Full wwPDB EM Validation Report

Jun 15, 2026 – 10:55 PM EDT

PDB ID	:	9MNC / pdb_00009mnc
EMDB ID	:	EMD-48420
Title	:	Human 80S ribosome bound to small molecule SW393071
Authors	:	Erzberger, J.P.; Cruz, V.E.
Deposited on	:	2024-12-20
Resolution	:	2.33 Å(reported)

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

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

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

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

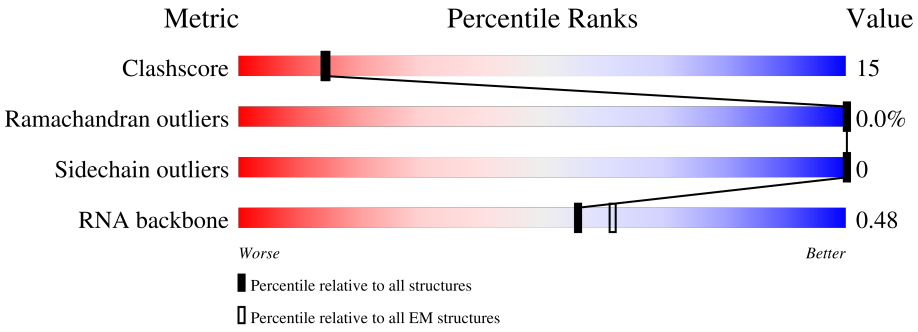
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

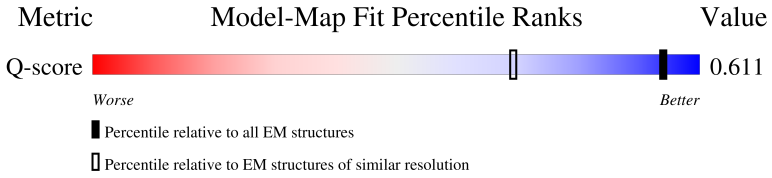
1 Overall quality at a glance

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

The reported resolution of this entry is 2.33 Å.

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





Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	4434 (1.83 - 2.83)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	L1	157	5% 45% 46% · 6%
2	L5	5069	12% 35% 26% 8% 31%
3	L8	297	17% 73% 26% ·

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Mol	Chain	Length	Quality of chain
4	L9	121	67% 32%
5	LB	403	6% 79% 20%
6	LC	427	67% 19% 15%
7	LD	257	81% 15%
8	LE	145	6% 70% 22% 8%
9	LF	248	6% 76% 15% 9%
10	LG	266	12% 62% 19% 19%
11	LH	192	8% 72% 27%
12	LI	135	76% 19% 5%
13	LJ	178	28% 59% 35% 6%
14	LK	288	18% 55% 22% 23%
15	LM	215	53% 9% 37%
16	LN	204	85% 15%
17	LO	123	12% 75% 24%
18	LP	97	76% 12% 11%
19	LQ	211	11% 76% 21%
20	LR	196	20% 75% 20% 5%
21	LS	176	82% 18%
22	LT	160	11% 83% 15%
23	LU	51	10% 76% 22%
24	LV	140	79% 14% 7%
25	LW	157	15% 41% 11% 48%
26	LY	203	78% 20%
27	LZ	136	76% 24%
28	La	148	5% 81% 18%

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Mol	Chain	Length	Quality of chain
29	Lb	161	22% 45% 20% 35%
30	Lc	115	12% 70% 17% 12%
31	Ld	125	6% 63% 20% 17%
32	Le	106	13% 76% 23%
33	Lf	110	83% 16%
34	Lg	117	9% 72% 23% 5%
35	Lh	184	7% 70% 16% 14%
36	Li	105	14% 74% 23%
37	Lj	188	87% 13%
38	Lk	70	43% 57% 40%
39	Ll	137	77% 14% 9%
40	Lm	128	53% 44% 34% 22%
41	Ln	156	58% 16% 26%
42	Lo	99	38% 14% 47%
43	Lp	92	82% 14%
44	Lz	214	7% 71% 22% 7%
45	S1	264	39% 54% 30% 16%
46	SA	295	33% 46% 28% 25%
47	SC	293	22% 50% 25% 25%
48	SD	204	81% 48% 42% 10%
49	SE	263	52% 58% 41%
50	SG	249	76% 43% 49% 8%
51	SH	194	74% 50% 46%
52	SI	208	31% 67% 33%
53	SJ	194	44% 63% 29% 8%

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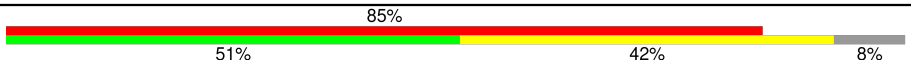
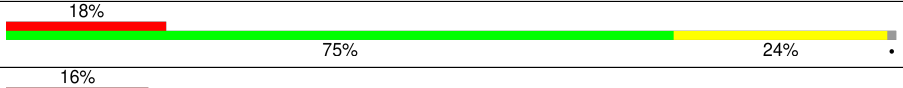
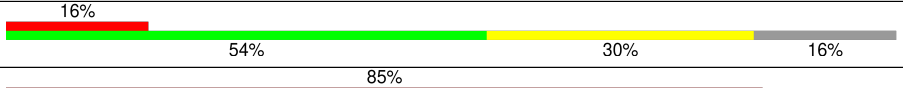
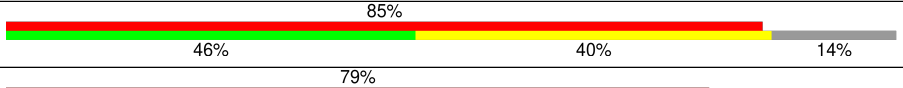
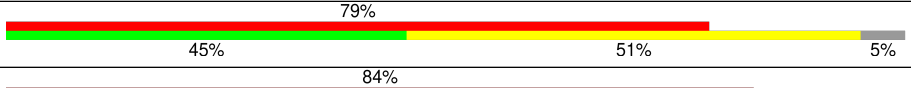
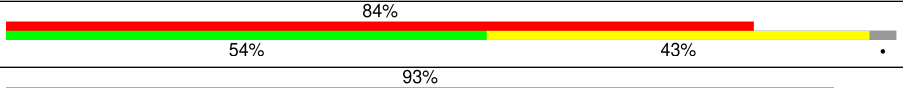
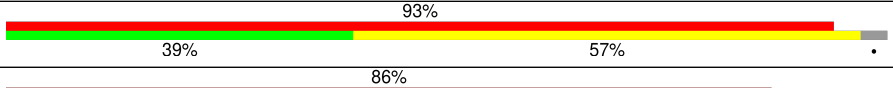
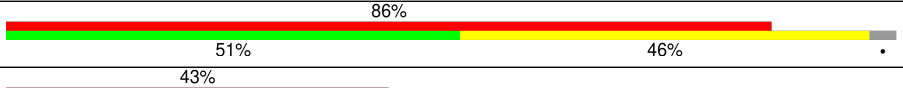
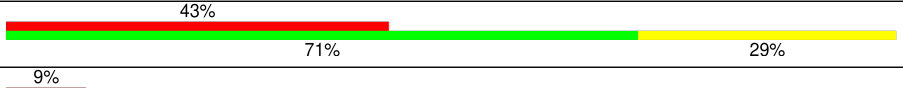
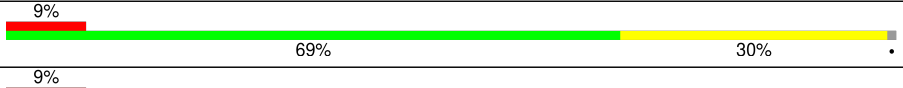
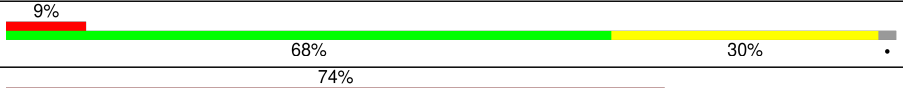
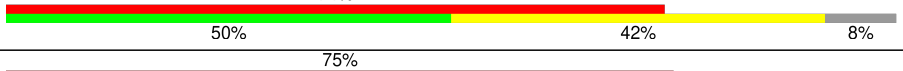
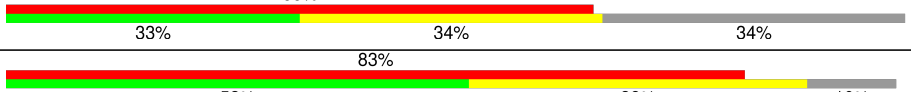
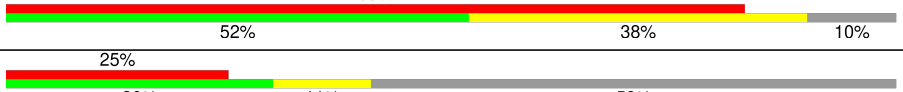
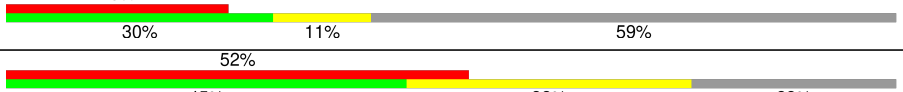
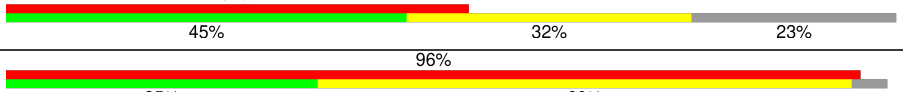
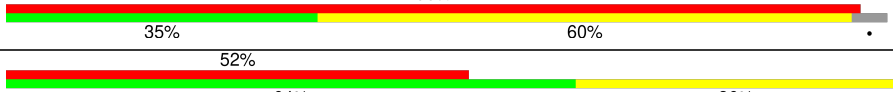
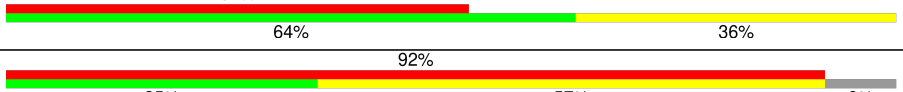
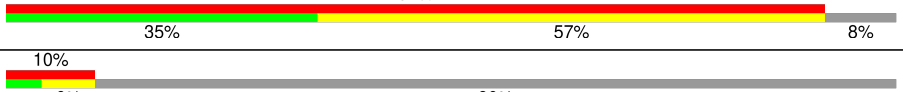
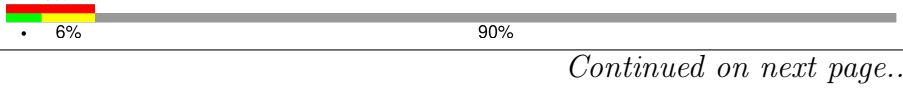
Mol	Chain	Length	Quality of chain
54	SK	243	
55	SL	158	
56	SM	165	
57	SN	151	
58	SO	151	
59	SP	145	
60	SQ	146	
61	SS	135	
62	ST	152	
63	SU	145	
64	SV	83	
65	SW	130	
66	SX	143	
67	SY	132	
68	SZ	119	
69	Sa	115	
70	Sb	84	
71	Sc	125	
72	Sd	69	
73	Se	133	
74	Sf	56	
75	Sg	317	
76	So	25	
77	Sy	132	
78	Sz	156	

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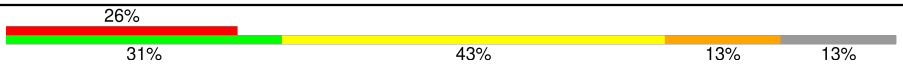
Mol	Chain	Length	Quality of chain
79	S2	1869	

2 Entry composition

There are 85 unique types of molecules in this entry. The entry contains 213617 atoms, of which 19 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	L1	148	3153	1408	563	1035	147	0	0

- Molecule 2 is a RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	L5	3508	75275	33564	13761	24443	3507	0	0

- Molecule 3 is a protein called Large ribosomal subunit protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	L8	293	2386	1510	435	427	14	0	0

- Molecule 4 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	L9	120	2558	1141	456	842	119	0	0

- Molecule 5 is a protein called Large ribosomal subunit protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	LB	401	3234	2058	607	555	14	0	0

- Molecule 6 is a protein called Large ribosomal subunit protein uL4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	LC	365	2908	1829	580	486	13	0	0

- Molecule 7 is a protein called Large ribosomal subunit protein uL2.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	LD	248	Total	C	N	O	S	0	0
			1899	1189	389	315	6		

- Molecule 8 is a protein called Large ribosomal subunit protein uL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	LE	134	Total	C	N	O	S	0	0
			1115	700	226	186	3		

- Molecule 9 is a protein called Large ribosomal subunit protein uL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	LF	225	Total	C	N	O	S	0	0
			1870	1202	358	301	9		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
LF	173	SER	ALA	conflict	UNP P18124

- Molecule 10 is a protein called Large ribosomal subunit protein eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LG	216	Total	C	N	O	S	0	0
			1752	1117	337	294	4		

- Molecule 11 is a protein called Large ribosomal subunit protein uL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	LH	190	Total	C	N	O	S	0	0
			1518	956	284	272	6		

- Molecule 12 is a protein called Large ribosomal subunit protein eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LI	128	Total	C	N	O	S	0	0
			1053	667	216	165	5		

- Molecule 13 is a protein called Large ribosomal subunit protein uL5.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	LJ	167	Total	C	N	O	S	0	0
			1340	848	250	236	6		

- Molecule 14 is a protein called Large ribosomal subunit protein eL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	LK	222	Total	C	N	O	S	0	0
			1780	1147	337	292	4		

- Molecule 15 is a protein called Large ribosomal subunit protein eL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	LM	135	Total	C	N	O	S	0	0
			1111	713	213	178	7		

- Molecule 16 is a protein called Large ribosomal subunit protein eL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	LN	203	Total	C	N	O	S	0	0
			1700	1072	359	265	4		

- Molecule 17 is a protein called Large ribosomal subunit protein uL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	LO	122	Total	C	N	O	S	0	0
			1014	641	205	167	1		

- Molecule 18 is a protein called Large ribosomal subunit protein eL37.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	LP	86	Total	C	N	O	S	0	0
			705	434	155	111	5		

- Molecule 19 is a protein called Large ribosomal subunit protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	LQ	206	Total	C	N	O	S	0	0
			1664	1041	345	274	4		

- Molecule 20 is a protein called Large ribosomal subunit protein eL19.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	LR	186	Total	C	N	O	S	0	0
			1558	965	335	249	9		

- Molecule 21 is a protein called Large ribosomal subunit protein eL20.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	LS	176	Total	C	N	O	S	0	0
			1460	930	284	235	11		

- Molecule 22 is a protein called Large ribosomal subunit protein eL21.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	LT	157	Total	C	N	O	S	0	0
			1284	815	250	214	5		

- Molecule 23 is a protein called Large ribosomal subunit protein eL39.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	LU	50	Total	C	N	O	S	0	0
			443	281	98	63	1		

- Molecule 24 is a protein called Large ribosomal subunit protein uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	LV	130	Total	C	N	O	S	0	0
			972	615	183	169	5		

- Molecule 25 is a protein called Large ribosomal subunit protein eL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LW	82	Total	C	N	O	S	0	0
			671	424	132	112	3		

- Molecule 26 is a protein called Large ribosomal subunit protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LY	198	Total	C	N	O	S	0	0
			1624	1048	317	254	5		

- Molecule 27 is a protein called Large ribosomal subunit protein eL27.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	LZ	135	Total	C	N	O	S	0	0
			1106	714	208	181	3		

- Molecule 28 is a protein called Large ribosomal subunit protein uL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	La	147	Total	C	N	O	S	0	0
			1162	736	237	186	3		

- Molecule 29 is a protein called Large ribosomal subunit protein eL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Lb	104	Total	C	N	O	S	0	0
			848	526	186	132	4		

- Molecule 30 is a protein called Large ribosomal subunit protein eL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Lc	101	Total	C	N	O	S	0	0
			785	498	138	142	7		

- Molecule 31 is a protein called Large ribosomal subunit protein eL31.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Ld	104	Total	C	N	O	S	0	0
			862	546	167	147	2		

- Molecule 32 is a protein called Large ribosomal subunit protein eL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Le	105	Total	C	N	O	S	0	0
			863	543	175	139	6		

- Molecule 33 is a protein called Large ribosomal subunit protein eL33.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Lf	109	Total	C	N	O	S	0	0
			875	555	174	143	3		

- Molecule 34 is a protein called Large ribosomal subunit protein eL34.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Lg	111	Total	C	N	O	S	0	0
			882	552	182	142	6		

- Molecule 35 is a protein called Large ribosomal subunit protein uL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Lh	159	Total	C	N	O	S	0	0
			1289	808	249	223	9		

- Molecule 36 is a protein called Large ribosomal subunit protein eL36.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Li	102	Total	C	N	O	S	0	0
			832	521	177	129	5		

- Molecule 37 is a protein called Large ribosomal subunit protein eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Lj	187	Total	C	N	O	S	0	0
			1512	944	314	249	5		

- Molecule 38 is a protein called Large ribosomal subunit protein eL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Lk	68	Total	C	N	O	S	0	0
			559	360	101	97	1		

- Molecule 39 is a protein called Large ribosomal subunit protein eL28.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Ll	124	Total	C	N	O	S	0	0
			990	614	205	167	4		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Ll	2	ACE	-	acetylation	UNP P46779

- Molecule 40 is a protein called Large ribosomal subunit protein eL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Lm	100	Total	C	N	O	S	0	0
			816	524	142	148	2		

- Molecule 41 is a protein called Large ribosomal subunit protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Ln	116	Total	C	N	O	S	0	0
			949	606	178	164	1		

- Molecule 42 is a protein called Large ribosomal subunit protein eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Lo	52	Total	C	N	O	S	1	0
			436	272	91	67	6		

There are 29 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Lo	?	-	GLY	deletion	UNP P62987
Lo	?	-	ILE	deletion	UNP P62987
Lo	?	-	PRO	deletion	UNP P62987
Lo	?	-	PRO	deletion	UNP P62987
Lo	?	-	ASP	deletion	UNP P62987
Lo	?	-	GLN	deletion	UNP P62987
Lo	?	-	GLN	deletion	UNP P62987
Lo	?	-	ARG	deletion	UNP P62987
Lo	?	-	LEU	deletion	UNP P62987
Lo	?	-	ILE	deletion	UNP P62987
Lo	?	-	PHE	deletion	UNP P62987
Lo	?	-	ALA	deletion	UNP P62987
Lo	?	-	GLY	deletion	UNP P62987
Lo	?	-	LYS	deletion	UNP P62987
Lo	?	-	GLN	deletion	UNP P62987
Lo	?	-	LEU	deletion	UNP P62987
Lo	?	-	GLU	deletion	UNP P62987
Lo	?	-	ASP	deletion	UNP P62987
Lo	?	-	GLY	deletion	UNP P62987
Lo	?	-	ARG	deletion	UNP P62987
Lo	?	-	THR	deletion	UNP P62987
Lo	?	-	LEU	deletion	UNP P62987
Lo	?	-	SER	deletion	UNP P62987
Lo	?	-	ASP	deletion	UNP P62987
Lo	?	-	TYR	deletion	UNP P62987

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Chain	Residue	Modelled	Actual	Comment	Reference
Lo	?	-	ASN	deletion	UNP P62987
Lo	?	-	ILE	deletion	UNP P62987
Lo	?	-	GLN	deletion	UNP P62987
Lo	?	-	LYS	deletion	UNP P62987

- Molecule 43 is a protein called Large ribosomal subunit protein eL43.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Lp	88	Total	C	N	O	S	0	0
			681	430	131	113	7		

- Molecule 44 is a protein called Large ribosomal subunit protein uL16.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Lz	198	Total	C	N	O	S	0	0
			1616	1029	312	263	12		

- Molecule 45 is a protein called Small ribosomal subunit protein eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	S1	221	Total	C	N	O	S	0	0
			1790	1135	323	318	14		

- Molecule 46 is a protein called Small ribosomal subunit protein uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	SA	220	Total	C	N	O	S	0	0
			1731	1099	303	321	8		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
SA	2	ACE	-	acetylation	UNP P08865

- Molecule 47 is a protein called Small ribosomal subunit protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	SC	219	Total	C	N	O	S	0	0
			1700	1100	292	298	10		

- Molecule 48 is a protein called Small ribosomal subunit protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	SD	184	Total	C	N	O	S	0	0
			1463	917	276	263	7		

- Molecule 49 is a protein called Small ribosomal subunit protein eS4, X isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	SE	262	Total	C	N	O	S	0	0
			2075	1324	386	357	8		

- Molecule 50 is a protein called Small ribosomal subunit protein eS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	SG	229	Total	C	N	O	S	0	0
			1853	1158	369	319	7		

- Molecule 51 is a protein called Small ribosomal subunit protein eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SH	187	Total	C	N	O	S	0	0
			1509	963	277	268	1		

- Molecule 52 is a protein called Small ribosomal subunit protein eS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	SI	207	Total	C	N	O	S	0	0
			1695	1064	334	292	5		

- Molecule 53 is a protein called Small ribosomal subunit protein uS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SJ	179	Total	C	N	O	S	0	0
			1495	953	299	241	2		

- Molecule 54 is a protein called Small ribosomal subunit protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SK	224	Total	C	N	O	S	0	0
			1745	1112	314	312	7		

- Molecule 55 is a protein called Small ribosomal subunit protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SL	143	Total	C	N	O	S	0	0
			1180	754	223	197	6		

- Molecule 56 is a protein called Small ribosomal subunit protein eS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SM	97	Total	C	N	O	S	0	0
			816	533	144	133	6		

- Molecule 57 is a protein called Small ribosomal subunit protein uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	SN	150	Total	C	N	O	S	0	0
			1207	773	229	204	1		

- Molecule 58 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SO	127	Total	C	N	O	S	0	0
			956	585	189	176	6		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
SO	138	IAS	ASP	conflict	UNP P62263

- Molecule 59 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SP	125	Total	C	N	O	S	0	0
			1021	647	192	175	7		

- Molecule 60 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SQ	139	Total	C	N	O	S	0	0
			1108	704	210	191	3		

- Molecule 61 is a protein called Small ribosomal subunit protein eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SS	131	Total	C	N	O	S	0	0
			1064	668	198	194	4		

- Molecule 62 is a protein called Small ribosomal subunit protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	ST	147	Total	C	N	O	S	0	0
			1208	758	244	205	1		

- Molecule 63 is a protein called Small ribosomal subunit protein eS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	SU	141	Total	C	N	O	S	0	0
			1094	685	210	196	3		

- Molecule 64 is a protein called Small ribosomal subunit protein eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	SV	83	Total	C	N	O	S	0	0
			636	393	117	121	5		

- Molecule 65 is a protein called Small ribosomal subunit protein uS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	SW	129	Total	C	N	O	S	0	0
			1033	659	193	175	6		

- Molecule 66 is a protein called Small ribosomal subunit protein uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	SX	140	Total	C	N	O	S	0	0
			1088	687	215	183	3		

- Molecule 67 is a protein called Isoform 3 of Small ribosomal subunit protein eS24.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SY	122	Total	C	N	O	S	0	0
			1002	635	196	166	5		

- Molecule 68 is a protein called Small ribosomal subunit protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	SZ	100	Total	C	N	O	S	0	0
			795	498	152	141	4		

- Molecule 69 is a protein called Small ribosomal subunit protein eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Sa	99	Total	C	N	O	S	0	0
			792	492	165	130	5		

- Molecule 70 is a protein called Small ribosomal subunit protein eS27.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	Sb	83	Total	C	N	O	S	0	0
			650	408	121	114	7		

- Molecule 71 is a protein called Small ribosomal subunit protein eS25.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	Sc	83	Total	C	N	O	S	0	0
			670	431	125	113	1		

- Molecule 72 is a protein called Small ribosomal subunit protein eS28.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	Sd	62	Total	C	N	O	S	0	0
			488	297	97	92	2		

- Molecule 73 is a protein called FAU ubiquitin-like and ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	Se	55	Total	C	N	O	S	0	0
			437	271	95	70	1		

- Molecule 74 is a protein called Small ribosomal subunit protein uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	Sf	43	Total	C	N	O	S	0	0
			349	216	71	57	5		

- Molecule 75 is a protein called Receptor of activated protein C kinase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Sg	303	Total	C	N	O	S	0	0
			2364	1492	412	448	12		

- Molecule 76 is a protein called Small ribosomal subunit protein eS32.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	So	25	Total	C	N	O	S	0	0
			239	145	64	27	3		

- Molecule 77 is a protein called Small ribosomal subunit protein eS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Sy	121	Total	C	N	O	S	0	0
			939	590	166	174	9		

- Molecule 78 is a protein called Ubiquitin-40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms				AltConf	Trace
78	Sz	16	Total	C	N	O	0	0
			142	95	28	19		

- Molecule 79 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	S2	1635	Total	C	N	O	P	0	0
			34964	15636	6271	11423	1634		

- Molecule 80 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
80	L1	4	Total	Mg	0
			4	4	
80	L5	206	Total	Mg	0
			206	206	
80	L9	3	Total	Mg	0
			3	3	
80	LD	1	Total	Mg	0
			1	1	
80	LI	2	Total	Mg	0
			2	2	
80	LN	1	Total	Mg	0
			1	1	

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Mol	Chain	Residues	Atoms	AltConf
80	LR	1	Total Mg 1 1	0
80	LV	1	Total Mg 1 1	0
80	La	1	Total Mg 1 1	0
80	Lh	1	Total Mg 1 1	0
80	ST	1	Total Mg 1 1	0
80	SX	1	Total Mg 1 1	0
80	S2	98	Total Mg 98 98	0

- Molecule 81 is POTASSIUM ION (CCD ID: K) (formula: K).

Mol	Chain	Residues	Atoms	AltConf
81	L1	3	Total K 3 3	0
81	L5	42	Total K 42 42	0
81	L9	1	Total K 1 1	0
81	LC	1	Total K 1 1	0
81	LD	2	Total K 2 2	0
81	Lg	1	Total K 1 1	0
81	Lz	1	Total K 1 1	0
81	SE	1	Total K 1 1	0
81	ST	1	Total K 1 1	0
81	SU	1	Total K 1 1	0
81	Sa	1	Total K 1 1	0
81	Sf	1	Total K 1 1	0

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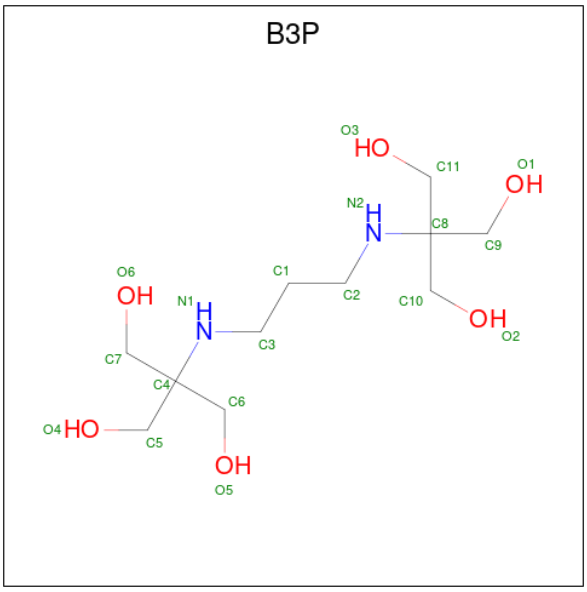
Mol	Chain	Residues	Atoms	AltConf
81	S2	38	Total K 38 38	0

- Molecule 82 is 2-[3-(2-HYDROXY-1,1-DIHYDROXYMETHYL-ETHYLAMINO)-PROPYLAMINO]-2-HYDROXYMETHYL-PROPANE-1,3-DIOL (CCD ID: B3P) (formula: $C_{11}H_{26}N_2O_6$).



Mol	Chain	Residues	Atoms	AltConf
82	L5	1	Total C N O 19 11 2 6	0

- Molecule 83 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	AltConf
83	LP	1	Total Zn 1 1	0
83	Le	1	Total Zn 1 1	0
83	Lg	1	Total Zn 1 1	0
83	Lo	1	Total Zn 1 1	0
83	Lp	1	Total Zn 1 1	0
83	Sa	1	Total Zn 1 1	0

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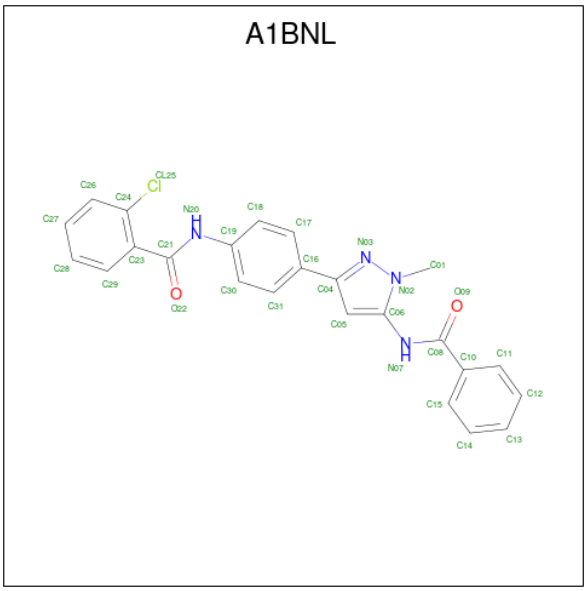
Mol	Chain	Residues	Atoms	AltConf
83	Sf	1	Total Zn 1 1	0
83	S2	1	Total Zn 1 1	0

- Molecule 84 is N-[4-(5-benzamido-1-methyl-1H-pyrazol-3-yl)phenyl]-2-chlorobenzamide (CCD ID: A1BNL) (formula: $C_{24}H_{19}ClN_4O_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	AltConf
84	SX	1	Total C Cl H N O 50 24 1 19 4 2	0

- Molecule 85 is water.

Mol	Chain	Residues	Atoms	AltConf
85	L1	117	Total O 117 117	0
85	L5	3736	Total O 3736 3736	0
85	L8	28	Total O 28 28	0
85	L9	73	Total O 73 73	0
85	LB	81	Total O 81 81	0
85	LC	85	Total O 85 85	0

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Mol	Chain	Residues	Atoms	AltConf
85	LD	73	Total O 73 73	0
85	LE	14	Total O 14 14	0
85	LF	42	Total O 42 42	0
85	LG	12	Total O 12 12	0
85	LH	17	Total O 17 17	0
85	LI	51	Total O 51 51	0
85	LJ	3	Total O 3 3	0
85	LK	14	Total O 14 14	0
85	LM	5	Total O 5 5	0
85	LN	75	Total O 75 75	0
85	LO	12	Total O 12 12	0
85	LP	36	Total O 36 36	0
85	LQ	37	Total O 37 37	0
85	LR	21	Total O 21 21	0
85	LS	30	Total O 30 30	0
85	LT	29	Total O 29 29	0
85	LU	10	Total O 10 10	0
85	LV	21	Total O 21 21	0
85	LW	8	Total O 8 8	0
85	LY	35	Total O 35 35	0
85	LZ	5	Total O 5 5	0

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Mol	Chain	Residues	Atoms	AltConf
85	La	48	Total O 48 48	0
85	Lb	18	Total O 18 18	0
85	Lc	8	Total O 8 8	0
85	Ld	13	Total O 13 13	0
85	Le	22	Total O 22 22	0
85	Lf	29	Total O 29 29	0
85	Lg	30	Total O 30 30	0
85	Lh	43	Total O 43 43	0
85	Li	4	Total O 4 4	0
85	Lj	56	Total O 56 56	0
85	Lk	1	Total O 1 1	0
85	Ll	27	Total O 27 27	0
85	Lm	1	Total O 1 1	0
85	Ln	15	Total O 15 15	0
85	Lo	2	Total O 2 2	0
85	Lp	23	Total O 23 23	0
85	Lz	10	Total O 10 10	0
85	S1	19	Total O 19 19	0
85	SA	6	Total O 6 6	0
85	SC	20	Total O 20 20	0
85	SD	12	Total O 12 12	0

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Mol	Chain	Residues	Atoms	AltConf
85	SE	27	Total O 27 27	0
85	SG	7	Total O 7 7	0
85	SH	4	Total O 4 4	0
85	SI	24	Total O 24 24	0
85	SJ	25	Total O 25 25	0
85	SK	2	Total O 2 2	0
85	SL	38	Total O 38 38	0
85	SN	22	Total O 22 22	0
85	SO	28	Total O 28 28	0
85	SP	3	Total O 3 3	0
85	SQ	14	Total O 14 14	0
85	SS	4	Total O 4 4	0
85	ST	10	Total O 10 10	0
85	SU	10	Total O 10 10	0
85	SV	6	Total O 6 6	0
85	SW	26	Total O 26 26	0
85	SX	38	Total O 38 38	0
85	SY	3	Total O 3 3	0
85	SZ	5	Total O 5 5	0
85	Sa	29	Total O 29 29	0
85	Sb	9	Total O 9 9	0

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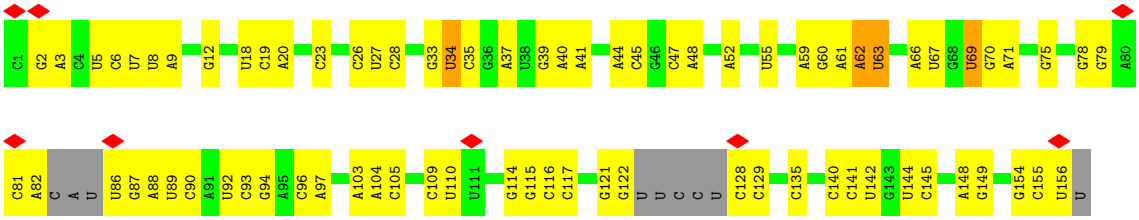
Mol	Chain	Residues	Atoms	AltConf
85	Sc	3	Total O 3 3	0
85	Sd	1	Total O 1 1	0
85	Se	7	Total O 7 7	0
85	Sf	4	Total O 4 4	0
85	So	3	Total O 3 3	0
85	S2	1288	Total O 1288 1288	0

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 atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

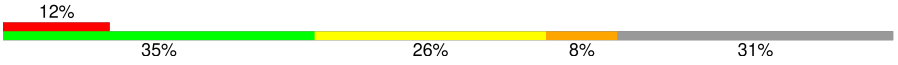
• Molecule 1: 5.8S rRNA

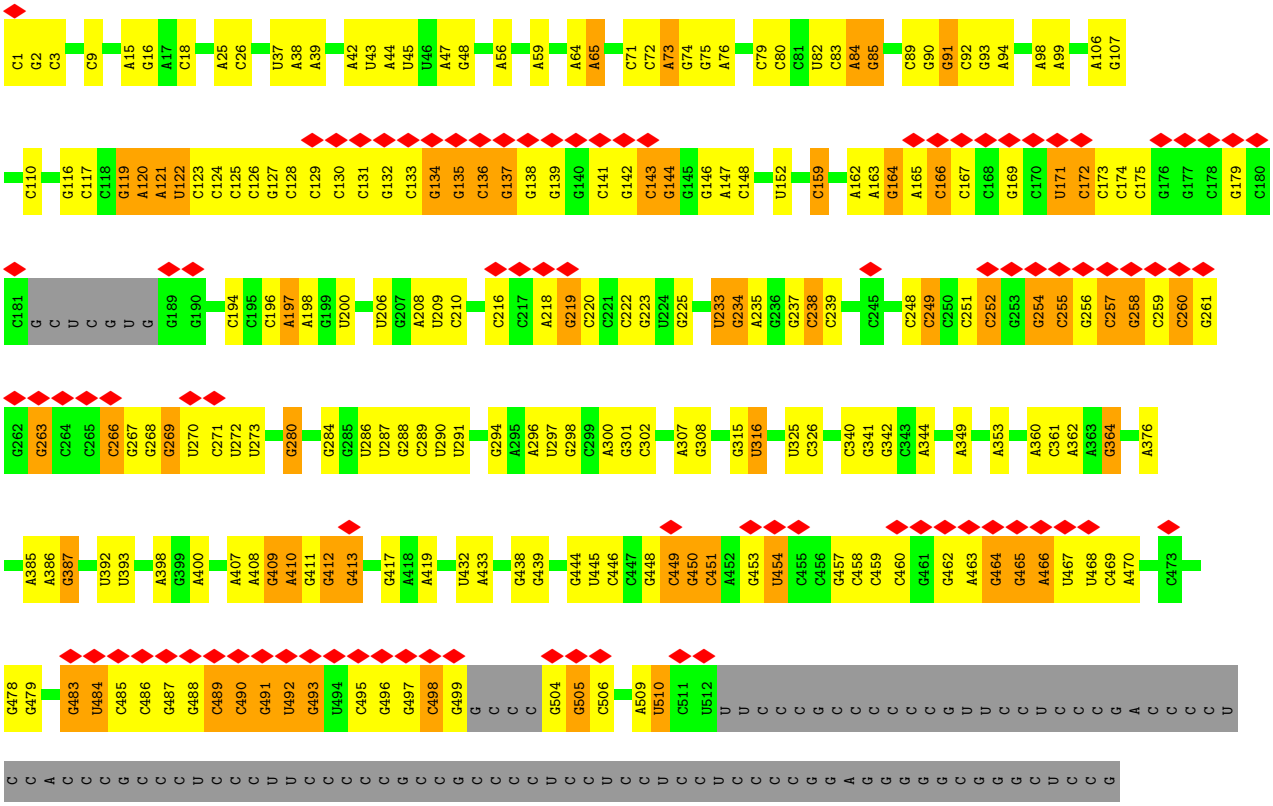
Chain L1:

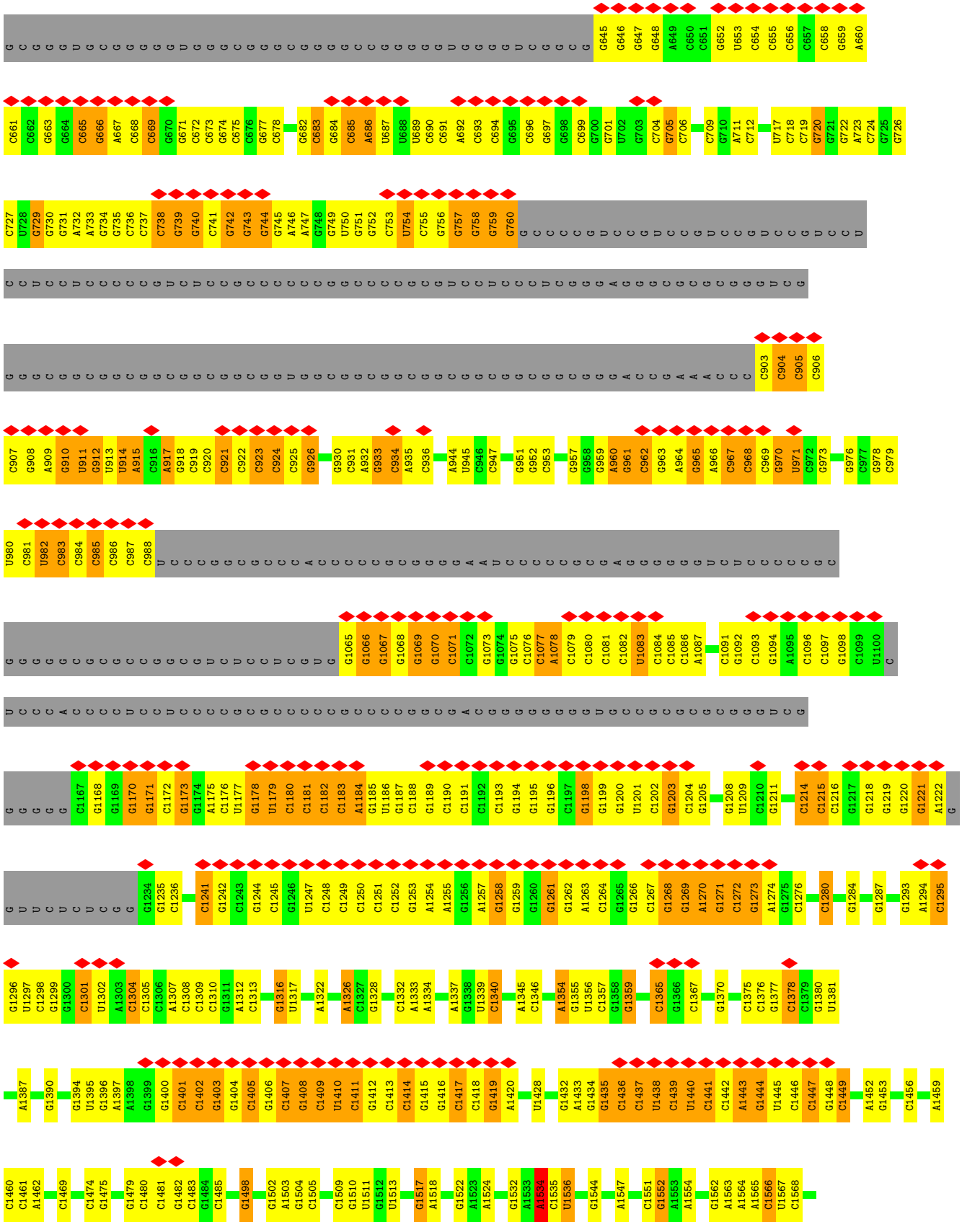


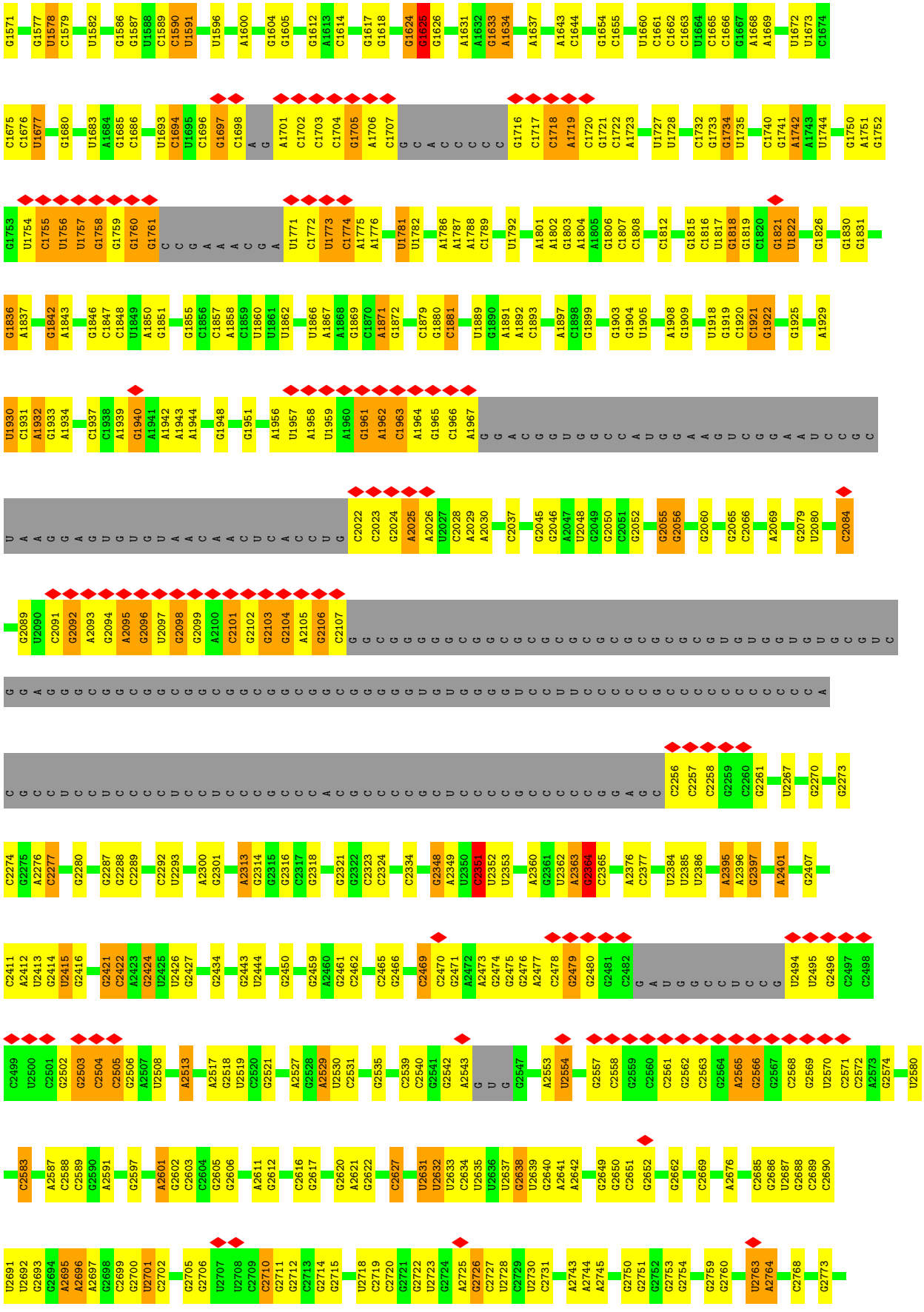
• Molecule 2: 28S rRNA

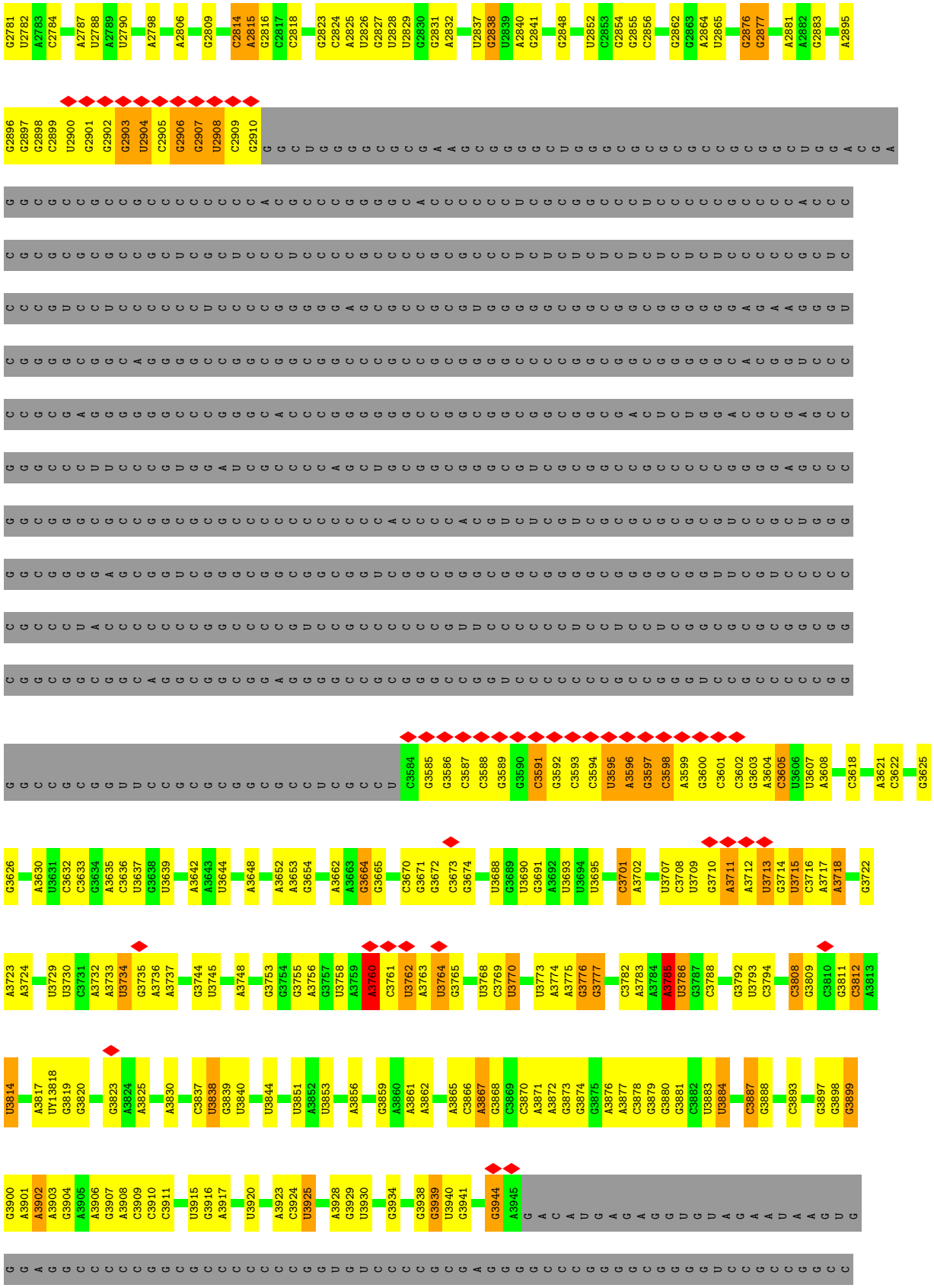
Chain L5:

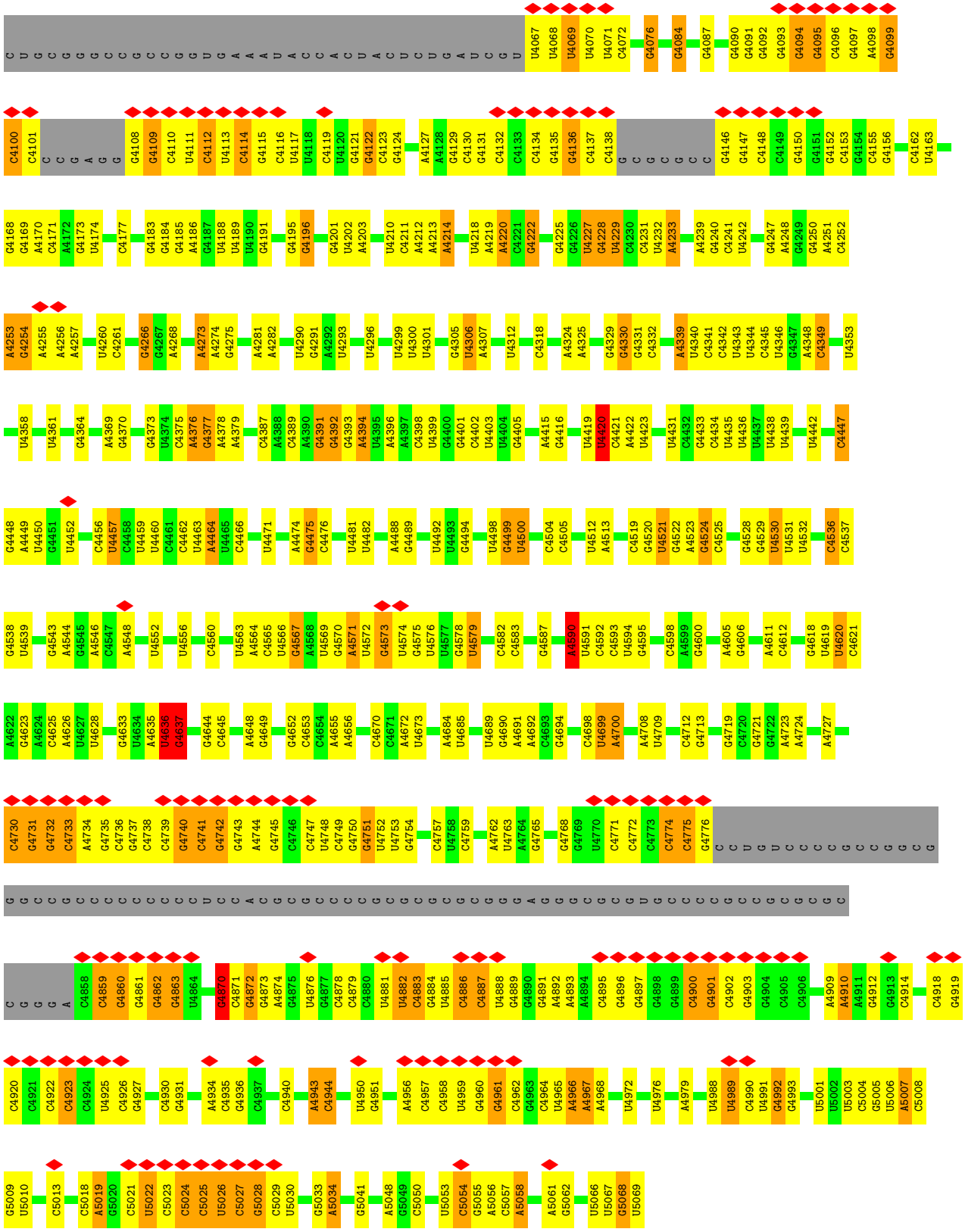






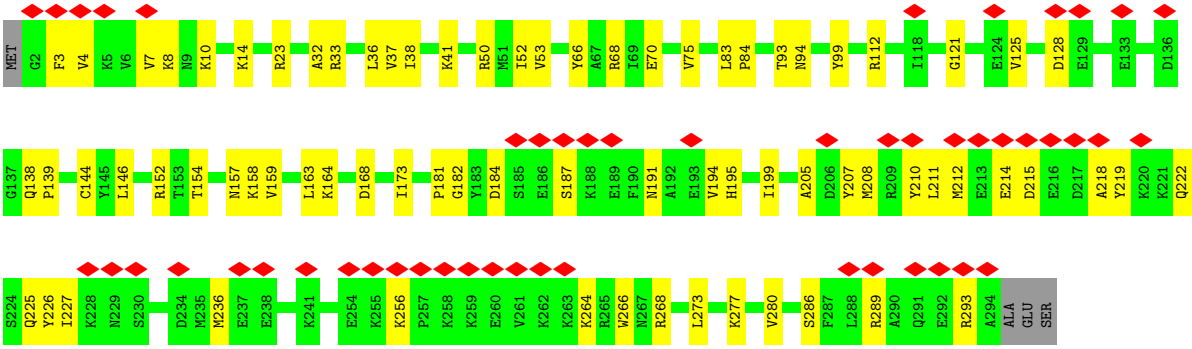






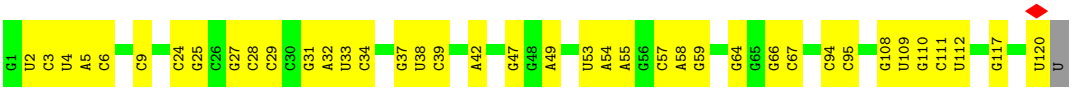
• Molecule 3: Large ribosomal subunit protein uL18

Chain L8:



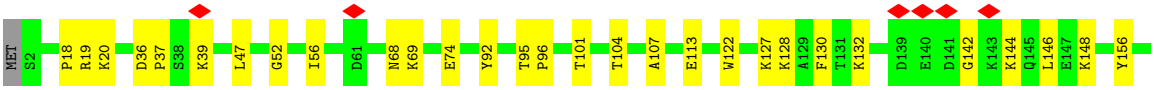
• Molecule 4: 5S rRNA

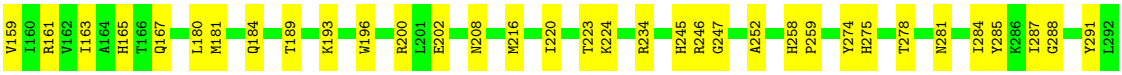
Chain L9:

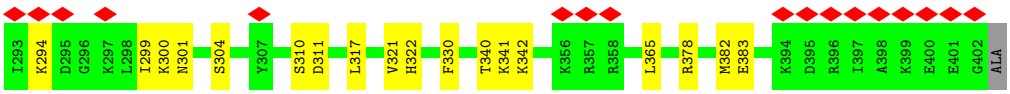


• Molecule 5: Large ribosomal subunit protein uL3

Chain LB:

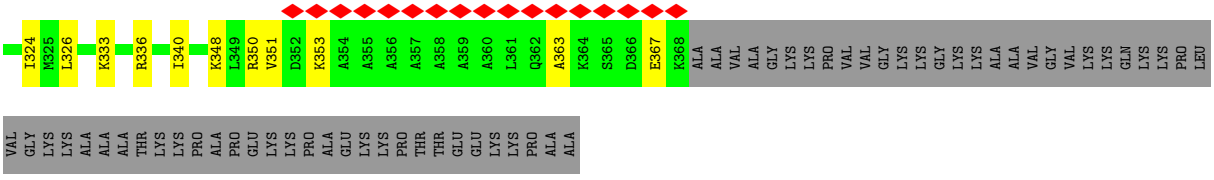






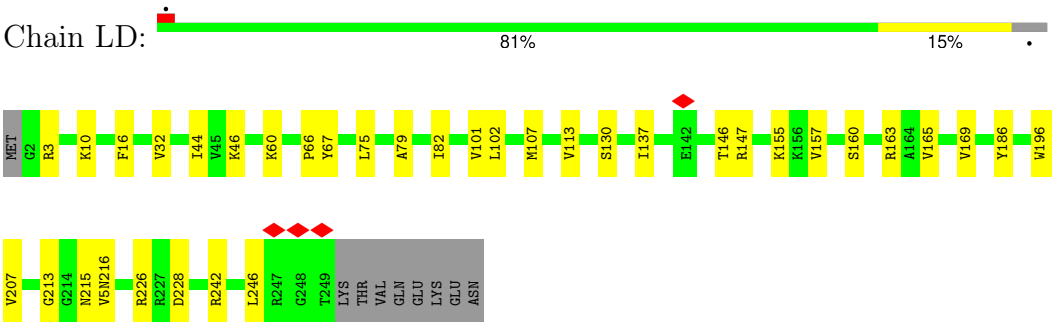
• Molecule 6: Large ribosomal subunit protein uL4

Chain LC:



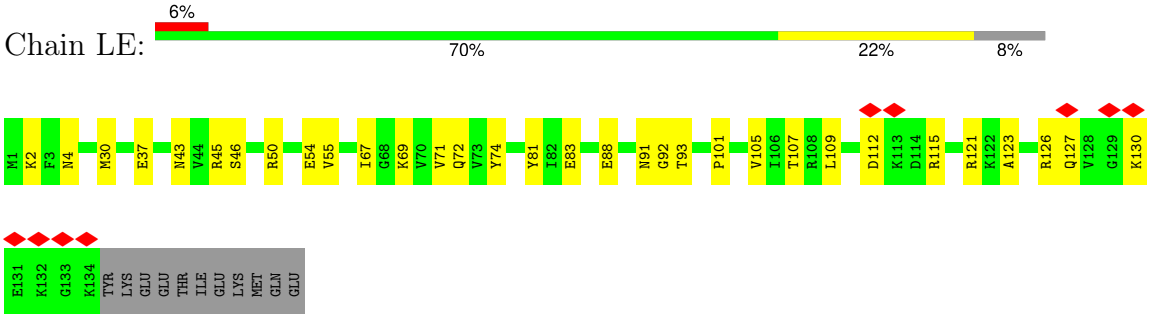
• Molecule 7: Large ribosomal subunit protein uL2

Chain LD:



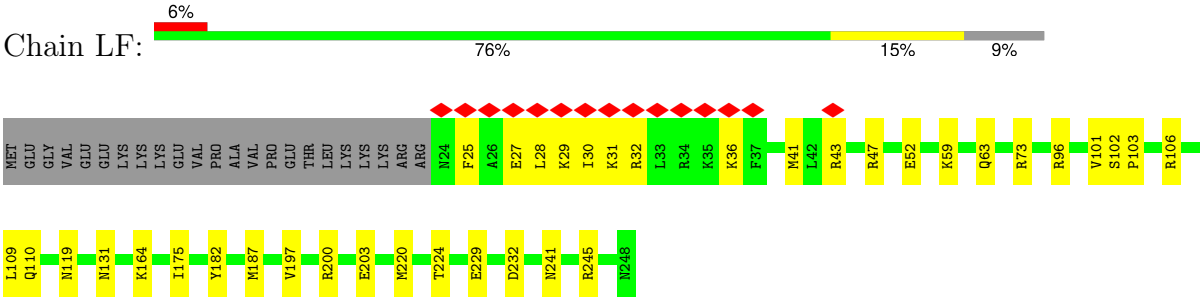
• Molecule 8: Large ribosomal subunit protein uL24

Chain LE:



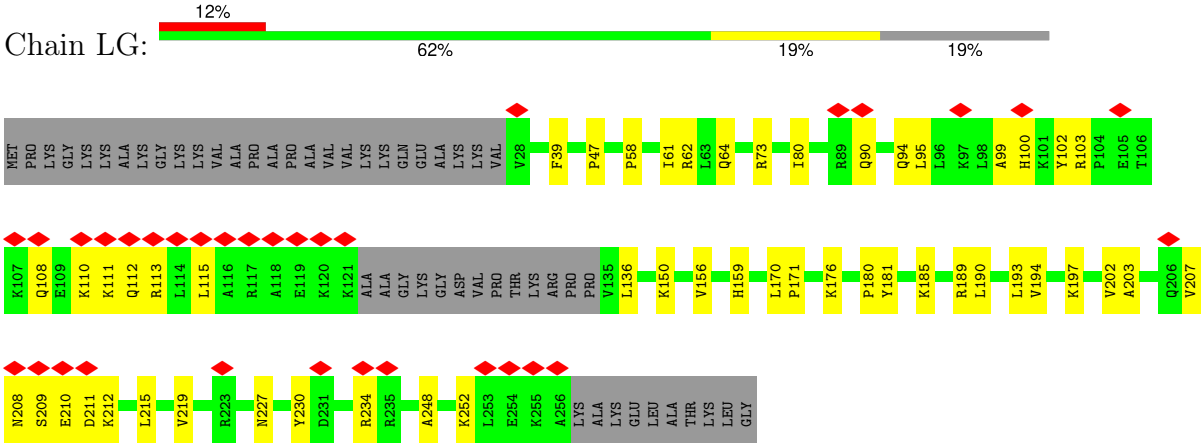
• Molecule 9: Large ribosomal subunit protein uL30

Chain LF:



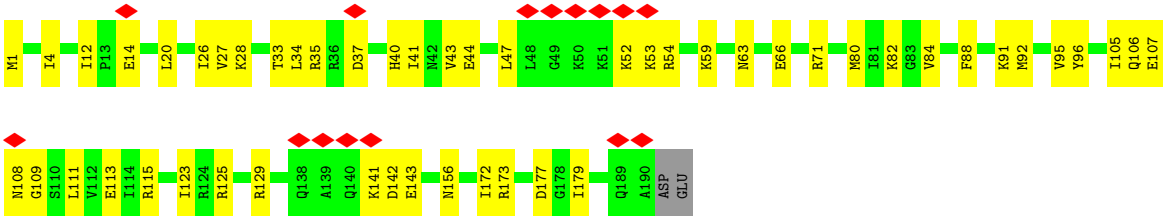
• Molecule 10: Large ribosomal subunit protein eL8

Chain LG:



• Molecule 11: Large ribosomal subunit protein uL6

Chain LH:

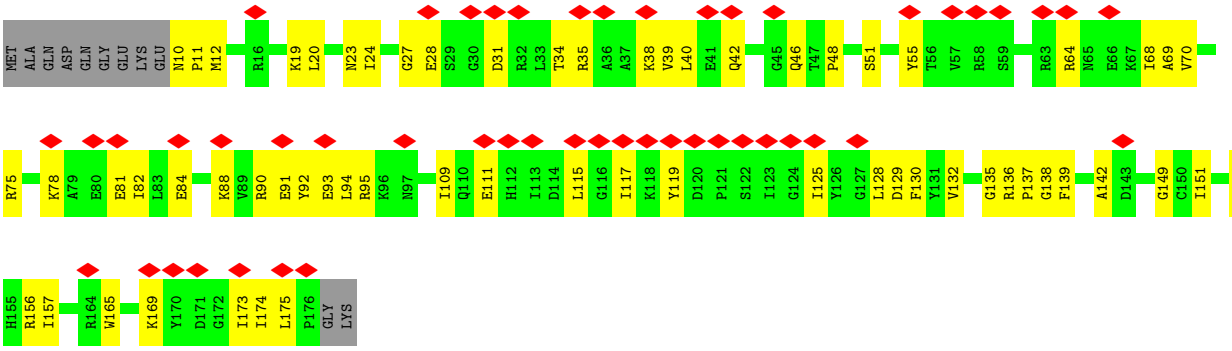


• Molecule 12: Large ribosomal subunit protein eL32

Chain LI:

• Molecule 13: Large ribosomal subunit protein uL5

Chain LJ:

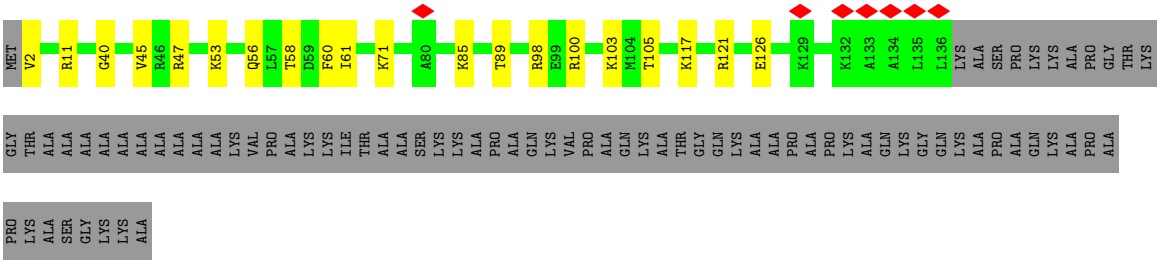


• Molecule 14: Large ribosomal subunit protein eL6

Chain LK:

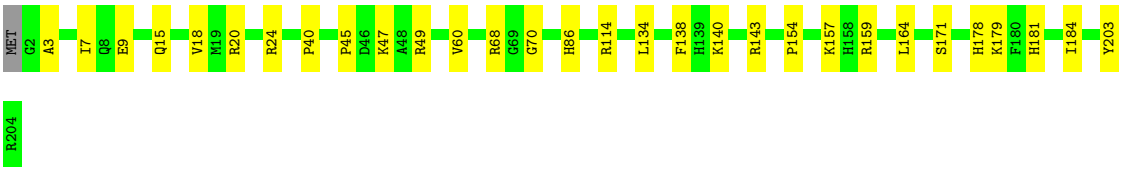
• Molecule 15: Large ribosomal subunit protein eL14

Chain LM:



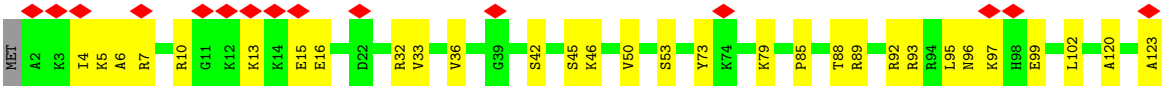
• Molecule 16: Large ribosomal subunit protein eL15

Chain LN:



• Molecule 17: Large ribosomal subunit protein uL29

Chain LO:

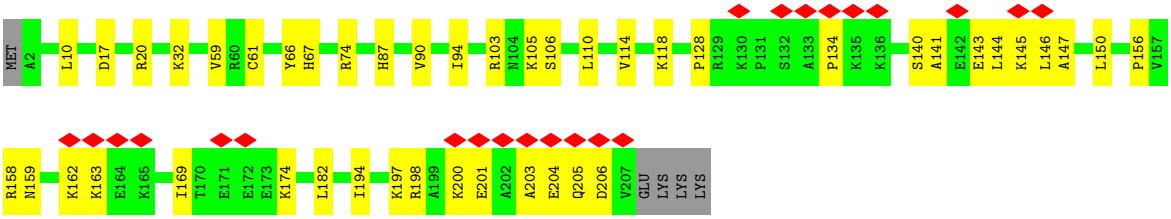


• Molecule 18: Large ribosomal subunit protein eL37

Chain LP:

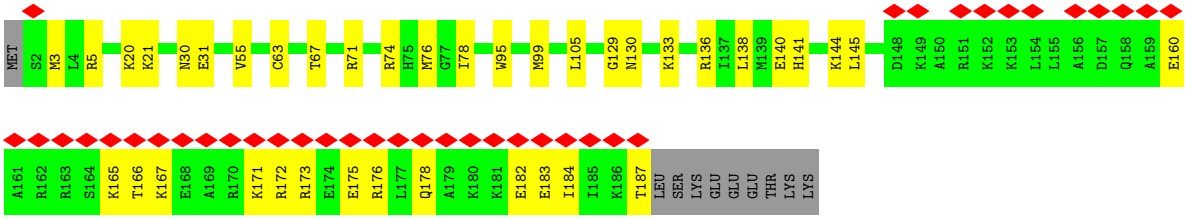
• Molecule 19: Large ribosomal subunit protein eL13

Chain LQ:

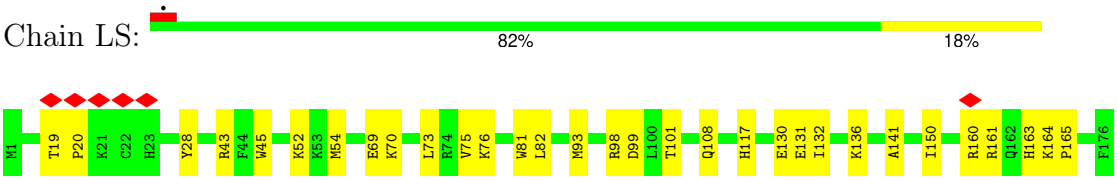


• Molecule 20: Large ribosomal subunit protein eL19

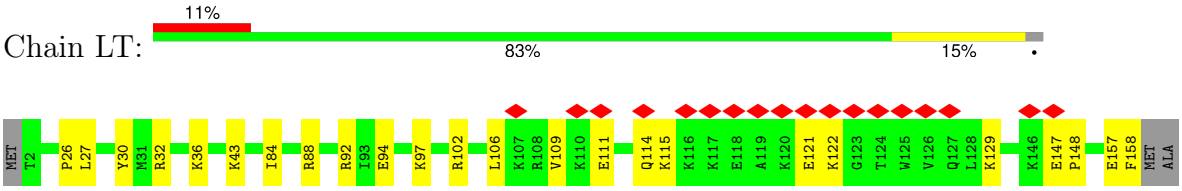
Chain LR:



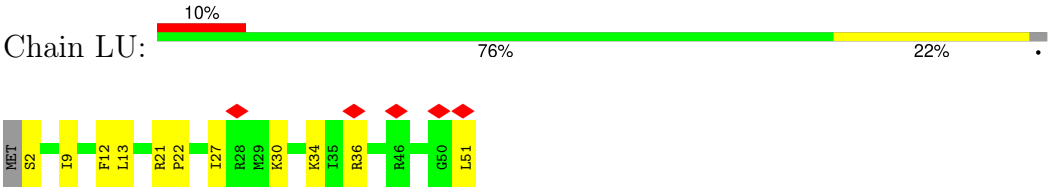
• Molecule 21: Large ribosomal subunit protein eL20



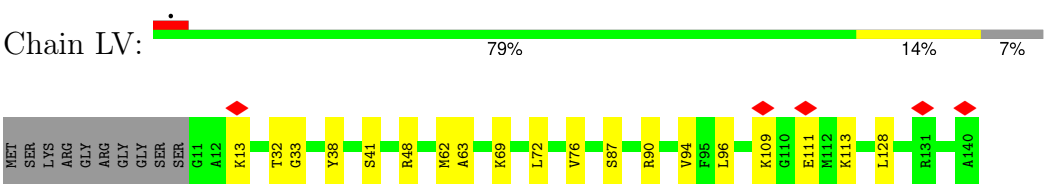
• Molecule 22: Large ribosomal subunit protein eL21



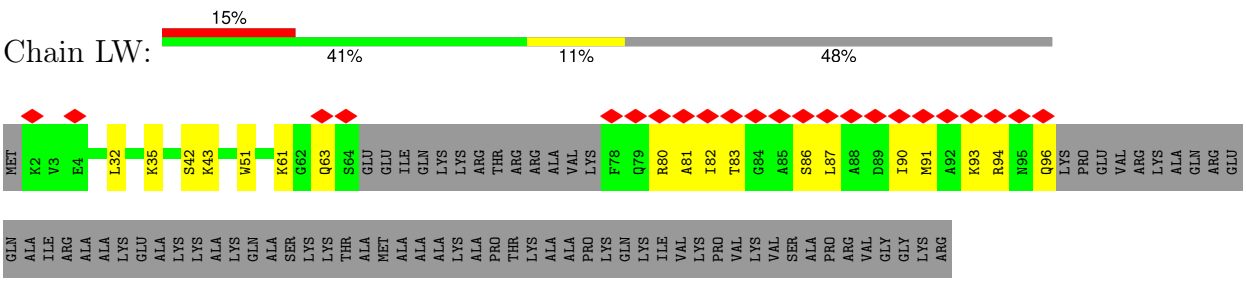
• Molecule 23: Large ribosomal subunit protein eL39



• Molecule 24: Large ribosomal subunit protein uL14

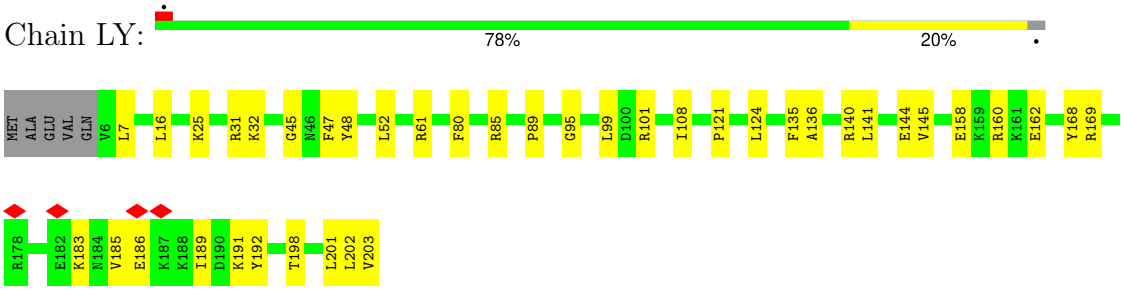


• Molecule 25: Large ribosomal subunit protein eL24



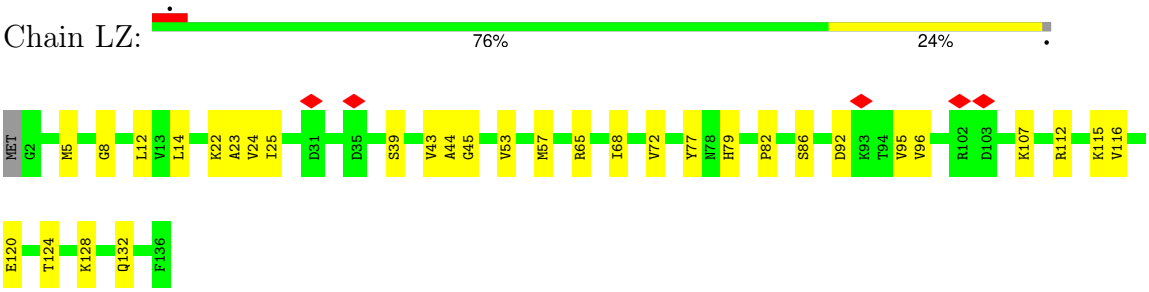
• Molecule 26: Large ribosomal subunit protein uL13

Chain LY:



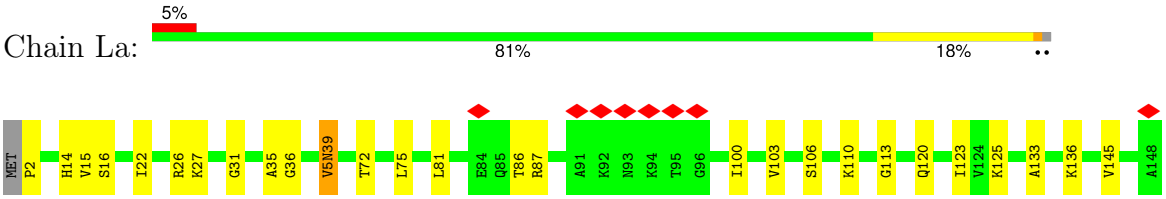
• Molecule 27: Large ribosomal subunit protein eL27

Chain LZ:



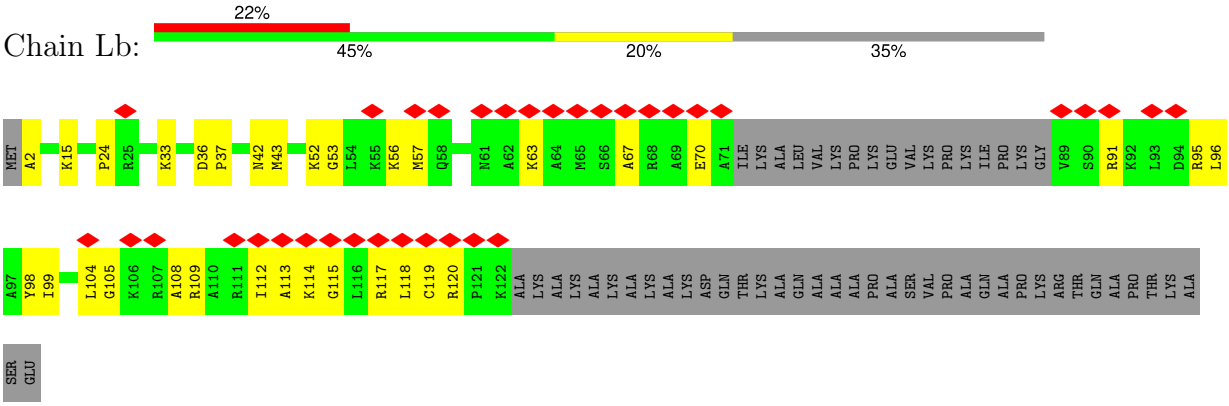
• Molecule 28: Large ribosomal subunit protein uL15

Chain La:



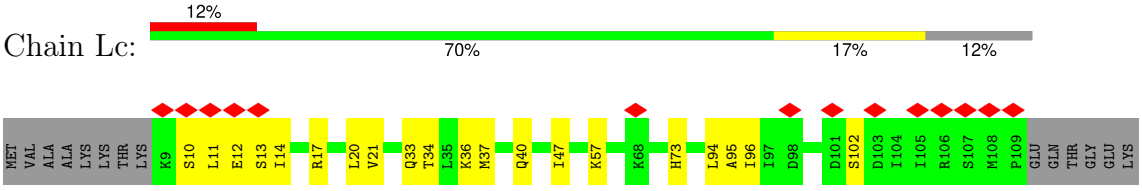
• Molecule 29: Large ribosomal subunit protein eL29

Chain Lb:



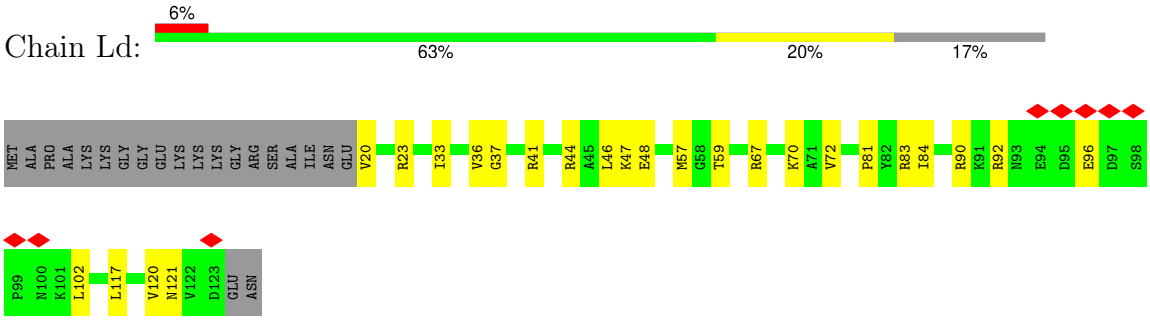
• Molecule 30: Large ribosomal subunit protein eL30

Chain Lc:



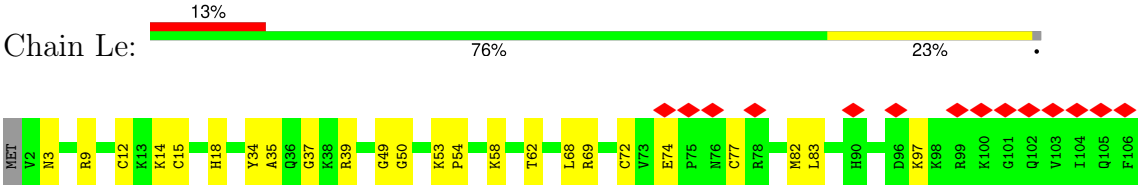
• Molecule 31: Large ribosomal subunit protein eL31

Chain Ld:



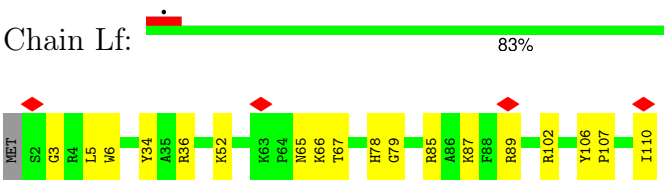
• Molecule 32: Large ribosomal subunit protein eL42

Chain Le:



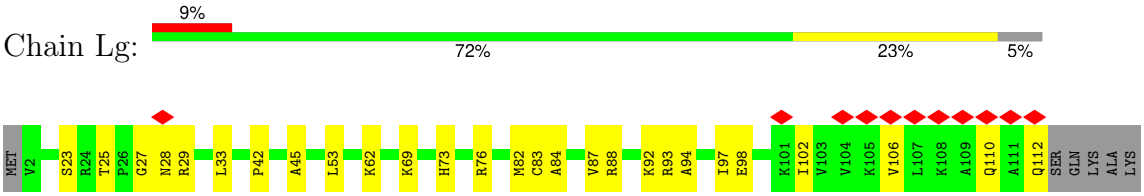
• Molecule 33: Large ribosomal subunit protein eL33

Chain Lf:



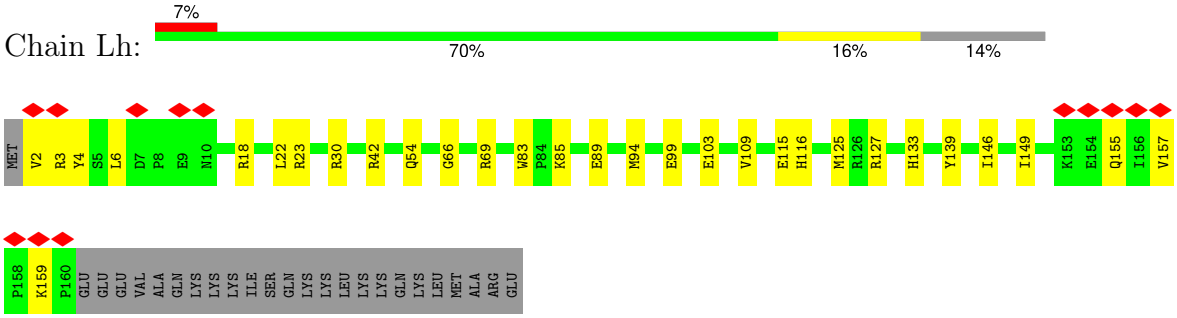
• Molecule 34: Large ribosomal subunit protein eL34

Chain Lg:



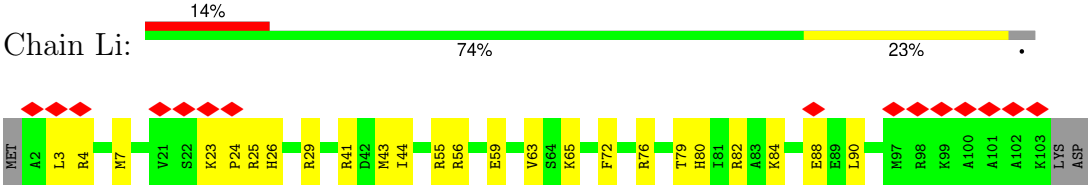
• Molecule 35: Large ribosomal subunit protein uL22

Chain Lh:



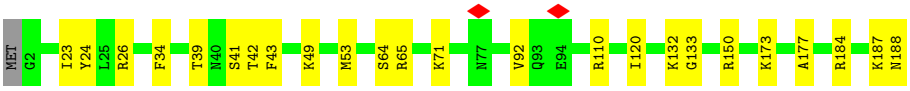
• Molecule 36: Large ribosomal subunit protein eL36

Chain Li:



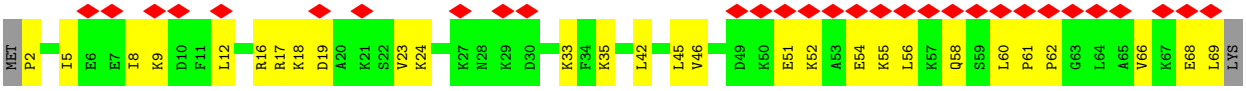
• Molecule 37: Large ribosomal subunit protein eL18

Chain Lj:



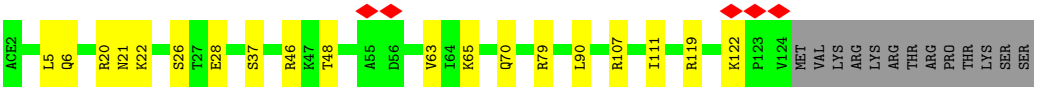
• Molecule 38: Large ribosomal subunit protein eL38

Chain Lk:



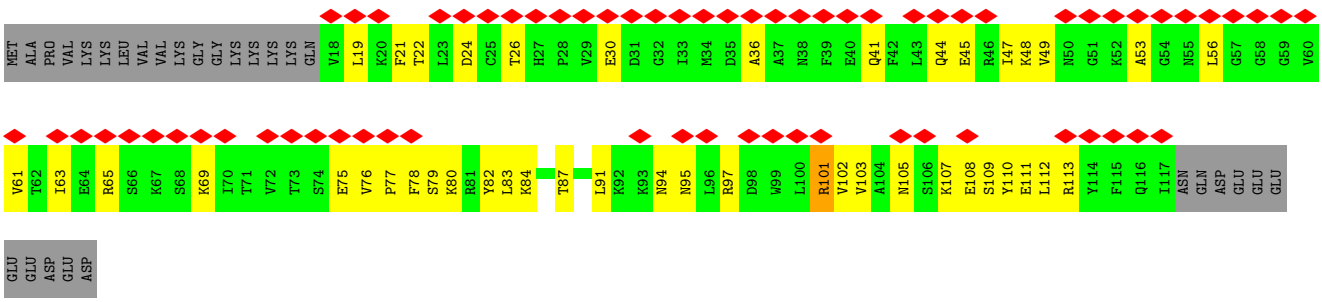
• Molecule 39: Large ribosomal subunit protein eL28

Chain Ll:



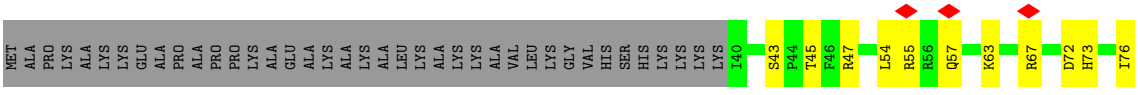
• Molecule 40: Large ribosomal subunit protein eL22

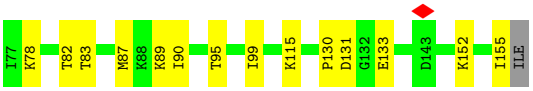
Chain Lm:



• Molecule 41: Large ribosomal subunit protein uL23

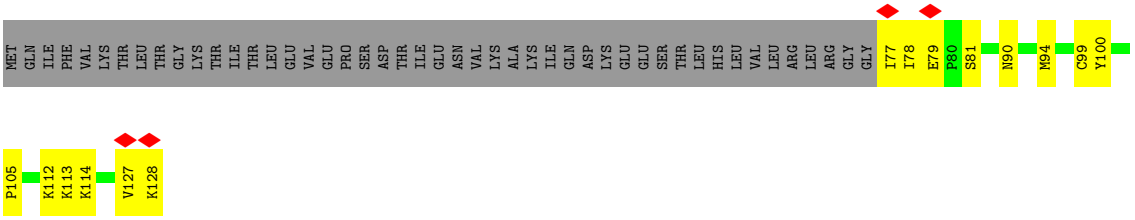
Chain Ln:



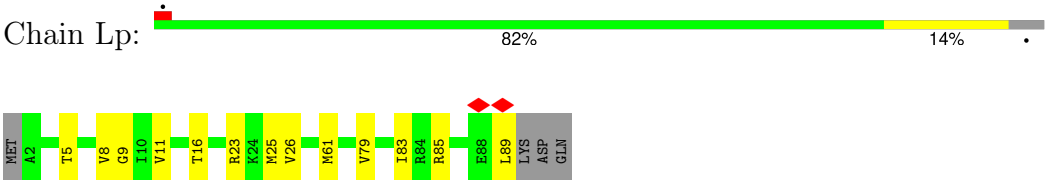


• Molecule 42: Large ribosomal subunit protein eL40

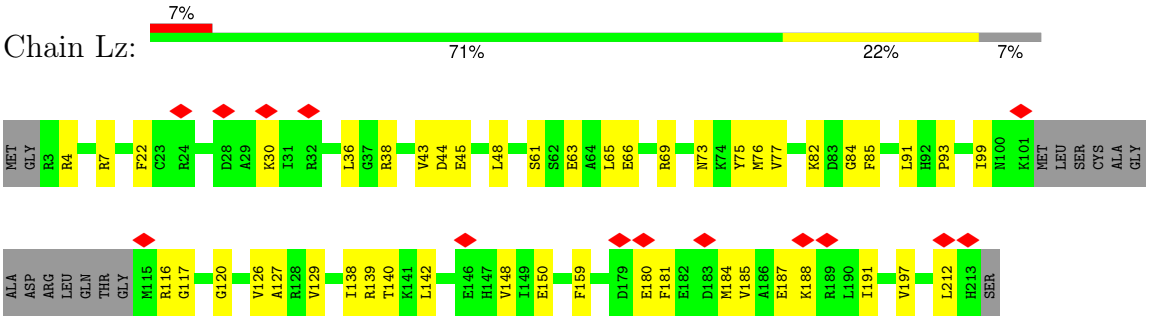
Chain Lo:



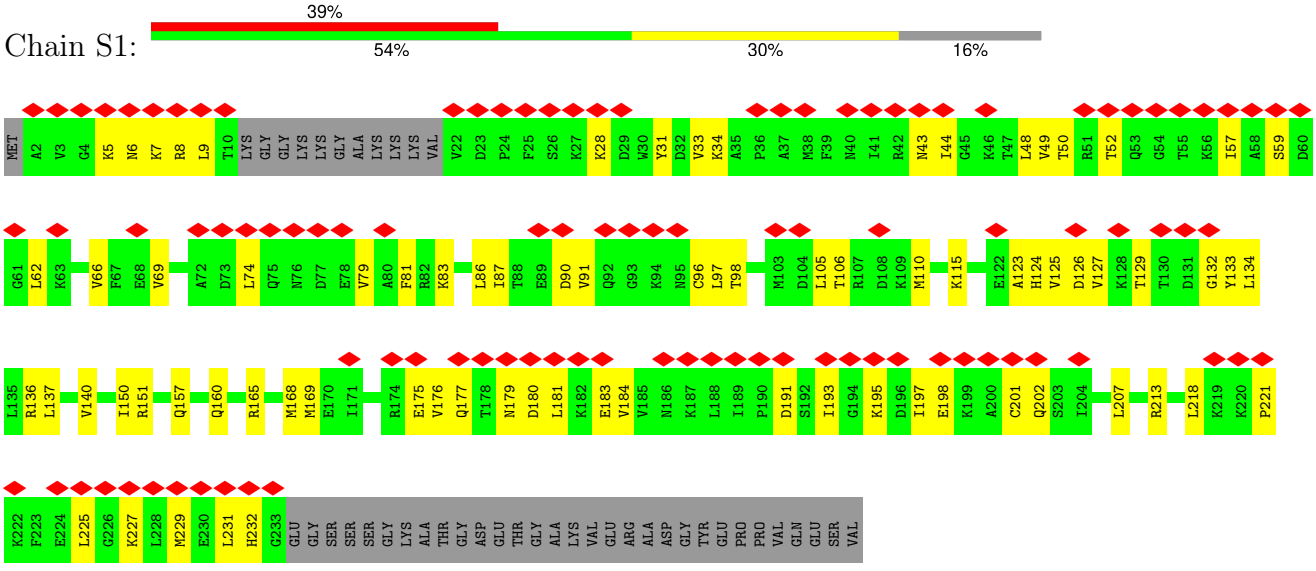
• Molecule 43: Large ribosomal subunit protein eL43



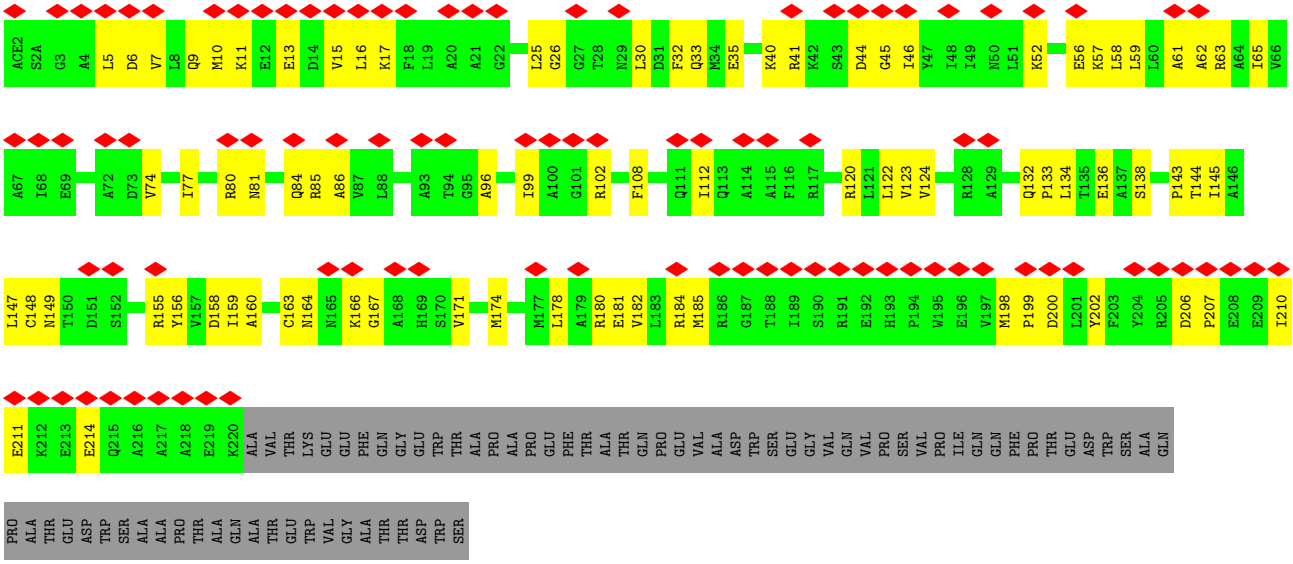
• Molecule 44: Large ribosomal subunit protein uL16



• Molecule 45: Small ribosomal subunit protein eS1

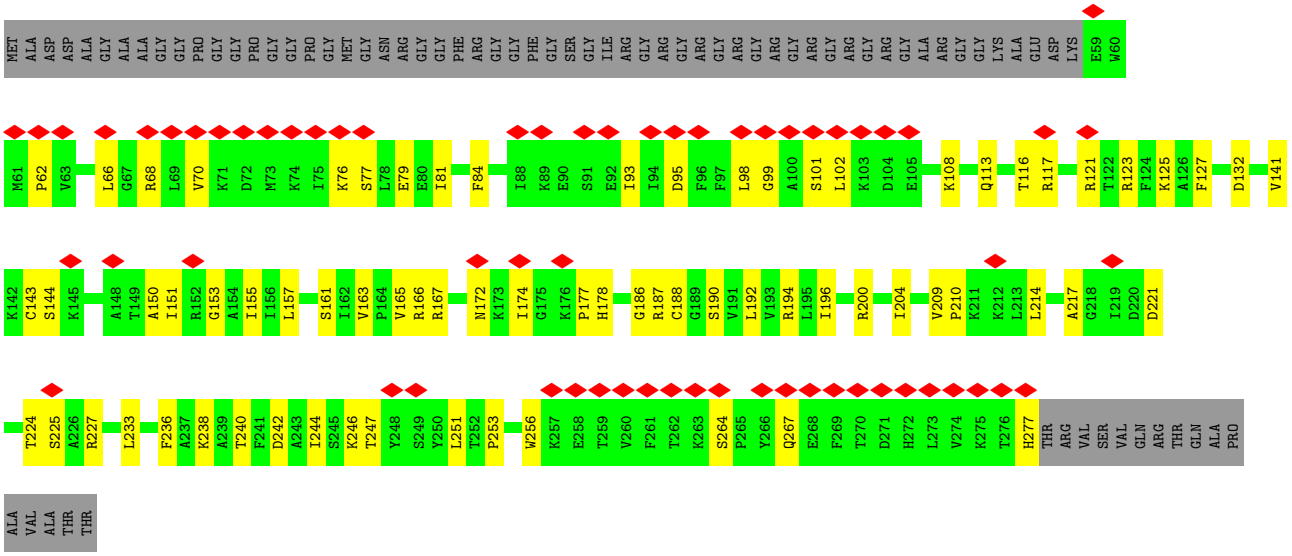


• Molecule 46: Small ribosomal subunit protein uS2



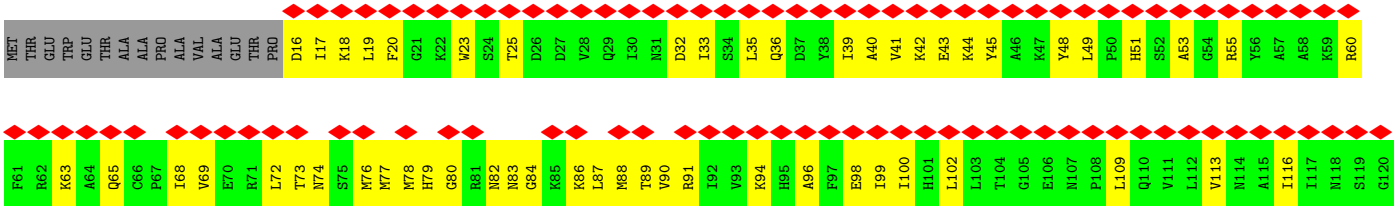
• Molecule 47: Small ribosomal subunit protein uS5

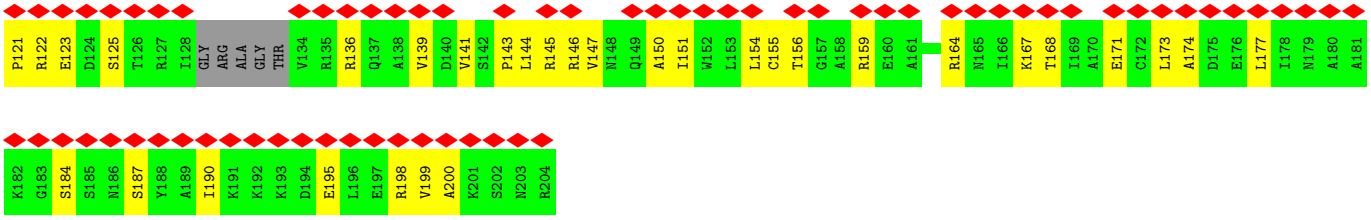
Chain SC:



• Molecule 48: Small ribosomal subunit protein uS7

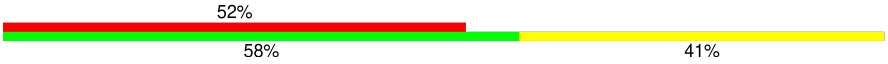
Chain SD:

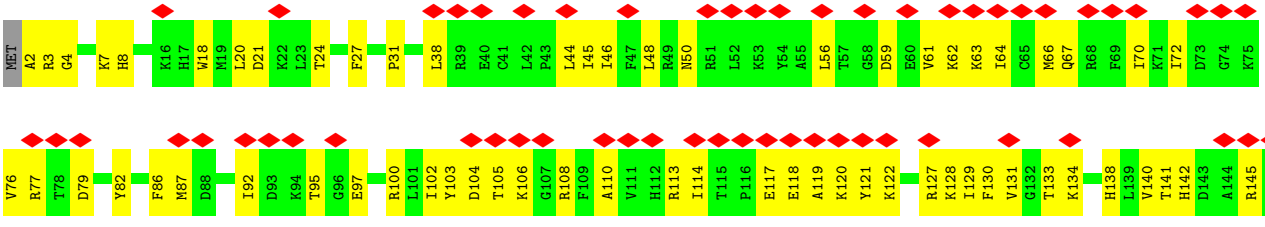


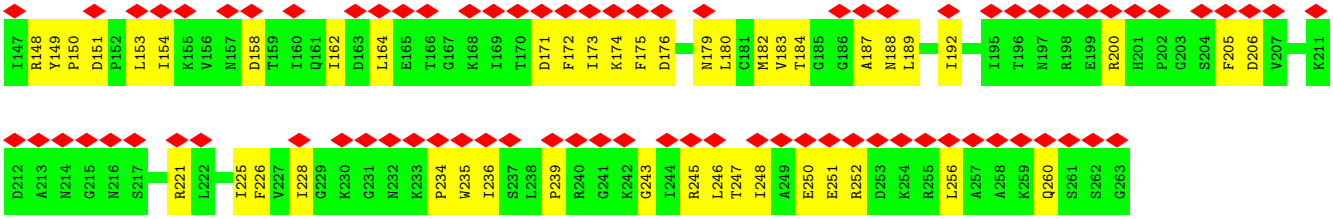


• Molecule 49: Small ribosomal subunit protein eS4, X isoform

Chain SE:

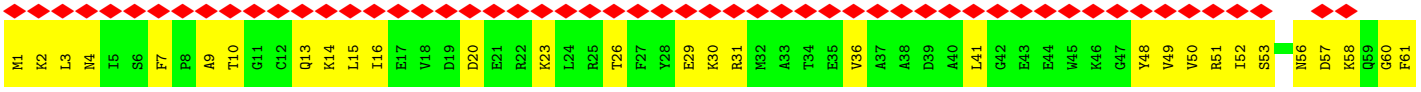


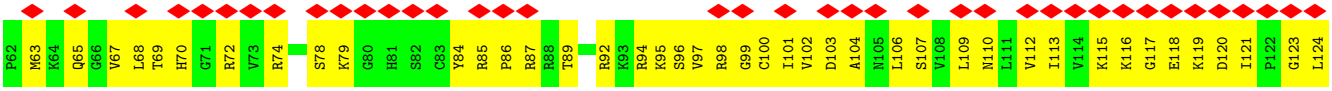


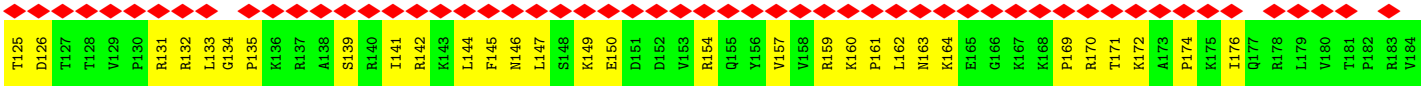


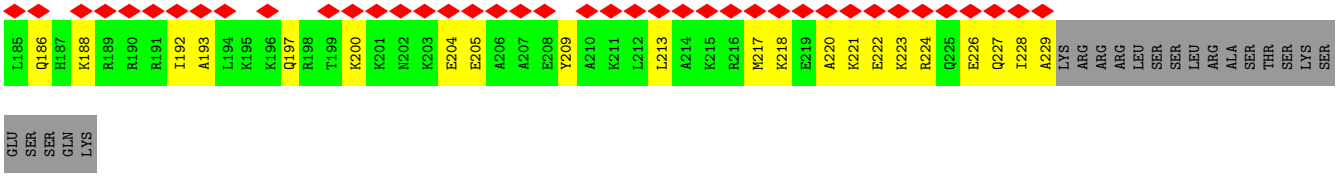
• Molecule 50: Small ribosomal subunit protein eS6

Chain SG:



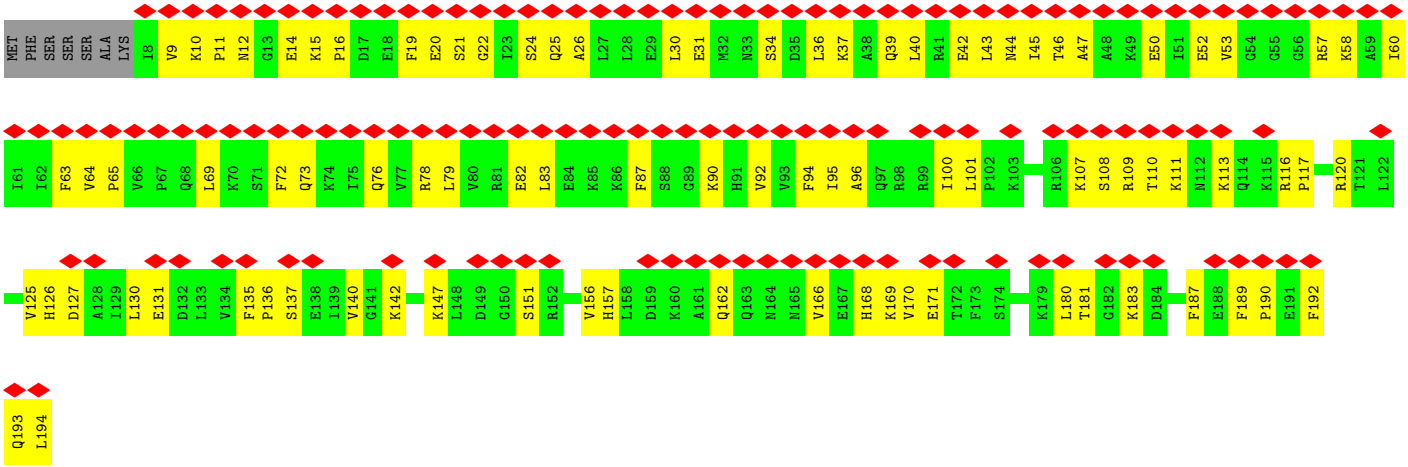






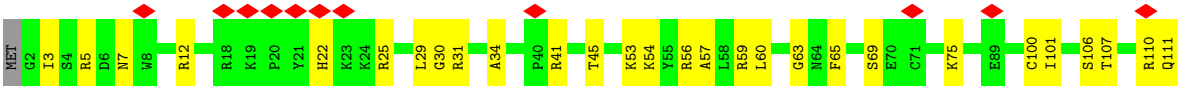
• Molecule 51: Small ribosomal subunit protein eS7

Chain SH:



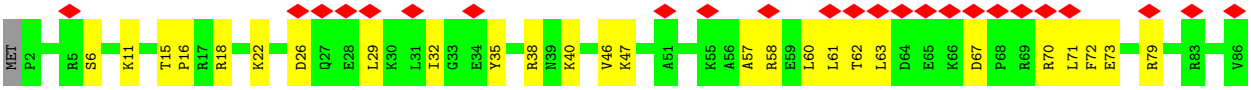
• Molecule 52: Small ribosomal subunit protein eS8

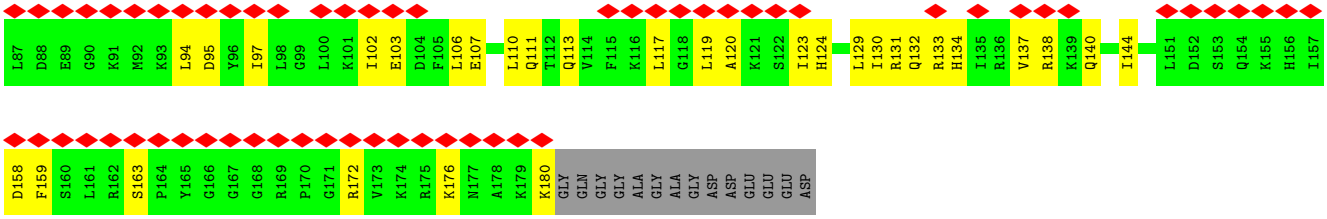
Chain SI:



• Molecule 53: Small ribosomal subunit protein uS4

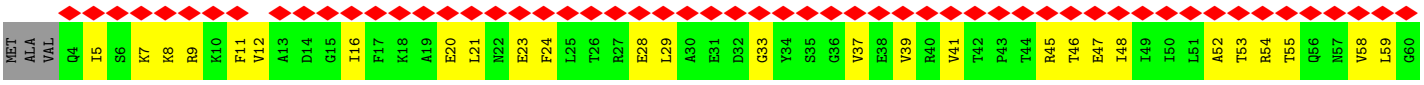
Chain SJ:





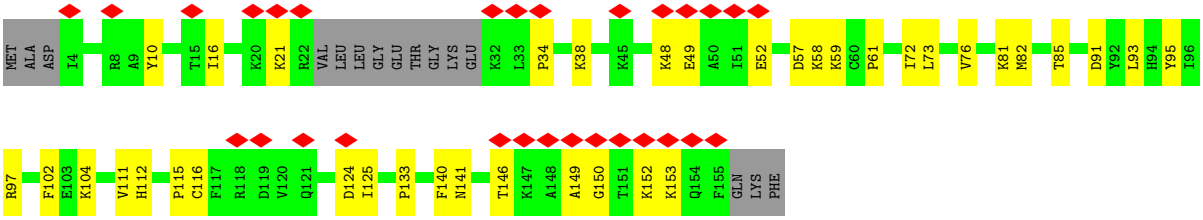
• Molecule 54: Small ribosomal subunit protein uS3

Chain SK:



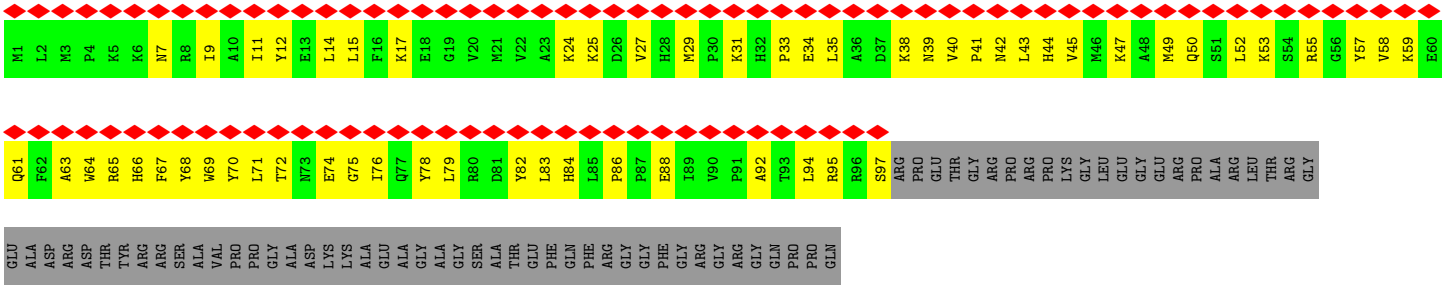
• Molecule 55: Small ribosomal subunit protein uS17

Chain SL:



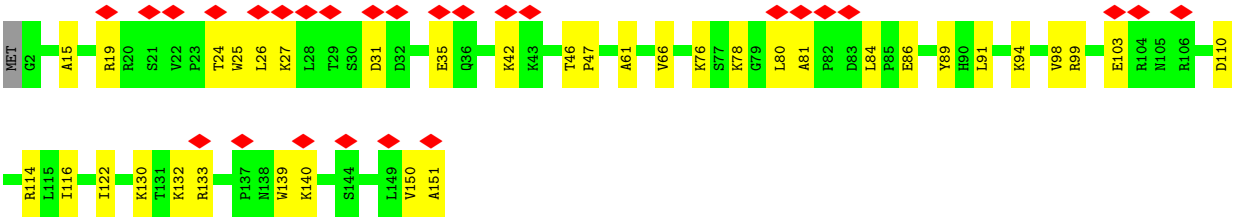
• Molecule 56: Small ribosomal subunit protein eS10

Chain SM:



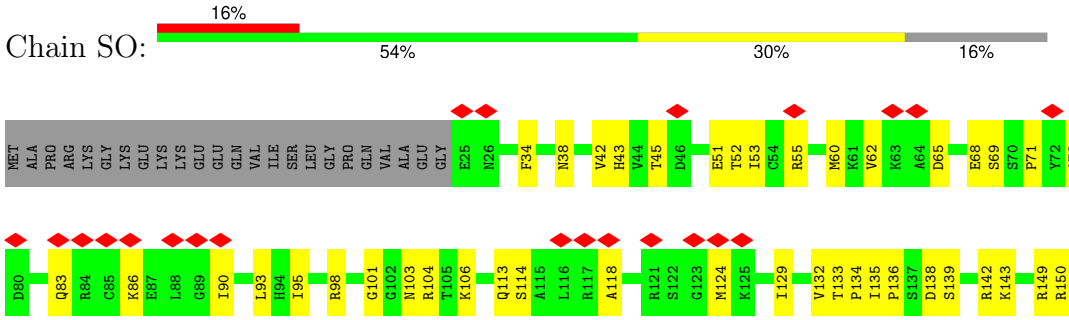
• Molecule 57: Small ribosomal subunit protein uS15

Chain SN:



