BA:2725:A:C4	35:BA:2727:G:C8	3.09	0.40
38:BD:153:ALA:O	38:BD:157:ARG:NH1	2.54	0.40
39:BE:36:ARG:HD3	39:BE:85:ASN:OD1	2.21	0.40
39:BE:78:LEU:H	39:BE:78:LEU:HD23	1.86	0.40
40:BF:53:THR:HG23	40:BF:55:GLY:N	2.35	0.40
46:BN:34:LEU:N	46:BN:34:LEU:HD12	2.36	0.40
47:BO:38:VAL:HA	47:BO:60:ALA:O	2.22	0.40
48:BP:110:TYR:O	48:BP:111:ARG:C	2.64	0.40
48:BP:114:ILE:HD13	48:BP:125:VAL:HG11	2.03	0.40
51:BS:68:GLN:CD	51:BS:68:GLN:H	2.28	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BS:98:VAL:HG22	51:BS:98:VAL:O	2.21	0.40
52:BT:93:ARG:HH21	52:BT:115:ARG:HH11	1.68	0.40
53:BU:88:ILE:O	53:BU:88:ILE:HG13	2.21	0.40
58:BZ:6:LYS:C	58:BZ:39:VAL:HG12	2.46	0.40
58:BZ:28:MET:O	58:BZ:35:ARG:N	2.38	0.40
1:CA:130:A:H3'	1:CA:189(G):G:O2'	2.21	0.40
1:CA:392:G:H2'	1:CA:393:A:H8	1.86	0.40
1:CA:439:A:C6	1:CA:496:A:C4	3.09	0.40
1:CA:539:A:OP1	12:CL:114:LYS:HD3	2.21	0.40
1:CA:678:U:C4	1:CA:679:C:N4	2.89	0.40
1:CA:777:A:H2'	1:CA:778:G:C8	2.56	0.40
1:CA:855:G:C6	1:CA:856:C:C4	3.09	0.40
2:CB:99:GLY:C	2:CB:101:MET:N	2.79	0.40
2:CB:117:GLU:O	2:CB:121:LEU:HD13	2.19	0.40
2:CB:166:ASP:O	2:CB:170:GLU:HB3	2.21	0.40
3:CC:14:ILE:CG1	3:CC:15:THR:H	2.34	0.40
3:CC:70:VAL:O	3:CC:105:GLU:HA	2.21	0.40
4:CD:166:LYS:HG2	4:CD:178:VAL:HG11	2.03	0.40
5:CE:148:VAL:O	5:CE:151:LEU:HD23	2.20	0.40
13:CM:107:ALA:O	13:CM:110:ARG:N	2.45	0.40
14:CN:8:GLU:O	14:CN:9:LYS:C	2.64	0.40
14:CN:12:ARG:C	14:CN:14:PRO:HD2	2.46	0.40
18:CR:40:LEU:H	18:CR:40:LEU:HG	1.25	0.40
19:CS:15:LEU:HA	19:CS:18:LYS:HB2	2.03	0.40
26:D1:73:LEU:HD13	26:D1:90:ILE:CG2	2.51	0.40
27:D2:23:LYS:HB2	56:DX:5:TYR:CE2	2.55	0.40
27:D2:31:GLU:O	27:D2:31:GLU:HG2	2.21	0.40
27:D2:50:ILE:O	27:D2:51:ARG:HB2	2.20	0.40
33:D8:27:THR:CG2	33:D8:28:GLY:H	2.28	0.40
34:D9:36:GLN:HG2	35:DA:1124:C:O2'	2.22	0.40
35:DA:80:G:N3	35:DA:294:A:H2	2.18	0.40
35:DA:999:U:O2'	35:DA:1000:A:H5'	2.21	0.40
35:DA:1212:G:HO2'	35:DA:1213:A:P	2.43	0.40
35:DA:1290:C:H2'	35:DA:1291:C:H6	1.85	0.40
35:DA:1754:C:H2'	35:DA:1755:A:O4'	2.21	0.40
35:DA:1786:A:C2	35:DA:2606:C:H1'	2.54	0.40
35:DA:2074:U:H2'	35:DA:2075:U:C6	2.56	0.40
35:DA:2770:G:H5"	35:DA:2771:C:OP2	2.21	0.40
35:DA:2810:A:H2'	39:DE:61:ARG:NH2	2.36	0.40
36:DB:48:A:H4'	51:DS:95:HIS:CE1	2.56	0.40
39:DE:88:GLY:C	39:DE:90:THR:H	2.29	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DF:66:PRO:O	40:DF:67:GLN:HB3	2.21	0.40
42:DH:150:ALA:O	42:DH:151:ILE:C	2.64	0.40
43:DI:92:VAL:HG22	43:DI:120:ILE:HG13	2.03	0.40
43:DI:95:LYS:HD3	43:DI:95:LYS:C	2.47	0.40
46:DN:70:LYS:HE3	46:DN:72:TYR:CZ	2.56	0.40
48:DP:59:LEU:HA	48:DP:61:ARG:NE	2.36	0.40
49:DQ:12:GLN:HG2	49:DQ:72:LYS:HE2	2.03	0.40
49:DQ:137:TYR:CD1	49:DQ:139:GLU:O	2.74	0.40
50:DR:38:VAL:HG23	50:DR:110:PRO:O	2.20	0.40
54:DV:1:MET:HB3	54:DV:2:PHE:H	1.68	0.40
57:DY:90:LEU:HD12	57:DY:91:GLU:H	1.85	0.40
58:DZ:24:LEU:HB2	58:DZ:41:LEU:HG	2.02	0.40
1:AA:69:G:O4'	1:AA:152:A:H2	2.04	0.40
1:AA:292:G:H5'	1:AA:293:G:OP2	2.21	0.40
1:AA:491:G:C2	1:AA:492:G:H1'	2.56	0.40
1:AA:562:C:H4'	1:AA:563:A:O5'	2.20	0.40
1:AA:599:C:H5"	8:AH:95:VAL:O	2.21	0.40
1:AA:702:A:O2'	1:AA:703:G:P	2.80	0.40
1:AA:1061:G:C5	1:AA:1062:U:C5	3.09	0.40
1:AA:1129:C:N4	1:AA:1143:G:H22	2.19	0.40
1:AA:1149:C:H2'	1:AA:1150:U:O4'	2.21	0.40
1:AA:1329:A:H5'	13:AM:29:ARG:NE	2.37	0.40
3:AC:154:SER:O	3:AC:165:THR:HA	2.21	0.40
4:AD:36:ARG:HB3	4:AD:38:TYR:CZ	2.56	0.40
6:AF:42:GLU:C	6:AF:44:GLY:N	2.79	0.40
7:AG:151:TYR:HA	7:AG:153:HIS:HD2	1.86	0.40
10:AJ:52:GLY:O	14:AN:42:ILE:HD11	2.21	0.40
11:AK:91:ARG:HG3	11:AK:92:GLU:H	1.85	0.40
12:AL:69:TYR:CD2	12:AL:99:HIS:CD2	3.07	0.40
15:AO:39:LEU:HD13	15:AO:39:LEU:O	2.21	0.40
16:AP:4:ILE:HA	16:AP:20:VAL:O	2.21	0.40
16:AP:34:GLU:OE2	16:AP:55:ARG:CD	2.64	0.40
19:AS:51:VAL:HB	19:AS:58:VAL:HG22	2.03	0.40
25:B0:19:LYS:HE2	35:BA:2262:U:OP2	2.21	0.40
26:B1:65:SER:O	35:BA:372:G:H8	2.03	0.40
27:B2:45:SER:O	27:B2:49:LYS:HG2	2.21	0.40
28:B3:31:LEU:HD23	28:B3:31:LEU:HA	1.89	0.40
34:B9:22:ARG:HB2	34:B9:24:TYR:CE1	2.55	0.40
35:BA:51:G:O2'	35:BA:119:A:N1	2.48	0.40
35:BA:72:U:C4	35:BA:112:U:H4'	2.56	0.40
35:BA:76:C:H2'	35:BA:77:C:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:234:C:H2'	35:BA:235:U:O4'	2.21	0.40
35:BA:413:C:H4'	35:BA:1880:C:O2'	2.20	0.40
35:BA:614(B):G:O2'	40:BF:44:ARG:NE	2.54	0.40
35:BA:1013:C:H42	35:BA:1149:G:H1	1.69	0.40
35:BA:1042:G:N2	35:BA:1113:U:O2	2.54	0.40
35:BA:1139:G:O2'	35:BA:1143:A:N1	2.44	0.40
35:BA:1224:C:O2'	54:BV:87:HIS:N	2.54	0.40
35:BA:1312:U:O2	35:BA:1312:U:O4'	2.39	0.40
35:BA:1436:G:H5'	35:BA:1437:C:OP2	2.21	0.40
35:BA:1804:C:H2'	35:BA:1805:U:H6	1.86	0.40
35:BA:2096:U:C2'	35:BA:2097:C:H5'	2.51	0.40
35:BA:2378:A:C2'	51:BS:20:ARG:HH12	2.33	0.40
35:BA:2582:G:N2	35:BA:2583:G:H1'	2.35	0.40
36:BB:91:C:HO2'	36:BB:92:C:P	2.44	0.40
39:BE:61:ARG:H	39:BE:61:ARG:HG2	1.62	0.40
40:BF:110:LEU:HD23	40:BF:183:VAL:HG12	2.03	0.40
41:BG:38:VAL:HG22	41:BG:93:THR:HG23	2.03	0.40
47:BO:53:LYS:O	47:BO:56:ASP:HB2	2.20	0.40
47:BO:113:LYS:O	47:BO:115:VAL:N	2.52	0.40
47:BO:113:LYS:C	47:BO:115:VAL:N	2.79	0.40
53:BU:9:VAL:HG12	53:BU:10:ARG:H	1.86	0.40
55:BW:40:ASN:C	55:BW:40:ASN:ND2	2.79	0.40
55:BW:51:LEU:HD22	55:BW:51:LEU:N	2.37	0.40
57:BY:9:LYS:HD2	57:BY:10:GLY:N	2.36	0.40
58:BZ:6:LYS:HE3	58:BZ:6:LYS:HB2	1.69	0.40
1:CA:260:G:H2'	1:CA:261:U:C6	2.56	0.40
1:CA:382:A:H2'	1:CA:383:A:C8	2.56	0.40
1:CA:397:A:N7	1:CA:548:G:C8	2.89	0.40
1:CA:404:U:H5'	4:CD:122:ARG:HE	1.85	0.40
1:CA:872:A:C5	1:CA:874:G:C8	3.09	0.40
1:CA:1074:G:H2'	1:CA:1075:C:C6	2.56	0.40
1:CA:1107:C:C4	1:CA:1108:G:C8	3.09	0.40
1:CA:1112:C:N3	3:CC:178:LEU:HD22	2.36	0.40
1:CA:1240:U:P	7:CG:116:ALA:HB2	2.61	0.40
1:CA:1307:U:C4	1:CA:1308:U:C4	3.09	0.40
1:CA:1315:U:C4	1:CA:1316:G:C6	3.09	0.40
1:CA:1508:G:H2'	1:CA:1509:C:O4'	2.21	0.40
2:CB:70:PHE:CD2	2:CB:163:PHE:HB3	2.56	0.40
2:CB:145:LEU:O	2:CB:149:LEU:HB2	2.20	0.40
3:CC:30:ARG:HB2	14:CN:36:PHE:O	2.21	0.40
3:CC:108:ASN:CB	3:CC:111:LEU:HD12	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:52:SER:O	4:CD:56:VAL:HG23	2.22	0.40
7:CG:140:ASP:HA	7:CG:143:ARG:HD2	2.04	0.40
14:CN:23:ARG:HA	14:CN:29:ARG:O	2.21	0.40
15:CO:4:THR:HG23	15:CO:7:GLU:OE2	2.21	0.40
17:CQ:82:MET:HB3	17:CQ:82:MET:HE3	1.72	0.40
19:CS:58:VAL:HG11	19:CS:75:ALA:HA	2.03	0.40
20:CT:37:SER:O	20:CT:41:ILE:HG12	2.22	0.40
21:CU:8:THR:HA	21:CU:21:TYR:HE2	1.83	0.40
22:CV:11:A:H4'	35:DA:1909:C:O2'	2.21	0.40
25:D0:70:GLN:O	25:D0:77:ARG:HA	2.22	0.40
33:D8:8:LYS:HE2	35:DA:245:G:O6	2.21	0.40
35:DA:803:U:O2'	35:DA:804:A:H5'	2.21	0.40
35:DA:1027:A:H4'	36:DB:88:C:C4	2.57	0.40
35:DA:1102:C:H6	35:DA:1102:C:H2'	1.67	0.40
35:DA:1303:G:H1'	35:DA:1641:A:N1	2.36	0.40
35:DA:1451:C:N3	35:DA:1459:G:O6	2.55	0.40
35:DA:1937:A:C8	35:DA:1939:U:H2'	2.57	0.40
35:DA:1946:U:H2'	35:DA:1947:C:C6	2.57	0.40
35:DA:2050:C:H2'	35:DA:2051:A:O4'	2.22	0.40
35:DA:2190:G:C4	35:DA:2191:G:C8	3.10	0.40
35:DA:2191:G:H4'	35:DA:2192:G:OP1	2.20	0.40
35:DA:2393:A:C2'	35:DA:2394:C:H5'	2.51	0.40
35:DA:2612:C:C4	35:DA:2613:U:H5	2.39	0.40
35:DA:2787:C:O2	39:DE:61:ARG:NH1	2.54	0.40
38:DD:267:SER:O	38:DD:268:ARG:HB2	2.22	0.40
40:DF:107:LYS:O	40:DF:108:LYS:C	2.64	0.40
41:DG:83:ARG:H	41:DG:86:MET:CG	2.35	0.40
43:DI:91:SER:HB2	43:DI:121:LYS:HA	2.04	0.40
47:DO:68:GLU:OE2	47:DO:78:ARG:NH1	2.55	0.40
50:DR:67:LEU:O	50:DR:68:ARG:C	2.64	0.40
53:DU:92:ARG:HG2	54:DV:11:GLN:NE2	2.35	0.40
54:DV:76:LYS:HD3	54:DV:84:LYS:O	2.21	0.40
55:DW:69:LEU:HA	55:DW:108:GLY:O	2.21	0.40
55:DW:70:TYR:N	55:DW:70:TYR:CD1	2.89	0.40
56:DX:27:THR:HB	56:DX:78:LYS:CB	2.46	0.40
58:DZ:15:PRO:O	58:DZ:19:ARG:HB2	2.21	0.40
1:AA:147:G:C2	1:AA:176:C:O2	2.74	0.40
1:AA:608:A:H2'	1:AA:609:A:O4'	2.22	0.40
1:AA:849:C:H3'	1:AA:849:C:C6	2.56	0.40
1:AA:1030(B):G:H2'	1:AA:1030(B):G:N3	2.37	0.40
1:AA:1156:G:O2'	1:AA:1180:A:N6	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1368:G:O2'	1:AA:1369:C:H5'	2.21	0.40
3:AC:182:ILE:HG12	3:AC:203:PHE:CD1	2.56	0.40
7:AG:70:LYS:HG2	7:AG:96:GLN:HB3	2.03	0.40
7:AG:140:ASP:O	7:AG:143:ARG:N	2.55	0.40
8:AH:10:LEU:HD11	8:AH:135:CYS:CB	2.52	0.40
9:AI:70:LYS:H	9:AI:73:GLN:H	1.68	0.40
20:AT:74:LYS:C	20:AT:76:ALA:N	2.78	0.40
22:AV:65:G:H2'	22:AV:66:C:O4'	2.22	0.40
26:B1:13:ILE:HG12	26:B1:14:VAL:O	2.22	0.40
30:B5:25:LEU:HD21	55:BW:41:LYS:HE2	2.03	0.40
31:B6:14:THR:HA	31:B6:20:ASN:O	2.21	0.40
35:BA:26:G:H1'	35:BA:515:A:N6	2.36	0.40
35:BA:466:A:N1	35:BA:795:C:O2'	2.53	0.40
35:BA:533:G:H5'	53:BU:24:TYR:CD1	2.56	0.40
35:BA:928:G:H8	35:BA:928:G:O5'	2.05	0.40
35:BA:1014:U:H2'	35:BA:1015:G:H8	1.86	0.40
35:BA:1444:G:C6	35:BA:1547:C:N4	2.84	0.40
35:BA:2186:G:N1	35:BA:2187:G:C8	2.89	0.40
35:BA:2532:G:H2'	35:BA:2533:A:C8	2.56	0.40
35:BA:2688:U:H2'	35:BA:2719:G:N2	2.36	0.40
35:BA:2882:A:P	50:BR:96:ARG:HD3	2.62	0.40
36:BB:114:C:C4'	51:BS:46:VAL:HG22	2.42	0.40
36:BB:117:G:O5'	36:BB:117:G:H8	2.04	0.40
39:BE:77:ILE:HG13	39:BE:78:LEU:CD2	2.52	0.40
39:BE:111:ARG:CA	50:BR:3:HIS:CE1	3.02	0.40
40:BF:19:GLU:O	40:BF:20:LEU:HD22	2.22	0.40
41:BG:53:LEU:N	41:BG:53:LEU:HD22	2.36	0.40
41:BG:117:PHE:HD1	41:BG:118:ARG:N	2.19	0.40
41:BG:175:LEU:HD13	41:BG:175:LEU:O	2.21	0.40
43:BI:48:GLU:HA	43:BI:51:ILE:HB	2.03	0.40
48:BP:32:THR:C	48:BP:36:LYS:HD2	2.46	0.40
48:BP:62:LEU:O	48:BP:62:LEU:CD1	2.39	0.40
53:BU:9:VAL:HG12	53:BU:10:ARG:N	2.36	0.40
1:CA:298:A:H2'	1:CA:299:G:C8	2.55	0.40
1:CA:401:C:H2'	1:CA:402:G:C8	2.56	0.40
1:CA:511:C:O3'	4:CD:43:HIS:CD2	2.74	0.40
1:CA:558:G:H2'	1:CA:559:A:C2	2.56	0.40
1:CA:590:C:H2'	1:CA:591:U:C6	2.56	0.40
1:CA:730:G:H2'	1:CA:730:G:N3	2.37	0.40
1:CA:883:C:O2'	1:CA:884:U:H5'	2.21	0.40
1:CA:994:A:C2	14:CN:5:ALA:HB1	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:994:A:OP2	1:CA:994:A:H3'	2.22	0.40
1:CA:1107:C:P	3:CC:172:ARG:HB2	2.62	0.40
1:CA:1142:G:H2'	1:CA:1143:G:O4'	2.21	0.40
2:CB:73:THR:CG2	2:CB:96:ARG:HH22	2.34	0.40
2:CB:177:ALA:HB1	2:CB:184:VAL:HG22	2.02	0.40
3:CC:56:ASP:C	3:CC:57:ILE:HD12	2.46	0.40
5:CE:14:ARG:O	5:CE:14:ARG:HG3	2.21	0.40
5:CE:27:ARG:HG2	5:CE:27:ARG:NH1	2.35	0.40
6:CF:92:LYS:HE3	6:CF:92:LYS:HB3	1.84	0.40
7:CG:87:VAL:HA	7:CG:88:PRO:HD3	2.01	0.40
10:CJ:43:ARG:HD3	10:CJ:43:ARG:HA	1.94	0.40
10:CJ:80:LYS:HE3	10:CJ:80:LYS:HB2	1.92	0.40
12:CL:33:ARG:HB3	12:CL:85:ILE:CG2	2.51	0.40
17:CQ:98:LEU:H	17:CQ:98:LEU:HG	1.56	0.40
18:CR:40:LEU:C	18:CR:40:LEU:HD12	2.46	0.40
20:CT:77:ALA:O	20:CT:81:LYS:N	2.54	0.40
21:CU:8:THR:OG1	21:CU:11:GLY:N	2.50	0.40
22:CV:2:G:C5	22:CV:72:A:C2	3.09	0.40
22:CV:52:G:HO2'	22:CV:53:G:P	2.37	0.40
23:CW:8:U:HO2'	23:CW:22:G:H1	1.70	0.40
30:D5:5:PRO:O	30:D5:6:VAL:HG22	2.21	0.40
33:D8:5:LYS:HG3	35:DA:242:G:N7	2.36	0.40
34:D9:6:SER:H	35:DA:2466:C:H5"	1.86	0.40
35:DA:446:G:H5"	53:DU:3:ARG:HH12	1.86	0.40
35:DA:796:C:H2'	35:DA:797:C:H6	1.81	0.40
35:DA:803:U:H2'	35:DA:804:A:H5'	2.04	0.40
35:DA:814:C:H41	48:DP:27:HIS:CD2	2.38	0.40
35:DA:1651:G:N2	35:DA:2007:C:C2	2.89	0.40
35:DA:1778:U:H2'	35:DA:1784:A:C6	2.53	0.40
38:DD:119:ALA:CB	38:DD:130:ALA:HB3	2.52	0.40
39:DE:9:VAL:C	52:DT:8:LYS:HE2	2.46	0.40
40:DF:32:LEU:CD1	40:DF:105:VAL:HG13	2.51	0.40
41:DG:113:ARG:HG2	41:DG:140:ILE:HA	2.04	0.40
42:DH:148:ILE:C	42:DH:150:ALA:N	2.79	0.40
48:DP:50:ARG:HB3	48:DP:51:PHE:H	1.62	0.40
48:DP:59:LEU:HD23	48:DP:61:ARG:HD2	2.03	0.40
49:DQ:43:THR:O	49:DQ:46:GLN:N	2.55	0.40
49:DQ:55:VAL:CG1	49:DQ:64:ILE:HD12	2.48	0.40
50:DR:13:HIS:O	50:DR:14:SER:C	2.65	0.40
56:DX:21:PHE:C	56:DX:23:GLU:N	2.79	0.40
58:DZ:175:VAL:HA	58:DZ:176:PRO:HD3	1.94	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:11:G:C6	1:AA:12:U:C4	3.09	0.40
1:AA:460:G:N3	1:AA:460:G:C2'	2.83	0.40
1:AA:629:G:H2'	1:AA:630:G:O4'	2.22	0.40
1:AA:682:G:C5	1:AA:683:G:N7	2.90	0.40
1:AA:803:G:H2'	1:AA:804:U:O4'	2.20	0.40
1:AA:983:A:H5"	14:AN:2:ALA:HB3	2.04	0.40
1:AA:1066:C:H2'	1:AA:1067:A:C8	2.56	0.40
1:AA:1128:C:O2'	1:AA:1129:C:H4'	2.21	0.40
1:AA:1169:A:H8	1:AA:1170:A:C8	2.40	0.40
1:AA:1203:C:OP2	1:AA:1203:C:C6	2.67	0.40
1:AA:1353:G:H1	1:AA:1369:C:N4	2.15	0.40
1:AA:1363(A):A:C8	1:AA:1365:G:C5	3.09	0.40
2:AB:74:LYS:HB3	2:AB:165:VAL:HG21	2.02	0.40
2:AB:172:ILE:O	2:AB:175:ARG:HB2	2.22	0.40
3:AC:48:TYR:OH	3:AC:122:GLU:OE2	2.29	0.40
3:AC:184:TYR:HD1	3:AC:201:TYR:CE1	2.40	0.40
5:AE:122:GLU:OE1	5:AE:126:ARG:HG3	2.22	0.40
9:AI:6:GLY:N	9:AI:18:PHE:HE1	2.20	0.40
9:AI:65:VAL:HG21	9:AI:73:GLN:HG2	2.04	0.40
9:AI:111:ARG:O	9:AI:113:LYS:HG2	2.22	0.40
10:AJ:27:ALA:C	10:AJ:29:ARG:H	2.30	0.40
11:AK:44:SER:O	11:AK:48:ILE:HD12	2.21	0.40
13:AM:60:VAL:HG23	13:AM:64:TRP:CZ2	2.56	0.40
13:AM:91:ARG:HB3	13:AM:96:LEU:O	2.21	0.40
16:AP:76:GLN:O	16:AP:78:GLY:N	2.53	0.40
27:B2:12:GLU:O	27:B2:54:LYS:CG	2.67	0.40
27:B2:41:ILE:HD13	27:B2:44:LEU:CB	2.41	0.40
30:B5:19:ARG:HG3	35:BA:2046:G:H5'	2.02	0.40
30:B5:25:LEU:CB	55:BW:23:LEU:HD11	2.52	0.40
31:B6:46:HIS:O	31:B6:47:THR:C	2.64	0.40
33:B8:57:ARG:HH11	33:B8:57:ARG:HD2	1.75	0.40
34:B9:22:ARG:HH22	35:BA:2741:A:C5'	2.34	0.40
35:BA:298:G:H1'	35:BA:340:A:H61	1.87	0.40
35:BA:588:U:H2'	35:BA:589:C:C6	2.56	0.40
35:BA:641:C:O2'	35:BA:2350:C:OP1	2.17	0.40
35:BA:740:U:H2'	35:BA:741:G:C8	2.57	0.40
35:BA:740:U:O4'	35:BA:1981:A:C4	2.74	0.40
35:BA:903:C:H6	35:BA:903:C:OP2	2.04	0.40
35:BA:924:C:H2'	35:BA:925:C:C6	2.57	0.40
35:BA:1019:U:O2'	35:BA:1021:A:H2	2.03	0.40
35:BA:1100:C:C5	35:BA:1101:U:N3	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1156:A:P	53:BU:55:ARG:HH12	2.44	0.40
35:BA:1340:U:C2	35:BA:1603:A:O4'	2.74	0.40
35:BA:1529:G:H1'	35:BA:1530:C:N4	2.35	0.40
35:BA:1685:C:O2'	35:BA:1686:C:H5'	2.21	0.40
35:BA:1795:C:H2'	35:BA:1796:U:O4'	2.21	0.40
35:BA:1799:G:N2	35:BA:1818:U:O2'	2.55	0.40
35:BA:1846:G:H5'	35:BA:1847:A:OP2	2.22	0.40
35:BA:1986:A:H8	35:BA:1986:A:C5'	2.33	0.40
35:BA:2197:U:C2'	35:BA:2224:G:H1	2.35	0.40
35:BA:2243:U:H2'	35:BA:2244:U:C6	2.57	0.40
35:BA:2688:U:C5	35:BA:2720:U:OP2	2.75	0.40
35:BA:2729:G:H2'	35:BA:2730:C:H6	1.86	0.40
35:BA:2851:A:H8	35:BA:2851:A:O5'	2.05	0.40
36:BB:73:A:C8	36:BB:105:A:C6	3.10	0.40
38:BD:97:TYR:C	38:BD:99:ASP:H	2.29	0.40
41:BG:6:ALA:HB3	41:BG:104:GLU:OE1	2.20	0.40
42:BH:159:GLU:O	42:BH:160:LYS:HG2	2.21	0.40
47:BO:35:VAL:HG12	47:BO:106:LEU:HD13	2.04	0.40
50:BR:74:LYS:O	50:BR:77:ARG:HB2	2.22	0.40
50:BR:79:LEU:HD12	50:BR:83:ILE:CG2	2.52	0.40
51:BS:74:ALA:HB1	51:BS:104:GLY:HA3	2.04	0.40
52:BT:50:ILE:HA	52:BT:99:LEU:HD12	2.04	0.40
53:BU:39:LEU:HD23	53:BU:39:LEU:HA	1.72	0.40
56:BX:77:LYS:HD3	56:BX:77:LYS:HA	1.80	0.40
58:BZ:150:LEU:H	58:BZ:150:LEU:HD23	1.86	0.40
58:BZ:163:LEU:H	58:BZ:163:LEU:HD23	1.86	0.40
1:CA:509:A:H8	1:CA:509:A:O5'	2.04	0.40
1:CA:588:G:H5'	8:CH:1:MET:O	2.21	0.40
1:CA:908:A:H2'	1:CA:909:A:C8	2.56	0.40
1:CA:918:A:C6	1:CA:919:A:C6	3.10	0.40
1:CA:1239:A:H1'	1:CA:1241:G:C4	2.56	0.40
1:CA:1316:G:O6	19:CS:5:LEU:HD11	2.21	0.40
1:CA:1355:G:H2'	1:CA:1356:G:H8	1.86	0.40
1:CA:1405:G:O4'	1:CA:1519:A:H4'	2.21	0.40
1:CA:1446:U:C6	1:CA:1446:U:H3'	2.57	0.40
1:CA:1463:C:H2'	1:CA:1464:G:O4'	2.21	0.40
2:CB:53:ARG:O	2:CB:56:ARG:HG2	2.22	0.40
2:CB:130:ARG:HD2	2:CB:138:LEU:CD1	2.52	0.40
3:CC:29:TYR:O	3:CC:30:ARG:C	2.64	0.40
3:CC:113:ALA:HB3	3:CC:114:PRO:CD	2.52	0.40
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:44:GLY:HA2	6:CF:59:TYR:CE2	2.57	0.40
8:CH:1:MET:CG	8:CH:2:LEU:H	2.35	0.40
9:CI:42:ARG:O	9:CI:43:ALA:C	2.64	0.40
9:CI:88:TYR:HD1	9:CI:89:ASN:OD1	2.05	0.40
9:CI:93:ARG:NH2	9:CI:97:LYS:HD3	2.35	0.40
10:CJ:38:ILE:CG2	10:CJ:71:LEU:HB3	2.51	0.40
13:CM:23:TYR:HB3	13:CM:67:GLU:CB	2.51	0.40
14:CN:9:LYS:HE3	14:CN:12:ARG:HH22	1.86	0.40
14:CN:37:PHE:HE2	14:CN:53:LEU:HD13	1.87	0.40
25:D0:4:LYS:O	25:D0:5:LYS:HB2	2.20	0.40
26:D1:91:LYS:O	26:D1:92:LYS:C	2.65	0.40
28:D3:18:ASP:O	28:D3:22:ALA:N	2.39	0.40
30:D5:47:PRO:HG3	55:DW:38:TYR:OH	2.22	0.40
35:DA:53:A:H61	35:DA:117:G:C2'	2.33	0.40
35:DA:723:G:H2'	35:DA:724:U:O4'	2.21	0.40
35:DA:753:C:O2'	35:DA:754:C:H5'	2.21	0.40
35:DA:1550:C:O2'	35:DA:1551:C:H5'	2.21	0.40
35:DA:1915:U:OP2	35:DA:1915:U:C6	2.70	0.40
37:DC:60:GLY:O	37:DC:61:THR:OG1	2.24	0.40
38:DD:85:ASP:OD1	38:DD:85:ASP:C	2.64	0.40
41:DG:16:ARG:CZ	41:DG:31:VAL:HG11	2.52	0.40
43:DI:109:ILE:HB	43:DI:130:TYR:CZ	2.57	0.40
46:DN:79:PRO:HD2	46:DN:80:GLY:H	1.86	0.40
47:DO:7:TYR:C	47:DO:8:LEU:HD22	2.47	0.40
49:DQ:65:PHE:O	49:DQ:104:PHE:CB	2.70	0.40
49:DQ:104:PHE:HZ	49:DQ:125:LEU:HD11	1.86	0.40
50:DR:41:ALA:C	50:DR:43:GLU:N	2.78	0.40
50:DR:101:ALA:O	50:DR:102:GLU:HB2	2.21	0.40
51:DS:56:LEU:HB3	51:DS:58:LEU:HD21	2.03	0.40
56:DX:12:VAL:HG23	56:DX:29:TRP:CZ2	2.57	0.40
1:AA:437:U:H5"	4:AD:155:LEU:HD22	2.03	0.40
1:AA:458:C:H3'	1:AA:460:G:C8	2.48	0.40
1:AA:575:G:C6	1:AA:821:G:C8	3.09	0.40
1:AA:718:G:H22	18:AR:82:THR:HB	1.87	0.40
1:AA:928:G:H2'	1:AA:929:G:C8	2.56	0.40
1:AA:982:U:H6	1:AA:982:U:OP1	2.04	0.40
1:AA:994:A:O2'	14:AN:8:GLU:HG3	2.21	0.40
1:AA:1118:C:OP1	9:AI:9:ARG:HD2	2.21	0.40
1:AA:1187:G:H4'	9:AI:111:ARG:NH1	2.36	0.40
1:AA:1206:G:C5	1:AA:1207:G:C8	3.09	0.40
1:AA:1226:C:OP2	13:AM:103:THR:HG21	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1240:U:O2'	1:AA:1241:G:OP1	2.40	0.40
1:AA:1268:A:H2'	1:AA:1269:A:H8	1.84	0.40
1:AA:1298:C:O2'	1:AA:1299:A:OP2	2.38	0.40
1:AA:1425:U:O2'	1:AA:1426:C:H5'	2.21	0.40
1:AA:1466:C:C5	1:AA:1467:G:C5	3.10	0.40
1:AA:1517:G:H1'	35:BA:1919:A:O3'	2.20	0.40
4:AD:192:GLU:H	4:AD:192:GLU:CD	2.29	0.40
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	2.03	0.40
5:AE:57:LYS:O	5:AE:61:TYR:HD1	2.04	0.40
8:AH:17:THR:HG22	8:AH:63:LEU:HD11	2.03	0.40
8:AH:34:GLU:HG2	8:AH:37:ARG:CZ	2.51	0.40
12:AL:54:LYS:HD2	12:AL:54:LYS:N	2.36	0.40
14:AN:48:ALA:H	14:AN:51:GLY:H	1.70	0.40
15:AO:51:HIS:O	15:AO:54:ARG:HB3	2.21	0.40
17:AQ:17:LYS:HE2	17:AQ:47:PRO:HA	2.04	0.40
19:AS:19:VAL:HG11	19:AS:44:MET:HE2	2.04	0.40
19:AS:51:VAL:O	19:AS:57:HIS:HA	2.21	0.40
20:AT:67:ALA:O	20:AT:68:LYS:C	2.64	0.40
20:AT:75:ASN:OD1	20:AT:75:ASN:N	2.54	0.40
27:B2:55:ARG:NH1	27:B2:56:GLN:NE2	2.69	0.40
28:B3:43:ILE:H	28:B3:43:ILE:HG12	1.68	0.40
34:B9:19:ARG:HA	35:BA:2756:U:H5"	2.04	0.40
35:BA:186:G:C2	35:BA:211:A:C2	3.09	0.40
35:BA:271(Q):G:O2'	35:BA:271(R):G:P	2.79	0.40
35:BA:536:A:H2'	35:BA:537:C:O4'	2.22	0.40
35:BA:553:G:C6	35:BA:554:U:N3	2.90	0.40
35:BA:571:A:H5'	35:BA:2030:A:N7	2.36	0.40
35:BA:759:G:H2'	35:BA:760:G:H8	1.87	0.40
35:BA:763:G:H1'	35:BA:765:G:O4'	2.21	0.40
35:BA:880:G:N1	35:BA:881:G:C2	2.90	0.40
35:BA:1168:G:C2	35:BA:1182:A:N7	2.90	0.40
35:BA:1426:G:OP2	35:BA:1427:A:O2'	2.39	0.40
35:BA:1901:A:H4'	35:BA:1901:A:OP2	2.21	0.40
35:BA:2772:C:H2'	35:BA:2773:C:H6	1.87	0.40
35:BA:2795:G:H21	35:BA:2796:U:H2'	1.87	0.40
36:BB:76:G:O3'	58:BZ:19:ARG:NH2	2.48	0.40
37:BC:66:HIS:CE1	37:BC:186:ALA:HB1	2.56	0.40
38:BD:36:PRO:HB2	38:BD:61:LEU:HB3	2.03	0.40
38:BD:77:ALA:HB2	38:BD:97:TYR:CG	2.56	0.40
38:BD:109:ASP:C	38:BD:111:LEU:N	2.79	0.40
38:BD:126:GLN:O	38:BD:127:VAL:C	2.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:139:PHE:CD1	40:BF:139:PHE:C	2.99	0.40
41:BG:77:ILE:C	41:BG:79:ASN:H	2.29	0.40
42:BH:30:LYS:HB2	42:BH:79:VAL:HA	2.03	0.40
42:BH:125:VAL:O	42:BH:125:VAL:HG13	2.21	0.40
53:BU:62:ILE:O	53:BU:63:VAL:C	2.63	0.40
1:CA:687:A:N1	1:CA:704:A:C5	2.89	0.40
1:CA:801:U:H2'	1:CA:802:A:C8	2.57	0.40
1:CA:1324:A:C6	1:CA:1325:C:C4	3.10	0.40
1:CA:1381:U:H2'	1:CA:1381:U:O2	2.21	0.40
1:CA:1442(A):G:OP2	1:CA:1442(A):G:H3'	2.20	0.40
1:CA:1444:C:N3	1:CA:1458:G:N2	2.61	0.40
2:CB:112:VAL:O	2:CB:115:LEU:HB3	2.21	0.40
2:CB:238:LEU:O	2:CB:240:GLN:N	2.50	0.40
7:CG:113:GLU:HB2	7:CG:119:ARG:CG	2.51	0.40
9:CI:22:GLY:H	9:CI:59:PHE:HA	1.85	0.40
23:CW:34:G:N3	23:CW:34:G:H3'	2.36	0.40
23:CY:41:C:O2'	23:CY:42:C:H5'	2.21	0.40
25:D0:23:VAL:HG22	25:D0:38:VAL:HG22	2.03	0.40
27:D2:41:ILE:HG13	35:DA:61:G:N7	2.36	0.40
31:D6:28:ARG:HD3	31:D6:28:ARG:HA	1.80	0.40
35:DA:6:A:N3	35:DA:6:A:H2'	2.35	0.40
35:DA:83:G:O2'	35:DA:102:G:N2	2.54	0.40
35:DA:210:C:H2'	35:DA:211:A:C8	2.57	0.40
35:DA:335:C:H6	35:DA:335:C:O5'	2.03	0.40
35:DA:500:G:N2	35:DA:502:A:H3'	2.36	0.40
35:DA:522:G:H2'	35:DA:523:C:C6	2.56	0.40
35:DA:935:C:H2'	35:DA:936:C:H6	1.85	0.40
35:DA:1100:C:O2	35:DA:1100:C:H2'	2.21	0.40
35:DA:1169:G:H2'	35:DA:1170:G:O4'	2.22	0.40
35:DA:1223:G:C6	35:DA:1227:G:C6	3.10	0.40
35:DA:1439:A:H2'	35:DA:1440:G:O4'	2.20	0.40
35:DA:1615:C:C5	35:DA:1617:C:C4	3.10	0.40
35:DA:1678:G:H8	35:DA:1678:G:O5'	2.04	0.40
35:DA:1834:U:H4'	35:DA:1969:A:C6	2.57	0.40
35:DA:2177:C:OP2	35:DA:2177:C:C6	2.74	0.40
35:DA:2379:G:H2'	35:DA:2380:C:C6	2.56	0.40
35:DA:2777:G:H3'	35:DA:2777:G:C8	2.57	0.40
38:DD:70:TRP:HZ3	38:DD:146:GLU:OE2	2.05	0.40
39:DE:59:VAL:CG2	39:DE:63:LEU:HG	2.37	0.40
40:DF:24:LEU:HD13	40:DF:25:PRO:CG	2.50	0.40
40:DF:84:VAL:O	40:DF:85:GLY:C	2.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DN:26:LEU:CD1	46:DN:140:VAL:HG12	2.52	0.40
46:DN:30:ILE:HG22	46:DN:34:LEU:HD23	2.04	0.40
48:DP:94:GLU:HA	48:DP:124:LYS:HB2	2.04	0.40
50:DR:103:ARG:HG3	50:DR:108:GLY:C	2.47	0.40
53:DU:29:SER:O	53:DU:30:LYS:HD3	2.21	0.40
57:DY:86:ARG:HB2	57:DY:95:LYS:NZ	2.37	0.40
58:DZ:150:LEU:HD12	58:DZ:154:ASP:OD2	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AB	216/256 (84%)	148 (68%)	42 (19%)	26 (12%)	0 1
2	CB	232/256 (91%)	148 (64%)	59 (25%)	25 (11%)	0 2
3	AC	204/239 (85%)	145 (71%)	41 (20%)	18 (9%)	0 4
3	CC	205/239 (86%)	153 (75%)	37 (18%)	15 (7%)	1 6
4	AD	206/209 (99%)	148 (72%)	35 (17%)	23 (11%)	0 2
4	CD	206/209 (99%)	150 (73%)	41 (20%)	15 (7%)	1 6
5	AE	148/162 (91%)	113 (76%)	24 (16%)	11 (7%)	1 6
5	CE	149/162 (92%)	114 (76%)	27 (18%)	8 (5%)	1 10
6	AF	99/101 (98%)	80 (81%)	12 (12%)	7 (7%)	1 6
6	CF	99/101 (98%)	84 (85%)	12 (12%)	3 (3%)	3 20
7	AG	153/156 (98%)	103 (67%)	33 (22%)	17 (11%)	0 2
7	CG	153/156 (98%)	112 (73%)	30 (20%)	11 (7%)	1 6
8	AH	136/138 (99%)	98 (72%)	25 (18%)	13 (10%)	0 3
8	CH	136/138 (99%)	100 (74%)	26 (19%)	10 (7%)	1 6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
9	AI	119/128 (93%)	80 (67%)	20 (17%)	19 (16%)	0 1
9	CI	125/128 (98%)	87 (70%)	23 (18%)	15 (12%)	0 1
10	AJ	96/105 (91%)	61 (64%)	23 (24%)	12 (12%)	0 1
10	CJ	96/105 (91%)	66 (69%)	20 (21%)	10 (10%)	0 2
11	AK	117/129 (91%)	89 (76%)	19 (16%)	9 (8%)	1 5
11	CK	117/129 (91%)	86 (74%)	23 (20%)	8 (7%)	1 7
12	AL	120/132 (91%)	81 (68%)	23 (19%)	16 (13%)	0 1
12	CL	122/132 (92%)	86 (70%)	21 (17%)	15 (12%)	0 1
13	AM	114/126 (90%)	78 (68%)	22 (19%)	14 (12%)	0 1
13	CM	117/126 (93%)	88 (75%)	16 (14%)	13 (11%)	0 2
14	AN	58/61 (95%)	35 (60%)	16 (28%)	7 (12%)	0 1
14	CN	58/61 (95%)	36 (62%)	13 (22%)	9 (16%)	0 1
15	AO	86/89 (97%)	67 (78%)	14 (16%)	5 (6%)	1 9
15	CO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1 6
16	AP	81/88 (92%)	58 (72%)	17 (21%)	6 (7%)	1 6
16	CP	81/88 (92%)	53 (65%)	22 (27%)	6 (7%)	1 6
17	AQ	97/105 (92%)	81 (84%)	13 (13%)	3 (3%)	3 19
17	CQ	97/105 (92%)	74 (76%)	13 (13%)	10 (10%)	0 2
18	AR	68/88 (77%)	55 (81%)	8 (12%)	5 (7%)	1 6
18	CR	68/88 (77%)	48 (71%)	12 (18%)	8 (12%)	0 1
19	AS	76/93 (82%)	33 (43%)	30 (40%)	13 (17%)	0 1
19	CS	76/93 (82%)	46 (60%)	15 (20%)	15 (20%)	0 0
20	AT	97/106 (92%)	64 (66%)	23 (24%)	10 (10%)	0 2
20	CT	97/106 (92%)	67 (69%)	18 (19%)	12 (12%)	0 1
21	AU	22/27 (82%)	15 (68%)	3 (14%)	4 (18%)	0 0
21	CU	23/27 (85%)	19 (83%)	1 (4%)	3 (13%)	0 1
25	B0	74/85 (87%)	56 (76%)	13 (18%)	5 (7%)	1 7
25	D0	80/85 (94%)	59 (74%)	13 (16%)	8 (10%)	0 3
26	B1	86/98 (88%)	45 (52%)	21 (24%)	20 (23%)	0 0
26	D1	86/98 (88%)	60 (70%)	12 (14%)	14 (16%)	0 1
27	B2	48/72 (67%)	14 (29%)	20 (42%)	14 (29%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
27	D2	51/72 (71%)	22 (43%)	16 (31%)	13 (26%)	0	0
28	B3	56/60 (93%)	47 (84%)	7 (12%)	2 (4%)	2	17
28	D3	58/60 (97%)	46 (79%)	7 (12%)	5 (9%)	0	4
29	B4	43/71 (61%)	10 (23%)	13 (30%)	20 (46%)	0	0
29	D4	47/71 (66%)	11 (23%)	17 (36%)	19 (40%)	0	0
30	B5	52/60 (87%)	34 (65%)	9 (17%)	9 (17%)	0	1
30	D5	58/60 (97%)	40 (69%)	14 (24%)	4 (7%)	1	6
31	B6	44/54 (82%)	19 (43%)	8 (18%)	17 (39%)	0	0
31	D6	45/54 (83%)	19 (42%)	14 (31%)	12 (27%)	0	0
32	B7	46/49 (94%)	36 (78%)	6 (13%)	4 (9%)	0	4
32	D7	46/49 (94%)	42 (91%)	4 (9%)	0	100	100
33	B8	61/65 (94%)	37 (61%)	15 (25%)	9 (15%)	0	1
33	D8	60/65 (92%)	35 (58%)	13 (22%)	12 (20%)	0	0
34	B9	35/37 (95%)	28 (80%)	5 (14%)	2 (6%)	1	9
34	D9	35/37 (95%)	25 (71%)	7 (20%)	3 (9%)	0	4
37	BC	182/229 (80%)	82 (45%)	54 (30%)	46 (25%)	0	0
37	DC	182/229 (80%)	78 (43%)	63 (35%)	41 (22%)	0	0
38	BD	271/276 (98%)	203 (75%)	45 (17%)	23 (8%)	0	4
38	DD	273/276 (99%)	212 (78%)	43 (16%)	18 (7%)	1	7
39	BE	202/206 (98%)	147 (73%)	35 (17%)	20 (10%)	0	3
39	DE	202/206 (98%)	137 (68%)	36 (18%)	29 (14%)	0	1
40	BF	204/210 (97%)	130 (64%)	39 (19%)	35 (17%)	0	1
40	DF	206/210 (98%)	152 (74%)	35 (17%)	19 (9%)	0	3
41	BG	176/182 (97%)	117 (66%)	42 (24%)	17 (10%)	0	3
41	DG	179/182 (98%)	132 (74%)	32 (18%)	15 (8%)	0	4
42	BH	157/180 (87%)	92 (59%)	43 (27%)	22 (14%)	0	1
42	DH	163/180 (91%)	104 (64%)	33 (20%)	26 (16%)	0	1
43	BI	143/148 (97%)	88 (62%)	35 (24%)	20 (14%)	0	1
43	DI	142/148 (96%)	91 (64%)	30 (21%)	21 (15%)	0	1
46	BN	135/140 (96%)	91 (67%)	20 (15%)	24 (18%)	0	0
46	DN	138/140 (99%)	90 (65%)	22 (16%)	26 (19%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
47	BO	120/122 (98%)	89 (74%)	21 (18%)	10 (8%)	0 4
47	DO	120/122 (98%)	106 (88%)	13 (11%)	1 (1%)	16 44
48	BP	142/150 (95%)	64 (45%)	38 (27%)	40 (28%)	0 0
48	DP	144/150 (96%)	63 (44%)	35 (24%)	46 (32%)	0 0
49	BQ	133/141 (94%)	76 (57%)	34 (26%)	23 (17%)	0 1
49	DQ	134/141 (95%)	91 (68%)	27 (20%)	16 (12%)	0 1
50	BR	114/118 (97%)	83 (73%)	19 (17%)	12 (10%)	0 2
50	DR	115/118 (98%)	92 (80%)	12 (10%)	11 (10%)	0 3
51	BS	100/112 (89%)	58 (58%)	21 (21%)	21 (21%)	0 0
51	DS	97/112 (87%)	59 (61%)	22 (23%)	16 (16%)	0 1
52	BT	130/146 (89%)	70 (54%)	34 (26%)	26 (20%)	0 0
52	DT	135/146 (92%)	96 (71%)	25 (18%)	14 (10%)	0 2
53	BU	115/118 (98%)	86 (75%)	17 (15%)	12 (10%)	0 2
53	DU	115/118 (98%)	96 (84%)	11 (10%)	8 (7%)	1 6
54	BV	99/101 (98%)	50 (50%)	21 (21%)	28 (28%)	0 0
54	DV	99/101 (98%)	62 (63%)	22 (22%)	15 (15%)	0 1
55	BW	109/113 (96%)	84 (77%)	16 (15%)	9 (8%)	0 4
55	DW	109/113 (96%)	95 (87%)	5 (5%)	9 (8%)	0 4
56	BX	87/96 (91%)	46 (53%)	25 (29%)	16 (18%)	0 0
56	DX	92/96 (96%)	63 (68%)	9 (10%)	20 (22%)	0 0
57	BY	98/110 (89%)	45 (46%)	27 (28%)	26 (26%)	0 0
57	DY	107/110 (97%)	53 (50%)	26 (24%)	28 (26%)	0 0
58	BZ	174/206 (84%)	113 (65%)	43 (25%)	18 (10%)	0 2
58	DZ	174/206 (84%)	120 (69%)	33 (19%)	21 (12%)	0 1
All	All	11584/12586 (92%)	7801 (67%)	2288 (20%)	1495 (13%)	0 1

