



Full wwPDB EM Validation Report ⓘ

Mar 29, 2026 – 09:24 PM UTC

PDB ID : 8Y0W / pdb_00008y0w
EMDB ID : EMD-37991
Title : dormant ribosome with eIF5A, eEF2 and SERBP1
Authors : Du, M.; Zeng, F.
Deposited on : 2024-01-23
Resolution : 3.40 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:

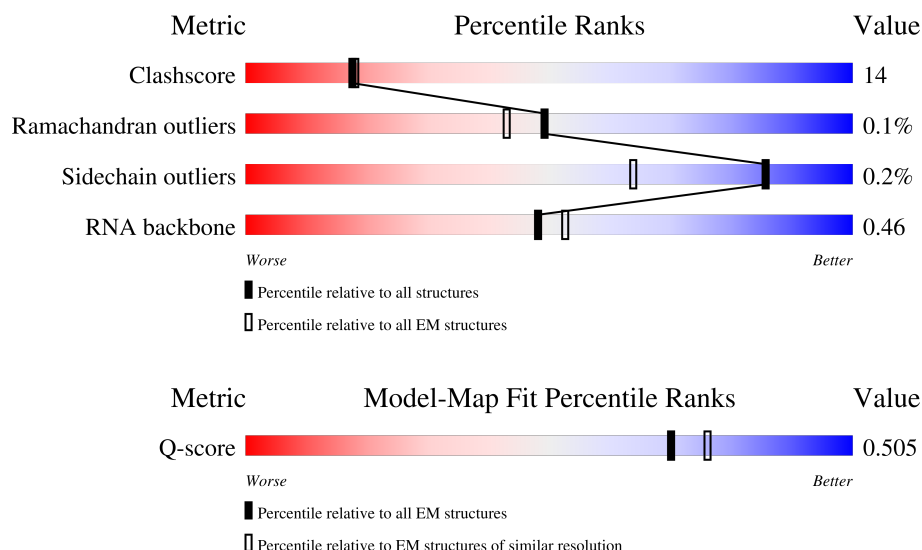
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & 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 3.40 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	14717 (2.90 - 3.90)

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	5	154	
2	CB	858	
3	L5	5070	

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Mol	Chain	Length	Quality of chain
4	L7	121	
5	L8	157	
6	LA	257	
7	LB	403	
8	LC	427	
9	LD	297	
10	LE	288	
11	LF	248	
12	LG	266	
13	LH	192	
14	LI	214	
15	LJ	178	
16	LL	211	
17	LM	215	
18	LN	204	
19	LO	203	
20	LP	184	
21	LQ	188	
22	LR	196	
23	LS	176	
24	LT	160	
25	LU	128	
26	LV	140	
27	LW	157	
28	LX	156	

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Mol	Chain	Length	Quality of chain
29	LY	145	
30	LZ	136	
31	La	148	
32	Lb	159	
33	Lc	115	
34	Ld	125	
35	Le	135	
36	Lf	110	
37	Lg	117	
38	Lh	123	
39	Li	105	
40	Lj	97	
41	Lk	70	
42	Ll	51	
43	Lm	128	
44	Ln	25	
45	Lo	106	
46	Lp	92	
47	Lr	137	
48	LZ	217	
49	S	402	
50	S2	1869	
51	SA	295	
52	SB	264	
53	SC	293	

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Mol	Chain	Length	Quality of chain
54	SD	243	
55	SE	263	
56	SF	204	
57	SG	249	
58	SH	194	
59	SI	208	
60	SJ	194	
61	SK	165	
62	SL	158	
63	SN	151	
64	SO	151	
65	SP	145	
66	SQ	146	
67	SR	135	
68	SS	152	
69	ST	145	
70	SU	119	
71	SV	83	
72	SW	130	
73	SX	143	
74	SY	133	
75	SZ	125	
76	Sa	115	
77	Sb	84	
78	Sc	69	

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Mol	Chain	Length	Quality of chain
79	Sd	56	11% 46% 48% 5%
80	Se	59	15% 81% 17%
81	Sg	317	9% 43% 56%

2 Entry composition

There are 83 unique types of molecules in this entry. The entry contains 220486 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Eukaryotic translation initiation factor 5A-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	5	131	Total	C	N	O	S	0	0
			992	620	168	196	8		

- Molecule 2 is a protein called Elongation factor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	CB	768	Total	C	N	O	S	0	0
			6014	3818	1036	1121	39		

- Molecule 3 is a RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	L5	3666	Total	C	N	O	P	0	0
			78591	34997	14383	25546	3665		

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

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

- Molecule 5 is a RNA chain called 5.8S rRNA.

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

- Molecule 6 is a protein called 60S ribosomal protein L8.

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

- Molecule 7 is a protein called 60S ribosomal protein L3.

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

- Molecule 8 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	LC	366	Total	C	N	O	S	0	0
			2914	1832	581	487	14		

- Molecule 9 is a protein called 60S ribosomal protein L5.

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

- Molecule 10 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LE	232	Total	C	N	O	S	0	0
			1873	1203	353	313	4		

- Molecule 11 is a protein called 60S ribosomal protein L7.

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

- Molecule 12 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LG	230	Total	C	N	O	S	0	0
			1858	1185	357	312	4		

- Molecule 13 is a protein called 60S ribosomal protein L9.

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

- Molecule 14 is a protein called 60S ribosomal protein L10-like.

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

- Molecule 15 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	LJ	174	Total	C	N	O	S	0	0
			1398	880	261	251	6		

- Molecule 16 is a protein called 60S ribosomal protein L13.

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

- Molecule 17 is a protein called 60S ribosomal protein L14.

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

- Molecule 18 is a protein called 60S ribosomal protein L15.

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

- Molecule 19 is a protein called 60S ribosomal protein L13a.

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

- Molecule 20 is a protein called 60S ribosomal protein L17.

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

- Molecule 21 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	LQ	185	Total	C	N	O	S	0	0
			1496	933	310	248	5		

- Molecule 22 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	LR	187	Total	C	N	O	S	0	0
			1566	971	336	250	9		

- Molecule 23 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	LS	173	Total	C	N	O	S	0	0
			1437	914	280	233	10		

- Molecule 24 is a protein called 60S ribosomal protein L21.

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

- Molecule 25 is a protein called 60S ribosomal protein L22.

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

- Molecule 26 is a protein called 60S ribosomal protein L23.

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

- Molecule 27 is a protein called 60S ribosomal protein L24.

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

- Molecule 28 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	LX	115	Total	C	N	O	S	0	0
			939	600	174	164	1		

- Molecule 29 is a protein called 60S ribosomal protein L26.

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

- Molecule 30 is a protein called 60S ribosomal protein L27.

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

- Molecule 31 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	La	145	Total	C	N	O	S	0	0
			1149	728	234	184	3		

- Molecule 32 is a protein called 60S ribosomal protein L29.

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

- Molecule 33 is a protein called 60S ribosomal protein L30.

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

- Molecule 34 is a protein called 60S ribosomal protein L31.

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

- Molecule 35 is a protein called 60S ribosomal protein L32.

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

- Molecule 36 is a protein called 60S ribosomal protein L35a.

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

- Molecule 37 is a protein called 60S ribosomal protein L34.

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

- Molecule 38 is a protein called 60S ribosomal protein L35.

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

- Molecule 39 is a protein called 60S ribosomal protein L36.

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

- Molecule 40 is a protein called 60S ribosomal protein L37.

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

- Molecule 41 is a protein called 60S ribosomal protein L38.

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

- Molecule 42 is a protein called 60S ribosomal protein L39.

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

- Molecule 43 is a protein called Ubiquitin-60S ribosomal protein L40.

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

- Molecule 44 is a protein called 60S ribosomal protein L41.

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

- Molecule 45 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Lo	102	Total	C	N	O	S	0	0
			834	522	171	135	6		

- Molecule 46 is a protein called 60S ribosomal protein L37a.

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

- Molecule 47 is a protein called 60S ribosomal protein L28.

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

- Molecule 48 is a protein called 60S ribosomal protein L10a.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	Lz	205	Total	C	N	O	S	0	0
			1643	1054	291	290	8		

- Molecule 49 is a protein called Isoform 2 of SERPINE1 mRNA-binding protein 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
49	S	55	Total	C	N	O	0	0
			440	263	87	90		

- Molecule 50 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	S2	1735	Total	C	N	O	P	0	0
			36789	16410	6578	12067	1734		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SA	217	Total	C	N	O	S	0	0
			1718	1092	301	317	8		

- Molecule 52 is a protein called 40S ribosomal protein S3a.

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

- Molecule 53 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SC	218	Total	C	N	O	S	0	0
			1690	1094	289	297	10		

- Molecule 54 is a protein called 40S ribosomal protein S3.

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

- Molecule 55 is a protein called 40S ribosomal protein S4, X isoform.

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

- Molecule 56 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SF	189	Total	C	N	O	S	0	0
			1495	934	284	270	7		

- Molecule 57 is a protein called 40S ribosomal protein S6.

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

- Molecule 58 is a protein called 40S ribosomal protein S7.

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

- Molecule 59 is a protein called 40S ribosomal protein S8.

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

- Molecule 60 is a protein called 40S ribosomal protein S9.

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

- Molecule 61 is a protein called 40S ribosomal protein S10.

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

- Molecule 62 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SL	145	Total	C	N	O	S	0	0
			1188	757	224	201	6		

- Molecule 63 is a protein called 40S ribosomal protein S13.

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

- Molecule 64 is a protein called 40S ribosomal protein S14.

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

- Molecule 65 is a protein called 40S ribosomal protein S15.

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

- Molecule 66 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	SQ	144	Total	C	N	O	S	0	0
			1142	726	216	197	3		

- Molecule 67 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SR	132	Total	C	N	O	S	0	0
			1067	671	196	195	5		

- Molecule 68 is a protein called 40S ribosomal protein S18.

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

- Molecule 69 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	ST	140	Total	C	N	O	S	0	0
			1094	685	211	195	3		

- Molecule 70 is a protein called 40S ribosomal protein S20.

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

- Molecule 71 is a protein called 40S ribosomal protein S21.

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

- Molecule 72 is a protein called 40S ribosomal protein S15a.

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

- Molecule 73 is a protein called 40S ribosomal protein S23.

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

- Molecule 74 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	SY	131	Total	C	N	O	S	0	0
			1059	667	209	178	5		

- Molecule 75 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	SZ	69	Total	C	N	O	S	0	0
			546	352	99	94	1		

- Molecule 76 is a protein called 40S ribosomal protein S26.

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

- Molecule 77 is a protein called 40S ribosomal protein S27.

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

- Molecule 78 is a protein called 40S ribosomal protein S28.

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

- Molecule 79 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Sd	53	Total	C	N	O	S	0	0
			445	278	90	72	5		

- Molecule 80 is a protein called 40S ribosomal protein S30.

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

- Molecule 81 is a protein called Receptor of activated protein C kinase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	Sg	313	Total	C	N	O	S	0	0
			2430	1532	421	465	12		

- Molecule 82 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

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

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Mol	Chain	Residues	Atoms		AltConf
82	LP	1	Total 1	Mg 1	0
82	LV	1	Total 1	Mg 1	0
82	Le	1	Total 1	Mg 1	0
82	Lg	1	Total 1	Mg 1	0

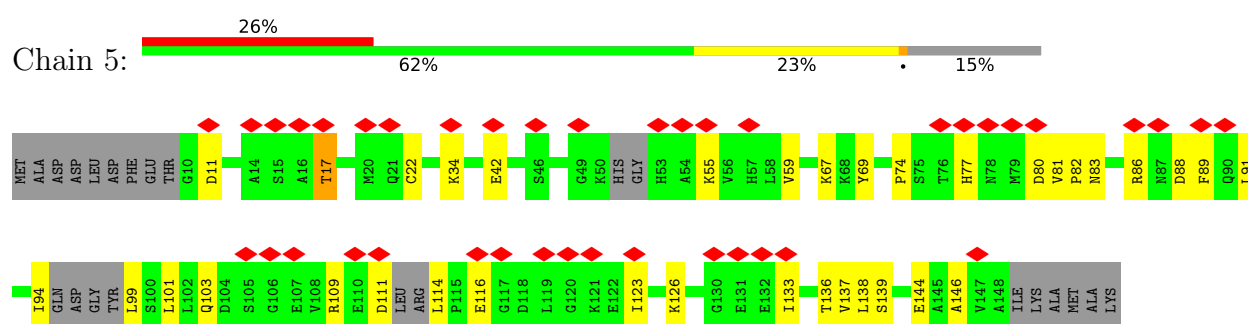
- Molecule 83 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
83	Lg	1	Total 1	Zn 1	0
83	Lj	1	Total 1	Zn 1	0
83	Lm	1	Total 1	Zn 1	0
83	Lo	1	Total 1	Zn 1	0
83	Lp	1	Total 1	Zn 1	0

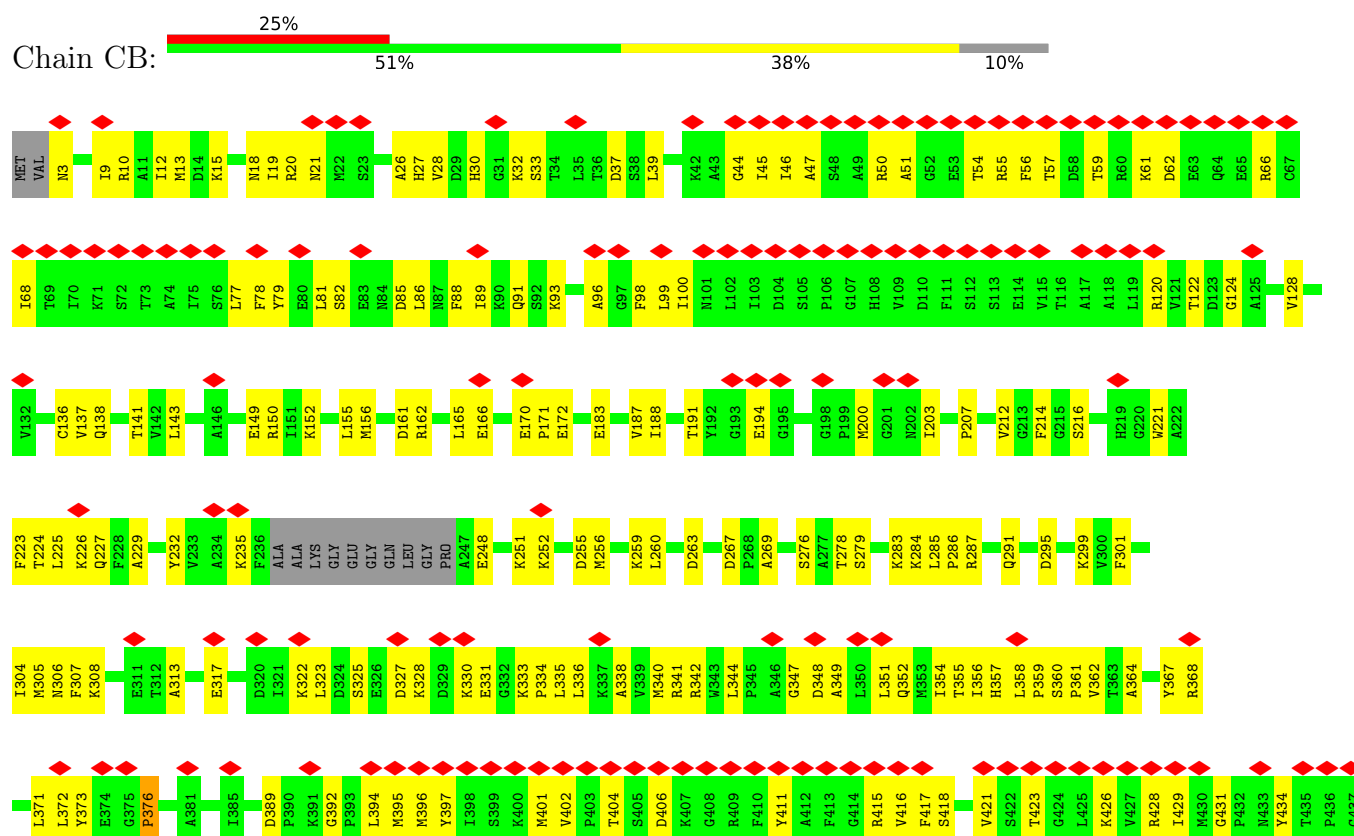
3 Residue-property plots

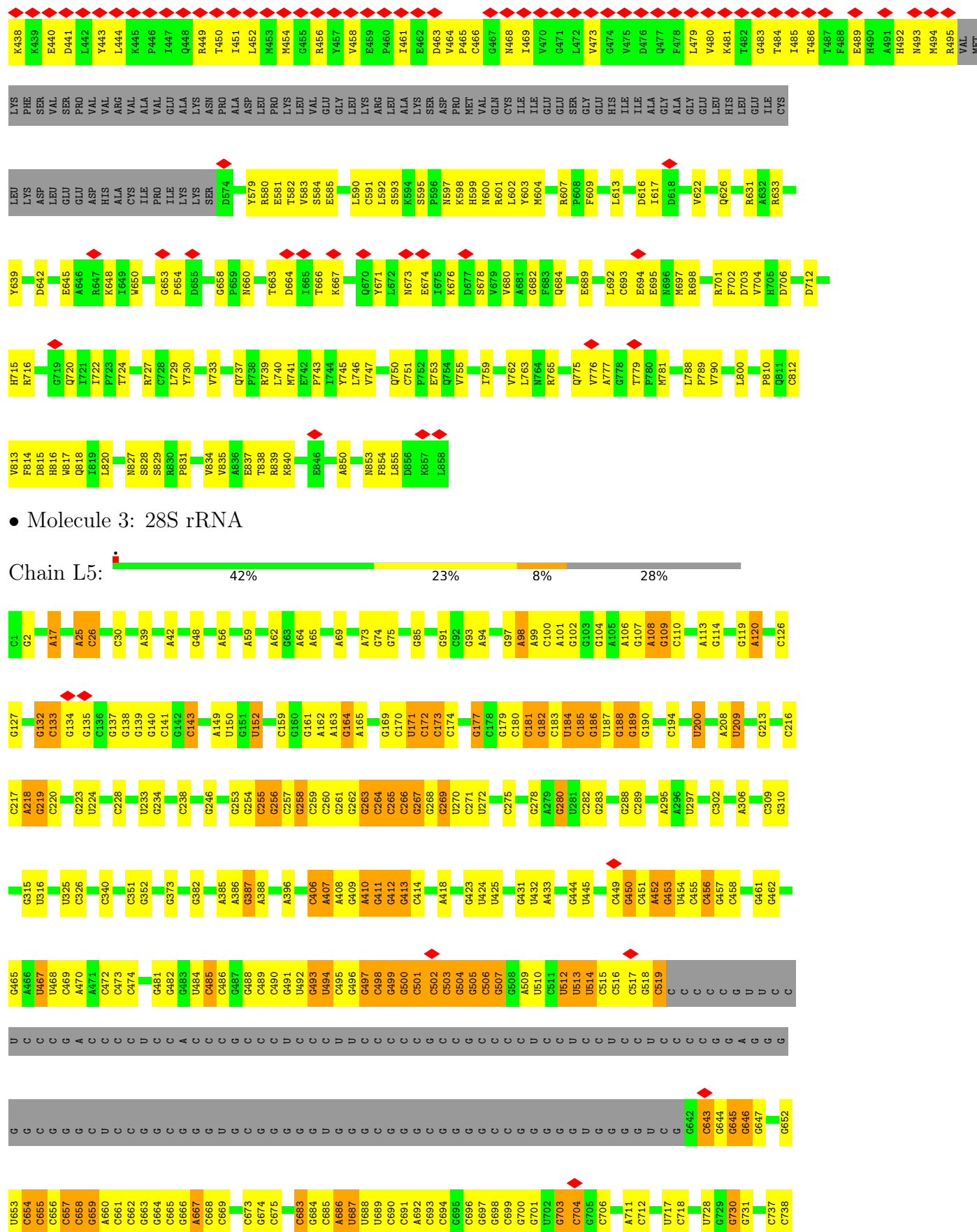
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

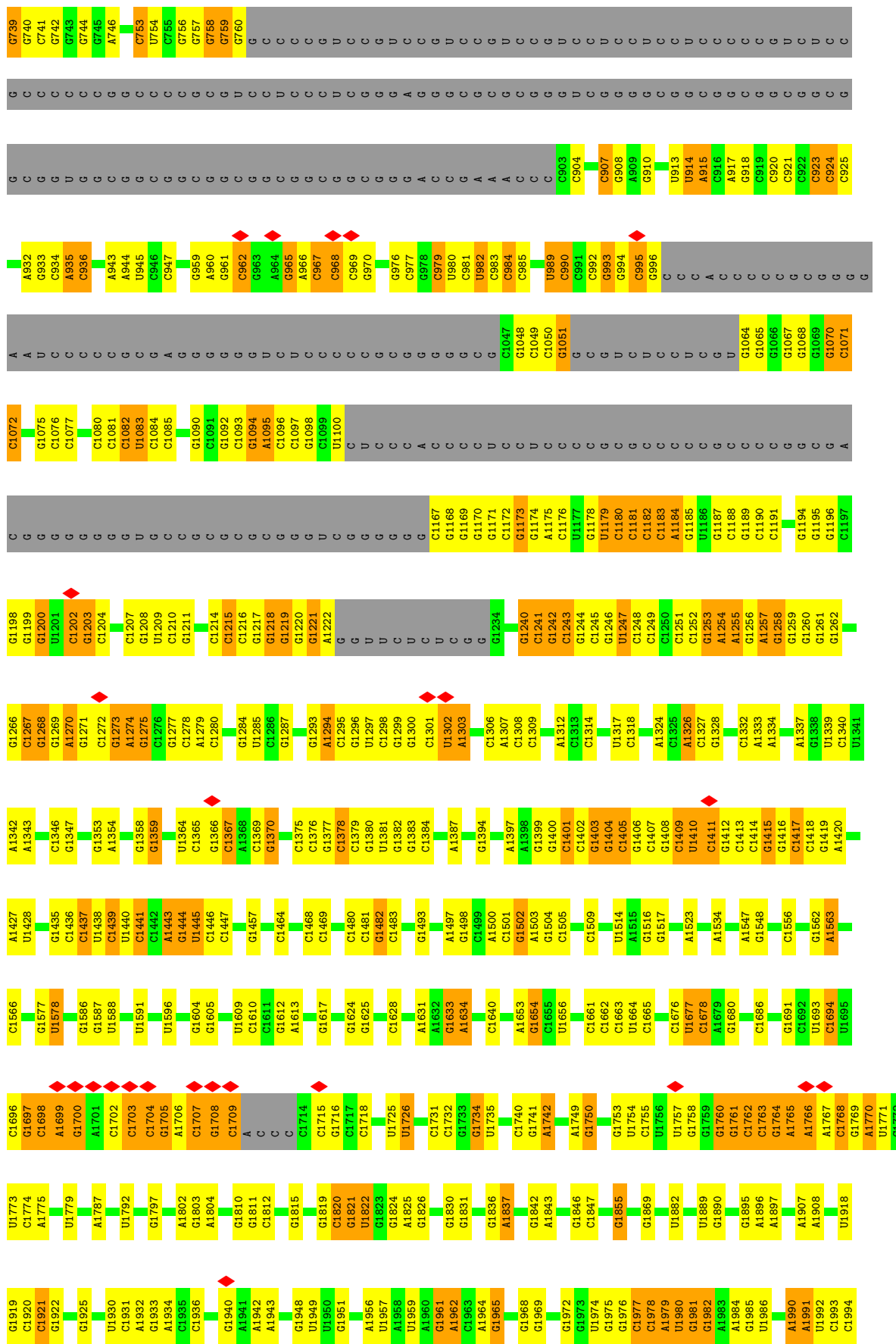
- Molecule 1: Eukaryotic translation initiation factor 5A-1



- Molecule 2: Elongation factor 2

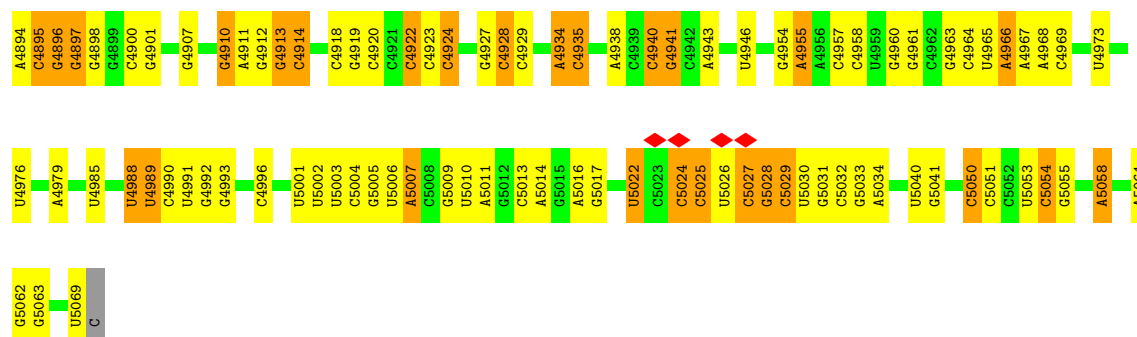




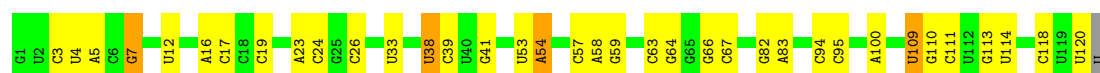




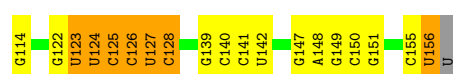




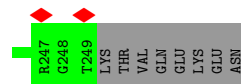
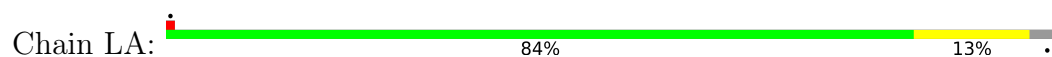
• Molecule 4: 5S rRNA



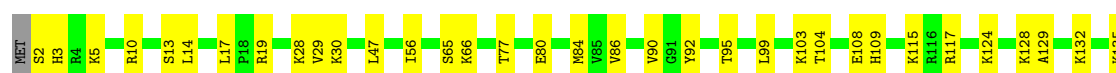
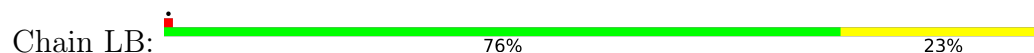
• Molecule 5: 5.8S rRNA



