



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 01:21 PM UTC

PDB ID : 8Y0X / pdb_00008y0x
EMDB ID : EMD-37992
Title : Dormant ribosome with SERBP1
Authors : Du, M.; Zeng, F.
Deposited on : 2024-01-23
Resolution : 3.30 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
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

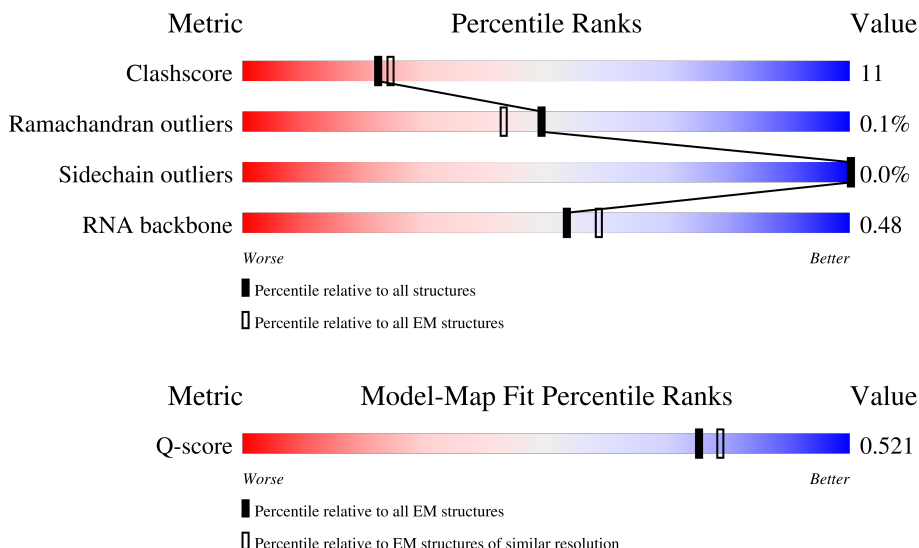
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.30 Å.

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



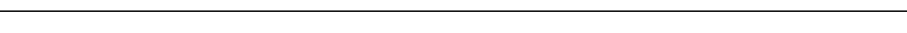
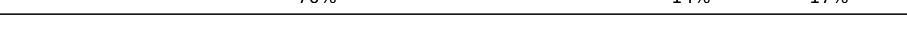
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	15087 (2.80 - 3.80)

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

Mol	Chain	Length	Quality of chain
1	L5	5070	
2	L7	121	
3	L8	157	

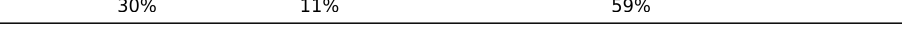
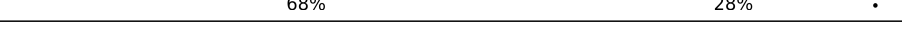
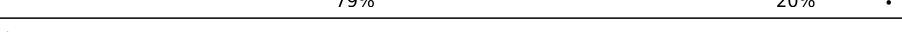
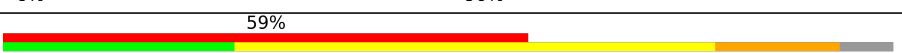
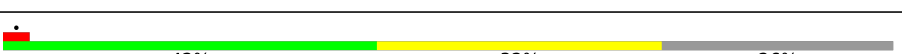
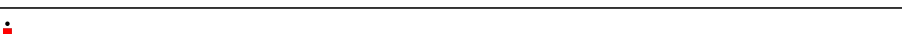
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Mol	Chain	Length	Quality of chain
4	LA	257	
5	LB	403	
6	LC	427	
7	LD	297	
8	LE	288	
9	LF	248	
10	LG	266	
11	LH	192	
12	LI	214	
13	LJ	178	
14	LL	211	
15	LM	215	
16	LN	204	
17	LO	203	
18	LP	184	
19	LQ	188	
20	LR	196	
21	LS	176	
22	LT	160	
23	LU	128	
24	LV	140	
25	LW	157	
26	LX	156	
27	LY	145	
28	LZ	136	

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Mol	Chain	Length	Quality of chain
29	La	148	
30	Lb	159	
31	Lc	115	
32	Ld	125	
33	Le	135	
34	Lf	110	
35	Lg	117	
36	Lh	123	
37	Li	105	
38	Lj	97	
39	Lk	70	
40	Ll	51	
41	Lm	128	
42	Ln	25	
43	Lo	106	
44	Lp	92	
45	Lr	137	
46	S2	1869	
47	S	402	
48	E	85	
49	SA	295	
50	SB	264	
51	SN	151	
52	SO	151	
53	SP	145	

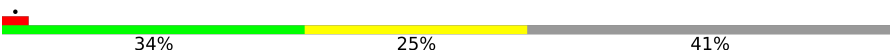
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Mol	Chain	Length	Quality of chain
54	SQ	146	
55	SR	135	
56	SS	152	
57	ST	145	
58	SU	119	
59	SV	83	
60	SW	130	
61	SX	143	
62	SY	133	
63	SZ	125	
64	Sa	115	
65	Sb	84	
66	Sc	69	
67	Sd	56	
68	Se	59	
69	Sg	317	
70	CB	858	
71	SG	249	
72	SJ	194	
73	SC	293	
74	SF	204	
75	SH	194	
76	SD	243	
77	SE	263	
78	SI	208	

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Mol	Chain	Length	Quality of chain
79	SK	165	
80	SL	158	

2 Entry composition [i](#)

There are 82 unique types of molecules in this entry. The entry contains 218903 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	L5	3658	Total	C	N	O	P	0	0
			78419	34920	14351	25491	3657		

- Molecule 2 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	L7	120	Total	C	N	O	P	0	0
			2561	1141	456	844	120		

- Molecule 3 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	L8	156	Total	C	N	O	P	0	0
			3314	1480	585	1094	155		

- Molecule 4 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	LA	248	Total	C	N	O	S	0	0
			1898	1189	389	314	6		

- Molecule 5 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	LB	402	Total	C	N	O	S	0	0
			3238	2060	608	556	14		

- Molecule 6 is a protein called 60S ribosomal protein L4.

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

- Molecule 7 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	LD	293	Total	C	N	O	S	0	0
			2382	1507	434	427	14		

- Molecule 8 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	LE	219	Total	C	N	O	S	0	0
			1764	1136	334	290	4		

- Molecule 9 is a protein called 60S ribosomal protein L7.

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

- Molecule 10 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LG	231	Total	C	N	O	S	0	0
			1867	1191	359	313	4		

- Molecule 11 is a protein called 60S ribosomal protein L9.

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 60S ribosomal protein L10-like.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LI	202	Total	C	N	O	S	0	0
			1634	1037	314	269	14		

- Molecule 13 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	LJ	172	Total	C	N	O	S	0	0
			1381	868	258	249	6		

- Molecule 14 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	LL	210	Total	C	N	O	S	0	0
			1701	1064	352	281	4		

- Molecule 15 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	LM	139	Total	C	N	O	S	0	0
			1138	730	218	183	7		

- Molecule 16 is a protein called 60S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	LN	203	Total	C	N	O	S	0	0
			1701	1072	359	266	4		

- Molecule 17 is a protein called 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	LO	201	Total	C	N	O	S	0	0
			1650	1063	321	261	5		

- Molecule 18 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	LP	153	Total	C	N	O	S	0	0
			1242	776	241	216	9		

- Molecule 19 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	LQ	187	Total	C	N	O	S	0	0
			1513	944	314	250	5		

- Molecule 20 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	LR	168	Total	C	N	O	S	0	0
			1397	867	300	221	9		

- Molecule 21 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	LS	175	Total	C	N	O	S	0	0
			1453	925	283	235	10		

- Molecule 22 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	LT	159	Total	C	N	O	S	0	0
			1298	823	252	217	6		

- Molecule 23 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	LU	101	Total	C	N	O	S	0	0
			825	529	144	150	2		

- Molecule 24 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	LV	131	Total	C	N	O	S	0	0
			979	618	184	172	5		

- Molecule 25 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LW	63	Total	C	N	O	S	0	0
			528	337	103	85	3		

- Molecule 26 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LX	117	Total	C	N	O	S	0	0
			958	612	179	166	1		

- Molecule 27 is a protein called 60S ribosomal protein L26.

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

- Molecule 28 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	LZ	135	Total	C	N	O	S	0	0
			1107	714	208	182	3		

- Molecule 29 is a protein called 60S ribosomal protein L27a.

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

- Molecule 30 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Lb	109	Total	C	N	O	S	0	0
			876	546	189	137	4		

- Molecule 31 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Lc	98	Total	C	N	O	S	0	0
			764	485	135	138	6		

- Molecule 32 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Ld	107	Total	C	N	O	S	0	0
			888	560	171	155	2		

- Molecule 33 is a protein called 60S ribosomal protein L32.

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

- Molecule 34 is a protein called 60S ribosomal protein L35a.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Lf	109	Total	C	N	O	S	0	0
			876	555	174	144	3		

- Molecule 35 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Lg	114	Total	C	N	O	S	0	0
			906	566	187	147	6		

- Molecule 36 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Lh	122	Total	C	N	O	S	0	0
			1015	641	205	168	1		

- Molecule 37 is a protein called 60S ribosomal protein L36.

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

- Molecule 38 is a protein called 60S ribosomal protein L37.

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

- Molecule 39 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Lk	69	Total	C	N	O	S	0	0
			569	366	103	99	1		

- Molecule 40 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Ll	50	Total	C	N	O	S	0	0
			444	281	98	64	1		

- Molecule 41 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Lm	52	Total	C	N	O	S	0	0
			429	266	90	67	6		

- Molecule 42 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Ln	24	Total	C	N	O	S	0	0
			230	139	62	26	3		

- Molecule 43 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Lo	98	Total	C	N	O	S	0	0
			805	504	165	130	6		

- Molecule 44 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Lp	91	Total	C	N	O	S	0	0
			708	445	136	120	7		

- Molecule 45 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Lr	125	Total	C	N	O	S	0	0
			1002	622	207	168	5		

- Molecule 46 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	S2	1739	Total	C	N	O	P	0	0
			36875	16449	6594	12094	1738		

- Molecule 47 is a protein called Isoform 2 of SERPINE1 mRNA-binding protein 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
47	S	40	Total	C	N	O	0	0
			318	188	65	65		

- Molecule 48 is a RNA chain called EtRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	E	80	Total	C	N	O	P	0	0
			1708	761	305	562	80		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E	34	U	A	variant	GB 2634358191
E	83	C	U	variant	GB 2634358191

- Molecule 49 is a protein called 40S ribosomal protein SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	SA	219	Total	C	N	O	S	0	0
			1733	1102	303	320	8		

- Molecule 50 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	SB	214	Total	C	N	O	S	0	0
			1738	1103	310	311	14		

- Molecule 51 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SN	150	Total	C	N	O	S	0	0
			1208	773	229	205	1		

- Molecule 52 is a protein called 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	SO	134	Total	C	N	O	S	0	0
			1002	612	197	187	6		

- Molecule 53 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SP	121	Total	C	N	O	S	0	0
			985	623	185	170	7		

- Molecule 54 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SQ	140	Total	C	N	O	S	0	0
			1107	704	209	191	3		

- Molecule 55 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SR	131	Total	C	N	O	S	0	0
			1060	666	195	194	5		

- Molecule 56 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SS	145	Total	C	N	O	S	0	0
			1198	751	242	203	2		

- Molecule 57 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	ST	141	Total	C	N	O	S	0	0
			1101	690	212	196	3		

- Molecule 58 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SU	103	Total	C	N	O	S	0	0
			817	511	155	147	4		

- Molecule 59 is a protein called 40S ribosomal protein S21.

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

- Molecule 60 is a protein called 40S ribosomal protein S15a.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SW	129	Total	C	N	O	S	0	0
			1034	659	193	176	6		

- Molecule 61 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SX	141	Total	C	N	O	S	0	0
			1098	693	219	183	3		

- Molecule 62 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SY	131	Total	C	N	O	S	0	0
			1065	673	209	178	5		

- Molecule 63 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	SZ	62	Total	C	N	O	S	0	0
			480	308	84	87	1		

- Molecule 64 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	Sa	102	Total	C	N	O	S	0	0
			821	512	171	133	5		

- Molecule 65 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	Sb	83	Total	C	N	O	S	0	0
			651	408	121	115	7		

- Molecule 66 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Sc	64	Total	C	N	O	S	0	0
			506	308	102	94	2		

- Molecule 67 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	Sd	52	Total	C	N	O	S	0	0
			436	273	88	70	5		

- Molecule 68 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	Se	58	Total	C	N	O	S	0	0
			459	284	100	74	1		

- Molecule 69 is a protein called Receptor of activated protein C kinase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Sg	313	Total	C	N	O	S	0	0
			2436	1535	424	465	12		

- Molecule 70 is a protein called Elongation factor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	CB	755	Total	C	N	O	S	0	0
			5904	3753	1014	1099	38		

- Molecule 71 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SG	237	Total	C	N	O	S	0	0
			1923	1200	387	329	7		

- Molecule 72 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	SJ	185	Total	C	N	O	S	0	0
			1525	969	306	248	2		

- Molecule 73 is a protein called 40S ribosomal protein S2.

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

- Molecule 74 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	SF	181	Total	C	N	O	S	0	0
			1438	900	270	261	7		

- Molecule 75 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	SH	186	Total	C	N	O	S	0	0
			1497	956	274	266	1		

- Molecule 76 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	SD	227	Total	C	N	O	S	0	0
			1765	1125	317	315	8		

- Molecule 77 is a protein called 40S ribosomal protein S4, X isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	SE	262	Total	C	N	O	S	0	0
			2076	1324	386	358	8		

- Molecule 78 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	SI	206	Total	C	N	O	S	0	0
			1686	1058	332	291	5		

- Molecule 79 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	SK	98	Total	C	N	O	S	0	0
			827	539	148	134	6		

- Molecule 80 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	SL	147	Total	C	N	O	S	0	0
			1205	769	227	203	6		

- Molecule 81 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
81	L5	211	Total	Mg	0
			211	211	
81	L7	3	Total	Mg	0
			3	3	
81	L8	5	Total	Mg	0
			5	5	
81	LA	1	Total	Mg	0
			1	1	
81	LI	1	Total	Mg	0
			1	1	
81	LP	1	Total	Mg	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
81	LV	1	Total 1	Mg 1	0
81	La	1	Total 1	Mg 1	0
81	Le	1	Total 1	Mg 1	0
81	Lg	1	Total 1	Mg 1	0
81	S2	29	Total 29	Mg 29	0

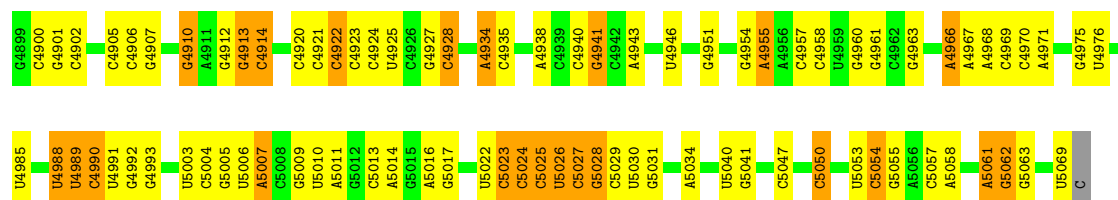
- Molecule 82 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
82	Lg	1	Total 1	Zn 1	0
82	Lj	1	Total 1	Zn 1	0
82	Lm	1	Total 1	Zn 1	0
82	Lo	1	Total 1	Zn 1	0
82	Lp	1	Total 1	Zn 1	0
82	Sa	1	Total 1	Zn 1	0
82	Sd	1	Total 1	Zn 1	0









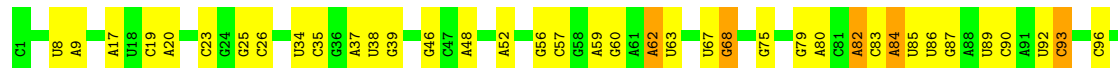
- Molecule 2: 5S rRNA

Chain L7: 74% 24% ..



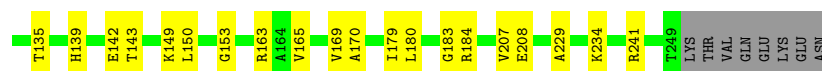
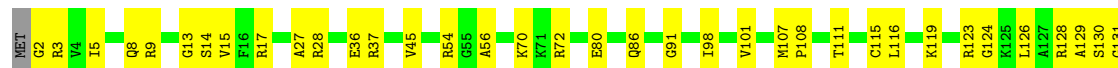
- Molecule 3: 5.8S rRNA

Chain L8: 55% 37% 7% .



- Molecule 4: 60S ribosomal protein L8

Chain LA: 75% 22% .



- Molecule 5: 60S ribosomal protein L3

Chain LB: 76% 23%



- Molecule 6: 60S ribosomal protein L4

[illegible]

- | |
|------|
| T153 | F160 | G182 | S187 | K188 | E189 | V194 | H195 | R196 | N203 | V204 | Y207 | M208 | L211 | D215 | E216 | D217 | A218 | F223 | Y226 | V231 | D234 | M235 | E238 | K242 | I247 | K258 | K259 | E260 | V261 | K262 | M271 | V280 | A294 | ALA | GLU | SER | | | | |
| ■ | | | |
| WT | G2 | V6 | K10 | A11 | R15 | R21 | E25 | R33 | K34 | R35 | K41 | M51 | G62 | G63 | T64 | A65 | Y66 | A67 | R68 | D72 | V75 | C76 | Y79 | E82 | L83 | P84 | K85 | Y86 | K89 | L105 | L109 | L110 | N113 | R112 | M115 | K116 | I117 | I118 | G127 | L150 |

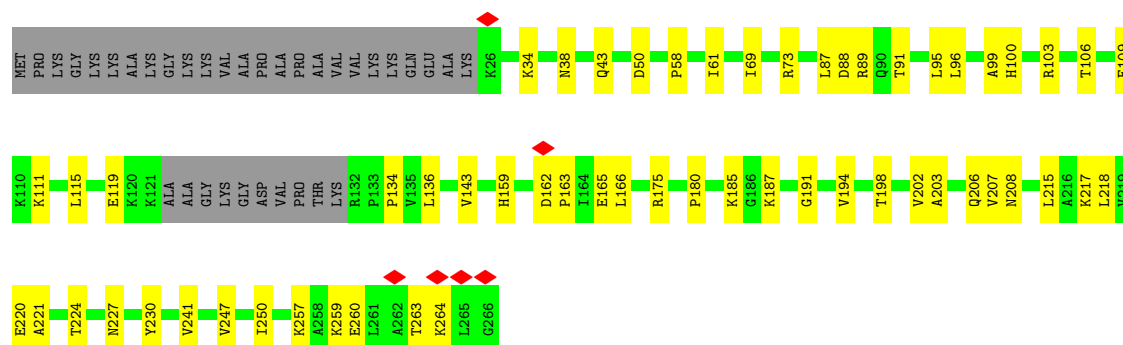
- [illegible]

- [illegible]



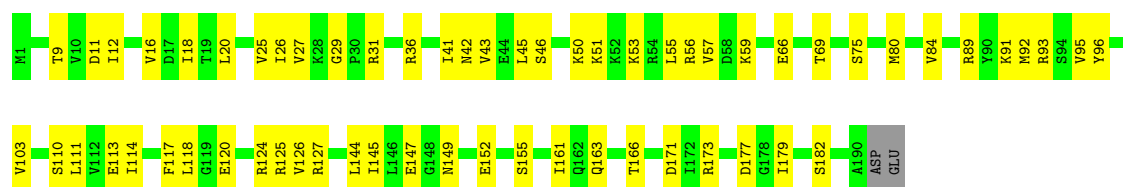
- Molecule 10: 60S ribosomal protein L7a

Chain LG: 65% 22% 13%



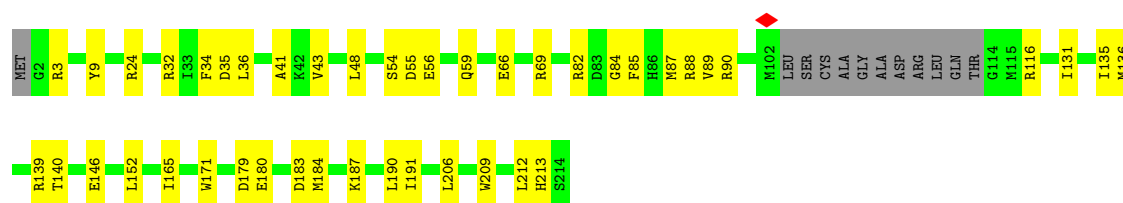
- Molecule 11: 60S ribosomal protein L9

Chain LH: 67% 32% .



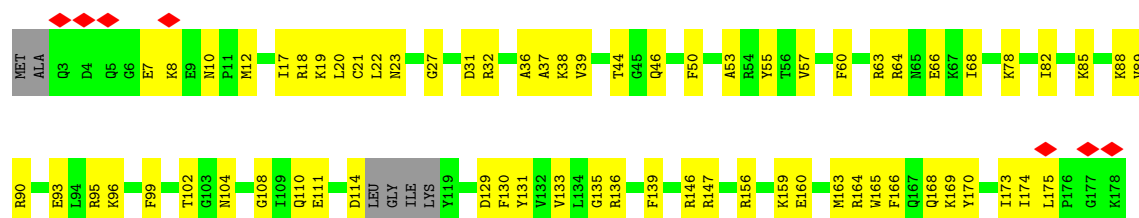
- Molecule 12: 60S ribosomal protein L10-like

Chain LI: 74% 21% 6%



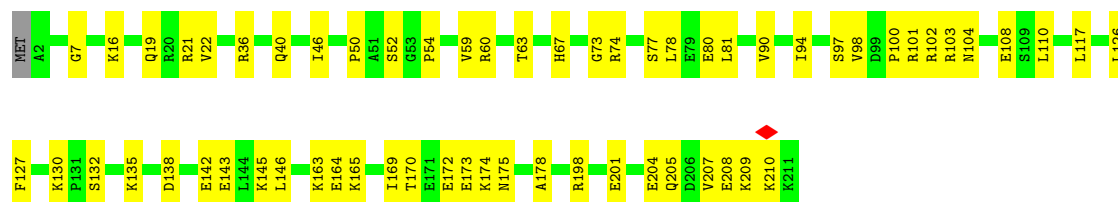
- Molecule 13: 60S ribosomal protein L11

Chain LJ: 59% 38% .



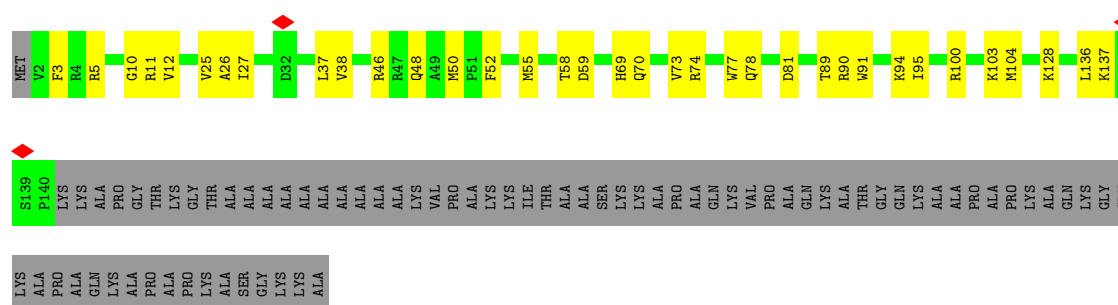
- Molecule 14: 60S ribosomal protein L13

Chain LL:  71% 29%



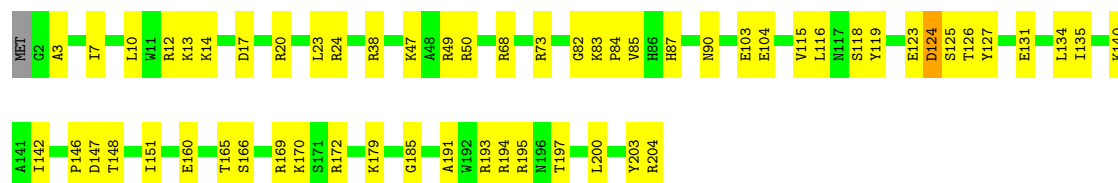
- Molecule 15: 60S ribosomal protein L14

Chain LM:  48% 16% 35%



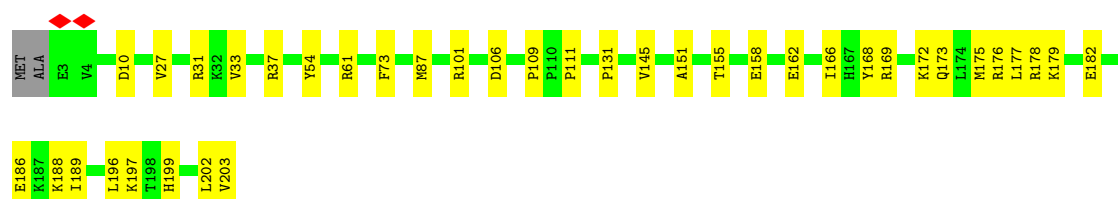
- Molecule 16: 60S ribosomal protein L15

Chain LN:  71% 28%



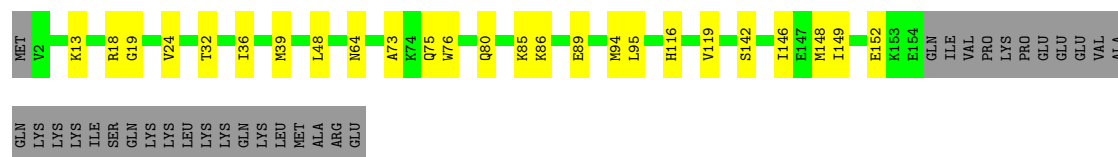
- Molecule 17: 60S ribosomal protein L13a

Chain LO:  80% 19%



- Molecule 18: 60S ribosomal protein L17

Chain LP:  70% 14% 17%



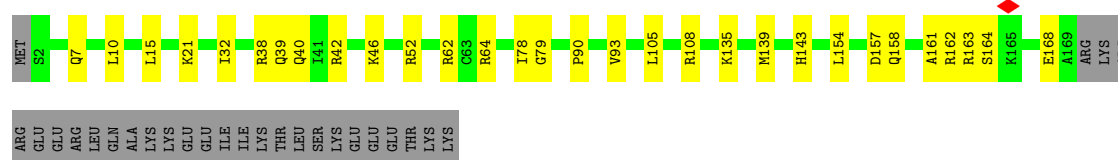
- Molecule 19: 60S ribosomal protein L18

Chain LQ: 85% 15%



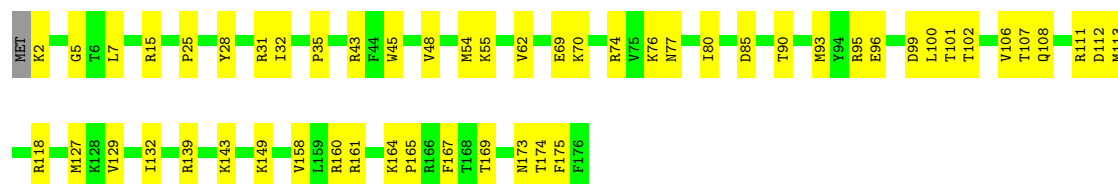
- Molecule 20: 60S ribosomal protein L19

Chain LR: 70% 15% 14%



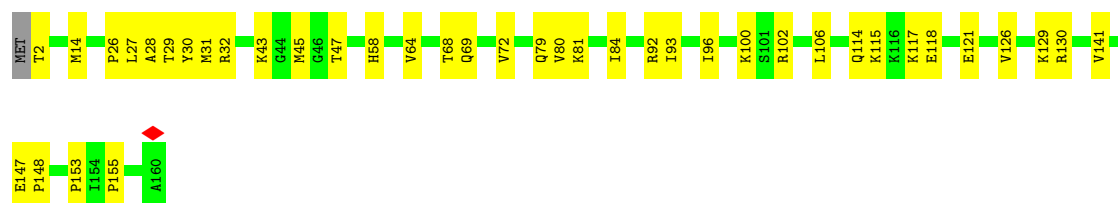
- Molecule 21: 60S ribosomal protein L18a

Chain LS: 69% 30%



- Molecule 22: 60S ribosomal protein L21

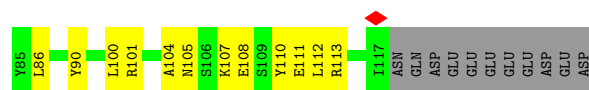
Chain LT: 74% 25%



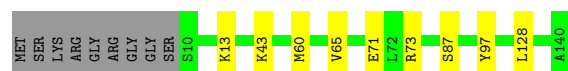
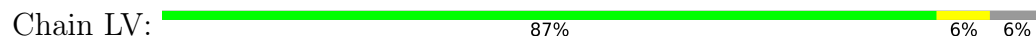
- Molecule 23: 60S ribosomal protein L22

Chain LU: 45% 32% 21%

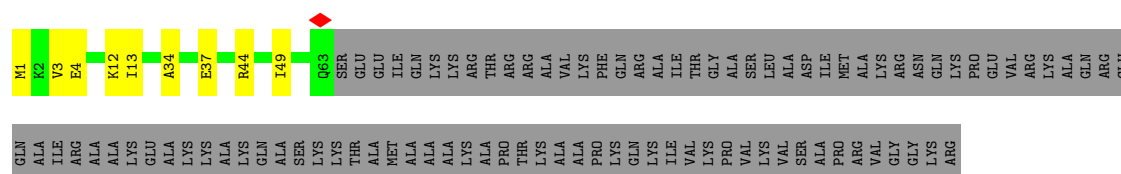
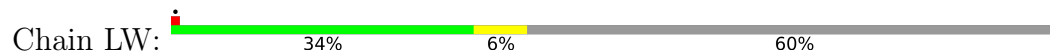




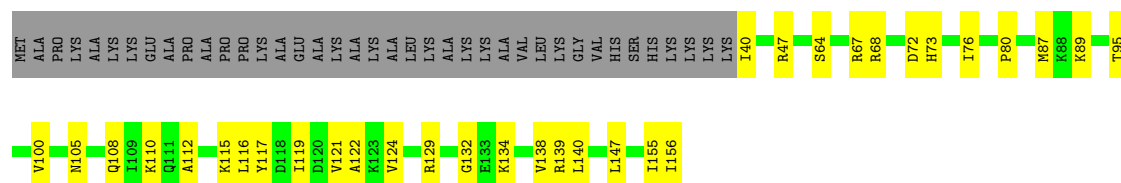
- Molecule 24: 60S ribosomal protein L23



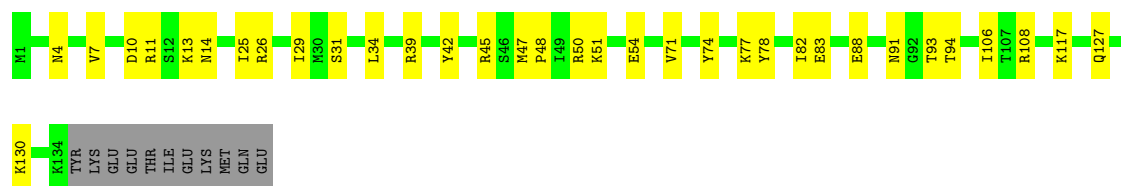
- Molecule 25: 60S ribosomal protein L24



- Molecule 26: 60S ribosomal protein L23a



- Molecule 27: 60S ribosomal protein L26



- Molecule 28: 60S ribosomal protein L27





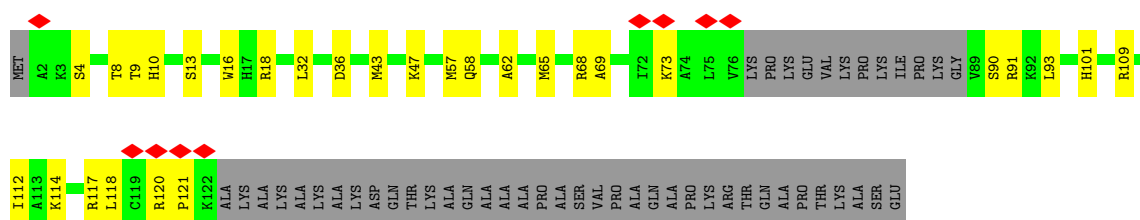
- Molecule 29: 60S ribosomal protein L27a

Chain La: 80% 20% .



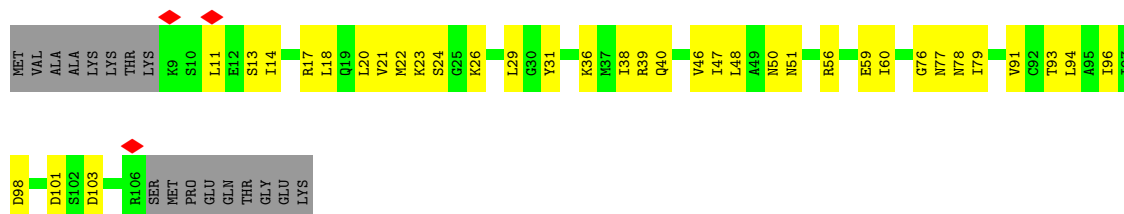
- Molecule 30: 60S ribosomal protein L29

Chain Lb: 6% 50% 18% 31%



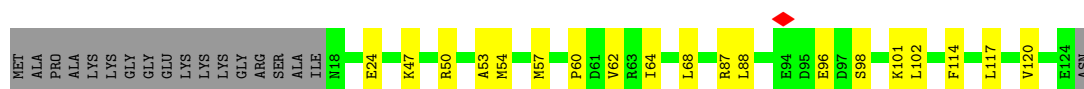
- Molecule 31: 60S ribosomal protein L30

Chain Lc: 54% 31% 15%



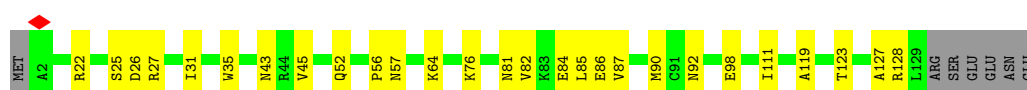
- Molecule 32: 60S ribosomal protein L31

Chain Ld: 70% 15% 14%



- Molecule 33: 60S ribosomal protein L32

Chain Le: 75% 20% 5%



- Molecule 34: 60S ribosomal protein L35a

Chain Lf:  78% 19% ..



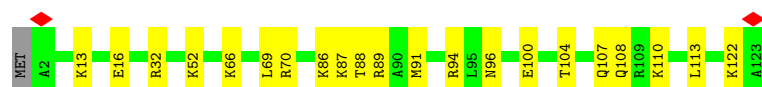
- Molecule 35: 60S ribosomal protein L34

Chain Lg:  79% 18% .



- Molecule 36: 60S ribosomal protein L35

Chain Lh:  82% 17% .



- Molecule 37: 60S ribosomal protein L36

Chain Li:  83% 14% .



- Molecule 38: 60S ribosomal protein L37

Chain Lj:  71% 18% 11%



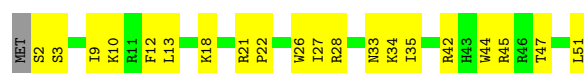
- Molecule 39: 60S ribosomal protein L38

Chain Lk:  60% 39% .

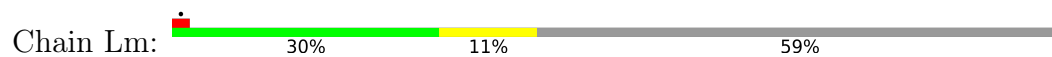


- Molecule 40: 60S ribosomal protein L39

Chain Ll:  59% 39% .



- Molecule 41: Ubiquitin-60S ribosomal protein L40



MET GLN ILE PHE VAL SER THR LEU THR LEU THR LEU GLY THR LEU THR LEU VAL GLU PRO SER ASP THR ILE GLU ASN VAL LYS ALA LYS ILE GLN ASP LYS GLY ILE PRO PRO ASP GLN ARG LEU ILE PHE ALA GLY LYS GLN LEU GLU ASP GLY ARG THR SER ASP ASN

ILE GLN LYS SER THR LEU HIS LEU VAL LEU ARG LEU ARG GLY I77 I78 E79 P80 S81 L82 R83 Q84 Q87 K88 Y89 M94 Y100 P105 K124 K125 K126 V127 K128

- Molecule 42: 60S ribosomal protein L41



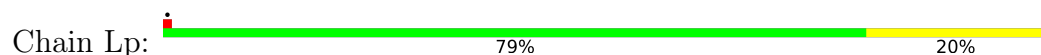
M1 R2 A3 R6 K7 R11 R12 R15 S24 LYS

- Molecule 43: 60S ribosomal protein L36a



MET V2 T10 F11 C12 C15 G16 H17 H18 Q19 P20 H21 K22 V23 T24 Q25 V26 K27 K30 K31 S32 L33 Y34 A35 Q36 G37 K38 R39 R40 P54 I55 F56 B57 T63 R69 E74 P75 N76 C77 K80 R87 D96 R99 LYS GLY GLN VAL ILE GLN PHE

- Molecule 44: 60S ribosomal protein L37a



MET A2 T16 R17 Y18 L22 R23 V26 T38 T45 K46 M47 C57 G58 S59 T70 Y71 N72 T73 T74 S75 A76 V77 T78 V79 K80 Q92

- Molecule 45: 60S ribosomal protein L28

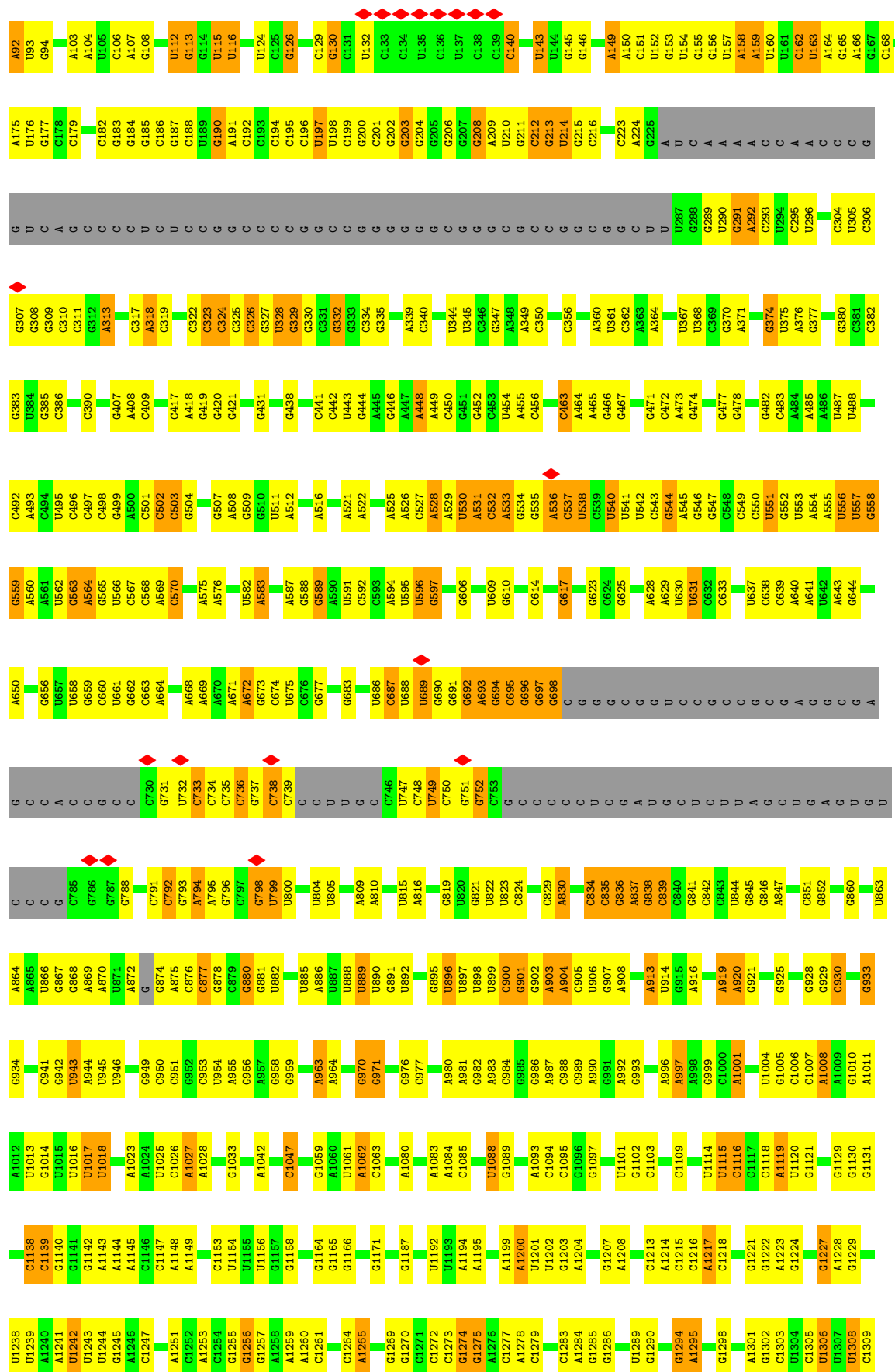


MET S2 A3 H4 L5 Q6 W7 M8 V9 V10 R11 R12 C13 K19 S26 T27 E28 N31 L32 K33 A34 S37 K47 T48 V49 A54 V61 I64 K65 R66 R67 I82 N85 T89 M96 R97 R98 Y102 R103 R107 M108 I111 R112 K122 M125 V126 LYS ARG LYS ARG THR PRO THR LYS SER SER

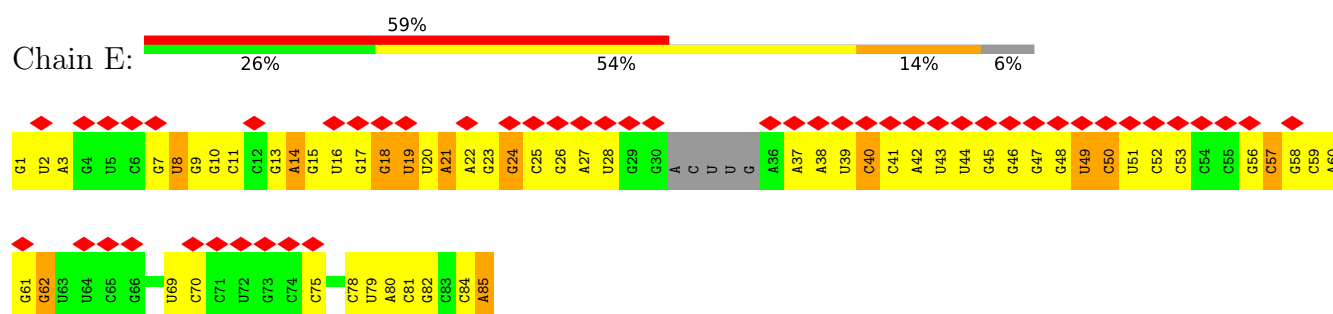
- Molecule 46: 18S rRNA



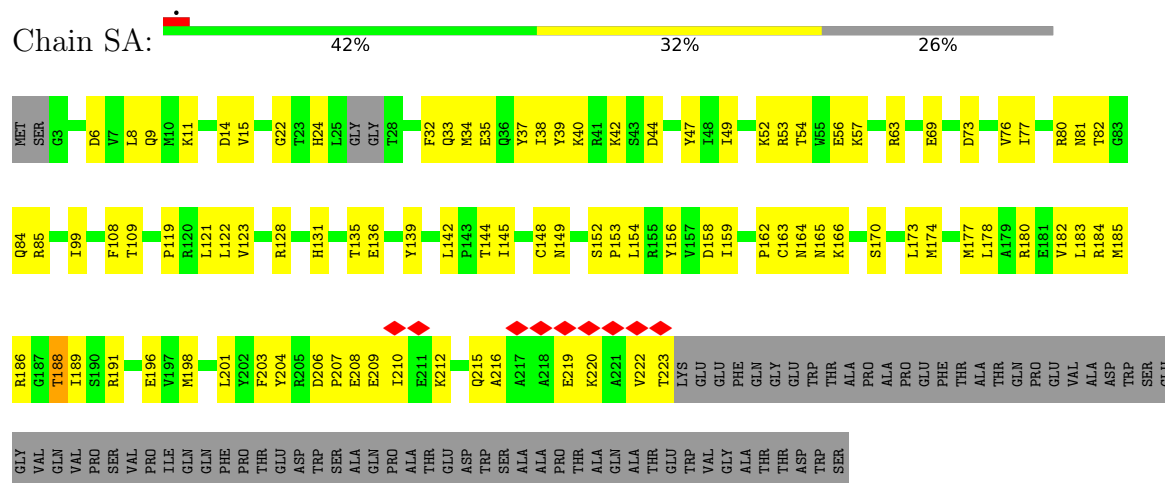
U1 A2 C3 C4 U5 G6 U12 C13 C14 U15 U16 G16 C17 C18 C24 A25 U28 C29 C30 G33 A38 G41 U44 A45 A46 U51 G52 G56 U57 C58 U59 A64 C65 G66 G67 A68 G71 C72 C73 C74 G75 U76 A77 C78 A84 A85 G90 A91



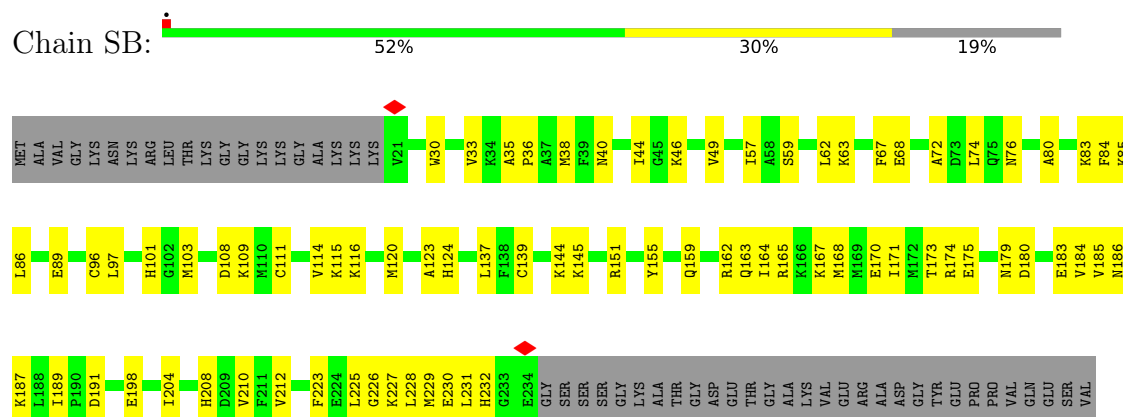




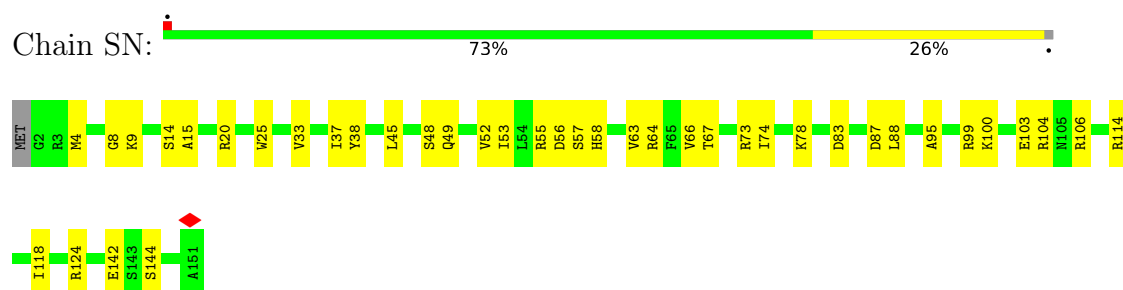
• Molecule 49: 40S ribosomal protein SA



• Molecule 50: 40S ribosomal protein S3a

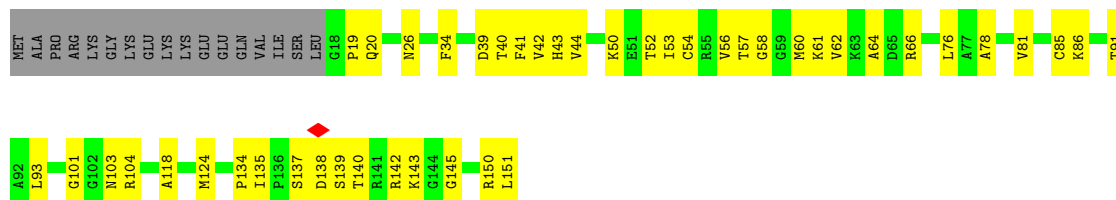


• Molecule 51: 40S ribosomal protein S13



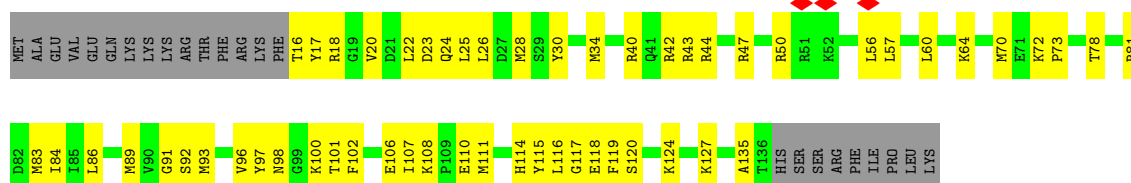
- Molecule 52: 40S ribosomal protein S14

Chain SO: 



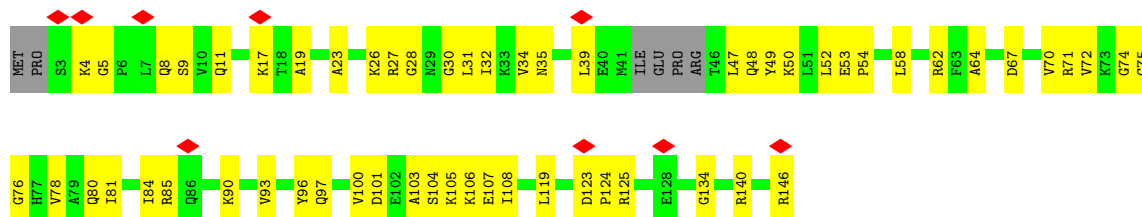
- Molecule 53: 40S ribosomal protein S15

Chain SP: 



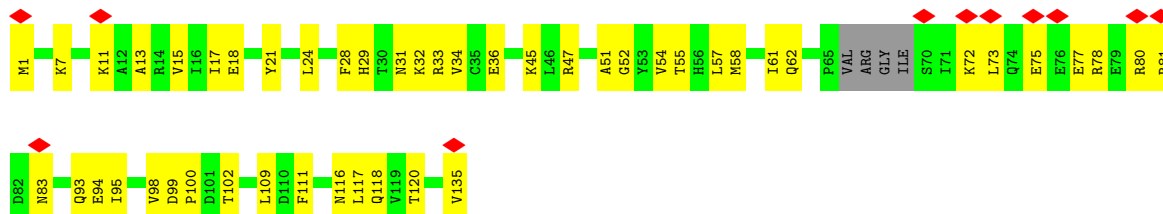
- Molecule 54: 40S ribosomal protein S16

Chain SQ: 



- Molecule 55: 40S ribosomal protein S17

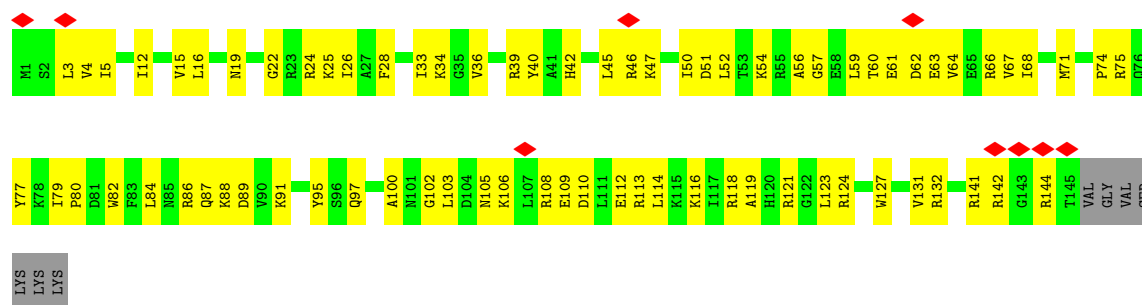
Chain SR: 



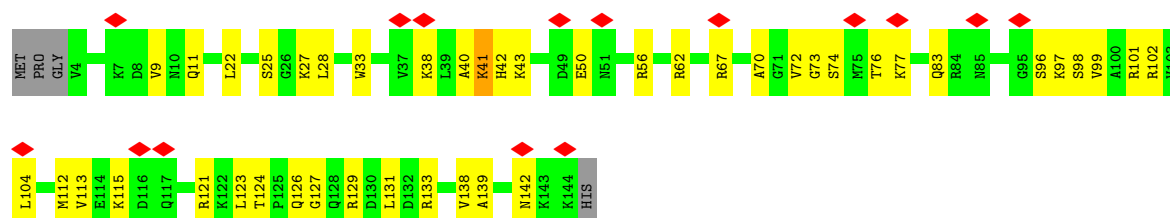
- Molecule 56: 40S ribosomal protein S18

Chain SS: 

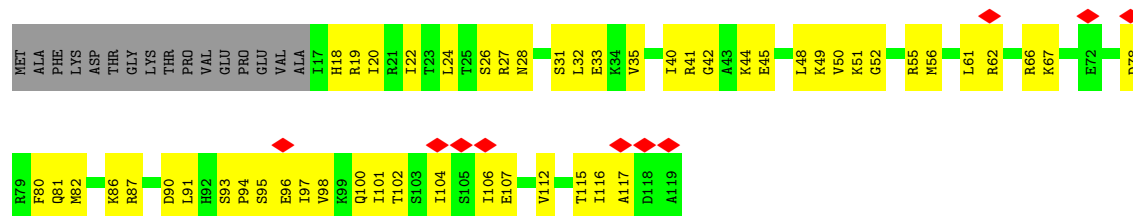
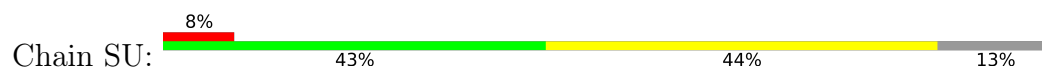




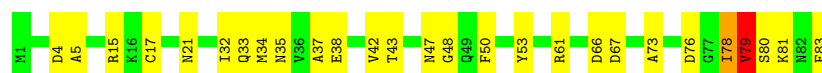
- Molecule 57: 40S ribosomal protein S19



- Molecule 58: 40S ribosomal protein S20



- Molecule 59: 40S ribosomal protein S21

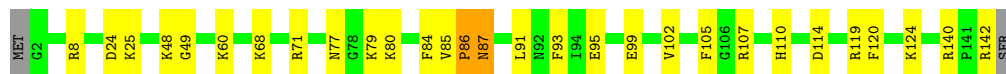


- Molecule 60: 40S ribosomal protein S15a



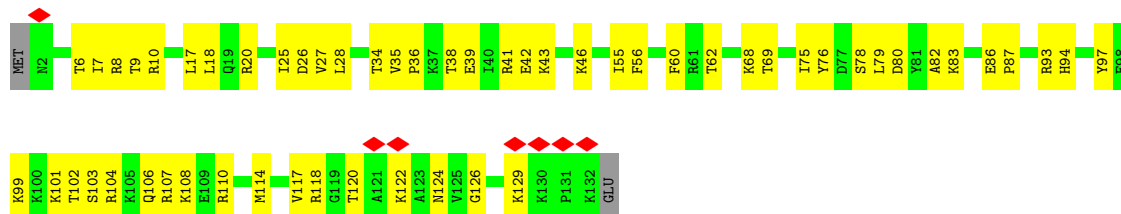
- Molecule 61: 40S ribosomal protein S23

Chain SX:  78% 19% ..



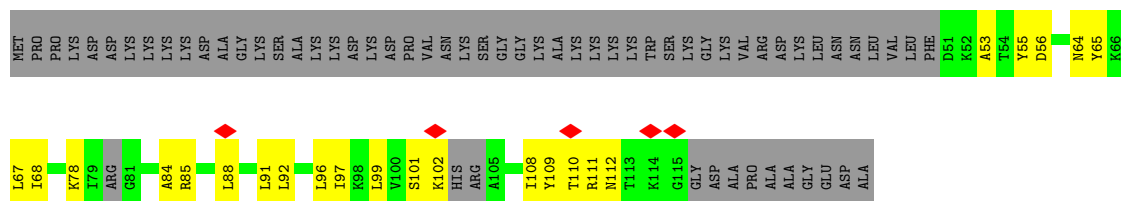
- Molecule 62: 40S ribosomal protein S24

Chain SY:  5% 56% 42% .



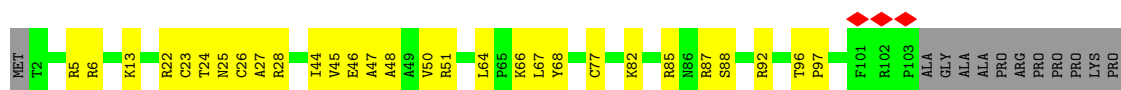
- Molecule 63: 40S ribosomal protein S25

Chain SZ:  31% 18% 50%



- Molecule 64: 40S ribosomal protein S26

Chain Sa:  63% 25% 11%



- Molecule 65: 40S ribosomal protein S27

Chain Sb:  63% 36% .



- Molecule 66: 40S ribosomal protein S28

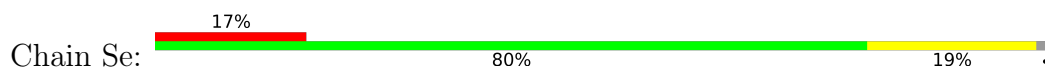
Chain Sc:  10% 49% 43% 7%



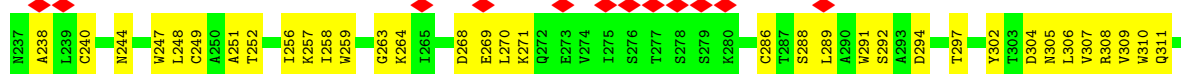
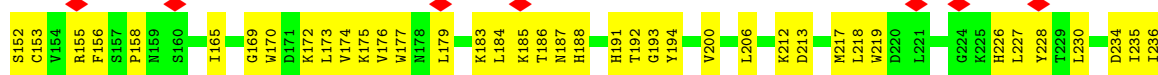
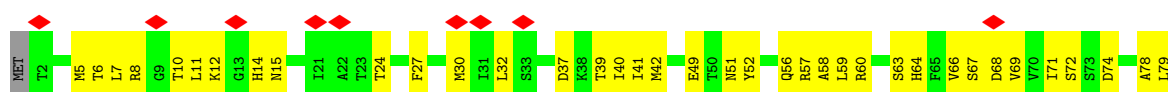
- Molecule 67: 40S ribosomal protein S29



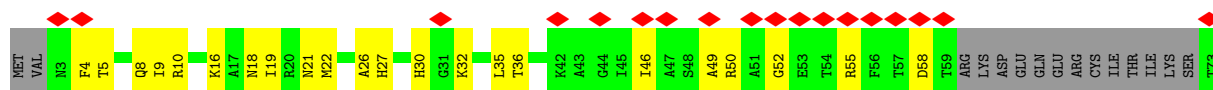
- Molecule 68: 40S ribosomal protein S30