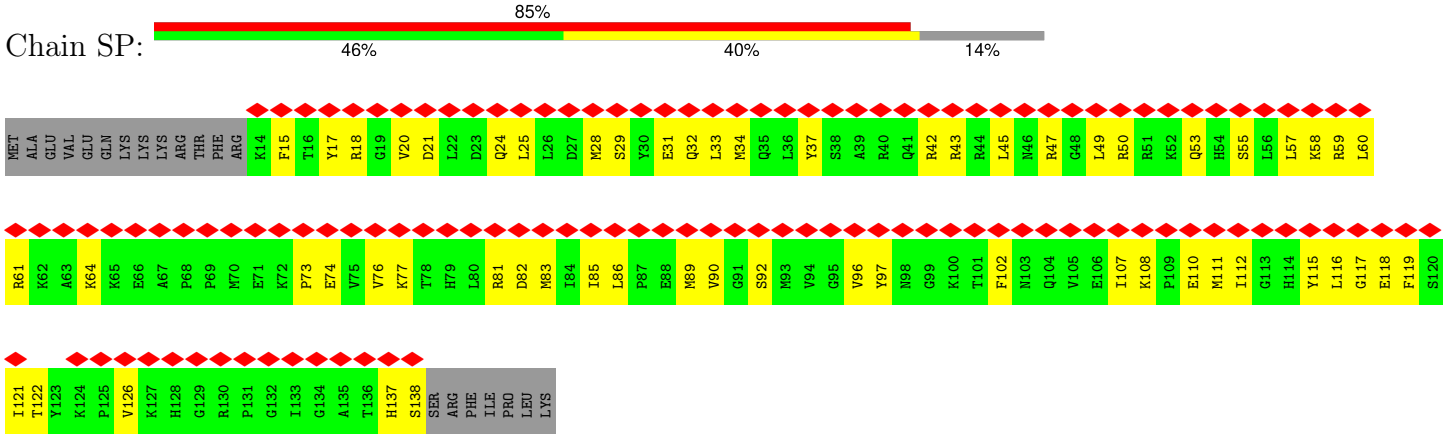
• Molecule 58: Small ribosomal subunit protein uS11

Chain SO:



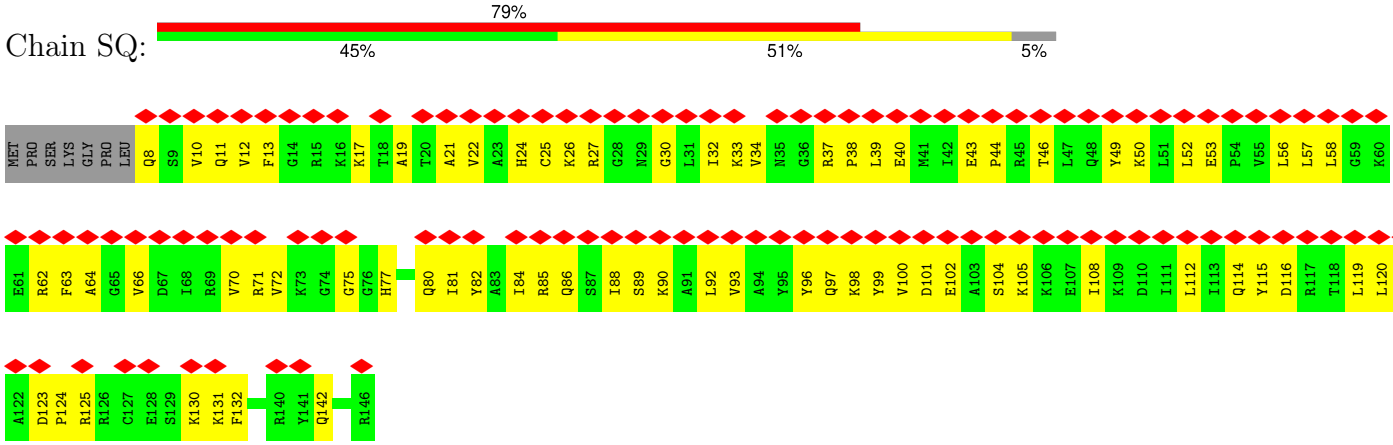
• Molecule 59: Small ribosomal subunit protein uS19

Chain SP:



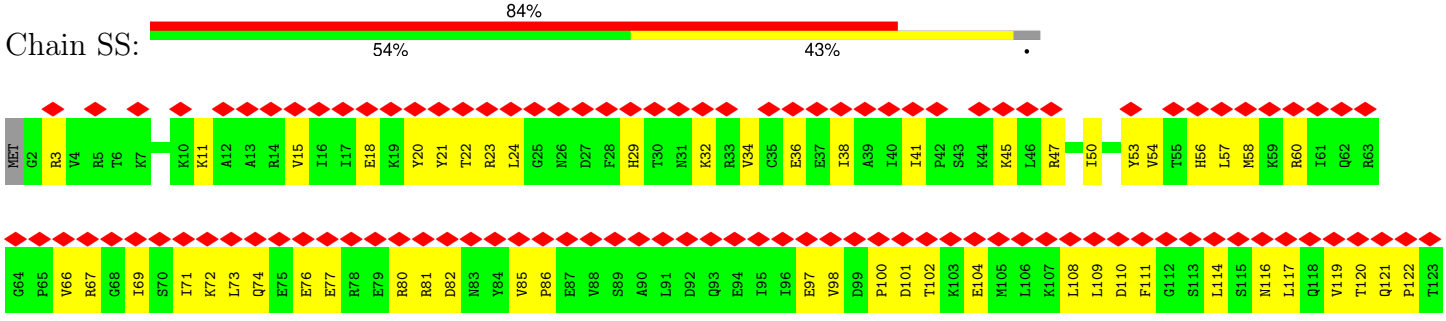
• Molecule 60: Small ribosomal subunit protein uS9

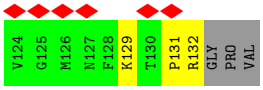
Chain SQ:



• Molecule 61: Small ribosomal subunit protein eS17

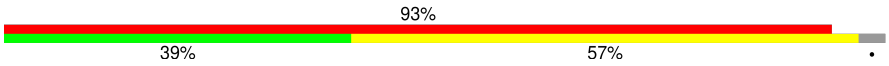
Chain SS:

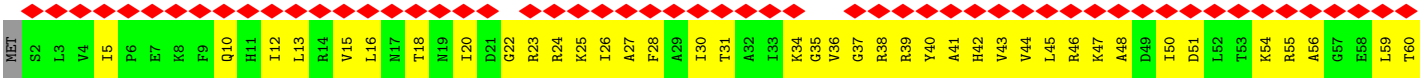


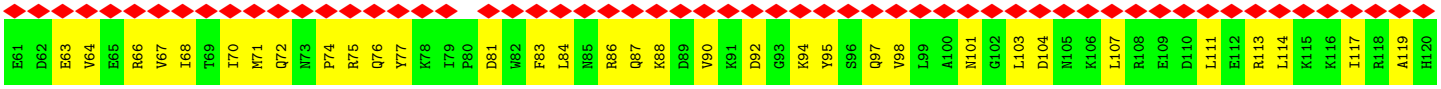


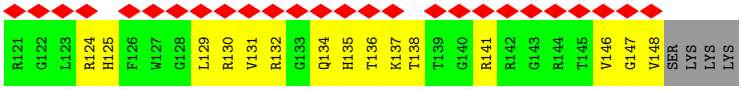
• Molecule 62: Small ribosomal subunit protein uS13

Chain ST:



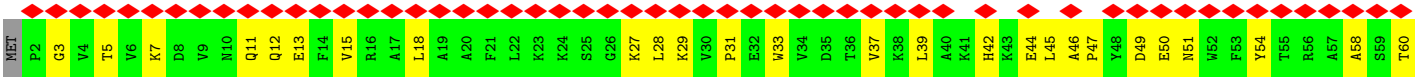


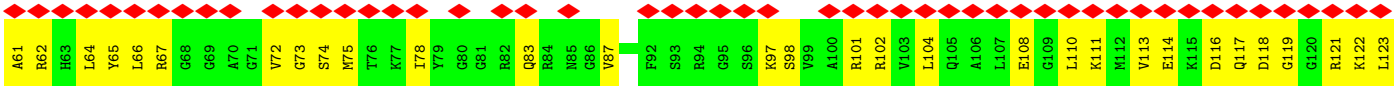


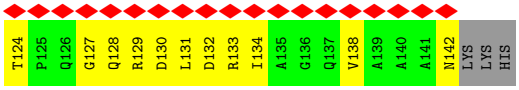


• Molecule 63: Small ribosomal subunit protein eS19

Chain SU:

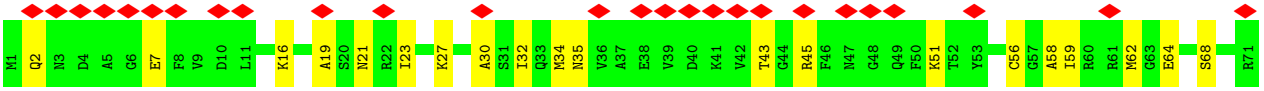


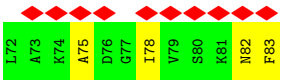




• Molecule 64: Small ribosomal subunit protein eS21

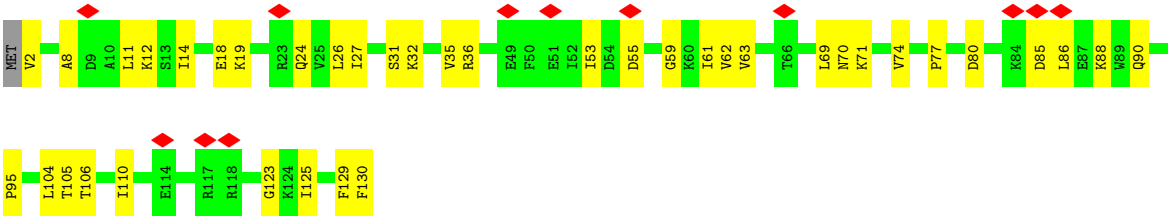
Chain SV:



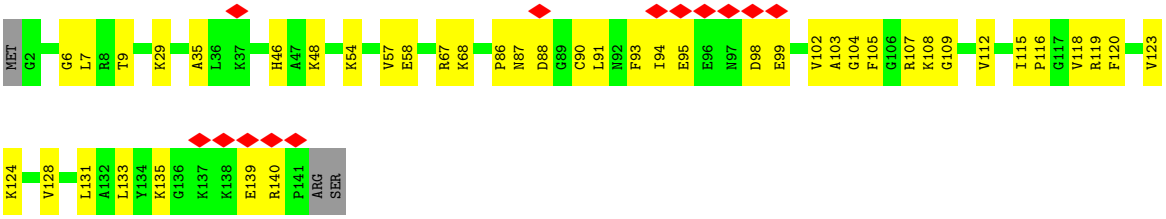


• Molecule 65: Small ribosomal subunit protein uS8

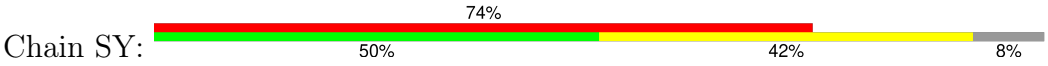
Chain SW:

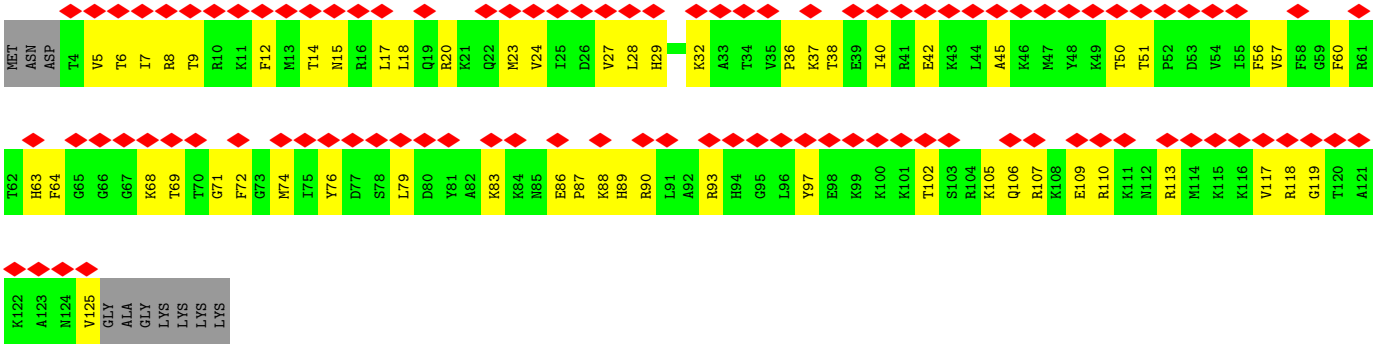


• Molecule 66: Small ribosomal subunit protein uS12

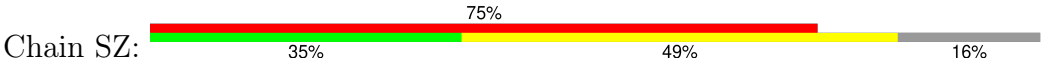


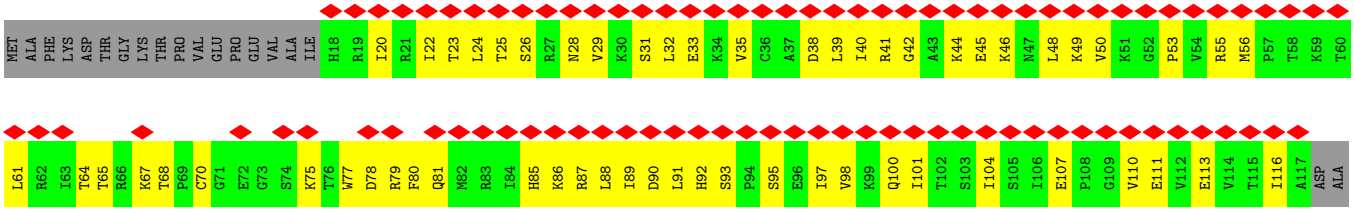
• Molecule 67: Isoform 3 of Small ribosomal subunit protein eS24



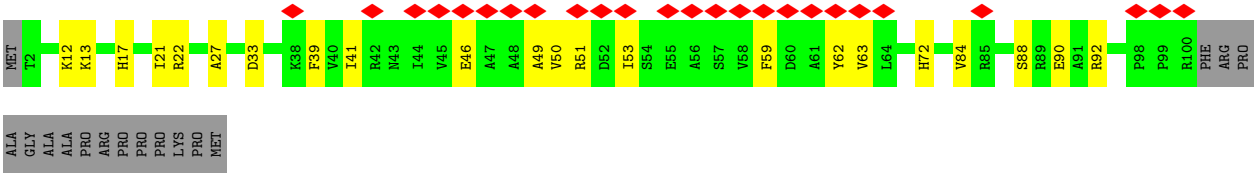


• Molecule 68: Small ribosomal subunit protein uS10

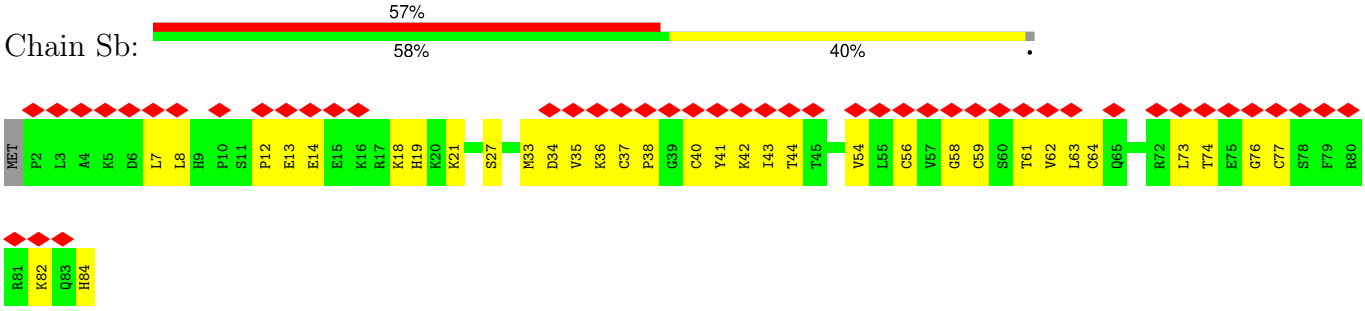




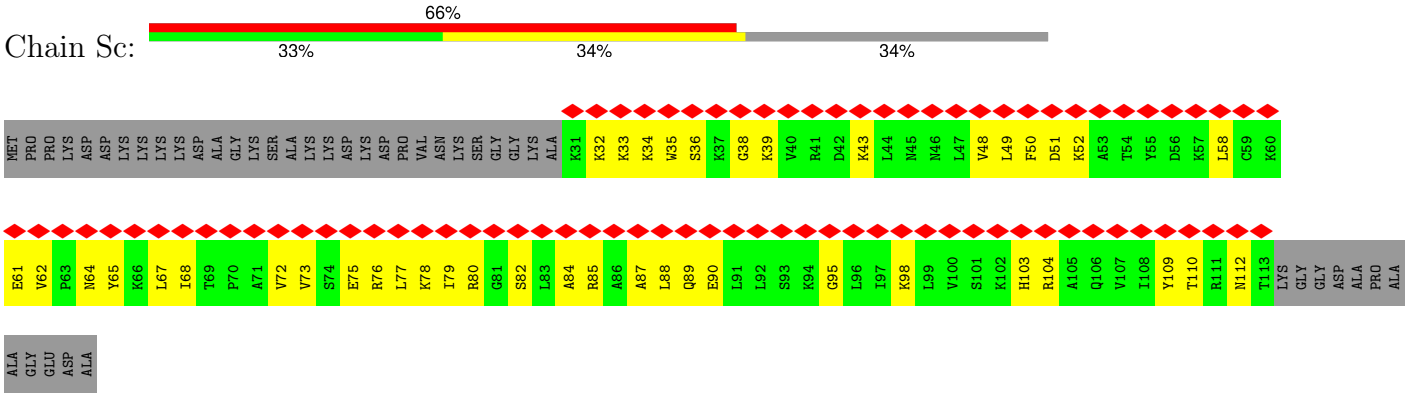
• Molecule 69: Small ribosomal subunit protein eS26



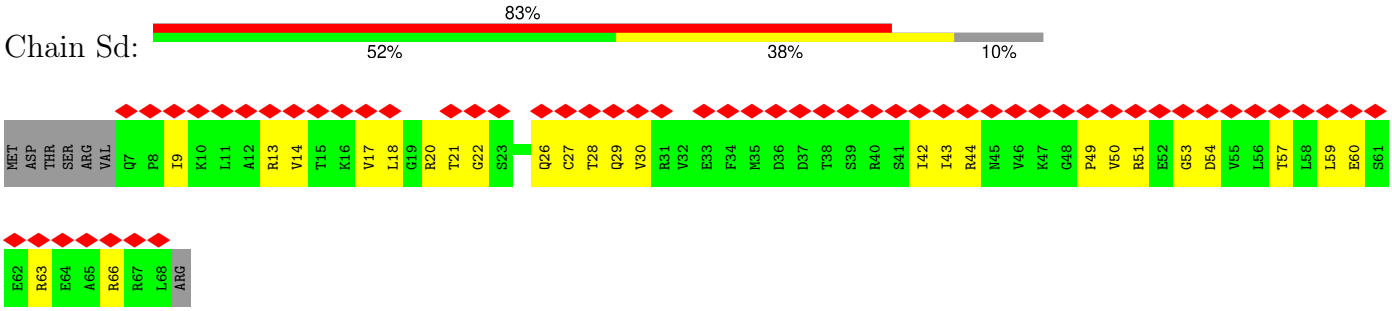
• Molecule 70: Small ribosomal subunit protein eS27



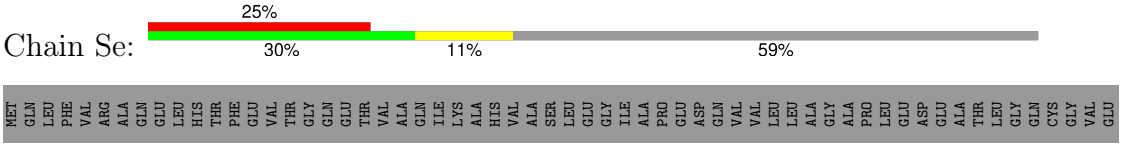
• Molecule 71: Small ribosomal subunit protein eS25

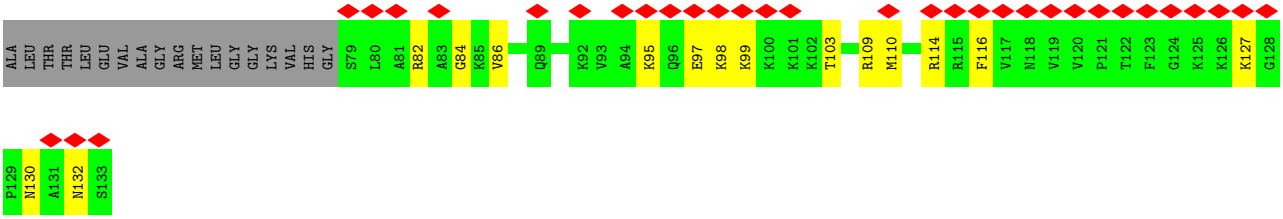


• Molecule 72: Small ribosomal subunit protein eS28

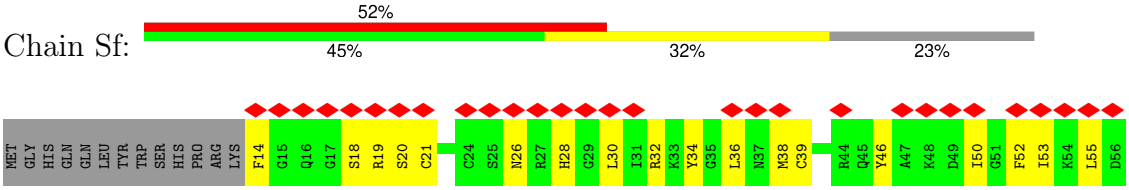


• Molecule 73: FAU ubiquitin-like and ribosomal protein S30

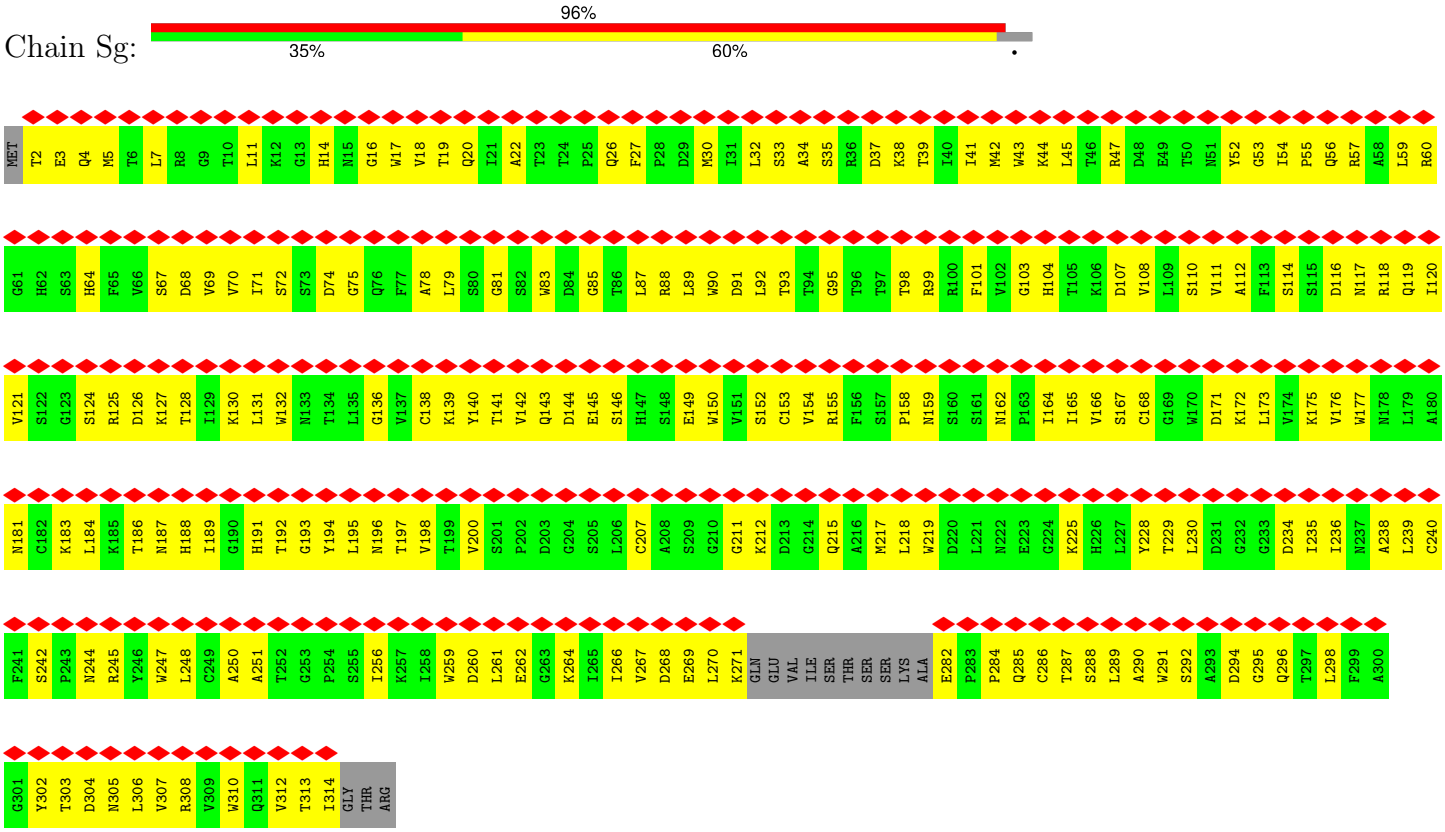




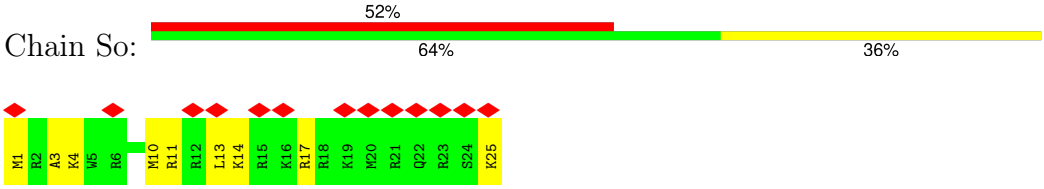
• Molecule 74: Small ribosomal subunit protein uS14



• Molecule 75: Receptor of activated protein C kinase 1

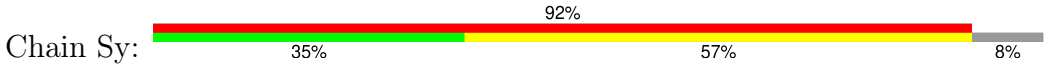


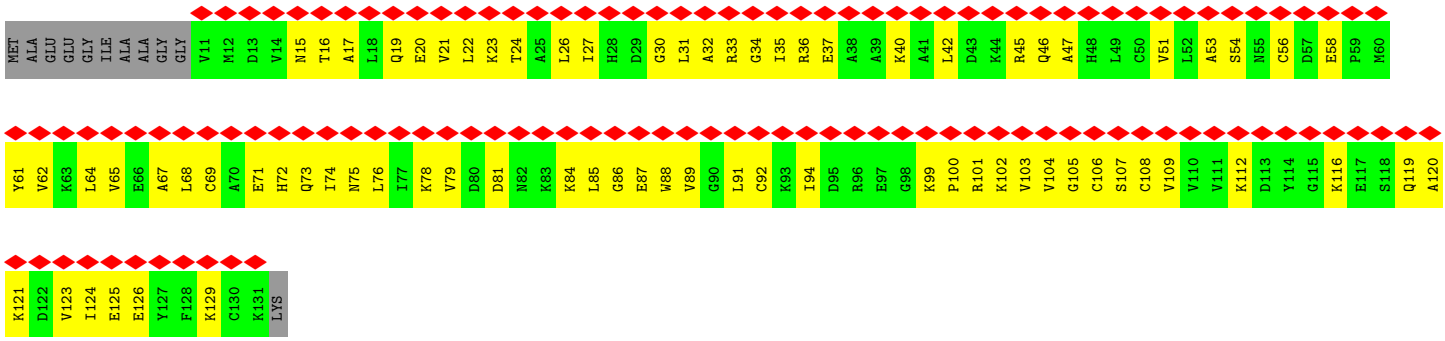
• Molecule 76: Small ribosomal subunit protein eS32



• Molecule 77: Small ribosomal subunit protein eS12

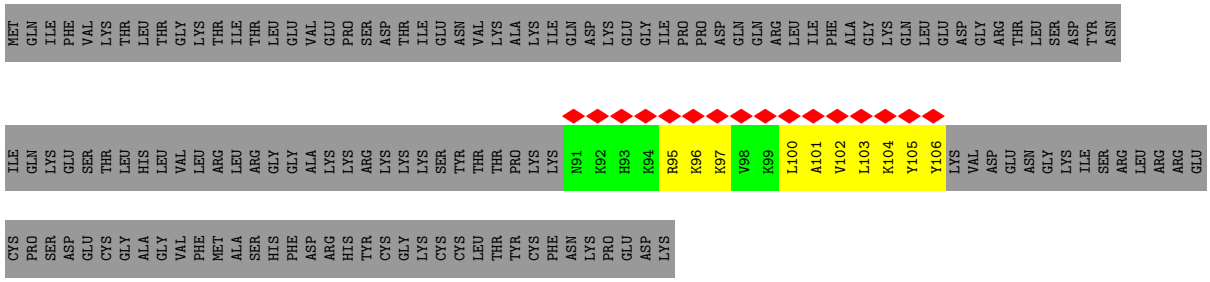
Chain Sy:





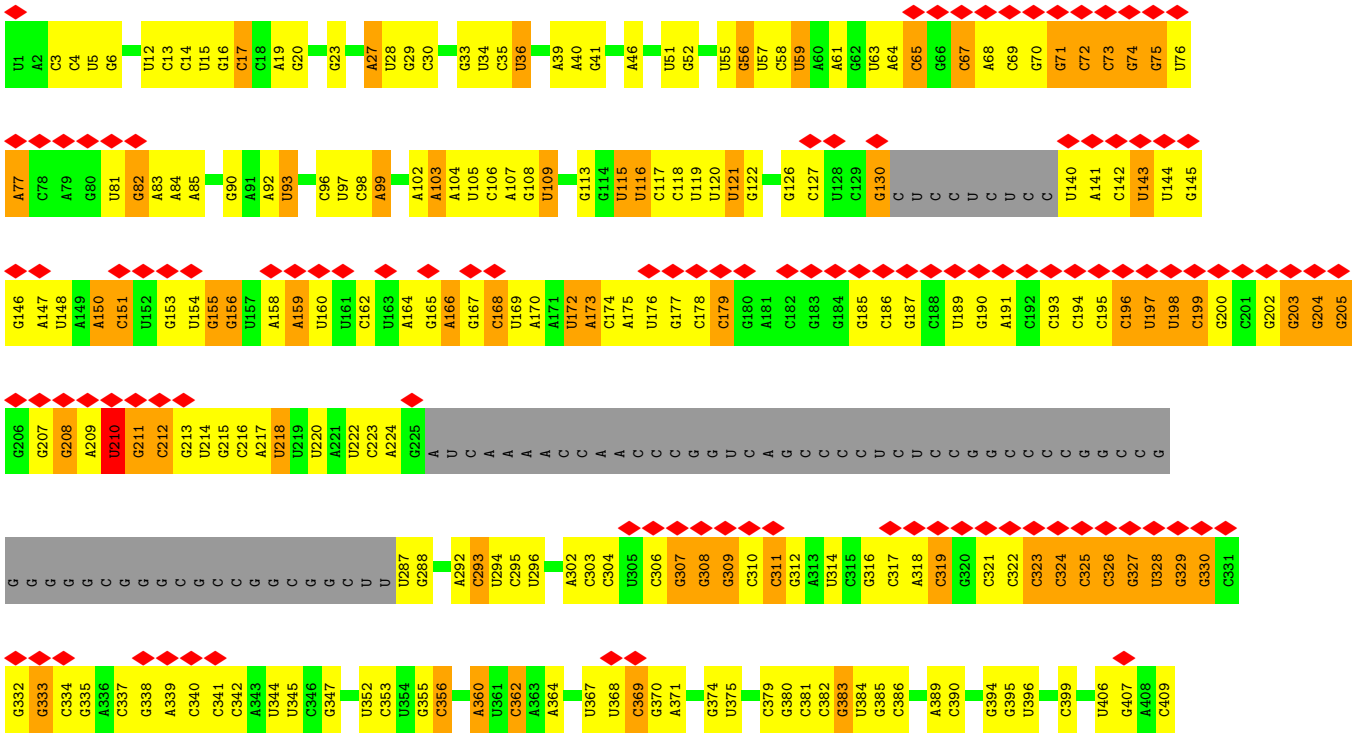
• Molecule 78: Ubiquitin-40S ribosomal protein S27a

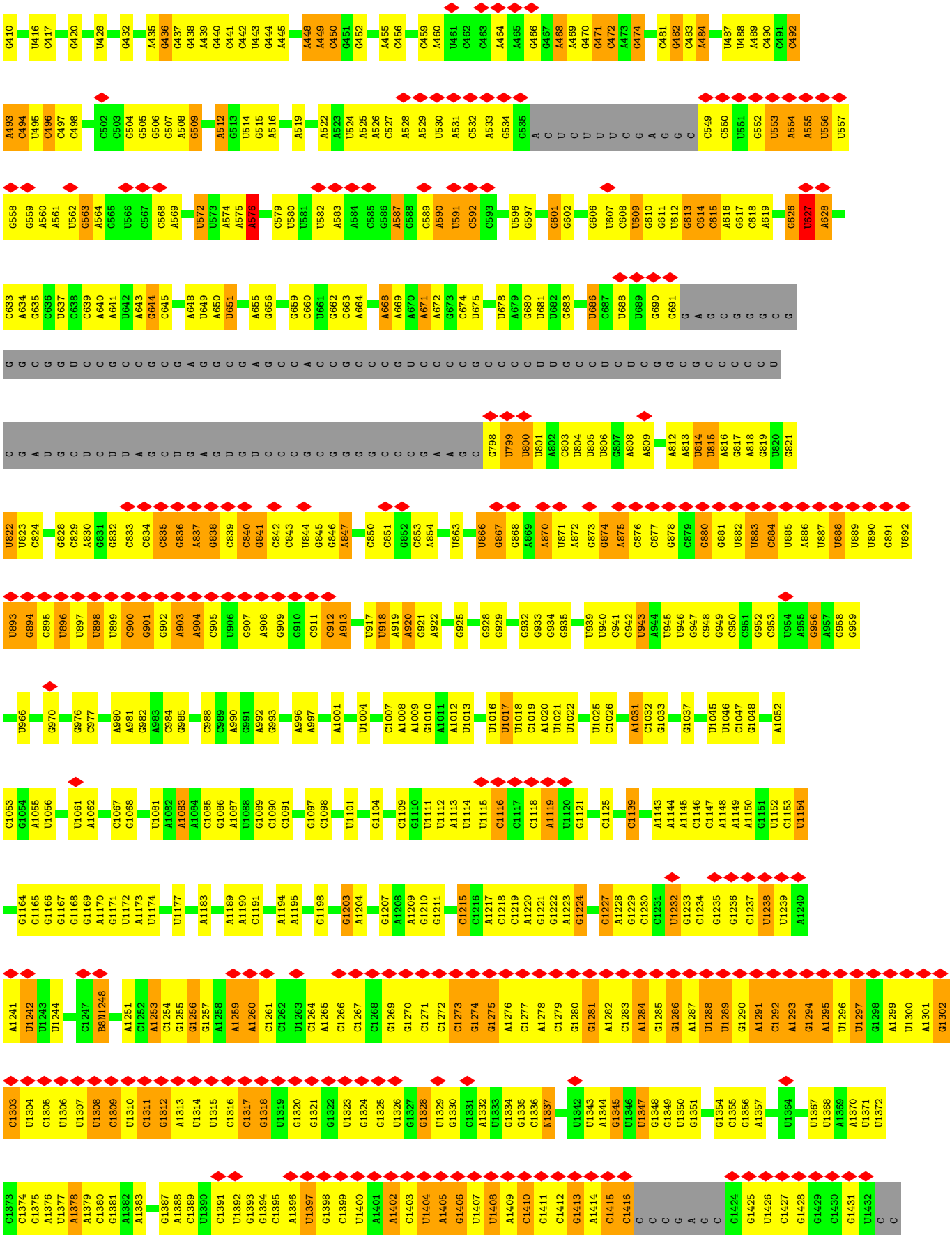
Chain Sz:



• Molecule 79: 18S rRNA

Chain S2:

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A493 C494 U495 C496 C497 C498 C502 C503 G504 G505 G506 G507 A508 G509 A512 G513 U514 G515 A516 A519 A522 A523 U524 A525 A526 C527 A528 A529 U530 A531 C532 A533 G534 G535 C549 C550 U551 G552 U553 A554 A555 U556 U557
G558 G559 A560 A561 U562 G563 A564 G565 U566 C567 C568 A569 U572 U573 A574 A575 A576 C579 U580 U581 U582 A583 A584 C585 C586 A587 G588 G589 A590 U591 C592 C593 U596 G597 G601 G602 G606 U607 C608 U609 G610 G611 U612 G613 C614 C615 A616 G617 C618 A619 G626 U627 A628
C633 A634 G635 C636 U637 C638 C639 A640 A641 U642 A643 G644 C645 A648 U649 A650 U651 A655 G656 G659 C660 U661 G662 C663 A664 A668 A669 A670 A671 A672 G673 C674 U675 U678 A679 G680 U681 U682 G683 U686 C687 U688 U689 G690 G691
C798 U799 U800 U801 A802 C803 U804 U805 U806 G807 A808 A809 A812 A813 U814 U815 A816 G817 A818 G819 U820 G821
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U893 G894 G895 U896 U897 U898 U899 C900 G901 G902 A903 A904 C905 U906 G907 A908 G909 G910 C911 C912 A913 U917 U918 A919 A920 G921 A922 G925 G928 G929 G932 G933 G934 G935 U939 U940 C941 G942 U943 A944 U945 U946 G947 C948 G949 C950 C951 G952 C953 U954 A955 G956 A957 G958 G959
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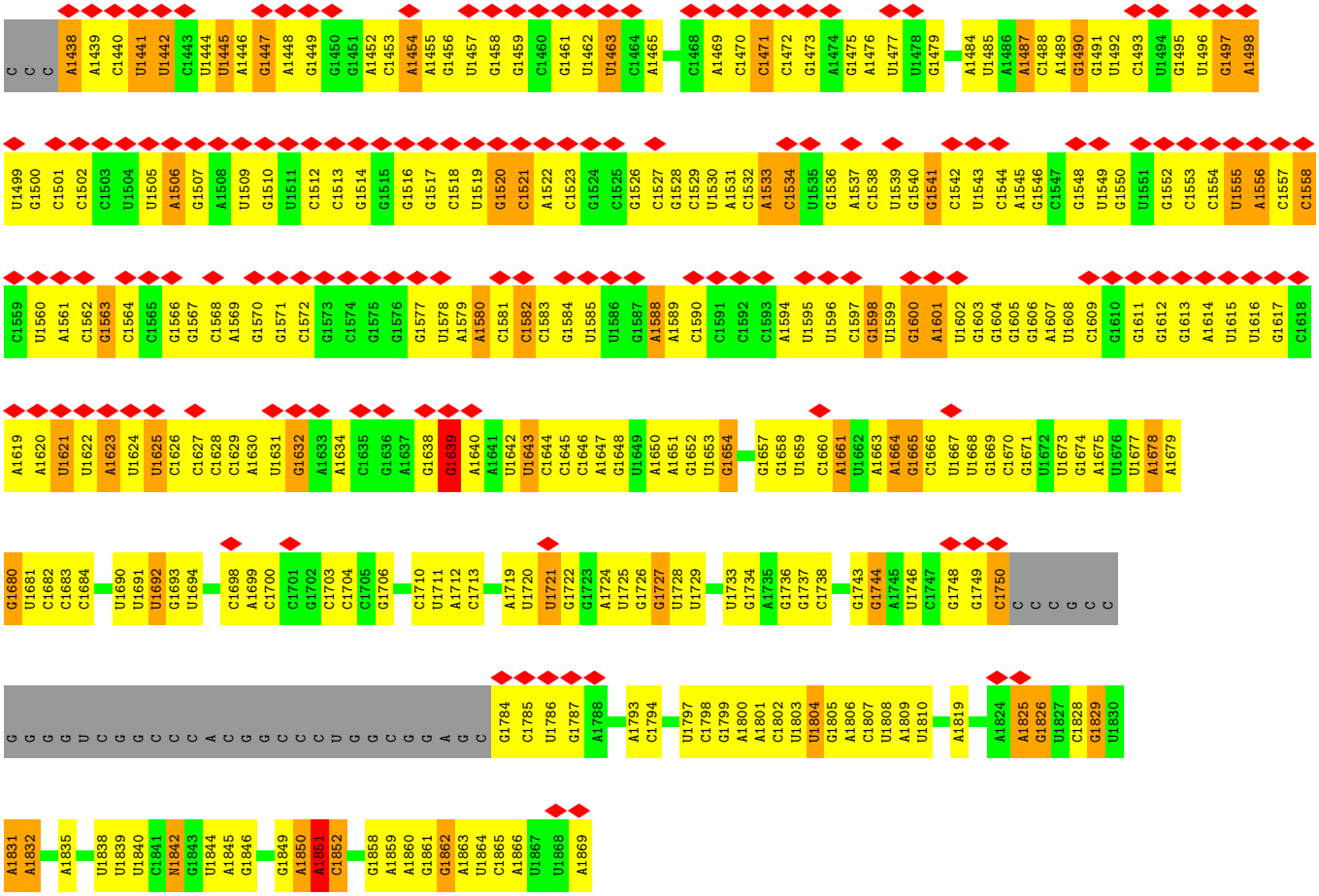
C1053 G1054 A1055 U1056 U1061 A1062 C1067 G1068 U1081 A1082 A1083 A1084 C1085 G1086 A1087 U1088 G1089 C1090 C1091 G1097 C1098 U1101 G1104 C1109 G1110 U1111 U1112 A1113 U1114 U1115 C1116 C1117 C1118 A1119 U1120 G1121 C1125 C1139 A1143 A1144 A1145 C1146 C1147 A1148 A1149 A1150 G1151 U1152 C1153 U1154
G1164 G1165 G1166 G1167 G1168 G1169 A1170 G1171 U1172 A1173 U1174 U1177 A1183 A1189 A1190 C1191 A1194 A1195 G1198 G1203 A1204 G1207 A1208 A1209 G1210 G1211 C1215 C1216 A1217 C1218 C1219 A1220 G1221 G1222 A1223 G1224 G1227 A1228 G1229 C1230 C1231 U1232 G1233 C1234 G1235 G1236 C1237 U1238 U1239 A1240
A1241 U1242 U1243 U1244 C1247 B8N1248 A1251 C1252 A1253 C1254 G1255 G1256 G1257 A1258 A1259 A1260 C1261 C1262 U1263 C1264 A1265 C1266 C1267 C1268 G1269 G1270 C1271 C1272 C1273 G1274 G1275 A1276 C1277 A1278 C1279 G1280 G1281 A1282 C1283 A1284 G1285 G1286 A1287 U1288 U1289 G1290 A1291 C1292 A1293 G1294 A1295 U1296 U1297 G1298 A1299 U1300 A1301 G1302
C1303 U1304 C1305 U1306 U1307 U1308 C1309 U1310 C1311 G1312 A1313 U1314 U1315 C1316 C1317 G1318 U1319 G1320 G1321 G1322 U1323 G1324 G1325 U1326 G1327 G1328 U1329 G1330 C1331 A1332 U1333 A1334 G1335 C1336 N1337 U1342 A1343 A1344 G1345 U1346 U1347 G1348 G1349 U1350 G1351 G1354 C1355 G1356 A1357 U1364 U1367 U1368 A1369 A1370 U1371 U1372
C1373 C1374 G1375 A1376 U1377 A1378 A1379 C1380 G1381 A1382 A1383 G1387 A1388 C1389 U1390 C1391 U1392 G1393 G1394 C1395 A1396 U1397 G1398 C1399 U1400 A1401 A1402 C1403 U1404 A1405 G1406 U1407 U1408 A1409 C1410 G1411 C1412 G1413 A1414 A1415 C1416 C C C G A G C G1424 G1425 U1426 C1427 G1428 G1429 C1430 G1431 U1432 C C C


C C C A1438 A1439 C1440 U1441 U1442 C1443 U1444 U1445 A1446 G1447 A1448 G1449 G1450 G1451 A1452 C1453 A1454 A1455 G1456 U1457 G1458 G1459 C1460 G1461 U1462 U1463 C1464 A1465 C1468 A1469 C1470 C1471 C1472 G1473 A1474 G1475 A1476 U1477 U1478 G1479 A1484 U1485 A1486 A1487 C1488 A1489 G1490 G1491 U1492 C1493 U1494 G1495 U1496 G1497 A1498
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C1559 U1560 A1561 C1562 G1563 C1564 C1565 G1566 G1567 C1568 A1569 G1570 G1571 C1572 G1573 C1574 G1575 G1576 G1577 U1578 A1579 A1580 C1581 C1582 C1583 G1584 U1585 U1586 G1587 A1588 A1589 C1590 C1591 C1592 C1593 A1594 U1595 U1596 C1597 G1598 U1599 G1600 A1601 U1602 G1603 G1604 G1605 G1606 A1607 U1608 C1609 G1610 G1611 G1612 G1613 A1614 U1615 U1616 G1617 C1618
A1619 A1620 U1621 U1622 A1623 U1624 U1625 C1626 C1627 C1628 C1629 A1630 U1631 G1632 A1633 A1634 C1635 G1636 A1637 G1638 G1639 A1640 A1641 U1642 U1643 C1644 C1645 C1646 A1647 G1648 U1649 A1650 A1651 G1652 U1653 G1654 G1657 G1658 U1659 C1660 A1661 U1662 A1663 A1664 G1665 C1666 U1667 U1668 G1669 C1670 G1671 U1672 U1673 G1674 A1675 U1676 U1677 A1678 A1679
G1680 U1681 C1682 C1683 C1684 U1690 U1691 U1692 G1693 U1694 C1698 A1699 C1700 C1701 G1702 C1703 C1704 C1705 G1706 C1710 U1711 A1712 C1713 A1719 U1720 U1721 G1722 G1723 A1724 U1725 G1726 G1727 U1728 U1729 U1733 G1734 A1735 G1736 G1737 C1738 G1743 G1744 A1745 U1746 C1747 G1748 G1749 C1750 C C C G C C
G G G G U C G G C C C A C G G C C C C U G G C G G A G C G C A1784 C1785 U1786 G1787 A1788 A1793 C1794 U1797 C1798 G1799 A1800 A1801 C1802 U1803 U1804 G1805 A1806 C1807 U1808 A1809 U1810 A1819 A1824 A1825 G1826 U1827 C1828 G1829 U1830
A1831 A1832 A1835 U1838 U1839 U1840 C1841 N1842 G1843 U1844 A1845 G1846 G1849 A1850 A1851 C1852 G1858 A1859 A1860 G1861 G1862 A1863 U1864 C1865 A1866 U1867 U1868 A1869

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	236566	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	39.3	Depositor
Minimum defocus (nm)	900	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.373	Depositor
Minimum map value	-0.177	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.012	Depositor
Recommended contour level	0.035	Depositor
Map size (Å)	432.00003, 432.00003, 432.00003	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.08, 1.08, 1.08	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: K, 7MG, IAS, A2M, HY3, PSU, A1BNL, UR3, OMC, V5N, 4AC, B3P, HIC, 1MA, UY1, 6MZ, B8N, M3L, ACE, 5MC, MA6, ZN, MLZ, 2MG, OMG, JMH, MG, OMU

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	L1	0.28	0/3450	0.33	0/5372
2	L5	0.28	4/81133 (0.0%)	0.36	0/126550
3	L8	0.20	0/2432	0.35	0/3256
4	L9	0.26	0/2858	0.31	0/4455
5	LB	0.21	0/3289	0.38	0/4399
6	LC	0.23	0/2962	0.39	0/3977
7	LD	0.23	0/1924	0.40	0/2578
8	LE	0.21	0/1132	0.36	0/1504
9	LF	0.23	0/1905	0.39	0/2540
10	LG	0.21	0/1781	0.37	0/2397
11	LH	0.20	0/1537	0.38	0/2066
12	LI	0.23	0/1071	0.41	0/1429
13	LJ	0.19	0/1363	0.40	0/1824
14	LK	0.19	0/1814	0.37	0/2435
15	LM	0.22	0/1133	0.37	0/1516
16	LN	0.24	0/1745	0.41	0/2338
17	LO	0.23	0/1022	0.37	0/1351
18	LP	0.24	0/720	0.44	0/952
19	LQ	0.21	0/1695	0.37	0/2270
20	LR	0.20	0/1574	0.35	0/2080
21	LS	0.22	0/1500	0.38	0/2013
22	LT	0.21	0/1312	0.36	0/1753
23	LU	0.23	0/453	0.41	0/599
24	LV	0.22	0/986	0.37	0/1324
25	LW	0.19	0/684	0.35	0/910
26	LY	0.24	0/1656	0.40	0/2216
27	LZ	0.22	0/1129	0.37	0/1507
28	La	0.23	0/1178	0.37	0/1573
29	Lb	0.21	0/850	0.39	0/1121
30	Lc	0.20	0/796	0.38	0/1068
31	Ld	0.20	0/877	0.39	0/1181

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
32	Le	0.21	0/866	0.35	0/1141
33	Lf	0.22	0/894	0.35	0/1198
34	Lg	0.22	0/892	0.35	0/1189
35	Lh	0.22	0/1317	0.41	0/1769
36	Li	0.19	0/843	0.33	0/1115
37	Lj	0.24	0/1536	0.40	0/2052
38	Lk	0.18	0/565	0.34	0/750
39	Ll	0.26	0/1003	0.39	0/1346
40	Lm	0.17	0/830	0.36	0/1114
41	Ln	0.21	0/966	0.36	0/1301
42	Lo	0.20	0/433	0.35	0/575
43	Lp	0.23	0/691	0.41	0/919
44	Lz	0.22	0/1654	0.36	0/2209
45	S1	0.17	0/1816	0.32	0/2427
46	SA	0.18	0/1766	0.33	0/2399
47	SC	0.18	0/1737	0.39	0/2347
48	SD	0.16	0/1483	0.33	0/1993
49	SE	0.16	0/2117	0.35	0/2849
50	SG	0.17	0/1876	0.37	0/2499
51	SH	0.16	0/1532	0.35	0/2053
52	SI	0.18	0/1724	0.39	0/2298
53	SJ	0.16	0/1520	0.30	0/2030
54	SK	0.16	0/1773	0.36	0/2387
55	SL	0.18	0/1201	0.34	0/1604
56	SM	0.14	0/840	0.35	0/1133
57	SN	0.19	0/1231	0.32	0/1656
58	SO	0.17	0/959	0.33	0/1284
59	SP	0.16	0/1041	0.36	0/1392
60	SQ	0.15	0/1125	0.32	0/1506
61	SS	0.14	0/1078	0.32	0/1447
62	ST	0.16	0/1226	0.34	0/1643
63	SU	0.16	0/1113	0.34	0/1493
64	SV	0.15	0/643	0.35	0/860
65	SW	0.20	0/1050	0.36	0/1406
66	SX	0.18	0/1096	0.33	0/1461
67	SY	0.16	0/1019	0.35	0/1354
68	SZ	0.15	0/805	0.36	0/1081
69	Sa	0.19	0/805	0.33	0/1079
70	Sb	0.16	0/664	0.38	0/891
71	Sc	0.14	0/678	0.31	0/906
72	Sd	0.15	0/490	0.31	0/656
73	Se	0.15	0/442	0.33	0/582
74	Sf	0.15	0/354	0.35	0/467

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
75	Sg	0.16	0/2420	0.40	0/3294
76	So	0.16	0/240	0.29	0/305
77	Sy	0.13	0/949	0.33	0/1273
78	Sz	0.16	0/144	0.35	0/188
79	S2	0.23	4/37101 (0.0%)	0.32	0/57824
All	All	0.24	8/216509 (0.0%)	0.35	0/317299

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
40	Lm	0	1
60	SQ	0	1
All	All	0	2

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	1773	OMU	O3'-P	5.30	1.61	1.56
79	S2	1326	OMU	O3'-P	5.30	1.61	1.56
79	S2	1804	OMU	O3'-P	5.24	1.61	1.56
79	S2	799	OMU	O3'-P	5.15	1.61	1.56
2	L5	3830	A2M	O3'-P	5.12	1.61	1.56
2	L5	2415	OMU	O3'-P	5.08	1.61	1.56
79	S2	1383	A2M	O3'-P	5.07	1.61	1.56
2	L5	3760	A2M	O3'-P	5.01	1.61	1.56

There are no bond angle outliers.

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
40	Lm	101	ARG	Sidechain
60	SQ	37	ARG	Sidechain

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	L1	3153	0	1603	61	0
2	L5	75275	0	38121	1522	0
3	L8	2386	0	2421	74	0
4	L9	2558	0	1295	31	0
5	LB	3234	0	3372	59	0
6	LC	2908	0	3082	65	0
7	LD	1899	0	1985	22	0
8	LE	1115	0	1205	33	0
9	LF	1870	0	1996	31	0
10	LG	1752	0	1877	44	0
11	LH	1518	0	1601	46	0
12	LI	1053	0	1147	21	0
13	LJ	1340	0	1377	51	0
14	LK	1780	0	1938	73	0
15	LM	1111	0	1174	16	0
16	LN	1700	0	1749	30	0
17	LO	1014	0	1148	29	0
18	LP	705	0	736	9	0
19	LQ	1664	0	1773	37	0
20	LR	1558	0	1718	28	0
21	LS	1460	0	1502	27	0
22	LT	1284	0	1352	21	0
23	LU	443	0	483	9	0
24	LV	972	0	1034	14	0
25	LW	671	0	684	27	0
26	LY	1624	0	1771	30	0
27	LZ	1106	0	1182	31	0
28	La	1162	0	1206	20	0
29	Lb	848	0	918	44	0
30	Lc	785	0	825	12	0
31	Ld	862	0	912	16	0
32	Le	863	0	929	21	0
33	Lf	875	0	912	13	0
34	Lg	882	0	972	18	0
35	Lh	1289	0	1324	32	0
36	Li	832	0	917	23	0
37	Lj	1512	0	1628	22	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	Lk	559	0	624	26	0
39	Ll	990	0	1054	15	0
40	Lm	816	0	842	45	0
41	Ln	949	0	1016	20	0
42	Lo	436	0	477	16	0
43	Lp	681	0	731	9	0
44	Lz	1616	0	1667	36	0
45	S1	1790	0	1873	75	0
46	SA	1731	0	1734	68	0
47	SC	1700	0	1784	55	0
48	SD	1463	0	1517	84	0
49	SE	2075	0	2177	94	0
50	SG	1853	0	2005	158	0
51	SH	1509	0	1604	99	0
52	SI	1695	0	1785	66	0
53	SJ	1495	0	1615	56	0
54	SK	1745	0	1839	120	0
55	SL	1180	0	1253	37	0
56	SM	816	0	841	73	0
57	SN	1207	0	1294	32	0
58	SO	956	0	981	37	0
59	SP	1021	0	1065	63	0
60	SQ	1108	0	1174	90	0
61	SS	1064	0	1118	58	0
62	ST	1208	0	1270	103	0
63	SU	1094	0	1120	76	0
64	SV	636	0	637	33	0
65	SW	1033	0	1080	32	0
66	SX	1088	0	1149	43	0
67	SY	1002	0	1075	49	0
68	SZ	795	0	862	66	0
69	Sa	792	0	841	21	0
70	Sb	650	0	672	42	0
71	Sc	670	0	745	46	0
72	Sd	488	0	514	26	0
73	Se	437	0	484	19	0
74	Sf	349	0	347	23	0
75	Sg	2364	0	2318	234	0
76	So	239	0	289	12	0
77	Sy	939	0	974	120	0
78	Sz	142	0	166	20	0
79	S2	34964	0	17693	1137	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
80	L1	4	0	0	0	0
80	L5	206	0	0	0	0
80	L9	3	0	0	0	0
80	LD	1	0	0	0	0
80	LI	2	0	0	0	0
80	LN	1	0	0	0	0
80	LR	1	0	0	0	0
80	LV	1	0	0	0	0
80	La	1	0	0	0	0
80	Lh	1	0	0	0	0
80	S2	98	0	0	0	0
80	ST	1	0	0	0	0
80	SX	1	0	0	0	0
81	L1	3	0	0	0	0
81	L5	42	0	0	0	0
81	L9	1	0	0	0	0
81	LC	1	0	0	0	0
81	LD	2	0	0	0	0
81	Lg	1	0	0	0	0
81	Lz	1	0	0	0	0
81	S2	38	0	0	0	0
81	SE	1	0	0	0	0
81	ST	1	0	0	0	0
81	SU	1	0	0	0	0
81	Sa	1	0	0	0	0
81	Sf	1	0	0	0	0
82	L5	19	0	26	3	0
83	LP	1	0	0	0	0
83	Le	1	0	0	0	0
83	Lg	1	0	0	0	0
83	Lo	1	0	0	0	0
83	Lp	1	0	0	0	0
83	S2	1	0	0	0	0
83	Sa	1	0	0	0	0
83	Sf	1	0	0	0	0
84	SX	31	19	0	1	0
85	L1	117	0	0	1	0
85	L5	3736	0	0	69	0
85	L8	28	0	0	2	0
85	L9	73	0	0	0	0
85	LB	81	0	0	2	0
85	LC	85	0	0	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
85	LD	73	0	0	0	0
85	LE	14	0	0	0	0
85	LF	42	0	0	1	0
85	LG	12	0	0	0	0
85	LH	17	0	0	0	0
85	LI	51	0	0	3	0
85	LJ	3	0	0	0	0
85	LK	14	0	0	0	0
85	LM	5	0	0	0	0
85	LN	75	0	0	5	0
85	LO	12	0	0	0	0
85	LP	36	0	0	2	0
85	LQ	37	0	0	0	0
85	LR	21	0	0	2	0
85	LS	30	0	0	1	0
85	LT	29	0	0	1	0
85	LU	10	0	0	0	0
85	LV	21	0	0	0	0
85	LW	8	0	0	0	0
85	LY	35	0	0	1	0
85	LZ	5	0	0	1	0
85	La	48	0	0	0	0
85	Lb	18	0	0	0	0
85	Lc	8	0	0	0	0
85	Ld	13	0	0	1	0
85	Le	22	0	0	2	0
85	Lf	29	0	0	1	0
85	Lg	30	0	0	0	0
85	Lh	43	0	0	0	0
85	Li	4	0	0	2	0
85	Lj	56	0	0	1	0
85	Lk	1	0	0	0	0
85	Ll	27	0	0	0	0
85	Lm	1	0	0	0	0
85	Ln	15	0	0	1	0
85	Lo	2	0	0	0	0
85	Lp	23	0	0	0	0
85	Lz	10	0	0	0	0
85	S1	19	0	0	1	0
85	S2	1288	0	0	55	0
85	SA	6	0	0	0	0
85	SC	20	0	0	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
85	SD	12	0	0	1	0
85	SE	27	0	0	1	0
85	SG	7	0	0	1	0
85	SH	4	0	0	0	0
85	SI	24	0	0	2	0
85	SJ	25	0	0	2	0
85	SK	2	0	0	0	0
85	SL	38	0	0	1	0
85	SN	22	0	0	1	0
85	SO	28	0	0	1	0
85	SP	3	0	0	1	0
85	SQ	14	0	0	0	0
85	SS	4	0	0	1	0
85	ST	10	0	0	1	0
85	SU	10	0	0	3	0
85	SV	6	0	0	3	0
85	SW	26	0	0	1	0
85	SX	38	0	0	5	0
85	SY	3	0	0	1	0
85	SZ	5	0	0	0	0
85	Sa	29	0	0	2	0
85	Sb	9	0	0	0	0
85	Sc	3	0	0	1	0
85	Sd	1	0	0	1	0
85	Se	7	0	0	1	0
85	Sf	4	0	0	0	0
85	So	3	0	0	2	0
All	All	213598	19	154201	5545	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 15.