• Molecule 6: 60S ribosomal protein L8



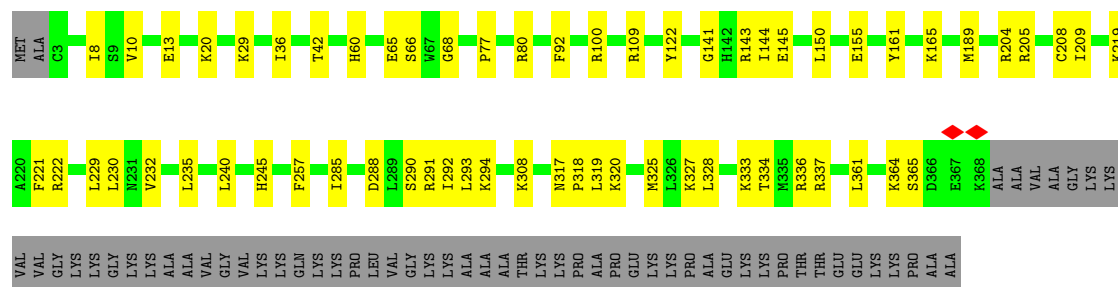
• Molecule 7: 60S ribosomal protein L3





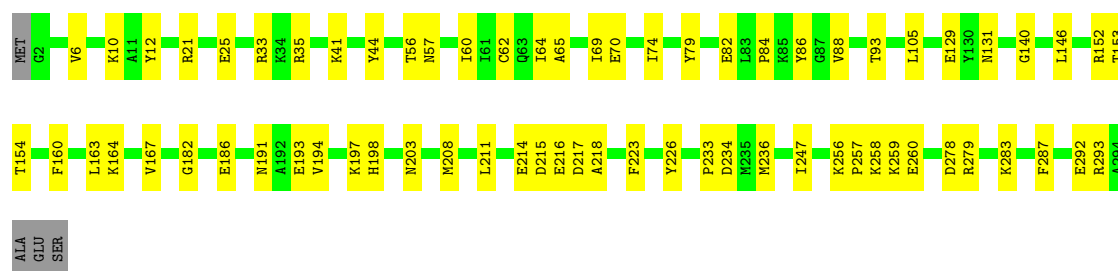
• Molecule 8: 60S ribosomal protein L4

Chain LC: 71% 15% 14%



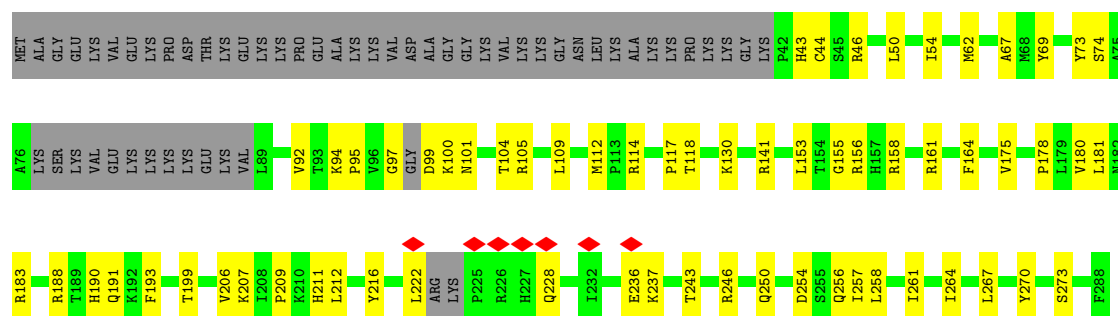
• Molecule 9: 60S ribosomal protein L5

Chain LD: 76% 23%



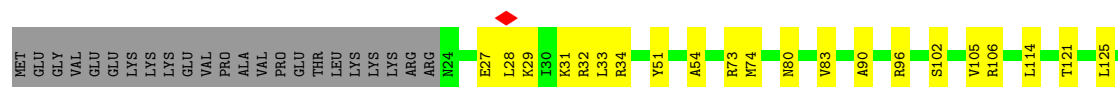
• Molecule 10: 60S ribosomal protein L6

Chain LE: 58% 22% 19%



• Molecule 11: 60S ribosomal protein L7

Chain LF: 71% 20% 9%

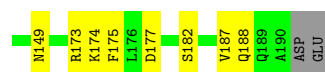
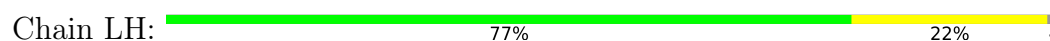




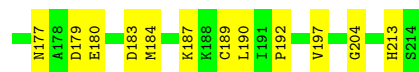
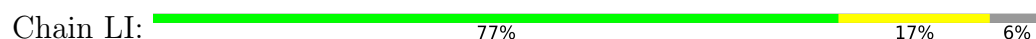
- Molecule 12: 60S ribosomal protein L7a



- Molecule 13: 60S ribosomal protein L9



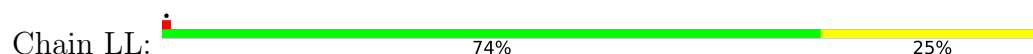
- Molecule 14: 60S ribosomal protein L10-like

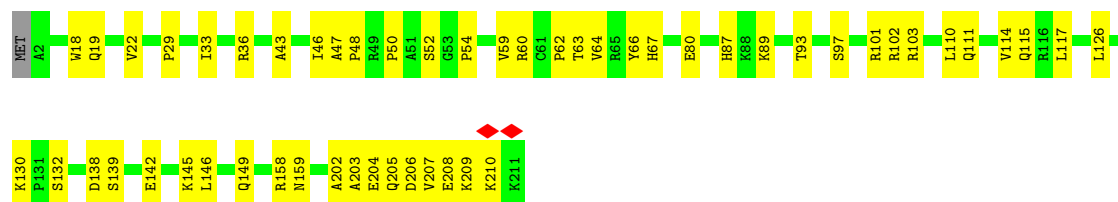


- Molecule 15: 60S ribosomal protein L11

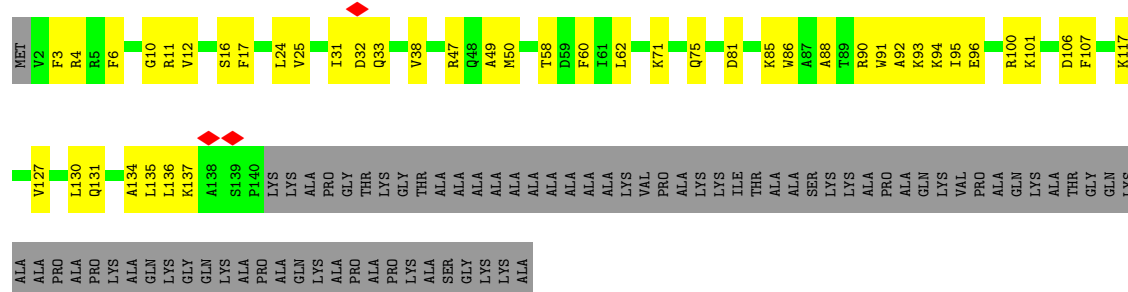


- Molecule 16: 60S ribosomal protein L13

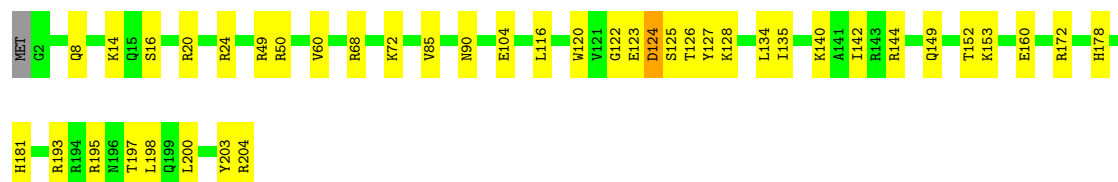
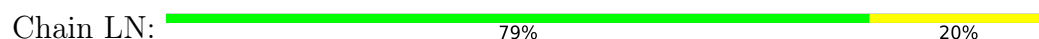




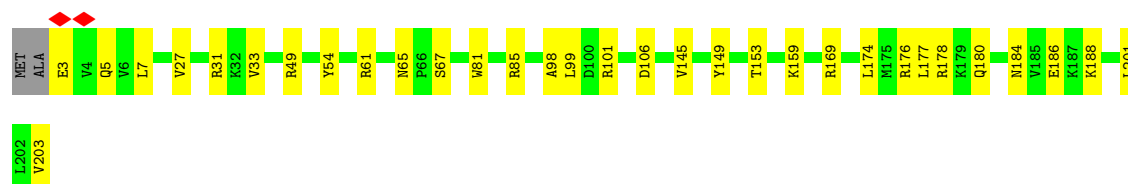
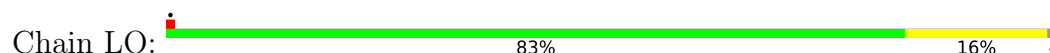
- Molecule 17: 60S ribosomal protein L14



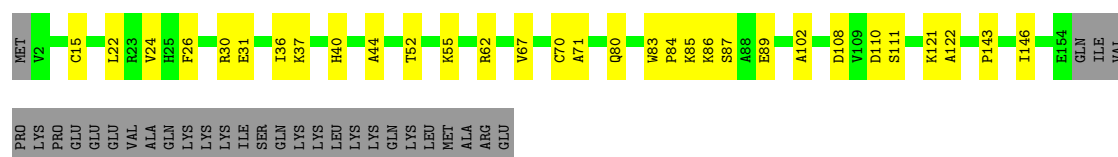
- Molecule 18: 60S ribosomal protein L15



- Molecule 19: 60S ribosomal protein L13a



- Molecule 20: 60S ribosomal protein L17



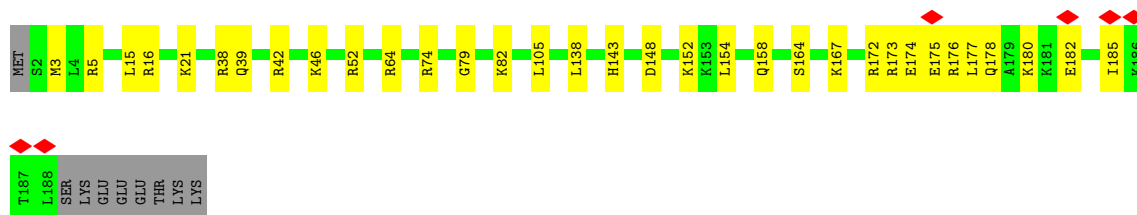
- Molecule 21: 60S ribosomal protein L18

Chain LQ:  78% 20% ..



- Molecule 22: 60S ribosomal protein L19

Chain LR:  79% 17% 5%



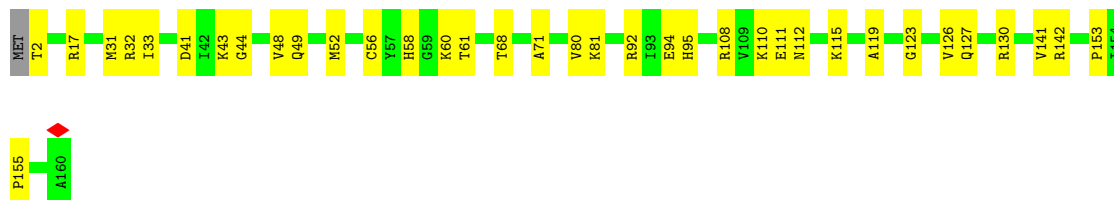
- Molecule 23: 60S ribosomal protein L18a

Chain LS:  83% 15%



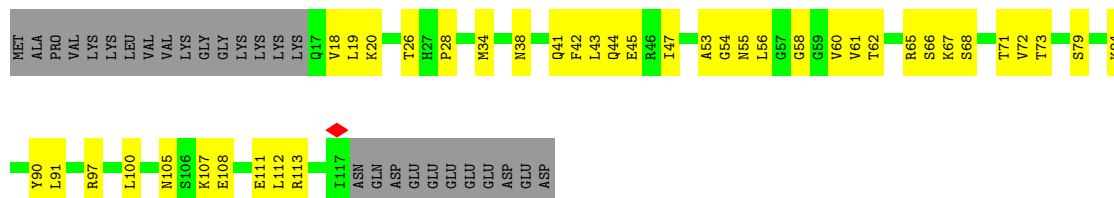
- Molecule 24: 60S ribosomal protein L21

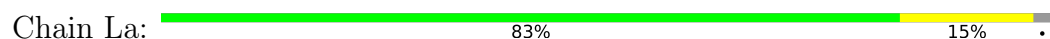
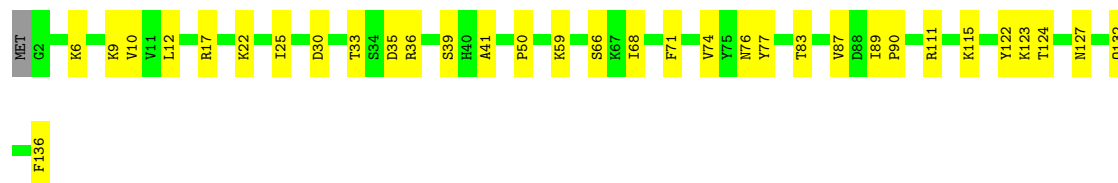
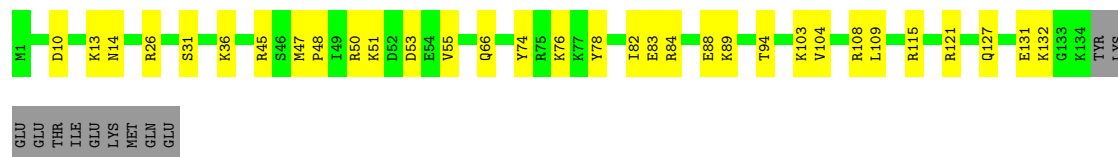
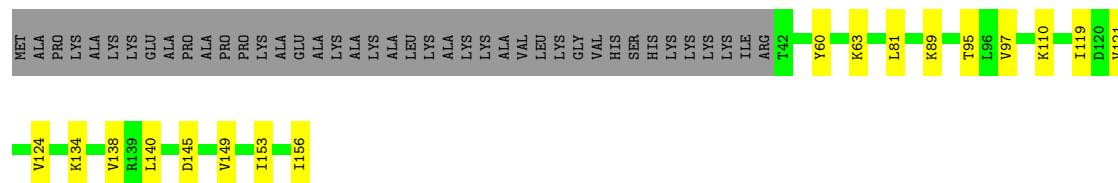
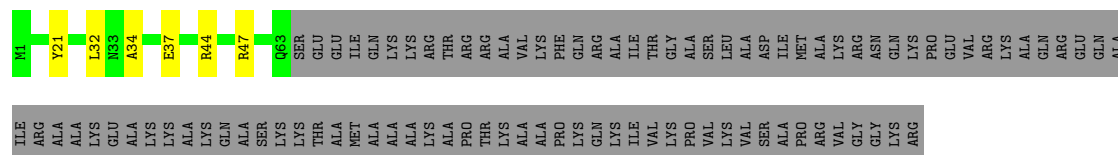
Chain LT:  77% 22%



- Molecule 25: 60S ribosomal protein L22

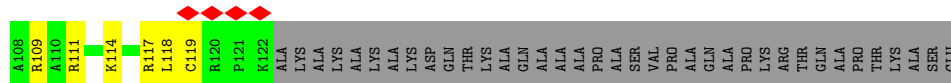
Chain LU:  48% 31% 21%







- Molecule 32: 60S ribosomal protein L29



- Molecule 33: 60S ribosomal protein L30



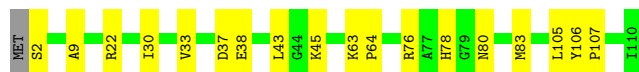
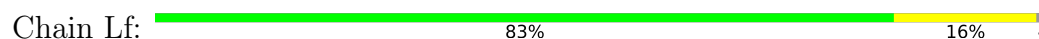
- Molecule 34: 60S ribosomal protein L31



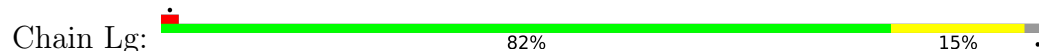
- Molecule 35: 60S ribosomal protein L32



- Molecule 36: 60S ribosomal protein L35a

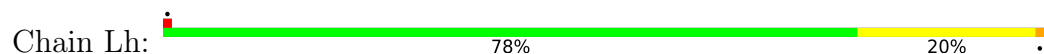


- Molecule 37: 60S ribosomal protein L34





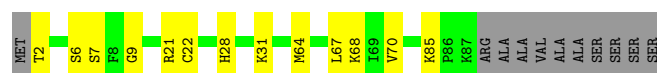
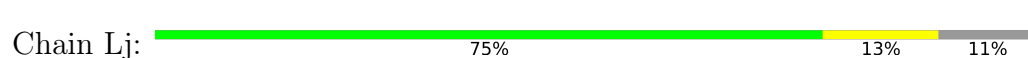
- Molecule 38: 60S ribosomal protein L35



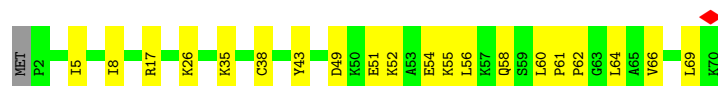
- Molecule 39: 60S ribosomal protein L36



- Molecule 40: 60S ribosomal protein L37



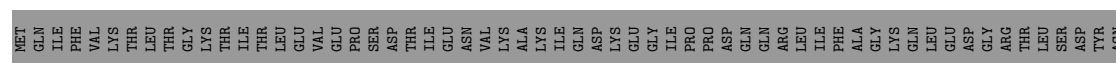
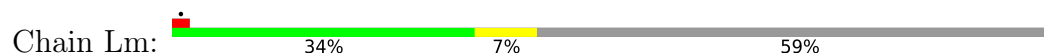
- Molecule 41: 60S ribosomal protein L38



- Molecule 42: 60S ribosomal protein L39



- Molecule 43: Ubiquitin-60S ribosomal protein L40



- Molecule 44: 60S ribosomal protein L41

Chain Ln:  88% 8%



- Molecule 45: 60S ribosomal protein L36a

Chain Lo:  75% 21%



- Molecule 46: 60S ribosomal protein L37a

Chain Lp:  82% 17%



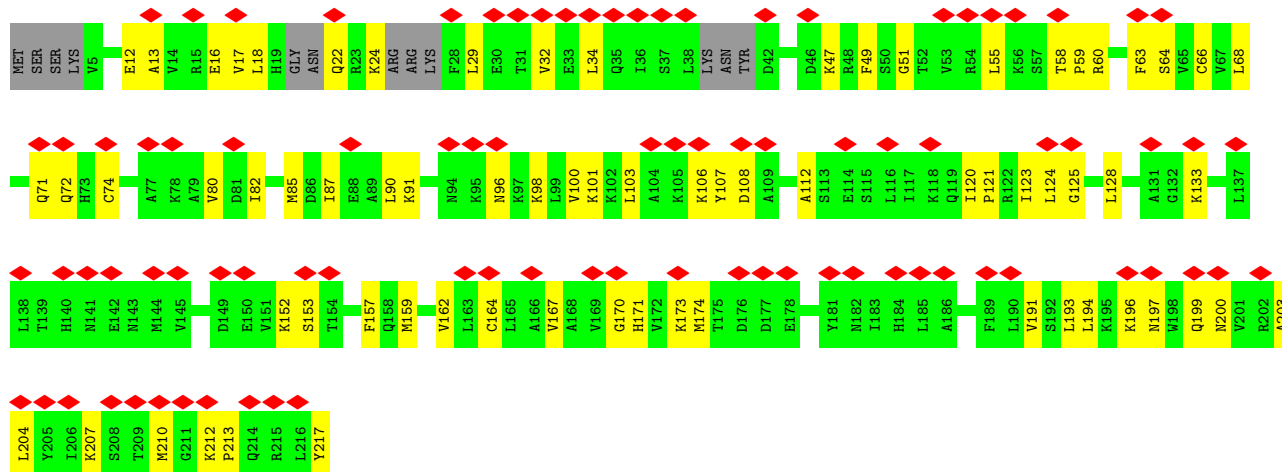
- Molecule 47: 60S ribosomal protein L28

Chain Lr:  76% 15% 9%

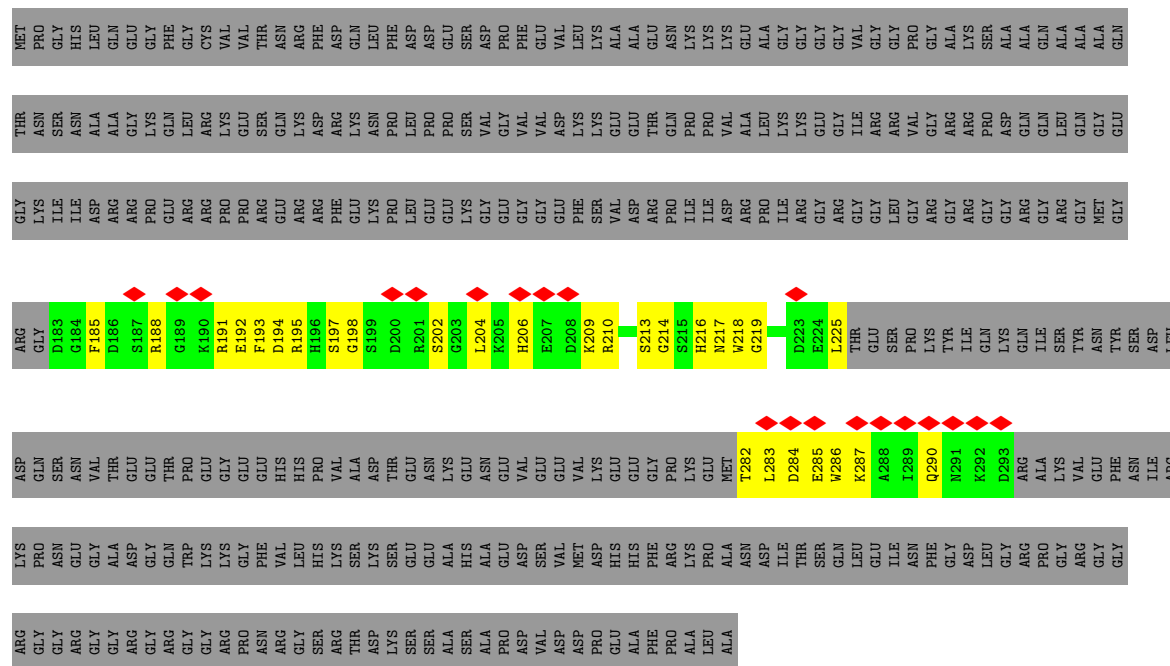


- Molecule 48: 60S ribosomal protein L10a

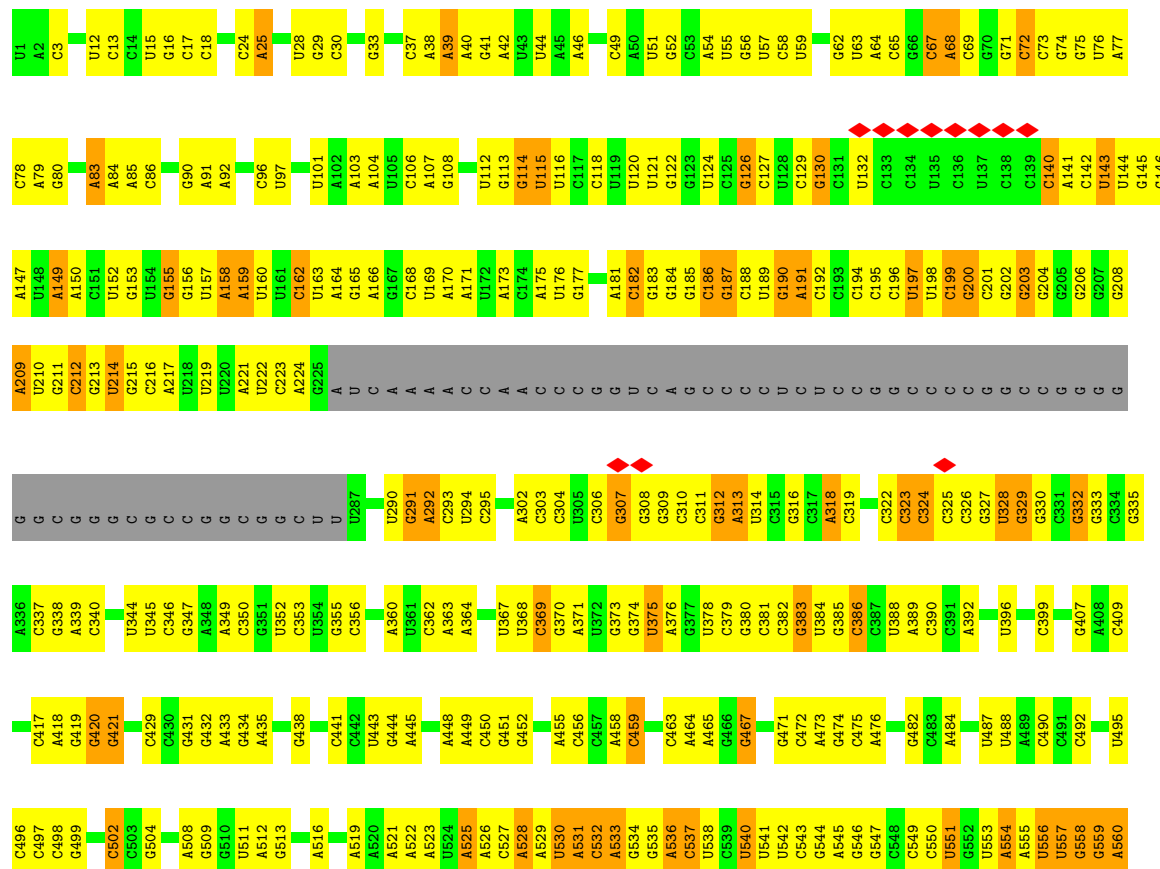
Chain Lz:  41% 62% 33% 6%



- Molecule 49: Isoform 2 of SERPINE1 mRNA-binding protein 1

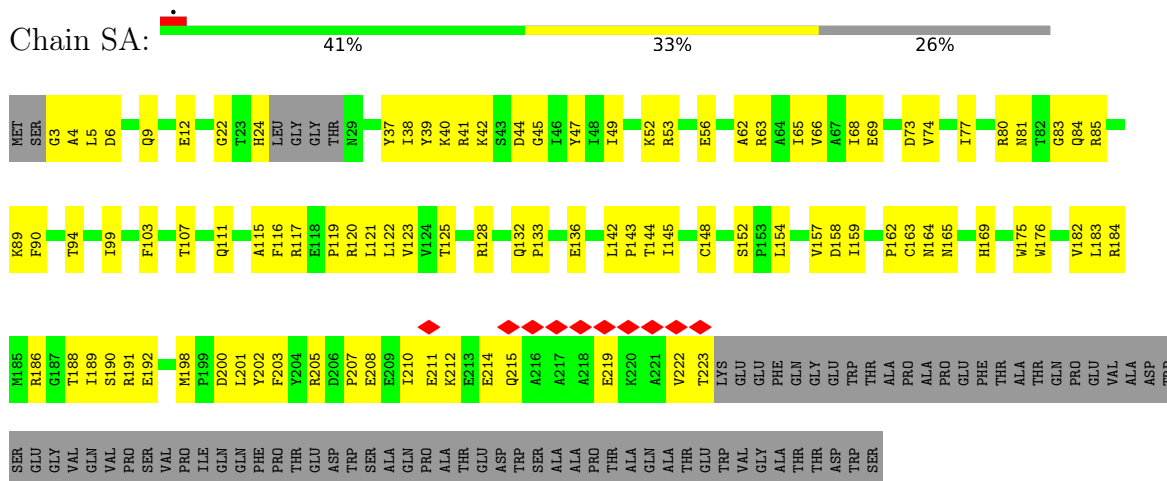


Chain S2:

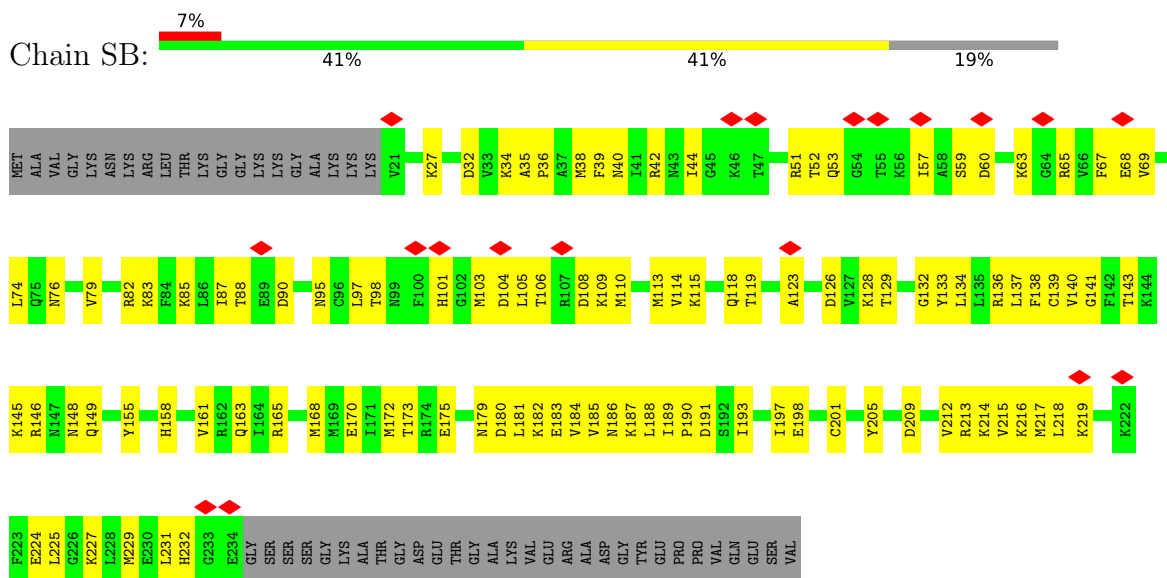




- Molecule 51: 40S ribosomal protein SA



- Molecule 52: 40S ribosomal protein S3a

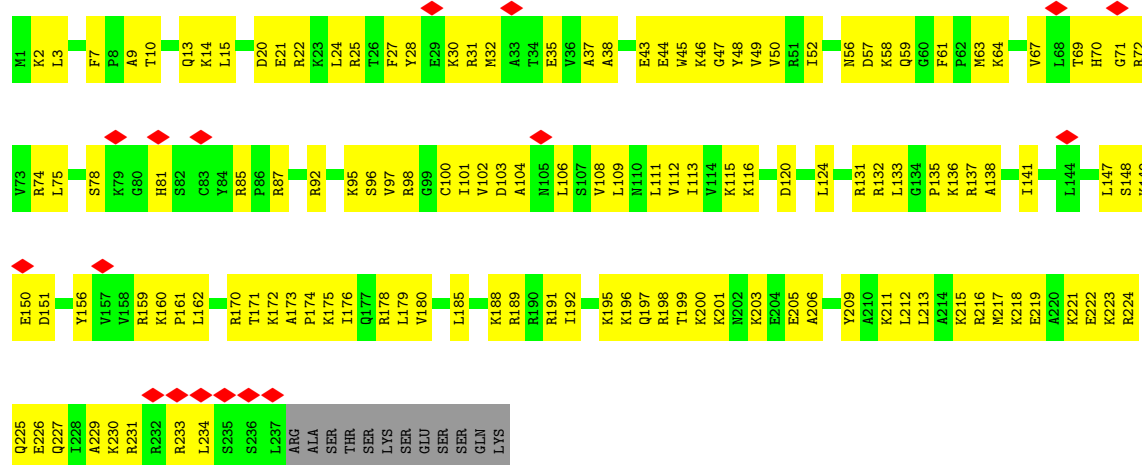


- Molecule 53: 40S ribosomal protein S2

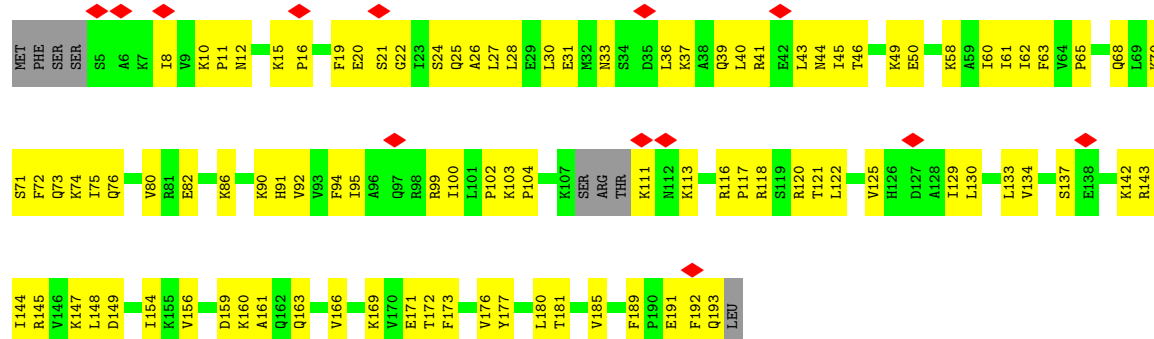




• Molecule 57: 40S ribosomal protein S6

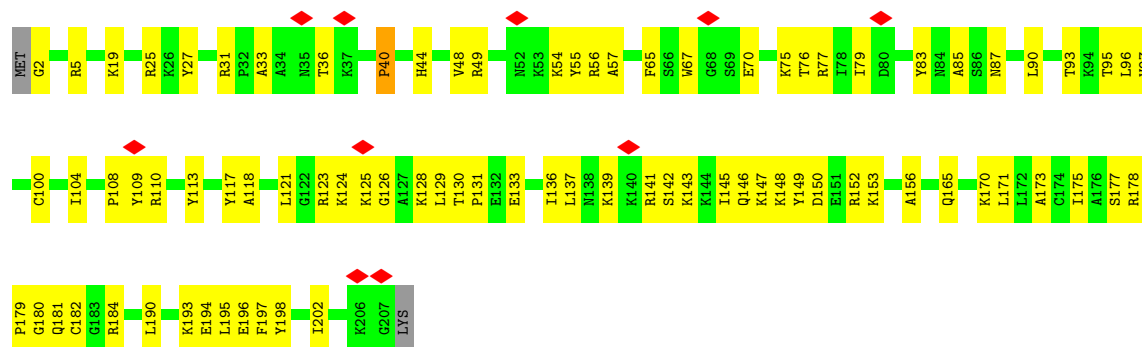


• Molecule 58: 40S ribosomal protein S7



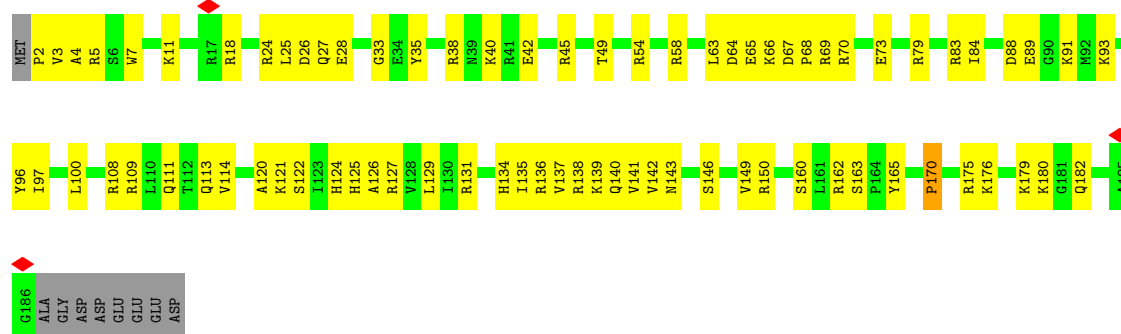
• Molecule 59: 40S ribosomal protein S8





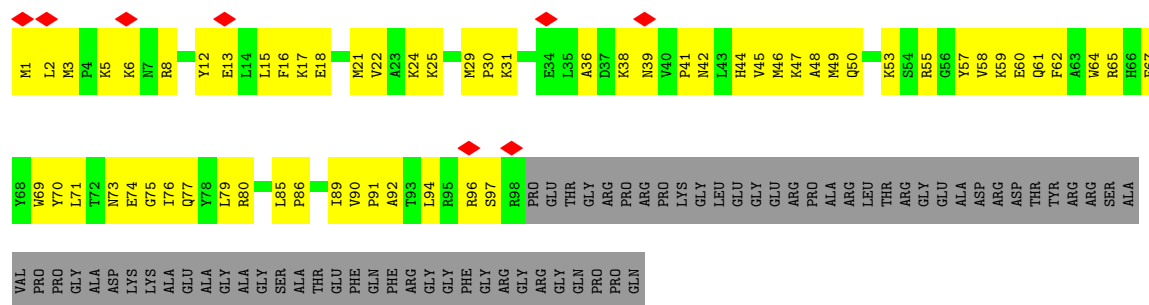
• Molecule 60: 40S ribosomal protein S9

Chain SJ: 56% 39% 5%



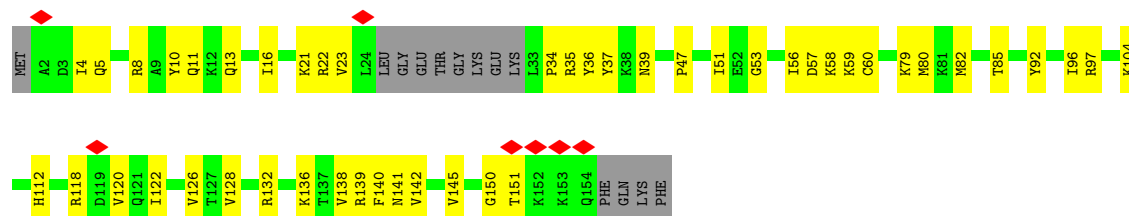
• Molecule 61: 40S ribosomal protein S10

Chain SK: 5% 22% 37% 41%



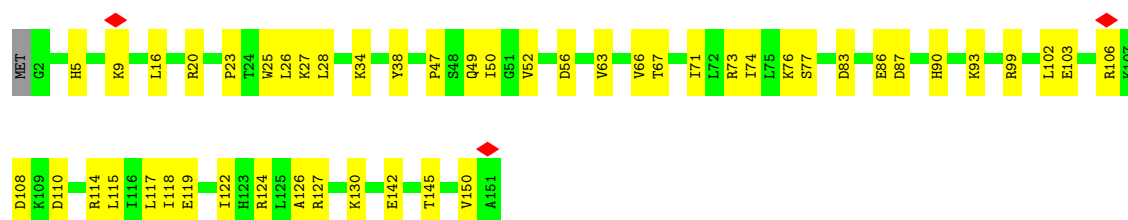
• Molecule 62: 40S ribosomal protein S11

Chain SL: 62% 30% 8%



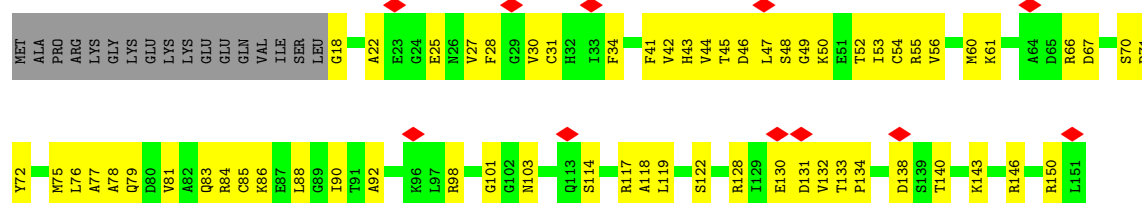
- Molecule 63: 40S ribosomal protein S13

Chain SN:  68% 32%



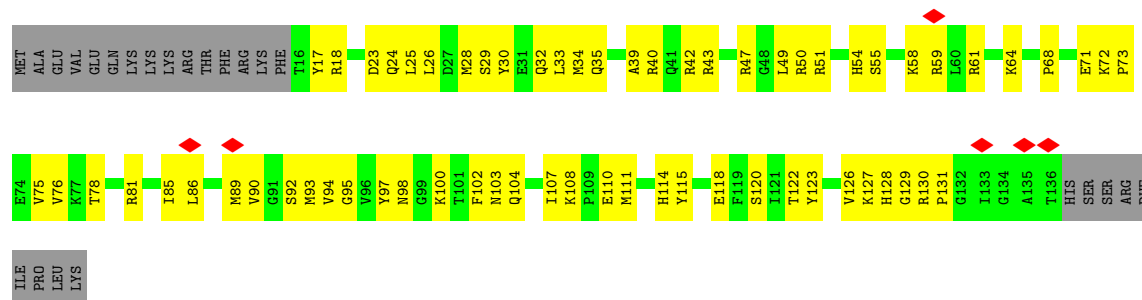
- Molecule 64: 40S ribosomal protein S14

Chain SO:  7% 48% 41% 11%



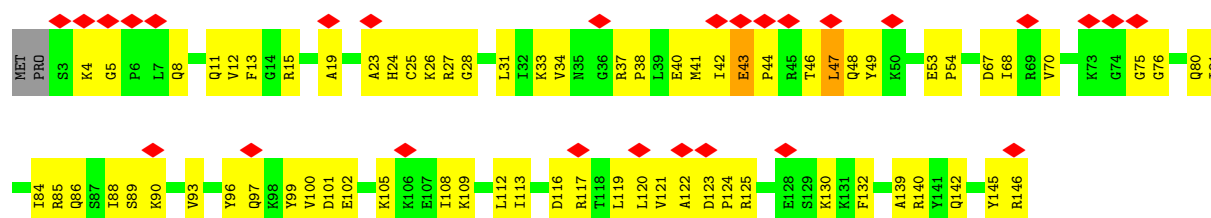
- Molecule 65: 40S ribosomal protein S15

Chain SP:  39% 45% 17%



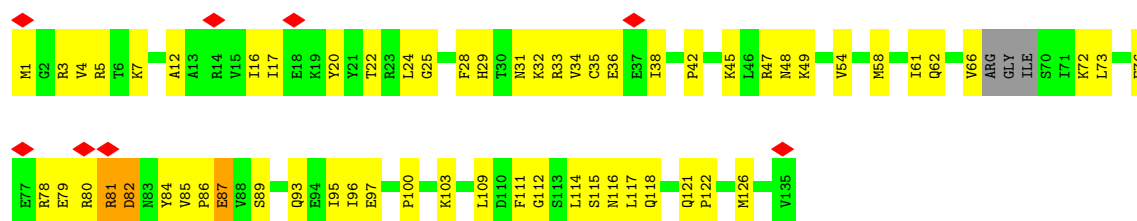
- Molecule 66: 40S ribosomal protein S16

Chain SQ:  18% 50% 47%

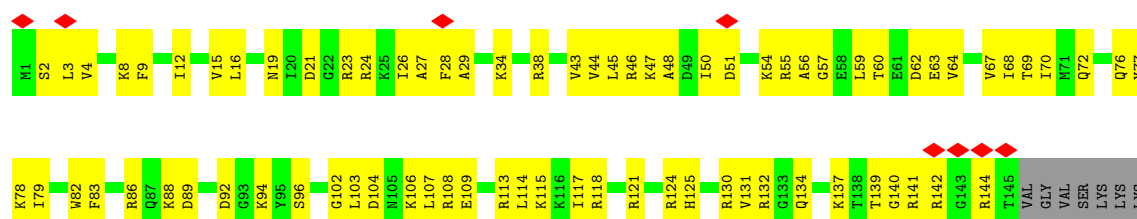


- Molecule 67: 40S ribosomal protein S17

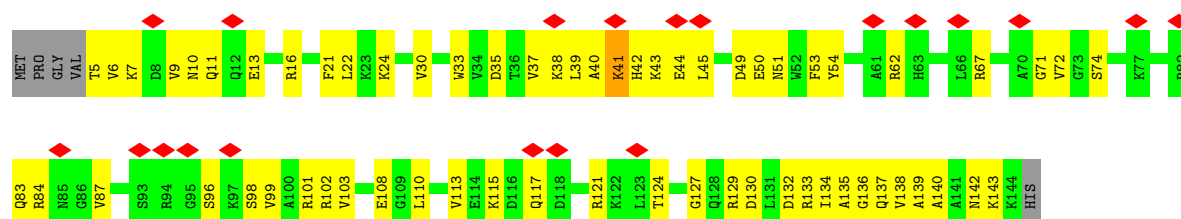
Chain SR:  6% 53% 43%



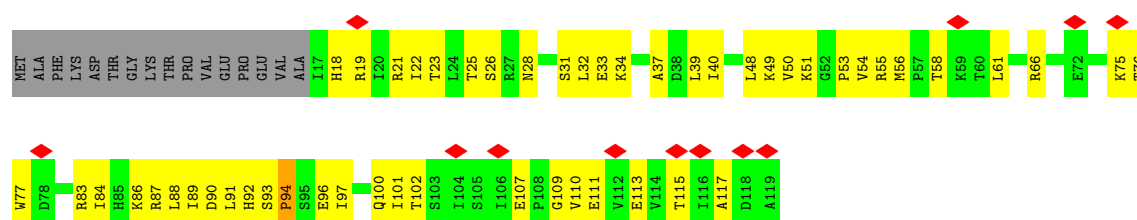
- Molecule 68: 40S ribosomal protein S18



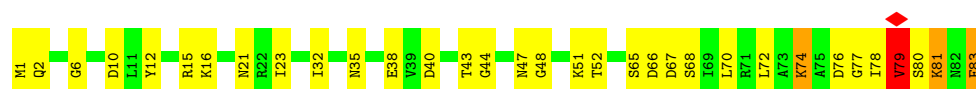
- Molecule 69: 40S ribosomal protein S19



- Molecule 70: 40S ribosomal protein S20

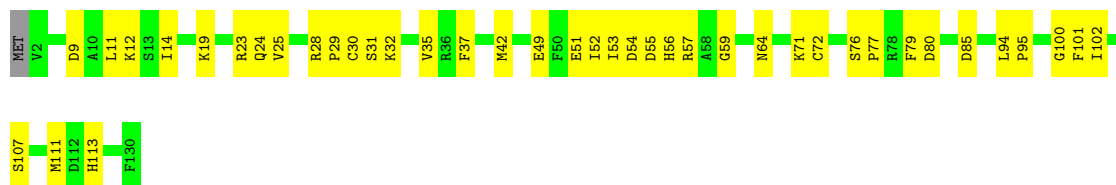


- Molecule 71: 40S ribosomal protein S21



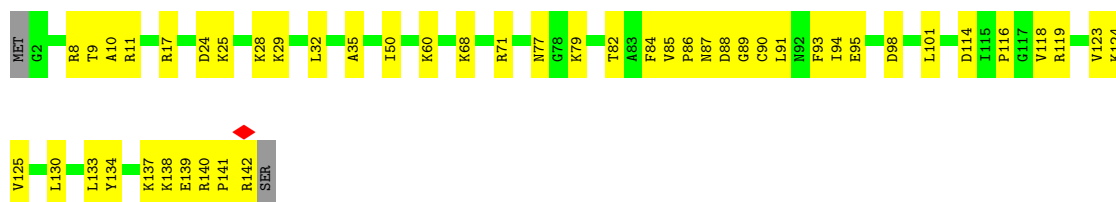
- Molecule 72: 40S ribosomal protein S15a

Chain SW:  68% 32%



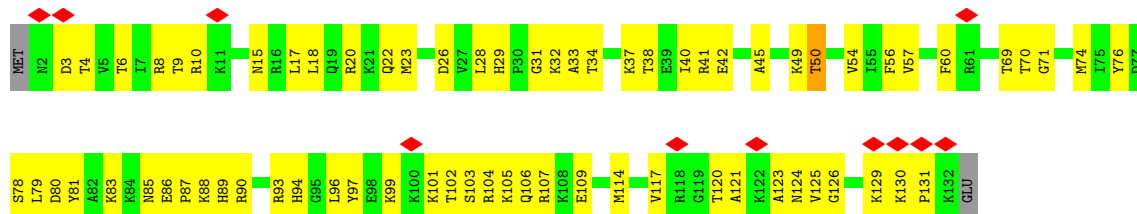
- Molecule 73: 40S ribosomal protein S23

Chain SX:  66% 33%



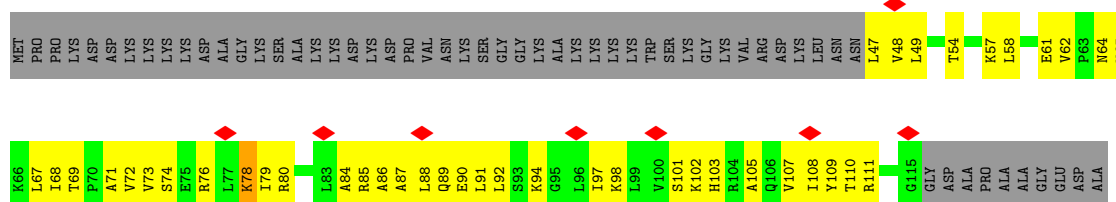
- Molecule 74: 40S ribosomal protein S24

Chain SY:  8% 45% 53%



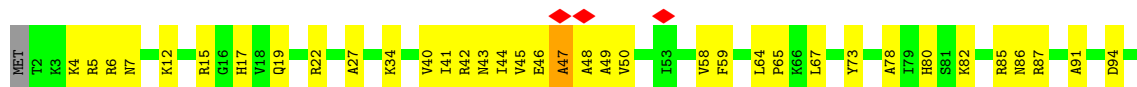
- Molecule 75: 40S ribosomal protein S25

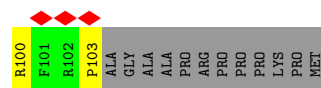
Chain SZ:  6% 22% 33% 45%



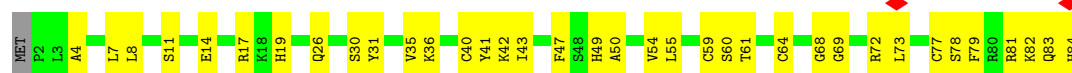
- Molecule 76: 40S ribosomal protein S26

Chain Sa:  5% 56% 32% 11%

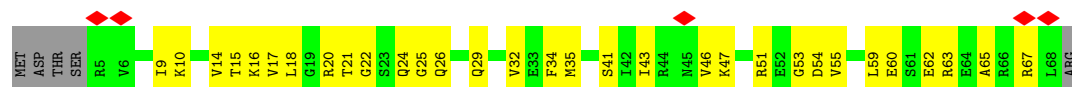




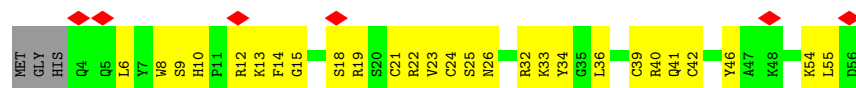
- Molecule 77: 40S ribosomal protein S27



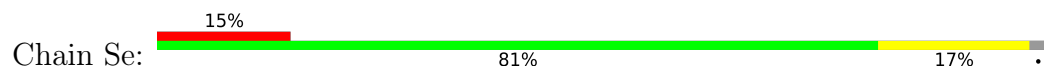
- Molecule 78: 40S ribosomal protein S28



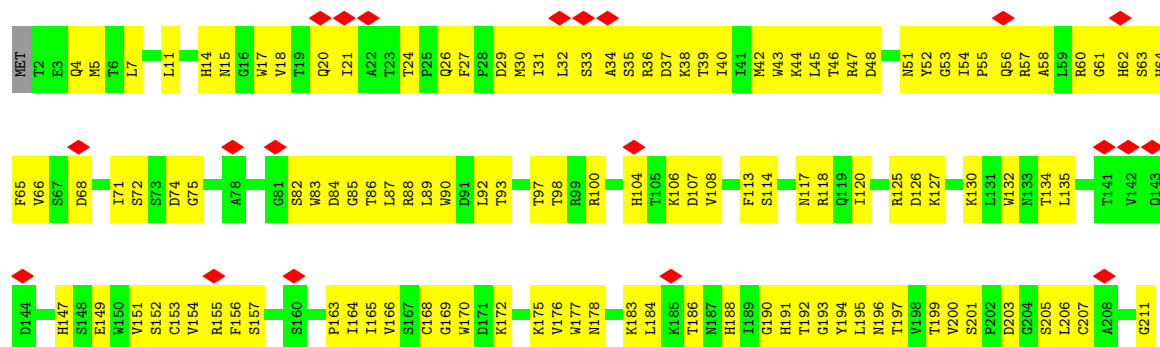
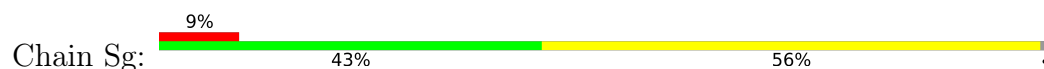
- Molecule 79: 40S ribosomal protein S29

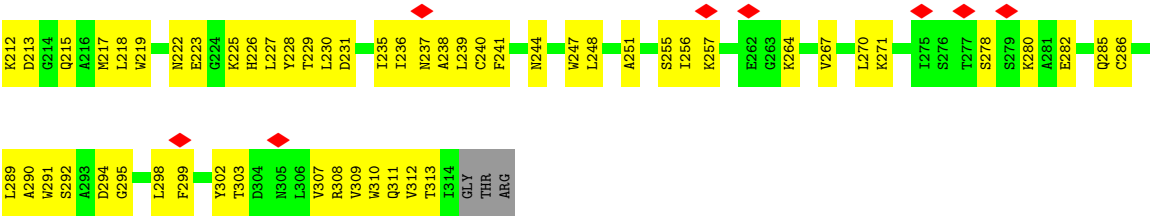


- Molecule 80: 40S ribosomal protein S30



- Molecule 81: Receptor of activated protein C kinase 1





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	74020	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	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	0.064	Depositor
Minimum map value	-0.034	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.005	Depositor
Map size ($\text{\AA}$)	483.84003, 483.84003, 483.84003	wwPDB
Map dimensions	448, 448, 448	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	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	5	0.23	0/1002	0.58	0/1343
2	CB	0.21	0/6133	0.47	1/8281 (0.0%)
3	L5	0.47	0/87914	0.36	0/137143
4	L7	0.49	0/2861	0.31	0/4459
5	L8	0.48	0/3701	0.33	0/5766
6	LA	0.53	0/1936	0.58	0/2596
7	LB	0.47	0/3306	0.56	1/4424 (0.0%)
8	LC	0.49	0/2968	0.52	0/3985
9	LD	0.43	0/2428	0.50	0/3252
10	LE	0.41	0/1909	0.57	0/2559
11	LF	0.50	0/1905	0.51	0/2539
12	LG	0.42	0/1889	0.49	0/2541
13	LH	0.45	0/1537	0.53	0/2066
14	LI	0.44	0/1673	0.52	0/2233
15	LJ	0.38	0/1420	0.59	0/1896
16	LL	0.46	0/1732	0.53	0/2315
17	LM	0.45	0/1161	0.53	0/1554
18	LN	0.52	0/1746	0.55	0/2338
19	LO	0.49	0/1682	0.48	0/2250
20	LP	0.49	0/1268	0.51	0/1701
21	LQ	0.52	0/1517	0.57	0/2022
22	LR	0.42	0/1582	0.50	0/2091
23	LS	0.49	0/1475	0.47	0/1977
24	LT	0.46	0/1326	0.51	0/1770
25	LU	0.37	0/839	0.63	0/1126
26	LV	0.48	0/993	0.48	0/1332
27	LW	0.44	0/541	0.49	0/720
28	LX	0.48	0/956	0.46	0/1287
29	LY	0.48	0/1132	0.48	0/1504
30	LZ	0.42	0/1130	0.51	0/1507
31	La	0.50	0/1177	0.47	0/1572
32	Lb	0.41	0/889	0.56	0/1175

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	Lc	0.42	0/774	0.46	0/1038
34	Ld	0.49	0/903	0.50	0/1216
35	Le	0.51	0/1071	0.53	0/1429
36	Lf	0.50	0/895	0.59	0/1198
37	Lg	0.45	0/916	0.47	0/1220
38	Lh	0.44	0/1023	0.50	0/1351
39	Li	0.40	0/843	0.48	0/1115
40	Lj	0.49	0/720	0.61	0/952
41	Lk	0.39	0/575	0.49	0/761
42	Ll	0.47	0/454	0.56	0/599
43	Lm	0.42	0/435	0.48	0/575
44	Ln	0.35	0/231	0.47	0/294
45	Lo	0.45	0/847	0.48	0/1117
46	Lp	0.46	0/718	0.47	0/953
47	Lr	0.49	0/1017	0.53	0/1364
48	Lz	0.20	0/1667	0.43	0/2234
49	S	0.21	0/447	0.41	0/592
50	S2	0.29	0/41120	0.35	0/64066
51	SA	0.29	0/1754	0.51	0/2382
52	SB	0.28	0/1765	0.55	0/2362
53	SC	0.33	0/1726	0.53	0/2332
54	SD	0.27	0/1793	0.52	0/2414
55	SE	0.27	0/2118	0.50	0/2849
56	SF	0.23	0/1516	0.57	0/2037
57	SG	0.24	0/1946	0.55	0/2590
58	SH	0.26	0/1519	0.55	0/2033
59	SI	0.27	0/1715	0.54	2/2287 (0.1%)
60	SJ	0.30	0/1550	0.53	1/2069 (0.0%)
61	SK	0.25	0/851	0.56	0/1147
62	SL	0.30	0/1208	0.50	0/1616
63	SN	0.26	0/1232	0.42	0/1656
64	SO	0.23	0/1015	0.51	0/1361
65	SP	0.26	0/1003	0.54	0/1342
66	SQ	0.25	0/1160	0.61	0/1553
67	SR	0.25	0/1081	0.58	0/1451
68	SS	0.24	0/1216	0.53	0/1628
69	ST	0.22	0/1112	0.49	0/1489
70	SU	0.25	0/827	0.58	1/1110 (0.1%)
71	SV	0.33	0/643	0.57	0/860
72	SW	0.37	0/1051	0.48	0/1406
73	SX	0.36	0/1116	0.54	0/1490
74	SY	0.25	0/1076	0.57	0/1429
75	SZ	0.22	0/552	0.61	1/741 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	Sa	0.32	0/836	0.57	0/1121
77	Sb	0.25	0/665	0.57	0/891
78	Sc	0.22	0/508	0.63	0/680
79	Sd	0.29	0/455	0.55	0/603
80	Se	0.23	0/465	0.55	0/612
81	Sg	0.24	0/2487	0.57	0/3387
All	All	0.41	0/236345	0.43	7/346326 (0.0%)

There are no bond length outliers.