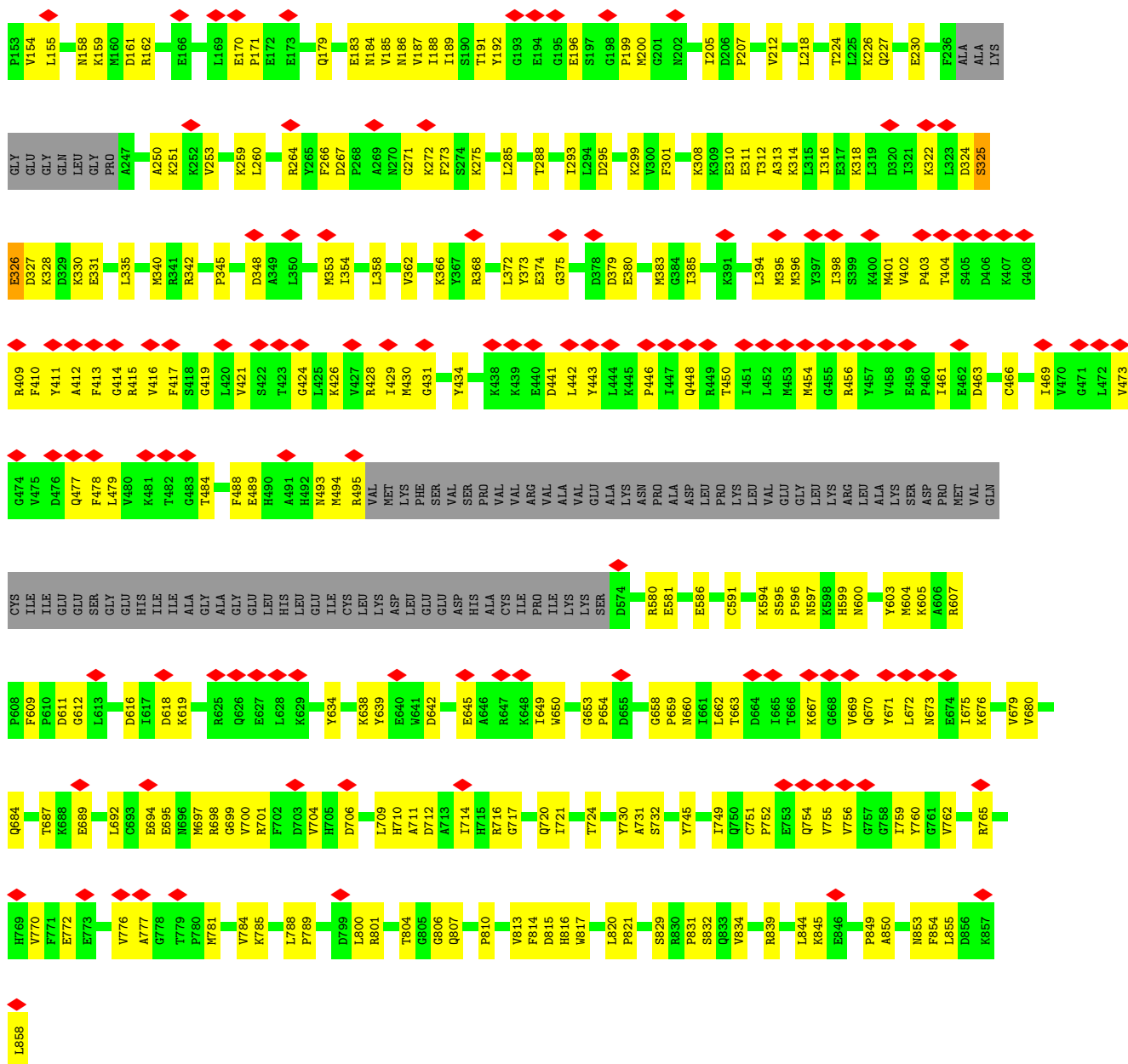


- Molecule 69: Receptor of activated protein C kinase 1



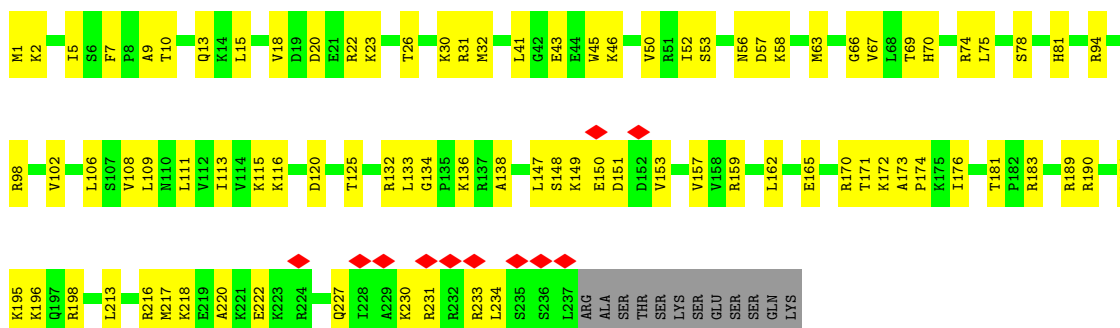
- Molecule 70: Elongation factor 2



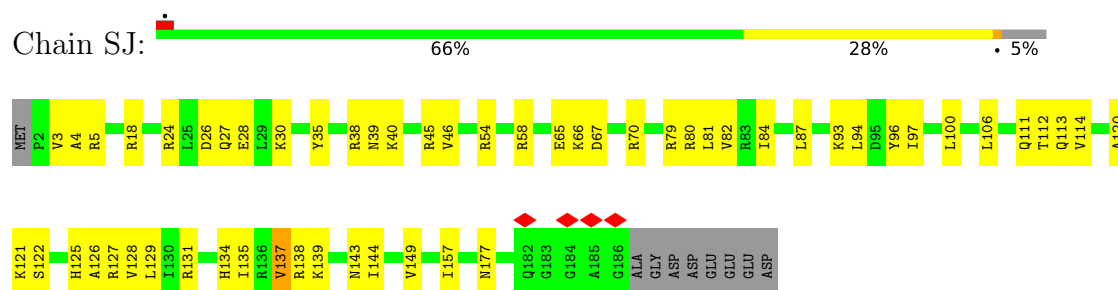


• Molecule 71: 40S ribosomal protein S6

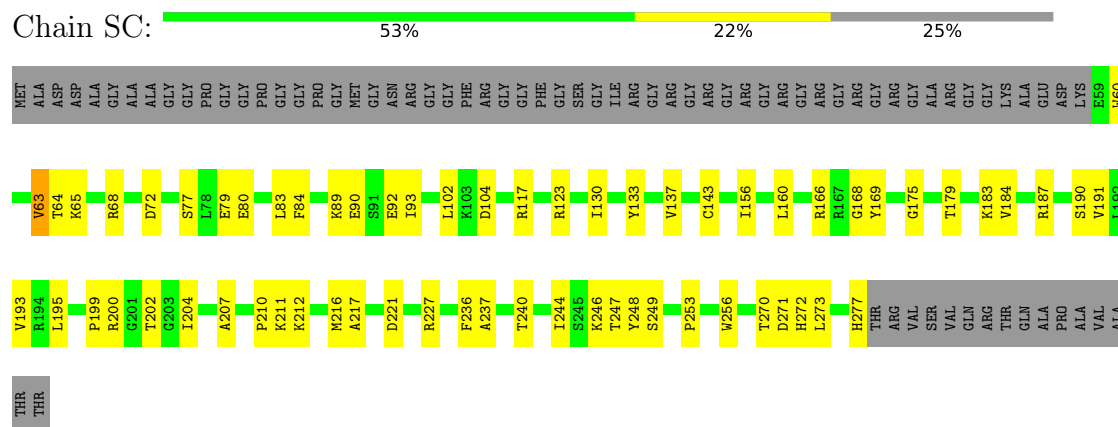
Chain SG: 60% 35% 5%



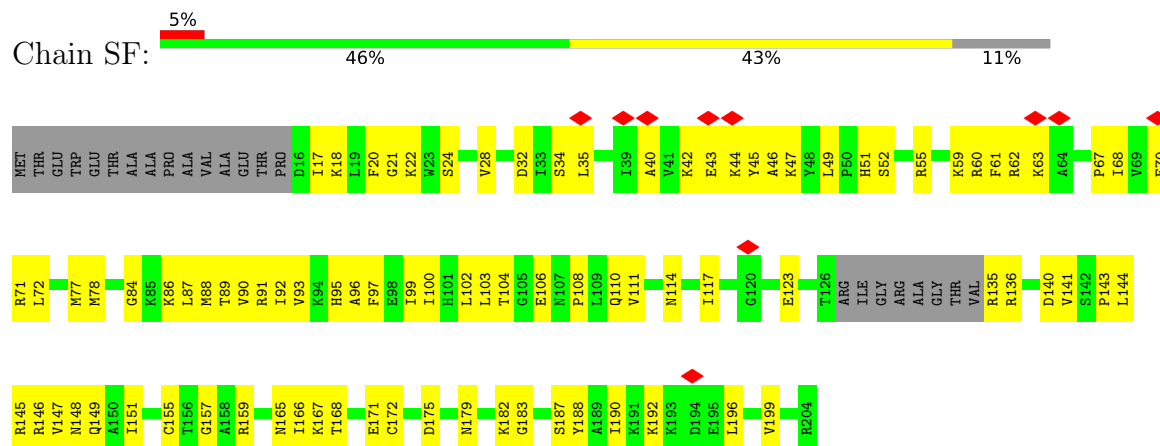
- Molecule 72: 40S ribosomal protein S9



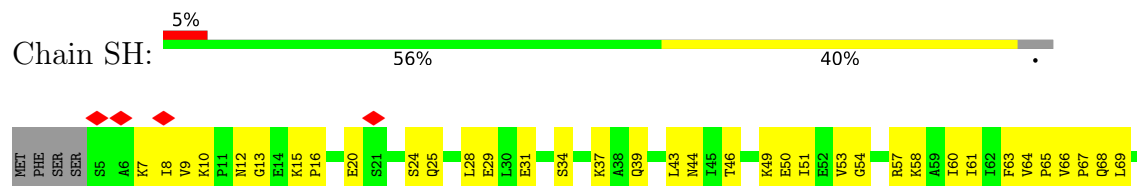
- Molecule 73: 40S ribosomal protein S2

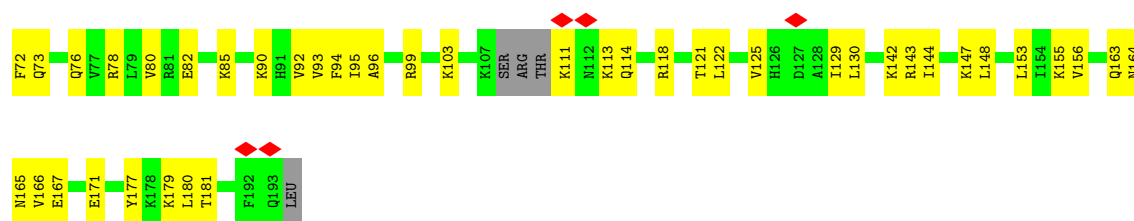


- Molecule 74: 40S ribosomal protein S5

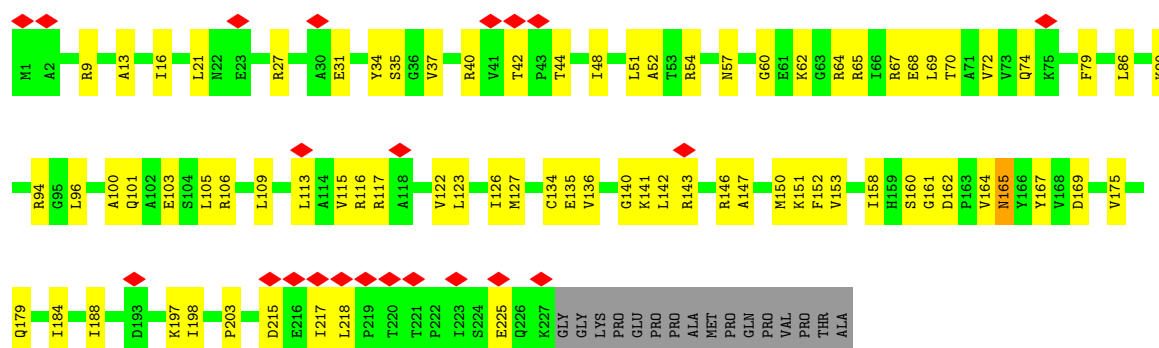


- Molecule 75: 40S ribosomal protein S7

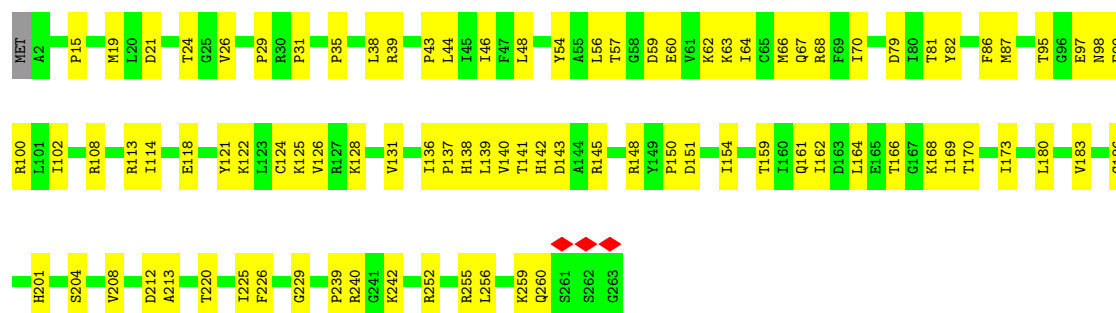




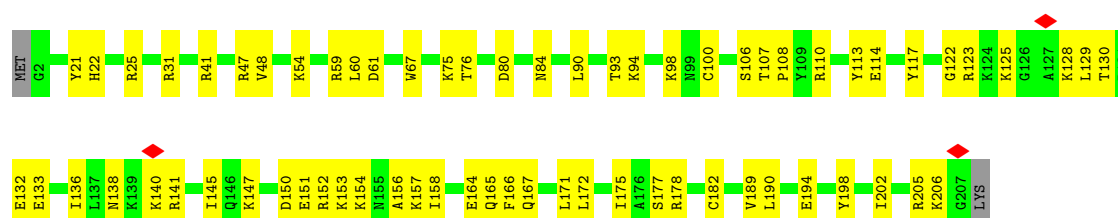
• Molecule 76: 40S ribosomal protein S3



• Molecule 77: 40S ribosomal protein S4, X isoform

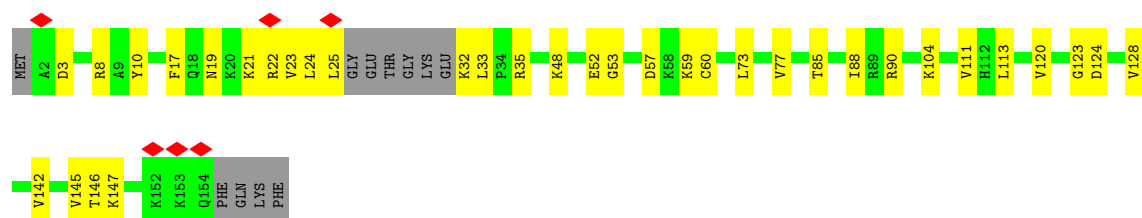


• Molecule 78: 40S ribosomal protein S8



• Molecule 79: 40S ribosomal protein S10





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	85947	Depositor
Resolution determination method	FSC 0.33 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	30	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.063	Depositor
Minimum map value	-0.036	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.003	Depositor
Recommended contour level	0.005	Depositor
Map size (Å)	483.84003, 483.84003, 483.84003	wwPDB
Map dimensions	448, 448, 448	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: ZN, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	L5	0.34	0/87719	0.33	0/136834
2	L7	0.35	0/2861	0.27	0/4459
3	L8	0.34	0/3701	0.29	0/5766
4	LA	0.38	0/1936	0.55	0/2596
5	LB	0.36	0/3306	0.54	0/4424
6	LC	0.38	0/2962	0.53	0/3977
7	LD	0.33	0/2428	0.50	0/3252
8	LE	0.33	0/1797	0.55	0/2408
9	LF	0.38	0/1905	0.54	0/2539
10	LG	0.32	0/1898	0.51	0/2552
11	LH	0.35	0/1537	0.54	0/2066
12	LI	0.33	0/1673	0.54	0/2233
13	LJ	0.30	0/1403	0.58	0/1874
14	LL	0.34	0/1732	0.51	0/2315
15	LM	0.34	0/1161	0.56	0/1554
16	LN	0.38	0/1746	0.57	0/2338
17	LO	0.36	0/1682	0.51	0/2250
18	LP	0.37	0/1268	0.48	0/1701
19	LQ	0.39	0/1537	0.56	0/2052
20	LR	0.35	0/1413	0.53	0/1870
21	LS	0.38	0/1493	0.52	0/2003
22	LT	0.36	0/1326	0.48	0/1770
23	LU	0.30	0/839	0.67	1/1126 (0.1%)
24	LV	0.34	0/993	0.48	0/1332
25	LW	0.34	0/541	0.46	0/720
26	LX	0.36	0/975	0.51	0/1312
27	LY	0.35	0/1132	0.48	0/1504
28	LZ	0.34	0/1130	0.54	1/1507 (0.1%)
29	La	0.37	0/1191	0.53	0/1591
30	Lb	0.29	0/889	0.54	0/1175
31	Lc	0.35	0/774	0.54	0/1038
32	Ld	0.37	0/903	0.51	0/1216

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	Le	0.38	0/1071	0.53	0/1429
34	Lf	0.38	0/895	0.56	0/1198
35	Lg	0.35	0/916	0.50	0/1220
36	Lh	0.32	0/1023	0.46	0/1351
37	Li	0.30	0/843	0.45	0/1115
38	Lj	0.38	0/720	0.60	0/952
39	Lk	0.30	0/575	0.54	0/761
40	Ll	0.35	0/454	0.50	0/599
41	Lm	0.32	0/435	0.50	0/575
42	Ln	0.33	0/231	0.50	0/294
43	Lo	0.35	0/818	0.50	0/1079
44	Lp	0.34	0/718	0.44	0/953
45	Lr	0.37	0/1017	0.51	0/1364
46	S2	0.26	0/41217	0.31	0/64218
47	S	0.15	0/322	0.42	0/423
48	E	0.13	0/1907	0.28	0/2969
49	SA	0.29	0/1769	0.59	2/2403 (0.1%)
50	SB	0.29	0/1765	0.53	0/2362
51	SN	0.29	0/1232	0.45	0/1656
52	SO	0.31	0/1015	0.53	0/1361
53	SP	0.24	0/1003	0.57	0/1342
54	SQ	0.22	0/1123	0.57	0/1501
55	SR	0.24	0/1074	0.59	0/1441
56	SS	0.23	0/1216	0.52	0/1628
57	ST	0.20	0/1119	0.47	0/1499
58	SU	0.23	0/827	0.59	0/1110
59	SV	0.28	0/643	0.58	0/860
60	SW	0.32	0/1051	0.50	0/1406
61	SX	0.32	0/1116	0.58	0/1490
62	SY	0.27	0/1083	0.58	0/1438
63	SZ	0.20	0/482	0.51	0/644
64	Sa	0.32	0/836	0.59	0/1121
65	Sb	0.30	0/665	0.60	0/891
66	Sc	0.24	0/508	0.62	0/680
67	Sd	0.22	0/446	0.47	0/591
68	Se	0.23	0/465	0.59	0/612
69	Sg	0.22	0/2493	0.57	2/3394 (0.1%)
70	CB	0.21	0/6022	0.51	0/8133
71	SG	0.23	0/1946	0.49	0/2590
72	SJ	0.28	0/1550	0.51	1/2069 (0.0%)
73	SC	0.31	0/1737	0.59	2/2347 (0.1%)
74	SF	0.23	0/1458	0.54	0/1958
75	SH	0.28	0/1519	0.61	0/2033

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	SD	0.22	0/1793	0.52	1/2414 (0.0%)
77	SE	0.27	0/2118	0.54	0/2849
78	SI	0.29	0/1715	0.53	0/2287
79	SK	0.24	0/851	0.56	0/1147
80	SL	0.30	0/1225	0.48	0/1638
All	All	0.32	0/234878	0.41	10/344749 (0.0%)

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
4	LA	0	1
34	Lf	0	1
36	Lh	0	1
59	SV	0	2
All	All	0	5

There are no bond length outliers.

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	LU	18	VAL	N-CA-C	-8.01	104.78	111.91
76	SD	165	ASN	N-CA-C	-6.80	106.17	114.75
69	Sg	124	SER	CA-C-N	5.75	129.80	120.60
69	Sg	124	SER	C-N-CA	5.75	129.80	120.60
49	SA	73	ASP	N-CA-C	-5.59	107.71	114.75
72	SJ	137	VAL	N-CA-C	-5.50	101.87	109.46
73	SC	63	VAL	CA-C-N	5.29	131.65	121.54
73	SC	63	VAL	C-N-CA	5.29	131.65	121.54
28	LZ	35	ASP	N-CA-C	-5.04	108.16	114.56
49	SA	188	THR	N-CA-C	-5.03	108.41	114.75

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	LA	13	GLY	Peptide
34	Lf	106	TYR	Peptide
36	Lh	86	LYS	Peptide

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Mol	Chain	Res	Type	Group
59	SV	78	ILE	Peptide
59	SV	79	VAL	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	L5	78419	0	39630	1092	0
2	L7	2561	0	1295	18	0
3	L8	3314	0	1683	43	0
4	LA	1898	0	1993	47	0
5	LB	3238	0	3376	73	0
6	LC	2908	0	3082	57	0
7	LD	2382	0	2410	50	0
8	LE	1764	0	1919	52	0
9	LF	1870	0	1996	38	0
10	LG	1867	0	2013	44	0
11	LH	1518	0	1601	44	0
12	LI	1634	0	1671	39	0
13	LJ	1381	0	1402	52	0
14	LL	1701	0	1818	46	0
15	LM	1138	0	1204	25	0
16	LN	1701	0	1749	50	0
17	LO	1650	0	1794	32	0
18	LP	1242	0	1269	19	0
19	LQ	1513	0	1628	24	0
20	LR	1397	0	1537	28	0
21	LS	1453	0	1490	40	0
22	LT	1298	0	1366	31	0
23	LU	825	0	850	36	0
24	LV	979	0	1039	5	0
25	LW	528	0	541	8	0
26	LX	958	0	1027	26	0
27	LY	1115	0	1205	23	0
28	LZ	1107	0	1182	28	0
29	La	1162	0	1213	24	0
30	Lb	876	0	948	24	0
31	Lc	764	0	804	25	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	Ld	888	0	930	14	0
33	Le	1053	0	1147	19	0
34	Lf	876	0	912	15	0
35	Lg	906	0	999	13	0
36	Lh	1015	0	1148	18	0
37	Li	832	0	917	13	0
38	Lj	705	0	736	12	0
39	Lk	569	0	637	17	0
40	Ll	444	0	483	15	0
41	Lm	429	0	465	11	0
42	Ln	230	0	276	5	0
43	Lo	805	0	869	21	0
44	Lp	708	0	756	15	0
45	Lr	1002	0	1068	26	0
46	S2	36875	0	18593	719	0
47	S	318	0	289	15	0
48	E	1708	0	865	49	0
49	SA	1733	0	1739	76	0
50	SB	1738	0	1809	62	0
51	SN	1208	0	1294	32	0
52	SO	1002	0	1023	38	0
53	SP	985	0	1031	56	0
54	SQ	1107	0	1175	48	0
55	SR	1060	0	1112	46	0
56	SS	1198	0	1261	74	0
57	ST	1101	0	1135	46	0
58	SU	817	0	882	41	0
59	SV	636	0	637	23	0
60	SW	1034	0	1080	32	0
61	SX	1098	0	1167	25	0
62	SY	1065	0	1142	53	0
63	SZ	480	0	528	21	0
64	Sa	821	0	870	22	0
65	Sb	651	0	672	26	0
66	Sc	506	0	536	35	0
67	Sd	436	0	433	15	0
68	Se	459	0	503	8	0
69	Sg	2436	0	2393	124	0
70	CB	5904	0	5943	226	0
71	SG	1923	0	2089	84	0
72	SJ	1525	0	1640	52	0
73	SC	1700	0	1784	55	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
74	SF	1438	0	1484	74	0
75	SH	1497	0	1590	68	0
76	SD	1765	0	1865	59	0
77	SE	2076	0	2177	72	0
78	SI	1686	0	1772	57	0
79	SK	827	0	854	44	0
80	SL	1205	0	1284	29	0
81	L5	211	0	0	0	0
81	L7	3	0	0	0	0
81	L8	5	0	0	0	0
81	LA	1	0	0	0	0
81	LI	1	0	0	0	0
81	LP	1	0	0	0	0
81	LV	1	0	0	0	0
81	La	1	0	0	0	0
81	Le	1	0	0	0	0
81	Lg	1	0	0	0	0
81	S2	29	0	0	0	0
82	Lg	1	0	0	0	0
82	Lj	1	0	0	0	0
82	Lm	1	0	0	0	0
82	Lo	1	0	0	0	0
82	Lp	1	0	0	0	0
82	Sa	1	0	0	0	0
82	Sd	1	0	0	0	0
All	All	218903	0	162729	4277	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 11.