All (5545) 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)
50:SG:57:ASP:OD2	50:SG:72:ARG:HD3	1.25	1.35
2:L5:2906:G:H2'	2:L5:2908:U:H1'	1.22	1.17
24:LV:13:LYS:HD3	24:LV:128:LEU:HD11	1.26	1.15
54:SK:106:ARG:HG3	54:SK:175:VAL:HG22	1.33	1.10
50:SG:116:LYS:HE3	50:SG:125:THR:HG21	1.31	1.10
36:Li:23:LYS:HD3	36:Li:24:PRO:HD2	1.28	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SG:79:LYS:HG2	50:SG:86:PRO:HG3	1.30	1.07
64:SV:43:THR:HG22	64:SV:45:ARG:HG3	1.36	1.07
64:SV:43:THR:HG21	64:SV:45:ARG:HD2	1.35	1.04
77:Sy:47:ALA:HA	77:Sy:112:LYS:HA	1.39	1.04
68:SZ:50:VAL:HG22	68:SZ:91:LEU:HG	1.32	1.04
10:LG:111:LYS:HE2	10:LG:115:LEU:HD11	1.36	1.03
19:LQ:103:ARG:HD2	19:LQ:105:LYS:HE3	1.38	1.03
68:SZ:48:LEU:HD11	68:SZ:97:ILE:HG21	1.40	1.03
78:Sz:102:VAL:HG13	78:Sz:104:LYS:HG2	1.38	1.02
75:Sg:5:MET:HE2	75:Sg:310:TRP:HB2	1.36	1.02
25:LW:82:ILE:HG13	50:SG:131:ARG:HD2	1.41	1.02
60:SQ:62:ARG:NH1	60:SQ:108:ILE:HG12	1.75	1.01
2:L5:4306:OMU:HM22	2:L5:4307:A:H5'	1.43	1.00
77:Sy:51:VAL:HG11	77:Sy:85:LEU:HD11	1.43	1.00
79:S2:1804:OMU:HM22	79:S2:1805:G:H5'	1.41	1.00
60:SQ:19:ALA:HB2	60:SQ:75:GLY:HA3	1.40	1.00
70:Sb:38:PRO:HD3	70:Sb:77:CYS:HA	1.41	1.00
32:Le:74:GLU:HB3	32:Le:77:CYS:HB3	1.41	0.99
68:SZ:25:THR:HG22	68:SZ:86:LYS:HG3	1.42	0.99
51:SH:69:LEU:HD12	51:SH:96:ALA:HB2	1.43	0.99
75:Sg:22:ALA:HB1	75:Sg:71:ILE:HG13	1.45	0.98
50:SG:116:LYS:CE	50:SG:125:THR:HG21	1.93	0.98
50:SG:57:ASP:OD2	50:SG:72:ARG:CD	2.11	0.98
2:L5:4730:C:H5	2:L5:4965:U:HO2'	1.09	0.97
71:Sc:68:ILE:HB	71:Sc:109:TYR:HB2	1.47	0.97
54:SK:33:GLY:HA3	54:SK:53:THR:HG22	1.45	0.97
79:S2:167:G:H2'	79:S2:168:C:H5"	1.47	0.97
14:LK:238:GLU:HG3	14:LK:239:LYS:H	1.28	0.96
14:LK:165:LEU:HD11	14:LK:176:THR:HG22	1.47	0.96
75:Sg:2:THR:HG23	75:Sg:3:GLU:HG3	1.45	0.96
54:SK:142:LEU:HD13	54:SK:150:MET:HE3	1.44	0.95
2:L5:4113:U:H2'	2:L5:4114:C:C6	2.02	0.95
79:S2:1513:C:H2'	79:S2:1514:G:H8	1.31	0.95
2:L5:964:A:H2'	2:L5:965:G:H4'	1.49	0.94
2:L5:2557:G:H1	2:L5:2570:U:H3	1.06	0.94
31:Ld:36:VAL:HG23	31:Ld:41:ARG:HG2	1.48	0.94
58:SO:149:ARG:HG2	58:SO:151:LEU:HD11	1.48	0.94
75:Sg:87:LEU:HD13	75:Sg:132:TRP:HZ3	1.33	0.94
79:S2:1288:OMU:HM22	79:S2:1289:U:H5'	1.49	0.94
50:SG:170:ARG:HB2	79:S2:74:G:H22	1.31	0.93
48:SD:125:SER:HB2	48:SD:136:ARG:HH21	1.31	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SG:116:LYS:HE3	50:SG:125:THR:CG2	1.98	0.93
53:SJ:111:GLN:HE21	53:SJ:123:ILE:HG13	1.34	0.93
68:SZ:20:ILE:HD13	68:SZ:98:VAL:HG21	1.51	0.93
38:Lk:55:LYS:HA	38:Lk:58:GLN:HE21	1.30	0.93
56:SM:47:LYS:HE2	79:S2:1274:G:H5"	1.48	0.93
2:L5:492:U:H1'	6:LC:268:ARG:HH21	1.33	0.93
77:Sy:45:ARG:CZ	77:Sy:72:HIS:HD2	1.82	0.92
75:Sg:172:LYS:HE2	75:Sg:193:GLY:HA2	1.51	0.92
14:LK:93:THR:HG22	14:LK:106:VAL:HG22	1.51	0.92
48:SD:144:LEU:HD23	72:Sd:49:PRO:HG2	1.49	0.92
52:SI:151:GLU:HA	52:SI:154:LYS:HE3	1.52	0.92
11:LH:52:LYS:HD2	11:LH:54:ARG:HH11	1.34	0.91
2:L5:3938:G:OP2	16:LN:24:ARG:HD2	1.71	0.91
56:SM:29:MET:HE1	56:SM:33:PRO:HD3	1.48	0.91
2:L5:1316:OMG:HM22	2:L5:1317:U:H5'	1.53	0.91
2:L5:1696:C:H2'	2:L5:1697:G:C8	2.05	0.91
2:L5:934:C:H41	6:LC:350:ARG:HH21	1.15	0.90
79:S2:1391:OMC:HM22	79:S2:1392:U:H5'	1.51	0.90
2:L5:2469:C:H5	2:L5:2471:G:H1	1.19	0.90
79:S2:903:A:H2'	79:S2:904:A:H5"	1.50	0.90
50:SG:142:ARG:HA	50:SG:147:LEU:HD13	1.53	0.90
79:S2:834:C:H4'	79:S2:835:C:H5	1.36	0.90
75:Sg:159:ASN:HB3	75:Sg:162:ASN:HB2	1.53	0.90
79:S2:554:A:H4'	79:S2:555:A:H5"	1.51	0.90
79:S2:690:G:N2	79:S2:690:G:OP2	2.04	0.90
2:L5:137:G:O2'	2:L5:138:G:O4'	1.89	0.89
70:Sb:56:CYS:HB3	70:Sb:63:LEU:HD11	1.53	0.89
52:SI:34:ALA:HB2	52:SI:56:ARG:CD	2.02	0.89
2:L5:2494:U:H2'	2:L5:2495:U:C6	2.07	0.89
2:L5:2517:A:H5'	34:Lg:62:LYS:HD2	1.55	0.89
2:L5:4569:U:H1'	35:Lh:69:ARG:NH1	1.87	0.88
64:SV:43:THR:CG2	64:SV:45:ARG:CD	2.52	0.88
64:SV:43:THR:HG21	64:SV:45:ARG:CD	2.02	0.88
60:SQ:21:ALA:HB2	60:SQ:72:VAL:HG23	1.56	0.88
59:SP:89:MET:HE2	59:SP:107:ILE:HD11	1.56	0.88
5:LB:216:MET:HG3	5:LB:281:ASN:HA	1.55	0.88
62:ST:15:VAL:HB	62:ST:20:ILE:HD13	1.56	0.88
62:ST:36:VAL:HG21	62:ST:71:MET:HE3	1.55	0.88
64:SV:43:THR:HG22	64:SV:45:ARG:CG	2.04	0.88
2:L5:1247:U:H2'	2:L5:1248:C:C6	2.09	0.87
48:SD:19:LEU:HD21	48:SD:69:VAL:HG21	1.53	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SP:49:LEU:HD22	59:SP:53:GLN:HG2	1.55	0.87
75:Sg:4:GLN:O	75:Sg:313:THR:HB	1.74	0.87
75:Sg:87:LEU:HD13	75:Sg:132:TRP:CZ3	2.09	0.87
2:L5:4572:U:H2'	2:L5:4573:G:H5"	1.54	0.87
48:SD:102:LEU:HD23	71:Sc:67:LEU:HD12	1.55	0.87
52:SI:34:ALA:HB2	52:SI:56:ARG:HD2	1.54	0.87
75:Sg:30:MET:HE1	75:Sg:42:MET:HG3	1.57	0.87
79:S2:328:U:O2'	79:S2:329:G:O5'	1.91	0.87
54:SK:41:VAL:HA	54:SK:46:THR:HG23	1.55	0.87
75:Sg:42:MET:HG2	75:Sg:56:GLN:HE21	1.40	0.87
79:S2:1403:C:OP2	79:S2:1405:A:N6	2.06	0.87
50:SG:50:VAL:HG12	50:SG:113:ILE:HD13	1.58	0.86
2:L5:5053:U:H3'	2:L5:5054:C:C6	2.10	0.86
39:Ll:48:THR:HG22	39:Ll:65:LYS:HB2	1.58	0.86
71:Sc:43:LYS:HZ2	79:S2:1600:G:H5'	1.40	0.86
75:Sg:197:THR:HB	75:Sg:238:ALA:HA	1.56	0.85
2:L5:4115:G:OP2	2:L5:4115:G:N2	2.10	0.85
77:Sy:45:ARG:CZ	77:Sy:72:HIS:CD2	2.59	0.85
50:SG:133:LEU:O	79:S2:168:C:O2'	1.94	0.85
76:So:10:MET:HE2	76:So:14:LYS:HG3	1.56	0.85
2:L5:965:G:O2'	2:L5:2092:G:N2	2.10	0.85
2:L5:1198:G:H2'	2:L5:1199:G:H8	1.41	0.85
71:Sc:48:VAL:HG12	71:Sc:80:ARG:HD2	1.59	0.85
72:Sd:18:LEU:HD12	72:Sd:29:GLN:HG2	1.56	0.85
14:LK:50:LEU:HD23	14:LK:56:ARG:HA	1.59	0.85
50:SG:7:PHE:HE1	50:SG:9:ALA:HB3	1.42	0.85
2:L5:1418:C:C2'	2:L5:1419:G:H5'	2.05	0.84
2:L5:1761:G:O6	2:L5:1771:U:O4	1.95	0.84
2:L5:4070:U:H2'	2:L5:4071:U:C6	2.12	0.84
30:Lc:20:LEU:HD23	30:Lc:102:SER:HA	1.59	0.84
2:L5:2705:G:H2'	2:L5:2706:G:H5'	1.56	0.84
68:SZ:40:ILE:HD11	68:SZ:89:ILE:HD11	1.59	0.84
72:Sd:29:GLN:HE21	72:Sd:43:ILE:HG21	1.42	0.84
46:SA:206:ASP:O	46:SA:210:ILE:HG13	1.78	0.84
75:Sg:284:PRO:HB3	75:Sg:304:ASP:HB3	1.57	0.84
8:LE:72:GLN:NE2	8:LE:74:TYR:HD1	1.74	0.84
79:S2:882:U:H2'	79:S2:883:U:C6	2.13	0.83
79:S2:899:U:H3'	79:S2:900:C:H5"	1.59	0.83
50:SG:145:PHE:HB2	50:SG:147:LEU:CD1	2.08	0.83
2:L5:3823:G:OP2	2:L5:3823:G:N2	2.10	0.83
2:L5:4925:U:H4'	2:L5:4926:C:H5'	1.58	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:1435:G:C2'	2:L5:1436:C:H5'	2.08	0.83
2:L5:1920:C:H3'	2:L5:1921:C:H5"	1.59	0.83
79:S2:1228:A:H2'	79:S2:1229:G:C8	2.13	0.83
56:SM:57:TYR:HB3	56:SM:75:GLY:HA2	1.60	0.83
2:L5:1480:C:O2'	2:L5:1482:G:OP2	1.95	0.83
49:SE:105:THR:HG21	49:SE:245:ARG:HA	1.61	0.83
2:L5:1482:G:OP2	2:L5:1482:G:N2	2.11	0.83
2:L5:4633:G:O2'	2:L5:4635:A:OP2	1.95	0.83
75:Sg:5:MET:HE2	75:Sg:310:TRP:CB	2.09	0.83
79:S2:165:G:OP2	79:S2:165:G:N2	2.11	0.83
79:S2:1703:OMC:HM22	79:S2:1704:C:H5'	1.61	0.83
26:LY:32:LYS:HE2	26:LY:101:ARG:HG2	1.60	0.83
27:LZ:53:VAL:HA	27:LZ:57:MET:HE2	1.60	0.83
53:SJ:176:LYS:HE2	53:SJ:180:LYS:HE2	1.61	0.83
79:S2:893:U:H5'	79:S2:894:G:OP2	1.78	0.83
2:L5:4934:A:H2'	2:L5:4935:C:C6	2.14	0.83
79:S2:834:C:H4'	79:S2:835:C:C5	2.12	0.83
79:S2:1538:C:H2'	79:S2:1539:U:C6	2.14	0.82
2:L5:965:G:H2'	2:L5:2256:C:N3	1.94	0.82
79:S2:1395:C:O2'	79:S2:1396:A:H5'	1.79	0.82
75:Sg:42:MET:HB3	75:Sg:57:ARG:HB3	1.62	0.82
75:Sg:132:TRP:CD1	75:Sg:138:CYS:HA	2.14	0.82
2:L5:4522:G:O2'	2:L5:4525:C:OP2	1.96	0.82
53:SJ:94:LEU:HD12	53:SJ:97:ILE:HD12	1.59	0.82
67:SY:86:GLU:OE1	67:SY:90:ARG:HD2	1.78	0.82
79:S2:553:U:H5"	79:S2:555:A:H5'	1.61	0.82
38:Lk:35:LYS:HB3	38:Lk:42:LEU:HD11	1.62	0.82
2:L5:660:A:H2'	2:L5:661:C:C6	2.15	0.82
2:L5:682:G:C2'	2:L5:683:C:H5'	2.09	0.82
13:LJ:109:ILE:HD11	13:LJ:128:LEU:HD21	1.62	0.82
54:SK:179:GLN:OE1	54:SK:179:GLN:N	2.13	0.82
72:Sd:42:ILE:HD11	72:Sd:44:ARG:HD3	1.61	0.82
2:L5:1271:G:OP2	2:L5:1271:G:N2	2.12	0.81
2:L5:1716:G:H2'	2:L5:1717:C:C6	2.15	0.81
2:L5:4934:A:H2'	2:L5:4935:C:H6	1.42	0.81
54:SK:193:ASP:OD2	54:SK:198:ILE:HG12	1.78	0.81
2:L5:759:G:H3'	2:L5:904:C:H42	1.43	0.81
2:L5:2351:OMC:HM22	2:L5:2352:U:H5'	1.61	0.81
48:SD:68:ILE:HD11	48:SD:151:ILE:HD11	1.62	0.81
77:Sy:54:SER:HB2	77:Sy:78:LYS:HD3	1.62	0.81
79:S2:1164:G:O2'	79:S2:1165:G:H5'	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:254:G:H2'	2:L5:255:C:C6	2.15	0.81
59:SP:57:LEU:HD21	59:SP:86:LEU:HD12	1.61	0.81
2:L5:1440:U:O2'	2:L5:1441:C:O5'	1.97	0.81
79:S2:329:G:H2'	79:S2:330:G:C8	2.15	0.81
79:S2:1528:G:O2'	79:S2:1666:C:OP1	1.98	0.81
2:L5:4109:G:H2'	2:L5:4110:C:C6	2.16	0.81
5:LB:224:LYS:HG2	5:LB:340:THR:HG22	1.62	0.81
51:SH:10:LYS:HZ3	51:SH:47:ALA:HA	1.44	0.81
79:S2:158:A:O2'	79:S2:159:A2M:H5'	1.80	0.81
10:LG:108:GLN:O	10:LG:112:GLN:HG3	1.81	0.81
51:SH:110:THR:HB	51:SH:113:LYS:HB2	1.62	0.81
77:Sy:85:LEU:HA	77:Sy:88:TRP:CE3	2.16	0.81
2:L5:1339:U:H2'	2:L5:1340:OMC:C6	2.15	0.80
2:L5:2705:G:C2'	2:L5:2706:G:H5'	2.11	0.80
44:Lz:76:MET:HE1	44:Lz:148:VAL:HA	1.62	0.80
59:SP:18:ARG:HD3	62:ST:90:VAL:HA	1.63	0.80
68:SZ:31:SER:O	68:SZ:35:VAL:HG23	1.81	0.80
68:SZ:80:PHE:HB3	74:Sf:52:PHE:HB3	1.63	0.80
71:Sc:72:VAL:O	71:Sc:76:ARG:HG2	1.81	0.80
25:LW:83:THR:HG23	50:SG:131:ARG:O	1.81	0.80
48:SD:25:THR:HG22	48:SD:109:LEU:CD1	2.11	0.80
50:SG:65:GLN:HE21	79:S2:1746:U:H4'	1.45	0.80
54:SK:16:ILE:HD11	74:Sf:36:LEU:HD23	1.64	0.80
79:S2:1529:C:O2	79:S2:1665:G:N2	2.14	0.80
2:L5:741:C:H2'	2:L5:742:G:O4'	1.81	0.80
2:L5:125:C:H2'	2:L5:126:C:C6	2.17	0.80
2:L5:257:C:O2'	2:L5:258:G:OP1	1.99	0.80
2:L5:1434:G:H3'	2:L5:1435:G:H5"	1.64	0.80
75:Sg:32:LEU:HD11	75:Sg:92:LEU:HD21	1.63	0.80
2:L5:1760:OMG:H2'	2:L5:1761:G:O4'	1.81	0.80
41:Ln:63:LYS:HD3	41:Ln:67:ARG:HH21	1.47	0.80
2:L5:1241:C:H2'	2:L5:1242:G:H8	1.47	0.80
19:LQ:182:LEU:HD23	36:Li:7:MET:HE3	1.61	0.80
52:SI:129:LEU:HD12	52:SI:133:GLU:OE1	1.80	0.80
77:Sy:36:ARG:NH1	78:Sz:103:LEU:HB2	1.96	0.80
79:S2:1532:C:O2'	79:S2:1601:A:N1	2.14	0.80
2:L5:3938:G:H5"	16:LN:24:ARG:HH12	1.45	0.80
79:S2:1461:G:H3'	79:S2:1463:U:H3	1.46	0.80
2:L5:497:G:H2'	2:L5:498:C:H5"	1.64	0.80
2:L5:1077:C:H2'	2:L5:1078:A:H5"	1.64	0.80
54:SK:48:ILE:HB	54:SK:86:LEU:CD2	2.12	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:711:A:H2'	2:L5:712:C:C6	2.16	0.80
2:L5:1365:C:H41	2:L5:1370:G:H22	1.30	0.80
54:SK:39:VAL:HG22	54:SK:48:ILE:HG12	1.64	0.80
79:S2:160:U:O4	79:S2:468:A2M:H4'	1.82	0.80
2:L5:964:A:C2'	2:L5:965:G:H4'	2.12	0.79
53:SJ:176:LYS:HG2	53:SJ:180:LYS:HE3	1.64	0.79
54:SK:137:VAL:HG22	54:SK:151:LYS:HB2	1.64	0.79
63:SU:104:LEU:HD13	63:SU:121:ARG:HH11	1.47	0.79
79:S2:328:U:O2'	79:S2:329:G:O4'	2.00	0.79
2:L5:1734:G:OP2	85:L5:5401:HOH:O	2.00	0.79
19:LQ:198:ARG:HA	19:LQ:201:GLU:HG2	1.64	0.79
68:SZ:29:VAL:O	68:SZ:33:GLU:HG2	1.81	0.79
2:L5:1202:C:H3'	2:L5:1203:G:C5'	2.12	0.79
53:SJ:176:LYS:O	53:SJ:180:LYS:HG3	1.83	0.79
50:SG:78:SER:HB3	50:SG:92:ARG:HG2	1.65	0.79
68:SZ:40:ILE:CD1	68:SZ:53:PRO:HD3	2.13	0.79
79:S2:554:A:O5'	79:S2:555:A:H4'	1.83	0.79
50:SG:116:LYS:CE	50:SG:125:THR:CG2	2.60	0.79
2:L5:1703:C:C2'	2:L5:1704:C:H5'	2.12	0.79
20:LR:166:THR:HG21	79:S2:873:G:H5'	1.65	0.79
47:SC:167:ARG:HB3	47:SC:177:PRO:HB2	1.64	0.79
79:S2:150:A:H5'	79:S2:151:C:OP2	1.83	0.79
2:L5:1415:G:O2'	2:L5:1416:G:H5'	1.82	0.79
2:L5:2763:U:H4'	2:L5:2764:A:O5'	1.81	0.79
45:S1:229:MET:HA	45:S1:229:MET:HE2	1.64	0.79
63:SU:7:LYS:NZ	79:S2:1427:C:H5"	1.98	0.79
79:S2:952:G:H2'	79:S2:953:C:C6	2.18	0.79
79:S2:1310:U:H2'	79:S2:1311:C:H6	1.48	0.79
79:S2:1595:U:H2'	79:S2:1596:U:C6	2.18	0.79
2:L5:760:G:H1	2:L5:903:C:HO2'	1.26	0.78
54:SK:64:ARG:HH11	56:SM:94:LEU:HD21	1.46	0.78
79:S2:556:U:H2'	79:S2:557:U:C6	2.18	0.78
79:S2:928:G:H1	79:S2:1013:U:H3	1.30	0.78
2:L5:4108:G:H2'	2:L5:4109:G:C8	2.19	0.78
2:L5:3938:G:H5"	16:LN:24:ARG:NH1	1.98	0.78
64:SV:43:THR:CG2	64:SV:45:ARG:HD2	2.12	0.78
2:L5:1097:C:H2'	2:L5:1098:G:C8	2.17	0.78
2:L5:1187:G:N2	2:L5:1187:G:OP2	2.14	0.78
46:SA:178:LEU:O	46:SA:182:VAL:HG23	1.84	0.78
71:Sc:73:VAL:HG21	71:Sc:88:LEU:HD21	1.64	0.78
79:S2:1520:G:O2'	79:S2:1521:C:OP1	2.02	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:4114:C:H2'	2:L5:4115:G:N3	1.97	0.78
2:L5:4694:G:H4'	11:LH:71:ARG:HH12	1.49	0.78
59:SP:90:VAL:HA	59:SP:107:ILE:HG22	1.66	0.78
77:Sy:15:ASN:O	77:Sy:19:GLN:HG2	1.83	0.78
77:Sy:61:TYR:OH	77:Sy:108:CYS:HB3	1.83	0.78
50:SG:125:THR:HG22	50:SG:125:THR:O	1.83	0.78
2:L5:135:G:C6	17:LO:97:LYS:HE2	2.19	0.78
2:L5:1817:U:C2'	2:L5:1818:G:H5'	2.13	0.78
14:LK:43:HIS:ND1	14:LK:46:ARG:HD2	1.99	0.78
50:SG:116:LYS:NZ	50:SG:125:THR:CG2	2.47	0.78
2:L5:1434:G:C3'	2:L5:1435:G:H5"	2.14	0.77
2:L5:4111:U:H2'	2:L5:4112:C:H6	1.50	0.77
52:SI:145:ILE:O	52:SI:148:LYS:HG2	1.84	0.77
2:L5:4860:G:OP1	26:LY:169:ARG:HD3	1.84	0.77
51:SH:110:THR:HG21	51:SH:113:LYS:HD3	1.64	0.77
2:L5:682:G:H2'	2:L5:683:C:H5'	1.67	0.77
2:L5:1618:G:N7	82:L5:5101:B3P:O2	2.17	0.77
2:L5:5021:C:H2'	2:L5:5022:U:O4'	1.84	0.77
45:S1:8:ARG:C	45:S1:9:LEU:HD12	2.10	0.77
50:SG:170:ARG:CB	79:S2:74:G:H22	1.96	0.77
51:SH:190:PRO:HG2	51:SH:193:GLN:HE21	1.49	0.77
60:SQ:72:VAL:HG11	60:SQ:84:ILE:HD11	1.66	0.77
79:S2:899:U:H3'	79:S2:900:C:C5'	2.14	0.77
77:Sy:17:ALA:O	77:Sy:21:VAL:HG23	1.85	0.77
49:SE:87:MET:HE1	49:SE:236:ILE:HD13	1.65	0.77
52:SI:123:ARG:HD2	52:SI:129:LEU:HD11	1.66	0.77
51:SH:100:ILE:HD11	51:SH:125:VAL:HG11	1.66	0.77
2:L5:483:G:H4'	2:L5:484:U:H5"	1.67	0.76
56:SM:38:LYS:HB2	56:SM:40:VAL:HG23	1.66	0.76
46:SA:56:GLU:HG3	64:SV:83:PHE:HD1	1.50	0.76
2:L5:1375:C:O2'	2:L5:1376:C:H5'	1.86	0.76
75:Sg:194:TYR:CE2	75:Sg:212:LYS:HD2	2.20	0.76
79:S2:1657:G:O2'	79:S2:1658:G:H5'	1.85	0.76
40:Lm:36:ALA:HB3	40:Lm:65:ARG:HH11	1.51	0.76
63:SU:134:ILE:O	63:SU:138:VAL:HG23	1.85	0.76
79:S2:1545:A:N3	79:S2:1671:G:O2'	2.16	0.76
2:L5:444:G:O2'	2:L5:445:U:H5'	1.86	0.76
58:SO:75:MET:HG3	58:SO:118:ALA:HB2	1.68	0.76
2:L5:1183:C:H5'	2:L5:1184:A:OP2	1.86	0.76
2:L5:1446:C:H2'	2:L5:1447:C:C6	2.21	0.76
2:L5:2638:G:O2'	2:L5:2639:U:H5'	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:ST:43:VAL:HG11	62:ST:83:PHE:CE2	2.21	0.76
75:Sg:176:VAL:HB	75:Sg:186:THR:HB	1.67	0.76
2:L5:4992:G:H2'	2:L5:4993:G:C8	2.20	0.76
51:SH:110:THR:CB	51:SH:113:LYS:HB2	2.15	0.76
62:ST:10:GLN:HB3	62:ST:13:LEU:HG	1.67	0.76
2:L5:759:G:H1	2:L5:904:C:H3'	1.51	0.76
11:LH:52:LYS:HD2	11:LH:54:ARG:NH1	2.01	0.76
58:SO:79:GLN:O	58:SO:83:GLN:HG3	1.85	0.76
60:SQ:19:ALA:HB2	60:SQ:75:GLY:CA	2.16	0.76
79:S2:912:C:H4'	79:S2:913:A:OP2	1.85	0.76
59:SP:89:MET:HE2	59:SP:107:ILE:CD1	2.16	0.76
75:Sg:270:LEU:HD23	75:Sg:310:TRP:CD2	2.21	0.76
2:L5:457:G:H2'	2:L5:458:C:C6	2.21	0.75
2:L5:1170:G:N2	2:L5:1171:G:O6	2.18	0.75
48:SD:49:LEU:HD12	60:SQ:50:LYS:HG2	1.68	0.75
54:SK:121:GLY:HA2	54:SK:124:ARG:NH1	2.00	0.75
75:Sg:78:ALA:O	75:Sg:89:LEU:HD12	1.86	0.75
75:Sg:153:CYS:HB3	75:Sg:198:VAL:HG12	1.67	0.75
79:S2:1278:A:H2'	79:S2:1279:C:H6	1.50	0.75
79:S2:1678:A2M:O2'	79:S2:1679:A:H5'	1.85	0.75
2:L5:453:G:H5"	2:L5:454:U:O5'	1.85	0.75
4:L9:28:C:H2'	4:L9:29:C:H5'	1.67	0.75
9:LF:29:LYS:HG2	9:LF:32:ARG:NH2	2.01	0.75
40:Lm:78:PHE:HE1	40:Lm:83:LEU:HG	1.51	0.75
79:S2:1553:C:H2'	79:S2:1554:C:O4'	1.87	0.75
2:L5:1241:C:C6	29:Lb:115:GLY:HA2	2.21	0.75
2:L5:1409:C:H3'	2:L5:1410:U:O4'	1.86	0.75
2:L5:3910:C:H2'	2:L5:3911:C:C6	2.21	0.75
2:L5:4146:G:H2'	2:L5:4147:G:C8	2.21	0.75
13:LJ:31:ASP:O	13:LJ:35:ARG:HG3	1.86	0.75
70:Sb:56:CYS:SG	70:Sb:59:CYS:HB2	2.26	0.75
2:L5:1241:C:H2'	2:L5:1242:G:C8	2.22	0.75
2:L5:5025:C:O2'	2:L5:5028:G:H1'	1.86	0.75
79:S2:553:U:H5"	79:S2:555:A:C5'	2.15	0.75
79:S2:1513:C:H2'	79:S2:1514:G:C8	2.20	0.75
2:L5:1503:A:H4'	2:L5:1504:G:H5'	1.68	0.75
5:LB:224:LYS:HG2	5:LB:340:THR:CG2	2.15	0.75
63:SU:97:LYS:NZ	79:S2:1570:G:N7	2.33	0.75
2:L5:4569:U:H1'	35:Lh:69:ARG:HH12	1.51	0.75
5:LB:56:ILE:HD12	5:LB:365:LEU:CD2	2.15	0.75
45:S1:127:VAL:HG13	45:S1:176:VAL:HG11	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SI:56:ARG:HH12	79:S2:379:C:H5"	1.52	0.75
77:Sy:51:VAL:HG12	77:Sy:85:LEU:HD21	1.68	0.75
79:S2:1473:G:N1	79:S2:1476:A:OP2	2.18	0.75
45:S1:97:LEU:CD1	45:S1:229:MET:HE1	2.17	0.75
70:Sb:36:LYS:HB2	70:Sb:43:ILE:HD13	1.68	0.75
77:Sy:26:LEU:HA	77:Sy:30:GLY:HA2	1.69	0.75
77:Sy:84:LYS:O	77:Sy:87:GLU:HG2	1.87	0.75
2:L5:4918:C:H2'	2:L5:4919:G:C8	2.22	0.75
2:L5:56:A:N7	85:L5:5406:HOH:O	2.20	0.74
2:L5:135:G:C5	17:LO:97:LYS:HE2	2.22	0.74
2:L5:1177:U:H3'	2:L5:1180:C:N4	2.02	0.74
2:L5:1434:G:H2'	2:L5:1435:G:O4'	1.86	0.74
2:L5:2910:G:N2	2:L5:3586:G:O2'	2.20	0.74
45:S1:227:LYS:O	45:S1:231:LEU:HD13	1.87	0.74
48:SD:19:LEU:CD2	48:SD:69:VAL:HG21	2.17	0.74
75:Sg:30:MET:HE2	75:Sg:92:LEU:HD13	1.69	0.74
75:Sg:154:VAL:O	75:Sg:155:ARG:NH1	2.20	0.74
79:S2:981:A:H2'	79:S2:982:G:C8	2.22	0.74
2:L5:2876:OMG:HM22	2:L5:2877:G:H5'	1.67	0.74
57:SN:24:THR:O	57:SN:27:LYS:NZ	2.20	0.74
77:Sy:47:ALA:HA	77:Sy:112:LYS:CA	2.17	0.74
25:LW:82:ILE:HG13	50:SG:131:ARG:CD	2.17	0.74
79:S2:554:A:H3'	79:S2:556:U:OP1	1.86	0.74
2:L5:965:G:N2	2:L5:2092:G:O2'	2.20	0.74
55:SL:16:ILE:HG23	55:SL:34:PRO:HG2	1.69	0.74
79:S2:367:U:H4'	79:S2:371:A:C8	2.22	0.74
2:L5:3717:A:H2'	2:L5:3718:A2M:C8	2.18	0.74
6:LC:5:ARG:HD2	6:LC:24:LEU:O	1.88	0.74
48:SD:25:THR:HG22	48:SD:109:LEU:HD13	1.69	0.74
79:S2:903:A:H2'	79:S2:904:A:C5'	2.16	0.74
79:S2:1239:U:H2'	79:S2:1241:A:OP2	1.87	0.74
2:L5:982:U:H2'	2:L5:983:C:O4'	1.88	0.74
2:L5:1066:G:C2'	2:L5:1067:G:H5'	2.16	0.74
2:L5:1761:G:N2	2:L5:1771:U:O2	2.12	0.74
40:Lm:107:LYS:O	40:Lm:108:GLU:HG3	1.88	0.74
51:SH:130:LEU:HD21	51:SH:156:VAL:HG21	1.67	0.74
74:Sf:30:LEU:HA	74:Sf:39:CYS:HA	1.69	0.74
79:S2:1560:U:H2'	79:S2:1561:A:H8	1.52	0.74
79:S2:1597:C:H4'	79:S2:1603:G:O6	1.87	0.74
2:L5:965:G:H2'	2:L5:2256:C:C2	2.22	0.74
2:L5:4537:C:H2'	2:L5:4538:G:C8	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L8:191:ASN:HB3	3:L8:194:VAL:HG22	1.69	0.74
8:LE:72:GLN:NE2	8:LE:74:TYR:CD1	2.55	0.74
44:Lz:38:ARG:NH2	44:Lz:45:GLU:OE1	2.20	0.74
50:SG:103:ASP:OD1	50:SG:104:ALA:N	2.18	0.74
5:LB:189:THR:O	5:LB:193:LYS:HG2	1.88	0.74
79:S2:1274:G:H5'	79:S2:1274:G:N3	2.03	0.74
79:S2:1310:U:H2'	79:S2:1311:C:C6	2.22	0.74
77:Sy:116:LYS:HZ2	77:Sy:119:GLN:H	1.36	0.74
79:S2:1328:OMG:HM22	79:S2:1329:U:H5'	1.68	0.74
2:L5:491:G:O2'	2:L5:493:G:O4'	2.06	0.73
2:L5:3602:C:O2'	2:L5:3603:G:H5'	1.87	0.73
2:L5:4724:A:O2'	5:LB:104:THR:HG22	1.88	0.73
35:Lh:4:TYR:OH	35:Lh:18:ARG:HG3	1.87	0.73
77:Sy:32:ALA:HB1	77:Sy:37:GLU:HB3	1.69	0.73
75:Sg:176:VAL:O	75:Sg:184:LEU:HD12	1.88	0.73
75:Sg:215:GLN:HB3	75:Sg:229:THR:CG2	2.18	0.73
2:L5:1479:G:O2'	2:L5:1480:C:H5'	1.88	0.73
3:L8:75:VAL:O	3:L8:112:ARG:NH1	2.22	0.73
3:L8:286:SER:HA	3:L8:289:ARG:NH1	2.03	0.73
60:SQ:97:GLN:NE2	60:SQ:105:LYS:HE3	2.02	0.73
67:SY:79:LEU:HG	67:SY:83:LYS:HZ2	1.54	0.73
79:S2:1228:A:H2'	79:S2:1229:G:H8	1.52	0.73
79:S2:1533:A:C8	79:S2:1604:G:H1'	2.23	0.73
79:S2:1680:G:N7	85:S2:2104:HOH:O	2.21	0.73
50:SG:220:ALA:O	50:SG:224:ARG:HG3	1.88	0.73
67:SY:7:ILE:CD1	67:SY:27:VAL:HG22	2.18	0.73
2:L5:1754:U:O2	2:L5:1755:C:N4	2.21	0.73
2:L5:4625:C:O2'	2:L5:4626:A:H5'	1.88	0.73
20:LR:105:LEU:HD23	20:LR:138:LEU:HD23	1.69	0.73
28:La:87:ARG:HG2	28:La:120:GLN:HE22	1.51	0.73
51:SH:58:LYS:HB2	51:SH:90:LYS:HG2	1.69	0.73
59:SP:47:ARG:NE	79:S2:1619:A:OP1	2.21	0.73
75:Sg:197:THR:HG21	75:Sg:239:LEU:HG	1.69	0.73
2:L5:3717:A:H2'	2:L5:3718:A2M:H8	1.70	0.73
25:LW:93:LYS:O	25:LW:96:GLN:HG2	1.88	0.73
48:SD:91:ARG:HD2	71:Sc:103:HIS:CE1	2.23	0.73
50:SG:79:LYS:HG2	50:SG:86:PRO:CG	2.14	0.73
54:SK:85:GLU:HG3	54:SK:87:TYR:HE1	1.53	0.73
79:S2:1393:G:H2'	79:S2:1394:G:C8	2.23	0.73
79:S2:1681:U:H2'	79:S2:1682:C:C6	2.23	0.73
69:Sa:46:GLU:O	69:Sa:50:VAL:HG23	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:12:U:H2'	79:S2:13:C:C6	2.24	0.73
79:S2:316:G:O2'	79:S2:317:C:H5'	1.87	0.73
79:S2:1305:C:H2'	79:S2:1306:U:C6	2.22	0.73
2:L5:905:C:H2'	2:L5:906:C:H6	1.53	0.73
38:Lk:23:VAL:CG1	38:Lk:66:VAL:HG12	2.18	0.73
62:ST:48:ALA:O	62:ST:66:ARG:NH2	2.22	0.73
75:Sg:197:THR:OG1	75:Sg:239:LEU:N	2.22	0.73
79:S2:329:G:H2'	79:S2:330:G:H8	1.53	0.73
2:L5:361:C:H4'	23:LU:34:LYS:HZ3	1.53	0.73
2:L5:2881:A:N1	85:L5:5413:HOH:O	2.22	0.73
20:LR:166:THR:HG21	79:S2:873:G:C5'	2.19	0.73
20:LR:183:GLU:O	20:LR:187:THR:HG23	1.88	0.73
53:SJ:110:LEU:HG	53:SJ:130:ILE:HD11	1.71	0.73
59:SP:57:LEU:CD2	59:SP:86:LEU:HD12	2.19	0.73
79:S2:1306:U:H2'	79:S2:1307:U:O4'	1.89	0.73
1:L1:149:G:H21	10:LG:64:GLN:HE22	1.36	0.73
2:L5:499:G:O2'	2:L5:504:G:O4'	2.07	0.73
2:L5:660:A:H2'	2:L5:661:C:H6	1.51	0.73
2:L5:2910:G:N1	2:L5:3586:G:H1'	2.03	0.73
2:L5:3736:A:H2'	2:L5:3737:A:C8	2.24	0.73
12:LI:84:GLU:OE1	39:Ll:20:ARG:NH2	2.21	0.73
79:S2:1850:MA6:H92	79:S2:1851:MA6:C9	2.19	0.73
54:SK:53:THR:HG23	54:SK:54:ARG:HG3	1.70	0.72
63:SU:51:ASN:HB3	63:SU:54:TYR:HD2	1.54	0.72
75:Sg:27:PHE:CD2	75:Sg:30:MET:HB3	2.24	0.72
79:S2:907:G:H2'	79:S2:908:A:H8	1.53	0.72
2:L5:1438:U:O2'	2:L5:1439:C:OP2	2.03	0.72
39:Ll:63:VAL:HG22	39:Ll:79:ARG:HG2	1.69	0.72
51:SH:52:GLU:O	51:SH:52:GLU:HG2	1.87	0.72
54:SK:33:GLY:HA3	54:SK:53:THR:CG2	2.18	0.72
2:L5:1195:G:H2'	2:L5:1196:G:H8	1.53	0.72
2:L5:1830:G:O2'	2:L5:1831:G:H5'	1.90	0.72
48:SD:74:ASN:HA	48:SD:77:MET:HE2	1.72	0.72
50:SG:164:LYS:H	79:S2:67:C:H41	1.34	0.72
2:L5:1821:G:H21	2:L5:1822:U:C5'	2.01	0.72
6:LC:363:ALA:O	6:LC:367:GLU:HG3	1.89	0.72
2:L5:917:A:H2'	2:L5:918:G:O4'	1.88	0.72
2:L5:1198:G:H2'	2:L5:1199:G:C8	2.24	0.72
19:LQ:143:GLU:HA	19:LQ:146:LEU:HG	1.71	0.72
56:SM:25:LYS:HB2	56:SM:67:PHE:CE1	2.24	0.72
75:Sg:22:ALA:CB	75:Sg:71:ILE:HG13	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:174:OMC:HM22	79:S2:175:A:H5'	1.71	0.72
79:S2:528:A:H2'	79:S2:529:A:H8	1.54	0.72
2:L5:1075:G:H2'	2:L5:1076:C:C6	2.25	0.72
79:S2:204:G:H2'	79:S2:205:G:O4'	1.89	0.72
79:S2:1113:A:H2'	79:S2:1114:U:C6	2.24	0.72
79:S2:1396:A:O2'	79:S2:1398:G:N7	2.21	0.72
2:L5:1066:G:O2'	2:L5:1067:G:H5'	1.88	0.72
12:LI:70:LEU:HD11	12:LI:76:LYS:HB3	1.72	0.72
62:ST:23:ARG:O	62:ST:55:ARG:HD2	1.88	0.72
75:Sg:197:THR:CB	75:Sg:238:ALA:HA	2.20	0.72
2:L5:134:G:H21	17:LO:85:PRO:HA	1.53	0.72
2:L5:1065:G:H2'	2:L5:1066:G:C8	2.25	0.72
2:L5:1247:U:H2'	2:L5:1248:C:H6	1.51	0.72
2:L5:1562:G:N7	85:L5:5419:HOH:O	2.23	0.72
2:L5:3587:C:H2'	2:L5:3588:C:C6	2.25	0.72
3:L8:99:TYR:CD2	3:L8:199:ILE:HD12	2.25	0.72
54:SK:227:LYS:HE2	75:Sg:187:ASN:ND2	2.05	0.72
58:SO:65:ASP:HA	58:SO:68:GLU:OE2	1.90	0.72
79:S2:1203:G:H2'	79:S2:1204:A:C8	2.23	0.72
2:L5:4419:U:H2'	2:L5:4420:PSU:H5"	1.71	0.72
2:L5:4734:A:H2'	2:L5:4735:G:C8	2.24	0.72
2:L5:4925:U:H4'	2:L5:4926:C:C5'	2.19	0.72
20:LR:172:ARG:HD2	79:S2:909:G:OP1	1.88	0.72
75:Sg:260:ASP:HB2	75:Sg:267:VAL:HG11	1.70	0.72
79:S2:1316:C:H2'	79:S2:1317:C:C6	2.25	0.72
2:L5:1701:A:H4'	6:LC:305:PRO:O	1.90	0.72
2:L5:2569:G:H2'	2:L5:2570:U:C6	2.25	0.72
60:SQ:12:VAL:HA	79:S2:1397:U:O4	1.90	0.72
61:SS:34:VAL:O	61:SS:38:ILE:HG12	1.89	0.72
61:SS:36:GLU:OE1	61:SS:47:ARG:NH1	2.22	0.72
79:S2:1597:C:H4'	79:S2:1603:G:C6	2.24	0.72
2:L5:1187:G:O2'	2:L5:1188:C:H5'	1.90	0.71
2:L5:2638:G:N2	2:L5:2718:U:H2'	2.04	0.71
55:SL:49:GLU:HG3	55:SL:116:CYS:HA	1.71	0.71
75:Sg:172:LYS:HG2	75:Sg:193:GLY:C	2.14	0.71
79:S2:71:G:C2	79:S2:72:C:H1'	2.25	0.71
2:L5:268:G:H2'	2:L5:269:G:H8	1.55	0.71
2:L5:1633:G:H5'	2:L5:1634:A:OP1	1.89	0.71
2:L5:1662:C:H2'	2:L5:1663:C:C6	2.24	0.71
66:SX:105:PHE:CD2	66:SX:112:VAL:HB	2.25	0.71
79:S2:1278:A:H2'	79:S2:1279:C:C6	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:2759:G:O2'	2:L5:2760:G:O4'	2.03	0.71
16:LN:45:PRO:O	16:LN:49:ARG:HG3	1.89	0.71
51:SH:10:LYS:HE3	51:SH:20:GLU:HB3	1.71	0.71
77:Sy:121:LYS:O	77:Sy:125:GLU:HG2	1.89	0.71
2:L5:1773:OMU:O2'	2:L5:1774:C:H5'	1.90	0.71
51:SH:53:VAL:HG23	51:SH:57:ARG:HG3	1.71	0.71
76:So:1:MET:HB2	79:S2:1706:G:H5'	1.73	0.71
77:Sy:35:ILE:HG23	77:Sy:61:TYR:CE1	2.25	0.71
79:S2:907:G:H2'	79:S2:908:A:C8	2.25	0.71
2:L5:93:G:H2'	2:L5:94:A:C8	2.26	0.71
2:L5:1077:C:H4'	2:L5:1215:C:N4	2.06	0.71
50:SG:209:TYR:CE2	50:SG:213:LEU:HD22	2.25	0.71
75:Sg:110:SER:OG	75:Sg:154:VAL:HG22	1.90	0.71
2:L5:1220:G:H2'	2:L5:1221:G:H5'	1.73	0.71
2:L5:3597:G:O2'	2:L5:3598:C:O5'	2.09	0.71
61:SS:18:GLU:OE2	61:SS:69:ILE:HA	1.89	0.71
67:SY:119:GLY:O	79:S2:84:A:H4'	1.90	0.71
79:S2:325:C:H2'	79:S2:326:C:H5'	1.72	0.71
2:L5:166:C:H2'	2:L5:167:C:O4'	1.91	0.71
2:L5:1097:C:H2'	2:L5:1098:G:H8	1.55	0.71
2:L5:4137:C:H2'	2:L5:4138:C:C6	2.24	0.71
50:SG:145:PHE:HB2	50:SG:147:LEU:HD11	1.70	0.71
79:S2:619:A:N7	85:S2:2107:HOH:O	2.23	0.71
2:L5:492:U:H1'	6:LC:268:ARG:NH2	2.06	0.71
50:SG:98:ARG:HH11	50:SG:98:ARG:HG3	1.55	0.71
72:Sd:17:VAL:HG13	72:Sd:30:VAL:HG12	1.73	0.71
75:Sg:144:ASP:O	75:Sg:145:GLU:HG2	1.90	0.71
79:S2:324:C:H4'	79:S2:325:C:OP2	1.90	0.71
79:S2:495:U:H2'	79:S2:496:C:O4'	1.89	0.71
79:S2:528:A:H2'	79:S2:529:A:C8	2.26	0.71
79:S2:1536:G:H2'	79:S2:1537:A:C8	2.25	0.71
2:L5:1179:U:H5"	3:L8:289:ARG:HD2	1.73	0.71
45:S1:34:LYS:NZ	45:S1:43:ASN:OD1	2.22	0.71
59:SP:137:HIS:O	59:SP:138:SER:OG	2.04	0.71
60:SQ:34:VAL:HG22	60:SQ:70:VAL:HB	1.72	0.71
75:Sg:17:TRP:CD2	75:Sg:303:THR:HG23	2.25	0.71
2:L5:1195:G:H2'	2:L5:1196:G:C8	2.26	0.71
46:SA:59:LEU:HD23	46:SA:181:GLU:HG2	1.71	0.71
67:SY:56:PHE:HB3	67:SY:90:ARG:HD3	1.73	0.71
79:S2:319:C:OP1	79:S2:319:C:H4'	1.87	0.71
79:S2:1314:U:O2	79:S2:1314:U:H2'	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1554:C:H3'	79:S2:1555:U:H6	1.53	0.71
2:L5:905:C:H2'	2:L5:906:C:C6	2.26	0.70
44:Lz:36:LEU:HD11	44:Lz:69:ARG:HH11	1.56	0.70
2:L5:465:G:O2'	2:L5:466:A:OP1	2.07	0.70
2:L5:1940:G:N2	2:L5:4434:C:OP1	2.24	0.70
2:L5:1961:G:N2	2:L5:2024:G:O2'	2.21	0.70
2:L5:4095:G:H1	2:L5:4113:U:H3	1.38	0.70
50:SG:7:PHE:CE2	50:SG:113:ILE:HG21	2.25	0.70
52:SI:130:THR:O	52:SI:134:GLU:HG2	1.90	0.70
56:SM:47:LYS:NZ	79:S2:1274:G:H4'	2.05	0.70
59:SP:89:MET:HB3	59:SP:107:ILE:HD12	1.71	0.70
75:Sg:42:MET:HE2	75:Sg:92:LEU:HD22	1.72	0.70
49:SE:62:LYS:O	49:SE:66:MET:HG2	1.90	0.70
61:SS:66:VAL:HG11	61:SS:69:ILE:HD12	1.74	0.70
62:ST:98:VAL:HG23	62:ST:103:LEU:CD2	2.21	0.70
79:S2:942:G:H2'	79:S2:943:U:C6	2.26	0.70
2:L5:689:U:H2'	2:L5:690:C:C6	2.26	0.70
20:LR:165:LYS:HD3	79:S2:907:G:OP1	1.89	0.70
25:LW:90:ILE:HG22	25:LW:91:MET:HE2	1.74	0.70
78:Sz:95:ARG:HA	79:S2:1305:C:OP1	1.90	0.70
2:L5:685:C:H5"	2:L5:686:A:OP1	1.90	0.70
2:L5:2424:OMG:HM22	2:L5:2426:U:C6	2.26	0.70
2:L5:2570:U:O2'	2:L5:2571:C:H5'	1.91	0.70
19:LQ:103:ARG:CD	19:LQ:105:LYS:HE3	2.18	0.70
47:SC:172:ASN:ND2	53:SJ:95:ASP:OD2	2.25	0.70
54:SK:104:SER:O	54:SK:108:LYS:HG3	1.91	0.70
75:Sg:154:VAL:HG12	75:Sg:167:SER:HA	1.73	0.70
2:L5:1962:A:OP2	2:L5:2024:G:N1	2.24	0.70
28:La:72:THR:HG22	28:La:110:LYS:HB3	1.73	0.70
75:Sg:191:HIS:ND1	75:Sg:195:LEU:HD21	2.06	0.70
77:Sy:94:ILE:CB	77:Sy:100:PRO:HB3	2.22	0.70
79:S2:901:G:H2'	79:S2:902:G:C8	2.26	0.70
79:S2:1232:PSU:H2'	79:S2:1233:G:C8	2.26	0.70
2:L5:2904:U:H3'	2:L5:2904:U:OP2	1.91	0.70
6:LC:296:PRO:O	6:LC:300:ARG:HG3	1.92	0.70
51:SH:26:ALA:O	51:SH:30:LEU:HD23	1.92	0.70
67:SY:63:HIS:CE1	67:SY:68:LYS:HE3	2.27	0.70
2:L5:1177:U:H3'	2:L5:1180:C:H41	1.56	0.70
2:L5:1774:C:H2'	2:L5:1775:A:C8	2.26	0.70
2:L5:1703:C:H2'	2:L5:1704:C:H5'	1.72	0.70
13:LJ:135:GLY:HA2	13:LJ:139:PHE:CE2	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:LR:136:ARG:O	20:LR:140:GLU:HG2	1.92	0.70
24:LV:32:THR:O	24:LV:69:LYS:NZ	2.24	0.70
25:LW:91:MET:HE1	25:LW:94:ARG:CZ	2.22	0.70
33:Lf:36:ARG:HD2	33:Lf:79:GLY:O	1.92	0.70
75:Sg:242:SER:HA	75:Sg:291:TRP:CD1	2.27	0.70
79:S2:1614:A:N3	85:S2:2110:HOH:O	2.23	0.70
2:L5:465:G:H2'	2:L5:466:A:C8	2.27	0.70
2:L5:1307:A:H2'	2:L5:1308:C:C6	2.27	0.70
5:LB:56:ILE:HD12	5:LB:365:LEU:HD22	1.72	0.70
14:LK:72:LYS:HD2	29:Lb:119:CYS:SG	2.32	0.70
41:Ln:89:LYS:HB3	41:Ln:95:THR:OG1	1.92	0.70
48:SD:100:ILE:CD1	48:SD:177:LEU:HD12	2.22	0.70
75:Sg:212:LYS:HA	75:Sg:235:ILE:HG13	1.73	0.70
77:Sy:42:LEU:HD13	77:Sy:68:LEU:HB3	1.74	0.70
79:S2:1307:U:H2'	79:S2:1308:U:C6	2.26	0.70
2:L5:4652:G:N7	85:L5:5423:HOH:O	2.24	0.69
21:LS:45:TRP:CZ3	21:LS:54:MET:HE2	2.27	0.69
70:Sb:56:CYS:SG	70:Sb:61:THR:OG1	2.25	0.69
75:Sg:18:VAL:HA	75:Sg:35:SER:OG	1.91	0.69
78:Sz:102:VAL:HG13	78:Sz:104:LYS:CG	2.16	0.69
2:L5:4111:U:H2'	2:L5:4112:C:C6	2.26	0.69
2:L5:4260:U:H2'	2:L5:4261:C:C6	2.26	0.69
3:L8:286:SER:HA	3:L8:289:ARG:HH12	1.55	0.69
14:LK:101:ASN:OD1	14:LK:105:ARG:NH2	2.24	0.69
32:Le:14:LYS:HD3	32:Le:77:CYS:SG	2.33	0.69
48:SD:99:ILE:CD1	48:SD:171:GLU:HG2	2.22	0.69
48:SD:100:ILE:HD11	48:SD:177:LEU:HD12	1.74	0.69
60:SQ:21:ALA:HB2	60:SQ:72:VAL:CG2	2.22	0.69
61:SS:100:PRO:HG2	61:SS:122:PRO:HD3	1.73	0.69
73:Se:98:LYS:HE2	79:S2:637:U:OP2	1.91	0.69
75:Sg:30:MET:CE	75:Sg:92:LEU:HD22	2.22	0.69
77:Sy:45:ARG:HH12	77:Sy:72:HIS:HA	1.57	0.69
79:S2:186:C:H2'	79:S2:187:G:H8	1.57	0.69
2:L5:510:U:OP1	19:LQ:163:LYS:NZ	2.25	0.69
2:L5:1817:U:O2'	2:L5:1818:G:H5'	1.90	0.69
2:L5:2416:G:N2	2:L5:2427:G:N7	2.39	0.69
21:LS:45:TRP:HZ3	21:LS:54:MET:HE2	1.57	0.69
53:SJ:40:LYS:NZ	79:S2:641:A:OP1	2.23	0.69
60:SQ:77:HIS:O	60:SQ:81:ILE:HG12	1.91	0.69
79:S2:1526:G:O2'	79:S2:1527:C:H5'	1.92	0.69
75:Sg:30:MET:HE1	75:Sg:42:MET:CG	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1391:OMC:HM22	79:S2:1392:U:C5'	2.22	0.69
2:L5:987:C:H2'	2:L5:988:C:C6	2.28	0.69
2:L5:2092:G:O5'	2:L5:2094:G:N2	2.25	0.69
26:LY:121:PRO:HA	26:LY:124:LEU:HD12	1.73	0.69
72:Sd:42:ILE:CD1	72:Sd:44:ARG:HD3	2.23	0.69
2:L5:1179:U:H5"	3:L8:289:ARG:CD	2.22	0.69
2:L5:1378:C:N4	19:LQ:159:ASN:O	2.23	0.69
2:L5:2106:G:H2'	2:L5:2106:G:N3	2.06	0.69
47:SC:62:PRO:HB2	47:SC:68:ARG:HD2	1.73	0.69
54:SK:223:ILE:CG2	54:SK:225:GLU:HG2	2.23	0.69
62:ST:98:VAL:HG23	62:ST:103:LEU:HD23	1.73	0.69
76:So:1:MET:HG3	79:S2:1852:C:OP2	1.93	0.69
79:S2:1850:MA6:H92	79:S2:1851:MA6:N6	2.08	0.69
2:L5:2396:A:H4'	2:L5:2397:G:OP2	1.93	0.69
2:L5:4147:G:H2'	2:L5:4148:C:C6	2.26	0.69
6:LC:209:ILE:HB	6:LC:229:LEU:HD13	1.72	0.69
2:L5:760:G:OP2	2:L5:904:C:N4	2.25	0.69
2:L5:1202:C:O5'	2:L5:1203:G:H5"	1.93	0.69
2:L5:1510:G:N7	85:L5:5445:HOH:O	2.26	0.69
3:L8:125:VAL:HG11	3:L8:199:ILE:HG21	1.75	0.69
27:LZ:68:ILE:O	27:LZ:115:LYS:HE2	1.92	0.69
50:SG:52:ILE:HG23	50:SG:109:LEU:HD11	1.73	0.69
51:SH:140:VAL:HG12	57:SN:19:ARG:HD2	1.73	0.69
58:SO:60:MET:HG2	79:S2:956:G:OP1	1.92	0.69
59:SP:89:MET:HB3	59:SP:107:ILE:CD1	2.23	0.69
61:SS:22:THR:O	75:Sg:212:LYS:NZ	2.24	0.69
67:SY:27:VAL:HB	67:SY:69:THR:CG2	2.23	0.69
70:Sb:21:LYS:HE3	79:S2:921:G:H5'	1.72	0.69
72:Sd:13:ARG:NH1	72:Sd:53:GLY:O	2.26	0.69
72:Sd:29:GLN:NE2	72:Sd:66:ARG:O	2.26	0.69
77:Sy:69:CYS:SG	77:Sy:76:LEU:HD12	2.33	0.69
77:Sy:121:LYS:O	77:Sy:124:ILE:HG12	1.92	0.69
79:S2:554:A:P	79:S2:555:A:H4'	2.33	0.69
79:S2:640:A:H2'	79:S2:641:A:C8	2.28	0.69
7:LD:147:ARG:HG3	7:LD:157:VAL:HG22	1.72	0.69
10:LG:230:TYR:O	10:LG:234:ARG:HG3	1.91	0.69
79:S2:532:C:O2	79:S2:552:G:N2	2.24	0.69
2:L5:1202:C:H3'	2:L5:1203:G:H5"	1.75	0.69
2:L5:2037:C:O2'	42:Lo:113:LYS:HE3	1.93	0.69
2:L5:4109:G:H2'	2:L5:4110:C:H6	1.57	0.69
2:L5:4274:A:H2'	2:L5:4275:G:C8	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:4721:G:N7	85:L5:5438:HOH:O	2.25	0.69
2:L5:4964:C:O2'	2:L5:4965:U:H5'	1.93	0.69
54:SK:41:VAL:HG22	54:SK:46:THR:CG2	2.23	0.69
66:SX:58:GLU:HG3	85:SX:313:HOH:O	1.92	0.69
79:S2:1804:OMU:HM22	79:S2:1805:G:C5'	2.21	0.69
2:L5:1801:A:H4'	22:LT:102:ARG:HH21	1.56	0.68
2:L5:4741:C:OP1	2:L5:4742:G:H4'	1.92	0.68
51:SH:100:ILE:HG12	51:SH:125:VAL:HG21	1.75	0.68
79:S2:455:A:H2'	79:S2:456:C:C6	2.28	0.68
56:SM:25:LYS:HB2	56:SM:67:PHE:HE1	1.58	0.68
79:S2:836:G:H4'	79:S2:837:A:O5'	1.91	0.68
40:Lm:44:GLN:NE2	40:Lm:63:ILE:HD12	2.08	0.68
59:SP:49:LEU:CD2	59:SP:53:GLN:HG2	2.22	0.68
67:SY:86:GLU:OE1	67:SY:90:ARG:NH1	2.22	0.68
79:S2:73:C:C1'	79:S2:74:G:H5'	2.23	0.68
2:L5:439:G:N7	85:L5:5433:HOH:O	2.25	0.68
75:Sg:42:MET:O	75:Sg:56:GLN:HG2	1.94	0.68
77:Sy:45:ARG:NH1	77:Sy:72:HIS:HA	2.08	0.68
2:L5:1755:C:N4	2:L5:1776:A:N1	2.42	0.68
2:L5:1774:C:H2'	2:L5:1775:A:H8	1.57	0.68
2:L5:4872:2MG:HM21	26:LY:202:LEU:HA	1.74	0.68
54:SK:142:LEU:CD1	54:SK:150:MET:HE3	2.21	0.68
2:L5:218:A:H2'	2:L5:218:A:N3	2.09	0.68
2:L5:671:G:O2'	2:L5:672:C:H5'	1.93	0.68
51:SH:126:HIS:CE1	51:SH:181:THR:HG23	2.27	0.68
52:SI:151:GLU:HA	52:SI:154:LYS:CE	2.24	0.68
53:SJ:103:GLU:O	53:SJ:107:GLU:HG2	1.94	0.68
62:ST:47:LYS:HD2	62:ST:77:TYR:O	1.92	0.68
68:SZ:20:ILE:HG21	68:SZ:98:VAL:HG21	1.74	0.68
77:Sy:102:LYS:HE3	79:S2:1283:C:H42	1.59	0.68
77:Sy:116:LYS:NZ	77:Sy:119:GLN:H	1.91	0.68
2:L5:1235:G:H2'	2:L5:1236:C:H6	1.58	0.68
10:LG:58:PRO:HD2	10:LG:61:ILE:HD12	1.75	0.68
13:LJ:24:ILE:HD12	13:LJ:40:LEU:CD1	2.24	0.68
33:Lf:65:ASN:OD1	33:Lf:67:THR:HG22	1.94	0.68
44:Lz:77:VAL:HG13	44:Lz:82:LYS:HG2	1.76	0.68
46:SA:180:ARG:HD3	46:SA:184:ARG:CZ	2.22	0.68
49:SE:205:PHE:CD2	49:SE:221:ARG:HD3	2.29	0.68
59:SP:108:LYS:HB3	59:SP:110:GLU:OE1	1.94	0.68
60:SQ:132:PHE:HD2	68:SZ:79:ARG:HH12	1.40	0.68
79:S2:325:C:H3'	79:S2:326:C:C6	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1520:G:HO2'	79:S2:1521:C:P	2.17	0.68
50:SG:118:GLU:HG2	50:SG:119:LYS:HD2	1.74	0.68
53:SJ:113:GLN:O	53:SJ:117:LEU:HG	1.94	0.68
53:SJ:133:ARG:HA	85:SJ:203:HOH:O	1.94	0.68
63:SU:12:GLN:HG2	79:S2:1541:G:O2'	1.94	0.68
2:L5:1272:C:H2'	29:Lb:117:ARG:HD3	1.75	0.68
2:L5:2557:G:H2'	2:L5:2558:C:C6	2.29	0.68
41:Ln:82:THR:HG22	41:Ln:155:ILE:HG23	1.76	0.68
49:SE:252:ARG:O	49:SE:256:LEU:HG	1.94	0.68
51:SH:46:THR:HG23	51:SH:65:PRO:HD3	1.74	0.68
55:SL:149:ALA:HB1	79:S2:867:OMG:H5"	1.74	0.68
79:S2:160:U:O2'	79:S2:162:C:OP2	2.12	0.68
79:S2:292:A:N1	85:S2:2111:HOH:O	2.26	0.68
2:L5:266:C:O2'	2:L5:267:G:H5'	1.94	0.68
2:L5:1418:C:H2'	2:L5:1419:G:H5'	1.76	0.68
37:Lj:64:SER:HB3	37:Lj:92:VAL:CG2	2.24	0.68
51:SH:22:GLY:O	51:SH:25:GLN:HG3	1.94	0.68
52:SI:174:CYS:HB2	52:SI:190:LEU:HD21	1.75	0.68
57:SN:25:TRP:CD1	70:Sb:82:LYS:HZ3	2.12	0.68
2:L5:300:A:N7	85:L5:5458:HOH:O	2.27	0.67
2:L5:4582:C:O2'	2:L5:4583:C:H5'	1.93	0.67
37:Lj:64:SER:HB3	37:Lj:92:VAL:HG21	1.76	0.67
68:SZ:65:THR:HG22	79:S2:1256:G:O6	1.93	0.67
77:Sy:79:VAL:HG21	77:Sy:85:LEU:HD13	1.76	0.67
79:S2:1631:U:C2'	79:S2:1632:G:H5'	2.24	0.67
2:L5:25:A:H2'	2:L5:26:C:H6	1.58	0.67
2:L5:947:C:OP1	6:LC:336:ARG:NH1	2.25	0.67
14:LK:238:GLU:HG3	14:LK:239:LYS:N	2.07	0.67
50:SG:116:LYS:NZ	50:SG:125:THR:HG21	2.08	0.67
58:SO:83:GLN:HA	58:SO:86:LYS:HE3	1.77	0.67
79:S2:71:G:C4	79:S2:72:C:H1'	2.29	0.67
2:L5:254:G:O2'	2:L5:255:C:OP1	2.13	0.67
2:L5:759:G:N2	2:L5:905:C:O4'	2.28	0.67
2:L5:4266:G:N3	2:L5:4266:G:H2'	2.08	0.67
2:L5:4738:C:O2'	2:L5:4739:C:H5'	1.94	0.67
2:L5:4956:A:O2'	2:L5:4957:C:H5'	1.93	0.67
56:SM:27:VAL:HG13	56:SM:43:LEU:HD13	1.75	0.67
74:Sf:18:SER:HB2	79:S2:1556:A:N6	2.09	0.67
79:S2:435:A:N7	85:S2:2126:HOH:O	2.27	0.67
2:L5:4113:U:O2'	2:L5:4114:C:H5'	1.94	0.67
14:LK:201:ILE:HD11	14:LK:267:LEU:HD21	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:SE:127:ARG:HG3	49:SE:142:HIS:HA	1.76	0.67
50:SG:7:PHE:HB3	50:SG:10:THR:OG1	1.93	0.67
64:SV:43:THR:HG22	64:SV:45:ARG:CD	2.23	0.67
1:L1:149:G:H21	10:LG:64:GLN:NE2	1.93	0.67
2:L5:1262:G:H2'	2:L5:1263:A:C8	2.30	0.67
3:L8:256:LYS:HE3	4:L9:117:G:H5"	1.76	0.67
19:LQ:198:ARG:HA	19:LQ:201:GLU:CG	2.24	0.67
26:LY:141:LEU:O	26:LY:145:VAL:HG22	1.94	0.67
68:SZ:64:THR:HG22	68:SZ:77:TRP:CE3	2.29	0.67
2:L5:689:U:H2'	2:L5:690:C:H6	1.59	0.67
2:L5:1759:G:H1	2:L5:1773:OMU:HN3	1.40	0.67
2:L5:4504:C:H2'	2:L5:4505:C:C6	2.29	0.67
2:L5:4944:C:O2	33:Lf:67:THR:HG23	1.94	0.67
62:ST:84:LEU:HA	62:ST:97:GLN:OE1	1.94	0.67
79:S2:118:C:H1'	79:S2:445:A:C5	2.29	0.67
79:S2:167:G:C2'	79:S2:168:C:H5"	2.23	0.67
2:L5:2583:C:OP2	34:Lg:76:ARG:NH1	2.27	0.67
14:LK:165:LEU:HD11	14:LK:176:THR:CG2	2.25	0.67
51:SH:147:LYS:HE2	51:SH:151:SER:OG	1.94	0.67
79:S2:107:A:H2'	79:S2:108:G:C8	2.30	0.67
79:S2:1296:U:H2'	79:S2:1297:U:C6	2.29	0.67
79:S2:1531:A:H2'	79:S2:1532:C:C6	2.30	0.67
50:SG:154:ARG:O	50:SG:157:VAL:HG12	1.94	0.67
51:SH:170:VAL:HG13	51:SH:187:PHE:HB2	1.76	0.67
62:ST:75:ARG:NH1	62:ST:75:ARG:HB3	2.09	0.67
75:Sg:240:CYS:O	75:Sg:248:LEU:HD12	1.95	0.67
79:S2:360:A:C2	79:S2:362:C:H2'	2.29	0.67
2:L5:1220:G:C2'	2:L5:1221:G:H5'	2.25	0.67
2:L5:4524:G:OP2	2:L5:4524:G:H4'	1.94	0.67
14:LK:203:ILE:HG23	14:LK:206:VAL:HG21	1.75	0.67
14:LK:287:VAL:O	15:LM:105:THR:HA	1.95	0.67
53:SJ:18:ARG:NH2	79:S2:3:C:O2	2.27	0.67
60:SQ:44:PRO:HD3	60:SQ:77:HIS:HB3	1.76	0.67
69:Sa:49:ALA:O	69:Sa:53:ILE:HG12	1.94	0.67
77:Sy:58:GLU:O	77:Sy:62:VAL:HG23	1.95	0.67
2:L5:361:C:H4'	23:LU:34:LYS:NZ	2.10	0.67
6:LC:163:LYS:O	6:LC:166:GLU:HG2	1.94	0.67
13:LJ:10:ASN:HB3	13:LJ:11:PRO:HD3	1.75	0.67
59:SP:18:ARG:NH1	62:ST:88:LYS:O	2.28	0.67
73:Se:132:ASN:OD1	79:S2:606:G:H1'	1.95	0.67
75:Sg:27:PHE:HD2	75:Sg:30:MET:HB3	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:652:G:O2'	2:L5:653:U:H5'	1.95	0.66
15:LM:40:GLY:HA3	15:LM:45:VAL:HB	1.76	0.66
59:SP:24:GLN:O	59:SP:28:MET:HG3	1.95	0.66
66:SX:128:VAL:HG11	66:SX:133:LEU:HD21	1.77	0.66
75:Sg:30:MET:CE	75:Sg:42:MET:HG3	2.25	0.66
75:Sg:57:ARG:HH11	75:Sg:57:ARG:HB2	1.59	0.66
77:Sy:19:GLN:O	77:Sy:23:LYS:HG3	1.95	0.66
2:L5:921:C:H2'	2:L5:922:C:C6	2.29	0.66
20:LR:171:LYS:O	20:LR:175:GLU:HG3	1.96	0.66
38:Lk:60:LEU:HD22	38:Lk:61:PRO:HD2	1.77	0.66
54:SK:176:LEU:CD2	54:SK:181:VAL:HG22	2.24	0.66
75:Sg:172:LYS:HG2	75:Sg:193:GLY:CA	2.26	0.66
77:Sy:84:LYS:HB3	77:Sy:88:TRP:CZ2	2.30	0.66
79:S2:1139:C:H5'	85:S2:2792:HOH:O	1.95	0.66
79:S2:1426:U:O2'	79:S2:1427:C:H5'	1.96	0.66
2:L5:2313:A:H5'	2:L5:2314:G:OP2	1.95	0.66
2:L5:3887:OMC:HM22	2:L5:3888:G:H5'	1.76	0.66
2:L5:4123:C:O2'	2:L5:4124:G:H5'	1.96	0.66
61:SS:97:GLU:N	61:SS:97:GLU:OE1	2.27	0.66
75:Sg:164:ILE:CG2	75:Sg:176:VAL:HG13	2.24	0.66
2:L5:1435:G:H2'	2:L5:1436:C:H5'	1.75	0.66
2:L5:1617:G:H1'	2:L5:2513:A:N6	2.10	0.66
27:LZ:53:VAL:HA	27:LZ:57:MET:CE	2.26	0.66
51:SH:16:PRO:HA	51:SH:20:GLU:OE1	1.96	0.66
54:SK:65:ARG:O	54:SK:68:GLU:HG2	1.96	0.66
60:SQ:17:LYS:HE2	79:S2:1648:G:N7	2.10	0.66
77:Sy:21:VAL:HG21	77:Sy:123:VAL:HG21	1.78	0.66
77:Sy:58:GLU:HG2	77:Sy:61:TYR:H	1.59	0.66
2:L5:407:A:O2'	2:L5:410:A:OP1	2.13	0.66
2:L5:505:G:O2'	2:L5:506:C:H5'	1.95	0.66
2:L5:1437:C:H1'	2:L5:2098:G:H2'	1.77	0.66
51:SH:108:SER:HB3	79:S2:799:OMU:OP1	1.94	0.66
60:SQ:49:TYR:O	60:SQ:53:GLU:HG3	1.94	0.66
68:SZ:40:ILE:O	68:SZ:44:LYS:HG2	1.96	0.66
79:S2:1617:G:N2	79:S2:1619:A:H3'	2.11	0.66
2:L5:4379:A:N7	85:L5:5475:HOH:O	2.29	0.66
13:LJ:24:ILE:HD12	13:LJ:40:LEU:HD11	1.77	0.66
14:LK:176:THR:HG23	14:LK:176:THR:O	1.95	0.66
40:Lm:19:LEU:HD23	40:Lm:19:LEU:H	1.60	0.66
40:Lm:44:GLN:HE21	40:Lm:63:ILE:HD12	1.60	0.66
44:Lz:191:ILE:HD11	44:Lz:212:LEU:CD2	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SG:161:PRO:HB2	50:SG:163:ASN:OD1	1.95	0.66
49:SE:114:ILE:HB	49:SE:118:GLU:OE1	1.96	0.66
60:SQ:82:TYR:O	60:SQ:85:ARG:HG2	1.96	0.66
2:L5:270:U:H2'	2:L5:271:C:C6	2.31	0.66
2:L5:1929:A:H5'	2:L5:1930:U:OP1	1.95	0.66
2:L5:3880:G:O2'	2:L5:3881:G:H5'	1.96	0.66
2:L5:4420:PSU:H2'	2:L5:4421:C:C5	2.31	0.66
14:LK:268:GLN:O	14:LK:272:ARG:HG3	1.94	0.66
45:S1:191:ASP:O	45:S1:195:LYS:HD3	1.96	0.66
46:SA:52:LYS:HB2	61:SS:109:LEU:HD22	1.77	0.66
46:SA:63:ARG:HG3	46:SA:185:MET:HE1	1.76	0.66
60:SQ:32:ILE:HG21	60:SQ:39:LEU:HD22	1.75	0.66
75:Sg:42:MET:HE2	75:Sg:92:LEU:CD2	2.25	0.66
1:L1:141:C:H2'	1:L1:142:U:C6	2.30	0.66
1:L1:156:U:H3	2:L5:1:C:H42	1.40	0.66
2:L5:4306:OMU:HM22	2:L5:4307:A:C5'	2.22	0.66
9:LF:52:GLU:HG3	29:Lb:96:LEU:CD1	2.26	0.66
11:LH:26:ILE:HD12	11:LH:35:ARG:HG2	1.78	0.66
48:SD:44:LYS:HE2	60:SQ:114:GLN:HE21	1.61	0.66
49:SE:31:PRO:HG2	49:SE:38:LEU:HG	1.77	0.66
79:S2:71:G:C3'	79:S2:72:C:H4'	2.26	0.66
79:S2:556:U:H2'	79:S2:557:U:H6	1.61	0.66
79:S2:1217:A:H2'	79:S2:1218:C:C6	2.31	0.66
2:L5:1096:C:O2'	2:L5:1097:C:H5'	1.96	0.66
2:L5:4571:A2M:H2'	2:L5:4572:U:H6	1.59	0.66
50:SG:123:GLY:N	50:SG:126:ASP:OD1	2.27	0.66
50:SG:135:PRO:HG2	50:SG:141:ILE:HG12	1.76	0.66
54:SK:41:VAL:HG22	54:SK:46:THR:HG21	1.78	0.66
68:SZ:41:ARG:O	68:SZ:45:GLU:HG2	1.95	0.66
2:L5:1771:U:H2'	2:L5:1772:C:C6	2.31	0.65
2:L5:4741:C:H3'	2:L5:4742:G:H5'	1.78	0.65
10:LG:136:LEU:HD13	10:LG:202:VAL:HG11	1.77	0.65
49:SE:141:THR:OG1	49:SE:145:ARG:HB2	1.95	0.65
77:Sy:123:VAL:HA	77:Sy:126:GLU:CD	2.21	0.65
79:S2:1670:C:H2'	79:S2:1671:G:C8	2.31	0.65
52:SI:22:HIS:HA	85:SI:314:HOH:O	1.96	0.65
56:SM:50:GLN:HG3	56:SM:53:LYS:HE3	1.77	0.65
63:SU:18:LEU:HB3	63:SU:58:ALA:HB1	1.78	0.65
71:Sc:43:LYS:NZ	79:S2:1600:G:H5'	2.10	0.65
79:S2:1269:G:O2'	79:S2:1270:G:H5'	1.95	0.65
79:S2:1646:C:H1'	85:S2:2390:HOH:O	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L8:182:GLY:HA2	3:L8:194:VAL:HG21	1.77	0.65
6:LC:308:LYS:HD3	6:LC:310:HIS:NE2	2.11	0.65
44:Lz:191:ILE:HD11	44:Lz:212:LEU:HD21	1.78	0.65
56:SM:14:LEU:HD22	56:SM:35:LEU:HD21	1.77	0.65
62:ST:44:VAL:HG11	62:ST:71:MET:CG	2.26	0.65
79:S2:568:C:H2'	79:S2:569:A:C8	2.31	0.65
79:S2:1236:G:H2'	79:S2:1237:C:C6	2.31	0.65
2:L5:125:C:H2'	2:L5:126:C:H6	1.60	0.65
61:SS:132:ARG:NE	85:SS:201:HOH:O	2.26	0.65
2:L5:408:A:H4'	2:L5:409:G:H5"	1.77	0.65
2:L5:719:C:C2'	2:L5:720:G:H5'	2.26	0.65
4:L9:24:C:H2'	4:L9:25:G:O4'	1.96	0.65
10:LG:90:GLN:O	10:LG:94:GLN:HG3	1.96	0.65
11:LH:82:LYS:HD2	11:LH:88:PHE:CZ	2.30	0.65
13:LJ:28:GLU:OE1	13:LJ:28:GLU:N	2.29	0.65
48:SD:167:LYS:HG3	48:SD:171:GLU:OE1	1.95	0.65
62:ST:92:ASP:OD2	62:ST:94:LYS:HB3	1.96	0.65
77:Sy:26:LEU:HD13	77:Sy:31:LEU:CD2	2.27	0.65
79:S2:522:A:N3	85:S2:2140:HOH:O	2.30	0.65
2:L5:683:C:H2'	2:L5:684:G:O4'	1.97	0.65
2:L5:1544:G:N7	85:L5:5477:HOH:O	2.29	0.65
2:L5:2060:G:N7	85:L5:5471:HOH:O	2.29	0.65
2:L5:2267:U:OP1	39:Ll:37:SER:HB2	1.97	0.65
2:L5:4462:C:O2'	2:L5:4463:U:H5'	1.95	0.65
55:SL:124:ASP:HB2	55:SL:146:THR:O	1.96	0.65
66:SX:105:PHE:CE2	66:SX:112:VAL:HB	2.32	0.65
2:L5:3917:A:N3	85:L5:5483:HOH:O	2.29	0.65
2:L5:4591:U:H2'	2:L5:4592:C:C6	2.31	0.65
50:SG:162:LEU:HD21	50:SG:172:LYS:HE2	1.78	0.65
56:SM:41:PRO:HG2	56:SM:44:HIS:CE1	2.32	0.65
56:SM:57:TYR:HB3	56:SM:75:GLY:CA	2.27	0.65
56:SM:86:PRO:HB2	56:SM:88:GLU:OE1	1.96	0.65
62:ST:15:VAL:HB	62:ST:20:ILE:CD1	2.25	0.65
79:S2:958:G:H2'	79:S2:959:G:C8	2.31	0.65
2:L5:235:A:OP1	6:LC:201:ARG:NH2	2.30	0.65
5:LB:317:LEU:HD11	5:LB:382:MET:HG3	1.77	0.65
8:LE:88:GLU:OE2	8:LE:92:GLY:HA2	1.97	0.65
20:LR:133:LYS:HG3	85:LR:319:HOH:O	1.96	0.65
45:S1:6:ASN:HB3	45:S1:9:LEU:HD11	1.78	0.65
49:SE:122:LYS:HG2	49:SE:164:LEU:HD21	1.77	0.65
61:SS:11:LYS:O	61:SS:15:VAL:HG23	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:553:U:H3'	79:S2:555:A:C4'	2.27	0.65
10:LG:180:PRO:HA	10:LG:227:ASN:OD1	1.97	0.65
41:Ln:83:THR:O	41:Ln:87:MET:HG2	1.97	0.65
46:SA:32:PHE:O	46:SA:35:GLU:HG2	1.97	0.65
51:SH:162:GLN:O	51:SH:166:VAL:HG22	1.96	0.65
52:SI:34:ALA:CB	52:SI:56:ARG:HD2	2.27	0.65
58:SO:93:LEU:HD11	58:SO:124:MET:HE2	1.78	0.65
62:ST:113:ARG:O	62:ST:117:ILE:HG23	1.97	0.65
70:Sb:36:LYS:HB2	70:Sb:43:ILE:CD1	2.27	0.65
75:Sg:144:ASP:OD1	75:Sg:145:GLU:N	2.30	0.65
2:L5:2906:G:N2	2:L5:3586:G:O6	2.30	0.65
42:Lo:79:GLU:OE1	42:Lo:81:SER:N	2.29	0.65
44:Lz:61:SER:HA	44:Lz:126:VAL:HG12	1.78	0.65
79:S2:993:G:N3	85:S2:2134:HOH:O	2.29	0.65
2:L5:4239:A:H2'	2:L5:4240:G:C8	2.32	0.64
2:L5:4733:C:H4'	2:L5:4734:A:O5'	1.96	0.64
55:SL:82:MET:HB2	55:SL:85:THR:O	1.97	0.64
61:SS:20:TYR:O	61:SS:24:LEU:HD13	1.97	0.64
62:ST:41:ALA:O	62:ST:45:LEU:HG	1.97	0.64
68:SZ:38:ASP:O	68:SZ:41:ARG:HG2	1.97	0.64
79:S2:1545:A:H2'	79:S2:1546:G:C8	2.32	0.64
2:L5:489:C:C2'	2:L5:667:A:H61	2.10	0.64
2:L5:1271:G:H22	2:L5:2106:G:H1	1.44	0.64
2:L5:1400:G:H2'	2:L5:1401:C:C6	2.31	0.64
2:L5:4872:2MG:HM21	26:LY:202:LEU:CA	2.27	0.64
46:SA:120:ARG:NH2	47:SC:267:GLN:HB2	2.11	0.64
51:SH:181:THR:HG22	51:SH:183:LYS:HG3	1.77	0.64
62:ST:124:ARG:HH21	62:ST:129:LEU:HB3	1.62	0.64
2:L5:4537:C:H2'	2:L5:4538:G:H8	1.60	0.64
50:SG:170:ARG:HB2	79:S2:74:G:N2	2.10	0.64
79:S2:325:C:N4	79:S2:328:U:O4	2.30	0.64
79:S2:1445:PSU:H1'	79:S2:1580:A:N6	2.12	0.64
46:SA:147:LEU:HD12	46:SA:163:CYS:SG	2.37	0.64
51:SH:78:ARG:O	51:SH:82:GLU:HG2	1.98	0.64
71:Sc:85:ARG:O	71:Sc:89:GLN:HG3	1.98	0.64
79:S2:845:G:H2'	79:S2:846:G:O4'	1.97	0.64
79:S2:1215:C:H1'	85:S2:2467:HOH:O	1.97	0.64
2:L5:137:G:H2'	2:L5:138:G:C8	2.32	0.64
2:L5:453:G:H2'	2:L5:705:G:C8	2.31	0.64
2:L5:489:C:O2'	2:L5:667:A:N6	2.21	0.64
2:L5:737:C:H2'	2:L5:739:G:H4'	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:1908:A:N1	85:L5:5474:HOH:O	2.29	0.64
9:LF:27:GLU:O	9:LF:30:ILE:HG22	1.97	0.64
46:SA:11:LYS:O	46:SA:15:VAL:HG23	1.98	0.64
50:SG:65:GLN:NE2	79:S2:1746:U:H4'	2.11	0.64
51:SH:36:LEU:O	51:SH:40:LEU:HG	1.98	0.64
60:SQ:97:GLN:HB2	60:SQ:105:LYS:HG3	1.80	0.64
63:SU:101:ARG:NH2	79:S2:1566:G:N7	2.45	0.64
75:Sg:79:LEU:HD21	75:Sg:87:LEU:HD23	1.79	0.64
79:S2:1148:A:H4'	79:S2:1149:A:O4'	1.97	0.64
79:S2:1232:PSU:H2'	79:S2:1233:G:H8	1.61	0.64
48:SD:102:LEU:HD23	71:Sc:67:LEU:CD1	2.27	0.64
58:SO:150:ARG:C	58:SO:151:LEU:HD12	2.23	0.64
60:SQ:86:GLN:HG3	60:SQ:119:LEU:O	1.96	0.64
75:Sg:217:MET:HE3	75:Sg:219:TRP:CZ2	2.33	0.64
79:S2:799:OMU:O4	79:S2:866:PSU:N3	2.20	0.64
25:LW:90:ILE:HG22	25:LW:91:MET:CE	2.28	0.64
47:SC:187:ARG:HD3	47:SC:192:LEU:HD12	1.80	0.64
48:SD:168:THR:OG1	48:SD:171:GLU:HG3	1.98	0.64
52:SI:41:ARG:NH2	79:S2:306:C:OP2	2.30	0.64
53:SJ:172:ARG:HD3	85:S2:2970:HOH:O	1.96	0.64
54:SK:71:ALA:O	54:SK:74:GLN:HG2	1.97	0.64
62:ST:44:VAL:HG11	62:ST:71:MET:HG2	1.80	0.64
75:Sg:259:TRP:CD1	75:Sg:266:ILE:HG12	2.32	0.64
77:Sy:45:ARG:NH1	77:Sy:72:HIS:CD2	2.66	0.64
79:S2:554:A:H3'	79:S2:556:U:P	2.37	0.64
79:S2:1285:G:C3'	79:S2:1286:G:H5'	2.27	0.64
79:S2:1710:OMC:HM22	79:S2:1711:U:O4'	1.98	0.64
2:L5:1175:A:H2	2:L5:1185:G:H1	1.45	0.64
2:L5:1444:G:H2'	2:L5:1445:U:H6	1.63	0.64
2:L5:3604:A:H2'	2:L5:3605:C:C1'	2.28	0.64
50:SG:48:TYR:CE1	50:SG:117:GLY:HA3	2.33	0.64
52:SI:101:ILE:HD12	52:SI:190:LEU:HD11	1.80	0.64
58:SO:103:ASN:O	58:SO:142:ARG:HD2	1.97	0.64
59:SP:115:TYR:HB2	59:SP:118:GLU:HG3	1.80	0.64
79:S2:147:A:O2'	79:S2:148:U:H5'	1.98	0.64
2:L5:4255:A:O2'	2:L5:4256:A:H5'	1.96	0.64
20:LR:67:THR:O	20:LR:71:ARG:HG3	1.96	0.64
55:SL:72:ILE:O	55:SL:73:LEU:HD23	1.97	0.64
63:SU:7:LYS:HZ1	79:S2:1427:C:H5"	1.60	0.64
1:L1:33:G:H5"	1:L1:34:U:OP1	1.98	0.64
2:L5:4730:C:O2'	2:L5:4731:G:H5'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:L5:7953:HOH:O	43:Lp:25:MET:HE1	1.98	0.64
40:Lm:24:ASP:HB2	40:Lm:69:LYS:NZ	2.13	0.64
52:SI:59:ARG:O	52:SI:60:LEU:HD23	1.98	0.64
57:SN:25:TRP:HZ3	70:Sb:84:HIS:HA	1.63	0.64
79:S2:1407:U:H2'	79:S2:1408:U:C6	2.33	0.64
2:L5:2640:G:H2'	2:L5:2641:A:C8	2.34	0.63
63:SU:104:LEU:HD13	63:SU:121:ARG:NH1	2.12	0.63
77:Sy:94:ILE:CG1	77:Sy:100:PRO:HB3	2.28	0.63
2:L5:751:G:H2'	2:L5:752:G:O4'	1.98	0.63
2:L5:1551:C:C2'	2:L5:1552:G:H5'	2.28	0.63
2:L5:1591:U:OP2	2:L5:2856:C:O2'	2.14	0.63
2:L5:3652:A:N1	85:L5:5501:HOH:O	2.31	0.63
60:SQ:40:GLU:OE1	60:SQ:40:GLU:N	2.32	0.63
79:S2:321:C:O2'	79:S2:322:C:H5'	1.98	0.63
79:S2:898:U:H2'	79:S2:899:U:H5	1.63	0.63
79:S2:1330:G:H4'	79:S2:1332:A:OP1	1.97	0.63
2:L5:1438:U:O2	2:L5:2099:G:H3'	1.98	0.63
2:L5:2415:OMU:HM22	2:L5:2416:G:O4'	1.97	0.63
8:LE:72:GLN:HE21	8:LE:74:TYR:HD1	1.45	0.63
17:LO:13:LYS:HB2	17:LO:16:GLU:OE1	1.97	0.63
50:SG:14:LYS:NZ	50:SG:16:ILE:HG22	2.14	0.63
53:SJ:131:ARG:NH1	79:S2:522:A:H4'	2.12	0.63
69:Sa:13:LYS:NZ	85:Sa:302:HOH:O	2.31	0.63
71:Sc:75:GLU:HG3	85:Sc:203:HOH:O	1.98	0.63
73:Se:99:LYS:NZ	79:S2:555:A:OP2	2.31	0.63
79:S2:514:U:C2'	79:S2:515:G:H5'	2.28	0.63
79:S2:1678:A2M:H3'	85:S2:2274:HOH:O	1.99	0.63
2:L5:2565:A:OP2	2:L5:2565:A:H8	1.82	0.63
2:L5:3718:A2M:H2	2:L5:3934:G:O4'	1.97	0.63
45:S1:168:MET:HG2	45:S1:197:ILE:HG21	1.80	0.63
48:SD:150:ALA:O	48:SD:154:LEU:HG	1.98	0.63
51:SH:10:LYS:NZ	51:SH:47:ALA:HA	2.13	0.63
62:ST:10:GLN:CB	62:ST:13:LEU:HG	2.27	0.63
64:SV:43:THR:CG2	64:SV:45:ARG:NE	2.62	0.63
79:S2:29:G:H2'	79:S2:30:C:C6	2.34	0.63
79:S2:1727:G:O2'	79:S2:1728:U:H5'	1.98	0.63
2:L5:4108:G:H2'	2:L5:4109:G:H8	1.62	0.63
26:LY:25:LYS:HB3	85:LY:312:HOH:O	1.97	0.63
36:Li:80:HIS:O	36:Li:84:LYS:HG3	1.99	0.63
50:SG:172:LYS:HD2	79:S2:65:C:H4'	1.80	0.63
52:SI:56:ARG:NH1	79:S2:379:C:H5"	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SI:110:ARG:HG2	52:SI:121:LEU:HB3	1.81	0.63
54:SK:7:LYS:HE2	68:SZ:113:GLU:OE2	1.98	0.63
56:SM:49:MET:HA	56:SM:49:MET:HE3	1.79	0.63
67:SY:7:ILE:HD12	67:SY:27:VAL:HG22	1.79	0.63
72:Sd:50:VAL:HA	85:Sd:101:HOH:O	1.97	0.63
79:S2:894:G:H2'	79:S2:895:G:H5'	1.80	0.63
79:S2:1272:C:O2'	79:S2:1273:C:H5'	1.98	0.63
79:S2:1282:A:H3'	79:S2:1283:C:H6	1.62	0.63
2:L5:1826:G:H5'	29:Lb:43:MET:HE2	1.79	0.63
2:L5:2256:C:O2'	2:L5:2257:C:H5'	1.98	0.63
2:L5:2562:G:N2	2:L5:2565:A:OP2	2.32	0.63
10:LG:111:LYS:O	10:LG:115:LEU:HG	1.98	0.63
38:Lk:51:GLU:HG2	38:Lk:52:LYS:N	2.13	0.63
53:SJ:111:GLN:NE2	53:SJ:123:ILE:HG13	2.10	0.63
59:SP:60:LEU:CD1	59:SP:89:MET:HE3	2.29	0.63
68:SZ:50:VAL:CG2	68:SZ:91:LEU:HG	2.19	0.63
73:Se:95:LYS:NZ	79:S2:635:G:OP1	2.26	0.63
75:Sg:132:TRP:HD1	75:Sg:138:CYS:HA	1.64	0.63
79:S2:1571:G:O2'	79:S2:1572:C:H5'	1.99	0.63
2:L5:1418:C:O2'	2:L5:1419:G:H5'	1.98	0.63
2:L5:1812:C:H5"	29:Lb:56:LYS:HD2	1.78	0.63
2:L5:3630:A:N3	85:L5:5488:HOH:O	2.30	0.63
34:Lg:93:ARG:HG2	34:Lg:97:ILE:HD12	1.81	0.63
50:SG:132:ARG:O	50:SG:133:LEU:HD23	1.99	0.63
57:SN:42:LYS:HE3	57:SN:80:LEU:HD11	1.81	0.63
62:ST:37:GLY:N	79:S2:1630:A:H5'	2.14	0.63
68:SZ:97:ILE:O	68:SZ:101:ILE:HG13	1.99	0.63
75:Sg:59:LEU:CD2	75:Sg:95:GLY:HA2	2.28	0.63
77:Sy:69:CYS:SG	77:Sy:76:LEU:HB2	2.39	0.63
79:S2:71:G:H2'	79:S2:72:C:H4'	1.79	0.63
79:S2:512:A2M:HM'2	85:S2:2791:HOH:O	1.99	0.63
79:S2:590:A2M:HM'2	79:S2:590:A2M:O3'	1.99	0.63
2:L5:699:C:O2'	2:L5:968:C:N3	2.30	0.63
2:L5:1697:G:O2'	2:L5:1698:C:H5'	1.99	0.63
5:LB:216:MET:CG	5:LB:281:ASN:HA	2.27	0.63
8:LE:112:ASP:OD1	8:LE:115:ARG:HG2	1.99	0.63
26:LY:185:VAL:O	26:LY:189:ILE:HG12	1.99	0.63
62:ST:35:GLY:N	79:S2:1631:U:OP1	2.25	0.63
72:Sd:20:ARG:HD2	72:Sd:28:THR:HG23	1.80	0.63
77:Sy:94:ILE:HB	77:Sy:100:PRO:HB3	1.79	0.63
79:S2:73:C:H4'	79:S2:74:G:OP1	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1491:G:H2'	79:S2:1492:U:C6	2.34	0.63
2:L5:658:C:O2'	2:L5:659:G:H5'	1.99	0.63
2:L5:1440:U:C2'	2:L5:1441:C:O5'	2.47	0.63
2:L5:2631:U:H1'	40:Lm:82:TYR:CD1	2.33	0.63
14:LK:69:TYR:CE2	14:LK:70:LYS:HG3	2.34	0.63
35:Lh:42:ARG:HE	35:Lh:159:LYS:HB3	1.63	0.63
45:S1:57:ILE:HG22	45:S1:59:SER:H	1.63	0.63
49:SE:127:ARG:CG	49:SE:142:HIS:HA	2.29	0.63
65:SW:8:ALA:HB2	65:SW:74:VAL:HG21	1.80	0.63
70:Sb:42:LYS:HG3	70:Sb:58:GLY:H	1.64	0.63
79:S2:71:G:N3	79:S2:72:C:H1'	2.14	0.63
79:S2:73:C:H1'	79:S2:74:G:H5'	1.80	0.63
2:L5:1756:U:O2'	2:L5:1757:U:H5'	1.98	0.62
2:L5:4740:G:H5"	2:L5:4742:G:OP2	1.98	0.62
12:LI:5:ARG:HH12	12:LI:9:LYS:NZ	1.97	0.62
51:SH:166:VAL:HG23	51:SH:189:PHE:HZ	1.64	0.62
68:SZ:49:LYS:HE3	68:SZ:92:HIS:ND1	2.14	0.62
68:SZ:100:GLN:O	68:SZ:104:ILE:HG13	1.99	0.62
77:Sy:61:TYR:HE2	77:Sy:107:SER:HG	1.46	0.62
79:S2:886:A:H2'	79:S2:887:U:O4'	1.99	0.62
2:L5:2744:A:H2'	2:L5:2745:A:C8	2.34	0.62
2:L5:4070:U:H2'	2:L5:4071:U:H6	1.61	0.62
14:LK:98:GLY:HA3	14:LK:101:ASN:HB2	1.81	0.62
27:LZ:120:GLU:O	27:LZ:124:THR:HG23	1.99	0.62
44:Lz:93:PRO:HA	44:Lz:127:ALA:HB2	1.79	0.62
48:SD:96:ALA:CB	48:SD:173:LEU:HD23	2.29	0.62
53:SJ:22:LYS:HE3	53:SJ:26:ASP:OD1	1.97	0.62
2:L5:4887:C:H2'	2:L5:4888:U:O4'	1.98	0.62
48:SD:109:LEU:O	48:SD:113:VAL:HG23	1.99	0.62
49:SE:173:ILE:HD11	49:SE:235:TRP:CE3	2.35	0.62
51:SH:31:GLU:CG	51:SH:40:LEU:HB2	2.29	0.62
51:SH:69:LEU:HD12	51:SH:96:ALA:CB	2.24	0.62
53:SJ:67:ASP:HB3	53:SJ:70:ARG:HB3	1.80	0.62
75:Sg:112:ALA:HB3	75:Sg:121:VAL:CG1	2.28	0.62
75:Sg:191:HIS:CE1	75:Sg:217:MET:HE2	2.34	0.62
79:S2:469:A:H2'	79:S2:470:G:H5"	1.79	0.62
79:S2:1220:A:N3	79:S2:1677:U:O2'	2.23	0.62
79:S2:1554:C:H3'	79:S2:1555:U:C6	2.34	0.62
2:L5:963:G:H2'	2:L5:964:A:C4	2.34	0.62
2:L5:3910:C:H2'	2:L5:3911:C:H6	1.64	0.62
14:LK:222:LEU:HB3	14:LK:238:GLU:HB3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:SD:164:ARG:NH1	79:S2:1533:A:OP2	2.28	0.62
50:SG:74:ARG:NH2	85:SG:302:HOH:O	2.32	0.62
50:SG:200:LYS:O	50:SG:204:GLU:HG2	1.99	0.62
56:SM:71:LEU:HD21	56:SM:79:LEU:HD12	1.81	0.62
67:SY:63:HIS:HE1	67:SY:68:LYS:HE3	1.63	0.62
68:SZ:22:ILE:HG22	68:SZ:24:LEU:CD1	2.30	0.62
75:Sg:195:LEU:HA	75:Sg:211:GLY:HA3	1.81	0.62
79:S2:1440:C:O2'	79:S2:1441:U:H5'	2.00	0.62
79:S2:1744:G:H4'	85:S2:3240:HOH:O	1.99	0.62
2:L5:43:U:H2'	2:L5:44:A:H5'	1.81	0.62
2:L5:121:A:H5"	2:L5:122:U:OP2	2.00	0.62
2:L5:1296:G:H2'	2:L5:1297:U:O4'	1.99	0.62
2:L5:2415:OMU:HM22	2:L5:2416:G:C4'	2.29	0.62
2:L5:2539:C:H2'	2:L5:2540:C:C6	2.33	0.62
10:LG:210:GLU:OE1	10:LG:210:GLU:N	2.24	0.62
62:ST:34:LYS:HG2	62:ST:103:LEU:CD1	2.29	0.62
77:Sy:20:GLU:O	77:Sy:24:THR:HG23	1.99	0.62
2:L5:457:G:H2'	2:L5:458:C:H6	1.62	0.62
2:L5:2351:OMC:HM23	6:LC:95:MET:HG3	1.81	0.62
2:L5:3760:A2M:N1	79:S2:1825:A:H3'	2.14	0.62
11:LH:96:TYR:HA	11:LH:177:ASP:OD1	1.99	0.62
40:Lm:75:GLU:OE1	40:Lm:75:GLU:N	2.32	0.62
75:Sg:197:THR:HG23	75:Sg:239:LEU:HD12	1.80	0.62
75:Sg:270:LEU:HD23	75:Sg:310:TRP:CG	2.34	0.62
79:S2:191:A:C2	79:S2:209:A:H1'	2.34	0.62
79:S2:469:A:C2'	79:S2:470:G:H5"	2.29	0.62
79:S2:530:U:H2'	79:S2:531:A:C8	2.32	0.62
79:S2:1487:A:O2'	79:S2:1488:C:H5'	1.99	0.62
2:L5:719:C:O2'	2:L5:720:G:H5'	2.00	0.62
2:L5:2476:G:O2'	2:L5:2477:A:H5'	1.99	0.62
8:LE:37:GLU:H	8:LE:37:GLU:CD	2.07	0.62
11:LH:129:ARG:NE	11:LH:156:ASN:OD1	2.30	0.62
47:SC:227:ARG:HD2	79:S2:1154:U:O4	2.00	0.62
48:SD:72:LEU:O	48:SD:76:MET:HG2	1.99	0.62
49:SE:2:ALA:HB1	79:S2:93:PSU:OP1	2.00	0.62
54:SK:121:GLY:HA2	54:SK:124:ARG:HH12	1.63	0.62
75:Sg:101:PHE:CE1	75:Sg:136:GLY:HA2	2.34	0.62
79:S2:1471:C:H2'	79:S2:1472:C:C6	2.34	0.62
79:S2:1473:G:N2	79:S2:1475:G:H3'	2.15	0.62
2:L5:4885:U:H3'	2:L5:4886:C:H5"	1.80	0.62
68:SZ:48:LEU:CD1	68:SZ:97:ILE:HG21	2.25	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1255:G:OP1	79:S2:1256:G:O2'	2.10	0.62
79:S2:1828:C:H2'	79:S2:1829:G:O4'	1.99	0.62
2:L5:1086:C:O2'	2:L5:1087:A:H5'	2.00	0.62
2:L5:1842:G:OP1	9:LF:164:LYS:NZ	2.33	0.62
2:L5:4734:A:H2'	2:L5:4735:G:H8	1.65	0.62
22:LT:111:GLU:O	22:LT:115:LYS:HG3	1.99	0.62
27:LZ:96:VAL:HG23	27:LZ:96:VAL:O	1.99	0.62
35:Lh:6:LEU:HD12	35:Lh:116:HIS:ND1	2.14	0.62
59:SP:18:ARG:N	62:ST:90:VAL:O	2.31	0.62
61:SS:66:VAL:CG1	61:SS:69:ILE:HD12	2.29	0.62
66:SX:115:ILE:HB	66:SX:118:VAL:HG12	1.81	0.62
79:S2:1588:A:H2'	79:S2:1589:A:C8	2.35	0.62
79:S2:1712:A:H2'	79:S2:1713:C:C6	2.35	0.62
1:L1:156:U:H3	2:L5:1:C:N4	1.98	0.62
2:L5:1308:C:H2'	2:L5:1309:C:C6	2.34	0.62
2:L5:3793:U:H2'	2:L5:3794:C:C6	2.34	0.62
2:L5:3793:U:H2'	2:L5:3794:C:H6	1.65	0.62
14:LK:245:GLN:O	14:LK:248:ILE:HG12	2.00	0.62
62:ST:25:LYS:HD2	62:ST:55:ARG:HD3	1.82	0.62
65:SW:2:VAL:N	79:S2:1091:C:HO2'	1.98	0.62
79:S2:1613:G:H1'	85:S2:2218:HOH:O	1.99	0.62
79:S2:1653:U:H2'	79:S2:1654:G:C8	2.34	0.62
2:L5:759:G:H3'	2:L5:904:C:N4	2.13	0.61
2:L5:921:C:H2'	2:L5:922:C:H6	1.65	0.61
2:L5:1439:C:H42	2:L5:2105:A:H61	1.47	0.61
2:L5:2474:G:N2	2:L5:2502:G:H2'	2.14	0.61
2:L5:2784:C:H5'	85:L5:6460:HOH:O	2.00	0.61
2:L5:4694:G:H2'	2:L5:4694:G:N3	2.15	0.61
2:L5:5026:U:H4'	2:L5:5027:C:C5'	2.30	0.61
17:LO:5:LYS:HG2	17:LO:7:ARG:CZ	2.30	0.61
52:SI:135:GLU:O	52:SI:139:LYS:HB3	2.00	0.61
79:S2:601:OMG:HM22	79:S2:602:G:O4'	2.00	0.61
79:S2:867:OMG:O2'	79:S2:868:G:H5'	2.00	0.61
79:S2:1019:C:O2'	79:S2:1020:A:H5'	2.00	0.61
1:L1:62:A:H4'	1:L1:63:U:O5'	2.00	0.61
2:L5:1202:C:H3'	2:L5:1203:G:H4'	1.82	0.61
2:L5:1400:G:H2'	2:L5:1401:C:H6	1.65	0.61
2:L5:1444:G:H2'	2:L5:1445:U:C6	2.36	0.61
2:L5:1604:G:H2'	2:L5:1605:G:C8	2.34	0.61
2:L5:1807:C:O2'	2:L5:1808:C:H5'	2.00	0.61
4:L9:9:C:OP1	22:LT:26:PRO:HB2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:LB:294:LYS:HB3	5:LB:299:ILE:HD11	1.81	0.61
46:SA:206:ASP:CG	46:SA:207:PRO:HD2	2.25	0.61
48:SD:144:LEU:HD23	72:Sd:49:PRO:CG	2.26	0.61
50:SG:223:LYS:O	50:SG:227:GLN:HG3	2.00	0.61
75:Sg:17:TRP:CE2	75:Sg:303:THR:HG23	2.35	0.61
79:S2:17:C:O2'	79:S2:1194:A:N1	2.28	0.61
79:S2:72:C:H41	79:S2:74:G:H21	1.47	0.61
79:S2:1260:A:C2'	79:S2:1261:C:H5'	2.31	0.61
79:S2:1554:C:O5'	79:S2:1555:U:H2'	1.99	0.61
2:L5:1703:C:O2'	9:LF:43:ARG:NH2	2.33	0.61
2:L5:4131:G:O2'	2:L5:4132:C:H5'	2.00	0.61
20:LR:173:ARG:HA	20:LR:176:ARG:NH2	2.16	0.61
40:Lm:47:ILE:HD11	40:Lm:78:PHE:CE2	2.35	0.61
60:SQ:102:GLU:HB2	75:Sg:55:PRO:O	2.00	0.61
62:ST:38:ARG:NH2	79:S2:1603:G:H4'	2.15	0.61
63:SU:116:ASP:HB3	63:SU:119:GLY:O	1.99	0.61
71:Sc:33:LYS:HD2	71:Sc:34:LYS:H	1.64	0.61
77:Sy:33:ARG:N	77:Sy:37:GLU:OE1	2.33	0.61
79:S2:102:A:H4'	79:S2:104:A:C8	2.35	0.61
79:S2:195:C:H2'	79:S2:196:C:C6	2.35	0.61
40:Lm:24:ASP:HB2	40:Lm:69:LYS:HZ2	1.65	0.61
49:SE:102:ILE:HD12	49:SE:239:PRO:HD3	1.81	0.61
50:SG:7:PHE:CE1	50:SG:9:ALA:HB3	2.29	0.61
50:SG:149:LYS:NZ	79:S2:143:U:OP2	2.32	0.61
79:S2:1410:C:H2'	79:S2:1411:G:H8	1.64	0.61
2:L5:1333:A:H2'	2:L5:1334:A:C8	2.35	0.61
2:L5:4881:U:H5'	2:L5:4882:U:OP1	2.00	0.61
49:SE:102:ILE:CD1	49:SE:239:PRO:HD3	2.30	0.61
49:SE:105:THR:CG2	49:SE:245:ARG:HA	2.28	0.61
53:SJ:47:LYS:HG3	53:SJ:102:ILE:HD12	1.82	0.61
54:SK:76:ARG:HD3	56:SM:66:HIS:CD2	2.36	0.61
71:Sc:58:LEU:HD12	71:Sc:62:VAL:HG21	1.82	0.61
51:SH:15:LYS:HD3	51:SH:16:PRO:N	2.15	0.61
67:SY:45:ALA:HB1	67:SY:50:THR:O	1.99	0.61
75:Sg:217:MET:HE3	75:Sg:219:TRP:HZ2	1.66	0.61
79:S2:886:A:C2	79:S2:887:U:H1'	2.36	0.61
79:S2:1285:G:H3'	79:S2:1286:G:H5'	1.82	0.61
79:S2:1409:A:H2'	79:S2:1410:C:C6	2.35	0.61
2:L5:1075:G:H2'	2:L5:1076:C:H6	1.64	0.61
2:L5:1186:U:H2'	2:L5:1187:G:N3	2.15	0.61
10:LG:190:LEU:O	10:LG:193:LEU:HG	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LH:34:LEU:HD12	11:LH:84:VAL:HG13	1.80	0.61
30:Lc:47:ILE:HD12	30:Lc:94:LEU:HD11	1.83	0.61
53:SJ:61:LEU:HG	53:SJ:94:LEU:HD23	1.83	0.61
55:SL:91:ASP:HB3	55:SL:104:LYS:HE2	1.83	0.61
60:SQ:100:VAL:HG12	60:SQ:104:SER:HB2	1.82	0.61
73:Se:99:LYS:HD3	79:S2:554:A:C1'	2.30	0.61
75:Sg:44:LYS:HB2	75:Sg:56:GLN:OE1	2.00	0.61
75:Sg:124:SER:HB3	75:Sg:126:ASP:OD1	1.99	0.61
75:Sg:217:MET:HG2	75:Sg:229:THR:HG23	1.83	0.61
79:S2:115:U:H2'	79:S2:116:OMU:C6	2.31	0.61
79:S2:186:C:H2'	79:S2:187:G:C8	2.34	0.61
2:L5:686:A:H4'	14:LK:97:GLY:O	2.01	0.61
2:L5:1077:C:C2'	2:L5:1078:A:H5"	2.29	0.61
2:L5:1439:C:H42	2:L5:2105:A:N6	1.98	0.61
2:L5:1672:U:H2'	2:L5:1673:U:C6	2.36	0.61
2:L5:4572:U:C2'	2:L5:4573:G:H5"	2.28	0.61
5:LB:317:LEU:HD11	5:LB:382:MET:CG	2.30	0.61
10:LG:207:VAL:CG1	10:LG:211:ASP:HB2	2.30	0.61
22:LT:102:ARG:O	22:LT:106:LEU:HG	2.01	0.61
38:Lk:8:ILE:HG12	38:Lk:45:LEU:HD21	1.83	0.61
40:Lm:21:PHE:HD1	40:Lm:108:GLU:HA	1.65	0.61
49:SE:128:LYS:HB3	49:SE:140:VAL:HB	1.82	0.61
50:SG:142:ARG:CB	50:SG:147:LEU:HB2	2.30	0.61
61:SS:98:VAL:HG13	61:SS:102:THR:HB	1.83	0.61
65:SW:26:LEU:HB2	70:Sb:7:LEU:HD23	1.81	0.61
79:S2:198:U:H5'	79:S2:199:C:OP2	2.01	0.61
79:S2:876:C:O2'	79:S2:877:C:H5'	2.01	0.61
1:L1:82:A:H4'	1:L1:86:U:C5'	2.30	0.61
2:L5:741:C:H2'	2:L5:742:G:C1'	2.31	0.61
3:L8:277:LYS:O	3:L8:280:VAL:HG12	2.01	0.61
5:LB:18:PRO:HG2	5:LB:20:LYS:HD2	1.83	0.61
13:LJ:84:GLU:HG2	13:LJ:88:LYS:HE3	1.83	0.61
49:SE:106:LYS:NZ	79:S2:846:G:OP1	2.31	0.61
62:ST:60:THR:O	62:ST:64:VAL:HG23	2.01	0.61
79:S2:158:A:H2'	79:S2:159:A2M:H8	1.82	0.61
79:S2:469:A:H2'	79:S2:470:G:C5'	2.30	0.61
79:S2:880:G:H2'	79:S2:881:G:C8	2.36	0.61
2:L5:497:G:H2'	2:L5:498:C:C5'	2.29	0.61
2:L5:3600:G:H2'	2:L5:3601:C:C6	2.36	0.61
2:L5:5056:A:N3	85:L5:5509:HOH:O	2.32	0.61
14:LK:43:HIS:CE1	14:LK:46:ARG:HD2	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S1:198:GLU:O	45:S1:202:GLN:HG2	2.00	0.61
60:SQ:97:GLN:OE1	75:Sg:60:ARG:NE	2.34	0.61
63:SU:31:PRO:HB3	63:SU:102:ARG:HH11	1.66	0.61
79:S2:609:PSU:H2'	79:S2:610:G:H8	1.65	0.61
79:S2:907:G:O2'	79:S2:908:A:H5'	2.01	0.61
2:L5:1702:C:H2'	2:L5:1703:C:O4'	2.00	0.60
2:L5:4926:C:H2'	2:L5:4927:G:O4'	2.01	0.60
51:SH:166:VAL:HG23	51:SH:189:PHE:CZ	2.35	0.60
54:SK:62:LYS:HG3	54:SK:62:LYS:O	1.99	0.60
55:SL:61:PRO:HD3	55:SL:141:ASN:ND2	2.16	0.60
79:S2:90:G:N2	85:S2:2109:HOH:O	2.23	0.60
79:S2:1280:G:H2'	79:S2:1281:G:O4'	2.01	0.60
79:S2:1305:C:H2'	79:S2:1306:U:H6	1.66	0.60
2:L5:1272:C:H2'	29:Lb:117:ARG:CD	2.30	0.60
2:L5:1705:G:H2'	2:L5:1706:A:O4'	2.01	0.60
2:L5:2714:G:O2'	2:L5:2715:G:H5'	2.01	0.60
2:L5:3722:G:H2'	2:L5:3723:A:C8	2.36	0.60
62:ST:86:ARG:NH1	79:S2:1611:G:H4'	2.16	0.60
75:Sg:14:HIS:ND1	75:Sg:37:ASP:OD2	2.31	0.60
79:S2:55:U:H4'	79:S2:56:G:OP1	2.02	0.60
79:S2:883:U:H5"	79:S2:884:C:OP1	2.01	0.60
79:S2:897:U:H5'	79:S2:898:U:OP2	2.01	0.60
79:S2:1335:G:O2'	79:S2:1336:C:H5'	2.01	0.60
79:S2:1407:U:H2'	79:S2:1408:U:H6	1.65	0.60
79:S2:1538:C:H2'	79:S2:1539:U:H6	1.64	0.60
2:L5:4648:A:O2'	2:L5:4649:G:H5'	2.00	0.60
5:LB:142:GLY:O	5:LB:146:LEU:HD13	2.02	0.60
51:SH:10:LYS:HE3	51:SH:20:GLU:CG	2.31	0.60
52:SI:100:CYS:SG	52:SI:175:ILE:HD12	2.41	0.60
59:SP:58:LYS:HA	59:SP:61:ARG:NH1	2.15	0.60
66:SX:87:ASN:HA	85:SX:305:HOH:O	2.01	0.60
75:Sg:79:LEU:HD22	75:Sg:120:ILE:HD13	1.83	0.60
75:Sg:104:HIS:CG	75:Sg:124:SER:HB2	2.36	0.60
78:Sz:103:LEU:HD11	78:Sz:106:TYR:CE2	2.37	0.60
79:S2:323:C:H4'	79:S2:324:C:C5	2.37	0.60
79:S2:1438:A:H2'	79:S2:1439:A:C8	2.36	0.60
2:L5:218:A:O2'	6:LC:172:LYS:HD3	2.02	0.60
19:LQ:194:ILE:O	19:LQ:198:ARG:HG2	2.01	0.60
21:LS:130:GLU:HG3	21:LS:132:ILE:HD11	1.82	0.60
48:SD:121:PRO:O	48:SD:146:ARG:HG2	2.01	0.60
50:SG:142:ARG:HB2	50:SG:147:LEU:HB2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SI:54:LYS:HD3	52:SI:181:GLN:OE1	2.02	0.60
60:SQ:11:GLN:HG2	60:SQ:24:HIS:HB2	1.84	0.60
77:Sy:120:ALA:O	77:Sy:124:ILE:HG23	2.02	0.60
79:S2:176:U:O2'	79:S2:177:G:H5'	2.00	0.60
79:S2:925:G:H1	79:S2:1017:U:H3	1.49	0.60
79:S2:1470:C:C2'	79:S2:1471:C:H5'	2.31	0.60
2:L5:919:C:H2'	2:L5:920:C:C6	2.36	0.60
2:L5:1093:C:H2'	2:L5:1094:G:C8	2.37	0.60
2:L5:1942:A:H2'	2:L5:1943:A:C8	2.36	0.60
2:L5:2095:A:O2'	9:LF:28:LEU:HD21	2.01	0.60
2:L5:3710:G:N3	2:L5:3711:A:N6	2.49	0.60
11:LH:27:VAL:HG23	11:LH:80:MET:HE2	1.84	0.60
17:LO:88:THR:O	17:LO:92:ARG:HG3	2.02	0.60
26:LY:32:LYS:CE	26:LY:101:ARG:HG2	2.30	0.60
27:LZ:92:ASP:O	27:LZ:96:VAL:HG22	2.00	0.60
51:SH:11:PRO:HD2	51:SH:44:ASN:HD22	1.66	0.60
55:SL:150:GLY:HA3	57:SN:133:ARG:NH1	2.17	0.60
77:Sy:86:GLY:HA2	77:Sy:89:VAL:HG22	1.83	0.60
2:L5:2478:C:N3	2:L5:2591:A:O2'	2.34	0.60
2:L5:2602:G:H2'	2:L5:2603:C:C6	2.35	0.60
2:L5:3664:G:H2'	2:L5:3665:G:H8	1.66	0.60
9:LF:182:TYR:CZ	9:LF:203:GLU:HG2	2.35	0.60
9:LF:220:MET:HE2	9:LF:232:ASP:OD2	2.01	0.60
61:SS:73:LEU:HD12	61:SS:74:GLN:N	2.16	0.60
79:S2:612:U:O2'	79:S2:613:G:H5'	2.01	0.60
79:S2:947:G:O2'	79:S2:948:C:H5'	2.01	0.60
79:S2:1516:G:O2'	79:S2:1517:G:H5'	2.01	0.60
79:S2:1733:U:H2'	79:S2:1734:G:O4'	2.01	0.60
79:S2:1785:C:H2'	79:S2:1786:U:O4'	2.01	0.60
2:L5:951:G:N7	85:L5:5512:HOH:O	2.32	0.60
10:LG:100:HIS:O	10:LG:103:ARG:HG3	2.02	0.60
49:SE:184:THR:C	49:SE:189:LEU:HD13	2.25	0.60
62:ST:134:GLN:HG2	85:S2:2144:HOH:O	2.00	0.60
77:Sy:53:ALA:HB3	77:Sy:56:CYS:SG	2.41	0.60
79:S2:837:A:H1'	79:S2:838:G:C5	2.37	0.60
2:L5:740:G:H2'	2:L5:741:C:C6	2.37	0.60
2:L5:962:C:H5"	2:L5:963:G:N7	2.17	0.60
2:L5:987:C:H2'	2:L5:988:C:C1'	2.32	0.60
2:L5:4438:U:H2'	2:L5:4439:U:O4'	2.00	0.60
85:L5:9037:HOH:O	14:LK:139:LYS:HE2	2.02	0.60
44:Lz:76:MET:HE3	44:Lz:138:ILE:HG21	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:SA:198:MET:HG2	46:SA:200:ASP:H	1.67	0.60
54:SK:54:ARG:O	54:SK:58:VAL:HG23	2.02	0.60
65:SW:85:ASP:HA	65:SW:88:LYS:NZ	2.17	0.60
66:SX:29:LYS:HZ3	66:SX:35:ALA:HB1	1.66	0.60
68:SZ:42:GLY:O	68:SZ:46:LYS:HG2	2.00	0.60
69:Sa:12:LYS:HA	85:Sa:319:HOH:O	2.01	0.60
79:S2:553:U:H3'	79:S2:555:A:H4'	1.84	0.60
2:L5:967:C:H4'	2:L5:969:C:OP1	2.02	0.60
2:L5:1252:C:O5'	2:L5:1252:C:H6	1.85	0.60
19:LQ:182:LEU:HD23	36:Li:7:MET:CE	2.30	0.60
50:SG:7:PHE:CD2	50:SG:113:ILE:HG21	2.37	0.60
79:S2:1536:G:H2'	79:S2:1537:A:H8	1.64	0.60
79:S2:1554:C:OP2	79:S2:1555:U:O2'	2.18	0.60
79:S2:1801:A:H2'	79:S2:1802:C:H6	1.65	0.60
2:L5:483:G:H4'	2:L5:484:U:C5'	2.32	0.60
2:L5:759:G:C3'	2:L5:904:C:H42	2.15	0.60
2:L5:965:G:N2	2:L5:2092:G:H1'	2.17	0.60
2:L5:4076:G:OP1	10:LG:73:ARG:NE	2.20	0.60
2:L5:4348:A:H5"	2:L5:4349:C:OP2	2.01	0.60
4:L9:28:C:C2'	4:L9:29:C:H5'	2.31	0.60
6:LC:312:ARG:NH2	85:LC:603:HOH:O	2.34	0.60
13:LJ:111:GLU:HG3	13:LJ:125:ILE:CG2	2.32	0.60
47:SC:172:ASN:CB	47:SC:174:ILE:HD11	2.31	0.60
50:SG:224:ARG:O	50:SG:228:ILE:HG13	2.02	0.60
63:SU:51:ASN:HB3	63:SU:54:TYR:CD2	2.37	0.60
75:Sg:269:GLU:OE2	75:Sg:271:LYS:HD3	2.01	0.60
77:Sy:31:LEU:HD12	77:Sy:33:ARG:HG3	1.83	0.60
79:S2:1164:G:C2'	79:S2:1165:G:H5'	2.30	0.60
79:S2:1819:A:H5"	85:S2:3082:HOH:O	2.01	0.60
2:L5:162:A:O2'	2:L5:163:A:H5'	2.02	0.59
2:L5:2906:G:C2'	2:L5:2908:U:H1'	2.15	0.59
2:L5:3873:G:H2'	2:L5:3874:G:C8	2.36	0.59
17:LO:4:ILE:HD11	17:LO:53:SER:HB3	1.84	0.59
20:LR:3:MET:CE	20:LR:5:ARG:HG3	2.32	0.59
49:SE:148:ARG:NH2	50:SG:205:GLU:OE1	2.34	0.59
54:SK:48:ILE:HB	54:SK:86:LEU:HD23	1.84	0.59
54:SK:218:LEU:HD22	75:Sg:192:THR:HB	1.83	0.59
60:SQ:57:LEU:HD21	60:SQ:115:TYR:CD1	2.37	0.59
63:SU:113:VAL:HG22	63:SU:123:LEU:HD23	1.84	0.59
66:SX:115:ILE:HG21	66:SX:118:VAL:HG11	1.83	0.59
71:Sc:87:ALA:O	71:Sc:90:GLU:HG2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1563:G:H2'	79:S2:1564:C:H6	1.66	0.59
2:L5:163:A:H2'	2:L5:164:G:H8	1.67	0.59
2:L5:465:G:HO2'	2:L5:466:A:P	2.25	0.59
2:L5:1181:C:O2	2:L5:1181:C:H2'	2.01	0.59
2:L5:1920:C:C3'	2:L5:1921:C:H5"	2.31	0.59
2:L5:2809:G:O2'	2:L5:4644:G:OP1	2.16	0.59
2:L5:4749:C:H2'	2:L5:4750:G:O4'	2.03	0.59
47:SC:125:LYS:HG3	47:SC:143:CYS:SG	2.42	0.59
49:SE:27:PHE:O	79:S2:495:U:O2'	2.19	0.59
50:SG:85:ARG:O	50:SG:87:ARG:NH1	2.36	0.59
55:SL:91:ASP:OD1	55:SL:104:LYS:NZ	2.26	0.59
66:SX:108:LYS:HD2	79:S2:650:A:OP2	2.02	0.59
68:SZ:25:THR:CG2	68:SZ:86:LYS:HG3	2.27	0.59
77:Sy:24:THR:OG1	77:Sy:116:LYS:HD2	2.02	0.59
79:S2:1638:G:H5"	79:S2:1639:7MG:OP1	2.02	0.59
1:L1:128:C:H2'	1:L1:129:C:C6	2.37	0.59
2:L5:1069:G:O6	14:LK:43:HIS:NE2	2.36	0.59
2:L5:1235:G:H2'	2:L5:1236:C:C6	2.36	0.59
2:L5:1479:G:H2'	2:L5:1480:C:C6	2.37	0.59
2:L5:3722:G:H2'	2:L5:3723:A:H8	1.67	0.59
2:L5:3762:PSU:H2'	2:L5:3763:A:O4'	2.02	0.59
2:L5:4113:U:H2'	2:L5:4114:C:H6	1.60	0.59
2:L5:5026:U:OP2	2:L5:5026:U:H6	1.86	0.59
51:SH:137:SER:HA	51:SH:162:GLN:HE21	1.65	0.59
51:SH:194:LEU:HD23	70:Sb:27:SER:HB2	1.83	0.59
75:Sg:98:THR:HG22	75:Sg:99:ARG:HG3	1.84	0.59
79:S2:875:A:H2'	79:S2:876:C:H6	1.67	0.59
79:S2:902:G:O2'	79:S2:903:A:N3	2.28	0.59
79:S2:1801:A:H2'	79:S2:1802:C:C6	2.37	0.59
2:L5:982:U:H2'	2:L5:983:C:C6	2.37	0.59
2:L5:1459:A:OP1	37:Lj:65:ARG:NH1	2.36	0.59
2:L5:1706:A:C2	2:L5:1707:C:H5	2.21	0.59
3:L8:157:ASN:OD1	3:L8:159:VAL:HG22	2.01	0.59
21:LS:99:ASP:OD2	21:LS:108:GLN:NE2	2.35	0.59
44:Lz:181:PHE:O	44:Lz:185:VAL:HG23	2.02	0.59
50:SG:193:ALA:O	50:SG:197:GLN:HG3	2.02	0.59
51:SH:9:VAL:O	51:SH:9:VAL:HG12	2.02	0.59
63:SU:62:ARG:HH21	79:S2:1542:C:P	2.25	0.59
67:SY:27:VAL:HB	67:SY:69:THR:HG23	1.85	0.59
74:Sf:32:ARG:HB2	79:S2:1659:U:OP1	2.02	0.59
75:Sg:191:HIS:CD2	75:Sg:195:LEU:HD11	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Sy:116:LYS:HD3	77:Sy:119:GLN:HB2	1.85	0.59
77:Sy:123:VAL:O	77:Sy:126:GLU:HG2	2.02	0.59
2:L5:1273:G:H2'	2:L5:1274:A:O4'	2.03	0.59
2:L5:2098:G:HO2'	2:L5:2099:G:H8	1.50	0.59
10:LG:208:ASN:HB3	10:LG:210:GLU:OE1	2.02	0.59
13:LJ:51:SER:OG	13:LJ:69:ALA:HB3	2.02	0.59
47:SC:172:ASN:O	47:SC:174:ILE:HG12	2.01	0.59
60:SQ:96:TYR:CD2	60:SQ:100:VAL:HG11	2.38	0.59
2:L5:757:G:H2'	2:L5:758:G:C8	2.38	0.59
2:L5:984:C:H2'	2:L5:985:C:H6	1.68	0.59
2:L5:1250:C:C2'	2:L5:1251:C:H5'	2.33	0.59
2:L5:1446:C:H2'	2:L5:1447:C:O4'	2.02	0.59
2:L5:2722:G:O2'	2:L5:2723:U:H5'	2.02	0.59
14:LK:93:THR:CG2	14:LK:106:VAL:HG22	2.30	0.59
30:Lc:36:LYS:O	30:Lc:40:GLN:HG2	2.01	0.59
39:Ll:90:LEU:HD22	39:Ll:111:ILE:HG23	1.83	0.59
55:SL:76:VAL:HG22	55:SL:125:ILE:HD13	1.85	0.59
67:SY:15:ASN:ND2	67:SY:18:LEU:HB2	2.17	0.59
71:Sc:68:ILE:HB	71:Sc:109:TYR:CB	2.25	0.59
79:S2:158:A:C2'	79:S2:159:A2M:H5'	2.31	0.59
79:S2:1330:G:O6	79:S2:1493:C:H5'	2.01	0.59
2:L5:1267:C:C2'	2:L5:1268:G:H5'	2.33	0.59
11:LH:52:LYS:CD	11:LH:54:ARG:HD3	2.32	0.59
20:LR:3:MET:HE3	20:LR:5:ARG:HG3	1.84	0.59
50:SG:4:ASN:HB3	50:SG:110:ASN:OD1	2.02	0.59
50:SG:142:ARG:CA	50:SG:147:LEU:HB2	2.32	0.59
53:SJ:132:GLN:HB3	79:S2:562:U:H4'	1.84	0.59
54:SK:23:GLU:HG2	56:SM:64:TRP:HE1	1.67	0.59
55:SL:49:GLU:HG2	55:SL:116:CYS:O	2.01	0.59
61:SS:77:GLU:HB3	61:SS:81:ARG:NH1	2.18	0.59
68:SZ:20:ILE:CD1	68:SZ:98:VAL:HG21	2.29	0.59
79:S2:109:PSU:OP1	79:S2:809:A:O2'	2.19	0.59
2:L5:270:U:H2'	2:L5:271:C:H6	1.66	0.59
2:L5:739:G:OP2	15:LM:71:LYS:NZ	2.34	0.59
2:L5:2719:C:O2'	2:L5:2720:C:H5'	2.02	0.59
2:L5:3808:OMC:HM22	2:L5:3809:G:O4'	2.03	0.59
2:L5:3880:G:H2'	2:L5:3881:G:C8	2.38	0.59
2:L5:3944:OMG:HN1	2:L5:4069:U:H3	1.48	0.59
2:L5:4873:G:H4'	2:L5:4874:A:OP2	2.02	0.59
3:L8:41:LYS:HA	3:L8:41:LYS:HE2	1.84	0.59
9:LF:27:GLU:O	9:LF:31:LYS:HG3	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LG:80:ILE:HD11	16:LN:18:VAL:HG23	1.84	0.59
13:LJ:78:LYS:O	13:LJ:82:ILE:HG13	2.03	0.59
49:SE:95:THR:O	49:SE:95:THR:HG22	2.02	0.59
60:SQ:108:ILE:O	60:SQ:112:LEU:HG	2.01	0.59
63:SU:65:TYR:CA	63:SU:123:LEU:HD12	2.32	0.59
68:SZ:20:ILE:HD13	68:SZ:98:VAL:CG2	2.27	0.59
71:Sc:62:VAL:HA	71:Sc:65:TYR:CE2	2.38	0.59
79:S2:1374:C:H2'	79:S2:1375:G:O4'	2.03	0.59
2:L5:74:G:H5'	19:LQ:59:VAL:HB	1.83	0.59
2:L5:933:G:H3'	2:L5:933:G:OP2	2.03	0.59
2:L5:1662:C:H2'	2:L5:1663:C:H6	1.66	0.59
2:L5:2883:G:N7	85:L5:5511:HOH:O	2.32	0.59
2:L5:4256:A:O2'	13:LJ:55:TYR:OH	2.21	0.59
2:L5:4457:PSU:H1'	5:LB:252:ALA:HB3	1.84	0.59
6:LC:340:ILE:HG21	14:LK:50:LEU:HD13	1.83	0.59
50:SG:121:ILE:HG21	50:SG:124:LEU:HD12	1.84	0.59
60:SQ:62:ARG:HH11	60:SQ:108:ILE:HG12	1.60	0.59
62:ST:138:THR:HA	62:ST:141:ARG:HH21	1.67	0.59
64:SV:43:THR:CG2	64:SV:45:ARG:CG	2.78	0.59
79:S2:165:G:H21	79:S2:165:G:P	2.24	0.59
79:S2:1548:G:H1	79:S2:1584:G:H1	1.50	0.59
79:S2:1627:C:H2'	79:S2:1628:C:H6	1.67	0.59
1:L1:2:G:H2'	1:L1:3:A:H5'	1.83	0.59
2:L5:163:A:H2'	2:L5:164:G:C8	2.38	0.59
2:L5:692:A:O2'	2:L5:693:C:H5'	2.02	0.59
3:L8:3:PHE:HB3	3:L8:4:VAL:HG23	1.85	0.59
19:LQ:128:PRO:HB3	19:LQ:134:PRO:HA	1.84	0.59
54:SK:62:LYS:NZ	56:SM:97:SER:O	2.35	0.59
68:SZ:33:GLU:OE2	68:SZ:87:ARG:NH2	2.36	0.59
75:Sg:11:LEU:HB3	75:Sg:43:TRP:CZ3	2.38	0.59
75:Sg:59:LEU:HB3	75:Sg:90:TRP:CE3	2.38	0.59
77:Sy:34:GLY:HA2	79:S2:1285:G:OP2	2.03	0.59
79:S2:436:OMG:HM22	79:S2:437:G:H5'	1.84	0.59
79:S2:996:A:H2'	79:S2:997:A:C8	2.38	0.59
79:S2:1785:C:H2'	79:S2:1786:U:C6	2.38	0.59
2:L5:739:G:O2'	2:L5:740:G:H8	1.86	0.58
2:L5:1409:C:H3'	2:L5:1410:U:C4'	2.33	0.58
2:L5:1720:C:H2'	2:L5:1721:G:O4'	2.03	0.58
10:LG:111:LYS:CE	10:LG:115:LEU:HD11	2.24	0.58
13:LJ:24:ILE:CD1	13:LJ:40:LEU:HD11	2.33	0.58
42:Lo:127:VAL:HG12	42:Lo:128:LYS:HE2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:SC:188:CYS:SG	47:SC:238:LYS:HE3	2.43	0.58
65:SW:70:ASN:HB2	65:SW:130:PHE:O	2.03	0.58
67:SY:56:PHE:HD2	67:SY:90:ARG:HG2	1.67	0.58
68:SZ:50:VAL:HG22	68:SZ:91:LEU:CG	2.22	0.58
70:Sb:38:PRO:CD	70:Sb:77:CYS:HA	2.27	0.58
79:S2:674:C:H2'	79:S2:675:U:C6	2.38	0.58
79:S2:843:C:O2'	79:S2:844:U:H5'	2.03	0.58
79:S2:1295:A:H5'	79:S2:1296:U:OP2	2.03	0.58
2:L5:248:C:O2'	2:L5:249:C:H5'	2.02	0.58
2:L5:654:C:O2'	2:L5:655:C:H5'	2.02	0.58
2:L5:1218:G:C2'	2:L5:1219:G:H5'	2.32	0.58
2:L5:1624:G:OP1	2:L5:1626:G:O2'	2.18	0.58
2:L5:1956:A:O2'	2:L5:1957:U:H5'	2.03	0.58
5:LB:163:ILE:HG22	5:LB:180:LEU:HD11	1.85	0.58
20:LR:30:ASN:OD1	20:LR:31:GLU:N	2.36	0.58
50:SG:142:ARG:HA	50:SG:147:LEU:HB2	1.85	0.58
50:SG:160:LYS:HD3	79:S2:65:C:O2'	2.03	0.58
51:SH:79:LEU:O	51:SH:83:LEU:HD23	2.03	0.58
53:SJ:176:LYS:HG2	53:SJ:180:LYS:CE	2.31	0.58
54:SK:221:THR:O	54:SK:223:ILE:HD12	2.03	0.58
75:Sg:26:GLN:HE22	75:Sg:74:ASP:HA	1.66	0.58
79:S2:322:C:H2'	79:S2:323:C:O4'	2.03	0.58
79:S2:352:U:H2'	79:S2:353:C:C6	2.37	0.58
79:S2:1399:C:O2'	79:S2:1400:U:H5'	2.03	0.58
1:L1:19:C:H2'	1:L1:20:A:C8	2.37	0.58
2:L5:1077:C:H4'	2:L5:1215:C:C4	2.39	0.58
2:L5:1307:A:H2'	2:L5:1308:C:H6	1.68	0.58
2:L5:3902:A:OP1	2:L5:4450:U:H4'	2.02	0.58
3:L8:223:PHE:O	3:L8:227:ILE:HG12	2.04	0.58
6:LC:76:ILE:HD12	6:LC:77:PRO:HD2	1.84	0.58
19:LQ:141:ALA:O	19:LQ:145:LYS:HG3	2.03	0.58
35:Lh:54:GLN:HA	35:Lh:83:TRP:CD1	2.38	0.58
45:S1:151:ARG:HD2	85:S2:3118:HOH:O	2.03	0.58
68:SZ:55:ARG:HD2	79:S2:1446:A:N3	2.17	0.58
73:Se:86:VAL:HG23	79:S2:616:A:H1'	1.86	0.58
76:So:14:LYS:HG2	79:S2:1173:A:OP1	2.03	0.58
79:S2:4:C:O2	79:S2:4:C:H2'	2.04	0.58
79:S2:1229:G:H1'	85:S2:2472:HOH:O	2.04	0.58
79:S2:1229:G:N7	85:S2:2145:HOH:O	2.31	0.58
79:S2:1297:U:H1'	79:S2:1301:A:N1	2.18	0.58
2:L5:724:C:OP1	6:LC:350:ARG:HD3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:4116:C:H5”	2:L5:4117:U:H5	1.67	0.58
52:SI:160:SER:O	52:SI:164:GLU:HG3	2.03	0.58
54:SK:55:THR:OG1	54:SK:90:LYS:HG3	2.03	0.58
62:ST:74:PRO:HD2	85:ST:305:HOH:O	2.03	0.58
67:SY:7:ILE:O	67:SY:8:ARG:HD3	2.03	0.58
71:Sc:38:GLY:C	71:Sc:39:LYS:HD3	2.29	0.58
79:S2:174:OMC:HM22	79:S2:175:A:C5’	2.32	0.58
79:S2:318:A:H3’	79:S2:319:C:C5’	2.32	0.58
79:S2:610:G:O2’	79:S2:611:G:H5’	2.04	0.58
1:L1:144:U:H2’	1:L1:145:C:C6	2.39	0.58
2:L5:25:A:H2’	2:L5:26:C:C6	2.37	0.58
2:L5:364:G:O6	18:LP:55:ARG:NH2	2.35	0.58
2:L5:922:C:H2’	2:L5:923:C:O4’	2.03	0.58
2:L5:1685:G:H2’	2:L5:1686:C:C6	2.38	0.58
55:SL:58:LYS:HG2	85:S2:2700:HOH:O	2.04	0.58
55:SL:153:LYS:HE3	79:S2:870:A:OP2	2.03	0.58
59:SP:121:ILE:HA	85:S2:2329:HOH:O	2.04	0.58
61:SS:114:LEU:HD12	61:SS:117:LEU:HD11	1.85	0.58
63:SU:39:LEU:HD12	79:S2:1540:G:H5”	1.84	0.58
65:SW:32:LYS:HG2	79:S2:686:PSU:OP1	2.03	0.58
68:SZ:55:ARG:HG2	68:SZ:87:ARG:CD	2.33	0.58
71:Sc:58:LEU:HB2	71:Sc:77:LEU:HD11	1.84	0.58
1:L1:89:U:H2’	1:L1:90:C:C6	2.39	0.58
2:L5:1179:U:OP1	2:L5:1180:C:H5’	2.04	0.58
2:L5:1263:A:O2’	2:L5:1264:C:H5’	2.03	0.58
2:L5:1440:U:H2’	2:L5:1441:C:C6	2.39	0.58
2:L5:2907:G:N2	2:L5:3589:G:H1’	2.18	0.58
15:LM:85:LYS:O	15:LM:89:THR:HG23	2.03	0.58
36:Li:80:HIS:CD2	36:Li:84:LYS:HD2	2.39	0.58
45:S1:28:LYS:CD	45:S1:48:LEU:HD12	2.34	0.58
52:SI:110:ARG:HA	52:SI:121:LEU:HD23	1.83	0.58
57:SN:94:LYS:O	57:SN:98:VAL:HG23	2.04	0.58
60:SQ:57:LEU:HD21	60:SQ:115:TYR:CG	2.38	0.58
62:ST:24:ARG:HH21	62:ST:28:PHE:HB3	1.69	0.58
79:S2:883:U:O3’	79:S2:884:C:O4’	2.22	0.58
2:L5:499:G:O2’	2:L5:504:G:O5’	2.21	0.58
2:L5:1772:C:O2’	2:L5:1773:OMU:H5”	2.02	0.58
2:L5:4741:C:H3’	2:L5:4742:G:C5’	2.33	0.58
2:L5:4743:G:O2’	2:L5:4744:A:H5’	2.04	0.58
46:SA:132:GLN:HB3	46:SA:133:PRO:HD3	1.85	0.58
47:SC:172:ASN:HB2	47:SC:174:ILE:HD11	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:ST:36:VAL:HG21	62:ST:71:MET:CE	2.32	0.58
63:SU:60:THR:HG23	63:SU:75:MET:SD	2.44	0.58
67:SY:86:GLU:OE1	67:SY:87:PRO:HD2	2.04	0.58
75:Sg:38:LYS:HG2	75:Sg:64:HIS:C	2.28	0.58
75:Sg:240:CYS:HG	75:Sg:291:TRP:CD1	2.22	0.58
79:S2:505:G:H4'	85:S2:2149:HOH:O	2.04	0.58
79:S2:1617:G:O2'	79:S2:1619:A:N7	2.34	0.58
79:S2:1720:U:H5"	79:S2:1721:U:OP2	2.04	0.58
2:L5:1760:OMG:HM22	2:L5:1761:G:H4'	1.85	0.58
2:L5:1871:A2M:HM'2	2:L5:1872:G:H5'	1.86	0.58
2:L5:3597:G:O2'	2:L5:3598:C:O4'	2.15	0.58
2:L5:3604:A:H2'	2:L5:3605:C:H1'	1.85	0.58
2:L5:4110:C:H2'	2:L5:4111:U:H6	1.68	0.58
2:L5:4556:U:H3'	85:L5:7063:HOH:O	2.04	0.58
12:LI:9:LYS:HG3	85:LI:330:HOH:O	2.03	0.58
45:S1:86:LEU:HB3	45:S1:98:THR:HB	1.86	0.58
45:S1:115:LYS:HE2	79:S2:1869:A:C4	2.38	0.58
50:SG:131:ARG:HB2	79:S2:168:C:H4'	1.86	0.58
50:SG:176:ILE:HG13	79:S2:77:A:H1'	1.84	0.58
50:SG:226:GLU:O	50:SG:229:ALA:HB3	2.03	0.58
53:SJ:46:VAL:HG12	53:SJ:102:ILE:HG13	1.85	0.58
54:SK:20:GLU:OE2	54:SK:76:ARG:NH2	2.37	0.58
59:SP:60:LEU:O	59:SP:64:LYS:HG2	2.04	0.58
62:ST:40:TYR:HA	62:ST:83:PHE:HE2	1.68	0.58
77:Sy:54:SER:CB	77:Sy:78:LYS:HD3	2.34	0.58
77:Sy:123:VAL:HG22	77:Sy:126:GLU:OE2	2.03	0.58
79:S2:197:U:HO2'	79:S2:198:U:C1'	2.14	0.58
79:S2:526:A:O2'	79:S2:527:C:H5'	2.03	0.58
2:L5:982:U:C2'	2:L5:983:C:O4'	2.52	0.58
2:L5:984:C:O2'	2:L5:985:C:H5'	2.04	0.58
2:L5:1755:C:H41	2:L5:1776:A:H61	1.52	0.58
2:L5:2710:C:H2'	2:L5:2712:G:O5'	2.04	0.58
2:L5:4274:A:H2'	2:L5:4275:G:H8	1.67	0.58
35:Lh:42:ARG:NE	35:Lh:159:LYS:HB3	2.18	0.58
47:SC:210:PRO:HD3	47:SC:236:PHE:CE2	2.39	0.58
54:SK:5:ILE:HG13	54:SK:9:ARG:NH2	2.18	0.58
54:SK:133:GLY:HA3	54:SK:156:LEU:O	2.04	0.58
54:SK:142:LEU:HD13	54:SK:150:MET:CE	2.29	0.58
56:SM:57:TYR:CE1	56:SM:78:TYR:HB2	2.38	0.58
62:ST:130:ARG:NE	79:S2:1608:U:H4'	2.19	0.58
75:Sg:173:LEU:CD1	75:Sg:175:LYS:HG3	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Sy:91:LEU:CD2	77:Sy:104:VAL:HG23	2.34	0.58
79:S2:71:G:C2'	79:S2:72:C:H4'	2.33	0.58
79:S2:1152:U:H3'	85:S2:3017:HOH:O	2.03	0.58
2:L5:1267:C:O2'	2:L5:1268:G:H5'	2.04	0.58
2:L5:1272:C:H3'	29:Lb:117:ARG:NE	2.18	0.58
2:L5:2102:G:O2'	2:L5:2103:G:H5'	2.04	0.58
2:L5:2602:G:H2'	2:L5:2603:C:H6	1.68	0.58
2:L5:2901:G:H2'	2:L5:2902:G:O4'	2.04	0.58
14:LK:43:HIS:ND1	14:LK:46:ARG:CD	2.67	0.58
44:Lz:180:GLU:HG2	44:Lz:184:MET:HG3	1.85	0.58
49:SE:171:ASP:OD1	49:SE:172:PHE:N	2.37	0.58
49:SE:247:THR:O	49:SE:251:GLU:HG3	2.03	0.58
50:SG:14:LYS:HZ2	50:SG:16:ILE:HG22	1.69	0.58
54:SK:135:GLU:HG3	54:SK:153:VAL:HG12	1.86	0.58
68:SZ:22:ILE:HG22	68:SZ:24:LEU:HD11	1.84	0.58
68:SZ:35:VAL:HG21	68:SZ:110:VAL:HG21	1.84	0.58
70:Sb:35:VAL:CG2	70:Sb:63:LEU:HD23	2.33	0.58
75:Sg:57:ARG:HB2	75:Sg:57:ARG:NH1	2.18	0.58
75:Sg:139:LYS:HE2	75:Sg:139:LYS:HA	1.86	0.58
75:Sg:296:GLN:N	75:Sg:296:GLN:OE1	2.37	0.58
79:S2:832:G:O2'	79:S2:833:C:H5'	2.02	0.58
79:S2:1308:U:H5'	79:S2:1309:C:OP2	2.03	0.58
2:L5:84:A:H4'	2:L5:85:G:OP1	2.04	0.57
2:L5:745:G:H2'	2:L5:746:A:O4'	2.04	0.57
2:L5:2351:OMC:HM23	6:LC:95:MET:CG	2.34	0.57
2:L5:2407:G:O6	23:LU:2:SER:N	2.36	0.57
2:L5:3732:A:H2'	2:L5:3733:A:C8	2.39	0.57
2:L5:4459:U:H2'	2:L5:4460:U:C6	2.39	0.57
11:LH:52:LYS:HD2	11:LH:54:ARG:HD3	1.85	0.57
29:Lb:53:GLY:O	29:Lb:57:MET:HG3	2.04	0.57
50:SG:116:LYS:HZ1	50:SG:125:THR:CG2	2.16	0.57
52:SI:128:LYS:C	52:SI:129:LEU:HD22	2.29	0.57
63:SU:64:LEU:HB3	63:SU:123:LEU:HG	1.86	0.57
68:SZ:28:ASN:HB3	68:SZ:31:SER:OG	2.04	0.57
77:Sy:26:LEU:HD13	77:Sy:31:LEU:HG	1.85	0.57
79:S2:194:C:H2'	79:S2:195:C:C6	2.38	0.57
79:S2:323:C:H4'	79:S2:324:C:H5	1.69	0.57
79:S2:883:U:N3	79:S2:904:A:C6	2.68	0.57
79:S2:940:U:H2'	79:S2:941:C:C6	2.39	0.57
79:S2:1653:U:H3	79:S2:1671:G:H1	1.52	0.57
2:L5:38:A:H5"	28:La:35:ALA:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:465:G:H2'	2:L5:466:A:H8	1.66	0.57
2:L5:672:C:H2'	2:L5:673:C:C6	2.39	0.57
2:L5:2910:G:C2	2:L5:3586:G:H1'	2.40	0.57
2:L5:3899:OMG:HM22	2:L5:3900:G:H5'	1.85	0.57
2:L5:4861:G:H2'	2:L5:4862:G:H8	1.69	0.57
19:LQ:90:VAL:O	19:LQ:94:ILE:HG12	2.04	0.57
40:Lm:41:GLN:O	40:Lm:45:GLU:HG3	2.04	0.57
49:SE:131:VAL:HG11	79:S2:287:U:O2	2.04	0.57
75:Sg:30:MET:HG3	75:Sg:30:MET:O	2.02	0.57
76:So:13:LEU:HD21	76:So:17:ARG:NH1	2.19	0.57
79:S2:514:U:H2'	79:S2:515:G:H5'	1.86	0.57
79:S2:1276:A:C2	79:S2:1277:C:H1'	2.39	0.57
54:SK:113:LEU:HG	54:SK:117:ARG:HH11	1.70	0.57
61:SS:45:LYS:HE3	79:S2:1389:C:OP2	2.05	0.57
62:ST:34:LYS:HG2	62:ST:103:LEU:HD12	1.86	0.57
70:Sb:36:LYS:HD2	70:Sb:43:ILE:HD11	1.86	0.57
75:Sg:30:MET:HE1	75:Sg:42:MET:SD	2.43	0.57
2:L5:219:G:H3'	2:L5:219:G:P	2.44	0.57
2:L5:1091:C:H2'	2:L5:1092:G:O4'	2.04	0.57
2:L5:4772:C:O5'	2:L5:4772:C:H6	1.87	0.57
6:LC:174:LEU:O	6:LC:175:LYS:HB2	2.05	0.57
25:LW:80:ARG:HG2	25:LW:81:ALA:H	1.68	0.57
27:LZ:53:VAL:HG12	27:LZ:57:MET:CE	2.35	0.57
51:SH:53:VAL:CG2	51:SH:57:ARG:HG3	2.33	0.57
68:SZ:64:THR:HG22	68:SZ:77:TRP:HE3	1.69	0.57
71:Sc:43:LYS:NZ	79:S2:1601:A:OP1	2.23	0.57
79:S2:1323:U:O2'	79:S2:1324:G:H5'	2.04	0.57
2:L5:2412:A:H2'	2:L5:2413:U:C6	2.39	0.57
2:L5:3599:A:O2'	2:L5:3600:G:H5'	2.04	0.57
13:LJ:78:LYS:HD2	13:LJ:81:GLU:OE2	2.04	0.57
49:SE:21:ASP:HB2	79:S2:829:C:OP1	2.05	0.57
60:SQ:33:LYS:HE3	60:SQ:38:PRO:N	2.19	0.57
64:SV:16:LYS:HD2	64:SV:21:ASN:OD1	2.04	0.57
69:Sa:12:LYS:HB2	69:Sa:33:ASP:OD2	2.04	0.57
69:Sa:51:ARG:HB3	69:Sa:51:ARG:CZ	2.34	0.57
79:S2:51:U:H2'	79:S2:52:G:C8	2.40	0.57
79:S2:172:OMU:HM22	79:S2:173:A:H5'	1.85	0.57
79:S2:1444:U:H2'	79:S2:1445:PSU:O4'	2.04	0.57
2:L5:1401:C:O2'	2:L5:1402:C:OP1	2.15	0.57
2:L5:2334:C:OP2	6:LC:195:LYS:NZ	2.37	0.57
2:L5:3929:G:H2'	2:L5:3930:U:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:4114:C:H2'	2:L5:4115:G:C2	2.39	0.57
2:L5:4861:G:H2'	2:L5:4862:G:C8	2.39	0.57
8:LE:71:VAL:HG22	8:LE:81:TYR:O	2.04	0.57
25:LW:82:ILE:CG1	50:SG:131:ARG:HD2	2.24	0.57
40:Lm:22:THR:HB	40:Lm:69:LYS:HE3	1.86	0.57
45:S1:5:LYS:O	45:S1:7:LYS:HD3	2.04	0.57
50:SG:170:ARG:CA	79:S2:74:G:H22	2.17	0.57
50:SG:222:GLU:O	50:SG:226:GLU:HG3	2.05	0.57
51:SH:42:GLU:N	51:SH:42:GLU:OE1	2.36	0.57
51:SH:110:THR:OG1	51:SH:113:LYS:HB2	2.05	0.57
53:SJ:94:LEU:HD12	53:SJ:97:ILE:CD1	2.30	0.57
70:Sb:56:CYS:N	70:Sb:63:LEU:HD13	2.20	0.57
75:Sg:228:TYR:CD2	75:Sg:264:LYS:HE3	2.39	0.57
2:L5:2384:U:H2'	2:L5:2385:U:C6	2.39	0.57
2:L5:2903:G:H3'	2:L5:2903:G:OP2	2.04	0.57
2:L5:5026:U:H4'	2:L5:5027:C:H5'	1.85	0.57
39:Ll:21:ASN:O	39:Ll:22:LYS:HB2	2.04	0.57
46:SA:5:LEU:O	46:SA:9:GLN:HG2	2.05	0.57
54:SK:69:LEU:HA	54:SK:72:VAL:HG22	1.85	0.57
54:SK:71:ALA:HA	54:SK:74:GLN:NE2	2.20	0.57
56:SM:72:THR:O	56:SM:76:ILE:HG13	2.05	0.57
59:SP:82:ASP:HB3	79:S2:1621:U:O4	2.05	0.57
61:SS:77:GLU:HB3	61:SS:81:ARG:HH12	1.69	0.57
66:SX:68:LYS:HG2	85:SX:319:HOH:O	2.04	0.57
75:Sg:30:MET:HE1	75:Sg:92:LEU:HD22	1.87	0.57
79:S2:59:U:H2'	79:S2:61:A:OP2	2.04	0.57
79:S2:287:U:H2'	79:S2:288:G:C8	2.40	0.57
1:L1:8:U:H2'	1:L1:9:A:C8	2.40	0.57
2:L5:709:C:OP1	33:Lf:89:ARG:NH2	2.37	0.57
2:L5:1066:G:H2'	2:L5:1067:G:H5'	1.87	0.57
2:L5:1093:C:H2'	2:L5:1094:G:H8	1.70	0.57
2:L5:1316:OMG:HM22	2:L5:1317:U:C5'	2.32	0.57
2:L5:1830:G:C2'	2:L5:1831:G:H5'	2.35	0.57
2:L5:1879:C:O2'	2:L5:1891:A:N3	2.37	0.57
2:L5:1957:U:H2'	2:L5:1958:A:C8	2.40	0.57
2:L5:3764:PSU:O2'	2:L5:3765:G:H5'	2.04	0.57
2:L5:3867:A2M:HM'2	2:L5:3868:G:C4'	2.35	0.57
41:Ln:78:LYS:HB2	41:Ln:99:ILE:O	2.05	0.57
46:SA:143:PRO:HB3	64:SV:32:ILE:HD12	1.86	0.57
49:SE:64:ILE:CG2	67:SY:17:LEU:HD23	2.35	0.57
50:SG:186:GLN:OE1	79:S2:318:A:N6	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SU:127:GLY:O	63:SU:131:LEU:HD13	2.03	0.57
66:SX:67:ARG:HG3	66:SX:115:ILE:HG12	1.85	0.57
79:S2:193:C:O2'	79:S2:194:C:H5'	2.04	0.57
79:S2:492:C:N4	79:S2:507:G:OP2	2.27	0.57
79:S2:1302:G:OP2	79:S2:1303:C:H5	1.88	0.57
79:S2:1693:G:O2'	79:S2:1694:U:H5'	2.05	0.57
1:L1:82:A:H61	8:LE:50:ARG:HH22	1.53	0.57
2:L5:411:G:H4'	2:L5:412:G:H5"	1.85	0.57
2:L5:4571:A2M:H2'	2:L5:4572:U:C6	2.39	0.57
38:Lk:54:GLU:O	38:Lk:58:GLN:HG2	2.05	0.57
47:SC:200:ARG:HG3	85:SC:306:HOH:O	2.04	0.57
51:SH:10:LYS:HE3	51:SH:20:GLU:CB	2.33	0.57
52:SI:131:PRO:HA	52:SI:134:GLU:OE2	2.05	0.57
56:SM:12:TYR:CE1	56:SM:52:LEU:HD21	2.40	0.57
56:SM:50:GLN:O	56:SM:53:LYS:HG2	2.04	0.57
61:SS:100:PRO:HD3	61:SS:120:THR:O	2.04	0.57
62:ST:26:ILE:HD13	62:ST:59:LEU:HD22	1.87	0.57
70:Sb:40:CYS:SG	70:Sb:41:TYR:N	2.78	0.57
75:Sg:191:HIS:CG	75:Sg:195:LEU:HD21	2.40	0.57
79:S2:1516:G:C2'	79:S2:1517:G:H5'	2.35	0.57
2:L5:259:C:C2'	2:L5:260:C:H5'	2.35	0.57
2:L5:1400:G:O2'	2:L5:1401:C:H5'	2.05	0.57
10:LG:102:TYR:OH	10:LG:207:VAL:HG13	2.05	0.57
18:LP:64:MET:O	18:LP:68:LYS:HG2	2.04	0.57
24:LV:90:ARG:HB2	24:LV:94:VAL:HG22	1.87	0.57
50:SG:164:LYS:H	79:S2:67:C:N4	2.01	0.57
55:SL:76:VAL:HG22	55:SL:125:ILE:CD1	2.35	0.57
56:SM:55:ARG:HB3	56:SM:57:TYR:HE2	1.69	0.57
79:S2:178:C:H2'	79:S2:179:C:H6	1.70	0.57
2:L5:2898:G:H2'	2:L5:2899:C:C6	2.40	0.56
2:L5:4691:A:H2'	2:L5:4692:A:O4'	2.04	0.56
14:LK:74:SER:HB2	29:Lb:118:LEU:HD12	1.86	0.56
17:LO:73:TYR:O	17:LO:79:LYS:HE3	2.05	0.56
36:Li:3:LEU:HD23	36:Li:4:ARG:HG3	1.87	0.56
48:SD:78:MET:HB3	48:SD:79:HIS:HA	1.87	0.56
51:SH:57:ARG:NH2	51:SH:171:GLU:HB3	2.20	0.56
59:SP:34:MET:HB3	59:SP:42:ARG:HG3	1.86	0.56
60:SQ:26:LYS:NZ	79:S2:1409:A:OP1	2.28	0.56
67:SY:12:PHE:CD2	67:SY:23:MET:HE2	2.40	0.56
77:Sy:45:ARG:NH1	77:Sy:72:HIS:HD2	2.01	0.56
79:S2:1560:U:H2'	79:S2:1561:A:C8	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1803:U:H2'	79:S2:1804:OMU:H6	1.87	0.56
2:L5:2631:U:H5'	2:L5:2632:PSU:O4'	2.04	0.56
2:L5:4318:C:O2'	32:Le:18:HIS:ND1	2.33	0.56
2:L5:4902:C:H2'	2:L5:4903:G:O4'	2.05	0.56
11:LH:37:ASP:OD1	11:LH:37:ASP:O	2.23	0.56
47:SC:62:PRO:HB2	47:SC:68:ARG:CD	2.34	0.56
48:SD:39:ILE:HD11	48:SD:116:ILE:HG21	1.87	0.56
50:SG:163:ASN:HD22	50:SG:169:PRO:HB3	1.70	0.56
60:SQ:50:LYS:HD2	60:SQ:53:GLU:OE2	2.04	0.56
65:SW:95:PRO:HD3	65:SW:130:PHE:CD2	2.40	0.56
68:SZ:31:SER:HB2	68:SZ:107:GLU:OE1	2.05	0.56
70:Sb:13:GLU:HG2	70:Sb:14:GLU:N	2.19	0.56
79:S2:1667:U:H2'	79:S2:1668:U:C6	2.40	0.56
79:S2:1784:G:O2'	79:S2:1785:C:H5'	2.05	0.56
1:L1:82:A:H4'	1:L1:86:U:H5"	1.87	0.56
2:L5:268:G:H2'	2:L5:269:G:C8	2.37	0.56
2:L5:1345:A:H2'	2:L5:1346:C:C6	2.41	0.56
2:L5:3925:OMU:CM2	32:Le:50:GLY:HA3	2.35	0.56
2:L5:3940:U:O2'	2:L5:3941:G:H5'	2.05	0.56
2:L5:4699:U:H4'	2:L5:4700:A:OP1	2.06	0.56
2:L5:4699:U:H1'	2:L5:4700:A:H5"	1.87	0.56
2:L5:4935:C:H2'	2:L5:4936:G:C8	2.40	0.56
34:Lg:25:THR:OG1	34:Lg:29:ARG:HG2	2.04	0.56
35:Lh:116:HIS:HB3	35:Lh:149:ILE:HB	1.87	0.56
49:SE:119:ALA:C	49:SE:120:LYS:HD3	2.31	0.56
49:SE:205:PHE:HD2	49:SE:221:ARG:HD3	1.70	0.56
50:SG:186:GLN:CD	79:S2:318:A:H61	2.13	0.56
52:SI:69:SER:HB2	55:SL:21:LYS:HG3	1.86	0.56
62:ST:26:ILE:HD13	62:ST:59:LEU:CD2	2.35	0.56
63:SU:29:LYS:N	85:SU:301:HOH:O	2.28	0.56
63:SU:31:PRO:HB3	63:SU:102:ARG:NH1	2.20	0.56
63:SU:42:HIS:HB3	63:SU:83:GLN:HB2	1.87	0.56
68:SZ:40:ILE:HD13	68:SZ:53:PRO:HD3	1.87	0.56
69:Sa:39:PHE:CE2	69:Sa:41:ILE:HD11	2.40	0.56
75:Sg:26:GLN:NE2	75:Sg:74:ASP:HA	2.20	0.56
75:Sg:164:ILE:HG23	75:Sg:176:VAL:HG13	1.87	0.56
79:S2:190:G:H1'	79:S2:209:A:N6	2.20	0.56
79:S2:1484:A:H2'	79:S2:1485:U:H6	1.71	0.56
10:LG:209:SER:HA	10:LG:212:LYS:HZ3	1.70	0.56
45:S1:48:LEU:HD23	45:S1:48:LEU:H	1.69	0.56
47:SC:68:ARG:HG3	47:SC:277:HIS:NE2	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SG:14:LYS:HG2	50:SG:15:LEU:N	2.21	0.56
62:ST:141:ARG:HB3	79:S2:1523:C:OP1	2.06	0.56
63:SU:128:GLN:CD	79:S2:1415:C:H1'	2.31	0.56
68:SZ:40:ILE:HD11	68:SZ:89:ILE:CD1	2.32	0.56
77:Sy:91:LEU:HG	77:Sy:104:VAL:CG2	2.35	0.56
79:S2:39:A:H2'	79:S2:40:A:O4'	2.05	0.56
79:S2:1387:G:H2'	79:S2:1388:A:O4'	2.04	0.56
79:S2:1677:U:H2'	79:S2:1678:A2M:H8	1.87	0.56
2:L5:924:C:N3	2:L5:925:C:H1'	2.21	0.56
2:L5:1410:U:H3	29:Lb:52:LYS:HE3	1.71	0.56
2:L5:4546:A:N7	7:LD:215:ASN:ND2	2.49	0.56
25:LW:82:ILE:HA	50:SG:131:ARG:HG2	1.88	0.56
27:LZ:57:MET:HE1	27:LZ:65:ARG:HE	1.69	0.56
34:Lg:45:ALA:HB3	34:Lg:82:MET:HG2	1.88	0.56
48:SD:68:ILE:CD1	48:SD:151:ILE:HD11	2.34	0.56
48:SD:99:ILE:HD13	48:SD:171:GLU:HG2	1.86	0.56
51:SH:36:LEU:HD11	51:SH:78:ARG:HG2	1.88	0.56
51:SH:52:GLU:N	51:SH:52:GLU:OE1	2.38	0.56
75:Sg:228:TYR:HE2	75:Sg:230:LEU:HD11	1.70	0.56
77:Sy:86:GLY:O	77:Sy:89:VAL:HG22	2.05	0.56
79:S2:609:PSU:H2'	79:S2:610:G:C8	2.41	0.56
79:S2:1456:G:H2'	79:S2:1457:U:C6	2.40	0.56
2:L5:47:A:N3	85:L5:5525:HOH:O	2.33	0.56
2:L5:280:G:OP1	16:LN:47:LYS:HE2	2.06	0.56
2:L5:286:U:H2'	2:L5:287:U:C6	2.40	0.56
2:L5:1242:G:H5'	29:Lb:120:ARG:O	2.05	0.56
45:S1:168:MET:HG2	45:S1:197:ILE:CG2	2.36	0.56
48:SD:42:LYS:HG3	48:SD:43:GLU:HG2	1.87	0.56
49:SE:100:ARG:HH12	49:SE:122:LYS:HA	1.71	0.56
50:SG:58:LYS:NZ	50:SG:106:LEU:O	2.32	0.56
52:SI:106:SER:HB3	52:SI:171:LEU:HG	1.87	0.56
71:Sc:98:LYS:HB3	71:Sc:110:THR:CG2	2.36	0.56
75:Sg:294:ASP:OD1	75:Sg:295:GLY:N	2.39	0.56
77:Sy:94:ILE:HG13	77:Sy:100:PRO:HB3	1.87	0.56
79:S2:529:A:H2'	79:S2:530:U:H6	1.71	0.56
79:S2:1554:C:O5'	79:S2:1554:C:H6	1.88	0.56
2:L5:652:G:H2'	2:L5:653:U:C6	2.41	0.56
2:L5:1272:C:O2	2:L5:1272:C:H5"	2.06	0.56
2:L5:2701:U:O2'	2:L5:2702:C:H5'	2.06	0.56
2:L5:4146:G:H2'	2:L5:4147:G:H8	1.65	0.56
2:L5:4910:A:H4'	5:LB:95:THR:HG22	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LD:130:SER:HA	7:LD:169:VAL:HG12	1.86	0.56
13:LJ:20:LEU:HD13	13:LJ:132:VAL:HG22	1.87	0.56
15:LM:100:ARG:HA	15:LM:103:LYS:HG2	1.88	0.56
16:LN:138:PHE:HA	16:LN:143:ARG:HD2	1.87	0.56
52:SI:194:GLU:HG3	55:SL:10:TYR:CD2	2.41	0.56
53:SJ:29:LEU:HG	73:Se:116:PHE:HE2	1.71	0.56
54:SK:223:ILE:HG22	54:SK:225:GLU:HG2	1.88	0.56
56:SM:86:PRO:HB2	56:SM:88:GLU:CD	2.30	0.56
1:L1:109:C:O2'	18:LP:20:ARG:NH2	2.39	0.56
2:L5:979:C:OP1	14:LK:46:ARG:NE	2.27	0.56
2:L5:1071:C:N4	14:LK:65:ARG:O	2.39	0.56
2:L5:1250:C:H2'	2:L5:1251:C:H5'	1.88	0.56
2:L5:2364:OMG:HM22	2:L5:2365:OMC:O4'	2.06	0.56
2:L5:4747:C:H2'	2:L5:4748:U:O4'	2.06	0.56
2:L5:4774:C:HO2'	2:L5:4775:C:H6	1.53	0.56
2:L5:4902:C:H2'	2:L5:4903:G:C8	2.41	0.56
2:L5:4967:A:H2'	2:L5:4968:A:H8	1.70	0.56
4:L9:95:C:H1'	9:LF:229:GLU:OE2	2.04	0.56
11:LH:59:LYS:HE3	11:LH:66:GLU:HB3	1.87	0.56
48:SD:80:GLY:HA2	48:SD:83:ASN:ND2	2.19	0.56
53:SJ:134:HIS:ND1	53:SJ:163:SER:OG	2.24	0.56
56:SM:47:LYS:HZ1	79:S2:1274:G:H4'	1.70	0.56
79:S2:178:C:H2'	79:S2:179:C:C6	2.41	0.56
79:S2:614:C:H5"	79:S2:615:C:C5	2.41	0.56
79:S2:1555:U:OP1	79:S2:1556:A:N6	2.39	0.56
2:L5:2280:G:N7	85:L5:5527:HOH:O	2.33	0.56
2:L5:4257:A:H2	13:LJ:27:GLY:HA3	1.70	0.56
3:L8:152:ARG:HG3	3:L8:154:THR:HG23	1.87	0.56
13:LJ:27:GLY:HA2	13:LJ:68:ILE:HB	1.88	0.56
30:Lc:13:SER:O	30:Lc:17:ARG:HG3	2.05	0.56
46:SA:206:ASP:OD1	46:SA:207:PRO:HD2	2.06	0.56
75:Sg:7:LEU:HB2	75:Sg:310:TRP:CZ3	2.41	0.56
79:S2:628:A:OP1	79:S2:628:A:H2'	2.05	0.56
79:S2:1743:G:O2'	79:S2:1744:G:H5'	2.05	0.56
2:L5:2:G:O2'	2:L5:3:C:H5'	2.06	0.56
2:L5:134:G:N2	17:LO:85:PRO:HA	2.20	0.56
2:L5:239:C:OP1	8:LE:46:SER:OG	2.24	0.56
2:L5:750:U:H1'	2:L5:917:A:C8	2.41	0.56
2:L5:1685:G:H2'	2:L5:1686:C:H6	1.71	0.56
2:L5:1727:U:OP1	9:LF:131:ASN:ND2	2.39	0.56
2:L5:2055:G:H4'	2:L5:2056:G:OP2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:2091:C:C2	2:L5:2094:G:H4'	2.40	0.56
2:L5:2542:G:O2'	2:L5:2543:A:H5'	2.06	0.56
3:L8:70:GLU:OE1	3:L8:70:GLU:N	2.31	0.56
3:L8:264:LYS:HD2	3:L8:266:TRP:CZ2	2.41	0.56
6:LC:266:THR:O	6:LC:267:TRP:HB2	2.05	0.56
14:LK:203:ILE:HG22	14:LK:203:ILE:O	2.05	0.56
16:LN:86:HIS:ND1	85:LN:401:HOH:O	2.23	0.56
46:SA:155:ARG:HG2	46:SA:156:TYR:CD2	2.40	0.56
50:SG:68:LEU:HD23	50:SG:100:CYS:SG	2.46	0.56
53:SJ:110:LEU:HG	53:SJ:130:ILE:CD1	2.34	0.56
55:SL:59:LYS:HB2	55:SL:112:HIS:CE1	2.40	0.56
58:SO:149:ARG:HG2	58:SO:151:LEU:CD1	2.30	0.56
63:SU:7:LYS:HE2	63:SU:66:LEU:HD22	1.87	0.56
68:SZ:26:SER:HB3	68:SZ:32:LEU:HB2	1.87	0.56
2:L5:1414:C:H2'	2:L5:1415:G:C8	2.41	0.55
2:L5:1481:C:N4	36:Li:4:ARG:HE	2.04	0.55
2:L5:2864:A:H2'	2:L5:2865:U:C6	2.41	0.55
2:L5:4233:A:P	32:Le:97:LYS:HG3	2.46	0.55
28:La:75:LEU:HD11	28:La:133:ALA:HA	1.87	0.55
36:Li:23:LYS:CD	36:Li:24:PRO:HD2	2.19	0.55
51:SH:111:LYS:HA	79:S2:798:G:OP2	2.06	0.55
56:SM:11:ILE:HD13	56:SM:45:VAL:HA	1.88	0.55
59:SP:90:VAL:HA	59:SP:107:ILE:CG2	2.34	0.55
79:S2:1223:A:H2'	79:S2:1224:G:O4'	2.06	0.55
79:S2:1562:C:H2'	79:S2:1563:G:H8	1.71	0.55
79:S2:1631:U:H2'	79:S2:1632:G:O4'	2.06	0.55
1:L1:5:U:O2'	1:L1:6:C:H5'	2.07	0.55
2:L5:919:C:H2'	2:L5:920:C:H6	1.71	0.55
2:L5:1069:G:C5'	14:LK:65:ARG:HH22	2.19	0.55
2:L5:1218:G:O2'	2:L5:1219:G:H5'	2.06	0.55
2:L5:1759:G:H1	2:L5:1773:OMU:C2	2.19	0.55
2:L5:3707:U:H2'	2:L5:3708:C:C6	2.42	0.55
2:L5:4961:G:O2'	2:L5:4962:C:H5'	2.07	0.55
3:L8:144:CYS:SG	3:L8:173:ILE:HG12	2.46	0.55
9:LF:29:LYS:HG2	9:LF:32:ARG:HH21	1.70	0.55
10:LG:100:HIS:ND1	10:LG:103:ARG:HD2	2.21	0.55
12:LI:5:ARG:HH12	12:LI:9:LYS:HZ3	1.54	0.55
14:LK:72:LYS:CD	29:Lb:119:CYS:HB2	2.37	0.55
17:LO:33:VAL:O	17:LO:36:VAL:HG12	2.05	0.55
20:LR:78:ILE:HG23	85:LR:305:HOH:O	2.06	0.55
36:Li:63:VAL:HG23	36:Li:65:LYS:HG2	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:SD:53:ALA:O	60:SQ:125:ARG:NH2	2.38	0.55
52:SI:12:ARG:NH1	79:S2:103:A:H5'	2.20	0.55
56:SM:41:PRO:O	56:SM:45:VAL:HG23	2.06	0.55
63:SU:7:LYS:NZ	79:S2:1427:C:C5'	2.69	0.55
63:SU:128:GLN:NE2	79:S2:1415:C:H1'	2.21	0.55
67:SY:76:TYR:CE2	67:SY:86:GLU:HG2	2.41	0.55
75:Sg:42:MET:CB	75:Sg:57:ARG:HB3	2.36	0.55
75:Sg:91:ASP:OD1	75:Sg:93:THR:OG1	2.23	0.55
75:Sg:153:CYS:N	75:Sg:168:CYS:SG	2.78	0.55
77:Sy:103:VAL:O	77:Sy:103:VAL:HG13	2.06	0.55
79:S2:27:A2M:HM'2	79:S2:28:U:O4'	2.05	0.55
79:S2:69:C:H2'	79:S2:70:G:O4'	2.06	0.55
2:L5:2899:C:O2'	2:L5:2900:U:H5'	2.06	0.55
2:L5:4594:U:H2'	2:L5:4595:G:H8	1.71	0.55
2:L5:4967:A:H2'	2:L5:4968:A:C8	2.41	0.55
40:Lm:102:VAL:HG22	40:Lm:112:LEU:CD1	2.36	0.55
46:SA:77:ILE:HG12	46:SA:99:ILE:HB	1.87	0.55
75:Sg:54:ILE:HG13	75:Sg:55:PRO:HD2	1.88	0.55
2:L5:4114:C:O2'	2:L5:4115:G:H5'	2.06	0.55
2:L5:4232:U:H4'	2:L5:4233:A:O5'	2.04	0.55
48:SD:16:ASP:OD2	48:SD:17:ILE:HG13	2.07	0.55
49:SE:106:LYS:O	49:SE:108:ARG:HG3	2.07	0.55
61:SS:45:LYS:HG3	79:S2:1453:C:OP2	2.05	0.55
77:Sy:85:LEU:HD12	77:Sy:88:TRP:HE3	1.71	0.55
79:S2:207:G:H3'	79:S2:208:G:H8	1.71	0.55
2:L5:966:A:O2'	2:L5:967:C:H5'	2.07	0.55
2:L5:1760:OMG:HM22	2:L5:1761:G:C4'	2.36	0.55
2:L5:1957:U:H2'	2:L5:1958:A:H8	1.71	0.55
11:LH:105:ILE:CG2	11:LH:109:GLY:HA2	2.37	0.55
14:LK:141:ARG:NH2	33:Lf:110:ILE:O	2.38	0.55
27:LZ:53:VAL:CA	27:LZ:57:MET:HE2	2.34	0.55
48:SD:20:PHE:CE1	48:SD:94:LYS:HB2	2.40	0.55
52:SI:151:GLU:HA	52:SI:154:LYS:HG3	1.88	0.55
60:SQ:13:PHE:HB3	60:SQ:22:VAL:HG22	1.87	0.55
60:SQ:89:SER:O	60:SQ:93:VAL:HG23	2.06	0.55
65:SW:71:LYS:HE3	79:S2:1153:C:OP2	2.07	0.55
79:S2:985:G:N3	85:S2:2153:HOH:O	2.33	0.55
79:S2:1554:C:H2'	79:S2:1555:U:H5	1.71	0.55
1:L1:121:G:O2'	1:L1:122:G:H5'	2.07	0.55
2:L5:498:C:N4	2:L5:499:G:O6	2.39	0.55
2:L5:1181:C:H3'	2:L5:1182:C:H5'	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:1716:G:H2'	2:L5:1717:C:H6	1.65	0.55
2:L5:4254:G:H2'	2:L5:4254:G:N3	2.22	0.55
2:L5:4420:PSU:H2'	2:L5:4421:C:C6	2.41	0.55
14:LK:72:LYS:HD2	29:Lb:119:CYS:HB2	1.89	0.55
34:Lg:23:SER:HB2	34:Lg:33:LEU:HD12	1.88	0.55
45:S1:105:LEU:HG	45:S1:213:ARG:HA	1.89	0.55
45:S1:132:GLY:O	45:S1:221:PRO:HD3	2.06	0.55
52:SI:31:ARG:NH1	79:S2:380:G:H5"	2.21	0.55
66:SX:67:ARG:NH2	79:S2:618:C:H41	2.05	0.55
75:Sg:303:THR:O	75:Sg:303:THR:HG22	2.07	0.55
77:Sy:26:LEU:CD1	77:Sy:31:LEU:HG	2.37	0.55
78:Sz:105:TYR:O	78:Sz:105:TYR:CD1	2.59	0.55
79:S2:1456:G:H2'	79:S2:1457:U:H6	1.72	0.55
79:S2:1521:C:N4	85:S2:2175:HOH:O	2.36	0.55
79:S2:1712:A:H2'	79:S2:1713:C:H6	1.71	0.55
1:L1:141:C:H2'	1:L1:142:U:H6	1.70	0.55
2:L5:296:A:H1'	85:L5:8759:HOH:O	2.06	0.55
2:L5:666:G:O2'	2:L5:668:C:OP2	2.23	0.55
2:L5:1718:C:H4'	2:L5:1719:A:OP2	2.07	0.55
2:L5:4891:G:H2'	2:L5:4892:A:H5'	1.89	0.55
3:L8:208:MET:HE1	3:L8:236:MET:SD	2.47	0.55
22:LT:157:GLU:O	22:LT:158:PHE:HB3	2.06	0.55
31:Ld:33:ILE:O	31:Ld:36:VAL:HG22	2.06	0.55
62:ST:135:HIS:NE2	79:S2:1519:U:O4'	2.40	0.55
64:SV:51:LYS:CG	64:SV:78:ILE:HD11	2.37	0.55
75:Sg:75:GLY:O	75:Sg:92:LEU:HD12	2.05	0.55
75:Sg:200:VAL:HG22	75:Sg:207:CYS:HB3	1.89	0.55
79:S2:554:A:H4'	79:S2:555:A:C5'	2.29	0.55
2:L5:4375:C:H5"	2:L5:4376:A:OP1	2.07	0.55
9:LF:182:TYR:HB3	9:LF:200:ARG:HG3	1.89	0.55
51:SH:181:THR:CG2	51:SH:183:LYS:HE3	2.37	0.55
61:SS:3:ARG:HD2	79:S2:1454:A:H5"	1.88	0.55
61:SS:20:TYR:CD1	61:SS:38:ILE:HD12	2.42	0.55
62:ST:37:GLY:H	79:S2:1630:A:H5'	1.72	0.55
67:SY:6:THR:OG1	67:SY:28:LEU:HB2	2.07	0.55
79:S2:84:A:N3	79:S2:150:A:O2'	2.34	0.55
79:S2:949:G:H2'	79:S2:950:C:C6	2.42	0.55
79:S2:1019:C:C2'	79:S2:1020:A:H5'	2.37	0.55
79:S2:1170:A:H4'	79:S2:1171:G:OP1	2.06	0.55
1:L1:148:A:H2'	1:L1:149:G:C8	2.41	0.55
2:L5:1442:C:N4	2:L5:1443:A:H62	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:4543:G:H2'	2:L5:4544:A:C8	2.41	0.55
2:L5:4862:G:H2'	2:L5:4863:G:C8	2.42	0.55
14:LK:238:GLU:CG	14:LK:239:LYS:H	2.10	0.55
43:Lp:79:VAL:O	43:Lp:83:ILE:HG12	2.07	0.55
48:SD:18:LYS:HB3	48:SD:23:TRP:O	2.06	0.55
49:SE:20:LEU:HD21	49:SE:46:ILE:HD12	1.88	0.55
52:SI:151:GLU:CA	52:SI:154:LYS:HE3	2.31	0.55
64:SV:51:LYS:HG3	64:SV:78:ILE:HD11	1.88	0.55
2:L5:73:A:OP1	19:LQ:106:SER:HB2	2.07	0.55
2:L5:219:G:H3'	2:L5:219:G:OP2	2.06	0.55
2:L5:1273:G:H5"	29:Lb:117:ARG:HE	1.71	0.55
2:L5:1959:U:H5"	2:L5:1961:G:O4'	2.07	0.55
14:LK:176:THR:HB	14:LK:186:LEU:HD23	1.89	0.55
25:LW:80:ARG:HH21	50:SG:131:ARG:N	2.05	0.55
49:SE:182:MET:CE	49:SE:192:ILE:HD11	2.37	0.55
66:SX:115:ILE:HB	66:SX:118:VAL:CG1	2.37	0.55
75:Sg:32:LEU:HD23	75:Sg:42:MET:HA	1.88	0.55
78:Sz:95:ARG:NH1	78:Sz:97:LYS:HE3	2.22	0.55
79:S2:1839:U:H2'	79:S2:1840:U:C6	2.42	0.55
2:L5:510:U:H5'	28:La:86:THR:OG1	2.07	0.54
2:L5:3664:G:H2'	2:L5:3665:G:C8	2.41	0.54
2:L5:3859:G:H4'	35:Lh:139:TYR:CE1	2.42	0.54
27:LZ:128:LYS:O	27:LZ:132:GLN:HG3	2.06	0.54
37:Lj:110:ARG:HG3	37:Lj:120:ILE:HD12	1.87	0.54
50:SG:154:ARG:HD2	79:S2:77:A:C8	2.41	0.54
56:SM:84:HIS:NE2	77:Sy:27:ILE:HD12	2.22	0.54
75:Sg:2:THR:HG23	75:Sg:3:GLU:N	2.22	0.54
75:Sg:104:HIS:CD2	75:Sg:108:VAL:HG22	2.42	0.54
79:S2:76:U:H3'	79:S2:77:A:H5"	1.90	0.54
79:S2:980:A:O2'	79:S2:981:A:H5'	2.06	0.54
79:S2:1037:G:H4'	79:S2:1845:A:H4'	1.89	0.54
2:L5:341:G:N7	85:L5:5535:HOH:O	2.34	0.54
2:L5:4123:C:C2'	2:L5:4124:G:H5'	2.38	0.54
85:L5:8851:HOH:O	19:LQ:10:LEU:HB3	2.07	0.54
9:LF:25:PHE:O	9:LF:29:LYS:HG3	2.07	0.54
10:LG:80:ILE:CD1	16:LN:18:VAL:HG23	2.37	0.54
15:LM:117:LYS:O	15:LM:121:ARG:HG2	2.07	0.54
25:LW:94:ARG:HG3	50:SG:146:ASN:HB2	1.89	0.54
28:La:103:VAL:HG22	28:La:125:LYS:O	2.07	0.54
34:Lg:83:CYS:O	34:Lg:87:VAL:HG23	2.08	0.54
45:S1:126:ASP:OD1	45:S1:136:ARG:NE	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:SD:25:THR:HG22	48:SD:109:LEU:HD11	1.87	0.54
50:SG:67:VAL:HG12	50:SG:69:THR:HG22	1.88	0.54
51:SH:46:THR:CG2	51:SH:65:PRO:HD3	2.37	0.54
59:SP:81:ARG:NH1	59:SP:97:TYR:O	2.40	0.54
61:SS:104:GLU:O	61:SS:108:LEU:HD23	2.06	0.54
63:SU:65:TYR:HA	63:SU:123:LEU:HD12	1.89	0.54
66:SX:115:ILE:CG2	66:SX:118:VAL:HG11	2.37	0.54
75:Sg:296:GLN:O	75:Sg:312:VAL:HG13	2.07	0.54
77:Sy:62:VAL:O	77:Sy:65:VAL:HG12	2.06	0.54
78:Sz:100:LEU:HD21	78:Sz:102:VAL:O	2.07	0.54
79:S2:1229:G:H2'	79:S2:1230:C:O4'	2.07	0.54
2:L5:135:G:N1	17:LO:97:LYS:HG2	2.23	0.54
2:L5:930:G:OP1	6:LC:353:LYS:HE2	2.07	0.54
14:LK:149:ILE:HD12	14:LK:271:LEU:HD21	1.88	0.54
17:LO:5:LYS:HB3	17:LO:7:ARG:HG2	1.90	0.54
27:LZ:57:MET:HE1	27:LZ:65:ARG:NE	2.22	0.54
45:S1:127:VAL:CG1	45:S1:176:VAL:HG11	2.36	0.54
49:SE:183:VAL:HB	49:SE:188:ASN:O	2.07	0.54
50:SG:61:PHE:CE1	50:SG:96:SER:HB2	2.42	0.54
51:SH:100:ILE:HD11	51:SH:125:VAL:CG1	2.34	0.54
53:SJ:124:HIS:HE1	73:Se:109:ARG:HB2	1.72	0.54
60:SQ:100:VAL:HG12	60:SQ:101:ASP:N	2.22	0.54
61:SS:56:HIS:NE2	79:S2:1465:A:OP1	2.38	0.54
79:S2:321:C:H2'	79:S2:322:C:C6	2.43	0.54
79:S2:662:G:H4'	79:S2:663:C:OP1	2.07	0.54
79:S2:908:A:H2'	79:S2:909:G:O4'	2.07	0.54
79:S2:1113:A:H2'	79:S2:1114:U:H6	1.72	0.54
79:S2:1259:A:H3'	79:S2:1259:A:N3	2.22	0.54
79:S2:1279:C:H2'	79:S2:1280:G:C8	2.43	0.54
79:S2:1316:C:H2'	79:S2:1317:C:H6	1.69	0.54
79:S2:1859:A:O2'	79:S2:1860:A:H5'	2.08	0.54
2:L5:491:G:O2'	2:L5:493:G:H5'	2.07	0.54
2:L5:911:U:H2'	2:L5:912:G:N9	2.23	0.54
2:L5:2529:A:O2'	2:L5:2531:C:OP2	2.26	0.54
2:L5:3868:G:H22	2:L5:3900:G:H1'	1.72	0.54
2:L5:3929:G:H2'	2:L5:3930:U:H6	1.73	0.54
15:LM:126:GLU:HA	15:LM:126:GLU:OE1	2.07	0.54
55:SL:48:LYS:HE3	55:SL:52:GLU:OE2	2.07	0.54
57:SN:15:ALA:O	79:S2:1016:U:H5'	2.07	0.54
72:Sd:9:ILE:CG2	72:Sd:57:THR:HG23	2.38	0.54
74:Sf:19:ARG:NH1	79:S2:1661:A:OP1	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Sy:31:LEU:HD11	77:Sy:89:VAL:HB	1.89	0.54
79:S2:150:A:H5"	79:S2:151:C:H5	1.72	0.54
79:S2:1620:A:H1'	79:S2:1624:U:OP2	2.08	0.54
2:L5:2495:U:O5'	2:L5:2495:U:H6	1.91	0.54
2:L5:4922:C:H2'	2:L5:4923:C:C1'	2.38	0.54
12:LI:82:VAL:HG13	12:LI:114:ARG:HG2	1.88	0.54
13:LJ:165:TRP:O	13:LJ:169:LYS:HG2	2.08	0.54
27:LZ:25:ILE:HA	27:LZ:43:VAL:HG12	1.89	0.54
51:SH:11:PRO:HD2	51:SH:44:ASN:ND2	2.22	0.54
51:SH:110:THR:CG2	51:SH:113:LYS:HD3	2.37	0.54
53:SJ:58:ARG:O	53:SJ:62:THR:HG23	2.07	0.54
55:SL:16:ILE:CG2	55:SL:34:PRO:HG2	2.37	0.54
70:Sb:35:VAL:HG21	70:Sb:63:LEU:HD23	1.88	0.54
79:S2:65:C:N4	79:S2:169:U:O2'	2.39	0.54
79:S2:1344:A:H4'	79:S2:1345:G:OP1	2.07	0.54
79:S2:1391:OMC:HM22	79:S2:1392:U:C4'	2.37	0.54
1:L1:117:C:H5"	41:Ln:55:ARG:HH12	1.73	0.54
1:L1:154:G:H4'	10:LG:189:ARG:NH1	2.22	0.54
2:L5:1188:C:H2'	2:L5:1189:G:H8	1.71	0.54
2:L5:5024:C:H5'	2:L5:5025:C:O4'	2.08	0.54
26:LY:45:GLY:O	26:LY:135:PHE:HA	2.07	0.54
40:Lm:47:ILE:HD11	40:Lm:78:PHE:HE2	1.72	0.54
53:SJ:140:GLN:NE2	67:SY:64:PHE:HD2	2.06	0.54
70:Sb:56:CYS:HB3	70:Sb:63:LEU:CD1	2.33	0.54
75:Sg:5:MET:HE1	75:Sg:298:LEU:HB2	1.90	0.54
75:Sg:114:SER:OG	75:Sg:119:GLN:HB2	2.06	0.54
79:S2:168:C:H2'	79:S2:169:U:O4'	2.07	0.54
79:S2:838:G:O2'	79:S2:840:C:H5'	2.08	0.54
79:S2:1067:C:H2'	79:S2:1068:G:O4'	2.07	0.54
1:L1:71:A:N1	1:L1:81:C:O2'	2.37	0.54
2:L5:505:G:C2'	2:L5:506:C:H5'	2.37	0.54
2:L5:1904:G:C2'	2:L5:1905:U:H5'	2.36	0.54
2:L5:4966:A:H2'	2:L5:4967:A:O4'	2.07	0.54
49:SE:72:ILE:HD13	49:SE:77:ARG:CG	2.38	0.54
52:SI:144:LYS:HD2	52:SI:147:LYS:HE3	1.89	0.54
54:SK:63:GLY:O	54:SK:66:ILE:HG22	2.08	0.54
56:SM:9:ILE:HD13	56:SM:82:TYR:HE2	1.73	0.54
62:ST:40:TYR:HA	62:ST:83:PHE:CE2	2.43	0.54
79:S2:322:C:O2'	79:S2:324:C:N4	2.40	0.54
79:S2:1149:A:H2'	79:S2:1149:A:N3	2.22	0.54
79:S2:1692:PSU:H2'	79:S2:1693:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:438:G:O2'	2:L5:439:G:H5'	2.08	0.54
2:L5:738:C:OP1	2:L5:739:G:H4'	2.08	0.54
2:L5:1390:G:H1'	85:L5:6789:HOH:O	2.06	0.54
2:L5:3867:A2M:HM'2	2:L5:3868:G:O4'	2.07	0.54
2:L5:4239:A:H2'	2:L5:4240:G:H8	1.73	0.54
13:LJ:23:ASN:HB3	13:LJ:129:ASP:OD1	2.08	0.54
40:Lm:36:ALA:HB3	40:Lm:65:ARG:NH1	2.20	0.54
48:SD:187:SER:HB3	48:SD:190:ILE:CG1	2.37	0.54
54:SK:37:VAL:CG2	54:SK:48:ILE:HG23	2.38	0.54
54:SK:95:GLY:HA2	54:SK:101:GLN:NE2	2.23	0.54
62:ST:40:TYR:O	62:ST:44:VAL:HG23	2.08	0.54
71:Sc:82:SER:OG	79:S2:1598:G:OP2	2.22	0.54
77:Sy:85:LEU:O	77:Sy:89:VAL:HG13	2.08	0.54
79:S2:222:U:O2'	79:S2:223:C:H5'	2.08	0.54
79:S2:919:A:H4'	79:S2:920:A:O5'	2.07	0.54
79:S2:1307:U:H2'	79:S2:1308:U:H6	1.73	0.54
79:S2:1726:G:C2'	79:S2:1727:G:H5'	2.38	0.54
2:L5:198:A:P	8:LE:126:ARG:HH22	2.31	0.54
2:L5:1617:G:N7	82:L5:5101:B3P:H21	2.23	0.54
11:LH:28:LYS:HG3	11:LH:33:THR:HG22	1.90	0.54
30:Lc:57:LYS:HE2	30:Lc:73:HIS:NE2	2.23	0.54
47:SC:190:SER:OG	79:S2:14:C:H5'	2.08	0.54
51:SH:83:LEU:HB3	51:SH:92:VAL:HG21	1.90	0.54
52:SI:142:SER:HB2	52:SI:145:ILE:HD13	1.90	0.54
53:SJ:60:LEU:HD22	53:SJ:70:ARG:HA	1.89	0.54
54:SK:52:ALA:HB3	54:SK:58:VAL:HG21	1.90	0.54
54:SK:175:VAL:HG21	54:SK:184:ILE:HD11	1.89	0.54
75:Sg:290:ALA:O	75:Sg:298:LEU:HD12	2.08	0.54
77:Sy:69:CYS:CB	77:Sy:76:LEU:HD12	2.38	0.54
79:S2:529:A:H2'	79:S2:530:U:C6	2.42	0.54
79:S2:1324:G:H2'	79:S2:1325:G:O4'	2.07	0.54
79:S2:1444:U:H2'	79:S2:1445:PSU:C6	2.42	0.54
2:L5:665:C:O2	2:L5:665:C:H2'	2.08	0.54
2:L5:1702:C:H2'	2:L5:1703:C:C6	2.43	0.54
2:L5:3710:G:N2	2:L5:3713:U:H3	2.05	0.54
5:LB:200:ARG:HG2	5:LB:200:ARG:HH11	1.73	0.54
10:LG:171:PRO:HB3	10:LG:181:TYR:CE2	2.43	0.54
16:LN:154:PRO:O	16:LN:157:LYS:HG3	2.09	0.54
25:LW:61:LYS:O	25:LW:63:GLN:N	2.41	0.54
38:Lk:55:LYS:HA	38:Lk:58:GLN:NE2	2.12	0.54
45:S1:6:ASN:CB	45:S1:9:LEU:HD11	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SG:174:PRO:O	79:S2:77:A:O2'	2.26	0.54
60:SQ:123:ASP:OD1	60:SQ:125:ARG:HG3	2.08	0.54
60:SQ:142:GLN:NE2	79:S2:1527:C:OP1	2.37	0.54
68:SZ:68:THR:HG23	68:SZ:70:CYS:O	2.08	0.54
72:Sd:18:LEU:HD12	72:Sd:29:GLN:CG	2.33	0.54
75:Sg:22:ALA:O	75:Sg:71:ILE:HD11	2.08	0.54
75:Sg:68:ASP:HB3	75:Sg:111:VAL:HG22	1.90	0.54
75:Sg:196:ASN:HB2	75:Sg:236:ILE:O	2.09	0.54
77:Sy:64:LEU:HD21	78:Sz:106:TYR:HD2	1.73	0.54
79:S2:1265:A:H5'	79:S2:1266:C:OP2	2.07	0.54
79:S2:1354:G:N2	79:S2:1357:A:OP2	2.33	0.54
1:L1:12:G:H5"	35:Lh:3:ARG:HG3	1.90	0.53
2:L5:468:U:H4'	2:L5:469:C:OP1	2.08	0.53
2:L5:4900:C:H4'	2:L5:4901:G:OP2	2.08	0.53
2:L5:5004:C:H2'	2:L5:5005:G:O4'	2.09	0.53
45:S1:97:LEU:HB3	45:S1:232:HIS:NE2	2.24	0.53
53:SJ:63:LEU:HD23	53:SJ:70:ARG:HB2	1.89	0.53
53:SJ:73:GLU:CD	79:S2:817:G:H4'	2.33	0.53
65:SW:71:LYS:O	65:SW:129:PHE:HA	2.07	0.53
67:SY:5:VAL:HA	67:SY:28:LEU:O	2.09	0.53
74:Sf:26:ASN:ND2	79:S2:1495:G:H4'	2.23	0.53
75:Sg:79:LEU:HD12	75:Sg:88:ARG:O	2.07	0.53
79:S2:612:U:H2'	79:S2:613:G:O4'	2.08	0.53
79:S2:1233:G:O2'	79:S2:1234:C:H5'	2.08	0.53
79:S2:1282:A:C2	79:S2:1283:C:H1'	2.43	0.53
79:S2:1380:C:H2'	79:S2:1381:G:O4'	2.08	0.53
2:L5:223:G:H4'	2:L5:225:G:N7	2.23	0.53
2:L5:1178:G:H2'	3:L8:286:SER:HB2	1.90	0.53
2:L5:1202:C:H3'	2:L5:1203:G:C4'	2.38	0.53
2:L5:4228:OMG:H5"	2:L5:4229:U:O4'	2.08	0.53
5:LB:304:SER:HB3	5:LB:310:SER:O	2.08	0.53
11:LH:113:GLU:HG2	11:LH:125:ARG:HG2	1.91	0.53
14:LK:98:GLY:HA3	14:LK:101:ASN:CB	2.38	0.53
29:Lb:67:ALA:O	29:Lb:70:GLU:HB3	2.08	0.53
32:Le:68:LEU:N	32:Le:83:LEU:O	2.37	0.53
46:SA:85:ARG:NH2	61:SS:82:ASP:O	2.37	0.53
46:SA:108:PHE:HB2	46:SA:136:GLU:HG2	1.89	0.53
46:SA:145:ILE:HG12	46:SA:159:ILE:HB	1.89	0.53
61:SS:21:TYR:CE1	61:SS:58:MET:HE1	2.43	0.53
66:SX:131:LEU:HD21	66:SX:135:LYS:HD2	1.90	0.53
75:Sg:268:ASP:OD1	75:Sg:269:GLU:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:72:C:N4	79:S2:74:G:H21	2.06	0.53
79:S2:835:C:O5'	79:S2:836:G:N2	2.41	0.53
79:S2:1598:G:O2'	79:S2:1599:U:OP2	2.26	0.53
2:L5:138:G:C5	2:L5:139:G:N7	2.77	0.53
2:L5:1203:G:H2'	2:L5:1204:C:O4'	2.08	0.53
2:L5:1414:C:H2'	2:L5:1415:G:H8	1.73	0.53
2:L5:1758:G:OP2	2:L5:1758:G:H4'	2.09	0.53
17:LO:6:ALA:O	17:LO:10:ARG:HG3	2.07	0.53
31:Ld:23:ARG:HG2	31:Ld:121:ASN:HA	1.89	0.53
36:Li:80:HIS:NE2	36:Li:84:LYS:HD2	2.23	0.53
38:Lk:56:LEU:HD12	38:Lk:56:LEU:O	2.08	0.53
41:Ln:54:LEU:HD23	41:Ln:54:LEU:H	1.72	0.53
62:ST:38:ARG:HH21	79:S2:1603:G:H4'	1.73	0.53
66:SX:48:LYS:HG3	79:S2:483:C:H5'	1.89	0.53
75:Sg:172:LYS:HE2	75:Sg:193:GLY:CA	2.33	0.53
79:S2:339:A:H2'	79:S2:340:C:H5	1.73	0.53
79:S2:884:C:H2'	79:S2:885:U:O4'	2.08	0.53
2:L5:682:G:C3'	2:L5:683:C:H5'	2.39	0.53
2:L5:1551:C:H2'	2:L5:1552:G:H5'	1.89	0.53
2:L5:2876:OMG:C8	43:Lp:16:THR:HG22	2.44	0.53
2:L5:3672:G:H2'	2:L5:3672:G:N3	2.22	0.53
2:L5:3808:OMC:HM22	2:L5:3809:G:C4'	2.38	0.53
2:L5:3938:G:C5'	16:LN:24:ARG:NH1	2.71	0.53
5:LB:258:HIS:HA	5:LB:259:PRO:C	2.34	0.53
25:LW:35:LYS:HE3	25:LW:51:TRP:CZ2	2.44	0.53
31:Ld:46:LEU:HD22	31:Ld:72:VAL:HG11	1.90	0.53
46:SA:80:ARG:O	46:SA:84:GLN:HG3	2.09	0.53
55:SL:49:GLU:CG	55:SL:116:CYS:HA	2.38	0.53
57:SN:132:LYS:O	57:SN:133:ARG:HB2	2.09	0.53
59:SP:60:LEU:HD12	59:SP:89:MET:HE3	1.89	0.53
59:SP:64:LYS:HD2	59:SP:73:PRO:HG2	1.90	0.53
67:SY:29:HIS:HB2	67:SY:32:LYS:HB2	1.89	0.53
75:Sg:292:SER:OG	75:Sg:294:ASP:OD1	2.25	0.53
77:Sy:123:VAL:HA	77:Sy:126:GLU:HG2	1.90	0.53
79:S2:194:C:H2'	79:S2:195:C:H6	1.73	0.53
79:S2:223:C:H2'	79:S2:224:A:C8	2.44	0.53
79:S2:481:C:H2'	79:S2:482:G:O4'	2.08	0.53
79:S2:1295:A:H2'	79:S2:1295:A:N3	2.24	0.53
79:S2:1842:4AC:O7	79:S2:1842:4AC:H5	2.09	0.53
2:L5:206:U:O2'	2:L5:208:A:N7	2.31	0.53
2:L5:385:A:H4'	2:L5:386:A:OP1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:980:U:H2'	2:L5:981:C:C6	2.43	0.53
2:L5:1176:C:H42	2:L5:1184:A:H61	1.56	0.53
2:L5:1189:G:O2'	2:L5:1190:C:H5'	2.09	0.53
2:L5:4137:C:H2'	2:L5:4138:C:H6	1.70	0.53
2:L5:4147:G:H2'	2:L5:4148:C:H6	1.69	0.53
2:L5:4195:G:OP1	44:Lz:116:ARG:NE	2.41	0.53
2:L5:4727:A:OP1	5:LB:132:LYS:HB2	2.08	0.53
3:L8:273:LEU:O	3:L8:277:LYS:HG3	2.07	0.53
10:LG:248:ALA:O	10:LG:252:LYS:HG2	2.08	0.53
16:LN:178:HIS:HA	16:LN:181:HIS:NE2	2.23	0.53
19:LQ:140:SER:O	19:LQ:144:LEU:HG	2.08	0.53
45:S1:90:ASP:OD1	45:S1:91:VAL:N	2.42	0.53
46:SA:149:ASN:HD22	46:SA:166:LYS:HE2	1.73	0.53
51:SH:45:ILE:HG22	51:SH:64:VAL:HG12	1.90	0.53
54:SK:123:LEU:O	54:SK:127:MET:HG2	2.09	0.53
56:SM:7:ASN:O	56:SM:11:ILE:HG13	2.09	0.53
56:SM:38:LYS:CB	56:SM:40:VAL:HG23	2.37	0.53
56:SM:49:MET:SD	56:SM:52:LEU:HD12	2.49	0.53
56:SM:63:ALA:HB3	56:SM:68:TYR:CE1	2.42	0.53
60:SQ:24:HIS:ND1	79:S2:1408:U:H5'	2.23	0.53
65:SW:36:ARG:HD2	85:SW:214:HOH:O	2.06	0.53
79:S2:874:G:H2'	79:S2:875:A:H8	1.72	0.53
79:S2:1395:C:C2'	79:S2:1396:A:H5'	2.38	0.53
2:L5:254:G:H2'	2:L5:255:C:H6	1.72	0.53
2:L5:463:A:H2	2:L5:692:A:N1	2.06	0.53
2:L5:743:G:H2'	2:L5:744:G:O4'	2.08	0.53
2:L5:3808:OMC:HM22	2:L5:3809:G:H5'	1.90	0.53
2:L5:4733:C:H5'	2:L5:4733:C:O2	2.09	0.53
8:LE:88:GLU:HG3	8:LE:92:GLY:O	2.09	0.53
30:Lc:10:SER:O	30:Lc:14:ILE:HG13	2.09	0.53
31:Ld:20:VAL:HA	31:Ld:90:ARG:O	2.09	0.53
36:Li:55:ARG:O	36:Li:59:GLU:HG2	2.09	0.53
40:Lm:80:LYS:HG2	40:Lm:110:TYR:CE2	2.44	0.53
41:Ln:43:SER:OG	41:Ln:45:THR:HG22	2.08	0.53
51:SH:10:LYS:CE	51:SH:47:ALA:HA	2.39	0.53
59:SP:55:SER:O	59:SP:59:ARG:HG2	2.09	0.53
60:SQ:90:LYS:HG2	60:SQ:120:LEU:HD23	1.91	0.53
75:Sg:87:LEU:HB2	75:Sg:101:PHE:HB2	1.90	0.53
79:S2:63:U:O2'	79:S2:170:A:N3	2.40	0.53
2:L5:1921:C:C6	21:LS:161:ARG:HD3	2.44	0.53
2:L5:3642:A:C4	18:LP:3:LYS:HB3	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:LB:288:GLY:HA3	5:LB:330:PHE:CZ	2.44	0.53
14:LK:204:SER:O	14:LK:205:ASN:HB2	2.09	0.53
38:Lk:23:VAL:HG12	38:Lk:66:VAL:HG12	1.88	0.53
45:S1:33:VAL:HG12	45:S1:44:ILE:HD12	1.90	0.53
45:S1:34:LYS:HB2	45:S1:97:LEU:HD23	1.91	0.53
48:SD:32:ASP:OD2	48:SD:35:LEU:HG	2.09	0.53
53:SJ:124:HIS:CE1	73:Se:109:ARG:HB2	2.44	0.53
60:SQ:8:GLN:HA	60:SQ:99:TYR:CZ	2.43	0.53
62:ST:34:LYS:HA	85:S2:3047:HOH:O	2.09	0.53
66:SX:46:HIS:CD2	66:SX:103:ALA:HB2	2.44	0.53
70:Sb:36:LYS:HE3	70:Sb:40:CYS:O	2.09	0.53
77:Sy:16:THR:O	77:Sy:20:GLU:HG3	2.09	0.53
79:S2:318:A:H2'	79:S2:319:C:O4'	2.08	0.53
79:S2:901:G:H2'	79:S2:902:G:H8	1.73	0.53
2:L5:1742:A:OP2	3:L8:10:LYS:HD2	2.09	0.53
2:L5:4536:OMC:HM22	2:L5:4537:C:O4'	2.09	0.53
15:LM:11:ARG:NH1	15:LM:58:THR:O	2.37	0.53
43:Lp:85:ARG:O	43:Lp:89:LEU:HD13	2.09	0.53
44:Lz:76:MET:HE3	44:Lz:138:ILE:HD13	1.90	0.53
85:SC:318:HOH:O	64:SV:27:LYS:HE3	2.08	0.53
54:SK:23:GLU:OE1	54:SK:23:GLU:HA	2.09	0.53
59:SP:43:ARG:O	59:SP:47:ARG:HG3	2.08	0.53
60:SQ:102:GLU:HG2	75:Sg:56:GLN:O	2.09	0.53
79:S2:497:C:H5	85:S2:2475:HOH:O	1.92	0.53
79:S2:1534:C:O2	79:S2:1598:G:N2	2.42	0.53
2:L5:385:A:N3	2:L5:387:G:H5"	2.24	0.53
2:L5:984:C:H2'	2:L5:985:C:C6	2.44	0.53
2:L5:2396:A:C8	2:L5:2814:C:H2'	2.43	0.53
2:L5:2611:A:H5'	2:L5:2688:G:H4'	1.91	0.53
2:L5:4771:C:H2'	2:L5:4772:C:C6	2.44	0.53
2:L5:4872:2MG:HM21	26:LY:201:LEU:C	2.33	0.53
3:L8:215:ASP:HB2	3:L8:218:ALA:HB3	1.91	0.53
32:Le:62:THR:HG22	32:Le:62:THR:O	2.08	0.53
56:SM:63:ALA:HB3	56:SM:68:TYR:HE1	1.74	0.53
60:SQ:17:LYS:HE2	79:S2:1648:G:C5	2.44	0.53
75:Sg:154:VAL:HA	75:Sg:166:VAL:O	2.09	0.53
79:S2:530:U:H2'	79:S2:531:A:H8	1.72	0.53
79:S2:1631:U:O2'	79:S2:1632:G:H5'	2.09	0.53
2:L5:1405:C:H2'	2:L5:1406:G:C8	2.44	0.53
2:L5:3729:U:H5'	32:Le:34:TYR:OH	2.09	0.53
2:L5:4188:U:H2'	2:L5:4189:U:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LE:2:LYS:HE3	8:LE:4:ASN:O	2.08	0.53
20:LR:167:LYS:O	20:LR:171:LYS:HG2	2.08	0.53
35:Lh:23:ARG:NH1	35:Lh:125:MET:HE1	2.24	0.53
38:Lk:68:GLU:OE1	38:Lk:68:GLU:N	2.42	0.53
42:Lo:112:LYS:HB3	42:Lo:114:LYS:HG2	1.90	0.53
52:SI:145:ILE:H	52:SI:145:ILE:HD12	1.74	0.53
58:SO:113:GLN:HG3	69:Sa:46:GLU:CD	2.34	0.53
61:SS:20:TYR:HD2	61:SS:23:ARG:HH11	1.57	0.53
63:SU:113:VAL:HG13	63:SU:122:LYS:O	2.09	0.53
75:Sg:45:LEU:HB3	75:Sg:47:ARG:NH1	2.23	0.53
75:Sg:191:HIS:CE1	75:Sg:195:LEU:HD21	2.42	0.53
79:S2:328:U:C2	79:S2:329:G:H1'	2.44	0.53
79:S2:1282:A:H3'	79:S2:1283:C:C6	2.43	0.53
2:L5:290:U:H2'	2:L5:291:U:C6	2.45	0.52
2:L5:737:C:C6	2:L5:739:G:H5"	2.43	0.52
2:L5:760:G:N1	2:L5:903:C:O2'	2.24	0.52
2:L5:4744:A:H2'	2:L5:4745:G:O4'	2.08	0.52
22:LT:147:GLU:OE1	22:LT:148:PRO:HD2	2.09	0.52
34:Lg:84:ALA:O	34:Lg:88:ARG:HG3	2.09	0.52
57:SN:99:ARG:O	57:SN:103:GLU:HG3	2.09	0.52
67:SY:109:GLU:O	67:SY:113:ARG:HG3	2.09	0.52
75:Sg:5:MET:HE1	75:Sg:298:LEU:CB	2.39	0.52
75:Sg:104:HIS:ND1	75:Sg:124:SER:HB2	2.24	0.52
75:Sg:239:LEU:HD23	75:Sg:250:ALA:HB2	1.89	0.52
2:L5:219:G:H2'	2:L5:219:G:N3	2.24	0.52
2:L5:746:A:H2'	2:L5:747:A:C8	2.44	0.52
2:L5:1070:G:O2'	2:L5:1071:C:O5'	2.27	0.52
2:L5:1577:G:O2'	2:L5:1612:G:H4'	2.09	0.52
2:L5:4930:C:OP1	14:LK:266:GLN:NE2	2.28	0.52
3:L8:33:ARG:HG2	22:LT:27:LEU:CD1	2.40	0.52
8:LE:50:ARG:HD2	8:LE:115:ARG:NH1	2.23	0.52
46:SA:25:LEU:O	46:SA:164:ASN:HB2	2.09	0.52
52:SI:165:GLN:HB3	52:SI:171:LEU:HD23	1.91	0.52
54:SK:183:GLY:HA3	79:S2:1334:G:O3'	2.09	0.52
62:ST:129:LEU:HD13	79:S2:1521:C:OP2	2.10	0.52
67:SY:12:PHE:CE2	67:SY:23:MET:HE2	2.44	0.52
79:S2:512:A2M:H4'	79:S2:576:A2M:H2	1.91	0.52
79:S2:1328:OMG:HM22	79:S2:1329:U:C5'	2.38	0.52
79:S2:1724:A:H2'	79:S2:1725:U:C6	2.44	0.52
2:L5:465:G:O2'	2:L5:466:A:P	2.66	0.52
2:L5:738:C:H5"	2:L5:739:G:O5'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:1697:G:H22	2:L5:2084:C:P	2.31	0.52
2:L5:2421:G:OP2	2:L5:2828:U:H1'	2.10	0.52
2:L5:2517:A:N3	2:L5:2539:C:O2'	2.40	0.52
2:L5:2553:A:H8	2:L5:2553:A:OP1	1.93	0.52
2:L5:4475:G:OP2	2:L5:4476:C:H5"	2.09	0.52
2:L5:4958:C:H2'	2:L5:4959:U:O4'	2.09	0.52
7:LD:101:VAL:HG22	7:LD:165:VAL:HG22	1.90	0.52
15:LM:100:ARG:HD3	26:LY:198:THR:O	2.09	0.52
17:LO:96:ASN:OD1	17:LO:99:GLU:HG2	2.09	0.52
21:LS:69:GLU:HG2	21:LS:101:THR:HG22	1.89	0.52
31:Ld:37:GLY:O	31:Ld:41:ARG:HG3	2.09	0.52
32:Le:35:ALA:O	32:Le:39:ARG:HG3	2.10	0.52
48:SD:77:MET:CG	48:SD:89:THR:HG21	2.39	0.52
49:SE:72:ILE:HD13	49:SE:77:ARG:HG3	1.91	0.52
50:SG:49:VAL:HB	50:SG:115:LYS:HB3	1.92	0.52
50:SG:149:LYS:C	50:SG:150:GLU:HG3	2.33	0.52
56:SM:25:LYS:NZ	79:S2:1497:G:O6	2.33	0.52
77:Sy:94:ILE:HG13	77:Sy:100:PRO:CB	2.39	0.52
79:S2:1260:A:O2'	79:S2:1261:C:H5'	2.09	0.52
2:L5:1826:G:C5'	29:Lb:43:MET:HE2	2.39	0.52
2:L5:4434:C:O2'	2:L5:4435:U:H5'	2.10	0.52
85:L5:8652:HOH:O	32:Le:58:LYS:HE3	2.08	0.52
85:L5:8684:HOH:O	19:LQ:32:LYS:HE2	2.08	0.52
14:LK:74:SER:OG	29:Lb:118:LEU:HD13	2.10	0.52
48:SD:20:PHE:N	48:SD:48:TYR:O	2.33	0.52
50:SG:15:LEU:HD23	50:SG:16:ILE:N	2.25	0.52
51:SH:31:GLU:HG2	51:SH:40:LEU:HB2	1.91	0.52
53:SJ:38:ARG:NH1	85:SJ:201:HOH:O	2.23	0.52
60:SQ:96:TYR:CG	60:SQ:100:VAL:HG21	2.43	0.52
67:SY:89:HIS:CD2	79:S2:574:A:H5"	2.44	0.52
77:Sy:36:ARG:HB3	79:S2:1286:G:O6	2.09	0.52
79:S2:120:U:H2'	79:S2:121:OMU:H6	1.91	0.52
79:S2:1571:G:C2'	79:S2:1572:C:H5'	2.38	0.52
79:S2:1589:A:H2'	79:S2:1590:C:O4'	2.10	0.52
79:S2:1596:U:O2'	79:S2:1597:C:H5'	2.09	0.52
2:L5:267:G:O2'	2:L5:268:G:H5'	2.10	0.52
2:L5:726:G:O2'	2:L5:727:C:H5'	2.09	0.52
2:L5:1080:C:H2'	2:L5:1081:C:C6	2.45	0.52
2:L5:1564:A:H2'	2:L5:1565:A:C8	2.45	0.52
2:L5:2539:C:H2'	2:L5:2540:C:H6	1.72	0.52
2:L5:4415:A:H2'	2:L5:4416:G:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Lb:98:TYR:CE1	29:Lb:104:LEU:HB3	2.44	0.52
37:Lj:26:ARG:HD3	85:Lj:211:HOH:O	2.10	0.52
45:S1:28:LYS:HD2	45:S1:48:LEU:HD12	1.90	0.52
50:SG:70:HIS:ND1	50:SG:103:ASP:HB2	2.24	0.52
65:SW:36:ARG:HB3	65:SW:110:ILE:HG21	1.92	0.52
75:Sg:175:LYS:HG2	75:Sg:187:ASN:OD1	2.09	0.52
79:S2:554:A:O5'	79:S2:555:A:H5"	2.10	0.52
2:L5:963:G:H3'	2:L5:963:G:N3	2.24	0.52
2:L5:1415:G:C2'	2:L5:1416:G:H5'	2.39	0.52
2:L5:2422:OMC:OP1	35:Lh:127:ARG:NH2	2.37	0.52
2:L5:2479:G:H2'	2:L5:2480:G:H8	1.73	0.52
2:L5:4499:OMG:C2	2:L5:4529:G:H1'	2.45	0.52
2:L5:4943:A:OP1	14:LK:155:GLY:N	2.42	0.52
7:LD:186:TYR:HB2	7:LD:196:TRP:CZ3	2.44	0.52
11:LH:63:ASN:OD1	11:LH:66:GLU:HG3	2.09	0.52
21:LS:132:ILE:HG22	21:LS:136:LYS:HB2	1.92	0.52
50:SG:63:MET:HA	50:SG:98:ARG:O	2.09	0.52
55:SL:152:LYS:HG3	55:SL:153:LYS:HZ2	1.75	0.52
57:SN:116:ILE:HD12	79:S2:1031:A2M:HM'3	1.91	0.52
60:SQ:131:LYS:NZ	79:S2:1479:G:O2'	2.35	0.52
76:So:25:LYS:O	76:So:25:LYS:HG2	2.10	0.52
79:S2:72:C:H41	79:S2:74:G:N2	2.07	0.52
79:S2:533:A:H2'	79:S2:534:G:O4'	2.10	0.52
79:S2:1337:4AC:O7	79:S2:1337:4AC:H5	2.08	0.52
2:L5:987:C:H2'	2:L5:988:C:N1	2.24	0.52
2:L5:1354:A:H4'	2:L5:1355:G:O5'	2.09	0.52
2:L5:2276:A:H2'	2:L5:2277:C:O4'	2.09	0.52
2:L5:2597:G:N7	85:L5:5550:HOH:O	2.34	0.52
2:L5:2753:G:O2'	2:L5:2754:G:H5'	2.09	0.52
2:L5:2824:OMC:HM22	2:L5:2825:A:O4'	2.10	0.52
85:L5:8710:HOH:O	29:Lb:2:ALA:HB1	2.10	0.52
11:LH:106:GLN:HB2	11:LH:111:LEU:HB3	1.91	0.52
31:Ld:92:ARG:HA	31:Ld:102:LEU:HD23	1.89	0.52
35:Lh:155:GLN:OE1	35:Lh:157:VAL:HG23	2.09	0.52
39:Ll:107:ARG:O	39:Ll:111:ILE:HG12	2.10	0.52
48:SD:87:LEU:HD22	60:SQ:46:THR:OG1	2.10	0.52
52:SI:141:ARG:HD3	52:SI:145:ILE:HG21	1.92	0.52
54:SK:178:ARG:O	79:S2:1500:G:H4'	2.10	0.52
56:SM:50:GLN:HA	56:SM:53:LYS:HG2	1.91	0.52
60:SQ:86:GLN:HG3	60:SQ:119:LEU:C	2.35	0.52
61:SS:116:ASN:C	61:SS:117:LEU:HD23	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:ST:146:VAL:HG23	62:ST:146:VAL:O	2.10	0.52
71:Sc:104:ARG:HG2	79:S2:1594:A:OP2	2.09	0.52
77:Sy:91:LEU:HG	77:Sy:91:LEU:O	2.08	0.52
77:Sy:91:LEU:HD21	77:Sy:104:VAL:HG23	1.92	0.52
79:S2:1785:C:H2'	79:S2:1786:U:H6	1.75	0.52
2:L5:254:G:O2'	2:L5:255:C:P	2.67	0.52
2:L5:490:C:H2'	2:L5:491:G:O4'	2.10	0.52
2:L5:1332:C:H2'	2:L5:1333:A:H8	1.75	0.52
2:L5:1956:A:C2'	2:L5:1957:U:H5'	2.40	0.52
2:L5:2376:A:H2'	2:L5:2377:C:C6	2.45	0.52
2:L5:3701:OMC:N4	2:L5:3745:U:H2'	2.25	0.52
46:SA:167:GLY:O	46:SA:171:VAL:HG23	2.10	0.52
50:SG:14:LYS:HB3	50:SG:124:LEU:HD21	1.91	0.52
51:SH:43:LEU:HB3	51:SH:72:PHE:CE2	2.45	0.52
52:SI:5:ARG:NH2	79:S2:384:U:O4	2.23	0.52
60:SQ:70:VAL:HG11	60:SQ:84:ILE:HG23	1.92	0.52
61:SS:85:VAL:HG13	61:SS:86:PRO:HD2	1.91	0.52
63:SU:116:ASP:OD1	63:SU:122:LYS:HD2	2.09	0.52
67:SY:102:THR:O	67:SY:107:ARG:NH1	2.43	0.52
75:Sg:152:SER:HB3	75:Sg:168:CYS:SG	2.49	0.52
79:S2:197:U:HO2'	79:S2:198:U:C4'	2.21	0.52
79:S2:410:G:H5'	85:S2:2794:HOH:O	2.09	0.52
79:S2:882:U:H2'	79:S2:883:U:N1	2.24	0.52
79:S2:1209:A:O2'	79:S2:1210:G:H5'	2.08	0.52
79:S2:1484:A:H2'	79:S2:1485:U:C6	2.45	0.52
79:S2:1670:C:H2'	79:S2:1671:G:O4'	2.09	0.52
2:L5:1202:C:H5"	2:L5:1203:G:OP2	2.09	0.52
2:L5:1509:C:H5"	28:La:2:PRO:HD3	1.92	0.52
5:LB:161:ARG:HG2	5:LB:184:GLN:HA	1.92	0.52
26:LY:158:GLU:O	26:LY:162:GLU:HG2	2.10	0.52
46:SA:6:ASP:OD1	46:SA:7:VAL:N	2.43	0.52
55:SL:152:LYS:HG3	55:SL:153:LYS:NZ	2.24	0.52
66:SX:104:GLY:O	79:S2:648:A:H4'	2.10	0.52
77:Sy:91:LEU:HD23	77:Sy:105:GLY:C	2.34	0.52
79:S2:533:A:H2'	79:S2:534:G:C8	2.45	0.52
79:S2:902:G:H2'	79:S2:903:A:C2	2.45	0.52
79:S2:1236:G:H2'	79:S2:1237:C:H6	1.75	0.52
79:S2:1533:A:N7	79:S2:1604:G:H1'	2.25	0.52
2:L5:259:C:H2'	2:L5:260:C:H5'	1.91	0.52
2:L5:909:A:H2'	2:L5:910:G:C8	2.45	0.52
2:L5:4109:G:C4	2:L5:4110:C:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:5006:U:H4'	2:L5:5007:A:H5'	1.90	0.52
19:LQ:200:LYS:O	19:LQ:204:GLU:HG3	2.09	0.52
50:SG:162:LEU:HD23	79:S2:67:C:O4'	2.09	0.52
51:SH:15:LYS:HG2	51:SH:16:PRO:HD2	1.92	0.52
54:SK:85:GLU:HG3	54:SK:87:TYR:CE1	2.40	0.52
54:SK:193:ASP:HB2	54:SK:198:ILE:CG1	2.39	0.52
56:SM:29:MET:CE	56:SM:33:PRO:HD3	2.31	0.52
59:SP:17:TYR:CD2	59:SP:18:ARG:HG2	2.45	0.52
59:SP:24:GLN:HB3	59:SP:28:MET:HE3	1.92	0.52
61:SS:129:LYS:HD2	79:S2:1125:C:OP1	2.10	0.52
63:SU:62:ARG:NH2	79:S2:1542:C:OP1	2.43	0.52
63:SU:74:SER:O	63:SU:78:ILE:HG13	2.10	0.52
68:SZ:85:HIS:ND1	79:S2:1447:G:OP1	2.36	0.52
79:S2:671:A:O2'	79:S2:1089:G:OP2	2.23	0.52
2:L5:141:C:O2'	2:L5:142:G:H5'	2.10	0.51
2:L5:448:G:H5"	2:L5:449:C:OP2	2.09	0.51
2:L5:1771:U:H2'	2:L5:1772:C:H6	1.75	0.51
2:L5:2848:G:O2'	2:L5:3838:U:O4	2.26	0.51
2:L5:4566:U:H2'	2:L5:4567:G:O4'	2.09	0.51
6:LC:69:THR:HG22	6:LC:75:ARG:HD3	1.92	0.51
11:LH:20:LEU:CD1	11:LH:47:LEU:HG	2.40	0.51
38:Lk:33:LYS:HG2	38:Lk:46:VAL:HG22	1.92	0.51
49:SE:131:VAL:O	49:SE:131:VAL:HG13	2.10	0.51
56:SM:49:MET:CE	56:SM:52:LEU:HD12	2.40	0.51
62:ST:36:VAL:HA	62:ST:40:TYR:HD2	1.75	0.51
62:ST:137:LYS:HA	79:S2:1521:C:C5	2.45	0.51
68:SZ:95:SER:OG	68:SZ:116:ILE:HD11	2.09	0.51
75:Sg:164:ILE:HG21	75:Sg:176:VAL:HG13	1.91	0.51
77:Sy:51:VAL:CG1	77:Sy:85:LEU:HD11	2.29	0.51
79:S2:12:U:H2'	79:S2:13:C:H6	1.75	0.51
79:S2:97:U:O2'	79:S2:98:C:H5'	2.10	0.51
79:S2:196:C:N4	79:S2:203:G:O6	2.43	0.51
79:S2:1622:U:H3'	79:S2:1623:A:H4'	1.91	0.51
2:L5:3871:A:H2'	2:L5:3872:A:C8	2.45	0.51
2:L5:4989:U:P	2:L5:4989:U:H6	2.33	0.51
3:L8:50:ARG:NH2	4:L9:6:C:O2'	2.43	0.51
10:LG:39:PHE:CD1	10:LG:47:PRO:HD3	2.45	0.51
17:LO:123:ALA:HB2	19:LQ:150:LEU:CD1	2.39	0.51
23:LU:27:ILE:HD13	23:LU:30:LYS:HD2	1.92	0.51
50:SG:51:ARG:NH2	50:SG:112:VAL:HG11	2.25	0.51
57:SN:46:THR:HB	57:SN:47:PRO:HD2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SN:91:LEU:HB3	57:SN:122:ILE:HG12	1.91	0.51
59:SP:28:MET:HB3	59:SP:32:GLN:HB2	1.90	0.51
59:SP:31:GLU:HA	59:SP:34:MET:HE2	1.92	0.51
75:Sg:239:LEU:CD2	75:Sg:250:ALA:HB2	2.40	0.51
79:S2:805:U:O2'	79:S2:806:U:H5'	2.10	0.51
79:S2:844:U:O2'	79:S2:845:G:H5'	2.10	0.51
79:S2:1315:U:O2	79:S2:1315:U:H2'	2.09	0.51
79:S2:1568:C:O2	79:S2:1627:C:O2'	2.29	0.51
2:L5:759:G:N1	2:L5:904:C:H3'	2.23	0.51
12:LI:35:TRP:CZ2	12:LI:56:PRO:HD2	2.45	0.51
21:LS:163:HIS:O	21:LS:164:LYS:HD3	2.10	0.51
48:SD:143:PRO:O	48:SD:147:VAL:HG23	2.11	0.51
54:SK:123:LEU:HD21	54:SK:154:ASP:CB	2.41	0.51
62:ST:44:VAL:HG11	62:ST:71:MET:HG3	1.92	0.51
63:SU:42:HIS:CB	63:SU:83:GLN:HB2	2.40	0.51
63:SU:118:ASP:OD1	63:SU:119:GLY:N	2.44	0.51
67:SY:117:VAL:HG12	67:SY:118:ARG:N	2.24	0.51
70:Sb:34:ASP:OD1	70:Sb:82:LYS:HD2	2.10	0.51
75:Sg:172:LYS:CE	75:Sg:193:GLY:HA2	2.34	0.51
79:S2:1260:A:H2'	79:S2:1261:C:H5'	1.93	0.51
79:S2:1347:PSU:H2'	79:S2:1348:G:N3	2.25	0.51
79:S2:1448:A:O2'	79:S2:1449:G:H5'	2.10	0.51
79:S2:1648:G:N2	79:S2:1675:A:OP2	2.37	0.51
2:L5:413:G:H5'	23:LU:36:ARG:HH22	1.74	0.51
2:L5:1066:G:H2'	2:L5:1067:G:H8	1.75	0.51
2:L5:1208:G:O2'	2:L5:1209:U:H5'	2.09	0.51
2:L5:2572:C:O2'	27:LZ:112:ARG:NH2	2.41	0.51
2:L5:2691:U:C2	2:L5:2692:U:C5	2.99	0.51
2:L5:3733:A:H2'	2:L5:3734:PSU:O4'	2.10	0.51
2:L5:4129:G:O2'	2:L5:4130:C:H5'	2.10	0.51
5:LB:36:ASP:OD2	5:LB:39:LYS:HE2	2.11	0.51
9:LF:52:GLU:HG3	29:Lb:96:LEU:HD11	1.92	0.51
48:SD:122:ARG:HB2	72:Sd:59:LEU:HD11	1.93	0.51
50:SG:31:ARG:HA	50:SG:100:CYS:O	2.10	0.51
52:SI:65:PHE:HA	52:SI:187:GLY:O	2.10	0.51
53:SJ:60:LEU:HB2	53:SJ:94:LEU:HD21	1.92	0.51
56:SM:29:MET:SD	56:SM:42:ASN:ND2	2.84	0.51
62:ST:76:GLN:OE1	62:ST:76:GLN:HA	2.11	0.51
68:SZ:75:LYS:HE3	79:S2:1254:C:H4'	1.91	0.51
79:S2:505:G:O2'	79:S2:506:G:H5'	2.09	0.51
79:S2:554:A:C4'	79:S2:555:A:H5"	2.31	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:656:G:H5'	79:S2:662:G:N2	2.25	0.51
79:S2:911:C:H2'	79:S2:912:C:C6	2.46	0.51
79:S2:1217:A:H2'	79:S2:1218:C:H6	1.74	0.51
2:L5:483:G:H5'	2:L5:484:U:O5'	2.11	0.51
2:L5:920:C:H2'	2:L5:921:C:C6	2.46	0.51
2:L5:1932:A:C2'	2:L5:1933:G:H5'	2.40	0.51
2:L5:1966:C:H2'	2:L5:1967:A:O4'	2.11	0.51
2:L5:2557:G:H2'	2:L5:2558:C:H6	1.74	0.51
2:L5:4957:C:H2'	2:L5:4958:C:H6	1.76	0.51
4:L9:3:C:H2'	4:L9:4:U:H6	1.74	0.51
8:LE:69:LYS:HE3	8:LE:83:GLU:OE2	2.10	0.51
10:LG:215:LEU:O	10:LG:219:VAL:HG23	2.10	0.51
11:LH:107:GLU:O	11:LH:108:ASN:OD1	2.28	0.51
40:Lm:26:THR:O	40:Lm:30:GLU:HG2	2.08	0.51
49:SE:192:ILE:HD12	49:SE:243:GLY:HA3	1.93	0.51
51:SH:10:LYS:HE2	51:SH:47:ALA:HA	1.92	0.51
55:SL:152:LYS:C	55:SL:153:LYS:HG2	2.36	0.51
56:SM:15:LEU:HD23	56:SM:79:LEU:HD11	1.92	0.51
59:SP:126:VAL:HG13	79:S2:1238:PSU:O2'	2.11	0.51
60:SQ:124:PRO:HB3	85:S2:2519:HOH:O	2.11	0.51
79:S2:147:A:C2'	79:S2:148:U:H5'	2.41	0.51
79:S2:1301:A:H5"	79:S2:1301:A:N3	2.25	0.51
79:S2:1496:U:O2'	79:S2:1498:A:OP1	2.27	0.51
2:L5:300:A:H2'	2:L5:301:G:H8	1.76	0.51
2:L5:4878:C:O2'	2:L5:4879:C:H5'	2.10	0.51
3:L8:93:THR:O	3:L8:93:THR:HG22	2.10	0.51
3:L8:293:ARG:HB2	3:L8:293:ARG:HH11	1.75	0.51
6:LC:284:MET:HE2	6:LC:286:ASN:O	2.11	0.51
8:LE:71:VAL:CG1	8:LE:83:GLU:HG3	2.41	0.51
60:SQ:13:PHE:HA	60:SQ:22:VAL:HA	1.92	0.51
62:ST:10:GLN:O	62:ST:22:GLY:HA3	2.10	0.51
63:SU:67:ARG:HD2	79:S2:1585:U:O4	2.10	0.51
63:SU:72:VAL:HB	85:SU:302:HOH:O	2.11	0.51
65:SW:104:LEU:HD23	65:SW:125:ILE:HA	1.92	0.51
78:Sz:95:ARG:HG2	78:Sz:96:LYS:N	2.24	0.51
79:S2:1626:C:O2'	79:S2:1627:C:H5'	2.11	0.51
2:L5:5057:C:H2'	2:L5:5058:A:C8	2.45	0.51
13:LJ:93:GLU:HG2	13:LJ:173:ILE:HB	1.92	0.51
44:Lz:191:ILE:CD1	44:Lz:212:LEU:HD21	2.41	0.51
49:SE:175:PHE:HE2	49:SE:225:ILE:HG21	1.74	0.51
52:SI:141:ARG:HD3	52:SI:145:ILE:CG2	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SJ:176:LYS:HE2	53:SJ:180:LYS:CE	2.36	0.51
57:SN:25:TRP:CZ3	70:Sb:84:HIS:HA	2.45	0.51
67:SY:105:LYS:O	67:SY:109:GLU:HG3	2.11	0.51
75:Sg:197:THR:HB	75:Sg:238:ALA:CA	2.35	0.51
79:S2:99:A2M:H8	79:S2:99:A2M:O5'	2.11	0.51
79:S2:1617:G:N1	79:S2:1620:A:OP2	2.44	0.51
2:L5:1080:C:H2'	2:L5:1081:C:H6	1.75	0.51
2:L5:1175:A:H4'	3:L8:268:ARG:NH2	2.25	0.51
2:L5:1438:U:HO2'	2:L5:1439:C:P	2.26	0.51
2:L5:2028:C:O2'	2:L5:2029:A:H5'	2.11	0.51
2:L5:4587:G:OP1	26:LY:61:ARG:HD2	2.11	0.51
2:L5:4883:C:O2'	2:L5:4884:G:H5'	2.10	0.51
6:LC:189:MET:HE3	6:LC:195:LYS:CD	2.41	0.51
52:SI:151:GLU:HA	52:SI:154:LYS:CD	2.41	0.51
75:Sg:20:GLN:HA	75:Sg:288:SER:CB	2.41	0.51
75:Sg:194:TYR:HE2	75:Sg:212:LYS:HD2	1.71	0.51
77:Sy:81:ASP:HB3	77:Sy:84:LYS:HB2	1.92	0.51
79:S2:116:OMU:HM22	79:S2:117:C:O4'	2.10	0.51
79:S2:324:C:H3'	79:S2:325:C:C6	2.45	0.51
79:S2:333:G:O2'	79:S2:334:C:H5'	2.11	0.51
79:S2:639:C:H2'	79:S2:640:A:C8	2.46	0.51
2:L5:344:A:N7	85:L5:5553:HOH:O	2.35	0.51
2:L5:667:A:C4	6:LC:4:ALA:HB3	2.45	0.51
2:L5:1333:A:H2'	2:L5:1334:A:H8	1.76	0.51
2:L5:1786:A:H2'	2:L5:1789:C:C5	2.46	0.51
2:L5:2561:C:H2'	2:L5:2562:G:O4'	2.10	0.51
10:LG:99:ALA:HB1	10:LG:136:LEU:HD11	1.93	0.51
46:SA:58:LEU:HD13	46:SA:174:MET:HE1	1.93	0.51
51:SH:12:ASN:ND2	51:SH:14:GLU:O	2.43	0.51
51:SH:19:PHE:CZ	51:SH:50:GLU:HB2	2.46	0.51
51:SH:31:GLU:HG2	51:SH:37:LYS:HA	1.93	0.51
56:SM:24:LYS:HB2	56:SM:66:HIS:CE1	2.46	0.51
60:SQ:100:VAL:CG1	60:SQ:104:SER:HB2	2.41	0.51
79:S2:155:G:C2'	79:S2:156:G:O5'	2.59	0.51
79:S2:803:C:H2'	79:S2:804:U:C6	2.45	0.51
79:S2:1281:G:C4	79:S2:1282:A:C8	2.99	0.51
79:S2:1290:G:H2'	79:S2:1291:A:O4'	2.11	0.51
79:S2:1313:A:H5'	79:S2:1314:U:C5	2.45	0.51
79:S2:1663:A:O2'	85:S2:2101:HOH:O	2.20	0.51
1:L1:128:C:H2'	1:L1:129:C:H6	1.73	0.51
2:L5:459:C:O2'	2:L5:460:C:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:490:C:H4’	6:LC:4:ALA:CB	2.41	0.51
2:L5:961:G:O2’	2:L5:963:G:N7	2.42	0.51
2:L5:1251:C:H2’	2:L5:1252:C:C5	2.46	0.51
2:L5:1701:A:H2’	2:L5:1701:A:N3	2.26	0.51
2:L5:2287:G:C2’	2:L5:2288:G:H5’	2.41	0.51
3:L8:273:LEU:HD21	3:L8:277:LYS:HE2	1.92	0.51
50:SG:98:ARG:NH1	50:SG:99:GLY:O	2.44	0.51
54:SK:191:PRO:O	54:SK:199:GLY:HA3	2.11	0.51
60:SQ:57:LEU:HD11	60:SQ:115:TYR:CD2	2.46	0.51
74:Sf:28:HIS:NE2	79:S2:1264:C:OP1	2.36	0.51
77:Sy:67:ALA:O	77:Sy:71:GLU:HG2	2.11	0.51
77:Sy:102:LYS:HE3	79:S2:1283:C:N4	2.24	0.51
79:S2:29:G:H2’	79:S2:30:C:H6	1.74	0.51
79:S2:71:G:H3’	79:S2:72:C:H4’	1.93	0.51
79:S2:325:C:H3’	79:S2:326:C:O4’	2.11	0.51
79:S2:1406:G:H2’	79:S2:1407:U:C6	2.46	0.51
2:L5:196:C:H4’	8:LE:126:ARG:CG	2.41	0.50
2:L5:965:G:O2’	2:L5:966:A:OP2	2.23	0.50
2:L5:1076:C:H2’	2:L5:1077:C:H6	1.75	0.50
2:L5:2396:A:N7	2:L5:2814:C:H2’	2.25	0.50
2:L5:2434:G:O2’	2:L5:2527:A:N1	2.41	0.50
2:L5:3911:C:H4’	2:L5:4196:OMG:HM22	1.92	0.50
3:L8:205:ALA:HA	3:L8:208:MET:CE	2.42	0.50
9:LF:41:MET:HE3	29:Lb:113:ALA:HB2	1.92	0.50
40:Lm:48:LYS:HG2	40:Lm:53:ALA:HB2	1.93	0.50
48:SD:63:LYS:NZ	79:S2:1677:U:OP2	2.44	0.50
50:SG:125:THR:CG2	50:SG:125:THR:O	2.54	0.50
68:SZ:48:LEU:HD13	68:SZ:93:SER:HB3	1.92	0.50
77:Sy:92:CYS:SG	77:Sy:103:VAL:HB	2.50	0.50
79:S2:74:G:H4’	79:S2:76:U:H3	1.76	0.50
79:S2:799:OMU:H2’	79:S2:800:U:C6	2.46	0.50
79:S2:1517:G:O2’	79:S2:1518:C:H5’	2.12	0.50
1:L1:6:C:H2’	1:L1:7:U:C6	2.47	0.50
2:L5:248:C:C2’	2:L5:249:C:H5’	2.41	0.50
2:L5:911:U:H2’	2:L5:912:G:C8	2.45	0.50
2:L5:1200:G:H2’	2:L5:1200:G:N3	2.26	0.50
2:L5:1751:A:H2’	2:L5:1752:G:C8	2.46	0.50
2:L5:1893:C:H1’	2:L5:1937:C:O2	2.11	0.50
2:L5:1962:A:H1’	2:L5:2025:A:C2	2.46	0.50
2:L5:3893:C:O2’	2:L5:4979:A:N1	2.44	0.50
2:L5:4593:C:O2’	2:L5:4594:U:H5’	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:LJ:94:LEU:O	13:LJ:174:ILE:HA	2.11	0.50
13:LJ:136:ARG:HG3	13:LJ:157:ILE:HD11	1.93	0.50
25:LW:91:MET:HE1	25:LW:94:ARG:NH1	2.26	0.50
26:LY:32:LYS:CD	26:LY:101:ARG:HG2	2.41	0.50
35:Lh:115:GLU:OE1	35:Lh:115:GLU:HA	2.10	0.50
46:SA:112:ILE:HD11	79:S2:1349:G:H21	1.76	0.50
50:SG:36:VAL:HG21	50:SG:52:ILE:HD11	1.93	0.50
70:Sb:36:LYS:HD2	70:Sb:43:ILE:CD1	2.41	0.50
71:Sc:33:LYS:HE3	71:Sc:35:TRP:CZ3	2.46	0.50
75:Sg:191:HIS:ND1	75:Sg:217:MET:HE2	2.26	0.50
77:Sy:51:VAL:HB	77:Sy:109:VAL:CG2	2.41	0.50
78:Sz:95:ARG:CZ	78:Sz:97:LYS:HG2	2.41	0.50
79:S2:51:U:H2'	79:S2:52:G:H8	1.76	0.50
79:S2:804:U:H2'	79:S2:805:U:C6	2.47	0.50
79:S2:932:G:H2'	79:S2:934:G:OP1	2.11	0.50
79:S2:1498:A:H2'	79:S2:1499:U:O4'	2.12	0.50
79:S2:1512:C:O2'	79:S2:1513:C:H5'	2.10	0.50
2:L5:171:U:H4'	2:L5:172:C:OP2	2.11	0.50
2:L5:1096:C:C2'	2:L5:1097:C:H5'	2.41	0.50
2:L5:1257:A:C2	2:L5:1258:G:H1'	2.45	0.50
2:L5:1697:G:C2'	2:L5:1698:C:H5'	2.41	0.50
2:L5:2809:G:H5"	20:LR:63:CYS:SG	2.50	0.50
2:L5:4398:C:H2'	2:L5:4399:U:H5'	1.94	0.50
2:L5:5018:C:C2'	2:L5:5019:A:H5'	2.41	0.50
10:LG:150:LYS:O	10:LG:150:LYS:HG3	2.12	0.50
11:LH:92:MET:HE2	11:LH:179:ILE:HG22	1.92	0.50
34:Lg:69:LYS:HG2	34:Lg:73:HIS:CD2	2.46	0.50
42:Lo:77:ILE:HG13	42:Lo:78:ILE:N	2.25	0.50
48:SD:82:ASN:OD1	48:SD:88:MET:HE1	2.12	0.50
54:SK:12:VAL:HG21	74:Sf:34:TYR:HB3	1.93	0.50
54:SK:154:ASP:OD1	54:SK:155:GLY:N	2.44	0.50
54:SK:225:GLU:N	75:Sg:187:ASN:O	2.44	0.50
58:SO:71:PRO:HB3	58:SO:114:SER:OG	2.12	0.50
61:SS:20:TYR:CD2	61:SS:23:ARG:NH1	2.79	0.50
63:SU:18:LEU:CD1	63:SU:134:ILE:HG13	2.41	0.50
68:SZ:75:LYS:HE2	79:S2:1254:C:O5'	2.11	0.50
75:Sg:251:ALA:HB1	75:Sg:286:CYS:SG	2.51	0.50
79:S2:459:C:H2'	79:S2:460:A:O4'	2.11	0.50
79:S2:1086:G:O2'	79:S2:1087:A:H5'	2.11	0.50
79:S2:1624:U:H2'	79:S2:1625:PSU:H6	1.75	0.50
2:L5:233:U:O2'	2:L5:234:G:H2'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:1696:C:H2'	2:L5:1697:G:N9	2.26	0.50
2:L5:1812:C:H5"	29:Lb:56:LYS:CD	2.41	0.50
2:L5:2384:U:H2'	2:L5:2385:U:H6	1.76	0.50
3:L8:33:ARG:HG2	22:LT:27:LEU:HD11	1.94	0.50
3:L8:191:ASN:HB3	3:L8:194:VAL:CG2	2.38	0.50
3:L8:210:TYR:CZ	3:L8:214:GLU:HG3	2.46	0.50
8:LE:30:MET:HB3	8:LE:101:PRO:HG3	1.91	0.50
11:LH:173:ARG:HB2	42:Lo:127:VAL:CG2	2.41	0.50
13:LJ:12:MET:HE3	13:LJ:137:PRO:HB2	1.93	0.50
13:LJ:35:ARG:O	13:LJ:39:VAL:HG23	2.11	0.50
15:LM:47:ARG:HD2	21:LS:73:LEU:HD23	1.94	0.50
22:LT:114:GLN:NE2	22:LT:115:LYS:HG2	2.26	0.50
26:LY:85:ARG:HG3	26:LY:99:LEU:HD22	1.93	0.50
31:Ld:96:GLU:OE1	31:Ld:96:GLU:HA	2.12	0.50