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	SI	40	PRO	CA-N-CD	-7.48	101.53	112.00
60	SJ	170	PRO	CA-N-CD	-6.25	103.25	112.00
59	SI	40	PRO	N-CD-CG	-5.68	94.69	103.20
2	CB	376	PRO	CA-N-CD	-5.67	104.06	112.00
7	LB	299	ILE	N-CA-C	-5.60	107.81	113.47
70	SU	94	PRO	CA-N-CD	-5.59	104.18	112.00
75	SZ	78	LYS	N-CA-C	-5.04	105.19	113.50

There are no chirality outliers.

There are no planarity outliers.

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	5	992	0	995	35	0
2	CB	6014	0	6059	272	0
3	L5	78591	0	39715	1108	0
4	L7	2561	0	1295	21	0
5	L8	3314	0	1683	33	0
6	LA	1898	0	1993	25	0
7	LB	3238	0	3376	77	0
8	LC	2914	0	3087	52	0
9	LD	2382	0	2410	57	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	LE	1873	0	2016	61	0
11	LF	1870	0	1996	39	0
12	LG	1858	0	2000	30	0
13	LH	1518	0	1601	34	0
14	LI	1634	0	1671	28	0
15	LJ	1398	0	1426	47	0
16	LL	1701	0	1818	39	0
17	LM	1138	0	1204	46	0
18	LN	1701	0	1749	40	0
19	LO	1650	0	1794	27	0
20	LP	1242	0	1269	18	0
21	LQ	1496	0	1613	34	0
22	LR	1566	0	1729	31	0
23	LS	1437	0	1469	26	0
24	LT	1298	0	1366	29	0
25	LU	825	0	850	34	0
26	LV	979	0	1039	11	0
27	LW	528	0	541	7	0
28	LX	939	0	1003	14	0
29	LY	1115	0	1205	26	0
30	LZ	1107	0	1182	23	0
31	La	1149	0	1196	18	0
32	Lb	876	0	948	31	0
33	Lc	764	0	804	15	0
34	Ld	888	0	930	14	0
35	Le	1053	0	1147	31	0
36	Lf	876	0	912	12	0
37	Lg	906	0	999	14	0
38	Lh	1015	0	1148	22	0
39	Li	832	0	917	8	0
40	Lj	705	0	737	8	0
41	Lk	569	0	637	16	0
42	Ll	444	0	483	16	0
43	Lm	429	0	465	7	0
44	Ln	230	0	276	2	0
45	Lo	834	0	903	18	0
46	Lp	708	0	756	13	0
47	Lr	1002	0	1068	20	0
48	Lz	1643	0	1745	61	0
49	S	440	0	402	30	0
50	S2	36789	0	18548	1060	0
51	SA	1718	0	1721	110	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
52	SB	1738	0	1809	109	0
53	SC	1690	0	1777	55	0
54	SD	1765	0	1865	89	0
55	SE	2076	0	2177	98	0
56	SF	1495	0	1549	115	0
57	SG	1923	0	2089	139	0
58	SH	1497	0	1590	79	0
59	SI	1686	0	1772	81	0
60	SJ	1525	0	1640	74	0
61	SK	827	0	854	64	0
62	SL	1188	0	1260	47	0
63	SN	1208	0	1294	42	0
64	SO	1002	0	1023	48	0
65	SP	985	0	1031	79	0
66	SQ	1142	0	1213	90	0
67	SR	1067	0	1121	82	0
68	SS	1198	0	1261	80	0
69	ST	1094	0	1126	68	0
70	SU	817	0	882	47	0
71	SV	636	0	637	37	0
72	SW	1034	0	1080	44	0
73	SX	1098	0	1167	35	0
74	SY	1059	0	1135	86	0
75	SZ	546	0	603	42	0
76	Sa	821	0	874	44	0
77	Sb	651	0	672	36	0
78	Sc	506	0	536	27	0
79	Sd	445	0	442	29	0
80	Se	459	0	503	12	0
81	Sg	2430	0	2382	171	0
82	L5	211	0	0	0	0
82	L7	3	0	0	0	0
82	L8	5	0	0	0	0
82	LA	1	0	0	0	0
82	LB	1	0	0	0	0
82	LI	1	0	0	0	0
82	LP	1	0	0	0	0
82	LV	1	0	0	0	0
82	Le	1	0	0	0	0
82	Lg	1	0	0	0	0
83	Lg	1	0	0	0	0
83	Lj	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
83	Lm	1	0	0	0	0
83	Lo	1	0	0	0	0
83	Lp	1	0	0	0	0
All	All	220486	0	165260	5129	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 14.