All (4277) 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)
1:L5:1762:C:N4	1:L5:1770:A:C2	2.08	1.21
46:S2:886:A:N6	46:S2:901:G:C4	2.09	1.19
1:L5:1443:A:N6	1:L5:2104:G:H21	1.39	1.19
1:L5:1176:C:N4	1:L5:1184:A:H61	1.41	1.17
1:L5:1176:C:H42	1:L5:1184:A:N6	1.41	1.17
46:S2:24:C:H42	46:S2:650:A:N6	1.44	1.16
1:L5:1443:A:H61	1:L5:2104:G:N2	1.41	1.16
46:S2:24:C:N4	46:S2:650:A:H61	1.44	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3951:G:C2	1:L5:4062:A:N6	2.15	1.15
1:L5:1095:A:H2	1:L5:1200:G:N1	1.53	1.06
1:L5:1095:A:C2	1:L5:1200:G:N1	2.25	1.04
1:L5:1762:C:N4	1:L5:1770:A:H2	1.46	1.04
75:SH:163:GLN:O	75:SH:167:GLU:HB2	1.58	1.04
64:Sa:88:SER:O	64:Sa:92:ARG:HB2	1.60	1.02
1:L5:3951:G:N2	1:L5:4062:A:N6	2.09	1.00
46:S2:140:C:N4	46:S2:313:A:H61	1.60	1.00
46:S2:694:G:O6	46:S2:737:G:C2	2.15	1.00
46:S2:140:C:H42	46:S2:313:A:N6	1.60	0.99
46:S2:1656:G:H1	46:S2:1668:U:H3	1.01	0.98
1:L5:3951:G:N2	1:L5:4062:A:C6	2.33	0.97
25:LW:4:GLU:O	25:LW:12:LYS:HA	1.63	0.96
1:L5:1406:G:H1	1:L5:1411:C:HO2'	1.12	0.96
1:L5:1402:C:O2	1:L5:1415:G:N2	1.99	0.95
1:L5:450:G:H1	1:L5:1297:U:H3	1.14	0.94
46:S2:694:G:C6	46:S2:737:G:N2	2.35	0.94
75:SH:72:PHE:O	75:SH:76:GLN:HB2	1.68	0.94
46:S2:886:A:N6	46:S2:901:G:C5	2.38	0.92
1:L5:2557:G:H1	1:L5:2570:U:H3	1.17	0.92
13:LJ:21:CYS:HB2	13:LJ:131:TYR:O	1.68	0.92
1:L5:1401:C:O2	1:L5:1416:G:N2	2.01	0.91
1:L5:4517:A:N7	5:LB:2:SER:N	2.18	0.91
1:L5:2483:G:H1	1:L5:2495:U:H3	0.91	0.90
31:Lc:50:ASN:ND2	31:Lc:76:GLY:O	2.04	0.90
46:S2:1748:G:H1	46:S2:1786:U:H3	1.18	0.90
46:S2:567:C:O2	46:S2:583:A:N6	2.05	0.90
35:Lg:49:CYS:SG	35:Lg:85:LYS:NZ	2.45	0.89
1:L5:1972:G:N2	1:L5:1994:C:O2	2.05	0.89
49:SA:38:ILE:HD11	49:SA:47:TYR:HB3	1.55	0.89
11:LH:59:LYS:HE3	11:LH:66:GLU:HG3	1.52	0.89
1:L5:493:G:N1	1:L5:660:A:H2	1.71	0.88
48:E:8:U:N3	48:E:14:A:C8	2.40	0.88
1:L5:1755:C:N4	1:L5:1776:A:N6	2.22	0.88
31:Lc:20:LEU:O	31:Lc:24:SER:HB3	1.73	0.87
61:SX:68:LYS:HB3	61:SX:91:LEU:HD22	1.55	0.87
1:L5:493:G:H1	1:L5:660:A:H2	0.94	0.87
46:S2:798:G:N3	75:SH:113:LYS:NZ	2.22	0.87
1:L5:493:G:N1	1:L5:660:A:C2	2.41	0.86
1:L5:3951:G:N3	1:L5:4062:A:N1	2.23	0.86
31:Lc:31:TYR:OH	31:Lc:59:GLU:OE2	1.93	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:505:G:H1	1:L5:653:U:H3	1.18	0.86
15:LM:25:VAL:HG11	15:LM:38:VAL:HG13	1.58	0.86
1:L5:4093:G:N2	1:L5:4114:C:N3	2.23	0.85
1:L5:4076:G:OP1	10:LG:73:ARG:NH1	2.08	0.85
62:SY:39:GLU:HA	62:SY:42:GLU:HG2	1.58	0.85
78:SI:151:GLU:OE1	78:SI:154:LYS:NZ	2.08	0.85
46:S2:334:C:H5	71:SG:190:ARG:HH12	1.24	0.85
49:SA:189:ILE:HG22	49:SA:191:ARG:H	1.40	0.85
1:L5:1072:C:O2	1:L5:1240:G:N2	2.10	0.84
56:SS:24:ARG:NH1	56:SS:28:PHE:O	2.10	0.84
50:SB:179:ASN:OD1	50:SB:180:ASP:N	2.10	0.84
70:CB:398:ILE:HG21	70:CB:479:LEU:HD11	1.60	0.84
46:S2:696:G:H21	46:S2:737:G:H1	1.17	0.84
1:L5:2079:G:OP2	33:Le:64:LYS:NZ	2.11	0.83
56:SS:34:LYS:HZ2	56:SS:103:LEU:HB3	1.43	0.83
1:L5:1762:C:N3	1:L5:1770:A:N1	2.25	0.83
56:SS:75:ARG:HH21	56:SS:95:TYR:HB2	1.44	0.83
73:SC:210:PRO:HD3	73:SC:236:PHE:HE2	1.44	0.83
1:L5:181:C:H3'	1:L5:182:G:H8	1.42	0.83
48:E:1:G:N2	48:E:81:C:O2	2.12	0.82
69:Sg:212:LYS:HA	69:Sg:235:ILE:HG13	1.58	0.82
72:SJ:65:GLU:OE2	72:SJ:66:LYS:NZ	2.11	0.82
56:SS:46:ARG:HH11	56:SS:52:LEU:HD23	1.44	0.82
50:SB:40:ASN:ND2	50:SB:76:ASN:OD1	2.12	0.82
46:S2:692:G:O6	46:S2:693:A:N6	2.13	0.82
46:S2:140:C:N3	46:S2:313:A:N1	2.27	0.81
1:L5:3754:G:H1	1:L5:3770:U:H3	0.87	0.81
9:LF:147:LEU:O	9:LF:151:ASN:ND2	2.13	0.81
16:LN:123:GLU:HG3	16:LN:124:ASP:H	1.45	0.81
74:SF:155:CYS:SG	74:SF:159:ARG:NH2	2.53	0.81
1:L5:3951:G:C2	1:L5:4062:A:C6	2.67	0.81
49:SA:52:LYS:HB2	55:SR:109:LEU:HD11	1.61	0.81
30:Lb:43:MET:HE3	30:Lb:47:LYS:HE2	1.62	0.81
1:L5:4093:G:N2	1:L5:4114:C:C4	2.48	0.81
7:LD:76:CYS:SG	7:LD:112:ARG:NH1	2.53	0.81
46:S2:1192:U:OP2	61:SX:119:ARG:NH2	2.14	0.81
1:L5:1656:U:OP2	29:La:26:ARG:NH2	2.13	0.81
1:L5:4907:G:N2	1:L5:4914:C:O2	2.12	0.80
46:S2:1652:G:H1	46:S2:1672:U:H3	1.24	0.80
54:SQ:5:GLY:O	54:SQ:27:ARG:NH1	2.13	0.80
20:LR:161:ALA:O	20:LR:164:SER:OG	2.00	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:534:G:H2'	46:S2:535:G:H8	1.45	0.80
1:L5:512:U:H3	1:L5:647:G:H1	1.31	0.79
1:L5:3589:G:N2	1:L5:3590:G:N7	2.30	0.79
1:L5:1269:G:N2	1:L5:1441:C:C2	2.50	0.79
15:LM:38:VAL:HG21	15:LM:50:MET:HB3	1.65	0.79
70:CB:649:ILE:HA	70:CB:663:THR:HG22	1.61	0.79
56:SS:46:ARG:HH21	57:ST:50:GLU:HG2	1.47	0.79
56:SS:67:VAL:HG22	56:SS:71:MET:HE2	1.63	0.79
1:L5:493:G:O6	1:L5:660:A:N1	2.14	0.79
5:LB:10:ARG:NH2	5:LB:11:HIS:O	2.16	0.79
46:S2:1396:A:N6	46:S2:1449:G:O6	2.14	0.79
69:Sg:7:LEU:HA	69:Sg:309:VAL:O	1.83	0.79
46:S2:1119:A:O3'	65:Sb:72:ARG:NH2	2.16	0.79
54:SQ:123:ASP:OD1	74:SF:55:ARG:NH1	2.15	0.79
1:L5:3753:G:H2'	1:L5:3754:G:H8	1.47	0.79
50:SB:198:GLU:HB2	50:SB:210:VAL:HG21	1.65	0.79
1:L5:3937:C:H1'	16:LN:125:SER:HB3	1.63	0.79
23:LU:17:GLN:N	23:LU:17:GLN:HE21	1.80	0.79
1:L5:1095:A:N1	1:L5:1200:G:O6	2.15	0.78
8:LE:254:ASP:HA	8:LE:257:ILE:HG22	1.64	0.78
53:SP:20:VAL:HG13	53:SP:25:LEU:HD11	1.66	0.78
27:LY:74:TYR:HE2	27:LY:77:LYS:HG3	1.48	0.78
46:S2:1403:C:N4	46:S2:1433:C:OP1	2.17	0.78
46:S2:1423:C:H41	54:SQ:4:LYS:HG2	1.47	0.78
71:SG:7:PHE:HD2	71:SG:10:THR:HG22	1.49	0.78
76:SD:106:ARG:HG3	76:SD:175:VAL:HG22	1.64	0.78
53:SP:86:LEU:HB2	53:SP:89:MET:HE1	1.66	0.78
11:LH:120:GLU:OE2	11:LH:124:ARG:NH2	2.17	0.78
1:L5:3760:A:C5	46:S2:1827:U:H5'	2.19	0.78
14:LL:16:LYS:O	14:LL:21:ARG:NH1	2.17	0.78
15:LM:104:MET:HE2	17:LO:199:HIS:HB3	1.65	0.78
1:L5:3754:G:H2'	1:L5:3755:G:C8	2.19	0.77
46:S2:1825:A:H61	70:CB:720:GLN:HG2	1.49	0.77
46:S2:925:G:H1	46:S2:1017:U:H3	1.29	0.77
46:S2:152:U:O4'	71:SG:132:ARG:NH2	2.17	0.77
23:LU:47:ILE:HG21	23:LU:56:LEU:HD13	1.67	0.77
46:S2:1467:C:OP1	55:SR:1:MET:N	2.17	0.77
27:LY:39:ARG:O	27:LY:42:TYR:O	2.02	0.77
74:SF:47:LYS:NZ	74:SF:52:SER:OG	2.16	0.77
1:L5:186:G:N3	1:L5:1366:G:N2	2.32	0.77
1:L5:1443:A:N6	1:L5:2104:G:N2	2.12	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1708:G:H2'	1:L5:1709:C:H3'	1.65	0.77
46:S2:693:A:N6	46:S2:738:C:O2'	2.17	0.77
46:S2:1677:U:OP1	74:SF:148:ASN:ND2	2.18	0.77
5:LB:117:ARG:HG2	5:LB:180:LEU:HD23	1.67	0.76
66:Sc:15:THR:HB	66:Sc:31:ARG:HH12	1.50	0.76
23:LU:56:LEU:HD12	23:LU:61:VAL:HG23	1.66	0.76
51:SN:103:GLU:HA	51:SN:106:ARG:HH21	1.49	0.76
69:Sg:87:LEU:HB2	69:Sg:101:PHE:HB2	1.66	0.76
73:SC:166:ARG:HB2	73:SC:248:TYR:HD1	1.49	0.76
46:S2:928:G:H1	46:S2:1013:U:H3	1.30	0.76
58:SU:40:ILE:HG12	58:SU:44:LYS:NZ	2.00	0.76
23:LU:105:ASN:ND2	23:LU:111:GLU:OE1	2.19	0.76
1:L5:1702:C:H4'	6:LC:308:LYS:HE3	1.66	0.76
14:LL:209:LYS:HG3	14:LL:210:LYS:HG2	1.66	0.76
1:L5:1755:C:H42	1:L5:1776:A:N6	1.80	0.76
1:L5:2495:U:H2'	1:L5:2496:G:H8	1.51	0.76
70:CB:199:PRO:HB2	70:CB:200:MET:HE2	1.68	0.76
1:L5:4773:C:N3	1:L5:4861:G:N1	2.30	0.76
70:CB:49:ALA:O	70:CB:50:ARG:NE	2.17	0.76
12:LI:36:LEU:HD11	12:LI:69:ARG:HH21	1.52	0.75
27:LY:31:SER:HA	27:LY:48:PRO:HA	1.68	0.75
70:CB:314:LYS:HB3	70:CB:318:LYS:HZ1	1.50	0.75
1:L5:3754:G:H2'	1:L5:3755:G:H8	1.48	0.75
1:L5:3946:G:H1	1:L5:4067:U:H3	1.32	0.75
46:S2:835:C:H3'	62:SY:8:ARG:HH22	1.51	0.75
1:L5:1762:C:H5''	1:L5:1764:G:H1	1.50	0.75
70:CB:616:ASP:OD2	70:CB:639:TYR:OH	2.04	0.75
1:L5:513:U:N3	1:L5:516:C:OP2	2.20	0.75
1:L5:4773:C:O2	1:L5:4861:G:N2	2.17	0.75
69:Sg:269:GLU:OE2	69:Sg:271:LYS:NZ	2.20	0.75
70:CB:450:THR:HB	70:CB:461:ILE:O	1.86	0.75
5:LB:348:ARG:HH12	5:LB:351:LEU:HD22	1.51	0.75
21:LS:99:ASP:OD2	21:LS:108:GLN:NE2	2.19	0.75
79:SK:6:LYS:NZ	79:SK:38:LYS:O	2.20	0.75
1:L5:4139:G:H21	1:L5:4140:C:H41	1.33	0.75
21:LS:85:ASP:HB3	21:LS:90:THR:HG22	1.67	0.75
46:S2:694:G:C6	46:S2:737:G:C2	2.75	0.75
33:Le:92:ASN:ND2	33:Le:119:ALA:O	2.20	0.75
54:SQ:50:LYS:HG2	74:SF:49:LEU:HD12	1.66	0.75
55:SR:58:MET:HA	55:SR:61:ILE:HG22	1.68	0.74
66:Sc:15:THR:HB	66:Sc:31:ARG:NH1	2.01	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:CB:403:PRO:HA	70:CB:410:PHE:HD1	1.52	0.74
58:SU:40:ILE:HG12	58:SU:44:LYS:HZ1	1.50	0.74
75:SH:69:LEU:HD13	75:SH:96:ALA:HB2	1.68	0.74
48:E:8:U:H3	48:E:14:A:H8	1.34	0.74
65:Sb:67:THR:OG1	65:Sb:70:LYS:O	2.05	0.74
1:L5:29:G:H5''	16:LN:172:ARG:HD3	1.67	0.74
1:L5:4894:A:H3'	1:L5:4895:C:H5'	1.68	0.74
26:LX:124:VAL:HG22	26:LX:138:VAL:HG23	1.69	0.74
66:Sc:14:VAL:HG12	66:Sc:32:VAL:HG12	1.70	0.74
30:Lb:8:THR:HG22	30:Lb:10:HIS:H	1.51	0.74
51:SN:49:GLN:HA	51:SN:52:VAL:HG12	1.69	0.74
57:ST:124:THR:HG23	57:ST:127:GLY:H	1.53	0.74
78:SI:152:ARG:O	78:SI:156:ALA:HB2	1.86	0.74
57:ST:9:VAL:O	57:ST:11:GLN:NE2	2.20	0.74
1:L5:1812:C:H1'	30:Lb:57:MET:HE2	1.70	0.74
1:L5:4626:A:OP2	5:LB:224:LYS:NZ	2.18	0.74
71:SG:190:ARG:HE	71:SG:194:LEU:HD21	1.51	0.74
8:LE:264:ILE:HD11	8:LE:267:LEU:HD22	1.70	0.74
79:SK:31:LYS:HZ1	79:SK:36:ALA:H	1.34	0.74
33:Le:76:LYS:NZ	33:Le:98:GLU:OE2	2.20	0.73
46:S2:197:U:OP2	46:S2:203:G:N2	2.21	0.73
46:S2:793:G:H2'	46:S2:794:A:C8	2.23	0.73
50:SB:68:GLU:HA	50:SB:84:PHE:O	1.88	0.73
15:LM:25:VAL:HG11	15:LM:38:VAL:CG1	2.19	0.73
76:SD:109:LEU:HD11	76:SD:115:VAL:HG12	1.71	0.73
46:S2:1277:C:H2'	46:S2:1278:A:H8	1.51	0.73
46:S2:834:C:H42	46:S2:839:C:H42	1.35	0.73
74:SF:187:SER:HB3	74:SF:190:ILE:HG12	1.71	0.73
53:SP:110:GLU:HG3	56:SS:116:LYS:HZ1	1.54	0.73
78:SI:177:SER:OG	78:SI:182:CYS:SG	2.47	0.72
26:LX:105:ASN:OD1	26:LX:108:GLN:HG3	1.89	0.72
40:Ll:21:ARG:NH1	40:Ll:22:PRO:O	2.22	0.72
46:S2:1756:C:C2	46:S2:1776:G:C6	2.78	0.72
9:LF:105:VAL:HG13	9:LF:136:VAL:HG12	1.70	0.72
34:Lf:63:LYS:HD2	34:Lf:64:PRO:HD2	1.70	0.72
56:SS:15:VAL:HG22	56:SS:16:LEU:HD12	1.71	0.72
62:SY:99:LYS:HG3	62:SY:101:LYS:HE2	1.69	0.72
73:SC:210:PRO:HD3	73:SC:236:PHE:CE2	2.23	0.72
1:L5:1072:C:N3	1:L5:1240:G:N1	2.31	0.72
23:LU:105:ASN:OD1	23:LU:113:ARG:NH2	2.23	0.72
46:S2:1488:C:O2'	46:S2:1490:G:OP2	2.06	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1755:C:N3	1:L5:1776:A:N1	2.36	0.72
50:SB:85:LYS:HB3	50:SB:101:HIS:HB3	1.71	0.72
54:SQ:8:GLN:OE1	54:SQ:27:ARG:NH2	2.22	0.72
70:CB:484:THR:HG21	70:CB:493:ASN:HA	1.70	0.72
1:L5:1269:G:N2	1:L5:1441:C:O2	2.23	0.72
1:L5:2693:G:OP1	39:Lk:35:LYS:NZ	2.23	0.72
61:SX:8:ARG:HH11	80:SL:104:LYS:HE2	1.53	0.72
70:CB:354:ILE:HG23	70:CB:358:LEU:HD12	1.71	0.72
1:L5:1755:C:N4	1:L5:1776:A:H61	1.86	0.72
12:LI:54:SER:HB2	12:LI:135:ILE:HD11	1.70	0.72
76:SD:94:ARG:O	76:SD:101:GLN:NE2	2.22	0.72
79:SK:15:LEU:O	79:SK:19:GLY:HA2	1.90	0.72
1:L5:919:C:OP1	15:LM:69:HIS:ND1	2.13	0.71
1:L5:1100:U:O3'	1:L5:1167:C:N4	2.23	0.71
3:L8:75:G:OP2	27:LY:74:TYR:OH	2.07	0.71
71:SG:217:MET:HA	71:SG:220:ALA:HB3	1.72	0.71
1:L5:1100:U:H3	1:L5:1194:G:H1	1.36	0.71
1:L5:1521:C:OP1	6:LC:100:ARG:NH2	2.21	0.71
1:L5:4112:C:N4	1:L5:4113:U:C4	2.59	0.71
46:S2:145:G:H2'	46:S2:146:G:C8	2.26	0.71
75:SH:8:ILE:HG12	75:SH:28:LEU:HD11	1.71	0.71
75:SH:46:THR:HG23	75:SH:65:PRO:HD3	1.72	0.71
76:SD:67:ARG:NH1	79:SK:93:THR:O	2.23	0.71
1:L5:209:U:H5	1:L5:233:U:C4	2.09	0.71
38:Lj:64:MET:O	38:Lj:68:LYS:HG2	1.91	0.71
46:S2:329:G:H2'	46:S2:330:G:C8	2.25	0.71
1:L5:2495:U:H2'	1:L5:2496:G:C8	2.26	0.71
1:L5:74:G:H5'	14:LL:59:VAL:HG13	1.70	0.71
1:L5:2092:G:O2'	1:L5:2262:G:N2	2.23	0.71
1:L5:4472:G:O2'	41:Lm:100:TYR:O	2.08	0.71
4:LA:27:ALA:O	4:LA:128:ARG:NH1	2.22	0.71
46:S2:556:U:H3'	46:S2:557:U:H4'	1.71	0.71
46:S2:557:U:H5'	46:S2:558:G:H8	1.56	0.71
46:S2:588:G:H4'	46:S2:589:G:H5'	1.71	0.71
49:SA:77:ILE:HG12	49:SA:99:ILE:HB	1.71	0.71
70:CB:58:ASP:O	70:CB:456:ARG:NH2	2.24	0.71
1:L5:2267:U:OP1	45:Lr:37:SER:OG	2.07	0.71
1:L5:2822:G:OP2	20:LR:21:LYS:NZ	2.24	0.71
46:S2:629:A:H4'	47:S:210:ARG:HH12	1.56	0.71
46:S2:1166:G:N7	61:SX:25:LYS:NZ	2.38	0.71
63:SZ:91:LEU:HD22	63:SZ:97:ILE:HG12	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1273:G:OP2	30:Lb:117:ARG:NH2	2.24	0.70
76:SD:101:GLN:HG3	76:SD:126:ILE:HD11	1.72	0.70
70:CB:16:LYS:NZ	70:CB:466:CYS:O	2.24	0.70
1:L5:1700:G:H1	9:LF:177:ARG:HH22	1.38	0.70
46:S2:1505:U:H4'	46:S2:1508:A:H1'	1.72	0.70
62:SY:102:THR:O	62:SY:107:ARG:NH1	2.25	0.70
70:CB:35:LEU:HD21	70:CB:158:ASN:HD21	1.55	0.70
1:L5:1095:A:H2	1:L5:1200:G:H1	0.76	0.70
14:LL:19:GLN:HA	14:LL:22:VAL:HG23	1.73	0.70
46:S2:694:G:O6	46:S2:737:G:N3	2.23	0.70
76:SD:197:LYS:HG3	76:SD:198:ILE:HG23	1.73	0.70
71:SG:116:LYS:HZ3	71:SG:125:THR:HG21	1.56	0.70
1:L5:1401:C:N3	1:L5:1416:G:N1	2.37	0.70
8:LE:281:ILE:HB	8:LE:286:LEU:HD21	1.73	0.70
10:LG:264:LYS:HD2	50:SB:225:LEU:HG	1.72	0.70
31:Lc:18:LEU:O	31:Lc:22:MET:HG2	1.92	0.70
56:SS:64:VAL:O	56:SS:68:ILE:HG12	1.91	0.70
69:Sg:145:GLU:O	69:Sg:175:LYS:NZ	2.24	0.70
55:SR:77:GLU:OE1	55:SR:80:ARG:NH2	2.24	0.70
38:Lj:20:ARG:NH2	38:Lj:39:TYR:OH	2.25	0.70
46:S2:1616:U:OP2	53:SP:43:ARG:NH2	2.24	0.70
50:SB:139:CYS:SG	50:SB:168:MET:HE2	2.32	0.70
57:ST:104:LEU:HD12	57:ST:121:ARG:HD2	1.71	0.70
1:L5:1414:C:H2'	1:L5:1415:G:H8	1.57	0.70
46:S2:201:C:H3'	46:S2:202:G:H21	1.57	0.70
53:SP:81:ARG:NH1	53:SP:120:SER:OG	2.20	0.70
1:L5:2483:G:O6	1:L5:2495:U:O4	2.09	0.70
5:LB:356:LYS:O	5:LB:359:ALA:C	2.34	0.70
14:LL:63:THR:HG21	29:La:66:ASN:HB3	1.72	0.70
1:L5:4985:U:O2	5:LB:174:ARG:NH1	2.24	0.69
3:L8:123:U:O2'	3:L8:126:C:N4	2.23	0.69
1:L5:4093:G:C2	1:L5:4114:C:N3	2.59	0.69
10:LG:38:ASN:ND2	10:LG:43:GLN:OE1	2.26	0.69
65:Sb:40:CYS:SG	65:Sb:41:TYR:N	2.64	0.69
76:SD:74:GLN:NE2	76:SD:79:PHE:O	2.25	0.69
42:Ln:1:MET:HG3	46:S2:1706:G:H5'	1.74	0.69
46:S2:1550:G:H3'	46:S2:1579:A:H61	1.56	0.69
32:Ld:96:GLU:OE2	32:Ld:98:SER:OG	2.11	0.69
74:SF:157:GLY:HA2	74:SF:188:TYR:HD2	1.57	0.69
1:L5:295:A:OP2	43:Lo:39:ARG:NH1	2.26	0.69
1:L5:499:G:H2'	1:L5:504:G:H1	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3753:G:H2'	1:L5:3754:G:C8	2.27	0.69
56:SS:15:VAL:HG13	56:SS:16:LEU:H	1.57	0.69
8:LE:261:ILE:HD11	8:LE:271:LEU:HD12	1.75	0.69
19:LQ:109:ALA:O	19:LQ:113:ILE:HG13	1.93	0.69
46:S2:630:U:OP1	47:S:210:ARG:NH1	2.25	0.69
74:SF:43:GLU:HA	74:SF:46:ALA:HB2	1.75	0.69
1:L5:4140:C:N3	1:L5:4145:C:O2'	2.26	0.69
14:LL:126:LEU:N	14:LL:138:ASP:OD2	2.23	0.69
56:SS:15:VAL:HG11	56:SS:33:ILE:HD11	1.74	0.69
76:SD:162:ASP:OD1	76:SD:165:ASN:ND2	2.22	0.69
46:S2:1229:G:H5''	56:SS:142:ARG:HE	1.58	0.69
72:SJ:122:SER:O	72:SJ:125:HIS:N	2.26	0.69
1:L5:2486:G:O6	1:L5:2493:G:O6	2.10	0.69
46:S2:844:U:OP1	77:SE:240:ARG:NH1	2.26	0.69
66:Sc:43:ILE:HG23	66:Sc:65:ALA:HB3	1.75	0.69
70:CB:86:LEU:HA	70:CB:89:ILE:HD12	1.74	0.68
75:SH:31:GLU:HA	75:SH:37:LYS:HD2	1.75	0.68
46:S2:1756:C:N3	46:S2:1776:G:N1	2.42	0.68
66:Sc:60:GLU:OE2	66:Sc:63:ARG:HG3	1.92	0.68
58:SU:95:SER:HA	58:SU:98:VAL:HG22	1.73	0.68
71:SG:23:LYS:HD2	71:SG:41:LEU:HD23	1.75	0.68
11:LH:103:VAL:HG21	11:LH:144:LEU:HD21	1.76	0.68
14:LL:145:LYS:HD2	14:LL:146:LEU:HB2	1.75	0.68
46:S2:687:C:O2'	75:SH:103:LYS:NZ	2.24	0.68
70:CB:673:ASN:HA	70:CB:676:LYS:HG2	1.75	0.68
1:L5:257:C:H2'	1:L5:258:G:C8	2.29	0.68
21:LS:127:MET:HA	22:LT:153:PRO:HG2	1.76	0.68
46:S2:390:C:O2'	80:SL:8:ARG:NH1	2.27	0.68
50:SB:183:GLU:HA	50:SB:186:ASN:HB2	1.76	0.68
1:L5:935:A:O2'	1:L5:936:C:OP1	2.12	0.68
73:SC:68:ARG:HH12	73:SC:72:ASP:HB2	1.58	0.68
74:SF:97:PHE:CD1	74:SF:108:PRO:HB2	2.28	0.68
1:L5:261:G:H2'	1:L5:262:G:C8	2.29	0.68
39:Lk:54:GLU:OE2	39:Lk:58:GLN:NE2	2.27	0.68
1:L5:2253:A:H61	9:LF:27:GLU:HG2	1.59	0.68
1:L5:3708:C:O2	1:L5:3742:G:N2	2.18	0.68
70:CB:604:MET:HB3	70:CB:704:VAL:HA	1.75	0.68
77:SE:161:GLN:OE1	77:SE:170:THR:OG1	2.12	0.68
1:L5:1402:C:N3	1:L5:1415:G:N1	2.37	0.68
1:L5:2262:G:OP2	45:Lr:98:ARG:NH1	2.26	0.68
1:L5:3717:A:H2'	1:L5:3718:A:C8	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4893:A:OP1	17:LO:188:LYS:NZ	2.27	0.67
46:S2:165:G:OP2	46:S2:165:G:N2	2.25	0.67
46:S2:549:C:C4	46:S2:550:C:N4	2.62	0.67
1:L5:512:U:O4	1:L5:647:G:O6	2.13	0.67
1:L5:4095:G:H1	1:L5:4114:C:H1'	1.59	0.67
3:L8:125:C:H1'	3:L8:126:C:H2'	1.77	0.67
46:S2:1353:A:OP1	49:SA:139:TYR:OH	2.12	0.67
1:L5:3725:G:N7	37:Li:67:LYS:NZ	2.42	0.67
1:L5:4896:G:H2'	1:L5:4897:G:C8	2.30	0.67
25:LW:3:VAL:HG11	25:LW:12:LYS:HE2	1.74	0.67
1:L5:1269:G:N2	1:L5:1440:U:O2	2.27	0.67
70:CB:595:SER:HB3	70:CB:600:ASN:HB2	1.76	0.67
46:S2:1213:C:O2	46:S2:1686:G:N2	2.18	0.67
54:SQ:97:GLN:HB3	54:SQ:105:LYS:HG3	1.77	0.67
54:SQ:100:VAL:HG22	54:SQ:101:ASP:H	1.60	0.67
77:SE:38:LEU:HD12	77:SE:39:ARG:HD2	1.76	0.67
1:L5:4741:C:H4'	1:L5:4742:G:H5'	1.75	0.67
46:S2:534:G:H2'	46:S2:535:G:C8	2.28	0.67
52:SO:57:THR:HB	52:SO:60:MET:HG3	1.77	0.67
1:L5:4688:C:HO2'	11:LH:155:SER:HG	1.40	0.67
5:LB:222:VAL:O	5:LB:343:ARG:NH1	2.28	0.67
46:S2:1562:C:H2'	46:S2:1563:G:H8	1.60	0.67
57:ST:129:ARG:HG2	57:ST:133:ARG:HE	1.58	0.67
1:L5:1255:A:N6	1:L5:1257:A:O2'	2.28	0.67
1:L5:1443:A:N1	1:L5:2104:G:N3	2.43	0.67
21:LS:164:LYS:HB3	21:LS:165:PRO:HD3	1.77	0.67
69:Sg:251:ALA:HB2	69:Sg:289:LEU:HD11	1.77	0.67
74:SF:32:ASP:OD1	74:SF:34:SER:OG	2.12	0.67
74:SF:143:PRO:HA	74:SF:146:ARG:HG2	1.76	0.67
1:L5:730:G:C6	9:LF:73:ARG:HD3	2.29	0.67
1:L5:3768:U:H4'	46:S2:1059:G:H4'	1.76	0.67
4:LA:180:LEU:HD11	44:Lp:26:VAL:HG21	1.76	0.67
1:L5:138:G:H2'	1:L5:139:G:C8	2.29	0.66
46:S2:527:C:O3'	72:SJ:121:LYS:NZ	2.28	0.66
77:SE:122:LYS:NZ	77:SE:124:CYS:SG	2.68	0.66
1:L5:2486:G:N7	1:L5:2493:G:N1	2.42	0.66
58:SU:98:VAL:HA	58:SU:101:ILE:HG22	1.77	0.66
74:SF:88:MET:O	74:SF:92:ILE:HG13	1.94	0.66
32:Ld:101:LYS:HA	32:Ld:101:LYS:HE3	1.77	0.66
46:S2:750:C:H41	46:S2:793:G:H21	1.42	0.66
64:Sa:82:LYS:HB3	64:Sa:85:ARG:HH22	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Sg:176:VAL:HB	69:Sg:186:THR:HB	1.75	0.66
32:Ld:54:MET:O	32:Ld:57:MET:O	2.13	0.66
45:Lr:26:SER:OG	45:Lr:28:GLU:OE1	2.14	0.66
48:E:79:U:H2'	48:E:80:A:H8	1.60	0.66
70:CB:776:VAL:HG23	70:CB:777:ALA:H	1.61	0.66
72:SJ:87:LEU:HD13	72:SJ:100:LEU:HD21	1.77	0.66
77:SE:99:PHE:HE1	77:SE:113:ARG:HE	1.41	0.66
5:LB:279:GLU:OE2	5:LB:282:LYS:NZ	2.25	0.66
1:L5:989:U:O2	1:L5:1064:G:O6	2.14	0.66
1:L5:4907:G:N1	1:L5:4914:C:N3	2.30	0.66
5:LB:233:SER:O	5:LB:272:LYS:NZ	2.26	0.66
11:LH:36:ARG:NH1	11:LH:152:GLU:OE2	2.28	0.66
46:S2:1631:U:H5''	56:SS:34:LYS:HG2	1.77	0.66
56:SS:118:ARG:HD3	56:SS:123:LEU:HD21	1.76	0.66
53:SP:50:ARG:NH1	53:SP:50:ARG:HA	2.11	0.66
59:SV:42:VAL:HG23	59:SV:43:THR:HG23	1.78	0.66
31:Lc:22:MET:O	31:Lc:23:LYS:HG3	1.96	0.66
48:E:45:G:H2'	48:E:46:G:C8	2.30	0.66
78:SI:157:LYS:O	80:SL:21:LYS:NZ	2.29	0.66
80:SL:147:LYS:HA	80:SL:147:LYS:HE3	1.78	0.66
14:LL:142:GLU:HA	14:LL:145:LYS:HG3	1.78	0.66
31:Lc:48:LEU:HD22	31:Lc:93:THR:HG22	1.77	0.66
46:S2:140:C:O2'	46:S2:143:U:OP1	2.14	0.66
46:S2:639:C:H2'	46:S2:640:A:H8	1.61	0.66
48:E:15:G:N2	48:E:57:C:O2	2.29	0.66
74:SF:17:ILE:HG21	74:SF:46:ALA:HB1	1.78	0.66
77:SE:125:LYS:O	77:SE:142:HIS:N	2.29	0.66
1:L5:1176:C:N3	1:L5:1184:A:N1	2.44	0.66
1:L5:2468:U:O2'	1:L5:2506:G:N2	2.29	0.66
1:L5:2856:C:O2	5:LB:242:ARG:NH2	2.29	0.66
62:SY:18:LEU:HD21	77:SE:64:ILE:HG22	1.78	0.66
1:L5:1202:C:N3	1:L5:1203:G:O2'	2.28	0.65
36:Lh:13:LYS:NZ	36:Lh:16:GLU:OE2	2.28	0.65
46:S2:928:G:H2'	46:S2:929:G:C8	2.31	0.65
46:S2:1228:A:H2'	46:S2:1229:G:C8	2.31	0.65
56:SS:47:LYS:HD3	56:SS:77:TYR:HB3	1.78	0.65
58:SU:18:HIS:HB3	58:SU:117:ALA:HB2	1.78	0.65
60:SW:82:GLN:OE1	60:SW:84:LYS:NZ	2.28	0.65
70:CB:609:PHE:HE1	70:CB:701:ARG:HB2	1.61	0.65
71:SG:70:HIS:HA	71:SG:98:ARG:HH12	1.60	0.65
1:L5:4771:C:H2'	1:L5:4772:C:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:158:A:H2'	46:S2:159:A:O4'	1.95	0.65
46:S2:1469:A:OP1	74:SF:59:LYS:NZ	2.26	0.65
54:SQ:50:LYS:HE2	74:SF:49:LEU:HB2	1.78	0.65
6:LC:141:GLY:O	6:LC:204:ARG:NH1	2.30	0.65
13:LJ:90:ARG:NH2	13:LJ:108:GLY:O	2.27	0.65
17:LO:196:LEU:HD23	17:LO:202:LEU:HD13	1.77	0.65
46:S2:748:C:N4	46:S2:795:A:N6	2.44	0.65
46:S2:834:C:N4	46:S2:839:C:H42	1.94	0.65
46:S2:906:U:H2'	46:S2:907:G:H8	1.62	0.65
50:SB:35:ALA:HB2	50:SB:44:ILE:HD11	1.77	0.65
1:L5:510:U:OP1	14:LL:163:LYS:NZ	2.29	0.65
26:LX:129:ARG:O	26:LX:132:GLY:N	2.26	0.65
46:S2:553:U:N3	46:S2:554:A:N7	2.44	0.65
46:S2:107:A:H2'	46:S2:108:G:C8	2.32	0.65
47:S:204:LEU:O	76:SD:146:ARG:NH1	2.29	0.65
62:SY:82:ALA:O	62:SY:86:GLU:HB3	1.96	0.65
70:CB:85:ASP:HA	70:CB:88:PHE:HD2	1.61	0.65
1:L5:3681:G:OP2	4:LA:128:ARG:NH2	2.29	0.65
1:L5:3689:G:O2'	1:L5:3818:U:OP2	2.14	0.65
18:LP:119:VAL:HG22	18:LP:146:ILE:HG12	1.76	0.65
55:SR:80:ARG:HA	55:SR:83:ASN:ND2	2.11	0.65
69:Sg:91:ASP:HB2	69:Sg:98:THR:HG23	1.77	0.65
70:CB:398:ILE:HD12	70:CB:412:ALA:HB1	1.79	0.65
77:SE:208:VAL:HG21	77:SE:225:ILE:HG13	1.78	0.65
1:L5:4876:U:O4	21:LS:161:ARG:NH2	2.30	0.65
10:LG:100:HIS:CE1	10:LG:103:ARG:HH11	2.14	0.65
46:S2:166:A:H1'	71:SG:13:GLN:HE21	1.62	0.65
46:S2:543:C:H3'	46:S2:544:G:H8	1.59	0.65
69:Sg:174:VAL:HB	69:Sg:188:HIS:HB2	1.79	0.65
72:SJ:28:GLU:HG3	72:SJ:40:LYS:HE2	1.79	0.65
6:LC:65:GLU:OE1	6:LC:80:ARG:NH1	2.30	0.65
46:S2:197:U:N3	46:S2:202:G:N7	2.45	0.65
46:S2:455:A:H2'	46:S2:456:C:H6	1.62	0.65
46:S2:696:G:N2	46:S2:737:G:H1	1.91	0.65
23:LU:19:LEU:HB2	23:LU:73:THR:HG23	1.78	0.65
59:SV:73:ALA:HB1	59:SV:78:ILE:HB	1.78	0.65
29:La:94:LYS:HA	29:La:94:LYS:HE3	1.79	0.65
44:Lp:38:THR:HA	44:Lp:45:THR:HA	1.79	0.65
46:S2:1673:U:O2'	74:SF:84:GLY:O	2.15	0.65
53:SP:72:LYS:HD2	53:SP:73:PRO:HD2	1.79	0.65
8:LE:222:LEU:H	8:LE:237:LYS:HZ2	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LI:55:ASP:HA	12:LI:131:ILE:O	1.96	0.64
28:LZ:33:THR:OG1	28:LZ:35:ASP:OD1	2.14	0.64
1:L5:171:U:OP2	1:L5:172:C:N4	2.30	0.64
1:L5:308:G:OP2	1:L5:308:G:N2	2.28	0.64
1:L5:759:G:P	11:LH:51:LYS:HZ1	2.20	0.64
45:Lr:107:ARG:O	45:Lr:111:ILE:HG12	1.97	0.64
1:L5:1252:C:H2'	1:L5:1254:A:H62	1.61	0.64
1:L5:2611:A:H5'	1:L5:2688:G:H4'	1.79	0.64
66:Sc:59:LEU:HD13	74:SF:123:GLU:HG3	1.79	0.64
1:L5:382:G:N1	1:L5:385:A:OP2	2.30	0.64
57:ST:112:MET:HE1	57:ST:126:GLN:HE22	1.63	0.64
1:L5:1179:U:H3'	1:L5:1180:C:H5''	1.78	0.64
1:L5:1697:G:N2	1:L5:2084:C:OP1	2.31	0.64
13:LJ:160:GLU:OE1	13:LJ:164:ARG:NH2	2.30	0.64
23:LU:100:LEU:HD12	23:LU:112:LEU:HB3	1.79	0.64
46:S2:839:C:N4	62:SY:9:THR:O	2.26	0.64
46:S2:874:G:H2'	46:S2:875:A:H8	1.62	0.64
46:S2:1203:G:H2'	46:S2:1204:A:C8	2.32	0.64
49:SA:53:ARG:HG2	59:SV:83:PHE:CD2	2.32	0.64
63:SZ:67:LEU:HD23	74:SF:103:LEU:HD12	1.79	0.64
69:Sg:57:ARG:HD3	69:Sg:58:ALA:H	1.62	0.64
71:SG:216:ARG:O	71:SG:217:MET:HG3	1.96	0.64
77:SE:252:ARG:HG3	77:SE:255:ARG:HH21	1.63	0.64
1:L5:4279:A:H5'	1:L5:4281:A:H1'	1.80	0.64
57:ST:42:HIS:HB2	57:ST:83:GLN:HB2	1.79	0.64
1:L5:387:G:HO2'	1:L5:412:G:H1	1.45	0.64
1:L5:1837:A:OP2	22:LT:130:ARG:NH2	2.27	0.64
1:L5:2554:U:O2	1:L5:2764:A:N7	2.31	0.64
43:Lo:33:LEU:HA	43:Lo:38:LYS:HG2	1.80	0.64
46:S2:752:G:OP1	46:S2:792:C:O2'	2.14	0.64
46:S2:919:A:OP1	51:SN:20:ARG:NH1	2.30	0.64
66:Sc:15:THR:HG22	66:Sc:16:LYS:H	1.62	0.64
5:LB:302:ASN:O	5:LB:304:SER:N	2.30	0.64
46:S2:533:A:N1	46:S2:551:U:N3	2.45	0.64
46:S2:749:U:O4	46:S2:793:G:N2	2.29	0.64
46:S2:981:A:H2'	46:S2:982:G:C8	2.33	0.64
55:SR:36:GLU:HB3	55:SR:47:ARG:HD2	1.80	0.64
57:ST:25:SER:HB2	57:ST:27:LYS:HZ1	1.61	0.64
69:Sg:172:LYS:NZ	69:Sg:192:THR:O	2.26	0.64
70:CB:259:LYS:HZ2	70:CB:264:ARG:HE	1.45	0.64
1:L5:2658:G:N2	1:L5:2676:A:OP2	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:LM:77:TRP:O	15:LM:81:ASP:HA	1.98	0.64
27:LY:25:ILE:O	27:LY:29:ILE:HG12	1.97	0.64
46:S2:521:A:OP1	72:SJ:45:ARG:NH1	2.27	0.64
1:L5:2378:G:N2	1:L5:2381:A:OP2	2.30	0.64
46:S2:1244:U:H2'	46:S2:1245:G:H8	1.62	0.64
49:SA:177:MET:HE3	49:SA:180:ARG:HH21	1.61	0.64
55:SR:24:LEU:HB2	55:SR:58:MET:HE1	1.80	0.64
1:L5:1754:U:H2'	1:L5:1755:C:H6	1.63	0.63
8:LE:239:LYS:NZ	8:LE:240:TYR:O	2.29	0.63
22:LT:43:LYS:O	22:LT:58:HIS:ND1	2.30	0.63
57:ST:38:LYS:NZ	57:ST:41:LYS:O	2.31	0.63
58:SU:67:LYS:HB2	58:SU:78:ASP:HB2	1.78	0.63
2:L7:12:U:O3'	2:L7:109:U:O2'	2.15	0.63
3:L8:155:C:OP2	10:LG:89:ARG:NH2	2.31	0.63
16:LN:193:ARG:O	16:LN:197:THR:HG23	1.99	0.63
35:Lg:62:LYS:O	35:Lg:65:MET:HG2	1.99	0.63
1:L5:4873:G:N7	17:LO:179:LYS:NZ	2.45	0.63
11:LH:31:ARG:NH1	11:LH:149:ASN:OD1	2.31	0.63
46:S2:124:U:OP1	77:SE:148:ARG:NH1	2.31	0.63
51:SN:57:SER:OG	51:SN:58:HIS:ND1	2.31	0.63
57:ST:138:VAL:O	57:ST:142:ASN:ND2	2.32	0.63
43:Lo:36:GLN:OE1	43:Lo:40:ARG:NH1	2.31	0.63
70:CB:76:SER:HB2	70:CB:454:MET:HE1	1.80	0.63
72:SJ:113:GLN:HG3	72:SJ:149:VAL:HG21	1.79	0.63
74:SF:97:PHE:HD1	74:SF:108:PRO:HB2	1.60	0.63
1:L5:1252:C:N4	1:L5:1253:G:N3	2.47	0.63
1:L5:1762:C:C4	1:L5:1770:A:C2	2.85	0.63
27:LY:54:GLU:HG2	27:LY:108:ARG:HB3	1.79	0.63
34:Lf:78:HIS:HB3	34:Lf:83:MET:O	1.99	0.63
48:E:41:C:H2'	48:E:42:A:C8	2.34	0.63
78:SI:157:LYS:HD3	78:SI:158:ILE:H	1.62	0.63
1:L5:1258:G:H2'	1:L5:1259:G:C8	2.33	0.63
5:LB:356:LYS:O	5:LB:359:ALA:O	2.17	0.63
11:LH:163:GLN:HA	11:LH:166:THR:HG23	1.78	0.63
69:Sg:192:THR:OG1	69:Sg:213:ASP:OD2	2.15	0.63
73:SC:77:SER:O	73:SC:80:GLU:HG3	1.98	0.63
1:L5:455:C:O2'	1:L5:456:C:H5'	1.99	0.63
46:S2:1217:A:H2'	46:S2:1218:C:H6	1.64	0.63
70:CB:607:ARG:HE	70:CB:701:ARG:NH2	1.96	0.63
75:SH:20:GLU:O	75:SH:24:SER:OG	2.16	0.63
13:LJ:136:ARG:NH1	13:LJ:156:ARG:O	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1543:U:OP1	57:ST:62:ARG:NH2	2.30	0.63
1:L5:181:C:H3'	1:L5:182:G:C8	2.31	0.63
1:L5:1979:A:C5	1:L5:1980:U:H5	2.17	0.63
1:L5:4162:C:H6	10:LG:73:ARG:HH21	1.45	0.63
46:S2:640:A:H2'	46:S2:641:A:C8	2.34	0.63
46:S2:1565:C:OP2	57:ST:101:ARG:NH2	2.32	0.63
51:SN:63:VAL:HA	51:SN:66:VAL:HG12	1.80	0.63
56:SS:141:ARG:O	56:SS:144:ARG:O	2.15	0.63
70:CB:745:TYR:HB2	70:CB:814:PHE:HA	1.81	0.63
1:L5:1095:A:N1	1:L5:1200:G:C6	2.67	0.62
1:L5:2083:C:OP2	19:LQ:14:ARG:NH2	2.32	0.62
1:L5:2848:G:O2'	1:L5:3838:U:O4	2.15	0.62
1:L5:3878:C:O2	5:LB:258:HIS:NE2	2.31	0.62
1:L5:4093:G:C2	1:L5:4114:C:C2	2.87	0.62
2:L7:99:G:N7	21:LS:55:LYS:NZ	2.46	0.62
46:S2:639:C:H2'	46:S2:640:A:C8	2.34	0.62
1:L5:665:C:H4'	1:L5:666:G:H5'	1.79	0.62
5:LB:80:GLU:OE1	5:LB:323:TYR:OH	2.16	0.62
37:Li:2:ALA:N	37:Li:5:TYR:HH	1.97	0.62
46:S2:1617:G:N1	46:S2:1620:A:OP2	2.32	0.62
50:SB:49:VAL:HG11	50:SB:62:LEU:HD11	1.81	0.62
1:L5:3949:A:N7	1:L5:4065:G:C6	2.67	0.62
40:Ll:27:ILE:O	40:Ll:33:ASN:ND2	2.32	0.62
44:Lp:57:CYS:SG	44:Lp:59:SER:OG	2.58	0.62
46:S2:1102:G:OP2	50:SB:151:ARG:NH1	2.32	0.62
69:Sg:156:PHE:CE1	69:Sg:165:ILE:HD13	2.35	0.62
70:CB:689:GLU:O	70:CB:730:TYR:OH	2.10	0.62
46:S2:656:G:O2'	73:SC:227:ARG:NH2	2.32	0.62
61:SX:107:ARG:HG3	61:SX:110:HIS:HB3	1.80	0.62
69:Sg:8:ARG:NH1	69:Sg:311:GLN:HG2	2.14	0.62
1:L5:1705:G:H2'	1:L5:1706:A:O4'	1.98	0.62
1:L5:4093:G:H22	1:L5:4114:C:N4	1.97	0.62
1:L5:4314:C:O2'	30:Lb:36:ASP:OD1	2.16	0.62
5:LB:220:ILE:HG12	5:LB:278:THR:HG23	1.81	0.62
10:LG:166:LEU:HA	16:LN:7:ILE:HD11	1.81	0.62
45:Lr:47:LYS:HB2	45:Lr:102:TYR:CZ	2.34	0.62
55:SR:80:ARG:HA	55:SR:83:ASN:HD21	1.62	0.62
66:Sc:44:ARG:HH22	66:Sc:63:ARG:HB2	1.64	0.62
69:Sg:66:VAL:HA	69:Sg:82:SER:HA	1.81	0.62
1:L5:268:G:H2'	1:L5:269:G:H8	1.62	0.62
46:S2:455:A:H2'	46:S2:456:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SZ:99:LEU:HD11	63:SZ:102:LYS:H	1.64	0.62
1:L5:408:A:O2'	1:L5:411:G:OP2	2.13	0.62
7:LD:33:ARG:HH21	22:LT:27:LEU:HD12	1.64	0.62
51:SN:67:THR:HG21	51:SN:74:ILE:HD11	1.81	0.62
69:Sg:8:ARG:HH12	69:Sg:311:GLN:N	1.98	0.62
1:L5:2017:A:O2'	1:L5:2018:C:O5'	2.17	0.62
46:S2:1120:U:H5'	65:Sb:72:ARG:HH21	1.65	0.62
55:SR:116:ASN:OD1	55:SR:117:LEU:N	2.30	0.62
1:L5:4910:G:H4'	5:LB:95:THR:HG22	1.82	0.62
28:LZ:128:LYS:O	28:LZ:132:GLN:HG3	1.99	0.62
46:S2:1239:U:OP1	53:SP:127:LYS:NZ	2.33	0.62
46:S2:1542:C:OP1	57:ST:62:ARG:NH1	2.25	0.62
49:SA:85:ARG:HG3	55:SR:81:ARG:NH2	2.15	0.62
50:SB:33:VAL:HG23	50:SB:44:ILE:HB	1.81	0.62
52:SO:39:ASP:OD2	52:SO:40:THR:N	2.33	0.62
72:SJ:3:VAL:CG1	72:SJ:5:ARG:HD3	2.29	0.62
15:LM:136:LEU:O	15:LM:137:LYS:NZ	2.31	0.62
20:LR:164:SER:HA	20:LR:168:GLU:CD	2.25	0.62
27:LY:91:ASN:HB2	27:LY:93:THR:HG22	1.82	0.62
31:Lc:47:ILE:HD12	31:Lc:94:LEU:HD11	1.82	0.62
46:S2:1005:G:OP2	50:SB:162:ARG:NH1	2.32	0.62
48:E:79:U:H2'	48:E:80:A:C8	2.34	0.62
69:Sg:234:ASP:OD2	69:Sg:252:THR:OG1	2.18	0.62
75:SH:53:VAL:HG13	75:SH:57:ARG:HB2	1.82	0.62
1:L5:1270:A:H8	1:L5:2106:G:H21	1.46	0.61
1:L5:1700:G:N2	9:LF:177:ARG:HH12	1.98	0.61
1:L5:4891:G:H1	1:L5:4928:C:H5	1.48	0.61
4:LA:14:SER:HA	4:LA:17:ARG:HH12	1.64	0.61
46:S2:3:C:O2	72:SJ:18:ARG:NH1	2.33	0.61
75:SH:12:ASN:ND2	75:SH:16:PRO:HB2	2.15	0.61
77:SE:212:ASP:OD2	77:SE:213:ALA:N	2.29	0.61
1:L5:966:A:OP2	1:L5:2092:G:N2	2.28	0.61
1:L5:4739:C:H2'	1:L5:4740:G:H5'	1.81	0.61
46:S2:16:G:H2'	46:S2:17:C:C6	2.35	0.61
56:SS:91:LYS:O	56:SS:91:LYS:NZ	2.33	0.61
58:SU:80:PHE:HB3	67:Sd:52:PHE:HB3	1.82	0.61
75:SH:34:SER:OG	75:SH:78:ARG:NH1	2.26	0.61
73:SC:68:ARG:NH1	73:SC:72:ASP:HB2	2.16	0.61
74:SF:71:ARG:HH12	74:SF:148:ASN:HD21	1.48	0.61
74:SF:78:MET:O	74:SF:159:ARG:NH1	2.34	0.61
78:SI:151:GLU:O	78:SI:154:LYS:HG2	1.98	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:SL:113:LEU:HD12	80:SL:142:VAL:HG11	1.82	0.61
1:L5:3756:A:H2'	1:L5:3757:G:C8	2.35	0.61
1:L5:4261:C:O2'	13:LJ:102:THR:HG21	2.00	0.61
46:S2:695:C:N4	46:S2:736:C:O2'	2.34	0.61
75:SH:43:LEU:HD12	75:SH:72:PHE:CD2	2.36	0.61
1:L5:1961:G:N2	1:L5:2024:G:O2'	2.29	0.61
3:L8:96:C:OP1	36:Lh:70:ARG:NH1	2.32	0.61
8:LE:161:ARG:NH2	8:LE:273:SER:OG	2.33	0.61
12:LI:88:ARG:HD2	12:LI:90:ARG:HD2	1.82	0.61
46:S2:885:U:H3	46:S2:901:G:H1	1.48	0.61
49:SA:37:TYR:OH	49:SA:57:LYS:NZ	2.33	0.61
52:SO:26:ASN:HB2	52:SO:91:THR:OG1	2.00	0.61
76:SD:135:GLU:HB2	76:SD:153:VAL:HG23	1.83	0.61
1:L5:1404:G:N7	1:L5:1408:G:C2	2.69	0.61
1:L5:4732:G:N2	1:L5:4734:A:N7	2.48	0.61
46:S2:692:G:O6	46:S2:738:C:O2'	2.09	0.61
46:S2:1616:U:O4	53:SP:40:ARG:NH1	2.33	0.61
58:SU:106:ILE:HG21	76:SD:40:ARG:HH21	1.65	0.61
70:CB:331:GLU:HA	70:CB:335:LEU:HB2	1.83	0.61
1:L5:2107:C:N4	1:L5:2108:G:O6	2.33	0.61
1:L5:3753:G:OP1	1:L5:3777:G:H8	1.84	0.61
9:LF:182:TYR:HB3	9:LF:200:ARG:HG3	1.82	0.61
10:LG:58:PRO:HD2	10:LG:61:ILE:HD12	1.82	0.61
13:LJ:169:LYS:HD3	13:LJ:170:TYR:CE1	2.35	0.61
17:LO:166:ILE:O	17:LO:169:ARG:HB2	2.01	0.61
53:SP:108:LYS:HE2	53:SP:111:MET:HE3	1.81	0.61
1:L5:495:C:H2'	1:L5:496:G:C8	2.36	0.61
77:SE:56:LEU:N	77:SE:60:GLU:OE1	2.28	0.61
6:LC:67:TRP:NE1	6:LC:71:ARG:HE	1.99	0.61
30:Lb:109:ARG:HA	30:Lb:112:ILE:HG12	1.83	0.61
46:S2:906:U:H2'	46:S2:907:G:C8	2.35	0.61
46:S2:1298:G:H4'	53:SP:78:THR:HA	1.82	0.61
50:SB:167:LYS:O	50:SB:171:ILE:HG13	2.01	0.61
74:SF:32:ASP:HB3	74:SF:35:LEU:HB2	1.83	0.61
79:SK:11:ILE:HG12	79:SK:45:VAL:HG23	1.82	0.61
1:L5:169:G:O6	1:L5:170:C:N4	2.34	0.61
1:L5:2696:A:OP1	39:Lk:26:LYS:NZ	2.32	0.61
56:SS:141:ARG:O	56:SS:144:ARG:C	2.44	0.61
57:ST:126:GLN:HG2	57:ST:129:ARG:HH21	1.66	0.61
70:CB:52:GLY:H	70:CB:55:ARG:HD2	1.64	0.61
75:SH:53:VAL:O	75:SH:57:ARG:HB2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:SD:48:ILE:HB	76:SD:86:LEU:HD23	1.83	0.61
1:L5:496:G:O6	1:L5:497:G:N2	2.33	0.60
1:L5:4993:G:H1	1:L5:5058:A:H61	1.49	0.60
6:LC:218:ILE:O	6:LC:222:ARG:HB2	2.01	0.60
46:S2:24:C:N3	46:S2:650:A:N1	2.48	0.60
46:S2:925:G:N2	51:SN:48:SER:OG	2.34	0.60
70:CB:88:PHE:HE1	70:CB:253:VAL:HG11	1.64	0.60
70:CB:611:ASP:OD1	70:CB:612:GLY:N	2.34	0.60
79:SK:47:LYS:NZ	79:SK:50:GLN:OE1	2.23	0.60
8:LE:190:HIS:HB3	8:LE:193:PHE:HD2	1.65	0.60
32:Ld:50:ARG:HG3	32:Ld:62:VAL:HG21	1.83	0.60
34:Lf:33:VAL:HG23	34:Lf:38:GLU:HB2	1.82	0.60
46:S2:625:G:OP1	47:S:210:ARG:NE	2.34	0.60
49:SA:80:ARG:HH22	49:SA:166:LYS:HA	1.66	0.60
69:Sg:30:MET:HE1	69:Sg:92:LEU:HD11	1.82	0.60
69:Sg:256:ILE:HB	69:Sg:270:LEU:HB2	1.83	0.60
69:Sg:258:ILE:HB	69:Sg:268:ASP:HB2	1.82	0.60
1:L5:966:A:OP1	1:L5:967:C:N4	2.34	0.60
1:L5:4431:U:OP2	12:LI:3:ARG:NH2	2.34	0.60
7:LD:204:VAL:O	7:LD:208:MET:HG3	2.01	0.60
13:LJ:174:ILE:HG22	13:LJ:175:LEU:H	1.65	0.60
58:SU:51:LYS:HE2	58:SU:51:LYS:HA	1.81	0.60
59:SV:66:ASP:OD1	59:SV:67:ASP:N	2.33	0.60
61:SX:8:ARG:HH11	80:SL:104:LYS:CE	2.14	0.60
1:L5:2520:C:O2	1:L5:2640:G:N2	2.35	0.60
1:L5:3599:A:H2'	1:L5:3600:G:C8	2.36	0.60
33:Le:82:VAL:O	33:Le:86:GLU:HG2	2.00	0.60
69:Sg:72:SER:OG	69:Sg:74:ASP:OD1	2.20	0.60
75:SH:82:GLU:HG3	75:SH:85:LYS:HE3	1.83	0.60
2:L7:120:U:O3'	7:LD:262:LYS:NZ	2.33	0.60
14:LL:205:GLN:NE2	14:LL:208:GLU:OE2	2.34	0.60
16:LN:20:ARG:O	16:LN:24:ARG:HG3	2.01	0.60
46:S2:901:G:H2'	46:S2:902:G:H8	1.66	0.60
46:S2:1609:C:H3'	56:SS:132:ARG:HH12	1.67	0.60
65:Sb:49:HIS:ND1	65:Sb:69:GLY:O	2.34	0.60
70:CB:322:LYS:HD3	70:CB:342:ARG:HH12	1.66	0.60
1:L5:126:C:H2'	1:L5:127:G:H8	1.65	0.60
1:L5:444:G:H22	1:L5:1303:A:H2	1.49	0.60
1:L5:700:G:H2'	1:L5:701:G:C8	2.36	0.60
1:L5:3641:U:OP2	1:L5:3646:A:N6	2.35	0.60
1:L5:4093:G:O6	1:L5:4114:C:O2'	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4646:U:OP2	20:LR:62:ARG:NH2	2.29	0.60
33:Le:26:ASP:OD1	33:Le:27:ARG:N	2.34	0.60
46:S2:1536:G:H2'	46:S2:1537:A:H8	1.66	0.60
54:SQ:30:GLY:N	54:SQ:64:ALA:O	2.34	0.60
60:SW:54:ASP:HB3	75:SH:142:LYS:HB2	1.83	0.60
74:SF:196:LEU:HA	74:SF:199:VAL:HG12	1.84	0.60
1:L5:493:G:C6	1:L5:660:A:N1	2.70	0.60
3:L8:83:C:H42	27:LY:50:ARG:NH2	2.00	0.60
18:LP:73:ALA:O	18:LP:76:TRP:O	2.18	0.60
46:S2:1551:U:OP1	76:SD:9:ARG:NH2	2.30	0.60
63:SZ:96:LEU:O	63:SZ:112:ASN:HB2	2.01	0.60
73:SC:68:ARG:HG2	73:SC:277:HIS:HB2	1.84	0.60
76:SD:72:VAL:HG11	79:SK:70:TYR:HE1	1.65	0.60
1:L5:2260:C:O2	1:L5:2261:G:N1	2.35	0.60
13:LJ:20:LEU:O	13:LJ:131:TYR:O	2.19	0.60
70:CB:84:ASN:OD1	70:CB:85:ASP:N	2.34	0.60
1:L5:4291:G:H5'	1:L5:4293:U:C6	2.37	0.60
46:S2:496:C:H5'	77:SE:29:PRO:HA	1.82	0.60
46:S2:1753:C:H5'	46:S2:1780:G:H22	1.66	0.60
49:SA:77:ILE:HD12	49:SA:122:LEU:HD11	1.83	0.60
70:CB:161:ASP:OD1	70:CB:162:ARG:N	2.35	0.60
76:SD:62:LYS:O	76:SD:67:ARG:NH2	2.34	0.60
1:L5:188:G:N1	1:L5:190:G:O6	2.35	0.60
1:L5:1270:A:H1'	1:L5:1440:U:H1'	1.83	0.60
1:L5:1762:C:C4	1:L5:1770:A:N1	2.70	0.60
1:L5:2711:G:OP2	20:LR:39:GLN:NE2	2.34	0.60
1:L5:3949:A:C5	1:L5:4065:G:C6	2.90	0.60
11:LH:95:VAL:HG22	41:Lm:82:LEU:HB3	1.82	0.60
49:SA:63:ARG:HG3	49:SA:185:MET:HE1	1.84	0.60
56:SS:63:GLU:HG2	56:SS:66:ARG:HH22	1.67	0.60
70:CB:259:LYS:NZ	70:CB:264:ARG:HE	2.00	0.60
1:L5:143:C:OP2	10:LG:111:LYS:NZ	2.34	0.59
46:S2:1825:A:C2	46:S2:1826:G:H5''	2.37	0.59
56:SS:86:ARG:HG3	56:SS:106:LYS:HZ3	1.66	0.59
1:L5:188:G:N2	1:L5:189:G:O6	2.34	0.59
28:LZ:22:LYS:NZ	28:LZ:132:GLN:O	2.34	0.59
39:Lk:7:GLU:OE1	39:Lk:9:LYS:HG2	2.01	0.59
70:CB:594:LYS:NZ	70:CB:858:LEU:OXT	2.35	0.59
78:SI:205:ARG:HH12	78:SI:206:LYS:HB2	1.67	0.59
1:L5:663:G:H2'	1:L5:664:G:C8	2.37	0.59
1:L5:4742:G:H2'	1:L5:4743:G:H8	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:5053:U:H3'	1:L5:5054:C:C6	2.38	0.59
5:LB:103:LYS:HG2	5:LB:149:ASP:OD1	2.02	0.59
7:LD:234:ASP:O	7:LD:235:MET:HG3	2.02	0.59
16:LN:124:ASP:HB3	16:LN:127:TYR:H	1.67	0.59
41:Lm:126:LYS:HB3	41:Lm:128:LYS:HG2	1.84	0.59
46:S2:1407:U:H2'	46:S2:1408:U:C6	2.37	0.59
56:SS:34:LYS:NZ	56:SS:100:ALA:O	2.35	0.59
59:SV:17:CYS:O	59:SV:21:ASN:N	2.35	0.59
67:Sd:6:LEU:HA	67:Sd:9:SER:HB3	1.83	0.59
69:Sg:89:LEU:O	69:Sg:98:THR:OG1	2.15	0.59
1:L5:4260:U:H2'	1:L5:4261:C:C6	2.38	0.59
11:LH:92:MET:HE2	11:LH:179:ILE:HG22	1.84	0.59
46:S2:830:A:OP2	46:S2:846:G:N2	2.32	0.59
54:SQ:80:GLN:O	54:SQ:84:ILE:HG12	2.02	0.59
71:SG:57:ASP:OD1	71:SG:58:LYS:N	2.34	0.59
1:L5:494:U:H2'	1:L5:495:C:C6	2.37	0.59
14:LL:164:GLU:HG3	29:La:100:ILE:HG13	1.85	0.59
46:S2:851:C:H5''	46:S2:852:G:H5'	1.85	0.59
46:S2:1130:G:OP2	46:S2:1130:G:N2	2.32	0.59
46:S2:1354:G:N2	46:S2:1357:A:OP2	2.32	0.59
49:SA:53:ARG:HG2	59:SV:83:PHE:HD2	1.67	0.59
53:SP:57:LEU:HD23	53:SP:60:LEU:HD21	1.85	0.59
70:CB:260:LEU:HD21	70:CB:293:ILE:HD11	1.84	0.59
71:SG:2:LYS:HB3	71:SG:15:LEU:HD11	1.85	0.59
78:SI:205:ARG:HG2	78:SI:205:ARG:HH11	1.66	0.59
1:L5:1220:G:H2'	1:L5:1221:G:C8	2.37	0.59
1:L5:4774:C:O2'	1:L5:4775:C:O2	2.18	0.59
5:LB:356:LYS:O	5:LB:360:LEU:HG	2.03	0.59
46:S2:687:C:N3	75:SH:118:ARG:NH1	2.49	0.59
1:L5:2845:A:H61	1:L5:3843:C:H42	1.49	0.59
11:LH:45:LEU:HD23	11:LH:57:VAL:HG12	1.85	0.59
18:LP:95:LEU:HD23	18:LP:148:MET:HE1	1.84	0.59
52:SO:142:ARG:NH2	64:Sa:24:THR:O	2.21	0.59
53:SP:70:MET:HE2	53:SP:70:MET:HA	1.84	0.59
60:SW:52:ILE:HB	75:SH:144:ILE:HG23	1.82	0.59
62:SY:122:LYS:O	62:SY:122:LYS:NZ	2.33	0.59
1:L5:667:A:H5''	1:L5:668:C:H5''	1.85	0.59
1:L5:2792:C:O2	38:Lj:9:GLY:HA2	2.03	0.59
69:Sg:104:HIS:CE1	69:Sg:130:LYS:HD2	2.38	0.59
70:CB:448:GLN:HB3	70:CB:473:VAL:HG23	1.83	0.59
70:CB:669:VAL:HG21	70:CB:672:LEU:HD22	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:CB:815:ASP:OD1	70:CB:816:HIS:N	2.35	0.59
72:SJ:137:VAL:HG12	72:SJ:138:ARG:H	1.67	0.59
77:SE:54:TYR:OH	77:SE:97:GLU:OE2	2.21	0.59
1:L5:1207:C:H2'	1:L5:1208:G:H8	1.67	0.59
1:L5:1628:C:H42	4:LA:3:ARG:HH11	1.50	0.59
1:L5:3754:G:O6	1:L5:3770:U:O4	2.19	0.59
1:L5:4875:G:H2'	21:LS:169:THR:HG22	1.85	0.59
22:LT:79:GLN:HG3	22:LT:84:ILE:HG12	1.82	0.59
24:LV:65:VAL:HG13	24:LV:73:ARG:HA	1.83	0.59
45:Lr:49:VAL:HG12	45:Lr:64:ILE:HG22	1.85	0.59
46:S2:1228:A:H2'	46:S2:1229:G:H8	1.67	0.59
55:SR:17:ILE:HD11	55:SR:54:VAL:HG13	1.85	0.59
55:SR:95:ILE:HD11	55:SR:118:GLN:HB2	1.83	0.59
73:SC:204:ILE:O	73:SC:211:LYS:NZ	2.36	0.59
74:SF:20:PHE:O	74:SF:22:LYS:NZ	2.35	0.59
74:SF:90:VAL:HA	74:SF:93:VAL:HG12	1.85	0.59
1:L5:905:C:H2'	1:L5:906:C:C6	2.37	0.59
4:LA:80:GLU:HB2	4:LA:170:ALA:HA	1.85	0.59
8:LE:258:LEU:O	8:LE:261:ILE:HG22	2.03	0.59
46:S2:747:U:O2	75:SH:111:LYS:NZ	2.36	0.59
56:SS:34:LYS:NZ	56:SS:103:LEU:HB3	2.15	0.59
64:Sa:51:ARG:HH21	66:Sc:63:ARG:HA	1.67	0.59
69:Sg:304:ASP:OD1	69:Sg:305:ASN:N	2.35	0.59
70:CB:143:LEU:O	70:CB:147:ILE:HG12	2.02	0.59
70:CB:804:THR:HG23	70:CB:806:GLY:H	1.67	0.59
1:L5:4946:U:HO2'	34:Lf:2:SER:N	2.01	0.58
4:LA:28:ARG:HD2	4:LA:123:ARG:HD2	1.85	0.58
6:LC:328:LEU:HD22	9:LF:187:MET:HG3	1.85	0.58
12:LI:24:ARG:HB2	12:LI:24:ARG:NH2	2.18	0.58
46:S2:1536:G:H2'	46:S2:1537:A:C8	2.38	0.58
46:S2:1656:G:O6	46:S2:1668:U:O4	2.21	0.58
61:SX:77:ASN:O	61:SX:79:LYS:N	2.31	0.58
62:SY:126:GLY:HA2	62:SY:129:LYS:HG2	1.84	0.58
71:SG:23:LYS:O	71:SG:26:THR:OG1	2.20	0.58
73:SC:63:VAL:O	73:SC:64:THR:HG23	2.03	0.58
1:L5:691:C:H2'	1:L5:692:A:H8	1.68	0.58
46:S2:107:A:H2'	46:S2:108:G:H8	1.67	0.58
48:E:49:U:H2'	48:E:50:C:H5''	1.83	0.58
55:SR:75:GLU:HA	55:SR:78:ARG:HG3	1.85	0.58
56:SS:47:LYS:HE3	56:SS:79:ILE:HG13	1.85	0.58
1:L5:3680:U:OP1	4:LA:54:ARG:NH2	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LX:122:ALA:N	26:LX:139:ARG:O	2.33	0.58
58:SU:35:VAL:HG12	58:SU:107:GLU:HG2	1.84	0.58
69:Sg:32:LEU:HD22	69:Sg:71:ILE:HD11	1.85	0.58
69:Sg:147:HIS:CE1	69:Sg:175:LYS:HG2	2.38	0.58
1:L5:325:U:H2'	1:L5:326:C:C6	2.39	0.58
33:Le:84:GLU:O	33:Le:87:VAL:HG12	2.04	0.58
46:S2:748:C:H42	46:S2:795:A:N6	2.00	0.58
70:CB:675:ILE:HG22	70:CB:679:VAL:HG23	1.85	0.58
1:L5:1696:C:H2'	1:L5:1697:G:O4'	2.04	0.58
19:LQ:133:GLY:O	19:LQ:136:THR:OG1	2.19	0.58
46:S2:536:A:H3'	46:S2:537:C:H5''	1.86	0.58
46:S2:1120:U:H5'	65:Sb:72:ARG:NH2	2.19	0.58
46:S2:1158:G:H5''	60:SW:76:SER:HB2	1.84	0.58
46:S2:1756:C:H41	46:S2:1757:G:H21	1.51	0.58
48:E:23:G:H2'	48:E:24:G:H8	1.69	0.58
48:E:59:C:H2'	48:E:60:A:H8	1.68	0.58
77:SE:239:PRO:O	77:SE:242:LYS:NZ	2.37	0.58
1:L5:1082:C:HO2'	1:L5:1083:U:H6	1.51	0.58
1:L5:4108:G:H2'	1:L5:4109:G:C8	2.39	0.58
46:S2:94:G:HO2'	46:S2:508:A:HO2'	1.49	0.58
57:ST:115:LYS:HE2	57:ST:121:ARG:HH22	1.69	0.58
73:SC:123:ARG:NH1	73:SC:143:CYS:SG	2.76	0.58
77:SE:125:LYS:HB3	77:SE:142:HIS:HB3	1.86	0.58
9:LF:157:ARG:HE	9:LF:248:ASN:HB2	1.67	0.58
16:LN:135:ILE:HG23	16:LN:142:ILE:HD13	1.85	0.58
35:Lg:107:LEU:HD12	35:Lg:110:GLN:HE21	1.68	0.58
46:S2:895:G:H3'	46:S2:896:U:H4'	1.85	0.58
46:S2:1398:G:H1'	69:Sg:63:SER:HB3	1.85	0.58
50:SB:97:LEU:HD23	50:SB:232:HIS:CD2	2.39	0.58
52:SO:44:VAL:HG13	52:SO:53:ILE:HB	1.85	0.58
70:CB:154:VAL:HB	70:CB:353:MET:HE2	1.84	0.58
75:SH:10:LYS:NZ	75:SH:46:THR:O	2.26	0.58
1:L5:3716:C:N4	1:L5:3735:G:O2'	2.26	0.58
5:LB:57:VAL:HG22	5:LB:73:VAL:HG22	1.86	0.58
46:S2:750:C:N4	46:S2:752:G:OP2	2.37	0.58
46:S2:1756:C:C2	46:S2:1776:G:N1	2.72	0.58
53:SP:92:SER:HB2	53:SP:107:ILE:HD13	1.84	0.58
74:SF:108:PRO:HA	74:SF:111:VAL:HG12	1.84	0.58
1:L5:253:G:H2'	1:L5:254:G:C8	2.38	0.58
1:L5:3594:C:H2'	1:L5:3597:G:H1'	1.86	0.58
53:SP:110:GLU:HG3	56:SS:116:LYS:NZ	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SC:77:SER:O	73:SC:80:GLU:N	2.35	0.58
1:L5:1194:G:H2'	1:L5:1195:G:C8	2.38	0.58
25:LW:34:ALA:HA	25:LW:37:GLU:HG2	1.86	0.58
29:La:100:ILE:HD13	29:La:123:ILE:HB	1.85	0.58
39:Lk:2:PRO:O	39:Lk:3:ARG:NH2	2.35	0.58
1:L5:62:A:N3	1:L5:77:U:O2'	2.34	0.57
1:L5:1332:C:H2'	1:L5:1333:A:H8	1.69	0.57
1:L5:1700:G:H22	9:LF:177:ARG:HH12	1.52	0.57
1:L5:1975:G:N2	1:L5:1983:A:OP1	2.37	0.57
1:L5:4989:U:H1'	1:L5:4990:C:C5	2.39	0.57
16:LN:191:ALA:O	16:LN:195:ARG:HG2	2.03	0.57
46:S2:202:G:N2	46:S2:202:G:OP2	2.36	0.57
62:SY:9:THR:HG22	62:SY:25:ILE:HG22	1.85	0.57
69:Sg:236:ILE:HD13	69:Sg:252:THR:HB	1.84	0.57
80:SL:57:ASP:OD1	80:SL:60:CYS:N	2.37	0.57
1:L5:1194:G:H2'	1:L5:1195:G:H8	1.68	0.57
11:LH:89:ARG:HB2	11:LH:147:GLU:HG2	1.86	0.57
36:Lh:104:THR:HG23	36:Lh:107:GLN:H	1.69	0.57
45:Lr:28:GLU:OE2	45:Lr:31:ASN:ND2	2.29	0.57
56:SS:45:LEU:HD22	56:SS:50:ILE:HD11	1.87	0.57
69:Sg:114:SER:HB3	69:Sg:119:GLN:HB2	1.86	0.57
70:CB:670:GLN:NE2	70:CB:671:TYR:CE2	2.71	0.57
72:SJ:24:ARG:NH1	72:SJ:28:GLU:OE2	2.37	0.57
76:SD:31:GLU:O	76:SD:54:ARG:NH2	2.37	0.57
1:L5:1443:A:H61	1:L5:2104:G:H21	0.67	0.57
1:L5:2474:G:N2	1:L5:2502:G:O2'	2.37	0.57
1:L5:3910:C:H2'	1:L5:3911:C:C6	2.39	0.57
1:L5:4220:A:OP2	22:LT:2:THR:OG1	2.11	0.57
1:L5:5063:G:O6	5:LB:124:LYS:NZ	2.37	0.57
23:LU:17:GLN:N	23:LU:17:GLN:NE2	2.50	0.57
1:L5:1339:U:H2'	1:L5:1340:C:C6	2.40	0.57
1:L5:4062:A:H2'	1:L5:4063:U:C6	2.40	0.57
1:L5:4260:U:H2'	1:L5:4261:C:H6	1.67	0.57
1:L5:5023:C:H3'	1:L5:5024:C:H4'	1.87	0.57
27:LY:82:ILE:HG22	27:LY:83:GLU:H	1.69	0.57
40:Ll:28:ARG:HA	40:Ll:33:ASN:HD22	1.69	0.57
46:S2:1332:A:N3	76:SD:141:LYS:NZ	2.52	0.57
57:ST:40:ALA:H	57:ST:96:SER:HB2	1.68	0.57
76:SD:35:SER:OG	76:SD:51:LEU:O	2.22	0.57
1:L5:499:G:H5'	1:L5:500:G:H5''	1.86	0.57
1:L5:1077:C:OP1	1:L5:1215:C:O2'	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1406:G:N1	1:L5:1411:C:O2'	2.21	0.57
1:L5:3599:A:H2'	1:L5:3600:G:H8	1.69	0.57
1:L5:3614:G:O2'	1:L5:3615:G:OP1	2.16	0.57
7:LD:226:TYR:HD2	7:LD:231:VAL:HB	1.68	0.57
46:S2:1171:G:O2'	46:S2:1187:G:O6	2.19	0.57
46:S2:1261:C:O2	67:Sd:10:HIS:NE2	2.37	0.57
52:SO:56:VAL:HG12	52:SO:81:VAL:HG23	1.87	0.57
69:Sg:6:THR:O	69:Sg:310:TRP:HA	2.05	0.57
18:LP:73:ALA:O	18:LP:76:TRP:C	2.48	0.57
20:LR:163:ARG:NH1	46:S2:872:A:O3'	2.38	0.57
46:S2:1405:A:H2'	46:S2:1406:G:O4'	2.04	0.57
54:SQ:47:LEU:HD11	54:SQ:78:VAL:HG12	1.86	0.57
1:L5:2902:G:N7	1:L5:2903:G:N2	2.52	0.57
1:L5:4274:A:H2'	1:L5:4275:G:C8	2.40	0.57
1:L5:4460:U:H2'	1:L5:4461:C:H6	1.69	0.57
1:L5:5027:C:O2'	1:L5:5028:G:H5''	2.04	0.57
70:CB:772:GLU:HB3	70:CB:785:LYS:HB2	1.85	0.57
77:SE:31:PRO:HG2	77:SE:38:LEU:HB2	1.86	0.57
1:L5:1704:C:OP1	9:LF:43:ARG:NH1	2.37	0.57
1:L5:1764:G:H1'	1:L5:1770:A:C4	2.40	0.57
1:L5:2000:G:N2	1:L5:2000:G:OP2	2.38	0.57
1:L5:2089:G:O2'	6:LC:307:LYS:NZ	2.35	0.57
13:LJ:31:ASP:OD1	13:LJ:32:ARG:N	2.38	0.57
20:LR:90:PRO:HB2	20:LR:93:VAL:HG23	1.87	0.57
48:E:8:U:N3	48:E:14:A:H8	1.97	0.57
1:L5:3877:A:N3	1:L5:4401:G:O2'	2.31	0.57
6:LC:245:HIS:ND1	45:Lr:13:CYS:SG	2.78	0.57
7:LD:84:PRO:HB3	7:LD:89:LYS:HA	1.86	0.57
16:LN:123:GLU:O	16:LN:124:ASP:HB2	2.05	0.57
19:LQ:50:ARG:HB3	19:LQ:83:VAL:HG11	1.87	0.57
23:LU:54:GLY:O	23:LU:56:LEU:N	2.37	0.57
26:LX:121:VAL:HA	26:LX:140:LEU:HA	1.87	0.57
46:S2:1526:G:OP1	54:SQ:146:ARG:NH1	2.37	0.57
57:ST:22:LEU:HD13	57:ST:28:LEU:HD11	1.87	0.57
71:SG:159:ARG:HH21	71:SG:171:THR:HG23	1.70	0.57
72:SJ:4:ALA:HB2	77:SE:26:VAL:HG22	1.86	0.57
1:L5:502:C:H3'	1:L5:503:C:H3'	1.87	0.57
1:L5:1942:A:H2'	1:L5:1943:A:C8	2.40	0.57
1:L5:2579:G:N2	1:L5:2582:A:OP2	2.35	0.57
11:LH:91:LYS:HG2	11:LH:145:ILE:HD12	1.87	0.57
46:S2:1317:C:H2'	46:S2:1318:G:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SS:46:ARG:NH1	56:SS:52:LEU:HD23	2.19	0.57
59:SV:34:MET:C	59:SV:35:ASN:HD22	2.13	0.57
74:SF:18:LYS:HE2	74:SF:24:SER:HB3	1.87	0.57
21:LS:95:ARG:NH1	21:LS:113:MET:SD	2.78	0.56
28:LZ:10:VAL:O	28:LZ:83:THR:OG1	2.19	0.56
46:S2:595:U:H2'	46:S2:596:U:C6	2.38	0.56
46:S2:677:G:OP1	51:SN:124:ARG:NH1	2.38	0.56
46:S2:1629:C:OP1	56:SS:39:ARG:HD3	2.05	0.56
46:S2:1758:G:O2'	46:S2:1774:C:N4	2.35	0.56
73:SC:166:ARG:HB2	73:SC:248:TYR:CD1	2.37	0.56
78:SI:67:TRP:HA	78:SI:189:VAL:HG22	1.87	0.56
16:LN:124:ASP:OD1	16:LN:125:SER:N	2.37	0.56
16:LN:165:THR:O	16:LN:169:ARG:HG3	2.06	0.56
46:S2:1192:U:P	61:SX:119:ARG:HH22	2.28	0.56
1:L5:62:A:OP1	16:LN:172:ARG:NH2	2.39	0.56
1:L5:139:G:H2'	1:L5:140:G:C8	2.41	0.56
1:L5:703:G:H2'	1:L5:704:C:H4'	1.87	0.56
1:L5:1296:G:H2'	1:L5:1297:U:H6	1.71	0.56
1:L5:1508:A:OP1	6:LC:110:ARG:NH1	2.38	0.56
1:L5:1628:C:H42	4:LA:3:ARG:NH1	2.02	0.56
1:L5:4113:U:O2'	1:L5:4115:G:OP2	2.21	0.56
1:L5:4872:G:C2	17:LO:203:VAL:HG23	2.40	0.56
15:LM:12:VAL:O	15:LM:58:THR:OG1	2.23	0.56
31:Lc:17:ARG:HB3	31:Lc:103:ASP:HB3	1.86	0.56
46:S2:543:C:H3'	46:S2:544:G:C8	2.40	0.56
46:S2:876:C:H2'	46:S2:877:C:C6	2.39	0.56
46:S2:1239:U:O3'	53:SP:124:LYS:NZ	2.38	0.56
46:S2:1757:G:N2	46:S2:1775:U:O4	2.37	0.56
54:SQ:28:GLY:HA3	54:SQ:67:ASP:CG	2.30	0.56
56:SS:110:ASP:OD1	56:SS:113:ARG:NH2	2.38	0.56
69:Sg:193:GLY:N	69:Sg:213:ASP:OD2	2.38	0.56
70:CB:781:MET:HE2	70:CB:781:MET:HA	1.88	0.56
70:CB:807:GLN:N	70:CB:807:GLN:OE1	2.38	0.56
9:LF:106:ARG:O	9:LF:110:GLN:HG2	2.04	0.56
42:Ln:7:LYS:HD3	42:Ln:11:ARG:HH21	1.69	0.56
48:E:8:U:C2	48:E:14:A:N7	2.74	0.56
48:E:59:C:H2'	48:E:60:A:C8	2.40	0.56
62:SY:103:SER:HB3	62:SY:106:GLN:HE22	1.71	0.56
80:SL:35:ARG:NH1	80:SL:53:GLY:O	2.37	0.56
1:L5:5006:U:H4'	1:L5:5007:A:H5'	1.86	0.56
22:LT:14:MET:HE2	22:LT:58:HIS:CG	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:LT:147:GLU:OE1	22:LT:148:PRO:HD2	2.05	0.56
28:LZ:123:LYS:O	28:LZ:124:THR:OG1	2.22	0.56
43:Lo:74:GLU:HG2	43:Lo:75:PRO:HD2	1.88	0.56
46:S2:155:G:H4'	71:SG:15:LEU:HD22	1.88	0.56
46:S2:1736:G:H2'	46:S2:1737:G:H8	1.70	0.56
49:SA:184:ARG:HH21	49:SA:191:ARG:HG3	1.71	0.56
60:SW:86:LEU:O	60:SW:90:GLN:HG3	2.05	0.56
62:SY:102:THR:HG22	62:SY:106:GLN:HE21	1.71	0.56
72:SJ:131:ARG:NH2	72:SJ:143:ASN:O	2.38	0.56
77:SE:48:LEU:HD13	77:SE:64:ILE:HD11	1.88	0.56
1:L5:450:G:N2	1:L5:1297:U:O2	2.30	0.56
1:L5:4670:C:O2'	1:L5:4672:A:OP2	2.22	0.56
10:LG:264:LYS:HZ1	50:SB:226:GLY:HA2	1.71	0.56
46:S2:1568:C:H2'	46:S2:1569:A:C8	2.41	0.56
66:Sc:44:ARG:HH12	66:Sc:63:ARG:HD2	1.69	0.56
71:SG:50:VAL:HG11	71:SG:111:LEU:HB3	1.87	0.56
71:SG:149:LYS:HD2	71:SG:150:GLU:OE1	2.06	0.56
72:SJ:129:LEU:HD23	72:SJ:135:ILE:HD11	1.87	0.56
78:SI:150:ASP:HA	78:SI:153:LYS:HG2	1.86	0.56
79:SK:48:ALA:O	79:SK:51:SER:OG	2.21	0.56
1:L5:75:G:O6	14:LL:103:ARG:NH1	2.39	0.56
1:L5:2702:C:OP1	23:LU:101:ARG:NH2	2.38	0.56
1:L5:3777:G:O2'	1:L5:3815:G:O6	2.22	0.56
1:L5:4108:G:H2'	1:L5:4109:G:H8	1.71	0.56
5:LB:10:ARG:HH11	5:LB:14:LEU:HD21	1.70	0.56
6:LC:66:SER:O	6:LC:66:SER:OG	2.24	0.56
6:LC:144:ILE:HG13	6:LC:144:ILE:O	2.06	0.56
6:LC:235:LEU:HD12	6:LC:240:LEU:HD11	1.87	0.56
14:LL:81:LEU:HD11	14:LL:98:VAL:HG22	1.86	0.56
23:LU:25:CYS:HB2	23:LU:28:PRO:HG2	1.88	0.56
43:Lo:12:CYS:HB2	43:Lo:21:HIS:CE1	2.40	0.56
46:S2:819:G:OP1	72:SJ:79:ARG:NH2	2.39	0.56
46:S2:1010:G:H2'	46:S2:1011:A:H8	1.70	0.56
48:E:60:A:H2'	48:E:61:G:H8	1.70	0.56
52:SO:142:ARG:HH12	64:Sa:24:THR:HA	1.71	0.56
53:SP:83:MET:HE3	53:SP:84:ILE:N	2.21	0.56
70:CB:179:GLN:O	70:CB:183:GLU:HG3	2.06	0.56
1:L5:1444:G:H22	1:L5:2103:G:H1	1.54	0.56
24:LV:43:LYS:HG3	24:LV:60:MET:HG2	1.86	0.56
27:LY:47:MET:HE3	27:LY:48:PRO:HD2	1.86	0.56
46:S2:942:G:H2'	46:S2:943:U:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1274:G:C5	79:SK:43:LEU:HD11	2.40	0.56
65:Sb:54:VAL:HG12	65:Sb:64:CYS:SG	2.46	0.56
69:Sg:244:ASN:ND2	69:Sg:294:ASP:O	2.38	0.56
71:SG:7:PHE:CE2	71:SG:9:ALA:HB3	2.41	0.56
75:SH:68:GLN:O	75:SH:72:PHE:HD2	1.89	0.56
1:L5:256:G:H2'	1:L5:257:C:C6	2.40	0.56
1:L5:2491:C:O2'	1:L5:2492:C:O4'	2.21	0.56
1:L5:2497:C:H2'	1:L5:2498:C:H6	1.71	0.56
11:LH:29:GLY:H	11:LH:84:VAL:HG11	1.70	0.56
14:LL:178:ALA:N	29:La:134:GLU:OE1	2.38	0.56
17:LO:54:TYR:CD2	17:LO:145:VAL:HG21	2.41	0.56
18:LP:64:ASN:HB2	18:LP:80:GLN:NE2	2.21	0.56
28:LZ:115:LYS:O	28:LZ:119:GLU:HG3	2.05	0.56
45:Lr:82:ILE:HG22	45:Lr:89:THR:HG22	1.87	0.56
46:S2:529:A:H2'	46:S2:530:U:C6	2.40	0.56
46:S2:689:U:H2'	46:S2:690:G:N3	2.20	0.56
48:E:23:G:H2'	48:E:24:G:C8	2.40	0.56
60:SW:37:PHE:CE2	60:SW:103:VAL:HG11	2.41	0.56
73:SC:193:VAL:HG11	73:SC:240:THR:HA	1.87	0.56
77:SE:138:HIS:CD2	77:SE:148:ARG:HG2	2.40	0.56
78:SI:165:GLN:HG2	78:SI:171:LEU:HD23	1.87	0.56
1:L5:135:G:H22	36:Lh:94:ARG:HD2	1.71	0.56
1:L5:3910:C:H2'	1:L5:3911:C:H6	1.71	0.56
1:L5:4525:C:OP1	5:LB:246:ARG:NH1	2.36	0.56
19:LQ:94:GLU:N	19:LQ:94:GLU:OE1	2.39	0.56
29:La:76:ASP:N	29:La:76:ASP:OD1	2.38	0.56
46:S2:886:A:C6	46:S2:901:G:C4	2.91	0.56
46:S2:1284:A:OP1	46:S2:1285:G:O2'	2.21	0.56
46:S2:1674:G:N7	54:SQ:17:LYS:NZ	2.53	0.56
61:SX:93:PHE:HA	61:SX:140:ARG:HH21	1.71	0.56
70:CB:653:GLY:O	70:CB:684:GLN:NE2	2.33	0.56
75:SH:51:ILE:HG12	75:SH:179:LYS:HG3	1.87	0.56
77:SE:59:ASP:OD1	77:SE:60:GLU:N	2.39	0.56
1:L5:280:G:H5''	16:LN:14:LYS:NZ	2.21	0.55
15:LM:91:TRP:O	15:LM:95:ILE:HG13	2.05	0.55
25:LW:4:GLU:HB2	25:LW:13:ILE:HB	1.88	0.55
31:Lc:13:SER:O	31:Lc:17:ARG:HG3	2.06	0.55
46:S2:568:C:H2'	46:S2:569:A:C8	2.41	0.55
46:S2:1825:A:N6	70:CB:717:GLY:O	2.39	0.55
48:E:1:G:N1	48:E:81:C:N3	2.38	0.55
66:Sc:9:ILE:HD12	66:Sc:59:LEU:HA	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:Sc:51:ARG:HH21	74:SF:61:PHE:HB3	1.70	0.55
70:CB:140:GLU:OE2	70:CB:144:ARG:NH1	2.39	0.55
77:SE:87:MET:HG3	77:SE:87:MET:O	2.06	0.55
1:L5:1444:G:O2'	1:L5:1445:U:O4'	2.19	0.55
21:LS:28:TYR:HE2	21:LS:54:MET:HE1	1.71	0.55
34:Lf:37:ASP:N	34:Lf:37:ASP:OD1	2.38	0.55
46:S2:697:G:OP2	46:S2:733:C:N4	2.32	0.55
46:S2:1542:C:P	57:ST:62:ARG:HH11	2.30	0.55
49:SA:159:ILE:HG22	49:SA:159:ILE:O	2.05	0.55
70:CB:88:PHE:CE1	70:CB:253:VAL:HG11	2.41	0.55
70:CB:101:ASN:HD22	70:CB:469:ILE:HD13	1.71	0.55
70:CB:660:ASN:OD1	70:CB:687:THR:OG1	2.23	0.55
1:L5:270:U:H2'	1:L5:271:C:C6	2.41	0.55
1:L5:1100:U:O4	1:L5:1194:G:O6	2.24	0.55
1:L5:1701:A:OP1	1:L5:1703:C:N4	2.32	0.55
1:L5:2488:C:N4	3:L8:126:C:OP2	2.39	0.55
1:L5:2574:G:N7	1:L5:2760:G:N2	2.54	0.55
46:S2:291:G:O2'	46:S2:292:A:OP1	2.25	0.55
46:S2:690:G:OP2	46:S2:690:G:N2	2.34	0.55
46:S2:984:C:O2'	52:SO:138:ASP:O	2.16	0.55
46:S2:1420:G:O2'	46:S2:1421:A:O4'	2.18	0.55
56:SS:84:LEU:O	56:SS:87:GLN:NE2	2.31	0.55
69:Sg:292:SER:OG	69:Sg:294:ASP:OD1	2.24	0.55
74:SF:77:MET:HB3	74:SF:89:THR:HG21	1.87	0.55
75:SH:58:LYS:HB2	75:SH:90:LYS:HD3	1.87	0.55
78:SI:141:ARG:HE	78:SI:145:ILE:HD12	1.72	0.55
1:L5:2622:G:OP2	23:LU:84:LYS:NZ	2.38	0.55
1:L5:3760:A:N6	70:CB:597:ASN:HA	2.22	0.55
9:LF:220:MET:HB3	9:LF:232:ASP:OD1	2.06	0.55
46:S2:1144:A:H5'	46:S2:1355:C:H41	1.71	0.55
46:S2:1277:C:H2'	46:S2:1278:A:C8	2.37	0.55
46:S2:1317:C:H2'	46:S2:1318:G:H8	1.70	0.55
46:S2:1388:A:H61	76:SD:161:GLY:HA3	1.71	0.55
46:S2:1549:U:OP1	67:Sd:34:TYR:OH	2.13	0.55
46:S2:1653:U:H2'	46:S2:1654:G:C8	2.41	0.55
1:L5:152:U:P	16:LN:49:ARG:HH22	2.30	0.55
1:L5:4148:C:H5''	28:LZ:59:LYS:HE3	1.89	0.55
1:L5:4459:U:H2'	1:L5:4460:U:C6	2.41	0.55
14:LL:78:LEU:HD13	14:LL:100:PRO:HA	1.88	0.55
20:LR:139:MET:HG2	20:LR:143:HIS:CE1	2.42	0.55
31:Lc:29:LEU:HD13	31:Lc:91:VAL:HG11	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:67:C:OP2	71:SG:172:LYS:NZ	2.39	0.55
46:S2:557:U:H5'	46:S2:558:G:C8	2.41	0.55
46:S2:943:U:O2'	52:SO:135:ILE:O	2.25	0.55
53:SP:81:ARG:NH2	53:SP:117:GLY:O	2.40	0.55
57:ST:96:SER:HB3	57:ST:99:VAL:HG22	1.87	0.55
69:Sg:155:ARG:O	69:Sg:165:ILE:HD12	2.07	0.55
1:L5:1296:G:H2'	1:L5:1297:U:C6	2.42	0.55
1:L5:2544:G:N2	3:L8:126:C:OP1	2.29	0.55
19:LQ:121:LEU:HA	19:LQ:125:GLN:HE21	1.72	0.55
46:S2:563:G:O2'	46:S2:564:A:OP1	2.24	0.55
50:SB:185:VAL:O	50:SB:189:ILE:HG12	2.06	0.55
62:SY:99:LYS:HA	62:SY:101:LYS:HZ1	1.72	0.55
62:SY:126:GLY:HA2	62:SY:129:LYS:HE2	1.87	0.55
1:L5:1179:U:O2'	1:L5:1180:C:OP1	2.25	0.55
1:L5:4242:U:H3	1:L5:4281:A:H2	1.54	0.55
4:LA:229:ALA:HB3	4:LA:234:LYS:HB3	1.89	0.55
8:LE:209:PRO:HD2	8:LE:212:LEU:HD12	1.88	0.55
12:LI:35:ASP:OD1	12:LI:88:ARG:HG3	2.06	0.55
46:S2:130:G:O2'	46:S2:132:U:OP2	2.24	0.55
70:CB:374:GLU:HB3	70:CB:495:ARG:HH12	1.70	0.55
1:L5:29:G:H5''	16:LN:172:ARG:CD	2.37	0.55
1:L5:1846:G:H2'	1:L5:1847:C:C6	2.42	0.55
12:LI:209:TRP:O	12:LI:212:LEU:O	2.24	0.55
31:Lc:21:VAL:HG21	31:Lc:96:ILE:HD12	1.89	0.55
39:Lk:49:ASP:OD2	39:Lk:52:LYS:HG3	2.06	0.55
46:S2:1661:A:C8	67:Sd:14:PHE:CD2	2.95	0.55
54:SQ:62:ARG:NH1	54:SQ:107:GLU:OE2	2.39	0.55
70:CB:362:VAL:O	70:CB:366:LYS:NZ	2.35	0.55
1:L5:3786:U:OP1	1:L5:4550:G:O2'	2.24	0.55
7:LD:21:ARG:O	7:LD:25:GLU:HG3	2.07	0.55
21:LS:96:GLU:HG3	21:LS:139:ARG:HG2	1.88	0.55
31:Lc:38:ILE:HD11	31:Lc:46:VAL:HG11	1.89	0.55
46:S2:344:U:H2'	46:S2:345:U:C6	2.42	0.55
46:S2:731:G:H5'	46:S2:732:U:H5''	1.89	0.55
50:SB:67:PHE:O	50:SB:85:LYS:C	2.50	0.55
50:SB:67:PHE:O	50:SB:85:LYS:O	2.25	0.55
55:SR:17:ILE:HG13	55:SR:57:LEU:HD23	1.88	0.55
66:Sc:36:ASP:OD1	66:Sc:37:ASP:N	2.36	0.55
69:Sg:297:THR:HG22	69:Sg:311:GLN:HB3	1.89	0.55
70:CB:267:ASP:HB3	70:CB:285:LEU:HG	1.89	0.55
70:CB:327:ASP:HA	70:CB:330:LYS:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SF:96:ALA:O	74:SF:100:ILE:HG12	2.07	0.55
75:SH:164:ASN:OD1	75:SH:165:ASN:N	2.40	0.55
46:S2:77:A:N3	71:SG:176:ILE:HG22	2.22	0.55
46:S2:197:U:H5'	46:S2:203:G:H21	1.72	0.55
57:ST:115:LYS:HG2	57:ST:121:ARG:NH2	2.22	0.55
69:Sg:249:CYS:HB3	69:Sg:258:ILE:HG13	1.89	0.55
1:L5:4910:G:N2	17:LO:106:ASP:O	2.40	0.54
11:LH:96:TYR:HA	11:LH:177:ASP:OD1	2.07	0.54
13:LJ:55:TYR:HA	13:LJ:64:ARG:HB3	1.89	0.54
43:Lo:15:CYS:SG	43:Lo:19:GLN:HG3	2.47	0.54
46:S2:570:C:O2'	62:SY:34:THR:O	2.23	0.54
46:S2:839:C:H41	62:SY:10:ARG:HA	1.72	0.54
46:S2:1538:C:H2'	46:S2:1539:U:C6	2.43	0.54
46:S2:1759:G:O2'	46:S2:1760:G:O4'	2.23	0.54
49:SA:183:LEU:O	49:SA:186:ARG:C	2.50	0.54
70:CB:207:PRO:HA	70:CB:212:VAL:HG22	1.89	0.54
71:SG:115:LYS:NZ	71:SG:116:LYS:O	2.40	0.54
73:SC:244:ILE:O	73:SC:247:THR:HG22	2.07	0.54
1:L5:181:C:H1'	1:L5:256:G:N2	2.22	0.54
1:L5:3919:C:H5''	4:LA:207:VAL:HG12	1.90	0.54
1:L5:4093:G:N1	1:L5:4114:C:C2	2.75	0.54
4:LA:142:GLU:O	4:LA:143:THR:OG1	2.22	0.54
13:LJ:12:MET:HE2	13:LJ:12:MET:HA	1.89	0.54
14:LL:36:ARG:O	14:LL:40:GLN:HG3	2.07	0.54
15:LM:89:THR:OG1	15:LM:90:ARG:N	2.40	0.54
46:S2:84:A:N3	46:S2:150:A:O2'	2.37	0.54
46:S2:151:C:H2'	71:SG:132:ARG:HH22	1.72	0.54
46:S2:1147:C:OP1	64:Sa:6:ARG:NH1	2.40	0.54
49:SA:128:ARG:NH2	49:SA:153:PRO:HD3	2.22	0.54
49:SA:163:CYS:SG	49:SA:164:ASN:N	2.79	0.54
70:CB:155:LEU:HB2	70:CB:205:ILE:HG12	1.89	0.54
75:SH:49:LYS:O	75:SH:60:ILE:HD12	2.07	0.54
80:SL:124:ASP:HB3	80:SL:147:LYS:HE3	1.89	0.54
1:L5:189:G:H2'	1:L5:190:G:H8	1.72	0.54
1:L5:262:G:H2'	1:L5:263:G:C8	2.42	0.54
1:L5:662:C:H2'	1:L5:663:G:C8	2.43	0.54
1:L5:1405:C:N4	1:L5:1408:G:N3	2.42	0.54
1:L5:3753:G:C8	1:L5:3776:G:C8	2.96	0.54
5:LB:80:GLU:HG3	5:LB:326:VAL:HG13	1.89	0.54
10:LG:264:LYS:NZ	50:SB:226:GLY:HA2	2.22	0.54
20:LR:154:LEU:O	20:LR:158:GLN:HG3	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LX:73:HIS:CE1	26:LX:115:LYS:HD3	2.43	0.54
27:LY:74:TYR:CE2	27:LY:77:LYS:HG3	2.36	0.54
69:Sg:165:ILE:CG2	69:Sg:177:TRP:HB2	2.37	0.54
70:CB:428:ARG:NH2	70:CB:488:PHE:O	2.32	0.54
70:CB:801:ARG:HA	70:CB:804:THR:HG22	1.89	0.54
72:SJ:114:VAL:HG13	72:SJ:126:ALA:HB1	1.88	0.54
1:L5:4146:G:H2'	1:L5:4147:G:C8	2.43	0.54
5:LB:300:LYS:HD3	5:LB:304:SER:OG	2.08	0.54
25:LW:4:GLU:O	25:LW:12:LYS:CA	2.49	0.54
48:E:8:U:O2	48:E:14:A:N7	2.40	0.54
50:SB:144:LYS:HD2	50:SB:208:HIS:HB3	1.88	0.54
50:SB:179:ASN:HD22	50:SB:187:LYS:NZ	2.06	0.54
53:SP:91:GLY:HA2	53:SP:107:ILE:O	2.07	0.54
55:SR:21:TYR:CE2	55:SR:72:LYS:HE2	2.42	0.54
69:Sg:212:LYS:HG3	69:Sg:235:ILE:HD12	1.88	0.54
70:CB:829:SER:OG	70:CB:831:PRO:HD2	2.08	0.54
1:L5:4088:C:OP1	4:LA:37:ARG:NH1	2.40	0.54
6:LC:209:ILE:HB	6:LC:229:LEU:HD13	1.88	0.54
13:LJ:95:ARG:HG3	13:LJ:96:LYS:H	1.72	0.54
14:LL:54:PRO:HB2	14:LL:97:SER:HB3	1.89	0.54
20:LR:158:GLN:O	20:LR:162:ARG:HG2	2.07	0.54
21:LS:85:ASP:N	21:LS:85:ASP:OD1	2.40	0.54
50:SB:108:ASP:OD1	50:SB:109:LYS:N	2.40	0.54
51:SN:95:ALA:O	51:SN:99:ARG:HG3	2.08	0.54
54:SQ:11:GLN:HA	54:SQ:23:ALA:O	2.08	0.54
1:L5:494:U:C4	1:L5:495:C:N4	2.75	0.54
1:L5:4992:G:H2'	1:L5:4993:G:C8	2.42	0.54
5:LB:200:ARG:HH11	5:LB:200:ARG:HG3	1.72	0.54
10:LG:134:PRO:HB3	10:LG:206:GLN:NE2	2.22	0.54
13:LJ:38:LYS:HA	13:LJ:38:LYS:HE2	1.89	0.54
46:S2:541:U:O2	46:S2:543:C:N4	2.41	0.54
46:S2:689:U:H2'	46:S2:690:G:C2	2.43	0.54
46:S2:1244:U:H2'	46:S2:1245:G:C8	2.42	0.54
46:S2:1374:C:H2'	46:S2:1375:G:O4'	2.08	0.54
70:CB:170:GLU:HG2	70:CB:171:PRO:HD2	1.90	0.54
1:L5:753:C:H41	1:L5:910:G:H1	1.55	0.54
1:L5:1367:C:O2'	1:L5:1369:C:OP2	2.26	0.54
1:L5:1912:G:N2	17:LO:87:MET:HE2	2.22	0.54
1:L5:2811:G:N1	1:L5:2814:C:OP2	2.30	0.54
1:L5:3811:G:O2'	1:L5:3814:U:OP2	2.25	0.54
1:L5:4742:G:H2'	1:L5:4743:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Lc:20:LEU:O	31:Lc:24:SER:CB	2.52	0.54
46:S2:1513:C:H2'	46:S2:1514:G:H8	1.73	0.54
46:S2:1566:G:H1	57:ST:97:LYS:NZ	2.05	0.54
46:S2:1743:G:H21	46:S2:1791:A:H62	1.56	0.54
46:S2:1801:A:H2'	46:S2:1802:C:H6	1.72	0.54
49:SA:39:TYR:CD2	49:SA:40:LYS:HG2	2.43	0.54
56:SS:36:VAL:HG13	56:SS:40:TYR:HD2	1.72	0.54
79:SK:1:MET:HE1	79:SK:43:LEU:HD23	1.88	0.54
1:L5:128:C:H2'	1:L5:129:C:C6	2.43	0.54
1:L5:662:C:H2'	1:L5:663:G:H8	1.73	0.54
8:LE:70:LYS:HG3	8:LE:71:ARG:HG3	1.89	0.54
46:S2:890:U:H3	46:S2:895:G:H22	1.56	0.54
50:SB:83:LYS:O	50:SB:103:MET:HG2	2.07	0.54
62:SY:39:GLU:HA	62:SY:42:GLU:CG	2.34	0.54
65:Sb:54:VAL:HG13	65:Sb:63:LEU:HB3	1.90	0.54
70:CB:52:GLY:N	70:CB:55:ARG:HD2	2.22	0.54
76:SD:141:LYS:HE3	76:SD:179:GLN:OE1	2.08	0.54
1:L5:690:C:H4'	45:Lr:85:ASN:ND2	2.23	0.54
1:L5:1317:U:H2'	1:L5:1318:C:C6	2.43	0.54
1:L5:1821:G:H2'	1:L5:1821:G:N3	2.23	0.54
4:LA:56:ALA:HB2	4:LA:130:SER:HB3	1.90	0.54
5:LB:200:ARG:HG3	5:LB:200:ARG:NH1	2.23	0.54
13:LJ:7:GLU:HA	13:LJ:10:ASN:OD1	2.07	0.54
13:LJ:22:LEU:HD22	13:LJ:130:PHE:CD1	2.43	0.54
16:LN:3:ALA:O	16:LN:7:ILE:HG12	2.07	0.54
39:Lk:10:ASP:HA	39:Lk:13:LEU:HG	1.90	0.54
44:Lp:47:MET:HE2	44:Lp:57:CYS:HB2	1.88	0.54
69:Sg:99:ARG:NH1	69:Sg:135:LEU:O	2.41	0.54
70:CB:396:MET:HB3	70:CB:416:VAL:HG22	1.90	0.54
70:CB:712:ASP:OD2	70:CB:714:ILE:HG22	2.08	0.54
1:L5:923:C:HO2'	1:L5:924:C:H6	1.55	0.54
1:L5:3755:G:H2'	1:L5:3756:A:O4'	2.08	0.54
1:L5:4537:C:H2'	1:L5:4538:G:C8	2.43	0.54
8:LE:95:PRO:HA	8:LE:104:THR:HG22	1.90	0.54
46:S2:1408:U:H2'	46:S2:1409:A:C8	2.43	0.54
49:SA:222:VAL:HG13	49:SA:223:THR:HG23	1.89	0.54
59:SV:15:ARG:NH1	73:SC:83:LEU:O	2.41	0.54
62:SY:39:GLU:O	62:SY:43:LYS:HG3	2.08	0.54
70:CB:264:ARG:HH12	70:CB:275:LYS:HB3	1.72	0.54
70:CB:675:ILE:HD11	70:CB:716:ARG:HD2	1.90	0.54
70:CB:800:LEU:HD23	70:CB:810:PRO:HG3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:711:A:H2'	1:L5:712:C:C6	2.43	0.53
1:L5:737:C:C5	1:L5:739:G:H5''	2.44	0.53
1:L5:1986:U:H5'	1:L5:1987:C:OP1	2.08	0.53
10:LG:88:ASP:OD1	10:LG:89:ARG:N	2.40	0.53
11:LH:113:GLU:HG2	11:LH:125:ARG:HG2	1.90	0.53
15:LM:52:PHE:HA	15:LM:55:MET:HG2	1.91	0.53
46:S2:1095:C:N3	46:S2:1149:A:N1	2.55	0.53
46:S2:1736:G:H2'	46:S2:1737:G:C8	2.42	0.53
46:S2:1757:G:C8	46:S2:1758:G:H1'	2.42	0.53
49:SA:215:GLN:O	49:SA:219:GLU:HG2	2.08	0.53
69:Sg:88:ARG:HH21	69:Sg:97:THR:HG21	1.73	0.53
70:CB:712:ASP:OD2	70:CB:714:ILE:N	2.37	0.53
70:CB:760:TYR:CD2	70:CB:770:VAL:HG11	2.43	0.53
71:SG:5:ILE:HD13	71:SG:111:LEU:HB2	1.90	0.53
75:SH:147:LYS:HZ1	75:SH:153:LEU:HB2	1.72	0.53
1:L5:4063:U:H2'	1:L5:4064:C:C2	2.44	0.53
1:L5:4896:G:H2'	1:L5:4897:G:H8	1.74	0.53
5:LB:367:PHE:HB2	25:LW:1:MET:HE1	1.90	0.53
32:Ld:50:ARG:HG3	32:Ld:62:VAL:CG2	2.38	0.53
46:S2:1700:C:O2	46:S2:1834:A:N6	2.41	0.53
47:S:196:HIS:HB3	70:CB:712:ASP:OD1	2.08	0.53
49:SA:206:ASP:O	49:SA:210:ILE:HG13	2.08	0.53
55:SR:13:ALA:O	55:SR:17:ILE:HG12	2.07	0.53
56:SS:40:TYR:CZ	56:SS:97:GLN:HG2	2.44	0.53
62:SY:104:ARG:O	62:SY:108:LYS:HG3	2.08	0.53
69:Sg:165:ILE:HG23	69:Sg:177:TRP:HB2	1.90	0.53
1:L5:2079:G:H2'	1:L5:2080:U:C6	2.43	0.53
1:L5:4582:C:OP2	5:LB:28:LYS:NZ	2.35	0.53
1:L5:4988:U:H4'	1:L5:4989:U:H5	1.74	0.53
4:LA:14:SER:HA	4:LA:17:ARG:NH1	2.24	0.53
30:Lb:101:HIS:O	30:Lb:109:ARG:NH2	2.41	0.53
46:S2:367:U:H4'	46:S2:371:A:C8	2.44	0.53
54:SQ:96:TYR:HD2	54:SQ:108:ILE:HD13	1.72	0.53
70:CB:10:ARG:NE	70:CB:463:ASP:OD1	2.37	0.53
1:L5:1480:C:O2'	1:L5:1482:G:OP2	2.26	0.53
22:LT:80:VAL:HG12	22:LT:81:LYS:H	1.73	0.53
46:S2:1410:C:H2'	46:S2:1411:G:C8	2.44	0.53
73:SC:63:VAL:O	73:SC:63:VAL:HG13	2.09	0.53
1:L5:223:G:N3	6:LC:223:ASN:ND2	2.56	0.53
1:L5:663:G:C6	1:L5:664:G:C6	2.96	0.53
1:L5:3717:A:H2'	1:L5:3718:A:H8	1.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4913:G:H4'	1:L5:4914:C:O5'	2.08	0.53
3:L8:122:G:O6	3:L8:128:C:N4	2.42	0.53
19:LQ:4:ASP:OD1	19:LQ:4:ASP:O	2.27	0.53
27:LY:10:ASP:HB3	27:LY:13:LYS:HB2	1.89	0.53
36:Lh:96:ASN:O	36:Lh:100:GLU:HB2	2.08	0.53
46:S2:51:U:H2'	46:S2:52:G:H8	1.73	0.53
46:S2:846:G:OP2	77:SE:108:ARG:NH2	2.41	0.53
49:SA:109:THR:HG23	49:SA:136:GLU:OE2	2.07	0.53
56:SS:3:LEU:HD12	56:SS:4:VAL:HG12	1.91	0.53
70:CB:272:LYS:HG3	70:CB:273:PHE:H	1.74	0.53
70:CB:659:PRO:HB2	70:CB:699:GLY:H	1.74	0.53
72:SJ:3:VAL:HG12	72:SJ:5:ARG:HD3	1.89	0.53
73:SC:168:GLY:N	73:SC:179:THR:O	2.26	0.53
75:SH:118:ARG:O	75:SH:121:THR:HG22	2.08	0.53
1:L5:1202:C:H3'	1:L5:1203:G:C5'	2.39	0.53
1:L5:1617:G:H1'	1:L5:2513:A:N6	2.24	0.53
1:L5:4892:A:H2'	1:L5:4893:A:O4'	2.09	0.53
14:LL:130:LYS:NZ	14:LL:132:SER:OG	2.41	0.53
46:S2:65:C:H4'	71:SG:172:LYS:HE2	1.90	0.53
46:S2:201:C:H3'	46:S2:202:G:N2	2.21	0.53
46:S2:750:C:H41	46:S2:793:G:N2	2.06	0.53
46:S2:1568:C:OP2	57:ST:98:SER:OG	2.26	0.53
50:SB:59:SER:O	50:SB:63:LYS:HG3	2.09	0.53
54:SQ:19:ALA:HB2	54:SQ:75:GLY:HA3	1.90	0.53
54:SQ:124:PRO:HD2	74:SF:55:ARG:HH12	1.74	0.53
56:SS:60:THR:HG23	56:SS:63:GLU:HG3	1.91	0.53
59:SV:80:SER:O	59:SV:81:LYS:HB3	2.08	0.53
72:SJ:94:LEU:HD23	72:SJ:97:ILE:HD12	1.91	0.53
80:SL:120:VAL:HG22	80:SL:145:VAL:HG11	1.91	0.53
1:L5:76:A:OP2	14:LL:74:ARG:NH1	2.42	0.53
1:L5:1100:U:H1'	1:L5:1167:C:H42	1.72	0.53
1:L5:2568:C:H2'	1:L5:2569:G:H8	1.73	0.53
1:L5:4093:G:N7	1:L5:4095:G:C2	2.77	0.53
7:LD:280:VAL:HG23	12:LI:206:LEU:HD22	1.89	0.53
9:LF:232:ASP:OD2	9:LF:236:ARG:NH2	2.38	0.53
29:La:38:LEU:O	29:La:42:ARG:NH1	2.42	0.53
39:Lk:27:LYS:O	39:Lk:70:LYS:NZ	2.39	0.53
46:S2:77:A:H2'	46:S2:78:C:C6	2.44	0.53
46:S2:507:G:OP1	62:SY:108:LYS:NZ	2.40	0.53
46:S2:1373:C:OP1	55:SR:7:LYS:N	2.40	0.53
49:SA:208:GLU:OE2	49:SA:209:GLU:HG3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SN:100:LYS:HE3	51:SN:104:ARG:HH12	1.73	0.53
52:SO:44:VAL:HG12	52:SO:54:CYS:O	2.09	0.53
54:SQ:39:LEU:HD21	54:SQ:52:LEU:HB3	1.90	0.53
77:SE:162:ILE:HG22	77:SE:169:ILE:HA	1.90	0.53
78:SI:157:LYS:HA	78:SI:157:LYS:HE2	1.91	0.53
1:L5:1084:C:H2'	1:L5:1085:C:H6	1.74	0.53
1:L5:1414:C:H2'	1:L5:1415:G:C8	2.41	0.53
2:L7:54:A:OP1	13:LJ:8:LYS:NZ	2.42	0.53
3:L8:141:C:H2'	3:L8:142:U:C6	2.43	0.53
21:LS:158:VAL:HG13	21:LS:160:ARG:HE	1.73	0.53
45:Lr:54:ALA:HA	45:Lr:61:VAL:HG23	1.91	0.53
46:S2:1275:G:N2	46:S2:1506:A:OP2	2.25	0.53
70:CB:609:PHE:CE1	70:CB:701:ARG:HB2	2.43	0.53
73:SC:65:LYS:HD3	73:SC:273:LEU:HD13	1.91	0.53
75:SH:80:VAL:HG23	75:SH:92:VAL:HB	1.89	0.53
76:SD:127:MET:HE3	76:SD:134:CYS:SG	2.48	0.53
79:SK:80:ARG:NH2	79:SK:89:ILE:O	2.40	0.53
1:L5:1199:G:H2'	1:L5:1200:G:H8	1.73	0.53
1:L5:1464:C:H5''	30:Lb:32:LEU:HD12	1.90	0.53
1:L5:2415:U:H2'	1:L5:2416:G:C8	2.44	0.53
1:L5:3951:G:N1	1:L5:4060:U:N3	2.57	0.53
28:LZ:30:ASP:HA	28:LZ:39:SER:OG	2.09	0.53
46:S2:1097:G:H4'	49:SA:32:PHE:CD1	2.44	0.53
50:SB:124:HIS:HA	50:SB:137:LEU:O	2.09	0.53
59:SV:38:GLU:OE1	59:SV:38:GLU:N	2.41	0.53
69:Sg:217:MET:HB3	69:Sg:219:TRP:HE1	1.74	0.53
70:CB:314:LYS:HB3	70:CB:318:LYS:NZ	2.23	0.53
70:CB:489:GLU:H	70:CB:489:GLU:CD	2.17	0.53
77:SE:201:HIS:O	77:SE:204:SER:C	2.52	0.53
79:SK:42:ASN:HA	79:SK:45:VAL:HG12	1.91	0.53
1:L5:1095:A:H2'	1:L5:1096:C:H6	1.74	0.53
46:S2:563:G:H1	46:S2:592:C:H5	1.57	0.53
49:SA:49:ILE:HG21	49:SA:162:PRO:O	2.08	0.53
55:SR:99:ASP:OD1	55:SR:100:PRO:HD2	2.09	0.53
63:SZ:64:ASN:O	63:SZ:111:ARG:NH2	2.42	0.53
69:Sg:91:ASP:OD1	69:Sg:92:LEU:N	2.42	0.53
70:CB:398:ILE:HA	70:CB:414:GLY:HA3	1.91	0.53
70:CB:731:ALA:HB1	70:CB:855:LEU:HG	1.90	0.53
70:CB:813:VAL:HG13	70:CB:814:PHE:H	1.74	0.53
1:L5:229:G:OP1	27:LY:11:ARG:NH1	2.41	0.52
1:L5:4743:G:H2'	1:L5:4744:A:C8	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LX:72:ASP:O	26:LX:76:ILE:HG12	2.09	0.52
27:LY:88:GLU:HG2	27:LY:94:THR:HG22	1.91	0.52
46:S2:558:G:O2'	46:S2:559:G:OP2	2.21	0.52
46:S2:1010:G:H2'	46:S2:1011:A:C8	2.44	0.52
46:S2:1406:G:H2'	46:S2:1407:U:C6	2.44	0.52
53:SP:72:LYS:HZ3	53:SP:92:SER:HA	1.73	0.52
61:SX:71:ARG:HH11	61:SX:80:LYS:HB3	1.73	0.52
69:Sg:89:LEU:HB2	69:Sg:101:PHE:HE2	1.74	0.52
76:SD:150:MET:HG3	76:SD:152:PHE:CZ	2.44	0.52
77:SE:57:THR:OG1	77:SE:59:ASP:OD1	2.24	0.52
9:LF:29:LYS:HA	9:LF:32:ARG:HG2	1.91	0.52
46:S2:1356:G:H2'	46:S2:1357:A:C8	2.44	0.52
48:E:2:U:H2'	48:E:3:A:C8	2.43	0.52
59:SV:33:GLN:HE22	73:SC:84:PHE:HE1	1.55	0.52
69:Sg:24:THR:OG1	69:Sg:27:PHE:O	2.28	0.52
78:SI:130:THR:O	78:SI:132:GLU:N	2.42	0.52
1:L5:270:U:H2'	1:L5:271:C:H6	1.74	0.52
1:L5:691:C:H2'	1:L5:692:A:C8	2.43	0.52
1:L5:3772:U:H2'	1:L5:3773:U:H5''	1.92	0.52
1:L5:3949:A:C8	1:L5:4065:G:C6	2.97	0.52
11:LH:66:GLU:O	11:LH:69:THR:OG1	2.26	0.52
13:LJ:166:PHE:HD2	13:LJ:174:ILE:HD11	1.73	0.52
14:LL:108:GLU:OE2	37:Li:18:THR:HG22	2.10	0.52
26:LX:64:SER:HB2	36:Lh:69:LEU:HD13	1.91	0.52
46:S2:901:G:H2'	46:S2:902:G:C8	2.43	0.52
46:S2:1284:A:N6	46:S2:1313:A:O2'	2.42	0.52
48:E:61:G:H2'	48:E:62:G:H8	1.74	0.52
51:SN:114:ARG:O	51:SN:118:ILE:HG12	2.09	0.52
55:SR:7:LYS:HB2	55:SR:11:LYS:NZ	2.25	0.52
70:CB:325:SER:O	70:CB:327:ASP:N	2.43	0.52
77:SE:60:GLU:O	77:SE:64:ILE:HG23	2.09	0.52
77:SE:128:LYS:HB3	77:SE:140:VAL:HG22	1.92	0.52
1:L5:459:C:H5'	8:LE:110:ARG:HD2	1.92	0.52
1:L5:2640:G:H2'	1:L5:2641:A:C8	2.44	0.52
1:L5:3641:U:H5	1:L5:3646:A:N7	2.07	0.52
1:L5:3764:U:C2	1:L5:3765:G:C8	2.98	0.52
8:LE:63:TYR:CE1	8:LE:68:MET:HB2	2.45	0.52
8:LE:186:LEU:HD11	8:LE:253:VAL:HG11	1.91	0.52
12:LI:32:ARG:HG2	12:LI:32:ARG:HH11	1.75	0.52
55:SR:99:ASP:O	55:SR:102:THR:OG1	2.25	0.52
79:SK:16:PHE:CD2	79:SK:79:LEU:HD22	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:SK:31:LYS:NZ	79:SK:36:ALA:H	2.06	0.52
1:L5:737:C:C4	1:L5:739:G:H5''	2.44	0.52
1:L5:2758:G:O2'	1:L5:2765:A:N3	2.40	0.52
1:L5:4139:G:H1'	1:L5:4146:G:N1	2.24	0.52
12:LI:82:ARG:NH1	12:LI:82:ARG:HB3	2.25	0.52
13:LJ:19:LYS:HB2	13:LJ:133:VAL:HG12	1.90	0.52
22:LT:118:GLU:O	22:LT:121:GLU:HG3	2.10	0.52