40:Lm:107:LYS:C	40:Lm:108:GLU:HG3	2.35	0.50
48:SD:39:ILE:HD11	48:SD:116:ILE:CG2	2.41	0.50
50:SG:50:VAL:HG12	50:SG:113:ILE:CD1	2.38	0.50
51:SH:73:GLN:HA	51:SH:76:GLN:HB2	1.93	0.50
54:SK:113:LEU:HG	54:SK:117:ARG:NH1	2.26	0.50
61:SS:67:ARG:NH1	79:S2:1376:A:OP2	2.40	0.50
67:SY:20:ARG:HD2	67:SY:74:MET:HE3	1.94	0.50
72:Sd:60:GLU:OE1	72:Sd:63:ARG:HG2	2.12	0.50
75:Sg:191:HIS:CG	75:Sg:217:MET:HE2	2.46	0.50
79:S2:199:C:H6	79:S2:199:C:OP1	1.94	0.50
79:S2:1221:G:H2'	79:S2:1222:G:C8	2.47	0.50
79:S2:1542:C:O2'	79:S2:1543:U:H5'	2.11	0.50
79:S2:1652:G:H2'	79:S2:1653:U:H5'	1.92	0.50
79:S2:1680:G:H2'	79:S2:1681:U:C6	2.46	0.50
2:L5:1518:A:N1	85:L5:5559:HOH:O	2.35	0.50
2:L5:1591:U:H2'	85:L5:8066:HOH:O	2.10	0.50
2:L5:3652:A:N6	85:L5:5473:HOH:O	2.29	0.50
2:L5:4621:C:OP1	24:LV:48:ARG:HD2	2.11	0.50
13:LJ:12:MET:HE3	13:LJ:137:PRO:CB	2.41	0.50
14:LK:244:GLU:O	14:LK:248:ILE:HG23	2.10	0.50
17:LO:120:ALA:CB	19:LQ:147:ALA:HB1	2.41	0.50
46:SA:10:MET:HG3	46:SA:11:LYS:H	1.75	0.50
58:SO:93:LEU:CD1	58:SO:124:MET:HE2	2.41	0.50
58:SO:113:GLN:HG3	69:Sa:46:GLU:HG3	1.93	0.50
61:SS:53:TYR:CE2	61:SS:57:LEU:HD11	2.47	0.50
62:ST:16:LEU:HD21	62:ST:72:GLN:OE1	2.11	0.50
70:Sb:35:VAL:HG22	70:Sb:44:THR:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:Sg:128:THR:HG22	75:Sg:143:GLN:HG2	1.93	0.50
79:S2:1279:C:H2'	79:S2:1280:G:H8	1.77	0.50
2:L5:1269:G:O2'	2:L5:1270:A:O5'	2.29	0.50
2:L5:3593:C:H1'	2:L5:3595:U:O4	2.12	0.50
2:L5:3940:U:C2'	2:L5:3941:G:H5'	2.42	0.50
2:L5:4324:A:O2'	2:L5:4325:A:H5'	2.12	0.50
2:L5:4419:U:C2'	2:L5:4420:PSU:H5"	2.41	0.50
5:LB:246:ARG:HB2	85:LB:543:HOH:O	2.11	0.50
5:LB:291:TYR:CE2	5:LB:300:LYS:HE2	2.46	0.50
6:LC:69:THR:CG2	6:LC:75:ARG:HD3	2.42	0.50
46:SA:163:CYS:SG	46:SA:174:MET:HG3	2.52	0.50
49:SE:46:ILE:HA	49:SE:50:ASN:OD1	2.11	0.50
54:SK:62:LYS:HG2	56:SM:97:SER:HB3	1.93	0.50
56:SM:50:GLN:HA	56:SM:53:LYS:HE3	1.94	0.50
56:SM:86:PRO:HB2	56:SM:88:GLU:OE2	2.11	0.50
58:SO:101:GLY:HA3	58:SO:134:PRO:HD2	1.92	0.50
62:ST:42:HIS:O	62:ST:46:ARG:HG2	2.12	0.50
63:SU:7:LYS:HZ1	79:S2:1427:C:C5'	2.24	0.50
69:Sa:84:VAL:HB	79:S2:1866:A:N6	2.26	0.50
79:S2:644:OMG:HM22	79:S2:645:C:O4'	2.11	0.50
79:S2:1526:G:H1'	85:S2:2372:HOH:O	2.10	0.50
2:L5:1441:C:O2	2:L5:2104:G:N2	2.45	0.50
2:L5:2517:A:C5'	34:Lg:62:LYS:HD2	2.36	0.50
2:L5:4358:U:OP1	19:LQ:194:ILE:HG23	2.11	0.50
3:L8:225:GLN:HB2	4:L9:49:A:OP1	2.12	0.50
5:LB:301:ASN:HB3	5:LB:311:ASP:OD1	2.11	0.50
32:Le:72:CYS:SG	32:Le:74:GLU:HB2	2.51	0.50
40:Lm:49:VAL:HG21	40:Lm:56:LEU:HD23	1.94	0.50
48:SD:100:ILE:HG13	48:SD:174:ALA:HB1	1.94	0.50
48:SD:125:SER:HB2	48:SD:136:ARG:NH2	2.14	0.50
49:SE:260:GLN:HA	49:SE:260:GLN:OE1	2.11	0.50
51:SH:19:PHE:CZ	51:SH:60:ILE:HG23	2.47	0.50
54:SK:33:GLY:O	54:SK:53:THR:N	2.39	0.50
54:SK:114:ALA:H	54:SK:117:ARG:NH1	2.09	0.50
54:SK:151:LYS:O	54:SK:151:LYS:HG3	2.12	0.50
62:ST:44:VAL:HG13	62:ST:70:ILE:HG22	1.93	0.50
65:SW:62:VAL:HG11	70:Sb:8:LEU:HG	1.94	0.50
66:SX:123:VAL:HG12	66:SX:124:LYS:HG3	1.94	0.50
72:Sd:14:VAL:O	72:Sd:53:GLY:N	2.34	0.50
75:Sg:188:HIS:HB3	75:Sg:219:TRP:CZ3	2.47	0.50
75:Sg:313:THR:O	75:Sg:314:ILE:HB	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:107:A:H2'	79:S2:108:G:H8	1.75	0.50
79:S2:190:G:H1'	79:S2:209:A:H61	1.76	0.50
79:S2:562:U:H2'	79:S2:563:G:C8	2.47	0.50
79:S2:650:A:H2'	79:S2:651:PSU:O4'	2.11	0.50
79:S2:976:G:O2'	79:S2:977:C:H5'	2.11	0.50
79:S2:1203:G:H2'	79:S2:1204:A:H8	1.72	0.50
79:S2:1644:C:H2'	79:S2:1645:C:O4'	2.12	0.50
79:S2:1670:C:H2'	79:S2:1671:G:C1'	2.42	0.50
2:L5:1271:G:H3'	2:L5:1272:C:O4'	2.12	0.50
2:L5:3601:C:O2'	2:L5:3602:C:H5'	2.12	0.50
2:L5:4957:C:O2'	2:L5:4958:C:H5'	2.11	0.50
2:L5:5018:C:O2'	2:L5:5019:A:H5'	2.12	0.50
11:LH:91:LYS:HD2	11:LH:143:GLU:OE2	2.12	0.50
45:S1:115:LYS:O	79:S2:988:C:H4'	2.12	0.50
45:S1:193:ILE:O	45:S1:197:ILE:HG13	2.11	0.50
50:SG:218:LYS:O	50:SG:222:GLU:HG2	2.12	0.50
59:SP:111:MET:HG2	59:SP:119:PHE:CZ	2.46	0.50
59:SP:126:VAL:HG13	79:S2:1238:PSU:H1'	1.92	0.50
71:Sc:84:ALA:O	71:Sc:88:LEU:HG	2.11	0.50
73:Se:86:VAL:HG21	79:S2:616:A:N3	2.26	0.50
75:Sg:194:TYR:CZ	75:Sg:212:LYS:HB2	2.47	0.50
79:S2:1286:G:H8	79:S2:1286:G:OP2	1.95	0.50
1:L1:78:G:O2'	17:LO:42:SER:HA	2.11	0.50
2:L5:732:A:H2'	2:L5:733:A:O4'	2.12	0.50
2:L5:1732:C:OP1	22:LT:43:LYS:NZ	2.41	0.50
2:L5:3760:A2M:C2	79:S2:1825:A:H3'	2.42	0.50
2:L5:4619:U:H2'	2:L5:4620:OMU:H6	1.93	0.50
2:L5:5023:C:N3	2:L5:5024:C:O2'	2.45	0.50
7:LD:3:ARG:HG2	7:LD:207:VAL:HG22	1.92	0.50
47:SC:200:ARG:HA	47:SC:221:ASP:OD2	2.12	0.50
48:SD:187:SER:HB3	48:SD:190:ILE:HB	1.94	0.50
54:SK:41:VAL:CA	54:SK:46:THR:HG23	2.35	0.50
57:SN:150:VAL:O	57:SN:151:ALA:HB3	2.11	0.50
69:Sa:21:ILE:HD12	69:Sa:72:HIS:CG	2.47	0.50
70:Sb:62:VAL:O	70:Sb:74:THR:OG1	2.22	0.50
79:S2:1316:C:O2'	79:S2:1317:C:H5'	2.11	0.50
79:S2:1410:C:H2'	79:S2:1411:G:C8	2.46	0.50
79:S2:1472:C:O5'	79:S2:1472:C:H6	1.95	0.50
79:S2:1514:G:H4'	85:S2:2241:HOH:O	2.12	0.50
1:L1:78:G:H2'	1:L1:79:G:O4'	2.12	0.49
1:L1:144:U:H2'	1:L1:145:C:H6	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:1356:U:H2'	2:L5:1357:C:C6	2.47	0.49
2:L5:2412:A:H2'	2:L5:2413:U:H6	1.76	0.49
3:L8:181:PRO:HG2	3:L8:195:HIS:HD2	1.77	0.49
46:SA:158:ASP:HB3	64:SV:34:MET:HE1	1.93	0.49
48:SD:86:LYS:O	48:SD:90:VAL:HG23	2.12	0.49
49:SE:128:LYS:O	49:SE:129:ILE:HD13	2.12	0.49
56:SM:49:MET:HE1	56:SM:58:VAL:HG11	1.94	0.49
59:SP:21:ASP:O	59:SP:25:LEU:HG	2.10	0.49
62:ST:30:ILE:HD13	62:ST:45:LEU:HD21	1.92	0.49
62:ST:40:TYR:CZ	62:ST:97:GLN:HG2	2.46	0.49
62:ST:148:VAL:HG13	62:ST:148:VAL:O	2.12	0.49
65:SW:19:LYS:HZ3	79:S2:1152:U:H4'	1.77	0.49
65:SW:61:ILE:HG22	65:SW:63:VAL:HG23	1.93	0.49
70:Sb:34:ASP:CG	70:Sb:82:LYS:HD2	2.38	0.49
77:Sy:36:ARG:NH1	78:Sz:103:LEU:CB	2.73	0.49
77:Sy:91:LEU:HD11	79:S2:1284:A:C2	2.47	0.49
79:S2:355:G:H2'	79:S2:356:C:H5'	1.93	0.49
79:S2:1414:A:H2'	79:S2:1415:C:C6	2.47	0.49
2:L5:1178:G:OP2	2:L5:1180:C:N4	2.45	0.49
2:L5:1722:C:O2'	2:L5:1723:A:H5'	2.11	0.49
2:L5:2693:G:OP2	38:Lk:33:LYS:NZ	2.37	0.49
2:L5:3865:A:H2'	2:L5:3866:C:H6	1.75	0.49
2:L5:4168:G:OP2	85:L5:5403:HOH:O	2.20	0.49
2:L5:4222:G:OP2	44:Lz:117:GLY:HA2	2.12	0.49
2:L5:4227:OMU:HM22	2:L5:4228:OMG:O4'	2.11	0.49
3:L8:182:GLY:HA3	3:L8:194:VAL:HG23	1.94	0.49
29:Lb:105:GLY:O	29:Lb:109:ARG:HG3	2.11	0.49
30:Lc:33:GLN:O	30:Lc:37:MET:HG2	2.12	0.49
44:Lz:30:LYS:HG3	44:Lz:66:GLU:OE1	2.11	0.49
45:S1:110:MET:HE1	45:S1:140:VAL:HG21	1.93	0.49
47:SC:153:GLY:O	47:SC:157:LEU:HG	2.12	0.49
66:SX:57:VAL:HG12	66:SX:116:PRO:HD2	1.93	0.49
66:SX:139:GLU:OE1	66:SX:139:GLU:HA	2.11	0.49
71:Sc:68:ILE:CB	71:Sc:109:TYR:HB2	2.33	0.49
73:Se:110:MET:HE3	73:Se:114:ARG:HH22	1.77	0.49
79:S2:1335:G:C2'	79:S2:1336:C:H5'	2.42	0.49
79:S2:1501:C:H2'	79:S2:1502:C:C6	2.47	0.49
79:S2:1624:U:H2'	79:S2:1625:PSU:C6	2.47	0.49
2:L5:1082:C:H2'	2:L5:1083:U:O4'	2.12	0.49
2:L5:1214:C:C2	29:Lb:91:ARG:HD3	2.47	0.49
2:L5:1440:U:H3	2:L5:2104:G:H1	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:2079:G:H2'	2:L5:2080:U:C6	2.47	0.49
2:L5:2700:G:H2'	2:L5:2701:U:C6	2.47	0.49
2:L5:4247:G:O2'	2:L5:4248:A:H5'	2.12	0.49
2:L5:4935:C:H2'	2:L5:4936:G:H8	1.76	0.49
3:L8:205:ALA:HA	3:L8:208:MET:HE3	1.94	0.49
9:LF:96:ARG:NH2	9:LF:224:THR:HG22	2.27	0.49
9:LF:241:ASN:O	9:LF:245:ARG:HG2	2.12	0.49
18:LP:39:TYR:CD1	18:LP:40:PRO:HA	2.47	0.49
21:LS:164:LYS:HE3	33:Lf:34:TYR:HB2	1.94	0.49
45:S1:129:THR:OG1	45:S1:133:TYR:HB2	2.11	0.49
48:SD:173:LEU:O	48:SD:177:LEU:HG	2.13	0.49
49:SE:180:LEU:HD23	49:SE:234:PRO:HB3	1.94	0.49
49:SE:187:ALA:O	49:SE:245:ARG:NH2	2.34	0.49
51:SH:135:PHE:CG	51:SH:136:PRO:HA	2.47	0.49
51:SH:192:PHE:CD2	70:Sb:12:PRO:HB3	2.47	0.49
53:SJ:79:ARG:NH2	79:S2:819:G:OP1	2.46	0.49
57:SN:42:LYS:CE	57:SN:80:LEU:HD21	2.43	0.49
61:SS:29:HIS:O	61:SS:32:LYS:HG2	2.12	0.49
63:SU:27:LYS:HE2	63:SU:27:LYS:HA	1.94	0.49
63:SU:129:ARG:HE	63:SU:133:ARG:NH2	2.10	0.49
66:SX:107:ARG:HG3	66:SX:112:VAL:HG22	1.94	0.49
75:Sg:244:ASN:ND2	75:Sg:245:ARG:NH1	2.60	0.49
79:S2:1009:A:O2'	79:S2:1010:G:H5'	2.13	0.49
79:S2:1377:U:O2'	79:S2:1379:A:O5'	2.29	0.49
2:L5:733:A:H2'	2:L5:734:G:O4'	2.12	0.49
2:L5:2557:G:H2'	2:L5:2558:C:O4'	2.12	0.49
2:L5:2571:C:O2'	2:L5:2572:C:H5'	2.13	0.49
2:L5:2601:A:N6	2:L5:2744:A:OP2	2.45	0.49
2:L5:4212:A:H4'	2:L5:4213:A:O5'	2.11	0.49
2:L5:4241:C:O2'	2:L5:4242:U:H5'	2.12	0.49
2:L5:4582:C:C2'	2:L5:4583:C:H5'	2.41	0.49
2:L5:4731:G:H4'	2:L5:4732:G:O4'	2.11	0.49
6:LC:158:VAL:HG22	6:LC:170:LEU:HD13	1.95	0.49
6:LC:326:LEU:HD22	6:LC:333:LYS:HB2	1.95	0.49
22:LT:106:LEU:O	22:LT:109:VAL:HG22	2.12	0.49
25:LW:94:ARG:NE	50:SG:144:LEU:O	2.42	0.49
31:Ld:57:MET:O	31:Ld:59:THR:HG23	2.13	0.49
46:SA:44:ASP:OD1	46:SA:44:ASP:N	2.45	0.49
48:SD:51:HIS:NE2	79:S2:1674:G:OP1	2.38	0.49
50:SG:139:SER:HA	50:SG:142:ARG:HG2	1.94	0.49
60:SQ:52:LEU:CD1	60:SQ:56:LEU:HG	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SY:36:PRO:O	67:SY:40:ILE:HG13	2.12	0.49
79:S2:310:C:H2'	79:S2:311:C:O4'	2.13	0.49
79:S2:508:A:H2'	79:S2:509:OMG:O4'	2.12	0.49
79:S2:1473:G:N7	85:S2:2161:HOH:O	2.34	0.49
1:L1:66:A:H2'	1:L1:67:U:C6	2.48	0.49
1:L1:82:A:H4'	1:L1:86:U:H5'	1.94	0.49
2:L5:729:2MG:HM23	2:L5:729:2MG:OP1	2.12	0.49
2:L5:2634:C:H2'	2:L5:2635:U:C6	2.48	0.49
2:L5:4252:C:OP2	2:L5:4253:A:O2'	2.17	0.49
4:L9:111:C:H2'	4:L9:112:U:O4'	2.12	0.49
7:LD:79:ALA:O	7:LD:82:ILE:HG12	2.13	0.49
9:LF:220:MET:HB3	9:LF:232:ASP:OD2	2.12	0.49
20:LR:166:THR:CG2	79:S2:873:G:H5'	2.37	0.49
22:LT:97:LYS:HG2	85:LT:202:HOH:O	2.12	0.49
25:LW:81:ALA:HB2	25:LW:87:LEU:N	2.27	0.49
29:Lb:108:ALA:O	29:Lb:112:ILE:HG12	2.12	0.49
34:Lg:27:GLY:O	34:Lg:28:ASN:HB2	2.12	0.49
45:S1:179:ASN:ND2	45:S1:183:GLU:OE1	2.44	0.49
49:SE:158:ASP:OD2	49:SE:174:LYS:HD2	2.13	0.49
60:SQ:58:LEU:HD11	60:SQ:112:LEU:HD21	1.94	0.49
60:SQ:132:PHE:HD2	68:SZ:79:ARG:NH1	2.07	0.49
63:SU:44:GLU:O	63:SU:45:LEU:HD23	2.11	0.49
63:SU:61:ALA:O	63:SU:123:LEU:HD11	2.13	0.49
75:Sg:126:ASP:O	75:Sg:128:THR:HG23	2.13	0.49
79:S2:799:OMU:HM22	79:S2:800:U:O4'	2.13	0.49
79:S2:1305:C:C2	79:S2:1306:U:C5	3.00	0.49
1:L1:69:PSU:O2'	1:L1:70:G:H5'	2.12	0.49
2:L5:72:C:C5	19:LQ:67:HIS:CD2	3.00	0.49
2:L5:968:C:O4'	14:LK:110:ARG:NH1	2.46	0.49
2:L5:1413:C:H2'	2:L5:1414:C:O5'	2.11	0.49
2:L5:1434:G:C2'	2:L5:1435:G:H5"	2.43	0.49
2:L5:3688:U:OP2	7:LD:198:ARG:NH2	2.37	0.49
2:L5:4110:C:H2'	2:L5:4111:U:C6	2.47	0.49
2:L5:4393:G:O4'	2:L5:4447:5MC:HM52	2.13	0.49
2:L5:4892:A:H2'	2:L5:4893:A:O4'	2.13	0.49
85:L8:320:HOH:O	22:LT:36:LYS:HG3	2.11	0.49
6:LC:236:ASN:HB3	6:LC:239:LYS:HG2	1.94	0.49
6:LC:286:ASN:HD21	6:LC:291:ARG:NH1	2.10	0.49
14:LK:162:VAL:HA	14:LK:177:GLY:HA3	1.95	0.49
34:Lg:94:ALA:O	34:Lg:98:GLU:HG2	2.12	0.49
44:Lz:76:MET:HG3	44:Lz:85:PHE:CD1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:S1:229:MET:HE2	45:S1:229:MET:CA	2.40	0.49
47:SC:116:THR:HG22	47:SC:117:ARG:N	2.27	0.49
49:SE:158:ASP:CG	49:SE:174:LYS:HA	2.37	0.49
49:SE:176:ASP:OD1	49:SE:179:ASN:ND2	2.46	0.49
50:SG:70:HIS:CE1	50:SG:101:ILE:HG22	2.47	0.49
50:SG:159:ARG:HD2	79:S2:76:U:OP2	2.12	0.49
63:SU:116:ASP:CG	63:SU:122:LYS:HD2	2.38	0.49
65:SW:80:ASP:OD2	79:S2:803:C:H4'	2.13	0.49
71:Sc:98:LYS:HB3	71:Sc:110:THR:HG22	1.94	0.49
75:Sg:72:SER:OG	75:Sg:74:ASP:OD1	2.27	0.49
79:S2:887:U:H2'	79:S2:888:U:H5"	1.94	0.49
79:S2:1533:A:H2	79:S2:1536:G:N3	2.10	0.49
2:L5:45:U:H5'	85:L5:7599:HOH:O	2.12	0.49
2:L5:134:G:H21	17:LO:85:PRO:CA	2.25	0.49
2:L5:271:C:H2'	2:L5:272:U:C6	2.48	0.49
2:L5:2692:U:O2	38:Lk:2:PRO:HB2	2.12	0.49
2:L5:4260:U:H2'	2:L5:4261:C:H6	1.76	0.49
85:L5:6197:HOH:O	44:Lz:120:GLY:HA3	2.12	0.49
9:LF:59:LYS:NZ	9:LF:63:GLN:OE1	2.46	0.49
17:LO:4:ILE:O	17:LO:4:ILE:HG13	2.12	0.49
17:LO:89:ARG:O	17:LO:93:ARG:HG2	2.13	0.49
48:SD:19:LEU:HG	48:SD:20:PHE:CD2	2.48	0.49
50:SG:142:ARG:HA	50:SG:147:LEU:CD1	2.36	0.49
62:ST:34:LYS:HG2	62:ST:103:LEU:HD13	1.95	0.49
69:Sa:17:HIS:NE2	79:S2:1858:G:OP1	2.38	0.49
77:Sy:21:VAL:CG2	77:Sy:123:VAL:HG21	2.43	0.49
79:S2:146:G:C2'	79:S2:147:A:O5'	2.61	0.49
79:S2:1546:G:H1'	79:S2:1670:C:O2'	2.11	0.49
2:L5:1094:G:H1	2:L5:1201:U:H3	1.60	0.49
2:L5:1395:U:C2'	2:L5:1396:G:H5'	2.42	0.49
2:L5:1428:U:H5"	37:Lj:42:THR:OG1	2.13	0.49
2:L5:4231:C:H2'	85:L5:7432:HOH:O	2.12	0.49
2:L5:4570:G:O2'	2:L5:4571:A2M:H5'	2.13	0.49
49:SE:87:MET:HB3	49:SE:122:LYS:HE3	1.95	0.49
62:ST:23:ARG:HB3	71:Sc:48:VAL:HG11	1.95	0.49
62:ST:114:LEU:O	62:ST:117:ILE:HG12	2.13	0.49
67:SY:93:ARG:HH21	79:S2:575:A:P	2.36	0.49
75:Sg:16:GLY:O	75:Sg:305:ASN:HA	2.13	0.49
79:S2:1233:G:C2'	79:S2:1234:C:H5'	2.43	0.49
79:S2:1324:G:O2'	79:S2:1325:G:H5'	2.12	0.49
79:S2:1470:C:H2'	79:S2:1471:C:H5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:2676:A:N6	85:L5:5688:HOH:O	2.42	0.49
2:L5:4108:G:H3'	2:L5:4108:G:P	2.53	0.49
2:L5:4752:U:O2'	2:L5:4753:U:H5'	2.12	0.49
2:L5:4950:U:H4'	2:L5:4951:G:OP2	2.13	0.49
3:L8:121:GLY:HA3	3:L8:168:ASP:O	2.13	0.49
5:LB:284:ILE:HG21	5:LB:287:ILE:HD11	1.94	0.49
7:LD:226:ARG:NH1	7:LD:228:ASP:HB2	2.28	0.49
17:LO:32:ARG:HH11	17:LO:32:ARG:HG3	1.77	0.49
28:La:113:GLY:O	28:La:136:LYS:NZ	2.31	0.49
46:SA:122:LEU:HB3	46:SA:144:THR:HG22	1.95	0.49
50:SG:72:ARG:HA	50:SG:97:VAL:O	2.13	0.49
52:SI:63:GLY:HA3	52:SI:185:ALA:O	2.12	0.49
53:SJ:67:ASP:O	53:SJ:71:LEU:HG	2.11	0.49
54:SK:48:ILE:HB	54:SK:86:LEU:HD22	1.90	0.49
54:SK:122:VAL:HG12	54:SK:126:ILE:HD11	1.95	0.49
63:SU:130:ASP:O	63:SU:134:ILE:HG12	2.12	0.49
67:SY:79:LEU:HG	67:SY:83:LYS:NZ	2.25	0.49
75:Sg:304:ASP:OD2	75:Sg:308:ARG:NH2	2.44	0.49
79:S2:160:U:C4	79:S2:468:A2M:H4'	2.48	0.49
79:S2:212:C:H2'	79:S2:213:G:H8	1.77	0.49
79:S2:928:G:H2'	79:S2:929:G:C8	2.48	0.49
79:S2:1582:C:O2'	79:S2:1583:C:H5'	2.13	0.49
2:L5:740:G:C2	2:L5:741:C:C4	3.01	0.49
2:L5:1175:A:H2	2:L5:1185:G:H22	1.61	0.49
2:L5:1443:A:N6	2:L5:1444:G:O6	2.46	0.49
2:L5:2902:G:H5'	2:L5:2903:G:OP2	2.13	0.49
6:LC:348:LYS:HA	6:LC:351:VAL:HG22	1.95	0.49
11:LH:44:GLU:OE2	15:LM:2:VAL:HA	2.13	0.49
33:Lf:52:LYS:HA	33:Lf:66:LYS:O	2.13	0.49
35:Lh:4:TYR:CZ	35:Lh:18:ARG:HG3	2.47	0.49
37:Lj:39:THR:HB	37:Lj:132:LYS:HE3	1.94	0.49
47:SC:253:PRO:HA	47:SC:256:TRP:CE2	2.48	0.49
48:SD:41:VAL:HG13	48:SD:42:LYS:N	2.28	0.49
49:SE:103:TYR:HA	49:SE:108:ARG:O	2.13	0.49
50:SG:79:LYS:HE2	50:SG:86:PRO:HG2	1.95	0.49
54:SK:193:ASP:CG	54:SK:198:ILE:HG12	2.38	0.49
57:SN:25:TRP:CG	70:Sb:82:LYS:HZ3	2.29	0.49
75:Sg:11:LEU:HB2	75:Sg:307:VAL:HB	1.95	0.49
75:Sg:14:HIS:ND1	75:Sg:35:SER:HB2	2.28	0.49
79:S2:1311:C:O2'	79:S2:1312:G:H5'	2.13	0.49
2:L5:911:U:O2'	2:L5:912:G:O4'	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:964:A:H2'	2:L5:965:G:C4'	2.32	0.48
2:L5:1178:G:H5"	2:L5:1180:C:N4	2.28	0.48
2:L5:1532:G:H3'	85:L5:5427:HOH:O	2.12	0.48
2:L5:1719:A:H2'	2:L5:1720:C:C6	2.48	0.48
2:L5:2641:A:C2'	2:L5:2642:A:H5'	2.43	0.48
4:L9:39:C:O2'	13:LJ:46:GLN:HB3	2.12	0.48
11:LH:40:HIS:CD2	11:LH:40:HIS:H	2.30	0.48
24:LV:109:LYS:HB2	24:LV:111:GLU:OE1	2.13	0.48
29:Lb:63:LYS:C	29:Lb:63:LYS:HD3	2.38	0.48
34:Lg:106:VAL:O	34:Lg:110:GLN:HG2	2.13	0.48
47:SC:151:ILE:O	47:SC:155:ILE:HG13	2.13	0.48
48:SD:100:ILE:HD11	48:SD:174:ALA:HA	1.95	0.48
49:SE:31:PRO:CG	49:SE:38:LEU:HG	2.43	0.48
56:SM:75:GLY:O	56:SM:79:LEU:HG	2.13	0.48
68:SZ:23:THR:HG23	68:SZ:88:LEU:HD23	1.95	0.48
75:Sg:172:LYS:HE2	75:Sg:192:THR:O	2.12	0.48
78:Sz:103:LEU:HD11	78:Sz:106:TYR:HE2	1.78	0.48
79:S2:217:A:H2'	79:S2:218:PSU:H5"	1.95	0.48
79:S2:360:A:H2	79:S2:362:C:H2'	1.74	0.48
79:S2:1442:OMU:O2	79:S2:1442:OMU:H2'	2.12	0.48
79:S2:1567:G:H21	79:S2:1628:C:H4'	1.78	0.48
79:S2:1698:C:H3'	79:S2:1699:A:H5'	1.95	0.48
79:S2:1733:U:C2'	79:S2:1734:G:H5'	2.42	0.48
2:L5:76:A:OP2	19:LQ:74:ARG:HD2	2.12	0.48
2:L5:2689:C:H2'	2:L5:2690:C:C6	2.48	0.48
2:L5:2689:C:H2'	2:L5:2690:C:H6	1.77	0.48
2:L5:4401:G:H2'	2:L5:4402:C:H6	1.78	0.48
2:L5:5027:C:H1'	2:L5:5028:G:C8	2.48	0.48
3:L8:273:LEU:HG	3:L8:277:LYS:HE2	1.95	0.48
4:L9:3:C:H2'	4:L9:4:U:C6	2.47	0.48
6:LC:218:ILE:HD13	6:LC:229:LEU:HG	1.95	0.48
9:LF:175:ILE:HD11	9:LF:187:MET:SD	2.53	0.48
40:Lm:76:VAL:HB	40:Lm:77:PRO:CD	2.43	0.48
43:Lp:23:ARG:O	43:Lp:26:VAL:HG12	2.13	0.48
48:SD:167:LYS:HG2	48:SD:171:GLU:HB2	1.95	0.48
49:SE:151:ASP:HB3	49:SE:154:ILE:HG13	1.94	0.48
52:SI:34:ALA:CA	52:SI:56:ARG:HD2	2.43	0.48
54:SK:64:ARG:NH1	56:SM:94:LEU:HD21	2.21	0.48
57:SN:25:TRP:HA	57:SN:27:LYS:NZ	2.29	0.48
60:SQ:84:ILE:O	60:SQ:88:ILE:HG13	2.13	0.48
61:SS:129:LYS:HB2	85:S2:2442:HOH:O	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:SW:18:GLU:HG2	65:SW:69:LEU:HB3	1.94	0.48
68:SZ:48:LEU:HD13	68:SZ:93:SER:CB	2.43	0.48
71:Sc:51:ASP:OD1	71:Sc:52:LYS:N	2.46	0.48
71:Sc:98:LYS:HD3	71:Sc:110:THR:CG2	2.42	0.48
74:Sf:14:PHE:HB2	79:S2:1661:A:C8	2.48	0.48
75:Sg:20:GLN:CG	75:Sg:69:VAL:HG12	2.43	0.48
75:Sg:171:ASP:CG	75:Sg:173:LEU:HG	2.38	0.48
75:Sg:228:TYR:OH	75:Sg:261:LEU:HD22	2.13	0.48
79:S2:840:C:H3'	79:S2:841:G:C5'	2.43	0.48
79:S2:1272:C:H2'	79:S2:1273:C:C6	2.48	0.48
79:S2:1704:C:H1'	79:S2:1832:6MZ:N1	2.28	0.48
2:L5:129:C:H2'	2:L5:130:C:C6	2.49	0.48
2:L5:1175:A:H4'	3:L8:268:ARG:CZ	2.44	0.48
2:L5:1328:G:O2'	2:L5:2349:A:OP1	2.29	0.48
2:L5:2023:C:N4	2:L5:2024:G:O6	2.46	0.48
2:L5:2091:C:O2	2:L5:2094:G:O2'	2.16	0.48
2:L5:2864:A:H2'	2:L5:2865:U:H6	1.77	0.48
2:L5:4195:G:H5'	44:Lz:116:ARG:HH21	1.77	0.48
2:L5:4481:U:H2'	2:L5:4482:U:C6	2.48	0.48
2:L5:5003:U:H2'	2:L5:5004:C:C6	2.48	0.48
6:LC:281:MET:HE2	37:Lj:110:ARG:CZ	2.44	0.48
10:LG:210:GLU:H	10:LG:210:GLU:CD	2.14	0.48
11:LH:41:ILE:HG22	11:LH:43:VAL:HG13	1.94	0.48
14:LK:41:LYS:HD2	14:LK:41:LYS:C	2.37	0.48
21:LS:81:TRP:HZ3	21:LS:130:GLU:HG2	1.76	0.48
22:LT:111:GLU:O	22:LT:114:GLN:HG3	2.14	0.48
25:LW:81:ALA:HB1	25:LW:86:SER:HA	1.95	0.48
25:LW:82:ILE:HG13	50:SG:131:ARG:CG	2.43	0.48
40:Lm:102:VAL:HG22	40:Lm:112:LEU:HD13	1.96	0.48
42:Lo:127:VAL:HG12	42:Lo:128:LYS:HG3	1.96	0.48
46:SA:143:PRO:HA	46:SA:158:ASP:OD2	2.12	0.48
47:SC:194:ARG:HD3	47:SC:196:ILE:HD11	1.94	0.48
50:SG:84:TYR:HD1	50:SG:95:LYS:HD2	1.78	0.48
53:SJ:120:ALA:HB2	53:SJ:129:LEU:HD12	1.93	0.48
54:SK:41:VAL:HG22	54:SK:46:THR:HG23	1.93	0.48
58:SO:104:ARG:HB3	85:SO:222:HOH:O	2.12	0.48
60:SQ:10:VAL:HG12	60:SQ:98:LYS:NZ	2.28	0.48
60:SQ:53:GLU:OE1	60:SQ:85:ARG:NH2	2.46	0.48
62:ST:27:ALA:O	62:ST:31:THR:HG23	2.14	0.48
66:SX:102:VAL:CG1	66:SX:120:PHE:HB3	2.43	0.48
66:SX:109:GLY:O	66:SX:119:ARG:HD3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:Sg:42:MET:SD	75:Sg:57:ARG:HD2	2.54	0.48
78:Sz:103:LEU:HG	78:Sz:104:LYS:N	2.28	0.48
79:S2:73:C:O4'	79:S2:74:G:H5'	2.13	0.48
79:S2:341:C:H2'	79:S2:342:C:H6	1.77	0.48
79:S2:1328:OMG:HM22	79:S2:1329:U:O4'	2.12	0.48
79:S2:1402:A:N6	79:S2:1441:U:O2	2.46	0.48
79:S2:1458:G:H2'	79:S2:1459:G:O4'	2.13	0.48
79:S2:1666:C:H2'	79:S2:1667:U:C6	2.48	0.48
2:L5:717:U:H2'	2:L5:718:C:C6	2.49	0.48
2:L5:742:G:H2'	2:L5:742:G:N3	2.28	0.48
2:L5:1942:A:H2'	2:L5:1943:A:H8	1.77	0.48
2:L5:2640:G:H2'	2:L5:2641:A:H8	1.78	0.48
2:L5:2901:G:N3	2:L5:2902:G:H1'	2.29	0.48
2:L5:4266:G:N3	2:L5:4266:G:C2'	2.75	0.48
8:LE:55:VAL:HA	8:LE:105:VAL:O	2.13	0.48
8:LE:91:ASN:OD1	8:LE:93:THR:HG22	2.13	0.48
14:LK:245:GLN:HA	14:LK:248:ILE:HG12	1.96	0.48
16:LN:159:ARG:HB3	16:LN:164:LEU:HB2	1.94	0.48
20:LR:129:GLY:O	20:LR:130:ASN:HB3	2.14	0.48
26:LY:47:PHE:HA	26:LY:136:ALA:HB2	1.95	0.48
40:Lm:97:ARG:HH11	40:Lm:97:ARG:HG3	1.77	0.48
42:Lo:79:GLU:CD	42:Lo:81:SER:H	2.21	0.48
48:SD:156:THR:HA	48:SD:159:ARG:NH1	2.28	0.48
50:SG:115:LYS:HD3	50:SG:116:LYS:O	2.14	0.48
50:SG:170:ARG:HA	79:S2:74:G:H22	1.78	0.48
52:SI:57:ALA:HB2	52:SI:183:GLY:HA2	1.93	0.48
60:SQ:71:ARG:CZ	79:S2:1407:U:H4'	2.43	0.48
62:ST:15:VAL:HG13	62:ST:68:ILE:HD11	1.95	0.48
77:Sy:121:LYS:HA	77:Sy:124:ILE:HG12	1.95	0.48
79:S2:561:A:O2'	79:S2:562:U:H5'	2.13	0.48
79:S2:948:C:H2'	79:S2:949:G:H8	1.78	0.48
79:S2:1055:A:N3	85:S2:2166:HOH:O	2.35	0.48
79:S2:1166:G:O2'	79:S2:1167:G:H5'	2.13	0.48
79:S2:1261:C:O2	79:S2:1261:C:H2'	2.13	0.48
79:S2:1471:C:O2'	79:S2:1472:C:H5'	2.14	0.48
79:S2:1533:A:N3	79:S2:1533:A:H2'	2.28	0.48
79:S2:1798:C:H2'	79:S2:1799:G:O4'	2.13	0.48
2:L5:924:C:H2'	2:L5:925:C:C4'	2.44	0.48
2:L5:1085:C:O2'	2:L5:1086:C:H5'	2.13	0.48
2:L5:1409:C:H5'	2:L5:1410:U:C1'	2.43	0.48
2:L5:2092:G:H4'	2:L5:2094:G:N2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:4731:G:H5”	2:L5:4732:G:O5’	2.14	0.48
6:LC:32:ILE:O	37:Lj:23:ILE:HD11	2.14	0.48
19:LQ:61:CYS:HB2	19:LQ:66:TYR:O	2.13	0.48
40:Lm:105:ASN:ND2	40:Lm:111:GLU:OE1	2.46	0.48
49:SE:173:ILE:HD11	49:SE:235:TRP:CD2	2.48	0.48
52:SI:3:ILE:HB	52:SI:30:GLY:O	2.13	0.48
52:SI:142:SER:O	52:SI:146:GLN:HG3	2.13	0.48
53:SJ:60:LEU:CB	53:SJ:94:LEU:HD21	2.42	0.48
58:SO:53:ILE:HG21	58:SO:90:ILE:HD12	1.94	0.48
64:SV:27:LYS:NZ	85:SV:102:HOH:O	2.32	0.48
67:SY:117:VAL:CG1	67:SY:118:ARG:N	2.77	0.48
77:Sy:123:VAL:HA	77:Sy:126:GLU:CG	2.44	0.48
79:S2:443:U:H2’	79:S2:444:G:O4’	2.13	0.48
79:S2:553:U:H5”	79:S2:555:A:H5”	1.96	0.48
79:S2:846:G:H5”	79:S2:847:A:O5’	2.13	0.48
79:S2:1025:U:H2’	79:S2:1026:C:O4’	2.13	0.48
79:S2:1097:G:O2’	79:S2:1098:C:H5’	2.14	0.48
2:L5:121:A:C5’	2:L5:122:U:OP2	2.61	0.48
2:L5:2535:G:N7	85:L5:5573:HOH:O	2.35	0.48
2:L5:3736:A:H2’	2:L5:3737:A:H8	1.77	0.48
2:L5:4090:G:O2’	2:L5:4091:G:H5’	2.14	0.48
3:L8:52:ILE:HD13	4:L9:6:C:H4’	1.96	0.48
8:LE:50:ARG:HD2	8:LE:115:ARG:HH11	1.78	0.48
31:Ld:44:ARG:O	31:Ld:48:GLU:HG2	2.13	0.48
31:Ld:117:LEU:HB2	85:Ld:201:HOH:O	2.14	0.48
44:Lz:187:GLU:O	44:Lz:188:LYS:HB2	2.13	0.48
48:SD:195:GLU:O	48:SD:199:VAL:HG23	2.14	0.48
49:SE:64:ILE:HG21	67:SY:17:LEU:HD23	1.95	0.48
62:ST:81:ASP:HB2	62:ST:95:TYR:CD2	2.49	0.48
75:Sg:67:SER:N	75:Sg:81:GLY:O	2.47	0.48
79:S2:58:C:H1’	79:S2:59:U:C5	2.49	0.48
79:S2:1314:U:O2	79:S2:1314:U:C2’	2.60	0.48
2:L5:417:G:OP2	85:L5:5404:HOH:O	2.20	0.48
2:L5:973:G:N7	85:L5:5567:HOH:O	2.35	0.48
2:L5:979:C:H2’	2:L5:980:U:C6	2.48	0.48
2:L5:1446:C:H2’	2:L5:1447:C:H6	1.75	0.48
2:L5:1696:C:O2’	2:L5:1697:G:O4’	2.31	0.48
2:L5:2065:G:H2’	2:L5:2066:C:O4’	2.14	0.48
2:L5:2726:G:H2’	2:L5:2727:C:C6	2.49	0.48
2:L5:4652:G:H2’	2:L5:4653:C:H6	1.78	0.48
5:LB:56:ILE:HD11	5:LB:285:TYR:CD2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:197:ARG:O	6:LC:198:ASN:HB2	2.13	0.48
13:LJ:48:PRO:HB2	13:LJ:70:VAL:HG22	1.95	0.48
28:La:87:ARG:HG2	28:La:120:GLN:NE2	2.25	0.48
48:SD:72:LEU:HD12	48:SD:155:CYS:SG	2.53	0.48
50:SG:58:LYS:HA	50:SG:107:SER:HB2	1.96	0.48
75:Sg:79:LEU:HD22	75:Sg:120:ILE:CD1	2.43	0.48
79:S2:337:C:H2'	79:S2:338:G:O4'	2.14	0.48
79:S2:875:A:H2'	79:S2:876:C:C6	2.47	0.48
2:L5:1703:C:O2'	2:L5:1704:C:H5'	2.14	0.48
2:L5:1866:U:H2'	2:L5:1867:A:O4'	2.13	0.48
2:L5:2465:C:H2'	2:L5:2466:G:O4'	2.14	0.48
2:L5:3654:G:O2'	2:L5:3693:U:OP1	2.25	0.48
2:L5:3883:U:H2'	2:L5:3884:PSU:C6	2.48	0.48
2:L5:4538:G:H2'	2:L5:4539:U:C6	2.49	0.48
9:LF:197:VAL:O	9:LF:197:VAL:HG12	2.14	0.48
19:LQ:197:LYS:O	19:LQ:201:GLU:HG2	2.12	0.48
21:LS:75:VAL:HG11	21:LS:98:ARG:NH2	2.29	0.48
26:LY:108:ILE:HD12	26:LY:160:ARG:CZ	2.43	0.48
37:Lj:177:ALA:O	37:Lj:184:ARG:HB2	2.13	0.48
37:Lj:187:LYS:O	37:Lj:188:ASN:HB3	2.14	0.48
45:S1:97:LEU:HD13	45:S1:229:MET:HE1	1.95	0.48
45:S1:175:GLU:HG3	45:S1:193:ILE:HG23	1.95	0.48
47:SC:209:VAL:N	47:SC:210:PRO:HD2	2.28	0.48
55:SL:133:PRO:O	79:S2:384:U:H5'	2.13	0.48
56:SM:41:PRO:HB2	56:SM:44:HIS:CD2	2.49	0.48
57:SN:61:ALA:HB1	79:S2:1016:U:O2	2.14	0.48
59:SP:77:LYS:HD3	59:SP:102:PHE:CD2	2.49	0.48
60:SQ:96:TYR:CD1	60:SQ:100:VAL:HG21	2.48	0.48
62:ST:98:VAL:O	62:ST:103:LEU:HG	2.14	0.48
63:SU:113:VAL:HG11	63:SU:121:ARG:HB3	1.96	0.48
79:S2:130:G:N3	79:S2:130:G:H3'	2.29	0.48
79:S2:1299:A:H2'	79:S2:1300:U:H3'	1.95	0.48
2:L5:1380:G:H4'	2:L5:1381:U:H6	1.78	0.48
2:L5:1660:U:H4'	85:L5:6288:HOH:O	2.14	0.48
2:L5:1920:C:O2'	2:L5:1922:G:H5"	2.14	0.48
2:L5:2727:C:H2'	2:L5:2728:U:C6	2.48	0.48
6:LC:114:ARG:HG2	85:LN:461:HOH:O	2.14	0.48
19:LQ:156:PRO:HB2	19:LQ:158:ARG:HH12	1.79	0.48
27:LZ:5:MET:CE	27:LZ:82:PRO:HB3	2.44	0.48
45:S1:157:GLN:HB2	45:S1:160:GLN:OE1	2.14	0.48
48:SD:77:MET:HG3	48:SD:89:THR:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SK:5:ILE:HD11	54:SK:9:ARG:CB	2.44	0.48
59:SP:74:GLU:OE1	59:SP:74:GLU:HA	2.12	0.48
63:SU:7:LYS:HZ2	79:S2:1427:C:H5"	1.75	0.48
69:Sa:59:PHE:HB2	69:Sa:62:TYR:HB2	1.95	0.48
75:Sg:5:MET:CE	75:Sg:310:TRP:HB2	2.26	0.48
76:So:13:LEU:HD21	76:So:17:ARG:HH12	1.77	0.48
79:S2:6:G:H4'	79:S2:601:OMG:CM2	2.43	0.48
79:S2:1736:G:H2'	79:S2:1737:G:C8	2.49	0.48
2:L5:216:C:H2'	2:L5:216:C:O2	2.13	0.48
2:L5:2605:G:O2'	2:L5:2606:G:H5'	2.13	0.48
2:L5:3938:G:OP2	16:LN:24:ARG:NH1	2.47	0.48
3:L8:182:GLY:CA	3:L8:194:VAL:CG2	2.92	0.48
4:L9:108:G:O2'	4:L9:109:U:H5'	2.14	0.48
6:LC:147:VAL:HG13	6:LC:148:PRO:HD2	1.95	0.48
16:LN:3:ALA:O	16:LN:7:ILE:HG13	2.13	0.48
17:LO:5:LYS:HG2	17:LO:7:ARG:NH1	2.28	0.48
44:Lz:4:ARG:NH1	44:Lz:99:ILE:HG13	2.29	0.48
47:SC:108:LYS:HD2	47:SC:233:LEU:HD13	1.96	0.48
50:SG:79:LYS:HE2	50:SG:86:PRO:CG	2.44	0.48
50:SG:132:ARG:NE	79:S2:151:C:O2'	2.47	0.48
54:SK:123:LEU:HD21	54:SK:154:ASP:HB2	1.94	0.48
71:Sc:61:GLU:O	71:Sc:64:ASN:HB2	2.14	0.48
75:Sg:125:ARG:HG2	75:Sg:150:TRP:CG	2.49	0.48
75:Sg:239:LEU:HD23	75:Sg:250:ALA:CB	2.44	0.48
77:Sy:85:LEU:HD12	77:Sy:88:TRP:CE3	2.49	0.48
2:L5:2685:C:H2'	2:L5:2686:G:O4'	2.14	0.47
2:L5:2815:A2M:H2'	2:L5:2816:G:C8	2.48	0.47
2:L5:3808:OMC:CM2	2:L5:3809:G:H5'	2.44	0.47
2:L5:4229:U:O2	2:L5:4229:U:H2'	2.14	0.47
2:L5:4563:U:O4	85:L5:5402:HOH:O	2.20	0.47
2:L5:4684:A:H2'	2:L5:4685:U:O4'	2.14	0.47
4:L9:66:G:H2'	4:L9:67:C:H6	1.79	0.47
10:LG:193:LEU:HD12	10:LG:194:VAL:HG13	1.96	0.47
11:LH:52:LYS:HD2	11:LH:54:ARG:CD	2.44	0.47
11:LH:172:ILE:HB	42:Lo:90:ASN:HD22	1.79	0.47
36:Li:26:HIS:O	36:Li:29:ARG:HG2	2.13	0.47
47:SC:70:VAL:HG21	47:SC:93:ILE:HG23	1.96	0.47
48:SD:43:GLU:OE1	48:SD:43:GLU:HA	2.14	0.47
50:SG:188:LYS:O	50:SG:192:ILE:HD12	2.14	0.47
56:SM:49:MET:HE3	56:SM:49:MET:CA	2.44	0.47
62:ST:75:ARG:HB3	62:ST:75:ARG:HH11	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SX:87:ASN:HB2	66:SX:90:CYS:SG	2.54	0.47
67:SY:106:GLN:HA	67:SY:106:GLN:OE1	2.14	0.47
67:SY:118:ARG:NH2	79:S2:85:A:O3'	2.47	0.47
75:Sg:244:ASN:C	75:Sg:245:ARG:HD2	2.39	0.47
77:Sy:92:CYS:SG	77:Sy:100:PRO:HB2	2.54	0.47
79:S2:189:U:H2'	79:S2:190:G:O4'	2.14	0.47
79:S2:379:C:H2'	79:S2:380:G:O4'	2.14	0.47
79:S2:497:C:O2'	79:S2:498:C:H5'	2.14	0.47
79:S2:579:C:C2'	79:S2:580:U:H5'	2.44	0.47
79:S2:1737:G:H2'	79:S2:1738:C:H6	1.79	0.47
1:L1:6:C:H2'	1:L1:7:U:H6	1.80	0.47
2:L5:490:C:H4'	6:LC:4:ALA:HB2	1.96	0.47
2:L5:934:C:N4	6:LC:350:ARG:HH21	1.96	0.47
2:L5:1187:G:H21	2:L5:1187:G:P	2.33	0.47
2:L5:1435:G:O2'	2:L5:1436:C:H5'	2.14	0.47
2:L5:2029:A:H2'	2:L5:2030:A:C8	2.50	0.47
2:L5:2318:G:N2	2:L5:2321:G:OP2	2.38	0.47
2:L5:4392:OMG:HM21	2:L5:4394:A:H2'	1.95	0.47
2:L5:4598:C:H2'	2:L5:4611:A:N6	2.29	0.47
2:L5:4870:OMG:HM23	15:LM:56:GLN:OE1	2.13	0.47
2:L5:5026:U:H4'	2:L5:5027:C:O5'	2.13	0.47
85:L5:7833:HOH:O	28:La:22:ILE:HD11	2.13	0.47
6:LC:149:GLU:HG3	6:LC:150:LEU:H	1.78	0.47
44:Lz:84:GLY:O	44:Lz:140:THR:OG1	2.29	0.47
50:SG:56:ASN:O	50:SG:107:SER:N	2.46	0.47
50:SG:120:ASP:OD1	50:SG:125:THR:HB	2.14	0.47
51:SH:10:LYS:HE3	51:SH:20:GLU:CD	2.39	0.47
53:SJ:73:GLU:OE2	79:S2:817:G:H4'	2.13	0.47
54:SK:53:THR:HG23	54:SK:54:ARG:CG	2.43	0.47
54:SK:75:LYS:NZ	56:SM:34:GLU:OE2	2.46	0.47
54:SK:114:ALA:HB3	54:SK:117:ARG:HB2	1.95	0.47
78:Sz:104:LYS:HE2	78:Sz:104:LYS:HA	1.96	0.47
79:S2:890:U:O4	79:S2:896:U:O2'	2.25	0.47
79:S2:1168:G:H2'	79:S2:1169:G:H5'	1.96	0.47
79:S2:1501:C:H2'	79:S2:1502:C:H6	1.77	0.47
79:S2:1567:G:H2'	79:S2:1568:C:C6	2.49	0.47
79:S2:1673:U:H2'	79:S2:1674:G:O4'	2.14	0.47
2:L5:300:A:H2'	2:L5:301:G:C8	2.50	0.47
2:L5:1332:C:H2'	2:L5:1333:A:C8	2.49	0.47
2:L5:1847:C:H2'	2:L5:1848:C:C6	2.48	0.47
2:L5:2495:U:H2'	2:L5:2496:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:3670:C:O2'	2:L5:3671:G:H5'	2.14	0.47
2:L5:4578:G:H2'	2:L5:4579:PSU:C6	2.50	0.47
2:L5:4594:U:H2'	2:L5:4595:G:C8	2.48	0.47
11:LH:172:ILE:HB	42:Lo:90:ASN:ND2	2.29	0.47
13:LJ:27:GLY:O	13:LJ:68:ILE:HG22	2.14	0.47
27:LZ:5:MET:HE2	27:LZ:82:PRO:HB3	1.95	0.47
35:Lh:94:MET:HE1	35:Lh:146:ILE:C	2.40	0.47
46:SA:181:GLU:OE2	46:SA:185:MET:HE3	2.14	0.47
50:SG:61:PHE:HB2	50:SG:72:ARG:CD	2.44	0.47
50:SG:98:ARG:HG3	50:SG:98:ARG:NH1	2.28	0.47
54:SK:9:ARG:NH2	79:S2:1552:G:H5'	2.29	0.47
60:SQ:90:LYS:HD3	60:SQ:120:LEU:O	2.14	0.47
69:Sa:39:PHE:HE2	69:Sa:41:ILE:HD11	1.79	0.47
79:S2:439:A:O2'	79:S2:440:G:H5'	2.14	0.47
79:S2:1281:G:N2	79:S2:1282:A:H1'	2.28	0.47
2:L5:1187:G:C2'	2:L5:1188:C:H5'	2.44	0.47
2:L5:4108:G:C2'	2:L5:4109:G:H8	2.25	0.47
2:L5:4116:C:H5"	2:L5:4117:U:C5	2.49	0.47
2:L5:4405:G:OP2	44:Lz:7:ARG:NH2	2.45	0.47
4:L9:57:C:H2'	4:L9:58:A:H8	1.78	0.47
9:LF:106:ARG:O	9:LF:110:GLN:HG3	2.14	0.47
10:LG:202:VAL:HG12	10:LG:203:ALA:N	2.29	0.47
15:LM:11:ARG:NH2	15:LM:61:ILE:HD11	2.29	0.47
18:LP:86:PRO:O	18:LP:87:LYS:HB3	2.13	0.47
28:La:87:ARG:CG	28:La:120:GLN:HE22	2.22	0.47
29:Lb:95:ARG:O	29:Lb:99:ILE:HG13	2.14	0.47
31:Ld:81:PRO:HB2	31:Ld:84:ILE:HD11	1.95	0.47
44:Lz:75:TYR:CZ	44:Lz:150:GLU:HG2	2.49	0.47
44:Lz:91:LEU:CD1	44:Lz:129:VAL:HG22	2.44	0.47
47:SC:68:ARG:HG3	47:SC:277:HIS:HE2	1.79	0.47
56:SM:14:LEU:HD22	56:SM:35:LEU:CD2	2.44	0.47
59:SP:121:ILE:HG13	85:S2:2329:HOH:O	2.13	0.47
66:SX:131:LEU:HD11	85:SX:314:HOH:O	2.14	0.47
75:Sg:42:MET:CE	75:Sg:57:ARG:HD2	2.45	0.47
77:Sy:33:ARG:HD3	77:Sy:89:VAL:CG2	2.44	0.47
77:Sy:106:CYS:HA	79:S2:1285:G:OP1	2.15	0.47
78:Sz:100:LEU:HD12	78:Sz:101:ALA:N	2.30	0.47
79:S2:1021:U:H4'	79:S2:1022:U:O4'	2.14	0.47
2:L5:119:G:H3'	2:L5:120:A:H5"	1.95	0.47
2:L5:750:U:H1'	2:L5:917:A:C5	2.50	0.47
2:L5:1175:A:H8	2:L5:1175:A:O5'	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:4250:G:O2'	13:LJ:129:ASP:HB2	2.15	0.47
2:L5:4389:C:H3'	85:L5:7591:HOH:O	2.15	0.47
2:L5:4922:C:H2'	2:L5:4923:C:O4'	2.14	0.47
3:L8:182:GLY:HA2	3:L8:194:VAL:CG2	2.44	0.47
20:LR:144:LYS:HB3	20:LR:144:LYS:HE2	1.63	0.47
32:Le:49:GLY:HA3	85:Le:310:HOH:O	2.13	0.47
45:S1:151:ARG:HG2	79:S2:1101:U:OP1	2.14	0.47
75:Sg:57:ARG:HD3	75:Sg:95:GLY:CA	2.43	0.47
79:S2:1266:C:H2'	79:S2:1267:C:C6	2.49	0.47
79:S2:1554:C:H2'	79:S2:1555:U:C5	2.48	0.47
79:S2:1652:G:C2'	79:S2:1653:U:H5'	2.45	0.47
1:L1:44:A:H2'	1:L1:45:C:O4'	2.15	0.47
2:L5:9:C:OP2	16:LN:40:PRO:HG3	2.15	0.47
2:L5:952:G:H2'	2:L5:953:C:C6	2.50	0.47
2:L5:1904:G:O2'	2:L5:1905:U:H5'	2.15	0.47
2:L5:2815:A2M:HM'3	2:L5:2815:A2M:H1'	1.59	0.47
2:L5:3786:U:O2	2:L5:3814:U:H4'	2.14	0.47
85:L5:8114:HOH:O	35:Lh:69:ARG:HD2	2.14	0.47
4:L9:27:G:H2'	4:L9:28:C:C6	2.50	0.47
7:LD:101:VAL:C	7:LD:102:LEU:HD12	2.39	0.47
45:S1:28:LYS:HD3	45:S1:48:LEU:HD12	1.96	0.47
51:SH:30:LEU:O	51:SH:34:SER:CB	2.62	0.47
52:SI:45:THR:HG21	52:SI:53:LYS:CE	2.45	0.47
54:SK:161:GLY:O	54:SK:164:VAL:HG22	2.14	0.47
55:SL:38:LYS:HE3	85:S2:3348:HOH:O	2.15	0.47
56:SM:43:LEU:O	56:SM:47:LYS:HG2	2.14	0.47
57:SN:78:LYS:HG3	57:SN:78:LYS:O	2.15	0.47
58:SO:45:THR:HG22	58:SO:52:THR:HA	1.96	0.47
58:SO:113:GLN:OE1	69:Sa:46:GLU:HG3	2.15	0.47
68:SZ:53:PRO:HB3	68:SZ:89:ILE:HD11	1.95	0.47
68:SZ:81:GLN:HE21	74:Sf:55:LEU:HD12	1.80	0.47
79:S2:1007:C:H2'	79:S2:1008:A:C8	2.49	0.47
79:S2:1190:A:H2'	79:S2:1191:C:O4'	2.14	0.47
79:S2:1461:G:H3'	79:S2:1463:U:N3	2.24	0.47
79:S2:1627:C:H2'	79:S2:1628:C:C6	2.48	0.47
79:S2:1737:G:H2'	79:S2:1738:C:C6	2.50	0.47
2:L5:37:U:H2'	2:L5:38:A:O4'	2.14	0.47
2:L5:139:G:H5"	2:L5:263:G:OP2	2.15	0.47
2:L5:302:C:OP1	16:LN:68:ARG:HB3	2.14	0.47
2:L5:987:C:H2'	2:L5:988:C:O4'	2.15	0.47
2:L5:1069:G:O5'	14:LK:65:ARG:NH2	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:1359:G:H4'	16:LN:203:TYR:HB2	1.96	0.47
2:L5:1554:A:H5'	43:Lp:9:GLY:C	2.40	0.47
2:L5:1590:C:H5"	2:L5:1591:U:O5'	2.14	0.47
2:L5:1741:G:N3	2:L5:1781:PSU:H5"	2.29	0.47
2:L5:1821:G:H21	2:L5:1822:U:H5'	1.75	0.47
2:L5:1821:G:H3'	2:L5:1822:U:C5'	2.44	0.47
2:L5:2580:U:O2'	27:LZ:79:HIS:ND1	2.41	0.47
2:L5:2616:C:O2'	2:L5:2617:G:H5'	2.15	0.47
2:L5:3760:A2M:N6	79:S2:1826:G:H8	2.11	0.47
2:L5:4069:U:H2'	2:L5:4070:U:C6	2.49	0.47
2:L5:4108:G:OP1	2:L5:4109:G:P	2.73	0.47
2:L5:4173:G:H2'	2:L5:4174:U:C6	2.50	0.47
2:L5:4730:C:C2'	2:L5:4731:G:H5'	2.45	0.47
2:L5:4762:A:O2'	2:L5:4763:U:H5'	2.15	0.47
2:L5:4872:2MG:HM21	26:LY:201:LEU:O	2.14	0.47
2:L5:4909:A:H2'	5:LB:156:TYR:CE1	2.50	0.47
3:L8:273:LEU:CG	3:L8:277:LYS:HE2	2.45	0.47
11:LH:26:ILE:CD1	11:LH:35:ARG:HG2	2.44	0.47
13:LJ:31:ASP:OD2	13:LJ:35:ARG:NE	2.48	0.47
14:LK:72:LYS:HD2	29:Lb:119:CYS:CB	2.44	0.47
20:LR:178:GLN:O	20:LR:182:GLU:HG2	2.14	0.47
23:LU:21:ARG:HB2	23:LU:22:PRO:HD2	1.96	0.47
24:LV:72:LEU:CD2	24:LV:113:LYS:HE2	2.45	0.47
27:LZ:39:SER:HB3	27:LZ:77:TYR:CE2	2.49	0.47
32:Le:69:ARG:HB2	32:Le:82:MET:HE1	1.95	0.47
40:Lm:84:LYS:HB2	40:Lm:110:TYR:CE2	2.50	0.47
46:SA:122:LEU:HD12	46:SA:123:VAL:H	1.80	0.47
46:SA:180:ARG:HD3	46:SA:184:ARG:NE	2.29	0.47
47:SC:251:LEU:HA	64:SV:23:ILE:HD11	1.97	0.47
48:SD:45:TYR:HE1	48:SD:65:GLN:HB3	1.80	0.47
49:SE:59:ASP:O	49:SE:63:LYS:HG3	2.15	0.47
50:SG:13:GLN:NE2	79:S2:153:G:N3	2.60	0.47
50:SG:217:MET:O	50:SG:221:LYS:HG2	2.14	0.47
51:SH:79:LEU:HD23	51:SH:94:PHE:CZ	2.50	0.47
52:SI:194:GLU:HG2	52:SI:198:TYR:CE2	2.50	0.47
54:SK:95:GLY:HA3	54:SK:125:PHE:CE2	2.48	0.47
54:SK:137:VAL:HG22	54:SK:151:LYS:CB	2.37	0.47
55:SL:61:PRO:HD3	55:SL:141:ASN:HD21	1.79	0.47
57:SN:26:LEU:HD21	57:SN:66:VAL:HG21	1.97	0.47
85:SN:203:HOH:O	79:S2:935:G:H1'	2.15	0.47
59:SP:37:TYR:CE2	59:SP:45:LEU:HD11	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:ST:125:HIS:CD2	62:ST:131:VAL:HG11	2.49	0.47
77:Sy:26:LEU:HD13	77:Sy:31:LEU:CG	2.44	0.47
79:S2:73:C:C4'	79:S2:74:G:H5'	2.45	0.47
79:S2:96:C:H2'	79:S2:97:U:C6	2.50	0.47
79:S2:213:G:C2'	79:S2:214:U:H5'	2.45	0.47
79:S2:884:C:H3'	79:S2:885:U:H6	1.80	0.47
79:S2:1512:C:H2'	79:S2:1513:C:C6	2.50	0.47
2:L5:419:A:N1	85:L5:5563:HOH:O	2.35	0.47
2:L5:484:U:O5'	2:L5:484:U:H6	1.97	0.47
2:L5:645:G:H3'	2:L5:646:G:H8	1.80	0.47
2:L5:740:G:H21	2:L5:924:C:N4	2.12	0.47
2:L5:1788:A:H2'	44:Lz:22:PHE:CZ	2.49	0.47
2:L5:2611:A:C5'	2:L5:2688:G:H4'	2.45	0.47
2:L5:3837:C:H2'	2:L5:3838:U:O4'	2.15	0.47
2:L5:4067:U:H2'	2:L5:4068:U:C6	2.50	0.47
2:L5:4109:G:C8	2:L5:4109:G:OP2	2.68	0.47
5:LB:113:GLU:OE1	5:LB:167:GLN:HA	2.14	0.47
12:LI:62:SER:HA	85:LI:324:HOH:O	2.13	0.47
20:LR:21:LYS:HE3	20:LR:55:VAL:HA	1.96	0.47
31:Ld:83:ARG:O	31:Ld:84:ILE:HD13	2.14	0.47
48:SD:40:ALA:HB1	48:SD:45:TYR:CD2	2.50	0.47
49:SE:21:ASP:OD2	49:SE:24:THR:OG1	2.32	0.47
51:SH:10:LYS:HD3	51:SH:16:PRO:HB3	1.97	0.47
51:SH:83:LEU:HD12	51:SH:87:PHE:HE2	1.79	0.47
51:SH:192:PHE:CG	70:Sb:12:PRO:HB3	2.49	0.47
60:SQ:50:LYS:HE2	60:SQ:82:TYR:OH	2.15	0.47
66:SX:86:PRO:O	66:SX:87:ASN:HB2	2.15	0.47
66:SX:107:ARG:CG	66:SX:112:VAL:HG22	2.44	0.47
68:SZ:55:ARG:HG2	68:SZ:87:ARG:NE	2.30	0.47
73:Se:130:ASN:ND2	79:S2:637:U:O2	2.45	0.47
79:S2:327:G:H5"	79:S2:328:U:C5	2.49	0.47
79:S2:493:A:H1'	79:S2:574:A:H5'	1.96	0.47
79:S2:1625:PSU:O2'	79:S2:1626:C:H5'	2.14	0.47
1:L1:2:G:C2'	1:L1:3:A:H5'	2.44	0.47
2:L5:729:2MG:OP1	2:L5:729:2MG:CM2	2.63	0.47
2:L5:1077:C:C4	2:L5:1078:A:C2	3.03	0.47
2:L5:1440:U:HO2'	2:L5:1441:C:C5'	2.18	0.47
2:L5:1665:C:H2'	2:L5:1666:C:H6	1.79	0.47
2:L5:2543:A:H2	2:L5:2773:G:H22	1.61	0.47
2:L5:2565:A:H3'	2:L5:2566:G:H8	1.79	0.47
2:L5:2905:C:O2	2:L5:3591:C:H1'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:4345:C:H2'	2:L5:4346:U:C6	2.50	0.47
42:Lo:94:MET:HG2	42:Lo:105:PRO:HA	1.97	0.47
45:S1:115:LYS:HE2	79:S2:1869:A:C5	2.50	0.47
51:SH:190:PRO:HG2	51:SH:193:GLN:NE2	2.23	0.47
54:SK:224:SER:CB	75:Sg:225:LYS:HA	2.45	0.47
55:SL:57:ASP:OD2	55:SL:115:PRO:HD3	2.15	0.47
61:SS:121:GLN:HG2	61:SS:122:PRO:O	2.15	0.47
63:SU:18:LEU:HD13	63:SU:134:ILE:HG13	1.97	0.47
75:Sg:30:MET:HE2	75:Sg:92:LEU:HD22	1.96	0.47
75:Sg:256:ILE:HD13	75:Sg:289:LEU:HD21	1.97	0.47
79:S2:489:A:H2'	79:S2:490:C:C6	2.50	0.47
79:S2:1218:C:O2'	79:S2:1219:C:H5'	2.15	0.47
79:S2:1659:U:OP2	79:S2:1660:C:N4	2.32	0.47
79:S2:1666:C:H2'	79:S2:1667:U:H6	1.80	0.47
2:L5:254:G:HO2'	2:L5:255:C:P	2.34	0.47
2:L5:1589:C:H2'	2:L5:1590:C:C6	2.50	0.47
2:L5:2103:G:O2'	2:L5:2104:G:OP2	2.27	0.47
2:L5:3607:U:H2'	2:L5:3608:A:C8	2.50	0.47
2:L5:3708:C:H2'	2:L5:3709:U:C6	2.50	0.47
2:L5:4100:C:H2'	2:L5:4101:C:O4'	2.15	0.47
2:L5:4652:G:H2'	2:L5:4653:C:C6	2.50	0.47
9:LF:36:LYS:HE2	9:LF:36:LYS:HA	1.96	0.47
12:LI:35:TRP:CH2	12:LI:55:MET:HG2	2.50	0.47
25:LW:82:ILE:HG22	25:LW:83:THR:N	2.29	0.47
35:Lh:2:VAL:HG12	35:Lh:3:ARG:N	2.29	0.47
37:Lj:49:LYS:HG2	37:Lj:53:MET:HE3	1.97	0.47
46:SA:58:LEU:HD13	46:SA:174:MET:CE	2.45	0.47
52:SI:107:THR:O	52:SI:111:GLN:HG3	2.15	0.47
54:SK:21:LEU:HD21	54:SK:48:ILE:HD13	1.97	0.47
54:SK:106:ARG:HD2	54:SK:174:HIS:O	2.14	0.47
56:SM:49:MET:HA	56:SM:49:MET:CE	2.44	0.47
62:ST:5:ILE:HG22	71:Sc:50:PHE:O	2.14	0.47
62:ST:38:ARG:HH21	79:S2:1603:G:C5'	2.27	0.47
77:Sy:35:ILE:HG13	79:S2:1285:G:H5'	1.95	0.47
79:S2:142:C:N4	79:S2:330:G:OP1	2.44	0.47
79:S2:324:C:H3'	79:S2:325:C:H6	1.79	0.47
79:S2:1145:A:C5	79:S2:1146:C:H1'	2.50	0.47
79:S2:1629:C:H2'	79:S2:1630:A:O4'	2.15	0.47
79:S2:1666:C:H2'	79:S2:1667:U:O4'	2.15	0.47
2:L5:445:U:H2'	2:L5:446:C:O4'	2.15	0.46
2:L5:1836:G:O5'	22:LT:129:LYS:NZ	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:2637:U:H5”	2:L5:2638:G:OP1	2.15	0.46
2:L5:4330:G:O2’	2:L5:4331:G:H5’	2.15	0.46
2:L5:4611:A:H2’	2:L5:4612:C:H6	1.80	0.46
2:L5:4888:U:O2	2:L5:4931:G:N2	2.46	0.46
3:L8:66:TYR:HA	85:L8:309:HOH:O	2.14	0.46
3:L8:191:ASN:O	3:L8:194:VAL:HG22	2.15	0.46
38:Lk:23:VAL:HA	38:Lk:35:LYS:O	2.15	0.46
47:SC:121:ARG:HH12	47:SC:123:ARG:NE	2.13	0.46
49:SE:44:LEU:HD11	49:SE:72:ILE:HD11	1.98	0.46
49:SE:175:PHE:HE2	49:SE:225:ILE:CG2	2.28	0.46
50:SG:14:LYS:CB	50:SG:124:LEU:HD21	2.45	0.46
50:SG:65:GLN:OE1	50:SG:65:GLN:HA	2.14	0.46
54:SK:5:ILE:HD11	54:SK:9:ARG:HB2	1.97	0.46
58:SO:106:LYS:HD2	58:SO:135:ILE:CD1	2.45	0.46
75:Sg:19:THR:HA	75:Sg:287:THR:HG21	1.96	0.46
75:Sg:314:ILE:O	75:Sg:314:ILE:HG22	2.15	0.46
77:Sy:94:ILE:HA	77:Sy:100:PRO:HA	1.97	0.46
79:S2:158:A:H2’	79:S2:159:A2M:O4’	2.14	0.46
79:S2:1829:G:O2’	79:S2:1850:MA6:N1	2.48	0.46
2:L5:1693:U:H2’	2:L5:1694:C:O4’	2.16	0.46
2:L5:2089:G:O2’	6:LC:307:LYS:NZ	2.27	0.46
2:L5:2101:C:N4	2:L5:2102:G:O6	2.48	0.46
2:L5:2588:C:OP1	2:L5:2768:C:O2’	2.29	0.46
31:Ld:120:VAL:HG12	31:Ld:121:ASN:O	2.15	0.46
44:Lz:43:VAL:HG21	44:Lz:197:VAL:HG13	1.97	0.46
48:SD:195:GLU:HA	48:SD:198:ARG:NH1	2.31	0.46
58:SO:133:THR:O	58:SO:135:ILE:HG12	2.15	0.46
59:SP:49:LEU:C	59:SP:50:ARG:HD3	2.40	0.46
75:Sg:20:GLN:HA	75:Sg:288:SER:HB3	1.97	0.46
79:S2:76:U:H3’	79:S2:77:A:C5’	2.45	0.46
79:S2:217:A:C2’	79:S2:218:PSU:H5”	2.46	0.46
79:S2:344:U:H2’	79:S2:345:U:C6	2.50	0.46
79:S2:1748:G:H2’	79:S2:1749:G:O4’	2.15	0.46
2:L5:979:C:H2’	2:L5:980:U:H6	1.81	0.46
2:L5:1304:C:H2’	2:L5:1305:C:C6	2.51	0.46
2:L5:1404:G:N3	2:L5:1404:G:H2’	2.29	0.46
2:L5:3776:G:H4’	2:L5:3777:G:OP1	2.14	0.46
2:L5:3788:C:N4	2:L5:3812:C:OP2	2.45	0.46
2:L5:3939:G:O2’	2:L5:4076:G:N1	2.43	0.46
3:L8:83:LEU:N	3:L8:84:PRO:CD	2.78	0.46
8:LE:109:LEU:HD22	8:LE:115:ARG:NH2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LH:27:VAL:CG2	11:LH:80:MET:HE2	2.44	0.46
11:LH:52:LYS:HD3	11:LH:54:ARG:HD3	1.97	0.46
13:LJ:136:ARG:HB2	13:LJ:139:PHE:CE1	2.50	0.46
45:S1:31:TYR:CE1	45:S1:49:VAL:HG12	2.50	0.46
54:SK:59:LEU:HD23	54:SK:59:LEU:C	2.40	0.46
55:SL:81:LYS:CB	79:S2:394:G:H5'	2.45	0.46
72:Sd:26:GLN:HG2	72:Sd:27:CYS:N	2.30	0.46
75:Sg:41:ILE:HG21	75:Sg:43:TRP:CE2	2.51	0.46
77:Sy:37:GLU:OE2	79:S2:1312:G:O2'	2.31	0.46
77:Sy:71:GLU:OE1	77:Sy:71:GLU:HA	2.14	0.46
78:Sz:100:LEU:HD12	78:Sz:101:ALA:H	1.79	0.46
79:S2:81:U:C2'	79:S2:82:G:O5'	2.64	0.46
79:S2:389:A:H2'	79:S2:390:C:C6	2.51	0.46
79:S2:494:C:N4	79:S2:509:OMG:HN22	2.13	0.46
79:S2:554:A:OP1	79:S2:555:A:H4'	2.16	0.46
79:S2:659:G:H2'	79:S2:663:C:C5	2.51	0.46
79:S2:1227:G:C2	79:S2:1228:A:C8	3.04	0.46
1:L1:149:G:N2	10:LG:64:GLN:HE22	2.09	0.46
2:L5:3923:A:H2'	2:L5:3924:C:C6	2.50	0.46
6:LC:316:LYS:HB2	6:LC:324:ILE:HG13	1.97	0.46
7:LD:66:PRO:HG2	7:LD:67:TYR:CD2	2.50	0.46
23:LU:12:PHE:CD1	23:LU:51:LEU:HD11	2.50	0.46
45:S1:69:VAL:HG12	45:S1:74:LEU:HG	1.97	0.46
46:SA:40:LYS:HD3	61:SS:101:ASP:OD1	2.15	0.46
47:SC:125:LYS:NZ	85:SC:301:HOH:O	2.32	0.46
48:SD:123:GLU:HG2	48:SD:200:ALA:HB1	1.98	0.46
49:SE:149:TYR:N	49:SE:150:PRO:HD3	2.30	0.46
54:SK:163:PRO:HA	54:SK:166:TYR:CZ	2.51	0.46
58:SO:43:HIS:CE1	58:SO:55:ARG:HH11	2.33	0.46
58:SO:62:VAL:CG1	58:SO:73:ALA:HB2	2.45	0.46
59:SP:37:TYR:HE2	59:SP:45:LEU:HD11	1.80	0.46
62:ST:84:LEU:O	62:ST:87:GLN:NE2	2.48	0.46
62:ST:98:VAL:CG2	62:ST:103:LEU:HD23	2.43	0.46
63:SU:65:TYR:HB2	63:SU:123:LEU:CD1	2.45	0.46
72:Sd:21:THR:OG1	72:Sd:22:GLY:N	2.47	0.46
75:Sg:131:LEU:HD21	75:Sg:165:ILE:CD1	2.46	0.46
77:Sy:31:LEU:CD1	77:Sy:33:ARG:HG3	2.45	0.46
79:S2:344:U:H2'	79:S2:345:U:H6	1.81	0.46
79:S2:443:U:H5	85:S2:2531:HOH:O	1.97	0.46
79:S2:881:G:O6	79:S2:882:U:O4	2.34	0.46
79:S2:1560:U:H4'	79:S2:1583:C:O2'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1562:C:H2'	79:S2:1563:G:C8	2.51	0.46
1:L1:155:C:O2'	1:L1:156:U:H5'	2.15	0.46
2:L5:122:U:H2'	2:L5:123:C:H6	1.81	0.46
2:L5:444:G:H2'	2:L5:445:U:C6	2.51	0.46
2:L5:469:C:H2'	2:L5:470:A:C8	2.50	0.46
2:L5:978:G:H2'	2:L5:979:C:H6	1.79	0.46
2:L5:1309:C:H2'	2:L5:1310:C:C6	2.51	0.46
2:L5:1504:G:H2'	2:L5:1505:C:C6	2.49	0.46
2:L5:1920:C:H3'	2:L5:1921:C:C5'	2.37	0.46
2:L5:2395:A:H1'	2:L5:2806:A:N3	2.30	0.46
2:L5:4110:C:C2	2:L5:4111:U:C5	3.04	0.46
2:L5:4152:G:O2'	2:L5:4153:C:H5'	2.15	0.46
2:L5:4344:U:H2'	2:L5:4345:C:C6	2.51	0.46
2:L5:4762:A:H2'	2:L5:4763:U:O4'	2.15	0.46
11:LH:4:ILE:HD13	21:LS:150:ILE:HD11	1.96	0.46
44:Lz:91:LEU:HD13	44:Lz:129:VAL:HG22	1.96	0.46
45:S1:6:ASN:C	45:S1:9:LEU:HD11	2.41	0.46
45:S1:225:LEU:HD12	45:S1:225:LEU:HA	1.77	0.46
48:SD:33:ILE:HD13	48:SD:36:GLN:NE2	2.30	0.46
48:SD:73:THR:HG21	48:SD:90:VAL:HG22	1.98	0.46
49:SE:175:PHE:CE2	49:SE:225:ILE:HG21	2.50	0.46
50:SG:116:LYS:HZ1	50:SG:125:THR:HG21	1.74	0.46
52:SI:142:SER:HB2	52:SI:145:ILE:CD1	2.46	0.46
54:SK:29:LEU:HD13	54:SK:58:VAL:HG13	1.98	0.46
63:SU:60:THR:HG23	63:SU:75:MET:CE	2.46	0.46
65:SW:77:PRO:HB2	66:SX:7:LEU:HG	1.98	0.46
73:Se:99:LYS:HD3	79:S2:554:A:O4'	2.15	0.46
75:Sg:154:VAL:HG12	75:Sg:167:SER:CA	2.44	0.46
79:S2:818:A:O3'	85:S2:2103:HOH:O	2.21	0.46
79:S2:1413:G:O2'	79:S2:1414:A:H5'	2.16	0.46
79:S2:1550:G:O2'	79:S2:1558:C:O2	2.29	0.46
2:L5:2831:G:O2'	2:L5:2832:A:H5'	2.15	0.46
2:L5:4733:C:H4'	2:L5:4734:A:C5'	2.46	0.46
2:L5:4737:G:H2'	2:L5:4738:C:C6	2.51	0.46
5:LB:223:THR:O	5:LB:274:TYR:HA	2.15	0.46
6:LC:52:TYR:HB3	85:LC:653:HOH:O	2.15	0.46
6:LC:138:MET:O	6:LC:141:GLY:N	2.49	0.46
8:LE:67:ILE:CD1	8:LE:107:THR:HG21	2.44	0.46
10:LG:136:LEU:CD1	10:LG:193:LEU:HD13	2.45	0.46
19:LQ:205:GLN:OE1	19:LQ:205:GLN:HA	2.15	0.46
35:Lh:99:GLU:O	35:Lh:103:GLU:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:SE:4:GLY:HA3	79:S2:92:A:O2'	2.16	0.46
50:SG:132:ARG:HH11	50:SG:133:LEU:HD21	1.80	0.46
53:SJ:15:THR:HG22	53:SJ:16:PRO:O	2.16	0.46
56:SM:74:GLU:OE1	56:SM:74:GLU:N	2.41	0.46
59:SP:49:LEU:HD22	59:SP:53:GLN:CG	2.37	0.46
59:SP:85:ILE:HD13	59:SP:111:MET:HB3	1.98	0.46
62:ST:15:VAL:HG13	62:ST:68:ILE:CD1	2.45	0.46
62:ST:147:GLY:O	62:ST:148:VAL:HB	2.15	0.46
74:Sf:19:ARG:HG2	79:S2:1555:U:H3	1.80	0.46
75:Sg:173:LEU:C	75:Sg:173:LEU:HD12	2.40	0.46
79:S2:374:G:H2'	79:S2:375:U:C6	2.50	0.46
1:L1:40:A:H2'	1:L1:41:A:C8	2.50	0.46
2:L5:1304:C:H2'	2:L5:1305:C:H6	1.81	0.46
2:L5:1665:C:H2'	2:L5:1666:C:C6	2.51	0.46
2:L5:1756:U:OP2	2:L5:1756:U:C6	2.69	0.46
2:L5:1816:C:O2	2:L5:1816:C:H2'	2.16	0.46
2:L5:2102:G:O2'	2:L5:2103:G:C5'	2.64	0.46
2:L5:2838:G:H5'	5:LB:247:GLY:HA3	1.98	0.46
2:L5:4582:C:HO2'	2:L5:4583:C:H5'	1.81	0.46
2:L5:4872:2MG:O6	15:LM:98:ARG:NH1	2.49	0.46
3:L8:93:THR:O	3:L8:93:THR:CG2	2.63	0.46
3:L8:223:PHE:HB3	3:L8:226:TYR:HB2	1.97	0.46
27:LZ:22:LYS:NZ	27:LZ:132:GLN:O	2.37	0.46
35:Lh:159:LYS:HG3	35:Lh:159:LYS:O	2.14	0.46
38:Lk:51:GLU:O	38:Lk:55:LYS:HG3	2.15	0.46
45:S1:6:ASN:HB2	79:S2:956:G:N7	2.31	0.46
45:S1:97:LEU:HD12	45:S1:229:MET:HE1	1.94	0.46
50:SG:116:LYS:HG3	50:SG:117:GLY:N	2.31	0.46
52:SI:29:LEU:C	52:SI:29:LEU:HD12	2.40	0.46
52:SI:75:LYS:HE3	79:S2:304:C:OP1	2.16	0.46
52:SI:145:ILE:O	52:SI:149:TYR:HD2	1.98	0.46
54:SK:125:PHE:HA	54:SK:128:GLU:HG2	1.97	0.46
60:SQ:43:GLU:HA	60:SQ:44:PRO:C	2.40	0.46
62:ST:40:TYR:HA	62:ST:43:VAL:HG12	1.98	0.46
62:ST:50:ILE:HG22	62:ST:51:ASP:N	2.31	0.46
63:SU:98:SER:HB2	79:S2:1568:C:P	2.56	0.46
64:SV:64:GLU:HA	85:SV:101:HOH:O	2.15	0.46
66:SX:6:GLY:O	66:SX:9:THR:OG1	2.31	0.46
66:SX:86:PRO:O	66:SX:90:CYS:HB2	2.16	0.46
75:Sg:116:ASP:O	75:Sg:117:ASN:HB2	2.16	0.46
75:Sg:270:LEU:HD23	75:Sg:310:TRP:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Sy:91:LEU:HD11	79:S2:1284:A:N3	2.31	0.46
79:S2:901:G:O2'	79:S2:902:G:H5'	2.16	0.46
79:S2:1349:G:H2'	79:S2:1350:U:C6	2.50	0.46
79:S2:1663:A:O2'	79:S2:1664:A:OP2	2.27	0.46
2:L5:159:C:H5'	36:Li:25:ARG:HH21	1.81	0.46
2:L5:1066:G:OP2	2:L5:1066:G:H8	1.99	0.46
2:L5:1272:C:N4	2:L5:2107:C:O3'	2.47	0.46
2:L5:4339:A:H2'	2:L5:4340:U:H6	1.81	0.46
2:L5:4464:A:H2'	2:L5:4464:A:N3	2.31	0.46
2:L5:4575:G:O2'	2:L5:5069:U:OP1	2.32	0.46
2:L5:5024:C:H5'	2:L5:5025:C:C6	2.51	0.46
3:L8:211:LEU:HD12	3:L8:223:PHE:HE2	1.80	0.46
5:LB:383:GLU:CD	5:LB:383:GLU:H	2.23	0.46
6:LC:207:PRO:HG2	6:LC:227:ILE:HD13	1.98	0.46
8:LE:43:ASN:O	8:LE:126:ARG:HD3	2.16	0.46
13:LJ:42:GLN:NE2	13:LJ:117:ILE:HG21	2.31	0.46
13:LJ:119:TYR:CG	62:ST:12:ILE:HB	2.51	0.46
14:LK:165:LEU:CD1	14:LK:176:THR:HG22	2.33	0.46
34:Lg:102:ILE:O	34:Lg:106:VAL:HG23	2.16	0.46
35:Lh:103:GLU:OE2	35:Lh:109:VAL:HG11	2.15	0.46
39:Ll:119:ARG:O	39:Ll:122:LYS:HB2	2.16	0.46
45:S1:66:VAL:HG22	45:S1:87:ILE:HG13	1.98	0.46
47:SC:84:PHE:CZ	47:SC:264:SER:HA	2.51	0.46
52:SI:139:LYS:HE2	52:SI:141:ARG:HH21	1.80	0.46
54:SK:105:LEU:HD23	54:SK:184:ILE:CG2	2.45	0.46
58:SO:34:PHE:HD1	58:SO:98:ARG:HG3	1.81	0.46
85:SP:203:HOH:O	79:S2:1299:A:H4'	2.15	0.46
71:Sc:73:VAL:HG12	71:Sc:79:ILE:HD11	1.98	0.46
79:S2:106:C:OP1	79:S2:432:G:H5'	2.16	0.46
79:S2:381:C:H2'	79:S2:382:C:C6	2.51	0.46
79:S2:481:C:H2'	79:S2:482:G:C1'	2.46	0.46
2:L5:257:C:HO2'	2:L5:258:G:P	2.31	0.46
2:L5:1094:G:C2	2:L5:1203:G:C2	3.04	0.46
2:L5:1732:C:O2'	2:L5:1733:G:H5'	2.16	0.46
2:L5:1773:OMU:HM22	2:L5:1774:C:OP2	2.16	0.46
2:L5:1821:G:H21	2:L5:1822:U:H4'	1.81	0.46
2:L5:2696:A:C5	38:Lk:69:LEU:HD13	2.51	0.46
2:L5:2902:G:H5'	2:L5:2903:G:H5'	1.98	0.46
2:L5:3769:C:H2'	2:L5:3770:PSU:O4'	2.16	0.46
2:L5:4111:U:C2	2:L5:4112:C:C5	3.04	0.46
3:L8:212:MET:HE3	3:L8:219:TYR:CZ	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L9:55:A:OP1	13:LJ:154:LYS:HE2	2.16	0.46
5:LB:92:TYR:HB2	5:LB:159:VAL:HB	1.98	0.46
5:LB:322:HIS:O	5:LB:342:LYS:NZ	2.44	0.46
13:LJ:88:LYS:HG2	13:LJ:92:TYR:CE1	2.50	0.46
27:LZ:57:MET:HE1	27:LZ:65:ARG:HD3	1.98	0.46
45:S1:69:VAL:HA	85:S1:304:HOH:O	2.15	0.46
47:SC:172:ASN:HB3	47:SC:174:ILE:HD11	1.97	0.46
49:SE:226:PHE:O	49:SE:228:ILE:HG23	2.16	0.46
50:SG:61:PHE:CD1	50:SG:96:SER:HB2	2.51	0.46
54:SK:172:VAL:O	54:SK:173:ARG:NH1	2.48	0.46
56:SM:47:LYS:HE2	79:S2:1274:G:C5'	2.33	0.46
56:SM:88:GLU:OE1	56:SM:88:GLU:N	2.49	0.46
62:ST:26:ILE:O	62:ST:30:ILE:HG12	2.16	0.46
63:SU:13:GLU:OE1	63:SU:142:ASN:ND2	2.46	0.46
76:So:10:MET:HE3	76:So:10:MET:O	2.16	0.46
77:Sy:73:GLN:O	77:Sy:74:ILE:HD13	2.15	0.46
79:S2:554:A:O5'	79:S2:555:A:C4'	2.60	0.46
79:S2:1862:G:OP2	85:S2:2102:HOH:O	2.21	0.46
2:L5:194:C:O2	8:LE:121:ARG:NH2	2.24	0.46
2:L5:931:C:O5'	2:L5:931:C:H6	1.99	0.46
2:L5:1534:A2M:HM'3	2:L5:1637:A:C4	2.50	0.46
2:L5:1817:U:H2'	2:L5:1818:G:H5'	1.96	0.46
2:L5:2101:C:C5	2:L5:2102:G:N7	2.84	0.46
2:L5:2650:G:O2'	2:L5:2651:C:H5'	2.15	0.46
2:L5:2832:A:OP1	31:Ld:47:LYS:NZ	2.43	0.46
2:L5:2876:OMG:CM2	2:L5:2877:G:H5'	2.44	0.46
2:L5:4398:C:C2'	2:L5:4399:U:H5'	2.46	0.46
2:L5:4860:G:H2'	2:L5:4861:G:C8	2.51	0.46
2:L5:4878:C:C2'	2:L5:4879:C:H5'	2.45	0.46
14:LK:46:ARG:NH2	14:LK:66:LYS:HG2	2.31	0.46
16:LN:140:LYS:HD3	16:LN:140:LYS:HA	1.71	0.46
22:LT:88:ARG:NH1	29:Lb:33:LYS:O	2.49	0.46
27:LZ:92:ASP:OD2	27:LZ:95:VAL:HG23	2.16	0.46
44:Lz:65:LEU:HD23	44:Lz:159:PHE:CE1	2.51	0.46
45:S1:34:LYS:O	45:S1:232:HIS:HE1	1.99	0.46
49:SE:121:TYR:HA	49:SE:164:LEU:HG	1.97	0.46
50:SG:3:LEU:HB2	50:SG:16:ILE:HG13	1.98	0.46
50:SG:170:ARG:HA	79:S2:74:G:N2	2.31	0.46
51:SH:107:LYS:O	51:SH:109:ARG:HD3	2.16	0.46
52:SI:118:ALA:O	52:SI:119:LEU:HD23	2.16	0.46
62:ST:5:ILE:HB	71:Sc:49:LEU:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:Sf:19:ARG:HG2	79:S2:1555:U:N3	2.31	0.46
75:Sg:142:VAL:HG12	75:Sg:146:SER:HB3	1.97	0.46
75:Sg:177:TRP:CE2	75:Sg:184:LEU:HD13	2.51	0.46
79:S2:945:U:H2'	79:S2:946:U:C6	2.50	0.46
79:S2:1111:U:H2'	79:S2:1112:U:C6	2.51	0.46
79:S2:1533:A:C2	79:S2:1536:G:N3	2.84	0.46
79:S2:1563:G:H2'	79:S2:1564:C:C6	2.49	0.46
79:S2:1677:U:O5'	79:S2:1677:U:H6	1.99	0.46
1:L1:27:U:H2'	1:L1:28:C:C6	2.51	0.45
1:L1:135:C:OP1	41:Ln:63:LYS:HE2	2.15	0.45
2:L5:251:C:O2'	2:L5:252:C:H5'	2.16	0.45
2:L5:1312:A:H3'	85:L5:5560:HOH:O	2.15	0.45
2:L5:1565:A:H2'	2:L5:1566:C:O4'	2.16	0.45
2:L5:2699:C:O2'	2:L5:2700:G:H5'	2.16	0.45
2:L5:4435:U:O2'	2:L5:4436:U:H5'	2.16	0.45
3:L8:41:LYS:NZ	22:LT:32:ARG:O	2.45	0.45
3:L8:273:LEU:CD2	3:L8:277:LYS:HE2	2.46	0.45
5:LB:74:GLU:OE1	5:LB:285:TYR:OH	2.32	0.45
12:LI:43:ASN:OD1	12:LI:45:VAL:HB	2.17	0.45
14:LK:74:SER:HB2	29:Lb:118:LEU:CD1	2.46	0.45
14:LK:221:LYS:O	14:LK:222:LEU:HD23	2.16	0.45
19:LQ:203:ALA:HA	19:LQ:206:ASP:HB3	1.98	0.45
35:Lh:94:MET:CE	35:Lh:146:ILE:HG22	2.46	0.45
45:S1:52:THR:HG23	45:S1:57:ILE:HD13	1.98	0.45
45:S1:83:LYS:HE2	45:S1:106:THR:HG22	1.97	0.45
50:SG:78:SER:HB3	50:SG:92:ARG:CG	2.40	0.45
51:SH:108:SER:O	79:S2:798:G:O3'	2.33	0.45
55:SL:125:ILE:HB	55:SL:146:THR:OG1	2.16	0.45
61:SS:111:PHE:O	61:SS:114:LEU:HG	2.16	0.45
63:SU:98:SER:HB2	79:S2:1568:C:OP1	2.16	0.45
66:SX:131:LEU:CD2	66:SX:135:LYS:HD2	2.45	0.45
75:Sg:37:ASP:O	75:Sg:39:THR:HG23	2.16	0.45
79:S2:532:C:H2'	79:S2:533:A:H8	1.81	0.45
79:S2:1266:C:H2'	79:S2:1267:C:H6	1.82	0.45
79:S2:1310:U:C2	79:S2:1311:C:C5	3.04	0.45
2:L5:376:A:OP1	85:L5:5407:HOH:O	2.21	0.45
2:L5:463:A:O2'	2:L5:464:G:H5'	2.16	0.45
2:L5:647:G:H2'	2:L5:648:G:C8	2.51	0.45
2:L5:750:U:H1'	2:L5:917:A:N7	2.31	0.45
2:L5:1194:G:H2'	2:L5:1195:G:C8	2.52	0.45
2:L5:1250:C:H2'	2:L5:1251:C:C5'	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:1932:A:O2'	2:L5:1933:G:H5'	2.16	0.45
2:L5:4768:G:OP1	26:LY:168:TYR:OH	2.26	0.45
3:L8:256:LYS:CE	4:L9:117:G:H5"	2.45	0.45
5:LB:107:ALA:HB1	5:LB:202:GLU:HG3	1.97	0.45
10:LG:95:LEU:HD21	10:LG:156:VAL:HG21	1.98	0.45
22:LT:92:ARG:HB3	22:LT:94:GLU:OE1	2.15	0.45
27:LZ:112:ARG:O	27:LZ:116:VAL:HG23	2.16	0.45
45:S1:125:VAL:CG1	45:S1:169:MET:HG2	2.46	0.45
45:S1:150:ILE:HG23	61:SS:131:PRO:HA	1.98	0.45
52:SI:176:ALA:HA	85:SI:302:HOH:O	2.15	0.45
54:SK:193:ASP:HB2	54:SK:198:ILE:HG13	1.97	0.45
55:SL:152:LYS:O	55:SL:153:LYS:HG2	2.16	0.45
62:ST:34:LYS:NZ	62:ST:104:ASP:OD1	2.36	0.45
75:Sg:85:GLY:C	75:Sg:108:VAL:HG23	2.41	0.45
79:S2:1145:A:N7	79:S2:1146:C:H1'	2.31	0.45
79:S2:1289:U:H2'	79:S2:1290:G:C8	2.51	0.45
1:L1:115:G:H2'	1:L1:116:C:H6	1.82	0.45
2:L5:197:A:H5"	8:LE:130:LYS:HZ3	1.81	0.45
2:L5:325:U:H2'	2:L5:326:C:C6	2.51	0.45
2:L5:1271:G:N2	2:L5:2106:G:H1	2.12	0.45
2:L5:1706:A:H2	2:L5:1707:C:H5	1.62	0.45
2:L5:1826:G:H5'	29:Lb:43:MET:CE	2.47	0.45
2:L5:2414:G:H2'	2:L5:2415:OMU:H6	1.99	0.45
2:L5:3865:A:H2'	2:L5:3866:C:C6	2.51	0.45
2:L5:4087:G:N7	7:LD:67:TYR:OH	2.44	0.45
2:L5:4112:C:O2'	2:L5:4113:U:H5'	2.17	0.45
3:L8:128:ASP:O	3:L8:164:LYS:NZ	2.50	0.45
13:LJ:48:PRO:HB2	13:LJ:70:VAL:CG2	2.46	0.45
21:LS:28:TYR:CZ	21:LS:52:LYS:HE3	2.51	0.45
28:La:81:LEU:HD22	28:La:106:SER:OG	2.17	0.45
45:S1:124:HIS:HA	45:S1:137:LEU:O	2.17	0.45
46:SA:102:ARG:NH2	79:S2:1378:A:OP2	2.49	0.45
47:SC:161:SER:O	47:SC:163:VAL:HG13	2.16	0.45
47:SC:267:GLN:HE22	64:SV:35:ASN:HD21	1.63	0.45
48:SD:99:ILE:HD11	48:SD:171:GLU:HG2	1.97	0.45
49:SE:133:THR:O	49:SE:134:LYS:HB2	2.17	0.45
51:SH:69:LEU:HD23	51:SH:69:LEU:C	2.42	0.45
54:SK:219:PRO:HG3	75:Sg:189:ILE:CG2	2.47	0.45
54:SK:223:ILE:HG21	54:SK:225:GLU:HG2	1.96	0.45
57:SN:130:LYS:NZ	57:SN:139:TRP:O	2.35	0.45
60:SQ:12:VAL:HG11	60:SQ:90:LYS:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SU:39:LEU:CD1	79:S2:1540:G:H5"	2.45	0.45
63:SU:132:ASP:OD2	79:S2:1415:C:O2'	2.27	0.45
64:SV:58:ALA:O	64:SV:62:MET:HG3	2.16	0.45
74:Sf:18:SER:HB2	79:S2:1556:A:C6	2.51	0.45
74:Sf:53:ILE:HD11	74:Sf:55:LEU:HD11	1.98	0.45
77:Sy:94:ILE:HG13	77:Sy:100:PRO:CA	2.47	0.45
79:S2:207:G:H3'	79:S2:208:G:C8	2.50	0.45
79:S2:294:U:H4'	79:S2:295:C:OP2	2.16	0.45
79:S2:1031:A2M:HM'3	79:S2:1031:A2M:H1'	1.65	0.45
79:S2:1183:A:H3'	85:S2:2141:HOH:O	2.16	0.45
79:S2:1288:OMU:HM22	79:S2:1289:U:C5'	2.34	0.45
79:S2:1290:G:P	79:S2:1290:G:H8	2.39	0.45
79:S2:1351:G:O2'	79:S2:1378:A:N1	2.49	0.45
2:L5:360:A:H4'	2:L5:361:C:OP2	2.16	0.45
2:L5:965:G:C1'	2:L5:2093:A:N6	2.80	0.45
2:L5:1077:C:N3	2:L5:1078:A:C2	2.84	0.45
2:L5:1933:G:H2'	2:L5:1934:A:C8	2.51	0.45
2:L5:3636:C:O2	2:L5:3636:C:H2'	2.15	0.45
2:L5:4358:U:H4'	19:LQ:197:LYS:HD2	1.98	0.45
2:L5:4571:A2M:HM'3	2:L5:4571:A2M:H1'	1.49	0.45
2:L5:4872:2MG:CM2	26:LY:202:LEU:HA	2.45	0.45
2:L5:5053:U:H3'	2:L5:5054:C:C5	2.49	0.45
3:L8:53:VAL:HG11	3:L8:159:VAL:HA	1.98	0.45
4:L9:28:C:O3'	13:LJ:138:GLY:HA2	2.16	0.45
4:L9:94:C:H2'	4:L9:95:C:H6	1.81	0.45
13:LJ:88:LYS:HG2	13:LJ:92:TYR:OH	2.16	0.45
30:Lc:11:LEU:C	30:Lc:11:LEU:HD12	2.41	0.45
31:Ld:67:ARG:CZ	31:Ld:70:LYS:HD3	2.46	0.45
33:Lf:6:TRP:CE3	33:Lf:102:ARG:HG2	2.51	0.45
37:Lj:187:LYS:O	37:Lj:188:ASN:CB	2.63	0.45
45:S1:5:LYS:NZ	58:SO:65:ASP:OD2	2.50	0.45
46:SA:149:ASN:ND2	46:SA:166:LYS:HG2	2.31	0.45
49:SE:18:TRP:HH2	49:SE:31:PRO:HD3	1.81	0.45
49:SE:130:PHE:CE2	49:SE:138:HIS:HB2	2.51	0.45
50:SG:218:LYS:HE3	50:SG:218:LYS:HB3	1.68	0.45
51:SH:39:GLN:O	51:SH:43:LEU:HG	2.16	0.45
54:SK:7:LYS:HZ2	68:SZ:86:LYS:HE3	1.81	0.45
58:SO:136:PRO:HB2	58:SO:139:SER:HB3	1.98	0.45
64:SV:51:LYS:HG3	64:SV:78:ILE:CD1	2.46	0.45
77:Sy:123:VAL:HA	77:Sy:126:GLU:OE2	2.15	0.45
79:S2:64:A:N6	79:S2:83:A:OP2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:590:A2M:HM'2	79:S2:591:U:P	2.56	0.45
79:S2:1143:A:H2'	79:S2:1144:A:C8	2.51	0.45
79:S2:1405:A:H2'	79:S2:1406:G:O4'	2.17	0.45
79:S2:1452:A:H4'	79:S2:1453:C:O4'	2.16	0.45
79:S2:1724:A:O2'	79:S2:1725:U:H5'	2.15	0.45
2:L5:1880:G:OP2	2:L5:1881:OMC:HM22	2.17	0.45
2:L5:2696:A:C2	38:Lk:69:LEU:HD22	2.51	0.45
2:L5:4731:G:H5"	2:L5:4732:G:O4'	2.16	0.45
11:LH:173:ARG:NE	42:Lo:127:VAL:HG23	2.31	0.45
45:S1:133:TYR:CD1	45:S1:181:LEU:HD22	2.51	0.45
50:SG:15:LEU:HD23	50:SG:15:LEU:C	2.42	0.45
50:SG:20:ASP:HB3	50:SG:23:LYS:HG3	1.99	0.45
50:SG:171:THR:HG22	79:S2:75:G:H21	1.81	0.45
57:SN:132:LYS:HD3	57:SN:132:LYS:HA	1.77	0.45
63:SU:39:LEU:HG	63:SU:47:PRO:HG3	1.98	0.45
79:S2:164:A:O2'	79:S2:165:G:H5'	2.15	0.45
79:S2:1168:G:C2'	79:S2:1169:G:H5'	2.46	0.45
2:L5:127:G:H2'	2:L5:128:C:C6	2.51	0.45
2:L5:672:C:O2'	2:L5:673:C:H5'	2.17	0.45
2:L5:1097:C:C2	2:L5:1098:G:C8	3.05	0.45
2:L5:1403:G:H2'	2:L5:1404:G:O4'	2.16	0.45
2:L5:2459:G:H2'	2:L5:2461:G:OP2	2.16	0.45
2:L5:2840:A:O2'	2:L5:2841:G:H5'	2.16	0.45
2:L5:3602:C:C2'	2:L5:3603:G:H5'	2.46	0.45
2:L5:3903:A:H2'	2:L5:3904:G:O4'	2.17	0.45
2:L5:4420:PSU:O2'	2:L5:4421:C:O4'	2.33	0.45
4:L9:31:G:O2'	4:L9:32:A:H5'	2.17	0.45
11:LH:20:LEU:HD12	11:LH:47:LEU:HG	1.97	0.45
14:LK:46:ARG:CZ	14:LK:66:LYS:HG2	2.47	0.45
24:LV:62:MET:HE3	24:LV:76:VAL:HG12	1.99	0.45
48:SD:32:ASP:O	48:SD:36:GLN:HG3	2.16	0.45
60:SQ:30:GLY:HA3	60:SQ:64:ALA:HA	1.98	0.45
61:SS:67:ARG:HH12	79:S2:1376:A:P	2.39	0.45
72:Sd:44:ARG:NH2	72:Sd:63:ARG:HE	2.15	0.45
74:Sf:34:TYR:OH	79:S2:1549:U:OP1	2.33	0.45
75:Sg:70:VAL:O	75:Sg:70:VAL:HG13	2.16	0.45
75:Sg:126:ASP:OD1	75:Sg:128:THR:OG1	2.31	0.45
79:S2:436:OMG:OP1	79:S2:450:C:H5	1.98	0.45
79:S2:1414:A:H2'	79:S2:1415:C:H6	1.82	0.45
79:S2:1453:C:H3'	79:S2:1453:C:O2	2.17	0.45
79:S2:1797:U:H2'	79:S2:1798:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:135:G:N2	17:LO:95:LEU:O	2.37	0.45
2:L5:263:G:H4'	2:L5:263:G:OP1	2.16	0.45
2:L5:907:C:H2'	2:L5:908:G:H8	1.81	0.45
2:L5:978:G:H2'	2:L5:979:C:C6	2.51	0.45
2:L5:1444:G:O2'	2:L5:1445:U:H5'	2.16	0.45
2:L5:2323:C:H2'	2:L5:2324:C:C6	2.52	0.45
2:L5:2831:G:C2'	2:L5:2832:A:H5'	2.47	0.45
2:L5:2862:G:H4'	2:L5:3625:G:N7	2.31	0.45
2:L5:3865:A:H4'	85:L5:6936:HOH:O	2.17	0.45
2:L5:4211:C:H3'	2:L5:4212:A:H2'	1.98	0.45
2:L5:4885:U:C3'	2:L5:4886:C:H5"	2.46	0.45
8:LE:54:GLU:OE1	8:LE:69:LYS:HG2	2.17	0.45
13:LJ:24:ILE:HG12	13:LJ:128:LEU:HB3	1.98	0.45
14:LK:162:VAL:HG11	14:LK:184:VAL:HG11	1.98	0.45
22:LT:121:GLU:HG2	22:LT:122:LYS:N	2.31	0.45
30:Lc:36:LYS:HE2	30:Lc:36:LYS:HB2	1.70	0.45
40:Lm:78:PHE:CE1	40:Lm:83:LEU:HG	2.42	0.45
45:S1:81:PHE:O	45:S1:106:THR:HG23	2.17	0.45
49:SE:97:GLU:OE2	49:SE:113:ARG:NH2	2.42	0.45
51:SH:101:LEU:HB2	51:SH:116:ARG:CD	2.46	0.45
59:SP:81:ARG:NH2	59:SP:122:THR:HG23	2.32	0.45
60:SQ:13:PHE:HD2	79:S2:1442:OMU:CM2	2.29	0.45
60:SQ:53:GLU:OE1	60:SQ:115:TYR:HE2	2.00	0.45
63:SU:62:ARG:NE	79:S2:1542:C:OP1	2.49	0.45
75:Sg:42:MET:CG	75:Sg:56:GLN:HE21	2.22	0.45
75:Sg:304:ASP:OD2	75:Sg:306:LEU:HD12	2.17	0.45
79:S2:886:A:H61	79:S2:900:C:N4	2.14	0.45
79:S2:1664:A:H2'	85:S2:2860:HOH:O	2.16	0.45
79:S2:1845:A:H2'	79:S2:1846:G:C8	2.52	0.45
2:L5:43:U:C2'	2:L5:44:A:H5'	2.46	0.45
2:L5:290:U:H2'	2:L5:291:U:H6	1.81	0.45
2:L5:1263:A:H2'	2:L5:1264:C:C6	2.51	0.45
2:L5:1271:G:H4'	2:L5:1272:C:OP2	2.17	0.45
2:L5:1775:A:H2'	2:L5:1776:A:C8	2.51	0.45
2:L5:1965:G:N1	2:L5:1966:C:C2	2.84	0.45
2:L5:2348:G:H5'	2:L5:2351:OMC:C5	2.52	0.45
2:L5:4136:G:H2'	2:L5:4137:C:C6	2.52	0.45
2:L5:4306:OMU:CM2	2:L5:4307:A:H5'	2.30	0.45
2:L5:4736:C:H4'	2:L5:5068:G:C4	2.52	0.45
3:L8:138:GLN:HB3	3:L8:139:PRO:HD2	1.97	0.45
3:L8:293:ARG:HH11	3:L8:293:ARG:CB	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:LB:165:HIS:HB3	5:LB:180:LEU:HD13	1.99	0.45
13:LJ:90:ARG:O	13:LJ:91:GLU:HB2	2.17	0.45
25:LW:82:ILE:HG21	50:SG:134:GLY:CA	2.46	0.45
40:Lm:105:ASN:HB2	40:Lm:111:GLU:HB3	1.99	0.45
45:S1:28:LYS:NZ	45:S1:50:THR:OG1	2.48	0.45
48:SD:74:ASN:OD1	48:SD:86:LYS:HE3	2.17	0.45
59:SP:15:PHE:CZ	59:SP:112:ILE:HD12	2.52	0.45
59:SP:29:SER:O	59:SP:33:LEU:HD13	2.16	0.45
62:ST:136:THR:OG1	79:S2:1521:C:H2'	2.16	0.45
63:SU:129:ARG:HG3	79:S2:1416:C:OP1	2.16	0.45
65:SW:11:LEU:HD12	65:SW:74:VAL:CG1	2.47	0.45
68:SZ:56:MET:HE1	79:S2:1580:A:H8	1.81	0.45
75:Sg:107:ASP:OD2	75:Sg:125:ARG:NH1	2.49	0.45
75:Sg:251:ALA:HB2	75:Sg:289:LEU:HD11	1.99	0.45
75:Sg:260:ASP:HB2	75:Sg:267:VAL:CG1	2.44	0.45
77:Sy:24:THR:HG21	77:Sy:116:LYS:CE	2.46	0.45
79:S2:118:C:H1'	79:S2:445:A:C4	2.52	0.45
79:S2:140:U:H2'	79:S2:141:A:C8	2.52	0.45
79:S2:834:C:O3'	79:S2:835:C:H3'	2.17	0.45
79:S2:1317:C:H2'	79:S2:1318:G:C8	2.52	0.45
79:S2:1328:OMG:CM2	79:S2:1329:U:H5'	2.42	0.45
79:S2:1454:A:C2	79:S2:1476:A:H1'	2.51	0.45
79:S2:1653:U:H2'	79:S2:1654:G:O4'	2.16	0.45
2:L5:1617:G:H1'	2:L5:2513:A:H61	1.81	0.45
2:L5:1655:C:C5	28:La:26:ARG:HD2	2.51	0.45
2:L5:1817:U:H2'	2:L5:1818:G:O4'	2.17	0.45
2:L5:2079:G:H2'	2:L5:2080:U:H6	1.81	0.45
2:L5:2106:G:N2	2:L5:2107:C:O4'	2.50	0.45
2:L5:2627:C:O2	2:L5:2627:C:H2'	2.16	0.45
2:L5:2702:C:H5"	40:Lm:101:ARG:HH22	1.82	0.45
2:L5:4569:U:C1'	35:Lh:69:ARG:HH12	2.23	0.45
2:L5:4690:G:O6	2:L5:4698:C:H5"	2.17	0.45
3:L8:207:TYR:HE2	3:L8:222:GLN:NE2	2.14	0.45
7:LD:44:ILE:CG2	7:LD:46:LYS:HE2	2.46	0.45
25:LW:80:ARG:HH22	79:S2:167:G:HO2'	1.63	0.45
26:LY:183:LYS:O	26:LY:186:GLU:HG2	2.17	0.45
27:LZ:24:VAL:HG12	27:LZ:44:ALA:O	2.17	0.45
45:S1:6:ASN:HB3	45:S1:9:LEU:HD21	1.98	0.45
46:SA:10:MET:HG3	46:SA:11:LYS:N	2.32	0.45
46:SA:207:PRO:O	46:SA:211:GLU:HG3	2.17	0.45
50:SG:23:LYS:O	50:SG:26:THR:HG22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SG:30:LYS:O	50:SG:102:VAL:HG23	2.17	0.45
50:SG:41:LEU:HD23	50:SG:41:LEU:H	1.82	0.45
54:SK:187:LYS:HE3	54:SK:187:LYS:HB2	1.79	0.45
56:SM:84:HIS:CD2	77:Sy:27:ILE:HD12	2.52	0.45
57:SN:110:ASP:O	57:SN:114:ARG:HG2	2.16	0.45
58:SO:95:ILE:HB	58:SO:129:ILE:HG12	1.99	0.45
60:SQ:52:LEU:HD12	60:SQ:52:LEU:O	2.17	0.45
67:SY:14:THR:OG1	79:S2:841:G:OP2	2.34	0.45
70:Sb:54:VAL:HB	70:Sb:64:CYS:SG	2.57	0.45
71:Sc:50:PHE:CE1	71:Sc:79:ILE:HG21	2.52	0.45
75:Sg:45:LEU:HD23	75:Sg:53:GLY:HA3	1.99	0.45
75:Sg:282:GLU:N	75:Sg:282:GLU:OE1	2.50	0.45
79:S2:468:A2M:HM'3	79:S2:468:A2M:H1'	1.49	0.45
79:S2:626:G:O2'	79:S2:627:OMU:OP2	2.24	0.45
79:S2:866:PSU:H2'	79:S2:867:OMG:C8	2.52	0.45
79:S2:1278:A:O2'	79:S2:1279:C:H5'	2.16	0.45
2:L5:1413:C:C2'	2:L5:1414:C:O5'	2.64	0.45
2:L5:1563:A:H2'	2:L5:1564:A:O4'	2.17	0.45
2:L5:1755:C:H1'	3:L8:3:PHE:CZ	2.52	0.45
2:L5:1850:A:H2'	2:L5:1851:G:C8	2.52	0.45
2:L5:2055:G:H3'	2:L5:2056:G:C5'	2.47	0.45
2:L5:2521:G:H5'	2:L5:2640:G:H1'	1.99	0.45
2:L5:2611:A:H2'	2:L5:2612:G:C8	2.52	0.45
2:L5:2781:G:O2'	2:L5:2782:U:H5'	2.17	0.45
2:L5:2838:G:H5'	5:LB:247:GLY:CA	2.47	0.45
2:L5:3652:A:H2'	2:L5:3653:A:C5	2.51	0.45
2:L5:4147:G:O2'	2:L5:4148:C:H5'	2.16	0.45
2:L5:4290:U:OP1	32:Le:9:ARG:HD3	2.17	0.45
2:L5:4738:C:C2'	2:L5:4739:C:H5'	2.47	0.45
2:L5:4750:G:H2'	2:L5:4751:G:C8	2.52	0.45
39:Ll:26:SER:OG	39:Ll:28:GLU:OE1	2.21	0.45
45:S1:6:ASN:HB2	79:S2:956:G:C8	2.52	0.45
48:SD:100:ILE:HG13	48:SD:174:ALA:CB	2.47	0.45
49:SE:70:ILE:CD1	49:SE:92:ILE:HG12	2.47	0.45
52:SI:128:LYS:O	52:SI:129:LEU:HD22	2.17	0.45
52:SI:202:ILE:HG22	52:SI:206:LYS:HD2	1.98	0.45
54:SK:16:ILE:HD11	74:Sf:36:LEU:CD2	2.41	0.45
54:SK:122:VAL:O	54:SK:126:ILE:HG13	2.17	0.45
54:SK:130:GLY:O	54:SK:191:PRO:HG3	2.17	0.45
56:SM:55:ARG:HB3	56:SM:57:TYR:CE2	2.51	0.45
60:SQ:8:GLN:HA	60:SQ:99:TYR:OH	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:Sd:50:VAL:HG22	72:Sd:51:ARG:N	2.31	0.45
77:Sy:46:GLN:HB3	77:Sy:112:LYS:HG3	1.99	0.45
79:S2:57:U:OP1	79:S2:504:G:O2'	2.35	0.45
79:S2:470:G:O2'	79:S2:471:G:C8	2.70	0.45
79:S2:559:G:O2'	79:S2:560:A:H8	2.00	0.45
79:S2:912:C:C4'	79:S2:913:A:OP2	2.62	0.45
79:S2:949:G:H2'	79:S2:950:C:H6	1.82	0.45
79:S2:1111:U:H2'	79:S2:1112:U:H6	1.82	0.45
79:S2:1599:U:H4'	79:S2:1600:G:O5'	2.17	0.45
1:L1:140:C:H2'	1:L1:141:C:C6	2.52	0.44
2:L5:146:G:O2'	2:L5:147:A:H5'	2.17	0.44
2:L5:173:C:O2'	2:L5:174:C:H5'	2.18	0.44
2:L5:478:G:H2'	2:L5:479:G:H8	1.81	0.44
2:L5:1069:G:P	14:LK:65:ARG:HH22	2.39	0.44
2:L5:1261:G:O2'	2:L5:1262:G:H5'	2.17	0.44
2:L5:1447:C:H6	2:L5:1447:C:O5'	2.00	0.44
2:L5:1600:A:H5'	35:Lh:133:HIS:HA	1.99	0.44
2:L5:2649:G:C2'	2:L5:2650:G:H5'	2.47	0.44
7:LD:107:MET:SD	7:LD:113:VAL:HG11	2.57	0.44
48:SD:84:GLY:O	79:S2:1673:U:O2'	2.35	0.44
54:SK:47:GLU:HG2	54:SK:85:GLU:OE2	2.16	0.44
67:SY:38:THR:O	67:SY:42:GLU:HG2	2.17	0.44
73:Se:86:VAL:CG2	79:S2:616:A:H1'	2.46	0.44
79:S2:1118:C:H3'	79:S2:1119:A:H8	1.82	0.44
79:S2:1786:U:O2'	79:S2:1787:G:H5'	2.17	0.44
1:L1:18:U:H2'	1:L1:19:C:C6	2.52	0.44
2:L5:485:C:O2'	2:L5:486:C:H5'	2.17	0.44
2:L5:1433:A:C2'	2:L5:1434:G:H5'	2.47	0.44
2:L5:1586:G:O2'	2:L5:1587:G:H5'	2.17	0.44
2:L5:4273:A:H2'	2:L5:4274:A:C8	2.52	0.44
2:L5:4345:C:H2'	2:L5:4346:U:H6	1.83	0.44
2:L5:4611:A:H2'	2:L5:4612:C:C6	2.53	0.44
5:LB:19:ARG:HB2	5:LB:234:ARG:NH2	2.32	0.44
27:LZ:53:VAL:HG12	27:LZ:57:MET:HE1	1.99	0.44
32:Le:53:MLZ:HB2	32:Le:54:PRO:HD2	2.00	0.44
38:Lk:61:PRO:HA	38:Lk:62:PRO:HD3	1.92	0.44
51:SH:36:LEU:HD11	51:SH:78:ARG:CG	2.48	0.44
53:SJ:57:ALA:HB2	53:SJ:97:ILE:HG21	1.99	0.44
56:SM:12:TYR:HD2	56:SM:82:TYR:CD2	2.35	0.44
56:SM:50:GLN:CG	56:SM:53:LYS:HE3	2.44	0.44
60:SQ:96:TYR:HA	60:SQ:100:VAL:CG2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SQ:96:TYR:HA	60:SQ:100:VAL:HG23	1.99	0.44
62:ST:132:ARG:HD2	79:S2:1609:C:OP2	2.16	0.44
74:Sf:30:LEU:HD12	74:Sf:38:MET:C	2.43	0.44
74:Sf:46:TYR:O	74:Sf:50:ILE:HG13	2.17	0.44
75:Sg:3:GLU:HG2	75:Sg:314:ILE:O	2.17	0.44
79:S2:220:U:O2'	85:S2:2106:HOH:O	2.21	0.44
79:S2:309:G:C2'	79:S2:310:C:H5'	2.47	0.44
79:S2:368:U:O2'	79:S2:369:C:OP1	2.32	0.44
2:L5:1298:C:H2'	2:L5:1299:G:H8	1.82	0.44
2:L5:1407:C:O2'	2:L5:1409:C:N4	2.50	0.44
2:L5:2098:G:O2'	2:L5:2099:G:H8	1.99	0.44
2:L5:2730:U:H2'	2:L5:2731:C:C6	2.52	0.44
2:L5:4168:G:H2'	2:L5:4169:G:H5'	1.99	0.44
2:L5:4324:A:H2'	2:L5:4325:A:C8	2.53	0.44
2:L5:4637:OMG:HM23	2:L5:4637:OMG:H1'	1.75	0.44
17:LO:99:GLU:HA	17:LO:102:LEU:HG	1.99	0.44
45:S1:201:CYS:HB2	45:S1:207:LEU:HD12	1.99	0.44
46:SA:13:GLU:O	46:SA:17:LYS:HG3	2.18	0.44
49:SE:56:LEU:HD11	67:SY:72:PHE:CE2	2.53	0.44
55:SL:81:LYS:HB3	79:S2:394:G:H5'	1.98	0.44
62:ST:16:LEU:O	62:ST:18:THR:HG23	2.17	0.44
63:SU:3:GLY:HA3	79:S2:1416:C:O2	2.16	0.44
65:SW:31:SER:O	65:SW:35:VAL:HG23	2.17	0.44
68:SZ:90:ASP:C	68:SZ:91:LEU:HD12	2.42	0.44
79:S2:13:C:H4'	79:S2:1355:C:O2	2.17	0.44
79:S2:19:A:H2'	79:S2:20:G:O4'	2.17	0.44
79:S2:302:A:O2'	79:S2:303:C:H5'	2.17	0.44
79:S2:1807:C:H2'	79:S2:1808:U:O4'	2.17	0.44
2:L5:1410:U:O2	29:Lb:52:LYS:NZ	2.47	0.44
2:L5:1721:G:H2'	2:L5:1722:C:C6	2.53	0.44
2:L5:1903:G:OP1	33:Lf:87:LYS:NZ	2.45	0.44
2:L5:2750:G:H2'	2:L5:2751:G:O4'	2.18	0.44
11:LH:173:ARG:HB2	42:Lo:127:VAL:HG23	1.99	0.44
13:LJ:20:LEU:CD1	13:LJ:132:VAL:HG22	2.48	0.44
21:LS:43:ARG:HA	21:LS:43:ARG:HD2	1.78	0.44
47:SC:224:THR:HG22	47:SC:225:SER:N	2.33	0.44
51:SH:168:HIS:CE1	51:SH:169:LYS:HE2	2.52	0.44
52:SI:25:ARG:HA	79:S2:448:A:H5"	2.00	0.44
57:SN:84:LEU:HD23	57:SN:89:TYR:HB2	1.99	0.44
61:SS:20:TYR:CG	61:SS:38:ILE:HD12	2.52	0.44
70:Sb:21:LYS:NZ	79:S2:921:G:OP2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:Sf:19:ARG:HA	79:S2:1555:U:O4	2.18	0.44
77:Sy:99:LYS:O	77:Sy:101:ARG:HD2	2.17	0.44
79:S2:146:G:H2'	79:S2:147:A:O5'	2.18	0.44
79:S2:455:A:H2'	79:S2:456:C:H6	1.77	0.44
79:S2:1147:C:H2'	79:S2:1148:A:H5"	1.99	0.44
79:S2:1306:U:O2'	79:S2:1307:U:H5'	2.17	0.44
79:S2:1520:G:N3	79:S2:1520:G:H2'	2.32	0.44
79:S2:1736:G:H2'	79:S2:1737:G:H8	1.82	0.44
2:L5:1959:U:H5"	2:L5:1961:G:C1'	2.48	0.44
2:L5:2565:A:H2'	2:L5:2566:G:O4'	2.17	0.44
2:L5:2632:PSU:H2'	2:L5:2633:U:C6	2.52	0.44
2:L5:2895:A:H2'	2:L5:2896:G:C8	2.53	0.44
16:LN:9:GLU:HB2	36:Li:44:ILE:HG13	2.00	0.44
16:LN:70:GLY:HA2	85:LN:455:HOH:O	2.16	0.44
20:LR:160:GLU:OE1	20:LR:160:GLU:HA	2.17	0.44
38:Lk:60:LEU:CD2	38:Lk:61:PRO:HD2	2.45	0.44
41:Ln:90:ILE:HA	41:Ln:95:THR:O	2.18	0.44
43:Lp:5:THR:HB	43:Lp:8:VAL:HG22	1.98	0.44
47:SC:127:PHE:CD2	47:SC:141:VAL:HG22	2.52	0.44
48:SD:168:THR:HB	85:SD:304:HOH:O	2.16	0.44
60:SQ:80:GLN:O	60:SQ:84:ILE:HG13	2.17	0.44
60:SQ:100:VAL:HG12	60:SQ:101:ASP:H	1.82	0.44
60:SQ:123:ASP:OD2	60:SQ:125:ARG:NE	2.48	0.44
62:ST:51:ASP:HB3	62:ST:54:LYS:HD2	2.00	0.44
65:SW:12:LYS:HB2	65:SW:12:LYS:HE2	1.85	0.44
66:SX:88:ASP:OD1	73:Se:84:GLY:HA2	2.16	0.44
75:Sg:251:ALA:N	75:Sg:289:LEU:HD11	2.32	0.44
79:S2:309:G:O2'	79:S2:310:C:H5'	2.17	0.44
79:S2:612:U:C2'	79:S2:613:G:H5'	2.47	0.44
79:S2:1228:A:O2'	79:S2:1634:A:O2'	2.29	0.44
79:S2:1728:U:H2'	79:S2:1729:U:O4'	2.17	0.44
1:L1:37:A:H5"	1:L1:39:G:O4'	2.18	0.44
2:L5:433:A:C2	2:L5:3867:A2M:H4'	2.52	0.44
2:L5:672:C:H2'	2:L5:673:C:O4'	2.17	0.44
2:L5:743:G:H2'	2:L5:744:G:C1'	2.48	0.44
2:L5:911:U:OP2	2:L5:911:U:H6	2.00	0.44
2:L5:1442:C:C4	2:L5:1443:A:N7	2.85	0.44
2:L5:1921:C:H4'	2:L5:1922:G:OP2	2.17	0.44
2:L5:1963:C:O2'	2:L5:1964:A:H5'	2.17	0.44
2:L5:2473:A:OP1	41:Ln:47:ARG:HD2	2.17	0.44
2:L5:2563:C:O2	2:L5:2563:C:H2'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:2818:C:OP1	2:L5:4655:A:H4'	2.18	0.44
2:L5:4232:U:H2'	32:Le:3:ASN:O	2.17	0.44
6:LC:158:VAL:HG12	6:LC:217:ILE:HD12	1.99	0.44
12:LI:53:ILE:HG23	85:LI:325:HOH:O	2.17	0.44
13:LJ:19:LYS:HD3	13:LJ:75:ARG:NH2	2.33	0.44
34:Lg:42:PRO:HB2	34:Lg:53:LEU:HD12	2.00	0.44
36:Li:56:ARG:HD2	36:Li:72:PHE:CZ	2.52	0.44
40:Lm:44:GLN:NE2	40:Lm:44:GLN:HA	2.32	0.44
47:SC:77:SER:OG	47:SC:79:GLU:OE1	2.32	0.44
48:SD:141:VAL:HG13	48:SD:145:ARG:HG2	1.99	0.44
49:SE:180:LEU:CD2	49:SE:234:PRO:HB3	2.47	0.44
53:SJ:144:ILE:HG21	79:S2:824:C:H1'	2.00	0.44
54:SK:118:ALA:O	54:SK:122:VAL:HG23	2.17	0.44
85:SL:229:HOH:O	79:S2:396:U:H5	2.01	0.44
59:SP:64:LYS:HD2	59:SP:73:PRO:CG	2.47	0.44
63:SU:110:LEU:O	63:SU:111:LYS:HB2	2.17	0.44
65:SW:11:LEU:HD12	65:SW:74:VAL:HG13	2.00	0.44
75:Sg:191:HIS:NE2	75:Sg:195:LEU:HD11	2.32	0.44
76:So:11:ARG:NH2	79:S2:1844:U:OP1	2.50	0.44
79:S2:210:PSU:H2'	79:S2:210:PSU:O4	2.17	0.44
79:S2:1293:A:H2'	79:S2:1294:G:C8	2.52	0.44
79:S2:1500:G:H2'	79:S2:1501:C:C6	2.52	0.44
1:L1:96:C:H2'	1:L1:97:A:C8	2.53	0.44
2:L5:2781:G:C2'	2:L5:2782:U:H5'	2.48	0.44
2:L5:4067:U:H2'	2:L5:4068:U:H6	1.82	0.44
10:LG:159:HIS:ND1	10:LG:185:LYS:HA	2.33	0.44
38:Lk:9:LYS:HD2	38:Lk:9:LYS:O	2.17	0.44
45:S1:69:VAL:CG1	45:S1:74:LEU:HG	2.48	0.44
47:SC:240:THR:O	47:SC:244:ILE:HG13	2.17	0.44
47:SC:242:ASP:O	47:SC:246:LYS:HG3	2.17	0.44
49:SE:8:HIS:HB2	85:SE:402:HOH:O	2.16	0.44
58:SO:151:LEU:HD12	58:SO:151:LEU:N	2.32	0.44
59:SP:59:ARG:NH1	79:S2:1299:A:OP1	2.50	0.44
60:SQ:96:TYR:O	60:SQ:100:VAL:N	2.50	0.44
66:SX:93:PHE:O	66:SX:140:ARG:NH1	2.51	0.44
69:Sa:51:ARG:HB3	69:Sa:51:ARG:NH1	2.33	0.44
70:Sb:14:GLU:O	70:Sb:18:LYS:HG3	2.18	0.44
75:Sg:101:PHE:CE1	75:Sg:136:GLY:CA	3.01	0.44
75:Sg:158:PRO:HD2	75:Sg:200:VAL:HG11	1.99	0.44
75:Sg:259:TRP:HD1	75:Sg:266:ILE:HG12	1.77	0.44
79:S2:16:G:H2'	79:S2:17:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:172:OMU:OP1	79:S2:314:U:O2'	2.33	0.44
79:S2:174:OMC:HM22	79:S2:175:A:C4'	2.48	0.44
79:S2:325:C:C5	79:S2:326:C:H1'	2.53	0.44
79:S2:1118:C:H3'	79:S2:1119:A:C8	2.52	0.44
79:S2:1404:U:O2	79:S2:1580:A:H5'	2.18	0.44
79:S2:1650:A:H2'	79:S2:1651:A:O4'	2.18	0.44
1:L1:69:PSU:H2'	1:L1:70:G:O4'	2.18	0.44
2:L5:123:C:H2'	2:L5:124:C:C6	2.53	0.44
2:L5:298:G:OP1	16:LN:179:LYS:HD3	2.18	0.44
2:L5:489:C:O2	2:L5:489:C:H2'	2.17	0.44
2:L5:1434:G:H2'	2:L5:1435:G:H5"	1.99	0.44
2:L5:1668:A:C2'	2:L5:1669:A:H5'	2.47	0.44
2:L5:1733:G:N3	2:L5:4214:A:H2'	2.33	0.44
2:L5:1802:A:H5"	2:L5:1803:G:H5'	2.00	0.44
2:L5:2474:G:N2	2:L5:2503:G:H5"	2.33	0.44
2:L5:3594:C:H5"	2:L5:3595:U:H5	1.82	0.44
2:L5:3774:A:H2'	2:L5:3775:A:C8	2.53	0.44
2:L5:4232:U:H4'	2:L5:4233:A:O4'	2.17	0.44
85:L5:8050:HOH:O	7:LD:197:PRO:HD2	2.18	0.44
3:L8:7:VAL:HG23	3:L8:8:LYS:N	2.33	0.44
5:LB:224:LYS:HG2	5:LB:340:THR:HG23	1.97	0.44
11:LH:54:ARG:HH11	11:LH:54:ARG:HG3	1.82	0.44
12:LI:5:ARG:HA	12:LI:5:ARG:HE	1.81	0.44
14:LK:177:GLY:O	14:LK:178:PRO:C	2.61	0.44
29:Lb:117:ARG:HG3	29:Lb:118:LEU:N	2.33	0.44
37:Lj:110:ARG:HG3	37:Lj:120:ILE:CD1	2.47	0.44
40:Lm:80:LYS:HE3	40:Lm:109:SER:N	2.33	0.44
45:S1:49:VAL:HB	45:S1:62:LEU:HD21	2.00	0.44
46:SA:15:VAL:HG21	61:SS:111:PHE:CD2	2.53	0.44
47:SC:187:ARG:HB3	47:SC:187:ARG:NH1	2.33	0.44
49:SE:76:VAL:O	49:SE:77:ARG:HD3	2.18	0.44
54:SK:122:VAL:HG12	54:SK:126:ILE:CD1	2.48	0.44
54:SK:175:VAL:HG21	54:SK:184:ILE:CD1	2.48	0.44
56:SM:41:PRO:HG2	56:SM:44:HIS:NE2	2.33	0.44
71:Sc:98:LYS:HD3	71:Sc:110:THR:HG21	2.00	0.44
79:S2:108:G:H1'	85:S2:2488:HOH:O	2.17	0.44
79:S2:691:G:N3	79:S2:691:G:H5"	2.33	0.44
79:S2:896:U:N3	79:S2:897:U:H5	2.16	0.44
79:S2:1446:A:O2'	79:S2:1447:G:H5"	2.17	0.44
79:S2:1471:C:H2'	79:S2:1472:C:H6	1.83	0.44
79:S2:1505:U:O2'	85:S2:2105:HOH:O	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:960:A:H2'	2:L5:970:G:N7	2.32	0.44
2:L5:1449:C:O5'	2:L5:1449:C:H6	2.01	0.44
2:L5:3760:A2M:H2	79:S2:1825:A:H3'	2.00	0.44
2:L5:4872:2MG:HM23	26:LY:203:VAL:H	1.82	0.44
18:LP:39:TYR:CG	18:LP:40:PRO:HA	2.53	0.44
27:LZ:107:LYS:HE2	85:LZ:204:HOH:O	2.18	0.44
45:S1:180:ASP:O	45:S1:184:VAL:HG23	2.17	0.44
46:SA:214:GLU:OE2	61:SS:80:ARG:NH1	2.42	0.44
47:SC:113:GLN:HA	47:SC:121:ARG:O	2.17	0.44
54:SK:106:ARG:HD3	54:SK:173:ARG:HB3	2.00	0.44
57:SN:25:TRP:CG	70:Sb:82:LYS:HE2	2.52	0.44
60:SQ:11:GLN:HG2	60:SQ:24:HIS:CB	2.47	0.44
62:ST:10:GLN:OE1	62:ST:10:GLN:HA	2.18	0.44
64:SV:59:ILE:HG23	64:SV:64:GLU:HB2	2.00	0.44
65:SW:55:ASP:OD1	65:SW:59:GLY:HA2	2.18	0.44
72:Sd:50:VAL:HG22	72:Sd:51:ARG:H	1.83	0.44
77:Sy:81:ASP:CB	77:Sy:84:LYS:HB2	2.48	0.44
79:S2:27:A2M:H5'	79:S2:484:A2M:HM'3	2.00	0.44
79:S2:212:C:H2'	79:S2:213:G:C8	2.53	0.44
79:S2:805:U:C2'	79:S2:806:U:H5'	2.48	0.44
79:S2:902:G:O2'	79:S2:903:A:O4'	2.35	0.44
79:S2:1850:MA6:H92	79:S2:1851:MA6:H93	1.98	0.44
2:L5:735:G:H2'	2:L5:736:C:C6	2.53	0.43
2:L5:741:C:C4	2:L5:742:G:N7	2.86	0.43
2:L5:1263:A:H2'	2:L5:1264:C:H6	1.83	0.43
2:L5:1295:C:H1'	2:L5:1296:G:N7	2.33	0.43
2:L5:2634:C:H2'	2:L5:2635:U:H6	1.83	0.43
2:L5:4723:A:N3	5:LB:101:THR:HG21	2.33	0.43
4:L9:58:A:H2'	4:L9:59:G:C8	2.52	0.43
6:LC:326:LEU:CD2	6:LC:333:LYS:HB2	2.49	0.43
13:LJ:151:ILE:HD11	13:LJ:156:ARG:HG2	2.00	0.43
49:SE:70:ILE:HD13	49:SE:92:ILE:HG12	2.00	0.43
49:SE:246:LEU:HD22	49:SE:250:GLU:OE1	2.18	0.43
60:SQ:58:LEU:HD21	60:SQ:112:LEU:HD21	1.98	0.43
63:SU:33:TRP:CE3	63:SU:37:VAL:HG21	2.53	0.43
77:Sy:51:VAL:CG1	77:Sy:85:LEU:HD21	2.44	0.43
79:S2:81:U:H2'	79:S2:82:G:O5'	2.18	0.43
79:S2:1018:U:H2'	79:S2:1019:C:C6	2.53	0.43
2:L5:677:G:H2'	2:L5:678:C:C6	2.53	0.43
2:L5:684:G:H5"	14:LK:100:LYS:HE2	2.00	0.43
2:L5:924:C:C2	2:L5:925:C:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:1177:U:C3'	2:L5:1180:C:H41	2.29	0.43
2:L5:1410:U:H5"	2:L5:1411:C:OP1	2.18	0.43
2:L5:1438:U:H3'	2:L5:1440:U:OP2	2.17	0.43
2:L5:2904:U:O5'	2:L5:2904:U:H6	2.01	0.43
5:LB:294:LYS:HB3	5:LB:299:ILE:CD1	2.46	0.43
13:LJ:34:THR:O	13:LJ:38:LYS:HG3	2.18	0.43
19:LQ:17:ASP:CG	19:LQ:20:ARG:HD3	2.43	0.43
30:Lc:21:VAL:HG11	30:Lc:96:ILE:HD13	2.00	0.43
38:Lk:12:LEU:O	38:Lk:16:ARG:HG3	2.18	0.43
46:SA:30:LEU:HD21	46:SA:35:GLU:CB	2.47	0.43
49:SE:79:ASP:HB3	49:SE:82:TYR:HB2	2.01	0.43
49:SE:104:ASP:HB3	49:SE:110:ALA:HB2	2.00	0.43
50:SG:57:ASP:OD1	50:SG:61:PHE:N	2.50	0.43
50:SG:209:TYR:CZ	50:SG:213:LEU:HD22	2.52	0.43
58:SO:38:ASN:C	58:SO:69:SER:HB3	2.43	0.43
64:SV:2:GLN:HA	64:SV:7:GLU:O	2.17	0.43
65:SW:53:ILE:HD11	65:SW:62:VAL:HG23	2.00	0.43
67:SY:110:ARG:HH12	67:SY:125:VAL:C	2.25	0.43
68:SZ:55:ARG:HA	68:SZ:87:ARG:HD3	2.00	0.43
74:Sf:21:CYS:SG	74:Sf:38:MET:HA	2.58	0.43
75:Sg:111:VAL:HA	75:Sg:121:VAL:O	2.18	0.43
77:Sy:79:VAL:CG2	77:Sy:85:LEU:HD22	2.48	0.43
79:S2:71:G:C4	79:S2:72:C:C1'	3.01	0.43
79:S2:191:A:C6	79:S2:209:A:C8	3.07	0.43
79:S2:322:C:HO2'	79:S2:324:C:N4	2.16	0.43
79:S2:984:C:O2'	79:S2:985:G:H5'	2.18	0.43
79:S2:1544:C:H2'	85:S2:3058:HOH:O	2.18	0.43
1:L1:8:U:H2'	1:L1:9:A:H8	1.82	0.43
1:L1:87:G:P	17:LO:7:ARG:HH22	2.41	0.43
1:L1:115:G:H2'	1:L1:116:C:C6	2.53	0.43
2:L5:197:A:O2'	2:L5:198:A:H5'	2.18	0.43
2:L5:478:G:H2'	2:L5:479:G:C8	2.53	0.43
2:L5:487:G:C2	2:L5:488:G:H1'	2.53	0.43
2:L5:1245:C:O2	2:L5:1245:C:H2'	2.16	0.43
2:L5:1271:G:H8	9:LF:30:ILE:CD1	2.31	0.43
2:L5:1672:U:H2'	2:L5:1673:U:H6	1.82	0.43
2:L5:1921:C:O2'	21:LS:160:ARG:NH1	2.42	0.43
2:L5:1957:U:O2'	2:L5:1958:A:H5'	2.18	0.43
2:L5:2362:U:H2'	2:L5:2363:A2M:H8	2.00	0.43
2:L5:3760:A2M:HM'3	2:L5:3760:A2M:H1'	1.74	0.43
2:L5:4740:G:H2'	2:L5:4740:G:N3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:4881:U:C5'	2:L5:4882:U:OP1	2.65	0.43
14:LK:41:LYS:HD2	14:LK:42:PRO:C	2.44	0.43
27:LZ:14:LEU:HD13	34:Lg:92:LYS:HE3	1.99	0.43
36:Li:41:ARG:HD2	85:Li:201:HOH:O	2.19	0.43
46:SA:198:MET:HG3	46:SA:199:PRO:HD2	1.99	0.43
48:SD:184:SER:O	48:SD:190:ILE:HG21	2.18	0.43
49:SE:158:ASP:OD1	49:SE:175:PHE:N	2.51	0.43
51:SH:111:LYS:HA	79:S2:798:G:P	2.58	0.43
58:SO:113:GLN:HG3	69:Sa:46:GLU:CG	2.49	0.43
60:SQ:115:TYR:CD2	60:SQ:116:ASP:HB2	2.53	0.43
63:SU:113:VAL:CG1	63:SU:121:ARG:HB3	2.48	0.43
66:SX:95:GLU:O	66:SX:98:ASP:HB2	2.18	0.43
66:SX:115:ILE:CG2	66:SX:118:VAL:CG1	2.96	0.43
68:SZ:22:ILE:HG22	68:SZ:24:LEU:HD12	1.99	0.43
71:Sc:43:LYS:HZ2	79:S2:1600:G:C5'	2.22	0.43
79:S2:120:U:H2'	79:S2:121:OMU:C6	2.48	0.43
79:S2:563:G:O2'	79:S2:564:A:H5"	2.18	0.43
79:S2:1405:A:H2'	79:S2:1406:G:O5'	2.17	0.43
1:L1:86:U:H4'	1:L1:87:G:OP2	2.19	0.43
2:L5:655:C:H2'	2:L5:656:C:C6	2.53	0.43
2:L5:1078:A:H2'	2:L5:1079:C:H5'	2.00	0.43
2:L5:1084:C:H2'	2:L5:1085:C:H6	1.83	0.43
2:L5:3596:A:OP1	2:L5:3596:A:H3'	2.17	0.43
2:L5:4213:A:H5"	2:L5:4214:A:H5'	2.01	0.43
2:L5:4254:G:H2'	2:L5:4256:A:C2	2.53	0.43
3:L8:23:ARG:O	3:L8:23:ARG:HD2	2.18	0.43
7:LD:242:ARG:NH1	7:LD:246:LEU:HD23	2.34	0.43
11:LH:82:LYS:HD2	11:LH:88:PHE:CE1	2.54	0.43
12:LI:47:ARG:O	12:LI:48:ARG:HB2	2.18	0.43
16:LN:15:GLN:HB2	85:LN:447:HOH:O	2.18	0.43
19:LQ:162:LYS:C	19:LQ:162:LYS:HD3	2.43	0.43
23:LU:12:PHE:CE1	23:LU:51:LEU:HD11	2.54	0.43
24:LV:41:SER:OG	24:LV:62:MET:HB2	2.19	0.43
24:LV:87:SER:HA	24:LV:96:LEU:O	2.18	0.43
27:LZ:23:ALA:HA	27:LZ:45:GLY:HA2	1.99	0.43
44:Lz:30:LYS:HG2	44:Lz:63:GLU:HA	2.00	0.43
44:Lz:48:LEU:O	44:Lz:139:ARG:HA	2.17	0.43
49:SE:118:GLU:O	49:SE:118:GLU:HG2	2.17	0.43
51:SH:95:ILE:HD12	51:SH:180:LEU:HD11	1.99	0.43
51:SH:117:PRO:HG2	51:SH:120:ARG:HD3	2.00	0.43
56:SM:17:LYS:HA	56:SM:17:LYS:HD3	1.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SO:132:VAL:HG23	58:SO:132:VAL:O	2.18	0.43
60:SQ:130:LYS:HG2	79:S2:1669:G:OP2	2.19	0.43
62:ST:67:VAL:O	62:ST:71:MET:HG3	2.18	0.43
77:Sy:75:ASN:OD1	77:Sy:76:LEU:N	2.52	0.43
79:S2:484:A2M:HM'3	79:S2:484:A2M:H1'	1.45	0.43
79:S2:563:G:N3	79:S2:564:A:C8	2.86	0.43
79:S2:639:C:H2'	79:S2:640:A:H8	1.83	0.43
79:S2:814:PSU:O4	79:S2:814:PSU:H2'	2.18	0.43
79:S2:1032:C:H2'	79:S2:1033:G:O4'	2.18	0.43
79:S2:1203:G:N3	79:S2:1699:A:H2	2.16	0.43
79:S2:1391:OMC:H2'	79:S2:1392:U:O4'	2.18	0.43
79:S2:1553:C:H2'	79:S2:1554:C:C1'	2.48	0.43
1:L1:78:G:H1'	17:LO:45:SER:OG	2.19	0.43
2:L5:89:C:C2'	2:L5:90:G:H5'	2.49	0.43
2:L5:665:C:H5'	2:L5:666:G:OP1	2.17	0.43
2:L5:2095:A:H4'	2:L5:2096:G:O5'	2.17	0.43
2:L5:4067:U:O2'	2:L5:4068:U:H5'	2.18	0.43
2:L5:4774:C:O2'	2:L5:4775:C:H6	2.02	0.43
6:LC:135:ALA:HB3	39:Ll:6:GLN:OE1	2.18	0.43
12:LI:35:TRP:HH2	12:LI:55:MET:HG2	1.83	0.43
25:LW:94:ARG:CG	50:SG:146:ASN:HB2	2.48	0.43
40:Lm:21:PHE:CD1	40:Lm:108:GLU:HA	2.50	0.43
40:Lm:22:THR:CB	40:Lm:69:LYS:HE3	2.47	0.43
46:SA:26:GLY:O	46:SA:46:ILE:HG23	2.18	0.43
50:SG:79:LYS:HE3	50:SG:89:THR:HA	2.00	0.43
56:SM:49:MET:CE	56:SM:58:VAL:HG21	2.48	0.43
63:SU:60:THR:HG23	63:SU:75:MET:HE3	2.01	0.43
72:Sd:51:ARG:N	72:Sd:54:ASP:OD2	2.47	0.43
72:Sd:51:ARG:HG2	72:Sd:54:ASP:OD2	2.18	0.43
79:S2:116:OMU:O5'	79:S2:116:OMU:H6	2.18	0.43
79:S2:203:G:O2'	79:S2:204:G:O5'	2.35	0.43
79:S2:815:PSU:C4	79:S2:816:A:C8	3.07	0.43
79:S2:886:A:H8	79:S2:886:A:O5'	2.01	0.43
79:S2:918:PSU:O2'	79:S2:919:A:H5'	2.19	0.43
79:S2:1265:A:H2	79:S2:1266:C:C6	2.37	0.43
79:S2:1282:A:H2'	79:S2:1283:C:O4'	2.18	0.43
79:S2:1444:U:H2'	79:S2:1445:PSU:H6	1.81	0.43
79:S2:1678:A2M:H1'	79:S2:1678:A2M:HM'3	1.44	0.43
1:L1:19:C:H2'	1:L1:20:A:H8	1.83	0.43
2:L5:123:C:H2'	2:L5:124:C:H6	1.83	0.43
2:L5:233:U:O2'	2:L5:234:G:C8	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:734:G:C2	2:L5:735:G:C8	3.07	0.43
2:L5:754:U:H2'	2:L5:755:C:C6	2.54	0.43
2:L5:970:G:H2'	2:L5:971:U:H5'	2.01	0.43
2:L5:983:C:H2'	2:L5:984:C:C6	2.53	0.43
2:L5:1078:A:C6	2:L5:1079:C:C5	3.06	0.43
2:L5:1097:C:H2'	2:L5:1098:G:O4'	2.18	0.43
2:L5:1214:C:O2	29:Lb:91:ARG:HD3	2.18	0.43
2:L5:1395:U:O2	2:L5:1469:C:H4'	2.18	0.43
2:L5:1433:A:H2'	2:L5:1434:G:H5'	2.01	0.43
2:L5:3621:A:H3'	2:L5:3622:C:C6	2.53	0.43
2:L5:4492:U:H1'	85:L5:6914:HOH:O	2.19	0.43
6:LC:301:ALA:HB1	37:Lj:132:LYS:HD3	2.00	0.43
19:LQ:169:ILE:HG22	19:LQ:174:LYS:HG3	1.99	0.43
22:LT:84:ILE:HG22	29:Lb:24:PRO:HD3	2.00	0.43
23:LU:9:ILE:O	23:LU:13:LEU:HG	2.18	0.43
24:LV:33:GLY:HA3	24:LV:69:LYS:HZ2	1.84	0.43
34:Lg:110:GLN:HA	34:Lg:110:GLN:OE1	2.19	0.43
36:Li:84:LYS:O	36:Li:88:GLU:HG3	2.18	0.43
45:S1:133:TYR:CG	45:S1:181:LEU:HD22	2.54	0.43
51:SH:10:LYS:CE	51:SH:20:GLU:HB3	2.43	0.43
58:SO:93:LEU:HG	58:SO:124:MET:CE	2.49	0.43
59:SP:53:GLN:HG3	59:SP:83:MET:SD	2.59	0.43
60:SQ:52:LEU:HD12	60:SQ:56:LEU:HG	2.00	0.43
62:ST:44:VAL:HG13	62:ST:70:ILE:CG2	2.48	0.43
65:SW:85:ASP:HA	65:SW:88:LYS:HZ3	1.82	0.43
66:SX:119:ARG:HD2	84:SX:201:A1BNL:C30	2.48	0.43
67:SY:37:LYS:HE2	79:S2:572:PSU:OP2	2.18	0.43
75:Sg:245:ARG:HB3	75:Sg:247:TRP:CE2	2.53	0.43
77:Sy:42:LEU:HD13	77:Sy:68:LEU:CB	2.46	0.43
79:S2:1679:A:H2	85:S2:2274:HOH:O	2.01	0.43
2:L5:677:G:H2'	2:L5:678:C:H6	1.84	0.43
2:L5:925:C:H5"	2:L5:925:C:H6	1.83	0.43
2:L5:4530:UR3:H2'	2:L5:4531:U:H2'	2.00	0.43
2:L5:4644:G:O2'	2:L5:4645:C:H5'	2.19	0.43
5:LB:144:LYS:O	5:LB:148:LYS:HG3	2.19	0.43
28:La:87:ARG:CG	28:La:120:GLN:NE2	2.82	0.43
40:Lm:102:VAL:HG22	40:Lm:112:LEU:HD11	2.01	0.43
41:Ln:73:HIS:CD2	41:Ln:115:LYS:HG2	2.54	0.43
46:SA:32:PHE:CE1	46:SA:33:GLN:HG3	2.53	0.43
46:SA:149:ASN:HD22	46:SA:166:LYS:HG2	1.83	0.43
48:SD:77:MET:HG2	48:SD:89:THR:HG21	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SK:7:LYS:O	54:SK:11:PHE:HD1	2.01	0.43
54:SK:8:LYS:HG2	68:SZ:61:LEU:HD11	1.99	0.43
61:SS:45:LYS:HZ2	61:SS:45:LYS:HG2	1.57	0.43
62:ST:34:LYS:O	62:ST:103:LEU:HD12	2.18	0.43
63:SU:87:VAL:HG22	79:S2:1607:A:OP1	2.18	0.43
66:SX:128:VAL:HG12	66:SX:133:LEU:HG	2.00	0.43
79:S2:557:U:O2'	79:S2:558:G:H5'	2.18	0.43
79:S2:899:U:O5'	79:S2:900:C:H5"	2.19	0.43
2:L5:654:C:H2'	2:L5:655:C:H6	1.84	0.43
2:L5:668:C:H3'	2:L5:669:C:H5"	2.01	0.43
2:L5:957:G:OP1	12:LI:65:LYS:HE3	2.18	0.43
2:L5:1257:A:H2'	2:L5:1258:G:O4'	2.18	0.43
2:L5:2292:C:H2'	2:L5:2293:U:C6	2.54	0.43
5:LB:378:ARG:HG2	25:LW:32:LEU:HD21	2.00	0.43
12:LI:8:VAL:HG23	12:LI:10:PRO:HD3	2.00	0.43
14:LK:145:THR:O	14:LK:164:PHE:HD2	2.02	0.43
17:LO:46:LYS:O	17:LO:50:VAL:HG23	2.18	0.43
21:LS:81:TRP:CZ3	21:LS:130:GLU:HG2	2.53	0.43
26:LY:191:LYS:HD2	26:LY:192:TYR:CZ	2.54	0.43
46:SA:148:CYS:SG	46:SA:160:ALA:HB1	2.57	0.43
50:SG:56:ASN:ND2	50:SG:60:GLY:O	2.51	0.43
51:SH:181:THR:HG21	51:SH:183:LYS:HD2	2.01	0.43
59:SP:64:LYS:HD3	59:SP:92:SER:HB3	2.01	0.43
60:SQ:96:TYR:CA	60:SQ:100:VAL:HB	2.49	0.43
61:SS:98:VAL:O	61:SS:119:VAL:HA	2.19	0.43
64:SV:19:ALA:HB2	64:SV:68:SER:HB3	2.00	0.43
65:SW:86:LEU:O	65:SW:90:GLN:HG3	2.18	0.43
71:Sc:48:VAL:O	71:Sc:49:LEU:HD23	2.19	0.43
71:Sc:98:LYS:HB3	71:Sc:110:THR:HG23	2.01	0.43
75:Sg:242:SER:HA	75:Sg:291:TRP:NE1	2.33	0.43
75:Sg:285:GLN:O	75:Sg:303:THR:N	2.48	0.43
77:Sy:40:LYS:HE2	77:Sy:40:LYS:HB2	1.91	0.43
79:S2:395:G:H4'	85:S2:2952:HOH:O	2.18	0.43
79:S2:875:A:O2'	79:S2:876:C:H5'	2.18	0.43
79:S2:1260:A:C2	79:S2:1620:A:C4	3.06	0.43
79:S2:1589:A:H2'	79:S2:1590:C:H6	1.82	0.43
79:S2:1724:A:H2'	79:S2:1725:U:H6	1.84	0.43
1:L1:26:C:H2'	1:L1:27:U:C6	2.54	0.43
1:L1:92:U:H2'	1:L1:93:C:O4'	2.19	0.43
2:L5:735:G:H2'	2:L5:736:C:H6	1.84	0.43
2:L5:753:C:O2	2:L5:753:C:H2'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:2095:A:O4'	2:L5:2096:G:C2	2.71	0.43
2:L5:2719:C:C2'	2:L5:2720:C:H5'	2.49	0.43
2:L5:4684:A:C2'	2:L5:4685:U:H5'	2.48	0.43
3:L8:68:ARG:HD3	3:L8:68:ARG:HA	1.84	0.43
6:LC:101:MET:HG2	85:LC:683:HOH:O	2.19	0.43
6:LC:210:ILE:HG21	6:LC:252:TRP:CZ3	2.53	0.43
6:LC:266:THR:C	6:LC:268:ARG:H	2.26	0.43
7:LD:146:THR:OG1	7:LD:160:SER:OG	2.33	0.43
11:LH:14:GLU:H	11:LH:14:GLU:CD	2.26	0.43
14:LK:213:THR:H	14:LK:216:TYR:HB3	1.84	0.43
20:LR:95:TRP:CH2	20:LR:99:MET:HE3	2.54	0.43
20:LR:141:HIS:O	20:LR:145:LEU:HD13	2.17	0.43
24:LV:72:LEU:HD21	24:LV:113:LYS:HE2	2.01	0.43
50:SG:118:GLU:HG2	50:SG:119:LYS:N	2.34	0.43
51:SH:15:LYS:HD3	51:SH:15:LYS:C	2.44	0.43
51:SH:83:LEU:O	51:SH:87:PHE:HD2	2.02	0.43
53:SJ:32:ILE:HD11	53:SJ:40:LYS:HD3	2.01	0.43
54:SK:176:LEU:HD23	54:SK:181:VAL:HG22	1.97	0.43
57:SN:42:LYS:HE3	57:SN:80:LEU:HD21	2.01	0.43
60:SQ:8:GLN:OE1	60:SQ:27:ARG:HD3	2.18	0.43
62:ST:63:GLU:O	62:ST:67:VAL:HG23	2.19	0.43
68:SZ:35:VAL:O	68:SZ:39:LEU:HD13	2.19	0.43
75:Sg:181:ASN:HB2	75:Sg:183:LYS:HG3	2.01	0.43
75:Sg:270:LEU:HD12	75:Sg:270:LEU:N	2.33	0.43
79:S2:6:G:H4'	79:S2:601:OMG:HM21	1.99	0.43
79:S2:319:C:OP1	79:S2:319:C:C4'	2.64	0.43
79:S2:812:A:H2'	79:S2:813:A:O4'	2.19	0.43
79:S2:853:C:C2	79:S2:854:A:C8	3.07	0.43
79:S2:898:U:H2'	79:S2:899:U:C5	2.50	0.43
79:S2:1313:A:H5'	79:S2:1314:U:C6	2.53	0.43
79:S2:1639:7MG:H2'	79:S2:1640:A:C8	2.54	0.43
1:L1:71:A:C2	1:L1:88:A:H1'	2.54	0.43
2:L5:1069:G:P	14:LK:65:ARG:NH2	2.92	0.43
2:L5:1172:C:H3'	2:L5:1173:G:C8	2.54	0.43
2:L5:1257:A:H3'	2:L5:1258:G:C8	2.54	0.43
2:L5:1717:C:C2'	2:L5:1718:C:O5'	2.66	0.43
2:L5:2273:G:H2'	2:L5:2274:C:C6	2.53	0.43
2:L5:3648:A:H1'	2:L5:3785:A2M:N6	2.33	0.43
2:L5:4093:G:H2'	2:L5:4094:G:O4'	2.19	0.43
2:L5:4201:G:O2'	2:L5:4202:U:H5'	2.18	0.43
2:L5:4391:G:O2'	2:L5:4392:OMG:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:LB:321:VAL:O	5:LB:322:HIS:HB2	2.18	0.43
15:LM:53:LYS:HB3	15:LM:53:LYS:HE3	1.87	0.43
19:LQ:156:PRO:HB2	19:LQ:158:ARG:NH1	2.34	0.43
28:La:14:HIS:O	28:La:16:SER:N	2.52	0.43
37:Lj:24:TYR:OH	39:Ll:5:LEU:HD11	2.19	0.43
40:Lm:36:ALA:CB	40:Lm:65:ARG:HH11	2.25	0.43
46:SA:86:ALA:HB2	46:SA:202:TYR:O	2.19	0.43
49:SE:200:ARG:HG2	49:SE:206:ASP:OD2	2.19	0.43
49:SE:248:ILE:HG13	53:SJ:72:PHE:CD1	2.54	0.43
53:SJ:119:LEU:HD12	53:SJ:159:PHE:CZ	2.53	0.43
54:SK:33:GLY:CA	54:SK:53:THR:HG22	2.30	0.43
63:SU:108:GLU:OE1	63:SU:121:ARG:NE	2.46	0.43
63:SU:114:GLU:HB3	63:SU:124:THR:CG2	2.49	0.43
64:SV:19:ALA:CB	64:SV:68:SER:HB3	2.48	0.43
78:Sz:102:VAL:CG1	78:Sz:104:LYS:HG2	2.26	0.43
79:S2:325:C:H2'	79:S2:326:C:C5'	2.46	0.43
79:S2:472:C:OP1	79:S2:472:C:H6	2.02	0.43
79:S2:1335:G:H2'	79:S2:1336:C:O4'	2.19	0.43
2:L5:196:C:H4'	8:LE:126:ARG:HG3	2.00	0.42
2:L5:483:G:N2	2:L5:487:G:O6	2.44	0.42
2:L5:652:G:H2'	2:L5:653:U:H6	1.83	0.42
2:L5:1077:C:C3'	2:L5:1078:A:H5"	2.48	0.42
2:L5:1190:C:H2'	2:L5:1191:C:O4'	2.19	0.42
2:L5:2257:C:O5'	2:L5:2257:C:H6	2.02	0.42
2:L5:2901:G:C2	2:L5:2902:G:H1'	2.54	0.42
2:L5:4342:C:O3'	32:Le:37:GLY:HA3	2.18	0.42
5:LB:208:ASN:C	5:LB:208:ASN:OD1	2.62	0.42
13:LJ:95:ARG:HA	13:LJ:175:LEU:O	2.19	0.42
26:LY:16:LEU:HD12	26:LY:80:PHE:HD1	1.84	0.42
27:LZ:57:MET:HE1	27:LZ:65:ARG:CD	2.49	0.42
27:LZ:72:VAL:HG13	27:LZ:107:LYS:HE3	2.01	0.42
41:Ln:57:GLN:OE1	41:Ln:57:GLN:HA	2.18	0.42
48:SD:60:ARG:NH2	79:S2:1679:A:OP1	2.46	0.42
51:SH:9:VAL:O	51:SH:9:VAL:CG1	2.67	0.42
53:SJ:6:SER:OG	79:S2:828:G:OP1	2.23	0.42
63:SU:28:LEU:HA	85:SU:301:HOH:O	2.19	0.42
75:Sg:45:LEU:HD22	75:Sg:52:TYR:CD1	2.54	0.42
75:Sg:112:ALA:HB3	75:Sg:121:VAL:HG12	2.00	0.42
75:Sg:218:LEU:HD22	75:Sg:228:TYR:CZ	2.54	0.42
78:Sz:102:VAL:HG22	78:Sz:103:LEU:HD23	2.01	0.42
79:S2:917:U:H2'	79:S2:918:PSU:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1052:A:H2'	79:S2:1053:C:O4'	2.19	0.42
79:S2:1448:A:H2'	79:S2:1449:G:C5'	2.49	0.42
1:L1:47:C:H1'	1:L1:61:A:H2'	2.01	0.42
2:L5:1242:G:H1'	29:Lb:120:ARG:NH2	2.34	0.42
2:L5:1655:C:OP1	2:L5:1680:G:H5'	2.19	0.42
2:L5:1821:G:H21	2:L5:1822:U:C4'	2.32	0.42
2:L5:2621:A:H2'	2:L5:2622:G:C8	2.54	0.42
2:L5:4564:A:H2'	2:L5:4565:C:C6	2.54	0.42
2:L5:4731:G:H5"	2:L5:4732:G:C4'	2.49	0.42
2:L5:4859:C:H5'	2:L5:4860:G:OP2	2.19	0.42
4:L9:66:G:H2'	4:L9:67:C:C6	2.54	0.42
6:LC:94:ASN:HA	6:LC:100:ARG:O	2.18	0.42
11:LH:95:VAL:O	11:LH:177:ASP:HA	2.19	0.42
14:LK:166:LYS:HD3	14:LK:208:ILE:HG21	2.01	0.42
26:LY:89:PRO:O	26:LY:95:GLY:HA3	2.19	0.42
32:Le:12:CYS:HB3	32:Le:15:CYS:HB2	2.01	0.42
45:S1:48:LEU:HD21	58:SO:51:GLU:CB	2.49	0.42
50:SG:1:MET:HG2	50:SG:2:LYS:N	2.34	0.42
54:SK:28:GLU:HA	56:SM:61:GLN:NE2	2.34	0.42
54:SK:105:LEU:HD23	54:SK:184:ILE:HG23	2.01	0.42
56:SM:31:LYS:HE2	56:SM:39:ASN:HA	2.01	0.42
66:SX:131:LEU:HG	85:SX:308:HOH:O	2.17	0.42
68:SZ:24:LEU:HA	68:SZ:111:GLU:O	2.18	0.42
71:Sc:32:LYS:HG2	71:Sc:33:LYS:N	2.34	0.42
72:Sd:57:THR:O	72:Sd:57:THR:HG22	2.20	0.42
77:Sy:54:SER:HB2	77:Sy:78:LYS:CD	2.42	0.42
79:S2:158:A:H2'	79:S2:159:A2M:C8	2.47	0.42
79:S2:307:G:H4'	79:S2:308:G:OP2	2.16	0.42
79:S2:311:C:OP2	79:S2:311:C:H6	2.02	0.42
79:S2:555:A:H2'	79:S2:555:A:N3	2.34	0.42
79:S2:562:U:O2'	79:S2:563:G:H5'	2.19	0.42
79:S2:929:G:N2	79:S2:1104:G:H4'	2.35	0.42
79:S2:1119:A:H8	79:S2:1119:A:OP2	2.02	0.42
79:S2:1509:U:H1'	85:S2:2600:HOH:O	2.18	0.42
79:S2:1568:C:H2'	79:S2:1569:A:C8	2.54	0.42
2:L5:162:A:H2'	2:L5:163:A:H8	1.84	0.42
2:L5:982:U:H2'	2:L5:983:C:C1'	2.49	0.42
2:L5:1567:U:H2'	2:L5:1568:C:C6	2.54	0.42
2:L5:2631:U:H1'	40:Lm:82:TYR:CE1	2.54	0.42
2:L5:2649:G:O2'	2:L5:2650:G:H5'	2.19	0.42
2:L5:3690:U:O2'	2:L5:3691:G:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:3717:A:OP2	2:L5:3735:G:N2	2.40	0.42
2:L5:3723:A:H2'	2:L5:3724:A:H8	1.84	0.42
2:L5:4210:U:O2'	2:L5:4211:C:H5'	2.20	0.42
2:L5:4712:C:O2'	2:L5:4713:G:H5'	2.20	0.42
3:L8:32:ALA:O	3:L8:36:LEU:HB2	2.19	0.42
7:LD:137:ILE:CD1	7:LD:155:LYS:HD2	2.49	0.42
13:LJ:128:LEU:CD1	13:LJ:130:PHE:HE1	2.32	0.42
14:LK:287:VAL:O	14:LK:287:VAL:HG12	2.18	0.42
17:LO:15:GLU:OE1	17:LO:15:GLU:HA	2.18	0.42
19:LQ:114:VAL:O	19:LQ:118:LYS:HG2	2.19	0.42
21:LS:93:MET:HE1	21:LS:117:HIS:NE2	2.33	0.42
30:Lc:34:THR:HG23	30:Lc:95:ALA:HB2	2.01	0.42
45:S1:97:LEU:HD22	45:S1:232:HIS:ND1	2.33	0.42
50:SG:20:ASP:HB2	50:SG:23:LYS:HD2	2.02	0.42
55:SL:93:LEU:HB3	55:SL:102:PHE:HB3	2.02	0.42
57:SN:76:LYS:HG3	57:SN:81:ALA:HB2	2.02	0.42
63:SU:64:LEU:CB	63:SU:123:LEU:HG	2.49	0.42
63:SU:101:ARG:HH11	63:SU:101:ARG:HB2	1.84	0.42
68:SZ:38:ASP:HA	68:SZ:41:ARG:NE	2.34	0.42
68:SZ:68:THR:HB	79:S2:1337:4AC:O2'	2.20	0.42
70:Sb:37:CYS:HA	70:Sb:77:CYS:SG	2.59	0.42
73:Se:103:THR:OG1	79:S2:524:U:H2'	2.18	0.42
75:Sg:34:ALA:HB2	75:Sg:69:VAL:HB	2.01	0.42
75:Sg:127:LYS:HG2	75:Sg:149:GLU:C	2.44	0.42
75:Sg:130:LYS:NZ	75:Sg:141:THR:OG1	2.52	0.42
75:Sg:144:ASP:C	75:Sg:146:SER:H	2.28	0.42
79:S2:5:U:H2'	79:S2:6:G:H8	1.84	0.42
79:S2:153:G:O2'	79:S2:154:U:H5'	2.20	0.42
79:S2:208:G:H8	79:S2:208:G:OP2	2.02	0.42
79:S2:1242:U:O2'	79:S2:1518:C:H4'	2.19	0.42
79:S2:1294:G:H2'	79:S2:1294:G:N3	2.34	0.42
79:S2:1428:G:N1	79:S2:1585:U:O4'	2.52	0.42
79:S2:1785:C:O5'	79:S2:1785:C:H6	2.02	0.42
2:L5:79:C:H2'	2:L5:80:C:H6	1.84	0.42
2:L5:143:C:H5"	2:L5:144:G:O5'	2.19	0.42
2:L5:173:C:H2'	2:L5:174:C:C6	2.54	0.42
2:L5:1921:C:O4'	21:LS:161:ARG:HD3	2.20	0.42
2:L5:2473:A:OP1	41:Ln:47:ARG:CD	2.68	0.42
2:L5:3690:U:C2'	2:L5:3691:G:H5'	2.49	0.42
2:L5:5008:C:H2'	2:L5:5009:G:O4'	2.20	0.42
5:LB:220:ILE:HG12	5:LB:278:THR:HG23	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LK:41:LYS:HD2	14:LK:42:PRO:O	2.19	0.42
14:LK:245:GLN:HG3	14:LK:246:ARG:N	2.34	0.42
45:S1:134:LEU:HG	45:S1:218:LEU:HD12	2.00	0.42
46:SA:62:ALA:CB	46:SA:181:GLU:HG3	2.49	0.42
47:SC:204:ILE:HD13	47:SC:214:LEU:HB3	2.01	0.42
48:SD:39:ILE:CD1	48:SD:116:ILE:HG21	2.50	0.42
49:SE:86:PHE:O	49:SE:87:MET:HB2	2.20	0.42
50:SG:53:SER:OG	79:S2:165:G:H4'	2.18	0.42
50:SG:61:PHE:CD2	50:SG:72:ARG:HD2	2.54	0.42
50:SG:135:PRO:O	50:SG:141:ILE:HD11	2.20	0.42
52:SI:131:PRO:HA	52:SI:134:GLU:CG	2.48	0.42
54:SK:52:ALA:CB	54:SK:58:VAL:HG21	2.48	0.42
60:SQ:52:LEU:HD12	60:SQ:52:LEU:C	2.45	0.42
64:SV:82:ASN:O	64:SV:83:PHE:C	2.62	0.42
75:Sg:140:TYR:CE2	75:Sg:142:VAL:HG23	2.53	0.42
79:S2:4:C:O2	79:S2:4:C:C2'	2.64	0.42
79:S2:469:A:H2'	79:S2:470:G:H5'	2.01	0.42
79:S2:591:U:H2'	85:S2:2920:HOH:O	2.18	0.42
2:L5:65:A:N6	2:L5:75:G:H1'	2.35	0.42
2:L5:1270:A:H1'	2:L5:1440:U:H1'	2.01	0.42
2:L5:1301:C:H2'	12:LI:17:THR:OG1	2.20	0.42
2:L5:1435:G:C3'	2:L5:1436:C:H5'	2.47	0.42
2:L5:1460:C:H2'	2:L5:1461:C:C6	2.54	0.42
2:L5:1485:C:O4'	2:L5:4349:C:N4	2.52	0.42
2:L5:1517:2MG:HM23	85:L5:5998:HOH:O	2.19	0.42
2:L5:1702:C:H5"	6:LC:308:LYS:HD2	2.01	0.42
2:L5:2706:G:N2	2:L5:2710:C:OP2	2.45	0.42
2:L5:3711:A:H1'	79:S2:970:G:O4'	2.19	0.42
2:L5:3909:C:O2	2:L5:4396:A:N1	2.52	0.42
2:L5:4376:A:H5"	2:L5:4377:G:O5'	2.20	0.42
2:L5:4876:U:OP2	21:LS:165:PRO:HG3	2.19	0.42
9:LF:119:ASN:ND2	85:LF:306:HOH:O	2.46	0.42
11:LH:34:LEU:HD12	11:LH:84:VAL:CG1	2.49	0.42
28:La:36:GLY:HA2	28:La:39:V5N:O2	2.19	0.42
30:Lc:11:LEU:HD12	30:Lc:12:GLU:N	2.34	0.42
36:Li:79:THR:HG22	36:Li:80:HIS:N	2.34	0.42
40:Lm:44:GLN:OE1	40:Lm:56:LEU:HD12	2.20	0.42
46:SA:81:ASN:HA	46:SA:84:GLN:HG3	2.02	0.42
47:SC:66:LEU:HD11	47:SC:81:ILE:HG12	2.02	0.42
49:SE:162:ILE:O	49:SE:162:ILE:HG13	2.18	0.42
51:SH:142:LYS:HE3	51:SH:142:LYS:HB2	1.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SK:227:LYS:HE2	75:Sg:187:ASN:HD21	1.81	0.42
59:SP:20:VAL:HG13	59:SP:24:GLN:OE1	2.19	0.42
59:SP:126:VAL:HB	79:S2:1521:C:H5'	2.01	0.42
71:Sc:58:LEU:HD12	71:Sc:62:VAL:CG2	2.48	0.42
72:Sd:9:ILE:HG22	72:Sd:57:THR:HG23	2.01	0.42
79:S2:179:C:H6	79:S2:179:C:O5'	2.02	0.42
79:S2:558:G:O2'	79:S2:559:G:H5'	2.20	0.42
79:S2:1253:A:N6	79:S2:1665:G:O2'	2.53	0.42
79:S2:1275:G:N1	79:S2:1506:A:OP2	2.52	0.42
79:S2:1556:A:N3	79:S2:1556:A:H2'	2.35	0.42
2:L5:15:A:O2'	2:L5:16:G:H5'	2.19	0.42
2:L5:174:C:H2'	2:L5:175:C:H6	1.84	0.42
2:L5:197:A:H5"	8:LE:130:LYS:NZ	2.33	0.42
2:L5:655:C:H2'	2:L5:656:C:H6	1.84	0.42
2:L5:1193:C:O2	2:L5:1193:C:H2'	2.19	0.42
2:L5:1774:C:H2'	2:L5:1775:A:O4'	2.19	0.42
2:L5:2045:G:O6	2:L5:3870:C:O2'	2.37	0.42
85:L5:8061:HOH:O	28:La:27:LYS:HD3	2.19	0.42
4:L9:33:U:H2'	4:L9:34:C:O4'	2.20	0.42
40:Lm:87:THR:O	40:Lm:91:LEU:HG	2.20	0.42
45:S1:9:LEU:HD12	45:S1:9:LEU:N	2.34	0.42
48:SD:123:GLU:HG3	48:SD:139:VAL:O	2.19	0.42
49:SE:63:LYS:O	49:SE:67:GLN:HG3	2.18	0.42
49:SE:151:ASP:C	49:SE:153:LEU:H	2.27	0.42
49:SE:182:MET:HE2	49:SE:192:ILE:HD11	2.00	0.42
51:SH:130:LEU:HD21	51:SH:156:VAL:CG2	2.43	0.42
51:SH:157:HIS:HB3	51:SH:190:PRO:HG3	2.01	0.42
52:SI:25:ARG:HA	79:S2:448:A:C5'	2.50	0.42
52:SI:123:ARG:CD	52:SI:129:LEU:HD11	2.42	0.42
61:SS:41:ILE:HD13	61:SS:50:ILE:HD12	2.01	0.42
64:SV:75:ALA:HB3	85:SV:106:HOH:O	2.19	0.42
68:SZ:67:LYS:HE2	68:SZ:78:ASP:OD1	2.20	0.42
71:Sc:32:LYS:HG2	71:Sc:33:LYS:H	1.85	0.42
76:So:3:ALA:HB3	79:S2:1842:4AC:OP1	2.18	0.42
79:S2:832:G:C2'	79:S2:833:C:H5'	2.49	0.42
79:S2:1398:G:N3	79:S2:1398:G:H2'	2.35	0.42
2:L5:223:G:H4'	2:L5:225:G:C8	2.54	0.42
2:L5:1272:C:H3'	29:Lb:117:ARG:CZ	2.49	0.42
2:L5:3708:C:O2'	2:L5:3709:U:H5'	2.18	0.42
4:L9:57:C:H2'	4:L9:58:A:C8	2.54	0.42
5:LB:96:PRO:HD2	85:LB:566:HOH:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:LS:70:LYS:HA	21:LS:70:LYS:HD2	1.87	0.42
38:Lk:24:LYS:HD3	38:Lk:69:LEU:HD21	2.02	0.42
41:Ln:72:ASP:O	41:Ln:76:ILE:HG13	2.18	0.42
44:Lz:180:GLU:O	44:Lz:184:MET:HG3	2.19	0.42
46:SA:41:ARG:NE	46:SA:45:GLY:HA2	2.34	0.42
47:SC:95:ASP:O	47:SC:99:GLY:HA3	2.19	0.42
51:SH:10:LYS:HA	51:SH:45:ILE:O	2.20	0.42
54:SK:53:THR:HG23	54:SK:54:ARG:N	2.35	0.42
57:SN:47:PRO:HG2	57:SN:86:GLU:OE2	2.19	0.42
61:SS:47:ARG:HD2	61:SS:47:ARG:C	2.45	0.42
66:SX:57:VAL:CG1	66:SX:116:PRO:HD2	2.50	0.42
70:Sb:19:HIS:CD2	70:Sb:21:LYS:H	2.37	0.42
73:Se:82:ARG:HB2	85:Se:204:HOH:O	2.19	0.42
75:Sg:14:HIS:CE1	75:Sg:41:ILE:HG13	2.54	0.42
75:Sg:101:PHE:HB3	75:Sg:132:TRP:CZ3	2.55	0.42
79:S2:72:C:O2	79:S2:72:C:H2'	2.19	0.42
79:S2:185:G:O2'	79:S2:186:C:H5'	2.20	0.42
79:S2:554:A:H4'	79:S2:555:A:OP2	2.18	0.42
79:S2:818:A:O2'	79:S2:819:G:H5'	2.19	0.42
2:L5:238:C:OP2	8:LE:45:ARG:NH2	2.53	0.42
2:L5:284:G:H3'	85:L5:5548:HOH:O	2.18	0.42
2:L5:294:G:H3'	2:L5:294:G:N3	2.35	0.42
2:L5:392:U:H2'	2:L5:393:U:C6	2.55	0.42
2:L5:1257:A:C2'	2:L5:1258:G:O5'	2.68	0.42
2:L5:1280:C:O2'	6:LC:321:ASN:OD1	2.31	0.42
2:L5:1301:C:OP2	2:L5:1302:U:H5	2.03	0.42
2:L5:2461:G:H2'	2:L5:2462:C:C6	2.54	0.42
2:L5:2620:G:H2'	2:L5:2621:A:H8	1.84	0.42
2:L5:3723:A:H2'	2:L5:3724:A:C8	2.55	0.42
2:L5:4582:C:H2'	2:L5:4583:C:O4'	2.19	0.42
2:L5:4727:A:H5'	5:LB:130:PHE:H	1.85	0.42
85:L5:8547:HOH:O	10:LG:62:ARG:HD3	2.19	0.42
10:LG:170:LEU:HB3	10:LG:171:PRO:HD3	2.02	0.42
11:LH:115:ARG:HG2	11:LH:123:ILE:HG12	2.01	0.42
13:LJ:142:ALA:HA	13:LJ:149:GLY:O	2.19	0.42
16:LN:114:ARG:CZ	16:LN:157:LYS:HG2	2.49	0.42
25:LW:82:ILE:CG2	25:LW:83:THR:N	2.82	0.42
27:LZ:8:GLY:O	27:LZ:86:SER:HB2	2.20	0.42
40:Lm:56:LEU:CD2	40:Lm:61:VAL:HB	2.50	0.42
48:SD:55:ARG:HD3	60:SQ:125:ARG:HD3	2.00	0.42
54:SK:63:GLY:CA	54:SK:66:ILE:HG22	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SM:59:LYS:O	56:SM:69:TRP:HA	2.19	0.42
59:SP:60:LEU:HD11	59:SP:89:MET:HE3	2.01	0.42
61:SS:73:LEU:HD12	61:SS:73:LEU:C	2.43	0.42
61:SS:116:ASN:O	61:SS:117:LEU:HD23	2.19	0.42
62:ST:55:ARG:NH1	79:S2:1598:G:OP1	2.50	0.42
66:SX:54:LYS:NZ	66:SX:94:ILE:O	2.45	0.42
75:Sg:18:VAL:O	75:Sg:287:THR:HB	2.19	0.42
76:So:10:MET:SD	79:S2:1172:U:H4'	2.59	0.42
77:Sy:26:LEU:HD13	77:Sy:31:LEU:HD23	2.01	0.42
77:Sy:99:LYS:O	77:Sy:101:ARG:CD	2.68	0.42
79:S2:204:G:H2'	79:S2:205:G:O5'	2.20	0.42
79:S2:438:G:O2'	79:S2:1800:A:H5"	2.19	0.42
79:S2:1282:A:C8	79:S2:1283:C:C5	3.07	0.42
79:S2:1529:C:O2'	79:S2:1530:U:H5'	2.20	0.42
79:S2:1615:U:C2	79:S2:1616:U:C5	3.08	0.42
2:L5:15:A:H2'	2:L5:16:G:O4'	2.19	0.42
2:L5:1395:U:H2'	2:L5:1396:G:H5'	2.01	0.42
2:L5:1416:G:H2'	2:L5:1417:C:O4'	2.19	0.42
2:L5:1758:G:N7	2:L5:1774:C:N3	2.67	0.42
2:L5:2323:C:H2'	2:L5:2324:C:H6	1.84	0.42
2:L5:2362:U:H5"	35:Lh:66:GLY:HA3	2.02	0.42
2:L5:2852:U:O2'	2:L5:2854:G:N7	2.48	0.42
2:L5:3592:G:H2'	2:L5:3593:C:O4'	2.20	0.42
2:L5:4135:G:H2'	2:L5:4136:G:C8	2.55	0.42
2:L5:4233:A:OP2	32:Le:97:LYS:HG3	2.19	0.42
2:L5:4957:C:H2'	2:L5:4958:C:C6	2.54	0.42
4:L9:2:U:H2'	4:L9:3:C:C6	2.55	0.42
4:L9:28:C:H2'	4:L9:29:C:C5'	2.44	0.42
6:LC:298:ILE:O	6:LC:302:LEU:HG	2.19	0.42
16:LN:171:SER:HB3	85:LN:457:HOH:O	2.18	0.42
18:LP:13:ASN:ND2	85:LP:201:HOH:O	2.40	0.42
50:SG:7:PHE:HD1	50:SG:10:THR:H	1.67	0.42
57:SN:140:LYS:HE2	57:SN:140:LYS:HB2	1.79	0.42
59:SP:81:ARG:HB3	59:SP:117:GLY:HA3	2.02	0.42
71:Sc:34:LYS:HG3	71:Sc:36:SER:H	1.84	0.42
79:S2:1271:C:OP1	79:S2:1303:C:H1'	2.19	0.42
79:S2:1355:C:H2'	79:S2:1356:G:O4'	2.19	0.42
79:S2:1439:A:H2'	79:S2:1440:C:O4'	2.20	0.42
79:S2:1626:C:N3	79:S2:1627:C:C5	2.88	0.42
2:L5:451:C:OP2	2:L5:1294:A:N6	2.53	0.42
2:L5:693:C:H2'	2:L5:694:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:907:C:H2'	2:L5:907:C:O2	2.20	0.42
2:L5:983:C:H2'	2:L5:984:C:H6	1.85	0.42
2:L5:1249:C:H2'	2:L5:1250:C:C6	2.55	0.42
2:L5:1250:C:H2'	2:L5:1251:C:O4'	2.20	0.42
2:L5:1408:G:OP2	2:L5:1408:G:H8	2.03	0.42
2:L5:1517:2MG:CM2	85:L5:5998:HOH:O	2.67	0.42
2:L5:1535:C:H2'	2:L5:1536:PSU:O4'	2.20	0.42
2:L5:2620:G:OP2	40:Lm:79:SER:OG	2.31	0.42
2:L5:2823:G:N7	20:LR:20:LYS:HD2	2.35	0.42
2:L5:4300:U:H2'	2:L5:4301:U:C6	2.55	0.42
5:LB:196:TRP:O	5:LB:200:ARG:HG2	2.19	0.42
25:LW:91:MET:HE1	25:LW:94:ARG:NH2	2.34	0.42
26:LY:140:ARG:O	26:LY:144:GLU:HG3	2.19	0.42
33:Lf:5:LEU:O	85:Lf:201:HOH:O	2.22	0.42
41:Ln:130:PRO:HD2	85:Ln:212:HOH:O	2.20	0.42
46:SA:124:VAL:HG21	46:SA:134:LEU:HD21	2.01	0.42
48:SD:94:LYS:O	48:SD:98:GLU:HG2	2.20	0.42
49:SE:7:LYS:HD3	79:S2:498:C:H5"	2.01	0.42
53:SJ:46:VAL:CG1	53:SJ:102:ILE:HG13	2.48	0.42
69:Sa:88:SER:O	69:Sa:92:ARG:HG3	2.20	0.42
75:Sg:87:LEU:HD12	75:Sg:108:VAL:HG21	2.01	0.42
75:Sg:118:ARG:HA	75:Sg:118:ARG:HD2	1.91	0.42
75:Sg:302:TYR:CE1	75:Sg:308:ARG:HD2	2.55	0.42
77:Sy:37:GLU:OE2	79:S2:1312:G:C8	2.73	0.42
79:S2:189:U:H2'	79:S2:190:G:C8	2.55	0.42
79:S2:441:C:H2'	79:S2:442:C:C6	2.55	0.42
79:S2:1368:U:O2'	79:S2:1370:A:N7	2.42	0.42
79:S2:1596:U:C2'	79:S2:1597:C:H5'	2.50	0.42
79:S2:1604:G:H2'	79:S2:1605:G:H5'	2.02	0.42
79:S2:1642:U:H2'	79:S2:1643:PSU:H6	1.85	0.42
79:S2:1809:A:H2'	79:S2:1810:U:C6	2.55	0.42
2:L5:173:C:H2'	2:L5:174:C:H6	1.85	0.41
2:L5:914:U:O4'	2:L5:915:A:C5	2.73	0.41
2:L5:952:G:H2'	2:L5:953:C:H6	1.85	0.41
2:L5:1189:G:H2'	2:L5:1190:C:O5'	2.20	0.41
2:L5:1685:G:O2'	29:Lb:15:LYS:HE2	2.20	0.41
2:L5:3856:A:H5"	35:Lh:83:TRP:O	2.20	0.41
2:L5:4960:G:O2'	2:L5:4961:G:H5'	2.19	0.41
6:LC:137:VAL:HA	6:LC:247:GLY:O	2.19	0.41
10:LG:136:LEU:HD12	10:LG:193:LEU:HD13	2.01	0.41
13:LJ:84:GLU:O	13:LJ:88:LYS:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:LS:82:LEU:C	21:LS:82:LEU:HD12	2.45	0.41
28:La:100:ILE:HG13	28:La:123:ILE:HB	2.00	0.41
35:Lh:30:ARG:C	35:Lh:30:ARG:HD3	2.45	0.41
43:Lp:8:VAL:O	43:Lp:11:VAL:HG22	2.19	0.41
44:Lz:43:VAL:HG13	44:Lz:44:ASP:OD1	2.19	0.41
47:SC:178:HIS:NE2	47:SC:200:ARG:HG2	2.35	0.41
51:SH:63:PHE:HA	51:SH:95:ILE:O	2.20	0.41
51:SH:101:LEU:HD12	51:SH:116:ARG:HG3	2.02	0.41
64:SV:56:CYS:SG	64:SV:59:ILE:HG12	2.60	0.41
67:SY:9:THR:HA	67:SY:24:VAL:O	2.20	0.41
74:Sf:18:SER:HB2	79:S2:1556:A:H61	1.85	0.41
75:Sg:14:HIS:NE2	75:Sg:33:SER:OG	2.50	0.41
75:Sg:59:LEU:HD13	75:Sg:90:TRP:HB3	2.02	0.41
79:S2:35:C:H2'	79:S2:36:PSU:C6	2.55	0.41
79:S2:399:C:H5	79:S2:680:G:H5"	1.85	0.41
79:S2:420:G:O2'	79:S2:660:C:N3	2.49	0.41
2:L5:91:G:OP2	85:L5:5410:HOH:O	2.21	0.41
2:L5:272:U:O2'	2:L5:273:U:H5'	2.20	0.41
2:L5:674:G:H2'	2:L5:675:C:O4'	2.21	0.41
2:L5:739:G:C6	2:L5:926:G:C5	3.07	0.41
2:L5:758:G:N3	2:L5:758:G:H2'	2.36	0.41
2:L5:2352:U:H2'	2:L5:2353:U:C6	2.55	0.41
2:L5:3707:U:H2'	2:L5:3708:C:H6	1.85	0.41
2:L5:4306:OMU:HM22	2:L5:4307:A:C4'	2.50	0.41
2:L5:4401:G:H2'	2:L5:4402:C:C6	2.55	0.41
2:L5:4920:C:O5'	2:L5:4920:C:H6	2.03	0.41
3:L8:195:HIS:O	3:L8:199:ILE:HG12	2.20	0.41
37:Lj:43:PHE:CD2	37:Lj:133:GLY:HA3	2.55	0.41
42:Lo:127:VAL:CG1	42:Lo:128:LYS:HE2	2.50	0.41
44:Lz:48:LEU:HB2	44:Lz:142:LEU:HD23	2.03	0.41
49:SE:3:ARG:NH1	79:S2:449:A:H1'	2.35	0.41
49:SE:131:VAL:O	79:S2:296:U:O2'	2.35	0.41
54:SK:124:ARG:NH1	54:SK:124:ARG:HB3	2.34	0.41
56:SM:57:TYR:HD1	56:SM:74:GLU:C	2.28	0.41
60:SQ:25:CYS:SG	60:SQ:66:VAL:HB	2.61	0.41
68:SZ:44:LYS:HE2	68:SZ:50:VAL:HB	2.00	0.41
75:Sg:11:LEU:HB3	75:Sg:43:TRP:CH2	2.55	0.41
79:S2:355:G:C2'	79:S2:356:C:H5'	2.50	0.41
79:S2:908:A:C2'	79:S2:909:G:H5'	2.50	0.41
79:S2:1047:C:H2'	79:S2:1048:G:O4'	2.19	0.41
79:S2:1469:A:H2'	79:S2:1470:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1495:G:H2'	79:S2:1496:U:C6	2.55	0.41
79:S2:1749:G:H2'	79:S2:1750:C:H6	1.85	0.41
2:L5:1079:C:C2	2:L5:1080:C:C5	3.09	0.41
2:L5:1407:C:H4'	2:L5:1408:G:OP1	2.21	0.41
2:L5:1461:C:H2'	2:L5:1462:A:C8	2.55	0.41
2:L5:1474:C:H2'	2:L5:1475:G:O4'	2.20	0.41
2:L5:1498:G:OP1	37:Lj:150:ARG:NH1	2.43	0.41
2:L5:1513:U:H1'	85:L5:8658:HOH:O	2.21	0.41
2:L5:1697:G:H8	2:L5:1697:G:OP2	2.04	0.41
2:L5:1962:A:C5'	2:L5:2024:G:H22	2.33	0.41
2:L5:2443:G:H2'	2:L5:2444:U:O4'	2.20	0.41
2:L5:2903:G:H3'	2:L5:2903:G:P	2.60	0.41
2:L5:3711:A:O2'	2:L5:3712:A:H8	2.03	0.41
3:L8:93:THR:HG22	3:L8:158:LYS:NZ	2.36	0.41
3:L8:94:ASN:HB2	4:L9:47:G:OP1	2.20	0.41
3:L8:184:ASP:OD2	3:L8:187:SER:HB3	2.19	0.41
9:LF:102:SER:HB2	9:LF:103:PRO:HD2	2.02	0.41
14:LK:150:LEU:O	14:LK:161:ARG:HA	2.21	0.41
29:Lb:36:ASP:OD1	29:Lb:37:PRO:HD2	2.19	0.41
33:Lf:78:HIS:HB2	33:Lf:85:ARG:HG3	2.01	0.41
33:Lf:106:TYR:HA	33:Lf:107:PRO:C	2.45	0.41
36:Li:76:ARG:HA	36:Li:76:ARG:HD3	1.79	0.41
36:Li:90:LEU:HD23	36:Li:90:LEU:HA	1.81	0.41
37:Lj:173:LYS:HB2	37:Lj:173:LYS:HE3	1.84	0.41
45:S1:123:ALA:HB2	45:S1:165:ARG:HG3	2.02	0.41
46:SA:158:ASP:OD2	64:SV:32:ILE:HD13	2.20	0.41
48:SD:40:ALA:HB1	48:SD:45:TYR:CG	2.55	0.41
49:SE:64:ILE:HG23	67:SY:17:LEU:HD23	2.02	0.41
51:SH:21:SER:HA	51:SH:24:SER:OG	2.20	0.41
56:SM:83:LEU:O	56:SM:84:HIS:HB2	2.20	0.41
62:ST:124:ARG:HH21	62:ST:129:LEU:CB	2.32	0.41
70:Sb:33:MET:HE1	70:Sb:73:LEU:HD21	2.01	0.41
77:Sy:22:LEU:HD22	77:Sy:89:VAL:HG12	2.02	0.41
79:S2:841:G:H2'	79:S2:842:C:H6	1.84	0.41
79:S2:1089:G:H2'	79:S2:1090:C:C6	2.54	0.41
79:S2:1089:G:H2'	79:S2:1090:C:H6	1.85	0.41
79:S2:1301:A:C4	79:S2:1303:C:C6	3.08	0.41
1:L1:117:C:C5'	41:Ln:55:ARG:HH12	2.34	0.41
2:L5:18:C:H4'	16:LN:138:PHE:CD2	2.55	0.41
2:L5:987:C:C2'	2:L5:988:C:O4'	2.68	0.41
2:L5:1394:G:H2'	2:L5:1395:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:1643:A:H2'	2:L5:1644:C:H6	1.85	0.41
2:L5:2385:U:H2'	2:L5:2386:U:C6	2.55	0.41
2:L5:2518:G:H1'	2:L5:2539:C:H1'	2.02	0.41
2:L5:2701:U:H2'	2:L5:2702:C:C6	2.55	0.41
2:L5:3808:OMC:HM22	2:L5:3809:G:C5'	2.51	0.41
2:L5:4241:C:C2'	2:L5:4242:U:H5'	2.49	0.41
3:L8:277:LYS:O	3:L8:280:VAL:CG1	2.68	0.41
7:LD:206:PRO:HG3	7:LD:213:GLY:HA3	2.02	0.41
12:LI:117:GLN:O	39:Ll:119:ARG:NH2	2.53	0.41
24:LV:33:GLY:HA3	24:LV:69:LYS:NZ	2.34	0.41
24:LV:128:LEU:HD23	24:LV:128:LEU:HA	1.92	0.41
26:LY:32:LYS:HD3	26:LY:101:ARG:HG2	2.02	0.41
47:SC:251:LEU:HA	64:SV:23:ILE:CD1	2.51	0.41
49:SE:87:MET:O	49:SE:122:LYS:HE3	2.21	0.41
50:SG:29:GLU:OE1	50:SG:70:HIS:NE2	2.53	0.41
51:SH:83:LEU:CB	51:SH:92:VAL:HG21	2.50	0.41
53:SJ:11:LYS:HG2	79:S2:519:A:H5"	2.03	0.41
56:SM:65:ARG:NH1	74:Sf:20:SER:OG	2.53	0.41
58:SO:43:HIS:CD2	58:SO:45:THR:HG23	2.55	0.41
59:SP:82:ASP:OD1	59:SP:82:ASP:N	2.50	0.41
59:SP:96:VAL:CG2	59:SP:116:LEU:HG	2.50	0.41
61:SS:24:LEU:HD23	61:SS:54:VAL:HG13	2.01	0.41
73:Se:127:LYS:HA	73:Se:127:LYS:HD3	1.79	0.41
75:Sg:54:ILE:CG1	75:Sg:55:PRO:HD2	2.51	0.41
75:Sg:104:HIS:HD2	75:Sg:108:VAL:HG22	1.82	0.41
75:Sg:262:GLU:OE1	75:Sg:262:GLU:HA	2.20	0.41
79:S2:568:C:H2'	79:S2:569:A:H8	1.79	0.41
79:S2:582:U:H2'	79:S2:583:A:C8	2.55	0.41
79:S2:1667:U:H2'	79:S2:1668:U:H6	1.83	0.41
79:S2:1698:C:C3'	79:S2:1699:A:H5'	2.50	0.41
2:L5:99:A:H5"	16:LN:184:ILE:HD12	2.01	0.41
2:L5:962:C:O4'	2:L5:963:G:C6	2.74	0.41
2:L5:1069:G:H5"	14:LK:65:ARG:HH22	1.84	0.41
2:L5:1244:G:H2'	2:L5:1245:C:H6	1.86	0.41
2:L5:1590:C:H4'	2:L5:1591:U:OP2	2.21	0.41
2:L5:2411:C:H2'	2:L5:2412:A:C8	2.55	0.41
2:L5:2504:C:H5"	2:L5:2505:C:O5'	2.21	0.41
2:L5:2652:G:N2	43:Lp:61:MET:HE2	2.35	0.41
2:L5:3861:A:H2'	2:L5:3862:A:C8	2.56	0.41
2:L5:4113:U:H2'	2:L5:4114:C:C5	2.50	0.41
2:L5:4488:A:H4'	2:L5:4489:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L5:4590:A2M:HM'2	2:L5:4591:U:H5'	2.02	0.41
82:L5:5101:B3P:H111	82:L5:5101:B3P:H22	1.66	0.41
85:L5:5978:HOH:O	28:La:31:GLY:HA2	2.20	0.41
4:L9:33:U:H2'	4:L9:34:C:C6	2.55	0.41
8:LE:123:ALA:O	8:LE:127:GLN:HG3	2.21	0.41
20:LR:74:ARG:O	20:LR:76:MET:HG2	2.21	0.41
32:Le:50:GLY:HA2	85:Le:303:HOH:O	2.19	0.41
40:Lm:94:ASN:O	40:Lm:95:ASN:HB2	2.20	0.41
45:S1:201:CYS:CB	45:S1:207:LEU:HD12	2.49	0.41
47:SC:144:SER:HB2	47:SC:150:ALA:HB2	2.02	0.41
50:SG:116:LYS:CE	50:SG:125:THR:HG23	2.47	0.41
51:SH:30:LEU:O	51:SH:34:SER:HB3	2.20	0.41
53:SJ:22:LYS:HA	53:SJ:22:LYS:HD2	1.93	0.41
55:SL:111:VAL:HG12	55:SL:140:PHE:HB2	2.02	0.41
62:ST:26:ILE:HG23	62:ST:27:ALA:N	2.35	0.41
62:ST:101:ASN:OD1	62:ST:104:ASP:HB2	2.20	0.41
65:SW:14:ILE:HG13	65:SW:27:ILE:HD11	2.01	0.41
65:SW:106:THR:HG22	65:SW:123:GLY:HA3	2.02	0.41
67:SY:57:VAL:HG22	85:SY:201:HOH:O	2.19	0.41
71:Sc:68:ILE:N	71:Sc:109:TYR:O	2.40	0.41
75:Sg:181:ASN:O	75:Sg:183:LYS:HG3	2.20	0.41
75:Sg:217:MET:HG2	75:Sg:229:THR:CG2	2.50	0.41
79:S2:287:U:H2'	79:S2:288:G:H8	1.85	0.41
79:S2:293:C:C5	79:S2:295:C:H1'	2.56	0.41
79:S2:472:C:H4'	79:S2:474:G:OP1	2.20	0.41
79:S2:1304:U:C2	79:S2:1305:C:C5	3.09	0.41
79:S2:1627:C:C2	79:S2:1628:C:C5	3.07	0.41
2:L5:222:C:H2'	2:L5:223:G:O4'	2.20	0.41
2:L5:666:G:N2	39:Ll:46:ARG:HG3	2.35	0.41
2:L5:920:C:H2'	2:L5:921:C:H6	1.86	0.41
2:L5:1625:OMG:H4'	2:L5:1626:G:O5'	2.20	0.41
2:L5:4219:A:H2'	2:L5:4220:6MZ:C8	2.50	0.41
2:L5:4343:U:H2'	2:L5:4344:U:C6	2.55	0.41
2:L5:4605:A:H2'	2:L5:4606:G:O4'	2.21	0.41
6:LC:60:HIS:NE2	6:LC:100:ARG:HD3	2.36	0.41
8:LE:54:GLU:OE1	8:LE:54:GLU:HA	2.20	0.41
10:LG:80:ILE:HG13	16:LN:18:VAL:HG23	2.01	0.41
34:Lg:112:GLN:OE1	34:Lg:112:GLN:HA	2.21	0.41
46:SA:57:LYS:HA	46:SA:57:LYS:HD2	1.86	0.41
46:SA:138:SER:O	64:SV:30:ALA:HA	2.21	0.41
46:SA:158:ASP:CG	64:SV:32:ILE:HD13	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:SC:98:LEU:O	47:SC:102:LEU:HG	2.21	0.41
47:SC:186:GLY:HA2	47:SC:246:LYS:HZ3	1.86	0.41
49:SE:140:VAL:HA	49:SE:145:ARG:O	2.20	0.41
53:SJ:137:VAL:O	53:SJ:138:ARG:HB2	2.20	0.41
58:SO:143:LYS:HB3	79:S2:1047:C:H5"	2.02	0.41
59:SP:58:LYS:HA	59:SP:61:ARG:HH11	1.84	0.41
60:SQ:58:LEU:CD1	60:SQ:92:LEU:HD23	2.51	0.41
61:SS:109:LEU:O	61:SS:110:ASP:HB3	2.20	0.41
62:ST:26:ILE:HG23	62:ST:45:LEU:CD1	2.50	0.41
75:Sg:154:VAL:HG12	75:Sg:167:SER:CB	2.51	0.41
79:S2:210:PSU:H2'	79:S2:211:G:C8	2.55	0.41
79:S2:803:C:H2'	79:S2:804:U:H6	1.83	0.41
79:S2:835:C:O5'	79:S2:836:G:OP1	2.39	0.41
79:S2:1215:C:H42	79:S2:1220:A:H61	1.69	0.41
79:S2:1448:A:C2'	79:S2:1449:G:H5'	2.51	0.41
79:S2:1602:U:C4	79:S2:1604:G:C8	3.09	0.41
79:S2:1630:A:H2'	79:S2:1630:A:N3	2.36	0.41
79:S2:1660:C:O5'	79:S2:1660:C:H6	2.04	0.41
79:S2:1831:A:H1'	79:S2:1852:C:H5'	2.01	0.41
2:L5:353:A:N1	2:L5:360:A:O2'	2.47	0.41
2:L5:655:C:O2'	2:L5:656:C:H5'	2.21	0.41
2:L5:1084:C:H2'	2:L5:1085:C:C6	2.56	0.41
2:L5:1096:C:H6	2:L5:1096:C:O5'	2.04	0.41
2:L5:1409:C:H3'	2:L5:1410:U:C5'	2.50	0.41
2:L5:1697:G:H2'	2:L5:1698:C:C5'	2.51	0.41
2:L5:4218:U:H5"	2:L5:4219:A:OP1	2.21	0.41
5:LB:47:LEU:HG	5:LB:181:MET:SD	2.61	0.41
5:LB:52:GLY:HA2	5:LB:341:LYS:HE3	2.01	0.41
17:LO:4:ILE:CD1	17:LO:53:SER:HB3	2.49	0.41
49:SE:4:GLY:HA3	79:S2:92:A:HO2'	1.85	0.41
50:SG:162:LEU:HD11	50:SG:172:LYS:HB3	2.02	0.41
52:SI:31:ARG:HH11	79:S2:380:G:H5"	1.83	0.41
53:SJ:15:THR:HG23	53:SJ:16:PRO:HD2	2.03	0.41
54:SK:162:ASP:N	54:SK:163:PRO:CD	2.83	0.41
56:SM:50:GLN:HG3	56:SM:53:LYS:CE	2.49	0.41
58:SO:65:ASP:O	58:SO:68:GLU:HG3	2.20	0.41
61:SS:50:ILE:O	61:SS:54:VAL:HG23	2.21	0.41
63:SU:5:THR:CG2	79:S2:1425:G:H21	2.34	0.41
67:SY:37:LYS:HA	67:SY:40:ILE:HD12	2.03	0.41
67:SY:50:THR:HG22	67:SY:51:THR:H	1.86	0.41
67:SY:88:LYS:HD3	67:SY:97:TYR:CE1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:Sg:186:THR:CG2	75:Sg:188:HIS:NE2	2.84	0.41
75:Sg:303:THR:O	75:Sg:303:THR:CG2	2.68	0.41
77:Sy:51:VAL:HB	77:Sy:109:VAL:HG22	2.03	0.41
77:Sy:129:LYS:HE3	77:Sy:129:LYS:HB3	1.90	0.41
79:S2:72:C:N4	79:S2:74:G:N2	2.66	0.41
79:S2:215:G:H2'	79:S2:216:C:C6	2.56	0.41
79:S2:308:G:OP2	79:S2:308:G:H8	2.04	0.41
79:S2:368:U:HO2'	79:S2:369:C:P	2.43	0.41
79:S2:885:U:O2	79:S2:885:U:H2'	2.20	0.41
79:S2:1473:G:C4	79:S2:1475:G:OP2	2.74	0.41
1:L1:2:G:N3	1:L1:2:G:H5"	2.35	0.41
2:L5:342:G:H4'	85:LP:222:HOH:O	2.20	0.41
2:L5:672:C:H2'	2:L5:673:C:H6	1.84	0.41
2:L5:964:A:N7	2:L5:2093:A:N6	2.68	0.41
2:L5:1510:G:H2'	2:L5:1511:U:C6	2.56	0.41
2:L5:1643:A:H2'	2:L5:1644:C:C6	2.55	0.41
2:L5:2570:U:C2'	2:L5:2571:C:H5'	2.51	0.41
2:L5:4891:G:C2'	2:L5:4892:A:H5'	2.50	0.41
5:LB:68:ASN:O	5:LB:69:LYS:HB2	2.21	0.41
5:LB:122:TRP:CH2	5:LB:127:LYS:HG2	2.56	0.41
7:LD:60:LYS:HD3	7:LD:75:LEU:HD13	2.02	0.41
9:LF:43:ARG:O	9:LF:47:ARG:HG2	2.21	0.41
11:LH:141:LYS:O	11:LH:142:ASP:HB2	2.20	0.41
19:LQ:110:LEU:O	19:LQ:114:VAL:HG23	2.21	0.41
35:Lh:155:GLN:HE22	35:Lh:157:VAL:CG2	2.34	0.41
38:Lk:5:ILE:HG22	38:Lk:45:LEU:HD13	2.02	0.41
41:Ln:131:ASP:OD1	41:Ln:133:GLU:HG2	2.21	0.41
47:SC:165:VAL:HG21	47:SC:217:ALA:HB1	2.02	0.41
49:SE:44:LEU:O	49:SE:48:LEU:HG	2.20	0.41
49:SE:117:GLU:OE1	49:SE:117:GLU:N	2.45	0.41
55:SL:72:ILE:C	55:SL:73:LEU:HD23	2.46	0.41
59:SP:15:PHE:HZ	59:SP:112:ILE:HD12	1.85	0.41
63:SU:11:GLN:O	63:SU:15:VAL:HG23	2.21	0.41
63:SU:72:VAL:O	63:SU:73:GLY:C	2.62	0.41
65:SW:26:LEU:HD12	65:SW:61:ILE:O	2.20	0.41
65:SW:85:ASP:HA	65:SW:88:LYS:HZ1	1.85	0.41
68:SZ:53:PRO:HA	68:SZ:89:ILE:HD13	2.02	0.41
69:Sa:63:VAL:O	69:Sa:63:VAL:HG23	2.21	0.41
71:Sc:78:LYS:HB3	71:Sc:78:LYS:HE3	1.88	0.41
76:So:4:LYS:HG2	85:So:102:HOH:O	2.20	0.41
77:Sy:116:LYS:HZ2	77:Sy:119:GLN:N	2.11	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Sy:116:LYS:CD	77:Sy:119:GLN:HB2	2.50	0.41
77:Sy:121:LYS:HA	77:Sy:124:ILE:CD1	2.50	0.41
79:S2:144:U:O2'	79:S2:145:G:H5'	2.21	0.41
79:S2:303:C:H2'	79:S2:304:C:O4'	2.21	0.41
79:S2:328:U:O2'	79:S2:329:G:P	2.79	0.41
79:S2:582:U:H2'	79:S2:583:A:H8	1.85	0.41
79:S2:587:A:H5'	79:S2:592:C:H41	1.85	0.41
79:S2:596:U:H2'	79:S2:597:G:O4'	2.21	0.41
79:S2:874:G:O2'	79:S2:875:A:P	2.78	0.41
79:S2:1317:C:H2'	79:S2:1318:G:H8	1.85	0.41
79:S2:1455:A:C2	79:S2:1456:G:C8	3.08	0.41
79:S2:1471:C:H2'	79:S2:1472:C:O4'	2.20	0.41
1:L1:19:C:H5"	85:L1:404:HOH:O	2.20	0.41
2:L5:162:A:H2'	2:L5:163:A:C8	2.56	0.41
2:L5:196:C:H4'	8:LE:126:ARG:HG2	2.02	0.41
2:L5:260:C:H2'	2:L5:261:G:O4'	2.21	0.41
2:L5:288:G:H2'	2:L5:289:C:C6	2.55	0.41
2:L5:438:G:C2'	2:L5:439:G:H5'	2.51	0.41
2:L5:450:G:H2'	2:L5:451:C:H6	1.84	0.41
2:L5:1184:A:N3	2:L5:1184:A:H2'	2.36	0.41
2:L5:1439:C:N4	2:L5:2105:A:H61	2.17	0.41
2:L5:1759:G:N2	2:L5:1773:OMU:O2	2.47	0.41
2:L5:1857:C:H2'	2:L5:1858:A:C8	2.56	0.41
2:L5:1899:G:O2'	12:LI:57:ASN:OD1	2.37	0.41
2:L5:1908:A:H2'	2:L5:1909:G:O4'	2.20	0.41
2:L5:2256:C:H2'	2:L5:2257:C:O4'	2.21	0.41
2:L5:2478:C:O2	2:L5:2591:A:H4'	2.21	0.41
2:L5:2554:U:H1'	2:L5:2574:G:N2	2.35	0.41
2:L5:2569:G:H2'	2:L5:2570:U:H6	1.79	0.41
2:L5:2814:C:H5'	2:L5:2815:A2M:P	2.61	0.41
2:L5:3632:C:O2'	2:L5:3633:C:H5'	2.20	0.41
2:L5:3773:U:H1'	2:L5:3776:G:C6	2.56	0.41
2:L5:3899:OMG:CM2	2:L5:3900:G:H5'	2.50	0.41
2:L5:4896:G:H2'	2:L5:4897:G:H8	1.85	0.41
2:L5:5033:G:H5"	2:L5:5034:A:OP1	2.21	0.41
2:L5:5053:U:H5'	2:L5:5054:C:C5	2.56	0.41
3:L8:146:LEU:HD22	3:L8:163:LEU:HD12	2.03	0.41
4:L9:4:U:H2'	4:L9:5:A:C8	2.55	0.41
6:LC:76:ILE:CD1	6:LC:77:PRO:HD2	2.51	0.41
7:LD:10:LYS:HA	7:LD:16:PHE:CD2	2.56	0.41
9:LF:109:LEU:HD23	9:LF:109:LEU:HA	1.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LI:75:ARG:O	12:LI:95:TYR:HA	2.20	0.41
12:LI:81:ASN:HA	12:LI:111:ILE:HD11	2.03	0.41
13:LJ:88:LYS:HA	13:LJ:92:TYR:CE1	2.56	0.41
14:LK:181:LEU:HD21	14:LK:268:GLN:HG3	2.01	0.41
14:LK:222:LEU:HB3	14:LK:238:GLU:CB	2.49	0.41
14:LK:276:ALA:CB	33:Lf:3:GLY:HA3	2.51	0.41
16:LN:20:ARG:O	16:LN:24:ARG:HG2	2.20	0.41
18:LP:79:ARG:C	18:LP:80:GLU:HG3	2.46	0.41
40:Lm:103:VAL:HG21	40:Lm:113:ARG:NH1	2.36	0.41
45:S1:127:VAL:CG2	45:S1:177:GLN:HG3	2.50	0.41
45:S1:179:ASN:HB3	45:S1:183:GLU:HB2	2.02	0.41
50:SG:3:LEU:HB2	50:SG:16:ILE:CG1	2.50	0.41
50:SG:51:ARG:HH21	50:SG:112:VAL:HG11	1.86	0.41
51:SH:111:LYS:HD3	79:S2:798:G:OP1	2.21	0.41
52:SI:151:GLU:HA	52:SI:154:LYS:CG	2.50	0.41
52:SI:194:GLU:HG2	52:SI:198:TYR:HE2	1.85	0.41
53:SJ:158:ASP:OD1	53:SJ:159:PHE:N	2.47	0.41
58:SO:42:VAL:O	58:SO:55:ARG:HA	2.21	0.41
62:ST:22:GLY:HA2	62:ST:56:ALA:HB3	2.02	0.41
62:ST:34:LYS:HG3	79:S2:1631:U:H5"	2.02	0.41
62:ST:40:TYR:O	62:ST:43:VAL:HG12	2.21	0.41
62:ST:48:ALA:HB2	62:ST:70:ILE:HD12	2.03	0.41
65:SW:105:THR:O	65:SW:105:THR:HG23	2.20	0.41
68:SZ:22:ILE:HA	68:SZ:113:GLU:O	2.21	0.41
68:SZ:46:LYS:HE3	68:SZ:46:LYS:HB3	1.91	0.41
72:Sd:60:GLU:OE1	72:Sd:63:ARG:CG	2.69	0.41
75:Sg:284:PRO:CB	75:Sg:304:ASP:HB3	2.40	0.41
85:So:103:HOH:O	79:S2:1719:A:H4'	2.20	0.41
77:Sy:17:ALA:HB1	77:Sy:123:VAL:CG2	2.50	0.41
79:S2:72:C:N4	79:S2:76:U:O4	2.54	0.41
79:S2:529:A:C4	79:S2:530:U:C5	3.09	0.41
79:S2:634:A:H2'	79:S2:635:G:H8	1.85	0.41
79:S2:678:U:OP2	79:S2:1026:C:N4	2.48	0.41
79:S2:976:G:H2'	79:S2:977:C:C6	2.56	0.41
79:S2:1083:A:N3	79:S2:1859:A:O2'	2.47	0.41
79:S2:1291:A:N3	79:S2:1291:A:H2'	2.36	0.41
79:S2:1336:C:H2'	79:S2:1337:4AC:O4'	2.20	0.41
79:S2:1537:A:H5'	85:S2:2747:HOH:O	2.20	0.41
79:S2:1580:A:O2'	79:S2:1581:C:H5'	2.20	0.41
79:S2:1598:G:HO2'	79:S2:1599:U:P	2.43	0.41
79:S2:1793:A:C2	79:S2:1794:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1806:A:H2'	79:S2:1807:C:O4'	2.20	0.41
2:L5:106:A:H2'	2:L5:107:G:O4'	2.21	0.41
2:L5:148:C:OP2	10:LG:197:LYS:NZ	2.45	0.41
2:L5:256:G:H2'	2:L5:257:C:C6	2.56	0.41
2:L5:469:C:H2'	2:L5:470:A:H8	1.86	0.41
2:L5:483:G:C2	2:L5:486:C:N4	2.89	0.41
2:L5:739:G:O2'	2:L5:740:G:O5'	2.38	0.41
2:L5:1262:G:H2'	2:L5:1263:A:H8	1.81	0.41
2:L5:1758:G:H3'	2:L5:1758:G:N3	2.36	0.41
2:L5:2267:U:C6	2:L5:2270:G:H4'	2.56	0.41
2:L5:3755:G:O2'	2:L5:3756:A:H5'	2.21	0.41
2:L5:3928:A:H2'	2:L5:3929:G:O4'	2.21	0.41
2:L5:4520:G:H2'	2:L5:4521:PSU:O4'	2.21	0.41
2:L5:4966:A:H5'	5:LB:128:LYS:HG3	2.02	0.41
5:LB:223:THR:HG1	5:LB:275:HIS:H	1.69	0.41
7:LD:32:VAL:HG12	7:LD:163:ARG:CZ	2.50	0.41
9:LF:101:VAL:O	9:LF:106:ARG:NH1	2.54	0.41
11:LH:12:ILE:HD12	11:LH:53:LYS:O	2.20	0.41
11:LH:173:ARG:CB	42:Lo:127:VAL:HG23	2.51	0.41
14:LK:94:LYS:HB3	14:LK:94:LYS:HE3	1.90	0.41
15:LM:60:PHE:CE1	15:LM:85:LYS:HE2	2.56	0.41
16:LN:60:VAL:CG2	16:LN:134:LEU:HB2	2.51	0.41
21:LS:19:THR:HB	21:LS:20:PRO:CD	2.51	0.41
25:LW:42:SER:O	25:LW:43:LYS:HB2	2.20	0.41
26:LY:48:TYR:HE1	26:LY:52:LEU:HD11	1.86	0.41
27:LZ:96:VAL:O	27:LZ:96:VAL:CG2	2.69	0.41
35:Lh:22:LEU:HD12	35:Lh:146:ILE:HD12	2.02	0.41
36:Li:79:THR:CG2	36:Li:80:HIS:N	2.83	0.41
38:Lk:17:ARG:NH2	38:Lk:19:ASP:OD2	2.54	0.41
41:Ln:47:ARG:HD3	41:Ln:47:ARG:HA	1.87	0.41
42:Lo:99:CYS:O	42:Lo:100:TYR:HB2	2.20	0.41
47:SC:166:ARG:HB3	47:SC:247:THR:HB	2.03	0.41
47:SC:242:ASP:OD2	47:SC:246:LYS:NZ	2.51	0.41
50:SG:31:ARG:NE	79:S2:1746:U:OP1	2.51	0.41
50:SG:61:PHE:HB2	50:SG:72:ARG:HD3	2.03	0.41
50:SG:84:TYR:HB2	50:SG:95:LYS:HD3	2.02	0.41
50:SG:116:LYS:NZ	50:SG:125:THR:HG23	2.33	0.41
54:SK:99:ILE:O	54:SK:103:GLU:HG2	2.21	0.41
60:SQ:30:GLY:N	60:SQ:64:ALA:O	2.54	0.41
61:SS:60:ARG:NH2	61:SS:66:VAL:HG13	2.35	0.41
69:Sa:22:ARG:NH2	69:Sa:27:ALA:O	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:Sg:103:GLY:HA3	75:Sg:132:TRP:HZ2	1.86	0.41
79:S2:190:G:O2'	79:S2:209:A:N6	2.54	0.41
79:S2:306:C:H4'	79:S2:307:G:O5'	2.21	0.41
79:S2:416:U:H2'	79:S2:417:C:O4'	2.21	0.41
79:S2:850:C:H2'	79:S2:851:C:C6	2.56	0.41
79:S2:1447:G:C2'	79:S2:1448:A:H5'	2.51	0.41
79:S2:1616:U:H2'	79:S2:1617:G:C8	2.56	0.41
79:S2:1683:C:C2	79:S2:1684:C:C5	3.09	0.41
79:S2:1690:U:H2'	79:S2:1691:U:C6	2.56	0.41
2:L5:92:C:OP2	2:L5:4341:C:O2'	2.30	0.40
2:L5:132:G:H22	2:L5:136:C:C1'	2.33	0.40
2:L5:666:G:N3	39:Ll:46:ARG:NH1	2.69	0.40
2:L5:691:C:H2'	2:L5:692:A:C8	2.57	0.40
2:L5:747:A:C2	2:L5:749:G:O4'	2.74	0.40
2:L5:1365:C:N4	2:L5:1370:G:H22	2.08	0.40
2:L5:1675:C:OP1	2:L5:4376:A:H3'	2.21	0.40
2:L5:1816:C:C6	29:Lb:42:ASN:OD1	2.74	0.40
2:L5:4084:G:H5"	85:L5:9039:HOH:O	2.21	0.40
2:L5:4169:G:H4'	2:L5:4171:C:C2	2.56	0.40
2:L5:4220:6MZ:H2'	2:L5:4222:G:H5"	2.03	0.40
2:L5:4369:A:N3	85:L5:5593:HOH:O	2.37	0.40
2:L5:4922:C:C2'	2:L5:4923:C:O4'	2.68	0.40
2:L5:5066:U:O2'	2:L5:5067:U:H5'	2.21	0.40
10:LG:207:VAL:CG1	10:LG:208:ASN:N	2.83	0.40
11:LH:1:MET:HE3	21:LS:141:ALA:HA	2.01	0.40
21:LS:73:LEU:HB2	85:LS:212:HOH:O	2.21	0.40
35:Lh:94:MET:HE1	35:Lh:146:ILE:HG22	2.02	0.40
41:Ln:152:LYS:HE3	41:Ln:152:LYS:HB3	1.79	0.40
45:S1:79:VAL:HB	45:S1:81:PHE:CE2	2.56	0.40
46:SA:16:LEU:HD21	61:SS:116:ASN:HB2	2.03	0.40
46:SA:77:ILE:HD12	46:SA:122:LEU:HD11	2.03	0.40
50:SG:171:THR:CG2	79:S2:75:G:H21	2.35	0.40
52:SI:7:ASN:HB2	85:S2:2203:HOH:O	2.21	0.40
57:SN:42:LYS:HE2	57:SN:80:LEU:HD21	2.03	0.40
59:SP:126:VAL:HG13	79:S2:1238:PSU:C1'	2.51	0.40
59:SP:126:VAL:CG2	79:S2:1521:C:H5'	2.52	0.40
62:ST:26:ILE:HG23	62:ST:45:LEU:HD13	2.04	0.40
62:ST:107:LEU:O	62:ST:111:LEU:HG	2.21	0.40
63:SU:12:GLN:HE21	79:S2:1541:G:H1'	1.86	0.40
63:SU:49:ASP:OD1	63:SU:50:GLU:N	2.54	0.40
73:Se:97:GLU:O	73:Se:97:GLU:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:Sg:234:ASP:OD1	75:Sg:235:ILE:N	2.48	0.40
78:Sz:95:ARG:HG3	79:S2:1305:C:OP2	2.21	0.40
79:S2:176:U:H2'	79:S2:177:G:C8	2.55	0.40
79:S2:590:A2M:O3'	79:S2:590:A2M:CM'	2.69	0.40
79:S2:850:C:H2'	79:S2:851:C:H6	1.86	0.40
79:S2:1242:U:O2'	79:S2:1518:C:H5"	2.21	0.40
79:S2:1292:C:O2	79:S2:1292:C:H2'	2.21	0.40
79:S2:1411:G:H2'	79:S2:1412:C:C6	2.56	0.40
79:S2:1577:G:H2'	79:S2:1578:U:H5"	2.03	0.40
2:L5:82:U:H2'	2:L5:83:C:O4'	2.20	0.40
2:L5:751:G:O2'	2:L5:752:G:H5'	2.21	0.40
2:L5:758:G:OP2	2:L5:758:G:H8	2.05	0.40
2:L5:1241:C:C5	29:Lb:115:GLY:HA2	2.55	0.40
2:L5:1257:A:H2'	2:L5:1258:G:C8	2.57	0.40
2:L5:1578:U:H2'	2:L5:1579:C:C6	2.57	0.40
2:L5:1806:G:H2'	2:L5:1807:C:H6	1.85	0.40
2:L5:1966:C:O2	2:L5:2022:C:C2	2.75	0.40
2:L5:2638:G:N7	2:L5:2697:A:N1	2.69	0.40
2:L5:3636:C:O2	2:L5:3636:C:C2'	2.66	0.40
2:L5:3715:PSU:H2'	2:L5:3716:C:O4'	2.21	0.40
2:L5:3820:G:OP2	85:L5:5408:HOH:O	2.21	0.40
2:L5:4121:G:H4'	2:L5:4122:G:OP2	2.20	0.40
2:L5:4134:C:H2'	2:L5:4135:G:O4'	2.21	0.40
2:L5:4210:U:C2'	2:L5:4211:C:H5'	2.50	0.40
2:L5:4474:A:C8	2:L5:4476:C:C6	3.10	0.40
2:L5:4887:C:C2'	2:L5:4888:U:O5'	2.69	0.40
8:LE:88:GLU:HG3	8:LE:92:GLY:C	2.47	0.40
10:LG:176:LYS:CB	36:Li:43:MET:HE1	2.52	0.40
14:LK:95:PRO:HA	14:LK:104:THR:HG22	2.02	0.40
19:LQ:87:HIS:HB3	19:LQ:90:VAL:HG23	2.02	0.40
21:LS:19:THR:HB	21:LS:20:PRO:HD2	2.03	0.40
24:LV:38:TYR:O	24:LV:63:ALA:HA	2.21	0.40
32:Le:74:GLU:HA	32:Le:74:GLU:OE1	2.21	0.40
36:Li:82:ARG:NH1	85:Li:203:HOH:O	2.54	0.40
37:Lj:41:SER:HB2	37:Lj:132:LYS:HE2	2.02	0.40
45:S1:62:LEU:HD13	45:S1:96:CYS:SG	2.60	0.40
47:SC:62:PRO:CB	47:SC:68:ARG:HD2	2.45	0.40
47:SC:166:ARG:HH11	47:SC:166:ARG:HD3	1.77	0.40
51:SH:15:LYS:HD3	51:SH:16:PRO:CD	2.51	0.40
51:SH:127:ASP:O	51:SH:131:GLU:HG2	2.22	0.40
54:SK:24:PHE:HZ	56:SM:70:TYR:OH	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SK:45:ARG:HE	54:SK:85:GLU:CD	2.30	0.40
54:SK:123:LEU:HD21	54:SK:154:ASP:OD2	2.21	0.40
55:SL:149:ALA:CB	79:S2:867:OMG:H5"	2.48	0.40
56:SM:92:ALA:HA	56:SM:95:ARG:HB3	2.03	0.40
61:SS:71:ILE:CG2	61:SS:73:LEU:HG	2.51	0.40
63:SU:113:VAL:HG12	63:SU:114:GLU:N	2.36	0.40
65:SW:24:GLN:HB2	70:Sb:7:LEU:HD13	2.03	0.40
70:Sb:56:CYS:SG	70:Sb:59:CYS:O	2.79	0.40
71:Sc:95:GLY:O	71:Sc:112:ASN:ND2	2.43	0.40
75:Sg:212:LYS:HA	75:Sg:235:ILE:CG1	2.46	0.40
77:Sy:61:TYR:HE2	77:Sy:107:SER:OG	2.01	0.40
79:S2:64:A:N3	79:S2:64:A:H2'	2.36	0.40
79:S2:317:C:H2'	79:S2:318:A:O4'	2.21	0.40
79:S2:874:G:C2'	79:S2:875:A:O5'	2.68	0.40
79:S2:1116:C:O2	79:S2:1116:C:H2'	2.21	0.40
79:S2:1242:U:O2'	79:S2:1518:C:C5'	2.69	0.40
79:S2:1406:G:H2'	79:S2:1407:U:H6	1.86	0.40
79:S2:1803:U:H2'	79:S2:1804:OMU:O4'	2.21	0.40
2:L5:43:U:H2'	2:L5:44:A:C5'	2.48	0.40
2:L5:316:U:OP1	2:L5:316:U:H3'	2.21	0.40
2:L5:705:G:H2'	2:L5:706:C:C6	2.55	0.40
2:L5:722:G:H2'	2:L5:723:A:O4'	2.22	0.40
2:L5:730:G:C6	9:LF:73:ARG:HD3	2.57	0.40
2:L5:983:C:C2	2:L5:984:C:C5	3.09	0.40
2:L5:987:C:C2'	2:L5:988:C:C6	3.03	0.40
2:L5:2092:G:C4'	2:L5:2094:G:N2	2.85	0.40
2:L5:4155:C:H2'	2:L5:4156:G:O4'	2.20	0.40
2:L5:4185:G:O2'	2:L5:4186:A:H5'	2.21	0.40
2:L5:4635:A:H3'	2:L5:4636:PSU:H4'	2.02	0.40
3:L8:33:ARG:O	3:L8:37:VAL:HG22	2.21	0.40
3:L8:38:ILE:HD12	22:LT:30:TYR:HB2	2.03	0.40
6:LC:293:LEU:HD22	37:Lj:34:PHE:CD2	2.56	0.40
10:LG:110:LYS:HG3	10:LG:113:ARG:NH2	2.36	0.40
13:LJ:55:TYR:HA	13:LJ:64:ARG:HB2	2.03	0.40
13:LJ:109:ILE:CD1	13:LJ:115:LEU:HD11	2.52	0.40
26:LY:7:LEU:HB2	26:LY:31:ARG:HD3	2.03	0.40
27:LZ:12:LEU:HD23	27:LZ:22:LYS:HG2	2.03	0.40
29:Lb:114:LYS:HA	29:Lb:117:ARG:HG2	2.03	0.40
37:Lj:71:LYS:HG3	37:Lj:71:LYS:O	2.21	0.40
39:Ll:46:ARG:NE	39:Ll:70:GLN:HG3	2.37	0.40
44:Lz:36:LEU:HD13	44:Lz:73:ASN:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:SD:141:VAL:CG1	48:SD:145:ARG:HG2	2.51	0.40
52:SI:195:LEU:O	52:SI:199:LEU:HG	2.21	0.40
53:SJ:132:GLN:O	53:SJ:133:ARG:HB2	2.20	0.40
60:SQ:98:LYS:HE3	60:SQ:98:LYS:HB2	1.86	0.40
61:SS:71:ILE:HG22	61:SS:73:LEU:HG	2.02	0.40
62:ST:117:ILE:HD11	62:ST:119:ALA:HB2	2.04	0.40
63:SU:117:GLN:H	63:SU:117:GLN:CD	2.29	0.40
66:SX:48:LYS:HD3	66:SX:99:GLU:OE2	2.22	0.40
66:SX:54:LYS:HD3	66:SX:91:LEU:HG	2.02	0.40
69:Sa:90:GLU:OE1	69:Sa:90:GLU:N	2.54	0.40
75:Sg:131:LEU:HD11	75:Sg:165:ILE:HD11	2.03	0.40
79:S2:15:U:H2'	79:S2:16:G:O4'	2.22	0.40
79:S2:549:C:H2'	79:S2:550:C:H6	1.86	0.40
79:S2:836:G:C1'	79:S2:837:A:H5"	2.51	0.40
79:S2:1690:U:H2'	79:S2:1691:U:H6	1.86	0.40
79:S2:1719:A:C2'	79:S2:1720:U:H5'	2.51	0.40
1:L1:12:G:H5"	35:Lh:3:ARG:CG	2.51	0.40
2:L5:131:C:C2'	2:L5:132:G:O5'	2.70	0.40
2:L5:307:A:O2'	2:L5:308:G:H5'	2.21	0.40
2:L5:1727:U:H2'	2:L5:1728:U:C6	2.57	0.40
2:L5:1755:C:H41	2:L5:1776:A:N6	2.16	0.40
2:L5:1826:G:H4'	29:Lb:43:MET:HE2	2.02	0.40
2:L5:2103:G:O2'	2:L5:2104:G:P	2.80	0.40
2:L5:2695:A:H4'	2:L5:2696:A:O5'	2.21	0.40
2:L5:2726:G:H2'	2:L5:2727:C:H6	1.86	0.40
2:L5:3762:PSU:O2'	2:L5:3763:A:H5'	2.22	0.40
2:L5:4098:A:H2'	2:L5:4099:G:O4'	2.21	0.40
2:L5:4109:G:H2'	2:L5:4110:C:C5	2.55	0.40
85:L5:6870:HOH:O	6:LC:106:LYS:HE2	2.21	0.40
5:LB:382:MET:HE2	5:LB:382:MET:HB3	1.94	0.40
6:LC:214:ASP:OD1	6:LC:218:ILE:HG12	2.20	0.40
14:LK:245:GLN:HA	14:LK:248:ILE:CD1	2.52	0.40
28:La:125:LYS:HA	28:La:145:VAL:O	2.22	0.40
44:Lz:77:VAL:HG11	44:Lz:82:LYS:HE2	2.02	0.40
46:SA:61:ALA:O	46:SA:65:ILE:HG13	2.22	0.40
46:SA:74:VAL:O	46:SA:96:ALA:HB1	2.21	0.40
48:SD:100:ILE:HD11	48:SD:177:LEU:HB2	2.03	0.40
53:SJ:35:TYR:CD2	53:SJ:106:LEU:HD13	2.56	0.40
54:SK:227:LYS:HE2	75:Sg:187:ASN:HD22	1.85	0.40
55:SL:95:TYR:CE2	55:SL:97:ARG:HA	2.55	0.40
60:SQ:63:PHE:CZ	60:SQ:92:LEU:HD22	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SS:72:LYS:O	61:SS:76:GLU:HG3	2.22	0.40
62:ST:39:ARG:NH1	63:SU:46:ALA:HB2	2.35	0.40
67:SY:60:PHE:CE1	67:SY:71:GLY:HA3	2.56	0.40
79:S2:127:C:OP1	79:S2:127:C:H3'	2.22	0.40
79:S2:382:C:H2'	79:S2:383:G:H8	1.86	0.40
79:S2:533:A:H2'	79:S2:534:G:H8	1.83	0.40
79:S2:904:A:C8	79:S2:905:C:C6	3.10	0.40
79:S2:1189:A:H2'	79:S2:1190:A:C8	2.56	0.40
79:S2:1228:A:C2	79:S2:1229:G:C5	3.10	0.40
79:S2:1282:A:C5	79:S2:1283:C:C2	3.09	0.40
79:S2:1286:G:C2	79:S2:1312:G:C4	3.10	0.40
79:S2:1611:G:H2'	79:S2:1612:G:O4'	2.22	0.40
2:L5:450:G:H2'	2:L5:451:C:C6	2.56	0.40
2:L5:1675:C:H5'	2:L5:4376:A:H2'	2.04	0.40
2:L5:1846:G:H2'	2:L5:1847:C:C6	2.56	0.40
2:L5:1943:A:C2'	2:L5:1944:A:H5'	2.51	0.40
2:L5:1962:A:C8	2:L5:1963:C:C6	3.10	0.40
2:L5:2901:G:O2'	2:L5:2902:G:H4'	2.21	0.40
2:L5:4152:G:H2'	2:L5:4153:C:H6	1.86	0.40
3:L8:10:LYS:O	3:L8:14:LYS:HG3	2.21	0.40
5:LB:36:ASP:HA	5:LB:37:PRO:HD3	1.97	0.40
20:LR:184:ILE:O	20:LR:187:THR:OG1	2.30	0.40
21:LS:76:LYS:HG2	21:LS:131:GLU:OE2	2.22	0.40
35:Lh:85:LYS:O	35:Lh:89:GLU:HG3	2.21	0.40
38:Lk:18:LYS:HB3	38:Lk:18:LYS:HE3	1.88	0.40
40:Lm:56:LEU:HD21	40:Lm:61:VAL:HB	2.04	0.40
40:Lm:76:VAL:HB	40:Lm:77:PRO:HD2	2.03	0.40
46:SA:32:PHE:CZ	46:SA:33:GLN:HG3	2.56	0.40
46:SA:52:LYS:HB2	61:SS:109:LEU:CD2	2.49	0.40
47:SC:76:LYS:O	47:SC:77:SER:HB2	2.21	0.40
47:SC:101:SER:O	47:SC:132:ASP:HA	2.22	0.40
49:SE:45:ILE:HA	49:SE:61:VAL:HG11	2.04	0.40
50:SG:94:ARG:NE	79:S2:455:A:OP1	2.51	0.40
57:SN:31:ASP:O	57:SN:35:GLU:HG3	2.21	0.40
59:SP:60:LEU:HD23	59:SP:76:VAL:HG21	2.03	0.40
62:ST:137:LYS:HA	79:S2:1521:C:C6	2.57	0.40
70:Sb:33:MET:HE3	70:Sb:33:MET:HB2	1.95	0.40
70:Sb:38:PRO:HG2	70:Sb:76:GLY:O	2.22	0.40
71:Sc:62:VAL:HA	71:Sc:65:TYR:CD2	2.56	0.40
75:Sg:64:HIS:HB3	75:Sg:83:TRP:HB2	2.03	0.40
79:S2:166:A2M:H1'	79:S2:166:A2M:HM'3	1.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:S2:1012:A:H2'	79:S2:1013:U:O4'	2.21	0.40
79:S2:1609:C:H42	79:S2:1630:A:H61	1.69	0.40
79:S2:1809:A:O2'	79:S2:1810:U:H5'	2.22	0.40
79:S2:1859:A:N7	85:S2:2187:HOH:O	2.37	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 PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	L8	291/297 (98%)	283 (97%)	8 (3%)	0	100	100
5	LB	398/403 (99%)	388 (98%)	10 (2%)	0	100	100
6	LC	363/427 (85%)	356 (98%)	7 (2%)	0	100	100
7	LD	245/257 (95%)	237 (97%)	8 (3%)	0	100	100
8	LE	132/145 (91%)	129 (98%)	3 (2%)	0	100	100
9	LF	223/248 (90%)	216 (97%)	7 (3%)	0	100	100
10	LG	212/266 (80%)	205 (97%)	7 (3%)	0	100	100
11	LH	188/192 (98%)	179 (95%)	9 (5%)	0	100	100
12	LI	126/135 (93%)	125 (99%)	1 (1%)	0	100	100
13	LJ	165/178 (93%)	158 (96%)	7 (4%)	0	100	100
14	LK	216/288 (75%)	208 (96%)	8 (4%)	0	100	100
15	LM	133/215 (62%)	128 (96%)	5 (4%)	0	100	100
16	LN	201/204 (98%)	194 (96%)	7 (4%)	0	100	100
17	LO	120/123 (98%)	117 (98%)	3 (2%)	0	100	100
18	LP	84/97 (87%)	84 (100%)	0	0	100	100
19	LQ	204/211 (97%)	201 (98%)	3 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	LR	184/196 (94%)	179 (97%)	5 (3%)	0	100	100
21	LS	174/176 (99%)	171 (98%)	3 (2%)	0	100	100
22	LT	155/160 (97%)	151 (97%)	4 (3%)	0	100	100
23	LU	48/51 (94%)	48 (100%)	0	0	100	100
24	LV	128/140 (91%)	128 (100%)	0	0	100	100
25	LW	78/157 (50%)	76 (97%)	2 (3%)	0	100	100
26	LY	196/203 (97%)	194 (99%)	2 (1%)	0	100	100
27	LZ	133/136 (98%)	131 (98%)	2 (2%)	0	100	100
28	La	144/148 (97%)	136 (94%)	7 (5%)	1 (1%)	18	18
29	Lb	99/161 (62%)	98 (99%)	1 (1%)	0	100	100
30	Lc	99/115 (86%)	99 (100%)	0	0	100	100
31	Ld	102/125 (82%)	101 (99%)	1 (1%)	0	100	100
32	Le	102/106 (96%)	100 (98%)	2 (2%)	0	100	100
33	Lf	107/110 (97%)	106 (99%)	1 (1%)	0	100	100
34	Lg	109/117 (93%)	108 (99%)	1 (1%)	0	100	100
35	Lh	157/184 (85%)	154 (98%)	3 (2%)	0	100	100
36	Li	100/105 (95%)	98 (98%)	2 (2%)	0	100	100
37	Lj	185/188 (98%)	180 (97%)	5 (3%)	0	100	100
38	Lk	66/70 (94%)	66 (100%)	0	0	100	100
39	Ll	122/137 (89%)	122 (100%)	0	0	100	100
40	Lm	98/128 (77%)	92 (94%)	6 (6%)	0	100	100
41	Ln	114/156 (73%)	113 (99%)	1 (1%)	0	100	100
42	Lo	50/99 (50%)	49 (98%)	1 (2%)	0	100	100
43	Lp	86/92 (94%)	81 (94%)	5 (6%)	0	100	100
44	Lz	194/214 (91%)	190 (98%)	4 (2%)	0	100	100
45	S1	217/264 (82%)	215 (99%)	2 (1%)	0	100	100
46	SA	218/295 (74%)	214 (98%)	4 (2%)	0	100	100
47	SC	217/293 (74%)	211 (97%)	6 (3%)	0	100	100
48	SD	180/204 (88%)	168 (93%)	12 (7%)	0	100	100
49	SE	260/263 (99%)	252 (97%)	8 (3%)	0	100	100
50	SG	227/249 (91%)	218 (96%)	9 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	SH	185/194 (95%)	180 (97%)	5 (3%)	0	100	100
52	SI	205/208 (99%)	200 (98%)	5 (2%)	0	100	100
53	SJ	177/194 (91%)	169 (96%)	8 (4%)	0	100	100
54	SK	222/243 (91%)	215 (97%)	7 (3%)	0	100	100
55	SL	139/158 (88%)	136 (98%)	3 (2%)	0	100	100
56	SM	95/165 (58%)	88 (93%)	7 (7%)	0	100	100
57	SN	148/151 (98%)	143 (97%)	5 (3%)	0	100	100
58	SO	123/151 (82%)	120 (98%)	3 (2%)	0	100	100
59	SP	123/145 (85%)	118 (96%)	5 (4%)	0	100	100
60	SQ	137/146 (94%)	132 (96%)	5 (4%)	0	100	100
61	SS	129/135 (96%)	123 (95%)	6 (5%)	0	100	100
62	ST	145/152 (95%)	133 (92%)	12 (8%)	0	100	100
63	SU	139/145 (96%)	132 (95%)	7 (5%)	0	100	100
64	SV	81/83 (98%)	78 (96%)	3 (4%)	0	100	100
65	SW	127/130 (98%)	124 (98%)	3 (2%)	0	100	100
66	SX	137/143 (96%)	134 (98%)	3 (2%)	0	100	100
67	SY	120/132 (91%)	120 (100%)	0	0	100	100
68	SZ	98/119 (82%)	95 (97%)	3 (3%)	0	100	100
69	Sa	97/115 (84%)	94 (97%)	3 (3%)	0	100	100
70	Sb	81/84 (96%)	79 (98%)	2 (2%)	0	100	100
71	Sc	81/125 (65%)	79 (98%)	2 (2%)	0	100	100
72	Sd	60/69 (87%)	57 (95%)	3 (5%)	0	100	100
73	Se	53/133 (40%)	52 (98%)	1 (2%)	0	100	100
74	Sf	41/56 (73%)	41 (100%)	0	0	100	100
75	Sg	299/317 (94%)	275 (92%)	24 (8%)	0	100	100
76	So	23/25 (92%)	22 (96%)	1 (4%)	0	100	100
77	Sy	119/132 (90%)	114 (96%)	5 (4%)	0	100	100
78	Sz	14/156 (9%)	10 (71%)	4 (29%)	0	100	100
All	All	11048/12734 (87%)	10720 (97%)	327 (3%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
28	La	15	VAL