All (5129) 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)
66:SQ:43:GLU:HB3	66:SQ:44:PRO:CD	1.42	1.35
51:SA:89:LYS:HD3	67:SR:81:ARG:NH1	1.49	1.26
3:L5:1443:A:H61	3:L5:2104:G:N2	1.36	1.24
66:SQ:43:GLU:CB	66:SQ:44:PRO:CD	2.18	1.18
74:SY:54:VAL:HG13	74:SY:76:TYR:HB2	1.24	1.17
3:L5:1443:A:N6	3:L5:2104:G:H21	1.42	1.17
3:L5:1176:C:H42	3:L5:1184:A:N6	1.43	1.16
3:L5:493:G:N1	3:L5:660:A:H2	1.45	1.13
3:L5:3951:G:N2	3:L5:4062:A:C6	2.18	1.12
3:L5:1176:C:N4	3:L5:1184:A:H61	1.45	1.12
3:L5:493:G:N1	3:L5:660:A:C2	2.14	1.11
1:5:17:THR:HG21	1:5:82:PRO:HA	1.22	1.10
50:S2:140:C:H42	50:S2:313:A:N6	1.46	1.10
50:S2:886:A:N6	50:S2:901:G:C4	2.19	1.09
35:Le:35:TRP:CZ2	35:Le:56:PRO:HD2	1.89	1.08
3:L5:4093:G:N2	3:L5:4114:C:C4	2.21	1.08
50:S2:140:C:N4	50:S2:313:A:H61	1.48	1.08
56:SF:16:ASP:N	56:SF:24:SER:HG	1.52	1.07
51:SA:53:ARG:CD	71:SV:83:PHE:CD1	2.37	1.07
3:L5:3951:G:N2	3:L5:4062:A:N6	2.02	1.07
3:L5:3951:G:C2	3:L5:4062:A:N6	2.22	1.06
66:SQ:102:GLU:HA	66:SQ:105:LYS:HD3	1.37	1.06
51:SA:53:ARG:HD2	71:SV:83:PHE:CE1	1.91	1.05
66:SQ:43:GLU:CG	66:SQ:44:PRO:HD3	1.87	1.04
3:L5:4093:G:N7	3:L5:4095:G:C2	2.26	1.03
3:L5:1401:C:O2	3:L5:1416:G:N2	1.93	1.01
51:SA:89:LYS:CD	67:SR:81:ARG:NH1	2.24	0.99
3:L5:1402:C:O2	3:L5:1415:G:N2	1.95	0.99
3:L5:4093:G:C2	3:L5:4114:C:N3	2.30	0.99
50:S2:39:A:H5'	60:SJ:7:TRP:HE1	1.25	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:694:G:O6	50:S2:737:G:C2	2.16	0.98
50:S2:1737:G:H1	50:S2:1797:U:H3	0.99	0.98
74:SY:56:PHE:HE1	74:SY:94:HIS:HE2	1.00	0.97
1:5:17:THR:HG21	1:5:82:PRO:CA	1.94	0.96
3:L5:5024:C:H41	3:L5:5028:G:H21	1.10	0.96
51:SA:214:GLU:HG3	67:SR:84:TYR:CE1	2.00	0.96
3:L5:4993:G:H1	3:L5:5058:A:H61	1.02	0.96
3:L5:3754:G:H1	3:L5:3770:U:H3	1.12	0.95
65:SP:28:MET:HB2	65:SP:32:GLN:HE21	1.30	0.95
3:L5:3951:G:N3	3:L5:4062:A:N1	2.15	0.94
1:5:17:THR:CG2	1:5:82:PRO:HA	1.96	0.94
3:L5:1404:G:N7	3:L5:1408:G:N2	2.15	0.94
59:SI:141:ARG:HE	59:SI:142:SER:H	1.09	0.94
50:S2:886:A:N6	50:S2:901:G:C5	2.36	0.94
51:SA:89:LYS:HD3	67:SR:81:ARG:HH12	1.29	0.93
74:SY:56:PHE:HE1	74:SY:94:HIS:NE2	1.66	0.93
3:L5:4093:G:N2	3:L5:4114:C:N3	2.16	0.93
50:S2:1748:G:H1	50:S2:1786:U:H3	0.95	0.92
50:S2:1266:C:N3	50:S2:1517:G:N2	2.18	0.92
66:SQ:43:GLU:CB	66:SQ:44:PRO:HD2	1.87	0.92
3:L5:2557:G:H1	3:L5:2570:U:H3	1.16	0.92
3:L5:2486:G:N7	3:L5:2493:G:N1	2.17	0.92
3:L5:1972:G:N2	3:L5:1994:C:O2	2.02	0.92
50:S2:1756:C:H41	50:S2:1757:G:H21	1.17	0.92
50:S2:567:C:O2	50:S2:583:A:N6	2.03	0.91
56:SF:55:ARG:NH2	66:SQ:123:ASP:OD1	2.03	0.91
66:SQ:43:GLU:HB3	66:SQ:44:PRO:HD2	0.91	0.90
3:L5:1269:G:N2	3:L5:1441:C:C2	2.40	0.90
3:L5:4093:G:N7	3:L5:4095:G:N2	2.19	0.90
3:L5:1656:U:OP2	31:La:26:ARG:NH2	2.05	0.90
10:LE:250:GLN:NE2	10:LE:254:ASP:OD2	2.05	0.89
3:L5:1095:A:C2	3:L5:1200:G:N1	2.38	0.89
3:L5:1095:A:H2	3:L5:1200:G:N1	1.69	0.89
3:L5:1072:C:O2	3:L5:1240:G:N2	2.05	0.89
74:SY:54:VAL:CG1	74:SY:76:TYR:HB2	2.02	0.89
3:L5:3765:G:O2'	3:L5:3767:C:N4	2.05	0.88
59:SI:27:TYR:HB3	59:SI:49:ARG:HH22	1.38	0.88
3:L5:1100:U:H3	3:L5:1194:G:H1	1.19	0.88
74:SY:57:VAL:HB	74:SY:60:PHE:HZ	1.39	0.88
50:S2:1616:U:OP2	65:SP:43:ARG:NH2	2.07	0.88
3:L5:4907:G:N2	3:L5:4914:C:O2	2.05	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1166:G:N7	73:SX:25:LYS:NZ	2.22	0.88
3:L5:1708:G:H2'	3:L5:1709:C:H3'	1.55	0.88
66:SQ:43:GLU:HB3	66:SQ:44:PRO:HD3	1.55	0.88
50:S2:637:U:OP2	80:Se:24:LYS:NZ	2.07	0.87
2:CB:286:PRO:HG2	2:CB:291:GLN:HE21	1.38	0.87
3:L5:1405:C:N4	3:L5:1408:G:N3	2.23	0.87
66:SQ:43:GLU:HG2	66:SQ:44:PRO:HD3	1.57	0.87
7:LB:348:ARG:HH12	7:LB:351:LEU:HD22	1.38	0.87
57:SG:200:LYS:HA	57:SG:203:LYS:HD3	1.56	0.86
60:SJ:162:ARG:HH12	74:SY:31:GLY:HA2	1.40	0.86
3:L5:3951:G:C2	3:L5:4062:A:N1	2.43	0.86
50:S2:885:U:H3	50:S2:901:G:H1	0.90	0.86
81:Sg:212:LYS:HA	81:Sg:235:ILE:HG13	1.56	0.86
51:SA:52:LYS:HB2	67:SR:109:LEU:HD11	1.58	0.86
65:SP:123:TYR:OH	68:SS:124:ARG:NH2	2.09	0.86
3:L5:4076:G:OP1	12:LG:73:ARG:NH1	2.08	0.85
51:SA:53:ARG:HD3	71:SV:83:PHE:CD1	2.10	0.85
3:L5:1443:A:N6	3:L5:2104:G:N2	2.12	0.85
13:LH:120:GLU:OE2	13:LH:124:ARG:NH2	2.09	0.85
15:LJ:56:THR:HG22	15:LJ:63:ARG:HA	1.56	0.85
50:S2:383:G:H4'	62:SL:132:ARG:HH22	1.41	0.85
50:S2:1757:G:O2'	50:S2:1776:G:O6	1.94	0.85
50:S2:694:G:O6	50:S2:737:G:N3	2.09	0.85
59:SI:143:LYS:HB3	59:SI:147:LYS:HE3	1.58	0.85
3:L5:3951:G:C2	3:L5:4062:A:C6	2.62	0.85
81:Sg:256:ILE:HB	81:Sg:270:LEU:HB2	1.59	0.85
69:ST:9:VAL:O	69:ST:11:GLN:NE2	2.09	0.84
55:SE:92:ILE:HD11	74:SY:17:LEU:HD21	1.59	0.84
50:S2:925:G:H1	50:S2:1017:U:H3	1.24	0.84
60:SJ:69:ARG:NH2	60:SJ:73:GLU:OE2	2.10	0.84
73:SX:95:GLU:OE1	73:SX:140:ARG:NH2	2.10	0.84
25:LU:19:LEU:HD12	25:LU:20:LYS:HG2	1.57	0.84
50:S2:1755:C:N4	50:S2:1756:C:N4	2.26	0.83
68:SS:51:ASP:OD1	68:SS:54:LYS:NZ	2.11	0.83
65:SP:35:GLN:O	68:SS:88:LYS:NZ	2.10	0.83
3:L5:4093:G:N2	3:L5:4114:C:N4	2.26	0.83
51:SA:53:ARG:CD	71:SV:83:PHE:HD1	1.88	0.83
3:L5:1095:A:H2	3:L5:1200:G:H1	0.88	0.83
3:L5:4517:A:N7	7:LB:2:SER:N	2.27	0.83
1:5:137:VAL:HA	1:5:146:ALA:HA	1.60	0.83
50:S2:1122:A:N3	52:SB:146:ARG:NH2	2.26	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SD:132:LYS:HE2	54:SD:191:PRO:HA	1.60	0.83
50:S2:153:G:N3	57:SG:13:GLN:NE2	2.25	0.83
50:S2:164:A:H3'	50:S2:165:G:H21	1.44	0.83
3:L5:4093:G:C2	3:L5:4114:C:C2	2.67	0.83
50:S2:382:C:H2'	50:S2:383:G:H8	1.43	0.83
3:L5:177:G:N2	3:L5:260:C:O2	2.12	0.82
56:SF:77:MET:HB2	56:SF:89:THR:HG21	1.62	0.82
56:SF:104:THR:HG23	56:SF:106:GLU:H	1.43	0.82
3:L5:4518:A:P	7:LB:258:HIS:HD1	2.01	0.82
3:L5:513:U:H3'	3:L5:514:U:H4'	1.61	0.82
3:L5:3946:G:N3	3:L5:3947:A:N6	2.27	0.82
24:LT:43:LYS:O	24:LT:58:HIS:ND1	2.13	0.82
68:SS:46:ARG:NH1	69:ST:35:ASP:OD1	2.13	0.82
64:SO:128:ARG:HH22	76:Sa:59:PHE:HE2	1.27	0.82
57:SG:135:PRO:HG2	57:SG:141:ILE:HG13	1.60	0.81
66:SQ:43:GLU:CB	66:SQ:44:PRO:HD3	1.97	0.81
50:S2:1858:G:OP2	64:SO:146:ARG:NH2	2.14	0.81
61:SK:60:GLU:HG3	61:SK:69:TRP:CD1	2.16	0.81
81:Sg:152:SER:HG	81:Sg:168:CYS:HG	1.16	0.81
50:S2:1550:G:H3'	50:S2:1579:A:H61	1.44	0.81
51:SA:89:LYS:CD	67:SR:81:ARG:HH12	1.86	0.81
58:SH:25:GLN:HA	58:SH:28:LEU:HB2	1.59	0.81
51:SA:53:ARG:NE	71:SV:83:PHE:HD1	1.79	0.81
60:SJ:65:GLU:HG3	60:SJ:66:LYS:HD2	1.62	0.81
51:SA:89:LYS:CG	67:SR:81:ARG:HH12	1.93	0.81
78:Sc:43:ILE:HG23	78:Sc:65:ALA:HB3	1.63	0.81
3:L5:1364:U:OP2	16:LL:36:ARG:NH1	2.13	0.81
3:L5:4893:A:OP1	19:LO:188:LYS:NZ	2.14	0.81
50:S2:140:C:N3	50:S2:313:A:N1	2.28	0.81
51:SA:53:ARG:HD2	71:SV:83:PHE:CD1	2.11	0.81
50:S2:747:U:O2	58:SH:111:LYS:NZ	2.14	0.80
50:S2:1228:A:H2'	50:S2:1229:G:H8	1.44	0.80
54:SD:16:ILE:HD12	79:Sd:22:ARG:HH12	1.44	0.80
3:L5:1083:U:O2	3:L5:1216:C:N4	2.13	0.80
3:L5:4993:G:H1	3:L5:5058:A:N6	1.78	0.80
61:SK:1:MET:HE2	61:SK:47:LYS:HG3	1.63	0.80
57:SG:22:ARG:HD3	57:SG:25:ARG:HE	1.46	0.80
57:SG:70:HIS:HA	57:SG:98:ARG:HH12	1.47	0.80
5:L8:123:U:O2'	5:L8:126:C:N4	2.15	0.80
3:L5:2017:A:HO2'	3:L5:2018:C:H6	1.27	0.80
81:Sg:88:ARG:HH21	81:Sg:100:ARG:HE	1.29	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:SP:72:LYS:HE3	65:SP:93:MET:HG2	1.63	0.79
51:SA:3:GLY:N	51:SA:56:GLU:OE2	2.16	0.79
72:SW:57:ARG:HH21	77:Sb:26:GLN:HE21	1.30	0.79
54:SD:23:GLU:OE2	79:Sd:46:TYR:OH	1.99	0.79
56:SF:61:PHE:HB3	78:Sc:51:ARG:HH21	1.47	0.79
73:SX:68:LYS:HB3	73:SX:91:LEU:HD22	1.63	0.79
50:S2:895:G:H3'	50:S2:896:U:H4'	1.63	0.79
3:L5:2578:G:N7	30:LZ:17:ARG:NH1	2.31	0.78
50:S2:1261:C:O2	79:Sd:10:HIS:NE2	2.15	0.78
1:5:109:ARG:NH2	1:5:144:GLU:OE2	2.16	0.78
3:L5:137:G:H2'	3:L5:138:G:C8	2.17	0.78
51:SA:80:ARG:NH2	51:SA:165:ASN:O	2.17	0.78
3:L5:1176:C:N3	3:L5:1184:A:N1	2.32	0.78
9:LD:256:LYS:NZ	9:LD:257:PRO:O	2.17	0.78
3:L5:493:G:O6	3:L5:660:A:N1	2.16	0.78
57:SG:25:ARG:HA	57:SG:28:TYR:HD2	1.48	0.78
11:LF:105:VAL:HG13	11:LF:136:VAL:HG12	1.66	0.78
74:SY:56:PHE:CE1	74:SY:94:HIS:NE2	2.47	0.77
58:SH:142:LYS:HB2	72:SW:54:ASP:HB3	1.66	0.77
65:SP:110:GLU:O	68:SS:113:ARG:NH2	2.17	0.77
16:LL:80:GLU:OE2	16:LL:102:ARG:NH1	2.17	0.77
69:ST:11:GLN:OE1	69:ST:62:ARG:NH1	2.17	0.77
3:L5:387:G:HO2'	3:L5:412:G:H1	1.30	0.77
3:L5:1406:G:H1	3:L5:1411:C:HO2'	1.28	0.77
3:L5:1709:C:N4	3:L5:1716:G:N2	2.32	0.77
23:LS:95:ARG:NH1	23:LS:113:MET:SD	2.58	0.77
50:S2:1277:C:H2'	50:S2:1278:A:H8	1.47	0.77
50:S2:1457:U:H2'	50:S2:1458:G:H8	1.49	0.77
57:SG:2:LYS:HB2	57:SG:108:VAL:HG22	1.67	0.77
3:L5:4773:C:O2	3:L5:4861:G:N2	2.12	0.77
58:SH:31:GLU:HA	58:SH:37:LYS:HE3	1.67	0.77
50:S2:798:G:N3	58:SH:113:LYS:NZ	2.33	0.77
2:CB:423:THR:HG22	2:CB:449:ARG:HA	1.66	0.77
50:S2:534:G:H2'	50:S2:535:G:H8	1.48	0.77
36:Lf:63:LYS:HD2	36:Lf:64:PRO:HD2	1.66	0.77
50:S2:641:A:OP1	60:SJ:40:LYS:NZ	2.18	0.77
8:LC:65:GLU:OE1	8:LC:80:ARG:NH1	2.18	0.76
54:SD:49:ILE:HG22	54:SD:87:TYR:HB2	1.67	0.76
3:L5:2517:A:H5'	37:Lg:62:LYS:HD3	1.67	0.76
50:S2:1660:C:O2	79:Sd:32:ARG:NH2	2.19	0.76
52:SB:35:ALA:O	52:SB:42:ARG:NH1	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SD:106:ARG:HH12	54:SD:173:ARG:HD3	1.50	0.76
15:LJ:95:ARG:NH1	15:LJ:176:PRO:O	2.18	0.76
71:SV:70:LEU:HD21	71:SV:74:LYS:HE3	1.65	0.76
58:SH:46:THR:HG23	58:SH:65:PRO:HD3	1.66	0.76
76:Sa:87:ARG:NH1	76:Sa:94:ASP:OD1	2.18	0.76
2:CB:3:ASN:N	2:CB:45:ILE:O	2.18	0.76
2:CB:480:VAL:HG12	2:CB:481:LYS:HG2	1.68	0.76
7:LB:222:VAL:O	7:LB:343:ARG:NH1	2.18	0.76
54:SD:53:THR:O	54:SD:90:LYS:NZ	2.17	0.76
54:SD:158:ILE:HG23	54:SD:164:VAL:HG12	1.65	0.76
3:L5:3716:C:N4	3:L5:3735:G:O2'	2.19	0.76
55:SE:176:ASP:OD1	55:SE:179:ASN:ND2	2.19	0.76
2:CB:354:ILE:HA	2:CB:358:LEU:HD23	1.67	0.76
3:L5:1443:A:N1	3:L5:2104:G:N3	2.34	0.76
81:Sg:54:ILE:O	81:Sg:56:GLN:NE2	2.19	0.76
50:S2:874:G:H2'	50:S2:875:A:H8	1.51	0.76
50:S2:1869:A:N6	52:SB:114:VAL:O	2.18	0.76
56:SF:87:LEU:HD23	66:SQ:46:THR:HG21	1.67	0.75
59:SI:83:TYR:HB2	59:SI:202:ILE:HD11	1.68	0.75
1:5:91:LEU:HD22	1:5:133:ILE:HG12	1.68	0.75
3:L5:138:G:H2'	3:L5:139:G:H8	1.51	0.75
17:LM:86:TRP:CE3	17:LM:92:ALA:HB2	2.22	0.75
52:SB:143:THR:HG23	52:SB:205:TYR:HE2	1.50	0.75
50:S2:694:G:N7	50:S2:696:G:C2	2.55	0.75
50:S2:694:G:N7	50:S2:696:G:N2	2.34	0.75
50:S2:1566:G:N7	69:ST:101:ARG:NH2	2.33	0.75
55:SE:127:ARG:HE	55:SE:142:HIS:HA	1.52	0.75
55:SE:11:ARG:HH22	55:SE:20:LEU:HD22	1.50	0.75
50:S2:126:G:OP1	57:SG:198:ARG:NH1	2.20	0.75
3:L5:184:U:O2	3:L5:253:G:N2	2.20	0.74
3:L5:4891:G:H1	3:L5:4928:C:H5	1.35	0.74
58:SH:26:ALA:O	58:SH:86:LYS:NZ	2.20	0.74
3:L5:1443:A:H2	3:L5:2104:G:H1'	1.52	0.74
50:S2:687:C:O2'	58:SH:103:LYS:NZ	2.21	0.74
51:SA:68:ILE:HG13	51:SA:120:ARG:HH21	1.52	0.74
57:SG:115:LYS:NZ	57:SG:116:LYS:O	2.19	0.74
3:L5:2468:U:O2'	3:L5:2506:G:N2	2.21	0.74
50:S2:928:G:H2'	50:S2:929:G:C8	2.22	0.74
1:5:17:THR:CG2	1:5:81:VAL:O	2.35	0.74
3:L5:966:A:OP1	3:L5:967:C:N4	2.21	0.74
4:L7:19:C:OP2	15:LJ:154:LYS:NZ	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:ST:138:VAL:O	69:ST:142:ASN:ND2	2.20	0.74
3:L5:4993:G:N2	3:L5:5058:A:N1	2.32	0.74
2:CB:79:TYR:OH	2:CB:352:GLN:OE1	2.05	0.74
52:SB:134:LEU:HB3	52:SB:218:LEU:HB2	1.70	0.74
79:Sd:6:LEU:HA	79:Sd:9:SER:HB3	1.70	0.74
3:L5:386:A:OP2	29:LY:89:LYS:NZ	2.20	0.74
54:SD:27:ARG:NH1	54:SD:28:GLU:OE2	2.21	0.74
54:SD:202:LYS:NZ	67:SR:42:PRO:O	2.21	0.74
57:SG:59:GLN:OE1	57:SG:72:ARG:NH2	2.21	0.74
77:Sb:40:CYS:SG	77:Sb:41:TYR:N	2.60	0.74
3:L5:4741:C:H4'	3:L5:4742:G:H5'	1.68	0.74
50:S2:146:G:H1	50:S2:173:A:H61	1.36	0.73
50:S2:1674:G:H4'	56:SF:77:MET:HE1	1.69	0.73
58:SH:191:GLU:O	58:SH:193:GLN:NE2	2.20	0.73
65:SP:43:ARG:HH21	65:SP:47:ARG:HH22	1.35	0.73
50:S2:379:C:OP2	59:SI:181:GLN:NE2	2.19	0.73
54:SD:170:THR:HG22	54:SD:187:LYS:HG2	1.70	0.73
2:CB:642:ASP:HB3	2:CB:645:GLU:HG2	1.68	0.73
3:L5:989:U:O2	3:L5:1064:G:O6	2.06	0.73
3:L5:1401:C:N3	3:L5:1416:G:N1	2.28	0.73
25:LU:105:ASN:HD21	25:LU:111:GLU:CD	1.97	0.73
50:S2:1095:C:N3	50:S2:1149:A:N1	2.37	0.73
51:SA:53:ARG:CD	71:SV:83:PHE:CE1	2.65	0.73
3:L5:758:G:O5'	13:LH:52:LYS:NZ	2.18	0.73
56:SF:127:ARG:HB3	56:SF:136:ARG:HB3	1.70	0.73
3:L5:2706:G:O6	22:LR:46:LYS:NZ	2.21	0.73
54:SD:40:ARG:NH1	54:SD:47:GLU:OE2	2.21	0.73
3:L5:1404:G:O6	3:L5:1413:C:N4	2.19	0.73
62:SL:82:MET:HE3	62:SL:85:THR:HG23	1.71	0.73
3:L5:137:G:H2'	3:L5:138:G:H8	1.54	0.73
3:L5:1269:G:N2	3:L5:1440:U:O2	2.22	0.73
56:SF:91:ARG:HH22	75:SZ:105:ALA:HB3	1.53	0.73
75:SZ:74:SER:HA	75:SZ:79:ILE:HB	1.69	0.73
81:Sg:17:TRP:H	81:Sg:36:ARG:HB2	1.52	0.73
2:CB:77:LEU:HB3	2:CB:100:ILE:HB	1.71	0.73
45:Lo:33:LEU:HA	45:Lo:38:LYS:HG2	1.71	0.73
3:L5:513:U:H1'	3:L5:516:C:H41	1.54	0.72
50:S2:1228:A:H2'	50:S2:1229:G:C8	2.23	0.72
63:SN:142:GLU:HB3	63:SN:145:THR:HG22	1.71	0.72
2:CB:82:SER:H	2:CB:85:ASP:HB2	1.54	0.72
16:LL:63:THR:HG21	31:La:66:ASN:HB3	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:960:U:N3	50:S2:963:A:OP2	2.21	0.72
50:S2:974:C:O2	64:SO:55:ARG:NH1	2.21	0.72
50:S2:984:C:O2'	64:SO:138:ASP:O	2.05	0.72
3:L5:181:C:H3'	3:L5:182:G:H8	1.54	0.72
58:SH:68:GLN:O	58:SH:71:SER:OG	2.07	0.72
2:CB:426:LYS:HD2	2:CB:444:LEU:HB3	1.71	0.72
47:Lr:26:SER:OG	47:Lr:28:GLU:OE1	2.07	0.72
52:SB:68:GLU:OE1	52:SB:83:LYS:NZ	2.17	0.72
68:SS:3:LEU:HD12	68:SS:4:VAL:HG12	1.71	0.72
81:Sg:17:TRP:HB2	81:Sg:36:ARG:HG3	1.69	0.72
3:L5:1068:G:O6	10:LE:43:HIS:NE2	2.21	0.72
25:LU:47:ILE:HG21	25:LU:56:LEU:HD13	1.70	0.72
50:S2:752:G:N2	50:S2:752:G:OP2	2.20	0.72
50:S2:1597:C:OP2	75:SZ:85:ARG:NH2	2.20	0.72
68:SS:76:GLN:O	68:SS:78:LYS:NZ	2.22	0.72
3:L5:1179:U:H3'	3:L5:1180:C:H5''	1.71	0.72
3:L5:2544:G:N1	5:L8:124:U:OP1	2.23	0.72
3:L5:4095:G:N2	3:L5:4114:C:O2'	2.23	0.72
52:SB:36:PRO:HA	52:SB:232:HIS:CD2	2.25	0.72
62:SL:80:MET:HE1	62:SL:120:VAL:HG23	1.69	0.72
66:SQ:96:TYR:HB3	66:SQ:105:LYS:HZ2	1.55	0.72
3:L5:2092:G:O2'	3:L5:2262:G:N2	2.23	0.72
9:LD:41:LYS:NZ	24:LT:32:ARG:O	2.22	0.72
50:S2:1288:U:N3	50:S2:1311:C:O2	2.22	0.72
50:S2:1403:C:N4	50:S2:1433:C:OP1	2.22	0.72
56:SF:184:SER:OG	56:SF:186:ASN:OD1	2.07	0.72
66:SQ:113:ILE:HD11	66:SQ:120:LEU:HD12	1.71	0.72
3:L5:4242:U:H3	3:L5:4281:A:H2	1.36	0.72
13:LH:31:ARG:NH1	13:LH:149:ASN:OD1	2.23	0.72
52:SB:137:LEU:HB3	52:SB:172:MET:HE3	1.71	0.72
57:SG:221:LYS:O	57:SG:225:GLN:N	2.19	0.72
3:L5:1202:C:N3	3:L5:1203:G:O2'	2.23	0.72
52:SB:110:MET:HE1	52:SB:140:VAL:HG21	1.72	0.72
66:SQ:96:TYR:HB3	66:SQ:105:LYS:NZ	2.05	0.72
3:L5:1100:U:O3'	3:L5:1167:C:N4	2.22	0.72
3:L5:4907:G:N1	3:L5:4914:C:N3	2.30	0.72
3:L5:1095:A:N1	3:L5:1200:G:O6	2.23	0.71
35:Le:35:TRP:CE2	35:Le:56:PRO:HD2	2.25	0.71
2:CB:654:PRO:HD2	2:CB:658:GLY:HA3	1.71	0.71
11:LF:156:LYS:NZ	11:LF:248:ASN:OXT	2.23	0.71
48:Lz:18:LEU:O	48:Lz:22:GLN:N	2.22	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:587:A:O2'	50:S2:588:G:N2	2.23	0.71
58:SH:144:ILE:HG23	72:SW:52:ILE:HB	1.72	0.71
50:S2:549:C:C4	50:S2:550:C:N4	2.58	0.71
66:SQ:19:ALA:HB2	66:SQ:75:GLY:HA3	1.72	0.71
45:Lo:74:GLU:HG2	45:Lo:75:PRO:HD2	1.73	0.71
71:SV:66:ASP:OD1	71:SV:67:ASP:N	2.24	0.71
3:L5:667:A:N3	47:Lr:46:ARG:NH1	2.39	0.71
12:LG:98:LEU:HD21	12:LG:215:LEU:HD12	1.73	0.71
50:S2:1130:G:OP2	50:S2:1130:G:N2	2.20	0.71
81:Sg:217:MET:HE2	81:Sg:219:TRP:HZ2	1.55	0.71
50:S2:329:G:H2'	50:S2:330:G:C8	2.25	0.71
50:S2:694:G:C6	50:S2:737:G:N2	2.59	0.71
64:SO:27:VAL:HG23	64:SO:90:ILE:HD12	1.72	0.71
67:SR:36:GLU:HB3	67:SR:47:ARG:HD2	1.73	0.71
38:Lh:88:THR:HG22	38:Lh:90:ALA:H	1.55	0.71
50:S2:72:C:H42	57:SG:170:ARG:HB3	1.54	0.71
50:S2:588:G:H4'	50:S2:589:G:H5'	1.72	0.71
52:SB:52:THR:HG23	52:SB:57:ILE:HA	1.71	0.71
81:Sg:5:MET:HB2	81:Sg:270:LEU:HD11	1.73	0.71
52:SB:40:ASN:ND2	52:SB:76:ASN:OD1	2.24	0.71
3:L5:989:U:C2	3:L5:1064:G:O6	2.43	0.71
50:S2:328:U:HO2'	50:S2:329:G:H8	1.39	0.71
50:S2:382:C:H2'	50:S2:383:G:C8	2.26	0.71
2:CB:263:ASP:OD1	2:CB:287:ARG:NH2	2.24	0.71
3:L5:4739:C:H2'	3:L5:4740:G:H5'	1.73	0.71
50:S2:177:G:H22	50:S2:313:A:H5'	1.56	0.71
55:SE:19:MET:HE2	55:SE:108:ARG:HE	1.55	0.71
57:SG:50:VAL:HG21	57:SG:111:LEU:HD13	1.72	0.71
57:SG:109:LEU:HD22	57:SG:111:LEU:HD23	1.72	0.71
63:SN:114:ARG:HA	63:SN:117:LEU:HD12	1.72	0.71
3:L5:3877:A:N3	3:L5:4401:G:O2'	2.24	0.70
10:LE:207:LYS:H	10:LE:256:GLN:HE22	1.39	0.70
50:S2:1610:G:OP1	68:SS:121:ARG:NH2	2.23	0.70
61:SK:3:MET:HE3	61:SK:48:ALA:HB2	1.73	0.70
51:SA:38:ILE:HD11	51:SA:47:TYR:HB3	1.73	0.70
3:L5:1268:G:OP1	32:Lb:107:ARG:NH2	2.23	0.70
3:L5:1732:C:OP1	24:LT:43:LYS:NZ	2.23	0.70
3:L5:2484:A:N7	3:L5:2486:G:N1	2.37	0.70
5:L8:125:C:H1'	5:L8:126:C:H2'	1.74	0.70
25:LU:28:PRO:HB2	25:LU:34:MET:HG2	1.72	0.70
52:SB:36:PRO:O	52:SB:42:ARG:NH2	2.17	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SF:35:LEU:HD12	56:SF:39:ILE:HD11	1.73	0.70
77:Sb:59:CYS:SG	77:Sb:61:THR:OG1	2.48	0.70
77:Sb:81:ARG:HH12	77:Sb:84:HIS:HA	1.57	0.70
3:L5:4105:A:N3	3:L5:4106:G:N2	2.38	0.70
9:LD:35:ARG:HH11	9:LD:35:ARG:HG3	1.55	0.70
12:LG:88:ASP:HB3	12:LG:91:THR:HG22	1.72	0.70
3:L5:493:G:C6	3:L5:660:A:N1	2.59	0.70
3:L5:4220:A:OP2	24:LT:2:THR:OG1	2.07	0.70
6:LA:180:LEU:HD11	46:Lp:26:VAL:HG21	1.74	0.70
52:SB:34:LYS:HD2	52:SB:42:ARG:HB3	1.73	0.70
3:L5:1269:G:N2	3:L5:1441:C:O2	2.23	0.70
50:S2:127:C:O2	55:SE:134:LYS:NZ	2.24	0.70
54:SD:167:TYR:HE2	54:SD:204:LEU:HB3	1.57	0.70
57:SG:148:SER:N	57:SG:151:ASP:OD2	2.24	0.70
3:L5:453:G:OP1	10:LE:228:GLN:NE2	2.24	0.70
48:Lz:162:VAL:HG12	48:Lz:164:CYS:H	1.56	0.70