All (1495) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	22	LYS
2	AB	48	MET
2	AB	124	SER
2	AB	132	LYS
2	AB	150	SER

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Mol	Chain	Res	Type
2	AB	154	LEU
2	AB	224	GLN
3	AC	18	TRP
3	AC	60	ALA
3	AC	74	GLY
3	AC	154	SER
3	AC	157	ILE
4	AD	3	ARG
4	AD	5	ILE
4	AD	9	CYS
4	AD	10	ARG
4	AD	28	SER
4	AD	73	ARG
4	AD	92	VAL
4	AD	171	GLY
4	AD	178	VAL
5	AE	85	GLY
5	AE	115	VAL
6	AF	31	GLU
6	AF	32	ASN
6	AF	55	ASP
7	AG	36	LYS
7	AG	64	GLN
7	AG	84	ASN
7	AG	119	ARG
7	AG	128	ALA
7	AG	141	VAL
8	AH	34	GLU
8	AH	91	ARG
9	AI	40	LEU
9	AI	44	VAL
9	AI	81	ILE
9	AI	107	ARG
10	AJ	57	LYS
10	AJ	59	SER
10	AJ	74	ILE
10	AJ	77	PRO
11	AK	87	THR
11	AK	117	ASN
12	AL	42	THR
12	AL	47	LYS
12	AL	52	LEU

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Mol	Chain	Res	Type
12	AL	79	GLU
12	AL	91	LYS
13	AM	83	ASP
13	AM	91	ARG
13	AM	104	ARG
13	AM	112	GLY
14	AN	27	CYS
14	AN	48	ALA
15	AO	87	ILE
16	AP	54	GLU
17	AQ	49	GLU
18	AR	20	ALA
19	AS	10	PHE
19	AS	40	ILE
19	AS	67	VAL
20	AT	93	GLU
21	AU	3	LYS
21	AU	7	ARG
21	AU	24	ARG
25	B0	41	ARG
25	B0	55	ARG
26	B1	11	ARG
26	B1	14	VAL
26	B1	39	LYS
26	B1	44	PRO
26	B1	80	LEU
26	B1	86	SER
26	B1	87	PRO
26	B1	89	GLU
26	B1	90	ILE
27	B2	19	VAL
27	B2	30	ARG
27	B2	35	LEU
27	B2	41	ILE
27	B2	46	GLN
27	B2	52	ASP
27	B2	60	LEU
28	B3	38	GLU
29	B4	6	HIS
29	B4	7	PRO
29	B4	21	VAL
29	B4	28	LYS

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Mol	Chain	Res	Type
29	B4	40	HIS
29	B4	41	PRO
30	B5	4	HIS
30	B5	51	TYR
30	B5	53	ALA
31	B6	26	ASN
31	B6	33	LYS
31	B6	40	CYS
31	B6	41	PRO
31	B6	48	VAL
31	B6	49	HIS
32	B7	35	ARG
32	B7	36	GLN
33	B8	6	THR
33	B8	16	ILE
33	B8	19	SER
33	B8	31	HIS
33	B8	38	GLY
37	BC	22	ILE
37	BC	38	ASP
37	BC	63	SER
37	BC	64	LEU
37	BC	78	ALA
37	BC	133	PRO
37	BC	140	PRO
37	BC	142	ALA
37	BC	161	ILE
37	BC	170	ALA
37	BC	173	ALA
37	BC	174	PRO
37	BC	182	PRO
37	BC	184	LYS
37	BC	193	ILE
37	BC	198	ALA
37	BC	201	PRO
38	BD	28	GLU
38	BD	32	SER
38	BD	33	LEU
38	BD	71	ASP
38	BD	98	VAL
38	BD	271	ILE
39	BE	57	LYS

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Mol	Chain	Res	Type
39	BE	66	HIS
39	BE	132	HIS
39	BE	169	ASN
39	BE	174	ASP
39	BE	200	GLU
40	BF	12	LEU
40	BF	24	LEU
40	BF	25	PRO
40	BF	43	LYS
40	BF	49	ALA
40	BF	80	ALA
40	BF	84	VAL
40	BF	128	ALA
40	BF	133	ASN
40	BF	168	ARG
41	BG	59	GLU
41	BG	81	LYS
41	BG	82	LEU
41	BG	87	PRO
41	BG	96	ARG
42	BH	55	PRO
42	BH	83	TYR
42	BH	93	GLY
42	BH	94	TYR
42	BH	109	PHE
42	BH	157	TYR
42	BH	168	PRO
43	BI	11	ASN
43	BI	92	VAL
43	BI	131	LYS
43	BI	132	PRO
43	BI	133	HIS
46	BN	4	TYR
46	BN	37	LYS
46	BN	63	THR
46	BN	64	GLY
46	BN	92	ALA
47	BO	27	GLY
47	BO	28	SER
47	BO	115	VAL
48	BP	14	LYS
48	BP	16	ARG

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Mol	Chain	Res	Type
48	BP	17	LYS
48	BP	21	ARG
48	BP	23	PRO
48	BP	25	SER
48	BP	28	GLY
48	BP	38	GLN
48	BP	70	GLN
48	BP	71	VAL
48	BP	74	GLU
48	BP	79	ARG
48	BP	110	TYR
48	BP	128	HIS
48	BP	133	SER
48	BP	136	GLU
48	BP	141	ALA
49	BQ	8	LYS
49	BQ	18	LYS
49	BQ	19	GLY
49	BQ	22	LYS
49	BQ	26	TYR
49	BQ	59	ARG
49	BQ	81	VAL
49	BQ	83	MET
49	BQ	126	PRO
49	BQ	127	ILE
49	BQ	135	ASP
50	BR	5	LYS
50	BR	23	ASN
50	BR	30	THR
50	BR	58	GLY
50	BR	88	ARG
50	BR	89	ASP
50	BR	107	ASP
51	BS	11	LYS
51	BS	12	PHE
51	BS	22	GLY
51	BS	23	ARG
51	BS	58	LEU
51	BS	86	ALA
51	BS	89	ARG
51	BS	91	PRO
51	BS	92	TYR

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Mol	Chain	Res	Type
51	BS	101	LEU
51	BS	102	ALA
51	BS	107	GLU
52	BT	4	GLY
52	BT	24	PRO
52	BT	29	ARG
52	BT	39	ARG
52	BT	55	ASN
52	BT	78	LEU
52	BT	81	PRO
52	BT	85	LYS
53	BU	15	LYS
53	BU	25	TRP
53	BU	28	ARG
53	BU	91	ASP
53	BU	93	LYS
54	BV	29	PRO
54	BV	51	VAL
54	BV	53	GLU
54	BV	55	ALA
54	BV	60	GLU
54	BV	61	VAL
54	BV	69	LYS
54	BV	71	LEU
54	BV	80	GLN
54	BV	82	ARG
54	BV	86	GLY
54	BV	88	ARG
55	BW	44	ALA
55	BW	53	SER
56	BX	11	PRO
56	BX	40	LYS
56	BX	41	ASN
56	BX	48	LYS
56	BX	66	LEU
56	BX	69	TYR
56	BX	86	GLY
57	BY	3	VAL
57	BY	6	HIS
57	BY	7	VAL
57	BY	8	LYS
57	BY	17	SER

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Mol	Chain	Res	Type
57	BY	21	LYS
57	BY	27	VAL
57	BY	28	LYS
57	BY	45	VAL
57	BY	49	VAL
57	BY	77	PRO
57	BY	78	ALA
57	BY	99	CYS
58	BZ	31	ARG
58	BZ	46	LYS
58	BZ	78	LYS
58	BZ	107	THR
2	CB	8	LYS
2	CB	204	ASN
2	CB	231	GLU
3	CC	4	LYS
3	CC	12	LEU
3	CC	29	TYR
3	CC	89	GLU
3	CC	113	ALA
3	CC	156	ARG
3	CC	168	ALA
4	CD	10	ARG
4	CD	86	LYS
4	CD	87	GLY
5	CE	21	ALA
5	CE	77	PRO
5	CE	137	GLU
7	CG	53	LYS
7	CG	55	GLY
7	CG	62	PHE
7	CG	83	ALA
7	CG	87	VAL
7	CG	146	GLU
9	CI	33	PHE
9	CI	47	LEU
9	CI	85	LEU
9	CI	94	ALA
9	CI	98	PRO
9	CI	118	LYS
10	CJ	88	LEU
11	CK	128	ALA

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Mol	Chain	Res	Type
12	CL	47	LYS
12	CL	62	SER
12	CL	76	ASN
13	CM	31	LYS
13	CM	36	LYS
13	CM	37	THR
13	CM	116	THR
14	CN	5	ALA
14	CN	14	PRO
14	CN	16	PHE
14	CN	18	VAL
15	CO	25	THR
15	CO	26	GLU
16	CP	28	ARG
16	CP	75	ARG
16	CP	76	GLN
17	CQ	48	GLU
17	CQ	49	GLU
18	CR	41	LYS
18	CR	84	LYS
18	CR	87	ARG
19	CS	28	LYS
19	CS	30	LEU
19	CS	54	GLY
19	CS	58	VAL
19	CS	61	TYR
19	CS	62	ILE
20	CT	55	ILE
20	CT	74	LYS
20	CT	75	ASN
20	CT	83	ARG
20	CT	84	LEU
21	CU	23	PRO
25	D0	10	THR
25	D0	12	ASN
25	D0	41	ARG
25	D0	55	ARG
25	D0	72	ARG
26	D1	10	LYS
26	D1	11	ARG
26	D1	27	GLU
26	D1	57	GLU

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Mol	Chain	Res	Type
26	D1	82	LEU
26	D1	85	LEU
27	D2	13	ALA
27	D2	35	LEU
27	D2	40	SER
27	D2	45	SER
27	D2	47	ASN
27	D2	51	ARG
27	D2	55	ARG
28	D3	3	ARG
29	D4	10	VAL
29	D4	29	PRO
30	D5	5	PRO
30	D5	6	VAL
30	D5	14	ALA
31	D6	9	LEU
31	D6	42	TRP
33	D8	7	HIS
33	D8	29	LYS
33	D8	31	HIS
33	D8	33	ASN
33	D8	36	LYS
33	D8	37	SER
34	D9	27	CYS
37	DC	24	GLU
37	DC	52	ARG
37	DC	63	SER
37	DC	128	GLY
37	DC	133	PRO
37	DC	166	ASP
37	DC	170	ALA
37	DC	174	PRO
37	DC	199	HIS
37	DC	200	LYS
37	DC	201	PRO
37	DC	205	LYS
38	DD	27	THR
38	DD	32	SER
38	DD	34	VAL
38	DD	156	ALA
38	DD	274	ARG
39	DE	33	VAL

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Mol	Chain	Res	Type
39	DE	57	LYS
39	DE	61	ARG
39	DE	64	LYS
39	DE	72	VAL
39	DE	82	ARG
39	DE	118	LYS
39	DE	132	HIS
39	DE	154	LYS
40	DF	3	GLU
40	DF	26	ALA
40	DF	49	ALA
41	DG	51	ARG
41	DG	84	LYS
41	DG	87	PRO
41	DG	122	PRO
41	DG	126	ASP
42	DH	22	GLY
42	DH	42	ARG
42	DH	70	THR
42	DH	71	LEU
42	DH	80	SER
42	DH	92	ILE
42	DH	120	GLY
42	DH	126	PRO
42	DH	138	LYS
42	DH	153	LYS
42	DH	165	ALA
43	DI	10	GLU
43	DI	98	ALA
43	DI	101	LEU
46	DN	6	PRO
46	DN	20	GLY
46	DN	74	ARG
46	DN	76	SER
46	DN	78	TYR
46	DN	95	PRO
46	DN	96	GLU
46	DN	129	PRO
46	DN	134	ARG
46	DN	138	LEU
48	DP	7	ARG
48	DP	9	ASN

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Mol	Chain	Res	Type
48	DP	10	PRO
48	DP	14	LYS
48	DP	21	ARG
48	DP	25	SER
48	DP	27	HIS
48	DP	31	ALA
48	DP	34	GLY
48	DP	36	LYS
48	DP	38	GLN
48	DP	47	ASP
48	DP	48	PRO
48	DP	50	ARG
48	DP	52	GLU
48	DP	56	SER
48	DP	61	ARG
48	DP	67	MET
48	DP	71	VAL
48	DP	98	GLU
48	DP	110	TYR
48	DP	133	SER
48	DP	134	ALA
48	DP	145	PRO
48	DP	146	VAL
49	DQ	5	ARG
49	DQ	11	LYS
49	DQ	64	ILE
49	DQ	81	VAL
49	DQ	86	GLY
49	DQ	87	LYS
49	DQ	90	VAL
49	DQ	127	ILE
50	DR	12	ARG
50	DR	13	HIS
50	DR	117	VAL
51	DS	14	VAL
51	DS	19	LYS
51	DS	55	ALA
51	DS	56	LEU
51	DS	89	ARG
51	DS	94	TYR
51	DS	107	GLU
52	DT	24	PRO

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Mol	Chain	Res	Type
52	DT	39	ARG
52	DT	41	ARG
52	DT	55	ASN
52	DT	80	SER
52	DT	93	ARG
52	DT	97	ALA
53	DU	76	TYR
53	DU	91	ASP
53	DU	96	ALA
53	DU	98	LEU
54	DV	30	GLY
54	DV	68	LYS
54	DV	73	SER
54	DV	74	LYS
54	DV	79	VAL
54	DV	81	TYR
55	DW	15	ARG
55	DW	48	ALA
55	DW	49	LYS
55	DW	66	GLU
56	DX	4	ALA
56	DX	22	ALA
56	DX	25	LYS
56	DX	36	LYS
56	DX	37	THR
56	DX	60	ARG
56	DX	71	GLY
56	DX	84	ALA
56	DX	85	PRO
56	DX	88	LYS
56	DX	93	GLU
57	DY	10	GLY
57	DY	17	SER
57	DY	32	PRO
57	DY	33	LYS
57	DY	56	PRO
57	DY	61	ILE
57	DY	66	PRO
57	DY	87	LYS
57	DY	99	CYS
57	DY	102	CYS
58	DZ	31	ARG

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Mol	Chain	Res	Type
58	DZ	61	LEU
58	DZ	80	ARG
58	DZ	105	VAL
58	DZ	120	ILE
58	DZ	167	PRO
58	DZ	168	GLU
2	AB	75	LYS
2	AB	97	TRP
2	AB	131	PRO
2	AB	134	GLU
2	AB	165	VAL
2	AB	169	LYS
2	AB	204	ASN
3	AC	26	LYS
3	AC	42	LEU
3	AC	61	ALA
3	AC	145	GLY
4	AD	29	PRO
4	AD	30	LYS
4	AD	43	HIS
4	AD	44	GLY
4	AD	108	LEU
4	AD	111	ALA
4	AD	164	ALA
4	AD	179	GLU
4	AD	190	ASP
5	AE	11	ILE
5	AE	21	ALA
5	AE	59	GLY
5	AE	153	LYS
6	AF	43	LEU
6	AF	54	LYS
6	AF	100	ASN
7	AG	29	LYS
7	AG	65	ALA
7	AG	140	ASP
7	AG	155	ARG
8	AH	54	ASP
9	AI	55	ALA
9	AI	82	ALA
9	AI	118	LYS
10	AJ	44	VAL

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Mol	Chain	Res	Type
10	AJ	54	PHE
11	AK	49	GLY
11	AK	76	GLY
11	AK	89	ALA
11	AK	90	GLY
11	AK	106	LYS
11	AK	127	LYS
12	AL	26	ALA
12	AL	27	LEU
12	AL	115	LYS
12	AL	125	PRO
13	AM	64	TRP
14	AN	32	SER
14	AN	47	LEU
14	AN	60	SER
16	AP	72	ARG
18	AR	41	LYS
18	AR	87	ARG
19	AS	11	VAL
19	AS	28	LYS
19	AS	31	ILE
20	AT	28	ALA
20	AT	36	LEU
20	AT	47	GLY
20	AT	71	THR
20	AT	91	LEU
20	AT	95	ALA
20	AT	96	GLY
26	B1	10	LYS
26	B1	13	ILE
26	B1	49	VAL
26	B1	65	SER
26	B1	81	LYS
26	B1	88	LYS
27	B2	27	GLU
27	B2	28	LYS
27	B2	31	GLU
27	B2	34	GLU
27	B2	39	ALA
28	B3	39	ASP
29	B4	9	LEU
29	B4	10	VAL

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Mol	Chain	Res	Type
29	B4	13	ARG
29	B4	23	GLU
29	B4	27	THR
29	B4	37	SER
29	B4	46	GLN
29	B4	47	GLN
30	B5	14	ALA
30	B5	50	GLY
31	B6	22	ALA
31	B6	30	THR
31	B6	32	ASN
31	B6	35	GLU
31	B6	42	TRP
31	B6	46	HIS
32	B7	2	LYS
33	B8	39	LYS
34	B9	2	LYS
37	BC	19	VAL
37	BC	92	ASP
37	BC	196	LEU
37	BC	202	GLU
37	BC	212	VAL
37	BC	214	VAL
38	BD	3	VAL
38	BD	16	MET
38	BD	43	ARG
38	BD	97	TYR
38	BD	109	ASP
39	BE	17	ASP
39	BE	68	ALA
39	BE	69	LYS
39	BE	86	PRO
39	BE	88	GLY
39	BE	124	GLY
39	BE	128	SER
40	BF	10	PRO
40	BF	17	ARG
40	BF	22	ALA
40	BF	31	HIS
40	BF	54	ARG
40	BF	89	VAL
40	BF	127	GLU

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Mol	Chain	Res	Type
41	BG	14	GLU
41	BG	50	ALA
41	BG	52	ILE
41	BG	84	LYS
41	BG	115	ARG
42	BH	123	PHE
42	BH	126	PRO
42	BH	169	VAL
43	BI	34	GLY
43	BI	57	ARG
43	BI	112	LYS
46	BN	17	ASP
46	BN	19	GLU
46	BN	58	ASP
46	BN	59	LYS
46	BN	67	LEU
46	BN	101	HIS
46	BN	124	ALA
46	BN	131	GLN
47	BO	5	GLN
47	BO	14	THR
47	BO	49	ARG
47	BO	112	MET
48	BP	39	LYS
48	BP	56	SER
48	BP	63	PRO
48	BP	64	LYS
48	BP	72	PRO
48	BP	76	LYS
48	BP	132	LYS
49	BQ	21	THR
49	BQ	30	GLY
49	BQ	60	ARG
49	BQ	89	ASN
49	BQ	111	GLU
49	BQ	120	ILE
50	BR	12	ARG
50	BR	33	ARG
50	BR	106	GLY
51	BS	43	GLU
51	BS	56	LEU
51	BS	59	LYS

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Mol	Chain	Res	Type
51	BS	65	VAL
51	BS	68	GLN
52	BT	2	ASN
52	BT	8	LYS
52	BT	18	ASP
52	BT	56	GLY
52	BT	72	VAL
52	BT	91	ARG
52	BT	93	ARG
52	BT	109	GLU
53	BU	29	SER
53	BU	30	LYS
53	BU	89	GLU
53	BU	90	VAL
54	BV	70	ILE
54	BV	81	TYR
54	BV	90	PRO
55	BW	54	ALA
56	BX	42	ALA
56	BX	46	ALA
56	BX	49	VAL
56	BX	64	LYS
57	BY	4	LYS
57	BY	10	GLY
57	BY	12	THR
57	BY	26	LYS
57	BY	39	VAL
57	BY	53	PRO
57	BY	56	PRO
57	BY	62	GLU
57	BY	83	THR
58	BZ	21	ALA
58	BZ	39	VAL
58	BZ	52	SER
58	BZ	80	ARG
2	CB	13	ALA
2	CB	26	PRO
2	CB	95	GLN
2	CB	106	LYS
2	CB	171	ALA
2	CB	195	ASP
3	CC	81	GLY

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Mol	Chain	Res	Type
3	CC	127	ARG
4	CD	9	CYS
4	CD	14	ARG
4	CD	77	ASN
4	CD	78	LEU
4	CD	181	MET
5	CE	85	GLY
6	CF	40	VAL
6	CF	70	ASP
9	CI	29	ASN
9	CI	99	LEU
9	CI	107	ARG
10	CJ	27	ALA
10	CJ	58	ASP
10	CJ	91	PRO
10	CJ	92	THR
11	CK	91	ARG
12	CL	29	GLY
12	CL	53	ARG
12	CL	91	LYS
13	CM	38	GLY
13	CM	67	GLU
13	CM	81	LEU
13	CM	83	ASP
13	CM	117	VAL
14	CN	4	LYS
14	CN	19	ARG
15	CO	87	ILE
16	CP	24	ALA
17	CQ	36	ILE
17	CQ	67	LYS
17	CQ	69	LYS
17	CQ	88	TYR
17	CQ	96	GLU
18	CR	26	LEU
18	CR	36	ASN
18	CR	40	LEU
18	CR	49	LYS
19	CS	5	LEU
19	CS	10	PHE
19	CS	25	LYS
20	CT	68	LYS

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Mol	Chain	Res	Type
20	CT	85	MET
20	CT	103	GLY
21	CU	20	LYS
21	CU	24	ARG
25	D0	5	LYS
26	D1	56	GLN
26	D1	83	GLU
27	D2	12	GLU
27	D2	32	LEU
27	D2	42	GLY
27	D2	48	HIS
27	D2	54	LYS
28	D3	13	ILE
28	D3	17	LYS
28	D3	51	ALA
29	D4	13	ARG
29	D4	18	CYS
29	D4	25	TYR
29	D4	33	VAL
29	D4	39	CYS
29	D4	42	PHE
30	D5	3	LYS
31	D6	19	ARG
31	D6	20	ASN
33	D8	8	LYS
37	DC	22	ILE
37	DC	121	GLY
37	DC	123	VAL
37	DC	125	SER
37	DC	162	GLU
37	DC	216	THR
38	DD	12	SER
38	DD	24	ILE
39	DE	2	LYS
39	DE	68	ALA
39	DE	70	ALA
39	DE	173	VAL
39	DE	174	ASP
39	DE	178	GLU
39	DE	200	GLU
40	DF	130	ALA
40	DF	133	ASN

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Mol	Chain	Res	Type
40	DF	165	ARG
41	DG	4	ASP
41	DG	47	LYS
41	DG	49	ASP
41	DG	104	GLU
41	DG	127	GLY
42	DH	7	LEU
42	DH	20	ALA
42	DH	45	VAL
42	DH	55	PRO
42	DH	89	ILE
42	DH	91	GLY
43	DI	81	VAL
43	DI	104	GLN
43	DI	133	HIS
46	DN	17	ASP
46	DN	19	GLU
46	DN	42	TRP
46	DN	88	GLU
46	DN	92	ALA
46	DN	135	PRO
46	DN	137	LYS
47	DO	49	ARG
48	DP	15	ARG
48	DP	16	ARG
48	DP	20	GLY
48	DP	33	ARG
48	DP	42	SER
48	DP	43	GLY
48	DP	57	THR
48	DP	60	MET
48	DP	106	LEU
48	DP	129	ALA
49	DQ	20	ALA
49	DQ	30	GLY
49	DQ	89	ASN
49	DQ	114	ALA
49	DQ	138	ASP
50	DR	5	LYS
50	DR	11	ASN
51	DS	18	ILE
51	DS	35	ILE

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Mol	Chain	Res	Type
52	DT	92	GLY
54	DV	2	PHE
54	DV	31	ALA
54	DV	70	ILE
55	DW	63	ASP
55	DW	71	VAL
56	DX	81	VAL
56	DX	90	GLU
57	DY	7	VAL
57	DY	30	VAL
57	DY	38	ILE
57	DY	53	PRO
57	DY	78	ALA
57	DY	90	LEU
58	DZ	79	ARG
58	DZ	177	PRO
2	AB	20	GLU
2	AB	34	ALA
2	AB	74	LYS
2	AB	94	ASN
2	AB	156	LYS
2	AB	205	ASP
2	AB	217	ARG
3	AC	155	GLY
3	AC	162	GLN
3	AC	189	ALA
4	AD	18	LYS
4	AD	58	LEU
5	AE	72	GLN
5	AE	107	ARG
7	AG	89	MET
7	AG	116	ALA
7	AG	129	GLU
9	AI	28	VAL
9	AI	69	GLY
9	AI	70	LYS
9	AI	98	PRO
9	AI	100	GLY
10	AJ	9	ARG
10	AJ	33	GLN
10	AJ	67	THR
12	AL	17	LYS

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Mol	Chain	Res	Type
12	AL	29	GLY
12	AL	64	TYR
13	AM	13	LYS
13	AM	46	LYS
13	AM	55	ARG
14	AN	26	ARG
15	AO	10	LYS
15	AO	79	ARG
16	AP	44	THR
16	AP	77	ALA
17	AQ	91	ARG
19	AS	27	GLU
19	AS	30	LEU
20	AT	53	LEU
25	B0	47	PRO
27	B2	55	ARG
29	B4	8	LYS
29	B4	30	GLU
29	B4	38	LYS
30	B5	34	PRO
30	B5	37	LYS
31	B6	19	ARG
31	B6	27	LYS
31	B6	34	LEU
33	B8	33	ASN
33	B8	61	LEU
37	BC	54	SER
37	BC	61	THR
37	BC	90	GLY
37	BC	120	MET
37	BC	148	ASN
37	BC	153	ILE
37	BC	162	GLU
37	BC	209	LEU
37	BC	220	PRO
38	BD	26	LYS
38	BD	35	LYS
38	BD	239	ARG
38	BD	240	ALA
38	BD	256	GLY
39	BE	16	ARG
39	BE	72	VAL

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Mol	Chain	Res	Type
40	BF	7	TYR
40	BF	48	THR
40	BF	81	PRO
40	BF	83	PHE
40	BF	131	GLY
40	BF	139	PHE
40	BF	141	ALA
41	BG	117	PHE
42	BH	149	ARG
42	BH	158	HIS
43	BI	10	GLU
43	BI	69	LYS
43	BI	91	SER
43	BI	143	SER
46	BN	76	SER
46	BN	132	ALA
47	BO	48	PRO
48	BP	8	PRO
48	BP	10	PRO
48	BP	42	SER
48	BP	46	LYS
48	BP	106	LEU
48	BP	111	ARG
48	BP	145	PRO
49	BQ	11	LYS
49	BQ	125	LEU
49	BQ	134	ARG
49	BQ	137	TYR
51	BS	16	ASN
51	BS	67	ARG
51	BS	95	HIS
52	BT	12	SER
52	BT	23	ARG
52	BT	94	ALA
53	BU	14	HIS
54	BV	23	GLU
54	BV	36	PRO
54	BV	68	LYS
55	BW	11	ARG
55	BW	99	ARG
56	BX	4	ALA
56	BX	52	VAL

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Mol	Chain	Res	Type
56	BX	89	ILE
57	BY	67	LEU
57	BY	81	LYS
58	BZ	81	ARG
58	BZ	166	SER
58	BZ	168	GLU
58	BZ	169	GLU
58	BZ	176	PRO
2	CB	84	GLU
2	CB	135	GLN
2	CB	160	ASP
2	CB	197	VAL
2	CB	230	VAL
3	CC	15	THR
4	CD	173	TRP
5	CE	8	GLU
7	CG	52	GLU
7	CG	63	LYS
7	CG	81	GLY
7	CG	144	MET
8	CH	64	LYS
8	CH	68	ARG
8	CH	105	ARG
9	CI	34	ASN
9	CI	48	GLU
9	CI	70	LYS
9	CI	84	ALA
10	CJ	78	ASN
12	CL	30	ALA
12	CL	48	PRO
12	CL	117	ARG
14	CN	3	ARG
14	CN	60	SER
15	CO	80	ALA
16	CP	73	LEU
17	CQ	17	LYS
17	CQ	82	MET
19	CS	6	LYS
19	CS	12	ASP
20	CT	95	ALA
26	D1	13	ILE
26	D1	72	GLU

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Mol	Chain	Res	Type
26	D1	94	LEU
27	D2	33	MET
31	D6	28	ARG
31	D6	29	ASN
31	D6	31	PRO
31	D6	41	PRO
31	D6	44	ARG
31	D6	49	HIS
33	D8	27	THR
37	DC	21	THR
37	DC	54	SER
37	DC	68	LEU
37	DC	73	ARG
37	DC	140	PRO
37	DC	167	LYS
37	DC	179	SER
37	DC	209	LEU
37	DC	217	THR
38	DD	36	PRO
39	DE	53	PRO
39	DE	60	ASN
39	DE	67	PHE
39	DE	77	ILE
39	DE	78	LEU
39	DE	129	HIS
40	DF	14	PRO
40	DF	21	ALA
40	DF	22	ALA
40	DF	168	ARG
42	DH	81	GLU
42	DH	119	GLU
43	DI	11	ASN
43	DI	16	GLY
43	DI	78	THR
43	DI	80	PRO
43	DI	132	PRO
46	DN	5	VAL
46	DN	58	ASP
46	DN	94	HIS
48	DP	23	PRO
48	DP	49	ARG
48	DP	147	LEU

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Mol	Chain	Res	Type
48	DP	149	GLU
49	DQ	78	PRO
50	DR	102	GLU
51	DS	54	LEU
52	DT	15	VAL
52	DT	81	PRO
53	DU	99	ALA
56	DX	34	ALA
56	DX	40	LYS
56	DX	69	TYR
56	DX	82	GLN
57	DY	69	ALA
57	DY	77	PRO
57	DY	103	GLY
58	DZ	107	THR
58	DZ	152	ALA
58	DZ	165	VAL
2	AB	62	ALA
2	AB	73	THR
3	AC	4	LYS
3	AC	129	ALA
3	AC	179	ARG
4	AD	191	ARG
5	AE	71	LEU
5	AE	74	GLY
7	AG	59	LEU
8	AH	28	ALA
8	AH	49	GLU
8	AH	59	LEU
9	AI	89	ASN
9	AI	94	ALA
9	AI	121	ARG
12	AL	46	LYS
19	AS	42	PRO
20	AT	52	ALA
21	AU	9	ARG
26	B1	17	SER
26	B1	83	GLU
27	B2	47	ASN
30	B5	35	GLU
31	B6	9	LEU
33	B8	3	LYS

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Mol	Chain	Res	Type
34	B9	31	LYS
37	BC	68	LEU
37	BC	84	LYS
37	BC	203	GLY
37	BC	211	SER
37	BC	215	THR
38	BD	45	ASN
39	BE	56	PRO
39	BE	60	ASN
40	BF	14	PRO
40	BF	69	HIS
40	BF	78	ILE
40	BF	132	VAL
40	BF	149	ASP
40	BF	160	ASN
40	BF	202	PHE
41	BG	86	MET
42	BH	22	GLY
42	BH	81	GLU
42	BH	137	ASP
42	BH	138	LYS
42	BH	155	SER
43	BI	47	LEU
43	BI	103	ARG
43	BI	117	GLU
43	BI	122	GLU
46	BN	3	THR
46	BN	20	GLY
46	BN	28	THR
46	BN	47	ALA
48	BP	31	ALA
48	BP	36	LYS
48	BP	68	GLN
48	BP	88	LEU
48	BP	108	LYS
48	BP	122	PRO
50	BR	102	GLU
52	BT	52	ILE
52	BT	66	VAL
52	BT	88	ILE
52	BT	119	LYS
55	BW	41	LYS

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Mol	Chain	Res	Type
55	BW	63	ASP
58	BZ	14	LYS
58	BZ	131	ARG
58	BZ	177	PRO
2	CB	15	VAL
2	CB	239	VAL
3	CC	111	LEU
3	CC	144	SER
4	CD	5	ILE
8	CH	63	LEU
8	CH	133	LEU
10	CJ	63	PHE
11	CK	39	PRO
11	CK	41	THR
12	CL	20	LYS
12	CL	27	LEU
12	CL	45	PRO
12	CL	115	LYS
13	CM	85	GLY
13	CM	104	ARG
13	CM	106	ASN
15	CO	24	SER
15	CO	86	GLY
16	CP	16	HIS
18	CR	60	ALA
19	CS	13	ASP
19	CS	34	TRP
26	D1	86	SER
28	D3	59	VAL
29	D4	7	PRO
29	D4	16	CYS
29	D4	36	CYS
29	D4	46	GLN
29	D4	47	GLN
33	D8	52	LYS
33	D8	53	PRO
33	D8	60	LEU
34	D9	28	GLU
37	DC	19	VAL
37	DC	64	LEU
38	DD	48	ARG
39	DE	56	PRO

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Mol	Chain	Res	Type
39	DE	87	GLU
40	DF	48	THR
41	DG	150	ASP
42	DH	13	LYS
43	DI	30	LEU
43	DI	39	ALA
43	DI	120	ILE
43	DI	137	PRO
46	DN	87	LEU
48	DP	30	THR
48	DP	40	SER
49	DQ	126	PRO
50	DR	8	ARG
51	DS	12	PHE
51	DS	61	ASN
55	DW	93	ALA
57	DY	27	VAL
57	DY	49	VAL
57	DY	81	LYS
57	DY	98	VAL
57	DY	107	ASP
58	DZ	12	GLY
2	AB	129	GLU
3	AC	29	TYR
4	AD	4	TYR
7	AG	7	ALA
7	AG	28	ASN
7	AG	58	PRO
8	AH	33	GLU
8	AH	95	VAL
9	AI	26	VAL
9	AI	48	GLU
9	AI	83	ARG
10	AJ	32	ALA
12	AL	19	ARG
12	AL	48	PRO
13	AM	12	ASN
13	AM	97	PRO
13	AM	113	PRO
14	AN	5	ALA
15	AO	24	SER
15	AO	86	GLY

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Mol	Chain	Res	Type
17	AQ	33	GLY
19	AS	13	ASP
19	AS	26	GLY
19	AS	43	GLU
19	AS	59	PRO
25	B0	73	GLY
26	B1	15	ALA
26	B1	45	ASN
29	B4	33	VAL
29	B4	43	TYR
31	B6	18	ARG
37	BC	52	ARG
37	BC	145	VAL
37	BC	168	THR
37	BC	171	ILE
37	BC	175	VAL
38	BD	110	GLY
38	BD	202	LYS
38	BD	257	LEU
39	BE	77	ILE
39	BE	130	GLY
39	BE	155	LYS
40	BF	9	ILE
40	BF	26	ALA
40	BF	119	ARG
41	BG	24	GLY
41	BG	68	PRO
41	BG	129	GLY
42	BH	20	ALA
42	BH	89	ILE
46	BN	5	VAL
46	BN	7	LYS
46	BN	129	PRO
47	BO	64	ARG
48	BP	98	GLU
48	BP	107	LYS
49	BQ	6	ARG
52	BT	14	TYR
52	BT	107	ASP
52	BT	122	ASP
54	BV	3	ALA
54	BV	44	LYS

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Mol	Chain	Res	Type
54	BV	64	HIS
54	BV	76	LYS
54	BV	79	VAL
54	BV	91	TYR
55	BW	59	VAL
58	BZ	53	ILE
58	BZ	165	VAL
2	CB	143	GLU
2	CB	158	LEU
4	CD	28	SER
4	CD	89	THR
4	CD	204	ILE
5	CE	22	GLY
5	CE	153	LYS
7	CG	102	ARG
8	CH	3	THR
8	CH	54	ASP
8	CH	103	VAL
9	CI	43	ALA
10	CJ	26	ALA
10	CJ	39	PRO
11	CK	25	TYR
11	CK	69	ALA
11	CK	100	ALA
12	CL	31	PRO
13	CM	68	GLY
14	CN	52	GLN
19	CS	31	ILE
19	CS	73	GLU
20	CT	46	GLU
20	CT	82	SER
25	D0	83	PRO
26	D1	44	PRO
29	D4	41	PRO
31	D6	23	THR
34	D9	36	GLN
37	DC	23	ASP
37	DC	61	THR
38	DD	3	VAL
38	DD	14	ARG
38	DD	26	LYS
38	DD	206	LEU

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Mol	Chain	Res	Type
38	DD	267	SER
39	DE	86	PRO
39	DE	89	ASP
40	DF	6	VAL
40	DF	25	PRO
40	DF	58	ALA
40	DF	102	PRO
40	DF	141	ALA
41	DG	105	LYS
43	DI	87	LYS
43	DI	131	LYS
46	DN	3	THR
46	DN	128	HIS
48	DP	35	HIS
48	DP	68	GLN
50	DR	10	LEU
50	DR	71	GLN
51	DS	75	GLU
51	DS	79	ALA
51	DS	106	ARG
52	DT	94	ALA
52	DT	115	ARG
53	DU	78	THR
53	DU	93	LYS
54	DV	57	VAL
55	DW	6	ILE
55	DW	14	PRO
56	DX	59	VAL
56	DX	74	PRO
56	DX	89	ILE
57	DY	67	LEU
58	DZ	65	GLN
58	DZ	81	ARG
58	DZ	112	ARG
3	AC	73	PRO
8	AH	55	GLY
8	AH	103	VAL
9	AI	105	ASP
10	AJ	4	ILE
13	AM	69	GLU
18	AR	30	ASP
18	AR	45	SER

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Mol	Chain	Res	Type
26	B1	32	LYS
37	BC	157	LYS
38	BD	41	GLY
38	BD	232	PRO
40	BF	185	ASP
41	BG	140	ILE
41	BG	142	PRO
42	BH	164	TYR
43	BI	120	ILE
49	BQ	78	PRO
56	BX	10	ALA
57	BY	66	PRO
2	CB	9	GLU
2	CB	232	PRO
3	CC	27	LYS
3	CC	62	ASP
5	CE	70	PRO
8	CH	34	GLU
9	CI	24	GLY
12	CL	126	LYS
20	CT	70	SER
29	D4	30	GLU
29	D4	31	ILE
29	D4	40	HIS
31	D6	46	HIS
33	D8	62	LEU
37	DC	100	ILE
37	DC	175	VAL
37	DC	178	ALA
38	DD	271	ILE
39	DE	22	PRO
40	DF	131	GLY
41	DG	86	MET
42	DH	21	PRO
42	DH	39	PRO
42	DH	65	HIS
43	DI	117	GLU
46	DN	83	LYS
49	DQ	60	ARG
50	DR	61	HIS
51	DS	99	LYS
54	DV	43	GLU

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Mol	Chain	Res	Type
54	DV	76	LYS
2	AB	39	ILE
2	AB	183	PRO
8	AH	27	PRO
8	AH	45	ILE
11	AK	121	PRO
29	B4	31	ILE
38	BD	142	VAL
42	BH	92	ILE
46	BN	6	PRO
54	BV	52	VAL
54	BV	99	ILE
56	BX	73	ARG
2	CB	194	PRO
2	CB	234	PRO
3	CC	80	GLY
4	CD	90	GLY
8	CH	90	GLY
29	D4	14	ILE
29	D4	35	VAL
37	DC	173	ALA
38	DD	11	PRO
40	DF	11	VAL
52	DT	88	ILE
54	DV	72	VAL
54	DV	86	GLY
58	DZ	114	GLY
6	AF	56	PRO
8	AH	88	LYS
37	BC	143	GLY
42	BH	100	GLY
2	CB	124	SER
2	CB	159	PRO
25	D0	51	VAL
37	DC	145	VAL
37	DC	182	PRO
38	DD	244	ARG
39	DE	75	VAL
40	DF	16	GLY
41	DG	179	PRO
43	DI	8	PRO
46	DN	80	GLY

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Mol	Chain	Res	Type
48	DP	19	VAL
48	DP	62	LEU
54	DV	22	VAL
57	DY	82	PRO
58	DZ	64	GLY
58	DZ	157	LEU
58	DZ	176	PRO
5	AE	70	PRO
37	BC	60	GLY
37	BC	152	ILE
43	BI	13	GLY
47	BO	114	ILE
50	BR	52	ILE
51	BS	85	VAL
53	BU	9	VAL
54	BV	57	VAL
57	BY	98	VAL
2	CB	65	GLY
6	CF	96	PRO
10	CJ	44	VAL
17	CQ	54	GLY
37	DC	150	GLY
38	DD	142	VAL
41	DG	109	VAL
42	DH	8	PRO
42	DH	14	GLY
43	DI	84	GLY
46	DN	64	GLY
48	DP	122	PRO
50	DR	83	ILE
53	DU	88	ILE
57	DY	39	VAL
58	DZ	96	VAL
3	AC	96	GLY
4	AD	67	ILE
10	AJ	39	PRO
16	AP	41	PRO
16	AP	46	PRO
30	B5	32	PRO
32	B7	6	GLN
43	BI	8	PRO
43	BI	90	GLY

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Mol	Chain	Res	Type
48	BP	144	GLU
53	BU	73	GLY
54	BV	16	PRO
55	BW	50	VAL
4	CD	29	PRO
26	D1	14	VAL
37	DC	124	GLY
37	DC	153	ILE
39	DE	175	VAL
42	DH	168	PRO
43	DI	107	VAL
52	DT	52	ILE
57	DY	37	VAL
12	AL	18	VAL
13	AM	10	PRO
13	AM	68	GLY
25	B0	63	VAL
46	BN	11	PRO
11	CK	35	PRO
37	DC	159	GLY

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	189/220 (86%)	189 (100%)	0	100	100
2	CB	202/220 (92%)	202 (100%)	0	100	100
3	AC	160/188 (85%)	159 (99%)	1 (1%)	78	82
3	CC	161/188 (86%)	161 (100%)	0	100	100
4	AD	180/181 (99%)	180 (100%)	0	100	100
4	CD	180/181 (99%)	180 (100%)	0	100	100
5	AE	115/123 (94%)	115 (100%)	0	100	100
5	CE	116/123 (94%)	115 (99%)	1 (1%)	70	78

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	AF	90/90 (100%)	90 (100%)	0	100	100
6	CF	90/90 (100%)	90 (100%)	0	100	100
7	AG	126/127 (99%)	126 (100%)	0	100	100
7	CG	126/127 (99%)	126 (100%)	0	100	100
8	AH	119/119 (100%)	119 (100%)	0	100	100
8	CH	119/119 (100%)	119 (100%)	0	100	100
9	AI	92/99 (93%)	92 (100%)	0	100	100
9	CI	98/99 (99%)	98 (100%)	0	100	100
10	AJ	88/92 (96%)	87 (99%)	1 (1%)	65	76
10	CJ	88/92 (96%)	88 (100%)	0	100	100
11	AK	90/99 (91%)	90 (100%)	0	100	100
11	CK	90/99 (91%)	90 (100%)	0	100	100
12	AL	103/109 (94%)	103 (100%)	0	100	100
12	CL	104/109 (95%)	104 (100%)	0	100	100
13	AM	93/101 (92%)	93 (100%)	0	100	100
13	CM	95/101 (94%)	95 (100%)	0	100	100
14	AN	49/50 (98%)	49 (100%)	0	100	100
14	CN	49/50 (98%)	49 (100%)	0	100	100
15	AO	79/80 (99%)	78 (99%)	1 (1%)	61	75
15	CO	79/80 (99%)	79 (100%)	0	100	100
16	AP	72/74 (97%)	72 (100%)	0	100	100
16	CP	72/74 (97%)	71 (99%)	1 (1%)	59	74
17	AQ	94/97 (97%)	94 (100%)	0	100	100
17	CQ	94/97 (97%)	94 (100%)	0	100	100
18	AR	61/77 (79%)	61 (100%)	0	100	100
18	CR	61/77 (79%)	61 (100%)	0	100	100
19	AS	69/80 (86%)	69 (100%)	0	100	100
19	CS	69/80 (86%)	69 (100%)	0	100	100
20	AT	76/82 (93%)	75 (99%)	1 (1%)	61	75
20	CT	76/82 (93%)	76 (100%)	0	100	100
21	AU	19/22 (86%)	19 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	CU	20/22 (91%)	20 (100%)	0	100	100
25	B0	61/67 (91%)	61 (100%)	0	100	100
25	D0	64/67 (96%)	64 (100%)	0	100	100
26	B1	73/83 (88%)	73 (100%)	0	100	100
26	D1	73/83 (88%)	73 (100%)	0	100	100
27	B2	46/67 (69%)	46 (100%)	0	100	100
27	D2	49/67 (73%)	49 (100%)	0	100	100
28	B3	50/52 (96%)	50 (100%)	0	100	100
28	D3	52/52 (100%)	51 (98%)	1 (2%)	50	69
30	B5	46/52 (88%)	46 (100%)	0	100	100
30	D5	52/52 (100%)	52 (100%)	0	100	100
31	B6	45/52 (86%)	45 (100%)	0	100	100
31	D6	46/52 (88%)	46 (100%)	0	100	100
32	B7	41/42 (98%)	41 (100%)	0	100	100
32	D7	41/42 (98%)	41 (100%)	0	100	100
33	B8	53/55 (96%)	53 (100%)	0	100	100
33	D8	52/55 (94%)	52 (100%)	0	100	100
34	B9	34/34 (100%)	34 (100%)	0	100	100
34	D9	34/34 (100%)	34 (100%)	0	100	100
37	BC	61/181 (34%)	61 (100%)	0	100	100
37	DC	61/181 (34%)	61 (100%)	0	100	100
38	BD	215/218 (99%)	215 (100%)	0	100	100
38	DD	217/218 (100%)	217 (100%)	0	100	100
39	BE	165/166 (99%)	165 (100%)	0	100	100
39	DE	165/166 (99%)	164 (99%)	1 (1%)	78	82
40	BF	164/166 (99%)	164 (100%)	0	100	100
40	DF	165/166 (99%)	164 (99%)	1 (1%)	78	82
41	BG	152/156 (97%)	152 (100%)	0	100	100
41	DG	155/156 (99%)	155 (100%)	0	100	100
42	BH	132/148 (89%)	132 (100%)	0	100	100
42	DH	138/148 (93%)	138 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
43	BI	122/124 (98%)	121 (99%)	1 (1%)	73 79
43	DI	121/124 (98%)	121 (100%)	0	100 100
46	BN	116/119 (98%)	115 (99%)	1 (1%)	70 78
46	DN	119/119 (100%)	119 (100%)	0	100 100
47	BO	100/100 (100%)	100 (100%)	0	100 100
47	DO	100/100 (100%)	100 (100%)	0	100 100
48	BP	111/116 (96%)	111 (100%)	0	100 100
48	DP	112/116 (97%)	112 (100%)	0	100 100
49	BQ	106/111 (96%)	106 (100%)	0	100 100
49	DQ	107/111 (96%)	107 (100%)	0	100 100
50	BR	99/101 (98%)	99 (100%)	0	100 100
50	DR	100/101 (99%)	100 (100%)	0	100 100
51	BS	81/88 (92%)	81 (100%)	0	100 100
51	DS	78/88 (89%)	78 (100%)	0	100 100
52	BT	116/127 (91%)	116 (100%)	0	100 100
52	DT	120/127 (94%)	120 (100%)	0	100 100
53	BU	93/94 (99%)	93 (100%)	0	100 100
53	DU	93/94 (99%)	93 (100%)	0	100 100
54	BV	82/82 (100%)	82 (100%)	0	100 100
54	DV	82/82 (100%)	82 (100%)	0	100 100
55	BW	91/92 (99%)	91 (100%)	0	100 100
55	DW	91/92 (99%)	91 (100%)	0	100 100
56	BX	72/78 (92%)	71 (99%)	1 (1%)	59 74
56	DX	76/78 (97%)	76 (100%)	0	100 100
57	BY	84/91 (92%)	84 (100%)	0	100 100
57	DY	90/91 (99%)	90 (100%)	0	100 100
58	BZ	155/179 (87%)	155 (100%)	0	100 100
58	DZ	155/179 (87%)	155 (100%)	0	100 100
All	All	9527/10302 (92%)	9515 (100%)	12 (0%)	88 91