46:S2:839:C:N4	62:SY:10:ARG:HA	2.24	0.52
56:SS:114:LEU:HD23	56:SS:121:ARG:HB3	1.91	0.52
64:Sa:23:CYS:O	64:Sa:27:ALA:N	2.43	0.52
70:CB:581:GLU:HG2	70:CB:697:MET:HG2	1.91	0.52
70:CB:755:VAL:O	70:CB:759:ILE:HG23	2.09	0.52
74:SF:40:ALA:HA	74:SF:45:TYR:OH	2.10	0.52
80:SL:23:VAL:HB	80:SL:25:LEU:HD22	1.92	0.52
1:L5:1072:C:H2'	1:L5:1073:G:H8	1.75	0.52
1:L5:3861:A:H2'	1:L5:3862:A:C8	2.44	0.52
1:L5:4093:G:N2	1:L5:4114:C:N4	2.57	0.52
1:L5:4274:A:H2'	1:L5:4275:G:H8	1.73	0.52
7:LD:51:MET:HE3	7:LD:105:LEU:HD23	1.90	0.52
46:S2:1597:C:OP2	63:SZ:85:ARG:NH2	2.37	0.52
66:Sc:20:ARG:HD3	66:Sc:28:THR:HG22	1.92	0.52
1:L5:406:C:O2'	1:L5:407:A:OP1	2.24	0.52
1:L5:1095:A:H2'	1:L5:1096:C:C6	2.45	0.52
1:L5:1359:G:H4'	16:LN:203:TYR:HB2	1.92	0.52
1:L5:2616:C:OP1	20:LR:64:ARG:HD3	2.10	0.52
1:L5:3951:G:H2'	1:L5:3952:A:O4'	2.10	0.52
1:L5:4238:G:H2'	1:L5:4239:A:C8	2.45	0.52
33:Le:45:VAL:HG12	33:Le:52:GLN:HB3	1.91	0.52
40:LI:33:ASN:OD1	40:LI:35:ILE:HG12	2.10	0.52
46:S2:1004:U:H2'	46:S2:1005:G:H8	1.75	0.52
46:S2:1777:G:H2'	46:S2:1778:C:C6	2.45	0.52
49:SA:145:ILE:HG13	49:SA:159:ILE:HB	1.91	0.52
63:SZ:101:SER:OG	63:SZ:108:ILE:N	2.38	0.52
75:SH:9:VAL:HA	75:SH:44:ASN:HD21	1.75	0.52
75:SH:69:LEU:O	75:SH:73:GLN:HG3	2.10	0.52
1:L5:1604:G:H2'	1:L5:1605:G:C8	2.45	0.52
1:L5:3612:C:H1'	1:L5:5016:A:C8	2.45	0.52
1:L5:4239:A:H2'	1:L5:4240:G:C8	2.44	0.52
1:L5:5025:C:H5''	1:L5:5026:U:C5	2.45	0.52
1:L5:5040:U:OP2	5:LB:396:ARG:NH2	2.43	0.52
12:LI:66:GLU:OE2	12:LI:69:ARG:NH1	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:LZ:102:ARG:NH1	28:LZ:102:ARG:HB2	2.24	0.52
46:S2:495:U:H2'	46:S2:496:C:O4'	2.10	0.52
46:S2:1461:G:H3'	46:S2:1463:U:H3	1.73	0.52
50:SB:46:LYS:NZ	52:SO:19:PRO:HB2	2.25	0.52
51:SN:4:MET:HE2	51:SN:124:ARG:NH2	2.24	0.52
70:CB:250:ALA:O	70:CB:253:VAL:HG12	2.10	0.52
77:SE:79:ASP:HB3	77:SE:82:TYR:HB2	1.92	0.52
1:L5:93:G:H2'	1:L5:94:A:C8	2.44	0.52
1:L5:4173:G:H2'	1:L5:4174:U:C6	2.45	0.52
1:L5:5047:C:O2'	1:L5:5050:C:OP2	2.25	0.52
15:LM:5:ARG:NE	15:LM:59:ASP:OD1	2.42	0.52
22:LT:32:ARG:HG2	22:LT:32:ARG:HH11	1.75	0.52
26:LX:73:HIS:HB3	26:LX:116:LEU:HD23	1.91	0.52
31:Lc:56:ARG:O	31:Lc:60:ILE:HG12	2.09	0.52
46:S2:907:G:H2'	46:S2:908:A:C8	2.45	0.52
48:E:14:A:H3'	48:E:15:G:H8	1.74	0.52
65:Sb:8:LEU:H	65:Sb:8:LEU:HD23	1.74	0.52
70:CB:403:PRO:HA	70:CB:410:PHE:CD1	2.39	0.52
70:CB:670:GLN:NE2	70:CB:671:TYR:CZ	2.78	0.52
77:SE:44:LEU:HD11	77:SE:70:ILE:HG21	1.91	0.52
1:L5:98:A:OP1	16:LN:195:ARG:HD3	2.10	0.52
1:L5:908:G:H2'	1:L5:909:A:H8	1.75	0.52
1:L5:1076:C:H2'	1:L5:1077:C:C6	2.45	0.52
1:L5:4419:U:C2	70:CB:765:ARG:HD2	2.45	0.52
1:L5:4922:C:H2'	1:L5:4923:C:C6	2.45	0.52
13:LJ:174:ILE:HG22	13:LJ:175:LEU:N	2.25	0.52
21:LS:74:ARG:O	21:LS:76:LYS:NZ	2.38	0.52
46:S2:536:A:H3'	46:S2:537:C:C5'	2.37	0.52
46:S2:1255:G:OP1	46:S2:1256:G:O2'	2.18	0.52
46:S2:1503:C:O3'	70:CB:667:LYS:NZ	2.43	0.52
58:SU:61:LEU:O	58:SU:81:GLN:HA	2.10	0.52
65:Sb:36:LYS:HB2	65:Sb:43:ILE:HD13	1.91	0.52
70:CB:398:ILE:CD1	70:CB:412:ALA:HB1	2.40	0.52
75:SH:15:LYS:H	75:SH:16:PRO:HD3	1.74	0.52
1:L5:1070:G:O6	8:LE:46:ARG:NH2	2.41	0.51
1:L5:1081:C:O2'	1:L5:1082:C:H5'	2.10	0.51
1:L5:2491:C:H2'	1:L5:2492:C:C6	2.46	0.51
15:LM:74:ARG:O	15:LM:78:GLN:HG3	2.10	0.51
39:Lk:66:VAL:O	39:Lk:66:VAL:HG12	2.10	0.51
46:S2:67:C:C5	71:SG:162:LEU:HB3	2.45	0.51
46:S2:942:G:H21	52:SO:137:SER:HB2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1329:U:O2'	46:S2:1332:A:OP2	2.22	0.51
53:SP:92:SER:O	53:SP:106:GLU:HA	2.10	0.51
70:CB:46:ILE:HD12	70:CB:454:MET:HE3	1.92	0.51
77:SE:15:PRO:HG3	77:SE:39:ARG:HE	1.74	0.51
1:L5:1577:G:O2'	1:L5:1612:G:H4'	2.09	0.51
3:L8:124:U:H4'	3:L8:125:C:H5''	1.91	0.51
26:LX:89:LYS:HG2	26:LX:95:THR:CG2	2.40	0.51
26:LX:119:ILE:HD12	26:LX:140:LEU:HD22	1.92	0.51
46:S2:970:G:H3'	46:S2:971:G:H5''	1.92	0.51
48:E:46:G:H2'	48:E:47:G:C8	2.46	0.51
61:SX:95:GLU:OE2	61:SX:142:ARG:NH2	2.43	0.51
70:CB:354:ILE:O	70:CB:358:LEU:HB2	2.09	0.51
1:L5:452:A:H62	1:L5:1293:G:H3'	1.76	0.51
1:L5:1756:U:O2'	1:L5:1758:G:OP2	2.17	0.51
1:L5:3755:G:C2	1:L5:3756:A:C5	2.98	0.51
2:L7:120:U:H5'	7:LD:261:VAL:HG23	1.92	0.51
10:LG:207:VAL:HG22	10:LG:208:ASN:H	1.75	0.51
12:LI:209:TRP:O	12:LI:212:LEU:C	2.53	0.51
46:S2:71:G:O6	71:SG:170:ARG:NH1	2.43	0.51
46:S2:629:A:O2'	46:S2:631:U:OP1	2.26	0.51
46:S2:1457:U:H2'	46:S2:1458:G:H8	1.76	0.51
46:S2:1670:C:H2'	46:S2:1671:G:C8	2.46	0.51
49:SA:163:CYS:SG	49:SA:174:MET:HG3	2.51	0.51
53:SP:84:ILE:HD12	53:SP:114:HIS:O	2.10	0.51
53:SP:96:VAL:HG21	53:SP:116:LEU:HB3	1.92	0.51
59:SV:53:TYR:OH	59:SV:76:ASP:OD2	2.14	0.51
1:L5:418:A:C2	3:L8:17:A:H1'	2.46	0.51
1:L5:1774:C:H2'	1:L5:1775:A:O4'	2.10	0.51
1:L5:3659:G:OP1	4:LA:241:ARG:NH1	2.44	0.51
1:L5:4507:A:H2'	1:L5:4508:C:C6	2.46	0.51
3:L8:19:C:H2'	3:L8:20:A:C8	2.46	0.51
4:LA:108:PRO:O	4:LA:111:THR:OG1	2.25	0.51
5:LB:107:ALA:HB2	5:LB:201:LEU:HG	1.92	0.51
28:LZ:76:ASN:OD1	28:LZ:77:TYR:N	2.43	0.51
30:Lb:13:SER:HA	30:Lb:16:TRP:NE1	2.26	0.51
46:S2:986:G:O4'	52:SO:138:ASP:HB2	2.09	0.51
46:S2:1033:G:N1	46:S2:1080:A:O2'	2.38	0.51
46:S2:1548:G:N1	46:S2:1586:U:O4	2.43	0.51
46:S2:1748:G:N2	46:S2:1786:U:O2	2.35	0.51
48:E:52:C:H2'	48:E:53:C:C6	2.46	0.51
55:SR:33:ARG:HG3	69:Sg:125:ARG:NH1	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SY:110:ARG:O	62:SY:114:MET:HG3	2.11	0.51
66:Sc:31:ARG:HA	66:Sc:43:ILE:HA	1.92	0.51
69:Sg:30:MET:HE3	69:Sg:42:MET:SD	2.50	0.51
71:SG:159:ARG:HD2	71:SG:173:ALA:HB2	1.92	0.51
74:SF:100:ILE:HG21	74:SF:111:VAL:HG11	1.92	0.51
1:L5:48:G:OP1	14:LL:16:LYS:NZ	2.36	0.51
1:L5:914:U:O2'	1:L5:915:A:OP2	2.24	0.51
1:L5:1270:A:O2'	1:L5:1439:C:O2	2.28	0.51
1:L5:1773:U:H2'	1:L5:1774:C:C6	2.46	0.51
1:L5:2539:C:H2'	1:L5:2540:C:C6	2.44	0.51
1:L5:2580:U:OP1	28:LZ:36:ARG:NH2	2.44	0.51
22:LT:28:ALA:HA	22:LT:31:MET:HG2	1.92	0.51
23:LU:28:PRO:HB2	23:LU:34:MET:HG2	1.93	0.51
34:Lf:6:TRP:CE2	34:Lf:102:ARG:HD3	2.46	0.51
45:Lr:2:SER:O	45:Lr:6:GLN:HG3	2.10	0.51
46:S2:158:A:C2	46:S2:463:C:O2	2.63	0.51
55:SR:93:GLN:C	55:SR:95:ILE:H	2.18	0.51
1:L5:138:G:H2'	1:L5:139:G:H8	1.74	0.51
15:LM:100:ARG:HA	15:LM:103:LYS:HG2	1.92	0.51
40:Ll:26:TRP:CD1	40:Ll:26:TRP:H	2.29	0.51
70:CB:308:LYS:HB3	70:CB:311:GLU:OE1	2.11	0.51
1:L5:1199:G:H2'	1:L5:1200:G:C8	2.46	0.51
1:L5:2705:G:H1	1:L5:2710:C:H41	1.58	0.51
6:LC:204:ARG:HG2	6:LC:205:ARG:H	1.76	0.51
11:LH:18:ILE:HG22	11:LH:27:VAL:HA	1.93	0.51
12:LI:146:GLU:CD	12:LI:146:GLU:H	2.19	0.51
46:S2:212:C:H2'	46:S2:213:G:H8	1.76	0.51
46:S2:866:U:H2'	46:S2:867:G:C8	2.45	0.51
49:SA:184:ARG:HH21	49:SA:191:ARG:CG	2.24	0.51
54:SQ:48:GLN:O	54:SQ:52:LEU:HG	2.11	0.51
54:SQ:96:TYR:HA	54:SQ:100:VAL:HG12	1.93	0.51
59:SV:15:ARG:NH1	73:SC:84:PHE:HA	2.25	0.51
69:Sg:40:ILE:HB	69:Sg:59:LEU:HB2	1.93	0.51
70:CB:379:ASP:OD1	70:CB:380:GLU:N	2.43	0.51
73:SC:169:TYR:OH	73:SC:175:GLY:O	2.17	0.51
78:SI:117:TYR:CD2	78:SI:156:ALA:HB1	2.45	0.51
1:L5:224:U:O2	6:LC:219:LYS:NZ	2.44	0.51
1:L5:2904:U:H3'	1:L5:2904:U:OP2	2.11	0.51
15:LM:10:GLY:N	15:LM:27:ILE:O	2.44	0.51
38:Lj:21:ARG:O	38:Lj:22:CYS:SG	2.68	0.51
46:S2:28:U:H2'	46:S2:29:G:H8	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:104:A:H62	46:S2:356:C:H5	1.57	0.51
46:S2:203:G:OP1	78:SI:147:LYS:NZ	2.44	0.51
46:S2:212:C:H2'	46:S2:213:G:C8	2.45	0.51
46:S2:483:C:H5''	61:SI:48:LYS:HG3	1.92	0.51
46:S2:913:A:N7	75:SH:99:ARG:HB3	2.26	0.51
49:SA:188:THR:OG1	49:SA:189:ILE:HD12	2.11	0.51
50:SB:67:PHE:O	50:SB:86:LEU:HB2	2.11	0.51
53:SP:72:LYS:HE3	53:SP:93:MET:HE2	1.91	0.51
71:SG:120:ASP:HB2	71:SG:125:THR:HB	1.93	0.51
78:SI:110:ARG:HH21	78:SI:123:ARG:HG3	1.76	0.51
79:SK:67:PHE:HB3	79:SK:69:TRP:CH2	2.46	0.51
1:L5:228:C:O2'	27:LY:14:ASN:ND2	2.44	0.51
1:L5:1048:G:H2'	1:L5:1049:C:C6	2.46	0.51
1:L5:1092:G:H2'	1:L5:1093:C:C6	2.46	0.51
1:L5:1890:G:OP2	1:L5:1890:G:N2	2.34	0.51
1:L5:4740:G:H1'	1:L5:4742:G:H5''	1.92	0.51
46:S2:1265:A:N3	46:S2:1265:A:H2'	2.25	0.51
46:S2:1482:C:OP1	67:Sd:54:LYS:NZ	2.28	0.51
46:S2:1524:G:H1'	53:SP:135:ALA:HA	1.93	0.51
46:S2:1595:U:H2'	46:S2:1596:U:C6	2.46	0.51
53:SP:81:ARG:HB2	53:SP:117:GLY:HA2	1.93	0.51
60:SW:90:GLN:HA	60:SW:102:ILE:HD11	1.93	0.51
67:Sd:22:ARG:NH1	67:Sd:36:LEU:O	2.32	0.51
74:SF:188:TYR:CE1	74:SF:192:LYS:HD3	2.45	0.51
1:L5:182:G:H22	1:L5:254:G:H1	1.58	0.51
1:L5:1070:G:OP2	8:LE:65:ARG:NH1	2.44	0.51
6:LC:66:SER:HA	6:LC:77:PRO:HA	1.93	0.51
12:LI:41:ALA:O	12:LI:139:ARG:NH2	2.36	0.51
16:LN:119:TYR:OH	16:LN:131:GLU:OE1	2.22	0.51
28:LZ:13:VAL:O	28:LZ:20:GLY:N	2.44	0.51
29:La:75:LEU:HD12	29:La:117:LEU:HD11	1.91	0.51
39:Lk:13:LEU:HA	39:Lk:16:ARG:HG2	1.93	0.51
46:S2:67:C:H5	71:SG:162:LEU:HB3	1.75	0.51
46:S2:550:C:H2'	46:S2:551:U:C5	2.46	0.51
46:S2:557:U:H3'	46:S2:558:G:H2'	1.93	0.51
46:S2:868:G:OP2	46:S2:868:G:N2	2.35	0.51
46:S2:1144:A:H2'	46:S2:1145:A:C8	2.46	0.51
46:S2:1541:G:OP1	57:ST:56:ARG:HD2	2.11	0.51
46:S2:1623:A:N6	56:SS:132:ARG:HE	2.09	0.51
53:SP:25:LEU:HA	53:SP:28:MET:HG2	1.92	0.51
54:SQ:72:VAL:HB	54:SQ:84:ILE:HD11	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1234:G:H2'	1:L5:1235:G:C8	2.46	0.50
1:L5:2485:U:H1'	1:L5:2486:G:N1	2.26	0.50
14:LL:50:PRO:O	14:LL:52:SER:N	2.43	0.50
23:LU:107:LYS:C	23:LU:108:GLU:HG3	2.36	0.50
46:S2:417:C:O2'	46:S2:418:A:H5''	2.11	0.50
46:S2:1658:G:OP2	46:S2:1660:C:N4	2.43	0.50
50:SB:163:GLN:HG3	50:SB:204:ILE:HD13	1.92	0.50
62:SY:76:TYR:OH	62:SY:86:GLU:OE1	2.28	0.50
71:SG:20:ASP:OD2	71:SG:23:LYS:HG3	2.10	0.50
72:SJ:137:VAL:O	72:SJ:139:LYS:N	2.44	0.50
74:SF:28:VAL:HG12	74:SF:110:GLN:HB2	1.92	0.50
75:SH:143:ARG:HB2	75:SH:155:LYS:HB2	1.91	0.50
79:SK:35:LEU:HD22	79:SK:40:VAL:HG21	1.93	0.50
1:L5:1243:C:H2'	1:L5:1244:G:H8	1.77	0.50
1:L5:4725:C:OP1	5:LB:103:LYS:NZ	2.41	0.50
3:L8:102:G:OP2	3:L8:104:A:O2'	2.28	0.50
4:LA:45:VAL:HG12	4:LA:86:GLN:HB3	1.93	0.50
5:LB:43:LEU:HD11	5:LB:196:TRP:HH2	1.75	0.50
69:Sg:52:TYR:HE1	69:Sg:309:VAL:HG21	1.76	0.50
70:CB:416:VAL:HG12	70:CB:466:CYS:HA	1.93	0.50
1:L5:444:G:H2'	1:L5:445:U:C6	2.47	0.50
1:L5:490:C:H2'	1:L5:491:G:C8	2.46	0.50
2:L7:12:U:OP2	2:L7:67:C:O2'	2.28	0.50
5:LB:77:THR:OG1	5:LB:335:GLY:O	2.24	0.50
8:LE:118:THR:OG1	33:Le:90:MET:O	2.24	0.50
11:LH:92:MET:SD	11:LH:161:ILE:HD11	2.51	0.50
19:LQ:124:ASP:N	19:LQ:124:ASP:OD1	2.44	0.50
46:S2:17:C:H2'	46:S2:18:C:C6	2.46	0.50
46:S2:693:A:H2'	46:S2:694:G:N7	2.27	0.50
46:S2:1531:A:H2'	46:S2:1532:C:C6	2.46	0.50
46:S2:1780:G:H2'	46:S2:1781:A:O4'	2.11	0.50
58:SU:41:ARG:HA	58:SU:44:LYS:HE2	1.94	0.50
60:SW:11:LEU:HD12	60:SW:74:VAL:HB	1.94	0.50
63:SZ:65:TYR:HA	63:SZ:111:ARG:HH21	1.76	0.50
69:Sg:114:SER:HA	69:Sg:156:PHE:CD2	2.47	0.50
69:Sg:251:ALA:HB1	69:Sg:286:CYS:SG	2.51	0.50
70:CB:266:PHE:HB2	70:CB:288:THR:HG22	1.92	0.50
72:SJ:35:TYR:HD1	72:SJ:112:THR:HG21	1.77	0.50
76:SD:123:LEU:HD12	76:SD:134:CYS:SG	2.52	0.50
80:SL:33:LEU:HD23	80:SL:33:LEU:H	1.75	0.50
1:L5:512:U:OP2	14:LL:165:LYS:HD2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1369:C:OP2	1:L5:1370:G:O2'	2.25	0.50
1:L5:1719:A:H2'	1:L5:1720:C:H6	1.75	0.50
1:L5:2284:G:OP1	29:La:7:LYS:NZ	2.38	0.50
1:L5:2448:G:H2'	1:L5:2449:A:C8	2.47	0.50
16:LN:68:ARG:NH1	16:LN:124:ASP:O	2.44	0.50
22:LT:114:GLN:O	22:LT:117:LYS:HG3	2.12	0.50
46:S2:126:G:OP1	71:SG:198:ARG:HD2	2.10	0.50
46:S2:1213:C:H2'	46:S2:1214:A:C8	2.46	0.50
46:S2:1513:C:P	67:Sd:12:ARG:HH22	2.35	0.50
47:S:183:ASP:HB3	70:CB:599:HIS:CD2	2.46	0.50
69:Sg:8:ARG:N	69:Sg:8:ARG:HD3	2.27	0.50
71:SG:227:GLN:HA	71:SG:230:LYS:HG2	1.92	0.50
78:SI:84:ASN:HD22	78:SI:90:LEU:HD22	1.76	0.50
1:L5:67:C:OP2	1:L5:312:G:N2	2.44	0.50
1:L5:1258:G:H2'	1:L5:1259:G:H8	1.77	0.50
1:L5:1332:C:H2'	1:L5:1333:A:C8	2.46	0.50
1:L5:1753:G:H2'	1:L5:1754:U:C6	2.47	0.50
1:L5:3873:G:H2'	1:L5:3874:G:C8	2.45	0.50
1:L5:4257:A:H2	13:LJ:27:GLY:HA2	1.75	0.50
7:LD:84:PRO:C	7:LD:86:TYR:H	2.19	0.50
32:Ld:101:LYS:O	32:Ld:102:LEU:HD23	2.12	0.50
46:S2:326:C:O2	46:S2:327:G:N2	2.44	0.50
46:S2:374:G:OP1	80:SL:59:LYS:NZ	2.40	0.50
46:S2:1539:U:OP1	57:ST:43:LYS:HB2	2.11	0.50
50:SB:180:ASP:O	50:SB:184:VAL:HG23	2.11	0.50
51:SN:56:ASP:OD2	65:Sb:51:GLN:N	2.44	0.50
62:SY:7:ILE:HD12	62:SY:27:VAL:HG22	1.93	0.50
65:Sb:42:LYS:NZ	65:Sb:43:ILE:H	2.09	0.50
70:CB:417:PHE:O	70:CB:466:CYS:HB2	2.11	0.50
70:CB:428:ARG:NH1	70:CB:489:GLU:HA	2.26	0.50
70:CB:730:TYR:HD2	70:CB:854:PHE:CE2	2.30	0.50
79:SK:49:MET:HG3	79:SK:52:LEU:HD12	1.93	0.50
1:L5:1244:G:H2'	1:L5:1245:C:H6	1.77	0.50
1:L5:1654:G:N2	1:L5:1678:C:OP1	2.44	0.50
1:L5:1662:C:H2'	1:L5:1663:C:H6	1.77	0.50
2:L7:3:C:H2'	2:L7:4:U:C6	2.47	0.50
46:S2:528:A:N6	46:S2:558:G:O6	2.45	0.50
46:S2:1609:C:H3'	56:SS:132:ARG:NH1	2.27	0.50
50:SB:174:ARG:HG3	50:SB:175:GLU:N	2.27	0.50
54:SQ:53:GLU:OE2	54:SQ:85:ARG:NH1	2.44	0.50
66:Sc:63:ARG:NH2	74:SF:123:GLU:OE1	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Sg:110:SER:CB	69:Sg:153:CYS:HA	2.42	0.50
70:CB:383:MET:HE2	70:CB:383:MET:HA	1.93	0.50
70:CB:752:PRO:O	70:CB:754:GLN:NE2	2.44	0.50
72:SJ:38:ARG:HG2	72:SJ:39:ASN:ND2	2.26	0.50
1:L5:162:A:H2'	1:L5:163:A:C8	2.47	0.50
1:L5:1195:G:H2'	1:L5:1196:G:C8	2.46	0.50
1:L5:1298:C:H2'	1:L5:1299:G:C8	2.47	0.50
1:L5:1820:C:O2'	1:L5:1821:G:N7	2.37	0.50
3:L8:67:U:H2'	3:L8:68:G:H8	1.76	0.50
6:LC:8:ILE:HD11	6:LC:257:PHE:CE2	2.47	0.50
6:LC:218:ILE:O	6:LC:221:PHE:C	2.55	0.50
11:LH:9:THR:HG22	11:LH:56:ARG:HG3	1.94	0.50
37:Li:99:LYS:HE3	37:Li:103:LYS:HZ1	1.76	0.50
49:SA:33:GLN:HB3	49:SA:154:LEU:HD23	1.94	0.50
49:SA:183:LEU:O	49:SA:186:ARG:O	2.29	0.50
53:SP:97:TYR:HB2	53:SP:102:PHE:CE1	2.45	0.50
54:SQ:34:VAL:HG23	54:SQ:70:VAL:HG23	1.94	0.50
54:SQ:76:GLY:O	54:SQ:80:GLN:HG3	2.12	0.50
55:SR:58:MET:O	55:SR:62:GLN:HG2	2.10	0.50
59:SV:37:ALA:HA	59:SV:50:PHE:HA	1.93	0.50
69:Sg:6:THR:O	69:Sg:8:ARG:NH1	2.44	0.50
69:Sg:8:ARG:HH12	69:Sg:310:TRP:C	2.19	0.50
69:Sg:14:HIS:HB2	69:Sg:37:ASP:OD2	2.11	0.50
69:Sg:88:ARG:NH2	69:Sg:97:THR:HG21	2.27	0.50
75:SH:72:PHE:O	75:SH:76:GLN:CB	2.53	0.50
1:L5:499:G:N3	1:L5:504:G:N1	2.60	0.50
1:L5:1857:C:H2'	1:L5:1858:A:H8	1.76	0.50
1:L5:3722:G:OP2	37:Li:68:ARG:NH2	2.45	0.50
1:L5:3928:A:OP1	16:LN:90:ASN:ND2	2.43	0.50
2:L7:9:C:OP1	22:LT:26:PRO:HB3	2.11	0.50
8:LE:261:ILE:HG13	8:LE:267:LEU:HD23	1.93	0.50
14:LL:170:THR:OG1	14:LL:173:GLU:HG3	2.11	0.50
21:LS:2:LYS:HE2	21:LS:35:PRO:HD3	1.94	0.50
21:LS:139:ARG:O	21:LS:143:LYS:HG3	2.11	0.50
31:Lc:26:LYS:HB2	31:Lc:98:ASP:HB3	1.94	0.50
46:S2:526:A:O2'	72:SJ:125:HIS:HD2	1.95	0.50
46:S2:875:A:H1'	75:SH:114:GLN:HE21	1.76	0.50
46:S2:1203:G:H2'	46:S2:1204:A:H8	1.76	0.50
46:S2:1779:G:C2	46:S2:1780:G:C5	2.99	0.50
53:SP:56:LEU:HD23	53:SP:60:LEU:HD23	1.93	0.50
54:SQ:35:ASN:HD21	54:SQ:72:VAL:HG12	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:SI:165:GLN:HE21	78:SI:171:LEU:HA	1.77	0.50
1:L5:499:G:H2'	1:L5:504:G:N1	2.24	0.50
1:L5:667:A:N7	6:LC:291:ARG:NH1	2.59	0.50
1:L5:1456:C:O2'	19:LQ:73:PRO:O	2.26	0.50
1:L5:1563:A:P	1:L5:1563:A:H8	2.35	0.50
1:L5:4364:G:H2'	1:L5:4365:C:H6	1.76	0.50
3:L8:92:U:H2'	3:L8:93:C:O4'	2.11	0.50
6:LC:348:LYS:HA	6:LC:351:VAL:HG12	1.93	0.50
21:LS:80:ILE:HD13	21:LS:129:VAL:HG13	1.93	0.50
37:Li:99:LYS:HE3	37:Li:103:LYS:NZ	2.26	0.50
46:S2:1498:A:OP2	76:SD:27:ARG:NH2	2.45	0.50
46:S2:1544:C:H4'	54:SQ:80:GLN:NE2	2.27	0.50
46:S2:1566:G:H1	57:ST:97:LYS:HZ2	1.57	0.50
48:E:15:G:N2	48:E:57:C:C2	2.77	0.50
53:SP:16:THR:HG23	56:SS:91:LYS:NZ	2.27	0.50
54:SQ:9:SER:HB2	54:SQ:26:LYS:HD2	1.94	0.50
70:CB:155:LEU:HB3	70:CB:212:VAL:HG12	1.93	0.50
70:CB:849:PRO:HB2	70:CB:854:PHE:CE1	2.47	0.50
76:SD:169:ASP:OD1	76:SD:188:ILE:HB	2.12	0.50
1:L5:1298:C:H2'	1:L5:1299:G:H8	1.76	0.49
1:L5:1548:G:O2'	1:L5:2812:A:N3	2.38	0.49
1:L5:4238:G:H2'	1:L5:4239:A:H8	1.78	0.49
17:LO:54:TYR:OH	17:LO:73:PHE:O	2.30	0.49
46:S2:4:C:H4'	73:SC:207:ALA:HB2	1.94	0.49
46:S2:1544:C:H4'	54:SQ:80:GLN:HE22	1.76	0.49
49:SA:34:MET:HE2	49:SA:149:ASN:O	2.12	0.49
59:SV:4:ASP:OD1	59:SV:5:ALA:N	2.45	0.49
62:SY:18:LEU:HD12	62:SY:20:ARG:CZ	2.42	0.49
68:Se:36:MET:HE2	68:Se:40:ARG:HH21	1.76	0.49
69:Sg:68:ASP:OD1	69:Sg:69:VAL:N	2.44	0.49
70:CB:429:ILE:HG22	70:CB:443:TYR:O	2.12	0.49
72:SJ:121:LYS:O	72:SJ:125:HIS:HB3	2.12	0.49
79:SK:3:MET:SD	79:SK:48:ALA:HB2	2.52	0.49
1:L5:369:G:N2	1:L5:372:A:OP2	2.37	0.49
1:L5:467:U:C2	1:L5:468:U:H1'	2.47	0.49
1:L5:1754:U:H2'	1:L5:1755:C:C6	2.46	0.49
1:L5:1766:A:OP2	1:L5:1768:C:O2'	2.29	0.49
1:L5:2876:G:C8	44:Lp:16:THR:HG22	2.47	0.49
1:L5:3598:C:H2'	1:L5:3599:A:C8	2.46	0.49
1:L5:4771:C:H2'	1:L5:4772:C:H6	1.76	0.49
7:LD:238:GLU:O	7:LD:242:LYS:HG3	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:LV:13:LYS:HD3	24:LV:128:LEU:HD11	1.94	0.49
28:LZ:96:VAL:HG12	28:LZ:110:ALA:HB1	1.93	0.49
36:Lh:104:THR:O	36:Lh:108:GLN:HG2	2.11	0.49
46:S2:51:U:H2'	46:S2:52:G:C8	2.47	0.49
46:S2:496:C:H2'	46:S2:497:C:H6	1.77	0.49
46:S2:549:C:C5	46:S2:550:C:N4	2.81	0.49
46:S2:609:U:H2'	46:S2:610:G:H8	1.77	0.49
46:S2:996:A:H2'	46:S2:997:A:C8	2.47	0.49
46:S2:1007:C:H2'	46:S2:1008:A:C8	2.47	0.49
64:Sa:47:ALA:HA	64:Sa:50:VAL:HG13	1.94	0.49
65:Sb:33:MET:HE2	65:Sb:48:SER:HA	1.94	0.49
69:Sg:120:ILE:HB	69:Sg:132:TRP:HB2	1.94	0.49
71:SG:1:MET:HB3	71:SG:18:VAL:O	2.12	0.49
73:SC:271:ASP:OD1	73:SC:272:HIS:N	2.44	0.49
79:SK:73:ASN:HA	79:SK:76:ILE:HD12	1.94	0.49
80:SL:85:THR:OG1	80:SL:111:VAL:O	2.22	0.49
1:L5:994:G:H2'	1:L5:995:C:H4'	1.92	0.49
1:L5:1461:C:H2'	1:L5:1462:A:H8	1.78	0.49
1:L5:1730:U:H4'	22:LT:100:LYS:HB2	1.94	0.49
1:L5:1764:G:H4'	1:L5:1769:G:C6	2.47	0.49
7:LD:150:LEU:HD12	13:LJ:146:ARG:HG3	1.95	0.49
46:S2:126:G:OP2	71:SG:195:LYS:HE2	2.12	0.49
46:S2:795:A:H2'	46:S2:796:G:H8	1.76	0.49
46:S2:1416:C:OP1	57:ST:129:ARG:HG3	2.12	0.49
46:S2:1560:U:O2'	46:S2:1583:C:O2'	2.25	0.49
46:S2:1612:G:OP1	53:SP:18:ARG:NH2	2.45	0.49
49:SA:170:SER:O	49:SA:174:MET:HG2	2.12	0.49
53:SP:64:LYS:NZ	53:SP:92:SER:OG	2.46	0.49
55:SR:29:HIS:HA	55:SR:32:LYS:HG2	1.95	0.49
69:Sg:191:HIS:CE1	69:Sg:193:GLY:H	2.30	0.49
76:SD:64:ARG:HG2	76:SD:68:GLU:OE1	2.13	0.49
78:SI:84:ASN:ND2	78:SI:90:LEU:HD22	2.27	0.49
79:SK:15:LEU:HD12	79:SK:49:MET:HE2	1.94	0.49
1:L5:461:G:H2'	1:L5:462:G:H8	1.77	0.49
1:L5:679:C:H2'	1:L5:680:G:H8	1.77	0.49
1:L5:1186:U:H2'	1:L5:1187:G:N3	2.28	0.49
1:L5:1293:G:OP2	1:L5:1293:G:N2	2.37	0.49
1:L5:2570:U:H2'	1:L5:2571:C:C6	2.47	0.49
1:L5:3607:U:H2'	1:L5:3608:A:C8	2.47	0.49
1:L5:3946:G:H21	1:L5:3947:A:H62	1.60	0.49
1:L5:4064:C:H2'	1:L5:4065:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4098:A:H2'	1:L5:4099:G:H4'	1.93	0.49
1:L5:4537:C:H2'	1:L5:4538:G:H8	1.76	0.49
8:LE:96:VAL:HG22	8:LE:103:GLY:C	2.37	0.49
13:LJ:164:ARG:O	13:LJ:168:GLN:HG2	2.12	0.49
18:LP:75:GLN:HA	18:LP:75:GLN:NE2	2.27	0.49
33:Le:35:TRP:CZ2	33:Le:56:PRO:HD2	2.48	0.49
46:S2:223:C:H2'	46:S2:224:A:C8	2.47	0.49
46:S2:550:C:H2'	46:S2:551:U:C6	2.47	0.49
46:S2:575:A:P	62:SY:93:ARG:HH11	2.35	0.49
46:S2:1365:G:H2'	46:S2:1366:G:H8	1.77	0.49
46:S2:1801:A:H2'	46:S2:1802:C:C6	2.47	0.49
49:SA:196:GLU:CD	49:SA:196:GLU:H	2.20	0.49
70:CB:660:ASN:HD22	70:CB:700:VAL:HB	1.76	0.49
70:CB:689:GLU:OE1	70:CB:694:GLU:HB3	2.13	0.49
72:SJ:38:ARG:HG2	72:SJ:39:ASN:HD22	1.77	0.49
75:SH:163:GLN:O	75:SH:167:GLU:CB	2.47	0.49
76:SD:142:LEU:HG	76:SD:143:ARG:H	1.77	0.49
76:SD:215:ASP:HB2	76:SD:217:ILE:HD11	1.94	0.49
77:SE:100:ARG:HH12	77:SE:122:LYS:HA	1.77	0.49
1:L5:3784:A:O2'	1:L5:3785:A:H3'	2.12	0.49
3:L8:141:C:H2'	3:L8:142:U:H6	1.77	0.49
7:LD:35:ARG:HH11	7:LD:35:ARG:HG3	1.78	0.49
12:LI:9:TYR:O	12:LI:59:GLN:NE2	2.42	0.49
12:LI:152:LEU:HB3	12:LI:165:ILE:HD12	1.93	0.49
16:LN:84:PRO:HA	16:LN:87:HIS:CG	2.46	0.49
45:Lr:108:MET:O	45:Lr:112:ARG:HG2	2.13	0.49
46:S2:656:G:H5'	46:S2:662:G:N2	2.28	0.49
46:S2:1289:U:H2'	46:S2:1290:G:C8	2.48	0.49
48:E:45:G:H2'	48:E:46:G:H8	1.77	0.49
49:SA:80:ARG:O	49:SA:84:GLN:HG3	2.13	0.49
50:SB:103:MET:HE1	50:SB:212:VAL:HG13	1.94	0.49
70:CB:250:ALA:HA	70:CB:253:VAL:HG12	1.94	0.49
70:CB:618:ASP:OD2	70:CB:698:ARG:NH1	2.37	0.49
74:SF:182:LYS:HG3	74:SF:183:GLY:N	2.27	0.49
77:SE:63:LYS:O	77:SE:67:GLN:HG3	2.11	0.49
1:L5:433:A:C2	1:L5:3867:A:H4'	2.48	0.49
1:L5:2395:A:HO2'	1:L5:2806:A:HO2'	1.60	0.49
1:L5:2568:C:H2'	1:L5:2569:G:C8	2.47	0.49
1:L5:3734:U:H2'	1:L5:3735:G:H5'	1.93	0.49
1:L5:3951:G:N3	1:L5:4062:A:C6	2.78	0.49
1:L5:4957:C:H2'	1:L5:4958:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:SA:156:TYR:OH	59:SV:61:ARG:HG3	2.13	0.49
50:SB:57:ILE:HG22	50:SB:59:SER:H	1.77	0.49
55:SR:17:ILE:HD12	55:SR:58:MET:HE3	1.94	0.49
56:SS:47:LYS:HE3	56:SS:79:ILE:CG1	2.43	0.49
70:CB:374:GLU:HB3	70:CB:495:ARG:NH1	2.27	0.49
70:CB:751:CYS:SG	70:CB:759:ILE:HG21	2.52	0.49
77:SE:118:GLU:HA	77:SE:121:TYR:CE1	2.48	0.49
78:SI:165:GLN:HE22	78:SI:172:LEU:HD22	1.76	0.49
1:L5:174:C:H2'	1:L5:175:C:C6	2.47	0.49
1:L5:1514:U:H2'	1:L5:1515:A:C8	2.48	0.49
1:L5:1552:G:O2'	1:L5:1574:G:N2	2.29	0.49
1:L5:3610:A:H2'	1:L5:3611:A:H8	1.76	0.49
1:L5:4541:G:N2	1:L5:4544:A:OP2	2.43	0.49
1:L5:4578:G:H2'	1:L5:4579:U:C6	2.48	0.49
8:LE:178:PRO:O	8:LE:181:LEU:N	2.30	0.49
10:LG:165:GLU:HB2	16:LN:10:LEU:HD23	1.94	0.49
22:LT:93:ILE:HA	22:LT:96:ILE:HG12	1.94	0.49
46:S2:304:C:OP1	78:SI:75:LYS:NZ	2.40	0.49
46:S2:747:U:N3	46:S2:796:G:N1	2.60	0.49
49:SA:164:ASN:HB3	49:SA:170:SER:OG	2.12	0.49
56:SS:121:ARG:HG3	56:SS:131:VAL:HG13	1.94	0.49
58:SU:26:SER:OG	58:SU:27:ARG:N	2.44	0.49
61:SX:84:PHE:HB3	61:SX:105:PHE:HE1	1.77	0.49
66:Sc:12:ALA:HB1	66:Sc:32:VAL:HB	1.95	0.49
69:Sg:206:LEU:HD21	69:Sg:218:LEU:HB3	1.95	0.49
69:Sg:238:ALA:HB3	69:Sg:251:ALA:HB3	1.93	0.49
76:SD:126:ILE:HG21	76:SD:134:CYS:HB3	1.94	0.49
77:SE:100:ARG:HG2	77:SE:102:ILE:HG12	1.94	0.49
1:L5:85:G:O2'	1:L5:97:G:O6	2.26	0.49
1:L5:2781:G:O2'	40:L1:3:SER:O	2.30	0.49
1:L5:2904:U:O4	1:L5:3592:G:N2	2.45	0.49
1:L5:3764:U:H2'	1:L5:3765:G:H8	1.77	0.49
1:L5:4591:U:H2'	1:L5:4592:C:C6	2.48	0.49
6:LC:36:ILE:HG21	6:LC:122:TYR:HD2	1.77	0.49
9:LF:83:VAL:HG12	21:LS:62:VAL:HA	1.94	0.49
12:LI:43:VAL:O	12:LI:171:TRP:NE1	2.29	0.49
13:LJ:110:GLN:OE1	13:LJ:110:GLN:N	2.46	0.49
14:LL:77:SER:OG	14:LL:104:ASN:OD1	2.23	0.49
16:LN:165:THR:HG22	16:LN:166:SER:H	1.77	0.49
16:LN:165:THR:HG22	16:LN:166:SER:N	2.27	0.49
23:LU:72:VAL:O	23:LU:72:VAL:HG12	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:691:G:OP2	46:S2:691:G:N2	2.28	0.49
50:SB:159:GLN:OE1	50:SB:159:GLN:HA	2.13	0.49
54:SQ:134:GLY:N	54:SQ:140:ARG:HH11	2.11	0.49
63:SZ:99:LEU:HD11	63:SZ:102:LYS:N	2.28	0.49
76:SD:136:VAL:HG22	76:SD:152:PHE:HB2	1.94	0.49
78:SI:76:THR:HG22	78:SI:108:PRO:HG2	1.94	0.49
1:L5:99:A:H2'	1:L5:100:C:O2	2.13	0.49
1:L5:677:G:H2'	1:L5:678:C:H6	1.78	0.49
1:L5:728:U:P	9:LF:73:ARG:HH21	2.36	0.49
1:L5:2469:C:H5'	1:L5:2470:C:OP2	2.13	0.49
1:L5:3607:U:H2'	1:L5:3608:A:H8	1.78	0.49
1:L5:5061:A:H4'	1:L5:5062:G:OP1	2.12	0.49
3:L8:82:A:N7	3:L8:84:A:H3'	2.28	0.49
4:LA:101:VAL:HG22	4:LA:165:VAL:HG22	1.94	0.49
7:LD:211:LEU:HD21	7:LD:223:PHE:HE1	1.78	0.49
16:LN:103:GLU:OE1	16:LN:118:SER:OG	2.24	0.49
44:Lp:46:LYS:HE3	44:Lp:46:LYS:HB3	1.64	0.49
46:S2:693:A:H2'	46:S2:694:G:C8	2.48	0.49
46:S2:874:G:H2'	46:S2:875:A:C8	2.47	0.49
46:S2:944:A:H5''	52:SO:134:PRO:HB3	1.95	0.49
46:S2:1164:G:O2'	46:S2:1165:G:H5'	2.13	0.49
46:S2:1407:U:H4'	54:SQ:71:ARG:NH2	2.27	0.49
49:SA:144:THR:O	49:SA:158:ASP:HB2	2.12	0.49
69:Sg:121:VAL:HG12	69:Sg:131:LEU:HD23	1.93	0.49
70:CB:415:ARG:HG3	70:CB:469:ILE:HG13	1.95	0.49
77:SE:126:VAL:HA	77:SE:141:THR:HA	1.94	0.49
80:SL:22:ARG:NH1	80:SL:22:ARG:HA	2.28	0.49
1:L5:257:C:H2'	1:L5:258:G:H8	1.78	0.49
1:L5:497:G:H1'	1:L5:498:C:H5	1.78	0.49
1:L5:1243:C:C2	1:L5:1244:G:C8	3.01	0.49
1:L5:3951:G:O6	1:L5:4060:U:O4	2.30	0.49
20:LR:39:GLN:HA	20:LR:42:ARG:HD2	1.95	0.49
21:LS:28:TYR:CE2	21:LS:54:MET:HE1	2.48	0.49
39:Lk:10:ASP:OD2	39:Lk:11:PHE:N	2.46	0.49
46:S2:550:C:O2'	46:S2:551:U:O5'	2.24	0.49
48:E:2:U:H2'	48:E:3:A:H8	1.77	0.49
48:E:43:U:H2'	48:E:44:U:C6	2.48	0.49
53:SP:17:TYR:OH	53:SP:18:ARG:NH1	2.46	0.49
62:SY:97:TYR:CE2	62:SY:99:LYS:HB2	2.48	0.49
68:Se:11:LYS:O	68:Se:15:GLN:HG3	2.13	0.49
78:SI:90:LEU:HA	78:SI:93:THR:HG22	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:126:C:H2'	1:L5:127:G:C8	2.47	0.48
1:L5:661:C:H2'	1:L5:662:C:C6	2.47	0.48
1:L5:2504:C:O2'	1:L5:2505:C:H3'	2.12	0.48
1:L5:2554:U:C2	1:L5:2764:A:N7	2.80	0.48
1:L5:2583:C:OP2	35:Lg:76:ARG:NH1	2.37	0.48
1:L5:3917:A:H2'	1:L5:3918:G:H8	1.77	0.48
1:L5:4563:U:H2'	1:L5:4564:A:H8	1.77	0.48
1:L5:4872:G:OP2	15:LM:94:LYS:NZ	2.45	0.48
11:LH:16:VAL:HG12	11:LH:29:GLY:HA3	1.95	0.48
13:LJ:78:LYS:HE3	13:LJ:82:ILE:HD11	1.95	0.48
23:LU:19:LEU:HD12	23:LU:20:LYS:HG2	1.94	0.48
46:S2:677:G:H21	46:S2:1028:A:H62	1.59	0.48
46:S2:1372:U:OP1	46:S2:1385:G:N2	2.36	0.48
46:S2:1640:A:O2'	48:E:37:A:N6	2.45	0.48
53:SP:91:GLY:CA	53:SP:107:ILE:O	2.60	0.48
55:SR:7:LYS:O	55:SR:11:LYS:HG2	2.13	0.48
57:ST:127:GLY:O	57:ST:131:LEU:HD23	2.12	0.48
60:SW:52:ILE:HB	75:SH:144:ILE:CG2	2.42	0.48
68:Se:2:VAL:HG22	68:Se:4:GLY:H	1.77	0.48
70:CB:831:PRO:HA	70:CB:834:VAL:HG12	1.95	0.48
72:SJ:58:ARG:HD3	73:SC:199:PRO:HG3	1.94	0.48
75:SH:12:ASN:OD1	75:SH:13:GLY:N	2.41	0.48
1:L5:2478:C:H2'	1:L5:2479:G:H5'	1.93	0.48
1:L5:2497:C:H2'	1:L5:2498:C:C6	2.48	0.48
1:L5:3760:A:C4	46:S2:1827:U:H5''	2.48	0.48
5:LB:71:GLU:OE1	25:LW:1:MET:N	2.46	0.48
28:LZ:99:ASP:HB2	28:LZ:102:ARG:NH2	2.28	0.48
31:Lc:78:ASN:OD1	31:Lc:79:ILE:N	2.46	0.48
46:S2:582:U:H2'	46:S2:583:A:O4'	2.13	0.48
46:S2:1260:A:C2	46:S2:1620:A:C4	3.02	0.48
46:S2:1567:G:C6	56:SS:82:TRP:CD1	3.01	0.48
49:SA:42:LYS:HE3	49:SA:44:ASP:OD2	2.13	0.48
49:SA:154:LEU:HD21	59:SV:66:ASP:OD2	2.13	0.48
57:ST:112:MET:HE1	57:ST:126:GLN:NE2	2.27	0.48
62:SY:78:SER:OG	62:SY:80:ASP:OD1	2.22	0.48
69:Sg:118:ARG:HH11	69:Sg:118:ARG:HG3	1.78	0.48
70:CB:5:THR:O	70:CB:9:ILE:HG12	2.13	0.48
70:CB:402:VAL:HG12	70:CB:411:TYR:O	2.13	0.48
70:CB:759:ILE:HA	70:CB:762:VAL:HG12	1.95	0.48
74:SF:88:MET:O	74:SF:91:ARG:HG3	2.13	0.48
74:SF:188:TYR:HE1	74:SF:192:LYS:HD3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:SE:43:PRO:HG2	77:SE:46:ILE:HG12	1.95	0.48
78:SI:48:VAL:HG11	78:SI:54:LYS:HG3	1.94	0.48
1:L5:678:C:H2'	1:L5:679:C:H6	1.78	0.48
1:L5:1273:G:H8	30:Lb:117:ARG:HD3	1.78	0.48
1:L5:1973:G:H3'	1:L5:1974:U:H2'	1.95	0.48
1:L5:3949:A:C8	1:L5:4065:G:C5	3.01	0.48
1:L5:4105:A:N3	1:L5:4106:G:N2	2.60	0.48
1:L5:4988:U:H4'	1:L5:4989:U:C5	2.48	0.48
20:LR:105:LEU:HD22	20:LR:135:LYS:HG3	1.95	0.48
27:LY:26:ARG:HG2	27:LY:78:TYR:CE1	2.49	0.48
29:La:103:VAL:HG22	29:La:125:LYS:O	2.14	0.48
46:S2:1387:G:H2'	46:S2:1388:A:O4'	2.14	0.48
48:E:60:A:H2'	48:E:61:G:C8	2.47	0.48
58:SU:24:LEU:HB3	58:SU:32:LEU:HD11	1.94	0.48
61:SX:68:LYS:O	61:SX:85:VAL:HG12	2.13	0.48
67:Sd:24:CYS:O	67:Sd:25:SER:OG	2.31	0.48
69:Sg:107:ASP:N	69:Sg:107:ASP:OD1	2.42	0.48
69:Sg:107:ASP:OD2	69:Sg:125:ARG:NH1	2.45	0.48
70:CB:50:ARG:O	70:CB:55:ARG:NE	2.46	0.48
70:CB:224:THR:HG22	70:CB:227:GLN:OE1	2.13	0.48
70:CB:428:ARG:HH12	70:CB:489:GLU:HA	1.78	0.48
74:SF:59:LYS:HG2	74:SF:60:ARG:H	1.78	0.48
1:L5:985:C:H3'	1:L5:986:C:H6	1.78	0.48
4:LA:115:CYS:SG	4:LA:124:GLY:HA3	2.53	0.48
9:LF:94:ARG:O	9:LF:118:PHE:N	2.47	0.48
9:LF:226:HIS:ND1	9:LF:228:VAL:HG22	2.28	0.48
11:LH:111:LEU:HD11	11:LH:125:ARG:HB3	1.95	0.48
18:LP:36:ILE:O	18:LP:39:MET:HG3	2.13	0.48
27:LY:39:ARG:O	27:LY:42:TYR:C	2.57	0.48
32:Ld:64:ILE:HG23	32:Ld:68:LEU:HD23	1.94	0.48
46:S2:72:C:N4	71:SG:170:ARG:HB3	2.28	0.48
46:S2:289:G:N2	46:S2:293:C:O2	2.35	0.48
46:S2:905:C:H2'	46:S2:906:U:C6	2.48	0.48
46:S2:1047:C:H5'	52:SO:143:LYS:HB2	1.95	0.48
56:SS:112:GLU:O	56:SS:116:LYS:HG2	2.13	0.48
57:ST:126:GLN:HE21	57:ST:129:ARG:HH21	1.61	0.48
64:Sa:87:ARG:NH1	64:Sa:92:ARG:O	2.47	0.48
65:Sb:56:CYS:HB3	65:Sb:59:CYS:O	2.12	0.48
68:Se:42:PHE:CZ	72:SJ:30:LYS:HG3	2.48	0.48
74:SF:40:ALA:C	74:SF:45:TYR:HE2	2.21	0.48
78:SI:125:LYS:H	78:SI:128:LYS:NZ	2.10	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:182:G:N2	1:L5:184:U:O4'	2.46	0.48
1:L5:185:C:H2'	1:L5:186:G:H8	1.78	0.48
1:L5:1198:G:H2'	1:L5:1199:G:C8	2.48	0.48
1:L5:1846:G:H2'	1:L5:1847:C:H6	1.78	0.48
1:L5:2706:G:O6	20:LR:46:LYS:NZ	2.35	0.48
1:L5:3726:A:H2'	1:L5:3727:A:C8	2.49	0.48
4:LA:45:VAL:CG1	4:LA:86:GLN:HB3	2.43	0.48
5:LB:47:LEU:HD13	5:LB:181:MET:SD	2.53	0.48
5:LB:351:LEU:HD23	5:LB:351:LEU:H	1.77	0.48
8:LE:254:ASP:O	8:LE:258:LEU:HD23	2.13	0.48
12:LI:183:ASP:N	12:LI:183:ASP:OD1	2.44	0.48
22:LT:64:VAL:HG13	22:LT:72:VAL:HG13	1.95	0.48
46:S2:145:G:H2'	46:S2:146:G:H8	1.77	0.48
46:S2:419:G:O3'	60:SW:88:LYS:NZ	2.46	0.48
46:S2:508:A:H3'	46:S2:509:G:H8	1.78	0.48
46:S2:544:G:H2'	46:S2:545:A:C8	2.48	0.48
46:S2:750:C:N3	46:S2:752:G:N2	2.60	0.48
46:S2:1101:U:H2'	46:S2:1102:G:C8	2.49	0.48
46:S2:1199:A:H2'	46:S2:1200:A:C8	2.49	0.48
55:SR:21:TYR:CD1	55:SR:58:MET:HE2	2.49	0.48
69:Sg:37:ASP:N	69:Sg:37:ASP:OD1	2.43	0.48
69:Sg:240:CYS:O	69:Sg:248:LEU:HD12	2.13	0.48
70:CB:149:GLU:O	70:CB:368:ARG:NH1	2.47	0.48
77:SE:137:PRO:HG2	77:SE:150:PRO:HD2	1.94	0.48
78:SI:107:THR:OG1	78:SI:108:PRO:HD3	2.14	0.48
1:L5:1306:C:H2'	1:L5:1307:A:H8	1.77	0.48
1:L5:1307:A:H2'	1:L5:1308:C:C6	2.47	0.48
1:L5:3732:A:H2'	1:L5:3733:A:C8	2.49	0.48
1:L5:4637:G:H2'	1:L5:4638:U:C6	2.48	0.48
5:LB:214:ASP:HA	5:LB:284:ILE:O	2.13	0.48
10:LG:162:ASP:HB3	10:LG:163:PRO:HD3	1.95	0.48
11:LH:25:VAL:HG21	11:LH:80:MET:HE1	1.95	0.48
21:LS:149:LYS:HB2	21:LS:149:LYS:NZ	2.29	0.48
28:LZ:73:LYS:HD3	28:LZ:75:TYR:CZ	2.49	0.48
46:S2:380:G:OP1	78:SI:31:ARG:HD2	2.13	0.48
46:S2:503:C:OP1	77:SE:62:LYS:NZ	2.47	0.48
46:S2:845:G:H2'	46:S2:846:G:C8	2.49	0.48
46:S2:1422:G:O3'	46:S2:1423:C:H3'	2.13	0.48
46:S2:1597:C:H3'	46:S2:1598:G:C8	2.48	0.48
56:SS:80:PRO:HB2	56:SS:82:TRP:NE1	2.29	0.48
61:SX:49:GLY:O	61:SX:99:GLU:HA	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:SD:158:ILE:HG13	76:SD:164:VAL:HG13	1.95	0.48
79:SK:31:LYS:HE2	79:SK:40:VAL:H	1.79	0.48
1:L5:135:G:H3'	1:L5:136:C:H5'	1.94	0.48
19:LQ:40:ASN:OD1	19:LQ:132:LYS:NZ	2.44	0.48
45:Lr:6:GLN:O	45:Lr:10:VAL:HG22	2.14	0.48
46:S2:38:A:OP1	72:SJ:5:ARG:HG3	2.14	0.48
46:S2:1093:A:O2'	60:SW:9:ASP:OD1	2.32	0.48
46:S2:1769:C:OP2	46:S2:1771:G:N1	2.43	0.48
51:SN:52:VAL:HG23	51:SN:55:ARG:HH12	1.79	0.48
56:SS:119:ALA:O	56:SS:123:LEU:HG	2.13	0.48
66:Sc:55:VAL:O	74:SF:143:PRO:HG3	2.14	0.48
69:Sg:10:THR:HB	69:Sg:306:LEU:HD12	1.96	0.48
69:Sg:173:LEU:HD11	69:Sg:187:ASN:OD1	2.13	0.48
70:CB:18:ASN:OD1	70:CB:98:PHE:HA	2.14	0.48
70:CB:147:ILE:HD11	70:CB:192:TYR:HB2	1.95	0.48
70:CB:295:ASP:O	70:CB:299:LYS:HG2	2.13	0.48
75:SH:76:GLN:NE2	75:SH:94:PHE:HB2	2.29	0.48
76:SD:60:GLY:HA3	76:SD:65:ARG:H	1.78	0.48
76:SD:217:ILE:HG22	76:SD:218:LEU:H	1.77	0.48
77:SE:87:MET:HA	77:SE:102:ILE:HD13	1.95	0.48
1:L5:492:U:H2'	1:L5:493:G:C8	2.48	0.48
1:L5:2079:G:H2'	1:L5:2080:U:H6	1.78	0.48
1:L5:2108:G:H2'	1:L5:2109:G:C8	2.49	0.48
1:L5:3762:U:H2'	1:L5:3763:A:O4'	2.13	0.48
1:L5:4378:A:O2'	1:L5:4379:A:H2'	2.13	0.48
1:L5:5004:C:H2'	1:L5:5005:G:O4'	2.13	0.48
7:LD:64:ILE:HD12	7:LD:109:LEU:HD22	1.95	0.48
11:LH:18:ILE:HA	11:LH:26:ILE:O	2.13	0.48
16:LN:115:VAL:HA	16:LN:134:LEU:HD13	1.95	0.48
17:LO:31:ARG:O	17:LO:33:VAL:HG23	2.14	0.48
46:S2:527:C:H2'	46:S2:528:A:C8	2.48	0.48
46:S2:563:G:HO2'	46:S2:564:A:P	2.37	0.48
46:S2:1541:G:C2	46:S2:1593:C:C2	3.02	0.48
46:S2:1752:C:N4	46:S2:1755:C:C4	2.82	0.48
53:SP:18:ARG:HE	56:SS:88:LYS:HG2	1.79	0.48
54:SQ:103:ALA:O	54:SQ:106:LYS:HG3	2.14	0.48
57:ST:139:ALA:HA	57:ST:142:ASN:HD21	1.77	0.48
64:Sa:66:LYS:HB2	64:Sa:68:TYR:CE1	2.49	0.48
66:Sc:31:ARG:HG2	66:Sc:31:ARG:HH11	1.79	0.48
70:CB:5:THR:HG22	70:CB:8:GLN:NE2	2.28	0.48
70:CB:259:LYS:HZ3	70:CB:264:ARG:HH21	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:SJ:111:GLN:NE2	72:SJ:127:ARG:HG3	2.29	0.48
1:L5:699:C:O2'	1:L5:968:C:O2	2.32	0.48
1:L5:1314:C:C2	1:L5:1315:C:C5	3.02	0.48
1:L5:4460:U:H2'	1:L5:4461:C:C6	2.48	0.48
1:L5:4967:A:H2'	1:L5:4968:A:C8	2.48	0.48
6:LC:116:ASN:HB2	6:LC:119:GLN:HG3	1.95	0.48
14:LL:204:GLU:O	14:LL:207:VAL:HG12	2.13	0.48
21:LS:102:THR:O	21:LS:106:VAL:HG23	2.14	0.48
46:S2:693:A:C5	46:S2:739:C:H4'	2.49	0.48
46:S2:733:C:C4	46:S2:734:C:H1'	2.49	0.48
46:S2:1435:C:O2'	46:S2:1437:C:N4	2.47	0.48
46:S2:1673:U:H5''	54:SQ:78:VAL:HG22	1.95	0.48
46:S2:1825:A:H62	70:CB:717:GLY:C	2.22	0.48
50:SB:38:MET:HE1	50:SB:231:LEU:HD11	1.96	0.48
62:SY:42:GLU:O	62:SY:46:LYS:HG2	2.14	0.48
69:Sg:71:ILE:HG22	69:Sg:72:SER:O	2.14	0.48
70:CB:74:ALA:HB2	70:CB:413:PHE:CE1	2.48	0.48
76:SD:167:TYR:OH	76:SD:203:PRO:HA	2.14	0.48
1:L5:187:U:H4'	1:L5:189:G:OP2	2.14	0.48
1:L5:1503:A:H4'	1:L5:1504:G:H5'	1.94	0.48
1:L5:2539:C:H2'	1:L5:2540:C:H6	1.79	0.48
1:L5:2693:G:H2'	1:L5:2694:G:N2	2.28	0.48
3:L8:137:A:H2'	3:L8:138:C:C6	2.49	0.48
5:LB:181:MET:HE2	5:LB:183:ILE:HG12	1.96	0.48
6:LC:60:HIS:HA	6:LC:92:PHE:HE1	1.78	0.48
6:LC:204:ARG:HG2	6:LC:205:ARG:N	2.29	0.48
7:LD:203:ASN:OD1	7:LD:204:VAL:N	2.46	0.48
18:LP:116:HIS:HB3	18:LP:149:ILE:HB	1.95	0.48
32:Ld:114:PHE:HA	32:Ld:117:LEU:HD12	1.94	0.48
46:S2:15:U:H2'	46:S2:16:G:O4'	2.14	0.48
46:S2:296:U:O2'	77:SE:131:VAL:O	2.27	0.48
46:S2:748:C:H42	46:S2:794:A:N6	2.11	0.48
46:S2:993:G:OP1	46:S2:1131:G:N2	2.37	0.48
47:S:195:ARG:HB3	47:S:204:LEU:HD11	1.96	0.48
55:SR:32:LYS:NZ	55:SR:33:ARG:HH12	2.12	0.48
56:SS:51:ASP:OD1	56:SS:51:ASP:N	2.46	0.48
56:SS:102:GLY:O	56:SS:106:LYS:HG2	2.13	0.48
58:SU:40:ILE:HG13	58:SU:50:VAL:HG11	1.96	0.48
62:SY:56:PHE:HE1	62:SY:94:HIS:HE2	1.58	0.48
69:Sg:156:PHE:CD1	69:Sg:165:ILE:HD13	2.49	0.48
73:SC:133:TYR:CE1	73:SC:216:MET:HA	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SF:42:LYS:HG3	74:SF:43:GLU:H	1.78	0.48
74:SF:86:LYS:O	74:SF:90:VAL:HG13	2.14	0.48
76:SD:69:LEU:HA	76:SD:72:VAL:HG22	1.95	0.48
1:L5:407:A:O2'	1:L5:410:A:OP1	2.30	0.47
1:L5:3911:C:H2'	1:L5:3912:U:H6	1.79	0.47
1:L5:4699:U:H1'	1:L5:4700:A:H5''	1.96	0.47
4:LA:131:GLY:H	4:LA:169:VAL:HG13	1.79	0.47
13:LJ:85:LYS:O	13:LJ:89:VAL:HG23	2.14	0.47
46:S2:76:U:O2'	71:SG:159:ARG:NH1	2.47	0.47
46:S2:129:C:OP2	46:S2:214:U:H2'	2.14	0.47
46:S2:419:G:N2	46:S2:661:U:O2	2.46	0.47
46:S2:549:C:H2'	46:S2:550:C:C6	2.49	0.47
46:S2:568:C:H2'	46:S2:569:A:H8	1.79	0.47
47:S:184:GLY:HA2	70:CB:710:HIS:CD2	2.49	0.47
49:SA:15:VAL:HG21	55:SR:111:PHE:CE2	2.49	0.47
50:SB:33:VAL:HG12	50:SB:96:CYS:HB2	1.96	0.47
51:SN:83:ASP:N	51:SN:83:ASP:OD1	2.46	0.47
58:SU:22:ILE:HD11	58:SU:112:VAL:HG22	1.96	0.47
58:SU:48:LEU:HD13	58:SU:93:SER:OG	2.14	0.47
69:Sg:240:CYS:SG	69:Sg:291:TRP:HD1	2.37	0.47
73:SC:104:ASP:OD1	73:SC:104:ASP:N	2.46	0.47
1:L5:238:C:OP2	27:LY:45:ARG:NH2	2.46	0.47
1:L5:4524:G:C2	5:LB:252:ALA:HB1	2.50	0.47
7:LD:86:TYR:OH	7:LD:247:ILE:HD11	2.14	0.47
8:LE:152:ILE:O	8:LE:159:GLY:N	2.48	0.47
12:LI:135:ILE:HG22	12:LI:136:MET:HG3	1.95	0.47
14:LL:90:VAL:O	14:LL:94:ILE:HG12	2.14	0.47
21:LS:173:ASN:OD1	21:LS:174:THR:N	2.48	0.47
28:LZ:102:ARG:HB2	28:LZ:102:ARG:HH11	1.78	0.47
34:Lf:50:VAL:HG22	34:Lf:69:VAL:HG22	1.96	0.47
38:Lj:4:GLY:O	38:Lj:8:PHE:HD2	1.97	0.47
46:S2:815:U:C2	46:S2:816:A:C8	3.02	0.47
46:S2:1614:A:P	53:SP:42:ARG:HH12	2.37	0.47
52:SO:145:GLY:O	64:Sa:22:ARG:NH1	2.46	0.47
62:SY:114:MET:HA	62:SY:117:VAL:HG12	1.96	0.47
69:Sg:177:TRP:CZ3	69:Sg:184:LEU:HB2	2.49	0.47
78:SI:110:ARG:O	78:SI:114:GLU:HG2	2.14	0.47
78:SI:110:ARG:NH2	78:SI:122:GLY:O	2.48	0.47
78:SI:205:ARG:NH1	78:SI:206:LYS:HB2	2.29	0.47
1:L5:965:G:H2'	1:L5:2092:G:N2	2.29	0.47
1:L5:1669:A:OP1	30:Lb:18:ARG:NH1	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1719:A:H2'	1:L5:1720:C:C6	2.49	0.47
1:L5:4188:U:H2'	1:L5:4189:U:C6	2.49	0.47
6:LC:33:ARG:HG3	6:LC:122:TYR:OH	2.13	0.47
7:LD:41:LYS:NZ	22:LT:32:ARG:O	2.44	0.47
11:LH:117:PHE:O	11:LH:120:GLU:HG2	2.13	0.47
12:LI:84:GLY:O	12:LI:140:THR:OG1	2.23	0.47
17:LO:197:LYS:HG2	17:LO:202:LEU:O	2.14	0.47
29:La:12:ARG:HG3	29:La:12:ARG:O	2.14	0.47
46:S2:162:C:H2'	46:S2:163:U:O4'	2.14	0.47
46:S2:691:G:H3'	46:S2:692:G:H4'	1.96	0.47
46:S2:863:U:H2'	46:S2:864:A:H8	1.80	0.47
46:S2:1222:G:H2'	46:S2:1223:A:C8	2.50	0.47
49:SA:108:PHE:HD2	49:SA:136:GLU:HG3	1.79	0.47
49:SA:216:ALA:O	49:SA:220:LYS:HG2	2.14	0.47
51:SN:33:VAL:O	51:SN:37:ILE:HG13	2.14	0.47
65:Sb:59:CYS:SG	65:Sb:61:THR:OG1	2.63	0.47
69:Sg:247:TRP:HA	69:Sg:259:TRP:O	2.14	0.47
70:CB:429:ILE:HD11	70:CB:479:LEU:HD12	1.94	0.47
70:CB:749:ILE:HG12	70:CB:810:PRO:HB3	1.95	0.47
73:SC:60:TRP:CD1	73:SC:92:GLU:OE2	2.67	0.47
78:SI:61:ASP:N	78:SI:61:ASP:OD1	2.44	0.47
1:L5:739:G:O2'	1:L5:740:G:O4'	2.32	0.47
1:L5:1333:A:H2'	1:L5:1334:A:C8	2.49	0.47
1:L5:1702:C:C4'	6:LC:308:LYS:HE3	2.39	0.47
1:L5:1933:G:H2'	1:L5:1934:A:C8	2.49	0.47
1:L5:1942:A:H2'	1:L5:1943:A:H8	1.77	0.47
1:L5:4458:C:H2'	1:L5:4459:U:C6	2.49	0.47
1:L5:4508:C:N3	1:L5:4512:U:H5	2.12	0.47
3:L8:130:C:H2'	3:L8:131:G:H8	1.80	0.47
7:LD:217:ASP:OD1	7:LD:218:ALA:N	2.47	0.47
12:LI:34:PHE:HD2	12:LI:89:VAL:HG23	1.80	0.47
13:LJ:17:ILE:HD11	13:LJ:165:TRP:HZ2	1.79	0.47
37:Li:63:VAL:O	37:Li:64:SER:OG	2.28	0.47
43:Lo:12:CYS:HB2	43:Lo:21:HIS:HE1	1.78	0.47
46:S2:943:U:C2	46:S2:944:A:C8	3.03	0.47
46:S2:1781:A:H3'	46:S2:1783:C:C4	2.49	0.47
46:S2:1865:C:C6	64:Sa:5:ARG:HB3	2.49	0.47
58:SU:94:PRO:HB2	58:SU:96:GLU:OE1	2.14	0.47
63:SZ:91:LEU:HD21	63:SZ:96:LEU:HB3	1.96	0.47
67:Sd:23:VAL:HG22	79:SK:64:TRP:CE3	2.50	0.47
71:SG:2:LYS:HB2	71:SG:108:VAL:HG23	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:SE:95:THR:HG23	77:SE:97:GLU:HG2	1.96	0.47
1:L5:2517:A:H5'	35:Lg:62:LYS:HE3	1.95	0.47
1:L5:3606:U:H2'	1:L5:3607:U:C6	2.49	0.47
1:L5:4347:G:H2'	1:L5:4348:A:C8	2.49	0.47
1:L5:4717:A:OP2	5:LB:30:LYS:NZ	2.31	0.47
4:LA:241:ARG:HH11	4:LA:241:ARG:HG3	1.79	0.47
7:LD:41:LYS:HB2	22:LT:68:THR:O	2.13	0.47
26:LX:110:LYS:HG3	26:LX:121:VAL:CG2	2.44	0.47
32:Ld:54:MET:O	32:Ld:57:MET:C	2.58	0.47
33:Le:98:GLU:HG3	33:Le:123:THR:OG1	2.14	0.47
37:Li:67:LYS:O	37:Li:71:LYS:HG3	2.14	0.47
38:Lj:54:LYS:O	38:Lj:58:THR:HB	2.15	0.47
40:Ll:42:ARG:HG3	40:Ll:47:THR:HG23	1.96	0.47
44:Lp:74:THR:HA	44:Lp:77:VAL:HG22	1.96	0.47
46:S2:617:G:OP2	61:SX:68:LYS:NZ	2.47	0.47
46:S2:913:A:OP2	75:SH:99:ARG:NH1	2.48	0.47
46:S2:1593:C:H2'	46:S2:1594:A:H8	1.78	0.47
46:S2:1758:G:H5'	46:S2:1759:G:OP2	2.14	0.47
53:SP:83:MET:HE3	53:SP:84:ILE:H	1.80	0.47
65:Sb:36:LYS:HE3	65:Sb:40:CYS:O	2.15	0.47
70:CB:839:ARG:NH2	70:CB:845:LYS:O	2.47	0.47
1:L5:1308:C:H2'	1:L5:1309:C:C6	2.50	0.47
1:L5:1404:G:N7	1:L5:1408:G:N2	2.63	0.47
1:L5:4092:G:C5	1:L5:4093:G:N2	2.82	0.47
1:L5:4173:G:H2'	1:L5:4174:U:H6	1.78	0.47
7:LD:182:GLY:HA2	7:LD:194:VAL:HG23	1.97	0.47
9:LF:90:ALA:HB2	9:LF:125:LEU:HD11	1.97	0.47
10:LG:187:LYS:HB2	10:LG:198:THR:HG23	1.96	0.47
28:LZ:77:TYR:HD2	31:Lc:39:ARG:HD3	1.78	0.47
38:Lj:67:LEU:HA	38:Lj:70:VAL:HG12	1.97	0.47
46:S2:443:U:H2'	46:S2:444:G:O4'	2.15	0.47
46:S2:748:C:N4	46:S2:795:A:H61	2.13	0.47
46:S2:1435:C:H42	58:SU:49:LYS:NZ	2.13	0.47
46:S2:1587:G:H5''	57:ST:77:LYS:HD3	1.95	0.47
48:E:27:A:H2'	48:E:28:U:C6	2.49	0.47
49:SA:11:LYS:O	49:SA:14:ASP:N	2.48	0.47
63:SZ:88:LEU:HD12	63:SZ:109:TYR:CD2	2.50	0.47
77:SE:87:MET:HE3	77:SE:226:PHE:CE1	2.50	0.47
78:SI:80:ASP:HB2	78:SI:94:LYS:NZ	2.29	0.47
80:SL:77:VAL:HG12	80:SL:88:ILE:HG22	1.97	0.47
1:L5:163:A:H2'	1:L5:164:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:179:G:N1	1:L5:258:G:O6	2.47	0.47
1:L5:272:U:H2'	1:L5:273:U:C6	2.49	0.47
1:L5:1786:A:H2'	1:L5:1789:C:C5	2.50	0.47
1:L5:2407:G:OP2	1:L5:2407:G:N2	2.45	0.47
1:L5:2632:U:H2'	1:L5:2633:U:C6	2.49	0.47
1:L5:3946:G:H21	1:L5:3947:A:N6	2.13	0.47
1:L5:4066:U:H2'	1:L5:4067:U:C6	2.50	0.47
1:L5:4083:U:OP1	4:LA:123:ARG:NH2	2.48	0.47
1:L5:4873:G:N3	17:LO:175:MET:HG2	2.29	0.47
1:L5:4895:C:H3'	1:L5:4895:C:OP2	2.15	0.47
1:L5:4954:G:H2'	1:L5:4955:A:C8	2.50	0.47
5:LB:29:VAL:HG13	5:LB:348:ARG:HD3	1.97	0.47
11:LH:96:TYR:O	41:Lm:78:ILE:HD13	2.14	0.47
27:LY:51:LYS:HE2	27:LY:71:VAL:O	2.15	0.47
28:LZ:93:LYS:O	28:LZ:97:ASN:HB3	2.15	0.47
33:Le:26:ASP:OD1	33:Le:27:ARG:HG3	2.14	0.47
36:Lh:110:LYS:HB2	36:Lh:110:LYS:HE3	1.68	0.47
37:Li:85:ARG:HB3	37:Li:85:ARG:HH11	1.80	0.47
39:Lk:57:LYS:HE2	39:Lk:68:GLU:OE2	2.13	0.47
46:S2:29:G:OP1	61:SX:124:LYS:NZ	2.47	0.47
46:S2:560:A:OP2	72:SJ:177:ASN:ND2	2.30	0.47
46:S2:693:A:N6	46:S2:738:C:HO2'	2.11	0.47
46:S2:1129:G:H3'	46:S2:1130:G:H21	1.80	0.47
46:S2:1415:C:H3'	46:S2:1416:C:C6	2.49	0.47
46:S2:1610:G:OP2	56:SS:132:ARG:NH1	2.48	0.47
46:S2:1615:U:O4	53:SP:40:ARG:NH2	2.47	0.47
46:S2:1745:A:H1'	71:SG:66:GLY:HA2	1.97	0.47
48:E:14:A:H3'	48:E:15:G:C8	2.49	0.47
51:SN:8:GLY:C	51:SN:9:LYS:HD3	2.40	0.47
52:SO:58:GLY:O	52:SO:62:VAL:HG12	2.14	0.47
56:SS:12:ILE:HB	56:SS:19:ASN:OD1	2.15	0.47
56:SS:54:LYS:HZ3	56:SS:59:LEU:HD12	1.79	0.47
57:ST:33:TRP:HZ3	57:ST:99:VAL:HG12	1.78	0.47
59:SV:17:CYS:O	59:SV:21:ASN:CA	2.63	0.47
62:SY:55:ILE:CD1	62:SY:75:ILE:HG12	2.45	0.47
62:SY:110:ARG:NH1	62:SY:114:MET:SD	2.88	0.47
70:CB:580:ARG:HG2	70:CB:817:TRP:CZ3	2.50	0.47
70:CB:721:ILE:O	70:CB:724:THR:OG1	2.25	0.47
77:SE:168:LYS:HE2	77:SE:168:LYS:HA	1.96	0.47
79:SK:95:ARG:HG3	79:SK:95:ARG:O	2.15	0.47
80:SL:73:LEU:HB3	80:SL:90:ARG:NH1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:447:C:H2'	1:L5:448:G:C8	2.49	0.47
1:L5:678:C:H4'	45:Lr:96:MET:HE2	1.97	0.47
1:L5:2259:G:H5'	1:L5:2260:C:C5	2.50	0.47
1:L5:4645:C:OP2	20:LR:62:ARG:NH1	2.47	0.47
1:L5:4873:G:C2	17:LO:175:MET:HG2	2.50	0.47
10:LG:106:THR:OG1	10:LG:109:GLU:HG3	2.15	0.47
13:LJ:20:LEU:C	13:LJ:131:TYR:O	2.58	0.47
13:LJ:53:ALA:HB2	13:LJ:68:ILE:HG13	1.96	0.47
19:LQ:145:GLY:O	19:LQ:146:ARG:HG3	2.15	0.47
23:LU:41:GLN:O	23:LU:44:GLN:N	2.48	0.47
39:Lk:69:LEU:HD23	39:Lk:69:LEU:HA	1.74	0.47
46:S2:317:C:H2'	46:S2:318:A:H5''	1.95	0.47
46:S2:529:A:H8	46:S2:529:A:O5'	1.96	0.47
74:SF:167:LYS:HD2	74:SF:172:CYS:SG	2.54	0.47
1:L5:1561:G:H2'	1:L5:1562:G:O4'	2.15	0.47
1:L5:1824:G:H2'	1:L5:1825:A:C8	2.50	0.47
1:L5:2562:G:N2	1:L5:2564:G:H3'	2.30	0.47
1:L5:3725:G:N2	1:L5:3728:A:OP2	2.38	0.47
1:L5:4635:A:OP1	1:L5:4636:U:O2'	2.32	0.47
1:L5:4921:C:H2'	1:L5:4922:C:H5'	1.97	0.47
9:LF:115:ARG:NH1	19:LQ:4:ASP:O	2.48	0.47
33:Le:43:ASN:OD1	33:Le:45:VAL:HG22	2.14	0.47
46:S2:65:C:C5	71:SG:174:PRO:HB3	2.50	0.47
46:S2:695:C:H41	46:S2:736:C:H1'	1.80	0.47
46:S2:804:U:H2'	46:S2:805:U:C6	2.50	0.47
46:S2:1365:G:H2'	46:S2:1366:G:C8	2.49	0.47
46:S2:1486:A:OP2	76:SD:151:LYS:HD3	2.15	0.47
48:E:81:C:H2'	48:E:82:G:H8	1.80	0.47
49:SA:85:ARG:HD3	49:SA:203:PHE:O	2.15	0.47
49:SA:148:CYS:HB3	49:SA:152:SER:OG	2.14	0.47
53:SP:30:TYR:O	53:SP:34:MET:HG2	2.14	0.47
55:SR:28:PHE:HA	55:SR:55:THR:HG21	1.96	0.47
68:Se:42:PHE:HZ	72:SJ:26:ASP:HB2	1.78	0.47
70:CB:813:VAL:HG13	70:CB:814:PHE:N	2.29	0.47
71:SG:125:THR:HG22	71:SG:125:THR:O	2.15	0.47
75:SH:39:GLN:O	75:SH:43:LEU:HD23	2.14	0.47
1:L5:406:C:HO2'	1:L5:407:A:P	2.36	0.47
1:L5:519:C:O2'	1:L5:643:C:O2	2.28	0.47
1:L5:1952:G:H4'	21:LS:93:MET:CG	2.44	0.47
1:L5:2744:A:H2'	1:L5:2745:A:C8	2.50	0.47
1:L5:3733:A:H2'	1:L5:3734:U:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:8:ILE:HD11	6:LC:257:PHE:CZ	2.50	0.47
23:LU:54:GLY:C	23:LU:56:LEU:H	2.20	0.47
28:LZ:6:LYS:HA	28:LZ:6:LYS:HD3	1.79	0.47
37:Li:84:LYS:HB3	37:Li:84:LYS:HE2	1.79	0.47
46:S2:496:C:H2'	46:S2:497:C:C6	2.50	0.47
46:S2:672:A:N6	46:S2:1027:A:OP1	2.43	0.47
46:S2:1677:U:H2'	46:S2:1678:A:H8	1.79	0.47
50:SB:97:LEU:HB3	50:SB:232:HIS:NE2	2.30	0.47
50:SB:163:GLN:HE21	50:SB:204:ILE:HG23	1.80	0.47
51:SN:45:LEU:HB3	51:SN:49:GLN:HG3	1.97	0.47
62:SY:103:SER:HB3	62:SY:106:GLN:NE2	2.30	0.47
70:CB:345:PRO:HB2	70:CB:348:ASP:HB3	1.96	0.47
70:CB:654:PRO:HD2	70:CB:658:GLY:HA3	1.97	0.47
71:SG:70:HIS:O	71:SG:70:HIS:ND1	2.44	0.47
80:SL:128:VAL:HG12	80:SL:142:VAL:HA	1.96	0.47
1:L5:759:G:C5'	11:LH:50:LYS:HZ1	2.28	0.46
1:L5:1217:G:N1	1:L5:1218:G:C6	2.83	0.46
1:L5:1699:A:N6	1:L5:1705:G:O2'	2.46	0.46
1:L5:1749:A:H2'	1:L5:1750:G:C8	2.50	0.46
1:L5:1961:G:O2'	1:L5:2025:A:N6	2.48	0.46
1:L5:2875:C:OP1	44:Lp:23:ARG:NH2	2.48	0.46
1:L5:3923:A:H2'	1:L5:3924:C:C6	2.51	0.46
1:L5:4572:U:H2'	1:L5:4573:G:C8	2.50	0.46
9:LF:26:ALA:O	9:LF:29:LYS:HG3	2.14	0.46
9:LF:80:ASN:HB3	22:LT:141:VAL:O	2.15	0.46
12:LI:183:ASP:C	12:LI:187:LYS:HZ2	2.22	0.46
14:LL:169:ILE:O	14:LL:174:LYS:NZ	2.49	0.46
16:LN:185:GLY:HA3	16:LN:194:ARG:HH22	1.80	0.46
17:LO:185:VAL:O	17:LO:189:ILE:HG12	2.14	0.46
28:LZ:11:VAL:HG21	28:LZ:80:LEU:HB3	1.96	0.46
29:La:36:GLY:HA3	29:La:40:HIS:CE1	2.49	0.46
33:Le:127:ALA:O	33:Le:128:ARG:HD3	2.15	0.46
46:S2:570:C:O2	62:SY:34:THR:OG1	2.33	0.46
46:S2:886:A:C6	46:S2:901:G:N3	2.84	0.46
46:S2:1601:A:OP2	46:S2:1636:G:N2	2.45	0.46
46:S2:1754:G:N7	46:S2:1779:G:N2	2.64	0.46
48:E:41:C:H2'	48:E:42:A:H8	1.80	0.46
60:SW:42:MET:SD	75:SH:148:LEU:HA	2.56	0.46
62:SY:27:VAL:HG11	62:SY:35:VAL:HG11	1.97	0.46
65:Sb:36:LYS:HB3	65:Sb:78:SER:OG	2.15	0.46
70:CB:308:LYS:O	70:CB:312:THR:HG23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:CB:394:LEU:HD21	70:CB:421:VAL:HG12	1.96	0.46
70:CB:839:ARG:HD2	70:CB:844:LEU:HD12	1.96	0.46
72:SJ:80:ARG:O	72:SJ:84:ILE:HG12	2.16	0.46
79:SK:31:LYS:HA	79:SK:31:LYS:HD2	1.77	0.46
1:L5:1070:G:O2'	1:L5:1071:C:O5'	2.28	0.46
1:L5:1404:G:N7	1:L5:1408:G:N1	2.62	0.46
1:L5:1563:A:H8	1:L5:1563:A:OP1	1.97	0.46
1:L5:3598:C:H2'	1:L5:3599:A:H8	1.80	0.46
1:L5:4084:G:O6	4:LA:70:LYS:NZ	2.47	0.46
1:L5:4313:A:OP1	22:LT:92:ARG:NH1	2.49	0.46
1:L5:4473:A:OP1	41:Lm:124:LYS:NZ	2.48	0.46
6:LC:28:PHE:CD1	6:LC:132:ALA:HB2	2.51	0.46
7:LD:35:ARG:HG3	7:LD:35:ARG:NH1	2.30	0.46
30:Lb:114:LYS:NZ	30:Lb:117:ARG:HH22	2.13	0.46
46:S2:1274:G:H4'	79:SK:47:LYS:HE2	1.98	0.46
46:S2:1779:G:H2'	46:S2:1780:G:C8	2.50	0.46
53:SP:91:GLY:N	53:SP:107:ILE:O	2.48	0.46
69:Sg:7:LEU:HD23	69:Sg:7:LEU:H	1.79	0.46
69:Sg:251:ALA:HB2	69:Sg:289:LEU:CD1	2.45	0.46
70:CB:322:LYS:O	70:CB:342:ARG:NH1	2.48	0.46
72:SJ:131:ARG:HA	72:SJ:131:ARG:HD2	1.69	0.46
77:SE:180:LEU:HB3	77:SE:229:GLY:HA3	1.97	0.46
1:L5:302:C:OP1	16:LN:68:ARG:HB2	2.15	0.46
1:L5:1084:C:H2'	1:L5:1085:C:C6	2.50	0.46
1:L5:1217:G:C6	1:L5:1218:G:C6	3.03	0.46
1:L5:1700:G:H22	9:LF:177:ARG:NH1	2.11	0.46
1:L5:2884:G:H2'	1:L5:2885:A:H8	1.80	0.46
1:L5:4097:G:C6	1:L5:4113:U:O2	2.68	0.46
2:L7:57:C:H2'	2:L7:58:A:H8	1.80	0.46
5:LB:147:GLU:OE2	5:LB:198:ARG:NH1	2.38	0.46
8:LE:243:THR:O	8:LE:247:LYS:HG2	2.16	0.46
12:LI:85:PHE:CE2	12:LI:87:MET:HE3	2.50	0.46
40:Ll:12:PHE:CD1	40:Ll:51:LEU:HD13	2.50	0.46
40:Ll:33:ASN:O	40:Ll:34:LYS:HG2	2.15	0.46
46:S2:1227:G:C2	46:S2:1228:A:C8	3.03	0.46
46:S2:1320:G:H2'	46:S2:1321:G:O4'	2.15	0.46
46:S2:1374:C:O2'	46:S2:1464:C:O2	2.31	0.46
46:S2:1648:G:H5''	54:SQ:125:ARG:HB2	1.97	0.46
51:SN:25:TRP:CG	65:Sb:82:LYS:HE2	2.50	0.46
53:SP:115:TYR:N	53:SP:118:GLU:OE2	2.49	0.46
56:SS:105:ASN:HA	56:SS:108:ARG:HG2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61: SX:60: LYS:HG2	61: SX:114: ASP:O	2.15	0.46
70: CB:394: LEU:HD11	70: CB:421: VAL:HG13	1.98	0.46
71: SG:67: VAL:HG12	71: SG:69: THR:HG22	1.97	0.46
74: SF:144: LEU:O	74: SF:147: VAL:HG12	2.15	0.46
76: SD:65: ARG:O	76: SD:69: LEU:HD23	2.14	0.46
1: L5:187: U:O3'	1: L5:188: G:H3'	2.15	0.46
1: L5:1907: A:H2'	1: L5:1908: A:C8	2.50	0.46
1: L5:2611: A:H2'	1: L5:2612: G:C8	2.50	0.46
1: L5:3700: C:O2'	1: L5:3774: A:N3	2.37	0.46
1: L5:3753: G:N7	1: L5:3776: G:C4	2.84	0.46
6: LC:36: ILE:HD12	6: LC:122: TYR:CE2	2.51	0.46
12: LI:85: PHE:HE2	12: LI:87: MET:HE3	1.80	0.46
12: LI:212: LEU:HD23	12: LI:213: HIS:H	1.80	0.46
46: S2:529: A:H2'	46: S2:530: U:H6	1.80	0.46
46: S2:562: U:H2'	46: S2:563: G:C8	2.51	0.46
46: S2:1438: A:H2'	46: S2:1439: A:C8	2.49	0.46
56: SS:15: VAL:HG13	56: SS:16: LEU:N	2.26	0.46
67: Sd:10: HIS:HB3	67: Sd:12: ARG:HH12	1.79	0.46
75: SH:177: TYR:O	75: SH:181: THR:HB	2.16	0.46
79: SK:31: LYS:HD3	79: SK:39: ASN:HA	1.97	0.46
79: SK:95: ARG:O	79: SK:95: ARG:NH1	2.49	0.46
1: L5:23: C:H2'	1: L5:24: G:O4'	2.16	0.46
1: L5:461: G:H2'	1: L5:462: G:C8	2.51	0.46
1: L5:504: G:H4'	1: L5:505: G:OP1	2.15	0.46
1: L5:907: C:H2'	1: L5:908: G:H8	1.80	0.46
1: L5:2017: A:O2'	1: L5:2018: C:H6	1.99	0.46
1: L5:2501: C:H2'	1: L5:2502: G:C8	2.50	0.46
1: L5:2503: G:O2'	1: L5:2505: C:H5'	2.15	0.46
1: L5:2730: U:H2'	1: L5:2731: C:C6	2.51	0.46
1: L5:3756: A:H2'	1: L5:3757: G:H8	1.79	0.46
1: L5:3861: A:H2'	1: L5:3862: A:H8	1.79	0.46
1: L5:4905: C:H2'	1: L5:4906: C:H6	1.80	0.46
1: L5:4993: G:N2	1: L5:5058: A:N1	2.55	0.46
3: L8:155: C:H2'	3: L8:156: U:O4'	2.15	0.46
5: LB:383: GLU:OE2	5: LB:383: GLU:N	2.38	0.46
6: LC:154: VAL:HG11	6: LC:174: LEU:HD11	1.96	0.46
36: Lh:87: LYS:HD3	36: Lh:91: MET:HE2	1.98	0.46
37: Li:76: ARG:HD3	37: Li:76: ARG:HA	1.65	0.46
46: S2:155: G:C6	46: S2:164: A:C6	3.04	0.46
46: S2:1143: A:OP2	73: SC:187: ARG:NH1	2.48	0.46
46: S2:1308: U:H2'	46: S2:1309: C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1447:G:P	58:SU:87:ARG:HH12	2.37	0.46
50:SB:145:LYS:NZ	55:SR:135:VAL:O	2.48	0.46
55:SR:93:GLN:O	55:SR:94:GLU:HG3	2.14	0.46
69:Sg:12:LYS:HB3	69:Sg:306:LEU:HD13	1.97	0.46
70:CB:147:ILE:HG21	70:CB:189:ILE:HD13	1.98	0.46
71:SG:148:SER:N	71:SG:151:ASP:OD2	2.39	0.46
73:SC:156:ILE:O	73:SC:160:LEU:HD23	2.16	0.46
76:SD:215:ASP:N	76:SD:215:ASP:OD1	2.49	0.46
78:SI:125:LYS:H	78:SI:128:LYS:HZ1	1.64	0.46
1:L5:298:G:OP1	16:LN:179:LYS:HD2	2.14	0.46
1:L5:663:G:N1	1:L5:664:G:C6	2.84	0.46
1:L5:966:A:H3'	1:L5:967:C:C6	2.51	0.46
1:L5:989:U:O2	1:L5:1064:G:C6	2.68	0.46
1:L5:1577:G:H5'	1:L5:1578:U:H5''	1.98	0.46
1:L5:3946:G:N2	1:L5:3947:A:H62	2.14	0.46
1:L5:4524:G:N3	5:LB:252:ALA:HB1	2.31	0.46
1:L5:5025:C:H2'	1:L5:5028:G:H1'	1.97	0.46
5:LB:257:TRP:CD1	5:LB:257:TRP:C	2.93	0.46
14:LL:7:GLY:O	29:La:49:HIS:NE2	2.42	0.46
15:LM:25:VAL:HG12	15:LM:26:ALA:N	2.29	0.46
15:LM:70:GLN:HA	15:LM:73:VAL:HG12	1.97	0.46
46:S2:24:C:O2'	46:S2:25:A:H8	1.98	0.46
46:S2:28:U:H2'	46:S2:29:G:C8	2.51	0.46
46:S2:921:G:H3'	60:SW:28:ARG:HH21	1.80	0.46
46:S2:1142:G:OP1	73:SC:187:ARG:NH2	2.45	0.46
46:S2:1545:A:H2'	46:S2:1546:G:C8	2.51	0.46
58:SU:94:PRO:HD2	58:SU:97:ILE:HD11	1.98	0.46
66:Sc:16:LYS:HA	66:Sc:52:GLU:HG3	1.97	0.46
71:SG:218:LYS:O	71:SG:222:GLU:HG2	2.15	0.46
73:SC:104:ASP:HB3	73:SC:130:ILE:HG13	1.97	0.46
1:L5:261:G:H2'	1:L5:262:G:H8	1.79	0.46
1:L5:717:U:H2'	1:L5:718:C:C6	2.51	0.46
1:L5:1306:C:H2'	1:L5:1307:A:C8	2.51	0.46
1:L5:3597:G:H2'	1:L5:3598:C:C6	2.51	0.46
1:L5:3938:G:N2	1:L5:4171:C:OP2	2.48	0.46
1:L5:4070:U:H2'	1:L5:4071:U:C6	2.51	0.46
1:L5:5003:U:H2'	1:L5:5004:C:C6	2.51	0.46
13:LJ:57:VAL:HG21	13:LJ:60:PHE:CZ	2.51	0.46
13:LJ:93:GLU:HG2	13:LJ:173:ILE:HB	1.98	0.46
19:LQ:172:ARG:NH1	29:La:56:VAL:O	2.48	0.46
29:La:81:LEU:HD22	29:La:106:SER:HB2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:674:C:H2'	46:S2:675:U:C6	2.50	0.46
46:S2:738:C:H2'	46:S2:739:C:H5''	1.98	0.46
46:S2:795:A:H2'	46:S2:796:G:C8	2.50	0.46
46:S2:1239:U:H2'	46:S2:1241:A:OP2	2.15	0.46
46:S2:1615:U:H2'	46:S2:1616:U:C6	2.51	0.46
46:S2:1705:C:H2'	46:S2:1706:G:C8	2.50	0.46
56:SS:124:ARG:O	56:SS:127:TRP:C	2.58	0.46
70:CB:86:LEU:HD12	70:CB:93:LYS:HD3	1.98	0.46
70:CB:680:VAL:O	70:CB:684:GLN:HG2	2.16	0.46
71:SG:136:LYS:O	71:SG:176:ILE:HD12	2.15	0.46
74:SF:175:ASP:O	74:SF:179:ASN:ND2	2.45	0.46
1:L5:498:C:C4	1:L5:499:G:C8	3.03	0.46
1:L5:989:U:O2'	1:L5:990:C:O4'	2.34	0.46
1:L5:2094:G:H2'	1:L5:2095:A:C4	2.51	0.46
1:L5:2249:C:H2'	1:L5:2250:C:C5	2.51	0.46
1:L5:4067:U:H2'	1:L5:4068:U:C6	2.51	0.46
1:L5:4281:A:H2'	1:L5:4282:A:H2'	1.97	0.46
1:L5:4355:G:C2	1:L5:4356:G:C8	3.03	0.46
1:L5:4920:C:H2'	1:L5:4921:C:C6	2.51	0.46
3:L8:39:G:O2'	3:L8:104:A:N1	2.48	0.46
8:LE:148:THR:HG22	8:LE:200:LYS:HD2	1.96	0.46
11:LH:42:ASN:HD21	17:LO:131:PRO:HB2	1.81	0.46
13:LJ:85:LYS:NZ	13:LJ:114:ASP:O	2.44	0.46
17:LO:27:VAL:O	17:LO:101:ARG:NH1	2.49	0.46
18:LP:36:ILE:HD11	18:LP:48:LEU:HD21	1.98	0.46
46:S2:184:G:H2'	46:S2:185:G:H8	1.80	0.46
46:S2:532:C:H2'	46:S2:533:A:C8	2.51	0.46
46:S2:698:G:H2'	46:S2:733:C:C2	2.50	0.46
46:S2:1772:C:H2'	46:S2:1772:C:O2	2.14	0.46
49:SA:54:THR:HG22	49:SA:162:PRO:HG2	1.97	0.46
49:SA:173:LEU:O	49:SA:177:MET:HG3	2.16	0.46
53:SP:111:MET:HB2	53:SP:119:PHE:CZ	2.51	0.46
69:Sg:127:LYS:HD2	69:Sg:148:SER:C	2.41	0.46
69:Sg:158:PRO:HD3	69:Sg:200:VAL:HG11	1.96	0.46
70:CB:385:ILE:HD11	70:CB:395:MET:HE3	1.97	0.46
70:CB:404:THR:HG23	70:CB:410:PHE:HA	1.98	0.46
70:CB:595:SER:HA	70:CB:724:THR:HG21	1.97	0.46
77:SE:201:HIS:O	77:SE:204:SER:O	2.34	0.46
78:SI:100:CYS:SG	78:SI:175:ILE:HD12	2.55	0.46
1:L5:678:C:H2'	1:L5:679:C:C6	2.51	0.46
1:L5:734:G:C2	1:L5:735:G:C8	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:923:C:O2'	1:L5:924:C:H5'	2.16	0.46
1:L5:1207:C:H2'	1:L5:1208:G:C8	2.48	0.46
1:L5:1431:C:H2'	1:L5:1432:G:O4'	2.16	0.46
1:L5:1982:G:H8	1:L5:1982:G:OP2	1.99	0.46
1:L5:1982:G:H2'	1:L5:1983:A:O4'	2.16	0.46
1:L5:2358:G:H2'	1:L5:2359:U:O4'	2.16	0.46
1:L5:2520:C:H2'	1:L5:2521:G:H8	1.80	0.46
1:L5:4724:A:O2'	5:LB:104:THR:HG22	2.16	0.46
3:L8:67:U:H5''	38:Lj:86:PRO:HA	1.98	0.46
5:LB:71:GLU:OE2	5:LB:366:LYS:HE2	2.15	0.46
7:LD:207:TYR:O	7:LD:211:LEU:HD23	2.16	0.46
8:LE:261:ILE:HD11	8:LE:271:LEU:CD1	2.45	0.46
10:LG:260:GLU:O	10:LG:264:LYS:HG2	2.15	0.46
11:LH:41:ILE:HG22	11:LH:43:VAL:HG13	1.98	0.46
46:S2:85:A:H5''	62:SY:118:ARG:HH12	1.80	0.46
46:S2:190:G:C6	46:S2:208:G:C6	3.04	0.46
46:S2:1247:C:OP2	47:S:188:ARG:NH2	2.37	0.46
48:E:10:G:H2'	48:E:11:C:C6	2.50	0.46
49:SA:82:THR:HG22	49:SA:204:TYR:CD2	2.51	0.46
49:SA:198:MET:O	49:SA:201:LEU:HB3	2.16	0.46
49:SA:219:GLU:HA	49:SA:222:VAL:HG12	1.98	0.46
52:SO:103:ASN:ND2	52:SO:140:THR:O	2.49	0.46
57:ST:9:VAL:HG21	57:ST:138:VAL:HG13	1.98	0.46
57:ST:40:ALA:N	57:ST:96:SER:HB2	2.30	0.46
60:SW:51:GLU:OE2	75:SH:143:ARG:HB3	2.16	0.46
77:SE:31:PRO:HA	77:SE:81:THR:HG1	1.80	0.46
1:L5:261:G:N1	1:L5:262:G:C6	2.84	0.46
1:L5:453:G:H4'	1:L5:454:U:H5'	1.98	0.46
1:L5:519:C:H1'	1:L5:643:C:N3	2.31	0.46
1:L5:2764:A:H2'	1:L5:2765:A:C8	2.51	0.46
1:L5:3597:G:H2'	1:L5:3598:C:H6	1.81	0.46
1:L5:4578:G:H2'	1:L5:4579:U:H6	1.81	0.46
1:L5:4968:A:H2'	1:L5:4969:C:H6	1.81	0.46
3:L8:8:U:H2'	3:L8:9:A:C8	2.51	0.46
4:LA:36:GLU:OE2	4:LA:163:ARG:NH1	2.35	0.46
9:LF:27:GLU:HA	9:LF:30:ILE:HG22	1.97	0.46
11:LH:11:ASP:OD1	11:LH:12:ILE:N	2.49	0.46
12:LI:55:ASP:O	12:LI:56:GLU:HG2	2.16	0.46
13:LJ:44:THR:O	13:LJ:78:LYS:HE2	2.16	0.46
13:LJ:78:LYS:O	13:LJ:82:ILE:HG13	2.16	0.46
15:LM:55:MET:HE2	15:LM:55:MET:HB3	1.74	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:LV:87:SER:HA	24:LV:97:TYR:HB3	1.97	0.46
46:S2:1156:U:OP1	60:SW:71:LYS:NZ	2.36	0.46
46:S2:1551:U:P	76:SD:9:ARG:HH22	2.36	0.46
52:SO:34:PHE:HB3	52:SO:41:PHE:HB2	1.98	0.46
55:SR:32:LYS:HZ3	55:SR:33:ARG:NH1	2.14	0.46
62:SY:102:THR:HG22	62:SY:106:GLN:NE2	2.30	0.46
63:SZ:92:LEU:HD21	63:SZ:109:TYR:CD1	2.50	0.46
66:Sc:61:SER:HB2	66:Sc:62:GLU:OE2	2.15	0.46
68:Se:22:GLN:HG2	68:Se:24:LYS:NZ	2.30	0.46
69:Sg:52:TYR:CD1	69:Sg:309:VAL:HG11	2.51	0.46
69:Sg:218:LEU:O	69:Sg:227:LEU:HB2	2.16	0.46
74:SF:59:LYS:HE2	74:SF:62:ARG:HH11	1.80	0.46
76:SD:42:THR:C	76:SD:44:THR:H	2.24	0.46
76:SD:100:ALA:O	76:SD:103:GLU:HG3	2.15	0.46
80:SL:17:PHE:CE1	80:SL:19:ASN:HB2	2.50	0.46
1:L5:690:C:H4'	45:Lr:85:ASN:HD22	1.79	0.45
1:L5:1182:C:H3'	1:L5:1183:C:H5''	1.98	0.45
1:L5:2111:G:N2	1:L5:2251:G:HO2'	2.15	0.45
1:L5:2318:G:N2	1:L5:2321:G:OP2	2.37	0.45
1:L5:2337:C:H4'	45:Lr:19:LYS:HB2	1.98	0.45
1:L5:3949:A:C5	1:L5:4065:G:O6	2.69	0.45
3:L8:140:C:H2'	3:L8:141:C:C6	2.51	0.45
4:LA:17:ARG:HH11	4:LA:17:ARG:HG3	1.80	0.45
4:LA:129:ALA:O	4:LA:169:VAL:HG11	2.16	0.45
10:LG:217:LYS:O	10:LG:220:GLU:HG3	2.16	0.45
28:LZ:41:ALA:HB2	28:LZ:77:TYR:HE1	1.80	0.45
35:Lg:41:ALA:O	35:Lg:52:ARG:HD2	2.15	0.45
35:Lg:61:PRO:O	35:Lg:64:LEU:HB3	2.16	0.45
46:S2:446:G:OP2	78:SI:47:ARG:NH2	2.46	0.45
46:S2:838:G:H1'	46:S2:839:C:H3'	1.98	0.45
46:S2:941:C:H2'	46:S2:942:G:C8	2.51	0.45
46:S2:1238:U:O2	46:S2:1242:U:H5	1.99	0.45
50:SB:115:LYS:HB3	50:SB:115:LYS:HE2	1.79	0.45
57:ST:72:VAL:HG21	57:ST:101:ARG:HG3	1.97	0.45
62:SY:79:LEU:HD23	62:SY:83:LYS:HE2	1.96	0.45
62:SY:120:THR:O	62:SY:124:ASN:HB2	2.15	0.45
69:Sg:187:ASN:HB3	76:SD:225:GLU:HG3	1.97	0.45
69:Sg:263:GLY:H	69:Sg:264:LYS:NZ	2.14	0.45
70:CB:120:ARG:HH21	70:CB:495:ARG:HB3	1.80	0.45
70:CB:595:SER:HA	70:CB:724:THR:CG2	2.46	0.45
73:SC:72:ASP:OD2	73:SC:272:HIS:NE2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:SD:74:GLN:HG2	76:SD:79:PHE:HB2	1.97	0.45
80:SL:48:LYS:O	80:SL:52:GLU:HG2	2.16	0.45
80:SL:73:LEU:HB3	80:SL:90:ARG:HH12	1.81	0.45
1:L5:1079:C:H2'	1:L5:1080:C:H6	1.81	0.45
1:L5:1253:G:H4'	1:L5:1254:A:N7	2.31	0.45
1:L5:1274:A:O2'	1:L5:1275:G:H5'	2.16	0.45
1:L5:1703:C:H5'	1:L5:1704:C:C5	2.52	0.45
1:L5:2639:U:O2'	1:L5:2694:G:O6	2.20	0.45
1:L5:2705:G:H1	1:L5:2710:C:H5	1.64	0.45
1:L5:4934:A:H2'	1:L5:4935:C:C6	2.51	0.45
6:LC:109:ARG:O	6:LC:109:ARG:HG2	2.17	0.45
17:LO:186:GLU:HA	17:LO:189:ILE:HG12	1.99	0.45
21:LS:85:ASP:HA	21:LS:90:THR:HA	1.99	0.45
23:LU:20:LYS:O	23:LU:108:GLU:HB2	2.17	0.45
31:Lc:101:ASP:C	31:Lc:101:ASP:OD1	2.59	0.45
46:S2:191:A:OP2	46:S2:192:C:N4	2.49	0.45
49:SA:119:PRO:HG2	49:SA:142:LEU:HD22	1.98	0.45
54:SQ:54:PRO:O	54:SQ:58:LEU:HD23	2.16	0.45
54:SQ:81:ILE:O	54:SQ:85:ARG:HG2	2.17	0.45
58:SU:20:ILE:CG2	58:SU:91:LEU:HB2	2.47	0.45
58:SU:33:GLU:OE1	58:SU:33:GLU:HA	2.15	0.45
70:CB:86:LEU:O	70:CB:93:LYS:HE2	2.16	0.45
71:SG:190:ARG:O	71:SG:194:LEU:HG	2.16	0.45
1:L5:170:C:H42	1:L5:266:C:H42	1.64	0.45
1:L5:178:C:H2'	1:L5:179:G:C8	2.51	0.45
1:L5:325:U:H2'	1:L5:326:C:H6	1.81	0.45
1:L5:4474:A:H5''	41:Lm:125:LYS:HD2	1.99	0.45
1:L5:4500:U:H2'	1:L5:4501:U:C6	2.52	0.45
1:L5:4678:G:N2	1:L5:4713:G:H1'	2.30	0.45
15:LM:3:PHE:H	21:LS:175:PHE:HZ	1.64	0.45
17:LO:10:ASP:OD2	17:LO:37:ARG:NH1	2.48	0.45
21:LS:7:LEU:HG	21:LS:107:THR:HG22	1.99	0.45
23:LU:38:ASN:OD1	23:LU:39:PHE:N	2.49	0.45
28:LZ:88:ASP:O	28:LZ:88:ASP:OD2	2.34	0.45
46:S2:12:U:H2'	46:S2:13:C:C6	2.51	0.45
46:S2:186:C:H2'	46:S2:187:G:C8	2.51	0.45
46:S2:329:G:H2'	46:S2:330:G:H8	1.73	0.45
46:S2:1256:G:C8	58:SU:66:ARG:HB2	2.51	0.45
46:S2:1556:A:O2'	46:S2:1557:C:O4'	2.34	0.45
46:S2:1588:A:H2'	46:S2:1589:A:C8	2.51	0.45
46:S2:1616:U:H2'	46:S2:1617:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SB:179:ASN:HD21	50:SB:183:GLU:HG2	1.82	0.45
52:SO:86:LYS:HG3	52:SO:124:MET:HE2	1.98	0.45
53:SP:44:ARG:O	53:SP:47:ARG:C	2.59	0.45
56:SS:4:VAL:O	63:SZ:55:TYR:HE1	2.00	0.45
75:SH:12:ASN:CG	75:SH:13:GLY:H	2.24	0.45
1:L5:254:G:C6	1:L5:255:C:C2	3.04	0.45
1:L5:982:U:H2'	1:L5:983:C:C6	2.52	0.45
1:L5:1629:G:H1	4:LA:208:GLU:HG2	1.80	0.45
1:L5:1662:C:H2'	1:L5:1663:C:C6	2.51	0.45
1:L5:3610:A:H2'	1:L5:3611:A:C8	2.52	0.45
1:L5:4419:U:O2	70:CB:765:ARG:HD2	2.17	0.45
1:L5:4504:C:H2'	1:L5:4505:C:C6	2.51	0.45
43:Lo:96:ASP:OD2	43:Lo:96:ASP:N	2.39	0.45
46:S2:804:U:H2'	46:S2:805:U:H6	1.82	0.45
46:S2:1536:G:C2	46:S2:1537:A:C5	3.05	0.45
68:Se:6:LEU:HD23	68:Se:6:LEU:H	1.80	0.45
79:SK:22:VAL:O	79:SK:22:VAL:HG12	2.17	0.45
1:L5:184:U:O2	1:L5:254:G:C6	2.69	0.45
1:L5:1072:C:H2'	1:L5:1073:G:C8	2.52	0.45
1:L5:1092:G:H2'	1:L5:1093:C:H6	1.79	0.45
1:L5:1178:G:H2'	1:L5:1178:G:N3	2.32	0.45
1:L5:2487:G:OP2	1:L5:2487:G:H8	1.98	0.45
1:L5:2638:G:O4'	35:Lg:28:ASN:ND2	2.49	0.45
1:L5:2780:C:OP1	26:LX:134:LYS:NZ	2.48	0.45
1:L5:4092:G:C4	1:L5:4093:G:C2	3.04	0.45
1:L5:4345:C:H2'	1:L5:4346:U:H6	1.81	0.45
1:L5:4345:C:H2'	1:L5:4346:U:C6	2.52	0.45
1:L5:4993:G:H1	1:L5:5058:A:N6	2.14	0.45
2:L7:16:A:H2'	2:L7:17:C:C6	2.51	0.45
3:L8:133:G:OP1	26:LX:67:ARG:NH1	2.34	0.45
5:LB:307:TYR:CD2	5:LB:366:LYS:HG2	2.51	0.45
6:LC:334:THR:HG21	9:LF:51:TYR:OH	2.17	0.45
7:LD:127:GLY:H	7:LD:196:ARG:HB3	1.82	0.45
8:LE:149:ILE:HD12	8:LE:271:LEU:HD21	1.99	0.45
12:LI:179:ASP:OD1	12:LI:180:GLU:N	2.50	0.45
13:LJ:163:MET:HB3	13:LJ:174:ILE:HD13	1.99	0.45
16:LN:17:ASP:N	16:LN:17:ASP:OD1	2.49	0.45
17:LO:173:GLN:OE1	17:LO:176:ARG:NH2	2.49	0.45
29:La:78:LEU:HD12	29:La:81:LEU:HD12	1.98	0.45
33:Le:85:LEU:HD23	33:Le:85:LEU:HA	1.73	0.45
43:Lo:54:PRO:O	48:E:84:C:O2'	2.24	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:57:U:OP1	46:S2:504:G:O2'	2.35	0.45
46:S2:987:A:C6	50:SB:120:MET:HE1	2.51	0.45
46:S2:1005:G:H2'	46:S2:1006:C:H6	1.82	0.45
46:S2:1088:U:H4'	46:S2:1089:G:OP2	2.15	0.45
46:S2:1430:C:H2'	46:S2:1431:G:C8	2.51	0.45
49:SA:121:LEU:HD11	49:SA:145:ILE:CD1	2.47	0.45
63:SZ:84:ALA:O	63:SZ:88:LEU:HD23	2.17	0.45
71:SG:233:ARG:HG2	71:SG:234:LEU:HD12	1.98	0.45
73:SC:183:LYS:HA	73:SC:195:LEU:O	2.17	0.45
75:SH:15:LYS:N	75:SH:16:PRO:HD3	2.31	0.45
80:SL:124:ASP:HB2	80:SL:146:THR:O	2.16	0.45
1:L5:368:C:O4'	6:LC:83:GLY:HA3	2.17	0.45
1:L5:1198:G:H2'	1:L5:1199:G:H8	1.81	0.45
1:L5:3775:A:H5'	1:L5:3776:G:OP2	2.17	0.45
2:L7:3:C:H2'	2:L7:4:U:H6	1.81	0.45
5:LB:50:LYS:HB2	5:LB:345:LEU:HD11	1.98	0.45
6:LC:7:LEU:HG	6:LC:21:ASN:HB3	1.97	0.45
6:LC:321:ASN:HB3	6:LC:324:ILE:HB	1.99	0.45
31:Lc:17:ARG:HD2	31:Lc:103:ASP:HA	1.98	0.45
32:Ld:54:MET:HE2	32:Ld:60:PRO:HA	1.98	0.45
34:Lf:45:LYS:HD2	34:Lf:106:TYR:O	2.16	0.45
36:Lh:87:LYS:HA	38:Lj:73:ARG:HH22	1.81	0.45
39:Lk:60:LEU:HG	39:Lk:61:PRO:HD2	1.98	0.45
46:S2:328:U:HO2'	46:S2:329:G:H8	1.60	0.45
46:S2:693:A:N7	46:S2:739:C:H4'	2.31	0.45
46:S2:694:G:C6	46:S2:737:G:N3	2.83	0.45
46:S2:907:G:H2'	46:S2:908:A:H8	1.80	0.45
46:S2:1139:C:H2'	46:S2:1140:G:O4'	2.16	0.45
46:S2:1272:C:H2'	46:S2:1273:C:C6	2.51	0.45
50:SB:191:ASP:OD2	50:SB:212:VAL:HG12	2.16	0.45
56:SS:4:VAL:HG13	56:SS:5:ILE:N	2.31	0.45
63:SZ:68:ILE:HG22	63:SZ:88:LEU:HD11	1.97	0.45
64:Sa:51:ARG:NH2	66:Sc:63:ARG:HA	2.30	0.45
1:L5:300:A:H2'	1:L5:301:G:H8	1.81	0.45
1:L5:964:A:C3'	1:L5:965:G:H4'	2.47	0.45
1:L5:1081:C:N4	1:L5:1219:G:O6	2.50	0.45
1:L5:1683:U:OP1	29:La:44:ASN:ND2	2.45	0.45
1:L5:2112:G:O2'	1:L5:2250:C:N4	2.48	0.45
1:L5:3951:G:N2	1:L5:4061:G:N7	2.65	0.45
1:L5:4607:A:H8	1:L5:4607:A:O5'	2.00	0.45
5:LB:139:ASP:O	5:LB:143:LYS:NZ	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:287:THR:O	45:Lr:2:SER:OG	2.23	0.45
7:LD:79:TYR:HB2	7:LD:82:GLU:HG2	1.99	0.45
13:LJ:63:ARG:HG2	13:LJ:66:GLU:OE2	2.17	0.45
18:LP:94:MET:HG2	18:LP:148:MET:SD	2.56	0.45
22:LT:45:MET:HE2	22:LT:47:THR:HB	1.97	0.45
30:Lb:69:ALA:O	30:Lb:73:LYS:HG2	2.16	0.45
41:Lm:80:PRO:O	41:Lm:84:GLN:HG2	2.17	0.45
46:S2:557:U:H2'	46:S2:558:G:C8	2.52	0.45
46:S2:885:U:O2	46:S2:901:G:N2	2.40	0.45
46:S2:1395:C:H1'	46:S2:1474:A:C5	2.51	0.45
56:SS:68:ILE:HA	56:SS:71:MET:HE3	1.99	0.45
63:SZ:99:LEU:HD13	63:SZ:109:TYR:CE1	2.51	0.45
70:CB:580:ARG:HB3	70:CB:698:ARG:HG2	1.99	0.45
74:SF:67:PRO:HG2	74:SF:70:GLU:HG2	1.97	0.45
76:SD:67:ARG:O	76:SD:70:THR:OG1	2.29	0.45
77:SE:100:ARG:HB2	77:SE:114:ILE:HD13	1.98	0.45
78:SI:157:LYS:HD3	78:SI:158:ILE:N	2.27	0.45
1:L5:519:C:H1'	1:L5:643:C:C2	2.52	0.45
1:L5:1461:C:H2'	1:L5:1462:A:C8	2.52	0.45
1:L5:1504:G:H2'	1:L5:1505:C:C6	2.52	0.45
1:L5:1633:G:H5'	1:L5:1634:A:OP1	2.17	0.45
1:L5:1759:G:N2	1:L5:1761:G:OP1	2.50	0.45
1:L5:4092:G:C5	1:L5:4093:G:C2	3.05	0.45
10:LG:207:VAL:HG11	10:LG:215:LEU:HD12	1.98	0.45
23:LU:18:VAL:O	23:LU:18:VAL:HG12	2.17	0.45
28:LZ:48:ARG:HB2	28:LZ:69:LYS:HB3	1.98	0.45
46:S2:903:A:H2'	46:S2:904:A:O4'	2.17	0.45
46:S2:929:G:H2'	46:S2:930:C:O4'	2.17	0.45
46:S2:1453:C:O2'	55:SR:52:GLY:HA3	2.17	0.45
52:SO:78:ALA:HB3	52:SO:118:ALA:HB3	1.98	0.45
60:SW:28:ARG:HB3	60:SW:29:PRO:HD3	1.99	0.45
60:SW:111:MET:HE1	60:SW:119:LYS:HD2	1.98	0.45
63:SZ:101:SER:HB3	63:SZ:108:ILE:HB	1.99	0.45
69:Sg:10:THR:HG22	69:Sg:308:ARG:HG2	1.98	0.45
74:SF:95:HIS:O	74:SF:99:ILE:HG13	2.17	0.45
74:SF:168:THR:HG22	74:SF:171:GLU:OE1	2.17	0.45
1:L5:924:C:H2'	1:L5:925:C:O4'	2.17	0.45
1:L5:1364:U:OP2	14:LL:36:ARG:NH1	2.39	0.45
1:L5:1460:C:H2'	1:L5:1461:C:H6	1.82	0.45
1:L5:1972:G:N1	1:L5:1994:C:N3	2.36	0.45
1:L5:1977:C:H2'	1:L5:1978:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3664:G:H2'	1:L5:3665:G:H8	1.81	0.45
1:L5:3871:A:H2'	1:L5:3872:A:C8	2.51	0.45
5:LB:145:GLN:OE1	5:LB:145:GLN:HA	2.16	0.45
5:LB:285:TYR:N	5:LB:332:MET:O	2.43	0.45
5:LB:295:ASP:OD1	5:LB:295:ASP:N	2.50	0.45
10:LG:191:GLY:HA2	10:LG:194:VAL:HG12	1.99	0.45
13:LJ:37:ALA:HB2	13:LJ:50:PHE:HE1	1.81	0.45
25:LW:44:ARG:HE	25:LW:49:ILE:HD11	1.82	0.45
27:LY:117:LYS:HE2	27:LY:117:LYS:HB3	1.66	0.45
34:Lf:96:ALA:O	34:Lf:99:HIS:HB2	2.16	0.45
46:S2:150:A:H62	46:S2:168:C:H42	1.65	0.45
46:S2:686:U:OP1	60:SW:32:LYS:HG3	2.15	0.45
46:S2:963:A:H2'	46:S2:964:A:C8	2.51	0.45
46:S2:1689:C:H2'	46:S2:1690:U:C6	2.52	0.45
70:CB:759:ILE:HD12	70:CB:784:VAL:HG11	1.99	0.45
71:SG:78:SER:H	71:SG:81:HIS:CD2	2.34	0.45
74:SF:72:LEU:HA	74:SF:151:ILE:HD11	1.99	0.45
76:SD:105:LEU:HD23	76:SD:184:ILE:HG21	1.98	0.45
76:SD:150:MET:HG3	76:SD:152:PHE:CE2	2.52	0.45
78:SI:129:LEU:O	78:SI:129:LEU:HD23	2.17	0.45
79:SK:7:ASN:HD22	79:SK:40:VAL:HG12	1.82	0.45
1:L5:1274:A:O2'	1:L5:1275:G:H8	2.00	0.45
1:L5:2465:C:H2'	1:L5:2466:G:O4'	2.16	0.45
1:L5:2469:C:H5	1:L5:2471:G:H1	1.62	0.45
1:L5:4143:G:N3	1:L5:4145:C:H1'	2.31	0.45
6:LC:218:ILE:HG12	6:LC:229:LEU:HG	1.99	0.45
18:LP:18:ARG:HG2	18:LP:19:GLY:N	2.31	0.45
20:LR:7:GLN:HG2	20:LR:32:ILE:HG22	1.99	0.45
23:LU:23:LEU:HD13	23:LU:110:TYR:HB2	1.97	0.45
30:Lb:90:SER:OG	30:Lb:91:ARG:N	2.50	0.45
39:Lk:64:LEU:O	39:Lk:66:VAL:HG23	2.17	0.45
43:Lo:10:THR:HA	43:Lo:18:HIS:HD2	1.82	0.45
46:S2:551:U:H2'	46:S2:552:G:C4	2.52	0.45
46:S2:1102:G:H2'	46:S2:1103:C:C6	2.51	0.45
46:S2:1217:A:H2'	46:S2:1218:C:C6	2.49	0.45
46:S2:1756:C:O2	46:S2:1776:G:C6	2.70	0.45
73:SC:137:VAL:HG13	73:SC:217:ALA:HA	1.98	0.45
77:SE:164:LEU:C	77:SE:166:THR:H	2.23	0.45
78:SI:59:ARG:O	78:SI:60:LEU:HD23	2.16	0.45
1:L5:129:C:H2'	1:L5:130:C:C6	2.51	0.44
1:L5:488:G:H8	1:L5:488:G:O5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:650:C:H2'	1:L5:651:C:H6	1.82	0.44
1:L5:989:U:C2	1:L5:1064:G:O6	2.70	0.44
1:L5:1080:C:N3	1:L5:1220:G:N1	2.65	0.44
1:L5:1847:C:H2'	1:L5:1848:C:C6	2.52	0.44
1:L5:2261:G:H4'	8:LE:112:MET:HE1	1.98	0.44
1:L5:4371:G:N2	48:E:85:A:O2'	2.50	0.44
8:LE:118:THR:HG21	33:Le:92:ASN:HB3	1.99	0.44
10:LG:257:LYS:HB2	10:LG:257:LYS:HE2	1.70	0.44
20:LR:157:ASP:O	20:LR:161:ALA:HB3	2.17	0.44
46:S2:24:C:O2'	46:S2:25:A:O5'	2.35	0.44
46:S2:65:C:C6	71:SG:174:PRO:HB3	2.52	0.44
46:S2:72:C:H5'	46:S2:73:C:C4	2.51	0.44
46:S2:835:C:H4'	46:S2:836:G:C8	2.52	0.44
46:S2:1138:C:O2'	59:SV:61:ARG:HD2	2.16	0.44
46:S2:1746:U:P	71:SG:31:ARG:HH12	2.40	0.44
58:SU:20:ILE:HD12	58:SU:115:THR:O	2.17	0.44
58:SU:51:LYS:HB3	58:SU:90:ASP:HB3	1.98	0.44
58:SU:61:LEU:HD12	58:SU:82:MET:SD	2.57	0.44
66:Sc:16:LYS:HB3	66:Sc:31:ARG:HH22	1.82	0.44
67:Sd:21:CYS:SG	67:Sd:24:CYS:N	2.85	0.44
70:CB:600:ASN:OD1	70:CB:709:LEU:HA	2.16	0.44
70:CB:616:ASP:HA	70:CB:619:LYS:HG2	1.99	0.44
72:SJ:26:ASP:OD1	72:SJ:27:GLN:N	2.50	0.44
73:SC:90:GLU:HB2	73:SC:93:ILE:HD12	2.00	0.44
74:SF:135:ARG:HB3	74:SF:136:ARG:H	1.71	0.44
75:SH:15:LYS:HG3	75:SH:15:LYS:O	2.17	0.44