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	L8	247/250 (99%)	247 (100%)	0	100	100
5	LB	347/348 (100%)	347 (100%)	0	100	100
6	LC	304/348 (87%)	304 (100%)	0	100	100
7	LD	189/198 (96%)	189 (100%)	0	100	100
8	LE	124/135 (92%)	124 (100%)	0	100	100
9	LF	195/216 (90%)	195 (100%)	0	100	100
10	LG	187/223 (84%)	187 (100%)	0	100	100
11	LH	169/171 (99%)	169 (100%)	0	100	100
12	LI	114/121 (94%)	114 (100%)	0	100	100
13	LJ	141/149 (95%)	141 (100%)	0	100	100
14	LK	196/252 (78%)	196 (100%)	0	100	100
15	LM	115/161 (71%)	115 (100%)	0	100	100
16	LN	171/172 (99%)	171 (100%)	0	100	100
17	LO	109/110 (99%)	109 (100%)	0	100	100
18	LP	73/80 (91%)	73 (100%)	0	100	100
19	LQ	172/177 (97%)	172 (100%)	0	100	100
20	LR	165/175 (94%)	165 (100%)	0	100	100
21	LS	157/157 (100%)	157 (100%)	0	100	100
22	LT	138/140 (99%)	138 (100%)	0	100	100
23	LU	47/48 (98%)	47 (100%)	0	100	100
24	LV	100/107 (94%)	100 (100%)	0	100	100
25	LW	69/126 (55%)	69 (100%)	0	100	100
26	LY	170/174 (98%)	170 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	LZ	117/118 (99%)	117 (100%)	0	100	100
28	La	119/120 (99%)	119 (100%)	0	100	100
29	Lb	85/126 (68%)	85 (100%)	0	100	100
30	Lc	86/97 (89%)	86 (100%)	0	100	100
31	Ld	95/110 (86%)	95 (100%)	0	100	100
32	Le	92/93 (99%)	92 (100%)	0	100	100
33	Lf	88/89 (99%)	88 (100%)	0	100	100
34	Lg	95/100 (95%)	95 (100%)	0	100	100
35	Lh	140/163 (86%)	140 (100%)	0	100	100
36	Li	86/89 (97%)	86 (100%)	0	100	100
37	Lj	164/165 (99%)	164 (100%)	0	100	100
38	Lk	63/65 (97%)	63 (100%)	0	100	100
39	Ll	107/120 (89%)	107 (100%)	0	100	100
40	Lm	90/115 (78%)	90 (100%)	0	100	100
41	Ln	104/133 (78%)	104 (100%)	0	100	100
42	Lo	48/90 (53%)	48 (100%)	0	100	100
43	Lp	71/75 (95%)	71 (100%)	0	100	100
44	Lz	170/181 (94%)	170 (100%)	0	100	100
45	S1	200/231 (87%)	200 (100%)	0	100	100
46	SA	182/242 (75%)	182 (100%)	0	100	100
47	SC	185/225 (82%)	185 (100%)	0	100	100
48	SD	157/170 (92%)	157 (100%)	0	100	100
49	SE	224/225 (100%)	224 (100%)	0	100	100
50	SG	199/218 (91%)	199 (100%)	0	100	100
51	SH	168/174 (97%)	168 (100%)	0	100	100
52	SI	179/180 (99%)	179 (100%)	0	100	100
53	SJ	160/168 (95%)	160 (100%)	0	100	100
54	SK	188/202 (93%)	188 (100%)	0	100	100
55	SL	130/142 (92%)	130 (100%)	0	100	100
56	SM	88/136 (65%)	88 (100%)	0	100	100
57	SN	130/131 (99%)	130 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
58	SO	99/118 (84%)	99 (100%)	0	100	100
59	SP	111/130 (85%)	111 (100%)	0	100	100
60	SQ	115/121 (95%)	115 (100%)	0	100	100
61	SS	119/122 (98%)	119 (100%)	0	100	100
62	ST	127/132 (96%)	127 (100%)	0	100	100
63	SU	111/115 (96%)	111 (100%)	0	100	100
64	SV	67/67 (100%)	67 (100%)	0	100	100
65	SW	112/113 (99%)	112 (100%)	0	100	100
66	SX	111/114 (97%)	111 (100%)	0	100	100
67	SY	107/114 (94%)	107 (100%)	0	100	100
68	SZ	92/107 (86%)	92 (100%)	0	100	100
69	Sa	86/98 (88%)	86 (100%)	0	100	100
70	Sb	75/76 (99%)	75 (100%)	0	100	100
71	Sc	74/103 (72%)	74 (100%)	0	100	100
72	Sd	55/62 (89%)	55 (100%)	0	100	100
73	Se	45/104 (43%)	45 (100%)	0	100	100
74	Sf	37/49 (76%)	37 (100%)	0	100	100
75	Sg	263/275 (96%)	263 (100%)	0	100	100
76	So	24/24 (100%)	24 (100%)	0	100	100
77	Sy	103/108 (95%)	103 (100%)	0	100	100
78	Sz	15/140 (11%)	15 (100%)	0	100	100
All	All	9657/10823 (89%)	9657 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (87) such sidechains are listed below:

Mol	Chain	Res	Type
3	L8	198	HIS
3	L8	244	HIS
5	LB	11	HIS
5	LB	138	GLN
5	LB	204	GLN
5	LB	376	HIS

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Mol	Chain	Res	Type
6	LC	43	ASN
6	LC	178	ASN
6	LC	286	ASN
7	LD	218	HIS
8	LE	14	ASN
8	LE	61	HIS
8	LE	96	HIS
9	LF	192	HIS
9	LF	239	GLN
10	LG	64	GLN
10	LG	82	GLN
12	LI	23	HIS
12	LI	80	HIS
12	LI	81	ASN
12	LI	102	ASN
13	LJ	71	HIS
13	LJ	112	HIS
15	LM	69	HIS
16	LN	158	HIS
16	LN	201	HIS
17	LO	20	GLN
21	LS	50	GLN
21	LS	66	GLN
23	LU	33	ASN
25	LW	50	ASN
25	LW	59	HIS
27	LZ	127	ASN
28	La	62	HIS
28	La	120	GLN
29	Lb	49	HIS
29	Lb	60	ASN
30	Lc	72	HIS
35	Lh	28	ASN
35	Lh	34	GLN
35	Lh	93	HIS
37	Lj	21	GLN
38	Lk	58	GLN
39	Ll	21	ASN
40	Lm	50	ASN
41	Ln	73	HIS
41	Ln	151	ASN
42	Lo	104	HIS

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Mol	Chain	Res	Type
43	Lp	33	GLN
44	Lz	73	ASN
45	S1	76	ASN
45	S1	208	HIS
46	SA	70	ASN
46	SA	169	HIS
47	SC	115	GLN
47	SC	267	GLN
49	SE	157	ASN
50	SG	163	ASN
50	SG	197	GLN
51	SH	168	HIS
51	SH	193	GLN
52	SI	116	HIS
54	SK	74	GLN
54	SK	145	GLN
55	SL	94	HIS
56	SM	28	HIS
56	SM	42	ASN
56	SM	44	HIS
56	SM	61	GLN
57	SN	123	HIS
59	SP	35	GLN
60	SQ	114	GLN
62	ST	19	ASN
62	ST	105	ASN
65	SW	82	GLN
66	SX	16	HIS
67	SY	63	HIS
67	SY	94	HIS
72	Sd	29	GLN
73	Se	118	ASN
74	Sf	37	ASN
75	Sg	26	GLN
75	Sg	222	ASN
75	Sg	244	ASN
77	Sy	19	GLN
77	Sy	48	HIS
77	Sy	72	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	L1	145/157 (92%)	15 (10%)	0
2	L5	3488/5069 (68%)	596 (17%)	18 (0%)
4	L9	119/121 (98%)	8 (6%)	0
79	S2	1628/1869 (87%)	297 (18%)	8 (0%)
All	All	5380/7216 (74%)	916 (17%)	26 (0%)

All (916) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	L1	23	C
1	L1	34	U
1	L1	35	C
1	L1	48	A
1	L1	52	A
1	L1	59	A
1	L1	60	G
1	L1	62	A
1	L1	63	U
1	L1	94	G
1	L1	103	A
1	L1	104	A
1	L1	105	C
1	L1	110	U
1	L1	114	G
2	L5	39	A
2	L5	42	A
2	L5	48	G
2	L5	59	A
2	L5	64	A
2	L5	65	A
2	L5	71	C
2	L5	73	A
2	L5	85	G
2	L5	91	G
2	L5	98	A
2	L5	110	C
2	L5	116	G
2	L5	117	C
2	L5	119	G
2	L5	120	A
2	L5	121	A
2	L5	122	U
2	L5	133	C

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Mol	Chain	Res	Type
2	L5	134	G
2	L5	135	G
2	L5	136	C
2	L5	137	G
2	L5	143	C
2	L5	144	G
2	L5	152	U
2	L5	159	C
2	L5	164	G
2	L5	165	A
2	L5	166	C
2	L5	169	G
2	L5	171	U
2	L5	172	C
2	L5	179	G
2	L5	197	A
2	L5	200	U
2	L5	209	U
2	L5	210	C
2	L5	219	G
2	L5	220	C
2	L5	233	U
2	L5	234	G
2	L5	238	C
2	L5	249	C
2	L5	252	C
2	L5	255	C
2	L5	257	C
2	L5	258	G
2	L5	260	C
2	L5	263	G
2	L5	266	C
2	L5	269	G
2	L5	280	G
2	L5	297	U
2	L5	315	G
2	L5	316	U
2	L5	340	C
2	L5	349	A
2	L5	362	A
2	L5	364	G
2	L5	387	G

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Mol	Chain	Res	Type
2	L5	409	G
2	L5	410	A
2	L5	412	G
2	L5	413	G
2	L5	432	U
2	L5	449	C
2	L5	450	G
2	L5	451	C
2	L5	454	U
2	L5	462	G
2	L5	465	G
2	L5	466	A
2	L5	467	U
2	L5	483	G
2	L5	484	U
2	L5	489	C
2	L5	490	C
2	L5	491	G
2	L5	492	U
2	L5	493	G
2	L5	495	C
2	L5	496	G
2	L5	498	C
2	L5	505	G
2	L5	509	A
2	L5	510	U
2	L5	663	G
2	L5	665	C
2	L5	666	G
2	L5	669	C
2	L5	683	C
2	L5	685	C
2	L5	686	A
2	L5	687	U
2	L5	696	C
2	L5	697	G
2	L5	701	G
2	L5	704	C
2	L5	705	G
2	L5	720	G
2	L5	731	G
2	L5	738	C

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Mol	Chain	Res	Type
2	L5	739	G
2	L5	740	G
2	L5	742	G
2	L5	743	G
2	L5	744	G
2	L5	754	U
2	L5	756	G
2	L5	757	G
2	L5	758	G
2	L5	759	G
2	L5	760	G
2	L5	904	C
2	L5	905	C
2	L5	910	G
2	L5	911	U
2	L5	912	G
2	L5	913	U
2	L5	914	U
2	L5	915	A
2	L5	917	A
2	L5	921	C
2	L5	923	C
2	L5	924	C
2	L5	926	G
2	L5	932	A
2	L5	933	G
2	L5	934	C
2	L5	935	A
2	L5	936	C
2	L5	944	A
2	L5	945	U
2	L5	959	G
2	L5	960	A
2	L5	961	G
2	L5	962	C
2	L5	965	G
2	L5	967	C
2	L5	968	C
2	L5	970	G
2	L5	971	U
2	L5	976	G
2	L5	982	U

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Mol	Chain	Res	Type
2	L5	983	C
2	L5	985	C
2	L5	986	C
2	L5	1066	G
2	L5	1067	G
2	L5	1068	G
2	L5	1069	G
2	L5	1070	G
2	L5	1071	C
2	L5	1073	G
2	L5	1077	C
2	L5	1078	A
2	L5	1083	U
2	L5	1168	G
2	L5	1170	G
2	L5	1171	G
2	L5	1173	G
2	L5	1178	G
2	L5	1179	U
2	L5	1180	C
2	L5	1181	C
2	L5	1182	C
2	L5	1183	C
2	L5	1184	A
2	L5	1198	G
2	L5	1203	G
2	L5	1205	G
2	L5	1211	G
2	L5	1214	C
2	L5	1215	C
2	L5	1216	C
2	L5	1221	G
2	L5	1222	A
2	L5	1241	C
2	L5	1253	G
2	L5	1254	A
2	L5	1255	A
2	L5	1258	G
2	L5	1259	G
2	L5	1261	G
2	L5	1266	G
2	L5	1268	G

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Mol	Chain	Res	Type
2	L5	1269	G
2	L5	1270	A
2	L5	1271	G
2	L5	1272	C
2	L5	1273	G
2	L5	1276	C
2	L5	1280	C
2	L5	1284	G
2	L5	1287	G
2	L5	1293	G
2	L5	1295	C
2	L5	1301	C
2	L5	1304	C
2	L5	1313	C
2	L5	1326	A2M
2	L5	1337	A
2	L5	1354	A
2	L5	1359	G
2	L5	1365	C
2	L5	1367	C
2	L5	1377	G
2	L5	1378	C
2	L5	1387	A
2	L5	1397	A
2	L5	1402	C
2	L5	1403	G
2	L5	1405	C
2	L5	1407	C
2	L5	1408	G
2	L5	1409	C
2	L5	1410	U
2	L5	1411	C
2	L5	1412	G
2	L5	1414	C
2	L5	1417	C
2	L5	1419	G
2	L5	1420	A
2	L5	1432	G
2	L5	1435	G
2	L5	1436	C
2	L5	1437	C
2	L5	1439	C

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Mol	Chain	Res	Type
2	L5	1441	C
2	L5	1443	A
2	L5	1444	G
2	L5	1447	C
2	L5	1448	G
2	L5	1449	C
2	L5	1452	A
2	L5	1453	G
2	L5	1483	C
2	L5	1498	G
2	L5	1502	G
2	L5	1534	A2M
2	L5	1547	A
2	L5	1552	G
2	L5	1566	C
2	L5	1571	G
2	L5	1578	U
2	L5	1591	U
2	L5	1596	U
2	L5	1614	C
2	L5	1624	G
2	L5	1625	OMG
2	L5	1631	A
2	L5	1633	G
2	L5	1634	A
2	L5	1654	G
2	L5	1661	C
2	L5	1676	C
2	L5	1677	PSU
2	L5	1694	C
2	L5	1697	G
2	L5	1705	G
2	L5	1718	C
2	L5	1719	A
2	L5	1734	G
2	L5	1735	U
2	L5	1740	C
2	L5	1742	A
2	L5	1750	G
2	L5	1755	C
2	L5	1756	U
2	L5	1757	U

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Mol	Chain	Res	Type
2	L5	1758	G
2	L5	1761	G
2	L5	1774	C
2	L5	1787	A
2	L5	1804	A
2	L5	1815	G
2	L5	1818	G
2	L5	1819	G
2	L5	1821	G
2	L5	1822	U
2	L5	1836	G
2	L5	1837	A
2	L5	1842	G
2	L5	1843	A
2	L5	1855	G
2	L5	1869	G
2	L5	1889	U
2	L5	1892	A
2	L5	1897	A
2	L5	1918	U
2	L5	1919	G
2	L5	1921	C
2	L5	1922	G
2	L5	1925	G
2	L5	1930	U
2	L5	1931	C
2	L5	1932	A
2	L5	1939	A
2	L5	1940	G
2	L5	1948	G
2	L5	1951	G
2	L5	1961	G
2	L5	1962	A
2	L5	1963	C
2	L5	2025	A
2	L5	2026	A
2	L5	2046	G
2	L5	2048	U
2	L5	2052	G
2	L5	2055	G
2	L5	2056	G
2	L5	2069	A

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Mol	Chain	Res	Type
2	L5	2084	C
2	L5	2092	G
2	L5	2095	A
2	L5	2096	G
2	L5	2097	U
2	L5	2098	G
2	L5	2101	C
2	L5	2103	G
2	L5	2104	G
2	L5	2106	G
2	L5	2258	C
2	L5	2261	G
2	L5	2277	C
2	L5	2289	C
2	L5	2300	A
2	L5	2301	G
2	L5	2313	A
2	L5	2316	G
2	L5	2348	G
2	L5	2351	OMC
2	L5	2360	A
2	L5	2364	OMG
2	L5	2395	A
2	L5	2397	G
2	L5	2401	A2M
2	L5	2421	G
2	L5	2422	OMC
2	L5	2450	G
2	L5	2469	C
2	L5	2470	C
2	L5	2475	G
2	L5	2479	G
2	L5	2503	G
2	L5	2504	C
2	L5	2505	C
2	L5	2506	G
2	L5	2513	A
2	L5	2519	U
2	L5	2529	A
2	L5	2530	U
2	L5	2554	U
2	L5	2565	A

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Mol	Chain	Res	Type
2	L5	2566	G
2	L5	2568	C
2	L5	2583	C
2	L5	2587	A
2	L5	2589	C
2	L5	2601	A
2	L5	2627	C
2	L5	2631	U
2	L5	2638	G
2	L5	2662	G
2	L5	2669	C
2	L5	2687	U
2	L5	2695	A
2	L5	2696	A
2	L5	2701	U
2	L5	2710	C
2	L5	2711	G
2	L5	2725	A
2	L5	2726	G
2	L5	2743	A
2	L5	2763	U
2	L5	2764	A
2	L5	2788	U
2	L5	2790	U
2	L5	2798	A
2	L5	2814	C
2	L5	2826	U
2	L5	2827	G
2	L5	2829	U
2	L5	2838	G
2	L5	2855	G
2	L5	2877	G
2	L5	2897	G
2	L5	2903	G
2	L5	2904	U
2	L5	2906	G
2	L5	2907	G
2	L5	2908	U
2	L5	2909	C
2	L5	3585	G
2	L5	3591	C
2	L5	3595	U

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Mol	Chain	Res	Type
2	L5	3596	A
2	L5	3597	G
2	L5	3598	C
2	L5	3605	C
2	L5	3618	C
2	L5	3626	G
2	L5	3635	A
2	L5	3644	U
2	L5	3662	A
2	L5	3664	G
2	L5	3673	C
2	L5	3674	G
2	L5	3702	A
2	L5	3711	A
2	L5	3713	U
2	L5	3714	G
2	L5	3748	A
2	L5	3753	G
2	L5	3760	A2M
2	L5	3761	C
2	L5	3776	G
2	L5	3777	G
2	L5	3783	A
2	L5	3785	A2M
2	L5	3786	U
2	L5	3811	G
2	L5	3812	C
2	L5	3814	U
2	L5	3817	A
2	L5	3819	G
2	L5	3838	U
2	L5	3839	G
2	L5	3840	U
2	L5	3876	A
2	L5	3877	A
2	L5	3878	C
2	L5	3879	G
2	L5	3897	G
2	L5	3898	G
2	L5	3901	A
2	L5	3902	A
2	L5	3906	A

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Mol	Chain	Res	Type
2	L5	3907	G
2	L5	3908	A
2	L5	3915	U
2	L5	3916	G
2	L5	3939	G
2	L5	4069	U
2	L5	4072	C
2	L5	4076	G
2	L5	4084	G
2	L5	4092	G
2	L5	4094	G
2	L5	4095	G
2	L5	4096	C
2	L5	4097	G
2	L5	4099	G
2	L5	4100	C
2	L5	4109	G
2	L5	4112	C
2	L5	4114	C
2	L5	4119	C
2	L5	4122	G
2	L5	4127	A
2	L5	4136	G
2	L5	4150	G
2	L5	4162	C
2	L5	4163	U
2	L5	4170	A
2	L5	4177	C
2	L5	4183	G
2	L5	4184	G
2	L5	4191	G
2	L5	4203	A
2	L5	4214	A
2	L5	4222	G
2	L5	4225	G
2	L5	4229	U
2	L5	4233	A
2	L5	4251	A
2	L5	4253	A
2	L5	4254	G
2	L5	4266	G
2	L5	4268	A

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Mol	Chain	Res	Type
2	L5	4273	A
2	L5	4281	A
2	L5	4282	A
2	L5	4291	G
2	L5	4305	G
2	L5	4329	G
2	L5	4330	G
2	L5	4332	C
2	L5	4339	A
2	L5	4349	C
2	L5	4364	G
2	L5	4373	G
2	L5	4376	A
2	L5	4377	G
2	L5	4378	A
2	L5	4387	C
2	L5	4391	G
2	L5	4394	A
2	L5	4420	PSU
2	L5	4422	A
2	L5	4433	G
2	L5	4448	G
2	L5	4449	A
2	L5	4452	U
2	L5	4464	A
2	L5	4466	C
2	L5	4475	G
2	L5	4500	PSU
2	L5	4512	U
2	L5	4513	A
2	L5	4519	C
2	L5	4524	G
2	L5	4528	G
2	L5	4548	A
2	L5	4560	C
2	L5	4567	G
2	L5	4573	G
2	L5	4574	U
2	L5	4590	A2M
2	L5	4600	G
2	L5	4636	PSU
2	L5	4637	OMG

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Mol	Chain	Res	Type
2	L5	4656	A
2	L5	4670	C
2	L5	4672	A
2	L5	4700	A
2	L5	4708	A
2	L5	4709	U
2	L5	4719	G
2	L5	4730	C
2	L5	4731	G
2	L5	4732	G
2	L5	4733	C
2	L5	4740	G
2	L5	4741	C
2	L5	4742	G
2	L5	4751	G
2	L5	4754	G
2	L5	4757	C
2	L5	4759	C
2	L5	4765	G
2	L5	4774	C
2	L5	4775	C
2	L5	4776	G
2	L5	4859	C
2	L5	4860	G
2	L5	4862	G
2	L5	4863	G
2	L5	4870	OMG
2	L5	4871	C
2	L5	4882	U
2	L5	4883	C
2	L5	4886	C
2	L5	4887	C
2	L5	4889	G
2	L5	4895	C
2	L5	4900	C
2	L5	4901	G
2	L5	4910	A
2	L5	4912	G
2	L5	4914	C
2	L5	4923	C
2	L5	4940	C
2	L5	4943	A

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Mol	Chain	Res	Type
2	L5	4944	C
2	L5	4961	G
2	L5	4966	A
2	L5	4967	A
2	L5	4976	U
2	L5	4988	U
2	L5	4989	U
2	L5	4990	C
2	L5	4991	U
2	L5	4992	G
2	L5	5007	A
2	L5	5013	C
2	L5	5019	A
2	L5	5022	U
2	L5	5024	C
2	L5	5025	C
2	L5	5026	U
2	L5	5027	C
2	L5	5028	G
2	L5	5029	C
2	L5	5030	U
2	L5	5034	A
2	L5	5041	G
2	L5	5048	A
2	L5	5050	C
2	L5	5054	C
2	L5	5055	G
2	L5	5058	A
2	L5	5061	A
2	L5	5062	G
2	L5	5068	G
4	L9	37	G
4	L9	38	U
4	L9	42	A
4	L9	53	U
4	L9	54	A
4	L9	64	G
4	L9	110	G
4	L9	120	U
79	S2	17	C
79	S2	23	G
79	S2	33	G

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Mol	Chain	Res	Type
79	S2	41	G
79	S2	46	A
79	S2	56	G
79	S2	59	U
79	S2	65	C
79	S2	67	C
79	S2	68	A
79	S2	71	G
79	S2	72	C
79	S2	73	C
79	S2	74	G
79	S2	75	G
79	S2	77	A
79	S2	82	G
79	S2	103	A
79	S2	113	G
79	S2	115	U
79	S2	122	G
79	S2	126	G
79	S2	130	G
79	S2	143	U
79	S2	150	A
79	S2	151	C
79	S2	155	G
79	S2	156	G
79	S2	168	C
79	S2	173	A
79	S2	179	C
79	S2	196	C
79	S2	197	U
79	S2	198	U
79	S2	199	C
79	S2	200	G
79	S2	202	G
79	S2	203	G
79	S2	204	G
79	S2	205	G
79	S2	208	G
79	S2	210	PSU
79	S2	211	G
79	S2	212	C
79	S2	293	C

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Mol	Chain	Res	Type
79	S2	307	G
79	S2	308	G
79	S2	309	G
79	S2	311	C
79	S2	312	G
79	S2	319	C
79	S2	323	C
79	S2	324	C
79	S2	325	C
79	S2	326	C
79	S2	327	G
79	S2	328	U
79	S2	329	G
79	S2	330	G
79	S2	332	G
79	S2	333	G
79	S2	335	G
79	S2	347	G
79	S2	356	C
79	S2	360	A
79	S2	362	C
79	S2	364	A
79	S2	369	C
79	S2	370	G
79	S2	383	G
79	S2	385	G
79	S2	386	C
79	S2	407	G
79	S2	409	C
79	S2	448	A
79	S2	449	A
79	S2	450	C
79	S2	452	G
79	S2	464	A
79	S2	466	G
79	S2	471	G
79	S2	472	C
79	S2	474	G
79	S2	482	G
79	S2	487	U
79	S2	488	U
79	S2	492	C

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Mol	Chain	Res	Type
79	S2	493	A
79	S2	494	C
79	S2	496	C
79	S2	516	A
79	S2	525	A
79	S2	553	U
79	S2	554	A
79	S2	555	A
79	S2	556	U
79	S2	563	G
79	S2	576	A2M
79	S2	587	A
79	S2	589	G
79	S2	591	U
79	S2	592	C
79	S2	607	U
79	S2	608	C
79	S2	613	G
79	S2	614	C
79	S2	615	C
79	S2	617	G
79	S2	626	G
79	S2	627	OMU
79	S2	628	A
79	S2	633	C
79	S2	643	A
79	S2	655	A
79	S2	664	A
79	S2	668	A2M
79	S2	669	A
79	S2	671	A
79	S2	672	A
79	S2	688	U
79	S2	800	U
79	S2	808	A
79	S2	821	G
79	S2	822	PSU
79	S2	830	A
79	S2	835	C
79	S2	836	G
79	S2	837	A
79	S2	838	G

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Mol	Chain	Res	Type
79	S2	839	C
79	S2	840	C
79	S2	841	G
79	S2	847	A
79	S2	870	A
79	S2	871	U
79	S2	872	A
79	S2	875	A
79	S2	878	G
79	S2	880	G
79	S2	883	U
79	S2	884	C
79	S2	888	U
79	S2	889	U
79	S2	891	G
79	S2	892	U
79	S2	893	U
79	S2	894	G
79	S2	896	U
79	S2	898	U
79	S2	900	C
79	S2	901	G
79	S2	903	A
79	S2	904	A
79	S2	913	A
79	S2	920	A
79	S2	922	A
79	S2	933	G
79	S2	939	U
79	S2	943	U
79	S2	956	G
79	S2	990	A
79	S2	992	A
79	S2	1001	A
79	S2	1017	U
79	S2	1061	U
79	S2	1062	A
79	S2	1083	A
79	S2	1085	C
79	S2	1109	C
79	S2	1115	U
79	S2	1116	C

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Mol	Chain	Res	Type
79	S2	1119	A
79	S2	1121	G
79	S2	1139	C
79	S2	1150	A
79	S2	1154	U
79	S2	1195	A
79	S2	1198	G
79	S2	1203	G
79	S2	1207	G
79	S2	1211	G
79	S2	1215	C
79	S2	1224	G
79	S2	1227	G
79	S2	1235	G
79	S2	1242	U
79	S2	1248	B8N
79	S2	1251	A
79	S2	1253	A
79	S2	1256	G
79	S2	1257	G
79	S2	1259	A
79	S2	1260	A
79	S2	1273	C
79	S2	1274	G
79	S2	1275	G
79	S2	1281	G
79	S2	1284	A
79	S2	1286	G
79	S2	1287	A
79	S2	1289	U
79	S2	1291	A
79	S2	1292	C
79	S2	1293	A
79	S2	1294	G
79	S2	1295	A
79	S2	1297	U
79	S2	1302	G
79	S2	1303	C
79	S2	1308	U
79	S2	1309	C
79	S2	1311	C
79	S2	1312	G

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Mol	Chain	Res	Type
79	S2	1317	C
79	S2	1318	G
79	S2	1320	G
79	S2	1321	G
79	S2	1343	U
79	S2	1345	G
79	S2	1371	U
79	S2	1372	U
79	S2	1378	A
79	S2	1397	U
79	S2	1402	A
79	S2	1404	U
79	S2	1405	A
79	S2	1406	G
79	S2	1408	U
79	S2	1410	C
79	S2	1413	G
79	S2	1415	C
79	S2	1416	C
79	S2	1431	G
79	S2	1438	A
79	S2	1441	U
79	S2	1447	G
79	S2	1454	A
79	S2	1462	U
79	S2	1463	U
79	S2	1471	C
79	S2	1477	U
79	S2	1487	A
79	S2	1489	A
79	S2	1490	OMG
79	S2	1497	G
79	S2	1498	A
79	S2	1506	A
79	S2	1507	G
79	S2	1510	G
79	S2	1521	C
79	S2	1522	A
79	S2	1533	A
79	S2	1534	C
79	S2	1541	G
79	S2	1555	U

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Mol	Chain	Res	Type
79	S2	1556	A
79	S2	1557	C
79	S2	1558	C
79	S2	1563	G
79	S2	1579	A
79	S2	1580	A
79	S2	1582	C
79	S2	1588	A
79	S2	1598	G
79	S2	1600	G
79	S2	1601	A
79	S2	1606	G
79	S2	1621	U
79	S2	1623	A
79	S2	1632	G
79	S2	1639	7MG
79	S2	1647	A
79	S2	1654	G
79	S2	1661	A
79	S2	1664	A
79	S2	1665	G
79	S2	1680	G
79	S2	1700	C
79	S2	1721	U
79	S2	1722	G
79	S2	1727	G
79	S2	1744	G
79	S2	1750	C
79	S2	1825	A
79	S2	1826	G
79	S2	1829	G
79	S2	1831	A
79	S2	1835	A
79	S2	1838	U
79	S2	1849	G
79	S2	1851	MA6
79	S2	1852	C
79	S2	1861	G
79	S2	1862	G
79	S2	1863	A
79	S2	1864	U
79	S2	1865	C

All (26) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	L5	84	A
2	L5	171	U
2	L5	237	G
2	L5	254	G
2	L5	257	C
2	L5	464	G
2	L5	465	G
2	L5	1401	C
2	L5	1438	U
2	L5	1440	U
2	L5	1590	C
2	L5	1633	G
2	L5	2529	A
2	L5	2763	U
2	L5	3597	G
2	L5	3876	A
2	L5	4699	U
2	L5	5026	U
79	S2	73	C
79	S2	307	G
79	S2	554	A
79	S2	607	U
79	S2	836	G
79	S2	874	G
79	S2	912	C
79	S2	1520	G

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

223 non-standard protein/DNA/RNA residues are modelled in this entry.