All (12) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	AC	207	VAL
10	AJ	46	ARG
15	AO	7	GLU
20	AT	55	ILE
43	BI	89	TYR
46	BN	66	LYS
56	BX	49	VAL
5	CE	18	ARG
16	CP	53	VAL
28	D3	30	ARG
39	DE	40	GLU
40	DF	161	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (139) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	16	HIS
2	AB	19	HIS
2	AB	40	HIS
2	AB	95	GLN
2	AB	146	GLN
3	AC	102	ASN
3	AC	108	ASN
3	AC	123	GLN
3	AC	162	GLN
4	AD	42	GLN
4	AD	45	GLN
5	AE	38	GLN
5	AE	78	HIS
6	AF	7	ASN
6	AF	13	ASN
6	AF	18	GLN
6	AF	73	ASN
7	AG	28	ASN
7	AG	84	ASN
7	AG	86	GLN
7	AG	96	GLN
7	AG	153	HIS
9	AI	38	GLN
10	AJ	62	HIS
10	AJ	76	ASN
11	AK	26	ASN
11	AK	99	GLN

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Mol	Chain	Res	Type
15	AO	28	GLN
15	AO	71	GLN
19	AS	65	ASN
25	B0	70	GLN
27	B2	38	GLN
27	B2	56	GLN
31	B6	20	ASN
31	B6	26	ASN
31	B6	29	ASN
31	B6	32	ASN
33	B8	31	HIS
33	B8	33	ASN
34	B9	20	HIS
34	B9	29	ASN
34	B9	34	GLN
34	B9	36	GLN
37	BC	44	HIS
38	BD	44	ASN
38	BD	203	ASN
38	BD	220	HIS
39	BE	48	GLN
39	BE	55	ASN
40	BF	40	GLN
40	BF	203	GLN
41	BG	138	GLN
42	BH	61	HIS
42	BH	65	HIS
42	BH	74	ASN
46	BN	56	ASN
47	BO	5	GLN
47	BO	29	ASN
48	BP	27	HIS
48	BP	68	GLN
48	BP	81	GLN
48	BP	84	ASN
48	BP	128	HIS
49	BQ	46	GLN
50	BR	3	HIS
51	BS	61	ASN
51	BS	68	GLN
52	BT	79	HIS
53	BU	75	ASN

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Mol	Chain	Res	Type
54	BV	64	HIS
54	BV	87	HIS
56	BX	87	GLN
58	BZ	32	HIS
58	BZ	54	HIS
2	CB	104	ASN
2	CB	146	GLN
3	CC	6	HIS
3	CC	63	ASN
3	CC	98	ASN
3	CC	108	ASN
4	CD	43	HIS
6	CF	13	ASN
7	CG	84	ASN
7	CG	122	HIS
7	CG	153	HIS
9	CI	31	GLN
10	CJ	56	HIS
10	CJ	84	GLN
11	CK	26	ASN
11	CK	117	ASN
12	CL	8	ASN
12	CL	49	ASN
13	CM	101	GLN
16	CP	16	HIS
17	CQ	16	GLN
17	CQ	45	HIS
17	CQ	93	GLN
26	D1	19	GLN
26	D1	42	GLN
26	D1	56	GLN
27	D2	9	GLN
27	D2	38	GLN
27	D2	46	GLN
27	D2	48	HIS
31	D6	26	ASN
31	D6	29	ASN
33	D8	33	ASN
33	D8	35	GLN
33	D8	43	GLN
34	D9	36	GLN
38	DD	44	ASN

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Mol	Chain	Res	Type
38	DD	87	ASN
38	DD	96	HIS
39	DE	143	ASN
40	DF	40	GLN
41	DG	108	ASN
42	DH	143	GLN
42	DH	158	HIS
43	DI	17	GLN
43	DI	54	GLN
43	DI	139	GLN
47	DO	3	GLN
47	DO	5	GLN
48	DP	27	HIS
48	DP	38	GLN
48	DP	84	ASN
48	DP	128	HIS
50	DR	13	HIS
51	DS	34	HIS
51	DS	95	HIS
52	DT	79	HIS
52	DT	84	GLN
53	DU	14	HIS
54	DV	11	GLN
54	DV	89	GLN
55	DW	62	HIS
57	DY	43	ASN
58	DZ	32	HIS
58	DZ	75	ASN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1520 (98%)	539 (35%)	67 (4%)
1	CA	1503/1520 (98%)	451 (30%)	39 (2%)
22	AV	75/77 (97%)	27 (36%)	1 (1%)
22	CV	76/77 (98%)	30 (39%)	0
23	AW	75/76 (98%)	63 (84%)	8 (10%)
23	AY	18/76 (23%)	8 (44%)	0
23	CW	75/76 (98%)	50 (66%)	4 (5%)
23	CY	20/76 (26%)	6 (30%)	0
24	AX	11/24 (45%)	4 (36%)	1 (9%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
24	CX	11/24 (45%)	4 (36%)	1 (9%)
35	BA	2823/2839 (99%)	989 (35%)	91 (3%)
35	DA	2823/2839 (99%)	884 (31%)	74 (2%)
36	BB	119/122 (97%)	39 (32%)	2 (1%)
36	DB	118/122 (96%)	37 (31%)	5 (4%)
All	All	9250/9468 (97%)	3131 (33%)	293 (3%)

All (3131) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	10	A
1	AA	14	U
1	AA	22	G
1	AA	31	G
1	AA	32	A
1	AA	36	C
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	51	A
1	AA	53	A
1	AA	55	A
1	AA	56	U
1	AA	57	G
1	AA	58	C
1	AA	60	A
1	AA	61	G
1	AA	64	G
1	AA	70	G
1	AA	71	C
1	AA	73	G
1	AA	76	C
1	AA	77	G
1	AA	78	G
1	AA	79	G
1	AA	80	G
1	AA	81	U
1	AA	82	U
1	AA	83	U
1	AA	84	U
1	AA	88	A

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Mol	Chain	Res	Type
1	AA	89	C
1	AA	90	U
1	AA	91	C
1	AA	92	C
1	AA	93	G
1	AA	96	U
1	AA	97	G
1	AA	98	G
1	AA	99	U
1	AA	100	C
1	AA	101	A
1	AA	112	G
1	AA	115	G
1	AA	116	A
1	AA	119	A
1	AA	120	A
1	AA	121	C
1	AA	122	G
1	AA	131	C
1	AA	143	A
1	AA	144	G
1	AA	146	G
1	AA	147	G
1	AA	154	C
1	AA	155	C
1	AA	157	G
1	AA	158	G
1	AA	159	G
1	AA	161	A
1	AA	162	A
1	AA	163	C
1	AA	164	U
1	AA	165	C
1	AA	166	G
1	AA	168	G
1	AA	169	C
1	AA	171	A
1	AA	172	A
1	AA	173	U
1	AA	174	C
1	AA	175	C
1	AA	176	C

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Mol	Chain	Res	Type
1	AA	180	U
1	AA	183	G
1	AA	186	C
1	AA	187	C
1	AA	189(F)	U
1	AA	189(G)	G
1	AA	189(H)	G
1	AA	189(I)	G
1	AA	189(J)	G
1	AA	189(K)	U
1	AA	189(L)	G
1	AA	190	U
1	AA	195	A
1	AA	196	A
1	AA	197	A
1	AA	200	G
1	AA	201	C
1	AA	203	U
1	AA	215	U
1	AA	216	G
1	AA	228	A
1	AA	243	A
1	AA	244	U
1	AA	245	C
1	AA	247	G
1	AA	249	U
1	AA	251	G
1	AA	258	G
1	AA	262	A
1	AA	263	A
1	AA	265	G
1	AA	266	G
1	AA	267	C
1	AA	269	C
1	AA	277	C
1	AA	279	A
1	AA	280	C
1	AA	289	G
1	AA	293	G
1	AA	299	G
1	AA	303	A
1	AA	321	A

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Mol	Chain	Res	Type
1	AA	327	A
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	340	U
1	AA	344	A
1	AA	345	C
1	AA	348	G
1	AA	349	A
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	369	C
1	AA	370	C
1	AA	372	C
1	AA	373	A
1	AA	374	A
1	AA	382	A
1	AA	383	A
1	AA	384	G
1	AA	388	G
1	AA	390	C
1	AA	394	G
1	AA	397	A
1	AA	398	C
1	AA	400	C
1	AA	406	G
1	AA	410	G
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	420	U
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	441	A
1	AA	448	A

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Mol	Chain	Res	Type
1	AA	452	A
1	AA	453	A
1	AA	455	C
1	AA	456	C
1	AA	457	C
1	AA	458	C
1	AA	460	G
1	AA	461	A
1	AA	471	G
1	AA	472	A
1	AA	473	G
1	AA	474	G
1	AA	476	G
1	AA	477	A
1	AA	481	G
1	AA	485	G
1	AA	490	G
1	AA	496	A
1	AA	498	U
1	AA	505	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	517	G
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	545	C
1	AA	546	G
1	AA	547	A
1	AA	548	G
1	AA	551	U
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	564	C
1	AA	567	G
1	AA	568	G
1	AA	572	A

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Mol	Chain	Res	Type
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	579	G
1	AA	587	G
1	AA	592	G
1	AA	593	G
1	AA	594	G
1	AA	596	C
1	AA	602	A
1	AA	611	A
1	AA	612	C
1	AA	614	A
1	AA	615	C
1	AA	630	G
1	AA	631	G
1	AA	632	A
1	AA	633	G
1	AA	634	C
1	AA	653	A
1	AA	654	G
1	AA	655	A
1	AA	656	C
1	AA	661	G
1	AA	665	A
1	AA	671	G
1	AA	688	G
1	AA	695	A
1	AA	701	C
1	AA	702	A
1	AA	703	G
1	AA	704	A
1	AA	705	U
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	730	G
1	AA	731	G
1	AA	741	G
1	AA	747	C
1	AA	749	C

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Mol	Chain	Res	Type
1	AA	750	G
1	AA	753	A
1	AA	755	G
1	AA	756	C
1	AA	760	G
1	AA	762	C
1	AA	766	A
1	AA	767	A
1	AA	777	A
1	AA	778	G
1	AA	781	A
1	AA	782	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	796	C
1	AA	798	G
1	AA	817	C
1	AA	819	A
1	AA	821	G
1	AA	826	C
1	AA	833	U
1	AA	836	G
1	AA	837	G
1	AA	838	G
1	AA	839	U
1	AA	840	C
1	AA	848	C
1	AA	849	C
1	AA	850	U
1	AA	851	G
1	AA	853	G
1	AA	859	A
1	AA	862	C
1	AA	863	U
1	AA	870	U
1	AA	872	A
1	AA	873	A
1	AA	885	G
1	AA	890	G
1	AA	906	G
1	AA	907	A

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Mol	Chain	Res	Type
1	AA	914	A
1	AA	916	G
1	AA	926	G
1	AA	927	G
1	AA	931	C
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	940	C
1	AA	942	G
1	AA	956	U
1	AA	957	U
1	AA	958	A
1	AA	960	U
1	AA	961	U
1	AA	963	G
1	AA	966	G
1	AA	967	C
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	981	U
1	AA	982	U
1	AA	983	A
1	AA	984	C
1	AA	985	C
1	AA	992	U
1	AA	993	G
1	AA	995	C
1	AA	996	A
1	AA	997	U
1	AA	998	G
1	AA	999	C
1	AA	1000	U
1	AA	1002	G
1	AA	1003	G
1	AA	1004	A

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Mol	Chain	Res	Type
1	AA	1005	A
1	AA	1006	C
1	AA	1007	C
1	AA	1010	G
1	AA	1016	A
1	AA	1019	C
1	AA	1020	U
1	AA	1021	G
1	AA	1022	G
1	AA	1023	G
1	AA	1024	G
1	AA	1025	U
1	AA	1026	G
1	AA	1028	C
1	AA	1029	C
1	AA	1030	C
1	AA	1030(B)	G
1	AA	1030(C)	C
1	AA	1030(D)	G
1	AA	1030(E)	A
1	AA	1031	G
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1036	G
1	AA	1037	C
1	AA	1039	C
1	AA	1040	U
1	AA	1042	G
1	AA	1043	C
1	AA	1045	C
1	AA	1049	U
1	AA	1050	G
1	AA	1051	C
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1063	C
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G

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Mol	Chain	Res	Type
1	AA	1073	U
1	AA	1081	G
1	AA	1084	G
1	AA	1091	U
1	AA	1092	A
1	AA	1093	A
1	AA	1094	G
1	AA	1097	C
1	AA	1099	G
1	AA	1101	A
1	AA	1103	C
1	AA	1104	G
1	AA	1106	G
1	AA	1112	C
1	AA	1116	C
1	AA	1121	U
1	AA	1122	U
1	AA	1124	G
1	AA	1126	U
1	AA	1127	G
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1132	C
1	AA	1134	G
1	AA	1135	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1143	G
1	AA	1144	G
1	AA	1146	A
1	AA	1147	C
1	AA	1148	U
1	AA	1151	A
1	AA	1152	A
1	AA	1154	G
1	AA	1155	G
1	AA	1157	A

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Mol	Chain	Res	Type
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1162	C
1	AA	1163	C
1	AA	1164	G
1	AA	1165	C
1	AA	1166	G
1	AA	1168	A
1	AA	1169	A
1	AA	1170	A
1	AA	1173	G
1	AA	1174	G
1	AA	1178	G
1	AA	1180	A
1	AA	1181	G
1	AA	1186	G
1	AA	1188	A
1	AA	1193	G
1	AA	1195	C
1	AA	1196	U
1	AA	1197	G
1	AA	1199	U
1	AA	1201	A
1	AA	1202	G
1	AA	1203	C
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1225	A
1	AA	1227	A
1	AA	1228	C
1	AA	1233	G
1	AA	1240	U
1	AA	1241	G
1	AA	1244	C
1	AA	1246	C
1	AA	1253	G
1	AA	1254	C
1	AA	1255	G
1	AA	1256	A
1	AA	1257	U

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Mol	Chain	Res	Type
1	AA	1258	G
1	AA	1259	C
1	AA	1260	C
1	AA	1261	A
1	AA	1263	C
1	AA	1267	C
1	AA	1269	A
1	AA	1273	G
1	AA	1274	G
1	AA	1278	U
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1283	G
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1288	A
1	AA	1289	A
1	AA	1290	G
1	AA	1292	U
1	AA	1293	G
1	AA	1294	G
1	AA	1296	C
1	AA	1297	C
1	AA	1298	C
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1303	C
1	AA	1305	G
1	AA	1306	A
1	AA	1310	G
1	AA	1314	C
1	AA	1317	C
1	AA	1319	A
1	AA	1321	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1335	C

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Mol	Chain	Res	Type
1	AA	1336	C
1	AA	1338	G
1	AA	1340	A
1	AA	1345	U
1	AA	1346	A
1	AA	1347	G
1	AA	1353	G
1	AA	1363(A)	A
1	AA	1364	U
1	AA	1365	G
1	AA	1368	G
1	AA	1369	C
1	AA	1370	G
1	AA	1381	U
1	AA	1382	C
1	AA	1394	A
1	AA	1397	C
1	AA	1398	A
1	AA	1401	G
1	AA	1404	C
1	AA	1419	G
1	AA	1422	G
1	AA	1439	C
1	AA	1440	C
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1458	G
1	AA	1486	G
1	AA	1492	A
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1503	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G

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Mol	Chain	Res	Type
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
22	AV	8	U
22	AV	16	C
22	AV	17	C
22	AV	18	U
22	AV	19	G
22	AV	20	G
22	AV	21	U
22	AV	22	A
22	AV	23	G
22	AV	32	G
22	AV	38	A
22	AV	44	A
22	AV	46	G
22	AV	47	A
22	AV	49	C
22	AV	50	G
22	AV	53	G
22	AV	54	G
22	AV	60	A
22	AV	61	U
22	AV	62	C
22	AV	64	G
22	AV	65	G
22	AV	67	C
22	AV	74	A
22	AV	75	C
22	AV	77	A
23	AW	2	C
23	AW	3	C
23	AW	5	G
23	AW	7	A
23	AW	8	U
23	AW	9	A
23	AW	10	G
23	AW	11	C
23	AW	12	U
23	AW	13	C
23	AW	14	A
23	AW	15	G

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Mol	Chain	Res	Type
23	AW	16	U
23	AW	17	C
23	AW	18	G
23	AW	19	G
23	AW	20	U
23	AW	21	A
23	AW	22	G
23	AW	23	A
23	AW	24	G
23	AW	26	A
23	AW	28	G
23	AW	33	U
23	AW	34	G
23	AW	35	A
23	AW	36	A
23	AW	37	A
23	AW	38	A
23	AW	39	U
23	AW	40	C
23	AW	41	C
23	AW	42	C
23	AW	43	C
23	AW	44	G
23	AW	45	U
23	AW	46	G
23	AW	47	U
23	AW	48	C
23	AW	49	C
23	AW	50	U
23	AW	51	U
23	AW	52	G
23	AW	53	G
23	AW	54	U
23	AW	55	U
23	AW	56	C
23	AW	57	G
23	AW	58	A
23	AW	59	U
23	AW	60	U
23	AW	61	C
23	AW	62	C
23	AW	63	G

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Mol	Chain	Res	Type
23	AW	64	A
23	AW	65	G
23	AW	66	U
23	AW	67	C
23	AW	69	G
23	AW	70	G
23	AW	71	G
23	AW	73	A
23	AW	76	A
24	AX	13	A
24	AX	14	A
24	AX	15	A
24	AX	16	A
23	AY	30	G
23	AY	34	G
23	AY	36	A
23	AY	39	U
23	AY	41	C
23	AY	42	C
23	AY	43	C
23	AY	44	G
35	BA	7	G
35	BA	8	A
35	BA	9	U
35	BA	10	G
35	BA	12	U
35	BA	14	A
35	BA	15	G
35	BA	23	G
35	BA	26	G
35	BA	28	A
35	BA	34	C
35	BA	35	G
35	BA	36	G
35	BA	45	C
35	BA	50	U
35	BA	51	G
35	BA	61	G
35	BA	64	A
35	BA	71	A
35	BA	72	U
35	BA	73	A

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Mol	Chain	Res	Type
35	BA	74	A
35	BA	75	G
35	BA	79	G
35	BA	80	G
35	BA	81	G
35	BA	82	G
35	BA	83	G
35	BA	84	A
35	BA	85	G
35	BA	88	G
35	BA	89	G
35	BA	90	U
35	BA	92	A
35	BA	95	G
35	BA	96	G
35	BA	97	C
35	BA	98	G
35	BA	99	U
35	BA	100	G
35	BA	102	G
35	BA	103	A
35	BA	105	C
35	BA	106	C
35	BA	118	A
35	BA	119	A
35	BA	120	U
35	BA	121	G
35	BA	128	C
35	BA	129	C
35	BA	132	G
35	BA	133	C
35	BA	134	C
35	BA	135	G
35	BA	136	G
35	BA	137	C
35	BA	139	G
35	BA	139(A)	G
35	BA	140	G
35	BA	142(A)	C
35	BA	144	C
35	BA	146	G
35	BA	153	C

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Mol	Chain	Res	Type
35	BA	154	G
35	BA	154(A)	C
35	BA	157	U
35	BA	158	U
35	BA	171	G
35	BA	172	C
35	BA	173	G
35	BA	174	C
35	BA	175	G
35	BA	181	A
35	BA	182	A
35	BA	196	A
35	BA	199	A
35	BA	203	C
35	BA	204	A
35	BA	205	G
35	BA	214	G
35	BA	215	G
35	BA	216	A
35	BA	219	G
35	BA	221	A
35	BA	222	A
35	BA	224	G
35	BA	225	A
35	BA	227	A
35	BA	228	A
35	BA	229	A
35	BA	230	U
35	BA	233	A
35	BA	248	G
35	BA	250	G
35	BA	252	G
35	BA	259	G
35	BA	262	A
35	BA	265	A
35	BA	266	G
35	BA	271(D)	G
35	BA	271(I)	G
35	BA	271(J)	C
35	BA	271(K)	U
35	BA	271(L)	U
35	BA	271(N)	U

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Mol	Chain	Res	Type
35	BA	271(O)	C
35	BA	271(P)	C
35	BA	271(R)	G
35	BA	271(T)	C
35	BA	271(W)	G
35	BA	272	G
35	BA	272(B)	G
35	BA	272(C)	G
35	BA	272(F)	C
35	BA	272(G)	C
35	BA	272(H)	C
35	BA	272(I)	U
35	BA	274	G
35	BA	275	G
35	BA	279	C
35	BA	280	C
35	BA	281	G
35	BA	287	C
35	BA	291	C
35	BA	292	C
35	BA	294	A
35	BA	299	A
35	BA	302	C
35	BA	308	G
35	BA	311	A
35	BA	312	G
35	BA	324	A
35	BA	329	G
35	BA	330	A
35	BA	331	A
35	BA	332	A
35	BA	343	C
35	BA	345	A
35	BA	346	A
35	BA	349	G
35	BA	352	G
35	BA	354	G
35	BA	361	G
35	BA	363	G
35	BA	363(A)	A
35	BA	363(C)	G
35	BA	363(D)	G

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Mol	Chain	Res	Type
35	BA	363(F)	A
35	BA	378	C
35	BA	385	C
35	BA	386	G
35	BA	387	U
35	BA	388	G
35	BA	393	C
35	BA	396	G
35	BA	399	G
35	BA	405	U
35	BA	406	G
35	BA	411	G
35	BA	412	A
35	BA	414	C
35	BA	418	G
35	BA	421	U
35	BA	428	A
35	BA	444	C
35	BA	454	A
35	BA	455	C
35	BA	456	C
35	BA	457	A
35	BA	463	G
35	BA	464	U
35	BA	470	A
35	BA	473	G
35	BA	482	A
35	BA	491	G
35	BA	494	G
35	BA	504	U
35	BA	505	A
35	BA	508	G
35	BA	509	C
35	BA	512	G
35	BA	513	A
35	BA	530	G
35	BA	531	C
35	BA	532	A
35	BA	533	G
35	BA	538	G
35	BA	539	G
35	BA	540	C

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Mol	Chain	Res	Type
35	BA	541	C
35	BA	543	C
35	BA	548	A
35	BA	549	G
35	BA	551	G
35	BA	560	C
35	BA	562	U
35	BA	563	G
35	BA	573	G
35	BA	575	A
35	BA	580	C
35	BA	586	A
35	BA	588	U
35	BA	595	C
35	BA	598	G
35	BA	603	A
35	BA	604	G
35	BA	607	U
35	BA	613	G
35	BA	614	U
35	BA	614(B)	G
35	BA	615	G
35	BA	616	G
35	BA	619	G
35	BA	621	A
35	BA	622	G
35	BA	624	C
35	BA	627	A
35	BA	628	G
35	BA	637	A
35	BA	645	C
35	BA	646	A
35	BA	647	G
35	BA	651	G
35	BA	652	C
35	BA	656	G
35	BA	657	U
35	BA	660	G
35	BA	668	G
35	BA	669	G
35	BA	673	C
35	BA	684	G

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Mol	Chain	Res	Type
35	BA	685	A
35	BA	686	G
35	BA	695	G
35	BA	699	A
35	BA	702	G
35	BA	714	U
35	BA	720	C
35	BA	722	A
35	BA	724	U
35	BA	730	C
35	BA	739	G
35	BA	740	U
35	BA	741	G
35	BA	752	A
35	BA	753	C
35	BA	759	G
35	BA	764	A
35	BA	774	A
35	BA	775	G
35	BA	776	G
35	BA	779	U
35	BA	782	A
35	BA	784	A
35	BA	785	G
35	BA	789	A
35	BA	792	G
35	BA	793	A
35	BA	805	G
35	BA	812	C
35	BA	819	A
35	BA	820	A
35	BA	827	U
35	BA	828	U
35	BA	831	G
35	BA	832	G
35	BA	839	U
35	BA	845	G
35	BA	846	C
35	BA	854	G
35	BA	855	G
35	BA	856	C
35	BA	857	C

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Mol	Chain	Res	Type
35	BA	859	G
35	BA	861	A
35	BA	866	A
35	BA	869	G
35	BA	875	G
35	BA	877	U
35	BA	878	A
35	BA	879	G
35	BA	880	G
35	BA	882	G
35	BA	883	G
35	BA	884	C
35	BA	893	C
35	BA	894	C
35	BA	896	A
35	BA	897	C
35	BA	898	C
35	BA	899	A
35	BA	900	A
35	BA	901	A
35	BA	902	C
35	BA	903	C
35	BA	904	C
35	BA	906	G
35	BA	907	U
35	BA	910	A
35	BA	914	C
35	BA	915	C
35	BA	917	A
35	BA	921	G
35	BA	926	A
35	BA	932	G
35	BA	933	A
35	BA	938	G
35	BA	941	A
35	BA	945	A
35	BA	946	G
35	BA	953	A
35	BA	954	G
35	BA	958	U
35	BA	959	A
35	BA	961	C

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Mol	Chain	Res	Type
35	BA	967	C
35	BA	968	G
35	BA	972	G
35	BA	974	G
35	BA	975	C
35	BA	975(A)	G
35	BA	983	A
35	BA	988	A
35	BA	990	A
35	BA	996	A
35	BA	1007	C
35	BA	1008	C
35	BA	1010	A
35	BA	1011	G
35	BA	1012	U
35	BA	1013	C
35	BA	1017	G
35	BA	1020	A
35	BA	1022	G
35	BA	1023	U
35	BA	1025	G
35	BA	1026	U
35	BA	1027	A
35	BA	1031	G
35	BA	1032	A
35	BA	1033	U
35	BA	1034	G
35	BA	1037	G
35	BA	1041	C
35	BA	1043	C
35	BA	1044	G
35	BA	1045	A
35	BA	1047	G
35	BA	1048	A
35	BA	1049	C
35	BA	1050	A
35	BA	1051	G
35	BA	1052	C
35	BA	1053	C
35	BA	1054	A
35	BA	1055	G
35	BA	1056	G

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Mol	Chain	Res	Type
35	BA	1057	A
35	BA	1058	G
35	BA	1059	G
35	BA	1060	U
35	BA	1061	U
35	BA	1062	G
35	BA	1063	G
35	BA	1064	C
35	BA	1065	U
35	BA	1066	U
35	BA	1067	A
35	BA	1068	G
35	BA	1069	A
35	BA	1070	A
35	BA	1071	G
35	BA	1073	A
35	BA	1074	G
35	BA	1075	C
35	BA	1076	C
35	BA	1077	A
35	BA	1078	U
35	BA	1079	C
35	BA	1080	C
35	BA	1081	U
35	BA	1083	U
35	BA	1084	A
35	BA	1085	A
35	BA	1086	A
35	BA	1087	G
35	BA	1088	A
35	BA	1089	G
35	BA	1090	U
35	BA	1091	G
35	BA	1092	C
35	BA	1094	U
35	BA	1095	A
35	BA	1096	A
35	BA	1097	U
35	BA	1098	A
35	BA	1099	G
35	BA	1100	C
35	BA	1101	U

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Mol	Chain	Res	Type
35	BA	1102	C
35	BA	1103	A
35	BA	1105	U
35	BA	1106	G
35	BA	1108	U
35	BA	1110	G
35	BA	1111	A
35	BA	1112	G
35	BA	1113	U
35	BA	1114	G
35	BA	1115	G
35	BA	1116	C
35	BA	1118	C
35	BA	1119	C
35	BA	1122	G
35	BA	1130	U
35	BA	1133	U
35	BA	1135	C
35	BA	1136	G
35	BA	1139	G
35	BA	1140	C
35	BA	1141	U
35	BA	1142	U
35	BA	1143	A
35	BA	1146	C
35	BA	1147	C
35	BA	1148	A
35	BA	1155	A
35	BA	1157	G
35	BA	1159	U
35	BA	1160	G
35	BA	1167	U
35	BA	1171	G
35	BA	1173	G
35	BA	1174	A
35	BA	1175	U
35	BA	1176	G
35	BA	1177	A
35	BA	1179	C
35	BA	1180	C
35	BA	1182	A
35	BA	1186	G

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Mol	Chain	Res	Type
35	BA	1187	G
35	BA	1204	A
35	BA	1205	U
35	BA	1206	G
35	BA	1210	A
35	BA	1211	U
35	BA	1212	G
35	BA	1219	G
35	BA	1220	A
35	BA	1221	C
35	BA	1224	C
35	BA	1228	G
35	BA	1239	G
35	BA	1243	G
35	BA	1247	A
35	BA	1248	G
35	BA	1249	U
35	BA	1250	G
35	BA	1253	A
35	BA	1255	U
35	BA	1256	G
35	BA	1258	C
35	BA	1262	A
35	BA	1265	A
35	BA	1271	G
35	BA	1272	A
35	BA	1275	A
35	BA	1281	G
35	BA	1283	G
35	BA	1289	C
35	BA	1300	U
35	BA	1301	A
35	BA	1308	A
35	BA	1312	U
35	BA	1313	U
35	BA	1314	C
35	BA	1317	A
35	BA	1319	G
35	BA	1320	C
35	BA	1321	A
35	BA	1322	A
35	BA	1329	U

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Mol	Chain	Res	Type
35	BA	1330	C
35	BA	1332	G
35	BA	1334	G
35	BA	1345	C
35	BA	1349	A
35	BA	1352	U
35	BA	1359	A
35	BA	1364	G
35	BA	1365	A
35	BA	1371	G
35	BA	1373	A
35	BA	1378	A
35	BA	1379	A
35	BA	1380	G
35	BA	1384	A
35	BA	1385	G
35	BA	1394	U
35	BA	1395	A
35	BA	1396	U
35	BA	1402	C
35	BA	1404	C
35	BA	1414	G
35	BA	1416	G
35	BA	1417	C
35	BA	1418	G
35	BA	1419	A
35	BA	1420	U
35	BA	1421	G
35	BA	1427	A
35	BA	1428	C
35	BA	1435	G
35	BA	1436	G
35	BA	1437	C
35	BA	1445	A
35	BA	1446	C
35	BA	1447	G
35	BA	1448	G
35	BA	1449	A
35	BA	1450	G
35	BA	1450(A)	C
35	BA	1451	C
35	BA	1452	A

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Mol	Chain	Res	Type
35	BA	1458	C
35	BA	1459	G
35	BA	1461	G
35	BA	1463	C
35	BA	1467	C
35	BA	1471	A
35	BA	1475	G
35	BA	1477	A
35	BA	1480	G
35	BA	1481	U
35	BA	1482	G
35	BA	1487	G
35	BA	1488	G
35	BA	1490	A
35	BA	1493	C
35	BA	1494	A
35	BA	1495	A
35	BA	1496	A
35	BA	1497	U
35	BA	1499	C
35	BA	1500	G
35	BA	1501	C
35	BA	1502	C
35	BA	1504	C
35	BA	1505	C
35	BA	1508	A
35	BA	1509	C
35	BA	1512	U
35	BA	1519	G
35	BA	1520	G
35	BA	1523	U
35	BA	1528	A
35	BA	1528(A)	A
35	BA	1530	C
35	BA	1533	G
35	BA	1543	C
35	BA	1544	A
35	BA	1545	A
35	BA	1546	C
35	BA	1547	C
35	BA	1549	C
35	BA	1550	C

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Mol	Chain	Res	Type
35	BA	1558	A
35	BA	1559	G
35	BA	1560	G
35	BA	1566	A
35	BA	1567	A
35	BA	1569	A
35	BA	1571	A
35	BA	1578	U
35	BA	1579	A
35	BA	1581	G
35	BA	1582	C
35	BA	1583	A
35	BA	1584	C
35	BA	1586	A
35	BA	1588	C
35	BA	1589	C
35	BA	1591	G
35	BA	1592	C
35	BA	1594	G
35	BA	1603	A
35	BA	1608	A
35	BA	1610	A
35	BA	1615	C
35	BA	1616	A
35	BA	1618	A
35	BA	1619	G
35	BA	1628	G
35	BA	1629	U
35	BA	1632	A
35	BA	1634	A
35	BA	1637	A
35	BA	1639	U
35	BA	1640	C
35	BA	1648	C
35	BA	1651	G
35	BA	1652	A
35	BA	1654	A
35	BA	1666	G
35	BA	1669	A
35	BA	1671	U
35	BA	1672	C
35	BA	1674	G

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Mol	Chain	Res	Type
35	BA	1675	C
35	BA	1692	U
35	BA	1696	G
35	BA	1697	G
35	BA	1699	G
35	BA	1700	A
35	BA	1701	A
35	BA	1721	G
35	BA	1722	A
35	BA	1739	U
35	BA	1740	G
35	BA	1741	A
35	BA	1742	G
35	BA	1743	C
35	BA	1744	C
35	BA	1752	C
35	BA	1754	C
35	BA	1756	G
35	BA	1758	G
35	BA	1760	A
35	BA	1762	A
35	BA	1763	G
35	BA	1764	G
35	BA	1768	U
35	BA	1773	A
35	BA	1780	A
35	BA	1781	C
35	BA	1782	C
35	BA	1783	A
35	BA	1784	A
35	BA	1791	A
35	BA	1799	G
35	BA	1800	C
35	BA	1801	G
35	BA	1802	A
35	BA	1808	U
35	BA	1811	G
35	BA	1816	G
35	BA	1819	A
35	BA	1820	U
35	BA	1835	G
35	BA	1840	G

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Mol	Chain	Res	Type
35	BA	1847	A
35	BA	1848	A
35	BA	1849	G
35	BA	1850	G
35	BA	1852	C
35	BA	1858	G
35	BA	1859	A
35	BA	1860	G
35	BA	1865	G
35	BA	1866	C
35	BA	1877	A
35	BA	1878	G
35	BA	1879	C
35	BA	1880	C
35	BA	1881	C
35	BA	1882	C
35	BA	1883	G
35	BA	1884	A
35	BA	1886	C
35	BA	1888	G
35	BA	1896	G
35	BA	1900	A
35	BA	1904	G
35	BA	1906	G
35	BA	1912	A
35	BA	1919	A
35	BA	1929	G
35	BA	1930	G
35	BA	1931	U
35	BA	1932	A
35	BA	1936	A
35	BA	1938	A
35	BA	1941	C
35	BA	1947	C
35	BA	1948	G
35	BA	1954	G
35	BA	1955	U
35	BA	1963	U
35	BA	1964	G
35	BA	1967	C
35	BA	1968	G
35	BA	1969	A

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Mol	Chain	Res	Type
35	BA	1970	A
35	BA	1971	A
35	BA	1972	A
35	BA	1982	C
35	BA	1986	A
35	BA	1987	G
35	BA	1993	U
35	BA	2004	G
35	BA	2005	A
35	BA	2012	G
35	BA	2019	A
35	BA	2020	A
35	BA	2023	G
35	BA	2031	A
35	BA	2032	G
35	BA	2033	A
35	BA	2039	C
35	BA	2043	C
35	BA	2049	G
35	BA	2052	G
35	BA	2055	C
35	BA	2056	G
35	BA	2060	A
35	BA	2061	G
35	BA	2062	A
35	BA	2063	C
35	BA	2069	G
35	BA	2076	U
35	BA	2082	A
35	BA	2092	U
35	BA	2093	G
35	BA	2096	U
35	BA	2097	C
35	BA	2102	U
35	BA	2103	C
35	BA	2104	G
35	BA	2105	C
35	BA	2107	C
35	BA	2108	C
35	BA	2109	U
35	BA	2111	C
35	BA	2112	G

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Mol	Chain	Res	Type
35	BA	2113	U
35	BA	2114	A
35	BA	2115	G
35	BA	2116	G
35	BA	2117	A
35	BA	2119	A
35	BA	2120	G
35	BA	2122	U
35	BA	2123	G
35	BA	2125	G
35	BA	2126	A
35	BA	2127	G
35	BA	2128	C
35	BA	2129	C
35	BA	2130	U
35	BA	2159	G
35	BA	2160	G
35	BA	2161	C
35	BA	2162	G
35	BA	2163	C
35	BA	2164	C
35	BA	2165	G
35	BA	2167	U
35	BA	2170	A
35	BA	2171	A
35	BA	2172	U
35	BA	2174	C
35	BA	2175	C
35	BA	2178	C
35	BA	2182	G
35	BA	2185	C
35	BA	2186	G
35	BA	2187	G
35	BA	2189	U
35	BA	2191	G
35	BA	2192	G
35	BA	2197	U
35	BA	2198	A
35	BA	2207	G
35	BA	2208	A
35	BA	2218	U
35	BA	2219	G

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Mol	Chain	Res	Type
35	BA	2225	A
35	BA	2226	C
35	BA	2234	G
35	BA	2238	G
35	BA	2239	G
35	BA	2243	U
35	BA	2245	U
35	BA	2246	G
35	BA	2258	C
35	BA	2259	G
35	BA	2266	A
35	BA	2267	A
35	BA	2269	A
35	BA	2273	A
35	BA	2275	C
35	BA	2278	A
35	BA	2279	G
35	BA	2283	C
35	BA	2286	A
35	BA	2287	A
35	BA	2288	A
35	BA	2289	G
35	BA	2293	C
35	BA	2302	G
35	BA	2305	A
35	BA	2306	C
35	BA	2308	G
35	BA	2309	A
35	BA	2310	A
35	BA	2311	A
35	BA	2312	U
35	BA	2319	G
35	BA	2320	A
35	BA	2321	G
35	BA	2325	G
35	BA	2327	A
35	BA	2334	G
35	BA	2336	A
35	BA	2343	C
35	BA	2344	U
35	BA	2345	G
35	BA	2346	A

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Mol	Chain	Res	Type
35	BA	2347	C
35	BA	2348	U
35	BA	2349	G
35	BA	2350	C
35	BA	2359	C
35	BA	2377	A
35	BA	2378	A
35	BA	2379	G
35	BA	2383	G
35	BA	2384	G
35	BA	2385	C
35	BA	2388	A
35	BA	2391	G
35	BA	2393	A
35	BA	2394	C
35	BA	2400	G
35	BA	2402	C
35	BA	2403	C
35	BA	2405	G
35	BA	2406	U
35	BA	2410	G
35	BA	2411	A
35	BA	2414	G
35	BA	2416	C
35	BA	2423	U
35	BA	2424	C
35	BA	2425	A
35	BA	2429	G
35	BA	2430	A
35	BA	2431	U
35	BA	2434	A
35	BA	2435	A
35	BA	2439	A
35	BA	2440	C
35	BA	2441	C
35	BA	2446	G
35	BA	2447	G
35	BA	2448	A
35	BA	2469	A
35	BA	2473	U
35	BA	2474	C
35	BA	2476	A

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Mol	Chain	Res	Type
35	BA	2478	A
35	BA	2484	G
35	BA	2489	G
35	BA	2502	G
35	BA	2504	U
35	BA	2505	G
35	BA	2512	C
35	BA	2513	G
35	BA	2518	A
35	BA	2520	C
35	BA	2523	G
35	BA	2525	G
35	BA	2527	C
35	BA	2529	G
35	BA	2535	G
35	BA	2542	A
35	BA	2543	G
35	BA	2549	G
35	BA	2554	U
35	BA	2555	U
35	BA	2566	A
35	BA	2567	G
35	BA	2569	G
35	BA	2572	A
35	BA	2573	C
35	BA	2578	G
35	BA	2582	G
35	BA	2584	U
35	BA	2585	U
35	BA	2592	G
35	BA	2596	U
35	BA	2597	G
35	BA	2599	G
35	BA	2602	A
35	BA	2609	U
35	BA	2611	U
35	BA	2612	C
35	BA	2613	U
35	BA	2615	U
35	BA	2620	C
35	BA	2632	A
35	BA	2641	G

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Mol	Chain	Res	Type
35	BA	2654	A
35	BA	2656	U
35	BA	2659	G
35	BA	2660	A
35	BA	2661	G
35	BA	2662	A
35	BA	2663	G
35	BA	2666	C
35	BA	2671	A
35	BA	2673	G
35	BA	2682	U
35	BA	2683	C
35	BA	2684	U
35	BA	2685	G
35	BA	2689	U
35	BA	2690	C
35	BA	2700	C
35	BA	2702	U
35	BA	2703	C
35	BA	2704	C
35	BA	2712(A)	A
35	BA	2713	A
35	BA	2720	U
35	BA	2721	A
35	BA	2726	U
35	BA	2733	A
35	BA	2734	A
35	BA	2744	G
35	BA	2748	A
35	BA	2751	G
35	BA	2752	C
35	BA	2753	A
35	BA	2754	U
35	BA	2757	A
35	BA	2758	A
35	BA	2760	C
35	BA	2764	A
35	BA	2765	A
35	BA	2766	G
35	BA	2770	G
35	BA	2778	A
35	BA	2779	U

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Mol	Chain	Res	Type
35	BA	2780	G
35	BA	2786	U
35	BA	2787	C
35	BA	2789	C
35	BA	2790	A
35	BA	2791	C
35	BA	2793	G
35	BA	2794	C
35	BA	2796	U
35	BA	2799	C
35	BA	2801	A
35	BA	2801(A)	A
35	BA	2802	G
35	BA	2803	C
35	BA	2804	C
35	BA	2805	G
35	BA	2807	G
35	BA	2808	U
35	BA	2809	A
35	BA	2811	G
35	BA	2812	G
35	BA	2818	G
35	BA	2820	A
35	BA	2821	A
35	BA	2831	G
35	BA	2833	G
35	BA	2834	G
35	BA	2835	A
35	BA	2838	G
35	BA	2846	G
35	BA	2849	U
35	BA	2860	A
35	BA	2866	U
35	BA	2872	G
35	BA	2876	G
35	BA	2877	G
35	BA	2878	U
35	BA	2880	C
35	BA	2885	C
35	BA	2892	A
35	BA	2893	G
35	BA	2894	G

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Mol	Chain	Res	Type
35	BA	2896	C
35	BA	2897	U
36	BB	2	C
36	BB	5	C
36	BB	8	U
36	BB	12	C
36	BB	15	A
36	BB	16	G
36	BB	21	G
36	BB	22	U
36	BB	24	G
36	BB	25	A
36	BB	30	C
36	BB	32	C
36	BB	35	U
36	BB	41	U
36	BB	43	C
36	BB	44	G
36	BB	45	A
36	BB	51	G
36	BB	52	A
36	BB	53	A
36	BB	58	A
36	BB	63	G
36	BB	65	C
36	BB	67	G
36	BB	72	G
36	BB	73	A
36	BB	81	G
36	BB	82	G
36	BB	86	G
36	BB	89	G
36	BB	90	A
36	BB	91	C
36	BB	92	C
36	BB	103	G
36	BB	106	G
36	BB	109	C
36	BB	110	G
36	BB	116	G
36	BB	120	A
1	CA	7	G

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Mol	Chain	Res	Type
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	33	A
1	CA	34	C
1	CA	39	G
1	CA	44	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	54	C
1	CA	57	G
1	CA	60	A
1	CA	70	G
1	CA	76	C
1	CA	78	G
1	CA	79	G
1	CA	81	U
1	CA	82	U
1	CA	88	A
1	CA	89	C
1	CA	90	U
1	CA	91	C
1	CA	92	C
1	CA	93	G
1	CA	97	G
1	CA	98	G
1	CA	101	A
1	CA	115	G
1	CA	116	A
1	CA	121	C
1	CA	122	G
1	CA	129	U
1	CA	129(A)	G
1	CA	131	C
1	CA	137	C
1	CA	144	G
1	CA	152	A
1	CA	163	C
1	CA	172	A
1	CA	173	U
1	CA	181	G

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Mol	Chain	Res	Type
1	CA	189(F)	U
1	CA	189(I)	G
1	CA	191	G
1	CA	195	A
1	CA	197	A
1	CA	201	C
1	CA	202	U
1	CA	203	U
1	CA	204	U
1	CA	216	G
1	CA	227	G
1	CA	232	G
1	CA	236	G
1	CA	244	U
1	CA	247	G
1	CA	251	G
1	CA	252	U
1	CA	258	G
1	CA	261	U
1	CA	266	G
1	CA	267	C
1	CA	270	A
1	CA	274	A
1	CA	275	G
1	CA	280	C
1	CA	281	G
1	CA	289	G
1	CA	291	C
1	CA	299	G
1	CA	301	G
1	CA	319	G
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	340	U
1	CA	344	A
1	CA	345	C
1	CA	346	G
1	CA	351	G
1	CA	352	C

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Mol	Chain	Res	Type
1	CA	353	A
1	CA	354	G
1	CA	356	A
1	CA	363	A
1	CA	365	U
1	CA	366	C
1	CA	367	U
1	CA	371	G
1	CA	372	C
1	CA	373	A
1	CA	375	U
1	CA	376	G
1	CA	378	G
1	CA	383	A
1	CA	384	G
1	CA	388	G
1	CA	390	C
1	CA	392	G
1	CA	396	G
1	CA	397	A
1	CA	398	C
1	CA	403	C
1	CA	405	U
1	CA	406	G
1	CA	408	A
1	CA	410	G
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	422	C
1	CA	423	G
1	CA	424	G
1	CA	427	U
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	437	U
1	CA	442	C
1	CA	452	A
1	CA	455	C
1	CA	460	G
1	CA	461	A

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Mol	Chain	Res	Type
1	CA	470	C
1	CA	471	G
1	CA	474	G
1	CA	485	G
1	CA	496	A
1	CA	498	U
1	CA	500	G
1	CA	505	G
1	CA	507	C
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	517	G
1	CA	518	C
1	CA	519	C
1	CA	521	G
1	CA	524	G
1	CA	527	G
1	CA	529	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	536	C
1	CA	547	A
1	CA	559	A
1	CA	561	U
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	G
1	CA	577	G
1	CA	587	G
1	CA	592	G
1	CA	596	C
1	CA	606	G
1	CA	608	A
1	CA	622	A
1	CA	623	C
1	CA	630	G
1	CA	632	A
1	CA	633	G

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Mol	Chain	Res	Type
1	CA	653	A
1	CA	661	G
1	CA	665	A
1	CA	686	U
1	CA	687	A
1	CA	688	G
1	CA	695	A
1	CA	722	A
1	CA	724	G
1	CA	731	G
1	CA	733	A
1	CA	734	G
1	CA	747	C
1	CA	748	C
1	CA	749	C
1	CA	753	A
1	CA	755	G
1	CA	763	G
1	CA	766	A
1	CA	767	A
1	CA	771	G
1	CA	777	A
1	CA	793	U
1	CA	794	A
1	CA	796	C
1	CA	800	G
1	CA	802	A
1	CA	815	A
1	CA	817	C
1	CA	818	G
1	CA	821	G
1	CA	828	A
1	CA	829	G
1	CA	833	U
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	849	C
1	CA	851	G
1	CA	853	G
1	CA	859	A

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Mol	Chain	Res	Type
1	CA	860	A
1	CA	868	C
1	CA	873	A
1	CA	876	G
1	CA	884	U
1	CA	887	G
1	CA	891	U
1	CA	902	G
1	CA	910	C
1	CA	911	U
1	CA	914	A
1	CA	916	G
1	CA	920	U
1	CA	922	G
1	CA	923	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	936	C
1	CA	940	C
1	CA	942	G
1	CA	949	A
1	CA	954	G
1	CA	960	U
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	981	U
1	CA	982	U
1	CA	983	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	995	C