1:L5:184:U:O2	1:L5:253:G:N2	2.51	0.44
1:L5:1617:G:H1'	1:L5:2513:A:H61	1.82	0.44
1:L5:3764:U:H2'	1:L5:3765:G:C8	2.52	0.44
1:L5:4457:U:O2	5:LB:252:ALA:HB3	2.17	0.44
1:L5:4563:U:H2'	1:L5:4564:A:C8	2.52	0.44
5:LB:165:HIS:HA	5:LB:179:HIS:O	2.18	0.44
6:LC:361:LEU:HA	6:LC:364:LYS:NZ	2.32	0.44
11:LH:93:ARG:HG2	11:LH:182:SER:HB3	1.99	0.44
18:LP:24:VAL:HG12	18:LP:86:LYS:HG2	1.99	0.44
21:LS:99:ASP:OD1	21:LS:100:LEU:N	2.44	0.44
32:Ld:47:LYS:HE2	32:Ld:47:LYS:HB3	1.69	0.44
46:S2:14:C:H5'	73:SC:190:SER:OG	2.17	0.44
46:S2:305:U:H4'	78:SI:41:ARG:CZ	2.47	0.44
46:S2:563:G:C2	46:S2:564:A:C8	3.05	0.44
46:S2:656:G:N2	46:S2:663:C:H5''	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:694:G:C5	46:S2:737:G:N2	2.83	0.44
46:S2:1331:C:N4	47:S:194:ASP:O	2.50	0.44
46:S2:1406:G:H2'	46:S2:1407:U:H6	1.83	0.44
46:S2:1788:A:H2'	46:S2:1789:G:O4'	2.18	0.44
46:S2:1797:U:H2'	46:S2:1798:C:C6	2.52	0.44
48:E:27:A:H2'	48:E:28:U:H6	1.82	0.44
54:SQ:90:LYS:HA	54:SQ:93:VAL:HG12	1.98	0.44
65:Sb:40:CYS:HB2	65:Sb:59:CYS:HB2	1.98	0.44
66:Sc:15:THR:OG1	66:Sc:33:GLU:OE1	2.32	0.44
70:CB:301:PHE:HE1	70:CB:340:MET:HE2	1.82	0.44
70:CB:401:MET:CE	70:CB:410:PHE:HB2	2.47	0.44
70:CB:776:VAL:HG23	70:CB:777:ALA:N	2.29	0.44
71:SG:153:VAL:O	71:SG:157:VAL:HG13	2.17	0.44
1:L5:1333:A:H2'	1:L5:1334:A:H8	1.83	0.44
1:L5:1646:A:O2'	38:Lj:49:TRP:O	2.28	0.44
1:L5:1704:C:O2	1:L5:2097:U:N3	2.50	0.44
1:L5:1806:G:H2'	1:L5:1807:C:C6	2.52	0.44
1:L5:1855:G:OP1	30:Lb:4:SER:HB2	2.18	0.44
1:L5:2334:C:C5	6:LC:191:ALA:HB2	2.53	0.44
1:L5:4681:A:H2'	1:L5:4682:U:O4'	2.18	0.44
46:S2:152:U:C2	46:S2:153:G:C8	3.05	0.44
46:S2:166:A:N3	71:SG:13:GLN:NE2	2.65	0.44
46:S2:900:C:H5'	46:S2:901:G:N7	2.31	0.44
46:S2:1221:G:H2'	46:S2:1222:G:C8	2.52	0.44
49:SA:69:GLU:OE2	73:SC:270:THR:OG1	2.33	0.44
49:SA:208:GLU:O	49:SA:212:LYS:HG2	2.18	0.44
58:SU:61:LEU:HB2	58:SU:82:MET:HG2	2.00	0.44
70:CB:19:ILE:HG22	70:CB:99:LEU:HB3	1.99	0.44
70:CB:586:GLU:HG3	70:CB:607:ARG:NH1	2.33	0.44
71:SG:147:LEU:HB3	71:SG:151:ASP:HB2	1.98	0.44
74:SF:188:TYR:O	74:SF:192:LYS:HG2	2.17	0.44
75:SH:166:VAL:O	75:SH:166:VAL:HG23	2.17	0.44
1:L5:677:G:H2'	1:L5:678:C:C6	2.52	0.44
1:L5:1278:C:H2'	1:L5:1279:A:O4'	2.17	0.44
1:L5:1354:A:OP1	19:LQ:108:ARG:NH1	2.50	0.44
1:L5:2493:G:H3'	1:L5:2494:U:H6	1.82	0.44
2:L7:119:U:H2'	7:LD:261:VAL:HG21	2.00	0.44
3:L8:130:C:H2'	3:L8:131:G:C8	2.52	0.44
7:LD:33:ARG:NH1	7:LD:72:ASP:OD1	2.51	0.44
7:LD:153:THR:HG23	7:LD:160:PHE:CE2	2.53	0.44
11:LH:20:LEU:HD23	11:LH:25:VAL:HG12	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:LJ:95:ARG:HG3	13:LJ:96:LYS:N	2.33	0.44
15:LM:37:LEU:HD12	15:LM:37:LEU:HA	1.78	0.44
23:LU:26:THR:HA	23:LU:29:VAL:HG12	1.99	0.44
30:Lb:58:GLN:NE2	30:Lb:62:ALA:HB2	2.32	0.44
35:Lg:94:ALA:O	35:Lg:98:GLU:HG2	2.18	0.44
46:S2:1686:G:H2'	46:S2:1687:C:C6	2.52	0.44
48:E:39:U:H2'	48:E:40:C:H6	1.82	0.44
49:SA:42:LYS:HG2	55:SR:99:ASP:OD2	2.15	0.44
51:SN:55:ARG:NH2	51:SN:56:ASP:OD1	2.51	0.44
52:SO:42:VAL:HG13	52:SO:81:VAL:HG21	1.99	0.44
69:Sg:67:SER:N	69:Sg:81:GLY:O	2.46	0.44
69:Sg:217:MET:HB3	69:Sg:219:TRP:NE1	2.31	0.44
70:CB:477:GLN:OE1	70:CB:477:GLN:N	2.45	0.44
70:CB:595:SER:CB	70:CB:600:ASN:HB2	2.46	0.44
71:SG:116:LYS:HB3	71:SG:116:LYS:HE3	1.77	0.44
72:SJ:129:LEU:HG	72:SJ:134:HIS:CD2	2.52	0.44
74:SF:165:ASN:OD1	74:SF:166:ILE:N	2.50	0.44
75:SH:25:GLN:O	75:SH:28:LEU:N	2.50	0.44
75:SH:28:LEU:O	75:SH:31:GLU:HG2	2.18	0.44
1:L5:162:A:H2'	1:L5:163:A:H8	1.81	0.44
1:L5:495:C:H2'	1:L5:496:G:H8	1.79	0.44
1:L5:674:G:H2'	1:L5:675:C:C6	2.52	0.44
1:L5:690:C:H2'	1:L5:691:C:C6	2.52	0.44
1:L5:1345:A:H2'	1:L5:1346:C:C6	2.52	0.44
1:L5:1645:C:H2'	1:L5:1646:A:C8	2.53	0.44
1:L5:3727:A:H2'	1:L5:3728:A:C8	2.53	0.44
1:L5:3951:G:H3'	1:L5:3952:A:H8	1.82	0.44
5:LB:10:ARG:HH11	5:LB:14:LEU:CD2	2.30	0.44
5:LB:214:ASP:OD2	5:LB:362:LYS:HA	2.18	0.44
9:LF:222:LYS:HD3	9:LF:225:THR:HG23	1.99	0.44
14:LL:80:GLU:OE2	14:LL:102:ARG:NH1	2.51	0.44
16:LN:148:THR:O	16:LN:151:ILE:HG22	2.18	0.44
21:LS:5:GLY:O	21:LS:111:ARG:NH1	2.51	0.44
21:LS:45:TRP:HA	21:LS:48:VAL:HG12	2.00	0.44
22:LT:115:LYS:HD3	22:LT:126:VAL:HG11	2.00	0.44
26:LX:147:LEU:HD12	26:LX:147:LEU:HA	1.83	0.44
31:Lc:36:LYS:O	31:Lc:40:GLN:HG2	2.16	0.44
40:Ll:9:ILE:O	40:Ll:13:LEU:HG	2.17	0.44
46:S2:115:U:H2'	46:S2:116:U:C6	2.52	0.44
46:S2:349:A:H2'	46:S2:350:C:O4'	2.18	0.44
46:S2:376:A:H2'	46:S2:377:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1084:A:OP1	46:S2:1858:G:O2'	2.34	0.44
46:S2:1733:U:H2'	46:S2:1734:G:O4'	2.17	0.44
56:SS:74:PRO:HD2	56:SS:75:ARG:H	1.83	0.44
66:Sc:37:ASP:OD1	66:Sc:39:SER:OG	2.36	0.44
69:Sg:60:ARG:O	69:Sg:90:TRP:HH2	2.00	0.44
70:CB:756:VAL:O	70:CB:760:TYR:HD1	2.00	0.44
1:L5:32:G:OP1	16:LN:73:ARG:NH1	2.51	0.44
1:L5:499:G:H2'	1:L5:504:G:H22	1.83	0.44
1:L5:759:G:O5'	11:LH:50:LYS:NZ	2.51	0.44
1:L5:992:C:H2'	1:L5:993:G:C8	2.53	0.44
1:L5:2718:U:H5''	1:L5:2719:C:H5'	2.00	0.44
1:L5:2864:A:H2'	1:L5:2865:U:H6	1.83	0.44
1:L5:3684:G:H2'	1:L5:3685:C:C6	2.52	0.44
1:L5:4371:G:O2'	1:L5:4372:U:OP2	2.30	0.44
1:L5:4538:G:H2'	1:L5:4539:U:C6	2.52	0.44
6:LC:210:ILE:HG13	6:LC:230:LEU:HB2	2.00	0.44
6:LC:339:THR:O	6:LC:343:GLN:HG3	2.18	0.44
10:LG:136:LEU:HD13	10:LG:202:VAL:HG11	2.00	0.44
26:LX:110:LYS:HG3	26:LX:121:VAL:HG21	1.99	0.44
46:S2:1004:U:H2'	46:S2:1005:G:C8	2.52	0.44
53:SP:115:TYR:O	53:SP:118:GLU:HG2	2.18	0.44
54:SQ:31:LEU:HD12	54:SQ:32:ILE:H	1.83	0.44
60:SW:49:GLU:OE2	75:SH:147:LYS:HA	2.17	0.44
62:SY:36:PRO:HB2	62:SY:39:GLU:OE2	2.17	0.44
70:CB:603:TYR:CD2	70:CB:706:ASP:HB3	2.52	0.44
1:L5:173:C:H2'	1:L5:174:C:C6	2.53	0.44
1:L5:448:G:C6	1:L5:450:G:C8	3.05	0.44
1:L5:1664:U:H2'	1:L5:1665:C:C6	2.53	0.44
1:L5:2521:G:H5'	1:L5:2640:G:H1'	2.00	0.44
1:L5:3753:G:N7	1:L5:3776:G:H2'	2.33	0.44
1:L5:4278:C:O2'	1:L5:4281:A:H8	2.00	0.44
1:L5:4968:A:H2'	1:L5:4969:C:C6	2.53	0.44
7:LD:207:TYR:CE1	7:LD:211:LEU:HD22	2.52	0.44
8:LE:211:HIS:ND1	8:LE:211:HIS:O	2.50	0.44
10:LG:99:ALA:HB1	10:LG:136:LEU:HD11	2.00	0.44
14:LL:172:GLU:O	14:LL:175:ASN:C	2.61	0.44
15:LM:46:ARG:O	15:LM:48:GLN:HG2	2.18	0.44
26:LX:87:MET:HE3	26:LX:87:MET:HB3	1.75	0.44
40:Ll:44:TRP:CZ3	40:Ll:45:ARG:HD3	2.52	0.44
44:Lp:47:MET:CE	44:Lp:57:CYS:HB2	2.48	0.44
46:S2:382:C:H2'	46:S2:383:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:502:C:H3'	46:S2:503:C:C6	2.53	0.44
46:S2:1278:A:H2'	46:S2:1279:C:C6	2.53	0.44
46:S2:1563:G:C4	46:S2:1573:G:N2	2.86	0.44
48:E:61:G:H2'	48:E:62:G:C8	2.51	0.44
49:SA:76:VAL:HG12	49:SA:123:VAL:HB	1.99	0.44
49:SA:174:MET:HA	49:SA:174:MET:HE3	1.99	0.44
50:SB:89:GLU:HB2	50:SB:228:LEU:HD11	1.99	0.44
52:SO:101:GLY:HA3	52:SO:134:PRO:HD2	1.99	0.44
55:SR:31:ASN:HA	55:SR:34:VAL:HG12	1.98	0.44
69:Sg:119:GLN:HG3	69:Sg:179:LEU:HD11	2.00	0.44
70:CB:26:ALA:HB3	70:CB:32:LYS:HD3	2.00	0.44
70:CB:188:ILE:HA	70:CB:191:THR:HG22	2.00	0.44
70:CB:829:SER:O	70:CB:832:SER:OG	2.27	0.44
72:SJ:46:VAL:HG11	72:SJ:106:LEU:HD21	1.99	0.44
73:SC:68:ARG:HA	73:SC:68:ARG:HD2	1.72	0.44
1:L5:179:G:H2'	1:L5:180:C:C6	2.52	0.44
1:L5:447:C:H2'	1:L5:448:G:H8	1.83	0.44
1:L5:730:G:C5	9:LF:73:ARG:HD3	2.52	0.44
1:L5:1739:G:H2'	1:L5:1740:C:C6	2.53	0.44
1:L5:2261:G:H4'	8:LE:112:MET:CE	2.48	0.44
1:L5:2411:C:H2'	1:L5:2412:A:H8	1.82	0.44
1:L5:2844:A:O2'	1:L5:4631:G:H4'	2.18	0.44
1:L5:3951:G:H8	1:L5:3951:G:OP2	2.01	0.44
1:L5:4142:C:H3'	1:L5:4143:G:C4	2.53	0.44
1:L5:4322:G:N2	1:L5:4325:A:OP2	2.44	0.44
1:L5:4458:C:H2'	1:L5:4459:U:H6	1.83	0.44
1:L5:4905:C:H2'	1:L5:4906:C:C6	2.53	0.44
1:L5:4967:A:H2'	1:L5:4968:A:H8	1.82	0.44
8:LE:43:HIS:CG	8:LE:44:CYS:H	2.36	0.44
13:LJ:88:LYS:HB3	13:LJ:88:LYS:HE3	1.80	0.44
32:Ld:24:GLU:OE1	32:Ld:87:ARG:NH2	2.42	0.44
46:S2:191:A:C2	46:S2:192:C:H1'	2.53	0.44
46:S2:641:A:OP1	72:SJ:40:LYS:NZ	2.44	0.44
46:S2:1468:C:H2'	46:S2:1469:A:H8	1.83	0.44
50:SB:227:LYS:HD3	50:SB:230:GLU:OE2	2.18	0.44
57:ST:126:GLN:HE21	57:ST:129:ARG:NH2	2.15	0.44
58:SU:28:ASN:OD1	58:SU:31:SER:OG	2.36	0.44
60:SW:87:GLU:HA	60:SW:90:GLN:HG3	1.99	0.44
62:SY:27:VAL:O	62:SY:68:LYS:HA	2.18	0.44
70:CB:650:TRP:HB2	70:CB:662:LEU:O	2.18	0.44
73:SC:199:PRO:O	73:SC:202:THR:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SH:66:VAL:HB	75:SH:67:PRO:HD3	1.99	0.44
77:SE:159:THR:HB	77:SE:173:ILE:HB	1.99	0.44
1:L5:457:G:H2'	1:L5:458:C:H6	1.83	0.44
1:L5:923:C:O2'	1:L5:924:C:H6	2.01	0.44
1:L5:1190:C:H2'	1:L5:1191:C:C6	2.53	0.44
1:L5:1758:G:H2'	1:L5:1759:G:C8	2.52	0.44
1:L5:2467:U:H4'	1:L5:2468:U:H5'	1.99	0.44
1:L5:2558:C:H2'	1:L5:2559:G:C8	2.53	0.44
1:L5:2899:C:OP1	20:LR:108:ARG:NH2	2.50	0.44
1:L5:3754:G:C4	1:L5:3755:G:C8	3.06	0.44
1:L5:4957:C:H2'	1:L5:4958:C:H6	1.82	0.44
4:LA:116:LEU:HB3	4:LA:126:LEU:HB2	1.99	0.44
14:LL:117:LEU:HD23	14:LL:117:LEU:HA	1.79	0.44
15:LM:74:ARG:HG2	15:LM:74:ARG:HH11	1.82	0.44
18:LP:48:LEU:HD23	18:LP:48:LEU:HA	1.84	0.44
21:LS:165:PRO:C	21:LS:167:PHE:H	2.25	0.44
40:LI:28:ARG:HA	40:LI:33:ASN:ND2	2.33	0.44
43:Lo:74:GLU:HB3	43:Lo:77:CYS:SG	2.57	0.44
45:Lr:7:TRP:O	45:Lr:11:ARG:HB2	2.18	0.44
46:S2:377:G:H5'	78:SI:98:LYS:HB3	1.99	0.44
46:S2:477:G:C2	46:S2:478:G:C8	3.06	0.44
46:S2:1101:U:H2'	46:S2:1102:G:H8	1.82	0.44
46:S2:1713:C:H2'	46:S2:1714:U:C6	2.53	0.44
46:S2:1770:G:H5'	46:S2:1771:G:N2	2.33	0.44
50:SB:164:ILE:O	50:SB:168:MET:HG3	2.18	0.44
53:SP:50:ARG:HA	53:SP:50:ARG:HH11	1.82	0.44
62:SY:25:ILE:HD11	62:SY:60:PHE:HZ	1.82	0.44
69:Sg:79:LEU:HD11	69:Sg:87:LEU:HB3	1.99	0.44
70:CB:671:TYR:HB2	70:CB:709:LEU:HD12	2.00	0.44
71:SG:213:LEU:O	71:SG:213:LEU:HD23	2.17	0.44
74:SF:145:ARG:NH1	74:SF:149:GLN:HG2	2.33	0.44
77:SE:124:CYS:HB3	77:SE:141:THR:OG1	2.17	0.44
79:SK:52:LEU:HD23	79:SK:55:ARG:HH12	1.83	0.44
1:L5:715:G:OP1	6:LC:321:ASN:ND2	2.51	0.43
1:L5:983:C:H2'	1:L5:984:C:O4'	2.18	0.43
1:L5:1435:G:O2'	1:L5:1708:G:OP2	2.33	0.43
1:L5:1857:C:H2'	1:L5:1858:A:C8	2.52	0.43
1:L5:1942:A:N3	1:L5:4432:C:O2'	2.43	0.43
1:L5:2864:A:H2'	1:L5:2865:U:C6	2.52	0.43
1:L5:3893:C:H2'	1:L5:3894:A:C8	2.52	0.43
1:L5:4091:G:N2	1:L5:4092:G:N7	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4625:C:O2'	1:L5:4626:A:H5'	2.17	0.43
4:LA:150:LEU:O	4:LA:153:GLY:N	2.50	0.43
6:LC:345:ARG:O	6:LC:348:LYS:HG3	2.18	0.43
10:LG:88:ASP:HB3	10:LG:91:THR:HG22	1.99	0.43
16:LN:83:LYS:HB3	16:LN:85:VAL:HG12	2.00	0.43
19:LQ:128:LEU:HD23	19:LQ:128:LEU:HA	1.86	0.43
23:LU:80:LYS:HE2	23:LU:110:TYR:CE1	2.53	0.43
46:S2:183:G:C2	46:S2:184:G:C8	3.06	0.43
46:S2:448:A:H5''	78:SI:25:ARG:HA	2.00	0.43
46:S2:454:U:H2'	46:S2:455:A:H8	1.83	0.43
46:S2:633:C:H1'	68:Se:16:THR:HG21	1.98	0.43
46:S2:637:U:H2'	46:S2:638:C:H6	1.82	0.43
46:S2:1115:U:H1'	46:S2:1116:C:H3'	1.99	0.43
46:S2:1560:U:HO2'	46:S2:1583:C:HO2'	1.54	0.43
46:S2:1562:C:H2'	46:S2:1563:G:C8	2.46	0.43
47:S:205:LYS:HE2	47:S:207:GLU:OE2	2.17	0.43
49:SA:81:ASN:OD1	49:SA:81:ASN:N	2.51	0.43
70:CB:581:GLU:OE1	70:CB:695:GLU:HB2	2.18	0.43
70:CB:820:LEU:HD12	70:CB:821:PRO:HD2	2.00	0.43
71:SG:41:LEU:O	71:SG:45:TRP:HD1	2.01	0.43
72:SJ:157:ILE:HD12	72:SJ:157:ILE:H	1.83	0.43
73:SC:200:ARG:HA	73:SC:221:ASP:OD2	2.18	0.43
75:SH:29:GLU:C	75:SH:31:GLU:H	2.26	0.43
76:SD:34:TYR:OH	76:SD:37:VAL:HB	2.18	0.43
77:SE:60:GLU:HA	77:SE:63:LYS:HG2	1.98	0.43
77:SE:259:LYS:HD3	77:SE:259:LYS:C	2.42	0.43
79:SK:1:MET:HE1	79:SK:43:LEU:CD2	2.47	0.43
1:L5:1693:U:OP2	19:LQ:49:LYS:NZ	2.51	0.43
1:L5:1872:G:O2'	1:L5:4219:A:N3	2.42	0.43
1:L5:2306:G:H1'	1:L5:2332:A:N6	2.33	0.43
1:L5:2394:G:O2'	1:L5:2819:U:O4	2.28	0.43
1:L5:4139:G:N2	1:L5:4140:C:H41	2.10	0.43
1:L5:4459:U:H2'	1:L5:4460:U:H6	1.81	0.43
1:L5:4897:G:H2'	1:L5:4898:G:C8	2.52	0.43
7:LD:215:ASP:OD1	7:LD:218:ALA:N	2.46	0.43
7:LD:234:ASP:C	7:LD:235:MET:HG3	2.43	0.43
11:LH:118:LEU:HA	11:LH:118:LEU:HD23	1.85	0.43
26:LX:100:VAL:HG23	26:LX:134:LYS:HB3	1.99	0.43
29:La:131:ARG:NH2	29:La:135:GLU:OE1	2.51	0.43
33:Le:81:ASN:HA	33:Le:111:ILE:HD11	2.00	0.43
43:Lo:27:LYS:HA	43:Lo:27:LYS:HD3	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:155:G:N2	71:SG:56:ASN:OD1	2.51	0.43
46:S2:735:C:H5''	46:S2:736:C:C2	2.53	0.43
46:S2:1386:A:OP2	76:SD:160:SER:OG	2.26	0.43
46:S2:1845:A:H2'	46:S2:1846:G:C8	2.53	0.43
48:E:14:A:N1	48:E:21:A:O2'	2.43	0.43
50:SB:46:LYS:NZ	52:SO:20:GLN:O	2.51	0.43
62:SY:26:ASP:OD1	62:SY:26:ASP:N	2.47	0.43
70:CB:21:ASN:HB2	70:CB:123:ASP:OD2	2.17	0.43
70:CB:196:GLU:H	70:CB:196:GLU:CD	2.26	0.43
70:CB:660:ASN:HA	70:CB:700:VAL:O	2.18	0.43
76:SD:113:LEU:HD21	76:SD:117:ARG:HG3	2.00	0.43
78:SI:164:GLU:O	78:SI:167:GLN:HB2	2.18	0.43
1:L5:450:G:H2'	1:L5:451:C:C6	2.53	0.43
1:L5:1444:G:N2	1:L5:2103:G:H1	2.15	0.43
1:L5:1613:A:H5''	4:LA:183:GLY:HA2	2.00	0.43
1:L5:1806:G:H2'	1:L5:1807:C:H6	1.83	0.43
1:L5:2292:C:H2'	1:L5:2293:U:C6	2.53	0.43
1:L5:3717:A:OP2	1:L5:3735:G:N2	2.48	0.43
1:L5:3735:G:O2'	1:L5:3736:A:OP2	2.33	0.43
1:L5:3773:U:O2	1:L5:3773:U:H2'	2.19	0.43
1:L5:4122:G:O2'	28:LZ:136:PHE:OXT	2.35	0.43
1:L5:4389:C:H2'	1:L5:4390:A:H8	1.82	0.43
1:L5:4500:U:H2'	1:L5:4501:U:H6	1.83	0.43
1:L5:4584:A:H2'	1:L5:4585:U:O4'	2.17	0.43
1:L5:4768:G:OP1	17:LO:168:TYR:OH	2.25	0.43
4:LA:135:THR:HG22	4:LA:149:LYS:HB3	2.01	0.43
5:LB:308:ASP:OD1	5:LB:309:LEU:N	2.51	0.43
5:LB:348:ARG:NH1	5:LB:351:LEU:HD22	2.27	0.43
7:LD:66:TYR:CE2	7:LD:68:ARG:HD3	2.53	0.43
8:LE:91:THR:HG22	8:LE:108:LYS:HG2	1.99	0.43
8:LE:153:LEU:HB2	8:LE:193:PHE:O	2.18	0.43
10:LG:247:VAL:HA	10:LG:250:ILE:HG22	1.99	0.43
12:LI:66:GLU:CD	12:LI:69:ARG:HH11	2.26	0.43
12:LI:212:LEU:HD23	12:LI:213:HIS:N	2.33	0.43
18:LP:95:LEU:CD2	18:LP:148:MET:HE1	2.48	0.43
19:LQ:82:VAL:O	19:LQ:102:ALA:HA	2.18	0.43
22:LT:45:MET:HB2	22:LT:45:MET:HE3	1.73	0.43
46:S2:945:U:H2'	46:S2:946:U:C6	2.53	0.43
46:S2:953:C:H2'	46:S2:954:U:O4'	2.18	0.43
46:S2:989:C:OP2	50:SB:155:TYR:OH	2.29	0.43
46:S2:1119:A:H2'	46:S2:1120:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1457:U:H2'	46:S2:1458:G:C8	2.53	0.43
46:S2:1503:C:H2'	46:S2:1504:U:C6	2.53	0.43
46:S2:1687:C:H2'	46:S2:1688:C:H6	1.83	0.43
46:S2:1825:A:N1	70:CB:720:GLN:NE2	2.59	0.43
49:SA:164:ASN:OD1	49:SA:165:ASN:N	2.51	0.43
55:SR:15:VAL:HA	55:SR:18:GLU:HG3	2.01	0.43
66:Sc:33:GLU:HG3	66:Sc:41:SER:HB2	2.01	0.43
69:Sg:64:HIS:CE1	69:Sg:83:TRP:HE3	2.36	0.43
69:Sg:191:HIS:HD2	69:Sg:217:MET:HE3	1.83	0.43
71:SG:63:MET:HA	71:SG:98:ARG:O	2.18	0.43
72:SJ:120:ALA:HB1	72:SJ:125:HIS:ND1	2.33	0.43
73:SC:184:VAL:HG11	73:SC:247:THR:HB	2.00	0.43
75:SH:54:GLY:HA3	75:SH:171:GLU:OE1	2.18	0.43
77:SE:242:LYS:HD3	77:SE:242:LYS:HA	1.71	0.43
1:L5:385:A:N3	1:L5:387:G:H5''	2.33	0.43
1:L5:1443:A:H2	1:L5:2104:G:H1'	1.82	0.43
1:L5:1972:G:C6	1:L5:1995:G:C6	3.06	0.43
1:L5:3946:G:N3	1:L5:3947:A:N6	2.67	0.43
1:L5:4162:C:H5	10:LG:73:ARG:HE	1.67	0.43
7:LD:187:SER:O	7:LD:189:GLU:HG2	2.18	0.43
7:LD:260:GLU:OE1	7:LD:260:GLU:N	2.51	0.43
8:LE:201:ILE:HD11	8:LE:267:LEU:CD2	2.48	0.43
8:LE:281:ILE:HD12	8:LE:286:LEU:HD11	2.00	0.43
10:LG:96:LEU:HD23	10:LG:96:LEU:HA	1.83	0.43
11:LH:171:ASP:OD2	11:LH:173:ARG:HB2	2.18	0.43
16:LN:104:GLU:HA	16:LN:160:GLU:HG3	2.01	0.43
46:S2:65:C:C5	71:SG:133:LEU:HD23	2.53	0.43
46:S2:156:G:H2'	46:S2:157:U:C6	2.53	0.43
46:S2:554:A:O2'	46:S2:555:A:H5''	2.18	0.43
46:S2:1305:C:H2'	46:S2:1306:U:C6	2.54	0.43
46:S2:1437:C:H2'	46:S2:1437:C:O2	2.17	0.43
46:S2:1756:C:N4	46:S2:1757:G:H21	2.16	0.43
47:S:217:ASN:OD1	47:S:218:TRP:N	2.50	0.43
50:SB:59:SER:OG	50:SB:63:LYS:NZ	2.50	0.43
50:SB:212:VAL:HG13	50:SB:212:VAL:O	2.18	0.43
52:SO:93:LEU:HD23	52:SO:124:MET:SD	2.57	0.43
56:SS:22:GLY:O	56:SS:57:GLY:N	2.52	0.43
65:Sb:20:LYS:O	65:Sb:26:GLN:HB2	2.18	0.43
69:Sg:183:LYS:HB3	69:Sg:185:LYS:NZ	2.33	0.43
73:SC:77:SER:C	73:SC:79:GLU:N	2.73	0.43
76:SD:52:ALA:O	76:SD:90:LYS:HA	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:SE:141:THR:OG1	77:SE:142:HIS:N	2.51	0.43
78:SI:130:THR:HA	78:SI:133:GLU:HG3	2.00	0.43
79:SK:21:MET:HG2	79:SK:49:MET:HE1	2.01	0.43
79:SK:86:PRO:HG2	79:SK:89:ILE:HG12	2.00	0.43
80:SL:3:ASP:OD1	80:SL:3:ASP:N	2.50	0.43
1:L5:132:G:H3'	1:L5:133:C:H4'	2.00	0.43
1:L5:483:G:C6	1:L5:485:C:H4'	2.54	0.43
1:L5:965:G:N2	1:L5:2092:G:H1'	2.33	0.43
1:L5:1628:C:OP2	4:LA:9:ARG:HD2	2.18	0.43
1:L5:2580:U:P	28:LZ:36:ARG:HH22	2.41	0.43
1:L5:4563:U:C2	1:L5:4564:A:C8	3.07	0.43
2:L7:58:A:H2'	2:L7:59:G:H8	1.82	0.43
3:L8:83:C:P	3:L8:83:C:H6	2.42	0.43
5:LB:14:LEU:HD22	5:LB:17:LEU:HD12	2.00	0.43
10:LG:260:GLU:O	10:LG:263:THR:OG1	2.30	0.43
21:LS:69:GLU:HG2	21:LS:101:THR:HG22	2.00	0.43
22:LT:68:THR:OG1	22:LT:69:GLN:N	2.50	0.43
26:LX:80:PRO:HG2	26:LX:155:ILE:HG21	2.01	0.43
46:S2:988:C:H5''	50:SB:116:LYS:HG2	2.01	0.43
46:S2:1016:U:H5''	51:SN:14:SER:HB3	2.00	0.43
46:S2:1567:G:C6	56:SS:82:TRP:CG	3.06	0.43
46:S2:1585:U:C4	57:ST:67:ARG:HD2	2.53	0.43
46:S2:1811:C:H2'	46:S2:1812:U:O4'	2.19	0.43
53:SP:23:ASP:OD1	53:SP:24:GLN:N	2.51	0.43
64:Sa:13:LYS:HA	64:Sa:13:LYS:HD3	1.70	0.43
69:Sg:5:MET:HA	69:Sg:311:GLN:O	2.18	0.43
69:Sg:125:ARG:C	69:Sg:127:LYS:H	2.26	0.43
69:Sg:170:TRP:HA	69:Sg:194:TYR:HB2	2.00	0.43
70:CB:586:GLU:OE2	70:CB:605:LYS:HD3	2.18	0.43
71:SG:50:VAL:HG22	71:SG:113:ILE:HG12	2.00	0.43
71:SG:102:VAL:HG21	71:SG:109:LEU:HD21	1.99	0.43
75:SH:179:LYS:C	75:SH:179:LYS:HD3	2.43	0.43
78:SI:128:LYS:HE3	78:SI:128:LYS:HB2	1.80	0.43
78:SI:177:SER:OG	78:SI:178:ARG:N	2.52	0.43
78:SI:190:LEU:HD13	78:SI:198:TYR:HD2	1.84	0.43
79:SK:8:ARG:NH1	79:SK:12:TYR:OH	2.51	0.43
1:L5:209:U:H5	1:L5:233:U:N3	2.15	0.43
1:L5:683:C:H2'	1:L5:684:G:O4'	2.18	0.43
1:L5:1177:U:O4	1:L5:1183:C:N3	2.51	0.43
1:L5:4389:C:H2'	1:L5:4390:A:C8	2.54	0.43
4:LA:180:LEU:HD22	44:Lp:18:TYR:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:LN:23:LEU:HD23	16:LN:23:LEU:HA	1.85	0.43
19:LQ:50:ARG:HA	19:LQ:53:MET:HG3	2.00	0.43
22:LT:26:PRO:HB2	22:LT:29:THR:HG23	2.00	0.43
43:Lo:22:LYS:HE2	43:Lo:22:LYS:HB3	1.79	0.43
46:S2:158:A:N1	46:S2:463:C:O2	2.51	0.43
46:S2:540:U:H5	46:S2:544:G:C6	2.36	0.43
46:S2:890:U:H3	46:S2:895:G:N2	2.16	0.43
50:SB:170:GLU:HA	50:SB:173:THR:HG22	2.00	0.43
55:SR:93:GLN:C	55:SR:94:GLU:HG3	2.43	0.43
58:SU:55:ARG:HE	58:SU:87:ARG:NH1	2.16	0.43
65:Sb:73:LEU:HD22	65:Sb:79:PHE:CE1	2.53	0.43
69:Sg:11:LEU:HB2	69:Sg:307:VAL:HB	2.01	0.43
69:Sg:102:VAL:HG13	69:Sg:102:VAL:O	2.18	0.43
69:Sg:118:ARG:HA	69:Sg:134:THR:HG23	2.01	0.43
70:CB:32:LYS:O	70:CB:36:THR:HG23	2.19	0.43
72:SJ:93:LYS:HB2	72:SJ:96:TYR:CD2	2.53	0.43
75:SH:130:LEU:HD21	75:SH:156:VAL:HG21	2.00	0.43
1:L5:88:A:N7	19:LQ:173:LYS:NZ	2.66	0.43
1:L5:1460:C:H2'	1:L5:1461:C:C6	2.53	0.43
1:L5:1812:C:H1'	30:Lb:57:MET:CE	2.44	0.43
1:L5:1899:G:O2'	33:Le:57:ASN:OD1	2.36	0.43
1:L5:3760:A:C8	70:CB:596:PRO:HB2	2.53	0.43
1:L5:4503:A:H2'	1:L5:4504:C:C6	2.54	0.43
3:L8:39:G:H1'	3:L8:103:A:N6	2.34	0.43
8:LE:43:HIS:CE1	8:LE:46:ARG:NH1	2.87	0.43
9:LF:114:LEU:HD22	9:LF:119:ASN:O	2.19	0.43
10:LG:259:LYS:O	10:LG:263:THR:HG23	2.18	0.43
12:LI:180:GLU:O	12:LI:184:MET:HG3	2.18	0.43
16:LN:140:LYS:HA	16:LN:140:LYS:HD3	1.80	0.43
17:LO:177:LEU:HD23	17:LO:177:LEU:HA	1.88	0.43
20:LR:162:ARG:HD2	20:LR:163:ARG:N	2.34	0.43
46:S2:886:A:N6	46:S2:901:G:N9	2.47	0.43
46:S2:976:G:H2'	46:S2:977:C:C6	2.54	0.43
46:S2:1678:A:O2'	46:S2:1679:A:H5'	2.18	0.43
46:S2:1718:G:O2'	46:S2:1815:A:N6	2.51	0.43
48:E:18:G:H4'	48:E:19:U:OP2	2.16	0.43
49:SA:22:GLY:O	49:SA:24:HIS:ND1	2.39	0.43
53:SP:16:THR:HG23	56:SS:91:LYS:HZ1	1.84	0.43
56:SS:62:ASP:OD1	56:SS:63:GLU:N	2.50	0.43
58:SU:55:ARG:HG2	58:SU:87:ARG:HG2	2.01	0.43
67:Sd:23:VAL:HG22	79:SK:64:TRP:CD2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:CB:788:LEU:HD12	70:CB:789:PRO:HD2	2.00	0.43
71:SG:43:GLU:O	71:SG:46:LYS:HG2	2.18	0.43
71:SG:116:LYS:NZ	71:SG:125:THR:HG21	2.30	0.43
74:SF:141:VAL:HG23	74:SF:145:ARG:HD2	2.00	0.43
77:SE:86:PHE:CZ	77:SE:87:MET:HE2	2.53	0.43
78:SI:194:GLU:HG2	80:SL:10:TYR:CD2	2.52	0.43
1:L5:268:G:H2'	1:L5:269:G:C8	2.47	0.43
1:L5:753:C:C5	1:L5:754:U:C5	3.07	0.43
1:L5:757:G:H2'	1:L5:758:G:C8	2.54	0.43
1:L5:1754:U:C2	1:L5:1755:C:C5	3.06	0.43
1:L5:2029:A:H2'	1:L5:2030:A:C8	2.53	0.43
1:L5:4257:A:C4	13:LJ:60:PHE:CE2	3.07	0.43
5:LB:307:TYR:CE2	5:LB:366:LYS:HG2	2.54	0.43
8:LE:50:LEU:HD23	8:LE:50:LEU:H	1.84	0.43
12:LI:48:LEU:O	12:LI:139:ARG:HA	2.18	0.43
13:LJ:159:LYS:HG2	13:LJ:163:MET:HE2	2.01	0.43
14:LL:46:ILE:O	14:LL:46:ILE:HG13	2.19	0.43
16:LN:200:LEU:HD22	16:LN:204:ARG:HD3	2.00	0.43
17:LO:168:TYR:CZ	17:LO:172:LYS:HD2	2.53	0.43
18:LP:94:MET:HE3	18:LP:94:MET:HB2	1.86	0.43
20:LR:15:LEU:HD21	20:LR:52:ARG:HB2	2.00	0.43
31:Lc:101:ASP:OD1	31:Lc:103:ASP:N	2.52	0.43
34:Lf:95:LYS:HE3	34:Lf:95:LYS:HB2	1.81	0.43
43:Lo:24:THR:HG22	43:Lo:25:GLN:N	2.34	0.43
45:Lr:4:HIS:O	45:Lr:8:MET:HG2	2.18	0.43
46:S2:152:U:H2'	46:S2:153:G:C8	2.54	0.43
46:S2:829:C:OP1	77:SE:21:ASP:HB2	2.19	0.43
46:S2:919:A:OP1	51:SN:20:ARG:HD3	2.19	0.43
46:S2:1422:G:C4	46:S2:1424:G:N7	2.86	0.43
46:S2:1539:U:H2'	46:S2:1540:G:C8	2.54	0.43
46:S2:1545:A:H2	46:S2:1671:G:H1'	1.82	0.43
46:S2:1547:C:N4	46:S2:1586:U:O4	2.49	0.43
48:E:10:G:H2'	48:E:11:C:H6	1.84	0.43
50:SB:36:PRO:HA	50:SB:232:HIS:ND1	2.33	0.43
54:SQ:48:GLN:HG2	54:SQ:49:TYR:N	2.34	0.43
54:SQ:53:GLU:N	54:SQ:54:PRO:HD2	2.34	0.43
58:SU:56:MET:HG3	58:SU:86:LYS:HD2	2.01	0.43
64:Sa:88:SER:O	64:Sa:92:ARG:CB	2.48	0.43
69:Sg:32:LEU:HA	69:Sg:41:ILE:O	2.19	0.43
71:SG:74:ARG:HE	71:SG:74:ARG:HB3	1.74	0.43
74:SF:67:PRO:HG2	74:SF:70:GLU:CG	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:SE:183:VAL:HG22	77:SE:220:THR:HG21	1.99	0.43
79:SK:92:ALA:O	79:SK:96:ARG:HG2	2.19	0.43
1:L5:2634:C:H2'	1:L5:2635:U:H6	1.84	0.43
1:L5:3619:G:H4'	20:LR:79:GLY:O	2.19	0.43
1:L5:3868:G:H22	1:L5:3900:G:H1'	1.84	0.43
5:LB:122:TRP:CH2	5:LB:127:LYS:HG2	2.54	0.43
7:LD:117:LYS:HB3	7:LD:117:LYS:HE3	1.81	0.43
7:LD:258:LYS:H	7:LD:259:LYS:NZ	2.17	0.43
13:LJ:23:ASN:HB3	13:LJ:129:ASP:OD2	2.19	0.43
13:LJ:36:ALA:HA	13:LJ:39:VAL:HG12	2.01	0.43
16:LN:166:SER:O	16:LN:170:LYS:HG3	2.18	0.43
21:LS:43:ARG:HD2	21:LS:43:ARG:HA	1.76	0.43
46:S2:1322:G:H2'	46:S2:1323:U:O4'	2.19	0.43
46:S2:1458:G:H2'	46:S2:1459:G:H8	1.84	0.43
46:S2:1545:A:H4'	54:SQ:74:GLY:HA2	2.01	0.43
46:S2:1804:U:H2'	46:S2:1805:G:H8	1.84	0.43
48:E:79:U:C2	48:E:80:A:C8	3.07	0.43
49:SA:35:GLU:O	49:SA:38:ILE:HG22	2.18	0.43
49:SA:56:GLU:OE2	59:SV:79:VAL:HB	2.19	0.43
58:SU:56:MET:HE3	58:SU:56:MET:HB3	1.88	0.43
58:SU:100:GLN:O	58:SU:104:ILE:HG13	2.18	0.43
70:CB:426:LYS:H	70:CB:426:LYS:HG3	1.57	0.43
77:SE:19:MET:HE2	77:SE:108:ARG:HD2	2.00	0.43
1:L5:1178:G:H5''	1:L5:1180:C:H41	1.84	0.43
1:L5:1773:U:H2'	1:L5:1774:C:H6	1.83	0.43
1:L5:1977:C:H2'	1:L5:1978:C:C6	2.54	0.43
1:L5:2474:G:C4	26:LX:47:ARG:NH2	2.87	0.43
1:L5:2527:A:P	20:LR:38:ARG:HH22	2.42	0.43
1:L5:5057:C:H2'	1:L5:5058:A:C8	2.54	0.43
28:LZ:33:THR:C	28:LZ:35:ASP:H	2.27	0.43
45:Lr:65:LYS:O	45:Lr:102:TYR:OH	2.36	0.43
46:S2:194:C:H2'	46:S2:195:C:H6	1.83	0.43
46:S2:941:C:H2'	46:S2:942:G:H8	1.83	0.43
46:S2:949:G:H2'	46:S2:950:C:C6	2.54	0.43
46:S2:1550:G:O2'	46:S2:1558:C:O2	2.32	0.43
56:SS:89:ASP:OD2	56:SS:91:LYS:HB3	2.19	0.43
58:SU:98:VAL:O	58:SU:102:THR:HG22	2.18	0.43
59:SV:17:CYS:O	59:SV:21:ASN:HA	2.19	0.43
70:CB:396:MET:HE3	70:CB:396:MET:HB2	1.86	0.43
71:SG:20:ASP:OD1	71:SG:22:ARG:NE	2.51	0.43
71:SG:32:MET:HA	71:SG:52:ILE:HG23	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SH:49:LYS:HB2	75:SH:61:ILE:CG1	2.49	0.43
78:SI:113:TYR:OH	78:SI:156:ALA:O	2.35	0.43
1:L5:106:A:H2'	1:L5:107:G:O4'	2.18	0.42
1:L5:1328:G:O2'	1:L5:2349:A:OP1	2.36	0.42
1:L5:1770:A:C8	1:L5:1771:U:N3	2.87	0.42
1:L5:1779:U:OP1	7:LD:6:VAL:HG12	2.19	0.42
1:L5:2108:G:C6	1:L5:2109:G:C6	3.06	0.42
1:L5:2588:C:OP1	1:L5:2768:C:O2'	2.30	0.42
1:L5:4084:G:O6	4:LA:72:ARG:NH2	2.44	0.42
1:L5:4185:G:OP1	4:LA:2:GLY:N	2.52	0.42
1:L5:4740:G:C5	1:L5:4742:G:C8	3.07	0.42
6:LC:285:ILE:HD11	19:LQ:125:GLN:OE1	2.18	0.42
7:LD:62:CYS:HB3	7:LD:105:LEU:HD22	2.00	0.42
8:LE:164:PHE:CE1	8:LE:173:LEU:HD22	2.54	0.42
13:LJ:135:GLY:HA2	13:LJ:139:PHE:CE2	2.54	0.42
13:LJ:169:LYS:HD3	13:LJ:170:TYR:HE1	1.80	0.42
23:LU:45:GLU:HG2	23:LU:46:ARG:N	2.34	0.42
27:LY:127:GLN:O	27:LY:130:LYS:HG3	2.19	0.42
36:Lh:32:ARG:HG2	36:Lh:32:ARG:HH11	1.84	0.42
38:Lj:85:LYS:O	38:Lj:85:LYS:HD2	2.19	0.42
46:S2:5:U:H2'	46:S2:6:G:H8	1.83	0.42
46:S2:535:G:C2	46:S2:549:C:N3	2.87	0.42
46:S2:595:U:H2'	46:S2:596:U:H6	1.81	0.42
46:S2:691:G:C6	46:S2:692:G:H1'	2.53	0.42
54:SQ:104:SER:O	54:SQ:108:ILE:HG12	2.18	0.42
64:Sa:46:GLU:O	64:Sa:48:ALA:N	2.51	0.42
70:CB:186:ASN:HA	70:CB:189:ILE:HG22	2.01	0.42
70:CB:493:ASN:O	70:CB:494:MET:HE2	2.19	0.42
71:SG:70:HIS:HA	71:SG:98:ARG:NH1	2.31	0.42
71:SG:159:ARG:HB3	71:SG:171:THR:OG1	2.19	0.42
74:SF:17:ILE:HG12	74:SF:46:ALA:O	2.19	0.42
1:L5:75:G:O2'	14:LL:101:ARG:NH1	2.51	0.42
1:L5:4622:A:H4'	5:LB:13:SER:HB2	2.00	0.42
3:L8:89:U:H2'	3:L8:90:C:C6	2.54	0.42
6:LC:298:ILE:O	6:LC:302:LEU:HG	2.19	0.42
7:LD:215:ASP:OD1	7:LD:216:GLU:N	2.53	0.42
8:LE:100:LYS:HD3	8:LE:100:LYS:HA	1.85	0.42
9:LF:240:ILE:HD12	9:LF:240:ILE:HA	1.93	0.42
46:S2:1565:C:H5	57:ST:101:ARG:NH1	2.17	0.42
46:S2:1593:C:H2'	46:S2:1594:A:C8	2.54	0.42
46:S2:1639:G:H2'	46:S2:1639:G:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1703:C:H2'	46:S2:1704:C:O4'	2.19	0.42
48:E:8:U:H5''	48:E:58:G:H5'	2.01	0.42
51:SN:20:ARG:HH12	60:SW:56:HIS:HB3	1.84	0.42
51:SN:25:TRP:CD2	65:Sb:82:LYS:HE2	2.54	0.42
51:SN:49:GLN:O	51:SN:53:ILE:HG12	2.19	0.42
53:SP:22:LEU:O	53:SP:26:LEU:HD23	2.19	0.42
56:SS:25:LYS:HE2	56:SS:25:LYS:HB2	1.77	0.42
57:ST:11:GLN:OE1	57:ST:62:ARG:HD2	2.19	0.42
57:ST:33:TRP:CZ2	57:ST:102:ARG:HG3	2.54	0.42
58:SU:62:ARG:NH1	58:SU:81:GLN:OE1	2.53	0.42
60:SW:42:MET:HE2	60:SW:42:MET:HB3	1.74	0.42
65:Sb:21:LYS:C	65:Sb:23:ARG:H	2.25	0.42
70:CB:22:MET:O	70:CB:102:LEU:HA	2.19	0.42
70:CB:313:ALA:O	70:CB:316:ILE:HG22	2.19	0.42
71:SG:30:LYS:HD3	71:SG:30:LYS:HA	1.90	0.42
72:SJ:81:LEU:HD13	72:SJ:100:LEU:HD11	2.00	0.42
75:SH:25:GLN:O	75:SH:29:GLU:OE1	2.37	0.42
75:SH:82:GLU:N	75:SH:82:GLU:OE2	2.52	0.42
80:SL:32:LYS:HD3	80:SL:33:LEU:H	1.84	0.42
1:L5:308:G:O6	16:LN:12:ARG:NH1	2.53	0.42
1:L5:2845:A:H61	1:L5:3843:C:N4	2.15	0.42
1:L5:3753:G:OP2	1:L5:3776:G:O2'	2.37	0.42
3:L8:144:U:H2'	3:L8:145:C:C6	2.54	0.42
8:LE:43:HIS:ND1	8:LE:44:CYS:N	2.67	0.42
10:LG:115:LEU:O	10:LG:119:GLU:OE1	2.37	0.42
17:LO:178:ARG:O	17:LO:182:GLU:HG3	2.19	0.42
18:LP:32:THR:O	18:LP:36:ILE:HG12	2.18	0.42
28:LZ:135:ARG:HD2	28:LZ:135:ARG:HA	1.85	0.42
34:Lf:6:TRP:CD2	34:Lf:102:ARG:HD3	2.54	0.42
35:Lg:68:SER:O	35:Lg:72:LYS:HE2	2.20	0.42
36:Lh:88:THR:HB	36:Lh:91:MET:HB2	2.01	0.42
43:Lo:32:SER:C	43:Lo:34:TYR:H	2.27	0.42
46:S2:323:C:H4'	46:S2:324:C:H5	1.84	0.42
46:S2:860:G:H21	60:SW:107:SER:HB2	1.82	0.42
46:S2:1272:C:H2'	46:S2:1273:C:O4'	2.18	0.42
46:S2:1274:G:OP1	46:S2:1274:G:N2	2.34	0.42
46:S2:1692:U:H2'	46:S2:1693:G:C8	2.54	0.42
56:SS:22:GLY:HA2	56:SS:56:ALA:HB3	2.01	0.42
57:ST:113:VAL:HA	57:ST:123:LEU:HA	2.00	0.42
69:Sg:93:THR:O	69:Sg:94:THR:OG1	2.31	0.42
70:CB:374:GLU:N	70:CB:374:GLU:OE2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SG:132:ARG:C	71:SG:133:LEU:HD12	2.44	0.42
71:SG:165:GLU:OE1	71:SG:165:GLU:N	2.51	0.42
71:SG:196:LYS:HE2	71:SG:196:LYS:HB2	1.86	0.42
74:SF:40:ALA:H	74:SF:68:ILE:HD11	1.84	0.42
77:SE:122:LYS:NZ	77:SE:145:ARG:HH21	2.18	0.42
78:SI:205:ARG:HG2	78:SI:205:ARG:NH1	2.34	0.42
1:L5:186:G:O2'	1:L5:1366:G:N2	2.52	0.42
1:L5:1094:G:H1	1:L5:1201:U:H3	1.66	0.42
1:L5:1097:C:H2'	1:L5:1098:G:C8	2.55	0.42
1:L5:1475:G:H2'	1:L5:1476:C:C6	2.54	0.42
1:L5:1765:A:N7	1:L5:1766:A:O2'	2.48	0.42
1:L5:1989:G:H2'	1:L5:1990:A:C8	2.54	0.42
6:LC:25:PRO:HD2	6:LC:28:PHE:HD2	1.83	0.42
7:LD:223:PHE:HD2	7:LD:226:TYR:CD1	2.37	0.42
9:LF:221:LYS:O	9:LF:222:LYS:HB2	2.20	0.42
10:LG:50:ASP:HB2	26:LX:40:ILE:HD11	2.01	0.42
15:LM:11:ARG:NH1	15:LM:58:THR:O	2.52	0.42
19:LQ:76:GLU:OE2	19:LQ:76:GLU:N	2.46	0.42
23:LU:41:GLN:O	23:LU:42:PHE:C	2.62	0.42
36:Lh:87:LYS:HG3	36:Lh:88:THR:H	1.84	0.42
46:S2:446:G:P	78:SI:47:ARG:HH22	2.42	0.42
46:S2:921:G:C2	65:Sb:22:LYS:HG2	2.54	0.42
46:S2:1418:C:O2'	46:S2:1420:G:N3	2.53	0.42
46:S2:1472:C:O3'	69:Sg:15:ASN:ND2	2.52	0.42
49:SA:215:GLN:OE1	49:SA:215:GLN:N	2.53	0.42
61:SX:102:VAL:CG1	61:SX:120:PHE:HB3	2.50	0.42
63:SZ:110:THR:HB	74:SF:102:LEU:HD11	2.00	0.42
70:CB:394:LEU:HA	70:CB:419:GLY:HA3	2.01	0.42
70:CB:431:GLY:HA3	70:CB:441:ASP:HB3	2.01	0.42
70:CB:600:ASN:OD1	70:CB:710:HIS:N	2.51	0.42
72:SJ:66:LYS:HD3	72:SJ:66:LYS:HA	1.79	0.42
73:SC:253:PRO:HA	73:SC:256:TRP:CG	2.54	0.42
77:SE:98:ASN:O	77:SE:114:ILE:HG12	2.18	0.42
78:SI:198:TYR:O	78:SI:202:ILE:HG13	2.19	0.42
1:L5:498:C:N4	1:L5:657:C:H42	2.18	0.42
1:L5:741:C:N4	1:L5:923:C:H42	2.17	0.42
1:L5:1241:C:N4	30:Lb:118:LEU:HD12	2.34	0.42
1:L5:1760:G:O3'	1:L5:1761:G:H2'	2.20	0.42
1:L5:1761:G:N1	1:L5:1768:C:N3	2.67	0.42
1:L5:2566:G:H2'	1:L5:2567:G:H8	1.83	0.42
1:L5:4685:U:H2'	1:L5:4686:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LG:159:HIS:ND1	10:LG:185:LYS:HA	2.34	0.42
13:LJ:99:PHE:CD1	13:LJ:163:MET:HG2	2.55	0.42
14:LL:127:PHE:HA	14:LL:143:GLU:OE1	2.19	0.42
19:LQ:83:VAL:HG13	19:LQ:83:VAL:O	2.20	0.42
22:LT:102:ARG:O	22:LT:106:LEU:HG	2.19	0.42
30:Lb:93:LEU:HD23	30:Lb:93:LEU:HA	1.87	0.42
42:Ln:3:ALA:HA	42:Ln:6:ARG:HG2	2.01	0.42
46:S2:375:U:H2'	46:S2:376:A:C8	2.54	0.42
46:S2:441:C:H2'	46:S2:442:C:C6	2.54	0.42
46:S2:537:C:H3'	46:S2:538:U:C6	2.55	0.42
46:S2:1201:U:H2'	46:S2:1202:U:C6	2.54	0.42
46:S2:1269:G:H2'	46:S2:1270:G:C8	2.54	0.42
50:SB:223:PHE:O	50:SB:223:PHE:CG	2.71	0.42
57:ST:129:ARG:HD2	57:ST:133:ARG:HH21	1.85	0.42
60:SW:87:GLU:HA	60:SW:90:GLN:HE21	1.85	0.42
64:Sa:25:ASN:ND2	64:Sa:77:CYS:SG	2.93	0.42
64:Sa:45:VAL:HG11	64:Sa:64:LEU:HD12	2.00	0.42
69:Sg:78:ALA:O	69:Sg:89:LEU:HD12	2.20	0.42
70:CB:659:PRO:O	70:CB:699:GLY:N	2.52	0.42
72:SJ:93:LYS:HA	72:SJ:93:LYS:HD3	1.87	0.42
72:SJ:143:ASN:OD1	72:SJ:143:ASN:N	2.52	0.42
73:SC:166:ARG:HD2	73:SC:248:TYR:CD1	2.54	0.42
74:SF:51:HIS:N	74:SF:70:GLU:OE2	2.52	0.42
75:SH:63:PHE:HA	75:SH:95:ILE:O	2.20	0.42
1:L5:189:G:H2'	1:L5:190:G:C8	2.54	0.42
1:L5:457:G:H2'	1:L5:458:C:C6	2.54	0.42
1:L5:993:G:O2'	1:L5:994:G:O4'	2.21	0.42
1:L5:1095:A:H2	1:L5:1200:G:C2	2.27	0.42
1:L5:1895:G:H2'	1:L5:1896:A:O4'	2.20	0.42
1:L5:2884:G:H2'	1:L5:2885:A:C8	2.54	0.42
1:L5:4538:G:H2'	1:L5:4539:U:H6	1.83	0.42
1:L5:4862:G:H2'	1:L5:4863:G:C8	2.55	0.42
2:L7:66:G:OP1	7:LD:10:LYS:HE3	2.19	0.42
5:LB:288:GLY:HA3	5:LB:330:PHE:CE1	2.55	0.42
16:LN:68:ARG:HG2	16:LN:126:THR:O	2.18	0.42
16:LN:123:GLU:HG3	16:LN:124:ASP:N	2.24	0.42
23:LU:19:LEU:CD1	23:LU:20:LYS:HG2	2.50	0.42
46:S2:112:U:O2'	46:S2:113:G:OP2	2.33	0.42
46:S2:866:U:H2'	46:S2:867:G:H8	1.82	0.42
46:S2:1017:U:H5'	51:SN:55:ARG:HH11	1.83	0.42
46:S2:1114:U:H6	46:S2:1114:U:H2'	1.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1533:A:C8	46:S2:1604:G:H1'	2.54	0.42
46:S2:1825:A:N3	46:S2:1825:A:H2'	2.34	0.42
48:E:7:G:H3'	48:E:8:U:C5'	2.49	0.42
49:SA:207:PRO:HA	49:SA:210:ILE:HD12	2.02	0.42
50:SB:30:TRP:CG	52:SO:19:PRO:HB3	2.55	0.42
52:SO:151:LEU:HD23	52:SO:151:LEU:H	1.84	0.42
53:SP:81:ARG:HH12	53:SP:120:SER:HG	1.57	0.42
57:ST:41:LYS:C	57:ST:43:LYS:H	2.27	0.42
66:Sc:22:GLY:C	66:Sc:24:GLN:H	2.26	0.42
69:Sg:42:MET:O	69:Sg:56:GLN:N	2.47	0.42
70:CB:81:LEU:HD23	70:CB:85:ASP:HB3	2.02	0.42
70:CB:368:ARG:O	70:CB:372:LEU:HD13	2.20	0.42
70:CB:428:ARG:HH21	70:CB:430:MET:HE3	1.83	0.42
70:CB:673:ASN:HA	70:CB:676:LYS:CG	2.47	0.42
70:CB:850:ALA:O	70:CB:853:ASN:HB3	2.19	0.42
1:L5:153:G:H2'	1:L5:154:G:H8	1.84	0.42
1:L5:1464:C:HO2'	30:Lb:47:LYS:HZ2	1.63	0.42
1:L5:2249:C:H2'	1:L5:2250:C:H5	1.85	0.42
1:L5:3911:C:H2'	1:L5:3912:U:C6	2.54	0.42
1:L5:4273:A:H2'	1:L5:4274:A:C8	2.55	0.42
3:L8:96:C:H5''	36:Lh:66:LYS:HG2	2.00	0.42
4:LA:98:ILE:HD11	44:Lp:80:LYS:HA	2.01	0.42
14:LL:59:VAL:HG21	14:LL:73:GLY:HA3	2.02	0.42
21:LS:7:LEU:H	21:LS:107:THR:CG2	2.33	0.42
41:Lm:94:MET:HE3	41:Lm:94:MET:HB3	1.97	0.42
46:S2:293:C:O2	46:S2:293:C:H2'	2.20	0.42
46:S2:880:G:H2'	46:S2:881:G:O4'	2.19	0.42
46:S2:919:A:OP2	51:SN:64:ARG:NH2	2.50	0.42
46:S2:1410:C:H2'	46:S2:1411:G:H8	1.82	0.42
46:S2:1453:C:OP2	55:SR:45:LYS:HG2	2.20	0.42
46:S2:1614:A:OP2	53:SP:42:ARG:NH2	2.49	0.42
49:SA:11:LYS:HD3	49:SA:11:LYS:HA	1.77	0.42
52:SO:150:ARG:H	52:SO:150:ARG:HG2	1.59	0.42
54:SQ:100:VAL:HG22	54:SQ:101:ASP:OD1	2.20	0.42
55:SR:51:ALA:O	55:SR:55:THR:HG23	2.19	0.42
63:SZ:88:LEU:O	63:SZ:92:LEU:HD23	2.19	0.42
69:Sg:39:THR:OG1	69:Sg:40:ILE:N	2.52	0.42
72:SJ:137:VAL:O	72:SJ:138:ARG:C	2.63	0.42
73:SC:89:LYS:HD2	73:SC:89:LYS:HA	1.81	0.42
73:SC:246:LYS:HA	73:SC:249:SER:OG	2.19	0.42
1:L5:499:G:H2'	1:L5:499:G:N3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1241:C:C4	1:L5:1242:G:C8	3.07	0.42
1:L5:1273:G:O2'	1:L5:1274:A:H5'	2.20	0.42
1:L5:1301:C:H3'	1:L5:1301:C:OP2	2.20	0.42
1:L5:1699:A:N7	9:LF:177:ARG:NH1	2.67	0.42
1:L5:2059:C:O2'	21:LS:118:ARG:NH2	2.52	0.42
1:L5:2274:C:H5''	6:LC:312:ARG:HB3	2.01	0.42
1:L5:2837:U:H2'	1:L5:2838:G:O4'	2.20	0.42
1:L5:3596:A:O3'	20:LR:143:HIS:NE2	2.53	0.42
1:L5:4633:G:O3'	1:L5:4634:U:H3'	2.20	0.42
8:LE:170:SER:OG	8:LE:214:ASP:OD2	2.30	0.42
11:LH:110:SER:O	11:LH:127:ARG:HD3	2.18	0.42
13:LJ:18:ARG:HB2	13:LJ:133:VAL:O	2.19	0.42
13:LJ:146:ARG:HG2	13:LJ:147:ARG:HG3	2.01	0.42
19:LQ:27:LEU:HD23	19:LQ:27:LEU:HA	1.92	0.42
21:LS:113:MET:HE3	21:LS:113:MET:HB3	1.89	0.42
29:La:75:LEU:HD23	29:La:113:GLY:HA2	2.01	0.42
46:S2:71:G:H3'	46:S2:72:C:H4'	2.01	0.42
46:S2:149:A:H3'	46:S2:150:A:H8	1.85	0.42
46:S2:176:U:H2'	46:S2:177:G:O4'	2.19	0.42
46:S2:210:U:C2	46:S2:211:G:C8	3.08	0.42
46:S2:501:C:O2	46:S2:501:C:H2'	2.20	0.42
46:S2:933:G:H1'	46:S2:1001:A:O4'	2.19	0.42
46:S2:958:G:H2'	46:S2:959:G:C8	2.55	0.42
46:S2:1398:G:C2	46:S2:1399:C:C6	3.08	0.42
47:S:185:PHE:CE2	47:S:189:GLY:HA2	2.54	0.42
55:SR:98:VAL:O	55:SR:120:THR:N	2.49	0.42
60:SW:77:PRO:HG2	60:SW:79:PHE:CZ	2.54	0.42
64:Sa:44:ILE:HG22	64:Sa:67:LEU:HD22	2.02	0.42
66:Sc:31:ARG:H	66:Sc:43:ILE:HD12	1.85	0.42
69:Sg:174:VAL:HB	69:Sg:188:HIS:CB	2.47	0.42
69:Sg:226:HIS:CE1	69:Sg:227:LEU:O	2.73	0.42
75:SH:125:VAL:O	75:SH:129:ILE:HG13	2.20	0.42
76:SD:13:ALA:HA	76:SD:16:ILE:HG12	2.02	0.42
1:L5:184:U:O2'	1:L5:189:G:O4'	2.38	0.42
1:L5:254:G:N1	1:L5:255:C:O2	2.53	0.42
1:L5:759:G:C6	1:L5:905:C:C4	3.08	0.42
1:L5:1407:C:O2'	1:L5:1408:G:H5'	2.19	0.42
1:L5:2347:A:C4	33:Le:31:ILE:HD11	2.55	0.42
1:L5:3756:A:C2	1:L5:3757:G:C5	3.07	0.42
7:LD:110:LEU:HD13	7:LD:115:MET:HG3	2.01	0.42
9:LF:28:LEU:HG	9:LF:32:ARG:NH1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:LN:146:PRO:O	16:LN:147:ASP:HB2	2.19	0.42
18:LP:13:LYS:HB3	18:LP:152:GLU:HB3	2.01	0.42
22:LT:81:LYS:HB3	30:Lb:16:TRP:CZ3	2.54	0.42
31:Lc:23:LYS:O	31:Lc:23:LYS:HD2	2.20	0.42
37:Li:89:GLU:O	37:Li:93:VAL:HG23	2.19	0.42
41:Lm:94:MET:HG2	41:Lm:105:PRO:HA	2.02	0.42
42:Ln:1:MET:HE2	42:Ln:1:MET:HB3	1.82	0.42
46:S2:332:G:N7	71:SG:189:ARG:NH2	2.47	0.42
46:S2:499:G:C6	46:S2:501:C:C2	3.07	0.42
46:S2:1129:G:H3'	46:S2:1130:G:N2	2.35	0.42
46:S2:1158:G:O3'	60:SW:76:SER:OG	2.31	0.42
46:S2:1491:G:H2'	46:S2:1492:U:C6	2.54	0.42
46:S2:1512:C:H5''	67:Sd:8:TRP:HZ3	1.84	0.42
46:S2:1541:G:N2	46:S2:1593:C:C2	2.88	0.42
52:SO:61:LYS:HG2	52:SO:76:LEU:HB3	2.02	0.42
55:SR:33:ARG:HD3	55:SR:33:ARG:HA	1.79	0.42
62:SY:55:ILE:HD12	62:SY:75:ILE:HG12	2.01	0.42
72:SJ:67:ASP:HB3	72:SJ:70:ARG:HB3	2.02	0.42
73:SC:72:ASP:O	73:SC:72:ASP:OD1	2.37	0.42
79:SK:21:MET:CG	79:SK:49:MET:HE1	2.50	0.42
79:SK:38:LYS:HB2	79:SK:40:VAL:HG13	2.01	0.42
1:L5:6:C:H2'	1:L5:7:C:H6	1.85	0.42
1:L5:170:C:H1'	1:L5:171:U:C5	2.55	0.42
1:L5:171:U:H4'	14:LL:135:LYS:HD2	2.02	0.42
1:L5:271:C:H2'	1:L5:272:U:C6	2.54	0.42
1:L5:725:G:H5'	6:LC:346:ASN:HD22	1.85	0.42
1:L5:1249:C:H2'	1:L5:1250:C:H6	1.85	0.42
1:L5:1704:C:P	9:LF:43:ARG:HH22	2.43	0.42
1:L5:1980:U:O2'	1:L5:1981:G:H5''	2.20	0.42
1:L5:2624:G:H2'	1:L5:2625:U:H6	1.85	0.42
1:L5:4481:U:H2'	1:L5:4482:U:H6	1.85	0.42
3:L8:60:G:OP1	26:LX:68:ARG:NH2	2.50	0.42
3:L8:141:C:OP1	16:LN:38:ARG:NH1	2.47	0.42
5:LB:302:ASN:HB2	5:LB:313:SER:HA	2.02	0.42
7:LD:75:VAL:O	7:LD:112:ARG:NH1	2.52	0.42
23:LU:41:GLN:O	23:LU:45:GLU:OE1	2.37	0.42
27:LY:34:LEU:HD23	27:LY:106:ILE:HB	2.01	0.42
43:Lo:69:ARG:NH1	43:Lo:80:LYS:HG2	2.35	0.42
46:S2:65:C:N4	71:SG:134:GLY:O	2.53	0.42
46:S2:151:C:C2'	71:SG:132:ARG:HH22	2.32	0.42
46:S2:191:A:H5''	78:SI:141:ARG:NH1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:215:G:H2'	46:S2:216:C:H6	1.85	0.42
46:S2:799:U:H2'	46:S2:800:U:O4'	2.20	0.42
46:S2:1401:A:O3'	58:SU:52:GLY:HA3	2.19	0.42
48:E:37:A:C4	48:E:38:A:C8	3.08	0.42
48:E:81:C:H2'	48:E:82:G:C8	2.55	0.42
49:SA:158:ASP:OD2	59:SV:32:ILE:HD13	2.20	0.42
56:SS:100:ALA:O	56:SS:103:LEU:N	2.53	0.42
61:SX:114:ASP:OD2	61:SX:114:ASP:N	2.47	0.42
64:Sa:26:CYS:SG	64:Sa:28:ARG:HB2	2.60	0.42
69:Sg:119:GLN:O	69:Sg:120:ILE:HD13	2.20	0.42
70:CB:27:HIS:HB3	70:CB:30:HIS:CE1	2.54	0.42
70:CB:653:GLY:HA3	70:CB:658:GLY:HA3	2.02	0.42
72:SJ:125:HIS:HA	72:SJ:128:VAL:HG12	2.02	0.42
73:SC:212:LYS:HB2	73:SC:212:LYS:HE2	1.74	0.42
74:SF:18:LYS:HB3	74:SF:21:GLY:C	2.45	0.42
76:SD:21:LEU:HD11	76:SD:48:ILE:HD13	2.02	0.42
1:L5:674:G:H2'	1:L5:675:C:H6	1.85	0.41
1:L5:1096:C:H2'	1:L5:1097:C:C6	2.55	0.41
1:L5:2049:G:O2'	1:L5:3884:U:O2'	2.32	0.41
1:L5:3753:G:C4	1:L5:3754:G:C8	3.09	0.41
1:L5:4187:G:H4'	16:LN:82:GLY:HA2	2.00	0.41
1:L5:4194:U:O2'	12:LI:116:ARG:NH1	2.53	0.41
1:L5:4745:G:H1	1:L5:4955:A:H61	1.67	0.41
3:L8:46:G:OP1	40:LI:18:LYS:NZ	2.35	0.41
8:LE:264:ILE:HA	8:LE:265:PRO:HD3	1.89	0.41
9:LF:213:LEU:CD1	9:LF:248:ASN:HB3	2.50	0.41
13:LJ:57:VAL:HG21	13:LJ:60:PHE:CE1	2.55	0.41
23:LU:42:PHE:CE2	23:LU:90:TYR:HB2	2.55	0.41
26:LX:112:ALA:O	26:LX:116:LEU:HG	2.20	0.41
34:Lf:48:ALA:HB2	34:Lf:71:TRP:CZ3	2.54	0.41
39:Lk:24:LYS:HA	39:Lk:67:LYS:O	2.20	0.41
41:Lm:84:GLN:HA	41:Lm:87:GLN:HB2	2.02	0.41
46:S2:17:C:O2'	46:S2:1194:A:N1	2.49	0.41
46:S2:152:U:H2'	46:S2:153:G:H8	1.85	0.41
46:S2:694:G:O6	46:S2:737:G:N2	2.35	0.41
46:S2:1508:A:C5	46:S2:1510:G:C5	3.07	0.41
56:SS:60:THR:O	56:SS:64:VAL:HG23	2.20	0.41
66:Sc:62:GLU:O	66:Sc:62:GLU:HG2	2.20	0.41
69:Sg:191:HIS:CD2	69:Sg:217:MET:HE3	2.55	0.41
71:SG:231:ARG:O	71:SG:231:ARG:NE	2.53	0.41
73:SC:102:LEU:HD13	73:SC:130:ILE:HD11	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SF:18:LYS:O	74:SF:21:GLY:N	2.52	0.41
77:SE:35:PRO:HB3	77:SE:143:ASP:OD2	2.20	0.41
77:SE:256:LEU:O	77:SE:260:GLN:HG2	2.20	0.41
1:L5:687:U:OP1	8:LE:97:GLY:HA2	2.19	0.41
1:L5:935:A:O2'	1:L5:936:C:P	2.79	0.41
1:L5:966:A:C2	1:L5:2093:A:H2	2.37	0.41
1:L5:984:C:H2'	1:L5:985:C:O4'	2.20	0.41
1:L5:1414:C:O2'	1:L5:1415:G:H5'	2.20	0.41
1:L5:1893:C:H1'	1:L5:1937:C:O2	2.20	0.41
1:L5:2017:A:O2'	1:L5:2018:C:C6	2.70	0.41
1:L5:2527:A:OP2	20:LR:38:ARG:NH2	2.51	0.41
1:L5:3756:A:N1	1:L5:3769:C:C2	2.88	0.41
1:L5:4548:A:H5'	1:L5:4549:G:H5'	2.03	0.41
1:L5:4938:A:N6	8:LE:247:LYS:HE3	2.35	0.41
4:LA:179:ILE:HG23	4:LA:184:ARG:HB2	2.02	0.41
5:LB:85:VAL:HA	5:LB:203:GLN:O	2.20	0.41
6:LC:134:PRO:HA	6:LC:150:LEU:CD2	2.50	0.41
8:LE:267:LEU:HD12	8:LE:267:LEU:HA	1.86	0.41
9:LF:199:LYS:C	9:LF:200:ARG:HD2	2.45	0.41
10:LG:69:ILE:O	10:LG:73:ARG:HG2	2.20	0.41
21:LS:127:MET:HE3	22:LT:155:PRO:HG3	2.00	0.41
29:La:75:LEU:HD12	29:La:117:LEU:HD21	2.01	0.41
39:Lk:21:LYS:N	39:Lk:37:ARG:O	2.51	0.41
44:Lp:70:THR:OG1	44:Lp:72:ASN:O	2.30	0.41
46:S2:1436:C:O2'	46:S2:1438:A:O5'	2.33	0.41
46:S2:1533:A:H2	46:S2:1536:G:N3	2.18	0.41
46:S2:1778:C:H2'	46:S2:1779:G:O4'	2.20	0.41
49:SA:108:PHE:CD2	49:SA:136:GLU:HG3	2.53	0.41
50:SB:74:LEU:HD23	50:SB:74:LEU:HA	1.77	0.41
52:SO:44:VAL:HG11	52:SO:85:CYS:SG	2.60	0.41
56:SS:26:ILE:HD11	56:SS:59:LEU:HD22	2.01	0.41
61:SX:77:ASN:O	61:SX:79:LYS:HG3	2.21	0.41
72:SJ:79:ARG:HA	72:SJ:82:VAL:HG22	2.01	0.41
74:SF:63:LYS:HE3	74:SF:71:ARG:NH1	2.35	0.41
75:SH:64:VAL:HG21	75:SH:72:PHE:CD2	2.55	0.41
76:SD:64:ARG:HA	76:SD:67:ARG:NH1	2.36	0.41
1:L5:651:C:H2'	1:L5:652:G:H8	1.84	0.41
1:L5:1307:A:H2'	1:L5:1308:C:H6	1.85	0.41
1:L5:1449:C:H2'	1:L5:1450:C:H6	1.85	0.41
1:L5:1760:G:O2'	1:L5:1761:G:N3	2.53	0.41
1:L5:2091:C:O2	1:L5:2094:G:O2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2573:A:N7	1:L5:2761:U:O4	2.53	0.41
1:L5:4263:C:H2'	1:L5:4264:G:O4'	2.21	0.41
1:L5:4417:C:H2'	1:L5:4418:G:O4'	2.20	0.41
13:LJ:111:GLU:N	13:LJ:111:GLU:OE2	2.53	0.41
17:LO:158:GLU:O	17:LO:162:GLU:HG3	2.20	0.41
26:LX:117:TYR:O	26:LX:119:ILE:HG23	2.20	0.41
30:Lb:9:THR:O	30:Lb:9:THR:HG22	2.21	0.41
35:Lg:43:LYS:NZ	35:Lg:50:PRO:O	2.54	0.41
45:Lr:85:ASN:O	45:Lr:89:THR:HG23	2.21	0.41
46:S2:526:A:H2'	46:S2:527:C:H6	1.85	0.41
46:S2:656:G:H21	46:S2:663:C:H5''	1.86	0.41
46:S2:658:U:O4	61:SX:24:ASP:HB3	2.20	0.41
46:S2:920:A:H4'	60:SW:57:ARG:HG2	2.02	0.41
46:S2:1334:G:H5'	76:SD:140:GLY:HA2	2.01	0.41
46:S2:1865:C:H5	64:Sa:6:ARG:H	1.66	0.41
60:SW:101:PHE:HA	60:SW:113:HIS:CE1	2.56	0.41
66:Sc:51:ARG:HB2	74:SF:61:PHE:CZ	2.54	0.41
70:CB:692:LEU:HD23	70:CB:692:LEU:HA	1.86	0.41
71:SG:43:GLU:OE1	71:SG:43:GLU:N	2.54	0.41
74:SF:40:ALA:O	74:SF:45:TYR:HE2	2.04	0.41
77:SE:151:ASP:HB3	77:SE:154:ILE:CD1	2.50	0.41
79:SK:12:TYR:CE1	79:SK:52:LEU:HD11	2.56	0.41
1:L5:37:U:H2'	1:L5:38:A:O4'	2.20	0.41
1:L5:1867:A:H2'	1:L5:1868:A:C8	2.55	0.41
1:L5:3759:A:N7	1:L5:3764:U:O2	2.53	0.41
2:L7:72:U:H2'	2:L7:73:U:O4'	2.20	0.41
3:L8:26:C:O2'	6:LC:53:ALA:O	2.37	0.41
4:LA:5:ILE:HG12	4:LA:8:GLN:HG3	2.01	0.41
4:LA:107:MET:O	4:LA:139:HIS:NE2	2.46	0.41
4:LA:119:LYS:HA	4:LA:119:LYS:HD3	1.84	0.41
4:LA:241:ARG:NH1	4:LA:241:ARG:HG3	2.35	0.41
11:LH:161:ILE:HD13	11:LH:161:ILE:HG21	1.84	0.41
14:LL:60:ARG:HD2	14:LL:67:HIS:O	2.21	0.41
17:LO:151:ALA:O	17:LO:155:THR:HG23	2.20	0.41
20:LR:39:GLN:HG2	20:LR:42:ARG:HH21	1.86	0.41
23:LU:24:ASP:HB3	23:LU:111:GLU:HB3	2.01	0.41
23:LU:66:SER:C	23:LU:68:SER:H	2.29	0.41
26:LX:73:HIS:ND1	26:LX:115:LYS:HD3	2.34	0.41
32:Ld:53:ALA:HA	32:Ld:88:LEU:HD21	2.01	0.41
46:S2:528:A:C6	46:S2:558:G:C6	3.08	0.41
46:S2:951:C:H1'	52:SO:50:LYS:HZ1	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1822:A:H3'	46:S2:1823:A:H8	1.85	0.41
49:SA:148:CYS:O	49:SA:162:PRO:HA	2.20	0.41
49:SA:178:LEU:O	49:SA:182:VAL:HG12	2.20	0.41
50:SB:111:CYS:HA	50:SB:114:VAL:HG12	2.01	0.41
51:SN:38:TYR:CZ	51:SN:78:LYS:HD3	2.55	0.41
60:SW:43:LYS:HB2	60:SW:43:LYS:HE2	1.59	0.41
65:Sb:32:PHE:O	65:Sb:82:LYS:HG2	2.20	0.41
66:Sc:62:GLU:OE2	66:Sc:62:GLU:N	2.54	0.41
69:Sg:288:SER:C	69:Sg:289:LEU:HD12	2.45	0.41
70:CB:184:ASN:O	70:CB:187:VAL:HG12	2.20	0.41
72:SJ:54:ARG:NH1	73:SC:202:THR:HG22	2.35	0.41
75:SH:61:ILE:HG22	75:SH:93:VAL:CG2	2.50	0.41
76:SD:94:ARG:C	76:SD:96:LEU:H	2.29	0.41
77:SE:21:ASP:OD2	77:SE:24:THR:HG23	2.20	0.41
79:SK:21:MET:HB3	79:SK:69:TRP:HE3	1.85	0.41
80:SL:23:VAL:HG12	80:SL:24:LEU:H	1.85	0.41
80:SL:32:LYS:HD3	80:SL:33:LEU:N	2.36	0.41
1:L5:450:G:OP2	1:L5:450:G:H8	2.03	0.41
1:L5:658:C:C4	1:L5:659:G:C8	3.08	0.41
1:L5:1098:G:H2'	1:L5:1099:C:H6	1.86	0.41
1:L5:1247:U:H2'	1:L5:1248:C:C6	2.55	0.41
1:L5:1449:C:H2'	1:L5:1450:C:C6	2.55	0.41
1:L5:1468:C:OP1	29:La:132:ARG:NH2	2.49	0.41
1:L5:1563:A:N6	46:S2:1028:A:C2	2.89	0.41
1:L5:3893:C:H2'	1:L5:3894:A:H8	1.86	0.41
1:L5:4239:A:H2'	1:L5:4240:G:H8	1.85	0.41
1:L5:4740:G:C4	1:L5:4742:G:C8	3.08	0.41
1:L5:4769:G:H5''	17:LO:176:ARG:HD3	2.02	0.41
2:L7:39:C:O2'	13:LJ:46:GLN:HB3	2.20	0.41
3:L8:37:A:OP2	36:Lh:89:ARG:HD2	2.21	0.41
4:LA:36:GLU:HG3	4:LA:91:GLY:HA2	2.02	0.41
5:LB:305:THR:HG21	5:LB:367:PHE:HA	2.02	0.41
6:LC:205:ARG:HA	6:LC:205:ARG:HD3	1.84	0.41
13:LJ:18:ARG:HD3	13:LJ:135:GLY:HA3	2.02	0.41
14:LL:145:LYS:HD2	14:LL:146:LEU:CB	2.45	0.41
14:LL:198:ARG:O	14:LL:201:GLU:HG3	2.21	0.41
21:LS:77:ASN:HB2	21:LS:132:ILE:O	2.20	0.41
41:Lm:88:LYS:HE2	41:Lm:89:TYR:CE2	2.56	0.41
45:Lr:47:LYS:O	45:Lr:103:ARG:HD2	2.20	0.41
46:S2:90:G:H2'	46:S2:91:A:O4'	2.20	0.41
46:S2:165:G:H21	46:S2:165:G:P	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:916:A:C6	51:SN:73:ARG:HD3	2.55	0.41
62:SY:82:ALA:O	62:SY:86:GLU:CB	2.66	0.41
66:Sc:28:THR:O	66:Sc:45:ASN:HA	2.20	0.41
66:Sc:31:ARG:N	66:Sc:43:ILE:HD12	2.36	0.41
69:Sg:104:HIS:ND1	69:Sg:124:SER:HB3	2.36	0.41
69:Sg:257:LYS:HD3	69:Sg:269:GLU:OE1	2.20	0.41
70:CB:642:ASP:HB3	70:CB:645:GLU:HG3	2.02	0.41
70:CB:749:ILE:HB	70:CB:784:VAL:CG1	2.50	0.41
76:SD:116:ARG:HE	76:SD:116:ARG:HB3	1.73	0.41
1:L5:1081:C:N3	1:L5:1219:G:N1	2.69	0.41
1:L5:1243:C:H2'	1:L5:1244:G:C8	2.55	0.41
1:L5:1677:U:H4'	1:L5:1680:G:C2	2.56	0.41
1:L5:2611:A:H2'	1:L5:2612:G:H8	1.84	0.41
1:L5:2786:C:O2'	1:L5:2787:A:OP2	2.27	0.41
1:L5:2859:G:H2'	1:L5:2860:C:H6	1.86	0.41
1:L5:3722:G:H2'	1:L5:3723:A:H8	1.85	0.41
1:L5:4146:G:H2'	1:L5:4147:G:O4'	2.20	0.41
1:L5:4212:A:H4'	1:L5:4213:A:O5'	2.20	0.41
7:LD:235:MET:HE2	7:LD:235:MET:HB2	1.98	0.41
11:LH:46:SER:O	11:LH:55:LEU:HD12	2.19	0.41
11:LH:126:VAL:HG11	11:LH:161:ILE:HG22	2.01	0.41
18:LP:142:SER:O	18:LP:142:SER:OG	2.33	0.41
23:LU:38:ASN:HA	23:LU:41:GLN:OE1	2.21	0.41
43:Lo:30:LYS:HB2	43:Lo:30:LYS:HE3	1.60	0.41
46:S2:511:U:H2'	46:S2:512:A:C8	2.56	0.41
46:S2:521:A:H2'	46:S2:522:A:O4'	2.20	0.41
46:S2:569:A:H2'	46:S2:570:C:O4'	2.20	0.41
46:S2:809:A:OP1	77:SE:186:GLY:HA3	2.20	0.41
46:S2:1294:G:H3'	46:S2:1295:A:H8	1.86	0.41
46:S2:1462:U:O2'	46:S2:1463:U:OP1	2.37	0.41
46:S2:1618:C:H2'	46:S2:1619:A:C8	2.55	0.41
46:S2:1688:C:H2'	46:S2:1689:C:C6	2.56	0.41
47:S:184:GLY:HA3	70:CB:711:ALA:H	1.85	0.41
48:E:37:A:H2'	48:E:38:A:O4'	2.21	0.41
48:E:78:C:H2'	48:E:79:U:H6	1.84	0.41
50:SB:123:ALA:HB2	50:SB:165:ARG:HG3	2.02	0.41
52:SO:43:HIS:NE2	52:SO:52:THR:HG23	2.36	0.41
53:SP:81:ARG:CZ	53:SP:117:GLY:HA2	2.51	0.41
54:SQ:85:ARG:NH2	54:SQ:119:LEU:HG	2.36	0.41
60:SW:57:ARG:HH21	65:Sb:26:GLN:CD	2.28	0.41
62:SY:38:THR:O	62:SY:41:ARG:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Sg:87:LEU:HD21	69:Sg:122:SER:HB3	2.03	0.41
69:Sg:183:LYS:HB3	69:Sg:185:LYS:HZ2	1.86	0.41
69:Sg:286:CYS:HA	69:Sg:302:TYR:HA	2.02	0.41
70:CB:326:GLU:OE1	70:CB:326:GLU:N	2.52	0.41
76:SD:122:VAL:O	76:SD:126:ILE:HG12	2.19	0.41
78:SI:106:SER:HB2	78:SI:166:PHE:CE1	2.55	0.41
1:L5:138:G:C6	1:L5:139:G:C6	3.09	0.41
1:L5:347:A:H2'	1:L5:348:G:C8	2.56	0.41
1:L5:490:C:H2'	1:L5:491:G:H8	1.86	0.41
1:L5:666:G:OP2	45:Lr:67:ARG:NH2	2.54	0.41
1:L5:979:C:OP1	8:LE:46:ARG:HB2	2.21	0.41
1:L5:1706:A:H8	1:L5:1706:A:OP2	2.04	0.41
1:L5:1920:C:H3'	1:L5:1921:C:H5''	2.01	0.41
1:L5:4638:U:H2'	1:L5:4639:G:N3	2.36	0.41
1:L5:4691:A:OP1	11:LH:75:SER:OG	2.26	0.41
1:L5:4775:C:H41	1:L5:4859:C:N4	2.19	0.41
5:LB:292:LEU:HB3	5:LB:298:LEU:HD21	2.03	0.41
8:LE:130:LYS:N	8:LE:130:LYS:HD2	2.36	0.41
13:LJ:104:ASN:CG	13:LJ:133:VAL:HG23	2.45	0.41
14:LL:198:ARG:HA	14:LL:201:GLU:HG3	2.02	0.41
21:LS:95:ARG:NH2	21:LS:112:ASP:OD1	2.54	0.41
24:LV:71:GLU:H	24:LV:71:GLU:CD	2.29	0.41
44:Lp:75:SER:O	44:Lp:79:VAL:HG23	2.21	0.41
46:S2:165:G:H4'	71:SG:53:SER:OG	2.20	0.41
46:S2:889:U:O2'	46:S2:890:U:H5''	2.21	0.41
46:S2:1013:U:C2	46:S2:1014:G:C8	3.09	0.41
46:S2:1471:C:H2'	46:S2:1472:C:C6	2.56	0.41
46:S2:1777:G:H2'	46:S2:1778:C:H6	1.84	0.41
49:SA:220:LYS:HA	49:SA:220:LYS:HD3	1.90	0.41
52:SO:64:ALA:C	52:SO:66:ARG:H	2.29	0.41
53:SP:57:LEU:HA	53:SP:60:LEU:HG	2.03	0.41
58:SU:19:ARG:O	58:SU:117:ALA:HA	2.21	0.41
70:CB:250:ALA:O	70:CB:251:LYS:C	2.62	0.41
70:CB:591:CYS:SG	70:CB:732:SER:HA	2.61	0.41
1:L5:651:C:H2'	1:L5:652:G:C8	2.56	0.41
1:L5:741:C:C4	1:L5:742:G:N7	2.89	0.41
1:L5:921:C:H2'	1:L5:922:C:C6	2.56	0.41
1:L5:1406:G:O6	1:L5:1408:G:H4'	2.21	0.41
1:L5:1514:U:H2'	1:L5:1515:A:H8	1.85	0.41
1:L5:1664:U:H2'	1:L5:1665:C:H6	1.85	0.41
1:L5:2407:G:O6	40:Ll:2:SER:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2544:G:H1'	3:L8:126:C:O4'	2.20	0.41
2:L7:23:A:N3	2:L7:118:C:O2'	2.43	0.41
4:LA:135:THR:CG2	4:LA:149:LYS:HB3	2.51	0.41
7:LD:11:ALA:O	7:LD:15:ARG:HG2	2.20	0.41
7:LD:34:LYS:HE2	22:LT:30:TYR:CZ	2.56	0.41
14:LL:146:LEU:HD21	36:Lh:122:LYS:HB2	2.03	0.41
16:LN:116:LEU:HD22	16:LN:135:ILE:HD11	2.02	0.41
17:LO:109:PRO:HB2	17:LO:111:PRO:HD2	2.02	0.41
20:LR:38:ARG:C	20:LR:40:GLN:H	2.28	0.41
43:Lo:17:LYS:HB2	43:Lo:17:LYS:HE3	1.87	0.41
43:Lo:63:THR:OG1	43:Lo:87:ARG:HD3	2.21	0.41
46:S2:531:A:N3	46:S2:531:A:H2'	2.35	0.41
46:S2:959:G:OP1	52:SO:104:ARG:NH1	2.47	0.41
46:S2:1093:A:H2'	46:S2:1094:C:C6	2.55	0.41
46:S2:1204:A:H5''	73:SC:117:ARG:HD2	2.02	0.41
46:S2:1397:U:OP1	46:S2:1398:G:H8	2.03	0.41
46:S2:1508:A:N6	46:S2:1510:G:C2	2.89	0.41
46:S2:1615:U:H2'	46:S2:1616:U:H6	1.85	0.41
46:S2:1616:U:O2	46:S2:1661:A:H2	2.04	0.41
50:SB:225:LEU:O	50:SB:229:MET:HG2	2.21	0.41
52:SO:42:VAL:HG12	52:SO:56:VAL:O	2.21	0.41
53:SP:98:ASN:HD21	53:SP:120:SER:HB2	1.85	0.41
54:SQ:134:GLY:H	54:SQ:140:ARG:HH11	1.67	0.41
56:SS:61:GLU:OE1	56:SS:61:GLU:HA	2.20	0.41
62:SY:62:THR:HA	62:SY:69:THR:HA	2.03	0.41
64:Sa:96:THR:HA	64:Sa:97:PRO:HD3	1.95	0.41
66:Sc:29:GLN:HB3	66:Sc:43:ILE:HD11	2.02	0.41
69:Sg:84:ASP:HB2	69:Sg:86:THR:OG1	2.20	0.41
70:CB:141:THR:O	70:CB:145:GLN:HG3	2.21	0.41
70:CB:271:GLY:O	70:CB:272:LYS:HE2	2.21	0.41
77:SE:126:VAL:HG23	77:SE:139:LEU:HD13	2.02	0.41
79:SK:3:MET:HE1	79:SK:8:ARG:NH2	2.36	0.41
1:L5:387:G:O2'	1:L5:412:G:N1	2.39	0.41
1:L5:1716:G:O2'	1:L5:1717:C:H5'	2.21	0.41
1:L5:1977:C:HO2'	1:L5:1978:C:P	2.43	0.41
1:L5:1977:C:O2'	1:L5:1978:C:OP1	2.34	0.41
1:L5:2109:G:H2'	1:L5:2110:C:C6	2.56	0.41
1:L5:2463:G:C2'	1:L5:2464:C:H5'	2.51	0.41
1:L5:2477:A:H2'	1:L5:2478:C:C5	2.55	0.41
1:L5:2496:G:H2'	1:L5:2497:C:H6	1.86	0.41
1:L5:2602:G:H2'	1:L5:2603:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:3656:A:H2'	1:L5:3657:U:H6	1.86	0.41
1:L5:3659:G:OP1	4:LA:241:ARG:HG3	2.21	0.41
1:L5:3736:A:H2'	1:L5:3737:A:C8	2.55	0.41
1:L5:3754:G:N2	1:L5:3770:U:O2	2.41	0.41
1:L5:4481:U:H2'	1:L5:4482:U:C6	2.56	0.41
1:L5:4580:U:O2'	5:LB:182:GLU:OE2	2.25	0.41
1:L5:4724:A:H2'	1:L5:4725:C:O4'	2.21	0.41
1:L5:4743:G:H2'	1:L5:4744:A:H8	1.84	0.41
1:L5:4966:A:H2'	1:L5:4967:A:O4'	2.20	0.41
3:L8:56:G:H2'	3:L8:57:C:O4'	2.20	0.41
5:LB:156:TYR:O	5:LB:158:GLN:NE2	2.54	0.41
5:LB:160:ILE:HD11	5:LB:193:LYS:HG3	2.03	0.41
10:LG:264:LYS:HD2	50:SB:225:LEU:CG	2.47	0.41
12:LI:24:ARG:HB2	12:LI:24:ARG:HH21	1.84	0.41
12:LI:32:ARG:HG2	12:LI:32:ARG:NH1	2.35	0.41
12:LI:191:ILE:HD13	12:LI:191:ILE:HA	1.87	0.41
14:LL:19:GLN:HA	14:LL:22:VAL:CG2	2.46	0.41
16:LN:47:LYS:HD2	16:LN:50:ARG:HH21	1.86	0.41
17:LO:27:VAL:HG23	17:LO:101:ARG:HB3	2.03	0.41
18:LP:85:LYS:O	18:LP:89:GLU:HG2	2.21	0.41
19:LQ:184:ARG:NH2	29:La:55:LYS:O	2.53	0.41
21:LS:15:ARG:HD2	21:LS:25:PRO:HG2	2.01	0.41
31:Lc:18:LEU:HA	31:Lc:21:VAL:HG12	2.03	0.41
31:Lc:51:ASN:ND2	31:Lc:77:ASN:HB2	2.36	0.41
35:Lg:63:VAL:HA	35:Lg:66:ARG:HG2	2.02	0.41
42:Ln:12:ARG:HG2	42:Ln:15:ARG:HH21	1.85	0.41
45:Lr:122:LYS:HB3	45:Lr:122:LYS:HE2	1.86	0.41
46:S2:106:C:OP1	46:S2:431:G:O2'	2.28	0.41
46:S2:140:C:H42	46:S2:313:A:H61	0.76	0.41
46:S2:187:G:C6	46:S2:188:C:C4	3.08	0.41
46:S2:497:C:H2'	46:S2:498:C:C6	2.55	0.41
46:S2:526:A:O2'	72:SJ:125:HIS:CD2	2.73	0.41
46:S2:694:G:H2'	46:S2:695:C:O4'	2.19	0.41
46:S2:794:A:C6	46:S2:795:A:N7	2.89	0.41
46:S2:878:G:O6	46:S2:908:A:N1	2.54	0.41
46:S2:1047:C:H5'	52:SO:143:LYS:CB	2.50	0.41
46:S2:1062:A:H2'	46:S2:1063:C:C6	2.56	0.41
46:S2:1333:U:H4'	76:SD:147:ALA:HB2	2.03	0.41
46:S2:1407:U:O3'	54:SQ:71:ARG:NH1	2.54	0.41
46:S2:1752:C:C4	46:S2:1779:G:N1	2.89	0.41
47:S:185:PHE:HD1	70:CB:711:ALA:HB2	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:SA:6:ASP:HA	49:SA:9:GLN:HG2	2.02	0.41
49:SA:38:ILE:CD1	49:SA:47:TYR:HB3	2.39	0.41
51:SN:87:ASP:OD1	51:SN:88:LEU:N	2.54	0.41
55:SR:17:ILE:CD1	55:SR:54:VAL:HG13	2.50	0.41
57:ST:73:GLY:O	57:ST:76:THR:HG22	2.21	0.41
60:SW:95:PRO:O	73:SC:183:LYS:HG2	2.20	0.41
61:SX:8:ARG:NH1	80:SL:104:LYS:HE2	2.29	0.41
66:Sc:47:LYS:NZ	74:SF:145:ARG:HE	2.18	0.41
69:Sg:108:VAL:HA	69:Sg:124:SER:HB2	2.02	0.41
69:Sg:228:TYR:HE2	69:Sg:230:LEU:HD23	1.85	0.41
70:CB:226:LYS:NZ	70:CB:230:GLU:OE1	2.48	0.41
71:SG:58:LYS:NZ	71:SG:106:LEU:O	2.39	0.41
71:SG:138:ALA:HB2	71:SG:176:ILE:HG13	2.03	0.41
71:SG:181:THR:HG22	71:SG:183:ARG:H	1.85	0.41
75:SH:122:LEU:O	75:SH:125:VAL:HG22	2.21	0.41
77:SE:66:MET:O	77:SE:68:ARG:HG3	2.21	0.41
77:SE:208:VAL:HG21	77:SE:225:ILE:CG1	2.49	0.41
77:SE:252:ARG:HG3	77:SE:255:ARG:NH2	2.35	0.41
79:SK:31:LYS:HZ2	79:SK:31:LYS:HG3	1.73	0.41
1:L5:442:G:OP1	34:Lf:68:ARG:NH1	2.53	0.41
1:L5:498:C:C2	1:L5:499:G:H1'	2.56	0.41
1:L5:1217:G:H2'	1:L5:1218:G:C8	2.56	0.41
1:L5:1253:G:C2	1:L5:1256:G:H4'	2.56	0.41
1:L5:1383:G:H2'	1:L5:1384:C:C6	2.56	0.41
1:L5:1704:C:O5'	9:LF:43:ARG:NH2	2.54	0.41
1:L5:1755:C:N4	1:L5:1776:A:C6	2.79	0.41
1:L5:1811:G:H2'	1:L5:1812:C:C6	2.55	0.41
1:L5:2385:U:H2'	1:L5:2386:U:C6	2.56	0.41
1:L5:2624:G:H2'	1:L5:2625:U:C6	2.56	0.41
1:L5:2652:G:N2	44:Lp:59:SER:O	2.54	0.41
1:L5:3652:A:H2'	1:L5:3653:A:C8	2.56	0.41
1:L5:4769:G:OP1	17:LO:176:ARG:NH1	2.53	0.41
1:L5:4941:G:OP2	8:LE:188:ARG:NH1	2.30	0.41
3:L8:62:A:OP1	36:Lh:52:LYS:NZ	2.53	0.41
7:LD:118:ILE:HD12	7:LD:118:ILE:HA	1.87	0.41
10:LG:95:LEU:HD13	10:LG:218:LEU:HD13	2.02	0.41
10:LG:175:ARG:HG3	10:LG:230:TYR:CG	2.55	0.41
16:LN:13:LYS:HD3	16:LN:13:LYS:HA	1.69	0.41
20:LR:10:LEU:HD23	20:LR:10:LEU:HA	1.88	0.41
23:LU:39:PHE:O	23:LU:43:LEU:HG	2.21	0.41
23:LU:104:ALA:HB2	23:LU:110:TYR:CE2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Lf:75:THR:OG1	34:Lf:85:ARG:O	2.38	0.41
45:Lr:32:LEU:C	45:Lr:34:ALA:H	2.29	0.41
46:S2:29:G:H2'	46:S2:30:C:C6	2.56	0.41
46:S2:750:C:H2'	46:S2:752:G:C6	2.56	0.41
46:S2:837:A:N6	62:SY:9:THR:H	2.19	0.41
46:S2:1093:A:H2'	46:S2:1094:C:H6	1.86	0.41
46:S2:1408:U:H2'	46:S2:1409:A:H8	1.85	0.41
56:SS:42:HIS:O	56:SS:46:ARG:HG2	2.21	0.41
56:SS:75:ARG:NH2	56:SS:95:TYR:H	2.19	0.41
57:ST:70:ALA:HB1	57:ST:74:SER:OG	2.21	0.41
57:ST:98:SER:HA	57:ST:101:ARG:HD3	2.03	0.41
69:Sg:112:ALA:HB3	69:Sg:121:VAL:CG2	2.51	0.41
69:Sg:152:SER:H	69:Sg:169:GLY:HA2	1.85	0.41
69:Sg:247:TRP:HB3	69:Sg:258:ILE:CG2	2.51	0.41
70:CB:159:LYS:HE2	70:CB:218:LEU:HD11	2.01	0.41
70:CB:324:ASP:O	70:CB:328:LYS:HD3	2.22	0.41
70:CB:634:TYR:CE1	70:CB:638:LYS:HD3	2.55	0.41
71:SG:216:ARG:HA	71:SG:216:ARG:HD3	1.82	0.41
74:SF:114:ASN:HA	74:SF:117:ILE:HG12	2.03	0.41
78:SI:133:GLU:HA	78:SI:136:ILE:HG22	2.03	0.41
1:L5:753:C:H5	1:L5:910:G:H1	1.69	0.40
1:L5:1779:U:H2'	1:L5:1780:A:C8	2.57	0.40
1:L5:1871:A:H1'	1:L5:4195:G:O6	2.21	0.40
1:L5:2065:G:H2'	1:L5:2066:C:O4'	2.21	0.40
1:L5:2485:U:H1'	1:L5:2486:G:H1	1.84	0.40
1:L5:2505:C:N4	1:L5:4084:G:H4'	2.37	0.40
6:LC:76:ILE:HG12	6:LC:96:CYS:SG	2.61	0.40
6:LC:133:LEU:HA	6:LC:134:PRO:HD3	1.91	0.40
9:LF:241:ASN:O	9:LF:245:ARG:HG2	2.21	0.40
10:LG:221:ALA:O	10:LG:224:THR:OG1	2.31	0.40
11:LH:12:ILE:HB	11:LH:53:LYS:O	2.21	0.40
11:LH:59:LYS:HA	11:LH:59:LYS:HD2	1.77	0.40
12:LI:82:ARG:O	12:LI:82:ARG:HG2	2.21	0.40
14:LL:80:GLU:HB3	14:LL:110:LEU:HD12	2.03	0.40
21:LS:31:ARG:O	21:LS:32:ILE:HD13	2.21	0.40
26:LX:87:MET:HE1	26:LX:156:ILE:HD12	2.03	0.40
27:LY:4:ASN:HB3	27:LY:7:VAL:HG22	2.02	0.40
31:Lc:11:LEU:O	31:Lc:14:ILE:HG22	2.21	0.40
37:Li:85:ARG:HB3	37:Li:85:ARG:NH1	2.36	0.40
43:Lo:55:ILE:O	43:Lo:57:ARG:HG2	2.21	0.40
44:Lp:22:LEU:O	44:Lp:26:VAL:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1025:U:H2'	46:S2:1026:C:O4'	2.21	0.40
46:S2:1269:G:H2'	46:S2:1270:G:H8	1.86	0.40
51:SN:142:GLU:CD	51:SN:144:SER:H	2.29	0.40
56:SS:3:LEU:HD12	56:SS:4:VAL:N	2.36	0.40
61:SX:91:LEU:HD12	61:SX:91:LEU:HA	1.75	0.40
67:Sd:31:ILE:O	67:Sd:37:ASN:N	2.54	0.40
70:CB:373:TYR:CZ	70:CB:375:GLY:HA3	2.56	0.40
73:SC:191:VAL:HG11	73:SC:236:PHE:HA	2.03	0.40
74:SF:140:ASP:N	74:SF:140:ASP:OD1	2.53	0.40
1:L5:261:G:C6	1:L5:262:G:C6	3.09	0.40
1:L5:650:C:H2'	1:L5:651:C:C6	2.56	0.40
1:L5:739:G:O2'	1:L5:740:G:C8	2.73	0.40
1:L5:1079:C:C2	1:L5:1080:C:C5	3.10	0.40
1:L5:1180:C:OP1	1:L5:1180:C:H4'	2.21	0.40
1:L5:1202:C:H3'	1:L5:1203:G:H5''	2.03	0.40
1:L5:1299:G:H2'	1:L5:1300:G:C8	2.57	0.40
1:L5:1558:A:H2'	1:L5:1559:G:C8	2.56	0.40
1:L5:1683:U:H2'	1:L5:1684:A:C8	2.56	0.40
1:L5:1703:C:H41	1:L5:2096:G:N2	2.19	0.40
1:L5:2480:G:H2'	1:L5:2481:G:H8	1.86	0.40
1:L5:2561:C:C2	1:L5:2562:G:C8	3.10	0.40
1:L5:2779:C:O2'	3:L8:112:G:OP1	2.20	0.40
1:L5:2782:U:OP2	40:Ll:10:LYS:NZ	2.45	0.40
1:L5:4112:C:N4	1:L5:4113:U:N3	2.70	0.40
1:L5:4562:C:H2'	1:L5:4563:U:H6	1.86	0.40
8:LE:192:LYS:HE3	34:Lf:107:PRO:HB3	2.02	0.40
10:LG:87:LEU:HG	10:LG:91:THR:HG23	2.03	0.40
14:LL:77:SER:OG	14:LL:80:GLU:HG2	2.21	0.40
17:LO:27:VAL:CG2	17:LO:101:ARG:HB3	2.50	0.40
21:LS:70:LYS:HD2	21:LS:70:LYS:HA	1.93	0.40
29:La:93:ASN:OD1	29:La:94:LYS:N	2.54	0.40
30:Lb:65:MET:O	30:Lb:68:ARG:HG3	2.21	0.40
35:Lg:59:VAL:HB	35:Lg:63:VAL:CG1	2.50	0.40
36:Lh:113:LEU:HA	36:Lh:113:LEU:HD23	1.82	0.40
46:S2:5:U:H2'	46:S2:6:G:C8	2.56	0.40
46:S2:92:A:H4'	46:S2:93:U:OP2	2.21	0.40
46:S2:190:G:O2'	46:S2:209:A:N6	2.55	0.40
46:S2:1016:U:H5'	51:SN:15:ALA:O	2.21	0.40
46:S2:1780:G:H3'	46:S2:1781:A:C8	2.57	0.40
53:SP:96:VAL:HG13	53:SP:120:SER:HB3	2.03	0.40
53:SP:100:LYS:HG2	53:SP:101:THR:HG23	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SU:42:GLY:O	58:SU:45:GLU:HG3	2.21	0.40
58:SU:51:LYS:HD3	58:SU:52:GLY:H	1.85	0.40
60:SW:55:ASP:OD1	60:SW:59:GLY:HA2	2.22	0.40
62:SY:17:LEU:O	62:SY:18:LEU:HD23	2.21	0.40
62:SY:86:GLU:CD	62:SY:87:PRO:HD2	2.45	0.40
69:Sg:114:SER:HA	69:Sg:156:PHE:CE2	2.56	0.40
71:SG:22:ARG:O	71:SG:26:THR:HG23	2.21	0.40
72:SJ:139:LYS:HD3	72:SJ:139:LYS:HA	1.72	0.40
72:SJ:143:ASN:O	72:SJ:144:ILE:HD13	2.21	0.40
74:SF:87:LEU:HA	74:SF:90:VAL:HG22	2.02	0.40
79:SK:7:ASN:ND2	79:SK:40:VAL:HG12	2.36	0.40
79:SK:11:ILE:HD12	79:SK:11:ILE:HA	1.86	0.40
80:SL:77:VAL:HG23	80:SL:123:GLY:H	1.85	0.40
1:L5:494:U:H2'	1:L5:495:C:N1	2.36	0.40
1:L5:1415:G:H2'	1:L5:1416:G:H8	1.87	0.40
1:L5:2519:U:H1'	1:L5:2520:C:C6	2.57	0.40
1:L5:2726:G:H2'	1:L5:2727:C:C6	2.56	0.40
1:L5:2904:U:H5''	1:L5:2905:C:OP1	2.21	0.40
1:L5:3770:U:C4	1:L5:3771:C:C4	3.09	0.40
1:L5:4635:A:H3'	1:L5:4636:U:H4'	2.03	0.40
1:L5:4897:G:OP1	15:LM:128:LYS:NZ	2.54	0.40
2:L7:61:G:C5'	7:LD:271:MET:HE3	2.51	0.40
5:LB:170:LEU:O	5:LB:328:ASN:ND2	2.52	0.40
6:LC:212:ASN:HD22	6:LC:255:SER:HB2	1.86	0.40
8:LE:43:HIS:CG	8:LE:44:CYS:N	2.90	0.40
10:LG:73:ARG:HD3	10:LG:241:VAL:O	2.21	0.40
10:LG:180:PRO:HA	10:LG:227:ASN:OD1	2.22	0.40
12:LI:184:MET:HB3	12:LI:190:LEU:HG	2.02	0.40
43:Lo:10:THR:HA	43:Lo:18:HIS:CD2	2.57	0.40
46:S2:596:U:H2'	46:S2:597:G:O4'	2.22	0.40
46:S2:983:A:H2	52:SO:139:SER:HB3	1.86	0.40
46:S2:1017:U:H2'	46:S2:1018:U:C6	2.56	0.40
46:S2:1467:C:H5''	55:SR:1:MET:H1	1.86	0.40
46:S2:1638:G:H5''	46:S2:1639:G:OP1	2.21	0.40
46:S2:1689:C:H2'	46:S2:1690:U:H6	1.85	0.40
46:S2:1748:G:H2'	46:S2:1749:G:C8	2.56	0.40
49:SA:8:LEU:HD23	49:SA:8:LEU:H	1.86	0.40
49:SA:131:HIS:O	49:SA:135:THR:HG23	2.22	0.40
50:SB:72:ALA:HB2	50:SB:80:ALA:HA	2.02	0.40
50:SB:179:ASN:OD1	50:SB:183:GLU:HG2	2.21	0.40
58:SU:116:ILE:HG22	58:SU:117:ALA:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SV:47:ASN:OD1	59:SV:48:GLY:N	2.54	0.40
61:SX:86:PRO:HB2	61:SX:87:ASN:H	1.74	0.40
62:SY:6:THR:OG1	62:SY:28:LEU:HB2	2.21	0.40
62:SY:18:LEU:HD12	62:SY:20:ARG:NH1	2.36	0.40
63:SZ:78:LYS:C	63:SZ:78:LYS:HD3	2.47	0.40
69:Sg:49:GLU:C	69:Sg:51:ASN:H	2.29	0.40
70:CB:185:VAL:O	70:CB:188:ILE:HG22	2.21	0.40
70:CB:264:ARG:O	70:CB:288:THR:HG23	2.22	0.40
70:CB:409:ARG:HH22	70:CB:473:VAL:HB	1.86	0.40
70:CB:434:TYR:CZ	70:CB:442:LEU:HD21	2.57	0.40
70:CB:443:TYR:CD2	70:CB:478:PHE:HD1	2.40	0.40
71:SG:75:LEU:O	71:SG:94:ARG:HA	2.21	0.40
72:SJ:24:ARG:O	72:SJ:28:GLU:HG2	2.21	0.40
74:SF:104:THR:C	74:SF:106:GLU:H	2.29	0.40
75:SH:82:GLU:HA	75:SH:85:LYS:HG2	2.03	0.40
75:SH:129:ILE:HG21	75:SH:180:LEU:HD11	2.04	0.40
76:SD:54:ARG:HB3	76:SD:57:ASN:OD1	2.22	0.40
77:SE:136:ILE:HG13	77:SE:138:HIS:CE1	2.56	0.40
78:SI:138:ASN:C	78:SI:140:LYS:H	2.29	0.40
1:L5:318:A:H2'	1:L5:319:A:C8	2.56	0.40
1:L5:482:G:H2'	1:L5:485:C:C6	2.57	0.40
1:L5:965:G:H2'	1:L5:965:G:N3	2.36	0.40
1:L5:1078:A:H2'	1:L5:1079:C:H5'	2.03	0.40
1:L5:1690:C:H2'	1:L5:1691:G:O4'	2.21	0.40
1:L5:1725:U:H2'	1:L5:1726:U:H6	1.86	0.40
1:L5:1837:A:O5'	22:LT:129:LYS:HB2	2.22	0.40
1:L5:2341:A:OP1	6:LC:46:LYS:NZ	2.52	0.40
1:L5:4095:G:H2'	1:L5:4096:C:C2	2.57	0.40
1:L5:4233:A:C8	1:L5:4235:G:C8	3.10	0.40
1:L5:4587:G:OP1	17:LO:61:ARG:HD2	2.21	0.40
1:L5:5010:U:H2'	1:L5:5011:A:H8	1.87	0.40
3:L8:148:A:H2'	3:L8:149:G:C8	2.57	0.40
4:LA:14:SER:OG	4:LA:15:VAL:N	2.54	0.40
11:LH:114:ILE:HB	11:LH:124:ARG:HG3	2.03	0.40
12:LI:206:LEU:HA	12:LI:206:LEU:HD12	1.81	0.40
20:LR:78:ILE:HD12	20:LR:78:ILE:HA	1.92	0.40
30:Lb:120:ARG:HA	30:Lb:121:PRO:HD3	1.91	0.40
32:Ld:24:GLU:HB2	32:Ld:120:VAL:HG22	2.03	0.40
38:Lj:67:LEU:O	38:Lj:70:VAL:HG12	2.22	0.40
46:S2:564:A:H2'	46:S2:565:G:O4'	2.21	0.40
46:S2:955:A:N3	46:S2:956:G:H1'	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:980:A:H2'	46:S2:981:A:C8	2.57	0.40
46:S2:1239:U:H5''	53:SP:124:LYS:HE2	2.02	0.40
46:S2:1384:C:C2	46:S2:1385:G:C8	3.10	0.40
46:S2:1623:A:H61	56:SS:132:ARG:HE	1.68	0.40
54:SQ:26:LYS:NZ	54:SQ:27:ARG:H	2.18	0.40
56:SS:47:LYS:HE2	56:SS:47:LYS:HB2	1.89	0.40
56:SS:109:GLU:O	56:SS:112:GLU:HG3	2.22	0.40
63:SZ:53:ALA:HA	63:SZ:56:ASP:OD2	2.21	0.40
69:Sg:108:VAL:HA	69:Sg:124:SER:CB	2.50	0.40
70:CB:310:GLU:H	70:CB:310:GLU:CD	2.28	0.40
70:CB:424:GLY:HA2	70:CB:446:PRO:HB2	2.03	0.40
74:SF:44:LYS:HD2	74:SF:44:LYS:N	2.36	0.40
75:SH:7:LYS:HE3	75:SH:7:LYS:HB3	1.83	0.40
77:SE:31:PRO:HA	77:SE:81:THR:OG1	2.21	0.40
78:SI:21:TYR:CZ	78:SI:22:HIS:HD2	2.40	0.40
1:L5:137:G:C2	1:L5:138:G:N7	2.89	0.40
1:L5:251:C:H2'	1:L5:252:C:C6	2.57	0.40
1:L5:280:G:H5''	16:LN:14:LYS:HZ3	1.86	0.40
1:L5:496:G:H3'	1:L5:497:G:O4'	2.21	0.40
1:L5:1096:C:H2'	1:L5:1097:C:H6	1.87	0.40
1:L5:1341:U:H2'	1:L5:1342:A:C8	2.57	0.40
1:L5:1399:G:H2'	1:L5:1400:G:H8	1.85	0.40
1:L5:3664:G:H2'	1:L5:3665:G:C8	2.55	0.40
1:L5:3880:G:H2'	1:L5:3881:G:C8	2.57	0.40
1:L5:3950:U:H2'	1:L5:3951:G:C8	2.57	0.40
1:L5:4970:C:C2	1:L5:4971:A:C8	3.09	0.40
3:L8:79:G:H2'	3:L8:80:A:O4'	2.21	0.40
8:LE:236:GLU:OE1	8:LE:237:LYS:N	2.55	0.40
10:LG:34:LYS:HB3	10:LG:34:LYS:HE3	1.98	0.40
10:LG:143:VAL:HG22	10:LG:203:ALA:HB2	2.03	0.40
11:LH:173:ARG:HB2	11:LH:173:ARG:HE	1.67	0.40
23:LU:64:GLU:OE2	23:LU:64:GLU:N	2.55	0.40
23:LU:86:LEU:HA	23:LU:86:LEU:HD23	1.87	0.40
28:LZ:57:MET:SD	28:LZ:61:LYS:HE3	2.61	0.40
33:Le:22:ARG:O	33:Le:25:SER:OG	2.33	0.40
46:S2:639:C:C2	46:S2:640:A:N7	2.89	0.40
46:S2:752:G:H5'	46:S2:792:C:H4'	2.04	0.40
46:S2:1467:C:H5''	55:SR:1:MET:N	2.36	0.40
46:S2:1535:U:O2	74:SF:88:MET:HE3	2.21	0.40
52:SO:86:LYS:HE3	52:SO:86:LYS:HB3	1.89	0.40
55:SR:72:LYS:HD2	55:SR:73:LEU:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:CB:4:PHE:HB3	70:CB:8:GLN:HE21	1.86	0.40
70:CB:756:VAL:O	70:CB:759:ILE:HG12	2.20	0.40
70:CB:839:ARG:HE	70:CB:844:LEU:HB2	1.86	0.40
73:SC:237:ALA:HA	73:SC:240:THR:HG22	2.04	0.40
75:SH:50:GLU:HG3	75:SH:60:ILE:CD1	2.51	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	
4	LA	246/257 (96%)	225 (92%)	21 (8%)	0	100	100
5	LB	400/403 (99%)	373 (93%)	27 (7%)	0	100	100
6	LC	363/427 (85%)	330 (91%)	33 (9%)	0	100	100
7	LD	291/297 (98%)	269 (92%)	22 (8%)	0	100	100
8	LE	211/288 (73%)	193 (92%)	18 (8%)	0	100	100
9	LF	223/248 (90%)	213 (96%)	10 (4%)	0	100	100
10	LG	227/266 (85%)	214 (94%)	13 (6%)	0	100	100
11	LH	188/192 (98%)	169 (90%)	19 (10%)	0	100	100
12	LI	198/214 (92%)	184 (93%)	14 (7%)	0	100	100
13	LJ	168/178 (94%)	153 (91%)	15 (9%)	0	100	100
14	LL	208/211 (99%)	191 (92%)	17 (8%)	0	100	100
15	LM	137/215 (64%)	125 (91%)	12 (9%)	0	100	100
16	LN	201/204 (98%)	185 (92%)	15 (8%)	1 (0%)	24	55
17	LO	199/203 (98%)	191 (96%)	8 (4%)	0	100	100
18	LP	151/184 (82%)	142 (94%)	9 (6%)	0	100	100
19	LQ	185/188 (98%)	177 (96%)	8 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	LR	166/196 (85%)	158 (95%)	8 (5%)	0	100	100
21	LS	173/176 (98%)	158 (91%)	15 (9%)	0	100	100
22	LT	157/160 (98%)	150 (96%)	7 (4%)	0	100	100
23	LU	99/128 (77%)	81 (82%)	17 (17%)	1 (1%)	12	40
24	LV	129/140 (92%)	121 (94%)	8 (6%)	0	100	100
25	LW	61/157 (39%)	57 (93%)	4 (7%)	0	100	100
26	LX	115/156 (74%)	112 (97%)	3 (3%)	0	100	100
27	LY	132/145 (91%)	121 (92%)	11 (8%)	0	100	100
28	LZ	133/136 (98%)	122 (92%)	11 (8%)	0	100	100
29	La	145/148 (98%)	137 (94%)	8 (6%)	0	100	100
30	Lb	105/159 (66%)	98 (93%)	7 (7%)	0	100	100
31	Lc	96/115 (84%)	88 (92%)	8 (8%)	0	100	100
32	Ld	105/125 (84%)	98 (93%)	7 (7%)	0	100	100
33	Le	126/135 (93%)	116 (92%)	10 (8%)	0	100	100
34	Lf	107/110 (97%)	97 (91%)	9 (8%)	1 (1%)	14	43
35	Lg	112/117 (96%)	108 (96%)	4 (4%)	0	100	100
36	Lh	120/123 (98%)	116 (97%)	4 (3%)	0	100	100
37	Li	100/105 (95%)	95 (95%)	5 (5%)	0	100	100
38	Lj	84/97 (87%)	78 (93%)	6 (7%)	0	100	100
39	Lk	67/70 (96%)	63 (94%)	4 (6%)	0	100	100
40	Ll	48/51 (94%)	46 (96%)	2 (4%)	0	100	100
41	Lm	50/128 (39%)	50 (100%)	0	0	100	100
42	Ln	22/25 (88%)	22 (100%)	0	0	100	100
43	Lo	96/106 (91%)	93 (97%)	3 (3%)	0	100	100
44	Lp	89/92 (97%)	85 (96%)	4 (4%)	0	100	100
45	Lr	123/137 (90%)	114 (93%)	9 (7%)	0	100	100
47	S	36/402 (9%)	35 (97%)	1 (3%)	0	100	100
49	SA	215/295 (73%)	191 (89%)	24 (11%)	0	100	100
50	SB	212/264 (80%)	200 (94%)	12 (6%)	0	100	100
51	SN	148/151 (98%)	142 (96%)	6 (4%)	0	100	100
52	SO	132/151 (87%)	120 (91%)	12 (9%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
53	SP	119/145 (82%)	105 (88%)	14 (12%)	0	100	100
54	SQ	136/146 (93%)	125 (92%)	11 (8%)	0	100	100
55	SR	127/135 (94%)	115 (91%)	12 (9%)	0	100	100
56	SS	143/152 (94%)	129 (90%)	14 (10%)	0	100	100
57	ST	139/145 (96%)	124 (89%)	14 (10%)	1 (1%)	18	49
58	SU	101/119 (85%)	92 (91%)	9 (9%)	0	100	100
59	SV	81/83 (98%)	71 (88%)	9 (11%)	1 (1%)	10	37
60	SW	127/130 (98%)	123 (97%)	4 (3%)	0	100	100
61	SX	139/143 (97%)	123 (88%)	14 (10%)	2 (1%)	9	33
62	SY	129/133 (97%)	117 (91%)	12 (9%)	0	100	100
63	SZ	56/125 (45%)	50 (89%)	6 (11%)	0	100	100
64	Sa	100/115 (87%)	87 (87%)	13 (13%)	0	100	100
65	Sb	81/84 (96%)	70 (86%)	11 (14%)	0	100	100
66	Sc	62/69 (90%)	48 (77%)	14 (23%)	0	100	100
67	Sd	50/56 (89%)	46 (92%)	4 (8%)	0	100	100
68	Se	56/59 (95%)	49 (88%)	7 (12%)	0	100	100
69	Sg	311/317 (98%)	270 (87%)	41 (13%)	0	100	100
70	CB	747/858 (87%)	693 (93%)	52 (7%)	2 (0%)	36	65
71	SG	235/249 (94%)	221 (94%)	14 (6%)	0	100	100
72	SJ	183/194 (94%)	168 (92%)	15 (8%)	0	100	100
73	SC	217/293 (74%)	203 (94%)	14 (6%)	0	100	100
74	SF	177/204 (87%)	161 (91%)	16 (9%)	0	100	100
75	SH	182/194 (94%)	151 (83%)	31 (17%)	0	100	100
76	SD	225/243 (93%)	199 (88%)	26 (12%)	0	100	100
77	SE	260/263 (99%)	244 (94%)	16 (6%)	0	100	100
78	SI	204/208 (98%)	195 (96%)	9 (4%)	0	100	100
79	SK	96/165 (58%)	79 (82%)	17 (18%)	0	100	100
80	SL	143/158 (90%)	133 (93%)	10 (7%)	0	100	100
All	All	11725/13660 (86%)	10797 (92%)	919 (8%)	9 (0%)	49	75