48:Lz:171:HIS:HD2	48:Lz:173:LYS:H	1.40	0.70
50:S2:1608:U:H5''	68:SS:130:ARG:HE	1.56	0.70
55:SE:95:THR:HG23	55:SE:97:GLU:HG2	1.73	0.70
59:SI:57:ALA:H	59:SI:180:GLY:HA2	1.55	0.70
81:Sg:65:PHE:HB2	81:Sg:83:TRP:CD1	2.27	0.70
50:S2:750:C:H41	50:S2:793:G:H21	1.40	0.70
52:SB:179:ASN:OD1	52:SB:180:ASP:N	2.24	0.70
50:S2:197:U:OP2	50:S2:203:G:N2	2.24	0.70
50:S2:830:A:OP2	50:S2:846:G:N2	2.23	0.70
3:L5:4093:G:O6	3:L5:4114:C:O2'	2.09	0.70
51:SA:22:GLY:O	51:SA:24:HIS:ND1	2.24	0.70
51:SA:53:ARG:HD2	71:SV:83:PHE:HE1	1.51	0.70
60:SJ:35:TYR:O	60:SJ:111:GLN:NE2	2.25	0.70
3:L5:3928:A:OP1	18:LN:90:ASN:ND2	2.25	0.69
3:L5:4429:C:N3	14:LI:158:LYS:NZ	2.40	0.69
66:SQ:109:LYS:HE3	66:SQ:109:LYS:HA	1.73	0.69
3:L5:4431:U:OP2	14:LI:3:ARG:NH2	2.25	0.69
3:L5:4472:G:O2'	43:Lm:100:TYR:O	2.10	0.69
81:Sg:44:LYS:HG2	81:Sg:56:GLN:NE2	2.07	0.69
3:L5:498:C:C2	3:L5:499:G:H1'	2.27	0.69
3:L5:4112:C:N4	3:L5:4113:U:N3	2.40	0.69
50:S2:1526:G:OP1	66:SQ:146:ARG:NH1	2.24	0.69
50:S2:1868:U:O2'	76:Sa:100:ARG:NH1	2.25	0.69
3:L5:512:U:H3	3:L5:647:G:H1	1.40	0.69
3:L5:1175:A:H2	3:L5:1185:G:H1	1.41	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1353:G:N7	21:LQ:104:ARG:NH2	2.39	0.69
3:L5:4139:G:H21	3:L5:4140:C:H41	1.39	0.69
30:LZ:22:LYS:NZ	30:LZ:132:GLN:O	2.25	0.69
2:CB:267:ASP:HB3	2:CB:285:LEU:HG	1.75	0.69
2:CB:325:SER:HA	2:CB:328:LYS:HE3	1.75	0.69
2:CB:373:TYR:OH	2:CB:492:HIS:ND1	2.19	0.69
56:SF:128:ILE:HG21	78:Sc:24:GLN:HE22	1.57	0.69
66:SQ:40:GLU:HG2	66:SQ:41:MET:HG2	1.72	0.69
3:L5:186:G:N3	3:L5:1366:G:N2	2.41	0.69
49:S:218:TRP:HA	54:SD:115:VAL:HG12	1.75	0.69
56:SF:49:LEU:HD11	66:SQ:49:TYR:HB2	1.74	0.69
81:Sg:46:THR:OG1	81:Sg:51:ASN:O	2.11	0.69
3:L5:1090:G:OP1	24:LT:142:ARG:NH1	2.25	0.69
3:L5:4117:U:O4'	12:LG:43:GLN:NE2	2.25	0.69
38:Lh:22:ASP:OD1	38:Lh:23:ASP:N	2.25	0.69
50:S2:885:U:O4	50:S2:901:G:O6	2.11	0.69
50:S2:1528:G:O2'	50:S2:1666:C:OP1	2.09	0.69
51:SA:214:GLU:OE2	67:SR:84:TYR:CE2	2.46	0.69
50:S2:1578:U:O2	54:SD:4:GLN:NE2	2.25	0.69
56:SF:20:PHE:HD2	56:SF:94:LYS:HD3	1.56	0.69
66:SQ:38:PRO:HB2	66:SQ:40:GLU:OE1	1.92	0.69
68:SS:15:VAL:HG13	68:SS:16:LEU:H	1.58	0.69
3:L5:3717:A:H2'	3:L5:3718:A:C8	2.28	0.69
35:Le:85:LEU:HD21	35:Le:115:ALA:HB2	1.74	0.69
50:S2:1616:U:O4	65:SP:40:ARG:NH1	2.24	0.69
10:LE:161:ARG:NH2	10:LE:273:SER:OG	2.26	0.69
31:La:77:LYS:O	31:La:80:THR:OG1	2.11	0.69
81:Sg:85:GLY:HA2	81:Sg:108:VAL:HG13	1.75	0.69
3:L5:182:G:H22	3:L5:254:G:H1	1.39	0.68
3:L5:4989:U:O2	3:L5:4990:C:N4	2.27	0.68
2:CB:616:ASP:OD2	2:CB:639:TYR:OH	2.11	0.68
50:S2:885:U:O2	50:S2:901:G:N2	2.21	0.68
54:SD:67:ARG:HH22	61:SK:96:ARG:H	1.39	0.68
56:SF:145:ARG:O	56:SF:149:GLN:N	2.22	0.68
3:L5:188:G:N1	3:L5:190:G:O6	2.26	0.68
3:L5:1302:U:OP2	3:L5:1303:A:N6	2.21	0.68
50:S2:935:G:O2'	63:SN:108:ASP:OD1	2.10	0.68
55:SE:125:LYS:O	55:SE:142:HIS:N	2.26	0.68
81:Sg:199:THR:HG21	81:Sg:240:CYS:HA	1.74	0.68
5:L8:75:G:OP2	29:LY:74:TYR:OH	2.10	0.68
13:LH:59:LYS:HE3	13:LH:66:GLU:HG3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:LL:126:LEU:N	16:LL:138:ASP:OD2	2.24	0.68
38:Lh:88:THR:HB	38:Lh:91:MET:HG3	1.73	0.68
2:CB:591:CYS:HB2	2:CB:855:LEU:HD21	1.76	0.68
3:L5:3598:C:H2'	3:L5:3599:A:H8	1.58	0.68
49:S:217:ASN:OD1	49:S:218:TRP:N	2.27	0.68
50:S2:1454:A:OP1	67:SR:49:LYS:NZ	2.26	0.68
50:S2:1524:G:OP2	68:SS:141:ARG:NH2	2.26	0.68
57:SG:116:LYS:HZ1	57:SG:120:ASP:HA	1.58	0.68
59:SI:113:TYR:OH	59:SI:156:ALA:O	2.12	0.68
81:Sg:217:MET:HG2	81:Sg:229:THR:HG23	1.74	0.68
2:CB:597:ASN:O	2:CB:599:HIS:ND1	2.27	0.68
3:L5:3680:U:OP1	6:LA:54:ARG:NH2	2.25	0.68
3:L5:1628:C:H42	6:LA:3:ARG:HH11	1.39	0.68
3:L5:3754:G:N2	3:L5:3770:U:O2	2.25	0.68
50:S2:65:C:H5	57:SG:136:LYS:HE2	1.59	0.68
50:S2:77:A:C2	57:SG:176:ILE:HG22	2.29	0.68
50:S2:996:A:H2'	50:S2:997:A:C8	2.29	0.68
50:S2:1513:C:H2'	50:S2:1514:G:H8	1.59	0.68
76:Sa:46:GLU:O	76:Sa:49:ALA:N	2.26	0.68
3:L5:4093:G:C8	3:L5:4095:G:C2	2.81	0.67
8:LC:327:LYS:NZ	11:LF:171:ASP:OD1	2.26	0.67
50:S2:529:A:H2'	50:S2:530:U:C6	2.28	0.67
50:S2:752:G:OP1	50:S2:792:C:O2'	2.12	0.67
51:SA:89:LYS:NZ	51:SA:201:LEU:O	2.24	0.67
3:L5:2495:U:H2'	3:L5:2496:G:H8	1.59	0.67
44:Ln:4:LYS:NZ	50:S2:1843:G:N7	2.42	0.67
55:SE:102:ILE:HG23	55:SE:182:MET:HE1	1.77	0.67
55:SE:117:GLU:O	55:SE:120:LYS:NZ	2.22	0.67
68:SS:102:GLY:O	68:SS:106:LYS:N	2.27	0.67
81:Sg:17:TRP:CD1	81:Sg:303:THR:HG1	2.12	0.67
2:CB:428:ARG:NH1	2:CB:489:GLU:O	2.27	0.67
3:L5:495:C:H2'	3:L5:496:G:C8	2.29	0.67
3:L5:1269:G:O2'	3:L5:1440:U:O2'	1.98	0.67
9:LD:258:LYS:H	9:LD:259:LYS:HZ2	1.42	0.67
41:Lk:26:LYS:HB2	41:Lk:69:LEU:HD12	1.77	0.67
49:S:225:LEU:O	80:Se:51:LYS:NZ	2.25	0.67
50:S2:556:U:H3'	50:S2:557:U:H4'	1.76	0.67
68:SS:139:THR:O	68:SS:144:ARG:NH2	2.24	0.67
3:L5:2611:A:H5'	3:L5:2688:G:H4'	1.74	0.67
3:L5:2856:C:O2	7:LB:242:ARG:NH2	2.28	0.67
15:LJ:169:LYS:HZ1	15:LJ:170:TYR:HE1	1.42	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:71:G:H2'	50:S2:72:C:H4'	1.77	0.67
50:S2:557:U:H5'	50:S2:558:G:H8	1.60	0.67
58:SH:44:ASN:OD1	58:SH:45:ILE:N	2.23	0.67
71:SV:70:LEU:CD2	71:SV:74:LYS:HE3	2.23	0.67
50:S2:640:A:H2'	50:S2:641:A:C8	2.29	0.67
53:SC:274:VAL:HG13	53:SC:275:LYS:HD3	1.76	0.67
57:SG:21:GLU:OE2	57:SG:22:ARG:NH2	2.28	0.67
2:CB:45:ILE:HG13	2:CB:46:ILE:HD12	1.76	0.67
50:S2:1457:U:H2'	50:S2:1458:G:C8	2.29	0.67
69:ST:124:THR:HG23	69:ST:127:GLY:H	1.57	0.67
2:CB:351:LEU:HA	2:CB:354:ILE:HG12	1.77	0.67
23:LS:41:LYS:NZ	23:LS:64:CYS:SG	2.68	0.67
74:SY:10:ARG:HH22	74:SY:26:ASP:HB3	1.59	0.67
81:Sg:152:SER:H	81:Sg:169:GLY:HA2	1.59	0.67
2:CB:692:LEU:O	2:CB:839:ARG:NH2	2.28	0.67
3:L5:1077:C:OP1	3:L5:1215:C:O2'	2.10	0.67
3:L5:2098:G:H2'	3:L5:2099:G:C8	2.29	0.67
4:L7:54:A:OP1	15:LJ:8:LYS:NZ	2.27	0.67
10:LE:236:GLU:O	10:LE:237:LYS:HG2	1.95	0.67
31:La:94:LYS:HA	31:La:94:LYS:HE3	1.76	0.67
50:S2:906:U:H2'	50:S2:907:G:C8	2.30	0.67
51:SA:214:GLU:HG3	67:SR:84:TYR:CD1	2.30	0.67
63:SN:66:VAL:HG23	63:SN:67:THR:HG23	1.76	0.67
68:SS:46:ARG:HH12	69:ST:35:ASP:HA	1.60	0.67
10:LE:112:MET:O	47:Lr:87:ARG:NH1	2.26	0.67
68:SS:67:VAL:HA	68:SS:70:ILE:HG12	1.75	0.67
75:SZ:73:VAL:HA	75:SZ:76:ARG:HB2	1.77	0.67
3:L5:2554:U:O2	3:L5:2764:A:N7	2.28	0.66
3:L5:4626:A:OP2	7:LB:224:LYS:NZ	2.25	0.66
15:LJ:84:GLU:OE1	15:LJ:92:TYR:OH	2.13	0.66
35:Le:90:MET:HE2	35:Le:90:MET:HA	1.77	0.66
2:CB:590:LEU:HD21	2:CB:603:TYR:HB3	1.77	0.66
46:Lp:42:CYS:SG	46:Lp:59:SER:OG	2.52	0.66
48:Lz:64:SER:O	48:Lz:108:ASP:N	2.27	0.66
50:S2:307:G:O6	59:SI:44:HIS:ND1	2.28	0.66
50:S2:1277:C:H2'	50:S2:1278:A:C8	2.29	0.66
50:S2:1755:C:N4	50:S2:1756:C:H41	1.93	0.66
55:SE:115:THR:OG1	55:SE:117:GLU:OE1	2.12	0.66
56:SF:91:ARG:NH2	75:SZ:105:ALA:HB3	2.10	0.66
78:Sc:16:LYS:NZ	78:Sc:17:VAL:O	2.28	0.66
79:Sd:10:HIS:HB3	79:Sd:12:ARG:HH12	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:396:MET:N	2:CB:485:ILE:O	2.29	0.66
2:CB:404:THR:OG1	2:CB:406:ASP:OD1	2.14	0.66
2:CB:434:TYR:O	2:CB:493:ASN:ND2	2.27	0.66
50:S2:981:A:H2'	50:S2:982:G:C8	2.31	0.66
50:S2:1405:A:H2'	50:S2:1406:G:O4'	1.95	0.66
50:S2:1601:A:OP2	50:S2:1636:G:N2	2.29	0.66
52:SB:105:LEU:HD23	52:SB:109:LYS:HG2	1.78	0.66
61:SK:74:GLU:OE1	61:SK:77:GLN:NE2	2.27	0.66
65:SP:98:ASN:ND2	65:SP:120:SER:OG	2.22	0.66
2:CB:305:MET:HE3	2:CB:336:LEU:HD22	1.76	0.66
3:L5:935:A:O2'	3:L5:936:C:OP1	2.13	0.66
3:L5:1439:C:OP2	11:LF:34:ARG:NH2	2.28	0.66
50:S2:140:C:O2'	50:S2:143:U:OP1	2.14	0.66
2:CB:750:GLN:HB3	2:CB:781:MET:HE2	1.76	0.66
12:LG:81:ASN:ND2	12:LG:237:TRP:O	2.29	0.66
13:LH:91:LYS:HG2	13:LH:145:ILE:HG12	1.75	0.66
48:Lz:194:LEU:HD21	48:Lz:200:ASN:HB2	1.77	0.66
50:S2:67:C:OP2	57:SG:172:LYS:NZ	2.28	0.66
50:S2:1737:G:O6	50:S2:1797:U:O4	2.13	0.66
57:SG:37:ALA:HA	57:SG:49:VAL:HA	1.77	0.66
65:SP:130:ARG:HD2	65:SP:131:PRO:HD2	1.78	0.66
66:SQ:38:PRO:HB2	66:SQ:40:GLU:CD	2.20	0.66
74:SY:57:VAL:HB	74:SY:60:PHE:CZ	2.27	0.66
2:CB:322:LYS:O	2:CB:342:ARG:NH1	2.28	0.66
3:L5:4896:G:H2'	3:L5:4897:G:C8	2.31	0.66
52:SB:110:MET:HB2	52:SB:213:ARG:HH12	1.59	0.66
65:SP:76:VAL:O	65:SP:95:GLY:N	2.23	0.66
3:L5:493:G:H1	3:L5:660:A:H2	0.89	0.66
50:S2:150:A:H62	50:S2:168:C:H42	1.42	0.66
50:S2:126:G:O4'	57:SG:195:LYS:NZ	2.29	0.66
3:L5:295:A:OP2	45:Lo:39:ARG:NH1	2.28	0.66
50:S2:149:A:H3'	50:S2:150:A:H8	1.61	0.66
50:S2:690:G:N2	50:S2:690:G:OP2	2.29	0.66
50:S2:1013:U:OP1	50:S2:1129:G:O2'	2.12	0.66
50:S2:1030:A:H2'	50:S2:1031:A:H8	1.61	0.66
51:SA:222:VAL:HG13	51:SA:223:THR:HG23	1.76	0.66
63:SN:86:GLU:O	63:SN:90:HIS:ND1	2.29	0.66
72:SW:57:ARG:HH21	77:Sb:26:GLN:NE2	1.94	0.66
73:SX:141:PRO:HD2	73:SX:142:ARG:HH21	1.60	0.66
78:Sc:14:VAL:HG13	78:Sc:53:GLY:H	1.61	0.66
81:Sg:14:HIS:HB2	81:Sg:37:ASP:OD2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:Sg:282:GLU:OE2	81:Sg:285:GLN:NE2	2.28	0.66
1:5:22:CYS:N	1:5:77:HIS:O	2.27	0.66
3:L5:209:U:H5	3:L5:233:U:C4	2.14	0.66
3:L5:469:C:N3	10:LE:105:ARG:NH2	2.41	0.66
3:L5:494:U:H2'	3:L5:495:C:C6	2.31	0.66
3:L5:2017:A:O2'	3:L5:2018:C:H6	1.79	0.66
41:Lk:54:GLU:OE2	41:Lk:58:GLN:NE2	2.23	0.66
50:S2:606:G:N3	80:Se:58:ASN:ND2	2.44	0.66
52:SB:143:THR:HG23	52:SB:205:TYR:CE2	2.31	0.66
56:SF:78:MET:H	56:SF:159:ARG:HH22	1.41	0.66
3:L5:3598:C:H2'	3:L5:3599:A:C8	2.31	0.65
3:L5:4063:U:H2'	3:L5:4064:C:C2	2.31	0.65
3:L5:4518:A:OP2	7:LB:258:HIS:N	2.28	0.65
15:LJ:34:THR:HG21	48:Lz:72:GLN:HG3	1.78	0.65
50:S2:527:C:O3'	60:SJ:121:LYS:NZ	2.25	0.65
2:CB:10:ARG:NE	2:CB:463:ASP:OD1	2.27	0.65
2:CB:663:THR:OG1	2:CB:703:ASP:OD1	2.14	0.65
2:CB:820:LEU:HD23	2:CB:831:PRO:HG3	1.77	0.65
3:L5:2906:G:H1'	3:L5:2908:U:H1'	1.78	0.65
3:L5:4863:G:OP1	13:LH:21:LYS:NZ	2.29	0.65
50:S2:1470:C:OP2	56:SF:59:LYS:NZ	2.28	0.65
50:S2:1743:G:H21	50:S2:1791:A:H62	1.42	0.65
51:SA:89:LYS:HZ2	51:SA:201:LEU:HG	1.60	0.65
54:SD:101:GLN:HG3	54:SD:126:ILE:HD11	1.78	0.65
3:L5:1399:G:H2'	3:L5:1400:G:H8	1.62	0.65
3:L5:3619:G:O2'	22:LR:82:LYS:NZ	2.30	0.65
3:L5:4162:C:H6	12:LG:73:ARG:HH21	1.42	0.65
7:LB:90:VAL:HG23	7:LB:104:THR:HG22	1.77	0.65
36:Lf:33:VAL:HG23	36:Lf:38:GLU:HB2	1.79	0.65
50:S2:158:A:H2'	50:S2:159:A:O4'	1.96	0.65
50:S2:1194:A:OP1	73:SX:60:LYS:NZ	2.28	0.65
50:S2:1407:U:H2'	50:S2:1408:U:C6	2.31	0.65
52:SB:103:MET:HB3	52:SB:215:VAL:HG12	1.78	0.65
52:SB:123:ALA:HB2	52:SB:165:ARG:HG2	1.77	0.65
57:SG:7:PHE:HD1	57:SG:113:ILE:HB	1.61	0.65
64:SO:103:ASN:ND2	64:SO:140:THR:O	2.16	0.65
81:Sg:26:GLN:HG2	81:Sg:75:GLY:HA3	1.77	0.65
3:L5:4146:G:H2'	3:L5:4147:G:C8	2.31	0.65
50:S2:201:C:H3'	50:S2:202:G:H21	1.60	0.65
52:SB:110:MET:HA	52:SB:113:MET:HB2	1.78	0.65
57:SG:2:LYS:HB3	57:SG:15:LEU:HD11	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SR:25:GLY:H	67:SR:31:ASN:HD21	1.44	0.65
3:L5:3951:G:H1	3:L5:4060:U:H3	1.44	0.65
50:S2:1533:A:P	56:SF:164:ARG:HH12	2.20	0.65
50:S2:1835:A:N1	76:Sa:80:HIS:ND1	2.44	0.65
66:SQ:47:LEU:HD13	66:SQ:81:ILE:HG21	1.79	0.65
3:L5:989:U:O2	3:L5:1064:G:C6	2.50	0.65
35:Le:45:VAL:HG12	35:Le:52:GLN:HB3	1.78	0.65
50:S2:928:G:H1	50:S2:1013:U:H3	1.42	0.65
50:S2:1650:A:H5''	66:SQ:139:ALA:HB2	1.78	0.65
65:SP:29:SER:H	65:SP:32:GLN:NE2	1.93	0.65
3:L5:512:U:O4	3:L5:647:G:O6	2.15	0.65
3:L5:1100:U:O4	3:L5:1194:G:O6	2.15	0.65
3:L5:2102:G:N2	3:L5:2103:G:O6	2.29	0.65
7:LB:80:GLU:OE1	7:LB:323:TYR:OH	2.14	0.65
16:LL:54:PRO:HB2	16:LL:97:SER:HB3	1.79	0.65
48:Lz:124:LEU:HB3	48:Lz:128:LEU:HD13	1.77	0.65
50:S2:63:U:O2'	50:S2:170:A:N3	2.29	0.65
57:SG:7:PHE:HB2	57:SG:113:ILE:HD13	1.79	0.65
57:SG:176:ILE:HG21	57:SG:179:LEU:HD22	1.79	0.65
58:SH:8:ILE:HG12	58:SH:28:LEU:HD11	1.79	0.65
65:SP:110:GLU:HB2	68:SS:113:ARG:HH22	1.60	0.65
73:SX:77:ASN:O	73:SX:79:LYS:N	2.29	0.65
3:L5:1270:A:H1'	3:L5:1440:U:H1'	1.78	0.65
25:LU:65:ARG:HD2	25:LU:67:LYS:H	1.60	0.65
49:S:210:ARG:NH1	50:S2:631:U:OP2	2.29	0.65
50:S2:1192:U:OP2	73:SX:119:ARG:NH2	2.30	0.65
54:SD:67:ARG:NH2	61:SK:92:ALA:O	2.30	0.65
81:Sg:66:VAL:HA	81:Sg:82:SER:HA	1.79	0.65
81:Sg:192:THR:OG1	81:Sg:213:ASP:OD2	2.15	0.65
3:L5:1173:G:N2	3:L5:1188:C:O2	2.29	0.65
22:LR:164:SER:HA	22:LR:167:LYS:HG3	1.79	0.65
32:Lb:23:LYS:HG2	32:Lb:24:PRO:HD2	1.79	0.65
50:S2:693:A:C5	50:S2:739:C:H4'	2.32	0.65
51:SA:214:GLU:CG	67:SR:84:TYR:CE1	2.77	0.65
8:LC:245:HIS:ND1	47:Lr:13:CYS:SG	2.70	0.65
16:LL:205:GLN:NE2	16:LL:208:GLU:OE2	2.30	0.65
50:S2:549:C:H2'	50:S2:550:C:C6	2.32	0.65
53:SC:84:PHE:HA	71:SV:15:ARG:NH1	2.12	0.65
67:SR:111:PHE:HD1	67:SR:114:LEU:HD21	1.61	0.65
1:5:91:LEU:HA	1:5:101:LEU:HA	1.78	0.64
3:L5:184:U:H1'	3:L5:254:G:H22	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:278:G:H5'	18:LN:8:GLN:HE22	1.62	0.64
10:LE:254:ASP:HA	10:LE:257:ILE:HG22	1.79	0.64
49:S:195:ARG:HA	49:S:204:LEU:HD21	1.77	0.64
50:S2:1588:A:H2'	50:S2:1589:A:C8	2.32	0.64
54:SD:44:THR:HG22	54:SD:45:ARG:H	1.61	0.64
68:SS:28:PHE:HD1	68:SS:38:ARG:HE	1.46	0.64
78:Sc:32:VAL:O	78:Sc:41:SER:OG	2.14	0.64
3:L5:741:C:H42	3:L5:923:C:H42	1.43	0.64
3:L5:2822:G:OP2	22:LR:21:LYS:NZ	2.30	0.64
3:L5:4541:G:N2	3:L5:4544:A:OP2	2.28	0.64
17:LM:90:ARG:HA	17:LM:93:LYS:HG2	1.77	0.64
3:L5:990:C:N3	3:L5:1051:G:O2'	2.30	0.64
17:LM:25:VAL:CG1	17:LM:38:VAL:HG13	2.27	0.64
39:Li:23:LYS:HD2	39:Li:24:PRO:HD2	1.77	0.64
53:SC:201:GLY:N	53:SC:221:ASP:OD2	2.29	0.64
74:SY:10:ARG:NH1	74:SY:26:ASP:OD1	2.30	0.64
2:CB:348:ASP:O	2:CB:352:GLN:NE2	2.31	0.64
22:LR:177:LEU:HA	22:LR:180:LYS:HD2	1.78	0.64
50:S2:943:U:H2'	50:S2:944:A:H8	1.61	0.64
50:S2:1279:C:H2'	50:S2:1280:G:C8	2.33	0.64
81:Sg:215:GLN:NE2	81:Sg:231:ASP:OD1	2.30	0.64
3:L5:4265:U:OP1	9:LD:12:TYR:OH	2.15	0.64
18:LN:135:ILE:HG23	18:LN:142:ILE:HD13	1.80	0.64
48:Lz:60:ARG:HB2	48:Lz:152:LYS:HZ1	1.62	0.64
57:SG:161:PRO:HA	57:SG:171:THR:HA	1.79	0.64
59:SI:70:GLU:OE2	62:SL:21:LYS:NZ	2.30	0.64
3:L5:182:G:N2	3:L5:255:C:O2	2.30	0.64
3:L5:1070:G:O2'	3:L5:1071:C:O5'	2.16	0.64
3:L5:4946:U:HO2'	36:Lf:2:SER:N	1.96	0.64
50:S2:146:G:O6	57:SG:137:ARG:NH2	2.30	0.64
50:S2:996:A:H2'	50:S2:997:A:H8	1.60	0.64
50:S2:1435:C:O2'	50:S2:1437:C:N4	2.31	0.64
50:S2:1755:C:C4	50:S2:1756:C:N4	2.65	0.64
53:SC:166:ARG:HB2	53:SC:248:TYR:CD1	2.33	0.64
3:L5:261:G:H2'	3:L5:262:G:C8	2.32	0.64
48:Lz:171:HIS:H	48:Lz:174:MET:HE1	1.62	0.64
48:Lz:212:LYS:HD2	48:Lz:213:PRO:HD2	1.79	0.64
50:S2:71:G:O6	57:SG:170:ARG:NH1	2.26	0.64
60:SJ:66:LYS:HA	60:SJ:66:LYS:HE3	1.80	0.64
65:SP:43:ARG:HE	65:SP:47:ARG:HH12	1.45	0.64
42:Ll:20:ASN:ND2	42:Ll:42:ARG:O	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SY:37:LYS:HA	74:SY:40:ILE:HD12	1.79	0.64
3:L5:493:G:C2	3:L5:660:A:H2	2.14	0.64
3:L5:700:G:H2'	3:L5:701:G:H8	1.62	0.64
3:L5:1654:G:N2	3:L5:1678:C:OP1	2.31	0.64
3:L5:3951:G:N2	3:L5:4060:U:O2	2.31	0.64
3:L5:3951:G:N1	3:L5:4060:U:N3	2.46	0.64
15:LJ:55:TYR:HA	15:LJ:64:ARG:HB3	1.79	0.64
24:LT:119:ALA:O	24:LT:123:GLY:N	2.29	0.64
30:LZ:76:ASN:OD1	30:LZ:77:TYR:N	2.31	0.64
57:SG:188:LYS:HA	57:SG:191:ARG:HD3	1.80	0.64
68:SS:44:VAL:O	68:SS:48:ALA:N	2.31	0.64
81:Sg:152:SER:OG	81:Sg:168:CYS:SG	2.40	0.64
81:Sg:228:TYR:HE2	81:Sg:230:LEU:HB3	1.63	0.64
2:CB:776:VAL:HG23	2:CB:777:ALA:H	1.63	0.64
3:L5:1705:G:H2'	3:L5:1706:A:O4'	1.98	0.64
50:S2:1432:U:O2'	50:S2:1437:C:O2	2.12	0.64
51:SA:4:ALA:HB3	71:SV:79:VAL:HG12	1.80	0.64
64:SO:28:PHE:HZ	76:Sa:58:VAL:HG21	1.62	0.64
67:SR:29:HIS:HA	67:SR:32:LYS:NZ	2.13	0.64
50:S2:617:G:OP2	73:SX:68:LYS:NZ	2.31	0.63
50:S2:1016:U:O2	77:Sb:30:SER:OG	2.16	0.63
6:LA:101:VAL:HG22	6:LA:165:VAL:HG22	1.80	0.63
13:LH:4:ILE:HG13	23:LS:144:GLN:OE1	1.97	0.63
29:LY:31:SER:HA	29:LY:48:PRO:HA	1.79	0.63
50:S2:1566:G:N2	50:S2:1569:A:OP2	2.31	0.63
50:S2:1603:G:O4'	68:SS:38:ARG:NH2	2.31	0.63
51:SA:6:ASP:HA	51:SA:9:GLN:HG2	1.78	0.63
3:L5:382:G:N1	3:L5:385:A:OP2	2.31	0.63
3:L5:2108:G:H2'	3:L5:2109:G:C8	2.33	0.63
47:Lr:47:LYS:HB2	47:Lr:102:TYR:CZ	2.34	0.63
50:S2:1239:U:OP1	65:SP:127:LYS:NZ	2.25	0.63
56:SF:27:ASP:O	56:SF:29:GLN:NE2	2.22	0.63
3:L5:267:G:H2'	3:L5:268:G:H8	1.64	0.63
3:L5:2017:A:O2'	3:L5:2018:C:O5'	2.16	0.63
10:LE:222:LEU:HB3	10:LE:237:LYS:HD2	1.80	0.63
48:Lz:24:LYS:NZ	48:Lz:210:MET:SD	2.71	0.63
50:S2:39:A:H5'	60:SJ:7:TRP:NE1	2.07	0.63
52:SB:136:ARG:HB3	52:SB:216:LYS:HB3	1.81	0.63
68:SS:86:ARG:HE	68:SS:106:LYS:HE3	1.64	0.63
1:5:123:ILE:HG23	1:5:133:ILE:HD11	1.80	0.63
2:CB:397:TYR:HB2	2:CB:494:MET:HE1	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:626:GLN:HG2	2:CB:631:ARG:HB2	1.80	0.63
7:LB:117:ARG:HA	7:LB:177:LYS:HD2	1.81	0.63
10:LE:43:HIS:CG	10:LE:44:CYS:H	2.17	0.63
45:Lo:99:ARG:HG3	45:Lo:102:GLN:HE21	1.63	0.63
55:SE:66:MET:O	55:SE:68:ARG:HG2	1.99	0.63
61:SK:90:VAL:HG23	61:SK:94:LEU:HD12	1.81	0.63
3:L5:2478:C:H2'	3:L5:2479:G:H5'	1.80	0.63
50:S2:375:U:H2'	50:S2:376:A:C8	2.34	0.63
50:S2:434:G:OP2	59:SI:25:ARG:NH1	2.31	0.63
57:SG:7:PHE:HD2	57:SG:10:THR:HG22	1.63	0.63
3:L5:4279:A:H5'	3:L5:4281:A:H1'	1.81	0.63
22:LR:182:GLU:HG3	22:LR:185:ILE:HD11	1.81	0.63
50:S2:145:G:H2'	50:S2:146:G:C8	2.33	0.63
51:SA:198:MET:HG2	51:SA:200:ASP:H	1.62	0.63
75:SZ:102:LYS:HA	75:SZ:107:VAL:HG12	1.80	0.63
2:CB:737:GLN:HE22	2:CB:739:ARG:NH1	1.97	0.63
6:LA:36:GLU:OE1	6:LA:163:ARG:NH1	2.31	0.63
12:LG:145:THR:O	12:LG:149:ASN:ND2	2.32	0.63
50:S2:1406:G:H2'	50:S2:1407:U:C6	2.33	0.63
50:S2:1566:G:OP2	69:ST:102:ARG:NH1	2.31	0.63
55:SE:247:THR:HG22	55:SE:250:GLU:HG2	1.81	0.63