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Mol	Chain	Res	Type
1	CA	1001(A)	G
1	CA	1002	G
1	CA	1004	A
1	CA	1005	A
1	CA	1006	C
1	CA	1009	G
1	CA	1012	U
1	CA	1016	A
1	CA	1022	G
1	CA	1023	G
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1029	C
1	CA	1030(A)	G
1	CA	1030(B)	C
1	CA	1030(C)	G
1	CA	1031	G
1	CA	1036	G
1	CA	1040	U
1	CA	1044	A
1	CA	1049	U
1	CA	1050	G
1	CA	1053	G
1	CA	1054	C
1	CA	1055	A
1	CA	1056	U
1	CA	1058	G
1	CA	1063	C
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1070	U
1	CA	1082	G
1	CA	1084	G
1	CA	1094	G
1	CA	1095	U
1	CA	1096	C
1	CA	1101	A
1	CA	1103	C
1	CA	1108	G

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Mol	Chain	Res	Type
1	CA	1113	C
1	CA	1116	C
1	CA	1117	G
1	CA	1122	U
1	CA	1124	G
1	CA	1126	U
1	CA	1127	G
1	CA	1128	C
1	CA	1129	C
1	CA	1131	G
1	CA	1133	G
1	CA	1134	G
1	CA	1135	U
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1142	G
1	CA	1145	C
1	CA	1146	A
1	CA	1147	C
1	CA	1151	A
1	CA	1152	A
1	CA	1154	G
1	CA	1159	U
1	CA	1160	G
1	CA	1162	C
1	CA	1170	A
1	CA	1171	G
1	CA	1182	G
1	CA	1183	A
1	CA	1184	G
1	CA	1186	G
1	CA	1187	G
1	CA	1189	C
1	CA	1190	G
1	CA	1194	U
1	CA	1196	U
1	CA	1197	G
1	CA	1201	A

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Mol	Chain	Res	Type
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1216	G
1	CA	1218	C
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1232	U
1	CA	1236	A
1	CA	1238	A
1	CA	1239	A
1	CA	1240	U
1	CA	1241	G
1	CA	1246	C
1	CA	1251	A
1	CA	1253	G
1	CA	1254	C
1	CA	1255	G
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1260	C
1	CA	1262	C
1	CA	1264	C
1	CA	1266	G
1	CA	1268	A
1	CA	1270	C
1	CA	1272	G
1	CA	1273	G
1	CA	1275	A
1	CA	1278	U
1	CA	1279	A
1	CA	1280	A
1	CA	1282	C
1	CA	1285	A
1	CA	1286	A
1	CA	1287	A
1	CA	1288	A
1	CA	1293	G
1	CA	1294	G

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Mol	Chain	Res	Type
1	CA	1296	C
1	CA	1297	C
1	CA	1298	C
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1304	G
1	CA	1305	G
1	CA	1312	G
1	CA	1313	U
1	CA	1314	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1326	C
1	CA	1331	G
1	CA	1335	C
1	CA	1338	G
1	CA	1340	A
1	CA	1346	A
1	CA	1347	G
1	CA	1353	G
1	CA	1360	A
1	CA	1363	C
1	CA	1363(A)	A
1	CA	1364	U
1	CA	1365	G
1	CA	1368	G
1	CA	1370	G
1	CA	1378	C
1	CA	1379	G
1	CA	1381	U
1	CA	1395	C
1	CA	1397	C
1	CA	1398	A
1	CA	1400	C
1	CA	1417	G
1	CA	1419	G
1	CA	1434	A
1	CA	1439	C
1	CA	1442	G

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Mol	Chain	Res	Type
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1444	C
1	CA	1446	U
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1457	G
1	CA	1464	G
1	CA	1469	G
1	CA	1484	C
1	CA	1487	G
1	CA	1492	A
1	CA	1494	G
1	CA	1497	G
1	CA	1498	U
1	CA	1499	A
1	CA	1502	A
1	CA	1503	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G
1	CA	1521	G
1	CA	1528	U
1	CA	1529	G
1	CA	1530	G
22	CV	2	G
22	CV	3	C
22	CV	5	G
22	CV	6	G
22	CV	9	G
22	CV	13	C
22	CV	15	G
22	CV	16	C
22	CV	17(A)	U
22	CV	18	G
22	CV	20	U
22	CV	21	A

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Mol	Chain	Res	Type
22	CV	22	G
22	CV	34	C
22	CV	46	A
22	CV	47	U
22	CV	48	C
22	CV	50	U
22	CV	53	G
22	CV	54	U
22	CV	55	U
22	CV	56	C
22	CV	60	U
22	CV	64	G
22	CV	66	C
22	CV	67	C
22	CV	72	A
22	CV	74	C
22	CV	75	C
22	CV	76	A
23	CW	7	A
23	CW	9	A
23	CW	10	G
23	CW	11	C
23	CW	12	U
23	CW	13	C
23	CW	14	A
23	CW	15	G
23	CW	16	U
23	CW	17	C
23	CW	18	G
23	CW	19	G
23	CW	20	U
23	CW	21	A
23	CW	22	G
23	CW	23	A
23	CW	24	G
23	CW	26	A
23	CW	27	G
23	CW	30	G
23	CW	31	A
23	CW	32	U
23	CW	33	U
23	CW	34	G

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Mol	Chain	Res	Type
23	CW	35	A
23	CW	36	A
23	CW	38	A
23	CW	44	G
23	CW	46	G
23	CW	47	U
23	CW	48	C
23	CW	50	U
23	CW	51	U
23	CW	52	G
23	CW	53	G
23	CW	55	U
23	CW	56	C
23	CW	58	A
23	CW	61	C
23	CW	63	G
23	CW	64	A
23	CW	65	G
23	CW	66	U
23	CW	67	C
23	CW	68	C
23	CW	69	G
23	CW	71	G
23	CW	73	A
23	CW	74	C
23	CW	76	A
24	CX	14	A
24	CX	19	U
24	CX	22	U
24	CX	23	A
23	CY	25	C
23	CY	26	A
23	CY	27	G
23	CY	28	G
23	CY	29	G
23	CY	44	G
35	DA	9	U
35	DA	10	G
35	DA	12	U
35	DA	26	G
35	DA	35	G
35	DA	36	G

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Mol	Chain	Res	Type
35	DA	45	C
35	DA	49	A
35	DA	55	G
35	DA	58	G
35	DA	63	U
35	DA	71	A
35	DA	72	U
35	DA	74	A
35	DA	75	G
35	DA	77	C
35	DA	83	G
35	DA	84	A
35	DA	88	G
35	DA	89	G
35	DA	90	U
35	DA	92	A
35	DA	94	C
35	DA	94(A)	G
35	DA	95	G
35	DA	100	G
35	DA	104	U
35	DA	117	G
35	DA	118	A
35	DA	119	A
35	DA	120	U
35	DA	123	G
35	DA	124	G
35	DA	129	C
35	DA	131	G
35	DA	139	G
35	DA	139(A)	G
35	DA	140	G
35	DA	141	A
35	DA	154(A)	C
35	DA	157	U
35	DA	158	U
35	DA	171	G
35	DA	172	C
35	DA	174	C
35	DA	175	G
35	DA	177	G
35	DA	182	A

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Mol	Chain	Res	Type
35	DA	193	U
35	DA	196	A
35	DA	197	A
35	DA	199	A
35	DA	202	U
35	DA	205	G
35	DA	214	G
35	DA	215	G
35	DA	216	A
35	DA	217	G
35	DA	221	A
35	DA	222	A
35	DA	224	G
35	DA	225	A
35	DA	229	A
35	DA	230	U
35	DA	233	A
35	DA	248	G
35	DA	252	G
35	DA	258	G
35	DA	260	G
35	DA	264	C
35	DA	266	G
35	DA	271(A)	A
35	DA	271(I)	G
35	DA	271(J)	C
35	DA	271(K)	U
35	DA	271(L)	U
35	DA	271(M)	G
35	DA	271(N)	U
35	DA	271(P)	C
35	DA	271(R)	G
35	DA	271(Y)	U
35	DA	272	G
35	DA	272(B)	G
35	DA	272(G)	C
35	DA	272(H)	C
35	DA	272(I)	U
35	DA	272(J)	C
35	DA	274	G
35	DA	275	G
35	DA	279	C

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Mol	Chain	Res	Type
35	DA	281	G
35	DA	283	A
35	DA	285	C
35	DA	287	C
35	DA	289	A
35	DA	295	G
35	DA	311	A
35	DA	315	G
35	DA	317	G
35	DA	323	G
35	DA	324	A
35	DA	329	G
35	DA	330	A
35	DA	350	U
35	DA	352	G
35	DA	353	G
35	DA	356	G
35	DA	360	G
35	DA	362	U
35	DA	363	G
35	DA	363(E)	U
35	DA	363(F)	A
35	DA	364	C
35	DA	372	G
35	DA	384	U
35	DA	386	G
35	DA	405	U
35	DA	407	G
35	DA	411	G
35	DA	421	U
35	DA	423	A
35	DA	424	G
35	DA	428	A
35	DA	442	G
35	DA	444	C
35	DA	448	U
35	DA	452	G
35	DA	455	C
35	DA	456	C
35	DA	459	U
35	DA	470	A
35	DA	473	G

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Mol	Chain	Res	Type
35	DA	479	A
35	DA	481	G
35	DA	482	A
35	DA	491	G
35	DA	493	G
35	DA	494	G
35	DA	495	G
35	DA	504	U
35	DA	505	A
35	DA	507	A
35	DA	508	G
35	DA	509	C
35	DA	510	C
35	DA	527	C
35	DA	528	A
35	DA	530	G
35	DA	531	C
35	DA	532	A
35	DA	533	G
35	DA	536	A
35	DA	537	C
35	DA	540	C
35	DA	542	C
35	DA	543	C
35	DA	547	A
35	DA	548	A
35	DA	549	G
35	DA	551	G
35	DA	552	G
35	DA	556	G
35	DA	563	G
35	DA	573	G
35	DA	575	A
35	DA	584	C
35	DA	586	A
35	DA	587	C
35	DA	588	U
35	DA	592	G
35	DA	593	G
35	DA	595	C
35	DA	599	G
35	DA	603	A

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Mol	Chain	Res	Type
35	DA	604	G
35	DA	607	U
35	DA	610	G
35	DA	612	C
35	DA	614	U
35	DA	614(B)	G
35	DA	614(C)	A
35	DA	615	G
35	DA	621	A
35	DA	622	G
35	DA	627	A
35	DA	633	A
35	DA	635	C
35	DA	637	A
35	DA	643	A
35	DA	645	C
35	DA	646	A
35	DA	647	G
35	DA	652	C
35	DA	656	G
35	DA	657	U
35	DA	662	G
35	DA	668	G
35	DA	686	G
35	DA	695	G
35	DA	696	G
35	DA	703	U
35	DA	715	G
35	DA	716	A
35	DA	717	G
35	DA	720	C
35	DA	721	C
35	DA	722	A
35	DA	730	C
35	DA	764	A
35	DA	765	G
35	DA	771	G
35	DA	776	G
35	DA	777	A
35	DA	782	A
35	DA	784	A
35	DA	785	G

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Mol	Chain	Res	Type
35	DA	791	C
35	DA	792	G
35	DA	805	G
35	DA	812	C
35	DA	819	A
35	DA	824	A
35	DA	827	U
35	DA	828	U
35	DA	830	G
35	DA	831	G
35	DA	832	G
35	DA	836	G
35	DA	846	C
35	DA	853	G
35	DA	854	G
35	DA	856	C
35	DA	857	C
35	DA	859	G
35	DA	866	A
35	DA	877	U
35	DA	878	A
35	DA	881	G
35	DA	882	G
35	DA	883	G
35	DA	884	C
35	DA	892	G
35	DA	893	C
35	DA	894	C
35	DA	896	A
35	DA	897	C
35	DA	898	C
35	DA	899	A
35	DA	900	A
35	DA	901	A
35	DA	902	C
35	DA	907	U
35	DA	910	A
35	DA	917	A
35	DA	919	G
35	DA	920	G
35	DA	924	C
35	DA	926	A

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Mol	Chain	Res	Type
35	DA	932	G
35	DA	933	A
35	DA	940	G
35	DA	941	A
35	DA	945	A
35	DA	946	G
35	DA	952	G
35	DA	953	A
35	DA	958	U
35	DA	959	A
35	DA	961	C
35	DA	967	C
35	DA	969	U
35	DA	974	G
35	DA	975	C
35	DA	975(A)	G
35	DA	983	A
35	DA	989	G
35	DA	990	A
35	DA	996	A
35	DA	1003	G
35	DA	1005	C
35	DA	1010	A
35	DA	1011	G
35	DA	1012	U
35	DA	1013	C
35	DA	1020	A
35	DA	1022	G
35	DA	1023	U
35	DA	1025	G
35	DA	1026	U
35	DA	1027	A
35	DA	1030	G
35	DA	1033	U
35	DA	1035	U
35	DA	1040	C
35	DA	1041	C
35	DA	1042	G
35	DA	1043	C
35	DA	1044	G
35	DA	1045	A
35	DA	1046	A

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Mol	Chain	Res	Type
35	DA	1047	G
35	DA	1048	A
35	DA	1049	C
35	DA	1050	A
35	DA	1051	G
35	DA	1052	C
35	DA	1053	C
35	DA	1054	A
35	DA	1055	G
35	DA	1056	G
35	DA	1057	A
35	DA	1058	G
35	DA	1059	G
35	DA	1060	U
35	DA	1061	U
35	DA	1062	G
35	DA	1063	G
35	DA	1064	C
35	DA	1065	U
35	DA	1066	U
35	DA	1068	G
35	DA	1069	A
35	DA	1070	A
35	DA	1071	G
35	DA	1072	C
35	DA	1073	A
35	DA	1075	C
35	DA	1077	A
35	DA	1078	U
35	DA	1079	C
35	DA	1081	U
35	DA	1082	U
35	DA	1084	A
35	DA	1086	A
35	DA	1087	G
35	DA	1088	A
35	DA	1089	G
35	DA	1090	U
35	DA	1093	G
35	DA	1094	U
35	DA	1095	A
35	DA	1096	A

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Mol	Chain	Res	Type
35	DA	1097	U
35	DA	1098	A
35	DA	1099	G
35	DA	1100	C
35	DA	1101	U
35	DA	1102	C
35	DA	1103	A
35	DA	1104	C
35	DA	1105	U
35	DA	1106	G
35	DA	1107	G
35	DA	1108	U
35	DA	1109	C
35	DA	1110	G
35	DA	1111	A
35	DA	1112	G
35	DA	1113	U
35	DA	1118	C
35	DA	1120	G
35	DA	1126	A
35	DA	1129	A
35	DA	1130	U
35	DA	1133	U
35	DA	1135	C
35	DA	1136	G
35	DA	1137	G
35	DA	1139	G
35	DA	1141	U
35	DA	1142	U
35	DA	1142(A)	A
35	DA	1143	A
35	DA	1147	C
35	DA	1149	G
35	DA	1152	C
35	DA	1156	A
35	DA	1165	U
35	DA	1168	G
35	DA	1170	G
35	DA	1171	G
35	DA	1174	A
35	DA	1175	U
35	DA	1176	G

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Mol	Chain	Res	Type
35	DA	1177	A
35	DA	1178	C
35	DA	1179	C
35	DA	1194	A
35	DA	1195	G
35	DA	1204	A
35	DA	1205	U
35	DA	1206	G
35	DA	1210	A
35	DA	1211	U
35	DA	1218	C
35	DA	1219	G
35	DA	1220	A
35	DA	1221	C
35	DA	1242	A
35	DA	1244	G
35	DA	1250	G
35	DA	1251	C
35	DA	1252	G
35	DA	1253	A
35	DA	1255	U
35	DA	1256	G
35	DA	1265	A
35	DA	1271	G
35	DA	1272	A
35	DA	1276	A
35	DA	1281	G
35	DA	1282	U
35	DA	1285	G
35	DA	1300	U
35	DA	1301	A
35	DA	1313	U
35	DA	1314	C
35	DA	1319	G
35	DA	1320	C
35	DA	1329	U
35	DA	1332	G
35	DA	1333	C
35	DA	1334	G
35	DA	1341	U
35	DA	1349	A
35	DA	1359	A

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Mol	Chain	Res	Type
35	DA	1364	G
35	DA	1365	A
35	DA	1373	A
35	DA	1379	A
35	DA	1380	G
35	DA	1384	A
35	DA	1385	G
35	DA	1386	C
35	DA	1412	A
35	DA	1415	U
35	DA	1416	G
35	DA	1420	U
35	DA	1421	G
35	DA	1428	C
35	DA	1429	G
35	DA	1430	C
35	DA	1433	U
35	DA	1445	A
35	DA	1447	G
35	DA	1449	A
35	DA	1450	G
35	DA	1455	G
35	DA	1461	G
35	DA	1466	G
35	DA	1467	C
35	DA	1471	A
35	DA	1475	G
35	DA	1478	G
35	DA	1481	U
35	DA	1482	G
35	DA	1486	A
35	DA	1488	G
35	DA	1489	U
35	DA	1490	A
35	DA	1491	G
35	DA	1492	G
35	DA	1493	C
35	DA	1494	A
35	DA	1495	A
35	DA	1497	U
35	DA	1498	C
35	DA	1501	C

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Mol	Chain	Res	Type
35	DA	1502	C
35	DA	1505	C
35	DA	1508	A
35	DA	1509	C
35	DA	1509(A)	A
35	DA	1512	U
35	DA	1517	G
35	DA	1519	G
35	DA	1520	G
35	DA	1527	G
35	DA	1528	A
35	DA	1528(A)	A
35	DA	1529	G
35	DA	1530	C
35	DA	1531	C
35	DA	1532	C
35	DA	1533	G
35	DA	1543	C
35	DA	1545	A
35	DA	1546	C
35	DA	1548	C
35	DA	1549	C
35	DA	1558	A
35	DA	1559	G
35	DA	1561	G
35	DA	1562	A
35	DA	1566	A
35	DA	1569	A
35	DA	1578	U
35	DA	1579	A
35	DA	1582	C
35	DA	1584	C
35	DA	1586	A
35	DA	1591	G
35	DA	1597	A
35	DA	1598	C
35	DA	1605	C
35	DA	1606	G
35	DA	1607	C
35	DA	1608	A
35	DA	1609	A
35	DA	1617	C

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Mol	Chain	Res	Type
35	DA	1618	A
35	DA	1625	C
35	DA	1631(A)	A
35	DA	1634	A
35	DA	1638	C
35	DA	1640	C
35	DA	1648	C
35	DA	1649	G
35	DA	1654	A
35	DA	1674	G
35	DA	1675	C
35	DA	1678	G
35	DA	1679	U
35	DA	1688	U
35	DA	1696	G
35	DA	1700	A
35	DA	1703	G
35	DA	1705	G
35	DA	1712	C
35	DA	1721	G
35	DA	1722	A
35	DA	1739	U
35	DA	1740	G
35	DA	1741	A
35	DA	1749	A
35	DA	1750	G
35	DA	1753	G
35	DA	1754	C
35	DA	1756	G
35	DA	1757	U
35	DA	1763	G
35	DA	1764	G
35	DA	1773	A
35	DA	1781	C
35	DA	1782	C
35	DA	1791	A
35	DA	1799	G
35	DA	1800	C
35	DA	1801	G
35	DA	1802	A
35	DA	1809	A
35	DA	1811	G

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Mol	Chain	Res	Type
35	DA	1816	G
35	DA	1819	A
35	DA	1829	A
35	DA	1835	G
35	DA	1837	C
35	DA	1838	C
35	DA	1839	G
35	DA	1846	G
35	DA	1847	A
35	DA	1853	A
35	DA	1858	G
35	DA	1865	G
35	DA	1877	A
35	DA	1878	G
35	DA	1881	C
35	DA	1883	G
35	DA	1885	A
35	DA	1886	C
35	DA	1888	G
35	DA	1896	G
35	DA	1899	G
35	DA	1900	A
35	DA	1903	G
35	DA	1906	G
35	DA	1908	C
35	DA	1913	A
35	DA	1914	C
35	DA	1916	A
35	DA	1922	G
35	DA	1929	G
35	DA	1930	G
35	DA	1931	U
35	DA	1936	A
35	DA	1937	A
35	DA	1938	A
35	DA	1947	C
35	DA	1948	G
35	DA	1955	U
35	DA	1960	A
35	DA	1963	U
35	DA	1967	C
35	DA	1970	A

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Mol	Chain	Res	Type
35	DA	1971	A
35	DA	1972	A
35	DA	1976	U
35	DA	1977	A
35	DA	1982	C
35	DA	1984	G
35	DA	1985	G
35	DA	1988	C
35	DA	1991	U
35	DA	1993	U
35	DA	1997	G
35	DA	2019	A
35	DA	2020	A
35	DA	2023	G
35	DA	2027	G
35	DA	2031	A
35	DA	2032	G
35	DA	2033	A
35	DA	2043	C
35	DA	2049	G
35	DA	2052	G
35	DA	2055	C
35	DA	2056	G
35	DA	2059	A
35	DA	2060	A
35	DA	2061	G
35	DA	2062	A
35	DA	2063	C
35	DA	2069	G
35	DA	2070	G
35	DA	2072	G
35	DA	2081	C
35	DA	2093	G
35	DA	2096	U
35	DA	2099	U
35	DA	2102	U
35	DA	2103	C
35	DA	2104	G
35	DA	2105	C
35	DA	2107	C
35	DA	2110	G
35	DA	2111	C

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Mol	Chain	Res	Type
35	DA	2112	G
35	DA	2113	U
35	DA	2114	A
35	DA	2115	G
35	DA	2116	G
35	DA	2117	A
35	DA	2118	U
35	DA	2119	A
35	DA	2120	G
35	DA	2121	G
35	DA	2122	U
35	DA	2126	A
35	DA	2127	G
35	DA	2128	C
35	DA	2130	U
35	DA	2159	G
35	DA	2160	G
35	DA	2161	C
35	DA	2162	G
35	DA	2163	C
35	DA	2164	C
35	DA	2167	U
35	DA	2168	G
35	DA	2169	A
35	DA	2170	A
35	DA	2171	A
35	DA	2172	U
35	DA	2177	C
35	DA	2179	C
35	DA	2185	C
35	DA	2186	G
35	DA	2190	G
35	DA	2192	G
35	DA	2197	U
35	DA	2198	A
35	DA	2199	A
35	DA	2203	U
35	DA	2206	G
35	DA	2207	G
35	DA	2208	A
35	DA	2218	U
35	DA	2219	G

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Mol	Chain	Res	Type
35	DA	2223	G
35	DA	2225	A
35	DA	2226	C
35	DA	2234	G
35	DA	2238	G
35	DA	2239	G
35	DA	2243	U
35	DA	2251	G
35	DA	2253	G
35	DA	2254	C
35	DA	2263	C
35	DA	2267	A
35	DA	2275	C
35	DA	2278	A
35	DA	2283	C
35	DA	2286	A
35	DA	2287	A
35	DA	2289	G
35	DA	2296	U
35	DA	2297	C
35	DA	2305	A
35	DA	2306	C
35	DA	2307	G
35	DA	2308	G
35	DA	2309	A
35	DA	2310	A
35	DA	2311	A
35	DA	2313	C
35	DA	2315	G
35	DA	2316	C
35	DA	2320	A
35	DA	2321	G
35	DA	2325	G
35	DA	2327	A
35	DA	2332	U
35	DA	2334	G
35	DA	2336	A
35	DA	2340	G
35	DA	2343	C
35	DA	2346	A
35	DA	2347	C
35	DA	2349	G

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Mol	Chain	Res	Type
35	DA	2350	C
35	DA	2361	A
35	DA	2379	G
35	DA	2381	C
35	DA	2383	G
35	DA	2385	C
35	DA	2388	A
35	DA	2394	C
35	DA	2396	G
35	DA	2402	C
35	DA	2403	C
35	DA	2405	G
35	DA	2406	U
35	DA	2410	G
35	DA	2411	A
35	DA	2423	U
35	DA	2424	C
35	DA	2425	A
35	DA	2427	C
35	DA	2429	G
35	DA	2430	A
35	DA	2431	U
35	DA	2435	A
35	DA	2439	A
35	DA	2440	C
35	DA	2441	C
35	DA	2447	G
35	DA	2448	A
35	DA	2449	U
35	DA	2459	A
35	DA	2465	C
35	DA	2469	A
35	DA	2470	G
35	DA	2474	C
35	DA	2475	C
35	DA	2476	A
35	DA	2477	C
35	DA	2478	A
35	DA	2480	C
35	DA	2482	G
35	DA	2483	C
35	DA	2490	G

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Mol	Chain	Res	Type
35	DA	2491	U
35	DA	2502	G
35	DA	2504	U
35	DA	2505	G
35	DA	2506	U
35	DA	2518	A
35	DA	2520	C
35	DA	2524	G
35	DA	2525	G
35	DA	2529	G
35	DA	2535	G
35	DA	2542	A
35	DA	2543	G
35	DA	2545	G
35	DA	2546	U
35	DA	2550	G
35	DA	2553	G
35	DA	2554	U
35	DA	2555	U
35	DA	2559	C
35	DA	2560	C
35	DA	2566	A
35	DA	2567	G
35	DA	2569	G
35	DA	2570	G
35	DA	2573	C
35	DA	2575	C
35	DA	2578	G
35	DA	2585	U
35	DA	2602	A
35	DA	2608	G
35	DA	2609	U
35	DA	2610	C
35	DA	2611	U
35	DA	2612	C
35	DA	2615	U
35	DA	2619	C
35	DA	2632	A
35	DA	2636	U
35	DA	2637	U
35	DA	2641	G
35	DA	2654	A

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Mol	Chain	Res	Type
35	DA	2655	G
35	DA	2656	U
35	DA	2657	A
35	DA	2660	A
35	DA	2661	G
35	DA	2662	A
35	DA	2663	G
35	DA	2664	G
35	DA	2670	A
35	DA	2673	G
35	DA	2689	U
35	DA	2694	G
35	DA	2700	C
35	DA	2702	U
35	DA	2703	C
35	DA	2704	C
35	DA	2707	G
35	DA	2712(A)	A
35	DA	2713	A
35	DA	2714	G
35	DA	2718	G
35	DA	2723	C
35	DA	2726	U
35	DA	2733	A
35	DA	2734	A
35	DA	2757	A
35	DA	2762	G
35	DA	2764	A
35	DA	2765	A
35	DA	2766	G
35	DA	2769	C
35	DA	2770	G
35	DA	2778	A
35	DA	2779	U
35	DA	2780	G
35	DA	2781	A
35	DA	2782	G
35	DA	2785	C
35	DA	2789	C
35	DA	2790	A
35	DA	2791	C
35	DA	2792	G

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Mol	Chain	Res	Type
35	DA	2794	C
35	DA	2795	G
35	DA	2796	U
35	DA	2801	A
35	DA	2801(A)	A
35	DA	2802	G
35	DA	2803	C
35	DA	2804	C
35	DA	2807	G
35	DA	2808	U
35	DA	2820	A
35	DA	2821	A
35	DA	2830	G
35	DA	2832	U
35	DA	2833	G
35	DA	2834	G
35	DA	2835	A
35	DA	2849	U
35	DA	2850	A
35	DA	2858	C
35	DA	2859	G
35	DA	2860	A
35	DA	2861	G
35	DA	2864	G
35	DA	2865	U
35	DA	2866	U
35	DA	2872	G
35	DA	2873	A
35	DA	2874	C
35	DA	2876	G
35	DA	2877	G
35	DA	2879	C
35	DA	2880	C
35	DA	2892	A
35	DA	2894	G
35	DA	2895	U
35	DA	2896	C
35	DA	2897	U
36	DB	8	U
36	DB	9	G
36	DB	12	C
36	DB	13	A

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Mol	Chain	Res	Type
36	DB	16	G
36	DB	19	G
36	DB	21	G
36	DB	24	G
36	DB	25	A
36	DB	27	C
36	DB	29	A
36	DB	33	G
36	DB	34	U
36	DB	42	C
36	DB	44	G
36	DB	45	A
36	DB	47	C
36	DB	53	A
36	DB	56	G
36	DB	58	A
36	DB	59	A
36	DB	63	G
36	DB	65	C
36	DB	66	A
36	DB	67	G
36	DB	73	A
36	DB	81	G
36	DB	82	G
36	DB	85	G
36	DB	87	G
36	DB	88	C
36	DB	89	G
36	DB	90	A
36	DB	91	C
36	DB	92	C
36	DB	102	A
36	DB	110	G

All (293) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	56	U
1	AA	60	A
1	AA	70	G
1	AA	73	G
1	AA	79	G

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Mol	Chain	Res	Type
1	AA	108	G
1	AA	115	G
1	AA	119	A
1	AA	143	A
1	AA	146	G
1	AA	165	C
1	AA	173	U
1	AA	189(H)	G
1	AA	203	U
1	AA	243	A
1	AA	250	A
1	AA	266	G
1	AA	279	A
1	AA	327	A
1	AA	328	C
1	AA	353	A
1	AA	410	G
1	AA	419	C
1	AA	420	U
1	AA	429	U
1	AA	452	A
1	AA	456	C
1	AA	509	A
1	AA	566	G
1	AA	702	A
1	AA	748	C
1	AA	870	U
1	AA	913	A
1	AA	926	G
1	AA	983	A
1	AA	997	U
1	AA	1006	C
1	AA	1022	G
1	AA	1030(E)	A
1	AA	1049	U
1	AA	1054	C
1	AA	1065	U
1	AA	1067	A
1	AA	1125	U
1	AA	1129	C
1	AA	1136	U
1	AA	1139	G

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Mol	Chain	Res	Type
1	AA	1141	C
1	AA	1143	G
1	AA	1154	G
1	AA	1166	G
1	AA	1168	A
1	AA	1173	G
1	AA	1180	A
1	AA	1201	A
1	AA	1240	U
1	AA	1257	U
1	AA	1277	C
1	AA	1281	U
1	AA	1298	C
1	AA	1300	G
1	AA	1302	U
1	AA	1346	A
1	AA	1442(B)	A
1	AA	1452	C
1	AA	1504	G
1	AA	1505	G
22	AV	20	G
23	AW	7	A
23	AW	8	U
23	AW	9	A
23	AW	15	G
23	AW	45	U
23	AW	54	U
23	AW	66	U
23	AW	71	G
24	AX	13	A
35	BA	27	G
35	BA	34	C
35	BA	50	U
35	BA	71	A
35	BA	72	U
35	BA	81	G
35	BA	90	U
35	BA	103	A
35	BA	105	C
35	BA	128	C
35	BA	171	G
35	BA	271(H)	G

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Mol	Chain	Res	Type
35	BA	271(J)	C
35	BA	271(N)	U
35	BA	272	G
35	BA	272(B)	G
35	BA	272(G)	C
35	BA	272(H)	C
35	BA	274	G
35	BA	387	U
35	BA	405	U
35	BA	508	G
35	BA	512	G
35	BA	587	C
35	BA	651	G
35	BA	684	G
35	BA	685	A
35	BA	752	A
35	BA	827	U
35	BA	856	C
35	BA	882	G
35	BA	883	G
35	BA	897	C
35	BA	899	A
35	BA	945	A
35	BA	958	U
35	BA	1026	U
35	BA	1047	G
35	BA	1055	G
35	BA	1060	U
35	BA	1065	U
35	BA	1078	U
35	BA	1102	C
35	BA	1210	A
35	BA	1252	G
35	BA	1321	A
35	BA	1378	A
35	BA	1379	A
35	BA	1418	G
35	BA	1420	U
35	BA	1427	A
35	BA	1489	U
35	BA	1494	A
35	BA	1495	A

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Mol	Chain	Res	Type
35	BA	1496	A
35	BA	1545	A
35	BA	1546	C
35	BA	1566	A
35	BA	1583	A
35	BA	1615	C
35	BA	1660	C
35	BA	1698	A
35	BA	1763	G
35	BA	1783	A
35	BA	1799	G
35	BA	1801	G
35	BA	1819	A
35	BA	1847	A
35	BA	1912	A
35	BA	1992	G
35	BA	2114	A
35	BA	2126	A
35	BA	2225	A
35	BA	2277	G
35	BA	2286	A
35	BA	2344	U
35	BA	2405	G
35	BA	2406	U
35	BA	2422	A
35	BA	2542	A
35	BA	2610	C
35	BA	2611	U
35	BA	2629	A
35	BA	2660	A
35	BA	2689	U
35	BA	2712(A)	A
35	BA	2756	U
35	BA	2808	U
35	BA	2818	G
35	BA	2849	U
35	BA	2859	G
36	BB	66	A
36	BB	109	C
1	CA	6	G
1	CA	108	G
1	CA	115	G

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Mol	Chain	Res	Type
1	CA	201	C
1	CA	250	A
1	CA	266	G
1	CA	274	A
1	CA	327	A
1	CA	328	C
1	CA	353	A
1	CA	366	C
1	CA	389	A
1	CA	410	G
1	CA	429	U
1	CA	484	G
1	CA	509	A
1	CA	575	G
1	CA	687	A
1	CA	748	C
1	CA	793	U
1	CA	828	A
1	CA	992	U
1	CA	1049	U
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1141	C
1	CA	1145	C
1	CA	1183	A
1	CA	1201	A
1	CA	1300	G
1	CA	1319	A
1	CA	1363(A)	A
1	CA	1447	A
1	CA	1493	A
1	CA	1498	U
1	CA	1504	G
1	CA	1505	G
23	CW	31	A
23	CW	50	U
23	CW	51	U
23	CW	66	U
24	CX	18	G
35	DA	34	C

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Mol	Chain	Res	Type
35	DA	71	A
35	DA	90	U
35	DA	100	G
35	DA	128	C
35	DA	140	G
35	DA	171	G
35	DA	221	A
35	DA	272	G
35	DA	272(B)	G
35	DA	283	A
35	DA	288	C
35	DA	363(E)	U
35	DA	363(F)	A
35	DA	481	G
35	DA	494	G
35	DA	542	C
35	DA	574	C
35	DA	587	C
35	DA	764	A
35	DA	776	G
35	DA	825	C
35	DA	827	U
35	DA	830	G
35	DA	859	G
35	DA	933	A
35	DA	945	A
35	DA	1045	A
35	DA	1058	G
35	DA	1069	A
35	DA	1105	U
35	DA	1110	G
35	DA	1176	G
35	DA	1210	A
35	DA	1241	A
35	DA	1250	G
35	DA	1275	A
35	DA	1301	A
35	DA	1332	G
35	DA	1379	A
35	DA	1427	A
35	DA	1545	A
35	DA	1558	A

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Mol	Chain	Res	Type
35	DA	1608	A
35	DA	1617	C
35	DA	1653	G
35	DA	1740	G
35	DA	1763	G
35	DA	1781	C
35	DA	1799	G
35	DA	1899	G
35	DA	1905	C
35	DA	1929	G
35	DA	2062	A
35	DA	2126	A
35	DA	2191	G
35	DA	2218	U
35	DA	2225	A
35	DA	2308	G
35	DA	2309	A
35	DA	2310	A
35	DA	2406	U
35	DA	2422	A
35	DA	2439	A
35	DA	2477	C
35	DA	2481	G
35	DA	2490	G
35	DA	2542	A
35	DA	2610	C
35	DA	2655	G
35	DA	2662	A
35	DA	2779	U
35	DA	2859	G
35	DA	2873	A
36	DB	44	G
36	DB	52	A
36	DB	66	A
36	DB	81	G
36	DB	90	A

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 1384 ligands modelled in this entry, 1382 are monoatomic - leaving 2 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	$\#\|Z\| > 2$
60	EDS	CA	1787	-	41,43,43	3.00	9 (21%)	39,61,61	2.00	16 (41%)
60	EDS	AA	1805	-	41,43,43	3.05	12 (29%)	39,61,61	1.63	9 (23%)

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
60	EDS	CA	1787	-	-	4/23/79/79	0/3/3/3
60	EDS	AA	1805	-	-	6/23/79/79	0/3/3/3

All (21) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
60	AA	1805	EDS	CBJ-CBI	14.81	1.53	1.32
60	CA	1787	EDS	CBJ-CBI	14.33	1.52	1.32
60	CA	1787	EDS	CAX-NAM	5.72	1.52	1.45
60	AA	1805	EDS	CBE-NAK	5.69	1.46	1.34
60	AA	1805	EDS	CAX-NAM	5.54	1.52	1.45
60	CA	1787	EDS	OAC-CBA	5.20	1.50	1.43
60	CA	1787	EDS	CBE-NAK	5.00	1.44	1.34
60	CA	1787	EDS	OAF-CAZ	-4.38	1.37	1.44
60	AA	1805	EDS	OAJ-CBO	-4.26	1.20	1.42
60	CA	1787	EDS	OAJ-CBO	-4.14	1.21	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
60	AA	1805	EDS	OAC-CBA	3.63	1.48	1.43
60	AA	1805	EDS	OAF-CAZ	-3.47	1.39	1.44
60	AA	1805	EDS	CBC-CAZ	2.97	1.57	1.52
60	AA	1805	EDS	CAQ-CAR	2.86	1.56	1.52
60	CA	1787	EDS	OAH-CBE	-2.46	1.18	1.23
60	AA	1805	EDS	CBA-CAZ	2.30	1.54	1.52
60	CA	1787	EDS	OAC-CAW	2.25	1.46	1.41
60	AA	1805	EDS	CAY-CAX	-2.19	1.49	1.53
60	AA	1805	EDS	OAC-CAW	2.18	1.46	1.41
60	CA	1787	EDS	CBF-CBD	-2.09	1.46	1.52
60	AA	1805	EDS	OAH-CBE	-2.08	1.19	1.23

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	AA	1805	EDS	CAT-CAS-CAQ	4.69	118.62	109.11
60	CA	1787	EDS	CBA-OAC-CAW	3.74	117.30	111.53
60	CA	1787	EDS	CAV-CAR-NAK	-3.57	105.32	110.78
60	CA	1787	EDS	OAJ-CBO-CBN	3.56	124.58	111.50
60	CA	1787	EDS	CAT-CAS-CAQ	3.37	115.94	109.11
60	CA	1787	EDS	OAH-CBE-NAK	-3.32	117.01	122.96
60	CA	1787	EDS	CBH-NAM-CAX	-3.22	110.04	114.47
60	AA	1805	EDS	CAV-CAR-NAK	-3.06	106.10	110.78
60	CA	1787	EDS	CAR-NAK-CBE	-3.00	118.03	123.25
60	AA	1805	EDS	CAW-CAY-CAX	2.89	114.00	109.31
60	CA	1787	EDS	CAS-CAQ-CAR	-2.79	106.32	111.18
60	AA	1805	EDS	CBM-CBK-CBG	-2.70	108.82	112.52
60	CA	1787	EDS	CBF-CBJ-CBI	-2.67	112.29	121.22
60	CA	1787	EDS	CBL-NAO-CBN	-2.64	107.50	112.85
60	CA	1787	EDS	CAQ-CAR-NAK	2.62	114.84	110.57
60	AA	1805	EDS	CBF-CBJ-CBI	-2.61	112.47	121.22
60	AA	1805	EDS	CAQ-CAR-NAK	2.59	114.80	110.57
60	AA	1805	EDS	CBB-OAB-CAT	-2.50	112.06	117.98
60	AA	1805	EDS	OAJ-CBO-CBN	2.49	120.65	111.50
60	CA	1787	EDS	CBM-CBK-CBG	-2.21	109.50	112.52
60	CA	1787	EDS	CAV-CAR-CAQ	2.20	113.83	109.75
60	CA	1787	EDS	CBB-OAB-CAT	-2.18	112.82	117.98
60	CA	1787	EDS	CAW-CAY-CAX	2.11	112.73	109.31
60	CA	1787	EDS	CBB-OAG-CBI	-2.10	111.83	116.25
60	AA	1805	EDS	CBB-OAG-CBI	-2.07	111.88	116.25

There are no chirality outliers.

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
60	AA	1805	EDS	CBO-CBN-NAO-CBL
60	CA	1787	EDS	OAG-CBB-OAB-CAT
60	AA	1805	EDS	CBI-CBL-NAO-CBN
60	AA	1805	EDS	CAY-CAX-NAM-CBH
60	CA	1787	EDS	CAY-CAX-NAM-CBH
60	CA	1787	EDS	CBO-CBN-NAO-CBL
60	AA	1805	EDS	CBG-CBK-CBM-NAP
60	CA	1787	EDS	CBG-CBK-CBM-NAP
60	AA	1805	EDS	OAG-CBB-OAB-CAT
60	AA	1805	EDS	OAC-CAW-OAA-CAQ

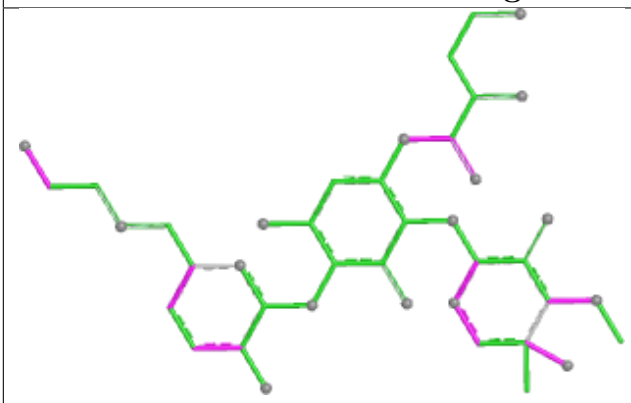
There are no ring outliers.

2 monomers are involved in 3 short contacts:

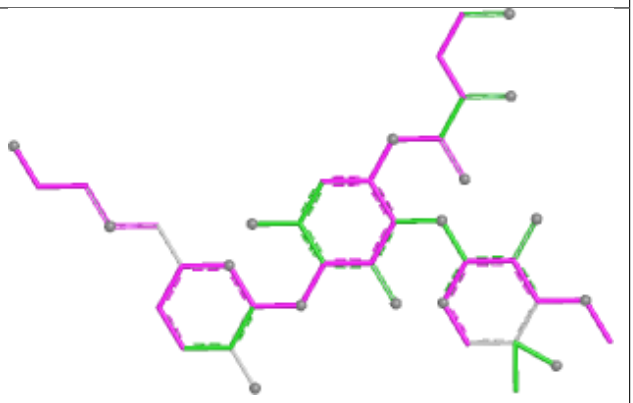
Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	CA	1787	EDS	1	0
60	AA	1805	EDS	2	0

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 then 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.