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
16	LN	124	ASP
23	LU	55	ASN
61	SX	87	ASN
59	SV	79	VAL
70	CB	326	GLU
57	ST	41	LYS
61	SX	86	PRO
34	Lf	107	PRO
70	CB	325	SER

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	LA	190/199 (96%)	190 (100%)	0	100	100
5	LB	348/349 (100%)	348 (100%)	0	100	100
6	LC	304/348 (87%)	304 (100%)	0	100	100
7	LD	246/250 (98%)	246 (100%)	0	100	100
8	LE	194/252 (77%)	194 (100%)	0	100	100
9	LF	194/215 (90%)	194 (100%)	0	100	100
10	LG	199/223 (89%)	199 (100%)	0	100	100
11	LH	169/171 (99%)	169 (100%)	0	100	100
12	LI	172/181 (95%)	172 (100%)	0	100	100
13	LJ	145/149 (97%)	145 (100%)	0	100	100
14	LL	176/177 (99%)	176 (100%)	0	100	100
15	LM	118/161 (73%)	118 (100%)	0	100	100
16	LN	171/172 (99%)	171 (100%)	0	100	100
17	LO	173/174 (99%)	173 (100%)	0	100	100
18	LP	134/163 (82%)	134 (100%)	0	100	100
19	LQ	164/165 (99%)	164 (100%)	0	100	100
20	LR	148/175 (85%)	148 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	LS	156/157 (99%)	156 (100%)	0	100	100
22	LT	139/140 (99%)	139 (100%)	0	100	100
23	LU	91/115 (79%)	90 (99%)	1 (1%)	65	76
24	LV	101/107 (94%)	101 (100%)	0	100	100
25	LW	55/126 (44%)	55 (100%)	0	100	100
26	LX	105/133 (79%)	105 (100%)	0	100	100
27	LY	124/135 (92%)	124 (100%)	0	100	100
28	LZ	117/118 (99%)	117 (100%)	0	100	100
29	La	120/121 (99%)	120 (100%)	0	100	100
30	Lb	88/126 (70%)	88 (100%)	0	100	100
31	Lc	83/97 (86%)	83 (100%)	0	100	100
32	Ld	98/110 (89%)	98 (100%)	0	100	100
33	Le	114/121 (94%)	114 (100%)	0	100	100
34	Lf	88/89 (99%)	88 (100%)	0	100	100
35	Lg	98/100 (98%)	98 (100%)	0	100	100
36	Lh	109/110 (99%)	109 (100%)	0	100	100
37	Li	86/89 (97%)	86 (100%)	0	100	100
38	Lj	73/80 (91%)	73 (100%)	0	100	100
39	Lk	64/65 (98%)	64 (100%)	0	100	100
40	Ll	47/48 (98%)	47 (100%)	0	100	100
41	Lm	48/116 (41%)	48 (100%)	0	100	100
42	Ln	23/24 (96%)	23 (100%)	0	100	100
43	Lo	87/94 (93%)	87 (100%)	0	100	100
44	Lp	74/75 (99%)	74 (100%)	0	100	100
45	Lr	109/121 (90%)	109 (100%)	0	100	100
47	S	33/322 (10%)	33 (100%)	0	100	100
49	SA	183/243 (75%)	183 (100%)	0	100	100
50	SB	195/231 (84%)	195 (100%)	0	100	100
51	SN	130/131 (99%)	130 (100%)	0	100	100
52	SO	104/119 (87%)	104 (100%)	0	100	100
53	SP	107/130 (82%)	107 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
54	SQ	115/121 (95%)	115 (100%)	0	100	100
55	SR	119/122 (98%)	119 (100%)	0	100	100
56	SS	126/132 (96%)	126 (100%)	0	100	100
57	ST	112/115 (97%)	112 (100%)	0	100	100
58	SU	94/107 (88%)	94 (100%)	0	100	100
59	SV	67/67 (100%)	67 (100%)	0	100	100
60	SW	112/113 (99%)	112 (100%)	0	100	100
61	SX	113/115 (98%)	113 (100%)	0	100	100
62	SY	113/115 (98%)	113 (100%)	0	100	100
63	SZ	53/103 (52%)	53 (100%)	0	100	100
64	Sa	89/98 (91%)	89 (100%)	0	100	100
65	Sb	75/76 (99%)	75 (100%)	0	100	100
66	Sc	57/62 (92%)	57 (100%)	0	100	100
67	Sd	46/49 (94%)	46 (100%)	0	100	100
68	Se	47/48 (98%)	47 (100%)	0	100	100
69	Sg	272/275 (99%)	272 (100%)	0	100	100
70	CB	642/730 (88%)	642 (100%)	0	100	100
71	SG	207/218 (95%)	207 (100%)	0	100	100
72	SJ	161/168 (96%)	161 (100%)	0	100	100
73	SC	185/225 (82%)	185 (100%)	0	100	100
74	SF	154/170 (91%)	154 (100%)	0	100	100
75	SH	166/174 (95%)	166 (100%)	0	100	100
76	SD	190/202 (94%)	190 (100%)	0	100	100
77	SE	224/225 (100%)	224 (100%)	0	100	100
78	SI	178/180 (99%)	178 (100%)	0	100	100
79	SK	89/136 (65%)	89 (100%)	0	100	100
80	SL	133/142 (94%)	133 (100%)	0	100	100
All	All	10233/11605 (88%)	10232 (100%)	1 (0%)	100	100