67:SR:103:LYS:NZ	67:SR:112:GLY:O	2.25	0.63
75:SZ:67:LEU:HD13	75:SZ:72:VAL:HG21	1.79	0.63
2:CB:221:TRP:CG	2:CB:340:MET:HG3	2.34	0.63
3:L5:194:C:O2	29:LY:121:ARG:NH2	2.31	0.63
9:LD:233:PRO:HA	9:LD:236:MET:HE2	1.81	0.63
10:LE:261:ILE:HG13	10:LE:267:LEU:HD23	1.81	0.63
57:SG:149:LYS:HD3	57:SG:150:GLU:H	1.64	0.63
61:SK:85:LEU:HD12	61:SK:86:PRO:HD2	1.80	0.63
76:Sa:44:ILE:HG22	76:Sa:67:LEU:HB2	1.79	0.63
50:S2:140:C:H1'	50:S2:143:U:H5'	1.80	0.62
50:S2:223:C:H2'	50:S2:224:A:C8	2.33	0.62
54:SD:35:SER:OG	54:SD:51:LEU:O	2.16	0.62
56:SF:187:SER:HB3	56:SF:190:ILE:HG22	1.81	0.62
72:SW:14:ILE:HG22	72:SW:25:VAL:HG11	1.80	0.62
77:Sb:81:ARG:NH1	77:Sb:84:HIS:HA	2.14	0.62
1:5:55:LYS:NZ	3:L5:4543:G:O6	2.32	0.62
8:LC:361:LEU:HA	8:LC:364:LYS:HG2	1.79	0.62
17:LM:24:LEU:HD21	17:LM:86:TRP:HE1	1.64	0.62
18:LN:124:ASP:HB3	18:LN:127:TYR:H	1.64	0.62
48:Lz:71:GLN:HA	48:Lz:74:CYS:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SQ:8:GLN:OE1	66:SQ:27:ARG:NH1	2.32	0.62
2:CB:323:LEU:HG	2:CB:328:LYS:HG2	1.80	0.62
3:L5:1811:G:H4'	32:Lb:60:ASN:HD22	1.63	0.62
48:Lz:34:LEU:HD21	48:Lz:204:LEU:HD23	1.80	0.62
50:S2:544:G:H2'	50:S2:545:A:H8	1.64	0.62
50:S2:1152:U:O2'	72:SW:19:LYS:NZ	2.28	0.62
58:SH:166:VAL:HG13	58:SH:169:LYS:HG3	1.81	0.62
59:SI:137:LEU:O	59:SI:139:LYS:NZ	2.33	0.62
75:SZ:54:THR:O	75:SZ:58:LEU:N	2.26	0.62
3:L5:408:A:O2'	3:L5:411:G:OP2	2.14	0.62
7:LB:289:GLN:HB3	7:LB:301:ASN:HB2	1.80	0.62
50:S2:150:A:H62	50:S2:168:C:N4	1.97	0.62
50:S2:558:G:O2'	50:S2:559:G:OP2	2.16	0.62
50:S2:1122:A:H1'	52:SB:146:ARG:HH22	1.64	0.62
52:SB:118:GLN:HB2	52:SB:143:THR:HB	1.81	0.62
57:SG:116:LYS:NZ	57:SG:120:ASP:HA	2.13	0.62
58:SH:133:LEU:HD11	58:SH:176:VAL:HG13	1.81	0.62
75:SZ:65:TYR:HA	75:SZ:111:ARG:HH21	1.65	0.62
81:Sg:201:SER:OG	81:Sg:203:ASP:O	2.17	0.62
3:L5:4773:C:N3	3:L5:4861:G:N1	2.34	0.62
10:LE:216:TYR:OH	10:LE:246:ARG:HD2	1.99	0.62
50:S2:399:C:O4'	73:SX:11:ARG:NH2	2.32	0.62
58:SH:31:GLU:N	58:SH:31:GLU:OE1	2.31	0.62
58:SH:37:LYS:O	58:SH:41:ARG:NE	2.31	0.62
76:Sa:44:ILE:HG13	76:Sa:45:VAL:HG13	1.80	0.62
81:Sg:104:HIS:CE1	81:Sg:130:LYS:HG2	2.34	0.62
2:CB:813:VAL:HG23	2:CB:814:PHE:H	1.64	0.62
59:SI:76:THR:HG22	59:SI:108:PRO:HG2	1.81	0.62
65:SP:92:SER:HB2	65:SP:107:ILE:HD13	1.82	0.62
3:L5:461:G:H2'	3:L5:462:G:H8	1.65	0.62
3:L5:3689:G:O2'	3:L5:3818:U:OP2	2.18	0.62
3:L5:4875:G:H2'	23:LS:169:THR:HG22	1.80	0.62
25:LU:56:LEU:HD12	25:LU:61:VAL:HG23	1.82	0.62
50:S2:694:G:O6	50:S2:737:G:N2	2.33	0.62
50:S2:1288:U:O4	50:S2:1311:C:N3	2.33	0.62
55:SE:100:ARG:HH12	55:SE:122:LYS:HA	1.64	0.62
65:SP:29:SER:OG	65:SP:30:TYR:N	2.32	0.62
74:SY:79:LEU:HD21	74:SY:83:LYS:HE2	1.81	0.62
2:CB:248:GLU:HA	2:CB:251:LYS:HD2	1.81	0.62
3:L5:3614:G:O2'	3:L5:3615:G:OP1	2.16	0.62
3:L5:4093:G:H22	3:L5:4114:C:N4	1.93	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S:210:ARG:NH2	50:S2:624:C:O2'	2.32	0.62
58:SH:11:PRO:HG2	58:SH:46:THR:HG22	1.82	0.62
3:L5:4771:C:H2'	3:L5:4772:C:C6	2.35	0.62
8:LC:209:ILE:HB	8:LC:229:LEU:HD13	1.80	0.62
73:SX:101:LEU:HB3	73:SX:123:VAL:HG23	1.81	0.62
3:L5:907:C:H2'	3:L5:908:G:H8	1.65	0.62
3:L5:4405:G:OP2	14:LI:7:ARG:NH1	2.33	0.62
3:L5:4518:A:OP2	7:LB:258:HIS:ND1	2.33	0.62
8:LC:143:ARG:NH1	8:LC:145:GLU:OE1	2.32	0.62
50:S2:672:A:N6	50:S2:1027:A:OP1	2.31	0.62
50:S2:1736:G:H2'	50:S2:1737:G:H8	1.65	0.62
51:SA:89:LYS:CG	67:SR:81:ARG:NH1	2.59	0.62
53:SC:98:LEU:O	53:SC:101:SER:OG	2.15	0.62
53:SC:203:GLY:N	53:SC:221:ASP:OD1	2.31	0.62
57:SG:25:ARG:HA	57:SG:28:TYR:CD2	2.31	0.62
57:SG:233:ARG:HG2	57:SG:234:LEU:HD12	1.81	0.62
81:Sg:11:LEU:HB2	81:Sg:307:VAL:HB	1.81	0.62
3:L5:1253:G:HO2'	3:L5:1257:A:H62	1.48	0.61
3:L5:1820:C:O2'	3:L5:1821:G:N7	2.28	0.61
3:L5:2495:U:H2'	3:L5:2496:G:C8	2.34	0.61
3:L5:4940:C:OP1	10:LE:156:ARG:NH2	2.31	0.61
29:LY:127:GLN:NE2	29:LY:131:GLU:OE1	2.33	0.61
35:Le:92:ASN:ND2	35:Le:119:ALA:O	2.33	0.61
52:SB:138:PHE:O	52:SB:213:ARG:N	2.33	0.61
52:SB:146:ARG:H	52:SB:149:GLN:HG3	1.65	0.61
55:SE:79:ASP:HB3	55:SE:82:TYR:HB2	1.81	0.61
56:SF:32:ASP:OD1	56:SF:34:SER:OG	2.14	0.61
71:SV:68:SER:O	71:SV:72:LEU:HG	2.00	0.61
74:SY:6:THR:HG23	74:SY:28:LEU:HD13	1.82	0.61
74:SY:97:TYR:CE2	74:SY:99:LYS:HB2	2.35	0.61
78:Sc:15:THR:HG22	78:Sc:16:LYS:H	1.64	0.61
81:Sg:255:SER:OG	81:Sg:257:LYS:NZ	2.33	0.61
3:L5:1404:G:N7	3:L5:1408:G:C2	2.68	0.61
3:L5:5024:C:N4	3:L5:5028:G:H21	1.91	0.61
50:S2:953:C:H2'	50:S2:954:U:C6	2.35	0.61
70:SU:26:SER:OG	70:SU:28:ASN:OD1	2.18	0.61
81:Sg:118:ARG:HA	81:Sg:134:THR:HG23	1.82	0.61
81:Sg:166:VAL:HG23	81:Sg:176:VAL:HG22	1.82	0.61
2:CB:276:SER:OG	2:CB:278:THR:O	2.18	0.61
3:L5:262:G:H2'	3:L5:263:G:C8	2.35	0.61
3:L5:730:G:C6	11:LF:73:ARG:HD3	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1994:C:H2'	3:L5:1995:G:C8	2.34	0.61
3:L5:3594:C:H2'	3:L5:3597:G:N3	2.15	0.61
16:LL:93:THR:HG23	38:Lh:116:LEU:HA	1.83	0.61
50:S2:1757:G:O6	50:S2:1758:G:N2	2.33	0.61
57:SG:57:ASP:OD1	57:SG:58:LYS:N	2.33	0.61
61:SK:15:LEU:HD13	61:SK:21:MET:HE1	1.82	0.61
66:SQ:53:GLU:HG2	66:SQ:54:PRO:HD3	1.81	0.61
3:L5:2902:G:N7	3:L5:2903:G:N2	2.48	0.61
21:LQ:122:THR:OG1	21:LQ:124:ASP:OD1	2.17	0.61
45:Lo:99:ARG:HE	45:Lo:102:GLN:HG2	1.64	0.61
50:S2:852:G:H1'	62:SL:97:ARG:HH22	1.66	0.61
51:SA:85:ARG:HE	67:SR:81:ARG:HD2	1.64	0.61
56:SF:100:ILE:HD13	56:SF:178:ILE:HG21	1.82	0.61
59:SI:36:THR:HG21	59:SI:179:PRO:HB2	1.82	0.61
68:SS:67:VAL:HG23	68:SS:70:ILE:HD11	1.82	0.61
3:L5:2573:A:H62	3:L5:2761:U:H3	1.48	0.61
50:S2:656:G:H1'	53:SC:227:ARG:HH22	1.64	0.61
50:S2:1115:U:H1'	50:S2:1116:C:H3'	1.83	0.61
50:S2:1435:C:H41	70:SU:92:HIS:CE1	2.18	0.61
58:SH:49:LYS:HB3	58:SH:61:ILE:HD11	1.82	0.61
69:ST:37:VAL:HG22	69:ST:39:LEU:H	1.65	0.61
69:ST:108:GLU:HG3	69:ST:113:VAL:HG13	1.82	0.61
70:SU:18:HIS:HB3	70:SU:117:ALA:HB2	1.82	0.61
72:SW:57:ARG:NH2	77:Sb:26:GLN:HE21	1.99	0.61
73:SX:87:ASN:HB3	73:SX:134:TYR:CE1	2.36	0.61
81:Sg:278:SER:HB2	81:Sg:280:LYS:NZ	2.15	0.61
2:CB:149:GLU:HG3	2:CB:368:ARG:HH12	1.65	0.61
18:LN:193:ARG:O	18:LN:197:THR:HG23	2.01	0.61
50:S2:920:A:OP1	72:SW:57:ARG:NH1	2.33	0.61
50:S2:1501:C:H2'	50:S2:1502:C:H6	1.63	0.61
53:SC:166:ARG:HB2	53:SC:248:TYR:HD1	1.66	0.61
62:SL:80:MET:HG2	62:SL:122:ILE:HD11	1.82	0.61
3:L5:261:G:H2'	3:L5:262:G:H8	1.66	0.61
3:L5:1709:C:N3	3:L5:1716:G:N1	2.49	0.61
3:L5:4194:U:O2'	14:LI:116:ARG:NH1	2.33	0.61
50:S2:369:C:N4	50:S2:1730:U:O3'	2.34	0.61
50:S2:1260:A:C2	50:S2:1620:A:C4	2.89	0.61
50:S2:1527:C:OP1	66:SQ:142:GLN:NE2	2.33	0.61
50:S2:1650:A:C4	50:S2:1675:A:N6	2.68	0.61
62:SL:120:VAL:HG12	62:SL:145:VAL:HG11	1.83	0.61
3:L5:4291:G:H5'	3:L5:4293:U:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LB:139:ASP:OD1	7:LB:140:GLU:N	2.34	0.61
41:Lk:49:ASP:HB3	41:Lk:52:LYS:HB2	1.82	0.61
50:S2:901:G:H2'	50:S2:902:G:H8	1.65	0.61
50:S2:948:C:H2'	50:S2:949:G:H8	1.64	0.61
50:S2:1373:C:OP1	67:SR:7:LYS:N	2.34	0.61
61:SK:31:LYS:HE2	61:SK:39:ASN:H	1.65	0.61
68:SS:34:LYS:NZ	68:SS:104:ASP:OD1	2.33	0.61
3:L5:184:U:O2	3:L5:253:G:C2	2.54	0.61
3:L5:1709:C:H42	3:L5:1716:G:N2	1.98	0.61
74:SY:54:VAL:HG11	74:SY:76:TYR:C	2.25	0.61
3:L5:4989:U:H1'	3:L5:4990:C:C5	2.35	0.61
50:S2:388:U:H2'	50:S2:389:A:H8	1.66	0.61
51:SA:122:LEU:HB3	51:SA:144:THR:HG22	1.81	0.61
57:SG:160:LYS:HD3	57:SG:161:PRO:HD2	1.83	0.61
58:SH:134:VAL:HG22	58:SH:137:SER:HB2	1.83	0.61
62:SL:136:LYS:C	62:SL:139:ARG:HH12	2.08	0.61
68:SS:45:LEU:HG	68:SS:50:ILE:HD11	1.83	0.61
2:CB:161:ASP:OD1	2:CB:162:ARG:N	2.34	0.60
50:S2:55:U:OP1	50:S2:451:G:N1	2.31	0.60
50:S2:57:U:O2'	50:S2:499:G:N3	2.33	0.60
50:S2:846:G:OP2	55:SE:108:ARG:NH2	2.23	0.60
50:S2:1298:G:H4'	65:SP:78:THR:HA	1.83	0.60
73:SX:71:ARG:HH21	73:SX:82:THR:HB	1.66	0.60
2:CB:361:PRO:HA	2:CB:364:ALA:HB3	1.81	0.60
3:L5:1202:C:H3'	3:L5:1203:G:C5'	2.31	0.60
25:LU:62:THR:OG1	25:LU:73:THR:OG1	2.19	0.60
50:S2:190:G:OP1	59:SI:149:TYR:OH	2.09	0.60
54:SD:67:ARG:HH22	61:SK:96:ARG:N	1.99	0.60
76:Sa:45:VAL:HG11	76:Sa:64:LEU:HD23	1.82	0.60
2:CB:26:ALA:HB3	2:CB:32:LYS:HD3	1.83	0.60
2:CB:124:GLY:HA3	2:CB:358:LEU:HD12	1.83	0.60
2:CB:155:LEU:HB3	2:CB:212:VAL:HG12	1.83	0.60
3:L5:1190:C:H2'	3:L5:1191:C:C6	2.37	0.60
3:L5:4872:G:C2	19:LO:203:VAL:HG23	2.37	0.60
33:Lc:20:LEU:O	33:Lc:24:SER:HB3	2.00	0.60
44:Ln:1:MET:HG3	50:S2:1706:G:H5'	1.82	0.60
49:S:219:GLY:HA3	54:SD:116:ARG:HG2	1.81	0.60
50:S2:878:G:C6	50:S2:909:G:C6	2.89	0.60
50:S2:1546:G:H21	50:S2:1670:C:H1'	1.66	0.60
55:SE:191:ARG:HD2	55:SE:245:ARG:HE	1.66	0.60
56:SF:77:MET:HE2	56:SF:83:ASN:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SF:179:ASN:HA	56:SF:182:LYS:HZ3	1.65	0.60
74:SY:10:ARG:HH12	74:SY:26:ASP:CG	2.10	0.60
2:CB:597:ASN:ND2	2:CB:720:GLN:HE22	1.99	0.60
3:L5:218:A:H1'	3:L5:219:G:C8	2.37	0.60
3:L5:4098:A:H2'	3:L5:4099:G:H4'	1.82	0.60
12:LG:99:ALA:HB1	12:LG:136:LEU:HD11	1.84	0.60
35:Le:35:TRP:NE1	35:Le:56:PRO:CG	2.64	0.60
50:S2:158:A:C2	50:S2:463:C:O2	2.55	0.60
50:S2:544:G:H2'	50:S2:545:A:C8	2.35	0.60
50:S2:1403:C:OP2	50:S2:1405:A:N6	2.32	0.60
2:CB:416:VAL:N	2:CB:468:ASN:O	2.35	0.60
3:L5:1921:C:C4	17:LM:17:PHE:HB3	2.37	0.60
3:L5:2658:G:N2	3:L5:2676:A:OP2	2.28	0.60
21:LQ:88:ASP:OD1	21:LQ:89:ASP:N	2.34	0.60
50:S2:906:U:H2'	50:S2:907:G:H8	1.67	0.60
50:S2:1308:U:H2'	50:S2:1309:C:H6	1.66	0.60
58:SH:12:ASN:HB2	58:SH:16:PRO:HD2	1.83	0.60
65:SP:108:LYS:H	65:SP:111:MET:HE2	1.65	0.60
2:CB:348:ASP:OD1	2:CB:352:GLN:NE2	2.34	0.60
3:L5:1704:C:O2	3:L5:2097:U:N3	2.35	0.60
15:LJ:95:ARG:NH1	15:LJ:96:LYS:HE2	2.17	0.60
50:S2:181:A:OP2	50:S2:182:C:O2'	2.17	0.60
50:S2:793:G:H2'	50:S2:794:A:C8	2.37	0.60
29:LY:88:GLU:HG3	29:LY:94:THR:HG22	1.84	0.60
49:S:218:TRP:CE3	54:SD:115:VAL:HG11	2.37	0.60
50:S2:199:C:O2'	50:S2:201:C:OP2	2.20	0.60
50:S2:1144:A:H5'	50:S2:1355:C:H41	1.67	0.60
50:S2:1618:C:H4'	65:SP:50:ARG:HH21	1.67	0.60
51:SA:123:VAL:HG22	51:SA:145:ILE:HB	1.82	0.60
8:LC:13:GLU:N	8:LC:155:GLU:OE1	2.32	0.60
9:LD:69:ILE:HD13	24:LT:31:MET:HG3	1.84	0.60
50:S2:901:G:H2'	50:S2:902:G:C8	2.37	0.60
53:SC:169:TYR:OH	53:SC:175:GLY:O	2.18	0.60
56:SF:67:PRO:HG2	56:SF:70:GLU:HB2	1.81	0.60
65:SP:85:ILE:HD12	65:SP:89:MET:HE3	1.83	0.60
67:SR:28:PHE:HZ	67:SR:48:ASN:HB2	1.66	0.60
75:SZ:92:LEU:HD22	75:SZ:97:ILE:HG13	1.83	0.60
2:CB:307:PHE:HE1	2:CB:331:GLU:HG2	1.66	0.60
3:L5:450:G:H1	3:L5:1297:U:H3	1.49	0.60
12:LG:137:ARG:HD3	12:LG:146:LEU:HD11	1.84	0.60
14:LI:184:MET:HG2	14:LI:190:LEU:HD13	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:LM:25:VAL:HG13	17:LM:38:VAL:HG13	1.82	0.60
50:S2:582:U:H1'	74:SY:33:ALA:HB2	1.83	0.60
53:SC:116:THR:HG23	53:SC:118:ALA:H	1.66	0.60
57:SG:28:TYR:HE1	57:SG:104:ALA:HA	1.67	0.60
62:SL:58:LYS:HE2	62:SL:59:LYS:HE3	1.82	0.60
74:SY:29:HIS:NE2	74:SY:69:THR:OG1	2.31	0.60
3:L5:280:G:H5''	18:LN:14:LYS:HE2	1.83	0.60
3:L5:309:C:O2	39:Li:32:ARG:NH1	2.31	0.60
3:L5:1378:C:N4	16:LL:159:ASN:O	2.33	0.60
3:L5:1754:U:H2'	3:L5:1755:C:C6	2.36	0.60
23:LS:85:ASP:OD1	23:LS:123:SER:OG	2.14	0.60
27:LW:47:ARG:HG3	27:LW:47:ARG:HH11	1.67	0.60
37:Lg:49:CYS:SG	37:Lg:85:LYS:NZ	2.64	0.60
50:S2:140:C:H42	50:S2:313:A:H61	0.71	0.60
50:S2:534:G:H2'	50:S2:535:G:C8	2.35	0.60
2:CB:44:GLY:HA2	2:CB:47:ALA:HB3	1.84	0.59
3:L5:238:C:OP2	29:LY:45:ARG:NH2	2.35	0.59
50:S2:3:C:O2	60:SJ:18:ARG:NH1	2.35	0.59
50:S2:1216:C:N4	50:S2:1342:U:OP1	2.31	0.59
3:L5:169:G:O6	3:L5:170:C:N4	2.34	0.59
3:L5:700:G:H2'	3:L5:701:G:C8	2.37	0.59
58:SH:148:LEU:HB2	72:SW:49:GLU:OE1	2.02	0.59
3:L5:513:U:N3	3:L5:516:C:OP2	2.36	0.59
50:S2:78:C:H1'	57:SG:175:LYS:HE3	1.83	0.59
50:S2:1354:G:N2	50:S2:1357:A:OP2	2.28	0.59
50:S2:1736:G:H2'	50:S2:1737:G:C8	2.37	0.59
56:SF:30:ILE:HD12	56:SF:36:GLN:HA	1.83	0.59
56:SF:107:ASN:HB3	56:SF:110:GLN:HG2	1.83	0.59
70:SU:58:THR:OG1	70:SU:84:ILE:O	2.19	0.59
71:SV:78:ILE:O	71:SV:78:ILE:HG22	2.01	0.59
3:L5:143:C:OP2	12:LG:111:LYS:NZ	2.36	0.59
3:L5:699:C:H2'	3:L5:700:G:H8	1.67	0.59
7:LB:290:GLY:O	7:LB:301:ASN:ND2	2.36	0.59
42:Ll:27:ILE:HG22	42:Ll:33:ASN:HD21	1.67	0.59
50:S2:886:A:C6	50:S2:901:G:C4	2.89	0.59
56:SF:95:HIS:O	56:SF:99:ILE:HG12	2.02	0.59
57:SG:226:GLU:O	57:SG:230:LYS:N	2.35	0.59
68:SS:64:VAL:O	68:SS:68:ILE:HG12	2.03	0.59
2:CB:682:GLY:HA2	2:CB:722:ILE:HG23	1.84	0.59
3:L5:756:G:H2'	3:L5:757:G:H8	1.68	0.59
3:L5:2574:G:N7	3:L5:2760:G:N2	2.48	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3734:U:H2'	3:L5:3735:G:H5'	1.85	0.59
52:SB:110:MET:SD	52:SB:213:ARG:NH2	2.74	0.59
56:SF:123:GLU:HA	56:SF:140:ASP:HA	1.83	0.59
68:SS:86:ARG:NE	68:SS:89:ASP:OD2	2.35	0.59
69:ST:133:ARG:HH11	69:ST:133:ARG:HG3	1.67	0.59
3:L5:1328:G:O2'	3:L5:2349:A:OP1	2.19	0.59
3:L5:1766:A:OP2	3:L5:1768:C:O2'	2.19	0.59
50:S2:1565:C:N4	50:S2:1566:G:O6	2.36	0.59
56:SF:201:LYS:HA	56:SF:204:ARG:NE	2.18	0.59
3:L5:1252:C:N4	3:L5:1253:G:N3	2.49	0.59
3:L5:3951:G:N2	3:L5:4061:G:O6	2.34	0.59
7:LB:289:GLN:HB3	7:LB:301:ASN:HD22	1.66	0.59
25:LU:111:GLU:OE2	25:LU:113:ARG:NE	2.26	0.59
49:S:213:SER:OG	49:S:214:GLY:N	2.33	0.59
50:S2:1093:A:O2'	72:SW:9:ASP:OD1	2.18	0.59
50:S2:1454:A:O4'	67:SR:3:ARG:NH2	2.33	0.59
52:SB:180:ASP:OD1	52:SB:181:LEU:N	2.36	0.59
57:SG:71:GLY:H	57:SG:98:ARG:NH1	2.00	0.59
58:SH:145:ARG:NH1	72:SW:51:GLU:OE1	2.33	0.59
81:Sg:65:PHE:HB2	81:Sg:83:TRP:HD1	1.68	0.59
2:CB:747:VAL:HG12	2:CB:812:CYS:HB3	1.83	0.59
3:L5:257:C:H2'	3:L5:258:G:C8	2.38	0.59
3:L5:4728:U:OP2	7:LB:132:LYS:NZ	2.35	0.59
50:S2:162:C:H2'	50:S2:163:U:O4'	2.03	0.59
50:S2:963:A:H2'	50:S2:964:A:C8	2.37	0.59
63:SN:25:TRP:NE1	77:Sb:83:GLN:OE1	2.35	0.59
74:SY:54:VAL:HG11	74:SY:76:TYR:O	2.01	0.59
81:Sg:84:ASP:HB2	81:Sg:86:THR:HG23	1.85	0.59
3:L5:1317:U:H2'	3:L5:1318:C:C6	2.38	0.59
50:S2:171:A:OP2	57:SG:137:ARG:NH2	2.36	0.59
50:S2:536:A:H3'	50:S2:537:C:H5''	1.85	0.59
50:S2:1413:G:H2'	50:S2:1414:A:H8	1.67	0.59
64:SO:101:GLY:HA3	64:SO:134:PRO:HD2	1.83	0.59
66:SQ:86:GLN:HE22	66:SQ:122:ALA:HA	1.66	0.59
74:SY:20:ARG:HH22	74:SY:22:GLN:HB3	1.67	0.59
2:CB:221:TRP:HB3	2:CB:341:ARG:HA	1.83	0.59
3:L5:4112:C:N4	3:L5:4113:U:C4	2.71	0.59
3:L5:4322:G:N2	3:L5:4325:A:OP2	2.34	0.59
3:L5:4580:U:O2'	7:LB:182:GLU:OE2	2.08	0.59
18:LN:123:GLU:HG3	18:LN:124:ASP:H	1.67	0.59
23:LS:127:MET:HE1	24:LT:155:PRO:HA	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:106:C:OP1	50:S2:431:G:O2'	2.21	0.59
50:S2:1102:G:H2'	50:S2:1103:C:C6	2.38	0.59
55:SE:143:ASP:OD1	55:SE:144:ALA:N	2.33	0.59
55:SE:161:GLN:O	55:SE:170:THR:OG1	2.20	0.59
57:SG:216:ARG:C	57:SG:218:LYS:H	2.09	0.59
60:SJ:42:GLU:OE1	60:SJ:42:GLU:N	2.30	0.59
3:L5:2083:C:OP2	21:LQ:14:ARG:NH2	2.36	0.58
49:S:206:HIS:ND1	54:SD:148:LYS:HE3	2.18	0.58
50:S2:496:C:H5'	55:SE:29:PRO:HA	1.84	0.58
50:S2:511:U:H2'	50:S2:512:A:H8	1.68	0.58
50:S2:550:C:H2'	50:S2:551:U:C5	2.38	0.58
50:S2:1436:C:O2'	50:S2:1438:A:O5'	2.20	0.58
54:SD:119:CYS:SG	54:SD:120:TYR:N	2.75	0.58
55:SE:127:ARG:HH21	55:SE:142:HIS:HB2	1.68	0.58
74:SY:78:SER:OG	74:SY:80:ASP:OD1	2.17	0.58
11:LF:226:HIS:ND1	11:LF:228:VAL:HG22	2.18	0.58
30:LZ:10:VAL:O	30:LZ:83:THR:OG1	2.17	0.58
3:L5:499:G:H2'	3:L5:499:G:N3	2.18	0.58
3:L5:1339:U:H2'	3:L5:1340:C:C6	2.39	0.58
3:L5:2469:C:H5	3:L5:2471:G:H1	1.48	0.58
3:L5:2848:G:O2'	3:L5:3838:U:O4	2.19	0.58
7:LB:147:GLU:OE1	7:LB:198:ARG:NH1	2.34	0.58
42:L1:28:ARG:HA	42:L1:33:ASN:HD22	1.68	0.58
50:S2:575:A:OP1	74:SY:93:ARG:NE	2.28	0.58
50:S2:963:A:H2'	50:S2:964:A:H8	1.68	0.58
58:SH:169:LYS:O	58:SH:172:THR:OG1	2.18	0.58
60:SJ:129:LEU:HG	60:SJ:135:ILE:HD11	1.85	0.58
67:SR:32:LYS:HD2	67:SR:47:ARG:HH21	1.69	0.58
67:SR:87:GLU:H	67:SR:87:GLU:CD	2.12	0.58
3:L5:1942:A:H2'	3:L5:1943:A:C8	2.38	0.58
18:LN:200:LEU:HD22	18:LN:204:ARG:HD3	1.85	0.58
23:LS:85:ASP:HB3	23:LS:90:THR:HG22	1.85	0.58
30:LZ:123:LYS:O	30:LZ:124:THR:OG1	2.19	0.58
50:S2:497:C:H2'	50:S2:498:C:C6	2.37	0.58
50:S2:1222:G:H2'	50:S2:1223:A:C8	2.39	0.58
54:SD:29:LEU:HD22	54:SD:58:VAL:HG12	1.86	0.58
56:SF:124:ASP:O	56:SF:139:VAL:N	2.32	0.58
6:LA:116:LEU:HB2	6:LA:126:LEU:HB2	1.86	0.58
11:LF:157:ARG:HE	11:LF:248:ASN:HB2	1.66	0.58
17:LM:24:LEU:HD11	17:LM:86:TRP:CD1	2.38	0.58
32:Lb:55:LYS:O	32:Lb:58:GLN:NE2	2.24	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1388:A:H61	54:SD:161:GLY:HA3	1.68	0.58
63:SN:63:VAL:O	63:SN:67:THR:OG1	2.16	0.58
69:ST:129:ARG:HH12	69:ST:133:ARG:NH1	2.01	0.58
81:Sg:46:THR:O	81:Sg:48:ASP:N	2.37	0.58
2:CB:152:LYS:HA	2:CB:203:ILE:HD11	1.84	0.58
2:CB:256:MET:HA	2:CB:259:LYS:HG2	1.86	0.58
3:L5:75:G:O2'	16:LL:101:ARG:NH1	2.36	0.58
13:LH:61:TRP:CZ3	17:LM:33:GLN:HG3	2.38	0.58
50:S2:639:C:H2'	50:S2:640:A:H8	1.67	0.58
50:S2:1447:G:H4'	70:SU:33:GLU:OE2	2.04	0.58
56:SF:108:PRO:HA	56:SF:111:VAL:HG12	1.85	0.58
3:L5:914:U:O2'	3:L5:915:A:OP2	2.19	0.58
3:L5:1194:G:H2'	3:L5:1195:G:C8	2.39	0.58
8:LC:10:VAL:HG21	8:LC:20:LYS:HE3	1.85	0.58
48:Lz:68:LEU:HD21	48:Lz:85:MET:HE3	1.85	0.58
52:SB:136:ARG:O	52:SB:215:VAL:HA	2.03	0.58
57:SG:138:ALA:HA	57:SG:176:ILE:HD11	1.86	0.58
57:SG:222:GLU:HA	57:SG:225:GLN:HB2	1.85	0.58
72:SW:30:CYS:SG	72:SW:31:SER:N	2.76	0.58
81:Sg:219:TRP:HA	81:Sg:227:LEU:HB2	1.86	0.58
2:CB:395:MET:HA	2:CB:486:THR:HA	1.86	0.58
3:L5:741:C:N4	3:L5:923:C:H42	2.00	0.58
3:L5:2573:A:N7	3:L5:2761:U:O4	2.37	0.58
3:L5:4896:G:H2'	3:L5:4897:G:H8	1.68	0.58