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	$\#\|Z\| > 2$
2	OMG	L5	1522	2	23,26,27	1.19	3 (13%)	32,38,41	2.05	7 (21%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
79	PSU	S2	1045	79	18,21,22	1.34	3 (16%)	21,30,33	2.15	4 (19%)
79	OMG	S2	509	80,79	23,26,27	1.20	3 (13%)	32,38,41	1.97	5 (15%)
79	PSU	S2	1367	79	18,21,22	1.36	3 (16%)	21,30,33	2.03	3 (14%)
2	A2M	L5	4523	2	22,25,26	1.33	2 (9%)	30,36,39	1.21	4 (13%)
2	PSU	L5	3844	2	18,21,22	1.36	3 (16%)	21,30,33	2.12	3 (14%)
79	PSU	S2	918	79	18,21,22	1.43	3 (16%)	21,30,33	2.11	5 (23%)
79	PSU	S2	1244	79	18,21,22	1.37	2 (11%)	21,30,33	2.03	4 (19%)
2	A2M	L5	1534	2,80	22,25,26	1.29	1 (4%)	30,36,39	1.00	1 (3%)
79	OMC	S2	1710	79	19,22,23	0.79	0	25,31,34	0.79	0
2	OMG	L5	3744	2	23,26,27	1.19	3 (13%)	32,38,41	2.02	6 (18%)
2	PSU	L5	4689	2	18,21,22	1.40	4 (22%)	21,30,33	2.02	3 (14%)
2	UR3	L5	4530	2	19,22,23	0.91	1 (5%)	26,32,35	1.77	3 (11%)
79	MA6	S2	1851	79	23,26,27	1.45	5 (21%)	33,38,41	2.35	12 (36%)
2	PSU	L5	4579	2	18,21,22	1.40	4 (22%)	21,30,33	2.10	3 (14%)
2	PSU	L5	5001	2	18,21,22	1.44	4 (22%)	21,30,33	2.12	4 (19%)
79	A2M	S2	1031	79	22,25,26	1.28	1 (4%)	30,36,39	0.99	1 (3%)
79	A2M	S2	484	79	22,25,26	1.32	2 (9%)	30,36,39	1.02	3 (10%)
2	2MG	L5	729	2	23,26,27	1.29	2 (8%)	33,38,41	1.45	4 (12%)
2	5MC	L5	3782	2,80	19,22,23	1.57	3 (15%)	26,32,35	1.17	3 (11%)
79	OMU	S2	1288	79	19,22,23	1.21	4 (21%)	25,31,34	1.85	5 (20%)
2	1MA	L5	1322	2,80	21,25,26	0.74	1 (4%)	30,37,40	1.32	5 (16%)
2	PSU	L5	1683	2,81	18,21,22	1.44	3 (16%)	21,30,33	2.17	3 (14%)
2	OMG	L5	4196	2	23,26,27	1.19	3 (13%)	32,38,41	1.96	7 (21%)
2	OMG	L5	4499	2	23,26,27	1.18	3 (13%)	32,38,41	2.06	7 (21%)
79	OMG	S2	436	79	23,26,27	1.20	3 (13%)	32,38,41	2.02	6 (18%)
2	OMU	L5	4306	2	19,22,23	1.31	3 (15%)	25,31,34	1.94	5 (20%)
79	OMU	S2	116	79	19,22,23	1.22	3 (15%)	25,31,34	1.90	5 (20%)
2	A2M	L5	400	2	22,25,26	1.34	1 (4%)	30,36,39	1.00	4 (13%)
2	6MZ	L5	4220	2	22,25,26	1.48	3 (13%)	29,36,39	2.26	10 (34%)
79	PSU	S2	119	79	18,21,22	1.37	3 (16%)	21,30,33	2.10	4 (19%)
79	OMU	S2	627	79	19,22,23	1.19	2 (10%)	25,31,34	1.85	5 (20%)
2	PSU	L5	4296	2	18,21,22	1.43	4 (22%)	21,30,33	2.28	4 (19%)
2	PSU	L5	4552	2	18,21,22	1.39	3 (16%)	21,30,33	2.15	4 (19%)
7	V5N	LD	216	7	8,11,12	1.51	2 (25%)	8,14,16	1.67	3 (37%)
2	PSU	L5	1792	2,81	18,21,22	1.38	4 (22%)	21,30,33	1.96	3 (14%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	JMH	L5	1456	2	18,22,23	2.72	6 (33%)	23,32,35	1.00	0
2	OMG	L5	4370	2	23,26,27	1.16	3 (13%)	32,38,41	2.04	7 (21%)
2	OMU	L5	4620	2	19,22,23	1.32	3 (15%)	25,31,34	1.80	5 (20%)
79	PSU	S2	36	79	18,21,22	1.39	3 (16%)	21,30,33	2.08	4 (19%)
79	A2M	S2	668	80,79	22,25,26	1.37	2 (9%)	30,36,39	1.02	1 (3%)
2	OMC	L5	2804	2	19,22,23	0.79	0	25,31,34	0.69	0
2	PSU	L5	3770	2	18,21,22	1.34	2 (11%)	21,30,33	2.12	4 (19%)
79	PSU	S2	1056	79	18,21,22	1.37	3 (16%)	21,30,33	2.17	4 (19%)
79	PSU	S2	1232	79	18,21,22	1.40	2 (11%)	21,30,33	2.03	4 (19%)
2	PSU	L5	3639	2	18,21,22	1.42	3 (16%)	21,30,33	2.03	4 (19%)
79	A2M	S2	512	79	22,25,26	1.35	1 (4%)	30,36,39	1.08	3 (10%)
79	A2M	S2	159	79	22,25,26	1.38	1 (4%)	30,36,39	1.08	3 (10%)
2	PSU	L5	4628	2	18,21,22	1.40	4 (22%)	21,30,33	2.11	5 (23%)
79	OMU	S2	1442	79	19,22,23	1.24	3 (15%)	25,31,34	1.85	4 (16%)
2	A2M	L5	1326	2	22,25,26	1.26	1 (4%)	30,36,39	1.03	2 (6%)
2	A2M	L5	1871	2,80	22,25,26	1.23	1 (4%)	30,36,39	1.13	2 (6%)
2	PSU	L5	4673	2	18,21,22	1.43	3 (16%)	21,30,33	2.18	3 (14%)
2	OMU	L5	4227	2	19,22,23	1.27	3 (15%)	25,31,34	1.83	4 (16%)
79	PSU	S2	686	79	18,21,22	1.39	2 (11%)	21,30,33	2.08	4 (19%)
79	7MG	S2	1639	79	23,26,27	1.04	1 (4%)	27,39,42	0.91	2 (7%)
79	OMC	S2	517	79	19,22,23	0.74	0	25,31,34	0.81	0
66	HY3	SX	62	66	7,8,9	0.93	0	7,10,12	1.19	0
2	PSU	L5	1860	2	18,21,22	1.44	3 (16%)	21,30,33	2.05	4 (19%)
2	PSU	L5	1677	2	18,21,22	1.50	4 (22%)	21,30,33	2.15	5 (23%)
79	A2M	S2	99	80,79	22,25,26	1.34	2 (9%)	30,36,39	1.07	3 (10%)
79	OMG	S2	1490	80,79	23,26,27	1.20	3 (13%)	32,38,41	2.00	6 (18%)
79	PSU	S2	815	79	18,21,22	1.42	4 (22%)	21,30,33	2.15	4 (19%)
2	PSU	L5	4361	2	18,21,22	1.41	3 (16%)	21,30,33	2.00	3 (14%)
2	A2M	L5	4571	2	22,25,26	1.26	1 (4%)	30,36,39	0.95	1 (3%)
79	PSU	S2	866	79	18,21,22	1.36	2 (11%)	21,30,33	2.13	4 (19%)
2	OMG	L5	2050	2	23,26,27	1.18	3 (13%)	32,38,41	2.17	9 (28%)
2	A2M	L5	2401	2	22,25,26	1.25	2 (9%)	30,36,39	1.00	2 (6%)
2	PSU	L5	3637	2,81	18,21,22	1.44	3 (16%)	21,30,33	2.08	5 (23%)
79	PSU	S2	651	79	18,21,22	1.35	3 (16%)	21,30,33	2.08	4 (19%)
79	PSU	S2	1177	79	18,21,22	1.36	3 (16%)	21,30,33	2.18	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
1	OMG	L1	75	1	23,26,27	1.21	3 (13%)	32,38,41	1.95	6 (18%)
2	PSU	L5	1782	2	18,21,22	1.43	4 (22%)	21,30,33	2.19	4 (19%)
2	PSU	L5	1781	2	18,21,22	1.45	3 (16%)	21,30,33	2.23	4 (19%)
79	PSU	S2	34	79	18,21,22	1.37	2 (11%)	21,30,33	2.10	5 (23%)
2	PSU	L5	3851	2	18,21,22	1.35	3 (16%)	21,30,33	2.02	6 (28%)
2	OMU	L5	4498	2	19,22,23	1.25	3 (15%)	25,31,34	1.93	5 (20%)
79	PSU	S2	218	79	18,21,22	1.38	3 (16%)	21,30,33	2.09	5 (23%)
79	PSU	S2	1347	79	18,21,22	1.35	2 (11%)	21,30,33	2.06	3 (14%)
79	OMC	S2	1703	79	19,22,23	0.78	0	25,31,34	0.76	0
2	OMC	L5	3808	2	19,22,23	0.78	0	25,31,34	0.84	1 (4%)
2	PSU	L5	4457	2	18,21,22	1.41	3 (16%)	21,30,33	2.08	5 (23%)
2	PSU	L5	3734	2	18,21,22	1.37	3 (16%)	21,30,33	2.10	4 (19%)
79	OMG	S2	644	79	23,26,27	1.18	3 (13%)	32,38,41	1.94	6 (18%)
79	PSU	S2	1046	79	18,21,22	1.33	3 (16%)	21,30,33	2.09	5 (23%)
79	PSU	S2	814	79	18,21,22	1.41	3 (16%)	21,30,33	2.07	5 (23%)
79	PSU	S2	609	79	18,21,22	1.35	3 (16%)	21,30,33	2.13	4 (19%)
2	PSU	L5	2632	2	18,21,22	1.44	3 (16%)	21,30,33	2.09	5 (23%)
2	PSU	L5	4972	2	18,21,22	1.41	3 (16%)	21,30,33	2.08	4 (19%)
79	OMC	S2	174	79	19,22,23	0.79	0	25,31,34	0.91	0
2	PSU	L5	4636	2	18,21,22	1.40	3 (16%)	21,30,33	2.13	4 (19%)
2	OMC	L5	3869	2	19,22,23	0.77	0	25,31,34	0.76	0
2	OMG	L5	4228	2	23,26,27	1.14	3 (13%)	32,38,41	2.02	6 (18%)
2	OMC	L5	2422	2,80	19,22,23	0.78	0	25,31,34	0.81	0
2	OMC	L5	1340	2	19,22,23	0.79	0	25,31,34	0.83	1 (4%)
79	PSU	S2	681	79	18,21,22	1.36	3 (16%)	21,30,33	2.05	3 (14%)
79	OMU	S2	121	79	19,22,23	1.23	2 (10%)	25,31,34	1.87	5 (20%)
2	PSU	L5	4532	2	18,21,22	1.37	2 (11%)	21,30,33	2.13	3 (14%)
2	UY1	L5	3818	2,81	19,22,23	1.67	5 (26%)	21,31,34	1.89	4 (19%)
2	OMG	L5	4392	2	23,26,27	1.22	3 (13%)	32,38,41	2.10	6 (18%)
79	PSU	S2	572	81,79	18,21,22	1.43	3 (16%)	21,30,33	2.07	5 (23%)
2	OMU	L5	1773	2	19,22,23	1.25	4 (21%)	25,31,34	1.74	5 (20%)
2	OMC	L5	2365	2	19,22,23	0.77	0	25,31,34	0.78	0
79	PSU	S2	109	79	18,21,22	1.40	3 (16%)	21,30,33	2.22	4 (19%)
79	PSU	S2	822	79	18,21,22	1.36	2 (11%)	21,30,33	2.10	4 (19%)
79	B8N	S2	1248	79	25,29,30	3.37	8 (32%)	28,42,45	1.98	7 (25%)
79	PSU	S2	93	79	18,21,22	1.41	3 (16%)	21,30,33	2.08	5 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
79	PSU	S2	1625	79	18,21,22	1.43	2 (11%)	21,30,33	2.05	4 (19%)
2	PSU	L5	3884	2	18,21,22	1.39	3 (16%)	21,30,33	2.13	4 (19%)
2	PSU	L5	1744	2,81	18,21,22	1.45	3 (16%)	21,30,33	2.05	4 (19%)
2	5MC	L5	4447	2,81	19,22,23	1.72	3 (15%)	26,32,35	1.28	3 (11%)
2	2MG	L5	1517	2	23,26,27	1.28	2 (8%)	33,38,41	1.44	4 (12%)
79	PSU	S2	210	79	18,21,22	1.37	2 (11%)	21,30,33	2.06	5 (23%)
2	A2M	L5	2815	2	22,25,26	1.25	1 (4%)	30,36,39	0.95	2 (6%)
2	A2M	L5	398	2	22,25,26	1.29	1 (4%)	30,36,39	1.03	3 (10%)
79	OMG	S2	867	79	23,26,27	1.17	3 (13%)	32,38,41	1.96	6 (18%)
79	OMG	S2	601	79	23,26,27	1.22	3 (13%)	32,38,41	2.02	7 (21%)
2	OMU	L5	2415	2	19,22,23	1.28	3 (15%)	25,31,34	1.81	4 (16%)
79	PSU	S2	1238	79	18,21,22	1.38	2 (11%)	21,30,33	2.08	4 (19%)
2	PSU	L5	3764	2	18,21,22	1.43	3 (16%)	21,30,33	2.07	6 (28%)
79	PSU	S2	1692	79	18,21,22	1.37	4 (22%)	21,30,33	2.05	4 (19%)
79	A2M	S2	1383	79	22,25,26	1.36	2 (9%)	30,36,39	1.08	2 (6%)
2	OMC	L5	2824	2	19,22,23	0.76	0	25,31,34	0.77	0
2	PSU	L5	3715	2	18,21,22	1.39	2 (11%)	21,30,33	2.08	5 (23%)
2	OMG	L5	2364	2	23,26,27	1.17	4 (17%)	32,38,41	1.99	6 (18%)
79	PSU	S2	1643	80,79	18,21,22	1.37	2 (11%)	21,30,33	2.05	4 (19%)
79	A2M	S2	27	80,79	22,25,26	1.30	2 (9%)	30,36,39	1.07	2 (6%)
79	PSU	S2	406	79	18,21,22	1.32	2 (11%)	21,30,33	2.17	4 (19%)
2	A2M	L5	2363	2,80	22,25,26	1.23	1 (4%)	30,36,39	1.03	3 (10%)
32	MLZ	Le	53	32	8,9,10	0.65	0	4,9,11	0.70	0
2	OMG	L5	4870	2	23,26,27	1.16	3 (13%)	32,38,41	2.01	6 (18%)
2	PSU	L5	4521	2,80,81	18,21,22	1.45	4 (22%)	21,30,33	1.93	5 (23%)
79	A2M	S2	166	79	22,25,26	1.42	3 (13%)	30,36,39	1.07	3 (10%)
2	OMG	L5	1625	2,81	23,26,27	1.22	3 (13%)	32,38,41	2.11	6 (18%)
79	OMG	S2	1328	79	23,26,27	1.20	3 (13%)	32,38,41	1.98	5 (15%)
2	PSU	L5	1862	2	18,21,22	1.36	3 (16%)	21,30,33	2.23	4 (19%)
2	A2M	L5	2787	2	22,25,26	1.31	2 (9%)	30,36,39	1.02	1 (3%)
2	A2M	L5	3760	2,79	22,25,26	1.30	1 (4%)	30,36,39	1.01	1 (3%)
79	4AC	S2	1337	79	21,24,25	3.20	11 (52%)	28,34,37	1.18	4 (14%)
2	OMU	L5	2837	2	19,22,23	1.25	3 (15%)	25,31,34	2.02	6 (24%)
2	PSU	L5	4293	2	18,21,22	1.42	3 (16%)	21,30,33	2.07	4 (19%)
2	A2M	L5	1524	2	22,25,26	1.40	2 (9%)	30,36,39	1.09	3 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	OMG	L5	4494	2	23,26,27	1.17	3 (13%)	32,38,41	2.07	5 (15%)
2	OMC	L5	3841	2	19,22,23	0.78	0	25,31,34	0.73	0
2	OMG	L5	1760	2	23,26,27	1.18	3 (13%)	32,38,41	1.96	6 (18%)
2	OMG	L5	3944	2	23,26,27	1.18	3 (13%)	32,38,41	2.03	7 (21%)
2	PSU	L5	4442	2	18,21,22	1.41	3 (16%)	21,30,33	2.05	4 (19%)
2	PSU	L5	1536	2	18,21,22	1.42	3 (16%)	21,30,33	2.18	4 (19%)
2	PSU	L5	2508	2	18,21,22	1.42	3 (16%)	21,30,33	2.11	5 (23%)
2	A2M	L5	3825	2	22,25,26	1.17	1 (4%)	30,36,39	0.97	2 (6%)
79	PSU	S2	105	79	18,21,22	1.41	3 (16%)	21,30,33	2.11	4 (19%)
2	PSU	L5	5010	2	18,21,22	1.42	4 (22%)	21,30,33	2.12	4 (19%)
1	PSU	L1	69	1	18,21,22	1.43	4 (22%)	21,30,33	2.09	4 (19%)
79	PSU	S2	1081	79	18,21,22	1.42	4 (22%)	21,30,33	2.06	5 (23%)
2	PSU	L5	4353	2	18,21,22	1.36	3 (16%)	21,30,33	2.11	5 (23%)
79	PSU	S2	966	79	18,21,22	1.34	3 (16%)	21,30,33	1.97	4 (19%)
2	PSU	L5	4420	2	18,21,22	1.42	4 (22%)	21,30,33	2.08	4 (19%)
79	PSU	S2	801	79	18,21,22	1.39	3 (16%)	21,30,33	2.15	4 (19%)
79	PSU	S2	863	79	18,21,22	1.37	3 (16%)	21,30,33	2.18	4 (19%)
2	OMG	L5	2424	2	23,26,27	1.23	3 (13%)	32,38,41	2.00	5 (15%)
2	OMG	L5	2876	2	23,26,27	1.20	3 (13%)	32,38,41	2.07	7 (21%)
2	PSU	L5	4312	2	18,21,22	1.45	3 (16%)	21,30,33	2.16	4 (19%)
2	PSU	L5	4431	2	18,21,22	1.45	3 (16%)	21,30,33	2.13	4 (19%)
79	OMU	S2	1804	79	19,22,23	1.27	4 (21%)	25,31,34	1.84	4 (16%)
79	OMU	S2	799	79	19,22,23	1.24	2 (10%)	25,31,34	1.86	5 (20%)
79	OMC	S2	1391	79	19,22,23	0.79	0	25,31,34	0.84	0
79	4AC	S2	1842	81,79	21,24,25	3.13	10 (47%)	28,34,37	1.13	3 (10%)
2	OMC	L5	1881	2,80	19,22,23	0.79	1 (5%)	25,31,34	0.92	0
79	A2M	S2	468	79	22,25,26	1.32	1 (4%)	30,36,39	1.06	3 (10%)
2	A2M	L5	3867	2	22,25,26	1.37	2 (9%)	30,36,39	1.07	2 (6%)
2	PSU	L5	3758	2	18,21,22	1.36	2 (11%)	21,30,33	2.10	4 (19%)
79	PSU	S2	1174	81,79	18,21,22	1.40	3 (16%)	21,30,33	2.15	4 (19%)
2	PSU	L5	4471	2	18,21,22	1.42	4 (22%)	21,30,33	2.02	3 (14%)
2	OMG	L5	4618	2	23,26,27	1.19	4 (17%)	32,38,41	2.04	8 (25%)
2	PSU	L5	3762	2	18,21,22	1.36	2 (11%)	21,30,33	1.99	5 (23%)
79	PSU	S2	649	79	18,21,22	1.38	3 (16%)	21,30,33	2.15	4 (19%)
28	V5N	La	39	28	8,11,12	1.29	1 (12%)	8,14,16	2.03	3 (37%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	OMG	L5	3899	2,80	23,26,27	1.19	3 (13%)	32,38,41	2.14	9 (28%)
5	HIC	LB	245	5	10,11,12	1.04	0	9,14,16	2.50	2 (22%)
79	PSU	S2	1445	79	18,21,22	1.36	2 (11%)	21,30,33	2.12	4 (19%)
79	A2M	S2	590	79	22,25,26	1.40	3 (13%)	30,36,39	1.10	3 (10%)
79	MA6	S2	1850	79	23,26,27	1.50	5 (21%)	33,38,41	2.34	13 (39%)
2	PSU	L5	3853	2,80	18,21,22	1.45	4 (22%)	21,30,33	2.11	5 (23%)
2	OMC	L5	2351	2,80	19,22,23	0.77	0	25,31,34	0.90	1 (4%)
79	OMU	S2	172	79	19,22,23	1.24	3 (15%)	25,31,34	1.90	5 (20%)
2	PSU	L5	3920	2,80	18,21,22	1.43	4 (22%)	21,30,33	2.08	4 (19%)
2	OMG	L5	4623	2	23,26,27	1.20	4 (17%)	32,38,41	2.07	6 (18%)
79	A2M	S2	576	81,79	22,25,26	1.26	2 (9%)	30,36,39	1.05	3 (10%)
79	PSU	S2	823	79	18,21,22	1.45	3 (16%)	21,30,33	2.09	4 (19%)
2	PSU	L5	4299	2	18,21,22	1.39	3 (16%)	21,30,33	2.18	4 (19%)
2	PSU	L5	3695	2,80,81	18,21,22	1.34	2 (11%)	21,30,33	2.17	4 (19%)
2	PSU	L5	4423	2	18,21,22	1.41	3 (16%)	21,30,33	1.99	4 (19%)
2	A2M	L5	4590	2	22,25,26	1.25	2 (9%)	30,36,39	1.10	4 (13%)
2	PSU	L5	4403	2	18,21,22	1.38	4 (22%)	21,30,33	2.06	4 (19%)
2	PSU	L5	4576	2	18,21,22	1.42	3 (16%)	21,30,33	2.14	4 (19%)
2	OMG	L5	3792	2,81	23,26,27	1.17	3 (13%)	32,38,41	1.98	6 (18%)
2	PSU	L5	3768	2	18,21,22	1.37	3 (16%)	21,30,33	2.10	4 (19%)
2	OMG	L5	4637	2,81	23,26,27	1.17	3 (13%)	32,38,41	2.09	6 (18%)
2	A2M	L5	3830	2	22,25,26	1.28	1 (4%)	30,36,39	1.11	1 (3%)
2	PSU	L5	3730	2	18,21,22	1.38	3 (16%)	21,30,33	2.16	4 (19%)
79	PSU	S2	1004	79	18,21,22	1.34	2 (11%)	21,30,33	2.09	3 (14%)
2	OMC	L5	4456	2	19,22,23	0.75	0	25,31,34	0.87	1 (4%)
2	OMG	L5	1316	2	23,26,27	1.17	4 (17%)	32,38,41	2.12	6 (18%)
29	MLZ	Lb	5	29	8,9,10	0.69	0	4,9,11	0.67	0
2	OMC	L5	3701	2,81	19,22,23	0.77	0	25,31,34	0.85	1 (4%)
2	PSU	L5	4500	2	18,21,22	1.39	2 (11%)	21,30,33	2.21	5 (23%)
79	OMU	S2	428	79	19,22,23	1.21	3 (15%)	25,31,34	1.90	5 (20%)
79	OMG	S2	683	79	23,26,27	1.19	3 (13%)	32,38,41	2.03	6 (18%)
79	6MZ	S2	1832	80,81,79	22,25,26	1.48	4 (18%)	29,36,39	2.15	8 (27%)
79	A2M	S2	1678	79	22,25,26	1.33	1 (4%)	30,36,39	1.04	2 (6%)
2	A2M	L5	3785	2	22,25,26	1.36	2 (9%)	30,36,39	1.28	4 (13%)
2	OMU	L5	3925	2	19,22,23	1.19	3 (15%)	25,31,34	2.05	5 (20%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
58	IAS	SO	138	58	6,7,8	1.11	0	3,8,10	2.10	1 (33%)
79	OMU	S2	1326	80,79	19,22,23	1.25	3 (15%)	25,31,34	1.94	5 (20%)
2	2MG	L5	4872	2	23,26,27	1.28	2 (8%)	33,38,41	1.42	4 (12%)
2	OMC	L5	4536	2	19,22,23	0.76	0	25,31,34	0.85	1 (4%)
2	PSU	L5	1582	2	18,21,22	1.40	4 (22%)	21,30,33	2.09	4 (19%)
42	M3L	Lo	98	42	10,11,12	0.83	0	9,14,16	0.69	0
2	OMC	L5	2861	2	19,22,23	0.77	0	25,31,34	0.84	0
2	A2M	L5	3718	2	22,25,26	1.19	1 (4%)	30,36,39	1.00	2 (6%)
79	OMC	S2	462	79	19,22,23	0.80	0	25,31,34	0.79	0
1	PSU	L1	55	1	18,21,22	1.36	3 (16%)	21,30,33	2.10	4 (19%)
2	OMC	L5	3887	2	19,22,23	0.80	1 (5%)	25,31,34	0.91	0

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
2	OMG	L5	1522	2	-	0/9/27/28	0/3/3/3
79	PSU	S2	1045	79	-	0/7/25/26	0/2/2/2
79	OMG	S2	509	80,79	-	0/9/27/28	0/3/3/3
79	PSU	S2	1367	79	-	0/7/25/26	0/2/2/2
2	A2M	L5	4523	2	-	0/9/27/28	0/3/3/3
2	PSU	L5	3844	2	-	1/7/25/26	0/2/2/2
79	PSU	S2	918	79	-	1/7/25/26	0/2/2/2
79	PSU	S2	1244	79	-	0/7/25/26	0/2/2/2
2	A2M	L5	1534	2,80	-	1/9/27/28	0/3/3/3
79	OMC	S2	1710	79	-	0/9/27/28	0/2/2/2
2	OMG	L5	3744	2	-	0/9/27/28	0/3/3/3
2	PSU	L5	4689	2	-	0/7/25/26	0/2/2/2
2	UR3	L5	4530	2	-	0/7/25/26	0/2/2/2
79	MA6	S2	1851	79	-	3/11/29/30	0/3/3/3
2	PSU	L5	4579	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	5001	2	-	0/7/25/26	0/2/2/2
79	A2M	S2	1031	79	-	1/9/27/28	0/3/3/3
79	A2M	S2	484	79	-	1/9/27/28	0/3/3/3
2	2MG	L5	729	2	-	1/9/27/28	0/3/3/3
2	5MC	L5	3782	2,80	-	0/7/25/26	0/2/2/2
79	OMU	S2	1288	79	-	1/9/27/28	0/2/2/2
2	1MA	L5	1322	2,80	-	2/7/25/26	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	PSU	L5	1683	2,81	-	0/7/25/26	0/2/2/2
2	OMG	L5	4196	2	-	0/9/27/28	0/3/3/3
2	OMG	L5	4499	2	-	0/9/27/28	0/3/3/3
79	OMG	S2	436	79	-	0/9/27/28	0/3/3/3
2	OMU	L5	4306	2	-	0/9/27/28	0/2/2/2
79	OMU	S2	116	79	-	0/9/27/28	0/2/2/2
2	A2M	L5	400	2	-	0/9/27/28	0/3/3/3
2	6MZ	L5	4220	2	-	0/9/27/28	0/3/3/3
79	PSU	S2	119	79	-	0/7/25/26	0/2/2/2
79	OMU	S2	627	79	-	4/9/27/28	0/2/2/2
2	PSU	L5	4296	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	4552	2	-	0/7/25/26	0/2/2/2
7	V5N	LD	216	7	-	1/9/10/12	0/1/1/1
2	PSU	L5	1792	2,81	-	0/7/25/26	0/2/2/2
2	JMH	L5	1456	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	4370	2	-	1/9/27/28	0/3/3/3
2	OMU	L5	4620	2	-	0/9/27/28	0/2/2/2
79	PSU	S2	36	79	-	0/7/25/26	0/2/2/2
79	A2M	S2	668	80,79	-	3/9/27/28	0/3/3/3
2	OMC	L5	2804	2	-	0/9/27/28	0/2/2/2
2	PSU	L5	3770	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	1056	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	1232	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	3639	2	-	0/7/25/26	0/2/2/2
79	A2M	S2	512	79	-	0/9/27/28	0/3/3/3
79	A2M	S2	159	79	-	0/9/27/28	0/3/3/3
2	PSU	L5	4628	2	-	0/7/25/26	0/2/2/2
79	OMU	S2	1442	79	-	2/9/27/28	0/2/2/2
2	A2M	L5	1326	2	-	3/9/27/28	0/3/3/3
2	A2M	L5	1871	2,80	-	0/9/27/28	0/3/3/3
2	PSU	L5	4673	2	-	0/7/25/26	0/2/2/2
2	OMU	L5	4227	2	-	1/9/27/28	0/2/2/2
79	PSU	S2	686	79	-	0/7/25/26	0/2/2/2
79	7MG	S2	1639	79	-	0/7/37/38	0/3/3/3
79	OMC	S2	517	79	-	1/9/27/28	0/2/2/2
66	HY3	SX	62	66	-	0/1/12/14	0/1/1/1
2	PSU	L5	1860	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	1677	2	-	0/7/25/26	0/2/2/2
79	A2M	S2	99	80,79	-	2/9/27/28	0/3/3/3
79	OMG	S2	1490	80,79	-	1/9/27/28	0/3/3/3
79	PSU	S2	815	79	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	PSU	L5	4361	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	4571	2	-	1/9/27/28	0/3/3/3
79	PSU	S2	866	79	-	0/7/25/26	0/2/2/2
2	OMG	L5	2050	2	-	0/9/27/28	0/3/3/3
2	A2M	L5	2401	2	-	2/9/27/28	0/3/3/3
2	PSU	L5	3637	2,81	-	0/7/25/26	0/2/2/2
79	PSU	S2	651	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	1177	79	-	0/7/25/26	0/2/2/2
1	OMG	L1	75	1	-	0/9/27/28	0/3/3/3
2	PSU	L5	1782	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	1781	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	34	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	3851	2	-	1/7/25/26	0/2/2/2
2	OMU	L5	4498	2	-	0/9/27/28	0/2/2/2
79	PSU	S2	218	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	1347	79	-	0/7/25/26	0/2/2/2
79	OMC	S2	1703	79	-	0/9/27/28	0/2/2/2
2	OMC	L5	3808	2	-	0/9/27/28	0/2/2/2
2	PSU	L5	4457	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	3734	2	-	2/7/25/26	0/2/2/2
79	OMG	S2	644	79	-	2/9/27/28	0/3/3/3
79	PSU	S2	1046	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	814	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	609	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	2632	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	4972	2	-	0/7/25/26	0/2/2/2
79	OMC	S2	174	79	-	1/9/27/28	0/2/2/2
2	PSU	L5	4636	2	-	2/7/25/26	0/2/2/2
2	OMC	L5	3869	2	-	0/9/27/28	0/2/2/2
2	OMG	L5	4228	2	-	0/9/27/28	0/3/3/3
2	OMC	L5	2422	2,80	-	0/9/27/28	0/2/2/2
2	OMC	L5	1340	2	-	0/9/27/28	0/2/2/2
79	PSU	S2	681	79	-	0/7/25/26	0/2/2/2
79	OMU	S2	121	79	-	0/9/27/28	0/2/2/2
2	PSU	L5	4532	2	-	0/7/25/26	0/2/2/2
2	UY1	L5	3818	2,81	-	1/9/27/28	0/2/2/2
2	OMG	L5	4392	2	-	0/9/27/28	0/3/3/3
79	PSU	S2	572	81,79	-	0/7/25/26	0/2/2/2
2	OMU	L5	1773	2	-	0/9/27/28	0/2/2/2
2	OMC	L5	2365	2	-	0/9/27/28	0/2/2/2
79	PSU	S2	109	79	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
79	PSU	S2	822	79	-	0/7/25/26	0/2/2/2
79	B8N	S2	1248	79	-	9/16/34/35	0/2/2/2
79	PSU	S2	93	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	1625	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	3884	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	1744	2,81	-	0/7/25/26	0/2/2/2
2	5MC	L5	4447	2,81	-	4/7/25/26	0/2/2/2
2	2MG	L5	1517	2	-	0/9/27/28	0/3/3/3
79	PSU	S2	210	79	-	4/7/25/26	0/2/2/2
2	A2M	L5	2815	2	-	1/9/27/28	0/3/3/3
2	A2M	L5	398	2	-	0/9/27/28	0/3/3/3
79	OMG	S2	867	79	-	0/9/27/28	0/3/3/3
79	OMG	S2	601	79	-	0/9/27/28	0/3/3/3
2	OMU	L5	2415	2	-	0/9/27/28	0/2/2/2
79	PSU	S2	1238	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	3764	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	1692	79	-	0/7/25/26	0/2/2/2
79	A2M	S2	1383	79	-	0/9/27/28	0/3/3/3
2	OMC	L5	2824	2	-	0/9/27/28	0/2/2/2
2	PSU	L5	3715	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	2364	2	-	2/9/27/28	0/3/3/3
79	PSU	S2	1643	80,79	-	0/7/25/26	0/2/2/2
79	A2M	S2	27	80,79	-	0/9/27/28	0/3/3/3
79	PSU	S2	406	79	-	0/7/25/26	0/2/2/2
2	A2M	L5	2363	2,80	-	0/9/27/28	0/3/3/3
32	MLZ	Le	53	32	-	0/7/8/10	-
2	OMG	L5	4870	2	-	3/9/27/28	0/3/3/3
2	PSU	L5	4521	2,80,81	-	2/7/25/26	0/2/2/2
79	A2M	S2	166	79	-	1/9/27/28	0/3/3/3
2	OMG	L5	1625	2,81	-	0/9/27/28	0/3/3/3
79	OMG	S2	1328	79	-	0/9/27/28	0/3/3/3
2	PSU	L5	1862	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	2787	2	-	3/9/27/28	0/3/3/3
2	A2M	L5	3760	2,79	-	5/9/27/28	0/3/3/3
79	4AC	S2	1337	79	-	0/11/29/30	0/2/2/2
2	OMU	L5	2837	2	-	1/9/27/28	0/2/2/2
2	PSU	L5	4293	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	1524	2	-	2/9/27/28	0/3/3/3
2	OMG	L5	4494	2	-	1/9/27/28	0/3/3/3
2	OMC	L5	3841	2	-	0/9/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	OMG	L5	1760	2	-	0/9/27/28	0/3/3/3
2	OMG	L5	3944	2	-	1/9/27/28	0/3/3/3
2	PSU	L5	4442	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	1536	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	2508	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	3825	2	-	0/9/27/28	0/3/3/3
79	PSU	S2	105	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	5010	2	-	0/7/25/26	0/2/2/2
1	PSU	L1	69	1	-	0/7/25/26	0/2/2/2
79	PSU	S2	1081	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	4353	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	966	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	4420	2	-	2/7/25/26	0/2/2/2
79	PSU	S2	801	79	-	0/7/25/26	0/2/2/2
79	PSU	S2	863	79	-	0/7/25/26	0/2/2/2
2	OMG	L5	2424	2	-	0/9/27/28	0/3/3/3
2	OMG	L5	2876	2	-	0/9/27/28	0/3/3/3
2	PSU	L5	4312	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	4431	2	-	0/7/25/26	0/2/2/2
79	OMU	S2	1804	79	-	0/9/27/28	0/2/2/2
79	OMU	S2	799	79	-	1/9/27/28	0/2/2/2
79	OMC	S2	1391	79	-	1/9/27/28	0/2/2/2
79	4AC	S2	1842	81,79	-	0/11/29/30	0/2/2/2
2	OMC	L5	1881	2,80	-	0/9/27/28	0/2/2/2
79	A2M	S2	468	79	-	1/9/27/28	0/3/3/3
2	A2M	L5	3867	2	-	2/9/27/28	0/3/3/3
2	PSU	L5	3758	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	1174	81,79	-	0/7/25/26	0/2/2/2
2	PSU	L5	4471	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	4618	2	-	1/9/27/28	0/3/3/3
2	PSU	L5	3762	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	649	79	-	0/7/25/26	0/2/2/2
28	V5N	La	39	28	-	1/9/10/12	0/1/1/1
2	OMG	L5	3899	2,80	-	0/9/27/28	0/3/3/3
5	HIC	LB	245	5	-	0/5/6/8	0/1/1/1
79	PSU	S2	1445	79	-	0/7/25/26	0/2/2/2
79	A2M	S2	590	79	-	1/9/27/28	0/3/3/3
79	MA6	S2	1850	79	-	1/11/29/30	0/3/3/3
2	PSU	L5	3853	2,80	-	0/7/25/26	0/2/2/2
2	OMC	L5	2351	2,80	-	1/9/27/28	0/2/2/2
79	OMU	S2	172	79	-	1/9/27/28	0/2/2/2
2	PSU	L5	3920	2,80	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	OMG	L5	4623	2	-	2/9/27/28	0/3/3/3
79	A2M	S2	576	81,79	-	2/9/27/28	0/3/3/3
79	PSU	S2	823	79	-	0/7/25/26	0/2/2/2
2	PSU	L5	4299	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	3695	2,80,81	-	0/7/25/26	0/2/2/2
2	PSU	L5	4423	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	4590	2	-	2/9/27/28	0/3/3/3
2	PSU	L5	4403	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	4576	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	3792	2,81	-	0/9/27/28	0/3/3/3
2	PSU	L5	3768	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	4637	2,81	-	0/9/27/28	0/3/3/3
2	A2M	L5	3830	2	-	0/9/27/28	0/3/3/3
2	PSU	L5	3730	2	-	0/7/25/26	0/2/2/2
79	PSU	S2	1004	79	-	0/7/25/26	0/2/2/2
2	OMC	L5	4456	2	-	0/9/27/28	0/2/2/2
2	OMG	L5	1316	2	-	1/9/27/28	0/3/3/3
29	MLZ	Lb	5	29	-	4/7/8/10	-
2	OMC	L5	3701	2,81	-	4/9/27/28	0/2/2/2
2	PSU	L5	4500	2	-	3/7/25/26	0/2/2/2
79	OMU	S2	428	79	-	3/9/27/28	0/2/2/2
79	OMG	S2	683	79	-	0/9/27/28	0/3/3/3
79	6MZ	S2	1832	80,81,79	-	2/9/27/28	0/3/3/3
79	A2M	S2	1678	79	-	1/9/27/28	0/3/3/3
2	A2M	L5	3785	2	-	4/9/27/28	0/3/3/3
2	OMU	L5	3925	2	-	0/9/27/28	0/2/2/2
58	IAS	SO	138	58	-	1/7/7/8	-
79	OMU	S2	1326	80,79	-	0/9/27/28	0/2/2/2
2	2MG	L5	4872	2	-	0/9/27/28	0/3/3/3
2	OMC	L5	4536	2	-	0/9/27/28	0/2/2/2
2	PSU	L5	1582	2	-	0/7/25/26	0/2/2/2
42	M3L	Lo	98	42	-	5/9/10/12	-
2	OMC	L5	2861	2	-	0/9/27/28	0/2/2/2
2	A2M	L5	3718	2	-	0/9/27/28	0/3/3/3
79	OMC	S2	462	79	-	0/9/27/28	0/2/2/2
1	PSU	L1	55	1	-	0/7/25/26	0/2/2/2
2	OMC	L5	3887	2	-	0/9/27/28	0/2/2/2

All (564) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
79	S2	1248	B8N	C4-N3	-8.62	1.25	1.40
79	S2	1248	B8N	C6-N1	7.62	1.55	1.36
79	S2	1337	4AC	C4-N3	7.13	1.44	1.32
2	L5	1456	JMH	C2-N1	6.96	1.48	1.38
79	S2	1842	4AC	C4-N3	6.90	1.44	1.32
79	S2	1248	B8N	C4-C5	6.88	1.63	1.47
2	L5	1456	JMH	C6-C5	6.60	1.50	1.35
79	S2	1842	4AC	C6-C5	6.35	1.49	1.35
79	S2	1337	4AC	C6-C5	6.32	1.49	1.35
2	L5	4447	5MC	C5-C4	6.20	1.48	1.44
79	S2	1337	4AC	C2-N3	6.14	1.48	1.36
79	S2	1842	4AC	C2-N3	5.83	1.47	1.36
79	S2	1248	B8N	C2-N1	5.66	1.55	1.39
2	L5	3782	5MC	C5-C4	5.63	1.48	1.44
79	S2	1248	B8N	C6-C5	5.16	1.42	1.35
79	S2	1248	B8N	C1'-C5	-4.83	1.39	1.50
2	L5	4220	6MZ	C5-C4	4.63	1.47	1.39
79	S2	1850	MA6	C5-C4	4.62	1.47	1.39
79	S2	1832	6MZ	C5-C4	4.56	1.47	1.39
2	L5	729	2MG	C2-N2	4.52	1.42	1.33
2	L5	4872	2MG	C2-N2	4.51	1.42	1.33
2	L5	1517	2MG	C2-N2	4.46	1.42	1.33
2	L5	1456	JMH	C2-N3	4.35	1.47	1.39
79	S2	1851	MA6	C5-C4	4.29	1.46	1.39
2	L5	4523	A2M	O5'-C5'	-4.22	1.31	1.44
79	S2	1639	7MG	C5-N7	4.15	1.40	1.35
2	L5	2815	A2M	O5'-C5'	-4.11	1.32	1.44
79	S2	668	A2M	O5'-C5'	-4.11	1.32	1.44
79	S2	1842	4AC	C2-N1	4.10	1.48	1.40
79	S2	99	A2M	O5'-C5'	-4.06	1.32	1.44
2	L5	3785	A2M	O5'-C5'	-4.05	1.32	1.44
2	L5	1326	A2M	O5'-C5'	-4.05	1.32	1.44
2	L5	2787	A2M	O5'-C5'	-4.04	1.32	1.44
79	S2	1031	A2M	O5'-C5'	-4.04	1.32	1.44
2	L5	1534	A2M	O5'-C5'	-4.02	1.32	1.44
79	S2	1383	A2M	O5'-C5'	-3.99	1.32	1.44
2	L5	1871	A2M	O5'-C5'	-3.97	1.32	1.44
2	L5	3830	A2M	O5'-C5'	-3.94	1.32	1.44
2	L5	3718	A2M	O5'-C5'	-3.94	1.32	1.44
2	L5	1524	A2M	O5'-C5'	-3.92	1.32	1.44
2	L5	3818	UY1	C4-N3	-3.91	1.31	1.38
79	S2	27	A2M	O5'-C5'	-3.89	1.32	1.44
79	S2	1337	4AC	C2-N1	3.89	1.48	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	2363	A2M	O5'-C5'	-3.87	1.32	1.44
79	S2	468	A2M	O5'-C5'	-3.84	1.33	1.44
2	L5	2401	A2M	O5'-C5'	-3.84	1.33	1.44
2	L5	3760	A2M	O5'-C5'	-3.83	1.33	1.44
2	L5	398	A2M	O5'-C5'	-3.82	1.33	1.44
2	L5	400	A2M	O5'-C5'	-3.80	1.33	1.44
2	L5	3825	A2M	O5'-C5'	-3.80	1.33	1.44
79	S2	1337	4AC	C7-N4	3.77	1.44	1.37
79	S2	1678	A2M	O5'-C5'	-3.76	1.33	1.44
79	S2	1337	4AC	C5-C4	3.76	1.49	1.41
79	S2	1842	4AC	C5-C4	3.75	1.49	1.41
79	S2	159	A2M	O5'-C5'	-3.75	1.33	1.44
79	S2	1842	4AC	O2-C2	-3.73	1.16	1.23
2	L5	4571	A2M	O5'-C5'	-3.72	1.33	1.44
79	S2	512	A2M	O5'-C5'	-3.70	1.33	1.44
2	L5	4590	A2M	O5'-C5'	-3.70	1.33	1.44
79	S2	484	A2M	O5'-C5'	-3.68	1.33	1.44
2	L5	3867	A2M	O5'-C5'	-3.67	1.33	1.44
79	S2	166	A2M	O5'-C5'	-3.61	1.33	1.44
79	S2	1625	PSU	C6-C5	3.54	1.39	1.35
79	S2	1337	4AC	O2-C2	-3.53	1.17	1.23
79	S2	590	A2M	O5'-C5'	-3.51	1.33	1.44
79	S2	576	A2M	O5'-C5'	-3.45	1.34	1.44
79	S2	1232	PSU	C6-C5	3.41	1.39	1.35
79	S2	1842	4AC	C7-N4	3.40	1.44	1.37
2	L5	3764	PSU	C6-C5	3.40	1.39	1.35
2	L5	4673	PSU	C6-C5	3.38	1.39	1.35
2	L5	3637	PSU	C6-C5	3.36	1.39	1.35
79	S2	823	PSU	C6-C5	3.35	1.39	1.35
2	L5	1744	PSU	C6-C5	3.35	1.39	1.35
79	S2	572	PSU	C6-C5	3.34	1.39	1.35
2	L5	4431	PSU	C6-C5	3.32	1.39	1.35
2	L5	3639	PSU	C6-C5	3.28	1.38	1.35
79	S2	36	PSU	C6-C5	3.25	1.38	1.35
2	L5	4636	PSU	C6-C5	3.25	1.38	1.35
79	S2	1337	4AC	C4-N4	3.25	1.44	1.39
79	S2	918	PSU	C6-C5	3.24	1.38	1.35
2	L5	2632	PSU	C6-C5	3.24	1.38	1.35
2	L5	4312	PSU	C4-N3	-3.24	1.32	1.38
2	L5	1781	PSU	C6-C5	3.24	1.38	1.35
2	L5	4361	PSU	C6-C5	3.23	1.38	1.35
2	L5	4293	PSU	C6-C5	3.22	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	3762	PSU	C6-C5	3.20	1.38	1.35
79	S2	1347	PSU	C6-C5	3.19	1.38	1.35
2	L5	4576	PSU	C4-N3	-3.19	1.32	1.38
79	S2	1238	PSU	C6-C5	3.19	1.38	1.35
2	L5	1683	PSU	C4-N3	-3.18	1.32	1.38
79	S2	105	PSU	C6-C5	3.17	1.38	1.35
79	S2	801	PSU	C6-C5	3.17	1.38	1.35
2	L5	1782	PSU	C6-C5	3.16	1.38	1.35
2	L5	4620	OMU	C4-N3	-3.13	1.33	1.38
2	L5	1781	PSU	C4-N3	-3.13	1.33	1.38
2	L5	1744	PSU	C4-N3	-3.13	1.33	1.38
2	L5	1677	PSU	C4-N3	-3.13	1.33	1.38
79	S2	34	PSU	C6-C5	3.13	1.38	1.35
2	L5	3730	PSU	C6-C5	3.13	1.38	1.35
2	L5	1860	PSU	C4-N3	-3.12	1.33	1.38
2	L5	2837	OMU	C4-N3	-3.12	1.33	1.38
2	L5	2508	PSU	C6-C5	3.12	1.38	1.35
2	L5	4521	PSU	C6-C5	3.11	1.38	1.35
2	L5	4431	PSU	C4-N3	-3.11	1.33	1.38
79	S2	866	PSU	C6-C5	3.11	1.38	1.35
2	L5	2424	OMG	C5-C4	3.11	1.47	1.38
2	L5	4972	PSU	C4-N3	-3.11	1.33	1.38
79	S2	686	PSU	C6-C5	3.10	1.38	1.35
79	S2	1337	4AC	C6-N1	3.10	1.45	1.38
2	L5	3884	PSU	C6-C5	3.09	1.38	1.35
79	S2	1081	PSU	C6-C5	3.09	1.38	1.35
2	L5	1760	OMG	C5-C4	3.09	1.47	1.38
79	S2	1328	OMG	C5-C4	3.09	1.47	1.38
2	L5	4353	PSU	C6-C5	3.08	1.38	1.35
79	S2	1842	4AC	C6-N1	3.08	1.45	1.38
2	L5	4296	PSU	C4-N3	-3.08	1.33	1.38
79	S2	1367	PSU	C6-C5	3.08	1.38	1.35
79	S2	210	PSU	C6-C5	3.08	1.38	1.35
2	L5	3920	PSU	C6-C5	3.07	1.38	1.35
2	L5	1536	PSU	C4-N3	-3.07	1.33	1.38
79	S2	644	OMG	C5-C4	3.07	1.47	1.38
1	L1	69	PSU	C6-C5	3.07	1.38	1.35
2	L5	4498	OMU	C4-N3	-3.06	1.33	1.38
2	L5	2508	PSU	C4-N3	-3.05	1.33	1.38
2	L5	3770	PSU	C6-C5	3.05	1.38	1.35
2	L5	4423	PSU	C6-C5	3.05	1.38	1.35
2	L5	3768	PSU	C6-C5	3.05	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	1792	PSU	C6-C5	3.05	1.38	1.35
79	S2	1046	PSU	C6-C5	3.05	1.38	1.35
2	L5	1524	A2M	O4'-C4'	-3.05	1.38	1.45
79	S2	601	OMG	C5-C4	3.04	1.47	1.38
1	L1	55	PSU	C6-C5	3.04	1.38	1.35
79	S2	823	PSU	C4-N3	-3.04	1.33	1.38
2	L5	4447	5MC	C6-C5	3.04	1.39	1.34
79	S2	814	PSU	C4-N3	-3.03	1.33	1.38
2	L5	1860	PSU	C6-C5	3.03	1.38	1.35
2	L5	4442	PSU	C6-C5	3.03	1.38	1.35
79	S2	93	PSU	C6-C5	3.03	1.38	1.35
2	L5	3637	PSU	C4-N3	-3.03	1.33	1.38
79	S2	1643	PSU	C6-C5	3.02	1.38	1.35
2	L5	4521	PSU	C4-N3	-3.02	1.33	1.38
2	L5	4532	PSU	C6-C5	3.02	1.38	1.35
2	L5	5010	PSU	C4-N3	-3.01	1.33	1.38
79	S2	1244	PSU	C6-C5	3.01	1.38	1.35
79	S2	109	PSU	C6-C5	3.01	1.38	1.35
2	L5	1456	JMH	O2-C2	-3.01	1.16	1.22
79	S2	1174	PSU	C4-N3	-3.01	1.33	1.38
2	L5	4423	PSU	C4-N3	-3.01	1.33	1.38
79	S2	609	PSU	C6-C5	3.01	1.38	1.35
79	S2	1490	OMG	C5-C4	3.00	1.47	1.38
2	L5	4392	OMG	C6-N1	-3.00	1.33	1.38
79	S2	218	PSU	C6-C5	2.99	1.38	1.35
79	S2	683	OMG	C5-C4	2.99	1.47	1.38
2	L5	4972	PSU	C6-C5	2.99	1.38	1.35
79	S2	1232	PSU	C4-N3	-2.99	1.33	1.38
2	L5	3715	PSU	C6-C5	2.99	1.38	1.35
79	S2	93	PSU	C4-N3	-2.99	1.33	1.38
1	L1	75	OMG	C5-C4	2.99	1.46	1.38
2	L5	4500	PSU	C6-C5	2.98	1.38	1.35
2	L5	3764	PSU	C4-N3	-2.98	1.33	1.38
2	L5	4471	PSU	C4-N3	-2.98	1.33	1.38
79	S2	867	OMG	C5-C4	2.98	1.46	1.38
79	S2	822	PSU	C6-C5	2.98	1.38	1.35
2	L5	3920	PSU	C4-N3	-2.98	1.33	1.38
2	L5	3734	PSU	C6-C5	2.98	1.38	1.35
2	L5	4392	OMG	C5-C4	2.97	1.46	1.38
79	S2	119	PSU	C6-C5	2.97	1.38	1.35
79	S2	509	OMG	C5-C4	2.97	1.46	1.38
2	L5	4689	PSU	C6-C5	2.97	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
79	S2	1177	PSU	C6-C5	2.97	1.38	1.35
2	L5	4628	PSU	C4-N3	-2.97	1.33	1.38
2	L5	4552	PSU	C4-N3	-2.97	1.33	1.38
2	L5	2632	PSU	C4-N3	-2.96	1.33	1.38
79	S2	436	OMG	C5-C4	2.96	1.46	1.38
2	L5	4457	PSU	C4-N3	-2.96	1.33	1.38
2	L5	1683	PSU	C6-C5	2.96	1.38	1.35
2	L5	1625	OMG	C5-C4	2.96	1.46	1.38
79	S2	681	PSU	C6-C5	2.96	1.38	1.35
2	L5	4623	OMG	C5-C4	2.96	1.46	1.38
2	L5	4299	PSU	C6-C5	2.95	1.38	1.35
2	L5	3715	PSU	C4-N3	-2.95	1.33	1.38
2	L5	3853	PSU	C4-N3	-2.95	1.33	1.38
79	S2	1445	PSU	C6-C5	2.95	1.38	1.35
2	L5	4471	PSU	C6-C5	2.95	1.38	1.35
2	L5	2415	OMU	C4-N3	-2.94	1.33	1.38
2	L5	5001	PSU	C6-C5	2.94	1.38	1.35
2	L5	3884	PSU	C4-N3	-2.94	1.33	1.38
79	S2	1056	PSU	C6-C5	2.94	1.38	1.35
2	L5	3758	PSU	C6-C5	2.93	1.38	1.35
2	L5	3818	UY1	C4-C5	-2.93	1.36	1.44
79	S2	815	PSU	C6-C5	2.93	1.38	1.35
2	L5	4420	PSU	C6-C5	2.92	1.38	1.35
79	S2	686	PSU	C4-N3	-2.92	1.33	1.38
2	L5	4494	OMG	C5-C4	2.92	1.46	1.38
2	L5	4579	PSU	C6-C5	2.92	1.38	1.35
2	L5	3792	OMG	C5-C4	2.91	1.46	1.38
2	L5	4306	OMU	C2-N3	-2.91	1.32	1.38
79	S2	1045	PSU	C6-C5	2.91	1.38	1.35
2	L5	5010	PSU	C6-C5	2.91	1.38	1.35
2	L5	1536	PSU	C6-C5	2.91	1.38	1.35
2	L5	4299	PSU	C4-N3	-2.90	1.33	1.38
2	L5	3851	PSU	C6-C5	2.90	1.38	1.35
79	S2	121	OMU	C4-N3	-2.90	1.33	1.38
2	L5	2876	OMG	C5-C4	2.90	1.46	1.38
2	L5	3744	OMG	C5-C4	2.90	1.46	1.38
2	L5	1862	PSU	C4-N3	-2.90	1.33	1.38
79	S2	1004	PSU	C6-C5	2.90	1.38	1.35
79	S2	1174	PSU	C6-C5	2.90	1.38	1.35
2	L5	4196	OMG	C6-N1	-2.89	1.33	1.38
79	S2	814	PSU	C6-C5	2.89	1.38	1.35
79	S2	799	OMU	C4-N3	-2.89	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	2050	OMG	C5-C4	2.89	1.46	1.38
79	S2	218	PSU	C4-N3	-2.88	1.33	1.38
79	S2	649	PSU	C4-N3	-2.88	1.33	1.38
2	L5	3944	OMG	C5-C4	2.88	1.46	1.38
2	L5	3734	PSU	C4-N3	-2.87	1.33	1.38
79	S2	651	PSU	C6-C5	2.87	1.38	1.35
2	L5	4628	PSU	C6-C5	2.87	1.38	1.35
2	L5	1782	PSU	C4-N3	-2.87	1.33	1.38
2	L5	4870	OMG	C5-C4	2.87	1.46	1.38
79	S2	1177	PSU	C4-N3	-2.87	1.33	1.38
2	L5	3818	UY1	O4-C4	-2.87	1.18	1.23
2	L5	4442	PSU	C4-N3	-2.87	1.33	1.38
79	S2	815	PSU	C4-N3	-2.87	1.33	1.38
2	L5	1582	PSU	C6-C5	2.87	1.38	1.35
79	S2	1445	PSU	C4-N3	-2.86	1.33	1.38
2	L5	1316	OMG	C5-C4	2.86	1.46	1.38
2	L5	4227	OMU	C4-N3	-2.86	1.33	1.38
2	L5	4552	PSU	C6-C5	2.86	1.38	1.35
79	S2	649	PSU	C6-C5	2.86	1.38	1.35
79	S2	651	PSU	C4-N3	-2.85	1.33	1.38
79	S2	609	PSU	C4-N3	-2.85	1.33	1.38
79	S2	1832	6MZ	C5-C6	2.85	1.48	1.41
2	L5	4370	OMG	C5-C4	2.85	1.46	1.38
2	L5	5001	PSU	C4-N3	-2.85	1.33	1.38
79	S2	1851	MA6	C5-C6	2.85	1.48	1.41
79	S2	1692	PSU	C4-N3	-2.84	1.33	1.38
2	L5	4576	PSU	C6-C5	2.84	1.38	1.35
2	L5	4499	OMG	C5-C4	2.84	1.46	1.38
2	L5	4361	PSU	C4-N3	-2.84	1.33	1.38
2	L5	3695	PSU	C6-C5	2.84	1.38	1.35
2	L5	4306	OMU	C4-N3	-2.84	1.33	1.38
2	L5	3844	PSU	C6-C5	2.84	1.38	1.35
79	S2	36	PSU	C4-N3	-2.84	1.33	1.38
2	L5	3639	PSU	C4-N3	-2.84	1.33	1.38
2	L5	4500	PSU	C4-N3	-2.83	1.33	1.38
2	L5	1522	OMG	C5-C4	2.83	1.46	1.38
79	S2	1056	PSU	C4-N3	-2.83	1.33	1.38
79	S2	1842	4AC	C4-N4	2.83	1.44	1.39
2	L5	4293	PSU	C4-N3	-2.83	1.33	1.38
2	L5	3851	PSU	C4-N3	-2.82	1.33	1.38
79	S2	109	PSU	C4-N3	-2.82	1.33	1.38
2	L5	2424	OMG	C6-N1	-2.82	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	3730	PSU	C4-N3	-2.82	1.33	1.38
79	S2	863	PSU	C6-C5	2.82	1.38	1.35
79	S2	1081	PSU	C4-N3	-2.82	1.33	1.38
1	L1	55	PSU	C4-N3	-2.81	1.33	1.38
2	L5	4353	PSU	C4-N3	-2.81	1.33	1.38
2	L5	1625	OMG	C6-N1	-2.81	1.33	1.38
1	L1	75	OMG	C6-N1	-2.81	1.33	1.38
2	L5	4618	OMG	C6-N1	-2.81	1.33	1.38
2	L5	3853	PSU	C6-C5	2.81	1.38	1.35
79	S2	406	PSU	C6-C5	2.81	1.38	1.35
79	S2	918	PSU	C4-N3	-2.81	1.33	1.38
79	S2	1045	PSU	C4-N3	-2.81	1.33	1.38
2	L5	4532	PSU	C4-N3	-2.81	1.33	1.38
2	L5	3867	A2M	O3'-C3'	-2.81	1.36	1.43
2	L5	4494	OMG	C6-N1	-2.80	1.33	1.38
79	S2	801	PSU	C4-N3	-2.80	1.33	1.38
79	S2	1804	OMU	C4-N3	-2.80	1.33	1.38
2	L5	2364	OMG	C5-C4	2.80	1.46	1.38
2	L5	4673	PSU	C4-N3	-2.79	1.33	1.38
79	S2	681	PSU	C4-N3	-2.79	1.33	1.38
2	L5	3695	PSU	C4-N3	-2.79	1.33	1.38
79	S2	572	PSU	C4-N3	-2.79	1.33	1.38
2	L5	4579	PSU	C4-N3	-2.79	1.33	1.38
2	L5	4312	PSU	C6-C5	2.79	1.38	1.35
79	S2	1692	PSU	C6-C5	2.79	1.38	1.35
2	L5	3768	PSU	C4-N3	-2.79	1.33	1.38
79	S2	863	PSU	C4-N3	-2.78	1.33	1.38
2	L5	1582	PSU	C4-N3	-2.78	1.33	1.38
2	L5	4620	OMU	C2-N3	-2.78	1.33	1.38
79	S2	601	OMG	C6-N1	-2.78	1.33	1.38
79	S2	1046	PSU	C4-N3	-2.78	1.33	1.38
79	S2	1244	PSU	C4-N3	-2.77	1.33	1.38
2	L5	3925	OMU	C4-N3	-2.77	1.33	1.38
7	LD	216	V5N	CE1-ND1	2.77	1.39	1.35
79	S2	105	PSU	C4-N3	-2.77	1.33	1.38
2	L5	4420	PSU	C4-N3	-2.76	1.33	1.38
2	L5	4403	PSU	C4-N3	-2.76	1.33	1.38
2	L5	4689	PSU	C4-N3	-2.76	1.33	1.38
2	L5	4637	OMG	C5-C4	2.76	1.46	1.38
1	L1	69	PSU	C4-N3	-2.76	1.33	1.38
2	L5	4636	PSU	C4-N3	-2.75	1.33	1.38
2	L5	4196	OMG	C5-C4	2.75	1.46	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	1773	OMU	C4-N3	-2.74	1.33	1.38
2	L5	4523	A2M	C2'-C1'	2.74	1.59	1.53
2	L5	4228	OMG	C5-C4	2.74	1.46	1.38
2	L5	3899	OMG	C5-C4	2.74	1.46	1.38
79	S2	509	OMG	C6-N1	-2.73	1.33	1.38
2	L5	4220	6MZ	C5-C6	2.73	1.48	1.41
2	L5	3844	PSU	C4-N3	-2.72	1.33	1.38
2	L5	3758	PSU	C4-N3	-2.72	1.33	1.38
2	L5	4296	PSU	C6-C5	2.72	1.38	1.35
2	L5	4457	PSU	C6-C5	2.72	1.38	1.35
79	S2	436	OMG	C6-N1	-2.72	1.33	1.38
79	S2	966	PSU	C4-N3	-2.72	1.33	1.38
2	L5	1677	PSU	O4'-C1'	-2.72	1.40	1.43
79	S2	822	PSU	C4-N3	-2.71	1.33	1.38
79	S2	1490	OMG	C6-N1	-2.71	1.33	1.38
79	S2	116	OMU	C4-N3	-2.70	1.34	1.38
79	S2	1238	PSU	C4-N3	-2.70	1.33	1.38
79	S2	668	A2M	O4'-C4'	-2.70	1.39	1.45
79	S2	34	PSU	C4-N3	-2.70	1.33	1.38
2	L5	3782	5MC	C6-C5	2.70	1.39	1.34
79	S2	1625	PSU	C4-N3	-2.69	1.33	1.38
79	S2	406	PSU	C4-N3	-2.69	1.33	1.38
79	S2	866	PSU	C4-N3	-2.69	1.33	1.38
79	S2	627	OMU	C4-N3	-2.69	1.34	1.38
79	S2	172	OMU	C4-N3	-2.69	1.34	1.38
79	S2	1850	MA6	C5-C6	2.69	1.48	1.41
2	L5	2050	OMG	C6-N1	-2.68	1.33	1.38
79	S2	119	PSU	C4-N3	-2.67	1.33	1.38
2	L5	3770	PSU	C4-N3	-2.67	1.33	1.38
79	S2	1326	OMU	C4-N3	-2.67	1.34	1.38
79	S2	1442	OMU	C4-N3	-2.67	1.34	1.38
2	L5	1522	OMG	C6-N1	-2.67	1.33	1.38
79	S2	966	PSU	C6-C5	2.66	1.38	1.35
2	L5	4618	OMG	C5-C4	2.66	1.46	1.38
2	L5	2876	OMG	C6-N1	-2.66	1.33	1.38
79	S2	1367	PSU	C4-N3	-2.65	1.33	1.38
2	L5	3762	PSU	C4-N3	-2.65	1.33	1.38
79	S2	210	PSU	C4-N3	-2.64	1.33	1.38
2	L5	4870	OMG	C6-N1	-2.63	1.33	1.38
79	S2	1643	PSU	C4-N3	-2.62	1.33	1.38
2	L5	4403	PSU	C6-C5	2.62	1.38	1.35
2	L5	3899	OMG	C6-N1	-2.62	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
79	S2	683	OMG	C6-N1	-2.62	1.34	1.38
2	L5	1862	PSU	C6-C5	2.61	1.38	1.35
2	L5	4623	OMG	C6-N1	-2.61	1.34	1.38
2	L5	2415	OMU	C2-N3	-2.61	1.33	1.38
79	S2	428	OMU	C4-N3	-2.60	1.34	1.38
2	L5	3744	OMG	C5-N7	-2.60	1.33	1.39
2	L5	4637	OMG	C6-N1	-2.60	1.34	1.38
79	S2	1347	PSU	C4-N3	-2.60	1.34	1.38
2	L5	1625	OMG	C5-N7	-2.59	1.33	1.39
2	L5	4498	OMU	C2-N3	-2.58	1.33	1.38
2	L5	3792	OMG	C6-N1	-2.58	1.34	1.38
79	S2	644	OMG	C6-N1	-2.58	1.34	1.38
2	L5	3944	OMG	C6-N1	-2.58	1.34	1.38
2	L5	4499	OMG	C6-N1	-2.58	1.34	1.38
2	L5	1792	PSU	C4-N3	-2.58	1.34	1.38
2	L5	4227	OMU	C2-N3	-2.58	1.33	1.38
2	L5	4370	OMG	C6-N1	-2.57	1.34	1.38
79	S2	1004	PSU	C4-N3	-2.57	1.34	1.38
2	L5	1677	PSU	C6-C5	2.57	1.38	1.35
79	S2	1288	OMU	C4-N3	-2.56	1.34	1.38
79	S2	1850	MA6	C5-N7	-2.56	1.34	1.39
2	L5	1316	OMG	C6-N1	-2.53	1.34	1.38
2	L5	4220	6MZ	C5-N7	-2.52	1.34	1.39
79	S2	1328	OMG	C6-N1	-2.52	1.34	1.38
2	L5	4431	PSU	C2-N3	-2.51	1.33	1.37
2	L5	3744	OMG	C6-N1	-2.50	1.34	1.38
2	L5	4499	OMG	C5-N7	-2.48	1.34	1.39
2	L5	1582	PSU	C2-N3	-2.48	1.33	1.37
2	L5	4296	PSU	C2-N3	-2.47	1.33	1.37
79	S2	1832	6MZ	C5-N7	-2.44	1.34	1.39
2	L5	4637	OMG	C5-N7	-2.44	1.34	1.39
2	L5	1456	JMH	C5-C4	2.44	1.48	1.42
79	S2	166	A2M	C5'-C4'	2.44	1.58	1.51
2	L5	1773	OMU	C2-N3	-2.44	1.33	1.38
79	S2	121	OMU	C2-N3	-2.43	1.33	1.38
2	L5	1760	OMG	C6-N1	-2.43	1.34	1.38
2	L5	2876	OMG	C5-N7	-2.43	1.34	1.39
2	L5	5001	PSU	C2-N3	-2.43	1.33	1.37
2	L5	3899	OMG	C5-N7	-2.42	1.34	1.39
2	L5	3818	UY1	O2-C2	-2.41	1.18	1.23
79	S2	867	OMG	C6-N1	-2.41	1.34	1.38
2	L5	3853	PSU	C2-N3	-2.41	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	4228	OMG	C6-N1	-2.40	1.34	1.38
2	L5	4312	PSU	C2-N3	-2.40	1.33	1.37
2	L5	2837	OMU	C2-N3	-2.40	1.33	1.38
2	L5	1456	JMH	C6-N1	2.40	1.43	1.38
79	S2	590	A2M	O4'-C4'	-2.38	1.39	1.45
2	L5	2050	OMG	C5-N7	-2.38	1.34	1.39
2	L5	1536	PSU	C2-N3	-2.38	1.33	1.37
2	L5	3884	PSU	C2-N3	-2.38	1.33	1.37
2	L5	4196	OMG	C5-N7	-2.37	1.34	1.39
2	L5	3925	OMU	C2-N3	-2.37	1.33	1.38
79	S2	683	OMG	C5-N7	-2.36	1.34	1.39
79	S2	1842	4AC	O7-C7	-2.36	1.18	1.23
79	S2	93	PSU	C2-N3	-2.36	1.33	1.37
79	S2	1851	MA6	C4-N9	-2.36	1.32	1.37
2	L5	2364	OMG	C6-N1	-2.35	1.34	1.38
2	L5	1744	PSU	C2-N3	-2.35	1.33	1.37
2	L5	2364	OMG	C5-N7	-2.34	1.34	1.39
79	S2	1804	OMU	C2-N3	-2.34	1.33	1.38
79	S2	918	PSU	O4'-C1'	-2.34	1.40	1.43
2	L5	2424	OMG	C5-N7	-2.34	1.34	1.39
79	S2	428	OMU	C2-N3	-2.33	1.33	1.38
79	S2	172	OMU	C2-N3	-2.33	1.33	1.38
79	S2	116	OMU	C2-N3	-2.33	1.33	1.38
2	L5	1677	PSU	C2-N3	-2.32	1.33	1.37
2	L5	2508	PSU	C2-N3	-2.32	1.33	1.37
2	L5	1860	PSU	C2-N3	-2.32	1.33	1.37
2	L5	1782	PSU	C2-N3	-2.32	1.33	1.37
79	S2	1174	PSU	C2-N3	-2.32	1.33	1.37
2	L5	4370	OMG	C5-N7	-2.32	1.34	1.39
2	L5	3818	UY1	C6-N1	-2.31	1.32	1.36
2	L5	4576	PSU	C2-N3	-2.31	1.33	1.37
2	L5	729	2MG	C4-N3	2.30	1.39	1.34
2	L5	3792	OMG	C5-N7	-2.30	1.34	1.39
79	S2	1248	B8N	O2-C2	-2.30	1.18	1.22
2	L5	3637	PSU	C2-N3	-2.30	1.33	1.37
79	S2	799	OMU	C2-N3	-2.29	1.34	1.38
79	S2	1326	OMU	C2-N1	2.29	1.42	1.38
2	L5	4361	PSU	C2-N3	-2.28	1.33	1.37
2	L5	4620	OMU	C5-C4	-2.28	1.38	1.43
2	L5	5010	PSU	C2-N3	-2.28	1.33	1.37
7	LD	216	V5N	CG-ND1	2.28	1.39	1.37
2	L5	1517	2MG	C4-N3	2.28	1.39	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	3782	5MC	C6-N1	-2.28	1.34	1.38
2	L5	3920	PSU	C2-N3	-2.27	1.33	1.37
79	S2	815	PSU	C2-N3	-2.27	1.33	1.37
2	L5	3785	A2M	O4'-C1'	-2.26	1.36	1.42
2	L5	1522	OMG	C5-N7	-2.26	1.34	1.39
2	L5	4521	PSU	C2-N3	-2.26	1.33	1.37
79	S2	801	PSU	C2-N3	-2.26	1.33	1.37
2	L5	2632	PSU	C2-N3	-2.25	1.33	1.37
79	S2	814	PSU	C2-N3	-2.25	1.33	1.37
2	L5	4872	2MG	C4-N3	2.25	1.39	1.34
2	L5	3853	PSU	C2-N1	-2.25	1.33	1.36
2	L5	1683	PSU	C2-N3	-2.25	1.33	1.37
2	L5	4972	PSU	C2-N3	-2.25	1.33	1.37
2	L5	4403	PSU	C2-N1	-2.25	1.33	1.36
2	L5	1781	PSU	C2-N3	-2.24	1.33	1.37
79	S2	1248	B8N	O4-C4	-2.24	1.18	1.23
2	L5	4457	PSU	C2-N3	-2.24	1.33	1.37
79	S2	1442	OMU	C2-N3	-2.24	1.34	1.38
2	L5	4403	PSU	C2-N3	-2.24	1.33	1.37
79	S2	99	A2M	O3'-C3'	-2.24	1.37	1.43
2	L5	1322	1MA	C2-N1	2.24	1.40	1.35
28	La	39	V5N	CE1-ND1	2.24	1.38	1.35
79	S2	644	OMG	C5-N7	-2.23	1.34	1.39
2	L5	4306	OMU	C5-C4	-2.23	1.38	1.43
2	L5	4392	OMG	C5-N7	-2.22	1.34	1.39
2	L5	3944	OMG	C5-N7	-2.22	1.34	1.39
2	L5	3639	PSU	C2-N3	-2.21	1.33	1.37
79	S2	116	OMU	C5-C4	-2.21	1.38	1.43
79	S2	1804	OMU	C5-C4	-2.21	1.38	1.43
79	S2	436	OMG	C5-N7	-2.21	1.34	1.39
79	S2	1490	OMG	C5-N7	-2.21	1.34	1.39
2	L5	4590	A2M	C5'-C4'	2.20	1.58	1.51
79	S2	590	A2M	C2'-C1'	2.20	1.58	1.53
79	S2	1851	MA6	C8-N7	2.19	1.35	1.31
79	S2	627	OMU	C2-N3	-2.19	1.34	1.38
1	L1	55	PSU	C2-N3	-2.19	1.33	1.37
1	L1	75	OMG	C5-N7	-2.18	1.34	1.39
2	L5	4870	OMG	C5-N7	-2.18	1.34	1.39
79	S2	1850	MA6	C4-N9	-2.18	1.33	1.37
2	L5	4636	PSU	C2-N3	-2.18	1.33	1.37
79	S2	651	PSU	C2-N3	-2.18	1.33	1.37
79	S2	105	PSU	C2-N3	-2.18	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	4673	PSU	C2-N3	-2.17	1.33	1.37
79	S2	601	OMG	C5-N7	-2.17	1.34	1.39
2	L5	4618	OMG	C5-N7	-2.17	1.34	1.39
79	S2	1056	PSU	C2-N3	-2.17	1.33	1.37
2	L5	4552	PSU	C2-N3	-2.17	1.33	1.37
2	L5	3925	OMU	C5-C4	-2.16	1.39	1.43
2	L5	4689	PSU	C2-N3	-2.16	1.33	1.37
2	L5	4628	PSU	C2-N3	-2.16	1.33	1.37
79	S2	1326	OMU	C2-N3	-2.16	1.34	1.38
2	L5	4228	OMG	C5-N7	-2.15	1.34	1.39
2	L5	4689	PSU	C2-N1	-2.15	1.33	1.36
2	L5	4293	PSU	C2-N3	-2.15	1.33	1.37
79	S2	166	A2M	C5-C4	2.14	1.42	1.39
2	L5	3851	PSU	C2-N3	-2.14	1.33	1.37
2	L5	2415	OMU	C5-C4	-2.14	1.39	1.43
79	S2	509	OMG	C5-N7	-2.14	1.34	1.39
79	S2	867	OMG	C5-N7	-2.14	1.34	1.39
2	L5	2364	OMG	C4-N9	-2.14	1.32	1.38
2	L5	4521	PSU	O4'-C1'	-2.14	1.40	1.43
2	L5	3730	PSU	C2-N3	-2.13	1.34	1.37
2	L5	4471	PSU	C2-N3	-2.13	1.34	1.37
79	S2	119	PSU	C2-N3	-2.13	1.34	1.37
2	L5	4420	PSU	C2-N3	-2.13	1.34	1.37
1	L1	69	PSU	C2-N3	-2.13	1.34	1.37
79	S2	1081	PSU	O4'-C1'	-2.13	1.40	1.43
2	L5	4447	5MC	C6-N1	-2.13	1.34	1.38
2	L5	1316	OMG	C4-N9	-2.13	1.32	1.38
2	L5	1316	OMG	C5-N7	-2.13	1.34	1.39
79	S2	109	PSU	C2-N3	-2.12	1.34	1.37
79	S2	1850	MA6	C8-N7	2.12	1.35	1.31
79	S2	1337	4AC	CM7-C7	2.12	1.54	1.50
2	L5	4353	PSU	C2-N3	-2.12	1.34	1.37
79	S2	1288	OMU	C2-N3	-2.12	1.34	1.38
2	L5	4442	PSU	C2-N3	-2.12	1.34	1.37
79	S2	1081	PSU	C2-N3	-2.12	1.34	1.37
2	L5	2787	A2M	O4'-C4'	-2.12	1.40	1.45
2	L5	4623	OMG	C5-N7	-2.11	1.34	1.39
2	L5	5001	PSU	C2-N1	-2.11	1.33	1.36
2	L5	1792	PSU	C2-N3	-2.11	1.34	1.37
79	S2	1692	PSU	C2-N3	-2.11	1.34	1.37
79	S2	1851	MA6	C5-N7	-2.11	1.35	1.39
2	L5	3734	PSU	C2-N3	-2.11	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	4423	PSU	C2-N3	-2.11	1.34	1.37
1	L1	69	PSU	C2-N1	-2.11	1.33	1.36
79	S2	1337	4AC	O7-C7	-2.10	1.18	1.23
2	L5	4579	PSU	C2-N1	-2.10	1.33	1.36
79	S2	1832	6MZ	C8-N7	2.10	1.35	1.31
2	L5	4420	PSU	O4'-C1'	-2.10	1.40	1.43
79	S2	172	OMU	C5-C4	-2.10	1.39	1.43
79	S2	823	PSU	C2-N3	-2.10	1.34	1.37
79	S2	1177	PSU	C2-N3	-2.10	1.34	1.37
79	S2	1692	PSU	C2-N1	-2.09	1.33	1.36
2	L5	4494	OMG	C5-N7	-2.09	1.34	1.39
2	L5	4623	OMG	C4-N9	-2.09	1.32	1.38
79	S2	484	A2M	C5-C4	2.09	1.42	1.39
2	L5	1792	PSU	C2-N1	-2.09	1.33	1.36
79	S2	1288	OMU	C5-C4	-2.09	1.39	1.43
79	S2	1383	A2M	C2'-C1'	2.08	1.58	1.53
2	L5	1862	PSU	C2-N3	-2.08	1.34	1.37
79	S2	572	PSU	C2-N3	-2.08	1.34	1.37
79	S2	36	PSU	C2-N3	-2.08	1.34	1.37
2	L5	4227	OMU	C5-C4	-2.08	1.39	1.43
2	L5	4579	PSU	C2-N3	-2.08	1.34	1.37
2	L5	4471	PSU	C2-N1	-2.08	1.34	1.36
2	L5	5010	PSU	C2-N1	-2.07	1.34	1.36
2	L5	3887	OMC	C6-N1	-2.06	1.33	1.38
79	S2	1442	OMU	C5-C4	-2.06	1.39	1.43
2	L5	3920	PSU	C2-N1	-2.05	1.34	1.36
2	L5	1760	OMG	C5-N7	-2.05	1.35	1.39
79	S2	1328	OMG	C5-N7	-2.05	1.35	1.39
2	L5	1881	OMC	C6-N1	-2.05	1.33	1.38
2	L5	1782	PSU	C2-N1	-2.05	1.34	1.36
79	S2	428	OMU	C5-C4	-2.05	1.39	1.43
79	S2	681	PSU	C2-N3	-2.04	1.34	1.37
79	S2	1804	OMU	C2-N1	2.04	1.41	1.38
2	L5	4618	OMG	C4-N9	-2.04	1.32	1.38
2	L5	1773	OMU	C5-C4	-2.04	1.39	1.43
79	S2	609	PSU	C2-N3	-2.04	1.34	1.37
2	L5	4628	PSU	C2-N1	-2.03	1.34	1.36
79	S2	27	A2M	C5-C4	2.03	1.42	1.39
2	L5	2401	A2M	C5'-C4'	2.03	1.57	1.51
79	S2	1045	PSU	C2-N3	-2.03	1.34	1.37
79	S2	1367	PSU	C2-N3	-2.02	1.34	1.37
2	L5	1582	PSU	C2-N1	-2.02	1.34	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
79	S2	863	PSU	C2-N3	-2.02	1.34	1.37
2	L5	3844	PSU	C2-N1	-2.02	1.34	1.36
79	S2	966	PSU	C2-N1	-2.02	1.34	1.36
2	L5	1773	OMU	C6-C5	2.02	1.39	1.35
79	S2	1046	PSU	C2-N3	-2.02	1.34	1.37
2	L5	4296	PSU	C2-N1	-2.01	1.34	1.36
2	L5	2837	OMU	C5-C4	-2.01	1.39	1.43
2	L5	4530	UR3	C5-C4	-2.01	1.38	1.43
79	S2	815	PSU	C2-N1	-2.01	1.34	1.36
2	L5	4498	OMU	C5-C4	-2.01	1.39	1.43
2	L5	4299	PSU	C2-N3	-2.01	1.34	1.37
79	S2	576	A2M	C5-C4	2.01	1.42	1.39
2	L5	3764	PSU	C2-N3	-2.01	1.34	1.37
79	S2	649	PSU	C2-N3	-2.01	1.34	1.37
79	S2	218	PSU	C2-N3	-2.01	1.34	1.37
2	L5	3768	PSU	C2-N3	-2.01	1.34	1.37
79	S2	1288	OMU	C2-N1	2.00	1.41	1.38