All (1) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
23	LU	17	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (104) such sidechains are listed below:

Mol	Chain	Res	Type
4	LA	205	ASN
5	LB	184	GLN
5	LB	302	ASN
6	LC	38	ASN
6	LC	142	HIS
6	LC	187	GLN
6	LC	212	ASN
6	LC	329	ASN
6	LC	346	ASN
9	LF	116	GLN
10	LG	64	GLN
10	LG	141	ASN
11	LH	42	ASN
12	LI	130	HIS
12	LI	166	HIS
13	LJ	97	ASN
14	LL	205	GLN
18	LP	10	ASN
18	LP	34	GLN
18	LP	75	GLN
19	LQ	44	ASN
21	LS	66	GLN
22	LT	127	GLN
25	LW	63	GLN
26	LX	57	GLN
26	LX	69	ASN
26	LX	107	HIS
26	LX	108	GLN
27	LY	14	ASN
27	LY	66	GLN
28	LZ	78	ASN
29	La	66	ASN
30	Lb	6	ASN
30	Lb	19	ASN
30	Lb	58	GLN
31	Lc	40	GLN
31	Lc	50	ASN
33	Le	107	ASN
33	Le	117	GLN
35	Lg	110	GLN
36	Lh	65	GLN

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Mol	Chain	Res	Type
37	Li	15	HIS
37	Li	80	HIS
37	Li	92	ASN
38	Lj	57	ASN
40	Ll	33	ASN
42	Ln	22	GLN
45	Lr	4	HIS
50	SB	75	GLN
50	SB	92	GLN
50	SB	101	HIS
53	SP	24	GLN
53	SP	35	GLN
53	SP	46	ASN
53	SP	54	HIS
54	SQ	80	GLN
54	SQ	142	GLN
55	SR	83	ASN
55	SR	93	GLN
55	SR	118	GLN
55	SR	127	ASN
57	ST	126	GLN
57	ST	142	ASN
58	SU	85	HIS
60	SW	98	GLN
60	SW	120	HIS
61	SX	23	HIS
61	SX	87	ASN
62	SY	112	ASN
63	SZ	64	ASN
64	Sa	43	ASN
68	Se	15	GLN
68	Se	37	GLN
69	Sg	56	GLN
69	Sg	133	ASN
69	Sg	222	ASN
70	CB	27	HIS
70	CB	30	HIS
70	CB	145	GLN
70	CB	168	GLN
70	CB	179	GLN
70	CB	365	GLN
70	CB	448	GLN

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Mol	Chain	Res	Type
70	CB	493	ASN
70	CB	696	ASN
70	CB	803	ASN
71	SG	13	GLN
71	SG	110	ASN
71	SG	177	GLN
72	SJ	125	HIS
72	SJ	156	HIS
74	SF	148	ASN
74	SF	179	ASN
75	SH	97	GLN
75	SH	114	GLN
76	SD	74	GLN
76	SD	101	GLN
77	SE	138	HIS
77	SE	197	ASN
77	SE	201	HIS
77	SE	260	GLN
78	SI	52	ASN
79	SK	7	ASN
79	SK	44	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	L5	3644/5070 (71%)	814 (22%)	20 (0%)
2	L7	119/121 (98%)	11 (9%)	0
3	L8	155/157 (98%)	30 (19%)	0
46	S2	1713/1869 (91%)	408 (23%)	8 (0%)
48	E	78/85 (91%)	26 (33%)	1 (1%)
All	All	5709/7302 (78%)	1289 (22%)	29 (0%)

All (1289) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	L5	2	G
1	L5	25	A
1	L5	26	C
1	L5	39	A
1	L5	42	A
1	L5	48	G

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Mol	Chain	Res	Type
1	L5	56	A
1	L5	59	A
1	L5	64	A
1	L5	65	A
1	L5	66	A
1	L5	73	A
1	L5	74	G
1	L5	91	G
1	L5	98	A
1	L5	104	G
1	L5	108	A
1	L5	109	G
1	L5	110	C
1	L5	119	G
1	L5	120	A
1	L5	127	G
1	L5	132	G
1	L5	133	C
1	L5	134	G
1	L5	135	G
1	L5	145	G
1	L5	152	U
1	L5	159	C
1	L5	165	A
1	L5	166	C
1	L5	171	U
1	L5	173	C
1	L5	181	C
1	L5	183	C
1	L5	184	U
1	L5	185	C
1	L5	187	U
1	L5	188	G
1	L5	189	G
1	L5	200	U
1	L5	209	U
1	L5	216	C
1	L5	218	A
1	L5	220	C
1	L5	234	G
1	L5	237	G
1	L5	250	C

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Mol	Chain	Res	Type
1	L5	255	C
1	L5	256	G
1	L5	258	G
1	L5	261	G
1	L5	264	C
1	L5	265	C
1	L5	266	C
1	L5	267	G
1	L5	269	G
1	L5	275	C
1	L5	280	G
1	L5	297	U
1	L5	306	A
1	L5	315	G
1	L5	316	U
1	L5	340	C
1	L5	350	C
1	L5	373	G
1	L5	387	G
1	L5	388	A
1	L5	407	A
1	L5	408	A
1	L5	409	G
1	L5	410	A
1	L5	411	G
1	L5	412	G
1	L5	413	G
1	L5	431	G
1	L5	432	U
1	L5	449	C
1	L5	450	G
1	L5	452	A
1	L5	453	G
1	L5	454	U
1	L5	456	C
1	L5	457	G
1	L5	467	U
1	L5	468	U
1	L5	483	G
1	L5	484	U
1	L5	485	C
1	L5	486	C

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Mol	Chain	Res	Type
1	L5	489	C
1	L5	493	G
1	L5	494	U
1	L5	495	C
1	L5	497	G
1	L5	498	C
1	L5	499	G
1	L5	500	G
1	L5	501	C
1	L5	502	C
1	L5	503	C
1	L5	504	G
1	L5	505	G
1	L5	506	C
1	L5	509	A
1	L5	510	U
1	L5	512	U
1	L5	513	U
1	L5	514	U
1	L5	518	G
1	L5	643	C
1	L5	645	G
1	L5	646	G
1	L5	654	C
1	L5	655	C
1	L5	656	C
1	L5	657	C
1	L5	658	C
1	L5	659	G
1	L5	665	C
1	L5	666	G
1	L5	667	A
1	L5	668	C
1	L5	673	C
1	L5	685	C
1	L5	686	A
1	L5	687	U
1	L5	688	U
1	L5	696	C
1	L5	703	G
1	L5	704	C
1	L5	706	C

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Mol	Chain	Res	Type
1	L5	731	G
1	L5	738	C
1	L5	739	G
1	L5	742	G
1	L5	744	G
1	L5	746	A
1	L5	753	C
1	L5	758	G
1	L5	759	G
1	L5	904	C
1	L5	907	C
1	L5	913	U
1	L5	914	U
1	L5	915	A
1	L5	917	A
1	L5	918	G
1	L5	923	C
1	L5	924	C
1	L5	926	G
1	L5	932	A
1	L5	933	G
1	L5	934	C
1	L5	935	A
1	L5	936	C
1	L5	937	U
1	L5	944	A
1	L5	945	U
1	L5	959	G
1	L5	960	A
1	L5	961	G
1	L5	962	C
1	L5	965	G
1	L5	966	A
1	L5	967	C
1	L5	969	C
1	L5	970	G
1	L5	977	C
1	L5	982	U
1	L5	984	C
1	L5	985	C
1	L5	989	U
1	L5	990	C

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Mol	Chain	Res	Type
1	L5	992	C
1	L5	993	G
1	L5	995	C
1	L5	996	G
1	L5	1048	G
1	L5	1049	C
1	L5	1050	C
1	L5	1051	G
1	L5	1070	G
1	L5	1071	C
1	L5	1072	C
1	L5	1074	G
1	L5	1075	G
1	L5	1082	C
1	L5	1083	U
1	L5	1095	A
1	L5	1168	G
1	L5	1171	G
1	L5	1172	C
1	L5	1173	G
1	L5	1179	U
1	L5	1180	C
1	L5	1181	C
1	L5	1182	C
1	L5	1183	C
1	L5	1184	A
1	L5	1193	C
1	L5	1200	G
1	L5	1202	C
1	L5	1203	G
1	L5	1204	C
1	L5	1210	C
1	L5	1211	G
1	L5	1214	C
1	L5	1215	C
1	L5	1216	C
1	L5	1217	G
1	L5	1218	G
1	L5	1219	G
1	L5	1222	A
1	L5	1235	G
1	L5	1241	C

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Mol	Chain	Res	Type
1	L5	1242	G
1	L5	1243	C
1	L5	1245	C
1	L5	1246	G
1	L5	1247	U
1	L5	1253	G
1	L5	1254	A
1	L5	1255	A
1	L5	1257	A
1	L5	1258	G
1	L5	1261	G
1	L5	1266	G
1	L5	1267	C
1	L5	1269	G
1	L5	1270	A
1	L5	1271	G
1	L5	1272	C
1	L5	1273	G
1	L5	1274	A
1	L5	1275	G
1	L5	1280	C
1	L5	1284	G
1	L5	1285	U
1	L5	1287	G
1	L5	1294	A
1	L5	1295	C
1	L5	1296	G
1	L5	1301	C
1	L5	1326	A
1	L5	1337	A
1	L5	1354	A
1	L5	1358	G
1	L5	1359	G
1	L5	1365	C
1	L5	1367	C
1	L5	1370	G
1	L5	1378	C
1	L5	1379	C
1	L5	1387	A
1	L5	1394	G
1	L5	1397	A
1	L5	1404	G