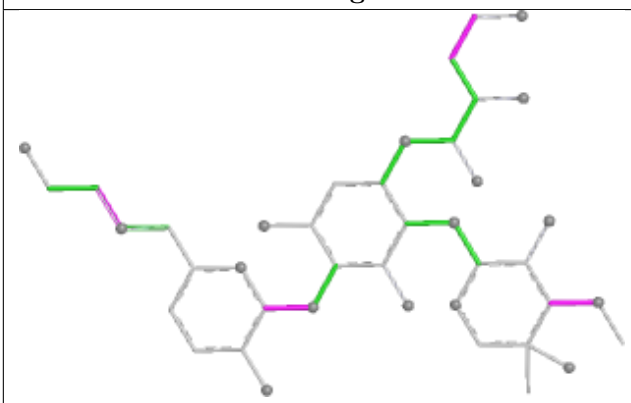
Ligand EDS CA 1787



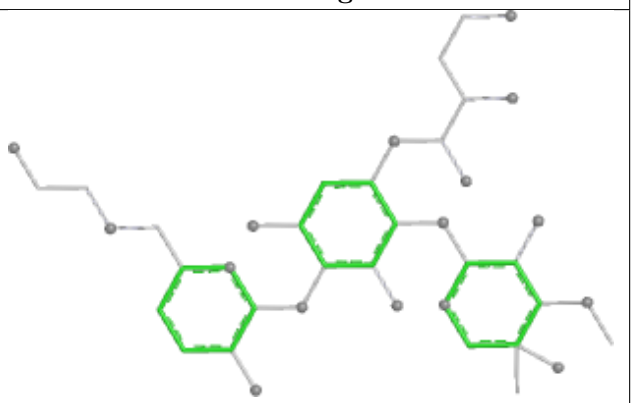
Bond lengths



Bond angles

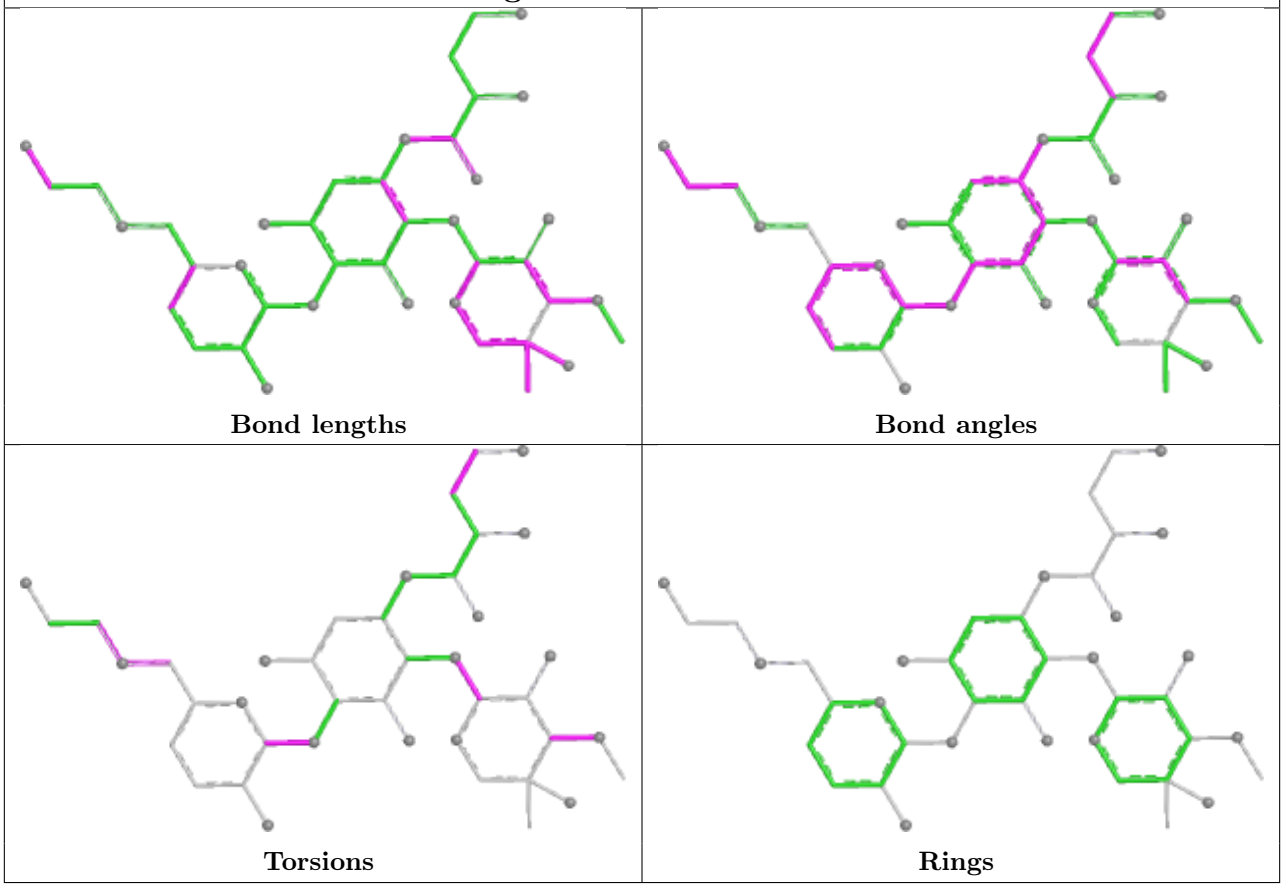


Torsions



Rings

Ligand EDS AA 1805



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1504/1520 (98%)	-0.12	46 (3%) 51 34	45, 87, 160, 209	0
1	CA	1504/1520 (98%)	-0.27	13 (0%) 81 65	41, 84, 187, 269	0
2	AB	218/256 (85%)	1.01	33 (15%) 5 5	101, 144, 193, 209	0
2	CB	234/256 (91%)	0.73	13 (5%) 30 20	92, 134, 190, 208	0
3	AC	206/239 (86%)	0.96	21 (10%) 12 10	89, 116, 150, 163	0
3	CC	207/239 (86%)	0.96	22 (10%) 11 10	77, 109, 151, 174	0
4	AD	208/209 (99%)	0.41	3 (1%) 73 55	65, 80, 100, 111	0
4	CD	208/209 (99%)	1.18	34 (16%) 4 4	73, 93, 118, 130	0
5	AE	150/162 (92%)	0.88	19 (12%) 8 7	70, 91, 117, 132	0
5	CE	151/162 (93%)	0.75	18 (11%) 9 8	63, 83, 110, 144	0
6	AF	101/101 (100%)	0.24	2 (1%) 65 46	69, 87, 102, 133	0
6	CF	101/101 (100%)	0.81	13 (12%) 7 6	68, 89, 110, 129	0
7	AG	155/156 (99%)	0.74	19 (12%) 8 7	90, 114, 148, 163	0
7	CG	155/156 (99%)	1.19	21 (13%) 7 6	90, 109, 144, 150	0
8	AH	138/138 (100%)	0.44	7 (5%) 33 23	69, 95, 112, 129	0
8	CH	138/138 (100%)	0.17	6 (4%) 40 26	70, 87, 103, 110	0
9	AI	121/128 (94%)	0.64	9 (7%) 20 16	90, 141, 171, 181	0
9	CI	127/128 (99%)	1.16	22 (17%) 4 4	77, 134, 175, 186	0
10	AJ	98/105 (93%)	1.28	20 (20%) 3 2	87, 150, 182, 186	0
10	CJ	98/105 (93%)	0.97	12 (12%) 8 7	75, 151, 194, 200	0
11	AK	119/129 (92%)	1.12	23 (19%) 3 3	72, 89, 120, 186	0
11	CK	119/129 (92%)	0.85	13 (10%) 10 9	54, 90, 135, 188	0
12	AL	122/132 (92%)	0.86	19 (15%) 5 4	56, 70, 94, 129	0
12	CL	124/132 (93%)	0.86	20 (16%) 4 4	49, 64, 106, 170	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	116/126 (92%)	0.65	13 (11%) 10 9	84, 121, 142, 155	0
13	CM	119/126 (94%)	1.21	26 (21%) 2 2	68, 110, 127, 143	0
14	AN	60/61 (98%)	0.79	6 (10%) 12 10	92, 111, 123, 129	0
14	CN	60/61 (98%)	0.56	4 (6%) 24 17	75, 96, 112, 123	0
15	AO	88/89 (98%)	0.11	0 100 100	68, 89, 116, 119	0
15	CO	88/89 (98%)	0.34	6 (6%) 23 17	64, 86, 110, 123	0
16	AP	83/88 (94%)	0.09	0 100 100	65, 77, 100, 140	0
16	CP	83/88 (94%)	0.31	2 (2%) 59 40	75, 88, 119, 176	0
17	AQ	99/105 (94%)	0.10	1 (1%) 79 63	65, 81, 105, 117	0
17	CQ	99/105 (94%)	0.64	6 (6%) 27 19	76, 88, 106, 117	0
18	AR	70/88 (79%)	0.64	4 (5%) 29 20	70, 90, 121, 132	0
18	CR	70/88 (79%)	0.48	3 (4%) 40 26	67, 86, 131, 149	0
19	AS	78/93 (83%)	0.76	8 (10%) 12 10	106, 141, 172, 180	0
19	CS	78/93 (83%)	0.94	8 (10%) 12 10	85, 113, 165, 167	0
20	AT	99/106 (93%)	0.22	1 (1%) 79 63	71, 89, 135, 151	0
20	CT	99/106 (93%)	0.31	3 (3%) 52 35	78, 104, 140, 145	0
21	AU	24/27 (88%)	0.33	0 100 100	90, 114, 134, 139	0
21	CU	25/27 (92%)	0.37	1 (4%) 42 28	86, 96, 126, 130	0
22	AV	76/77 (98%)	0.14	4 (5%) 32 22	56, 97, 125, 154	0
22	CV	77/77 (100%)	-0.25	2 (2%) 57 38	43, 88, 118, 155	0
23	AW	76/76 (100%)	1.69	26 (34%) 1 1	51, 193, 217, 221	0
23	AY	19/76 (25%)	1.17	4 (21%) 2 2	75, 101, 161, 166	0
23	CW	76/76 (100%)	0.87	9 (11%) 9 8	48, 194, 225, 230	0
23	CY	21/76 (27%)	0.75	3 (14%) 6 5	63, 99, 162, 202	0
24	AX	12/24 (50%)	0.91	3 (25%) 2 1	64, 74, 143, 145	0
24	CX	12/24 (50%)	0.32	3 (25%) 2 1	53, 60, 121, 127	0
25	B0	76/85 (89%)	0.14	3 (3%) 43 29	49, 69, 93, 149	0
25	D0	82/85 (96%)	0.43	11 (13%) 7 6	42, 57, 88, 102	0
26	B1	88/98 (89%)	1.49	23 (26%) 1 1	46, 65, 124, 140	0
26	D1	88/98 (89%)	1.42	23 (26%) 1 1	38, 60, 110, 120	0
27	B2	50/72 (69%)	3.41	36 (72%) 0 0	92, 120, 151, 164	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
27	D2	53/72 (73%)	1.98	23 (43%) 0 0	54, 69, 107, 120	0
28	B3	58/60 (96%)	0.39	3 (5%) 33 22	60, 74, 106, 109	0
28	D3	60/60 (100%)	0.06	0 100 100	43, 57, 101, 113	0
29	B4	45/71 (63%)	1.66	15 (33%) 1 1	91, 152, 167, 176	0
29	D4	49/71 (69%)	1.21	11 (22%) 2 2	81, 130, 153, 160	0
30	B5	54/60 (90%)	1.02	7 (12%) 7 6	38, 65, 120, 134	0
30	D5	60/60 (100%)	1.00	11 (18%) 3 3	28, 64, 147, 159	0
31	B6	46/54 (85%)	1.31	10 (21%) 2 2	68, 89, 104, 117	0
31	D6	47/54 (87%)	1.21	8 (17%) 4 4	67, 82, 116, 132	0
32	B7	48/49 (97%)	0.61	5 (10%) 11 10	38, 49, 78, 83	0
32	D7	48/49 (97%)	0.01	3 (6%) 26 18	29, 34, 68, 88	0
33	B8	63/65 (96%)	1.59	22 (34%) 1 1	49, 70, 86, 122	0
33	D8	62/65 (95%)	0.91	11 (17%) 4 3	41, 53, 71, 82	0
34	B9	37/37 (100%)	0.31	1 (2%) 56 37	77, 92, 106, 114	0
34	D9	37/37 (100%)	0.70	5 (13%) 7 6	59, 77, 98, 101	0
35	BA	2824/2839 (99%)	-0.07	133 (4%) 36 25	36, 63, 194, 265	0
35	DA	2824/2839 (99%)	-0.29	92 (3%) 49 33	27, 50, 193, 262	0
36	BB	120/122 (98%)	-0.12	4 (3%) 49 33	76, 99, 132, 148	0
36	DB	119/122 (97%)	-0.27	7 (5%) 28 19	53, 78, 113, 159	0
37	BC	190/229 (82%)	1.23	31 (16%) 4 4	161, 211, 232, 239	0
37	DC	190/229 (82%)	0.87	18 (9%) 14 11	166, 210, 231, 235	0
38	BD	273/276 (98%)	0.62	25 (9%) 14 11	34, 55, 77, 89	0
38	DD	275/276 (99%)	0.22	14 (5%) 33 23	28, 47, 73, 112	0
39	BE	204/206 (99%)	0.35	7 (3%) 48 32	41, 68, 120, 139	0
39	DE	204/206 (99%)	0.32	10 (4%) 35 24	27, 55, 101, 125	0
40	BF	206/210 (98%)	0.93	34 (16%) 4 4	34, 76, 149, 186	0
40	DF	208/210 (99%)	0.22	17 (8%) 17 14	29, 56, 138, 190	0
41	BG	178/182 (97%)	0.59	13 (7%) 21 16	84, 108, 143, 182	0
41	DG	181/182 (99%)	0.24	5 (2%) 55 36	67, 91, 134, 186	0
42	BH	159/180 (88%)	1.45	41 (25%) 1 1	117, 156, 198, 206	0
42	DH	165/180 (91%)	0.56	15 (9%) 15 12	57, 80, 107, 168	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
43	BI	145/148 (97%)	0.51	9 (6%) 26 19	61, 99, 133, 152	0
43	DI	144/148 (97%)	1.24	31 (21%) 2 2	55, 140, 180, 195	0
44	BJ	0/173	-	-	-	-
44	DJ	0/173	-	-	-	-
45	BK	0/147	-	-	-	-
45	DK	0/147	-	-	-	-
46	BN	137/140 (97%)	0.67	14 (10%) 12 10	50, 81, 126, 143	0
46	DN	140/140 (100%)	0.66	14 (10%) 12 10	42, 60, 102, 120	0
47	BO	122/122 (100%)	0.69	9 (7%) 20 16	46, 66, 87, 98	0
47	DO	122/122 (100%)	0.13	2 (1%) 70 52	38, 53, 77, 90	0
48	BP	144/150 (96%)	1.41	41 (28%) 1 1	44, 90, 126, 143	0
48	DP	146/150 (97%)	0.91	21 (14%) 6 5	32, 69, 100, 190	0
49	BQ	135/141 (95%)	1.13	23 (17%) 4 4	54, 85, 119, 154	0
49	DQ	136/141 (96%)	1.19	30 (22%) 2 2	45, 66, 106, 139	0
50	BR	116/118 (98%)	0.48	10 (8%) 16 13	46, 64, 103, 117	0
50	DR	117/118 (99%)	-0.12	1 (0%) 81 65	37, 53, 73, 90	0
51	BS	102/112 (91%)	0.99	16 (15%) 5 4	71, 102, 120, 127	0
51	DS	99/112 (88%)	0.64	11 (11%) 10 9	62, 82, 104, 107	0
52	BT	132/146 (90%)	0.75	17 (12%) 7 6	54, 77, 131, 169	0
52	DT	137/146 (93%)	0.67	17 (12%) 8 7	48, 68, 157, 221	0
53	BU	117/118 (99%)	0.45	4 (3%) 48 32	44, 72, 113, 127	0
53	DU	117/118 (99%)	0.43	6 (5%) 33 23	33, 53, 80, 106	0
54	BV	101/101 (100%)	1.48	27 (26%) 1 1	48, 110, 134, 183	0
54	DV	101/101 (100%)	1.02	14 (13%) 6 5	37, 81, 121, 153	0
55	BW	111/113 (98%)	1.19	24 (21%) 2 2	47, 61, 106, 123	0
55	DW	111/113 (98%)	0.33	7 (6%) 26 18	37, 46, 80, 135	0
56	BX	89/96 (92%)	1.82	37 (41%) 0 1	61, 82, 138, 159	0
56	DX	94/96 (97%)	0.86	14 (14%) 5 5	40, 55, 97, 140	0
57	BY	100/110 (90%)	1.84	40 (40%) 1 1	63, 105, 143, 160	0
57	DY	109/110 (99%)	1.18	26 (23%) 2 1	49, 76, 174, 200	0
58	BZ	176/206 (85%)	1.51	53 (30%) 1 1	92, 153, 201, 217	0
58	DZ	176/206 (85%)	1.21	39 (22%) 2 2	68, 128, 208, 216	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
All	All	21060/22694 (92%)	0.37	1828 (8%)	16	13	27, 80, 183, 269	0

All (1828) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	B5	2	ALA	15.9
7	CG	84	ASN	12.6
30	D5	1	MET	12.1
7	CG	85	TYR	11.5
11	AK	128	ALA	10.6
27	B2	31	GLU	9.9
11	CK	128	ALA	9.6
30	D5	2	ALA	9.1
9	CI	121	ARG	8.9
40	BF	86	GLY	8.8
27	B2	50	ILE	8.7
38	BD	57	GLY	8.5
10	AJ	59	SER	8.4
35	DA	1075	C	8.3
35	DA	1078	U	8.3
48	BP	58	THR	8.1
5	CE	18	ARG	8.0
35	DA	1532	C	7.9
3	AC	159	GLY	7.8
27	B2	54	LYS	7.8
1	AA	1452	C	7.6
26	D1	26	ARG	7.6
35	DA	1076	C	7.6
25	D0	4	LYS	7.5
27	B2	36	ARG	7.5
7	CG	83	ALA	7.4
49	DQ	136	ALA	7.4
49	BQ	90	VAL	7.4
11	CK	129	SER	7.3
7	CG	86	GLN	7.3
1	AA	1030(C)	C	7.2
55	BW	92	ARG	7.2
57	BY	61	ILE	7.1
35	BA	882	G	7.0
35	DA	1074	G	7.0
58	BZ	178	GLU	6.9
9	CI	128	ARG	6.9

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Mol	Chain	Res	Type	RSRZ
27	B2	46	GLN	6.7
54	BV	45	THR	6.7
27	D2	49	LYS	6.7
35	BA	1532	C	6.7
55	DW	90	ARG	6.7
13	CM	85	GLY	6.7
11	CK	127	LYS	6.6
46	DN	74	ARG	6.6
58	DZ	178	GLU	6.6
12	CL	27	LEU	6.5
7	CG	82	GLY	6.5
35	BA	896	A	6.5
35	DA	1079	C	6.4
27	B2	35	LEU	6.4
12	CL	28	LYS	6.4
35	DA	2795	G	6.3
40	BF	22	ALA	6.3
57	BY	5	MET	6.3
55	DW	91	GLY	6.2
57	BY	29	GLU	6.2
11	AK	129	SER	6.2
54	BV	81	TYR	6.2
54	BV	62	LEU	6.1
42	BH	34	GLU	6.1
35	BA	2506	U	6.1
48	BP	19	VAL	6.0
35	BA	229	A	6.0
26	B1	19	GLN	6.0
42	BH	24	VAL	5.9
56	BX	73	ARG	5.9
36	DB	1	U	5.9
7	CG	151	TYR	5.9
48	DP	52	GLU	5.9
46	DN	75	TYR	5.8
27	B2	24	LEU	5.8
42	BH	18	GLU	5.8
56	DX	26	TYR	5.8
9	CI	117	HIS	5.8
5	AE	15	ARG	5.7
6	CF	47	ARG	5.7
1	AA	89	C	5.7
7	AG	156	TRP	5.7

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Mol	Chain	Res	Type	RSRZ
26	B1	26	ARG	5.7
40	BF	83	PHE	5.7
41	DG	88	ILE	5.7
58	BZ	154	ASP	5.7
19	CS	80	TYR	5.6
42	BH	25	LYS	5.6
7	AG	81	GLY	5.6
49	DQ	24	GLY	5.6
35	DA	1080	C	5.6
30	B5	3	LYS	5.6
42	BH	32	GLU	5.6
49	DQ	17	LEU	5.5
12	AL	64	TYR	5.5
49	DQ	21	THR	5.5
20	CT	56	MET	5.5
19	CS	56	GLN	5.5
7	AG	83	ALA	5.5
35	DA	2794	C	5.5
12	CL	47	LYS	5.5
49	DQ	23	GLY	5.5
35	DA	896	A	5.5
27	D2	16	LEU	5.5
35	BA	2505	G	5.5
49	DQ	135	ASP	5.4
35	DA	1077	A	5.4
50	BR	29	LEU	5.4
4	CD	133	VAL	5.4
13	AM	119	GLY	5.4
12	AL	19	ARG	5.4
55	DW	92	ARG	5.4
7	CG	80	VAL	5.4
5	CE	21	ALA	5.4
11	AK	127	LYS	5.4
53	DU	4	ALA	5.4
38	DD	276	LYS	5.3
57	BY	86	ARG	5.3
27	B2	39	ALA	5.3
57	DY	58	GLY	5.3
35	BA	1533	G	5.3
54	BV	74	LYS	5.3
14	AN	34	TYR	5.2
35	DA	1533	G	5.2

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Mol	Chain	Res	Type	RSRZ
10	CJ	58	ASP	5.2
8	AH	104	ARG	5.2
55	BW	84	ARG	5.2
2	AB	131	PRO	5.2
27	B2	43	GLN	5.2
40	BF	72	ARG	5.2
4	CD	31	CYS	5.2
7	CG	77	SER	5.1
12	CL	26	ALA	5.1
42	DH	83	TYR	5.1
9	CI	116	LYS	5.1
25	D0	7	LEU	5.1
26	B1	20	ARG	5.1
27	B2	55	ARG	5.1
48	DP	59	LEU	5.1
49	DQ	90	VAL	5.1
3	AC	160	ALA	5.1
2	AB	152	PHE	5.1
35	BA	547	A	5.1
35	BA	652	C	5.1
27	B2	28	LYS	5.1
50	BR	33	ARG	5.0
27	D2	35	LEU	5.0
57	DY	102	CYS	5.0
5	AE	13	ILE	5.0
49	BQ	37	LEU	5.0
46	DN	140	VAL	5.0
57	BY	45	VAL	5.0
35	BA	548	A	4.9
56	BX	46	ALA	4.9
55	BW	91	GLY	4.9
7	CG	154	TYR	4.9
26	D1	40	ARG	4.9
39	BE	128	SER	4.9
10	CJ	50	ILE	4.9
39	DE	18	ASP	4.9
52	BT	106	SER	4.9
37	DC	85	GLU	4.9
46	DN	18	ALA	4.9
4	CD	144	ASP	4.9
35	BA	794	G	4.9
13	CM	115	LYS	4.8

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Mol	Chain	Res	Type	RSRZ
3	CC	164	ARG	4.8
26	B1	40	ARG	4.8
5	AE	12	LEU	4.8
56	BX	52	VAL	4.8
13	CM	84	ILE	4.8
9	CI	110	GLU	4.8
26	D1	38	SER	4.8
21	CU	2	GLY	4.8
38	BD	49	ILE	4.8
1	AA	1470	G	4.8
42	BH	76	VAL	4.7
11	CK	81	ASP	4.7
19	AS	79	THR	4.7
48	DP	60	MET	4.7
15	CO	89	GLY	4.7
23	AW	37	A	4.7
35	DA	2602	A	4.7
43	DI	81	VAL	4.7
18	AR	88	LYS	4.7
35	DA	1089	G	4.7
27	D2	61	LEU	4.7
56	BX	26	TYR	4.7
43	DI	85	GLU	4.7
9	CI	122	ALA	4.6
48	BP	57	THR	4.6
13	CM	102	ARG	4.6
7	CG	81	GLY	4.6
38	BD	220	HIS	4.6
27	B2	37	PHE	4.6
7	AG	84	ASN	4.6
35	BA	2118	U	4.6
39	DE	76	ARG	4.6
5	CE	23	GLY	4.6
33	B8	51	ALA	4.6
1	AA	161	A	4.6
25	D0	5	LYS	4.6
17	CQ	36	ILE	4.6
35	DA	508	G	4.6
53	BU	33	ARG	4.5
9	CI	123	PRO	4.5
5	CE	28	PHE	4.5
27	B2	42	GLY	4.5

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Mol	Chain	Res	Type	RSRZ
7	AG	2	ALA	4.5
57	DY	62	GLU	4.5
9	CI	126	SER	4.5
58	BZ	175	VAL	4.5
1	AA	1447	A	4.5
2	AB	130	ARG	4.5
40	BF	74	ARG	4.5
4	CD	138	TYR	4.5
23	AY	26	A	4.5
23	AW	34	G	4.5
23	AW	45	U	4.5
46	BN	73	THR	4.5
5	CE	25	ARG	4.5
53	BU	32	PHE	4.5
27	D2	17	SER	4.4
58	BZ	149	SER	4.4
3	CC	193	TYR	4.4
47	BO	80	ASP	4.4
23	AW	36	A	4.4
6	CF	45	LEU	4.4
38	DD	33	LEU	4.4
54	DV	45	THR	4.4
55	BW	89	ALA	4.3
12	AL	21	LYS	4.3
40	BF	62	ARG	4.3
35	DA	1543	C	4.3
6	CF	60	PHE	4.3
41	BG	155	MET	4.3
55	BW	90	ARG	4.3
10	AJ	62	HIS	4.3
18	AR	20	ALA	4.3
40	BF	65	TRP	4.3
29	B4	12	ALA	4.3
57	DY	107	ASP	4.3
50	DR	3	HIS	4.3
27	D2	33	MET	4.3
2	AB	102	LEU	4.3
56	BX	37	THR	4.3
58	BZ	176	PRO	4.3
33	B8	64	TYR	4.3
49	BQ	19	GLY	4.3
57	BY	59	GLY	4.3

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Mol	Chain	Res	Type	RSRZ
42	DH	58	GLU	4.3
52	DT	45	PHE	4.2
56	BX	47	PHE	4.2
13	CM	95	GLY	4.2
25	D0	8	GLY	4.2
39	BE	71	GLY	4.2
6	CF	46	ARG	4.2
54	BV	18	LEU	4.2
57	DY	56	PRO	4.2
23	AW	39	U	4.2
35	BA	1787	A	4.2
35	DA	274	G	4.2
27	B2	27	GLU	4.2
26	D1	50	ARG	4.2
19	CS	57	HIS	4.2
11	AK	49	GLY	4.2
1	AA	5	U	4.2
31	B6	13	CYS	4.2
51	BS	87	PHE	4.2
3	AC	124	ILE	4.2
55	BW	82	LEU	4.2
35	BA	787	U	4.2
40	DF	89	VAL	4.1
34	D9	1	MET	4.1
1	AA	1469	G	4.1
11	AK	35	PRO	4.1
48	BP	27	HIS	4.1
55	DW	85	VAL	4.1
57	BY	3	VAL	4.1
54	BV	20	LEU	4.1
6	CF	48	LEU	4.1
58	BZ	150	LEU	4.1
11	AK	31	THR	4.1
13	CM	105	THR	4.1
49	BQ	87	LYS	4.1
11	AK	12	ARG	4.1
12	AL	18	VAL	4.1
42	BH	44	VAL	4.1
29	B4	39	CYS	4.1
26	D1	32	LYS	4.1
48	DP	51	PHE	4.1
56	BX	65	ARG	4.1

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Mol	Chain	Res	Type	RSRZ
1	AA	81	U	4.1
26	B1	85	LEU	4.0
11	AK	36	ASP	4.0
51	BS	88	ASP	4.0
13	CM	111	LYS	4.0
27	D2	50	ILE	4.0
7	CG	78	ARG	4.0
1	AA	82	U	4.0
35	BA	2207	G	4.0
9	AI	59	PHE	4.0
1	AA	1030	C	4.0
30	D5	3	LYS	4.0
50	BR	31	HIS	4.0
4	CD	141	ARG	4.0
7	AG	154	TYR	4.0
57	BY	48	ALA	4.0
35	BA	549	G	4.0
57	DY	51	VAL	4.0
35	BA	764	A	4.0
37	BC	152	ILE	4.0
49	BQ	127	ILE	4.0
57	DY	108	THR	4.0
4	CD	135	LEU	4.0
58	BZ	177	PRO	4.0
9	AI	115	GLY	4.0
58	BZ	169	GLU	4.0
26	B1	82	LEU	4.0
9	CI	100	GLY	3.9
9	CI	119	ALA	3.9
49	DQ	79	LEU	3.9
35	BA	765	G	3.9
37	BC	88	GLU	3.9
57	DY	49	VAL	3.9
23	AW	43	C	3.9
27	B2	51	ARG	3.9
33	B8	13	ARG	3.9
50	BR	32	GLY	3.9
40	BF	206	ILE	3.9
56	DX	70	LEU	3.9
42	DH	44	VAL	3.9
56	BX	51	VAL	3.9
54	DV	101	GLY	3.9

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Mol	Chain	Res	Type	RSRZ
26	D1	19	GLN	3.9
36	DB	87	G	3.9
33	D8	51	ALA	3.9
12	AL	28	LYS	3.9
3	CC	196	LEU	3.9
13	CM	117	VAL	3.9
28	B3	48	GLU	3.9
31	B6	29	ASN	3.9
27	B2	52	ASP	3.9
53	DU	91	ASP	3.9
18	AR	46	GLU	3.8
27	B2	29	LYS	3.8
55	BW	43	GLY	3.8
35	DA	1064	C	3.8
5	AE	31	LEU	3.8
41	BG	39	ILE	3.8
54	DV	86	GLY	3.8
27	B2	30	ARG	3.8
33	B8	23	VAL	3.8
57	BY	63	LYS	3.8
2	AB	86	GLU	3.8
47	BO	27	GLY	3.8
3	CC	101	LEU	3.8
56	DX	68	ARG	3.8
32	B7	40	TRP	3.8
58	BZ	116	VAL	3.8
35	DA	1066	U	3.8
4	CD	131	ARG	3.8
38	DD	49	ILE	3.8
9	CI	115	GLY	3.8
33	B8	63	PRO	3.8
40	DF	72	ARG	3.8
57	BY	55	TYR	3.8
1	AA	83	U	3.8
1	CA	344	A	3.8
23	AW	33	U	3.8
35	DA	1094	U	3.8
35	BA	543	C	3.7
26	D1	30	VAL	3.7
2	AB	108	ILE	3.7
11	AK	126	ARG	3.7
42	BH	149	ARG	3.7

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Mol	Chain	Res	Type	RSRZ
10	CJ	10	GLY	3.7
11	CK	50	TYR	3.7
57	DY	109	GLU	3.7
4	CD	26	CYS	3.7
4	CD	140	VAL	3.7
42	BH	17	VAL	3.7
13	CM	94	ARG	3.7
48	BP	56	SER	3.7
33	B8	50	LEU	3.7
26	D1	27	GLU	3.7
35	DA	2793	G	3.7
7	AG	4	ARG	3.7
9	CI	120	ARG	3.7
13	CM	110	ARG	3.7
56	BX	60	ARG	3.7
23	CW	32	U	3.7
35	DA	6	A	3.7
33	D8	52	LYS	3.7
38	BD	40	THR	3.7
4	CD	154	ASN	3.7
35	DA	1087	G	3.7
10	CJ	47	PHE	3.7
48	BP	91	PHE	3.7
57	DY	59	GLY	3.7
33	B8	37	SER	3.7
55	BW	44	ALA	3.7
43	BI	9	LEU	3.7
27	B2	47	ASN	3.7
57	BY	43	ASN	3.7
35	BA	792	G	3.6
24	AX	13	A	3.6
50	BR	28	LEU	3.6
1	AA	91	C	3.6
3	CC	186	PHE	3.6
49	DQ	88	GLY	3.6
52	DT	24	PRO	3.6
51	DS	66	ALA	3.6
57	BY	65	ALA	3.6
29	D4	24	THR	3.6
38	BD	33	LEU	3.6
37	DC	84	LYS	3.6
35	BA	539	G	3.6

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Mol	Chain	Res	Type	RSRZ
55	BW	111	HIS	3.6
35	BA	777	A	3.6
12	CL	53	ARG	3.6
7	AG	80	VAL	3.6
17	CQ	35	VAL	3.6
30	B5	6	VAL	3.6
35	BA	2442	C	3.6
35	DA	2612	C	3.6
42	BH	169	VAL	3.6
56	BX	9	LEU	3.6
33	D8	31	HIS	3.6
3	AC	155	GLY	3.6
26	B1	41	ARG	3.6
37	BC	220	PRO	3.6
58	BZ	108	PRO	3.6
40	BF	24	LEU	3.6
6	CF	57	GLN	3.6
27	D2	58	ALA	3.6
52	BT	70	VAL	3.6
50	BR	23	ASN	3.6
27	D2	60	LEU	3.6
48	BP	59	LEU	3.6
5	AE	11	ILE	3.6
13	CM	37	THR	3.6
50	BR	30	THR	3.6
18	AR	87	ARG	3.5
35	DA	669	G	3.5
35	BA	1531	C	3.5
26	D1	25	LYS	3.5
57	BY	62	GLU	3.5
37	BC	50	ASP	3.5
2	CB	15	VAL	3.5
1	AA	1030(E)	A	3.5
43	BI	1	MET	3.5
55	BW	86	LEU	3.5
23	AY	27	G	3.5
35	BA	656	G	3.5
49	DQ	91	GLU	3.5
4	CD	132	ARG	3.5
17	CQ	100	LYS	3.5
52	DT	1	MET	3.5
49	DQ	139	GLU	3.5

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Mol	Chain	Res	Type	RSRZ
24	AX	12	A	3.5
48	BP	80	TYR	3.5
33	B8	48	PHE	3.5
35	BA	2055	C	3.5
23	AW	44	G	3.5
27	D2	15	LYS	3.5
35	BA	81	G	3.5
35	DA	1099	G	3.5
51	BS	98	VAL	3.5
4	CD	48	ALA	3.5
12	AL	26	ALA	3.5
12	CL	128	ALA	3.5
27	D2	10	LEU	3.5
56	DX	92	LEU	3.5
48	BP	60	MET	3.5
50	BR	34	ILE	3.5
54	BV	70	ILE	3.5
13	CM	104	ARG	3.5
38	BD	217	ARG	3.5
31	B6	26	ASN	3.5
56	BX	72	LYS	3.5
12	AL	55	VAL	3.5
35	DA	1088	A	3.5
42	BH	12	PRO	3.5
43	DI	80	PRO	3.5
58	DZ	8	TYR	3.4
38	DD	44	ASN	3.4
48	BP	22	GLY	3.4
3	AC	87	LEU	3.4
27	B2	61	LEU	3.4
54	BV	75	PHE	3.4
35	BA	763	G	3.4
38	BD	50	THR	3.4
57	BY	44	ILE	3.4
8	AH	87	SER	3.4
9	AI	126	SER	3.4
58	DZ	6	LYS	3.4
24	CX	14	A	3.4
2	AB	15	VAL	3.4
56	BX	66	LEU	3.4
57	DY	57	GLN	3.4
23	AW	29	G	3.4

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Mol	Chain	Res	Type	RSRZ
35	BA	139	G	3.4
35	DA	776	G	3.4
35	DA	1888	G	3.4
56	DX	34	ALA	3.4
1	AA	412	A	3.4
23	CY	26	A	3.4
35	DA	547	A	3.4
37	BC	153	ILE	3.4
41	BG	88	ILE	3.4
46	BN	3	THR	3.4
9	CI	127	LYS	3.4
54	BV	50	PRO	3.4
57	BY	47	LYS	3.4
35	BA	791	C	3.4
41	BG	80	PHE	3.4
57	DY	52	SER	3.4
13	CM	98	VAL	3.4
57	BY	49	VAL	3.4
51	DS	105	ALA	3.4
27	D2	9	GLN	3.4
35	BA	1321	A	3.3
35	BA	786	C	3.3
38	DD	43	ARG	3.3
42	DH	60	ARG	3.3
40	BF	207	GLY	3.3
58	BZ	110	GLY	3.3
38	BD	105	ILE	3.3
43	DI	109	ILE	3.3
27	D2	43	GLN	3.3
33	B8	34	TRP	3.3
1	AA	88	A	3.3
35	BA	788	A	3.3
46	DN	76	SER	3.3
48	BP	39	LYS	3.3
57	BY	101	LYS	3.3
7	AG	82	GLY	3.3
26	D1	54	ALA	3.3
42	BH	156	ALA	3.3
58	BZ	51	ALA	3.3
35	BA	2609	U	3.3
13	CM	114	ARG	3.3
43	BI	35	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
58	BZ	117	LEU	3.3
8	CH	93	VAL	3.3
37	BC	87	GLU	3.3
35	BA	2792	G	3.3
26	B1	84	GLY	3.3
39	DE	204	ALA	3.3
48	DP	143	GLY	3.3
23	CW	35	A	3.3
35	DA	652	C	3.3
2	AB	71	VAL	3.3
7	AG	141	VAL	3.3
12	AL	23	LYS	3.3
58	DZ	120	ILE	3.3
48	BP	24	GLY	3.3
9	CI	125	TYR	3.3
26	D1	86	SER	3.3
38	DD	32	SER	3.3
4	CD	9	CYS	3.3
58	BZ	134	PRO	3.3
5	CE	20	GLN	3.3
23	AW	70	G	3.3
46	DN	138	LEU	3.3
54	DV	46	VAL	3.3
1	AA	1531	A	3.3
23	AW	35	A	3.3
35	BA	1778	U	3.3
26	B1	61	ARG	3.2
40	DF	66	PRO	3.2
26	B1	94	LEU	3.2
58	BZ	155	LEU	3.2
37	BC	207	THR	3.2
37	BC	217	THR	3.2
48	BP	13	ASN	3.2
25	D0	6	GLY	3.2
58	BZ	115	GLY	3.2
19	CS	78	ARG	3.2
35	BA	774	A	3.2
1	CA	345	C	3.2
23	AY	40	C	3.2
12	CL	25	PRO	3.2
26	D1	10	LYS	3.2
29	B4	37	SER	3.2

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Mol	Chain	Res	Type	RSRZ
43	BI	20	ASP	3.2
54	DV	47	VAL	3.2
57	BY	51	VAL	3.2
58	BZ	121	HIS	3.2
31	D6	30	THR	3.2
32	D7	1	MET	3.2
49	BQ	66	ILE	3.2
37	BC	86	ALA	3.2
10	CJ	60	ARG	3.2
26	D1	55	GLY	3.2
26	D1	94	LEU	3.2
30	D5	58	LEU	3.2
32	B7	14	LYS	3.2
39	DE	52	LEU	3.2
52	BT	68	TYR	3.2
35	BA	1779	U	3.2
3	CC	207	VAL	3.2
35	BA	105	C	3.2
35	DA	1886	C	3.2
40	DF	77	ASP	3.2
7	CG	6	ARG	3.2
29	D4	20	ASN	3.2
33	D8	50	LEU	3.2
29	D4	49	PHE	3.2
49	BQ	4	PRO	3.2
30	D5	60	VAL	3.2
55	BW	85	VAL	3.2
31	B6	30	THR	3.2
51	BS	23	ARG	3.2
7	CG	156	TRP	3.2
36	DB	119	G	3.2
38	DD	275	LYS	3.2
48	BP	36	LYS	3.2
46	BN	91	LEU	3.2
53	DU	98	LEU	3.2
57	BY	64	GLU	3.2
49	BQ	89	ASN	3.2
2	CB	222	ILE	3.2
5	CE	27	ARG	3.2
57	BY	6	HIS	3.2
5	AE	16	THR	3.2
9	CI	118	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
49	DQ	25	ASP	3.1
56	BX	77	LYS	3.1
52	DT	109	GLU	3.1
13	CM	87	TYR	3.1
42	BH	157	TYR	3.1
35	BA	766	C	3.1
35	BA	2070	G	3.1
35	DA	1882	C	3.1
35	DA	1883	G	3.1
33	B8	7	HIS	3.1
48	BP	38	GLN	3.1
42	BH	30	LYS	3.1
50	BR	27	SER	3.1
37	DC	159	GLY	3.1
40	DF	87	GLY	3.1
31	D6	42	TRP	3.1
27	B2	34	GLU	3.1
29	D4	3	GLU	3.1
48	DP	146	VAL	3.1
15	CO	64	ARG	3.1
49	DQ	4	PRO	3.1
55	BW	45	TYR	3.1
1	CA	968	A	3.1
37	DC	83	ILE	3.1
49	BQ	136	ALA	3.1
49	DQ	20	ALA	3.1
35	DA	2799	C	3.1
1	AA	1030(D)	G	3.1
5	CE	22	GLY	3.1
35	DA	2207	G	3.1
52	BT	21	GLU	3.1
30	B5	52	TYR	3.1
56	DX	69	TYR	3.1
54	BV	76	LYS	3.1
35	DA	548	A	3.1
2	AB	134	GLU	3.1
2	CB	96	ARG	3.1
5	AE	55	VAL	3.1
9	CI	91	ASP	3.1
36	DB	88	C	3.1
48	BP	94	GLU	3.1
57	BY	2	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
25	D0	83	PRO	3.1
42	BH	85	LYS	3.1
1	AA	1471	G	3.1
5	AE	10	MET	3.1
35	BA	1529	G	3.1
35	BA	2659	G	3.1
3	CC	189	ALA	3.1
13	AM	76	ALA	3.1
35	DA	1090	U	3.1
35	DA	2796	U	3.1
54	DV	62	LEU	3.1
26	D1	29	GLY	3.1
33	D8	56	GLU	3.1
27	B2	41	ILE	3.1
37	BC	49	ILE	3.1
54	DV	39	LEU	3.0
55	BW	54	ALA	3.0
13	AM	92	HIS	3.0
46	BN	101	HIS	3.0
58	BZ	170	THR	3.0
35	BA	1026	U	3.0
32	D7	48	LYS	3.0
8	CH	89	PRO	3.0
35	BA	685	A	3.0
35	BA	1783	A	3.0
35	DA	1098	A	3.0
39	BE	54	GLN	3.0
23	AW	40	C	3.0
23	CW	42	C	3.0
35	BA	687	C	3.0
30	B5	10	LYS	3.0
47	DO	120	GLU	3.0
27	B2	32	LEU	3.0
6	CF	50	TYR	3.0
11	CK	60	ALA	3.0
30	D5	53	ALA	3.0
38	DD	48	ARG	3.0
7	CG	153	HIS	3.0
40	BF	75	HIS	3.0
34	B9	37	GLY	3.0
38	BD	55	GLY	3.0
48	BP	29	LYS	3.0

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Mol	Chain	Res	Type	RSRZ
1	AA	162	A	3.0
1	AA	1225	A	3.0
23	AW	31	A	3.0
35	BA	2062	A	3.0
42	BH	35	VAL	3.0
3	CC	15	THR	3.0
4	AD	34	GLU	3.0
10	AJ	95	GLU	3.0
35	BA	1543	C	3.0
37	BC	85	GLU	3.0
56	BX	38	GLU	3.0
9	CI	98	PRO	3.0
26	B1	80	LEU	3.0
12	CL	41	ARG	3.0
51	DS	100	ALA	3.0
56	DX	91	ALA	3.0
35	DA	1081	U	3.0
5	CE	9	LYS	3.0
46	BN	2	LYS	3.0
4	AD	31	CYS	3.0
54	DV	58	VAL	3.0
4	CD	129	ASN	3.0
43	BI	11	ASN	3.0
10	AJ	47	PHE	3.0
46	BN	16	ILE	3.0
5	AE	123	LEU	3.0
35	DA	2062	A	3.0
42	BH	29	PRO	3.0
57	BY	31	LEU	3.0
57	DY	53	PRO	3.0
57	BY	50	ARG	3.0
35	BA	574	C	3.0
40	BF	85	GLY	3.0
2	CB	110	GLN	3.0
33	D8	48	PHE	3.0
48	BP	45	LEU	2.9
48	BP	50	ARG	2.9
35	BA	82	G	2.9
13	AM	75	ALA	2.9
43	DI	115	ALA	2.9
7	AG	85	TYR	2.9
48	BP	42	SER	2.9

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Mol	Chain	Res	Type	RSRZ
1	AA	160	A	2.9
1	CA	1447	A	2.9
6	CF	9	VAL	2.9
4	CD	134	ASP	2.9
33	B8	38	GLY	2.9
54	BV	46	VAL	2.9
33	D8	41	ILE	2.9
46	BN	60	ILE	2.9
4	CD	12	CYS	2.9
26	D1	95	LEU	2.9
29	D4	18	CYS	2.9
37	DC	88	GLU	2.9
39	BE	204	ALA	2.9
57	BY	98	VAL	2.9
35	BA	651	G	2.9
35	BA	1448	G	2.9
58	BZ	136	PHE	2.9
43	DI	79	ILE	2.9
23	AW	38	A	2.9
23	CY	31	A	2.9
42	DH	170	ARG	2.9
11	AK	38	ASN	2.9
12	AL	46	LYS	2.9
35	BA	688	U	2.9
13	AM	87	TYR	2.9
30	D5	57	VAL	2.9
57	DY	55	TYR	2.9
42	BH	28	GLY	2.9
58	BZ	55	HIS	2.9
11	AK	18	ARG	2.9
37	BC	154	ARG	2.9
40	BF	28	ILE	2.9
20	CT	84	LEU	2.9
33	B8	15	LYS	2.9
29	B4	27	THR	2.9
3	CC	166	GLU	2.9
35	BA	919	G	2.9
37	BC	201	PRO	2.9
35	BA	677	A	2.9
57	DY	99	CYS	2.9
54	BV	57	VAL	2.9
35	DA	2804	C	2.9

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Mol	Chain	Res	Type	RSRZ
36	BB	84	C	2.9
42	BH	82	GLY	2.9
48	BP	37	GLY	2.9
18	CR	42	ARG	2.9
48	BP	21	ARG	2.9
48	DP	50	ARG	2.9
33	B8	61	LEU	2.9
52	BT	85	LYS	2.9
58	DZ	18	LEU	2.9
58	DZ	125	LEU	2.9
13	CM	97	PRO	2.9
49	DQ	78	PRO	2.9
49	BQ	102	VAL	2.9
56	BX	43	VAL	2.9
35	DA	2310	A	2.9
38	BD	6	PHE	2.9
47	BO	99	PHE	2.9
48	DP	33	ARG	2.9
52	DT	29	ARG	2.9
12	AL	27	LEU	2.9
34	D9	2	LYS	2.9
22	CV	1	C	2.8
35	BA	2610	C	2.8
3	CC	100	ALA	2.8
33	B8	56	GLU	2.8
4	CD	77	ASN	2.8
7	CG	87	VAL	2.8
31	D6	20	ASN	2.8
58	DZ	174	VAL	2.8
13	CM	93	ARG	2.8
33	D8	30	ARG	2.8
43	DI	82	ARG	2.8
12	CL	126	LYS	2.8
3	AC	196	LEU	2.8
13	CM	90	LEU	2.8
37	BC	156	ILE	2.8
41	BG	53	LEU	2.8
49	BQ	104	PHE	2.8
30	B5	51	TYR	2.8
43	DI	71	ILE	2.8
56	DX	89	ILE	2.8
12	AL	80	HIS	2.8

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Mol	Chain	Res	Type	RSRZ
9	CI	124	GLN	2.8
52	DT	131	ALA	2.8
56	BX	79	ALA	2.8
22	CV	47	U	2.8
41	BG	87	PRO	2.8
33	D8	27	THR	2.8
52	BT	27	THR	2.8
1	AA	848	C	2.8
3	AC	76	VAL	2.8
19	AS	60	VAL	2.8
35	DA	279	C	2.8
42	BH	50	VAL	2.8
48	BP	17	LYS	2.8
56	BX	33	LYS	2.8
57	DY	63	LYS	2.8
39	BE	78	LEU	2.8
58	BZ	160	GLY	2.8
2	AB	135	GLN	2.8
29	D4	47	GLN	2.8
56	BX	87	GLN	2.8
55	DW	93	ALA	2.8
37	DC	223	ARG	2.8
48	DP	41	ARG	2.8
56	BX	76	ARG	2.8
38	DD	40	THR	2.8
51	DS	99	LYS	2.8
35	BA	2504	U	2.8
4	CD	23	GLY	2.8
5	CE	19	MET	2.8
13	AM	78	ILE	2.8
56	BX	80	ILE	2.8
1	AA	840	C	2.8
9	AI	114	TYR	2.8
55	BW	62	HIS	2.8
48	DP	150	ALA	2.8
58	BZ	172	ALA	2.8
48	BP	18	ARG	2.8
8	CH	116	LYS	2.8
26	B1	87	PRO	2.8
42	BH	19	VAL	2.8
42	DH	169	VAL	2.8
4	CD	19	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
10	AJ	85	LEU	2.8
31	D6	15	GLU	2.8
13	AM	83	ASP	2.8
27	D2	57	ILE	2.8
40	DF	86	GLY	2.8
46	DN	1	MET	2.8
48	BP	110	TYR	2.8
38	BD	233	HIS	2.8
4	CD	47	ARG	2.8
1	AA	1163	C	2.8
33	B8	55	ALA	2.8
37	BC	204	ALA	2.8
54	BV	83	ARG	2.8
58	DZ	49	ARG	2.8
35	BA	1530	C	2.8
58	BZ	46	LYS	2.8
22	AV	2	G	2.8
23	CY	24	G	2.8
35	DA	881	G	2.8
7	AG	74	GLU	2.8
2	AB	127	ILE	2.8
10	AJ	96	ILE	2.8
13	CM	109	THR	2.8
49	BQ	21	THR	2.8
49	BQ	91	GLU	2.8
29	B4	31	ILE	2.8
58	BZ	124	ILE	2.8
10	AJ	12	ASP	2.7
3	AC	193	TYR	2.7
7	AG	76	ARG	2.7
27	B2	49	LYS	2.7
57	BY	34	LYS	2.7
24	AX	15	A	2.7
35	BA	2587	A	2.7
52	BT	90	GLN	2.7
2	AB	155	LEU	2.7
42	BH	33	LEU	2.7
1	AA	1429	C	2.7
23	AW	68	C	2.7
25	B0	10	THR	2.7
26	D1	35	THR	2.7
26	D1	89	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
35	BA	393	C	2.7
35	BA	775	G	2.7
51	BS	9	ARG	2.7
54	BV	88	ARG	2.7
56	BX	68	ARG	2.7
3	CC	199	LYS	2.7
2	AB	113	HIS	2.7
48	BP	12	ALA	2.7
58	BZ	113	ALA	2.7
3	AC	198	VAL	2.7
28	B3	59	VAL	2.7
48	DP	71	VAL	2.7
27	B2	44	LEU	2.7
51	BS	107	GLU	2.7
1	CA	1503	A	2.7
3	AC	197	GLY	2.7
26	B1	38	SER	2.7
49	BQ	62	GLY	2.7
51	BS	96	GLY	2.7
7	AG	155	ARG	2.7
56	BX	62	LYS	2.7
35	DA	1072	C	2.7
32	B7	45	ALA	2.7
37	DC	25	ALA	2.7
58	BZ	165	VAL	2.7
13	CM	96	LEU	2.7
19	CS	16	LEU	2.7
58	BZ	102	LEU	2.7
2	AB	110	GLN	2.7
35	BA	382	G	2.7
46	DN	79	PRO	2.7
7	CG	79	ARG	2.7
13	AM	88	ARG	2.7
49	DQ	128	LYS	2.7
54	BV	49	THR	2.7
29	D4	32	TYR	2.7
55	BW	93	ALA	2.7
10	CJ	94	VAL	2.7
40	BF	69	HIS	2.7
35	BA	2111	C	2.7
43	DI	138	ILE	2.7
57	BY	56	PRO	2.7