All (860) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L5	4530	UR3	C4-N3-C2	-7.09	118.88	124.58
2	L5	4312	PSU	N1-C2-N3	7.01	122.56	115.17
2	L5	1782	PSU	N1-C2-N3	6.99	122.54	115.17
2	L5	1781	PSU	N1-C2-N3	6.96	122.51	115.17
2	L5	1683	PSU	N1-C2-N3	6.95	122.50	115.17
2	L5	1677	PSU	N1-C2-N3	6.87	122.42	115.17
2	L5	1862	PSU	N1-C2-N3	6.86	122.41	115.17
2	L5	4296	PSU	N1-C2-N3	6.86	122.40	115.17
2	L5	4673	PSU	N1-C2-N3	6.83	122.38	115.17
79	S2	109	PSU	N1-C2-N3	6.82	122.37	115.17
2	L5	5010	PSU	N1-C2-N3	6.80	122.34	115.17
79	S2	815	PSU	N1-C2-N3	6.77	122.31	115.17
2	L5	1625	OMG	C5-C4-N3	-6.76	117.63	128.39
2	L5	3730	PSU	N1-C2-N3	6.76	122.30	115.17
2	L5	4576	PSU	N1-C2-N3	6.73	122.27	115.17
2	L5	4500	PSU	N1-C2-N3	6.73	122.26	115.17
79	S2	1056	PSU	N1-C2-N3	6.71	122.24	115.17
2	L5	4299	PSU	N1-C2-N3	6.70	122.24	115.17
79	S2	1174	PSU	N1-C2-N3	6.70	122.23	115.17
2	L5	2508	PSU	N1-C2-N3	6.69	122.23	115.17
2	L5	3853	PSU	N1-C2-N3	6.69	122.22	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L5	3884	PSU	N1-C2-N3	6.68	122.22	115.17
79	S2	823	PSU	N1-C2-N3	6.66	122.19	115.17
2	L5	2424	OMG	C5-C4-N3	-6.66	117.80	128.39
2	L5	5001	PSU	N1-C2-N3	6.65	122.18	115.17
79	S2	801	PSU	N1-C2-N3	6.63	122.17	115.17
2	L5	2632	PSU	N1-C2-N3	6.63	122.17	115.17
79	S2	814	PSU	N1-C2-N3	6.61	122.14	115.17
2	L5	4353	PSU	N1-C2-N3	6.61	122.14	115.17
79	S2	34	PSU	N1-C2-N3	6.61	122.14	115.17
2	L5	1536	PSU	N1-C2-N3	6.61	122.14	115.17
2	L5	3764	PSU	N1-C2-N3	6.60	122.13	115.17
2	L5	4420	PSU	N1-C2-N3	6.60	122.13	115.17
79	S2	406	PSU	N1-C2-N3	6.59	122.12	115.17
2	L5	4636	PSU	N1-C2-N3	6.59	122.12	115.17
1	L1	69	PSU	N1-C2-N3	6.59	122.12	115.17
79	S2	649	PSU	N1-C2-N3	6.58	122.11	115.17
79	S2	609	PSU	N1-C2-N3	6.57	122.10	115.17
79	S2	93	PSU	N1-C2-N3	6.57	122.10	115.17
79	S2	1625	PSU	N1-C2-N3	6.56	122.09	115.17
2	L5	3768	PSU	N1-C2-N3	6.56	122.08	115.17
79	S2	36	PSU	N1-C2-N3	6.55	122.08	115.17
79	S2	105	PSU	N1-C2-N3	6.55	122.08	115.17
79	S2	866	PSU	N1-C2-N3	6.54	122.07	115.17
2	L5	2050	OMG	C5-C4-N3	-6.53	118.00	128.39
2	L5	3758	PSU	N1-C2-N3	6.53	122.05	115.17
79	S2	863	PSU	N1-C2-N3	6.53	122.05	115.17
2	L5	3770	PSU	N1-C2-N3	6.52	122.05	115.17
79	S2	1045	PSU	N1-C2-N3	6.52	122.05	115.17
2	L5	4442	PSU	N1-C2-N3	6.52	122.05	115.17
2	L5	4972	PSU	N1-C2-N3	6.52	122.04	115.17
79	S2	1445	PSU	N1-C2-N3	6.52	122.04	115.17
2	L5	4431	PSU	N1-C2-N3	6.52	122.04	115.17
2	L5	1744	PSU	N1-C2-N3	6.51	122.03	115.17
2	L5	3844	PSU	N1-C2-N3	6.51	122.03	115.17
79	S2	822	PSU	N1-C2-N3	6.50	122.02	115.17
2	L5	4628	PSU	N1-C2-N3	6.49	122.01	115.17
79	S2	1238	PSU	N1-C2-N3	6.48	122.01	115.17
79	S2	1177	PSU	N1-C2-N3	6.48	122.00	115.17
2	L5	3734	PSU	N1-C2-N3	6.47	122.00	115.17
2	L5	2876	OMG	C5-C4-N3	-6.47	118.09	128.39
2	L5	3715	PSU	N1-C2-N3	6.47	121.99	115.17
2	L5	4532	PSU	N1-C2-N3	6.47	121.99	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
79	S2	1081	PSU	N1-C2-N3	6.46	121.98	115.17
79	S2	1004	PSU	N1-C2-N3	6.45	121.97	115.17
79	S2	218	PSU	N1-C2-N3	6.44	121.97	115.17
2	L5	4579	PSU	N1-C2-N3	6.44	121.96	115.17
79	S2	1046	PSU	N1-C2-N3	6.44	121.96	115.17
79	S2	572	PSU	N1-C2-N3	6.43	121.95	115.17
5	LB	245	HIC	NE2-CE1-ND1	-6.43	110.20	112.66
2	L5	4392	OMG	C5-C4-N3	-6.43	118.16	128.39
2	L5	1582	PSU	N1-C2-N3	6.42	121.94	115.17
79	S2	686	PSU	N1-C2-N3	6.41	121.93	115.17
79	S2	1232	PSU	N1-C2-N3	6.40	121.92	115.17
79	S2	119	PSU	N1-C2-N3	6.40	121.92	115.17
2	L5	4457	PSU	N1-C2-N3	6.39	121.91	115.17
2	L5	4637	OMG	C5-C4-N3	-6.39	118.22	128.39
2	L5	4423	PSU	N1-C2-N3	6.38	121.89	115.17
2	L5	3695	PSU	N1-C2-N3	6.37	121.89	115.17
2	L5	3637	PSU	N1-C2-N3	6.37	121.89	115.17
2	L5	4471	PSU	N1-C2-N3	6.36	121.87	115.17
2	L5	3639	PSU	N1-C2-N3	6.35	121.87	115.17
79	S2	1692	PSU	N1-C2-N3	6.34	121.85	115.17
2	L5	1860	PSU	N1-C2-N3	6.34	121.85	115.17
2	L5	3744	OMG	C5-C4-N3	-6.33	118.31	128.39
79	S2	918	PSU	N1-C2-N3	6.33	121.85	115.17
79	S2	1347	PSU	N1-C2-N3	6.31	121.83	115.17
2	L5	3920	PSU	N1-C2-N3	6.31	121.83	115.17
79	S2	651	PSU	N1-C2-N3	6.31	121.82	115.17
79	S2	601	OMG	C5-C4-N3	-6.30	118.36	128.39
79	S2	1490	OMG	C5-C4-N3	-6.30	118.37	128.39
79	S2	683	OMG	C5-C4-N3	-6.29	118.37	128.39
79	S2	210	PSU	N1-C2-N3	6.29	121.81	115.17
2	L5	4494	OMG	C5-C4-N3	-6.29	118.38	128.39
79	S2	1367	PSU	N1-C2-N3	6.29	121.80	115.17
1	L1	55	PSU	N1-C2-N3	6.29	121.80	115.17
2	L5	4403	PSU	N1-C2-N3	6.28	121.80	115.17
2	L5	3762	PSU	N1-C2-N3	6.28	121.80	115.17
2	L5	3899	OMG	C5-C4-N3	-6.27	118.42	128.39
79	S2	681	PSU	N1-C2-N3	6.26	121.77	115.17
2	L5	4552	PSU	N1-C2-N3	6.23	121.74	115.17
2	L5	4361	PSU	N1-C2-N3	6.22	121.73	115.17
79	S2	1643	PSU	N1-C2-N3	6.21	121.72	115.17
79	S2	436	OMG	C5-C4-N3	-6.21	118.51	128.39
79	S2	1244	PSU	N1-C2-N3	6.19	121.70	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L5	4293	PSU	N1-C2-N3	6.18	121.68	115.17
2	L5	4499	OMG	C5-C4-N3	-6.17	118.58	128.39
2	L5	4689	PSU	N1-C2-N3	6.16	121.67	115.17
1	L1	75	OMG	C5-C4-N3	-6.15	118.61	128.39
2	L5	4220	6MZ	C5-C4-N3	-6.11	118.30	126.72
2	L5	3944	OMG	C5-C4-N3	-6.11	118.66	128.39
79	S2	1328	OMG	C5-C4-N3	-6.08	118.71	128.39
2	L5	3792	OMG	C5-C4-N3	-6.08	118.72	128.39
2	L5	4623	OMG	C5-C4-N3	-6.06	118.74	128.39
2	L5	4196	OMG	C5-C4-N3	-6.04	118.78	128.39
2	L5	4370	OMG	C5-C4-N3	-6.03	118.79	128.39
79	S2	1832	6MZ	C5-C4-N3	-6.03	118.42	126.72
2	L5	4521	PSU	N1-C2-N3	5.99	121.49	115.17
79	S2	644	OMG	C5-C4-N3	-5.99	118.86	128.39
79	S2	867	OMG	C5-C4-N3	-5.99	118.86	128.39
2	L5	1522	OMG	C5-C4-N3	-5.98	118.87	128.39
79	S2	509	OMG	C5-C4-N3	-5.96	118.91	128.39
2	L5	1792	PSU	N1-C2-N3	5.94	121.44	115.17
79	S2	966	PSU	N1-C2-N3	5.92	121.41	115.17
2	L5	3851	PSU	N1-C2-N3	5.90	121.39	115.17
2	L5	1760	OMG	C5-C4-N3	-5.88	119.03	128.39
2	L5	4870	OMG	C5-C4-N3	-5.86	119.06	128.39
2	L5	4618	OMG	C5-C4-N3	-5.80	119.16	128.39
2	L5	4228	OMG	C5-C4-N3	-5.76	119.23	128.39
2	L5	2364	OMG	C5-C4-N3	-5.70	119.31	128.39
2	L5	1316	OMG	C5-C4-N3	-5.67	119.37	128.39
2	L5	3925	OMU	C4-N3-C2	-5.50	119.79	126.61
79	S2	1850	MA6	C5-C4-N3	-5.49	119.16	126.72
2	L5	4494	OMG	C2-N3-C4	5.48	121.73	112.30
2	L5	2050	OMG	C2-N3-C4	5.47	121.71	112.30
79	S2	1851	MA6	C10-N6-C6	-5.47	106.62	120.52
2	L5	4392	OMG	C2-N3-C4	5.44	121.67	112.30
2	L5	4637	OMG	C2-N3-C4	5.43	121.66	112.30
2	L5	1316	OMG	C2-N3-C4	5.38	121.56	112.30
2	L5	2837	OMU	C4-N3-C2	-5.36	119.96	126.61
2	L5	3899	OMG	C2-N3-C4	5.35	121.51	112.30
2	L5	1625	OMG	N9-C4-N3	5.29	136.54	125.95
2	L5	4499	OMG	C2-N3-C4	5.29	121.42	112.30
2	L5	4306	OMU	C4-N3-C2	-5.29	120.05	126.61
2	L5	1522	OMG	C2-N3-C4	5.27	121.37	112.30
2	L5	3792	OMG	C2-N3-C4	5.25	121.34	112.30
2	L5	4623	OMG	C2-N3-C4	5.25	121.34	112.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L5	1625	OMG	C2-N3-C4	5.24	121.33	112.30
79	S2	172	OMU	C4-N3-C2	-5.22	120.13	126.61
2	L5	2424	OMG	C2-N3-C4	5.19	121.23	112.30
2	L5	4498	OMU	C4-N3-C2	-5.17	120.19	126.61
2	L5	3744	OMG	C2-N3-C4	5.17	121.20	112.30
2	L5	4228	OMG	C2-N3-C4	5.16	121.19	112.30
2	L5	2876	OMG	C2-N3-C4	5.16	121.19	112.30
79	S2	428	OMU	C4-N3-C2	-5.16	120.21	126.61
2	L5	4370	OMG	C2-N3-C4	5.15	121.16	112.30
79	S2	683	OMG	C2-N3-C4	5.13	121.14	112.30
79	S2	1490	OMG	C2-N3-C4	5.12	121.12	112.30
79	S2	1328	OMG	C2-N3-C4	5.12	121.12	112.30
79	S2	1851	MA6	C5-C4-N3	-5.11	119.68	126.72
79	S2	116	OMU	C4-N3-C2	-5.11	120.27	126.61
2	L5	4870	OMG	C2-N3-C4	5.10	121.09	112.30
79	S2	627	OMU	C4-N3-C2	-5.10	120.28	126.61
79	S2	1248	B8N	C5-C4-N3	5.09	125.40	116.15
2	L5	2364	OMG	C2-N3-C4	5.08	121.06	112.30
79	S2	601	OMG	C2-N3-C4	5.08	121.06	112.30
2	L5	2876	OMG	N9-C4-N3	5.08	136.11	125.95
2	L5	4227	OMU	C4-N3-C2	-5.08	120.31	126.61
2	L5	3944	OMG	C2-N3-C4	5.06	121.02	112.30
2	L5	4618	OMG	C2-N3-C4	5.05	120.99	112.30
79	S2	121	OMU	C4-N3-C2	-5.04	120.35	126.61
79	S2	1326	OMU	C4-N3-C2	-5.01	120.39	126.61
2	L5	4196	OMG	C2-N3-C4	5.01	120.92	112.30
79	S2	436	OMG	C2-N3-C4	4.99	120.90	112.30
79	S2	799	OMU	C4-N3-C2	-4.98	120.43	126.61
79	S2	644	OMG	C2-N3-C4	4.96	120.85	112.30
79	S2	867	OMG	C2-N3-C4	4.95	120.82	112.30
2	L5	1760	OMG	C2-N3-C4	4.94	120.81	112.30
2	L5	3818	UY1	C4-N3-C2	-4.94	119.57	126.37
2	L5	4498	OMU	N3-C2-N1	4.92	121.30	114.89
79	S2	1442	OMU	C4-N3-C2	-4.92	120.51	126.61
2	L5	2415	OMU	C4-N3-C2	-4.91	120.51	126.61
1	L1	75	OMG	C2-N3-C4	4.91	120.75	112.30
79	S2	509	OMG	C2-N3-C4	4.89	120.72	112.30
2	L5	4296	PSU	C4-N3-C2	-4.89	119.64	126.37
79	S2	436	OMG	N9-C4-N3	4.86	135.67	125.95
79	S2	601	OMG	N9-C4-N3	4.85	135.65	125.95
2	L5	4196	OMG	N9-C4-N3	4.83	135.61	125.95
79	S2	1288	OMU	C4-N3-C2	-4.82	120.62	126.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
79	S2	1490	OMG	N9-C4-N3	4.78	135.52	125.95
79	S2	1804	OMU	C4-N3-C2	-4.78	120.68	126.61
2	L5	3744	OMG	N9-C4-N3	4.76	135.47	125.95
2	L5	2424	OMG	N9-C4-N3	4.76	135.47	125.95
2	L5	4552	PSU	C4-N3-C2	-4.76	119.82	126.37
2	L5	1536	PSU	C4-N3-C2	-4.74	119.84	126.37
2	L5	4220	6MZ	N3-C4-N9	4.73	135.22	127.17
2	L5	4637	OMG	N9-C4-N3	4.71	135.38	125.95
2	L5	4872	2MG	CM2-N2-C2	-4.69	113.57	123.65
2	L5	1781	PSU	C4-N3-C2	-4.68	119.93	126.37
2	L5	3899	OMG	N9-C4-N3	4.67	135.29	125.95
1	L1	75	OMG	N9-C4-N3	4.66	135.27	125.95
2	L5	4494	OMG	N9-C4-N3	4.66	135.27	125.95
79	S2	406	PSU	C4-N3-C2	-4.66	119.95	126.37
79	S2	799	OMU	N3-C2-N1	4.66	120.95	114.89
2	L5	2837	OMU	N3-C2-N1	4.65	120.95	114.89
79	S2	863	PSU	C4-N3-C2	-4.65	119.97	126.37
79	S2	1177	PSU	C4-N3-C2	-4.64	119.98	126.37
2	L5	4499	OMG	N9-C4-N3	4.64	135.22	125.95
79	S2	1326	OMU	N3-C2-N1	4.63	120.92	114.89
2	L5	4620	OMU	C4-N3-C2	-4.62	120.87	126.61
2	L5	3818	UY1	N1-C2-N3	4.61	120.03	115.17
79	S2	1056	PSU	C4-N3-C2	-4.60	120.03	126.37
2	L5	3695	PSU	C4-N3-C2	-4.56	120.09	126.37
2	L5	729	2MG	CM2-N2-C2	-4.56	113.86	123.65
2	L5	4870	OMG	N9-C4-N3	4.56	135.06	125.95
2	L5	4299	PSU	C4-N3-C2	-4.55	120.10	126.37
79	S2	1045	PSU	C4-N3-C2	-4.55	120.10	126.37
2	L5	1517	2MG	CM2-N2-C2	-4.55	113.88	123.65
79	S2	644	OMG	N9-C4-N3	4.55	135.04	125.95
1	L1	55	PSU	C4-N3-C2	-4.54	120.12	126.37
2	L5	3792	OMG	N9-C4-N3	4.53	135.01	125.95
2	L5	3925	OMU	N3-C2-N1	4.52	120.77	114.89
2	L5	4370	OMG	N9-C4-N3	4.52	134.99	125.95
2	L5	1862	PSU	C4-N3-C2	-4.51	120.15	126.37
79	S2	1832	6MZ	N3-C4-N9	4.51	134.84	127.17
79	S2	1046	PSU	C4-N3-C2	-4.50	120.17	126.37
2	L5	3944	OMG	N9-C4-N3	4.50	134.95	125.95
2	L5	3851	PSU	C4-N3-C2	-4.49	120.18	126.37
79	S2	649	PSU	C4-N3-C2	-4.49	120.18	126.37
79	S2	683	OMG	N9-C4-N3	4.49	134.93	125.95
79	S2	651	PSU	C4-N3-C2	-4.49	120.19	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L5	2050	OMG	N9-C4-N3	4.48	134.92	125.95
79	S2	609	PSU	C4-N3-C2	-4.48	120.20	126.37
2	L5	3637	PSU	C4-N3-C2	-4.47	120.22	126.37
2	L5	1760	OMG	N9-C4-N3	4.47	134.89	125.95
2	L5	4431	PSU	C4-N3-C2	-4.47	120.22	126.37
79	S2	109	PSU	C4-N3-C2	-4.46	120.22	126.37
2	L5	4618	OMG	N9-C4-N3	4.45	134.85	125.95
2	L5	4532	PSU	C4-N3-C2	-4.45	120.24	126.37
79	S2	121	OMU	N3-C2-N1	4.45	120.68	114.89
79	S2	428	OMU	N3-C2-N1	4.44	120.68	114.89
2	L5	1773	OMU	C4-N3-C2	-4.44	121.10	126.61
2	L5	4620	OMU	N3-C2-N1	4.44	120.67	114.89
79	S2	119	PSU	C4-N3-C2	-4.44	120.25	126.37
2	L5	1582	PSU	C4-N3-C2	-4.44	120.26	126.37
2	L5	4457	PSU	C4-N3-C2	-4.44	120.26	126.37
79	S2	105	PSU	C4-N3-C2	-4.44	120.26	126.37
79	S2	801	PSU	C4-N3-C2	-4.43	120.26	126.37
2	L5	4420	PSU	C4-N3-C2	-4.43	120.26	126.37
2	L5	3844	PSU	O2-C2-N1	-4.43	118.22	122.79
2	L5	4500	PSU	O2-C2-N1	-4.42	118.23	122.79
79	S2	109	PSU	O2-C2-N1	-4.42	118.23	122.79
2	L5	3734	PSU	C4-N3-C2	-4.41	120.30	126.37
2	L5	4500	PSU	C4-N3-C2	-4.41	120.30	126.37
79	S2	172	OMU	N3-C2-N1	4.40	120.62	114.89
2	L5	3730	PSU	C4-N3-C2	-4.40	120.31	126.37
79	S2	815	PSU	C4-N3-C2	-4.40	120.31	126.37
79	S2	1174	PSU	C4-N3-C2	-4.40	120.31	126.37
79	S2	866	PSU	C4-N3-C2	-4.40	120.32	126.37
79	S2	1442	OMU	N3-C2-N1	4.38	120.60	114.89
79	S2	627	OMU	N3-C2-N1	4.38	120.59	114.89
2	L5	4306	OMU	C5-C4-N3	4.37	120.93	114.80
2	L5	1677	PSU	C4-N3-C2	-4.37	120.36	126.37
79	S2	93	PSU	C4-N3-C2	-4.37	120.36	126.37
79	S2	1445	PSU	C4-N3-C2	-4.36	120.36	126.37
2	L5	3770	PSU	C4-N3-C2	-4.36	120.37	126.37
2	L5	1522	OMG	N9-C4-N3	4.35	134.66	125.95
79	S2	1248	B8N	C4-N3-C2	-4.35	120.26	125.62
2	L5	4353	PSU	C4-N3-C2	-4.35	120.38	126.37
79	S2	1004	PSU	C4-N3-C2	-4.35	120.39	126.37
2	L5	2508	PSU	C4-N3-C2	-4.34	120.39	126.37
79	S2	509	OMG	N9-C4-N3	4.34	134.63	125.95
79	S2	1850	MA6	C2-N1-C6	4.33	122.41	111.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L5	4403	PSU	C4-N3-C2	-4.33	120.41	126.37
2	L5	5001	PSU	C4-N3-C2	-4.32	120.42	126.37
79	S2	1850	MA6	C10-N6-C6	-4.32	109.53	120.52
2	L5	2415	OMU	C5-C4-N3	4.32	120.85	114.80
2	L5	3768	PSU	C4-N3-C2	-4.32	120.42	126.37
2	L5	4628	PSU	C4-N3-C2	-4.32	120.42	126.37
79	S2	867	OMG	N9-C4-N3	4.32	134.59	125.95
2	L5	3758	PSU	C4-N3-C2	-4.32	120.42	126.37
79	S2	1851	MA6	C2-N1-C6	4.31	122.36	111.83
2	L5	4972	PSU	C4-N3-C2	-4.30	120.45	126.37
2	L5	3884	PSU	C4-N3-C2	-4.29	120.45	126.37
2	L5	3695	PSU	O2-C2-N1	-4.29	118.36	122.79
2	L5	4392	OMG	N9-C4-N3	4.29	134.53	125.95
79	S2	1692	PSU	C4-N3-C2	-4.29	120.47	126.37
2	L5	1782	PSU	C4-N3-C2	-4.28	120.47	126.37
2	L5	3715	PSU	C4-N3-C2	-4.28	120.47	126.37
2	L5	4636	PSU	C4-N3-C2	-4.28	120.48	126.37
2	L5	1860	PSU	C4-N3-C2	-4.27	120.49	126.37
2	L5	1316	OMG	C6-C5-N7	4.27	138.06	130.29
2	L5	3853	PSU	C4-N3-C2	-4.27	120.49	126.37
79	S2	36	PSU	C4-N3-C2	-4.26	120.50	126.37
2	L5	4227	OMU	C5-C4-N3	4.26	120.77	114.80
2	L5	5010	PSU	C4-N3-C2	-4.26	120.50	126.37
2	L5	4293	PSU	C4-N3-C2	-4.26	120.50	126.37
79	S2	218	PSU	C4-N3-C2	-4.26	120.51	126.37
79	S2	1244	PSU	C4-N3-C2	-4.26	120.51	126.37
79	S2	1804	OMU	N3-C2-N1	4.25	120.43	114.89
2	L5	1862	PSU	O2-C2-N1	-4.24	118.41	122.79
79	S2	686	PSU	C4-N3-C2	-4.24	120.53	126.37
2	L5	4576	PSU	C4-N3-C2	-4.24	120.53	126.37
2	L5	1683	PSU	C4-N3-C2	-4.24	120.53	126.37
2	L5	4312	PSU	C4-N3-C2	-4.24	120.53	126.37
79	S2	1328	OMG	N9-C4-N3	4.23	134.42	125.95
79	S2	1238	PSU	C4-N3-C2	-4.22	120.56	126.37
2	L5	3920	PSU	C4-N3-C2	-4.22	120.56	126.37
79	S2	572	PSU	C4-N3-C2	-4.21	120.57	126.37
79	S2	814	PSU	C4-N3-C2	-4.20	120.58	126.37
79	S2	210	PSU	C4-N3-C2	-4.20	120.58	126.37
79	S2	1850	MA6	N3-C4-N9	4.20	134.31	127.17
2	L5	1773	OMU	N3-C2-N1	4.19	120.35	114.89
79	S2	681	PSU	C4-N3-C2	-4.18	120.61	126.37
2	L5	4471	PSU	C4-N3-C2	-4.18	120.62	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L5	4579	PSU	C4-N3-C2	-4.17	120.62	126.37
79	S2	1248	B8N	C1'-C5-C4	4.17	123.93	117.61
2	L5	4673	PSU	C4-N3-C2	-4.16	120.64	126.37
2	L5	4623	OMG	N9-C4-N3	4.16	134.26	125.95
79	S2	1643	PSU	C4-N3-C2	-4.14	120.67	126.37
79	S2	1347	PSU	C4-N3-C2	-4.14	120.67	126.37
2	L5	4306	OMU	N3-C2-N1	4.14	120.28	114.89
79	S2	34	PSU	C4-N3-C2	-4.13	120.68	126.37
79	S2	822	PSU	C4-N3-C2	-4.13	120.68	126.37
2	L5	2632	PSU	C4-N3-C2	-4.13	120.69	126.37
2	L5	4228	OMG	N9-C4-N3	4.12	134.19	125.95
2	L5	3764	PSU	C4-N3-C2	-4.12	120.70	126.37
2	L5	4673	PSU	O2-C2-N1	-4.11	118.55	122.79
79	S2	1232	PSU	C4-N3-C2	-4.11	120.71	126.37
2	L5	2837	OMU	C5-C4-N3	4.10	120.55	114.80
2	L5	4361	PSU	C4-N3-C2	-4.10	120.73	126.37
79	S2	823	PSU	C4-N3-C2	-4.09	120.73	126.37
2	L5	3844	PSU	C4-N3-C2	-4.09	120.73	126.37
79	S2	1081	PSU	C4-N3-C2	-4.09	120.73	126.37
2	L5	4579	PSU	O2-C2-N1	-4.09	118.57	122.79
79	S2	1367	PSU	C4-N3-C2	-4.08	120.75	126.37
1	L1	69	PSU	C4-N3-C2	-4.08	120.75	126.37
2	L5	729	2MG	N1-C2-N2	-4.08	112.40	116.56
79	S2	966	PSU	C4-N3-C2	-4.07	120.76	126.37
2	L5	1744	PSU	C4-N3-C2	-4.07	120.76	126.37
2	L5	3639	PSU	C4-N3-C2	-4.07	120.76	126.37
2	L5	4423	PSU	C4-N3-C2	-4.07	120.77	126.37
79	S2	116	OMU	N3-C2-N1	4.06	120.18	114.89
79	S2	1288	OMU	N3-C2-N1	4.06	120.17	114.89
79	S2	918	PSU	C4-N3-C2	-4.06	120.78	126.37
2	L5	4689	PSU	C4-N3-C2	-4.04	120.81	126.37
2	L5	2415	OMU	N3-C2-N1	4.03	120.14	114.89
79	S2	116	OMU	C5-C4-N3	4.02	120.44	114.80
79	S2	1625	PSU	C4-N3-C2	-4.02	120.83	126.37
2	L5	3925	OMU	C5-C4-N3	4.02	120.42	114.80
79	S2	34	PSU	O2-C2-N1	-4.01	118.66	122.79
2	L5	4532	PSU	O2-C2-N1	-4.00	118.66	122.79
2	L5	3770	PSU	O2-C2-N1	-4.00	118.66	122.79
2	L5	4392	OMG	C6-C5-N7	4.00	137.57	130.29
2	L5	4442	PSU	C4-N3-C2	-3.99	120.87	126.37
2	L5	3762	PSU	C4-N3-C2	-3.99	120.88	126.37
79	S2	1238	PSU	O2-C2-N1	-3.99	118.68	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L5	1782	PSU	O2-C2-N1	-3.99	118.68	122.79
79	S2	1177	PSU	O2-C2-N1	-3.98	118.69	122.79
79	S2	822	PSU	O2-C2-N1	-3.97	118.70	122.79
79	S2	1288	OMU	C5-C4-N3	3.97	120.36	114.80
2	L5	1517	2MG	N1-C2-N2	-3.97	112.51	116.56
79	S2	121	OMU	C5-C4-N3	3.96	120.35	114.80
79	S2	1851	MA6	N3-C4-N9	3.95	133.89	127.17
79	S2	1804	OMU	C5-C4-N3	3.95	120.33	114.80
2	L5	4220	6MZ	C2-N3-C4	3.94	121.46	111.83
79	S2	1445	PSU	O2-C2-N1	-3.94	118.72	122.79
2	L5	1792	PSU	C4-N3-C2	-3.94	120.95	126.37
2	L5	1316	OMG	N9-C4-N3	3.94	133.82	125.95
79	S2	406	PSU	O2-C2-N1	-3.93	118.73	122.79
79	S2	1643	PSU	O2-C2-N1	-3.93	118.73	122.79
79	S2	1004	PSU	O2-C2-N1	-3.93	118.73	122.79
79	S2	1347	PSU	O2-C2-N1	-3.93	118.74	122.79
2	L5	4299	PSU	O2-C2-N1	-3.92	118.74	122.79
79	S2	210	PSU	O2-C2-N1	-3.92	118.75	122.79
79	S2	172	OMU	C5-C4-N3	3.90	120.26	114.80
79	S2	1045	PSU	O2-C2-N1	-3.89	118.78	122.79
2	L5	4293	PSU	O2-C2-N1	-3.88	118.79	122.79
79	S2	863	PSU	O2-C2-N1	-3.87	118.80	122.79
79	S2	627	OMU	C5-C4-N3	3.87	120.22	114.80
2	L5	4227	OMU	N3-C2-N1	3.87	119.93	114.89
2	L5	2364	OMG	N9-C4-N3	3.86	133.68	125.95
1	L1	69	PSU	O2-C2-N1	-3.84	118.83	122.79
79	S2	1832	6MZ	C4-C5-N7	-3.83	106.20	110.58
2	L5	1683	PSU	O2-C2-N1	-3.83	118.84	122.79
2	L5	2364	OMG	C6-C5-N7	3.83	137.26	130.29
2	L5	4521	PSU	C4-N3-C2	-3.82	121.11	126.37
2	L5	3758	PSU	O2-C2-N1	-3.82	118.85	122.79
2	L5	4498	OMU	C5-C4-N3	3.81	120.14	114.80
79	S2	866	PSU	O2-C2-N1	-3.81	118.86	122.79
79	S2	428	OMU	C5-C4-N3	3.80	120.12	114.80
2	L5	3884	PSU	O2-C2-N1	-3.80	118.87	122.79
79	S2	1851	MA6	C2-N3-C4	3.79	121.09	111.83
2	L5	4628	PSU	O2-C2-N1	-3.78	118.89	122.79
2	L5	4872	2MG	N1-C2-N2	-3.77	112.71	116.56
2	L5	4623	OMG	C6-C5-N7	3.77	137.14	130.29
79	S2	1442	OMU	C5-C4-N3	3.77	120.07	114.80
2	L5	4296	PSU	O2-C2-N1	-3.75	118.93	122.79
2	L5	3730	PSU	O2-C2-N1	-3.74	118.93	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
79	S2	686	PSU	O2-C2-N1	-3.74	118.94	122.79
79	S2	1832	6MZ	C2-N3-C4	3.74	120.95	111.83
79	S2	1326	OMU	C5-C4-N3	3.72	120.01	114.80
79	S2	119	PSU	O2-C2-N1	-3.72	118.95	122.79
2	L5	4636	PSU	O2-C2-N1	-3.71	118.96	122.79
79	S2	799	OMU	C5-C4-N3	3.70	119.99	114.80
79	S2	1367	PSU	O2-C2-N1	-3.70	118.97	122.79
2	L5	4689	PSU	O2-C2-N1	-3.70	118.97	122.79
79	S2	218	PSU	O2-C2-N1	-3.70	118.97	122.79
79	S2	1851	MA6	N1-C2-N3	-3.70	122.98	128.58
2	L5	3768	PSU	O2-C2-N1	-3.69	118.98	122.79
79	S2	105	PSU	O2-C2-N1	-3.69	118.99	122.79
2	L5	4228	OMG	C6-C5-N7	3.68	136.99	130.29
79	S2	1850	MA6	C4-C5-N7	-3.67	106.38	110.58
79	S2	1851	MA6	C4-C5-N7	-3.67	106.39	110.58
79	S2	649	PSU	O2-C2-N1	-3.67	119.01	122.79
2	L5	1773	OMU	C5-C4-N3	3.67	119.93	114.80
2	L5	3920	PSU	O2-C2-N1	-3.66	119.01	122.79
2	L5	5001	PSU	O2-C2-N1	-3.66	119.02	122.79
2	L5	2050	OMG	C6-C5-N7	3.66	136.94	130.29
2	L5	2632	PSU	O2-C2-N1	-3.65	119.02	122.79
79	S2	966	PSU	O2-C2-N1	-3.65	119.02	122.79
2	L5	1792	PSU	O2-C2-N1	-3.65	119.03	122.79
2	L5	4220	6MZ	C4-C5-N7	-3.65	106.41	110.58
79	S2	681	PSU	O2-C2-N1	-3.64	119.03	122.79
2	L5	1522	OMG	C6-C5-N7	3.64	136.92	130.29
2	L5	4620	OMU	C5-C4-N3	3.64	119.89	114.80
79	S2	815	PSU	O2-C2-N1	-3.63	119.05	122.79
2	L5	3782	5MC	C5-C6-N1	-3.61	119.39	123.31
2	L5	1781	PSU	O2-C2-N1	-3.61	119.07	122.79
2	L5	4618	OMG	C6-C5-N7	3.60	136.85	130.29
58	SO	138	IAS	OD1-CG-CB	-3.58	114.95	125.38
2	L5	4220	6MZ	C6-C5-N7	3.58	136.33	132.43
2	L5	4442	PSU	O2-C2-N1	-3.58	119.10	122.79
2	L5	3853	PSU	O2-C2-N1	-3.58	119.10	122.79
79	S2	1174	PSU	O2-C2-N1	-3.57	119.10	122.79
28	La	39	V5N	O-C-CA	-3.57	115.59	124.77
2	L5	4220	6MZ	N1-C2-N3	-3.56	123.19	128.58
2	L5	4312	PSU	O2-C2-N1	-3.56	119.11	122.79
2	L5	4353	PSU	O2-C2-N1	-3.56	119.12	122.79
79	S2	918	PSU	O2-C2-N1	-3.56	119.12	122.79
2	L5	4494	OMG	C6-C5-N7	3.56	136.76	130.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
79	S2	823	PSU	O2-C2-N1	-3.55	119.12	122.79
2	L5	4220	6MZ	C9-N6-C6	-3.55	119.56	122.85
79	S2	1692	PSU	O2-C2-N1	-3.54	119.13	122.79
2	L5	1322	1MA	C6-C5-N7	-3.54	125.89	132.16
2	L5	4552	PSU	O2-C2-N1	-3.54	119.14	122.79
79	S2	1625	PSU	O2-C2-N1	-3.54	119.14	122.79
79	S2	1328	OMG	C6-C5-N7	3.54	136.72	130.29
2	L5	3734	PSU	O2-C2-N1	-3.53	119.14	122.79
2	L5	4530	UR3	C5-C4-N3	3.52	119.68	115.04
79	S2	1832	6MZ	C6-C5-N7	3.52	136.26	132.43
79	S2	1056	PSU	O2-C2-N1	-3.51	119.16	122.79
79	S2	36	PSU	O2-C2-N1	-3.50	119.18	122.79
79	S2	1850	MA6	C9-N6-C6	-3.50	111.62	120.52
2	L5	3925	OMU	O4-C4-C5	-3.49	119.14	125.16
79	S2	1850	MA6	C2-N3-C4	3.49	120.34	111.83
79	S2	1850	MA6	N1-C6-N6	3.48	121.10	116.86
2	L5	3715	PSU	O2-C2-N1	-3.47	119.21	122.79
79	S2	651	PSU	O2-C2-N1	-3.46	119.22	122.79
2	L5	4576	PSU	O2-C2-N1	-3.46	119.22	122.79
2	L5	3899	OMG	C6-C5-N7	3.45	136.58	130.29
28	La	39	V5N	O2-CB-CA	3.44	115.05	107.49
2	L5	4370	OMG	C6-C5-N7	3.44	136.56	130.29
2	L5	4420	PSU	O2-C2-N1	-3.44	119.24	122.79
79	S2	572	PSU	O2-C2-N1	-3.44	119.24	122.79
79	S2	1244	PSU	O2-C2-N1	-3.43	119.25	122.79
79	S2	609	PSU	O2-C2-N1	-3.43	119.25	122.79
79	S2	801	PSU	O2-C2-N1	-3.43	119.25	122.79
79	S2	1248	B8N	N3-C2-N1	3.42	120.89	116.72
79	S2	116	OMU	O4-C4-C5	-3.41	119.28	125.16
2	L5	3762	PSU	O2-C2-N1	-3.40	119.28	122.79
2	L5	4870	OMG	C6-C5-N7	3.40	136.48	130.29
79	S2	1081	PSU	O2-C2-N1	-3.38	119.30	122.79
79	S2	509	OMG	C6-C5-N7	3.38	136.43	130.29
2	L5	3639	PSU	O2-C2-N1	-3.37	119.32	122.79
2	L5	4471	PSU	O2-C2-N1	-3.36	119.32	122.79
2	L5	1860	PSU	O2-C2-N1	-3.36	119.32	122.79
2	L5	4431	PSU	O2-C2-N1	-3.36	119.33	122.79
2	L5	1536	PSU	O2-C2-N1	-3.34	119.34	122.79
2	L5	1760	OMG	C6-C5-N7	3.34	136.37	130.29
2	L5	5010	PSU	O2-C2-N1	-3.34	119.34	122.79
79	S2	1288	OMU	O4-C4-C5	-3.33	119.42	125.16
2	L5	4403	PSU	O2-C2-N1	-3.32	119.36	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L5	3944	OMG	C6-C5-N7	3.31	136.32	130.29
79	S2	428	OMU	O4-C4-C5	-3.31	119.45	125.16
2	L5	4637	OMG	C6-C5-N7	3.31	136.31	130.29
2	L5	4447	5MC	C5-C6-N1	-3.30	119.72	123.31
2	L5	4306	OMU	O4-C4-C5	-3.30	119.46	125.16
1	L1	55	PSU	O2-C2-N1	-3.30	119.38	122.79
79	S2	867	OMG	C6-C5-N7	3.30	136.29	130.29
2	L5	3830	A2M	C2'-C1'-N9	-3.29	108.33	113.75
2	L5	1582	PSU	O2-C2-N1	-3.26	119.42	122.79
2	L5	1744	PSU	O2-C2-N1	-3.26	119.43	122.79
2	L5	4392	OMG	C4-C5-N7	-3.26	105.51	110.67
2	L5	3792	OMG	C6-C5-N7	3.25	136.20	130.29
79	S2	683	OMG	C6-C5-N7	3.24	136.19	130.29
2	L5	4972	PSU	O2-C2-N1	-3.24	119.45	122.79
2	L5	1677	PSU	O2-C2-N1	-3.23	119.45	122.79
2	L5	4523	A2M	C2'-C1'-N9	-3.22	108.45	113.75
79	S2	1326	OMU	O4-C4-C5	-3.21	119.62	125.16
2	L5	4499	OMG	C6-C5-N7	3.20	136.12	130.29
79	S2	1851	MA6	C9-N6-C6	-3.19	112.40	120.52
2	L5	4227	OMU	O4-C4-C5	-3.19	119.65	125.16
2	L5	4447	5MC	C5-C4-N3	-3.18	118.49	121.75
2	L5	2415	OMU	O4-C4-C5	-3.17	119.69	125.16
79	S2	1851	MA6	C4-N9-C8	3.15	109.05	105.74
79	S2	1832	6MZ	N1-C2-N3	-3.14	123.82	128.58
2	L5	2837	OMU	O2-C2-N1	-3.14	118.70	122.80
79	S2	1248	B8N	O4-C4-N3	-3.14	114.89	119.99
2	L5	4457	PSU	O2-C2-N1	-3.14	119.55	122.79
79	S2	644	OMG	C6-C5-N7	3.13	135.99	130.29
2	L5	3925	OMU	O2-C2-N1	-3.12	118.73	122.80
79	S2	1850	MA6	N1-C2-N3	-3.11	123.87	128.58
2	L5	3764	PSU	O2-C2-N1	-3.11	119.58	122.79
79	S2	1046	PSU	O2-C2-N1	-3.10	119.59	122.79
2	L5	1322	1MA	N1-C6-N6	3.10	127.49	119.71
79	S2	1804	OMU	O4-C4-C5	-3.09	119.83	125.16
7	LD	216	V5N	O-C-CA	-3.07	116.87	124.77
79	S2	814	PSU	O2-C2-N1	-3.07	119.63	122.79
1	L1	75	OMG	C6-C5-N7	3.07	135.87	130.29
2	L5	2508	PSU	O2-C2-N1	-3.06	119.63	122.79
79	S2	601	OMG	C6-C5-N7	3.06	135.86	130.29
79	S2	172	OMU	O4-C4-C5	-3.05	119.89	125.16
79	S2	1490	OMG	C6-C5-N7	3.05	135.84	130.29
2	L5	2424	OMG	C6-C5-N7	3.04	135.83	130.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
79	S2	1442	OMU	O4-C4-C5	-3.04	119.92	125.16
2	L5	1316	OMG	C4-C5-N7	-3.03	105.88	110.67
2	L5	2050	OMG	C4-C5-N7	-3.02	105.88	110.67
2	L5	4498	OMU	O2-C2-N1	-3.02	118.86	122.80
79	S2	1842	4AC	C6-C5-C4	3.01	120.63	117.00
2	L5	2876	OMG	C6-C5-N7	3.00	135.75	130.29
79	S2	1337	4AC	N4-C4-N3	2.98	118.71	113.87
2	L5	4296	PSU	C5-C6-N1	-2.97	118.02	122.14
2	L5	2837	OMU	O4-C4-C5	-2.96	120.06	125.16
79	S2	1232	PSU	O2-C2-N1	-2.96	119.74	122.79
2	L5	4623	OMG	C4-C5-N7	-2.95	105.99	110.67
2	L5	4361	PSU	O2-C2-N1	-2.95	119.75	122.79
79	S2	93	PSU	O2-C2-N1	-2.94	119.75	122.79
79	S2	436	OMG	C6-C5-N7	2.94	135.63	130.29
2	L5	2364	OMG	C4-C5-N7	-2.94	106.02	110.67
2	L5	3785	A2M	C2'-C1'-N9	-2.93	108.93	113.75
2	L5	4423	PSU	O2-C2-N1	-2.93	119.77	122.79
2	L5	1871	A2M	C2'-C1'-N9	-2.92	108.94	113.75
2	L5	4521	PSU	O2-C2-N1	-2.92	119.78	122.79
79	S2	121	OMU	O4-C4-C5	-2.90	120.15	125.16
2	L5	3744	OMG	C6-C5-N7	2.90	135.57	130.29
2	L5	4196	OMG	C6-C5-N7	2.88	135.54	130.29
79	S2	27	A2M	C2'-C1'-N9	-2.88	109.01	113.75
79	S2	627	OMU	O4-C4-C5	-2.88	120.20	125.16
79	S2	121	OMU	O2-C2-N1	-2.87	119.06	122.80
2	L5	3637	PSU	O2-C2-N1	-2.86	119.83	122.79
7	LD	216	V5N	O2-CB-CA	2.83	113.69	107.49
79	S2	1639	7MG	C4-C5-N7	2.81	108.69	105.38
79	S2	799	OMU	O2-C2-N1	-2.79	119.17	122.80
28	La	39	V5N	O2-CB-CG	-2.77	102.78	109.90
2	L5	3782	5MC	C5-C4-N3	-2.77	118.91	121.75
79	S2	1832	6MZ	C5-N7-C8	2.77	107.80	103.45
79	S2	627	OMU	O2-C2-N1	-2.76	119.20	122.80
2	L5	1322	1MA	CM1-N1-C6	-2.72	115.93	120.15
79	S2	918	PSU	O4'-C1'-C2'	2.71	108.91	105.15
2	L5	3899	OMG	C4-C5-N7	-2.70	106.39	110.67
79	S2	1851	MA6	C6-C5-N7	2.70	137.74	133.43
79	S2	683	OMG	C4-C5-N7	-2.70	106.40	110.67
2	L5	4228	OMG	C4-C5-N7	-2.70	106.40	110.67
2	L5	1773	OMU	O4-C4-C5	-2.69	120.52	125.16
2	L5	1536	PSU	C5-C6-N1	-2.69	118.41	122.14
2	L5	4494	OMG	C4-C5-N7	-2.69	106.41	110.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
79	S2	1328	OMG	C4-C5-N7	-2.67	106.44	110.67
2	L5	1773	OMU	O2-C2-N1	-2.66	119.33	122.80
79	S2	863	PSU	C5-C6-N1	-2.66	118.44	122.14
2	L5	3637	PSU	C5-C6-N1	-2.66	118.45	122.14
79	S2	867	OMG	C4-C5-N7	-2.65	106.46	110.67
79	S2	166	A2M	C2'-C1'-N9	-2.65	109.38	113.75
2	L5	4370	OMG	C4-C5-N7	-2.65	106.47	110.67
2	L5	4637	OMG	C4-C5-N7	-2.64	106.48	110.67
79	S2	1326	OMU	C1'-N1-C2	2.64	122.34	117.59
79	S2	1850	MA6	C5-N7-C8	2.64	107.60	103.45
79	S2	801	PSU	C5-C6-N1	-2.63	118.49	122.14
79	S2	1174	PSU	C5-C6-N1	-2.63	118.49	122.14
2	L5	2876	OMG	C4-C5-N7	-2.62	106.51	110.67
2	L5	3851	PSU	O2-C2-N1	-2.62	120.08	122.79
79	S2	1248	B8N	C31-N3-C2	2.62	121.50	117.64
2	L5	1524	A2M	N3-C4-N9	2.61	131.61	127.17
79	S2	590	A2M	C4'-O4'-C1'	-2.61	103.70	109.47
79	S2	509	OMG	C4-C5-N7	-2.61	106.53	110.67
79	S2	1851	MA6	C5-N7-C8	2.61	107.55	103.45
2	L5	2424	OMG	C4-C5-N7	-2.60	106.55	110.67
2	L5	1522	OMG	C4-C5-N7	-2.59	106.57	110.67
2	L5	4498	OMU	O4-C4-C5	-2.59	120.70	125.16
79	S2	799	OMU	O4-C4-C5	-2.58	120.72	125.16
2	L5	1625	OMG	C6-C5-N7	2.57	134.97	130.29
79	S2	1337	4AC	C6-C5-C4	2.57	120.10	117.00
2	L5	3944	OMG	C4-C5-N7	-2.57	106.60	110.67
2	L5	4220	6MZ	C5-N7-C8	2.56	107.47	103.45
79	S2	609	PSU	C5-C6-N1	-2.56	118.59	122.14
2	L5	3744	OMG	O6-C6-C5	-2.54	119.83	126.53
79	S2	1337	4AC	CM7-C7-N4	2.54	119.36	115.27
79	S2	1850	MA6	C4-N9-C8	2.53	108.39	105.74
2	L5	4499	OMG	O6-C6-C5	-2.52	119.87	126.53
79	S2	1056	PSU	C5-C6-N1	-2.52	118.64	122.14
2	L5	4306	OMU	O2-C2-N1	-2.52	119.52	122.80
2	L5	1534	A2M	C3'-C2'-C1'	-2.51	98.01	102.81
2	L5	1322	1MA	C5-C4-N3	-2.50	123.59	127.27
79	S2	159	A2M	C2-N1-C6	-2.50	114.62	118.73
2	L5	1862	PSU	C5-C6-N1	-2.50	118.67	122.14
2	L5	4620	OMU	O4-C4-C5	-2.50	120.85	125.16
2	L5	4590	A2M	C2'-C1'-N9	-2.49	109.65	113.75
5	LB	245	HIC	CZ-NE2-CD2	-2.49	122.77	126.03
79	S2	172	OMU	O2-C2-N1	-2.49	119.56	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
79	S2	116	OMU	O2-C2-N1	-2.49	119.56	122.80
2	L5	4618	OMG	C4-C5-N7	-2.48	106.73	110.67
2	L5	4620	OMU	O2-C2-N1	-2.48	119.57	122.80
2	L5	1760	OMG	C4-C5-N7	-2.48	106.75	110.67
79	S2	649	PSU	C5-C6-N1	-2.47	118.71	122.14
2	L5	4499	OMG	C4-C5-N7	-2.46	106.77	110.67
2	L5	2050	OMG	O6-C6-C5	-2.46	120.04	126.53
2	L5	1677	PSU	C5-C6-N1	-2.46	118.73	122.14
2	L5	1860	PSU	C5-C6-N1	-2.46	118.73	122.14
79	S2	1490	OMG	C4-C5-N7	-2.45	106.78	110.67
2	L5	1781	PSU	C5-C6-N1	-2.45	118.74	122.14
2	L5	4228	OMG	O6-C6-C5	-2.45	120.07	126.53
79	S2	428	OMU	O2-C2-N1	-2.45	119.61	122.80
79	S2	823	PSU	C5-C6-N1	-2.43	118.76	122.14
2	L5	4552	PSU	C5-C6-N1	-2.43	118.77	122.14
1	L1	75	OMG	C4-C5-N7	-2.43	106.82	110.67
79	S2	468	A2M	C2-N1-C6	-2.42	114.75	118.73
2	L5	2508	PSU	C5-C6-N1	-2.41	118.79	122.14
2	L5	3792	OMG	C4-C5-N7	-2.41	106.85	110.67
2	L5	3744	OMG	C4-C5-N7	-2.41	106.85	110.67
2	L5	3884	PSU	C5-C6-N1	-2.41	118.80	122.14
2	L5	4870	OMG	C4-C5-N7	-2.41	106.85	110.67
2	L5	1517	2MG	N1-C2-N3	2.41	127.73	123.68
79	S2	119	PSU	C5-C6-N1	-2.41	118.80	122.14
2	L5	1322	1MA	C6-C5-C4	2.41	123.42	118.32
2	L5	4872	2MG	N1-C2-N3	2.40	127.73	123.68
2	L5	3899	OMG	O6-C6-C5	-2.40	120.19	126.53
2	L5	3867	A2M	N3-C4-N9	2.40	131.25	127.17
2	L5	729	2MG	N1-C2-N3	2.40	127.71	123.68
1	L1	55	PSU	C5-C6-N1	-2.39	118.82	122.14
2	L5	3715	PSU	C5-C6-N1	-2.38	118.83	122.14
79	S2	601	OMG	O6-C6-C5	-2.38	120.24	126.53
79	S2	436	OMG	O6-C6-C5	-2.38	120.24	126.53
2	L5	3695	PSU	C5-C6-N1	-2.38	118.83	122.14
2	L5	4431	PSU	C5-C6-N1	-2.38	118.84	122.14
79	S2	1851	MA6	N9-C8-N7	-2.37	110.57	113.94
79	S2	866	PSU	C5-C6-N1	-2.36	118.87	122.14
2	L5	4299	PSU	C5-C6-N1	-2.36	118.87	122.14
79	S2	644	OMG	C4-C5-N7	-2.35	106.94	110.67
2	L5	1625	OMG	O6-C6-C5	-2.35	120.34	126.53
79	S2	109	PSU	C5-C6-N1	-2.34	118.89	122.14
2	L5	3734	PSU	C5-C6-N1	-2.34	118.89	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
79	S2	601	OMG	C4-C5-N7	-2.34	106.96	110.67
79	S2	36	PSU	C5-C6-N1	-2.34	118.90	122.14
2	L5	1744	PSU	C5-C6-N1	-2.33	118.90	122.14
79	S2	436	OMG	C4-C5-N7	-2.33	106.97	110.67
79	S2	159	A2M	N3-C4-N9	2.33	131.13	127.17
2	L5	398	A2M	N3-C4-N9	2.33	131.13	127.17
2	L5	4590	A2M	N3-C4-N9	2.33	131.13	127.17
2	L5	1625	OMG	C4-C5-N7	-2.33	106.98	110.67
2	L5	400	A2M	N3-C4-N9	2.32	131.11	127.17
79	S2	406	PSU	C5-C6-N1	-2.32	118.92	122.14
79	S2	1232	PSU	C5-C6-N1	-2.32	118.92	122.14
79	S2	651	PSU	C5-C6-N1	-2.32	118.92	122.14
2	L5	3808	OMC	O2-C2-N3	-2.31	118.68	122.33
2	L5	4196	OMG	O6-C6-C5	-2.31	120.44	126.53
79	S2	1177	PSU	C5-C6-N1	-2.31	118.94	122.14
79	S2	512	A2M	N3-C4-N9	2.30	131.09	127.17
2	L5	4312	PSU	C5-C6-N1	-2.30	118.94	122.14
79	S2	1445	PSU	C5-C6-N1	-2.30	118.95	122.14
2	L5	398	A2M	C2-N1-C6	-2.29	114.96	118.73
79	S2	105	PSU	C5-C6-N1	-2.29	118.95	122.14
2	L5	4530	UR3	C3U-N3-C4	2.29	121.05	117.87
2	L5	4457	PSU	C5-C6-N1	-2.29	118.96	122.14
2	L5	3792	OMG	O6-C6-C5	-2.29	120.49	126.53
2	L5	1524	A2M	C2-N1-C6	-2.29	114.97	118.73
79	S2	1678	A2M	C2-N1-C6	-2.29	114.97	118.73
79	S2	815	PSU	C5-C6-N1	-2.29	118.97	122.14
2	L5	4972	PSU	C5-C6-N1	-2.28	118.97	122.14
2	L5	4536	OMC	O2-C2-N3	-2.28	118.73	122.33
2	L5	4523	A2M	C2'-C3'-C4'	-2.28	97.09	101.99
79	S2	1288	OMU	C1'-N1-C2	2.28	121.69	117.59
79	S2	822	PSU	O4'-C1'-C2'	2.28	108.30	105.15
2	L5	5010	PSU	C5-C6-N1	-2.27	118.98	122.14
2	L5	4523	A2M	C3'-C2'-C1'	-2.26	98.49	102.81
79	S2	1045	PSU	C5-C6-N1	-2.25	119.02	122.14
2	L5	4500	PSU	C5-C6-N1	-2.25	119.02	122.14
2	L5	729	2MG	C6-C5-C4	2.25	122.21	118.83
79	S2	93	PSU	C5-C6-N1	-2.24	119.03	122.14
79	S2	1842	4AC	N4-C4-N3	2.24	117.50	113.87
2	L5	3944	OMG	O6-C6-C5	-2.24	120.62	126.53
79	S2	668	A2M	N3-C4-N9	2.24	130.97	127.17
79	S2	1046	PSU	C5-C6-N1	-2.24	119.03	122.14
2	L5	1517	2MG	C6-C5-C4	2.24	122.19	118.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L5	4293	PSU	C5-C6-N1	-2.23	119.04	122.14
2	L5	4521	PSU	O4'-C1'-C2'	2.23	108.24	105.15
2	L5	3718	A2M	N3-C2-N1	2.23	131.96	128.58
79	S2	1850	MA6	C10-N6-C9	-2.23	109.01	116.18
2	L5	3785	A2M	N3-C4-N9	2.23	130.96	127.17
2	L5	4456	OMC	O2-C2-N3	-2.23	118.82	122.33
79	S2	867	OMG	O6-C6-C5	-2.22	120.67	126.53
2	L5	2050	OMG	C2-N1-C6	-2.22	121.08	125.11
2	L5	4447	5MC	N1-C2-N3	2.22	122.66	118.80
2	L5	4870	OMG	O6-C6-C5	-2.22	120.68	126.53
2	L5	400	A2M	N3-C2-N1	2.22	131.94	128.58
2	L5	1582	PSU	C5-C6-N1	-2.22	119.06	122.14
79	S2	590	A2M	C2-N1-C6	-2.21	115.10	118.73
79	S2	99	A2M	N3-C4-N9	2.21	130.93	127.17
2	L5	3718	A2M	C2-N1-C6	-2.21	115.11	118.73
2	L5	1326	A2M	N3-C4-N9	2.20	130.91	127.17
2	L5	4618	OMG	O6-C6-C5	-2.20	120.73	126.53
2	L5	2050	OMG	C5-C6-N1	2.20	118.85	113.25
2	L5	4457	PSU	O4'-C1'-C2'	2.20	108.19	105.15
2	L5	3764	PSU	O4'-C1'-C2'	2.20	108.19	105.15
2	L5	400	A2M	C5-C4-N3	-2.19	123.69	126.72
2	L5	3851	PSU	C6-C5-C4	-2.19	116.69	118.17
2	L5	1316	OMG	C8-N7-C5	2.19	108.17	104.26
79	S2	1081	PSU	O4'-C1'-C2'	2.19	108.18	105.15
2	L5	3730	PSU	C5-C6-N1	-2.19	119.10	122.14
79	S2	1842	4AC	CM7-C7-N4	2.19	118.80	115.27
2	L5	3785	A2M	C2-N1-C6	-2.19	115.14	118.73
2	L5	4353	PSU	C5-C6-N1	-2.18	119.11	122.14
2	L5	4442	PSU	O4'-C1'-C2'	2.18	108.17	105.15
2	L5	2876	OMG	O6-C6-C5	-2.18	120.79	126.53
2	L5	4392	OMG	C8-N7-C5	2.18	108.14	104.26
79	S2	576	A2M	C2-N1-C6	-2.17	115.16	118.73
79	S2	576	A2M	N3-C4-N9	2.17	130.86	127.17
79	S2	590	A2M	N3-C4-N9	2.17	130.86	127.17
79	S2	683	OMG	O6-C6-C5	-2.17	120.82	126.53
2	L5	4420	PSU	C5-C6-N1	-2.16	119.14	122.14
79	S2	966	PSU	C5-C6-N1	-2.16	119.14	122.14
2	L5	4370	OMG	O6-C6-C5	-2.16	120.82	126.53
1	L1	69	PSU	O4'-C1'-C2'	2.16	108.14	105.15
79	S2	1337	4AC	C5-C4-N3	-2.16	119.22	122.60
79	S2	572	PSU	C5-C6-N1	-2.16	119.14	122.14
79	S2	468	A2M	N3-C4-N9	2.16	130.84	127.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
79	S2	484	A2M	N3-C4-N9	2.16	130.84	127.17
2	L5	3920	PSU	C5-C6-N1	-2.15	119.15	122.14
79	S2	1692	PSU	C5-C6-N1	-2.15	119.15	122.14
79	S2	1081	PSU	C5-C6-N1	-2.15	119.16	122.14
2	L5	3768	PSU	C5-C6-N1	-2.15	119.16	122.14
79	S2	512	A2M	C2-N1-C6	-2.15	115.20	118.73
2	L5	1522	OMG	O6-C6-C5	-2.15	120.87	126.53
2	L5	4872	2MG	C6-C5-C4	2.14	122.06	118.83
79	S2	1832	6MZ	C4-N9-C8	2.14	107.99	105.74
2	L5	3851	PSU	C5-C6-N1	-2.14	119.17	122.14
2	L5	398	A2M	C5-C4-N3	-2.14	123.77	126.72
2	L5	4618	OMG	C2'-C1'-N9	-2.14	110.18	114.24
79	S2	512	A2M	C2'-C1'-N9	-2.14	110.23	113.75
2	L5	4628	PSU	C5-C6-N1	-2.14	119.17	122.14
79	S2	686	PSU	C5-C6-N1	-2.14	119.18	122.14
79	S2	1490	OMG	O6-C6-C5	-2.14	120.90	126.53
79	S2	1383	A2M	C2'-C1'-N9	-2.14	110.24	113.75
2	L5	1782	PSU	C5-C6-N1	-2.13	119.18	122.14
79	S2	218	PSU	C5-C6-N1	-2.13	119.18	122.14
2	L5	5001	PSU	C5-C6-N1	-2.13	119.19	122.14
2	L5	400	A2M	C2-N1-C6	-2.13	115.23	118.73
2	L5	3899	OMG	C5-C6-N1	2.13	118.67	113.25
2	L5	2050	OMG	C8-N7-C5	2.13	108.05	104.26
2	L5	2876	OMG	C8-N7-C5	2.13	108.05	104.26
2	L5	2837	OMU	C2'-C1'-N1	-2.12	110.21	114.24
2	L5	3764	PSU	C5-C6-N1	-2.12	119.19	122.14
2	L5	2787	A2M	C2-N1-C6	-2.12	115.25	118.73
2	L5	4423	PSU	C5-C6-N1	-2.12	119.20	122.14
2	L5	4576	PSU	C5-C6-N1	-2.12	119.20	122.14
2	L5	3818	UY1	C5-C4-N3	2.12	121.22	116.55
2	L5	4220	6MZ	C4-N9-C8	2.12	107.96	105.74
79	S2	99	A2M	C2-N1-C6	-2.12	115.25	118.73
2	L5	4637	OMG	O6-C6-C5	-2.12	120.94	126.53
2	L5	3825	A2M	C2-N1-C6	-2.12	115.25	118.73
79	S2	1244	PSU	C5-C6-N1	-2.11	119.20	122.14
2	L5	2364	OMG	O6-C6-C5	-2.11	120.95	126.53
79	S2	1238	PSU	C5-C6-N1	-2.11	119.21	122.14
79	S2	644	OMG	O6-C6-C5	-2.11	120.96	126.53
79	S2	601	OMG	C5-C6-N1	2.11	118.63	113.25
2	L5	3770	PSU	C5-C6-N1	-2.11	119.21	122.14
2	L5	3758	PSU	C5-C6-N1	-2.11	119.22	122.14
2	L5	1524	A2M	C5-C4-N3	-2.11	123.82	126.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	L1	75	OMG	O6-C6-C5	-2.11	120.98	126.53
79	S2	1383	A2M	N3-C4-N9	2.10	130.75	127.17
79	S2	918	PSU	C5-C6-N1	-2.10	119.22	122.14
79	S2	1678	A2M	N3-C4-N9	2.10	130.74	127.17
2	L5	3899	OMG	C8-N7-C5	2.10	108.00	104.26
2	L5	3825	A2M	N3-C4-N9	2.10	130.74	127.17
2	L5	1677	PSU	O2-C2-N3	-2.10	118.13	121.86
2	L5	4618	OMG	C5-C6-N1	2.10	118.59	113.25
2	L5	2508	PSU	O2-C2-N3	-2.10	118.14	121.86
79	S2	1643	PSU	O4'-C1'-C2'	2.09	108.05	105.15
79	S2	484	A2M	C2-N1-C6	-2.09	115.29	118.73
2	L5	3760	A2M	C2-N1-C6	-2.09	115.30	118.73
2	L5	4623	OMG	C2'-C1'-N9	-2.09	110.27	114.24
79	S2	484	A2M	N3-C2-N1	2.09	131.75	128.58
2	L5	3762	PSU	C5-C6-N1	-2.09	119.24	122.14
79	S2	93	PSU	O2-C2-N3	-2.09	118.15	121.86
2	L5	4523	A2M	N3-C2-N1	2.09	131.74	128.58
2	L5	4521	PSU	C5-C6-N1	-2.09	119.24	122.14
2	L5	3782	5MC	O2-C2-N3	-2.09	119.04	122.33
2	L5	1326	A2M	N3-C2-N1	2.09	131.74	128.58
2	L5	1760	OMG	O6-C6-C5	-2.08	121.03	126.53
2	L5	3785	A2M	C4'-O4'-C1'	-2.08	104.86	109.47
2	L5	2815	A2M	C2-N1-C6	-2.08	115.31	118.73
2	L5	2351	OMC	O2-C2-N3	-2.08	119.05	122.33
2	L5	2363	A2M	N3-C4-N9	2.08	130.70	127.17
2	L5	2363	A2M	N3-C2-N1	2.08	131.73	128.58
2	L5	4500	PSU	O4'-C1'-C2'	2.08	108.03	105.15
2	L5	2401	A2M	N3-C2-N1	2.08	131.73	128.58
79	S2	572	PSU	O4'-C1'-C2'	2.08	108.02	105.15
2	L5	2632	PSU	C5-C6-N1	-2.07	119.26	122.14
79	S2	34	PSU	O4'-C1'-C2'	2.07	108.02	105.15
2	L5	4196	OMG	C4-C5-N7	-2.07	107.39	110.67
2	L5	2401	A2M	C2-N1-C6	-2.07	115.33	118.73
79	S2	34	PSU	C5-C6-N1	-2.07	119.27	122.14
2	L5	3715	PSU	O4'-C1'-C2'	2.07	108.01	105.15
2	L5	3867	A2M	C2-N1-C6	-2.07	115.34	118.73
2	L5	3853	PSU	C5-C6-N1	-2.06	119.27	122.14
79	S2	166	A2M	N3-C4-N9	2.06	130.68	127.17
2	L5	4353	PSU	O4'-C1'-C2'	2.06	108.01	105.15
2	L5	4220	6MZ	C2-N1-C6	2.06	122.08	115.24
2	L5	3853	PSU	O4'-C1'-C2'	2.06	108.00	105.15
2	L5	1340	OMC	O2-C2-N3	-2.06	119.09	122.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L5	3701	OMC	O2-C2-N3	-2.06	119.09	122.33
2	L5	2632	PSU	O4'-C1'-C2'	2.05	107.99	105.15
2	L5	4571	A2M	C2-N1-C6	-2.05	115.36	118.73
2	L5	4636	PSU	O4'-C1'-C2'	2.05	107.99	105.15
2	L5	4590	A2M	C3'-C2'-C1'	-2.05	98.88	102.81
2	L5	4403	PSU	O4'-C1'-C2'	2.05	107.98	105.15
79	S2	468	A2M	N3-C2-N1	2.05	131.68	128.58
79	S2	159	A2M	C5-C4-N3	-2.05	123.90	126.72
79	S2	814	PSU	O2-C2-N3	-2.04	118.23	121.86
79	S2	99	A2M	C5-C4-N3	-2.04	123.90	126.72
79	S2	166	A2M	C2-N1-C6	-2.04	115.37	118.73
2	L5	1522	OMG	C5-C6-N1	2.04	118.45	113.25
79	S2	27	A2M	N3-C2-N1	2.04	131.67	128.58
2	L5	3639	PSU	C5-C6-N1	-2.04	119.31	122.14
79	S2	814	PSU	C5-C6-N1	-2.04	119.31	122.14
2	L5	3762	PSU	O4'-C1'-C2'	2.04	107.97	105.15
7	LD	216	V5N	O2-CB-CG	-2.04	104.67	109.90
79	S2	1625	PSU	C5-C6-N1	-2.03	119.32	122.14
2	L5	4590	A2M	C5-C4-N3	-2.03	123.92	126.72
2	L5	4370	OMG	C8-N7-C5	2.03	107.87	104.26
79	S2	1639	7MG	C5-C4-N9	2.03	108.93	106.33
2	L5	3899	OMG	C2'-C1'-N9	-2.02	110.40	114.24
79	S2	576	A2M	N3-C2-N1	2.02	131.64	128.58
79	S2	1850	MA6	C5-C6-N6	-2.02	122.13	125.33
79	S2	210	PSU	O4'-C1'-C2'	2.02	107.94	105.15
2	L5	4628	PSU	O4'-C1'-C2'	2.02	107.94	105.15
2	L5	3637	PSU	O2-C2-N3	-2.02	118.28	121.86
79	S2	210	PSU	C5-C6-N1	-2.02	119.34	122.14
2	L5	3851	PSU	O4'-C1'-C2'	2.02	107.94	105.15
2	L5	1871	A2M	N3-C2-N1	2.02	131.63	128.58
2	L5	4499	OMG	C5-C6-N1	2.01	118.38	113.25
2	L5	3764	PSU	O2-C2-N3	-2.01	118.29	121.86
2	L5	2363	A2M	O3'-C3'-C2'	-2.01	105.56	111.19
79	S2	218	PSU	O4'-C1'-C2'	2.01	107.93	105.15
2	L5	2815	A2M	N3-C4-N9	2.01	130.58	127.17
2	L5	3818	UY1	C5-C6-N1	-2.00	119.36	122.14
79	S2	1248	B8N	O4'-C1'-C2'	2.00	107.92	105.15
79	S2	1046	PSU	O4'-C1'-C2'	2.00	107.92	105.15
2	L5	3944	OMG	C5-C6-N1	2.00	118.35	113.25
2	L5	4196	OMG	C5-C6-N1	2.00	118.35	113.25
79	S2	1031	A2M	C2'-C1'-N9	-2.00	110.46	113.75

There are no chirality outliers.

All (129) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
29	Lb	5	MLZ	C-CA-CB-CG
29	Lb	5	MLZ	CD-CE-NZ-CM
2	L5	2815	A2M	C1'-C2'-O2'-CM'
2	L5	4571	A2M	C1'-C2'-O2'-CM'
2	L5	4590	A2M	C4'-C5'-O5'-P
2	L5	4870	OMG	O4'-C4'-C5'-O5'
79	S2	99	A2M	C1'-C2'-O2'-CM'
79	S2	166	A2M	C1'-C2'-O2'-CM'
79	S2	210	PSU	C2'-C1'-C5-C4
79	S2	210	PSU	C2'-C1'-C5-C6
79	S2	468	A2M	C1'-C2'-O2'-CM'
79	S2	484	A2M	C1'-C2'-O2'-CM'
79	S2	576	A2M	C3'-C4'-C5'-O5'
79	S2	1031	A2M	C1'-C2'-O2'-CM'
79	S2	1248	B8N	O4'-C4'-C5'-O5'
79	S2	1248	B8N	N3-C31-C32-C33
79	S2	1678	A2M	C1'-C2'-O2'-CM'
79	S2	1832	6MZ	C5-C6-N6-C9
79	S2	1832	6MZ	N1-C6-N6-C9
79	S2	1851	MA6	C5-C6-N6-C10
79	S2	1248	B8N	C32-C31-N3-C4
2	L5	2364	OMG	O4'-C4'-C5'-O5'
2	L5	2401	A2M	C3'-C4'-C5'-O5'
2	L5	3734	PSU	O4'-C4'-C5'-O5'
2	L5	4636	PSU	C3'-C4'-C5'-O5'
2	L5	4870	OMG	C3'-C4'-C5'-O5'
79	S2	210	PSU	O4'-C4'-C5'-O5'
79	S2	576	A2M	O4'-C4'-C5'-O5'
2	L5	3701	OMC	C2'-C1'-N1-C6
2	L5	4500	PSU	O4'-C4'-C5'-O5'
2	L5	4636	PSU	O4'-C4'-C5'-O5'
79	S2	1248	B8N	C32-C31-N3-C2
79	S2	1851	MA6	N1-C6-N6-C10
79	S2	172	OMU	C3'-C2'-O2'-CM2
2	L5	3785	A2M	O4'-C4'-C5'-O5'
2	L5	3785	A2M	C3'-C4'-C5'-O5'
2	L5	4500	PSU	C3'-C4'-C5'-O5'
79	S2	1248	B8N	C3'-C4'-C5'-O5'
2	L5	3701	OMC	C2'-C1'-N1-C2
2	L5	1326	A2M	C3'-C4'-C5'-O5'
2	L5	2364	OMG	C3'-C4'-C5'-O5'
2	L5	2401	A2M	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
2	L5	4420	PSU	O4'-C4'-C5'-O5'
79	S2	1248	B8N	N34-C33-C34-O36
2	L5	3760	A2M	C2'-C1'-N9-C8
2	L5	3734	PSU	C3'-C4'-C5'-O5'
2	L5	4447	5MC	C2'-C1'-N1-C6
2	L5	4420	PSU	C3'-C4'-C5'-O5'
79	S2	210	PSU	C3'-C4'-C5'-O5'
79	S2	627	OMU	C2'-C1'-N1-C6
42	Lo	98	M3L	CD-CE-NZ-CM2
79	S2	1248	B8N	N34-C33-C34-O35
2	L5	1524	A2M	C3'-C4'-C5'-O5'
79	S2	918	PSU	O4'-C4'-C5'-O5'
42	Lo	98	M3L	CA-CB-CG-CD
42	Lo	98	M3L	CE-CD-CG-CB
2	L5	3867	A2M	C3'-C4'-C5'-O5'
2	L5	4618	OMG	O4'-C4'-C5'-O5'
79	S2	1248	B8N	C31-C32-C33-C34
42	Lo	98	M3L	CD-CE-NZ-CM1
42	Lo	98	M3L	CD-CE-NZ-CM3
79	S2	1850	MA6	C5-C6-N6-C9
2	L5	3851	PSU	C3'-C4'-C5'-O5'
2	L5	4623	OMG	C3'-C4'-C5'-O5'
2	L5	2787	A2M	C2'-C1'-N9-C8
2	L5	4447	5MC	O4'-C1'-N1-C6
79	S2	428	OMU	C3'-C2'-O2'-CM2
2	L5	3701	OMC	O4'-C1'-N1-C2
79	S2	1490	OMG	C4'-C5'-O5'-P
29	Lb	5	MLZ	N-CA-CB-CG
58	SO	138	IAS	CA-CB-CG-OD1
28	La	39	V5N	O2-CB-CG-CD2
2	L5	3701	OMC	O4'-C1'-N1-C6
2	L5	4500	PSU	C4'-C5'-O5'-P
79	S2	627	OMU	O4'-C1'-N1-C6
2	L5	3785	A2M	C3'-C2'-O2'-CM'
2	L5	4370	OMG	C3'-C2'-O2'-CM2
79	S2	174	OMC	C3'-C2'-O2'-CM2
79	S2	799	OMU	C3'-C2'-O2'-CM2
2	L5	1326	A2M	C4'-C5'-O5'-P
2	L5	3818	UY1	C4'-C5'-O5'-P
79	S2	1851	MA6	C4'-C5'-O5'-P
2	L5	4521	PSU	O4'-C1'-C5-C4
2	L5	2787	A2M	C2'-C1'-N9-C4

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Mol	Chain	Res	Type	Atoms
2	L5	3760	A2M	C2'-C1'-N9-C4
2	L5	3844	PSU	C4'-C5'-O5'-P
79	S2	644	OMG	C4'-C5'-O5'-P
2	L5	4623	OMG	O4'-C4'-C5'-O5'
2	L5	1524	A2M	O4'-C4'-C5'-O5'
79	S2	668	A2M	O4'-C4'-C5'-O5'
2	L5	2837	OMU	C3'-C2'-O2'-CM2
2	L5	3944	OMG	C3'-C2'-O2'-CM2
79	S2	517	OMC	C3'-C2'-O2'-CM2
79	S2	99	A2M	O4'-C4'-C5'-O5'
79	S2	644	OMG	C3'-C4'-C5'-O5'
2	L5	4447	5MC	O4'-C1'-N1-C2
2	L5	2787	A2M	O4'-C1'-N9-C8
2	L5	1534	A2M	C4'-C5'-O5'-P
2	L5	4870	OMG	C4'-C5'-O5'-P
2	L5	1326	A2M	O4'-C4'-C5'-O5'
79	S2	1442	OMU	C2'-C1'-N1-C6
2	L5	3760	A2M	C1'-C2'-O2'-CM'
2	L5	4521	PSU	O4'-C1'-C5-C6
2	L5	2351	OMC	C2'-C1'-N1-C6
79	S2	1288	OMU	C2'-C1'-N1-C6
79	S2	1442	OMU	C2'-C1'-N1-C2
2	L5	1316	OMG	C3'-C2'-O2'-CM2
2	L5	4494	OMG	C3'-C2'-O2'-CM2
79	S2	627	OMU	O4'-C1'-N1-C2
79	S2	428	OMU	C2'-C1'-N1-C6
2	L5	3760	A2M	O4'-C1'-N9-C8
2	L5	1322	1MA	C2'-C1'-N9-C8
2	L5	3760	A2M	O4'-C4'-C5'-O5'
79	S2	590	A2M	C3'-C4'-C5'-O5'
2	L5	1322	1MA	C2'-C1'-N9-C4
79	S2	1248	B8N	C31-C32-C33-N34
79	S2	428	OMU	O4'-C1'-N1-C6
2	L5	4227	OMU	C3'-C2'-O2'-CM2
79	S2	1391	OMC	C3'-C2'-O2'-CM2
2	L5	3785	A2M	C2'-C1'-N9-C8
7	LD	216	V5N	O-C-CA-CB
2	L5	3867	A2M	O4'-C4'-C5'-O5'
79	S2	668	A2M	C3'-C4'-C5'-O5'
2	L5	4447	5MC	C2'-C1'-N1-C2
79	S2	627	OMU	C2'-C1'-N1-C2
79	S2	668	A2M	C2'-C1'-N9-C8

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Mol	Chain	Res	Type	Atoms
2	L5	729	2MG	O4'-C4'-C5'-O5'
29	Lb	5	MLZ	CE-CD-CG-CB
2	L5	4590	A2M	C3'-C4'-C5'-O5'

There are no ring outliers.

118 monomers are involved in 227 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
79	S2	509	OMG	2	0
79	S2	918	PSU	2	0
2	L5	1534	A2M	1	0
79	S2	1710	OMC	1	0
2	L5	4530	UR3	1	0
79	S2	1851	MA6	3	0
2	L5	4579	PSU	1	0
79	S2	1031	A2M	2	0
79	S2	484	A2M	2	0
2	L5	729	2MG	2	0
79	S2	1288	OMU	2	0
2	L5	4196	OMG	1	0
2	L5	4499	OMG	1	0
79	S2	436	OMG	2	0
2	L5	4306	OMU	4	0
79	S2	116	OMU	3	0
2	L5	4220	6MZ	2	0
79	S2	627	OMU	1	0
2	L5	4620	OMU	1	0
79	S2	36	PSU	1	0
2	L5	3770	PSU	1	0
79	S2	1232	PSU	2	0
79	S2	512	A2M	2	0
79	S2	159	A2M	5	0
79	S2	1442	OMU	2	0
2	L5	1871	A2M	1	0
2	L5	4227	OMU	1	0
79	S2	686	PSU	1	0
79	S2	1639	7MG	2	0
79	S2	99	A2M	1	0
79	S2	815	PSU	1	0
2	L5	4571	A2M	4	0
79	S2	866	PSU	2	0
79	S2	651	PSU	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	L5	1781	PSU	1	0
79	S2	218	PSU	2	0
79	S2	1347	PSU	1	0
79	S2	1703	OMC	1	0
2	L5	3808	OMC	5	0
2	L5	4457	PSU	1	0
2	L5	3734	PSU	1	0
79	S2	644	OMG	1	0
79	S2	814	PSU	1	0
79	S2	609	PSU	2	0
2	L5	2632	PSU	2	0
79	S2	174	OMC	3	0
2	L5	4636	PSU	1	0
2	L5	4228	OMG	2	0
2	L5	2422	OMC	1	0
2	L5	1340	OMC	1	0
79	S2	121	OMU	2	0
2	L5	4392	OMG	2	0
79	S2	572	PSU	1	0
2	L5	1773	OMU	6	0
2	L5	2365	OMC	1	0
79	S2	109	PSU	1	0
79	S2	93	PSU	1	0
79	S2	1625	PSU	3	0
2	L5	3884	PSU	1	0
2	L5	4447	5MC	1	0
2	L5	1517	2MG	2	0
79	S2	210	PSU	2	0
2	L5	2815	A2M	3	0
79	S2	867	OMG	4	0
79	S2	601	OMG	3	0
2	L5	2415	OMU	3	0
79	S2	1238	PSU	3	0
2	L5	3764	PSU	1	0
79	S2	1692	PSU	1	0
2	L5	2824	OMC	1	0
2	L5	3715	PSU	1	0
2	L5	2364	OMG	1	0
79	S2	1643	PSU	1	0
79	S2	27	A2M	2	0
2	L5	2363	A2M	1	0
32	Le	53	MLZ	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	L5	4870	OMG	1	0
2	L5	4521	PSU	1	0
79	S2	166	A2M	1	0
2	L5	1625	OMG	1	0
79	S2	1328	OMG	4	0
2	L5	3760	A2M	5	0
79	S2	1337	4AC	3	0
2	L5	1760	OMG	3	0
2	L5	3944	OMG	1	0
2	L5	1536	PSU	1	0
1	L1	69	PSU	2	0
2	L5	4420	PSU	5	0
2	L5	2424	OMG	1	0
2	L5	2876	OMG	3	0
79	S2	1804	OMU	4	0
79	S2	799	OMU	4	0
79	S2	1391	OMC	4	0
79	S2	1842	4AC	2	0
2	L5	1881	OMC	1	0
79	S2	468	A2M	3	0
2	L5	3867	A2M	3	0
2	L5	3762	PSU	2	0
28	La	39	V5N	1	0
2	L5	3899	OMG	2	0
79	S2	1445	PSU	4	0
79	S2	590	A2M	3	0
79	S2	1850	MA6	4	0
2	L5	2351	OMC	4	0
79	S2	172	OMU	2	0
79	S2	576	A2M	1	0
2	L5	4590	A2M	1	0
2	L5	4637	OMG	1	0
2	L5	1316	OMG	2	0
2	L5	3701	OMC	1	0
79	S2	1832	6MZ	1	0
79	S2	1678	A2M	4	0
2	L5	3785	A2M	1	0
2	L5	3925	OMU	1	0
2	L5	4872	2MG	7	0
2	L5	4536	OMC	1	0
2	L5	3718	A2M	3	0
2	L5	3887	OMC	1	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 425 ligands modelled in this entry, 423 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	$\#\|Z\| > 2$
84	A1BNL	SX	201	-	33,34,34	0.96	1 (3%)	45,47,47	2.57	18 (40%)
82	B3P	L5	5101	-	18,18,18	0.78	0	23,23,23	0.82	0

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
84	A1BNL	SX	201	-	-	2/20/20/20	0/4/4/4
82	B3P	L5	5101	-	-	20/28/28/28	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	SX	201	A1BNL	C19-N20	2.04	1.45	1.41

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	SX	201	A1BNL	C05-C06-N02	-7.23	104.30	107.50
84	SX	201	A1BNL	C04-C05-C06	6.16	109.04	104.91
84	SX	201	A1BNL	C31-C16-C17	-4.89	112.34	118.57
84	SX	201	A1BNL	C10-C08-N07	4.35	122.52	116.25
84	SX	201	A1BNL	C01-N02-C06	-3.78	123.66	128.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	SX	201	A1BNL	C30-C19-C18	-3.78	114.03	119.04
84	SX	201	A1BNL	C04-N03-N02	3.77	107.47	105.11
84	SX	201	A1BNL	C18-C17-C16	3.72	124.77	120.80
84	SX	201	A1BNL	C01-N02-N03	3.66	124.76	119.29
84	SX	201	A1BNL	C31-C16-C04	3.64	124.95	120.87
84	SX	201	A1BNL	C23-C21-N20	3.22	122.70	116.03
84	SX	201	A1BNL	C05-C04-N03	-3.19	107.61	111.11
84	SX	201	A1BNL	C30-C31-C16	2.83	123.83	120.80
84	SX	201	A1BNL	O09-C08-N07	-2.77	118.22	122.27
84	SX	201	A1BNL	C16-C04-N03	2.62	123.94	120.49
84	SX	201	A1BNL	C29-C23-C24	-2.27	115.14	117.79
84	SX	201	A1BNL	C26-C24-C23	2.12	123.71	121.36
84	SX	201	A1BNL	C17-C18-C19	2.11	122.73	120.30

There are no chirality outliers.

All (22) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
82	L5	5101	B3P	C6-C4-N1-C3
82	L5	5101	B3P	C7-C4-N1-C3
82	L5	5101	B3P	C9-C8-N2-C2
82	L5	5101	B3P	C10-C8-N2-C2
82	L5	5101	B3P	C11-C8-N2-C2
82	L5	5101	B3P	N2-C8-C9-O1
82	L5	5101	B3P	C10-C8-C9-O1
82	L5	5101	B3P	C11-C8-C9-O1
82	L5	5101	B3P	O2-C10-C8-C9
84	SX	201	A1BNL	N02-C06-N07-C08
82	L5	5101	B3P	C3-C1-C2-N2
82	L5	5101	B3P	C1-C3-N1-C4
82	L5	5101	B3P	C7-C4-C5-O4
82	L5	5101	B3P	C1-C2-N2-C8
82	L5	5101	B3P	C5-C4-N1-C3
84	SX	201	A1BNL	C05-C06-N07-C08
82	L5	5101	B3P	C2-C1-C3-N1
82	L5	5101	B3P	C6-C4-C5-O4
82	L5	5101	B3P	O2-C10-C8-N2
82	L5	5101	B3P	N1-C4-C5-O4
82	L5	5101	B3P	N1-C4-C6-O5
82	L5	5101	B3P	O2-C10-C8-C11

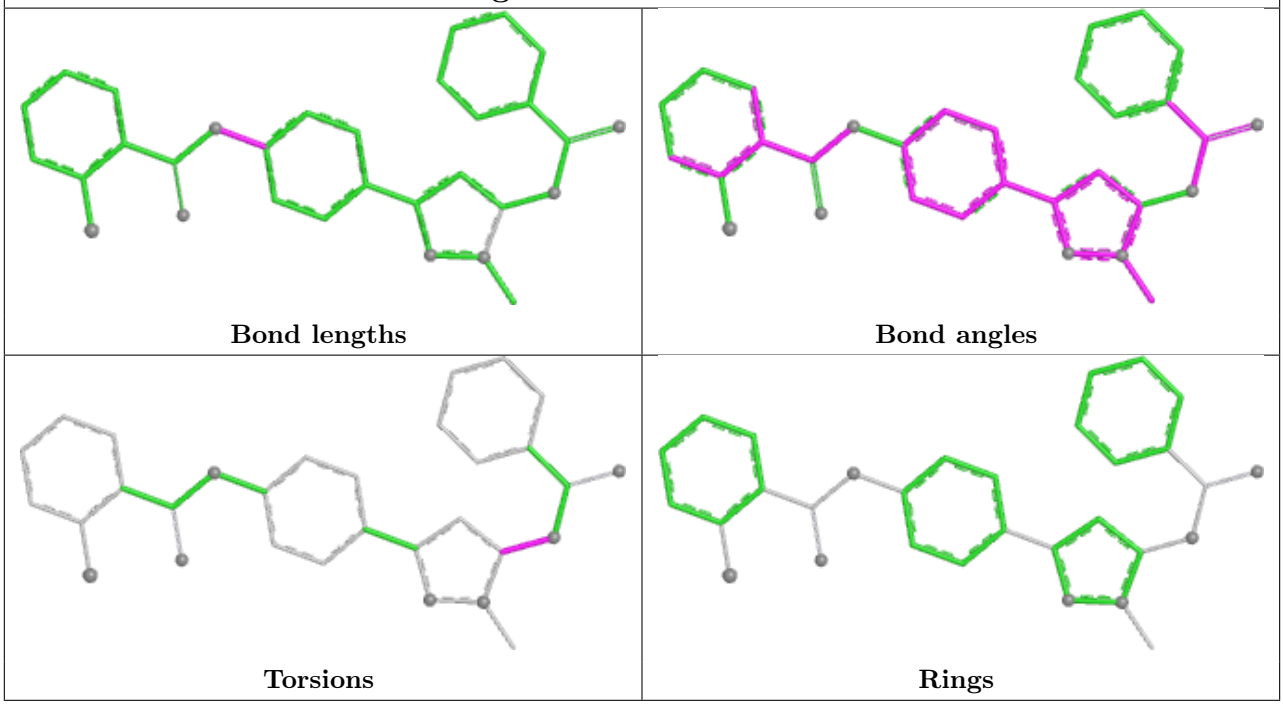
There are no ring outliers.

2 monomers are involved in 4 short contacts:

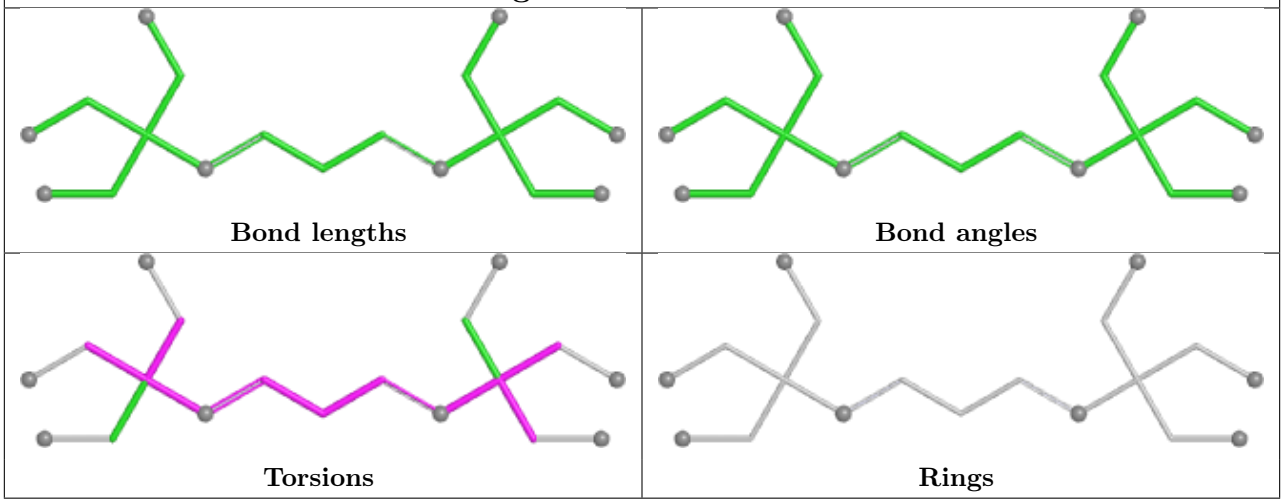
Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	SX	201	A1BNL	1	0
82	L5	5101	B3P	3	0

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 A1BNL SX 201



Ligand B3P L5 5101



5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

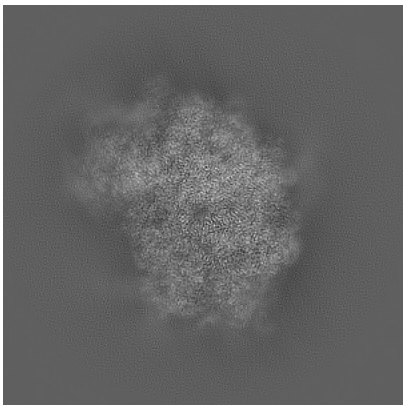
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-48420. These allow visual inspection of the internal detail of the map and identification of artifacts.

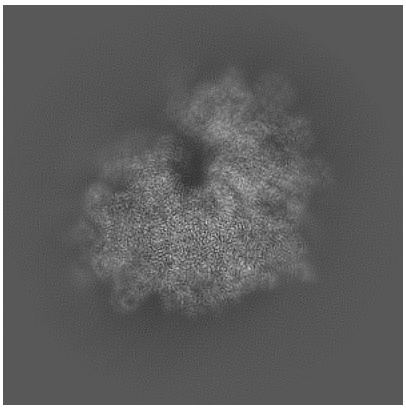
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

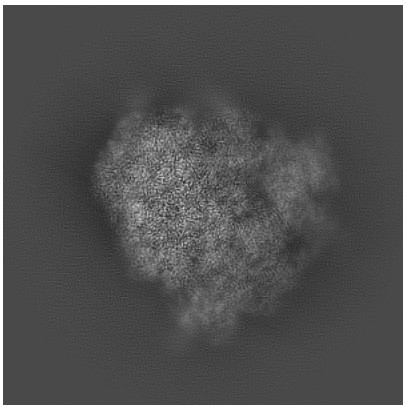
6.1.1 Primary map



X

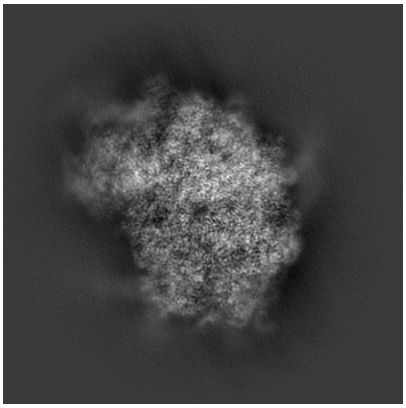


Y

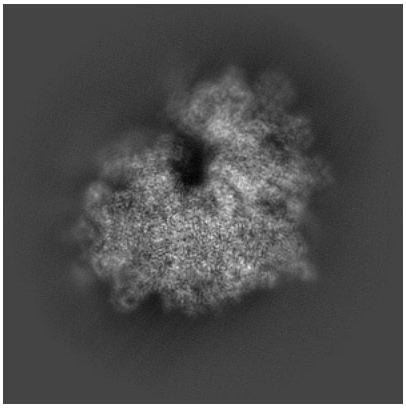


Z

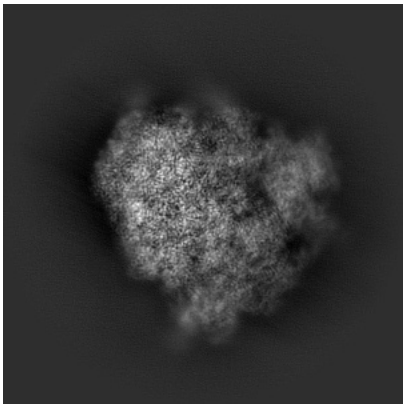
6.1.2 Raw map



X



Y

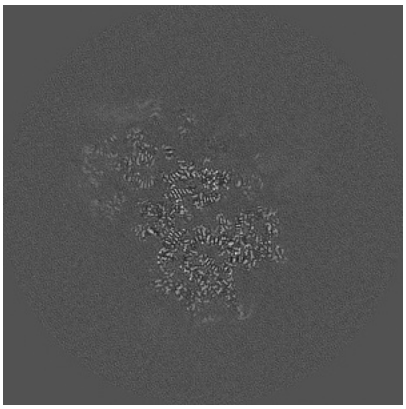


Z

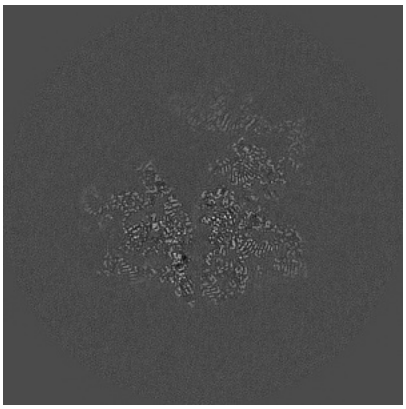
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

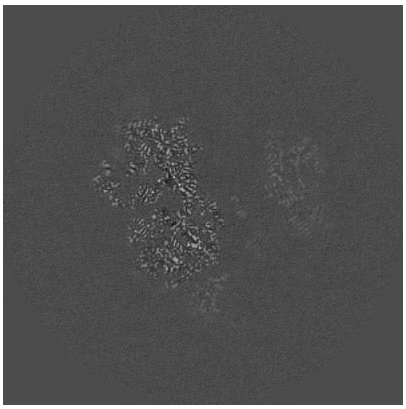
6.2.1 Primary map



X Index: 200

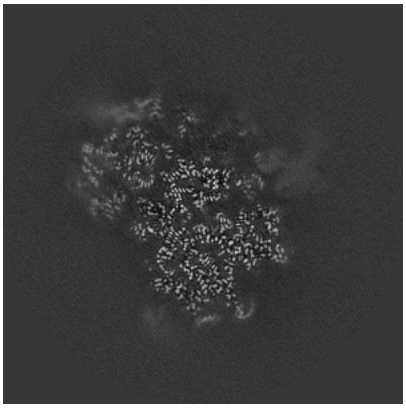


Y Index: 200

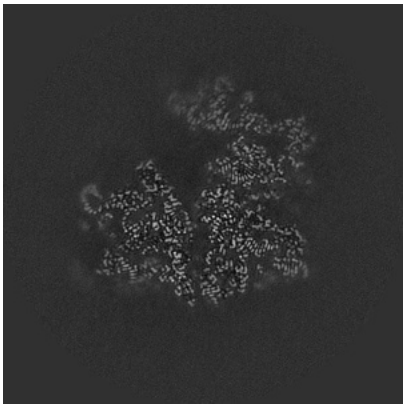


Z Index: 200

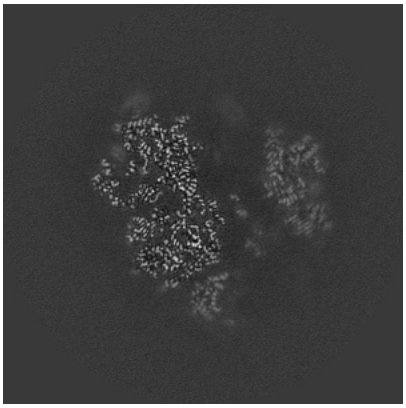
6.2.2 Raw map



X Index: 200



Y Index: 200

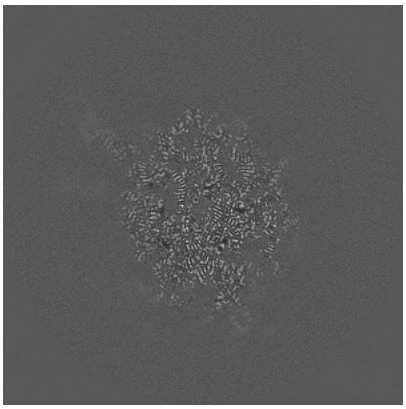


Z Index: 200

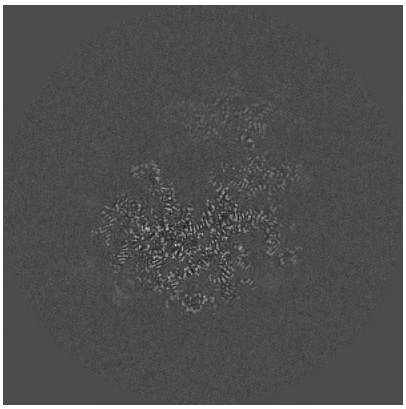
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

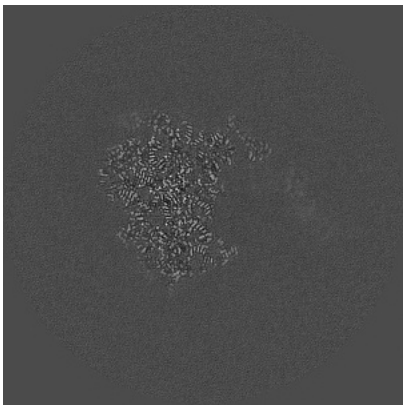
6.3.1 Primary map



X Index: 177

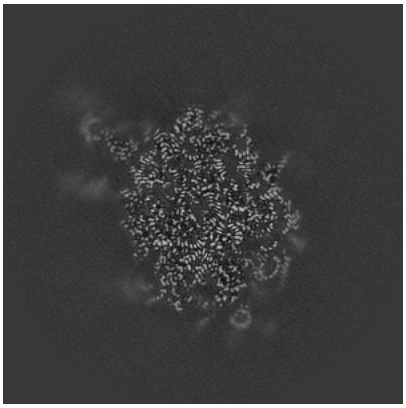


Y Index: 213

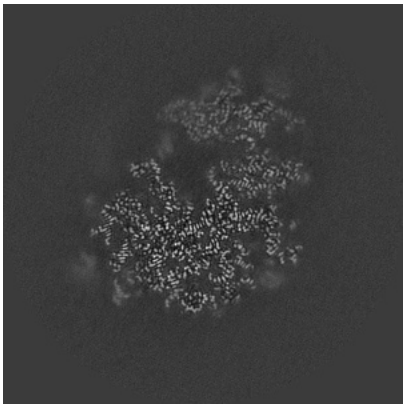


Z Index: 170

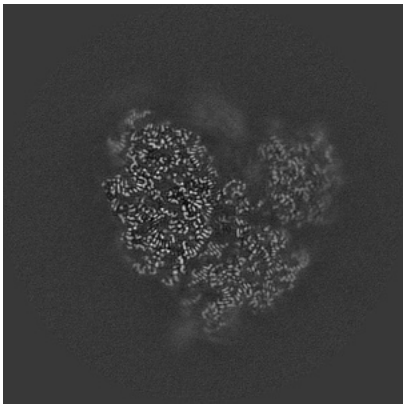
6.3.2 Raw map



X Index: 179



Y Index: 213

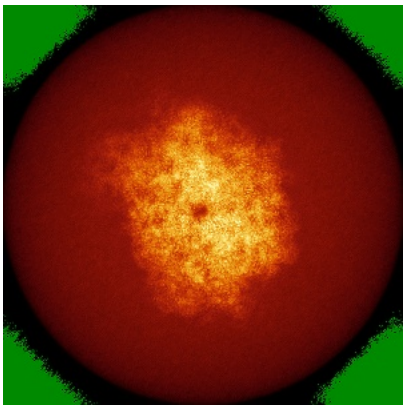


Z Index: 225

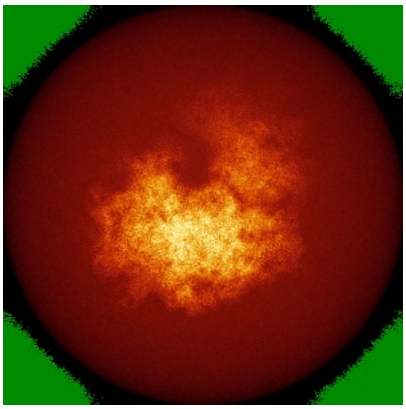
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

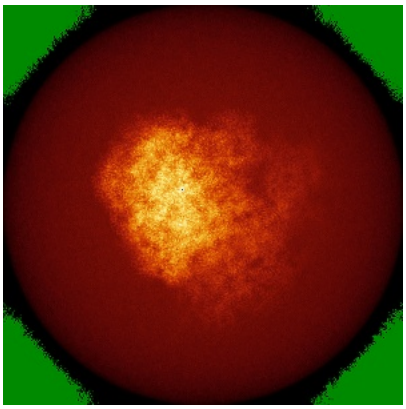
6.4.1 Primary map



X

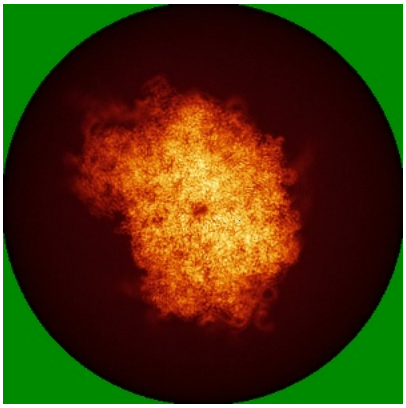


Y

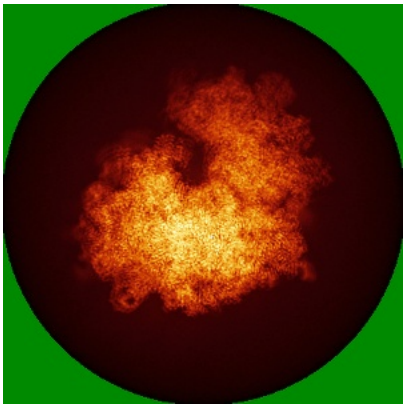


Z

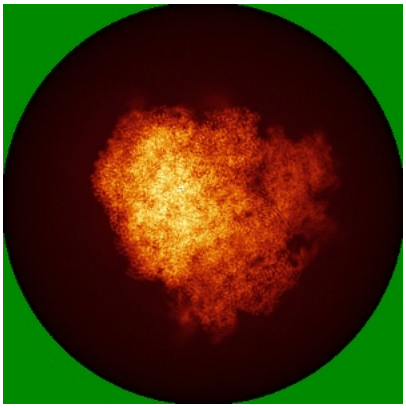
6.4.2 Raw map



X



Y

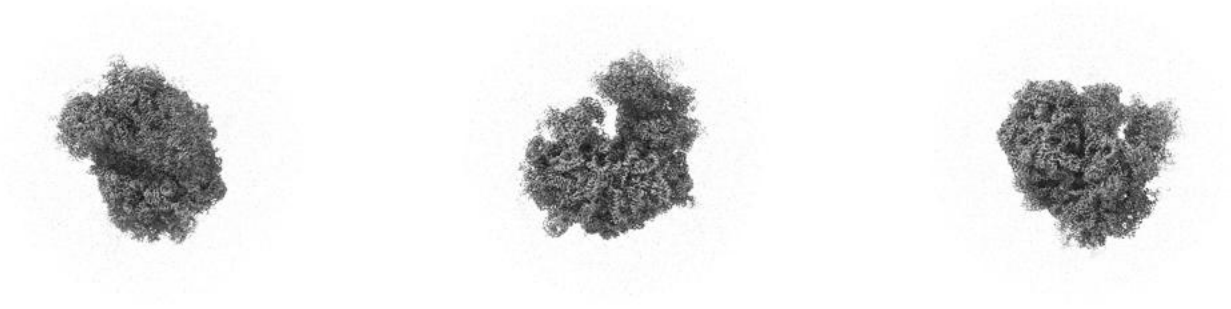


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.035. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

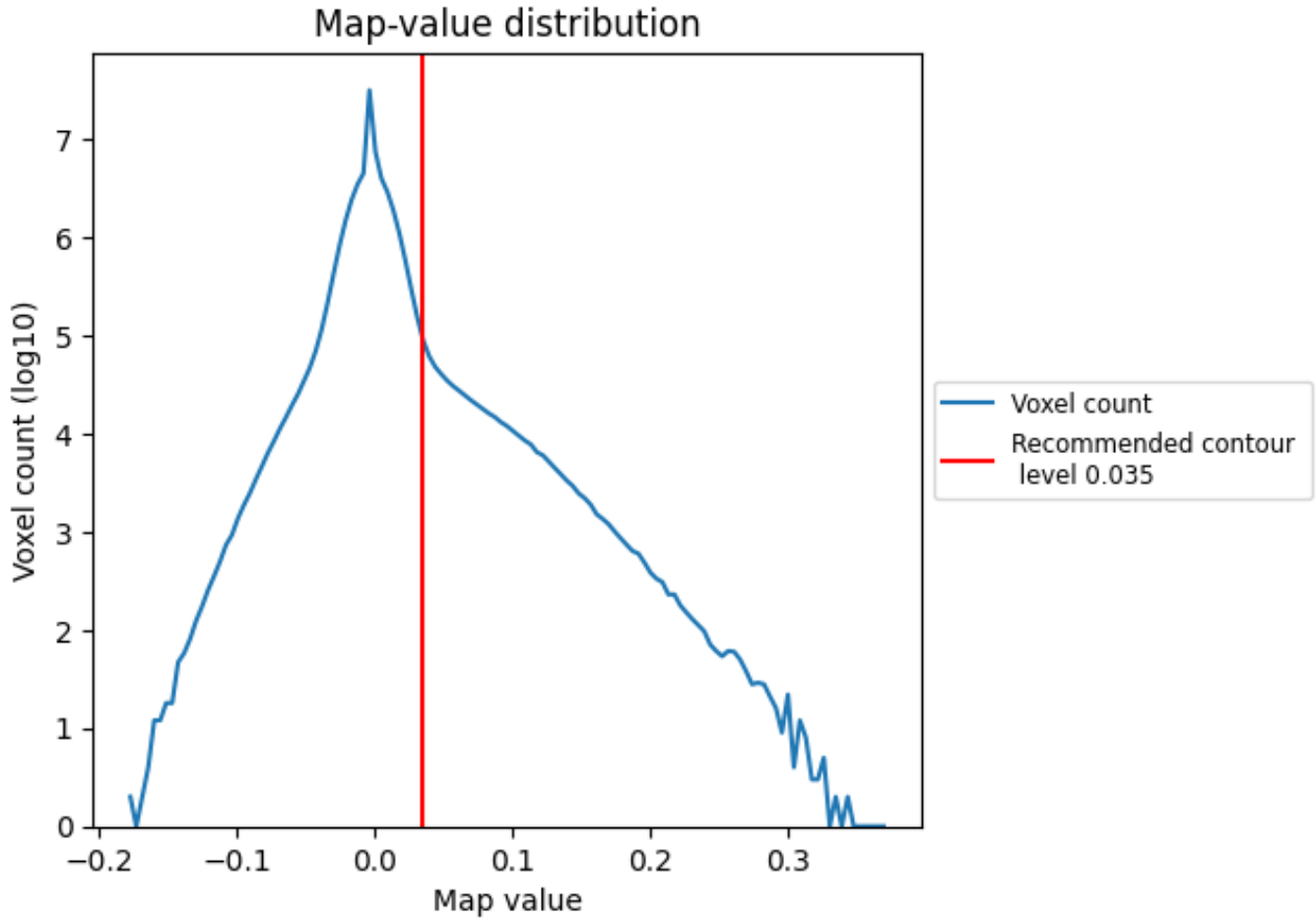
6.6 Mask visualisation (i)

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

7 Map analysis

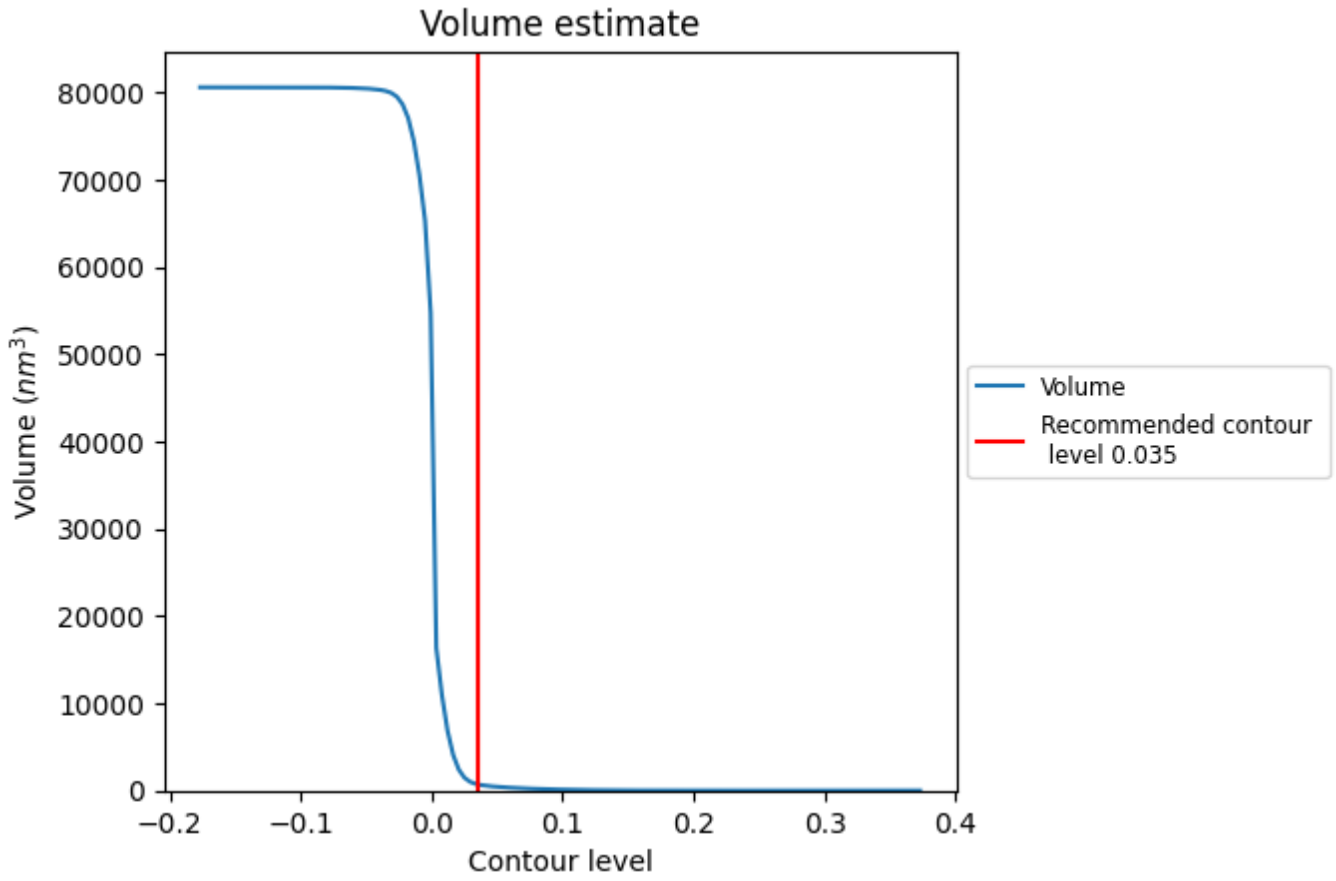
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

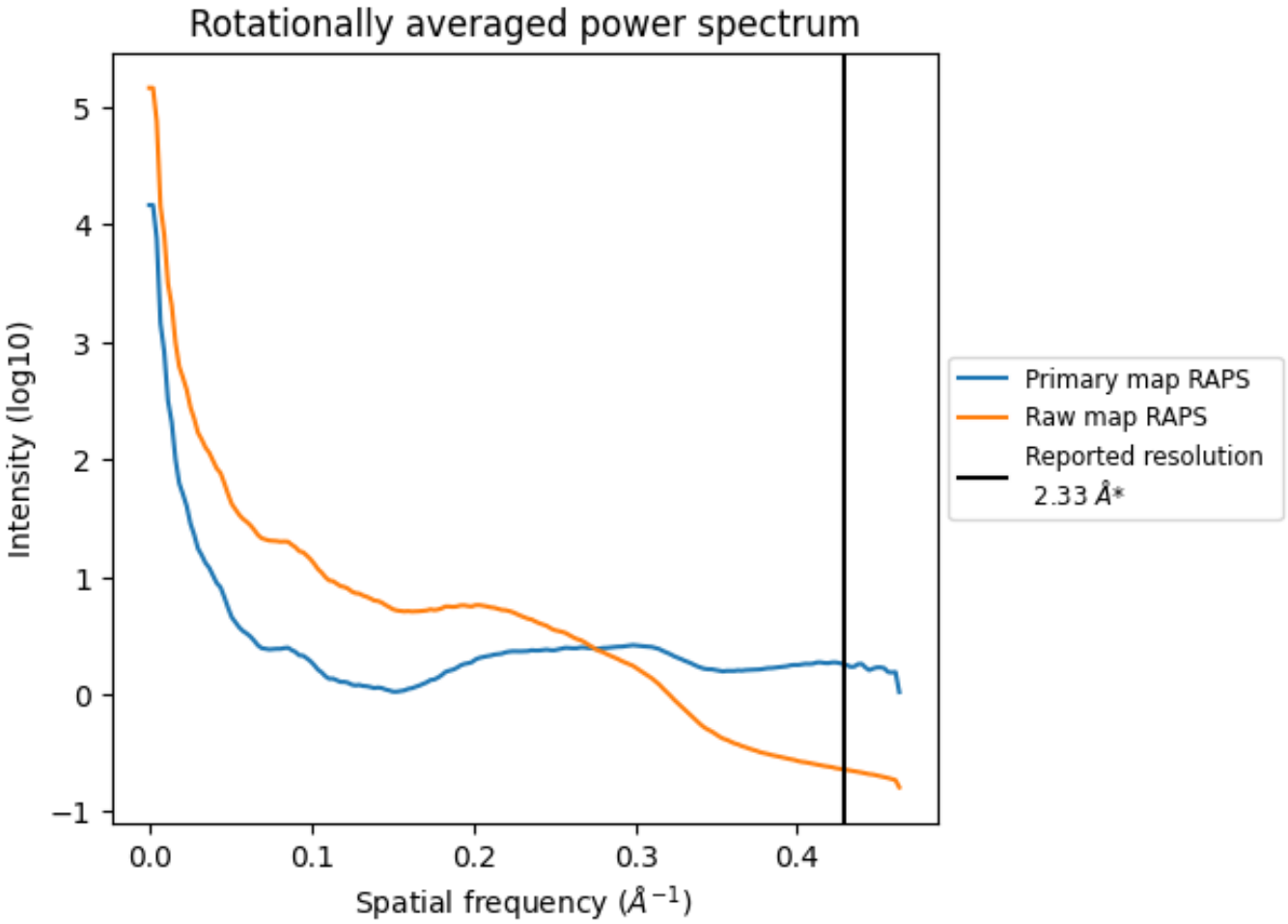
7.2 Volume estimate



The volume at the recommended contour level is 720 nm^3; this corresponds to an approximate mass of 650 kDa.

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

7.3 Rotationally averaged power spectrum (i)

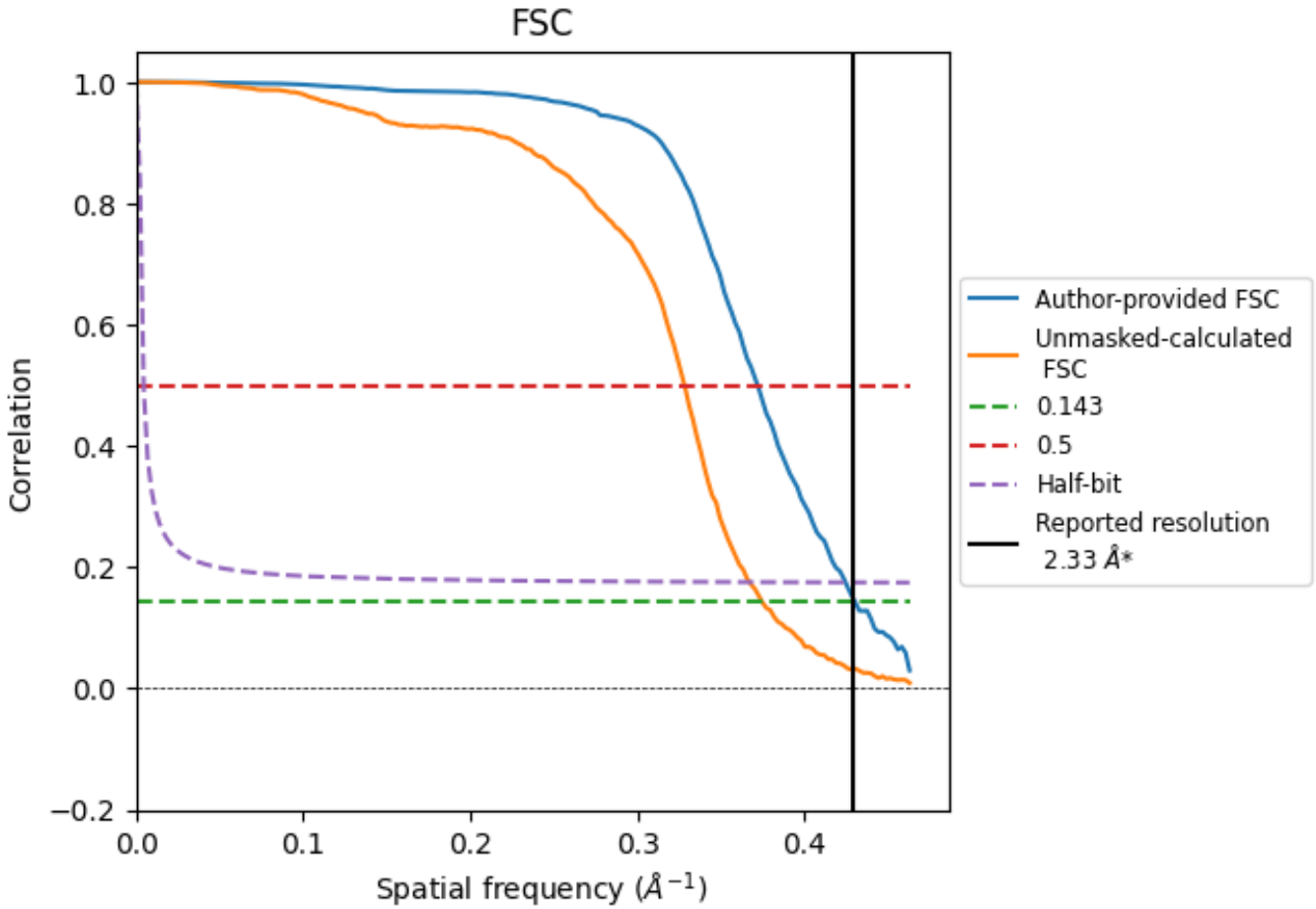


*Reported resolution corresponds to spatial frequency of 0.429 $Å^{-1}$

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.429 Å^{-1}

8.2 Resolution estimates (i)

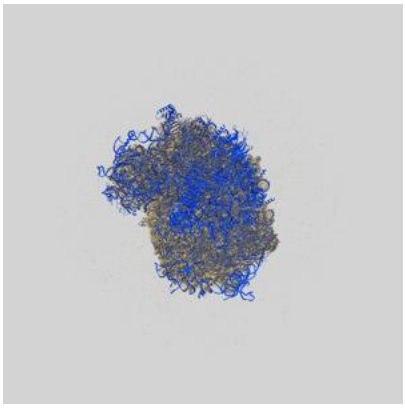
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.33	-	-
Author-provided FSC curve	2.32	2.69	2.36
Unmasked-calculated*	2.67	3.05	2.72

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 2.67 differs from the reported value 2.33 by more than 10 %

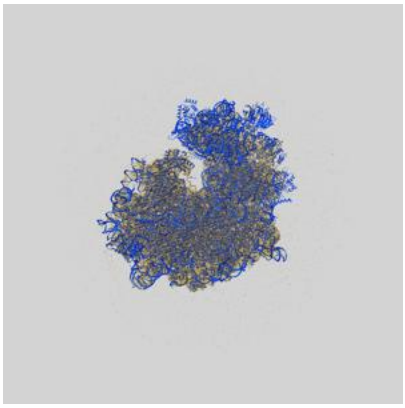
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-48420 and PDB model 9MNC. Per-residue inclusion information can be found in section 3 on page 27.

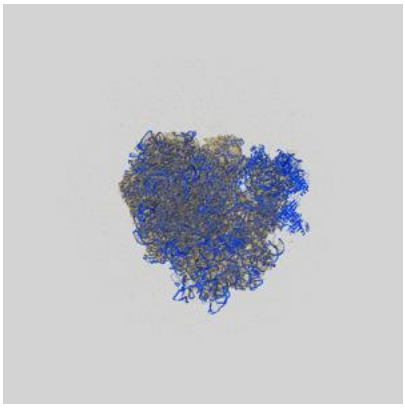
9.1 Map-model overlay



X



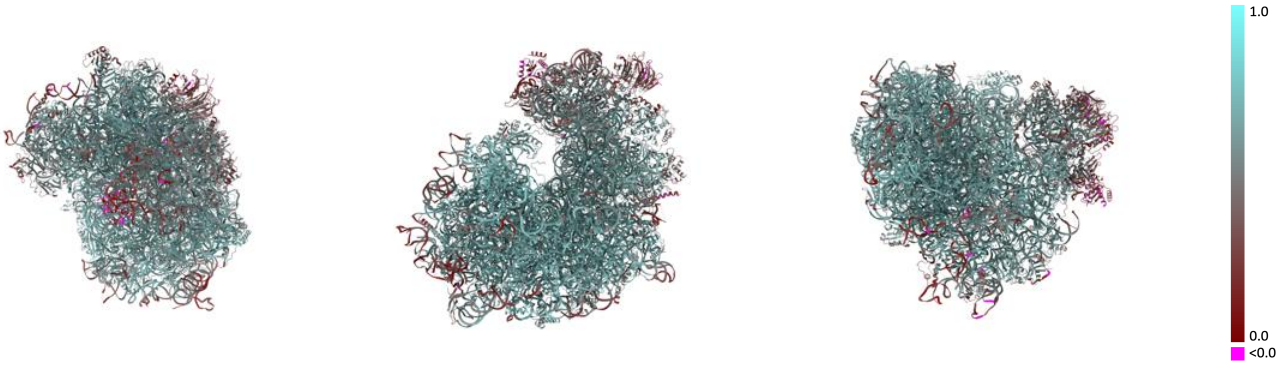
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.035 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

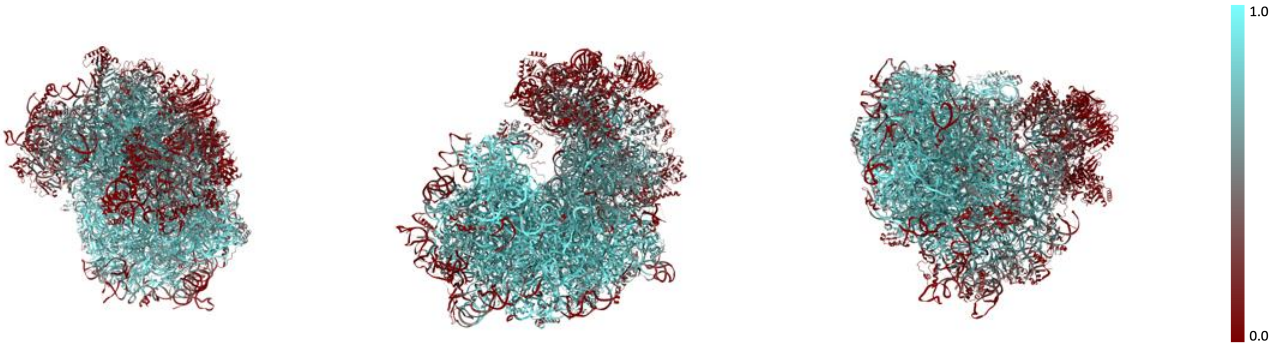
9.2 Q-score mapped to coordinate model



X Y Z

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

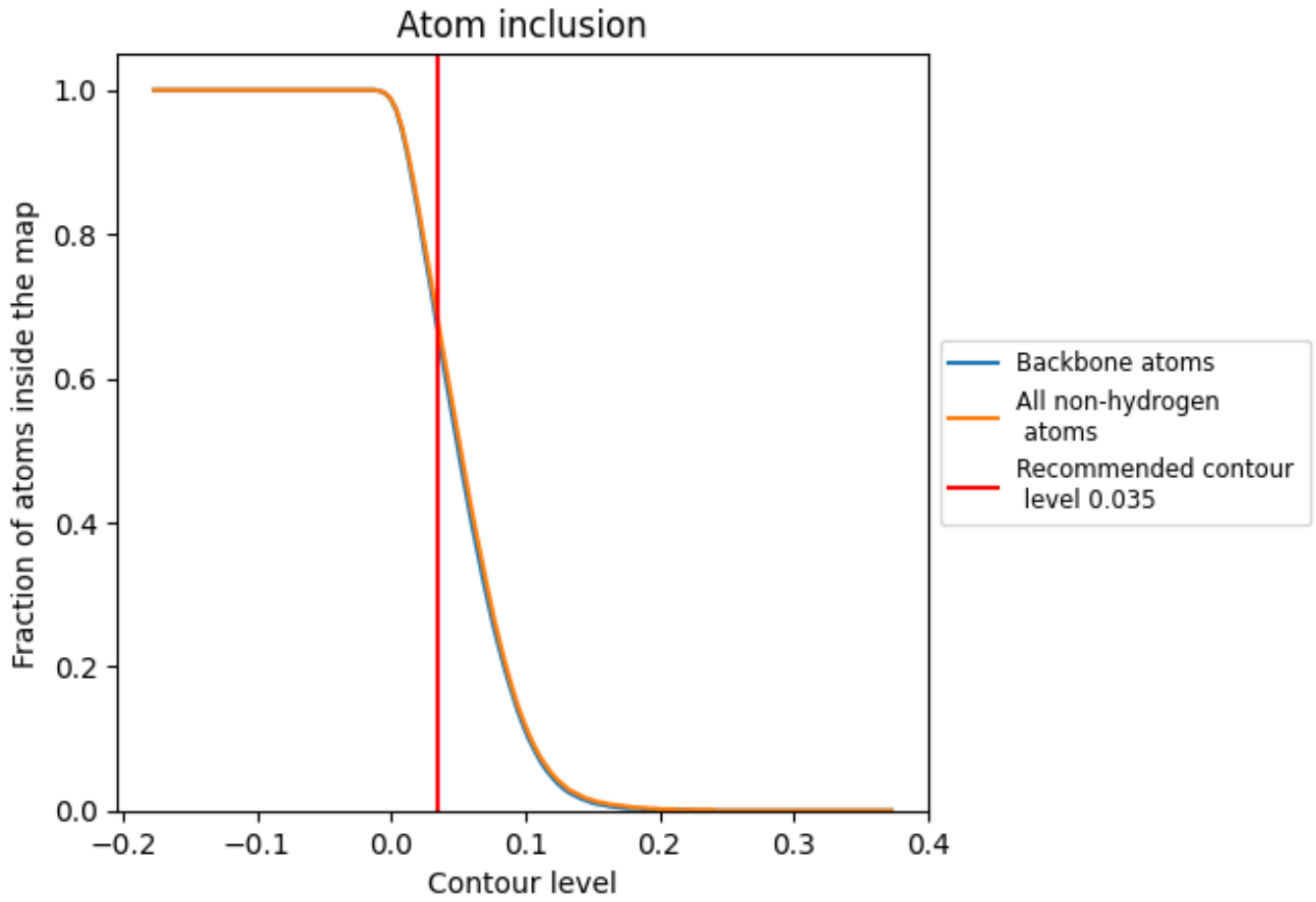
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.035).

9.4 Atom inclusion (i)



At the recommended contour level, 66% of all backbone atoms, 68% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.035) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6780	0.6110
L1	0.8970	0.6740
L5	0.7900	0.6320
L8	0.7260	0.6360
L9	0.9340	0.6860
LB	0.8600	0.6910
LC	0.8630	0.6860
LD	0.9250	0.7170
LE	0.8140	0.6640
LF	0.8620	0.6800
LG	0.7220	0.6230
LH	0.7810	0.6590
LI	0.8990	0.7000
LJ	0.5480	0.5870
LK	0.6560	0.6160
LM	0.8020	0.6650
LN	0.9540	0.7190
LO	0.7620	0.6460
LP	0.9240	0.7120
LQ	0.7800	0.6570
LR	0.7020	0.6070
LS	0.8750	0.6970
LT	0.8010	0.6680
LU	0.8390	0.6810
LV	0.8740	0.7000
LW	0.6640	0.5820
LY	0.8780	0.6930
LZ	0.7670	0.6520
La	0.9040	0.7090
Lb	0.5860	0.5760
Lc	0.7680	0.6510
Ld	0.8150	0.6640
Le	0.7730	0.6570
Lf	0.9240	0.7130
Lg	0.8240	0.6710

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Chain	Atom inclusion	Q-score
Lh	0.8450	0.6820
Li	0.7120	0.6380
Lj	0.9110	0.7130
Lk	0.5300	0.5800
Ll	0.8750	0.6950
Lm	0.3500	0.5210
Ln	0.8170	0.6710
Lo	0.8130	0.6720
Lp	0.8790	0.7000
Lz	0.8120	0.6680
S1	0.4560	0.5930
S2	0.6080	0.5860
SA	0.4330	0.5870
SC	0.5710	0.6200
SD	0.1780	0.5210
SE	0.4090	0.5900
SG	0.1860	0.4490
SH	0.2140	0.4740
SI	0.5480	0.5810
SJ	0.4530	0.5820
SK	0.1140	0.4300
SL	0.6840	0.6400
SM	0.0280	0.3370
SN	0.6750	0.6500
SO	0.6170	0.6340
SP	0.0590	0.3970
SQ	0.1870	0.4850
SS	0.1690	0.4720
ST	0.0900	0.4390
SU	0.1410	0.4570
SV	0.4230	0.5910
SW	0.7080	0.6660
SX	0.7090	0.6520
SY	0.2480	0.5200
SZ	0.1310	0.4160
Sa	0.6420	0.6280
Sb	0.3780	0.5150
Sc	0.0470	0.3930
Sd	0.1400	0.4960
Se	0.3340	0.5230
Sf	0.3060	0.5670
Sg	0.0180	0.3200

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Chain	Atom inclusion	Q-score
So	0.4680	0.6030
Sy	0.0000	0.1130
Sz	0.0000	0.1210