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Mol	Chain	Res	Type
1	L5	1405	C
1	L5	1407	C
1	L5	1409	C
1	L5	1410	U
1	L5	1411	C
1	L5	1412	G
1	L5	1414	C
1	L5	1415	G
1	L5	1417	C
1	L5	1420	A
1	L5	1437	C
1	L5	1439	C
1	L5	1441	C
1	L5	1443	A
1	L5	1444	G
1	L5	1446	C
1	L5	1447	C
1	L5	1482	G
1	L5	1483	C
1	L5	1497	A
1	L5	1498	G
1	L5	1501	C
1	L5	1502	G
1	L5	1513	U
1	L5	1516	G
1	L5	1517	G
1	L5	1518	A
1	L5	1534	A
1	L5	1547	A
1	L5	1562	G
1	L5	1564	A
1	L5	1566	C
1	L5	1574	G
1	L5	1578	U
1	L5	1582	U
1	L5	1591	U
1	L5	1596	U
1	L5	1624	G
1	L5	1625	G
1	L5	1631	A
1	L5	1633	G
1	L5	1634	A

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Mol	Chain	Res	Type
1	L5	1638	A
1	L5	1640	C
1	L5	1654	G
1	L5	1661	C
1	L5	1676	C
1	L5	1677	U
1	L5	1678	C
1	L5	1698	C
1	L5	1699	A
1	L5	1700	G
1	L5	1703	C
1	L5	1704	C
1	L5	1705	G
1	L5	1707	C
1	L5	1708	G
1	L5	1709	C
1	L5	1717	C
1	L5	1718	C
1	L5	1726	U
1	L5	1734	G
1	L5	1741	G
1	L5	1742	A
1	L5	1750	G
1	L5	1757	U
1	L5	1758	G
1	L5	1760	G
1	L5	1761	G
1	L5	1762	C
1	L5	1763	C
1	L5	1764	G
1	L5	1765	A
1	L5	1766	A
1	L5	1767	A
1	L5	1768	C
1	L5	1769	G
1	L5	1770	A
1	L5	1775	A
1	L5	1787	A
1	L5	1797	G
1	L5	1804	A
1	L5	1810	G
1	L5	1815	G

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Mol	Chain	Res	Type
1	L5	1820	C
1	L5	1821	G
1	L5	1822	U
1	L5	1834	U
1	L5	1836	G
1	L5	1837	A
1	L5	1842	G
1	L5	1843	A
1	L5	1855	G
1	L5	1869	G
1	L5	1882	U
1	L5	1889	U
1	L5	1897	A
1	L5	1917	A
1	L5	1918	U
1	L5	1919	G
1	L5	1920	C
1	L5	1921	C
1	L5	1922	G
1	L5	1925	G
1	L5	1931	C
1	L5	1932	A
1	L5	1936	C
1	L5	1940	G
1	L5	1948	G
1	L5	1949	U
1	L5	1959	U
1	L5	1961	G
1	L5	1962	A
1	L5	1968	G
1	L5	1972	G
1	L5	1974	U
1	L5	1975	G
1	L5	1978	C
1	L5	1980	U
1	L5	1981	G
1	L5	1982	G
1	L5	1984	A
1	L5	1985	G
1	L5	1991	A
1	L5	1992	U
1	L5	1993	C

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Mol	Chain	Res	Type
1	L5	1997	U
1	L5	2002	A
1	L5	2004	U
1	L5	2011	C
1	L5	2017	A
1	L5	2018	C
1	L5	2024	G
1	L5	2026	A
1	L5	2034	G
1	L5	2046	G
1	L5	2048	U
1	L5	2055	G
1	L5	2056	G
1	L5	2069	A
1	L5	2084	C
1	L5	2085	G
1	L5	2091	C
1	L5	2092	G
1	L5	2093	A
1	L5	2095	A
1	L5	2096	G
1	L5	2097	U
1	L5	2098	G
1	L5	2101	C
1	L5	2102	G
1	L5	2107	C
1	L5	2108	G
1	L5	2111	G
1	L5	2112	G
1	L5	2250	C
1	L5	2252	G
1	L5	2253	A
1	L5	2255	C
1	L5	2256	C
1	L5	2257	C
1	L5	2258	C
1	L5	2259	G
1	L5	2260	C
1	L5	2277	C
1	L5	2289	C
1	L5	2300	A
1	L5	2301	G

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Mol	Chain	Res	Type
1	L5	2313	A
1	L5	2316	G
1	L5	2333	G
1	L5	2348	G
1	L5	2351	C
1	L5	2360	A
1	L5	2364	G
1	L5	2369	U
1	L5	2397	G
1	L5	2412	A
1	L5	2417	A
1	L5	2418	A
1	L5	2421	G
1	L5	2425	U
1	L5	2441	C
1	L5	2450	G
1	L5	2464	C
1	L5	2465	C
1	L5	2469	C
1	L5	2474	G
1	L5	2475	G
1	L5	2478	C
1	L5	2479	G
1	L5	2483	G
1	L5	2484	A
1	L5	2485	U
1	L5	2487	G
1	L5	2488	C
1	L5	2489	C
1	L5	2490	U
1	L5	2491	C
1	L5	2494	U
1	L5	2503	G
1	L5	2504	C
1	L5	2505	C
1	L5	2506	G
1	L5	2513	A
1	L5	2519	U
1	L5	2520	C
1	L5	2537	A
1	L5	2544	G
1	L5	2546	G

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Mol	Chain	Res	Type
1	L5	2547	G
1	L5	2554	U
1	L5	2555	G
1	L5	2557	G
1	L5	2559	G
1	L5	2560	C
1	L5	2565	A
1	L5	2567	G
1	L5	2568	C
1	L5	2573	A
1	L5	2583	C
1	L5	2587	A
1	L5	2589	C
1	L5	2601	A
1	L5	2618	G
1	L5	2627	C
1	L5	2652	G
1	L5	2653	C
1	L5	2662	G
1	L5	2664	G
1	L5	2669	C
1	L5	2673	G
1	L5	2676	A
1	L5	2686	G
1	L5	2687	U
1	L5	2694	G
1	L5	2695	A
1	L5	2696	A
1	L5	2703	G
1	L5	2707	U
1	L5	2708	U
1	L5	2710	C
1	L5	2711	G
1	L5	2724	G
1	L5	2725	A
1	L5	2726	G
1	L5	2739	C
1	L5	2742	G
1	L5	2743	A
1	L5	2746	A
1	L5	2756	G
1	L5	2759	G

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Mol	Chain	Res	Type
1	L5	2761	U
1	L5	2763	U
1	L5	2764	A
1	L5	2769	U
1	L5	2770	C
1	L5	2787	A
1	L5	2788	U
1	L5	2790	U
1	L5	2815	A
1	L5	2826	U
1	L5	2827	G
1	L5	2829	U
1	L5	2838	G
1	L5	2848	G
1	L5	2855	G
1	L5	2877	G
1	L5	2892	C
1	L5	2900	U
1	L5	2902	G
1	L5	2903	G
1	L5	2904	U
1	L5	2905	C
1	L5	2906	G
1	L5	2908	U
1	L5	3587	C
1	L5	3588	C
1	L5	3590	G
1	L5	3591	C
1	L5	3594	C
1	L5	3595	U
1	L5	3596	A
1	L5	3597	G
1	L5	3598	C
1	L5	3599	A
1	L5	3605	C
1	L5	3615	G
1	L5	3618	C
1	L5	3626	G
1	L5	3635	A
1	L5	3644	U
1	L5	3646	A
1	L5	3662	A

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Mol	Chain	Res	Type
1	L5	3664	G
1	L5	3670	C
1	L5	3672	G
1	L5	3673	C
1	L5	3674	G
1	L5	3685	C
1	L5	3727	A
1	L5	3735	G
1	L5	3740	G
1	L5	3750	G
1	L5	3753	G
1	L5	3756	A
1	L5	3757	G
1	L5	3759	A
1	L5	3760	A
1	L5	3761	C
1	L5	3772	U
1	L5	3773	U
1	L5	3776	G
1	L5	3777	G
1	L5	3784	A
1	L5	3786	U
1	L5	3802	U
1	L5	3807	A
1	L5	3811	G
1	L5	3814	U
1	L5	3817	A
1	L5	3818	U
1	L5	3819	G
1	L5	3823	G
1	L5	3838	U
1	L5	3840	U
1	L5	3841	C
1	L5	3867	A
1	L5	3877	A
1	L5	3878	C
1	L5	3879	G
1	L5	3885	G
1	L5	3887	C
1	L5	3890	A
1	L5	3892	U
1	L5	3897	G

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Mol	Chain	Res	Type
1	L5	3901	A
1	L5	3906	A
1	L5	3907	G
1	L5	3908	A
1	L5	3915	U
1	L5	3916	G
1	L5	3920	U
1	L5	3922	G
1	L5	3938	G
1	L5	3939	G
1	L5	3942	A
1	L5	3943	A
1	L5	3947	A
1	L5	3948	C
1	L5	3949	A
1	L5	3950	U
1	L5	3951	G
1	L5	4062	A
1	L5	4063	U
1	L5	4064	C
1	L5	4065	G
1	L5	4076	G
1	L5	4084	G
1	L5	4086	G
1	L5	4091	G
1	L5	4092	G
1	L5	4093	G
1	L5	4094	G
1	L5	4096	C
1	L5	4097	G
1	L5	4099	G
1	L5	4100	C
1	L5	4101	C
1	L5	4102	C
1	L5	4104	G
1	L5	4108	G
1	L5	4111	U
1	L5	4113	U
1	L5	4114	C
1	L5	4115	G
1	L5	4116	C
1	L5	4117	U

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Mol	Chain	Res	Type
1	L5	4119	C
1	L5	4121	G
1	L5	4122	G
1	L5	4127	A
1	L5	4133	C
1	L5	4134	C
1	L5	4140	C
1	L5	4141	G
1	L5	4142	C
1	L5	4143	G
1	L5	4144	C
1	L5	4146	G
1	L5	4150	G
1	L5	4160	C
1	L5	4162	C
1	L5	4163	U
1	L5	4170	A
1	L5	4177	C
1	L5	4183	G
1	L5	4184	G
1	L5	4191	G
1	L5	4196	G
1	L5	4203	A
1	L5	4212	A
1	L5	4222	G
1	L5	4229	U
1	L5	4233	A
1	L5	4249	G
1	L5	4251	A
1	L5	4254	G
1	L5	4255	A
1	L5	4265	U
1	L5	4268	A
1	L5	4273	A
1	L5	4281	A
1	L5	4291	G
1	L5	4305	G
1	L5	4314	C
1	L5	4329	G
1	L5	4330	G
1	L5	4332	C
1	L5	4339	A

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Mol	Chain	Res	Type
1	L5	4349	C
1	L5	4354	U
1	L5	4373	G
1	L5	4376	A
1	L5	4377	G
1	L5	4378	A
1	L5	4380	A
1	L5	4387	C
1	L5	4394	A
1	L5	4405	G
1	L5	4421	C
1	L5	4422	A
1	L5	4448	G
1	L5	4449	A
1	L5	4452	U
1	L5	4453	C
1	L5	4464	A
1	L5	4466	C
1	L5	4475	G
1	L5	4488	A
1	L5	4500	U
1	L5	4502	C
1	L5	4512	U
1	L5	4513	A
1	L5	4519	C
1	L5	4524	G
1	L5	4545	G
1	L5	4548	A
1	L5	4549	G
1	L5	4560	C
1	L5	4567	G
1	L5	4573	G
1	L5	4575	G
1	L5	4584	A
1	L5	4589	A
1	L5	4590	A
1	L5	4600	G
1	L5	4617	G
1	L5	4627	U
1	L5	4636	U
1	L5	4637	G
1	L5	4656	A

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Mol	Chain	Res	Type
1	L5	4659	G
1	L5	4670	C
1	L5	4672	A
1	L5	4679	G
1	L5	4695	C
1	L5	4700	A
1	L5	4708	A
1	L5	4709	U
1	L5	4719	G
1	L5	4720	C
1	L5	4733	C
1	L5	4734	A
1	L5	4740	G
1	L5	4741	C
1	L5	4742	G
1	L5	4745	G
1	L5	4746	C
1	L5	4750	G
1	L5	4754	G
1	L5	4757	C
1	L5	4759	C
1	L5	4761	G
1	L5	4765	G
1	L5	4770	U
1	L5	4771	C
1	L5	4773	C
1	L5	4774	C
1	L5	4775	C
1	L5	4776	G
1	L5	4859	C
1	L5	4860	G
1	L5	4863	G
1	L5	4870	G
1	L5	4871	C
1	L5	4875	G
1	L5	4877	G
1	L5	4880	C
1	L5	4882	U
1	L5	4883	C
1	L5	4888	U
1	L5	4889	G
1	L5	4895	C

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Mol	Chain	Res	Type
1	L5	4896	G
1	L5	4897	G
1	L5	4900	C
1	L5	4901	G
1	L5	4902	C
1	L5	4910	G
1	L5	4912	G
1	L5	4914	C
1	L5	4922	C
1	L5	4924	C
1	L5	4925	U
1	L5	4927	G
1	L5	4928	C
1	L5	4934	A
1	L5	4940	C
1	L5	4941	G
1	L5	4943	A
1	L5	4951	G
1	L5	4955	A
1	L5	4960	G
1	L5	4961	G
1	L5	4963	G
1	L5	4966	A
1	L5	4975	G
1	L5	4976	U
1	L5	4988	U
1	L5	4989	U
1	L5	4990	C
1	L5	4991	U
1	L5	5007	A
1	L5	5009	G
1	L5	5013	C
1	L5	5014	A
1	L5	5017	G
1	L5	5022	U
1	L5	5023	C
1	L5	5024	C
1	L5	5025	C
1	L5	5026	U
1	L5	5027	C
1	L5	5028	G
1	L5	5029	C

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Mol	Chain	Res	Type
1	L5	5030	U
1	L5	5031	G
1	L5	5034	A
1	L5	5041	G
1	L5	5050	C
1	L5	5054	C
1	L5	5055	G
1	L5	5061	A
1	L5	5062	G
1	L5	5069	U
2	L7	4	U
2	L7	24	C
2	L7	33	U
2	L7	38	U
2	L7	53	U
2	L7	54	A
2	L7	63	C
2	L7	64	G
2	L7	100	A
2	L7	110	G
2	L7	111	C
3	L8	23	C
3	L8	25	G
3	L8	34	U
3	L8	35	C
3	L8	38	U
3	L8	48	A
3	L8	52	A
3	L8	59	A
3	L8	62	A
3	L8	63	U
3	L8	68	G
3	L8	82	A
3	L8	84	A
3	L8	85	U
3	L8	86	U
3	L8	87	G
3	L8	93	C
3	L8	103	A
3	L8	105	C
3	L8	110	U
3	L8	111	U

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Mol	Chain	Res	Type
3	L8	114	G
3	L8	123	U
3	L8	124	U
3	L8	125	C
3	L8	126	C
3	L8	127	U
3	L8	128	C
3	L8	147	G
3	L8	151	G
46	S2	13	C
46	S2	17	C
46	S2	25	A
46	S2	33	G
46	S2	41	G
46	S2	44	U
46	S2	45	A
46	S2	46	A
46	S2	56	G
46	S2	58	C
46	S2	59	U
46	S2	64	A
46	S2	67	C
46	S2	68	A
46	S2	72	C
46	S2	73	C
46	S2	74	G
46	S2	76	U
46	S2	92	A
46	S2	103	A
46	S2	113	G
46	S2	115	U
46	S2	116	U
46	S2	126	G
46	S2	130	G
46	S2	140	C
46	S2	143	U
46	S2	149	A
46	S2	154	U
46	S2	158	A
46	S2	159	A
46	S2	160	U
46	S2	162	C

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Mol	Chain	Res	Type
46	S2	163	U
46	S2	175	A
46	S2	179	C
46	S2	182	C
46	S2	190	G
46	S2	196	C
46	S2	197	U
46	S2	198	U
46	S2	199	C
46	S2	200	G
46	S2	203	G
46	S2	204	G
46	S2	206	G
46	S2	208	G
46	S2	212	C
46	S2	213	G
46	S2	214	U
46	S2	290	U
46	S2	291	G
46	S2	292	A
46	S2	295	C
46	S2	306	C
46	S2	307	G
46	S2	308	G
46	S2	309	G
46	S2	310	C
46	S2	311	C
46	S2	313	A
46	S2	318	A
46	S2	319	C
46	S2	322	C
46	S2	323	C
46	S2	324	C
46	S2	325	C
46	S2	326	C
46	S2	328	U
46	S2	329	G
46	S2	332	G
46	S2	335	G
46	S2	339	A
46	S2	340	C
46	S2	347	G

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Mol	Chain	Res	Type
46	S2	360	A
46	S2	361	U
46	S2	362	C
46	S2	364	A
46	S2	368	U
46	S2	370	G
46	S2	374	G
46	S2	385	G
46	S2	386	C
46	S2	407	G
46	S2	408	A
46	S2	409	C
46	S2	421	G
46	S2	438	G
46	S2	448	A
46	S2	449	A
46	S2	450	C
46	S2	452	G
46	S2	463	C
46	S2	464	A
46	S2	465	A
46	S2	466	G
46	S2	467	G
46	S2	471	G
46	S2	472	C
46	S2	473	A
46	S2	474	G
46	S2	482	G
46	S2	485	A
46	S2	487	U
46	S2	488	U
46	S2	492	C
46	S2	493	A
46	S2	502	C
46	S2	503	C
46	S2	516	A
46	S2	525	A
46	S2	528	A
46	S2	530	U
46	S2	531	A
46	S2	532	C
46	S2	533	A

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Mol	Chain	Res	Type
46	S2	536	A
46	S2	537	C
46	S2	538	U
46	S2	540	U
46	S2	542	U
46	S2	544	G
46	S2	546	G
46	S2	547	G
46	S2	551	U
46	S2	556	U
46	S2	557	U
46	S2	558	G
46	S2	559	G
46	S2	563	G
46	S2	564	A
46	S2	566	U
46	S2	570	C
46	S2	576	A
46	S2	583	A
46	S2	587	A
46	S2	589	G
46	S2	591	U
46	S2	594	A
46	S2	596	U
46	S2	597	G
46	S2	606	G
46	S2	614	C
46	S2	617	G
46	S2	623	G
46	S2	628	A
46	S2	631	U
46	S2	643	A
46	S2	644	G
46	S2	659	G
46	S2	660	C
46	S2	664	A
46	S2	668	A
46	S2	669	A
46	S2	671	A
46	S2	672	A
46	S2	673	G
46	S2	683	G

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Mol	Chain	Res	Type
46	S2	687	C
46	S2	688	U
46	S2	689	U
46	S2	692	G
46	S2	693	A
46	S2	694	G
46	S2	695	C
46	S2	696	G
46	S2	697	G
46	S2	698	G
46	S2	733	C
46	S2	736	C
46	S2	738	C
46	S2	749	U
46	S2	751	G
46	S2	752	G
46	S2	788	G
46	S2	791	C
46	S2	792	C
46	S2	794	A
46	S2	798	G
46	S2	799	U
46	S2	810	A
46	S2	821	G
46	S2	822	U
46	S2	823	U
46	S2	824	C
46	S2	830	A
46	S2	834	C
46	S2	835	C
46	S2	836	G
46	S2	837	A
46	S2	838	G
46	S2	839	C
46	S2	841	G
46	S2	842	C
46	S2	847	A
46	S2	869	A
46	S2	870	A
46	S2	877	C
46	S2	880	G
46	S2	882	U

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Mol	Chain	Res	Type
46	S2	888	U
46	S2	889	U
46	S2	891	G
46	S2	892	U
46	S2	896	U
46	S2	897	U
46	S2	898	U
46	S2	899	U
46	S2	900	C
46	S2	901	G
46	S2	903	A
46	S2	904	A
46	S2	913	A
46	S2	914	U
46	S2	919	A
46	S2	920	A
46	S2	930	C
46	S2	933	G
46	S2	934	G
46	S2	943	U
46	S2	963	A
46	S2	970	G
46	S2	971	G
46	S2	990	A
46	S2	992	A
46	S2	997	A
46	S2	999	G
46	S2	1001	A
46	S2	1008	A
46	S2	1017	U
46	S2	1018	U
46	S2	1023	A
46	S2	1027	A
46	S2	1042	A
46	S2	1047	C
46	S2	1061	U
46	S2	1062	A
46	S2	1083	A
46	S2	1085	C
46	S2	1088	U
46	S2	1109	C
46	S2	1115	U

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Mol	Chain	Res	Type
46	S2	1116	C
46	S2	1118	C
46	S2	1119	A
46	S2	1121	G
46	S2	1138	C
46	S2	1139	C
46	S2	1148	A
46	S2	1153	C
46	S2	1154	U
46	S2	1195	A
46	S2	1200	A
46	S2	1207	G
46	S2	1208	A
46	S2	1215	C
46	S2	1216	C
46	S2	1217	A
46	S2	1224	G
46	S2	1227	G
46	S2	1242	U
46	S2	1243	U
46	S2	1251	A
46	S2	1253	A
46	S2	1256	G
46	S2	1257	G
46	S2	1259	A
46	S2	1264	C
46	S2	1265	A
46	S2	1274	G
46	S2	1275	G
46	S2	1283	C
46	S2	1286	G
46	S2	1294	G
46	S2	1295	A
46	S2	1301	A
46	S2	1302	G
46	S2	1303	C
46	S2	1306	U
46	S2	1308	U
46	S2	1312	G
46	S2	1320	G
46	S2	1341	C
46	S2	1342	U

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Mol	Chain	Res	Type
46	S2	1348	G
46	S2	1371	U
46	S2	1372	U
46	S2	1373	C
46	S2	1376	A
46	S2	1378	A
46	S2	1401	A
46	S2	1402	A
46	S2	1406	G
46	S2	1408	U
46	S2	1412	C
46	S2	1414	A
46	S2	1415	C
46	S2	1419	C
46	S2	1420	G
46	S2	1421	A
46	S2	1422	G
46	S2	1423	C
46	S2	1424	G
46	S2	1429	G
46	S2	1433	C
46	S2	1435	C
46	S2	1436	C
46	S2	1437	C
46	S2	1438	A
46	S2	1442	U
46	S2	1449	G
46	S2	1454	A
46	S2	1463	U
46	S2	1486	A
46	S2	1489	A
46	S2	1490	G
46	S2	1494	U
46	S2	1497	G
46	S2	1498	A
46	S2	1505	U
46	S2	1507	G
46	S2	1509	U
46	S2	1521	C
46	S2	1522	A
46	S2	1533	A
46	S2	1534	C

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Mol	Chain	Res	Type
46	S2	1536	G
46	S2	1537	A
46	S2	1552	G
46	S2	1553	C
46	S2	1556	A
46	S2	1570	G
46	S2	1575	G
46	S2	1578	U
46	S2	1579	A
46	S2	1580	A
46	S2	1585	U
46	S2	1587	G
46	S2	1588	A
46	S2	1598	G
46	S2	1599	U
46	S2	1600	G
46	S2	1601	A
46	S2	1606	G
46	S2	1607	A
46	S2	1621	U
46	S2	1623	A
46	S2	1633	A
46	S2	1634	A
46	S2	1637	A
46	S2	1638	G
46	S2	1639	G
46	S2	1640	A
46	S2	1644	C
46	S2	1646	C
46	S2	1648	G
46	S2	1654	G
46	S2	1663	A
46	S2	1665	G
46	S2	1671	G
46	S2	1680	G
46	S2	1683	C
46	S2	1699	A
46	S2	1719	A
46	S2	1721	U
46	S2	1722	G
46	S2	1729	U
46	S2	1743	G

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Mol	Chain	Res	Type
46	S2	1744	G
46	S2	1745	A
46	S2	1748	G
46	S2	1752	C
46	S2	1753	C
46	S2	1754	G
46	S2	1756	C
46	S2	1757	G
46	S2	1758	G
46	S2	1760	G
46	S2	1761	U
46	S2	1772	C
46	S2	1773	C
46	S2	1774	C
46	S2	1775	U
46	S2	1777	G
46	S2	1782	G
46	S2	1783	C
46	S2	1784	G
46	S2	1786	U
46	S2	1798	C
46	S2	1800	A
46	S2	1810	U
46	S2	1812	U
46	S2	1822	A
46	S2	1823	A
46	S2	1824	A
46	S2	1825	A
46	S2	1826	G
46	S2	1829	G
46	S2	1835	A
46	S2	1838	U
46	S2	1849	G
46	S2	1851	A
46	S2	1852	C
46	S2	1861	G
46	S2	1862	G
46	S2	1863	A
46	S2	1865	C
48	E	8	U
48	E	9	G
48	E	13	G

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Mol	Chain	Res	Type
48	E	14	A
48	E	16	U
48	E	17	G
48	E	18	G
48	E	19	U
48	E	20	U
48	E	21	A
48	E	22	A
48	E	24	G
48	E	25	C
48	E	26	G
48	E	40	C
48	E	48	G
48	E	49	U
48	E	50	C
48	E	51	U
48	E	56	G
48	E	57	C
48	E	62	G
48	E	69	U
48	E	70	C
48	E	75	C
48	E	85	A

All (29) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	L5	183	C
1	L5	233	U
1	L5	406	C
1	L5	493	G
1	L5	504	G
1	L5	914	U
1	L5	935	A
1	L5	1082	C
1	L5	1633	G
1	L5	1977	C
1	L5	2033	A
1	L5	2416	G
1	L5	2675	G
1	L5	2760	G
1	L5	2786	C

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Mol	Chain	Res	Type
1	L5	3614	G
1	L5	3673	C
1	L5	4699	U
1	L5	4913	G
1	L5	5061	A
46	S2	112	U
46	S2	158	A
46	S2	291	G
46	S2	420	G
46	S2	563	G
46	S2	688	U
46	S2	1434	C
46	S2	1551	U
48	E	18	G

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 262 ligands modelled in this entry, 262 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

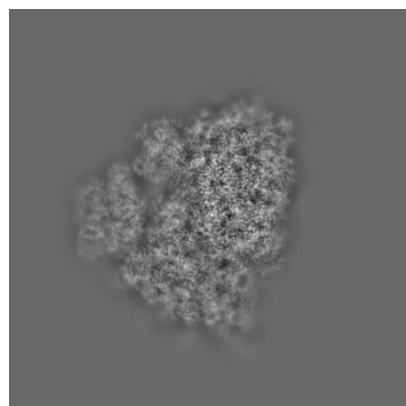
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-37992. These allow visual inspection of the internal detail of the map and identification of artifacts.

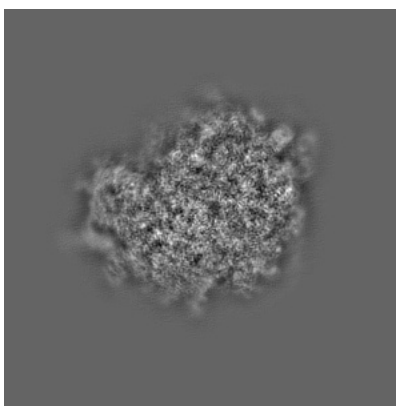
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

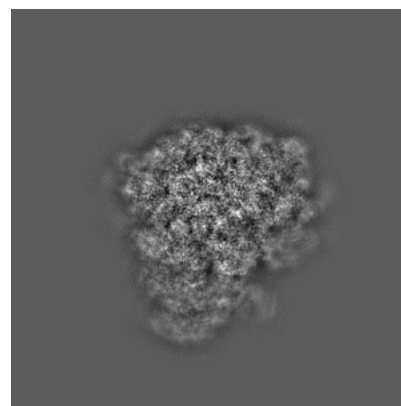
6.1.1 Primary map



X

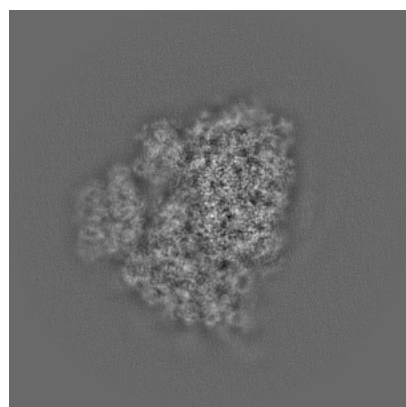


Y

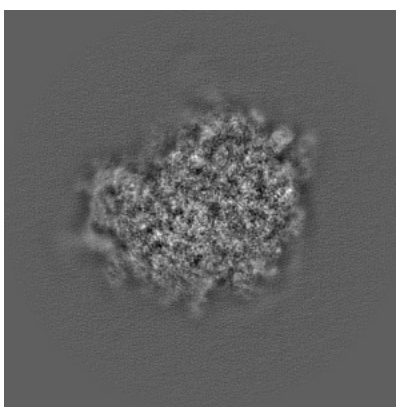


Z

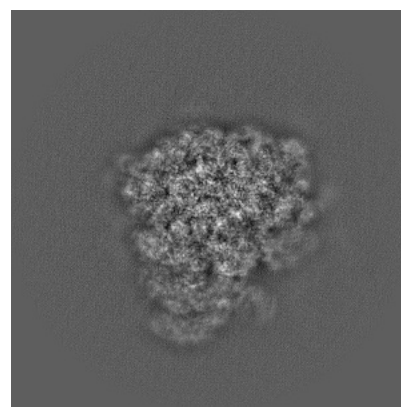
6.1.2 Raw map



X



Y

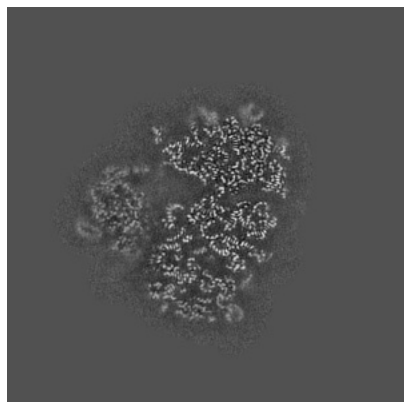


Z

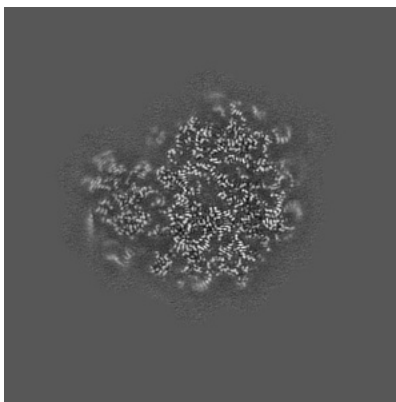
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

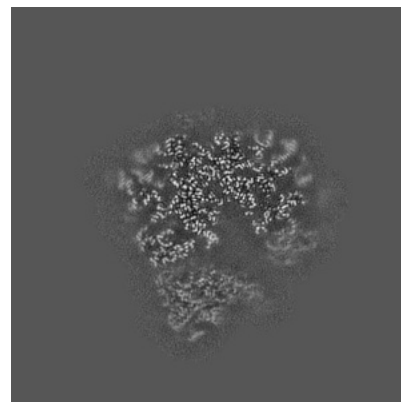
6.2.1 Primary map



X Index: 224

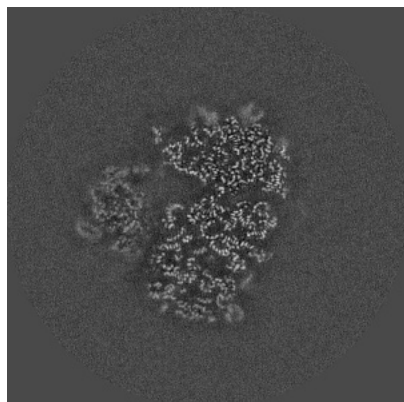


Y Index: 224

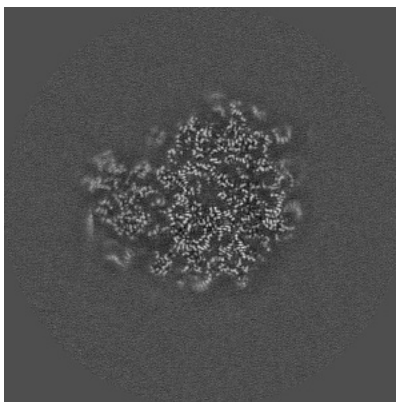


Z Index: 224

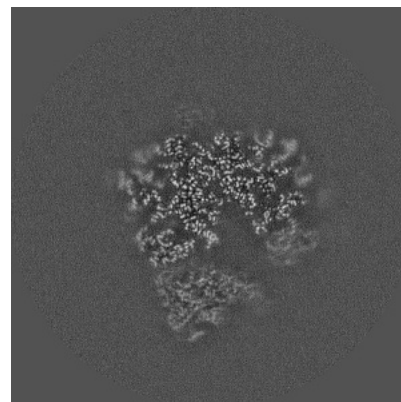
6.2.2 Raw map



X Index: 224



Y Index: 224

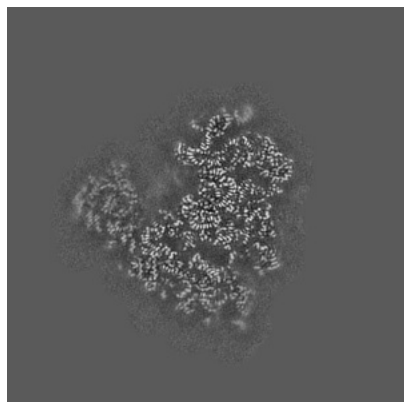


Z Index: 224

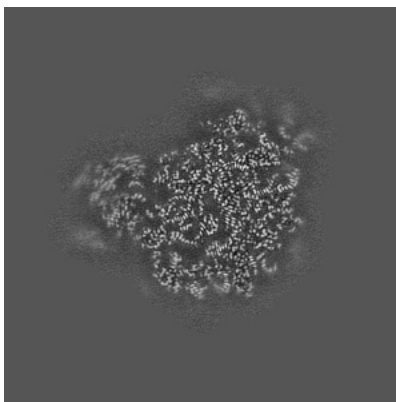
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

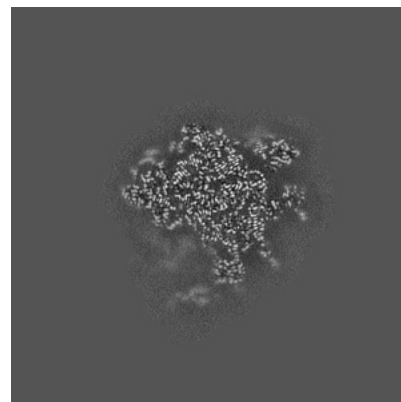
6.3.1 Primary map



X Index: 207

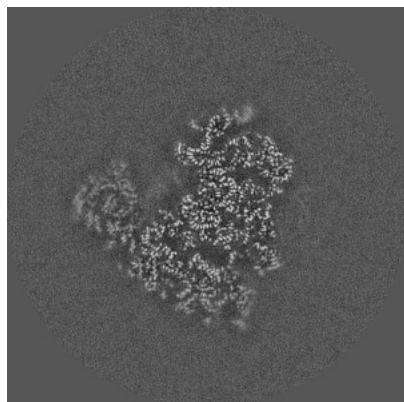


Y Index: 243

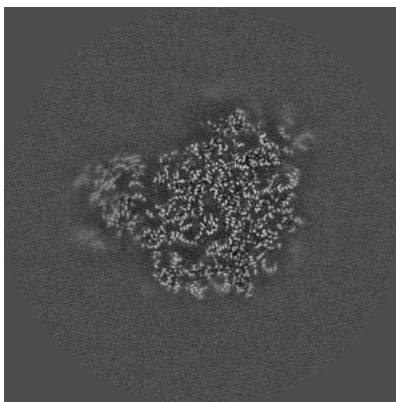


Z Index: 271

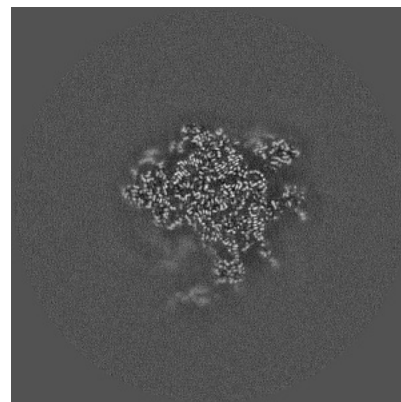
6.3.2 Raw map



X Index: 207



Y Index: 243

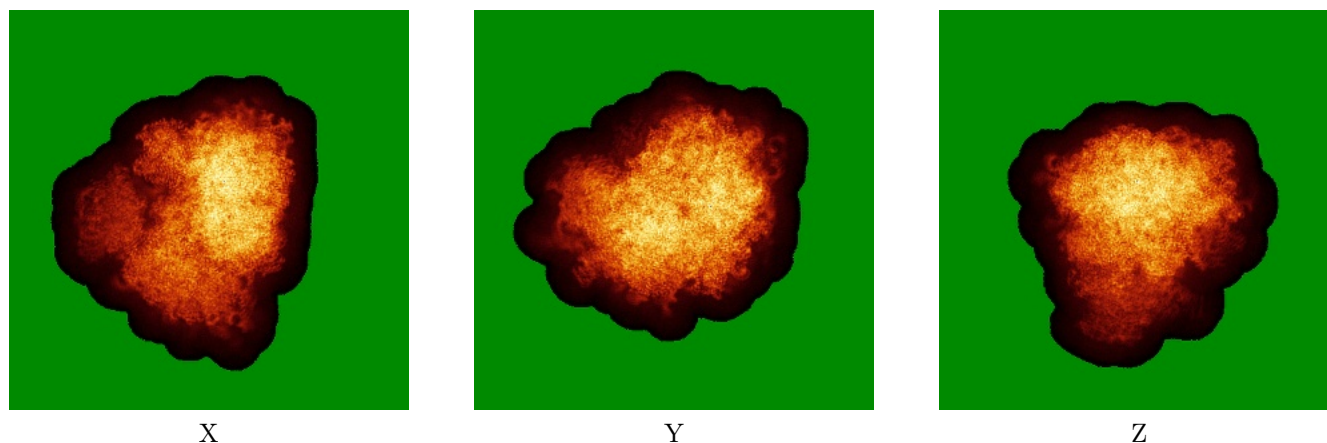


Z Index: 271

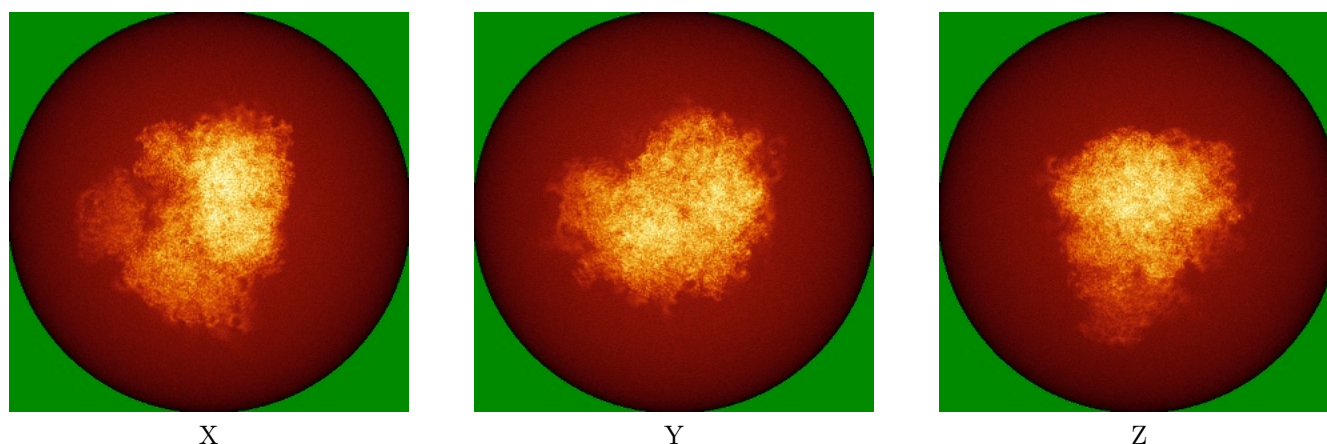
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



6.4.2 Raw map



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](#)

This section was not generated.

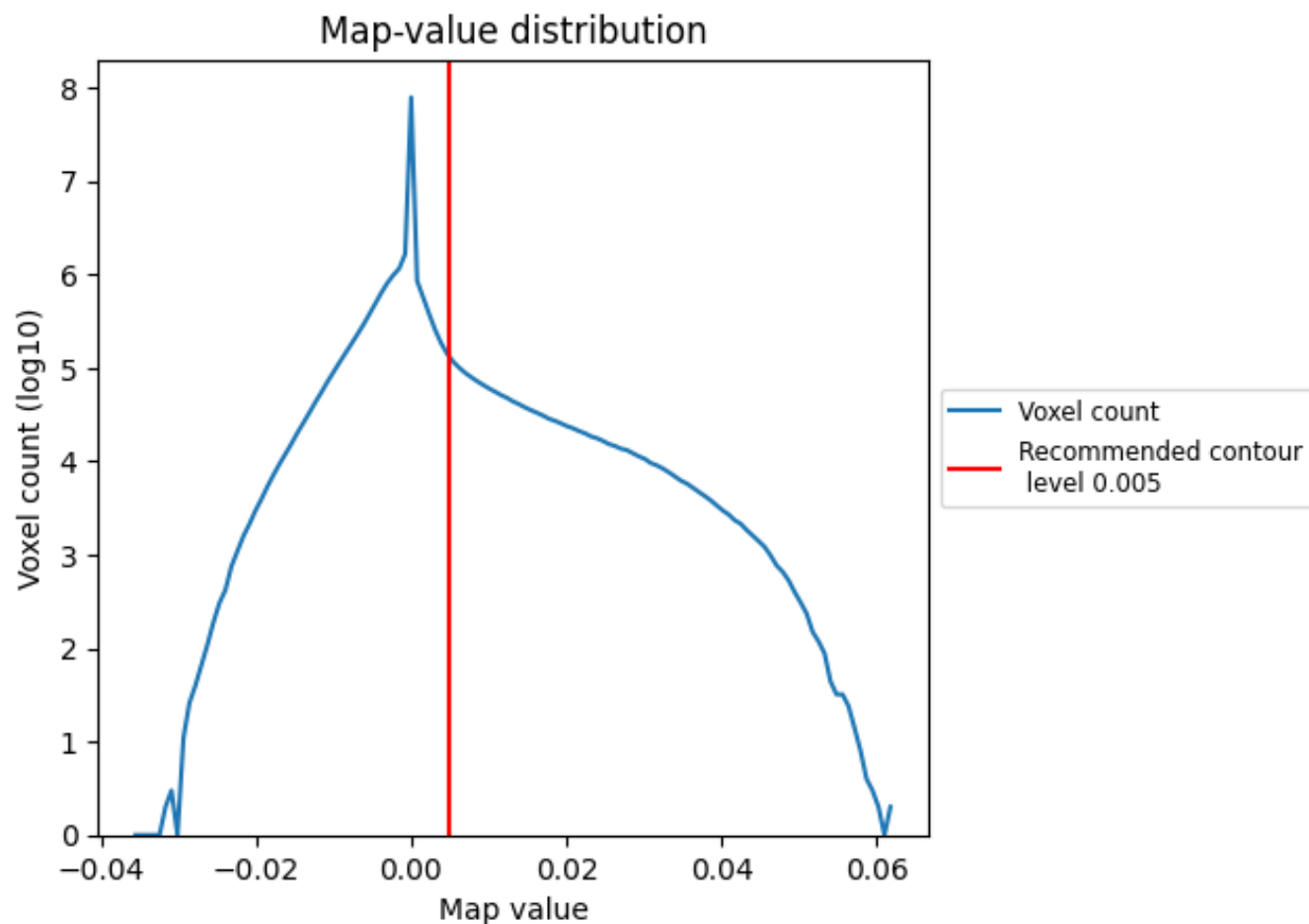
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

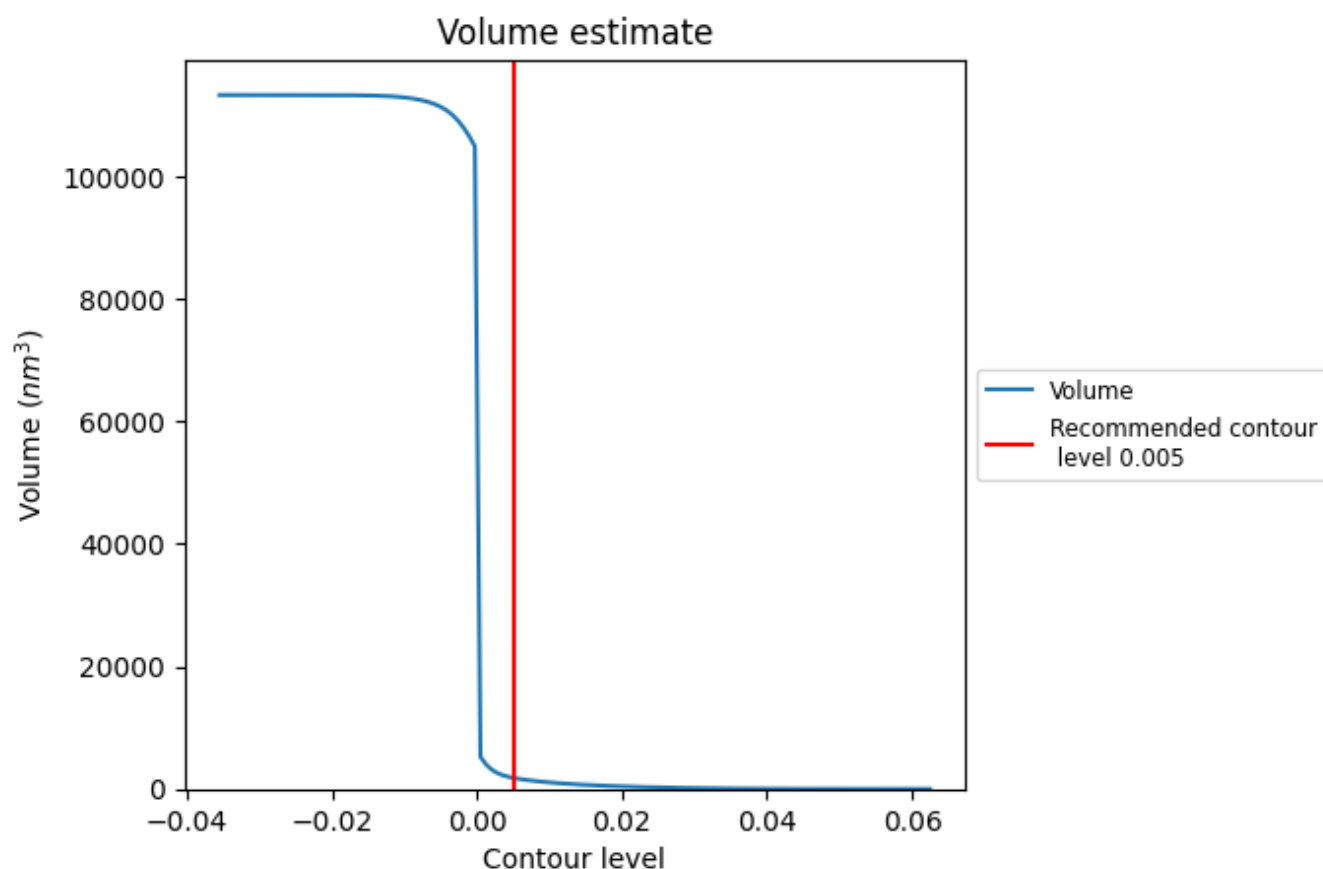
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

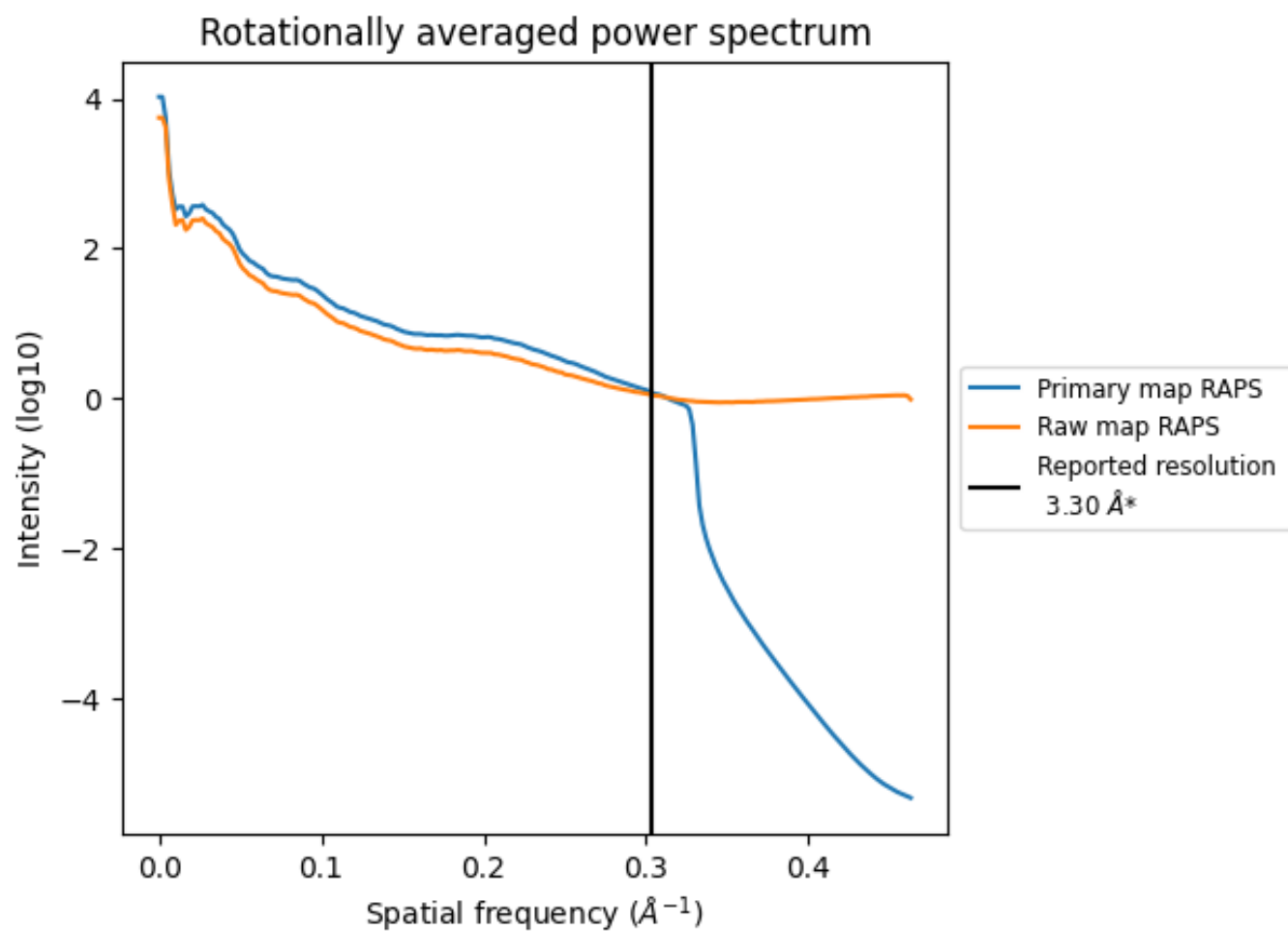
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1813 nm³; this corresponds to an approximate mass of 1637 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

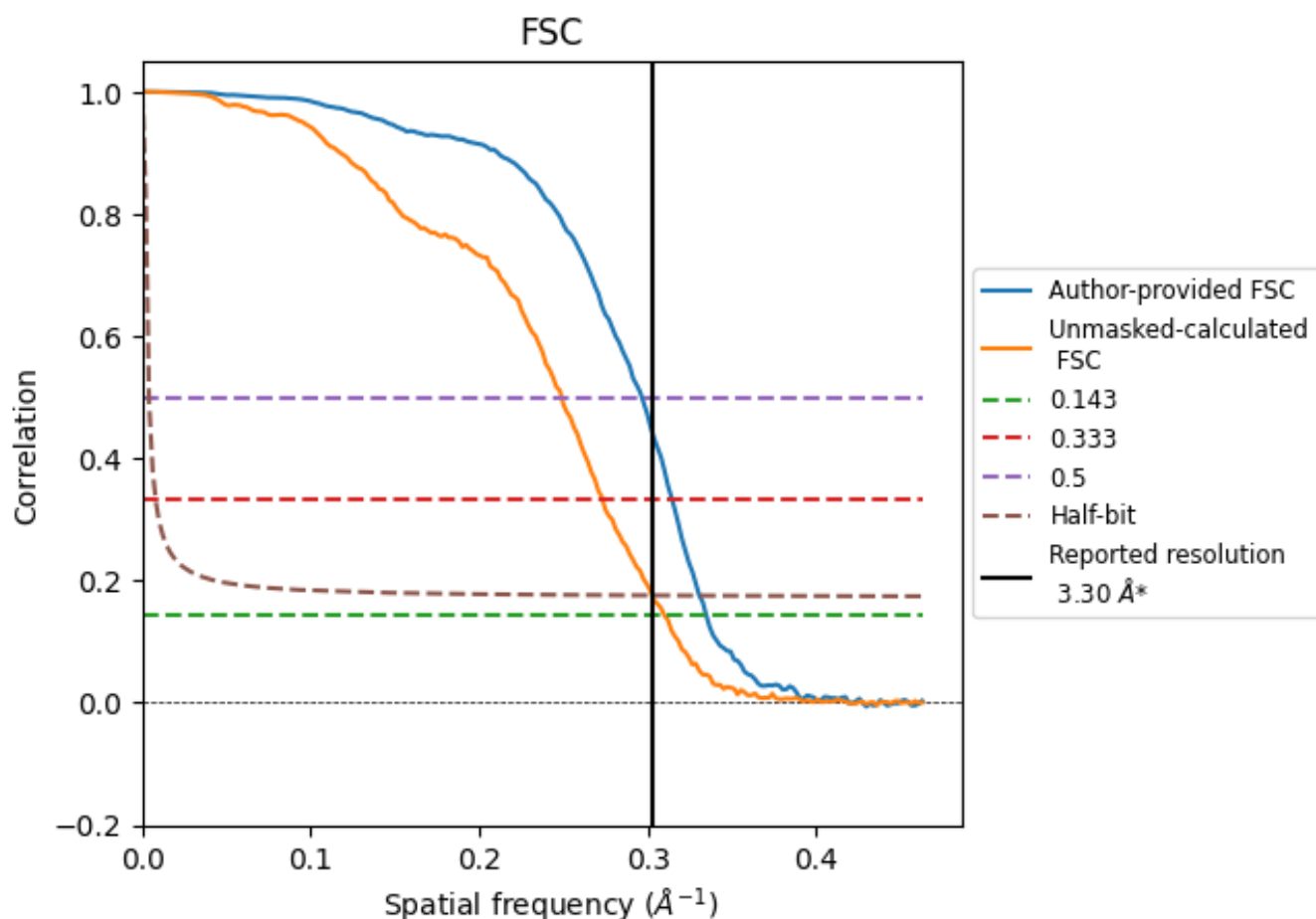


*Reported resolution corresponds to spatial frequency of $0.303 \text{ \AA}^{-1}$

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.303 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

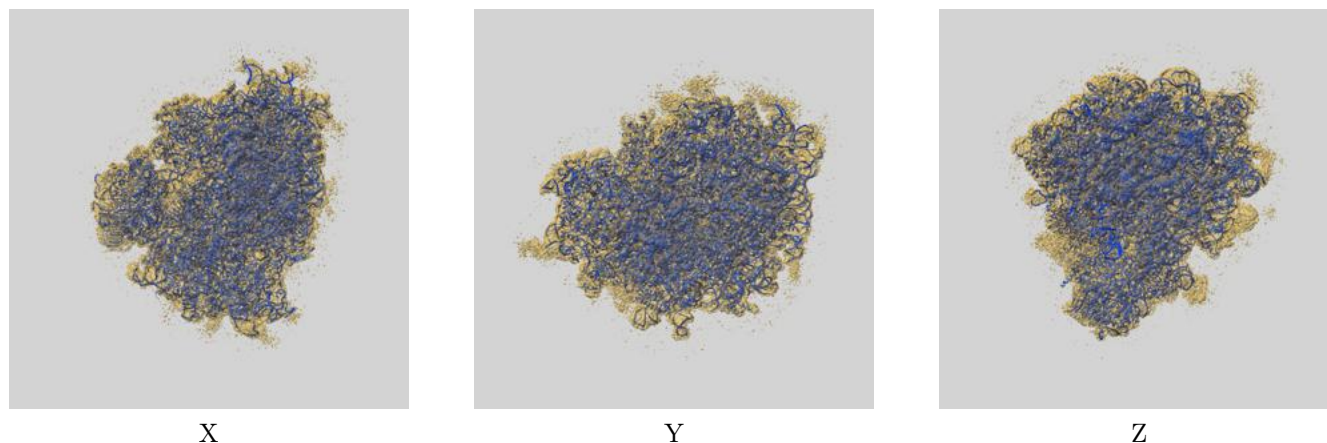
Resolution estimate (Å)	Estimation criterion (FSC cut-off)			
	0.143	0.5	Half-bit	0.333
Reported by author	-	-	-	3.30
Author-provided FSC curve	2.99	3.37	3.02	3.18
Unmasked-calculated*	3.23	4.02	3.30	3.66

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.33 CUT-OFF 3.66 differs from the reported value 3.3 by more than 10 %

9 Map-model fit [i](#)

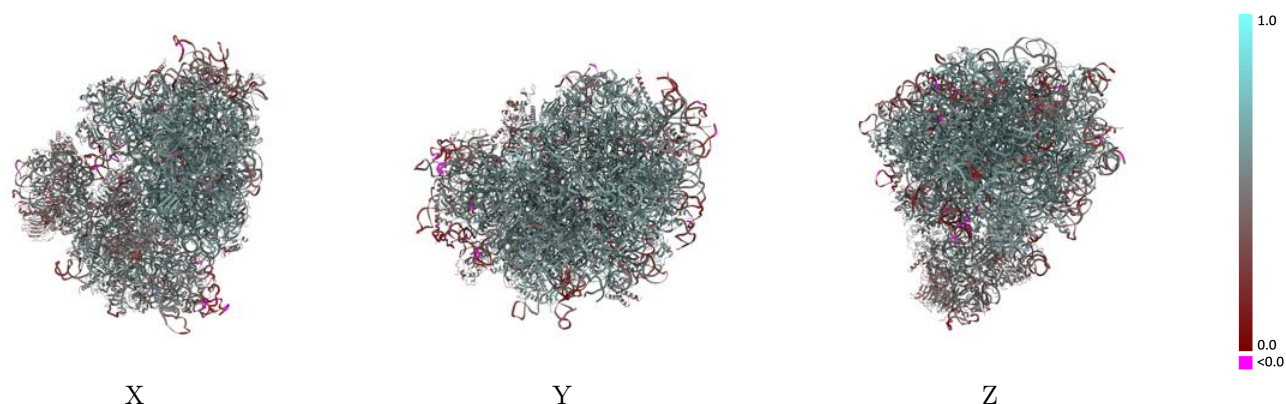
This section contains information regarding the fit between EMDB map EMD-37992 and PDB model 8Y0X. Per-residue inclusion information can be found in [section 3](#) on [page 20](#).

9.1 Map-model overlay [i](#)



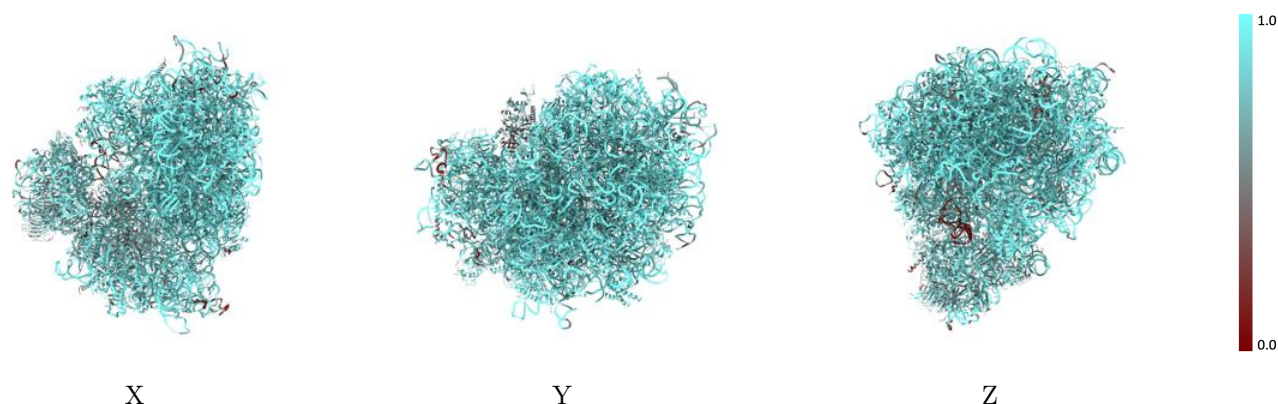
The images above show the 3D surface view of the map at the recommended contour level 0.005 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



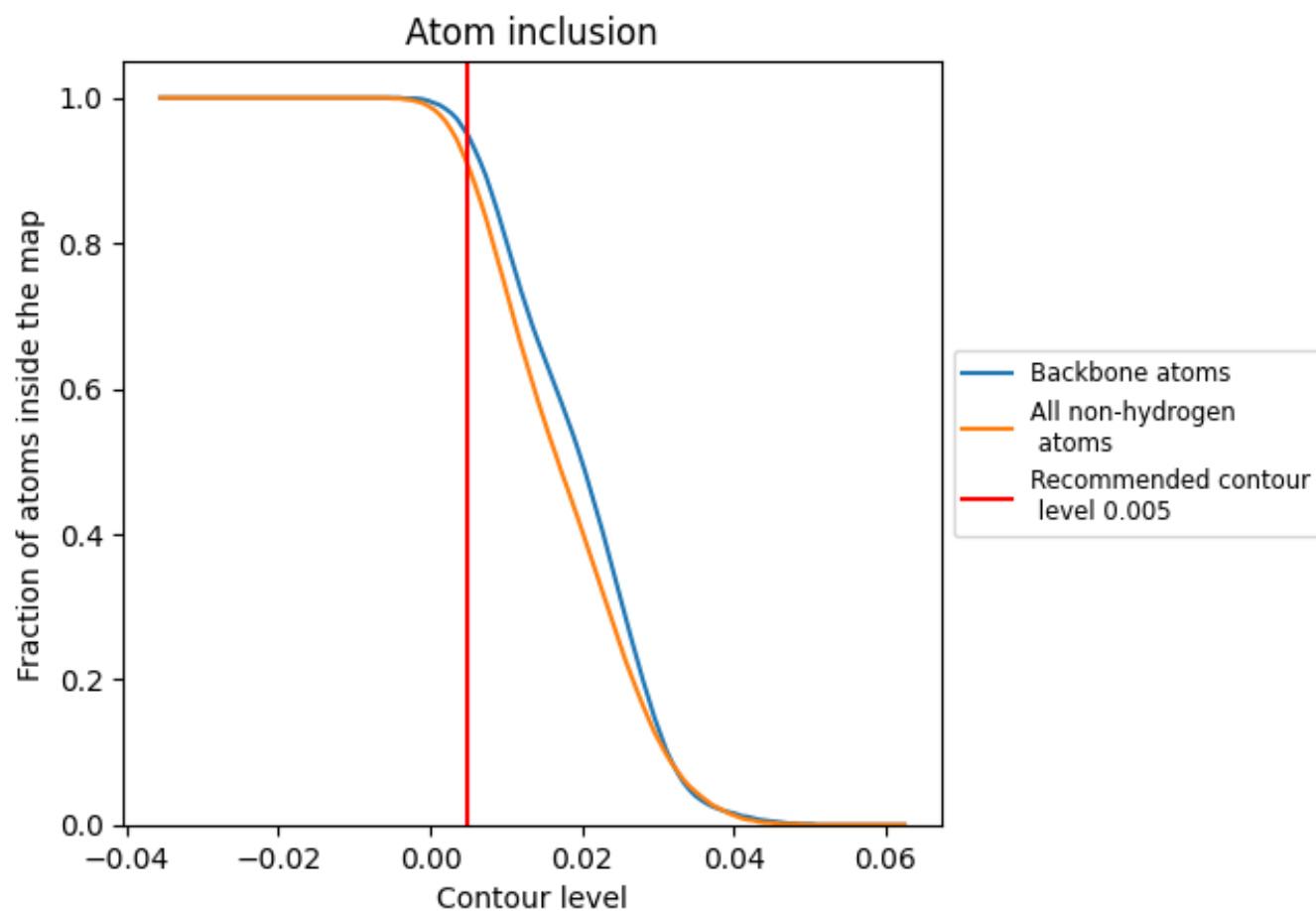
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



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 (0.005).

9.4 Atom inclusion [i](#)



At the recommended contour level, 95% of all backbone atoms, 91% 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 (0.005) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9070	 0.5210
CB	 0.5820	 0.3940
E	 0.3000	 0.1720
L5	 0.9570	 0.5340
L7	 0.9980	 0.5880
L8	 0.9760	 0.5580
LA	 0.9410	 0.5980
LB	 0.9390	 0.5780
LC	 0.9390	 0.5720
LD	 0.9420	 0.5540
LE	 0.9090	 0.5420
LF	 0.9190	 0.5770
LG	 0.9070	 0.5290
LH	 0.9380	 0.5700
LI	 0.9420	 0.5800
LJ	 0.8850	 0.5010
LL	 0.9190	 0.5530
LM	 0.9360	 0.5620
LN	 0.9280	 0.5980
LO	 0.9360	 0.5820
LP	 0.9450	 0.5850
LQ	 0.9430	 0.5990
LR	 0.9180	 0.5540
LS	 0.9520	 0.5890
LT	 0.9260	 0.5690
LU	 0.9220	 0.5000
LV	 0.9430	 0.5930
LW	 0.9210	 0.5850
LX	 0.9170	 0.5710
LY	 0.9220	 0.5710
LZ	 0.9360	 0.5680
La	 0.9470	 0.5950
Lb	 0.8040	 0.5000
Lc	 0.9260	 0.5480
Ld	 0.9330	 0.5640



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Chain	Atom inclusion	Q-score
Le	 0.9340	 0.5910
Lf	 0.9500	 0.5990
Lg	 0.9040	 0.5680
Lh	 0.9130	 0.5600
Li	 0.9340	 0.5550
Lj	 0.9290	 0.5910
Lk	 0.8920	 0.5210
Ll	 0.8890	 0.5680
Lm	 0.8990	 0.5760
Ln	 0.8900	 0.5740
Lo	 0.9530	 0.5840
Lp	 0.9200	 0.5750
Lr	 0.9490	 0.5790
S	 0.2080	 0.3590
S2	 0.9390	 0.5010
SA	 0.8760	 0.5080
SB	 0.8900	 0.5210
SC	 0.9030	 0.5390
SD	 0.7300	 0.4300
SE	 0.8590	 0.5230
SF	 0.7300	 0.4440
SG	 0.8150	 0.4380
SH	 0.8280	 0.4480
SI	 0.8750	 0.5160
SJ	 0.8590	 0.5080
SK	 0.6980	 0.3910
SL	 0.8740	 0.5540
SN	 0.8870	 0.5500
SO	 0.8890	 0.5340
SP	 0.7830	 0.4370
SQ	 0.7190	 0.4540
SR	 0.7690	 0.4440
SS	 0.7440	 0.4230
ST	 0.7300	 0.4460
SU	 0.7340	 0.4080
SV	 0.9050	 0.5300
SW	 0.8980	 0.5610
SX	 0.8900	 0.5470
SY	 0.8280	 0.4650
SZ	 0.6900	 0.3610
Sa	 0.8800	 0.5390
Sb	 0.8550	 0.4670

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Chain	Atom inclusion	Q-score
Sc	 0.6810	 0.4260
Sd	 0.7520	 0.4980
Se	 0.7120	 0.4450
Sg	 0.7010	 0.3820