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Mol	Chain	Res	Type	RSRZ
31	B6	24	GLU	2.7
42	BH	31	GLY	2.7
48	DP	57	THR	2.7
1	AA	887	G	2.7
26	B1	86	SER	2.7
11	CK	65	ALA	2.7
1	AA	1425	U	2.7
13	AM	19	LEU	2.7
13	CM	7	VAL	2.7
29	B4	43	TYR	2.7
39	BE	75	VAL	2.7
40	BF	160	ASN	2.7
2	AB	70	PHE	2.6
35	BA	1177	A	2.6
40	BF	81	PRO	2.6
41	BG	52	ILE	2.6
49	BQ	12	GLN	2.6
5	AE	14	ARG	2.6
2	AB	141	GLU	2.6
49	BQ	88	GLY	2.6
33	B8	6	THR	2.6
3	CC	167	TRP	2.6
10	AJ	94	VAL	2.6
27	B2	13	ALA	2.6
27	B2	21	LEU	2.6
27	B2	53	LEU	2.6
56	BX	4	ALA	2.6
57	BY	42	VAL	2.6
42	DH	65	HIS	2.6
2	AB	133	LYS	2.6
17	CQ	34	LYS	2.6
37	DC	160	ARG	2.6
38	BD	218	ARG	2.6
35	BA	767	U	2.6
35	BA	2611	U	2.6
54	BV	80	GLN	2.6
58	BZ	104	PHE	2.6
8	AH	131	GLY	2.6
38	BD	210	GLY	2.6
38	DD	25	THR	2.6
3	CC	188	LEU	2.6
38	BD	2	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
51	DS	102	ALA	2.6
56	BX	49	VAL	2.6
58	BZ	111	VAL	2.6
58	BZ	163	LEU	2.6
58	DZ	172	ALA	2.6
52	BT	67	SER	2.6
13	AM	84	ILE	2.6
38	BD	69	ARG	2.6
38	DD	38	LYS	2.6
40	DF	62	ARG	2.6
53	DU	16	LYS	2.6
54	BV	69	LYS	2.6
11	AK	121	PRO	2.6
37	DC	220	PRO	2.6
5	CE	5	ASP	2.6
6	CF	58	GLY	2.6
35	BA	2613	U	2.6
40	BF	56	GLU	2.6
1	AA	424	G	2.6
1	CA	630	G	2.6
35	DA	363	G	2.6
35	DA	1117	G	2.6
25	B0	84	LEU	2.6
42	DH	71	LEU	2.6
43	DI	108	THR	2.6
46	BN	67	LEU	2.6
58	BZ	91	LEU	2.6
39	BE	131	ALA	2.6
46	BN	13	TRP	2.6
31	B6	50	ARG	2.6
37	BC	157	LYS	2.6
39	DE	64	LYS	2.6
51	BS	10	ARG	2.6
19	CS	4	SER	2.6
58	BZ	171	ILE	2.6
58	DZ	124	ILE	2.6
40	DF	69	HIS	2.6
49	DQ	83	MET	2.6
9	AI	90	PRO	2.6
15	CO	2	PRO	2.6
11	AK	34	ASP	2.6
43	DI	84	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
48	BP	28	GLY	2.6
57	BY	92	ASN	2.6
58	DZ	150	LEU	2.6
10	AJ	92	THR	2.6
49	BQ	20	ALA	2.6
58	DZ	164	ALA	2.6
35	DA	1065	U	2.6
36	DB	104	U	2.6
10	AJ	23	ILE	2.6
58	BZ	53	ILE	2.6
1	CA	346	G	2.6
23	AW	69	G	2.6
35	BA	771	G	2.6
35	BA	2661	G	2.6
36	DB	76	G	2.6
48	BP	51	PHE	2.6
4	CD	172	PRO	2.6
58	BZ	92	SER	2.6
35	BA	1544	A	2.6
35	BA	2662	A	2.6
10	AJ	73	ASP	2.6
56	DX	94	GLY	2.6
58	BZ	106	GLY	2.6
14	CN	44	LEU	2.6
11	AK	68	ALA	2.6
18	CR	39	VAL	2.6
35	BA	106	C	2.6
35	BA	2507	C	2.6
35	BA	2803	C	2.6
56	DX	93	GLU	2.6
12	CL	21	LYS	2.6
13	AM	120	LYS	2.6
26	B1	48	LYS	2.6
37	BC	167	LYS	2.6
10	CJ	48	THR	2.6
38	BD	214	TRP	2.5
43	DI	129	THR	2.6
58	BZ	107	THR	2.6
10	AJ	98	ILE	2.5
5	AE	45	PHE	2.5
51	BS	12	PHE	2.5
35	DA	2506	U	2.5

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Mol	Chain	Res	Type	RSRZ
43	DI	29	TYR	2.5
46	DN	72	TYR	2.5
5	AE	49	PRO	2.5
6	CF	56	PRO	2.5
13	CM	113	PRO	2.5
12	AL	95	GLY	2.5
48	BP	11	GLY	2.5
43	DI	128	LEU	2.5
4	AD	50	ARG	2.5
5	AE	32	VAL	2.5
7	AG	5	ARG	2.5
35	BA	98	G	2.5
35	DA	468	G	2.5
40	BF	133	ASN	2.5
52	BT	46	GLU	2.5
52	DT	10	VAL	2.5
58	BZ	56	VAL	2.5
58	BZ	139	VAL	2.5
23	CW	36	A	2.5
35	BA	1096	A	2.5
55	BW	56	ALA	2.5
39	DE	77	ILE	2.5
41	BG	157	ILE	2.5
42	DH	68	THR	2.5
1	AA	1426	C	2.5
23	CW	72	C	2.5
35	BA	580	C	2.5
3	AC	158	GLY	2.5
30	D5	54	GLY	2.5
11	CK	124	LYS	2.5
50	BR	22	ARG	2.5
55	BW	98	LYS	2.5
56	DX	65	ARG	2.5
5	CE	55	VAL	2.5
52	BT	34	VAL	2.5
3	AC	60	ALA	2.5
52	BT	26	ASP	2.5
57	BY	40	GLU	2.5
42	DH	72	ILE	2.5
26	D1	34	THR	2.5
56	BX	3	THR	2.5
4	CD	110	PHE	2.5

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Mol	Chain	Res	Type	RSRZ
49	BQ	65	PHE	2.5
58	BZ	44	PHE	2.5
26	B1	44	PRO	2.5
31	D6	31	PRO	2.5
3	CC	190	ARG	2.5
48	BP	14	LYS	2.5
48	BP	15	ARG	2.5
52	BT	6	LEU	2.5
53	DU	27	LEU	2.5
58	BZ	24	LEU	2.5
30	D5	49	CYS	2.5
42	BH	114	VAL	2.5
37	BC	195	ALA	2.5
40	DF	80	ALA	2.5
1	AA	90	U	2.5
4	CD	80	GLU	2.5
35	BA	373	U	2.5
35	BA	1175	U	2.5
58	DZ	104	PHE	2.5
2	CB	98	LEU	2.5
27	B2	48	HIS	2.5
31	B6	10	LEU	2.5
38	BD	13	ARG	2.5
42	BH	71	LEU	2.5
54	BV	95	LEU	2.5
57	BY	8	LYS	2.5
29	D4	17	GLY	2.5
35	BA	2059	A	2.5
35	DA	751	A	2.5
43	DI	124	GLY	2.5
32	B7	46	VAL	2.5
39	DE	75	VAL	2.5
54	BV	79	VAL	2.5
27	B2	58	ALA	2.5
35	BA	684	G	2.5
27	D2	12	GLU	2.5
29	B4	23	GLU	2.5
58	DZ	171	ILE	2.5
35	BA	183	C	2.5
35	DA	790	C	2.5
36	BB	88	C	2.5
35	BA	1255	U	2.5

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Mol	Chain	Res	Type	RSRZ
38	DD	35	LYS	2.5
6	AF	45	LEU	2.5
40	BF	140	LEU	2.5
43	DI	35	LEU	2.5
51	BS	25	ARG	2.5
49	BQ	126	PRO	2.5
13	CM	92	HIS	2.5
38	BD	216	GLY	2.5
2	CB	93	VAL	2.5
10	AJ	49	VAL	2.5
19	CS	9	VAL	2.5
38	BD	51	VAL	2.5
37	DC	142	ALA	2.4
40	BF	26	ALA	2.4
15	CO	3	ILE	2.4
35	BA	793	A	2.4
35	BA	1614	A	2.4
35	BA	2015	A	2.4
35	BA	2060	A	2.4
33	B8	5	LYS	2.4
57	BY	28	LYS	2.4
1	AA	1164	G	2.4
35	BA	272(H)	C	2.4
35	BA	2794	C	2.4
36	BB	95	C	2.4
51	BS	26	LEU	2.4
35	BA	2130	U	2.4
39	DE	132	HIS	2.4
42	BH	26	VAL	2.4
57	BY	30	VAL	2.4
11	CK	78	GLN	2.4
43	DI	65	ALA	2.4
58	BZ	137	ILE	2.4
49	BQ	83	MET	2.4
3	CC	154	SER	2.4
4	CD	150	GLU	2.4
7	CG	8	GLU	2.4
8	AH	99	GLU	2.4
17	CQ	96	GLU	2.4
5	AE	28	PHE	2.4
18	CR	88	LYS	2.4
49	DQ	87	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
51	DS	12	PHE	2.4
56	BX	28	PHE	2.4
19	AS	81	ARG	2.4
37	BC	194	ARG	2.4
57	BY	4	LYS	2.4
2	AB	149	LEU	2.4
8	AH	138	TRP	2.4
32	B7	5	TRP	2.4
35	BA	2057	A	2.4
37	BC	144	THR	2.4
37	DC	92	ASP	2.4
39	DE	90	THR	2.4
37	BC	182	PRO	2.4
46	DN	129	PRO	2.4
10	AJ	72	VAL	2.4
11	AK	25	TYR	2.4
43	DI	25	TYR	2.4
49	DQ	137	TYR	2.4
52	DT	25	GLY	2.4
58	DZ	99	TYR	2.4
1	AA	423	G	2.4
20	AT	45	GLN	2.4
23	CW	70	G	2.4
27	D2	41	ILE	2.4
35	DA	388	G	2.4
42	BH	72	ILE	2.4
26	B1	83	GLU	2.4
27	D2	14	ARG	2.4
38	BD	14	ARG	2.4
56	BX	50	LYS	2.4
58	DZ	127	LYS	2.4
40	BF	27	GLU	2.4
48	DP	74	GLU	2.4
26	B1	17	SER	2.4
3	AC	175	LEU	2.4
9	CI	47	LEU	2.4
48	DP	147	LEU	2.4
11	AK	42	TRP	2.4
29	B4	24	THR	2.4
51	DS	14	VAL	2.4
52	DT	26	ASP	2.4
54	BV	58	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
27	D2	48	HIS	2.4
49	DQ	19	GLY	2.4
57	DY	10	GLY	2.4
2	AB	201	ILE	2.4
2	CB	188	ALA	2.4
4	CD	147	ALA	2.4
46	BN	132	ALA	2.4
35	DA	363(A)	A	2.4
7	AG	94	ARG	2.4
33	B8	59	LYS	2.4
42	DH	42	ARG	2.4
49	DQ	22	LYS	2.4
40	DF	90	PHE	2.4
2	AB	154	LEU	2.4
2	AB	215	LEU	2.4
10	AJ	65	LEU	2.4
23	AW	13	C	2.4
31	B6	15	GLU	2.4
37	DC	87	GLU	2.4
58	DZ	144	LEU	2.4
10	AJ	19	SER	2.4
58	DZ	129	SER	2.4
35	BA	214	G	2.4
35	BA	579	G	2.4
35	BA	2795	G	2.4
35	DA	469	G	2.4
3	AC	75	VAL	2.4
54	DV	79	VAL	2.4
56	BX	45	THR	2.4
3	AC	2	GLY	2.4
48	BP	26	GLY	2.4
52	DT	2	ASN	2.4
2	AB	218	ALA	2.4
6	CF	8	ILE	2.4
9	CI	81	ILE	2.4
37	DC	89	ALA	2.4
5	CE	24	ARG	2.4
7	CG	5	ARG	2.4
12	CL	19	ARG	2.4
38	BD	52	ARG	2.4
11	AK	125	PHE	2.4
2	AB	196	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
37	BC	47	LEU	2.4
40	BF	12	LEU	2.4
58	BZ	157	LEU	2.4
58	DZ	41	LEU	2.4
3	AC	161	GLU	2.4
29	B4	34	GLU	2.4
33	B8	40	GLU	2.4
35	BA	401	A	2.4
35	BA	676	A	2.4
35	DA	460	A	2.4
36	DB	90	A	2.4
42	DH	53	GLU	2.4
11	CK	82	VAL	2.4
22	AV	21	U	2.4
29	D4	35	VAL	2.4
35	BA	350	U	2.4
52	BT	66	VAL	2.4
58	DZ	177	PRO	2.4
37	BC	168	THR	2.3
40	BF	70	THR	2.3
49	DQ	11	LYS	2.3
57	BY	54	LYS	2.3
52	DT	53	ARG	2.3
55	DW	94	ASP	2.3
56	DX	76	ARG	2.3
35	BA	194	G	2.3
35	DA	1059	G	2.3
2	AB	212	GLN	2.3
14	AN	44	LEU	2.3
48	BP	6	LEU	2.3
57	DY	60	PHE	2.3
58	DZ	163	LEU	2.3
37	BC	19	VAL	2.3
42	BH	155	SER	2.3
48	DP	63	PRO	2.3
19	CS	55	LYS	2.3
35	BA	578	A	2.3
54	DV	56	SER	2.3
37	DC	90	GLY	2.3
38	DD	50	THR	2.3
53	BU	30	LYS	2.3
7	CG	76	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
47	BO	19	ILE	2.3
58	DZ	72	ARG	2.3
41	BG	4	ASP	2.3
58	DZ	123	ASP	2.3
37	BC	75	LEU	2.3
41	DG	82	LEU	2.3
48	DP	148	LEU	2.3
52	DT	9	LEU	2.3
1	AA	80	G	2.3
23	AY	44	G	2.3
35	BA	1450	G	2.3
35	DA	1058	G	2.3
35	DA	2805	G	2.3
42	BH	45	VAL	2.3
54	DV	57	VAL	2.3
41	BG	84	LYS	2.3
40	BF	205	ARG	2.3
2	AB	14	GLY	2.3
11	AK	37	GLY	2.3
11	AK	46	GLY	2.3
3	CC	165	THR	2.3
47	BO	16	ALA	2.3
52	DT	80	SER	2.3
58	BZ	173	ALA	2.3
27	B2	33	MET	2.3
49	BQ	103	MET	2.3
58	DZ	28	MET	2.3
29	D4	25	TYR	2.3
58	DZ	38	TYR	2.3
8	AH	133	LEU	2.3
38	BD	44	ASN	2.3
57	DY	89	PHE	2.3
58	BZ	93	ASP	2.3
23	AW	12	U	2.3
35	BA	2585	U	2.3
40	DF	56	GLU	2.3
1	CA	89	C	2.3
2	AB	22	LYS	2.3
8	CH	88	LYS	2.3
12	CL	43	VAL	2.3
26	B1	39	LYS	2.3
35	BA	698	C	2.3

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Mol	Chain	Res	Type	RSRZ
35	DA	272(J)	C	2.3
49	DQ	63	LYS	2.3
27	B2	59	ARG	2.3
5	AE	96	PRO	2.3
34	D9	26	ILE	2.3
14	CN	2	ALA	2.3
10	AJ	67	THR	2.3
9	AI	50	LEU	2.3
27	B2	16	LEU	2.3
41	DG	152	LEU	2.3
23	CW	1	G	2.3
35	BA	2793	G	2.3
35	DA	275	G	2.3
56	BX	75	ASP	2.3
37	DC	79	LYS	2.3
3	AC	190	ARG	2.3
4	CD	139	ARG	2.3
14	AN	46	GLU	2.3
35	BA	789	A	2.3
37	BC	151	GLU	2.3
40	BF	127	GLU	2.3
51	DS	15	ARG	2.3
57	BY	7	VAL	2.3
58	BZ	126	VAL	2.3
35	DA	158	U	2.3
57	BY	53	PRO	2.3
40	BF	79	GLY	2.3
40	DF	131	GLY	2.3
1	CA	163	C	2.3
35	DA	543	C	2.3
35	DA	2791	C	2.3
31	B6	36	LEU	2.3
46	BN	138	LEU	2.3
58	DZ	121	HIS	2.3
26	D1	8	SER	2.3
48	DP	110	TYR	2.3
49	DQ	32	TYR	2.3
49	DQ	56	ARG	2.3
54	DV	80	GLN	2.3
56	BX	40	LYS	2.3
4	CD	168	ARG	2.3
7	AG	78	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
14	CN	41	ARG	2.3
26	D1	20	ARG	2.3
38	BD	48	ARG	2.3
55	BW	88	ARG	2.3
57	DY	50	ARG	2.3
12	AL	92	ASP	2.3
40	BF	6	VAL	2.3
47	BO	58	VAL	2.3
1	AA	22	G	2.2
35	BA	776	G	2.2
23	AW	23	A	2.2
35	BA	2796	U	2.2
35	DA	1544	A	2.2
35	DA	2790	A	2.2
26	D1	33	LYS	2.2
30	B5	9	LYS	2.2
37	BC	125	SER	2.2
52	DT	85	LYS	2.2
54	BV	44	LYS	2.2
55	BW	13	SER	2.2
1	AA	1430	C	2.2
1	CA	269	C	2.2
11	AK	96	ARG	2.2
11	CK	126	ARG	2.2
22	AV	57	C	2.2
27	B2	26	ARG	2.2
46	DN	134	ARG	2.2
57	DY	2	ARG	2.2
19	AS	45	VAL	2.2
29	B4	20	ASN	2.2
51	DS	61	ASN	2.2
3	AC	166	GLU	2.2
4	CD	81	GLU	2.2
12	AL	79	GLU	2.2
29	B4	22	ILE	2.2
55	DW	96	ILE	2.2
58	DZ	133	ILE	2.2
3	AC	41	GLY	2.2
5	CE	49	PRO	2.2
25	B0	85	ALA	2.2
38	BD	215	LEU	2.2
49	DQ	37	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
55	BW	55	ALA	2.2
58	DZ	114	GLY	2.2
40	DF	65	TRP	2.2
27	D2	37	PHE	2.2
1	AA	79	G	2.2
1	AA	631	G	2.2
35	BA	272	G	2.2
35	BA	1626	G	2.2
19	AS	80	TYR	2.2
35	BA	2218	U	2.2
24	CX	13	A	2.2
35	BA	751	A	2.2
35	BA	1088	A	2.2
35	DA	777	A	2.2
35	DA	1884	A	2.2
2	CB	7	VAL	2.2
19	AS	58	VAL	2.2
34	D9	7	VAL	2.2
42	BH	15	VAL	2.2
42	BH	99	VAL	2.2
42	BH	141	VAL	2.2
42	DH	52	VAL	2.2
52	DT	136	GLN	2.2
25	D0	12	ASN	2.2
51	BS	16	ASN	2.2
42	BH	81	GLU	2.2
51	DS	64	GLU	2.2
57	BY	79	CYS	2.2
2	AB	72	GLY	2.2
9	CI	13	ALA	2.2
14	AN	2	ALA	2.2
27	D2	13	ALA	2.2
40	DF	130	ALA	2.2
41	BG	152	LEU	2.2
43	DI	94	ALA	2.2
46	DN	132	ALA	2.2
52	DT	105	LEU	2.2
54	BV	39	LEU	2.2
57	DY	80	GLY	2.2
10	AJ	55	LYS	2.2
11	AK	11	LYS	2.2
12	CL	17	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
37	BC	84	LYS	2.2
40	DF	63	LYS	2.2
57	BY	88	LYS	2.2
42	DH	69	ARG	2.2
48	BP	41	ARG	2.2
43	DI	78	THR	2.2
38	BD	9	TYR	2.2
47	BO	62	VAL	2.2
1	CA	1446	U	2.2
35	DA	807	U	2.2
35	DA	1026	U	2.2
10	CJ	98	ILE	2.2
26	B1	13	ILE	2.2
1	AA	1468	A	2.2
4	CD	24	GLU	2.2
23	AW	30	G	2.2
23	CW	34	G	2.2
35	BA	372	G	2.2
35	BA	768	G	2.2
35	BA	1095	A	2.2
35	DA	196	A	2.2
35	DA	470	A	2.2
35	DA	1073	A	2.2
41	DG	48	GLU	2.2
43	BI	30	LEU	2.2
43	BI	38	LEU	2.2
48	BP	92	GLU	2.2
3	CC	129	ALA	2.2
12	AL	25	PRO	2.2
28	B3	2	PRO	2.2
29	B4	36	CYS	2.2
40	BF	66	PRO	2.2
57	BY	41	GLY	2.2
58	DZ	130	PRO	2.2
3	CC	56	ASP	2.2
10	AJ	58	ASP	2.2
12	AL	57	LYS	2.2
33	D8	59	LYS	2.2
49	BQ	138	ASP	2.2
8	CH	105	ARG	2.2
42	BH	69	ARG	2.2
48	BP	7	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
48	BP	61	ARG	2.2
26	B1	49	VAL	2.2
37	DC	43	VAL	2.2
42	BH	133	VAL	2.2
49	DQ	81	VAL	2.2
58	DZ	165	VAL	2.2
46	DN	131	GLN	2.2
58	BZ	120	ILE	2.2
11	CK	98	LEU	2.2
27	B2	60	LEU	2.2
2	AB	83	MET	2.2
2	CB	101	MET	2.2
47	BO	112	MET	2.2
31	B6	20	ASN	2.2
1	AA	1281	U	2.2
9	AI	6	GLY	2.2
11	AK	122	LYS	2.2
11	CK	74	ALA	2.2
56	BX	36	LYS	2.2
56	BX	91	ALA	2.2
58	DZ	60	GLU	2.2
58	DZ	97	GLU	2.2
33	D8	38	GLY	2.2
5	AE	6	PHE	2.2
10	AJ	11	PHE	2.2
1	AA	250	A	2.2
35	DA	1096	A	2.2
1	AA	1456	G	2.2
35	BA	386	G	2.2
35	BA	1062	G	2.2
35	BA	2446	G	2.2
35	DA	674	G	2.2
35	DA	808	G	2.2
35	DA	1063	G	2.2
36	BB	85	G	2.2
3	AC	176	HIS	2.2
5	CE	51	VAL	2.1
25	D0	10	THR	2.1
43	DI	86	THR	2.1
58	DZ	141	VAL	2.1
2	CB	127	ILE	2.1
5	AE	80	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
6	CF	52	ILE	2.1
35	BA	790	C	2.1
35	BA	2804	C	2.1
35	DA	272(H)	C	2.1
57	DY	61	ILE	2.1
7	AG	86	GLN	2.1
9	CI	87	GLN	2.1
15	CO	67	LEU	2.1
54	BV	68	LYS	2.1
57	DY	54	LYS	2.1
4	CD	49	ARG	2.1
10	CJ	46	ARG	2.1
26	B1	89	GLU	2.1
43	DI	83	ALA	2.1
16	CP	41	PRO	2.1
27	D2	30	ARG	2.1
40	BF	87	GLY	2.1
43	DI	27	ARG	2.1
47	DO	49	ARG	2.1
54	BV	43	GLU	2.1
33	B8	2	PRO	2.1
54	BV	86	GLY	2.1
49	DQ	89	ASN	2.1
14	AN	36	PHE	2.1
35	DA	1097	U	2.1
40	BF	23	ASP	2.1
55	BW	63	ASP	2.1
2	AB	93	VAL	2.1
3	CC	66	VAL	2.1
13	AM	9	ILE	2.1
17	CQ	90	ILE	2.1
22	AV	77	A	2.1
24	CX	24	A	2.1
26	B1	43	TYR	2.1
29	D4	5	ILE	2.1
35	BA	1254	A	2.1
43	DI	97	ILE	2.1
12	AL	47	LYS	2.1
41	DG	53	LEU	2.1
52	BT	65	LYS	2.1
23	AW	5	G	2.1
27	B2	38	GLN	2.1

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Mol	Chain	Res	Type	RSRZ
35	BA	614(B)	G	2.1
35	BA	778	G	2.1
35	BA	2159	G	2.1
35	BA	2608	G	2.1
35	DA	1325	G	2.1
52	BT	91	ARG	2.1
4	CD	171	GLY	2.1
6	AF	56	PRO	2.1
25	D0	9	SER	2.1
43	DI	41	GLU	2.1
51	BS	103	GLU	2.1
56	DX	90	GLU	2.1
58	BZ	166	SER	2.1
23	AW	11	C	2.1
35	DA	1493	C	2.1
5	CE	6	PHE	2.1
13	CM	74	VAL	2.1
31	D6	13	CYS	2.1
42	BH	49	VAL	2.1
42	BH	131	VAL	2.1
56	BX	59	VAL	2.1
12	CL	23	LYS	2.1
26	D1	39	LYS	2.1
37	BC	215	THR	2.1
40	DF	64	ILE	2.1
43	DI	72	LEU	2.1
56	DX	25	LYS	2.1
48	DP	7	ARG	2.1
49	DQ	5	ARG	2.1
58	DZ	19	ARG	2.1
2	AB	123	ALA	2.1
42	BH	165	ALA	2.1
43	BI	36	ALA	2.1
5	AE	29	GLY	2.1
10	CJ	64	GLU	2.1
23	AW	14	A	2.1
35	BA	1785	A	2.1
37	BC	155	GLU	2.1
42	BH	154	PRO	2.1
48	DP	43	GLY	2.1
51	BS	90	GLY	2.1
58	BZ	11	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
58	BZ	158	PRO	2.1
43	DI	11	ASN	2.1
52	BT	104	ASN	2.1
35	BA	785	G	2.1
35	BA	808	G	2.1
35	DA	379	G	2.1
40	DF	11	VAL	2.1
46	DN	5	VAL	2.1
58	DZ	58	VAL	2.1
35	BA	1178	C	2.1
12	CL	20	LYS	2.1
12	CL	91	LYS	2.1
40	BF	93	LYS	2.1
54	DV	44	LYS	2.1
55	BW	110	LYS	2.1
56	BX	63	LYS	2.1
7	CG	47	CYS	2.1
51	DS	101	LEU	2.1
56	BX	39	ILE	2.1
32	D7	47	ARG	2.1
13	CM	33	ALA	2.1
41	BG	46	ALA	2.1
35	DA	2118	U	2.1
49	BQ	13	GLN	2.1
4	CD	130	GLY	2.1
12	CL	72	GLY	2.1
48	BP	118	GLY	2.1
10	CJ	95	GLU	2.1
14	CN	37	PHE	2.1
12	AL	62	SER	2.1
38	DD	34	VAL	2.1
43	BI	21	VAL	2.1
55	BW	50	VAL	2.1
12	CL	13	LYS	2.1
35	BA	256	A	2.1
35	BA	1069	A	2.1
35	BA	1545	A	2.1
35	DA	229	A	2.1
35	DA	675	A	2.1
35	DA	1067	A	2.1
7	AG	16	LEU	2.1
17	AQ	91	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
25	D0	82	ARG	2.1
43	DI	123	LEU	2.1
48	DP	61	ARG	2.1
52	DT	83	ILE	2.1
58	DZ	146	ILE	2.1
33	B8	31	HIS	2.1
2	CB	107	THR	2.1
8	CH	1	MET	2.1
47	BO	56	ASP	2.1
48	DP	30	THR	2.1
1	AA	1030(B)	G	2.1
13	AM	118	ALA	2.1
31	D6	22	ALA	2.1
35	DA	1040	C	2.1
58	BZ	152	ALA	2.1
57	BY	57	GLN	2.1
6	CF	51	PRO	2.1
8	AH	89	PRO	2.1
43	DI	23	PRO	2.1
43	DI	134	PRO	2.1
46	BN	19	GLU	2.1
58	DZ	13	GLU	2.1
29	B4	8	LYS	2.0
33	B8	29	LYS	2.0
34	D9	25	VAL	2.0
42	BH	38	SER	2.0
51	BS	27	SER	2.0
58	BZ	52	SER	2.0
58	BZ	153	SER	2.0
2	CB	121	LEU	2.0
3	CC	87	LEU	2.0
4	CD	50	ARG	2.0
4	CD	155	LEU	2.0
5	CE	15	ARG	2.0
10	CJ	82	ILE	2.0
25	D0	84	LEU	2.0
43	DI	5	LEU	2.0
57	DY	43	ASN	2.0
1	AA	1168	A	2.0
1	CA	162	A	2.0
1	CA	1188	A	2.0
9	AI	61	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
16	CP	17	TYR	2.0
29	B4	32	TYR	2.0
40	BF	21	ALA	2.0
41	BG	50	ALA	2.0
48	BP	127	ALA	2.0
58	DZ	63	ASP	2.0
52	BT	69	GLY	2.0
54	BV	67	GLY	2.0
3	CC	73	PRO	2.0
11	AK	113	PRO	2.0
46	BN	129	PRO	2.0
27	D2	11	GLU	2.0
30	D5	59	GLU	2.0
2	AB	136	VAL	2.0
5	AE	33	VAL	2.0
14	AN	25	VAL	2.0
19	AS	11	VAL	2.0
23	AW	42	C	2.0
35	BA	1546	C	2.0
46	BN	7	LYS	2.0
1	AA	1057	G	2.0
5	CE	14	ARG	2.0
15	CO	81	LEU	2.0
23	AW	1	G	2.0
23	AW	71	G	2.0
23	CW	69	G	2.0
27	D2	59	ARG	2.0
35	DA	952	G	2.0
35	DA	1017	G	2.0
48	BP	112	LEU	2.0
48	BP	147	LEU	2.0
29	B4	5	ILE	2.0
35	DA	2897	U	2.0
40	BF	204	ASN	2.0
19	AS	69	HIS	2.0
12	AL	68	ALA	2.0
37	DC	158	ALA	2.0
37	DC	207	THR	2.0
54	BV	32	THR	2.0
55	BW	58	ALA	2.0
3	AC	29	TYR	2.0
13	CM	83	ASP	2.0

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Mol	Chain	Res	Type	RSRZ
12	CL	29	GLY	2.0
30	D5	50	GLY	2.0
37	BC	143	GLY	2.0
40	BF	90	PHE	2.0
42	DH	82	GLY	2.0
53	BU	73	GLY	2.0
54	DV	30	GLY	2.0
2	AB	146	GLN	2.0
9	AI	123	PRO	2.0
39	DE	133	LYS	2.0
56	BX	82	GLN	2.0
57	DY	28	LYS	2.0
2	CB	128	GLU	2.0
7	CG	74	GLU	2.0
2	AB	96	ARG	2.0
12	CL	66	VAL	2.0
42	BH	170	ARG	2.0
49	DQ	60	ARG	2.0
58	DZ	80	ARG	2.0
31	D6	10	LEU	2.0
51	BS	58	LEU	2.0
56	BX	70	LEU	2.0
58	BZ	144	LEU	2.0
3	CC	84	ILE	2.0
20	CT	41	ILE	2.0
53	DU	17	ILE	2.0
1	AA	1477	C	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (i)

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum,

median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AW	104	1/1	-0.70	0.49	171,171,171,171	0
59	MG	BA	3397	1/1	-0.37	0.27	190,190,190,190	0
59	MG	AW	105	1/1	-0.31	0.39	170,170,170,170	0
59	MG	CW	110	1/1	-0.13	0.14	197,197,197,197	0
59	MG	CW	112	1/1	-0.10	0.14	191,191,191,191	0
59	MG	AA	1804	1/1	0.02	0.23	80,80,80,80	0
59	MG	BA	3323	1/1	0.10	0.27	159,159,159,159	0
59	MG	CW	104	1/1	0.10	0.23	174,174,174,174	0
59	MG	AW	118	1/1	0.13	0.14	188,188,188,188	0
59	MG	AW	115	1/1	0.21	0.29	193,193,193,193	0
59	MG	BC	302	1/1	0.22	0.17	171,171,171,171	0
59	MG	AW	114	1/1	0.22	0.25	193,193,193,193	0
59	MG	BA	3453	1/1	0.28	0.72	172,172,172,172	0
59	MG	AW	110	1/1	0.28	0.17	134,134,134,134	0
59	MG	CW	103	1/1	0.28	0.25	178,178,178,178	0
59	MG	BA	3326	1/1	0.29	0.19	130,130,130,130	0
59	MG	AA	1713	1/1	0.30	0.16	137,137,137,137	0
59	MG	CW	102	1/1	0.30	0.15	165,165,165,165	0
59	MG	BA	3285	1/1	0.31	0.28	103,103,103,103	0
59	MG	BA	3322	1/1	0.31	0.25	130,130,130,130	0
59	MG	AW	111	1/1	0.31	0.33	139,139,139,139	0
59	MG	AA	1756	1/1	0.31	0.31	107,107,107,107	0
59	MG	CW	101	1/1	0.33	0.12	101,101,101,101	0
59	MG	BA	3293	1/1	0.35	0.25	108,108,108,108	0
59	MG	AA	1777	1/1	0.36	0.25	81,81,81,81	0
59	MG	AW	117	1/1	0.38	0.28	125,125,125,125	0
59	MG	AW	101	1/1	0.39	0.23	154,154,154,154	0
59	MG	AW	119	1/1	0.39	0.19	194,194,194,194	0
59	MG	DA	3386	1/1	0.40	0.14	181,181,181,181	0
59	MG	DA	3328	1/1	0.41	0.21	155,155,155,155	0
59	MG	CW	107	1/1	0.41	0.13	145,145,145,145	0
59	MG	CA	1725	1/1	0.42	0.28	80,80,80,80	0
59	MG	CA	1620	1/1	0.43	0.15	105,105,105,105	0
59	MG	AA	1719	1/1	0.44	0.27	112,112,112,112	0
59	MG	BC	301	1/1	0.44	0.35	166,166,166,166	0
59	MG	CW	109	1/1	0.45	0.12	125,125,125,125	0
59	MG	BA	3410	1/1	0.47	0.16	206,206,206,206	0
59	MG	DA	3230	1/1	0.48	0.12	98,98,98,98	0
59	MG	AA	1789	1/1	0.48	0.25	126,126,126,126	0
59	MG	BA	3320	1/1	0.48	0.16	173,173,173,173	0
59	MG	BA	3427	1/1	0.49	0.26	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BB	204	1/1	0.50	0.23	98,98,98,98	0
59	MG	CW	108	1/1	0.50	0.27	130,130,130,130	0
59	MG	CA	1742	1/1	0.50	0.31	59,59,59,59	0
59	MG	BA	3351	1/1	0.50	0.15	116,116,116,116	0
59	MG	BA	3317	1/1	0.52	0.20	99,99,99,99	0
59	MG	BA	3431	1/1	0.54	0.15	94,94,94,94	0
59	MG	DB	211	1/1	0.54	0.22	106,106,106,106	0
59	MG	BA	3324	1/1	0.55	0.19	194,194,194,194	0
59	MG	AA	1760	1/1	0.55	0.12	105,105,105,105	0
59	MG	AA	1748	1/1	0.55	0.31	98,98,98,98	0
59	MG	AV	103	1/1	0.56	0.18	93,93,93,93	0
59	MG	BA	3438	1/1	0.58	0.13	104,104,104,104	0
59	MG	BB	217	1/1	0.58	0.20	98,98,98,98	0
59	MG	CW	105	1/1	0.58	0.18	107,107,107,107	0
59	MG	BA	3301	1/1	0.58	0.28	115,115,115,115	0
59	MG	AA	1746	1/1	0.59	0.17	87,87,87,87	0
59	MG	AA	1647	1/1	0.59	0.13	95,95,95,95	0
59	MG	AA	1707	1/1	0.59	0.18	87,87,87,87	0
59	MG	AA	1790	1/1	0.59	0.20	120,120,120,120	0
59	MG	BA	3434	1/1	0.59	0.35	90,90,90,90	0
59	MG	BA	3327	1/1	0.59	0.11	109,109,109,109	0
59	MG	BA	3003	1/1	0.59	0.22	84,84,84,84	0
59	MG	AA	1724	1/1	0.60	0.12	77,77,77,77	0
59	MG	AA	1675	1/1	0.60	0.23	85,85,85,85	0
59	MG	BA	3342	1/1	0.60	0.28	64,64,64,64	0
59	MG	AA	1801	1/1	0.60	0.18	69,69,69,69	0
59	MG	AW	109	1/1	0.61	0.20	154,154,154,154	0
59	MG	AA	1611	1/1	0.62	0.37	87,87,87,87	0
59	MG	DA	3007	1/1	0.62	0.24	77,77,77,77	0
59	MG	BA	3216	1/1	0.63	0.17	88,88,88,88	0
59	MG	DB	206	1/1	0.63	0.08	91,91,91,91	0
59	MG	AA	1657	1/1	0.63	0.20	92,92,92,92	0
59	MG	BA	3187	1/1	0.64	0.21	93,93,93,93	0
59	MG	AW	112	1/1	0.64	0.20	112,112,112,112	0
59	MG	CA	1791	1/1	0.64	0.11	78,78,78,78	0
59	MG	DA	3244	1/1	0.64	0.08	147,147,147,147	0
59	MG	DV	201	1/1	0.64	0.15	100,100,100,100	0
59	MG	BS	201	1/1	0.65	0.16	97,97,97,97	0
59	MG	CA	1641	1/1	0.65	0.32	71,71,71,71	0
59	MG	CW	106	1/1	0.65	0.14	133,133,133,133	0
59	MG	CA	1642	1/1	0.65	0.16	83,83,83,83	0
59	MG	CA	1648	1/1	0.66	0.09	96,96,96,96	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	1652	1/1	0.66	0.17	85,85,85,85	0
59	MG	AW	107	1/1	0.66	0.23	115,115,115,115	0
59	MG	BA	3234	1/1	0.66	0.32	83,83,83,83	0
59	MG	BA	3325	1/1	0.66	0.21	164,164,164,164	0
59	MG	BA	3344	1/1	0.66	0.27	81,81,81,81	0
59	MG	BA	3276	1/1	0.67	0.13	70,70,70,70	0
59	MG	DA	3387	1/1	0.67	0.26	102,102,102,102	0
59	MG	AW	103	1/1	0.67	0.27	105,105,105,105	0
59	MG	DA	3315	1/1	0.67	0.12	71,71,71,71	0
59	MG	CA	1656	1/1	0.67	0.21	74,74,74,74	0
59	MG	CA	1739	1/1	0.68	0.16	131,131,131,131	0
59	MG	BB	207	1/1	0.68	0.17	115,115,115,115	0
59	MG	CA	1686	1/1	0.68	0.18	77,77,77,77	0
59	MG	BA	3346	1/1	0.68	0.10	128,128,128,128	0
59	MG	DA	3264	1/1	0.69	0.31	64,64,64,64	0
59	MG	AW	106	1/1	0.69	0.19	149,149,149,149	0
59	MG	CA	1638	1/1	0.69	0.26	75,75,75,75	0
59	MG	AA	1686	1/1	0.69	0.09	86,86,86,86	0
59	MG	BA	3222	1/1	0.69	0.32	78,78,78,78	0
59	MG	BA	3171	1/1	0.69	0.08	76,76,76,76	0
59	MG	BB	206	1/1	0.69	0.24	94,94,94,94	0
59	MG	CA	1793	1/1	0.69	0.24	75,75,75,75	0
59	MG	BA	3254	1/1	0.70	0.22	89,89,89,89	0
59	MG	CA	1700	1/1	0.70	0.13	87,87,87,87	0
59	MG	DA	3320	1/1	0.70	0.31	67,67,67,67	0
59	MG	DB	207	1/1	0.70	0.23	73,73,73,73	0
59	MG	AA	1656	1/1	0.70	0.26	102,102,102,102	0
59	MG	DA	3357	1/1	0.70	0.16	63,63,63,63	0
59	MG	AA	1783	1/1	0.71	0.28	74,74,74,74	0
59	MG	CA	1672	1/1	0.71	0.16	94,94,94,94	0
59	MG	AA	1737	1/1	0.71	0.19	78,78,78,78	0
59	MG	CA	1690	1/1	0.71	0.28	84,84,84,84	0
59	MG	BA	3168	1/1	0.71	0.23	89,89,89,89	0
59	MG	CA	1650	1/1	0.71	0.25	78,78,78,78	0
59	MG	BA	3328	1/1	0.71	0.26	80,80,80,80	0
59	MG	BA	3366	1/1	0.72	0.11	89,89,89,89	0
59	MG	CA	1688	1/1	0.72	0.17	81,81,81,81	0
59	MG	CA	1637	1/1	0.72	0.36	71,71,71,71	0
59	MG	DA	3319	1/1	0.72	0.36	81,81,81,81	0
59	MG	BA	3385	1/1	0.72	0.08	84,84,84,84	0
59	MG	AA	1634	1/1	0.72	0.14	69,69,69,69	0
59	MG	AA	1700	1/1	0.72	0.13	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3319	1/1	0.72	0.16	133,133,133,133	0
59	MG	AA	1706	1/1	0.72	0.09	86,86,86,86	0
59	MG	BA	3298	1/1	0.72	0.25	65,65,65,65	0
59	MG	BA	3357	1/1	0.72	0.09	63,63,63,63	0
59	MG	DA	3008	1/1	0.72	0.19	76,76,76,76	0
59	MG	CA	1605	1/1	0.72	0.14	69,69,69,69	0
59	MG	AA	1674	1/1	0.73	0.28	61,61,61,61	0
59	MG	AA	1645	1/1	0.73	0.18	79,79,79,79	0
59	MG	DA	3337	1/1	0.73	0.19	67,67,67,67	0
59	MG	BA	3405	1/1	0.73	0.28	80,80,80,80	0
59	MG	BA	3321	1/1	0.73	0.07	175,175,175,175	0
59	MG	AA	1701	1/1	0.73	0.21	60,60,60,60	0
59	MG	AW	102	1/1	0.73	0.18	79,79,79,79	0
59	MG	BA	3116	1/1	0.73	0.24	69,69,69,69	0
59	MG	BA	3303	1/1	0.73	0.27	73,73,73,73	0
59	MG	AA	1802	1/1	0.73	0.18	85,85,85,85	0
59	MG	AA	1714	1/1	0.74	0.12	88,88,88,88	0
59	MG	BA	3230	1/1	0.74	0.16	89,89,89,89	0
59	MG	BA	3367	1/1	0.74	0.18	85,85,85,85	0
59	MG	BB	208	1/1	0.74	0.11	83,83,83,83	0
59	MG	CA	1619	1/1	0.74	0.29	66,66,66,66	0
59	MG	CA	1792	1/1	0.74	0.23	76,76,76,76	0
59	MG	BA	3257	1/1	0.74	0.35	77,77,77,77	0
59	MG	BF	302	1/1	0.75	0.19	61,61,61,61	0
59	MG	AA	1776	1/1	0.75	0.30	72,72,72,72	0
59	MG	CA	1710	1/1	0.75	0.08	120,120,120,120	0
59	MG	BA	3299	1/1	0.75	0.17	63,63,63,63	0
59	MG	DA	3372	1/1	0.75	0.15	68,68,68,68	0
59	MG	DA	3160	1/1	0.75	0.16	73,73,73,73	0
59	MG	BA	3278	1/1	0.75	0.19	86,86,86,86	0
59	MG	BB	209	1/1	0.75	0.11	109,109,109,109	0
59	MG	BA	3350	1/1	0.75	0.07	91,91,91,91	0
59	MG	AA	1617	1/1	0.75	0.33	81,81,81,81	0
59	MG	AA	1672	1/1	0.75	0.31	58,58,58,58	0
59	MG	BA	3233	1/1	0.76	0.10	69,69,69,69	0
59	MG	CA	1695	1/1	0.76	0.28	59,59,59,59	0
59	MG	BA	3376	1/1	0.76	0.24	81,81,81,81	0
59	MG	CA	1640	1/1	0.76	0.23	91,91,91,91	0
59	MG	AA	1772	1/1	0.76	0.13	86,86,86,86	0
59	MG	BA	3399	1/1	0.77	0.10	89,89,89,89	0
59	MG	BA	3200	1/1	0.77	0.20	68,68,68,68	0
59	MG	DA	3203	1/1	0.77	0.17	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	1644	1/1	0.77	0.20	75,75,75,75	0
59	MG	BA	3202	1/1	0.77	0.36	65,65,65,65	0
59	MG	AA	1677	1/1	0.77	0.18	72,72,72,72	0
59	MG	CA	1796	1/1	0.77	0.19	68,68,68,68	0
59	MG	BA	3219	1/1	0.77	0.09	181,181,181,181	0
59	MG	BA	3093	1/1	0.77	0.17	75,75,75,75	0
59	MG	CA	1601	1/1	0.77	0.30	53,53,53,53	0
59	MG	DA	3332	1/1	0.77	0.20	68,68,68,68	0
59	MG	AA	1763	1/1	0.77	0.11	66,66,66,66	0
59	MG	BA	3142	1/1	0.77	0.16	66,66,66,66	0
59	MG	AA	1765	1/1	0.77	0.18	84,84,84,84	0
59	MG	DA	3374	1/1	0.77	0.22	65,65,65,65	0
59	MG	DA	3383	1/1	0.77	0.10	92,92,92,92	0
59	MG	DA	3384	1/1	0.77	0.07	188,188,188,188	0
59	MG	CA	1626	1/1	0.77	0.29	94,94,94,94	0
59	MG	AA	1792	1/1	0.77	0.08	99,99,99,99	0
59	MG	B8	101	1/1	0.77	0.26	79,79,79,79	0
59	MG	CA	1721	1/1	0.77	0.22	81,81,81,81	0
59	MG	BA	3398	1/1	0.77	0.16	104,104,104,104	0
59	MG	CA	1737	1/1	0.77	0.21	82,82,82,82	0
59	MG	BA	3164	1/1	0.78	0.16	78,78,78,78	0
59	MG	AA	1742	1/1	0.78	0.13	72,72,72,72	0
59	MG	BA	3338	1/1	0.78	0.13	89,89,89,89	0
59	MG	DA	3311	1/1	0.78	0.17	70,70,70,70	0
59	MG	BA	3408	1/1	0.78	0.12	93,93,93,93	0
59	MG	BA	3304	1/1	0.78	0.07	71,71,71,71	0
59	MG	BA	3313	1/1	0.78	0.22	68,68,68,68	0
59	MG	DA	3327	1/1	0.78	0.26	89,89,89,89	0
59	MG	BA	3025	1/1	0.78	0.11	61,61,61,61	0
59	MG	CA	1692	1/1	0.78	0.16	96,96,96,96	0
59	MG	BA	3255	1/1	0.78	0.28	85,85,85,85	0
59	MG	CA	1697	1/1	0.78	0.23	77,77,77,77	0
59	MG	BA	3041	1/1	0.78	0.25	46,46,46,46	0
59	MG	BA	3353	1/1	0.78	0.17	75,75,75,75	0
59	MG	BA	3080	1/1	0.78	0.13	43,43,43,43	0
59	MG	AW	108	1/1	0.78	0.13	154,154,154,154	0
59	MG	AA	1697	1/1	0.78	0.20	76,76,76,76	0
59	MG	AA	1655	1/1	0.78	0.34	73,73,73,73	0
59	MG	DA	3014	1/1	0.78	0.13	55,55,55,55	0
59	MG	BA	3160	1/1	0.78	0.21	57,57,57,57	0
59	MG	BA	3161	1/1	0.78	0.35	35,35,35,35	0
59	MG	DB	212	1/1	0.78	0.22	99,99,99,99	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3213	1/1	0.78	0.10	71,71,71,71	0
59	MG	BA	3192	1/1	0.79	0.14	80,80,80,80	0
59	MG	DA	3304	1/1	0.79	0.08	70,70,70,70	0
59	MG	CA	1667	1/1	0.79	0.13	62,62,62,62	0
59	MG	CA	1722	1/1	0.79	0.07	67,67,67,67	0
59	MG	BA	3365	1/1	0.79	0.21	54,54,54,54	0
59	MG	CA	1729	1/1	0.79	0.20	77,77,77,77	0
59	MG	CA	1678	1/1	0.79	0.26	78,78,78,78	0
59	MG	CA	1682	1/1	0.79	0.22	67,67,67,67	0
59	MG	DA	3331	1/1	0.79	0.13	99,99,99,99	0
59	MG	BA	3232	1/1	0.79	0.16	74,74,74,74	0
59	MG	CA	1767	1/1	0.79	0.23	67,67,67,67	0
59	MG	CA	1775	1/1	0.79	0.18	76,76,76,76	0
59	MG	BU	203	1/1	0.79	0.17	82,82,82,82	0
59	MG	AE	201	1/1	0.79	0.27	86,86,86,86	0
59	MG	DA	3118	1/1	0.79	0.32	51,51,51,51	0
59	MG	AA	1623	1/1	0.79	0.24	79,79,79,79	0
59	MG	DA	3168	1/1	0.79	0.38	60,60,60,60	0
59	MG	DA	3182	1/1	0.79	0.12	56,56,56,56	0
59	MG	CA	1794	1/1	0.79	0.28	66,66,66,66	0
59	MG	BA	3133	1/1	0.79	0.38	94,94,94,94	0
59	MG	AA	1679	1/1	0.79	0.24	59,59,59,59	0
59	MG	DA	3232	1/1	0.79	0.09	93,93,93,93	0
59	MG	AA	1619	1/1	0.79	0.20	83,83,83,83	0
59	MG	BA	3014	1/1	0.80	0.25	55,55,55,55	0
59	MG	AW	113	1/1	0.80	0.20	96,96,96,96	0
59	MG	CA	1723	1/1	0.80	0.08	132,132,132,132	0
59	MG	CA	1655	1/1	0.80	0.30	57,57,57,57	0
59	MG	CA	1615	1/1	0.80	0.20	56,56,56,56	0
59	MG	BA	3228	1/1	0.80	0.16	68,68,68,68	0
59	MG	BA	3185	1/1	0.80	0.18	63,63,63,63	0
59	MG	DA	3330	1/1	0.80	0.21	55,55,55,55	0
59	MG	CA	1625	1/1	0.80	0.25	71,71,71,71	0
59	MG	CA	1759	1/1	0.80	0.25	61,61,61,61	0
59	MG	CA	1681	1/1	0.80	0.28	69,69,69,69	0
59	MG	DA	3354	1/1	0.80	0.25	36,36,36,36	0
59	MG	DA	3081	1/1	0.80	0.34	39,39,39,39	0
59	MG	AA	1635	1/1	0.80	0.26	53,53,53,53	0
59	MG	CA	1633	1/1	0.80	0.28	61,61,61,61	0
59	MG	DA	3375	1/1	0.80	0.14	84,84,84,84	0
59	MG	BB	214	1/1	0.80	0.12	84,84,84,84	0
59	MG	AA	1671	1/1	0.80	0.19	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3373	1/1	0.80	0.18	73,73,73,73	0
59	MG	CA	1693	1/1	0.80	0.07	87,87,87,87	0
59	MG	AA	1780	1/1	0.80	0.16	72,72,72,72	0
59	MG	BA	3162	1/1	0.80	0.23	55,55,55,55	0
59	MG	BA	3108	1/1	0.80	0.19	69,69,69,69	0
59	MG	BB	203	1/1	0.80	0.18	99,99,99,99	0
59	MG	DA	3282	1/1	0.80	0.39	52,52,52,52	0
59	MG	AA	1654	1/1	0.81	0.09	79,79,79,79	0
59	MG	BA	3019	1/1	0.81	0.20	68,68,68,68	0
59	MG	AA	1762	1/1	0.81	0.10	100,100,100,100	0
59	MG	AA	1741	1/1	0.81	0.09	69,69,69,69	0
59	MG	CA	1715	1/1	0.81	0.09	104,104,104,104	0
59	MG	BA	3253	1/1	0.81	0.21	97,97,97,97	0
59	MG	BA	3043	1/1	0.81	0.24	52,52,52,52	0
59	MG	AA	1648	1/1	0.81	0.14	81,81,81,81	0
59	MG	CA	1668	1/1	0.81	0.27	75,75,75,75	0
59	MG	CA	1728	1/1	0.81	0.15	73,73,73,73	0
59	MG	CA	1669	1/1	0.81	0.38	78,78,78,78	0
59	MG	BA	3081	1/1	0.81	0.24	37,37,37,37	0
59	MG	CA	1673	1/1	0.81	0.25	92,92,92,92	0
59	MG	CA	1674	1/1	0.81	0.35	69,69,69,69	0
59	MG	CA	1744	1/1	0.81	0.07	94,94,94,94	0
59	MG	AA	1794	1/1	0.81	0.14	103,103,103,103	0
59	MG	CA	1627	1/1	0.81	0.24	49,49,49,49	0
59	MG	CA	1770	1/1	0.81	0.22	80,80,80,80	0
59	MG	BA	3227	1/1	0.81	0.14	78,78,78,78	0
59	MG	CA	1778	1/1	0.81	0.23	77,77,77,77	0
59	MG	DA	3206	1/1	0.81	0.27	82,82,82,82	0
59	MG	BA	3281	1/1	0.81	0.34	68,68,68,68	0
59	MG	BA	3007	1/1	0.81	0.16	69,69,69,69	0
59	MG	BA	3413	1/1	0.81	0.29	59,59,59,59	0
59	MG	BA	3420	1/1	0.81	0.12	77,77,77,77	0
59	MG	DN	201	1/1	0.81	0.27	98,98,98,98	0
59	MG	BA	3286	1/1	0.81	0.18	69,69,69,69	0
59	MG	CA	1609	1/1	0.82	0.22	69,69,69,69	0
59	MG	CA	1675	1/1	0.82	0.17	77,77,77,77	0
59	MG	BA	3059	1/1	0.82	0.11	65,65,65,65	0
59	MG	BB	216	1/1	0.82	0.24	92,92,92,92	0
59	MG	AA	1803	1/1	0.82	0.13	70,70,70,70	0
59	MG	BA	3456	1/1	0.82	0.13	73,73,73,73	0
59	MG	AA	1726	1/1	0.82	0.14	72,72,72,72	0
59	MG	CE	201	1/1	0.82	0.24	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CG	201	1/1	0.82	0.10	72,72,72,72	0
59	MG	CU	101	1/1	0.82	0.17	84,84,84,84	0
59	MG	CA	1735	1/1	0.82	0.20	63,63,63,63	0
59	MG	BA	3186	1/1	0.82	0.33	65,65,65,65	0
59	MG	AA	1608	1/1	0.82	0.26	45,45,45,45	0
59	MG	DA	3382	1/1	0.82	0.27	80,80,80,80	0
59	MG	CA	1741	1/1	0.82	0.17	57,57,57,57	0
59	MG	DA	3234	1/1	0.82	0.37	72,72,72,72	0
59	MG	AA	1747	1/1	0.82	0.09	68,68,68,68	0
59	MG	DA	3252	1/1	0.82	0.11	68,68,68,68	0
59	MG	AA	1601	1/1	0.82	0.23	73,73,73,73	0
59	MG	CA	1750	1/1	0.82	0.20	70,70,70,70	0
59	MG	DA	3285	1/1	0.82	0.27	44,44,44,44	0
59	MG	CA	1671	1/1	0.82	0.11	106,106,106,106	0
59	MG	BA	3269	1/1	0.82	0.14	166,166,166,166	0
59	MG	DO	202	1/1	0.82	0.18	86,86,86,86	0
59	MG	CA	1608	1/1	0.82	0.17	75,75,75,75	0
59	MG	AA	1743	1/1	0.83	0.14	80,80,80,80	0
59	MG	AA	1750	1/1	0.83	0.30	68,68,68,68	0
59	MG	BA	3169	1/1	0.83	0.33	49,49,49,49	0
59	MG	DA	3297	1/1	0.83	0.20	50,50,50,50	0
59	MG	BB	211	1/1	0.83	0.12	74,74,74,74	0
59	MG	BA	3419	1/1	0.83	0.27	49,49,49,49	0
59	MG	CA	1732	1/1	0.83	0.18	85,85,85,85	0
59	MG	BB	215	1/1	0.83	0.21	76,76,76,76	0
59	MG	AA	1644	1/1	0.83	0.15	50,50,50,50	0
59	MG	AA	1788	1/1	0.83	0.08	94,94,94,94	0
59	MG	AA	1766	1/1	0.83	0.06	54,54,54,54	0
59	MG	AA	1808	1/1	0.83	0.11	65,65,65,65	0
59	MG	BA	3151	1/1	0.83	0.20	78,78,78,78	0
59	MG	BQ	201	1/1	0.83	0.14	51,51,51,51	0
59	MG	BA	3157	1/1	0.83	0.18	63,63,63,63	0
59	MG	DA	3348	1/1	0.83	0.24	72,72,72,72	0
59	MG	CA	1761	1/1	0.83	0.08	66,66,66,66	0
59	MG	DA	3084	1/1	0.83	0.20	41,41,41,41	0
59	MG	DA	3367	1/1	0.83	0.15	61,61,61,61	0
59	MG	DA	3091	1/1	0.83	0.20	37,37,37,37	0
59	MG	CA	1689	1/1	0.83	0.10	66,66,66,66	0
59	MG	AA	1759	1/1	0.83	0.10	93,93,93,93	0
59	MG	DA	3380	1/1	0.83	0.25	59,59,59,59	0
59	MG	DA	3163	1/1	0.83	0.20	79,79,79,79	0
59	MG	CA	1649	1/1	0.83	0.12	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3170	1/1	0.83	0.12	87,87,87,87	0
59	MG	AA	1791	1/1	0.83	0.22	91,91,91,91	0
59	MG	AA	1650	1/1	0.83	0.23	80,80,80,80	0
59	MG	BB	205	1/1	0.83	0.19	65,65,65,65	0
59	MG	BA	3163	1/1	0.83	0.20	81,81,81,81	0
59	MG	CA	1707	1/1	0.83	0.26	53,53,53,53	0
59	MG	CA	1709	1/1	0.83	0.28	49,49,49,49	0
59	MG	CA	1662	1/1	0.83	0.12	60,60,60,60	0
59	MG	CA	1663	1/1	0.83	0.28	71,71,71,71	0
59	MG	CA	1664	1/1	0.83	0.31	75,75,75,75	0
59	MG	DA	3321	1/1	0.84	0.14	63,63,63,63	0
59	MG	DA	3326	1/1	0.84	0.07	68,68,68,68	0
59	MG	BA	3198	1/1	0.84	0.13	54,54,54,54	0
59	MG	BA	3450	1/1	0.84	0.07	57,57,57,57	0
59	MG	DA	3167	1/1	0.84	0.13	76,76,76,76	0
59	MG	CA	1666	1/1	0.84	0.22	60,60,60,60	0
59	MG	AA	1633	1/1	0.84	0.22	64,64,64,64	0
59	MG	AA	1629	1/1	0.84	0.25	61,61,61,61	0
59	MG	DA	3344	1/1	0.84	0.20	43,43,43,43	0
59	MG	DA	3192	1/1	0.84	0.12	53,53,53,53	0
59	MG	BA	3212	1/1	0.84	0.24	64,64,64,64	0
59	MG	BA	3092	1/1	0.84	0.21	57,57,57,57	0
59	MG	BA	3352	1/1	0.84	0.29	66,66,66,66	0
59	MG	BA	3180	1/1	0.84	0.14	79,79,79,79	0
59	MG	DA	3373	1/1	0.84	0.29	75,75,75,75	0
59	MG	CA	1765	1/1	0.84	0.30	60,60,60,60	0
59	MG	BA	3412	1/1	0.84	0.08	64,64,64,64	0
59	MG	CA	1720	1/1	0.84	0.12	67,67,67,67	0
59	MG	DA	3246	1/1	0.84	0.21	58,58,58,58	0
59	MG	AA	1676	1/1	0.84	0.13	88,88,88,88	0
59	MG	AL	201	1/1	0.84	0.18	61,61,61,61	0
59	MG	DA	3271	1/1	0.84	0.16	61,61,61,61	0
59	MG	CA	1610	1/1	0.84	0.12	76,76,76,76	0
59	MG	BA	3166	1/1	0.84	0.12	105,105,105,105	0
59	MG	BA	3306	1/1	0.84	0.34	56,56,56,56	0
59	MG	BA	3167	1/1	0.84	0.21	77,77,77,77	0
59	MG	BA	3314	1/1	0.84	0.39	66,66,66,66	0
59	MG	DA	3101	1/1	0.84	0.27	37,37,37,37	0
59	MG	DA	3105	1/1	0.84	0.20	40,40,40,40	0
59	MG	CA	1733	1/1	0.84	0.14	81,81,81,81	0
59	MG	AA	1658	1/1	0.85	0.22	63,63,63,63	0
59	MG	AA	1692	1/1	0.85	0.26	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1738	1/1	0.85	0.23	57,57,57,57	0
59	MG	CA	1676	1/1	0.85	0.24	49,49,49,49	0
59	MG	AA	1757	1/1	0.85	0.28	60,60,60,60	0
59	MG	AA	1696	1/1	0.85	0.10	81,81,81,81	0
59	MG	BA	3271	1/1	0.85	0.24	61,61,61,61	0
59	MG	DA	3001	1/1	0.85	0.35	71,71,71,71	0
59	MG	DA	3317	1/1	0.85	0.25	52,52,52,52	0
59	MG	CA	1683	1/1	0.85	0.11	74,74,74,74	0
59	MG	CA	1743	1/1	0.85	0.13	67,67,67,67	0
59	MG	BA	3273	1/1	0.85	0.10	42,42,42,42	0
59	MG	AA	1660	1/1	0.85	0.33	84,84,84,84	0
59	MG	BA	3213	1/1	0.85	0.12	72,72,72,72	0
59	MG	DA	3089	1/1	0.85	0.25	46,46,46,46	0
59	MG	B8	102	1/1	0.85	0.24	58,58,58,58	0
59	MG	AA	1614	1/1	0.85	0.10	85,85,85,85	0
59	MG	BA	3335	1/1	0.85	0.15	81,81,81,81	0
59	MG	DA	3116	1/1	0.85	0.23	41,41,41,41	0
59	MG	BA	3220	1/1	0.85	0.09	59,59,59,59	0
59	MG	DA	3119	1/1	0.85	0.20	44,44,44,44	0
59	MG	DA	3149	1/1	0.85	0.27	40,40,40,40	0
59	MG	AA	1745	1/1	0.85	0.27	77,77,77,77	0
59	MG	CA	1777	1/1	0.85	0.28	60,60,60,60	0
59	MG	BA	3011	1/1	0.85	0.37	65,65,65,65	0
59	MG	CA	1785	1/1	0.85	0.22	46,46,46,46	0
59	MG	CA	1706	1/1	0.85	0.11	61,61,61,61	0
59	MG	BA	3176	1/1	0.85	0.20	66,66,66,66	0
59	MG	AA	1721	1/1	0.85	0.17	63,63,63,63	0
59	MG	DA	3193	1/1	0.85	0.25	50,50,50,50	0
59	MG	CA	1602	1/1	0.85	0.09	72,72,72,72	0
59	MG	BA	3302	1/1	0.85	0.26	75,75,75,75	0
59	MG	CA	1718	1/1	0.85	0.10	81,81,81,81	0
59	MG	DA	3216	1/1	0.85	0.18	26,26,26,26	0
59	MG	DB	202	1/1	0.85	0.21	83,83,83,83	0
59	MG	DA	3224	1/1	0.85	0.12	40,40,40,40	0
59	MG	BA	3184	1/1	0.85	0.21	59,59,59,59	0
59	MG	AA	1683	1/1	0.85	0.23	74,74,74,74	0
59	MG	AA	1793	1/1	0.85	0.16	85,85,85,85	0
59	MG	BB	201	1/1	0.85	0.06	87,87,87,87	0
59	MG	BA	3245	1/1	0.85	0.14	32,32,32,32	0
59	MG	BA	3246	1/1	0.85	0.12	54,54,54,54	0
59	MG	DA	3207	1/1	0.86	0.37	83,83,83,83	0
59	MG	BA	3237	1/1	0.86	0.26	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1754	1/1	0.86	0.13	77,77,77,77	0
59	MG	BA	3311	1/1	0.86	0.20	63,63,63,63	0
59	MG	AA	1664	1/1	0.86	0.17	89,89,89,89	0
59	MG	CA	1634	1/1	0.86	0.18	68,68,68,68	0
59	MG	BA	3364	1/1	0.86	0.30	62,62,62,62	0
59	MG	AA	1604	1/1	0.86	0.27	64,64,64,64	0
59	MG	BA	3044	1/1	0.86	0.25	70,70,70,70	0
59	MG	DA	3248	1/1	0.86	0.24	44,44,44,44	0
59	MG	BA	3051	1/1	0.86	0.16	66,66,66,66	0
59	MG	BA	3057	1/1	0.86	0.26	52,52,52,52	0
59	MG	B2	101	1/1	0.86	0.13	49,49,49,49	0
59	MG	CA	1646	1/1	0.86	0.12	72,72,72,72	0
59	MG	BA	3384	1/1	0.86	0.24	63,63,63,63	0
59	MG	AV	102	1/1	0.86	0.28	74,74,74,74	0
59	MG	DA	3299	1/1	0.86	0.22	63,63,63,63	0
59	MG	BA	3386	1/1	0.86	0.05	83,83,83,83	0
59	MG	AA	1631	1/1	0.86	0.28	62,62,62,62	0
59	MG	BA	3086	1/1	0.86	0.28	61,61,61,61	0
59	MG	AA	1779	1/1	0.86	0.32	58,58,58,58	0
59	MG	CA	1727	1/1	0.86	0.10	99,99,99,99	0
59	MG	CW	113	1/1	0.86	0.10	123,123,123,123	0
59	MG	BA	3402	1/1	0.86	0.10	54,54,54,54	0
59	MG	DA	3003	1/1	0.86	0.14	63,63,63,63	0
59	MG	BA	3221	1/1	0.86	0.23	87,87,87,87	0
59	MG	CA	1730	1/1	0.86	0.06	93,93,93,93	0
59	MG	AA	1740	1/1	0.86	0.16	114,114,114,114	0
59	MG	DA	3049	1/1	0.86	0.36	38,38,38,38	0
59	MG	BA	3172	1/1	0.86	0.07	62,62,62,62	0
59	MG	AA	1694	1/1	0.86	0.08	77,77,77,77	0
59	MG	AA	1749	1/1	0.86	0.12	105,105,105,105	0
59	MG	BA	3341	1/1	0.86	0.22	57,57,57,57	0
59	MG	CA	1670	1/1	0.86	0.29	68,68,68,68	0
59	MG	BA	3231	1/1	0.86	0.23	55,55,55,55	0
59	MG	DA	3358	1/1	0.86	0.11	72,72,72,72	0
59	MG	BA	3422	1/1	0.86	0.06	48,48,48,48	0
59	MG	BA	3182	1/1	0.86	0.09	69,69,69,69	0
59	MG	CA	1606	1/1	0.86	0.25	41,41,41,41	0
59	MG	DA	3120	1/1	0.86	0.33	37,37,37,37	0
59	MG	DA	3124	1/1	0.86	0.14	61,61,61,61	0
59	MG	DA	3138	1/1	0.86	0.41	34,34,34,34	0
59	MG	DA	3143	1/1	0.86	0.06	67,67,67,67	0
59	MG	CA	1751	1/1	0.86	0.07	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3428	1/1	0.86	0.25	71,71,71,71	0
59	MG	AA	1652	1/1	0.86	0.16	92,92,92,92	0
59	MG	BA	3433	1/1	0.86	0.23	94,94,94,94	0
59	MG	BA	3022	1/1	0.86	0.20	61,61,61,61	0
59	MG	BA	3435	1/1	0.86	0.09	73,73,73,73	0
59	MG	BA	3436	1/1	0.86	0.14	65,65,65,65	0
59	MG	DB	209	1/1	0.86	0.24	46,46,46,46	0
59	MG	DA	3187	1/1	0.86	0.17	53,53,53,53	0
59	MG	CA	1685	1/1	0.86	0.13	56,56,56,56	0
59	MG	CA	1621	1/1	0.86	0.14	67,67,67,67	0
59	MG	CA	1783	1/1	0.86	0.21	64,64,64,64	0
59	MG	CA	1623	1/1	0.86	0.23	66,66,66,66	0
59	MG	BA	3266	1/1	0.87	0.24	64,64,64,64	0
59	MG	BA	3145	1/1	0.87	0.20	62,62,62,62	0
59	MG	AA	1727	1/1	0.87	0.17	63,63,63,63	0
59	MG	CA	1747	1/1	0.87	0.15	40,40,40,40	0
59	MG	BA	3362	1/1	0.87	0.08	83,83,83,83	0
59	MG	DA	3275	1/1	0.87	0.15	53,53,53,53	0
59	MG	DA	3278	1/1	0.87	0.23	52,52,52,52	0
59	MG	DA	3280	1/1	0.87	0.11	46,46,46,46	0
59	MG	BA	3363	1/1	0.87	0.26	43,43,43,43	0
59	MG	CA	1753	1/1	0.87	0.16	82,82,82,82	0
59	MG	AA	1630	1/1	0.87	0.07	67,67,67,67	0
59	MG	AA	1680	1/1	0.87	0.16	51,51,51,51	0
59	MG	AA	1625	1/1	0.87	0.15	66,66,66,66	0
59	MG	CA	1653	1/1	0.87	0.24	38,38,38,38	0
59	MG	DA	3094	1/1	0.87	0.21	38,38,38,38	0
59	MG	DA	3099	1/1	0.87	0.27	33,33,33,33	0
59	MG	BA	3280	1/1	0.87	0.12	107,107,107,107	0
59	MG	AA	1718	1/1	0.87	0.25	89,89,89,89	0
59	MG	DA	3110	1/1	0.87	0.15	20,20,20,20	0
59	MG	DA	3113	1/1	0.87	0.12	23,23,23,23	0
59	MG	CA	1657	1/1	0.87	0.07	88,88,88,88	0
59	MG	CA	1659	1/1	0.87	0.27	50,50,50,50	0
59	MG	BA	3437	1/1	0.87	0.12	126,126,126,126	0
59	MG	CA	1714	1/1	0.87	0.15	67,67,67,67	0
59	MG	CA	1788	1/1	0.87	0.08	124,124,124,124	0
59	MG	BA	3087	1/1	0.87	0.19	53,53,53,53	0
59	MG	CA	1716	1/1	0.87	0.22	80,80,80,80	0
59	MG	BA	3383	1/1	0.87	0.10	35,35,35,35	0
59	MG	DA	3152	1/1	0.87	0.20	61,61,61,61	0
59	MG	BA	3194	1/1	0.87	0.24	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1685	1/1	0.87	0.18	104,104,104,104	0
59	MG	AA	1627	1/1	0.87	0.19	56,56,56,56	0
59	MG	CF	201	1/1	0.87	0.27	69,69,69,69	0
59	MG	BA	3392	1/1	0.87	0.80	83,83,83,83	0
59	MG	AW	120	1/1	0.87	0.22	104,104,104,104	0
59	MG	CV	102	1/1	0.87	0.20	62,62,62,62	0
59	MG	DA	3188	1/1	0.87	0.23	30,30,30,30	0
59	MG	CV	104	1/1	0.87	0.24	55,55,55,55	0
59	MG	AA	1705	1/1	0.87	0.17	83,83,83,83	0
59	MG	BA	3252	1/1	0.87	0.34	50,50,50,50	0
59	MG	BA	3127	1/1	0.87	0.14	77,77,77,77	0
59	MG	BA	3132	1/1	0.87	0.07	72,72,72,72	0
59	MG	BA	3305	1/1	0.87	0.34	77,77,77,77	0
59	MG	AV	104	1/1	0.87	0.20	102,102,102,102	0
59	MG	CA	1734	1/1	0.87	0.29	75,75,75,75	0
59	MG	AA	1615	1/1	0.87	0.32	32,32,32,32	0
59	MG	BA	3312	1/1	0.87	0.07	65,65,65,65	0
59	MG	DA	3233	1/1	0.87	0.19	53,53,53,53	0
59	MG	DF	301	1/1	0.87	0.11	66,66,66,66	0
59	MG	CA	1639	1/1	0.87	0.25	48,48,48,48	0
59	MG	DA	3235	1/1	0.87	0.41	73,73,73,73	0
59	MG	BA	3415	1/1	0.87	0.29	71,71,71,71	0
59	MG	BA	3270	1/1	0.88	0.11	73,73,73,73	0
59	MG	CA	1795	1/1	0.88	0.09	62,62,62,62	0
59	MG	BA	3124	1/1	0.88	0.22	49,49,49,49	0
59	MG	DA	3198	1/1	0.88	0.23	52,52,52,52	0
59	MG	DA	3202	1/1	0.88	0.08	54,54,54,54	0
59	MG	BA	3340	1/1	0.88	0.19	62,62,62,62	0
59	MG	BA	3126	1/1	0.88	0.20	61,61,61,61	0
59	MG	AA	1784	1/1	0.88	0.18	70,70,70,70	0
59	MG	CI	201	1/1	0.88	0.24	86,86,86,86	0
59	MG	BA	3012	1/1	0.88	0.22	66,66,66,66	0
59	MG	DA	3221	1/1	0.88	0.14	51,51,51,51	0
59	MG	AA	1670	1/1	0.88	0.25	68,68,68,68	0
59	MG	CV	103	1/1	0.88	0.09	80,80,80,80	0
59	MG	DA	3231	1/1	0.88	0.10	71,71,71,71	0
59	MG	BA	3203	1/1	0.88	0.25	58,58,58,58	0
59	MG	AT	201	1/1	0.88	0.07	75,75,75,75	0
59	MG	BA	3444	1/1	0.88	0.16	58,58,58,58	0
59	MG	CA	1717	1/1	0.88	0.14	48,48,48,48	0
59	MG	AA	1612	1/1	0.88	0.27	50,50,50,50	0
59	MG	CA	1719	1/1	0.88	0.13	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3291	1/1	0.88	0.21	63,63,63,63	0
59	MG	BA	3149	1/1	0.88	0.31	38,38,38,38	0
59	MG	DA	3253	1/1	0.88	0.12	80,80,80,80	0
59	MG	BA	3024	1/1	0.88	0.08	82,82,82,82	0
59	MG	AA	1643	1/1	0.88	0.12	58,58,58,58	0
59	MG	DA	3274	1/1	0.88	0.18	45,45,45,45	0
59	MG	BA	3030	1/1	0.88	0.16	52,52,52,52	0
59	MG	CW	111	1/1	0.88	0.35	75,75,75,75	0
59	MG	AA	1698	1/1	0.88	0.17	54,54,54,54	0
59	MG	AV	105	1/1	0.88	0.32	62,62,62,62	0
59	MG	D2	102	1/1	0.88	0.08	35,35,35,35	0
59	MG	DA	3290	1/1	0.88	0.09	68,68,68,68	0
59	MG	AV	106	1/1	0.88	0.18	96,96,96,96	0
59	MG	BA	3368	1/1	0.88	0.14	57,57,57,57	0
59	MG	CA	1658	1/1	0.88	0.35	55,55,55,55	0
59	MG	AA	1673	1/1	0.88	0.08	55,55,55,55	0
59	MG	DA	3012	1/1	0.88	0.22	45,45,45,45	0
59	MG	BB	210	1/1	0.88	0.20	93,93,93,93	0
59	MG	DA	3039	1/1	0.88	0.45	27,27,27,27	0
59	MG	AA	1646	1/1	0.88	0.32	67,67,67,67	0
59	MG	DA	3050	1/1	0.88	0.13	44,44,44,44	0
59	MG	DA	3322	1/1	0.88	0.17	56,56,56,56	0
59	MG	AA	1703	1/1	0.88	0.25	72,72,72,72	0
59	MG	BA	3063	1/1	0.88	0.23	46,46,46,46	0
59	MG	DA	3085	1/1	0.88	0.20	42,42,42,42	0
59	MG	BA	3077	1/1	0.88	0.22	52,52,52,52	0
59	MG	AX	102	1/1	0.88	0.13	79,79,79,79	0
59	MG	BA	3244	1/1	0.88	0.34	85,85,85,85	0
59	MG	DA	3336	1/1	0.88	0.24	62,62,62,62	0
59	MG	DA	3095	1/1	0.88	0.28	24,24,24,24	0
59	MG	BA	3396	1/1	0.88	0.27	63,63,63,63	0
59	MG	B1	101	1/1	0.88	0.08	52,52,52,52	0
59	MG	AA	1663	1/1	0.88	0.29	61,61,61,61	0
59	MG	DA	3108	1/1	0.88	0.20	48,48,48,48	0
59	MG	BA	3178	1/1	0.88	0.12	53,53,53,53	0
59	MG	BA	3400	1/1	0.88	0.12	59,59,59,59	0
59	MG	AA	1736	1/1	0.88	0.23	56,56,56,56	0
59	MG	CA	1760	1/1	0.88	0.07	92,92,92,92	0
59	MG	BA	3404	1/1	0.88	0.19	46,46,46,46	0
59	MG	AA	1688	1/1	0.88	0.24	50,50,50,50	0
59	MG	BA	3002	1/1	0.88	0.17	60,60,60,60	0
59	MG	DA	3134	1/1	0.88	0.33	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3096	1/1	0.88	0.15	47,47,47,47	0
59	MG	BA	3411	1/1	0.88	0.11	52,52,52,52	0
59	MG	DA	3146	1/1	0.88	0.19	46,46,46,46	0
59	MG	BA	3264	1/1	0.88	0.25	55,55,55,55	0
59	MG	DA	3150	1/1	0.88	0.12	54,54,54,54	0
59	MG	DB	204	1/1	0.88	0.21	77,77,77,77	0
59	MG	AA	1651	1/1	0.88	0.19	78,78,78,78	0
59	MG	CA	1687	1/1	0.88	0.20	56,56,56,56	0
59	MG	AA	1708	1/1	0.88	0.22	61,61,61,61	0
59	MG	DB	210	1/1	0.88	0.09	88,88,88,88	0
59	MG	BA	3418	1/1	0.88	0.28	61,61,61,61	0
59	MG	CA	1790	1/1	0.88	0.21	46,46,46,46	0
59	MG	BA	3330	1/1	0.88	0.10	104,104,104,104	0
59	MG	BA	3333	1/1	0.88	0.22	51,51,51,51	0
59	MG	DA	3186	1/1	0.88	0.50	43,43,43,43	0
59	MG	BA	3334	1/1	0.88	0.27	54,54,54,54	0
59	MG	CA	1691	1/1	0.89	0.21	65,65,65,65	0
59	MG	BA	3394	1/1	0.89	0.08	61,61,61,61	0
59	MG	AA	1723	1/1	0.89	0.06	64,64,64,64	0
59	MG	CA	1772	1/1	0.89	0.31	49,49,49,49	0
59	MG	AA	1628	1/1	0.89	0.13	52,52,52,52	0
59	MG	BA	3224	1/1	0.89	0.12	62,62,62,62	0
59	MG	BA	3331	1/1	0.89	0.10	88,88,88,88	0
59	MG	CA	1782	1/1	0.89	0.11	58,58,58,58	0
59	MG	CA	1701	1/1	0.89	0.15	53,53,53,53	0
59	MG	CA	1703	1/1	0.89	0.08	47,47,47,47	0
59	MG	AA	1702	1/1	0.89	0.10	93,93,93,93	0
59	MG	BA	3177	1/1	0.89	0.11	58,58,58,58	0
59	MG	BA	3229	1/1	0.89	0.21	54,54,54,54	0
59	MG	BA	3140	1/1	0.89	0.09	36,36,36,36	0
59	MG	AV	101	1/1	0.89	0.17	61,61,61,61	0
59	MG	DA	3313	1/1	0.89	0.08	47,47,47,47	0
59	MG	BA	3294	1/1	0.89	0.16	35,35,35,35	0
59	MG	AA	1678	1/1	0.89	0.10	82,82,82,82	0
59	MG	AA	1800	1/1	0.89	0.22	74,74,74,74	0
59	MG	AA	1666	1/1	0.89	0.25	58,58,58,58	0
59	MG	BA	3347	1/1	0.89	0.17	47,47,47,47	0
59	MG	BA	3153	1/1	0.89	0.14	42,42,42,42	0
59	MG	BU	202	1/1	0.89	0.33	52,52,52,52	0
59	MG	BA	3238	1/1	0.89	0.26	42,42,42,42	0
59	MG	CV	101	1/1	0.89	0.21	31,31,31,31	0
59	MG	BU	205	1/1	0.89	0.31	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	1665	1/1	0.89	0.20	72,72,72,72	0
59	MG	BA	3155	1/1	0.89	0.08	61,61,61,61	0
59	MG	BA	3156	1/1	0.89	0.23	78,78,78,78	0
59	MG	AA	1785	1/1	0.89	0.25	52,52,52,52	0
59	MG	BA	3307	1/1	0.89	0.35	39,39,39,39	0
59	MG	DA	3181	1/1	0.89	0.06	56,56,56,56	0
59	MG	BA	3036	1/1	0.89	0.25	56,56,56,56	0
59	MG	BA	3040	1/1	0.89	0.17	54,54,54,54	0
59	MG	BA	3095	1/1	0.89	0.28	30,30,30,30	0
59	MG	CA	1614	1/1	0.89	0.07	65,65,65,65	0
59	MG	AA	1641	1/1	0.89	0.07	78,78,78,78	0
59	MG	CA	1617	1/1	0.89	0.15	51,51,51,51	0
59	MG	DA	3197	1/1	0.89	0.24	49,49,49,49	0
59	MG	BA	3256	1/1	0.89	0.34	79,79,79,79	0
59	MG	BA	3204	1/1	0.89	0.13	40,40,40,40	0
59	MG	BA	3259	1/1	0.89	0.14	55,55,55,55	0
59	MG	BA	3439	1/1	0.89	0.11	69,69,69,69	0
59	MG	BA	3102	1/1	0.89	0.23	31,31,31,31	0
59	MG	DA	3211	1/1	0.89	0.17	55,55,55,55	0
59	MG	AA	1775	1/1	0.89	0.07	75,75,75,75	0
59	MG	AA	1681	1/1	0.89	0.09	76,76,76,76	0
59	MG	CA	1752	1/1	0.89	0.24	41,41,41,41	0
59	MG	DB	205	1/1	0.89	0.13	66,66,66,66	0
59	MG	BA	3218	1/1	0.89	0.07	77,77,77,77	0
59	MG	CA	1756	1/1	0.89	0.18	72,72,72,72	0
59	MG	BA	3048	1/1	0.89	0.22	69,69,69,69	0
59	MG	DA	3019	1/1	0.89	0.19	52,52,52,52	0
59	MG	DA	3032	1/1	0.89	0.26	28,28,28,28	0
59	MG	BA	3389	1/1	0.89	0.29	74,74,74,74	0
59	MG	DA	3045	1/1	0.89	0.23	38,38,38,38	0
59	MG	AD	301	1/1	0.89	0.24	69,69,69,69	0
59	MG	CA	1762	1/1	0.89	0.19	57,57,57,57	0
59	MG	DA	3063	1/1	0.89	0.25	19,19,19,19	0
59	MG	AA	1626	1/1	0.90	0.21	60,60,60,60	0
59	MG	AA	1781	1/1	0.90	0.23	70,70,70,70	0
59	MG	BA	3109	1/1	0.90	0.18	32,32,32,32	0
59	MG	BA	3113	1/1	0.90	0.08	48,48,48,48	0
59	MG	BA	3360	1/1	0.90	0.17	51,51,51,51	0
59	MG	AA	1807	1/1	0.90	0.30	66,66,66,66	0
59	MG	BA	3123	1/1	0.90	0.12	34,34,34,34	0
59	MG	AA	1782	1/1	0.90	0.09	116,116,116,116	0
59	MG	BA	3020	1/1	0.90	0.13	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1636	1/1	0.90	0.28	65,65,65,65	0
59	MG	AA	1717	1/1	0.90	0.14	67,67,67,67	0
59	MG	BA	3173	1/1	0.90	0.17	62,62,62,62	0
59	MG	DA	3293	1/1	0.90	0.21	16,16,16,16	0
59	MG	BA	3372	1/1	0.90	0.07	70,70,70,70	0
59	MG	BA	3272	1/1	0.90	0.25	44,44,44,44	0
59	MG	BA	3223	1/1	0.90	0.13	52,52,52,52	0
59	MG	BA	3441	1/1	0.90	0.20	50,50,50,50	0
59	MG	DA	3144	1/1	0.90	0.08	45,45,45,45	0
59	MG	BA	3381	1/1	0.90	0.10	53,53,53,53	0
59	MG	DA	3316	1/1	0.90	0.13	63,63,63,63	0
59	MG	BA	3382	1/1	0.90	0.20	43,43,43,43	0
59	MG	BA	3079	1/1	0.90	0.22	65,65,65,65	0
59	MG	BA	3137	1/1	0.90	0.16	33,33,33,33	0
59	MG	DA	3153	1/1	0.90	0.10	49,49,49,49	0
59	MG	DA	3155	1/1	0.90	0.12	56,56,56,56	0
59	MG	DA	3158	1/1	0.90	0.29	51,51,51,51	0
59	MG	AA	1795	1/1	0.90	0.22	47,47,47,47	0
59	MG	DA	3162	1/1	0.90	0.15	53,53,53,53	0
59	MG	BB	202	1/1	0.90	0.13	98,98,98,98	0
59	MG	BA	3028	1/1	0.90	0.17	23,23,23,23	0
59	MG	CA	1636	1/1	0.90	0.18	69,69,69,69	0
59	MG	BA	3029	1/1	0.90	0.26	50,50,50,50	0
59	MG	BA	3329	1/1	0.90	0.12	50,50,50,50	0
59	MG	BA	3183	1/1	0.90	0.14	68,68,68,68	0
59	MG	DA	3347	1/1	0.90	0.16	54,54,54,54	0
59	MG	CX	101	1/1	0.90	0.32	44,44,44,44	0
59	MG	BA	3287	1/1	0.90	0.10	51,51,51,51	0
59	MG	AA	1752	1/1	0.90	0.22	64,64,64,64	0
59	MG	BA	3292	1/1	0.90	0.20	48,48,48,48	0
59	MG	CA	1643	1/1	0.90	0.22	100,100,100,100	0
59	MG	BA	3090	1/1	0.90	0.09	73,73,73,73	0
59	MG	BA	3337	1/1	0.90	0.20	80,80,80,80	0
59	MG	CA	1647	1/1	0.90	0.25	67,67,67,67	0
59	MG	DA	3018	1/1	0.90	0.15	73,73,73,73	0
59	MG	DA	3379	1/1	0.90	0.11	53,53,53,53	0
59	MG	BA	3001	1/1	0.90	0.28	56,56,56,56	0
59	MG	CA	1704	1/1	0.90	0.22	66,66,66,66	0
59	MG	BA	3154	1/1	0.90	0.21	50,50,50,50	0
59	MG	AA	1710	1/1	0.90	0.07	53,53,53,53	0
59	MG	DA	3385	1/1	0.90	0.11	226,226,226,226	0
59	MG	CA	1708	1/1	0.90	0.15	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	1780	1/1	0.90	0.09	71,71,71,71	0
59	MG	DA	3053	1/1	0.90	0.24	29,29,29,29	0
59	MG	DB	203	1/1	0.90	0.10	59,59,59,59	0
59	MG	DA	3227	1/1	0.90	0.11	49,49,49,49	0
59	MG	DA	3229	1/1	0.90	0.19	52,52,52,52	0
59	MG	BA	3300	1/1	0.90	0.17	62,62,62,62	0
59	MG	DA	3064	1/1	0.90	0.35	32,32,32,32	0
59	MG	DA	3071	1/1	0.90	0.19	53,53,53,53	0
59	MG	AW	116	1/1	0.90	0.22	76,76,76,76	0
59	MG	CA	1711	1/1	0.90	0.25	72,72,72,72	0
59	MG	BA	3197	1/1	0.90	0.42	68,68,68,68	0
59	MG	DA	3238	1/1	0.90	0.32	26,26,26,26	0
59	MG	DA	3241	1/1	0.90	0.23	33,33,33,33	0
59	MG	AA	1712	1/1	0.90	0.09	67,67,67,67	0
59	MG	BA	3101	1/1	0.90	0.18	49,49,49,49	0
59	MG	DA	3250	1/1	0.91	0.14	48,48,48,48	0
59	MG	DA	3251	1/1	0.91	0.13	53,53,53,53	0
59	MG	AA	1618	1/1	0.91	0.17	65,65,65,65	0
59	MG	CA	1726	1/1	0.91	0.07	64,64,64,64	0
59	MG	DA	3254	1/1	0.91	0.30	66,66,66,66	0
59	MG	DA	3260	1/1	0.91	0.27	43,43,43,43	0
59	MG	BA	3391	1/1	0.91	0.17	44,44,44,44	0
59	MG	BA	3448	1/1	0.91	0.22	44,44,44,44	0
59	MG	BA	3208	1/1	0.91	0.07	36,36,36,36	0
59	MG	BA	3393	1/1	0.91	0.26	34,34,34,34	0
59	MG	CA	1731	1/1	0.91	0.28	51,51,51,51	0
59	MG	BA	3454	1/1	0.91	0.28	61,61,61,61	0
59	MG	CA	1624	1/1	0.91	0.21	58,58,58,58	0
59	MG	DA	3123	1/1	0.91	0.24	49,49,49,49	0
59	MG	AA	1687	1/1	0.91	0.10	84,84,84,84	0
59	MG	DA	3127	1/1	0.91	0.20	31,31,31,31	0
59	MG	DA	3296	1/1	0.91	0.14	46,46,46,46	0
59	MG	BA	3457	1/1	0.91	0.32	82,82,82,82	0
59	MG	BA	3013	1/1	0.91	0.12	62,62,62,62	0
59	MG	DA	3301	1/1	0.91	0.12	136,136,136,136	0
59	MG	DA	3140	1/1	0.91	0.26	43,43,43,43	0
59	MG	DA	3307	1/1	0.91	0.37	64,64,64,64	0
59	MG	CA	1630	1/1	0.91	0.04	120,120,120,120	0
59	MG	BA	3147	1/1	0.91	0.12	58,58,58,58	0
59	MG	BA	3217	1/1	0.91	0.25	72,72,72,72	0
59	MG	CA	1635	1/1	0.91	0.20	35,35,35,35	0
59	MG	AA	1764	1/1	0.91	0.09	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3260	1/1	0.91	0.15	59,59,59,59	0
59	MG	CA	1748	1/1	0.91	0.19	50,50,50,50	0
59	MG	BA	3308	1/1	0.91	0.08	53,53,53,53	0
59	MG	AA	1798	1/1	0.91	0.13	75,75,75,75	0
59	MG	BA	3107	1/1	0.91	0.19	53,53,53,53	0
59	MG	DA	3161	1/1	0.91	0.22	37,37,37,37	0
59	MG	BA	3179	1/1	0.91	0.07	66,66,66,66	0
59	MG	D2	101	1/1	0.91	0.11	59,59,59,59	0
59	MG	AA	1613	1/1	0.91	0.14	89,89,89,89	0
59	MG	B0	101	1/1	0.91	0.15	44,44,44,44	0
59	MG	DA	3333	1/1	0.91	0.09	57,57,57,57	0
59	MG	AA	1711	1/1	0.91	0.10	60,60,60,60	0
59	MG	DA	3004	1/1	0.91	0.21	89,89,89,89	0
59	MG	DA	3342	1/1	0.91	0.14	59,59,59,59	0
59	MG	DA	3343	1/1	0.91	0.24	26,26,26,26	0
59	MG	DA	3006	1/1	0.91	0.19	63,63,63,63	0
59	MG	DA	3185	1/1	0.91	0.23	31,31,31,31	0
59	MG	CA	1699	1/1	0.91	0.06	66,66,66,66	0
59	MG	AA	1767	1/1	0.91	0.17	47,47,47,47	0
59	MG	DA	3356	1/1	0.91	0.28	68,68,68,68	0
59	MG	BA	3414	1/1	0.91	0.21	48,48,48,48	0
59	MG	BA	3158	1/1	0.91	0.09	71,71,71,71	0
59	MG	DA	3361	1/1	0.91	0.12	42,42,42,42	0
59	MG	DA	3362	1/1	0.91	0.13	56,56,56,56	0
59	MG	DA	3363	1/1	0.91	0.23	48,48,48,48	0
59	MG	BA	3118	1/1	0.91	0.20	31,31,31,31	0
59	MG	DA	3368	1/1	0.91	0.35	50,50,50,50	0
59	MG	CA	1771	1/1	0.91	0.08	62,62,62,62	0
59	MG	AA	1620	1/1	0.91	0.23	38,38,38,38	0
59	MG	DA	3035	1/1	0.91	0.39	44,44,44,44	0
59	MG	DA	3036	1/1	0.91	0.16	62,62,62,62	0
59	MG	BA	3191	1/1	0.91	0.23	51,51,51,51	0
59	MG	BA	3284	1/1	0.91	0.10	62,62,62,62	0
59	MG	DA	3210	1/1	0.91	0.17	71,71,71,71	0
59	MG	DA	3047	1/1	0.91	0.19	16,16,16,16	0
59	MG	BA	3425	1/1	0.91	0.09	67,67,67,67	0
59	MG	CA	1779	1/1	0.91	0.21	46,46,46,46	0
59	MG	AA	1667	1/1	0.91	0.20	64,64,64,64	0
59	MG	AV	107	1/1	0.91	0.21	63,63,63,63	0
59	MG	DA	3226	1/1	0.91	0.11	51,51,51,51	0
59	MG	BA	3429	1/1	0.91	0.25	62,62,62,62	0
59	MG	AA	1640	1/1	0.91	0.31	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3074	1/1	0.91	0.12	40,40,40,40	0
59	MG	CA	1661	1/1	0.91	0.25	56,56,56,56	0
59	MG	DA	3083	1/1	0.91	0.25	33,33,33,33	0
59	MG	BA	3379	1/1	0.91	0.09	74,74,74,74	0
59	MG	BA	3236	1/1	0.91	0.25	48,48,48,48	0
59	MG	BA	3165	1/1	0.91	0.33	44,44,44,44	0
59	MG	BA	3199	1/1	0.91	0.18	60,60,60,60	0
59	MG	BA	3088	1/1	0.91	0.12	42,42,42,42	0
59	MG	AA	1730	1/1	0.91	0.23	59,59,59,59	0
59	MG	DA	3098	1/1	0.91	0.24	29,29,29,29	0
59	MG	AA	1603	1/1	0.91	0.11	65,65,65,65	0
59	MG	BA	3068	1/1	0.92	0.17	36,36,36,36	0
59	MG	AA	1770	1/1	0.92	0.29	74,74,74,74	0
59	MG	DA	3117	1/1	0.92	0.14	57,57,57,57	0
59	MG	DA	3255	1/1	0.92	0.18	55,55,55,55	0
59	MG	DA	3259	1/1	0.92	0.28	34,34,34,34	0
59	MG	BA	3268	1/1	0.92	0.15	48,48,48,48	0
59	MG	CA	1616	1/1	0.92	0.26	32,32,32,32	0
59	MG	DA	3265	1/1	0.92	0.12	38,38,38,38	0
59	MG	DA	3270	1/1	0.92	0.14	45,45,45,45	0
59	MG	CA	1736	1/1	0.92	0.25	63,63,63,63	0
59	MG	BA	3129	1/1	0.92	0.32	61,61,61,61	0
59	MG	CA	1738	1/1	0.92	0.13	95,95,95,95	0
59	MG	BA	3015	1/1	0.92	0.12	37,37,37,37	0
59	MG	DA	3133	1/1	0.92	0.26	22,22,22,22	0
59	MG	AA	1649	1/1	0.92	0.18	54,54,54,54	0
59	MG	DA	3136	1/1	0.92	0.24	46,46,46,46	0
59	MG	BA	3175	1/1	0.92	0.19	52,52,52,52	0
59	MG	DA	3139	1/1	0.92	0.36	57,57,57,57	0
59	MG	BA	3446	1/1	0.92	0.28	53,53,53,53	0
59	MG	AA	1810	1/1	0.92	0.07	88,88,88,88	0
59	MG	DA	3298	1/1	0.92	0.07	50,50,50,50	0
59	MG	AX	101	1/1	0.92	0.24	71,71,71,71	0
59	MG	BA	3277	1/1	0.92	0.16	56,56,56,56	0
59	MG	AC	301	1/1	0.92	0.17	66,66,66,66	0
59	MG	CX	102	1/1	0.92	0.19	49,49,49,49	0
59	MG	BA	3143	1/1	0.92	0.12	58,58,58,58	0
59	MG	CA	1632	1/1	0.92	0.17	54,54,54,54	0
59	MG	BA	3144	1/1	0.92	0.09	54,54,54,54	0
59	MG	AA	1704	1/1	0.92	0.21	61,61,61,61	0
59	MG	CA	1757	1/1	0.92	0.44	60,60,60,60	0
59	MG	CA	1758	1/1	0.92	0.16	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1610	1/1	0.92	0.13	95,95,95,95	0
59	MG	BA	3148	1/1	0.92	0.35	24,24,24,24	0
59	MG	DA	3164	1/1	0.92	0.07	57,57,57,57	0
59	MG	AA	1729	1/1	0.92	0.12	61,61,61,61	0
59	MG	BA	3288	1/1	0.92	0.21	78,78,78,78	0
59	MG	DA	3017	1/1	0.92	0.21	29,29,29,29	0
59	MG	B5	101	1/1	0.92	0.15	30,30,30,30	0
59	MG	AA	1624	1/1	0.92	0.17	63,63,63,63	0
59	MG	DA	3184	1/1	0.92	0.06	49,49,49,49	0
59	MG	DA	3027	1/1	0.92	0.18	32,32,32,32	0
59	MG	AA	1734	1/1	0.92	0.18	75,75,75,75	0
59	MG	CA	1702	1/1	0.92	0.18	75,75,75,75	0
59	MG	DA	3338	1/1	0.92	0.32	37,37,37,37	0
59	MG	DA	3340	1/1	0.92	0.08	84,84,84,84	0
59	MG	BA	3343	1/1	0.92	0.09	70,70,70,70	0
59	MG	DA	3190	1/1	0.92	0.38	61,61,61,61	0
59	MG	BA	3098	1/1	0.92	0.22	55,55,55,55	0
59	MG	DA	3040	1/1	0.92	0.16	22,22,22,22	0
59	MG	DA	3194	1/1	0.92	0.10	62,62,62,62	0
59	MG	DA	3195	1/1	0.92	0.16	52,52,52,52	0
59	MG	BA	3409	1/1	0.92	0.24	61,61,61,61	0
59	MG	BB	212	1/1	0.92	0.20	48,48,48,48	0
59	MG	DA	3199	1/1	0.92	0.08	52,52,52,52	0
59	MG	DA	3200	1/1	0.92	0.22	45,45,45,45	0
59	MG	BB	213	1/1	0.92	0.23	50,50,50,50	0
59	MG	AA	1797	1/1	0.92	0.08	73,73,73,73	0
59	MG	DA	3366	1/1	0.92	0.33	67,67,67,67	0
59	MG	BA	3243	1/1	0.92	0.17	52,52,52,52	0
59	MG	DA	3055	1/1	0.92	0.20	54,54,54,54	0
59	MG	DA	3208	1/1	0.92	0.22	63,63,63,63	0
59	MG	AA	1605	1/1	0.92	0.31	37,37,37,37	0
59	MG	AA	1653	1/1	0.92	0.24	45,45,45,45	0
59	MG	DA	3212	1/1	0.92	0.14	45,45,45,45	0
59	MG	DA	3070	1/1	0.92	0.30	41,41,41,41	0
59	MG	BA	3004	1/1	0.92	0.32	48,48,48,48	0
59	MG	DA	3381	1/1	0.92	0.07	57,57,57,57	0
59	MG	DA	3220	1/1	0.92	0.19	47,47,47,47	0
59	MG	BA	3249	1/1	0.92	0.14	49,49,49,49	0
59	MG	DA	3077	1/1	0.92	0.27	21,21,21,21	0
59	MG	DA	3080	1/1	0.92	0.20	51,51,51,51	0
59	MG	AA	1669	1/1	0.92	0.14	57,57,57,57	0
59	MG	BF	303	1/1	0.92	0.17	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3111	1/1	0.92	0.07	52,52,52,52	0
59	MG	BA	3052	1/1	0.92	0.22	58,58,58,58	0
59	MG	BA	3056	1/1	0.92	0.17	31,31,31,31	0
59	MG	BA	3423	1/1	0.92	0.14	61,61,61,61	0
59	MG	AA	1751	1/1	0.92	0.27	52,52,52,52	0
59	MG	BX	102	1/1	0.92	0.17	47,47,47,47	0
59	MG	AA	1693	1/1	0.92	0.15	56,56,56,56	0
59	MG	BA	3258	1/1	0.92	0.43	69,69,69,69	0
59	MG	DA	3243	1/1	0.92	0.26	42,42,42,42	0
59	MG	AA	1768	1/1	0.92	0.17	63,63,63,63	0
59	MG	DA	3103	1/1	0.92	0.42	59,59,59,59	0
59	MG	BA	3215	1/1	0.92	0.22	47,47,47,47	0
59	MG	BA	3371	1/1	0.92	0.27	68,68,68,68	0
59	MG	BA	3261	1/1	0.92	0.14	59,59,59,59	0
59	MG	BA	3377	1/1	0.93	0.07	30,30,30,30	0
59	MG	BA	3279	1/1	0.93	0.17	66,66,66,66	0
59	MG	DA	3256	1/1	0.93	0.18	59,59,59,59	0
59	MG	BA	3380	1/1	0.93	0.13	60,60,60,60	0
59	MG	CA	1618	1/1	0.93	0.21	65,65,65,65	0
59	MG	BA	3070	1/1	0.93	0.15	21,21,21,21	0
59	MG	CA	1677	1/1	0.93	0.19	68,68,68,68	0
59	MG	CA	1740	1/1	0.93	0.14	59,59,59,59	0
59	MG	BA	3190	1/1	0.93	0.18	38,38,38,38	0
59	MG	DA	3130	1/1	0.93	0.16	41,41,41,41	0
59	MG	BA	3282	1/1	0.93	0.22	76,76,76,76	0
59	MG	CA	1622	1/1	0.93	0.17	50,50,50,50	0
59	MG	BA	3073	1/1	0.93	0.18	37,37,37,37	0
59	MG	CA	1745	1/1	0.93	0.13	51,51,51,51	0
59	MG	BA	3115	1/1	0.93	0.13	48,48,48,48	0
59	MG	BA	3076	1/1	0.93	0.13	65,65,65,65	0
59	MG	DA	3291	1/1	0.93	0.10	44,44,44,44	0
59	MG	AA	1695	1/1	0.93	0.16	51,51,51,51	0
59	MG	BA	3332	1/1	0.93	0.09	75,75,75,75	0
59	MG	DA	3002	1/1	0.93	0.11	58,58,58,58	0
59	MG	B1	102	1/1	0.93	0.06	67,67,67,67	0
59	MG	AA	1690	1/1	0.93	0.07	69,69,69,69	0
59	MG	DA	3005	1/1	0.93	0.35	56,56,56,56	0
59	MG	DA	3302	1/1	0.93	0.17	48,48,48,48	0
59	MG	AA	1761	1/1	0.93	0.31	52,52,52,52	0
59	MG	AA	1809	1/1	0.93	0.27	57,57,57,57	0
59	MG	DA	3157	1/1	0.93	0.18	42,42,42,42	0
59	MG	BA	3251	1/1	0.93	0.15	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3010	1/1	0.93	0.13	40,40,40,40	0
59	MG	DA	3011	1/1	0.93	0.22	27,27,27,27	0
59	MG	CA	1694	1/1	0.93	0.08	80,80,80,80	0
59	MG	DA	3013	1/1	0.93	0.20	26,26,26,26	0
59	MG	BA	3295	1/1	0.93	0.24	51,51,51,51	0
59	MG	CA	1696	1/1	0.93	0.24	44,44,44,44	0
59	MG	BA	3296	1/1	0.93	0.36	59,59,59,59	0
59	MG	BA	3017	1/1	0.93	0.07	43,43,43,43	0
59	MG	DA	3020	1/1	0.93	0.20	29,29,29,29	0
59	MG	CA	1766	1/1	0.93	0.13	69,69,69,69	0
59	MG	BA	3046	1/1	0.93	0.11	39,39,39,39	0
59	MG	DA	3034	1/1	0.93	0.15	36,36,36,36	0
59	MG	CA	1768	1/1	0.93	0.29	58,58,58,58	0
59	MG	CA	1769	1/1	0.93	0.28	35,35,35,35	0
59	MG	DA	3335	1/1	0.93	0.23	51,51,51,51	0
59	MG	AA	1722	1/1	0.93	0.09	75,75,75,75	0
59	MG	DA	3189	1/1	0.93	0.17	47,47,47,47	0
59	MG	BA	3345	1/1	0.93	0.09	74,74,74,74	0
59	MG	DA	3042	1/1	0.93	0.23	52,52,52,52	0
59	MG	BA	3135	1/1	0.93	0.09	46,46,46,46	0
59	MG	DA	3046	1/1	0.93	0.20	35,35,35,35	0
59	MG	AA	1659	1/1	0.93	0.18	74,74,74,74	0
59	MG	BA	3170	1/1	0.93	0.15	66,66,66,66	0
59	MG	BA	3139	1/1	0.93	0.17	37,37,37,37	0
59	MG	DA	3350	1/1	0.93	0.20	58,58,58,58	0
59	MG	BA	3021	1/1	0.93	0.06	61,61,61,61	0
59	MG	DA	3355	1/1	0.93	0.19	39,39,39,39	0
59	MG	BA	3141	1/1	0.93	0.21	32,32,32,32	0
59	MG	DA	3061	1/1	0.93	0.20	21,21,21,21	0
59	MG	CA	1781	1/1	0.93	0.12	40,40,40,40	0
59	MG	BA	3354	1/1	0.93	0.21	38,38,38,38	0
59	MG	DA	3069	1/1	0.93	0.12	48,48,48,48	0
59	MG	BA	3356	1/1	0.93	0.11	69,69,69,69	0
59	MG	DA	3365	1/1	0.93	0.07	38,38,38,38	0
59	MG	BA	3416	1/1	0.93	0.17	50,50,50,50	0
59	MG	BA	3174	1/1	0.93	0.11	48,48,48,48	0
59	MG	AA	1744	1/1	0.93	0.18	70,70,70,70	0
59	MG	AA	1602	1/1	0.93	0.18	56,56,56,56	0
59	MG	BA	3421	1/1	0.93	0.25	50,50,50,50	0
59	MG	DA	3218	1/1	0.93	0.30	29,29,29,29	0
59	MG	BA	3097	1/1	0.93	0.12	46,46,46,46	0
59	MG	BA	3058	1/1	0.93	0.08	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	1660	1/1	0.93	0.11	65,65,65,65	0
59	MG	DA	3086	1/1	0.93	0.20	50,50,50,50	0
59	MG	DA	3088	1/1	0.93	0.27	24,24,24,24	0
59	MG	BA	3099	1/1	0.93	0.14	40,40,40,40	0
59	MG	BA	3315	1/1	0.93	0.09	64,64,64,64	0
59	MG	CA	1724	1/1	0.93	0.07	120,120,120,120	0
59	MG	AA	1725	1/1	0.93	0.28	54,54,54,54	0
59	MG	BA	3061	1/1	0.93	0.18	42,42,42,42	0
59	MG	BA	3430	1/1	0.93	0.09	69,69,69,69	0
59	MG	BA	3369	1/1	0.93	0.24	60,60,60,60	0
59	MG	AA	1637	1/1	0.93	0.22	71,71,71,71	0
59	MG	BA	3152	1/1	0.93	0.14	46,46,46,46	0
59	MG	DA	3242	1/1	0.93	0.17	36,36,36,36	0
59	MG	BA	3010	1/1	0.93	0.08	48,48,48,48	0
59	MG	DA	3109	1/1	0.93	0.14	17,17,17,17	0
59	MG	CA	1613	1/1	0.93	0.12	63,63,63,63	0
59	MG	DA	3111	1/1	0.93	0.33	28,28,28,28	0
59	MG	DA	3249	1/1	0.93	0.07	68,68,68,68	0
59	MG	DA	3112	1/1	0.93	0.17	22,22,22,22	0
59	MG	BA	3069	1/1	0.93	0.22	29,29,29,29	0
59	MG	DO	201	1/1	0.93	0.22	64,64,64,64	0
59	MG	DA	3114	1/1	0.93	0.07	32,32,32,32	0
59	MG	DA	3115	1/1	0.93	0.25	27,27,27,27	0
59	MG	AA	1720	1/1	0.94	0.18	59,59,59,59	0
59	MG	BA	3008	1/1	0.94	0.22	49,49,49,49	0
59	MG	BA	3042	1/1	0.94	0.31	52,52,52,52	0
59	MG	BA	3349	1/1	0.94	0.30	73,73,73,73	0
59	MG	AA	1632	1/1	0.94	0.14	77,77,77,77	0
59	MG	BV	201	1/1	0.94	0.23	33,33,33,33	0
59	MG	BX	101	1/1	0.94	0.06	48,48,48,48	0
59	MG	DA	3121	1/1	0.94	0.13	41,41,41,41	0
59	MG	DA	3258	1/1	0.94	0.22	65,65,65,65	0
59	MG	AA	1709	1/1	0.94	0.09	59,59,59,59	0
59	MG	AA	1609	1/1	0.94	0.13	80,80,80,80	0
59	MG	DA	3126	1/1	0.94	0.21	25,25,25,25	0
59	MG	BA	3094	1/1	0.94	0.12	30,30,30,30	0
59	MG	DA	3269	1/1	0.94	0.19	32,32,32,32	0
59	MG	DA	3129	1/1	0.94	0.13	34,34,34,34	0
59	MG	CA	1603	1/1	0.94	0.24	55,55,55,55	0
59	MG	DA	3273	1/1	0.94	0.17	54,54,54,54	0
59	MG	DA	3131	1/1	0.94	0.26	26,26,26,26	0
59	MG	DA	3132	1/1	0.94	0.16	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3277	1/1	0.94	0.12	49,49,49,49	0
59	MG	BA	3239	1/1	0.94	0.29	35,35,35,35	0
59	MG	DA	3279	1/1	0.94	0.31	52,52,52,52	0
59	MG	AA	1691	1/1	0.94	0.26	45,45,45,45	0
59	MG	DA	3281	1/1	0.94	0.24	38,38,38,38	0
59	MG	CA	1607	1/1	0.94	0.15	59,59,59,59	0
59	MG	BA	3188	1/1	0.94	0.19	66,66,66,66	0
59	MG	DA	3286	1/1	0.94	0.17	35,35,35,35	0
59	MG	BA	3049	1/1	0.94	0.18	35,35,35,35	0
59	MG	BA	3050	1/1	0.94	0.12	25,25,25,25	0
59	MG	DA	3141	1/1	0.94	0.08	40,40,40,40	0
59	MG	CA	1611	1/1	0.94	0.25	71,71,71,71	0
59	MG	CA	1754	1/1	0.94	0.20	53,53,53,53	0
59	MG	DA	3145	1/1	0.94	0.07	64,64,64,64	0
59	MG	CA	1755	1/1	0.94	0.17	47,47,47,47	0
59	MG	DA	3147	1/1	0.94	0.15	31,31,31,31	0
59	MG	BA	3248	1/1	0.94	0.09	54,54,54,54	0
59	MG	DA	3303	1/1	0.94	0.07	48,48,48,48	0
59	MG	AA	1771	1/1	0.94	0.16	48,48,48,48	0
59	MG	AX	103	1/1	0.94	0.16	52,52,52,52	0
59	MG	BA	3432	1/1	0.94	0.08	48,48,48,48	0
59	MG	BA	3195	1/1	0.94	0.27	42,42,42,42	0
59	MG	DA	3156	1/1	0.94	0.28	67,67,67,67	0
59	MG	BA	3055	1/1	0.94	0.15	23,23,23,23	0
59	MG	BA	3310	1/1	0.94	0.30	44,44,44,44	0
59	MG	DA	3031	1/1	0.94	0.19	32,32,32,32	0
59	MG	AA	1638	1/1	0.94	0.17	43,43,43,43	0
59	MG	BA	3370	1/1	0.94	0.07	47,47,47,47	0
59	MG	BA	3105	1/1	0.94	0.14	43,43,43,43	0
59	MG	DA	3324	1/1	0.94	0.21	46,46,46,46	0
59	MG	AA	1773	1/1	0.94	0.24	52,52,52,52	0
59	MG	DA	3165	1/1	0.94	0.13	34,34,34,34	0
59	MG	DA	3166	1/1	0.94	0.12	63,63,63,63	0
59	MG	BA	3201	1/1	0.94	0.28	49,49,49,49	0
59	MG	BA	3442	1/1	0.94	0.08	57,57,57,57	0
59	MG	DA	3169	1/1	0.94	0.17	37,37,37,37	0
59	MG	AA	1774	1/1	0.94	0.17	61,61,61,61	0
59	MG	DA	3174	1/1	0.94	0.18	37,37,37,37	0
59	MG	CA	1698	1/1	0.94	0.07	74,74,74,74	0
59	MG	AA	1758	1/1	0.94	0.22	42,42,42,42	0
59	MG	AA	1682	1/1	0.94	0.14	117,117,117,117	0
59	MG	DA	3339	1/1	0.94	0.24	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3048	1/1	0.94	0.26	14,14,14,14	0
59	MG	BA	3206	1/1	0.94	0.14	50,50,50,50	0
59	MG	BA	3451	1/1	0.94	0.19	45,45,45,45	0
59	MG	BA	3263	1/1	0.94	0.26	60,60,60,60	0
59	MG	DA	3345	1/1	0.94	0.34	53,53,53,53	0
59	MG	BA	3207	1/1	0.94	0.10	46,46,46,46	0
59	MG	DA	3057	1/1	0.94	0.20	28,28,28,28	0
59	MG	CA	1705	1/1	0.94	0.30	46,46,46,46	0
59	MG	BA	3062	1/1	0.94	0.19	30,30,30,30	0
59	MG	CA	1784	1/1	0.94	0.12	66,66,66,66	0
59	MG	DA	3065	1/1	0.94	0.23	23,23,23,23	0
59	MG	DA	3066	1/1	0.94	0.25	23,23,23,23	0
59	MG	BA	3210	1/1	0.94	0.05	56,56,56,56	0
59	MG	DA	3360	1/1	0.94	0.06	55,55,55,55	0
59	MG	BA	3114	1/1	0.94	0.08	49,49,49,49	0
59	MG	CA	1789	1/1	0.94	0.15	89,89,89,89	0
59	MG	AA	1796	1/1	0.94	0.10	47,47,47,47	0
59	MG	DA	3364	1/1	0.94	0.17	46,46,46,46	0
59	MG	BA	3066	1/1	0.94	0.10	47,47,47,47	0
59	MG	DA	3079	1/1	0.94	0.16	30,30,30,30	0
59	MG	AA	1616	1/1	0.94	0.10	63,63,63,63	0
59	MG	CA	1712	1/1	0.94	0.10	86,86,86,86	0
59	MG	DA	3209	1/1	0.94	0.06	80,80,80,80	0
59	MG	BA	3027	1/1	0.94	0.11	29,29,29,29	0
59	MG	BA	3274	1/1	0.94	0.12	58,58,58,58	0
59	MG	AA	1716	1/1	0.94	0.08	99,99,99,99	0
59	MG	DA	3378	1/1	0.94	0.07	35,35,35,35	0
59	MG	CA	1645	1/1	0.94	0.23	50,50,50,50	0
59	MG	AA	1606	1/1	0.94	0.14	65,65,65,65	0
59	MG	AA	1642	1/1	0.94	0.10	57,57,57,57	0
59	MG	DA	3090	1/1	0.94	0.17	31,31,31,31	0
59	MG	BA	3035	1/1	0.94	0.21	30,30,30,30	0
59	MG	DA	3223	1/1	0.94	0.19	19,19,19,19	0
59	MG	DA	3092	1/1	0.94	0.15	26,26,26,26	0
59	MG	BA	3130	1/1	0.94	0.14	54,54,54,54	0
59	MG	BA	3336	1/1	0.94	0.25	73,73,73,73	0
59	MG	CA	1651	1/1	0.94	0.16	60,60,60,60	0
59	MG	AA	1661	1/1	0.94	0.27	40,40,40,40	0
59	MG	BA	3403	1/1	0.94	0.18	44,44,44,44	0
59	MG	DA	3102	1/1	0.94	0.22	27,27,27,27	0
59	MG	BA	3037	1/1	0.94	0.18	28,28,28,28	0
59	MG	BA	3339	1/1	0.94	0.07	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3106	1/1	0.94	0.06	32,32,32,32	0
59	MG	DA	3107	1/1	0.94	0.11	31,31,31,31	0
59	MG	BA	3225	1/1	0.94	0.16	37,37,37,37	0
59	MG	BA	3134	1/1	0.94	0.17	30,30,30,30	0
59	MG	BA	3039	1/1	0.94	0.09	45,45,45,45	0
59	MG	BE	301	1/1	0.94	0.18	35,35,35,35	0
59	MG	BA	3082	1/1	0.94	0.15	42,42,42,42	0
59	MG	DA	3247	1/1	0.94	0.07	41,41,41,41	0
59	MG	BA	3083	1/1	0.94	0.16	28,28,28,28	0
60	EDS	CA	1787	41/41	0.94	0.09	39,46,57,70	0
59	MG	BA	3100	1/1	0.95	0.10	32,32,32,32	0
59	MG	DA	3100	1/1	0.95	0.20	29,29,29,29	0
59	MG	BA	3355	1/1	0.95	0.06	60,60,60,60	0
59	MG	DA	3295	1/1	0.95	0.16	66,66,66,66	0
59	MG	AA	1684	1/1	0.95	0.33	44,44,44,44	0
59	MG	AA	1739	1/1	0.95	0.19	44,44,44,44	0
59	MG	BA	3358	1/1	0.95	0.08	73,73,73,73	0
59	MG	DA	3191	1/1	0.95	0.08	32,32,32,32	0
59	MG	DA	3300	1/1	0.95	0.15	33,33,33,33	0
59	MG	DA	3015	1/1	0.95	0.14	29,29,29,29	0
59	MG	BA	3359	1/1	0.95	0.16	78,78,78,78	0
59	MG	AA	1621	1/1	0.95	0.11	58,58,58,58	0
59	MG	AA	1778	1/1	0.95	0.20	71,71,71,71	0
59	MG	DA	3306	1/1	0.95	0.06	39,39,39,39	0
59	MG	DA	3196	1/1	0.95	0.18	26,26,26,26	0
59	MG	AA	1731	1/1	0.95	0.15	56,56,56,56	0
59	MG	DA	3022	1/1	0.95	0.23	17,17,17,17	0
59	MG	DA	3314	1/1	0.95	0.06	64,64,64,64	0
59	MG	DA	3023	1/1	0.95	0.37	31,31,31,31	0
59	MG	DA	3025	1/1	0.95	0.20	22,22,22,22	0
59	MG	DA	3026	1/1	0.95	0.25	28,28,28,28	0
59	MG	AA	1806	1/1	0.95	0.28	30,30,30,30	0
59	MG	DA	3204	1/1	0.95	0.20	26,26,26,26	0
59	MG	DA	3029	1/1	0.95	0.18	28,28,28,28	0
59	MG	BA	3110	1/1	0.95	0.21	35,35,35,35	0
59	MG	CA	1679	1/1	0.95	0.06	63,63,63,63	0
59	MG	DA	3325	1/1	0.95	0.07	56,56,56,56	0
59	MG	CA	1629	1/1	0.95	0.20	45,45,45,45	0
59	MG	BA	3060	1/1	0.95	0.19	26,26,26,26	0
59	MG	BA	3417	1/1	0.95	0.22	43,43,43,43	0
59	MG	DA	3122	1/1	0.95	0.17	47,47,47,47	0
59	MG	BA	3112	1/1	0.95	0.32	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1769	1/1	0.95	0.12	71,71,71,71	0
59	MG	DA	3125	1/1	0.95	0.15	43,43,43,43	0
59	MG	DA	3219	1/1	0.95	0.17	26,26,26,26	0
59	MG	DA	3041	1/1	0.95	0.17	24,24,24,24	0
59	MG	AA	1733	1/1	0.95	0.11	67,67,67,67	0
59	MG	DA	3222	1/1	0.95	0.25	38,38,38,38	0
59	MG	DA	3128	1/1	0.95	0.13	28,28,28,28	0
59	MG	BA	3289	1/1	0.95	0.17	49,49,49,49	0
59	MG	BA	3290	1/1	0.95	0.30	47,47,47,47	0
59	MG	BA	3214	1/1	0.95	0.21	59,59,59,59	0
59	MG	BA	3089	1/1	0.95	0.17	42,42,42,42	0
59	MG	BA	3005	1/1	0.95	0.10	53,53,53,53	0
59	MG	BA	3065	1/1	0.95	0.15	35,35,35,35	0
59	MG	DA	3051	1/1	0.95	0.24	43,43,43,43	0
59	MG	DA	3349	1/1	0.95	0.44	39,39,39,39	1
59	MG	DA	3137	1/1	0.95	0.36	25,25,25,25	0
59	MG	DA	3353	1/1	0.95	0.14	51,51,51,51	0
59	MG	BA	3181	1/1	0.95	0.19	44,44,44,44	0
59	MG	DA	3054	1/1	0.95	0.16	18,18,18,18	0
59	MG	DA	3237	1/1	0.95	0.16	34,34,34,34	0
59	MG	BA	3120	1/1	0.95	0.07	38,38,38,38	0
59	MG	BA	3121	1/1	0.95	0.14	47,47,47,47	0
59	MG	DA	3359	1/1	0.95	0.06	57,57,57,57	0
59	MG	DA	3142	1/1	0.95	0.24	30,30,30,30	0
59	MG	CA	1749	1/1	0.95	0.11	60,60,60,60	0
59	MG	DA	3062	1/1	0.95	0.28	26,26,26,26	0
59	MG	BA	3122	1/1	0.95	0.14	27,27,27,27	0
59	MG	BA	3023	1/1	0.95	0.18	41,41,41,41	0
59	MG	AA	1699	1/1	0.95	0.05	105,105,105,105	0
59	MG	DA	3148	1/1	0.95	0.23	44,44,44,44	0
59	MG	BA	3125	1/1	0.95	0.06	65,65,65,65	0
59	MG	AA	1715	1/1	0.95	0.17	52,52,52,52	0
59	MG	DA	3369	1/1	0.95	0.12	58,58,58,58	0
59	MG	DA	3371	1/1	0.95	0.28	46,46,46,46	0
59	MG	DA	3151	1/1	0.95	0.26	40,40,40,40	0
59	MG	BA	3265	1/1	0.95	0.09	55,55,55,55	0
59	MG	BA	3390	1/1	0.95	0.16	30,30,30,30	0
59	MG	BA	3226	1/1	0.95	0.09	57,57,57,57	0
59	MG	DA	3376	1/1	0.95	0.17	56,56,56,56	0
59	MG	DA	3075	1/1	0.95	0.07	29,29,29,29	0
59	MG	BA	3440	1/1	0.95	0.25	54,54,54,54	0
59	MG	CA	1654	1/1	0.95	0.24	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3159	1/1	0.95	0.05	68,68,68,68	0
59	MG	DA	3261	1/1	0.95	0.28	50,50,50,50	0
59	MG	CA	1604	1/1	0.95	0.14	42,42,42,42	0
59	MG	BA	3009	1/1	0.95	0.05	48,48,48,48	0
59	MG	DA	3268	1/1	0.95	0.17	53,53,53,53	0
59	MG	BA	3128	1/1	0.95	0.29	41,41,41,41	0
59	MG	BA	3348	1/1	0.95	0.09	63,63,63,63	0
59	MG	DA	3390	1/1	0.95	0.21	49,49,49,49	0
59	MG	DA	3391	1/1	0.95	0.07	61,61,61,61	0
59	MG	DA	3392	1/1	0.95	0.20	28,28,28,28	0
59	MG	BA	3071	1/1	0.95	0.24	51,51,51,51	0
59	MG	DA	3272	1/1	0.95	0.17	57,57,57,57	0
59	MG	BA	3449	1/1	0.95	0.23	46,46,46,46	0
59	MG	AA	1728	1/1	0.95	0.15	88,88,88,88	0
59	MG	BA	3131	1/1	0.95	0.25	55,55,55,55	0
59	MG	DA	3276	1/1	0.95	0.22	38,38,38,38	0
59	MG	BA	3452	1/1	0.95	0.18	51,51,51,51	0
59	MG	AA	1755	1/1	0.95	0.17	70,70,70,70	0
59	MG	DA	3173	1/1	0.95	0.11	34,34,34,34	0
59	MG	BA	3275	1/1	0.95	0.16	45,45,45,45	0
59	MG	DA	3179	1/1	0.95	0.21	37,37,37,37	0
59	MG	BA	3455	1/1	0.95	0.08	59,59,59,59	0
59	MG	DA	3284	1/1	0.95	0.07	35,35,35,35	0
59	MG	DA	3097	1/1	0.95	0.29	19,19,19,19	0
59	MG	DA	3009	1/1	0.95	0.12	29,29,29,29	0
60	EDS	AA	1805	41/41	0.95	0.09	47,55,60,66	0
59	MG	DA	3289	1/1	0.95	0.21	50,50,50,50	0
59	MG	DA	3176	1/1	0.96	0.11	70,70,70,70	0
59	MG	BA	3038	1/1	0.96	0.31	32,32,32,32	0
59	MG	DA	3180	1/1	0.96	0.05	26,26,26,26	0
59	MG	AA	1787	1/1	0.96	0.08	84,84,84,84	0
59	MG	BA	3084	1/1	0.96	0.09	58,58,58,58	0
59	MG	BA	3395	1/1	0.96	0.08	37,37,37,37	0
59	MG	DA	3058	1/1	0.96	0.12	29,29,29,29	0
59	MG	DA	3257	1/1	0.96	0.14	21,21,21,21	0
59	MG	DA	3059	1/1	0.96	0.14	38,38,38,38	0
59	MG	B7	101	1/1	0.96	0.07	39,39,39,39	0
59	MG	BA	3361	1/1	0.96	0.14	42,42,42,42	0
59	MG	BA	3211	1/1	0.96	0.11	44,44,44,44	0
59	MG	AA	1689	1/1	0.96	0.15	53,53,53,53	0
59	MG	AA	1639	1/1	0.96	0.12	49,49,49,49	0
59	MG	DA	3266	1/1	0.96	0.22	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3267	1/1	0.96	0.26	53,53,53,53	0
59	MG	CA	1786	1/1	0.96	0.32	35,35,35,35	0
59	MG	BA	3241	1/1	0.96	0.28	41,41,41,41	0
59	MG	BA	3242	1/1	0.96	0.19	49,49,49,49	0
59	MG	AA	1662	1/1	0.96	0.39	43,43,43,43	0
59	MG	BA	3136	1/1	0.96	0.17	51,51,51,51	0
59	MG	AA	1799	1/1	0.96	0.13	41,41,41,41	0
59	MG	CA	1746	1/1	0.96	0.05	79,79,79,79	0
59	MG	DA	3135	1/1	0.96	0.11	56,56,56,56	0
59	MG	BA	3443	1/1	0.96	0.18	37,37,37,37	0
59	MG	BA	3138	1/1	0.96	0.05	34,34,34,34	0
59	MG	CA	1631	1/1	0.96	0.20	31,31,31,31	0
59	MG	DA	3082	1/1	0.96	0.23	32,32,32,32	0
59	MG	DA	3205	1/1	0.96	0.27	35,35,35,35	0
59	MG	BA	3445	1/1	0.96	0.20	36,36,36,36	0
59	MG	BU	201	1/1	0.96	0.07	74,74,74,74	0
59	MG	DA	3021	1/1	0.96	0.22	25,25,25,25	0
59	MG	AA	1732	1/1	0.96	0.29	56,56,56,56	0
59	MG	DA	3370	1/1	0.96	0.26	37,37,37,37	0
59	MG	CA	1713	1/1	0.96	0.04	61,61,61,61	0
59	MG	DA	3024	1/1	0.96	0.18	19,19,19,19	0
59	MG	AA	1607	1/1	0.96	0.21	53,53,53,53	0
59	MG	BA	3250	1/1	0.96	0.25	30,30,30,30	0
59	MG	DA	3214	1/1	0.96	0.38	31,31,31,31	0
59	MG	DA	3215	1/1	0.96	0.31	46,46,46,46	0
59	MG	BA	3016	1/1	0.96	0.23	27,27,27,27	0
59	MG	BA	3032	1/1	0.96	0.33	45,45,45,45	0
59	MG	BA	3033	1/1	0.96	0.13	37,37,37,37	0
59	MG	DA	3096	1/1	0.96	0.13	31,31,31,31	0
59	MG	BA	3034	1/1	0.96	0.20	27,27,27,27	0
59	MG	BA	3053	1/1	0.96	0.11	47,47,47,47	0
59	MG	DA	3154	1/1	0.96	0.09	54,54,54,54	0
59	MG	BA	3146	1/1	0.96	0.11	43,43,43,43	0
59	MG	BA	3054	1/1	0.96	0.16	16,16,16,16	0
59	MG	DA	3305	1/1	0.96	0.05	62,62,62,62	0
59	MG	DA	3388	1/1	0.96	0.14	46,46,46,46	0
59	MG	DA	3037	1/1	0.96	0.28	31,31,31,31	0
59	MG	DA	3038	1/1	0.96	0.05	41,41,41,41	0
59	MG	DA	3159	1/1	0.96	0.28	41,41,41,41	0
59	MG	CA	1764	1/1	0.96	0.23	29,29,29,29	0
59	MG	AA	1668	1/1	0.96	0.06	47,47,47,47	0
59	MG	BA	3006	1/1	0.96	0.26	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1735	1/1	0.96	0.32	56,56,56,56	0
59	MG	DA	3044	1/1	0.96	0.22	23,23,23,23	0
59	MG	BA	3388	1/1	0.96	0.19	59,59,59,59	0
59	MG	DB	208	1/1	0.96	0.30	55,55,55,55	0
59	MG	BA	3424	1/1	0.96	0.14	52,52,52,52	0
59	MG	BA	3103	1/1	0.96	0.18	42,42,42,42	0
59	MG	BA	3262	1/1	0.96	0.22	31,31,31,31	0
59	MG	DA	3323	1/1	0.96	0.17	43,43,43,43	0
59	MG	DE	301	1/1	0.96	0.14	25,25,25,25	0
59	MG	CA	1612	1/1	0.96	0.26	37,37,37,37	0
59	MG	DF	302	1/1	0.96	0.15	42,42,42,42	0
59	MG	BA	3104	1/1	0.96	0.34	38,38,38,38	0
59	MG	DA	3245	1/1	0.96	0.09	47,47,47,47	0
59	MG	DA	3171	1/1	0.96	0.16	46,46,46,46	0
59	MG	CA	1776	1/1	0.96	0.17	53,53,53,53	0
59	MG	DA	3052	1/1	0.96	0.22	20,20,20,20	0
59	MG	DA	3175	1/1	0.96	0.15	38,38,38,38	0
59	MG	DA	3087	1/1	0.97	0.13	17,17,17,17	0
59	MG	BA	3047	1/1	0.97	0.18	37,37,37,37	0
59	MG	BU	204	1/1	0.97	0.06	64,64,64,64	0
59	MG	BA	3297	1/1	0.97	0.03	66,66,66,66	0
59	MG	BA	3401	1/1	0.97	0.16	42,42,42,42	0
59	MG	BA	3150	1/1	0.97	0.30	37,37,37,37	0
59	MG	DA	3093	1/1	0.97	0.05	22,22,22,22	0
59	MG	DA	3056	1/1	0.97	0.06	32,32,32,32	0
59	MG	BA	3091	1/1	0.97	0.10	38,38,38,38	0
59	MG	D5	101	1/1	0.97	0.10	44,44,44,44	0
59	MG	DA	3308	1/1	0.97	0.19	47,47,47,47	0
59	MG	DA	3309	1/1	0.97	0.06	67,67,67,67	0
59	MG	DA	3028	1/1	0.97	0.32	23,23,23,23	0
59	MG	DA	3312	1/1	0.97	0.12	46,46,46,46	0
59	MG	BA	3447	1/1	0.97	0.07	35,35,35,35	0
59	MG	BA	3316	1/1	0.97	0.23	59,59,59,59	0
59	MG	CA	1773	1/1	0.97	0.21	44,44,44,44	0
59	MG	DA	3262	1/1	0.97	0.21	51,51,51,51	0
59	MG	DA	3263	1/1	0.97	0.27	38,38,38,38	0
59	MG	DA	3318	1/1	0.97	0.21	67,67,67,67	0
59	MG	DA	3033	1/1	0.97	0.06	26,26,26,26	0
59	MG	DA	3377	1/1	0.97	0.23	23,23,23,23	0
59	MG	DA	3177	1/1	0.97	0.32	25,25,25,25	0
59	MG	BA	3240	1/1	0.97	0.11	28,28,28,28	0
59	MG	BA	3078	1/1	0.97	0.33	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3104	1/1	0.97	0.07	23,23,23,23	0
59	MG	DA	3067	1/1	0.97	0.20	26,26,26,26	0
59	MG	CA	1628	1/1	0.97	0.07	33,33,33,33	0
59	MG	DA	3225	1/1	0.97	0.10	42,42,42,42	0
59	MG	BA	3387	1/1	0.97	0.05	42,42,42,42	0
59	MG	BA	3189	1/1	0.97	0.16	42,42,42,42	0
59	MG	DA	3329	1/1	0.97	0.06	94,94,94,94	0
59	MG	DA	3072	1/1	0.97	0.33	22,22,22,22	0
59	MG	DA	3389	1/1	0.97	0.12	24,24,24,24	0
59	MG	DA	3073	1/1	0.97	0.20	38,38,38,38	0
59	MG	BA	3085	1/1	0.97	0.11	30,30,30,30	0
59	MG	AA	1622	1/1	0.97	0.06	61,61,61,61	0
59	MG	DB	201	1/1	0.97	0.08	65,65,65,65	0
59	MG	DA	3076	1/1	0.97	0.11	29,29,29,29	0
59	MG	BA	3018	1/1	0.97	0.21	36,36,36,36	0
59	MG	DA	3078	1/1	0.97	0.20	33,33,33,33	0
59	MG	DA	3236	1/1	0.97	0.38	35,35,35,35	0
59	MG	BA	3205	1/1	0.97	0.12	48,48,48,48	0
59	MG	BF	301	1/1	0.97	0.06	45,45,45,45	0
59	MG	DA	3341	1/1	0.97	0.20	45,45,45,45	0
59	MG	DA	3239	1/1	0.97	0.10	35,35,35,35	0
59	MG	DA	3240	1/1	0.97	0.06	27,27,27,27	0
59	MG	DA	3288	1/1	0.97	0.15	22,22,22,22	0
59	MG	BA	3045	1/1	0.97	0.30	38,38,38,38	0
59	MG	DA	3346	1/1	0.97	0.19	13,13,13,13	0
59	MG	BA	3374	1/1	0.97	0.12	49,49,49,49	0
59	MG	AA	1786	1/1	0.97	0.15	56,56,56,56	0
59	MG	BA	3196	1/1	0.97	0.19	56,56,56,56	0
59	MG	DA	3294	1/1	0.97	0.37	34,34,34,34	0
59	MG	DA	3352	1/1	0.97	0.09	36,36,36,36	0
59	MG	BA	3378	1/1	0.97	0.12	68,68,68,68	0
59	MG	DA	3201	1/1	0.97	0.04	45,45,45,45	0
59	MG	BA	3209	1/1	0.97	0.10	45,45,45,45	0
59	MG	BA	3074	1/1	0.98	0.07	30,30,30,30	0
59	MG	BA	3119	1/1	0.98	0.04	41,41,41,41	0
59	MG	BA	3067	1/1	0.98	0.28	36,36,36,36	0
59	MG	DA	3178	1/1	0.98	0.15	40,40,40,40	0
59	MG	BA	3235	1/1	0.98	0.23	29,29,29,29	0
59	MG	CA	1763	1/1	0.98	0.07	50,50,50,50	0
59	MG	BA	3406	1/1	0.98	0.04	72,72,72,72	0
59	MG	DA	3068	1/1	0.98	0.22	16,16,16,16	0
59	MG	DA	3183	1/1	0.98	0.18	49,49,49,49	0

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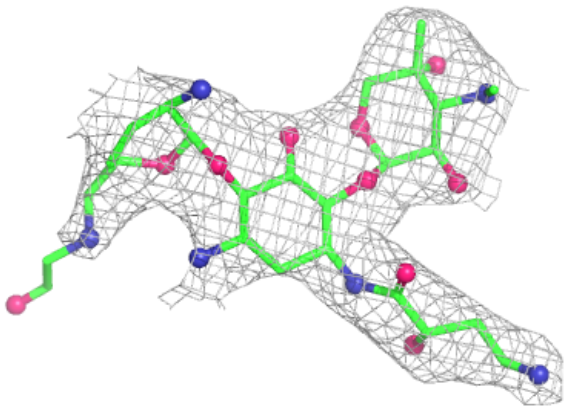
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3351	1/1	0.98	0.05	40,40,40,40	0
59	MG	BA	3426	1/1	0.98	0.08	67,67,67,67	0
59	MG	DA	3016	1/1	0.98	0.19	18,18,18,18	0
59	MG	DA	3043	1/1	0.98	0.10	26,26,26,26	0
59	MG	DA	3283	1/1	0.98	0.16	33,33,33,33	0
59	MG	BA	3407	1/1	0.98	0.08	54,54,54,54	0
59	MG	AA	1665	1/1	0.98	0.09	86,86,86,86	0
59	MG	BA	3031	1/1	0.98	0.12	25,25,25,25	0
59	MG	DA	3287	1/1	0.98	0.08	30,30,30,30	0
59	MG	CA	1680	1/1	0.98	0.06	84,84,84,84	0
59	MG	BA	3064	1/1	0.98	0.07	37,37,37,37	0
59	MG	BA	3375	1/1	0.98	0.06	47,47,47,47	0
59	MG	AA	1753	1/1	0.98	0.25	22,22,22,22	0
59	MG	CA	1684	1/1	0.98	0.08	79,79,79,79	0
59	MG	CA	1774	1/1	0.98	0.26	49,49,49,49	0
59	MG	DA	3228	1/1	0.98	0.27	43,43,43,43	0
59	MG	BA	3267	1/1	0.98	0.16	51,51,51,51	0
59	MG	BA	3072	1/1	0.98	0.08	31,31,31,31	0
59	MG	BA	3283	1/1	0.98	0.07	29,29,29,29	0
59	MG	DA	3334	1/1	0.98	0.11	21,21,21,21	0
59	MG	BA	3106	1/1	0.98	0.06	62,62,62,62	0
59	MG	BA	3193	1/1	0.98	0.23	37,37,37,37	0
59	MG	BA	3026	1/1	0.98	0.19	19,19,19,19	0
59	MG	BA	3318	1/1	0.98	0.06	46,46,46,46	0
59	MG	DA	3172	1/1	0.98	0.17	48,48,48,48	0
59	MG	DA	3060	1/1	0.98	0.30	24,24,24,24	0
59	MG	BA	3117	1/1	0.98	0.15	26,26,26,26	0
61	ZN	AD	302	1/1	0.98	0.16	64,64,64,64	0
59	MG	DA	3217	1/1	0.99	0.05	40,40,40,40	0
59	MG	BA	3075	1/1	0.99	0.13	21,21,21,21	0
59	MG	BA	3309	1/1	0.99	0.33	31,31,31,31	0
59	MG	DA	3292	1/1	0.99	0.08	21,21,21,21	0
59	MG	BE	302	1/1	0.99	0.07	23,23,23,23	0
59	MG	DA	3030	1/1	0.99	0.21	28,28,28,28	0
59	MG	BA	3247	1/1	0.99	0.05	34,34,34,34	0
59	MG	DA	3310	1/1	0.99	0.30	27,27,27,27	0
61	ZN	AN	101	1/1	0.99	0.03	100,100,100,100	0
61	ZN	CD	301	1/1	0.99	0.21	68,68,68,68	0
61	ZN	B9	101	1/1	1.00	0.02	91,91,91,91	0
61	ZN	CN	101	1/1	1.00	0.02	77,77,77,77	0
61	ZN	D9	101	1/1	1.00	0.02	75,75,75,75	0

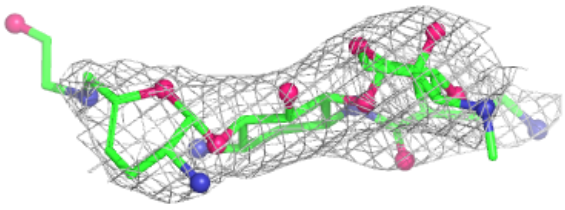
The following is a graphical depiction of the model fit to experimental electron density of all

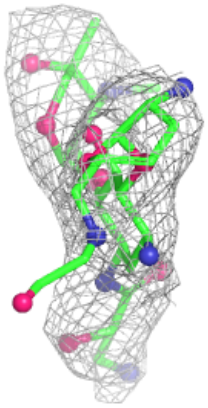
instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around EDS CA 1787:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

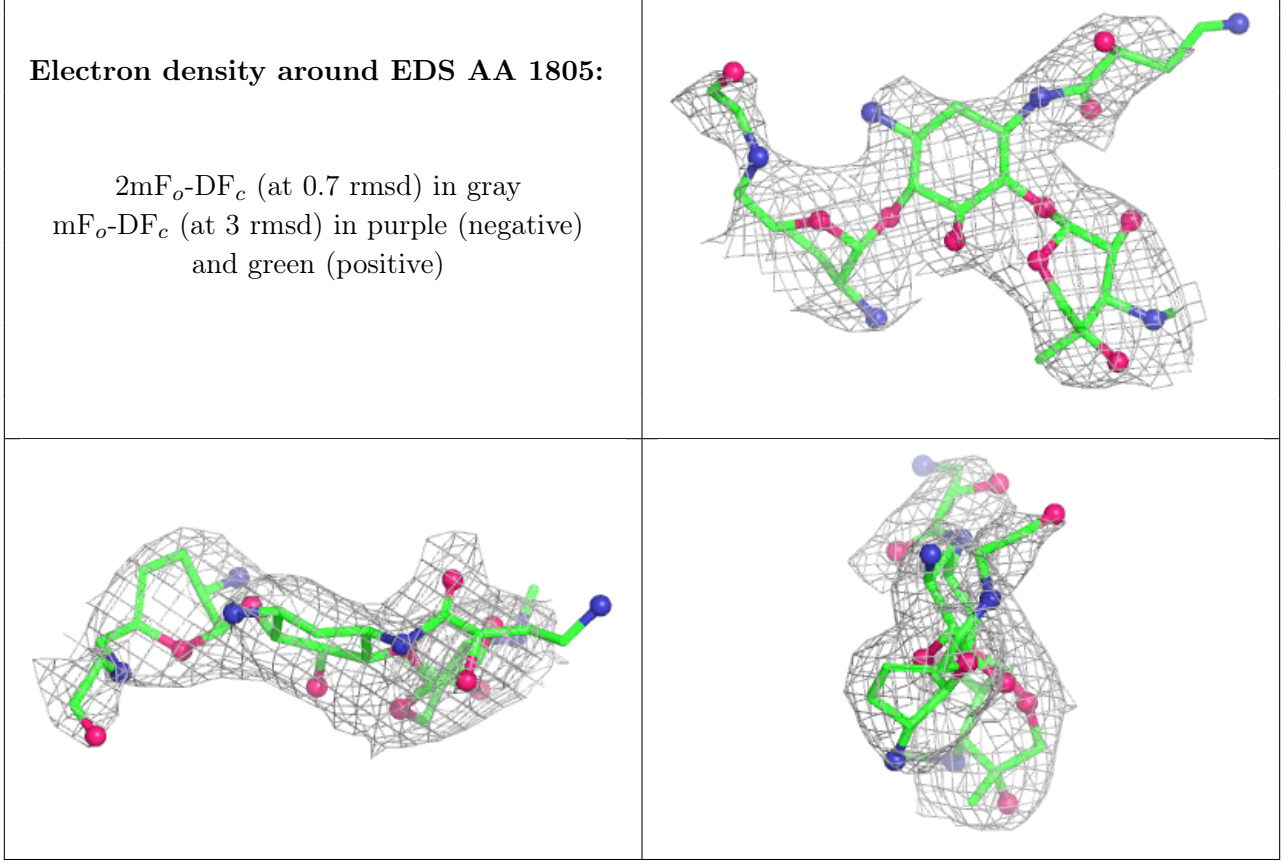






Electron density around EDS AA 1805:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers

There are no such residues in this entry.