6:LA:80:GLU:HB2	6:LA:170:ALA:HA	1.86	0.58
9:LD:86:TYR:OH	9:LD:247:ILE:HD11	2.04	0.58
15:LJ:3:GLN:O	15:LJ:7:GLU:N	2.34	0.58
16:LL:48:PRO:HB2	38:Lh:120:ALA:HB2	1.84	0.58
50:S2:1394:G:H21	50:S2:1475:G:H1'	1.68	0.58
50:S2:1454:A:H5''	67:SR:3:ARG:HD3	1.85	0.58
50:S2:1865:C:OP1	76:Sa:87:ARG:HD3	2.03	0.58
70:SU:51:LYS:HB2	70:SU:90:ASP:HB3	1.85	0.58
3:L5:2758:G:O2'	3:L5:2765:A:N3	2.30	0.58
50:S2:17:C:H2'	50:S2:18:C:C6	2.39	0.58
50:S2:107:A:H2'	50:S2:108:G:C8	2.39	0.58
50:S2:527:C:H2'	50:S2:528:A:C8	2.38	0.58
50:S2:1123:C:H5'	52:SB:149:GLN:HE21	1.69	0.58
52:SB:225:LEU:HD12	52:SB:229:MET:HE3	1.85	0.58
57:SG:102:VAL:HG21	57:SG:109:LEU:HD12	1.86	0.58
3:L5:2098:G:H2'	3:L5:2099:G:H8	1.68	0.58
3:L5:2486:G:O6	3:L5:2493:G:O6	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3951:G:H2'	3:L5:3952:A:O4'	2.03	0.58
15:LJ:120:ASP:HB3	15:LJ:123:ILE:HG12	1.86	0.58
50:S2:1595:U:H2'	50:S2:1596:U:C6	2.39	0.58
67:SR:29:HIS:HA	67:SR:32:LYS:HZ3	1.69	0.58
3:L5:209:U:C5	3:L5:233:U:C4	2.92	0.57
3:L5:1428:U:H5''	21:LQ:42:THR:OG1	2.04	0.57
3:L5:1697:G:H21	3:L5:2084:C:P	2.25	0.57
3:L5:2705:G:H22	3:L5:2710:C:H5	1.52	0.57
17:LM:131:GLN:HB3	19:LO:177:LEU:HD21	1.86	0.57
24:LT:108:ARG:O	24:LT:112:ASN:HB2	2.04	0.57
36:Lf:106:TYR:HB2	36:Lf:107:PRO:HD3	1.86	0.57
50:S2:16:G:H2'	50:S2:17:C:C6	2.38	0.57
50:S2:536:A:H3'	50:S2:537:C:C5'	2.33	0.57
50:S2:1486:A:OP2	54:SD:151:LYS:NZ	2.29	0.57
57:SG:180:VAL:HG13	57:SG:185:LEU:HD21	1.86	0.57
3:L5:138:G:H2'	3:L5:139:G:C8	2.36	0.57
49:S:192:GLU:OE2	49:S:192:GLU:N	2.33	0.57
50:S2:374:G:OP1	62:SL:59:LYS:NZ	2.35	0.57
50:S2:969:U:H4'	50:S2:971:G:H1'	1.85	0.57
50:S2:1598:G:H3'	75:SZ:80:ARG:HH21	1.68	0.57
56:SF:194:ASP:HA	56:SF:197:GLU:HB2	1.86	0.57
58:SH:91:HIS:ND1	58:SH:169:LYS:HE3	2.19	0.57
2:CB:45:ILE:HG23	2:CB:46:ILE:H	1.69	0.57
3:L5:4742:G:H2'	3:L5:4743:G:C8	2.39	0.57
29:LY:50:ARG:HD2	29:LY:51:LYS:H	1.68	0.57
50:S2:104:A:H62	50:S2:356:C:H5	1.50	0.57
50:S2:521:A:OP1	60:SJ:45:ARG:NH1	2.33	0.57
50:S2:748:C:H42	50:S2:795:A:N6	2.02	0.57
50:S2:1244:U:H2'	50:S2:1245:G:H8	1.70	0.57
50:S2:1410:C:H2'	50:S2:1411:G:C8	2.39	0.57
50:S2:1453:C:H5''	67:SR:49:LYS:HD2	1.85	0.57
50:S2:1503:C:H2'	50:S2:1504:U:C6	2.38	0.57
53:SC:84:PHE:HA	71:SV:15:ARG:HH12	1.68	0.57
73:SX:93:PHE:CE2	73:SX:133:LEU:HB3	2.38	0.57
2:CB:347:GLY:O	2:CB:351:LEU:HD13	2.04	0.57
3:L5:1734:G:N2	3:L5:1735:U:O4	2.30	0.57
3:L5:2249:C:H2'	3:L5:2250:C:C5	2.39	0.57
3:L5:4093:G:C5	3:L5:4095:G:N2	2.72	0.57
9:LD:193:GLU:OE2	9:LD:197:LYS:NZ	2.38	0.57
35:Le:35:TRP:CE2	35:Le:56:PRO:CD	2.87	0.57
45:Lo:99:ARG:NE	45:Lo:102:GLN:HG2	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:156:G:H1'	57:SG:56:ASN:ND2	2.19	0.57
50:S2:417:C:O2'	50:S2:418:A:H5''	2.04	0.57
50:S2:1297:U:O2'	50:S2:1301:A:N6	2.35	0.57
50:S2:1714:U:H2'	50:S2:1715:A:C8	2.38	0.57
67:SR:45:LYS:O	67:SR:49:LYS:HG2	2.04	0.57
75:SZ:61:GLU:HA	75:SZ:64:ASN:OD1	2.04	0.57
2:CB:39:LEU:HD22	2:CB:351:LEU:HD11	1.86	0.57
2:CB:428:ARG:NH2	2:CB:434:TYR:OH	2.37	0.57
2:CB:831:PRO:HA	2:CB:834:VAL:HG22	1.86	0.57
3:L5:2298:U:H5''	8:LC:204:ARG:HH22	1.69	0.57
3:L5:3680:U:H5''	6:LA:54:ARG:HH21	1.69	0.57
50:S2:945:U:H2'	50:S2:946:U:C6	2.40	0.57
54:SD:35:SER:HA	54:SD:99:ILE:HD11	1.85	0.57
55:SE:99:PHE:HE1	55:SE:113:ARG:HE	1.51	0.57
60:SJ:120:ALA:HB1	60:SJ:125:HIS:CD2	2.39	0.57
69:ST:44:GLU:N	69:ST:44:GLU:OE1	2.38	0.57
74:SY:54:VAL:CG1	74:SY:76:TYR:H	2.17	0.57
17:LM:86:TRP:C	17:LM:88:ALA:H	2.12	0.57
25:LU:100:LEU:HD12	25:LU:112:LEU:HB3	1.86	0.57
48:Lz:87:ILE:HG22	48:Lz:91:LYS:NZ	2.19	0.57
50:S2:1158:G:O3'	72:SW:76:SER:OG	2.18	0.57
50:S2:1620:A:H8	65:SP:40:ARG:NH2	2.02	0.57
50:S2:1700:C:O2	50:S2:1834:A:N6	2.37	0.57
53:SC:248:TYR:OH	71:SV:12:TYR:O	2.23	0.57
54:SD:106:ARG:HG3	54:SD:175:VAL:HG22	1.85	0.57
56:SF:91:ARG:HH21	75:SZ:103:HIS:CE1	2.23	0.57
74:SY:20:ARG:HD3	74:SY:76:TYR:CZ	2.40	0.57
81:Sg:47:ARG:NH2	81:Sg:52:TYR:OH	2.38	0.57
3:L5:1502:G:OP1	21:LQ:65:ARG:NH1	2.37	0.57
3:L5:4093:G:C2	3:L5:4114:C:C4	2.85	0.57
12:LG:58:PRO:HD2	12:LG:61:ILE:HD12	1.86	0.57
15:LJ:63:ARG:O	15:LJ:66:GLU:HG2	2.05	0.57
22:LR:3:MET:HE3	22:LR:5:ARG:HB3	1.86	0.57
22:LR:39:GLN:HG2	22:LR:42:ARG:NH2	2.20	0.57
48:Lz:60:ARG:HB2	48:Lz:152:LYS:NZ	2.20	0.57
50:S2:962:A:H5''	64:SO:66:ARG:HD3	1.85	0.57
50:S2:1230:C:OP1	68:SS:130:ARG:NH2	2.36	0.57
50:S2:1289:U:H2'	50:S2:1290:G:C8	2.40	0.57
50:S2:1504:U:H2'	50:S2:1505:U:C6	2.39	0.57
50:S2:1517:G:H2'	50:S2:1518:C:O4'	2.04	0.57
60:SJ:26:ASP:OD1	60:SJ:27:GLN:N	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SK:65:ARG:NH2	79:Sd:21:CYS:O	2.37	0.57
66:SQ:23:ALA:HB2	66:SQ:70:VAL:HG12	1.87	0.57
3:L5:947:C:OP1	8:LC:336:ARG:NH1	2.38	0.57
3:L5:1095:A:H2'	3:L5:1096:C:H6	1.70	0.57
3:L5:1702:C:H4'	8:LC:308:LYS:HD2	1.87	0.57
3:L5:2000:G:N2	3:L5:2000:G:OP2	2.36	0.57
50:S2:1279:C:H2'	50:S2:1280:G:H8	1.69	0.57
74:SY:54:VAL:CG1	74:SY:76:TYR:CB	2.79	0.57
2:CB:89:ILE:HB	2:CB:93:LYS:HD3	1.87	0.57
3:L5:1698:C:H3'	3:L5:1699:A:O4'	2.04	0.57
8:LC:8:ILE:HD11	8:LC:257:PHE:CZ	2.40	0.57
10:LE:141:ARG:HB2	10:LE:191:GLN:HE21	1.68	0.57
12:LG:177:MET:HE2	12:LG:177:MET:HA	1.86	0.57
18:LN:116:LEU:HD22	18:LN:135:ILE:HD11	1.86	0.57
29:LY:83:GLU:OE1	29:LY:84:ARG:NH2	2.37	0.57
49:S:214:GLY:HA3	54:SD:143:ARG:HH22	1.69	0.57
50:S2:681:U:H4'	73:SX:9:THR:HG22	1.85	0.57
50:S2:1536:G:H2'	50:S2:1537:A:H8	1.70	0.57
50:S2:1633:A:H2'	50:S2:1634:A:C8	2.40	0.57
50:S2:1683:C:H2'	50:S2:1684:C:H6	1.69	0.57
50:S2:1756:C:N4	50:S2:1757:G:H21	1.95	0.57
51:SA:62:ALA:HA	51:SA:65:ILE:HG22	1.86	0.57
54:SD:67:ARG:NH2	61:SK:96:ARG:H	2.03	0.57
55:SE:258:ALA:O	55:SE:262:SER:OG	2.19	0.57
74:SY:103:SER:C	74:SY:107:ARG:HE	2.13	0.57
50:S2:696:G:H21	50:S2:737:G:N2	2.03	0.57
50:S2:1142:G:N2	50:S2:1145:A:OP2	2.38	0.57
50:S2:1342:U:O2'	50:S2:1483:A:N1	2.34	0.57
50:S2:1538:C:H4'	69:ST:45:LEU:HD12	1.85	0.57
54:SD:223:ILE:HG13	54:SD:223:ILE:O	2.05	0.57
56:SF:55:ARG:HH22	66:SQ:124:PRO:HD2	1.70	0.57
81:Sg:278:SER:HB2	81:Sg:280:LYS:HZ2	1.68	0.57
2:CB:306:ASN:HB3	2:CB:308:LYS:NZ	2.20	0.56
3:L5:325:U:H2'	3:L5:326:C:C6	2.40	0.56
3:L5:406:C:O2'	3:L5:407:A:OP1	2.23	0.56
3:L5:1299:G:H2'	3:L5:1300:G:C8	2.39	0.56
3:L5:2262:G:OP2	47:Lr:98:ARG:NH1	2.38	0.56
3:L5:2480:G:H2'	3:L5:2481:G:H8	1.69	0.56
3:L5:2904:U:H3'	3:L5:2904:U:OP2	2.05	0.56
3:L5:4670:C:O2'	3:L5:4672:A:OP2	2.21	0.56
31:La:87:ARG:HG3	31:La:120:GLN:HE22	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Lg:45:ALA:HB3	37:Lg:82:MET:HE2	1.87	0.56
50:S2:90:G:H2'	50:S2:91:A:O4'	2.05	0.56
50:S2:495:U:OP1	55:SE:49:ARG:NH2	2.38	0.56
50:S2:1105:G:O3'	77:Sb:69:GLY:HA3	2.05	0.56
50:S2:1372:U:OP1	50:S2:1385:G:N2	2.34	0.56
50:S2:1386:A:OP2	54:SD:160:SER:OG	2.19	0.56
50:S2:1661:A:H8	79:Sd:14:PHE:HB2	1.70	0.56
54:SD:45:ARG:NH2	54:SD:85:GLU:HB3	2.19	0.56
57:SG:32:MET:HG2	57:SG:100:CYS:HB2	1.86	0.56
57:SG:219:GLU:O	57:SG:223:LYS:HG2	2.05	0.56
72:SW:94:LEU:HD21	72:SW:102:ILE:HG13	1.86	0.56
7:LB:302:ASN:O	7:LB:304:SER:N	2.36	0.56
18:LN:124:ASP:OD1	18:LN:125:SER:N	2.37	0.56
30:LZ:36:ARG:HH12	30:LZ:74:VAL:HG13	1.70	0.56
50:S2:1729:U:H3	50:S2:1805:G:H1	1.51	0.56
51:SA:163:CYS:SG	51:SA:164:ASN:N	2.74	0.56
58:SH:80:VAL:HG23	58:SH:92:VAL:HB	1.87	0.56
74:SY:56:PHE:O	74:SY:74:MET:N	2.34	0.56
76:Sa:4:LYS:HD3	76:Sa:5:ARG:NH1	2.20	0.56
1:5:17:THR:HG22	1:5:83:ASN:N	2.20	0.56
2:CB:37:ASP:HB3	2:CB:55:ARG:CZ	2.35	0.56
2:CB:279:SER:N	2:CB:283:LYS:O	2.36	0.56
3:L5:468:U:N3	3:L5:686:A:N1	2.54	0.56
3:L5:2008:U:H1'	3:L5:2011:C:H5	1.70	0.56
3:L5:2474:G:N2	3:L5:2502:G:O2'	2.38	0.56
12:LG:180:PRO:HA	12:LG:227:ASN:OD1	2.06	0.56
12:LG:218:LEU:O	12:LG:222:ILE:HG12	2.04	0.56
21:LQ:187:LYS:O	21:LQ:188:ASN:ND2	2.38	0.56
50:S2:294:U:OP1	62:SL:36:TYR:OH	2.21	0.56
50:S2:748:C:N4	50:S2:795:A:N6	2.53	0.56
50:S2:1217:A:H2'	50:S2:1218:C:C6	2.41	0.56
50:S2:1227:G:C2	50:S2:1228:A:C8	2.93	0.56
50:S2:1737:G:H2'	50:S2:1738:C:C6	2.40	0.56
52:SB:97:LEU:HB3	52:SB:232:HIS:CE1	2.39	0.56
56:SF:100:ILE:HG13	56:SF:104:THR:HG22	1.86	0.56
60:SJ:33:GLY:HA3	80:Se:38:TYR:CD1	2.40	0.56
61:SK:49:MET:HE2	61:SK:69:TRP:CG	2.40	0.56
61:SK:80:ARG:NH2	61:SK:89:ILE:O	2.31	0.56
64:SO:18:GLY:N	64:SO:88:LEU:O	2.39	0.56
64:SO:98:ARG:HG2	64:SO:133:THR:HA	1.86	0.56
65:SP:49:LEU:HD23	65:SP:54:HIS:HE1	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:ST:38:LYS:NZ	69:ST:41:LYS:O	2.38	0.56
78:Sc:22:GLY:O	78:Sc:26:GLN:NE2	2.35	0.56
3:L5:505:G:OP1	3:L5:505:G:H4'	2.04	0.56
3:L5:5025:C:H2'	3:L5:5028:G:H1'	1.88	0.56
3:L5:5053:U:H3'	3:L5:5054:C:C6	2.41	0.56
18:LN:123:GLU:O	18:LN:124:ASP:HB2	2.05	0.56
50:S2:975:G:O2'	64:SO:49:GLY:O	2.21	0.56
52:SB:179:ASN:HD21	52:SB:183:GLU:HB3	1.69	0.56
57:SG:224:ARG:HA	57:SG:224:ARG:NH1	2.20	0.56
60:SJ:108:ARG:NH1	60:SJ:149:VAL:O	2.39	0.56
69:ST:39:LEU:HB3	69:ST:43:LYS:HZ2	1.70	0.56
81:Sg:89:LEU:O	81:Sg:98:THR:OG1	2.16	0.56
3:L5:418:A:C2	5:L8:17:A:H1'	2.41	0.56
3:L5:433:A:C2	3:L5:3867:A:H4'	2.41	0.56
3:L5:1812:C:H5''	32:Lb:56:LYS:HE3	1.88	0.56
3:L5:1933:G:H2'	3:L5:1934:A:C8	2.40	0.56
5:L8:51:U:OP2	42:Ll:21:ARG:NH2	2.37	0.56
15:LJ:166:PHE:CD2	15:LJ:174:ILE:HD11	2.41	0.56
34:Ld:59:THR:OG1	34:Ld:104:THR:OG1	2.15	0.56
50:S2:1743:G:N2	50:S2:1791:A:H62	2.02	0.56
50:S2:1797:U:H2'	50:S2:1798:C:C6	2.40	0.56
51:SA:214:GLU:OE2	67:SR:84:TYR:CZ	2.59	0.56
52:SB:67:PHE:CE2	64:SO:48:SER:HB2	2.41	0.56
67:SR:29:HIS:O	67:SR:33:ARG:HG2	2.06	0.56
69:ST:53:PHE:CE1	69:ST:103:VAL:HG22	2.41	0.56
69:ST:129:ARG:HG2	69:ST:129:ARG:HH11	1.70	0.56
3:L5:1174:G:N2	3:L5:1187:G:N7	2.54	0.56
3:L5:2267:U:OP1	47:Lr:37:SER:OG	2.16	0.56
3:L5:2640:G:H2'	3:L5:2641:A:C8	2.40	0.56
5:L8:84:A:H5'	5:L8:86:U:H4'	1.88	0.56
7:LB:165:HIS:HB3	7:LB:180:LEU:HD23	1.86	0.56
45:Lo:36:GLN:OE1	45:Lo:40:ARG:NH1	2.39	0.56
48:Lz:87:ILE:C	48:Lz:91:LYS:HZ3	2.11	0.56
50:S2:876:C:H2'	50:S2:877:C:C6	2.39	0.56
50:S2:1392:U:H2'	50:S2:1393:G:C8	2.40	0.56
50:S2:1589:A:H2'	50:S2:1590:C:C6	2.41	0.56
50:S2:1748:G:O6	50:S2:1786:U:O4	2.23	0.56
70:SU:21:ARG:HD2	70:SU:88:LEU:HD12	1.87	0.56
78:Sc:60:GLU:O	78:Sc:63:ARG:NH1	2.38	0.56
2:CB:91:GLN:HE22	2:CB:359:PRO:HA	1.70	0.56
2:CB:689:GLU:O	2:CB:730:TYR:OH	2.11	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1979:A:C6	3:L5:1980:U:H5	2.24	0.56
6:LA:70:LYS:HE3	6:LA:72:ARG:HH21	1.70	0.56
33:Lc:13:SER:HB3	33:Lc:17:ARG:HD2	1.88	0.56
48:Lz:64:SER:OG	48:Lz:106:LYS:O	2.21	0.56
50:S2:1563:G:H5''	69:ST:115:LYS:HZ2	1.70	0.56
50:S2:1780:G:H3'	50:S2:1781:A:C8	2.40	0.56
51:SA:184:ARG:HH21	51:SA:191:ARG:HG2	1.70	0.56
54:SD:39:VAL:HG12	54:SD:48:ILE:HD12	1.87	0.56
54:SD:215:ASP:HB2	54:SD:217:ILE:HD11	1.88	0.56
60:SJ:140:GLN:OE1	60:SJ:141:VAL:N	2.38	0.56
74:SY:41:ARG:HH12	74:SY:94:HIS:CG	2.24	0.56
81:Sg:237:ASN:N	81:Sg:251:ALA:O	2.32	0.56
1:5:17:THR:HB	1:5:81:VAL:O	2.05	0.56
3:L5:1762:C:H5''	3:L5:1764:G:H1	1.70	0.56
3:L5:3873:G:H2'	3:L5:3874:G:C8	2.39	0.56
8:LC:141:GLY:O	8:LC:204:ARG:NH1	2.38	0.56
50:S2:1617:G:N2	50:S2:1619:A:H3'	2.20	0.56
56:SF:118:ASN:ND2	56:SF:181:ALA:O	2.38	0.56
58:SH:154:ILE:HB	58:SH:185:VAL:HG22	1.87	0.56
58:SH:180:LEU:HD12	58:SH:181:THR:HG23	1.88	0.56
63:SN:5:HIS:HB3	63:SN:117:LEU:HD22	1.88	0.56
64:SO:119:LEU:O	64:SO:122:SER:OG	2.23	0.56
72:SW:49:GLU:HB2	72:SW:64:ASN:HD22	1.71	0.56
77:Sb:31:TYR:HB3	77:Sb:81:ARG:HH21	1.71	0.56
3:L5:505:G:H3'	3:L5:506:C:H6	1.71	0.56
3:L5:1070:G:HO2'	3:L5:1071:C:P	2.27	0.56
3:L5:1296:G:O2'	3:L5:1297:U:O4'	2.23	0.56
3:L5:3606:U:H2'	3:L5:3607:U:C6	2.41	0.56
5:L8:141:C:H2'	5:L8:142:U:C6	2.41	0.56
7:LB:103:LYS:HG2	7:LB:149:ASP:OD1	2.06	0.56
40:Lj:64:MET:O	40:Lj:68:LYS:HG2	2.06	0.56
50:S2:1134:G:H2'	50:S2:1135:C:C6	2.41	0.56
51:SA:214:GLU:CD	67:SR:84:TYR:CZ	2.83	0.56
69:ST:21:PHE:HA	69:ST:24:LYS:NZ	2.21	0.56
81:Sg:17:TRP:NE1	81:Sg:303:THR:HG1	2.04	0.56
81:Sg:120:ILE:HB	81:Sg:132:TRP:HB2	1.87	0.56
3:L5:1096:C:H2'	3:L5:1097:C:C6	2.41	0.56
3:L5:1443:A:C2	3:L5:2104:G:H1'	2.37	0.56
3:L5:4260:U:H2'	3:L5:4261:C:C6	2.41	0.56
3:L5:4882:U:OP1	17:LM:117:LYS:NZ	2.39	0.56
6:LA:142:GLU:O	6:LA:143:THR:OG1	2.24	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LI:146:GLU:N	14:LI:146:GLU:OE1	2.39	0.56
34:Ld:67:ARG:HH11	34:Ld:67:ARG:HG3	1.71	0.56
50:S2:213:G:C6	50:S2:214:U:N3	2.74	0.56
50:S2:860:G:N2	72:SW:107:SER:OG	2.38	0.56
50:S2:1255:G:OP1	50:S2:1256:G:O2'	2.13	0.56
50:S2:1284:A:N6	50:S2:1313:A:O2'	2.39	0.56
50:S2:1466:G:OP1	67:SR:5:ARG:NH2	2.39	0.56
56:SF:144:LEU:O	56:SF:148:ASN:ND2	2.39	0.56
66:SQ:53:GLU:OE2	66:SQ:85:ARG:NH2	2.40	0.56
2:CB:256:MET:HE3	2:CB:260:LEU:HD22	1.88	0.55
2:CB:354:ILE:O	2:CB:358:LEU:HB2	2.05	0.55
2:CB:580:ARG:HB2	2:CB:741:MET:HG3	1.87	0.55
8:LC:317:ASN:HD22	8:LC:320:LYS:HD3	1.69	0.55
9:LD:223:PHE:HB3	9:LD:226:TYR:HB2	1.87	0.55
15:LJ:35:ARG:HD2	15:LJ:123:ILE:HA	1.88	0.55
56:SF:35:LEU:O	56:SF:39:ILE:HG12	2.06	0.55
56:SF:165:ASN:OD1	56:SF:167:LYS:N	2.33	0.55
57:SG:7:PHE:CE2	57:SG:9:ALA:HB3	2.41	0.55
59:SI:124:LYS:HG3	59:SI:125:LYS:HG2	1.89	0.55
65:SP:17:TYR:CD2	65:SP:18:ARG:HG3	2.41	0.55
66:SQ:109:LYS:HE2	66:SQ:120:LEU:HD11	1.88	0.55
74:SY:54:VAL:HG12	74:SY:76:TYR:H	1.70	0.55
81:Sg:7:LEU:HA	81:Sg:309:VAL:O	2.05	0.55
1:5:17:THR:HG21	1:5:81:VAL:O	2.05	0.55
2:CB:372:LEU:O	2:CB:494:MET:HB3	2.05	0.55
3:L5:1890:G:OP2	3:L5:1890:G:N2	2.35	0.55
3:L5:2018:C:H2'	3:L5:2019:C:H6	1.72	0.55
3:L5:2091:C:C2	3:L5:2094:G:H4'	2.41	0.55
8:LC:60:HIS:HA	8:LC:92:PHE:HE1	1.71	0.55
8:LC:144:ILE:HG13	8:LC:144:ILE:O	2.06	0.55
16:LL:47:ALA:HB3	16:LL:48:PRO:HD3	1.87	0.55
24:LT:115:LYS:HD3	24:LT:126:VAL:HG11	1.87	0.55
30:LZ:41:ALA:HB2	30:LZ:77:TYR:HE1	1.71	0.55
50:S2:557:U:H5'	50:S2:558:G:C8	2.41	0.55
50:S2:1740:C:OP1	59:SI:44:HIS:ND1	2.39	0.55
50:S2:1758:G:N2	50:S2:1773:C:H1'	2.21	0.55
55:SE:121:TYR:HA	55:SE:163:ASP:HA	1.88	0.55
58:SH:11:PRO:HD3	58:SH:44:ASN:HD21	1.71	0.55
61:SK:60:GLU:HG3	61:SK:69:TRP:HD1	1.71	0.55
62:SL:118:ARG:HH11	62:SL:118:ARG:HG2	1.71	0.55
70:SU:25:THR:OG1	70:SU:111:GLU:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SZ:73:VAL:HG21	75:SZ:88:LEU:HD21	1.88	0.55
81:Sg:193:GLY:N	81:Sg:213:ASP:OD2	2.38	0.55
3:L5:1082:C:HO2'	3:L5:1083:U:H6	1.52	0.55
7:LB:353:VAL:HG12	7:LB:355:THR:HG23	1.88	0.55
9:LD:292:GLU:HG2	9:LD:293:ARG:HH22	1.71	0.55
11:LF:203:GLU:OE1	11:LF:203:GLU:N	2.34	0.55
15:LJ:174:ILE:HG22	15:LJ:175:LEU:N	2.21	0.55
27:LW:44:ARG:HG2	27:LW:44:ARG:HH11	1.70	0.55
45:Lo:2:VAL:N	45:Lo:90:HIS:O	2.40	0.55
50:S2:1452:A:H4'	50:S2:1453:C:O5'	2.06	0.55
52:SB:168:MET:HG2	52:SB:197:ILE:HD11	1.89	0.55
55:SE:188:ASN:HB3	55:SE:191:ARG:HD3	1.88	0.55
81:Sg:286:CYS:HA	81:Sg:302:TYR:HD1	1.71	0.55
1:5:17:THR:CG2	1:5:82:PRO:CA	2.71	0.55
2:CB:829:SER:OG	2:CB:831:PRO:HD2	2.05	0.55
3:L5:224:U:O2	8:LC:219:LYS:NZ	2.34	0.55
3:L5:2811:G:N1	3:L5:2814:C:OP2	2.30	0.55
3:L5:4093:G:C8	3:L5:4095:G:N1	2.75	0.55
50:S2:1123:C:O2'	52:SB:148:ASN:OD1	2.24	0.55
50:S2:1467:C:OP1	67:SR:1:MET:N	2.38	0.55
60:SJ:122:SER:O	60:SJ:125:HIS:N	2.39	0.55
61:SK:6:LYS:NZ	61:SK:38:LYS:O	2.29	0.55
63:SN:119:GLU:HA	63:SN:122:ILE:HD12	1.88	0.55
1:5:99:LEU:N	1:5:114:LEU:HD13	2.21	0.55
3:L5:1175:A:H2	3:L5:1185:G:H22	1.52	0.55
3:L5:1240:G:O2'	3:L5:1241:C:OP1	2.22	0.55
25:LU:72:VAL:O	25:LU:72:VAL:HG12	2.05	0.55
50:S2:375:U:H2'	50:S2:376:A:H8	1.70	0.55
50:S2:1660:C:H3'	79:Sd:32:ARG:HH22	1.71	0.55
51:SA:184:ARG:HG2	51:SA:189:ILE:HB	1.89	0.55
52:SB:39:PHE:CD2	52:SB:74:LEU:HG	2.42	0.55
53:SC:263:LYS:HG2	53:SC:267:GLN:HG3	1.88	0.55
58:SH:43:LEU:HD23	58:SH:43:LEU:H	1.72	0.55
69:ST:42:HIS:HB2	69:ST:83:GLN:HB2	1.88	0.55
74:SY:60:PHE:CD1	74:SY:71:GLY:HA3	2.41	0.55
77:Sb:11:SER:N	77:Sb:14:GLU:OE1	2.37	0.55
2:CB:13:MET:HE3	2:CB:465:PRO:HD2	1.87	0.55
2:CB:170:GLU:HG2	2:CB:171:PRO:HD2	1.88	0.55
3:L5:256:G:H2'	3:L5:257:C:C6	2.41	0.55
3:L5:4151:G:H2'	3:L5:4152:G:H8	1.72	0.55
3:L5:5016:A:N6	3:L5:5033:G:O2'	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:LJ:96:LYS:HD3	15:LJ:175:LEU:HD23	1.88	0.55
16:LL:202:ALA:HA	16:LL:205:GLN:HG2	1.89	0.55
17:LM:10:GLY:O	17:LM:62:LEU:N	2.38	0.55
37:Lg:98:GLU:OE2	37:Lg:101:LYS:NZ	2.39	0.55
50:S2:529:A:H2'	50:S2:530:U:H6	1.71	0.55
50:S2:550:C:H2'	50:S2:551:U:C6	2.41	0.55
50:S2:847:A:OP1	55:SE:108:ARG:NH1	2.40	0.55
54:SD:66:ILE:O	54:SD:70:THR:HG23	2.07	0.55
60:SJ:26:ASP:HB2	80:Se:42:PHE:HZ	1.71	0.55
63:SN:63:VAL:HG21	63:SN:71:ILE:HG13	1.88	0.55
68:SS:130:ARG:HH12	68:SS:140:GLY:HA3	1.72	0.55
2:CB:88:PHE:HB3	2:CB:356:ILE:HD12	1.88	0.55
2:CB:429:ILE:HG12	2:CB:485:ILE:HG12	1.89	0.55
3:L5:1332:C:H2'	3:L5:1333:A:H8	1.71	0.55
3:L5:1703:C:O2'	3:L5:2097:U:O4	2.24	0.55
7:LB:348:ARG:NH1	7:LB:351:LEU:HD22	2.17	0.55
7:LB:378:ARG:HD3	27:LW:32:LEU:HD21	1.88	0.55
8:LC:290:SER:O	8:LC:294:LYS:HG2	2.07	0.55
50:S2:67:C:O2'	50:S2:69:C:OP2	2.22	0.55
50:S2:1562:C:H2'	50:S2:1563:G:C8	2.41	0.55
55:SE:100:ARG:HG2	55:SE:102:ILE:HD11	1.89	0.55
60:SJ:109:ARG:HH21	60:SJ:146:SER:HB2	1.71	0.55
74:SY:56:PHE:CE1	74:SY:94:HIS:CE1	2.94	0.55
2:CB:727:ARG:NH1	2:CB:853:ASN:O	2.38	0.55
3:L5:502:C:H3'	3:L5:503:C:H3'	1.87	0.55
3:L5:5027:C:O2'	3:L5:5028:G:H5''	2.06	0.55
3:L5:5063:G:O6	7:LB:124:LYS:NZ	2.39	0.55
48:Lz:108:ASP:HA	48:Lz:133:LYS:NZ	2.22	0.55
50:S2:1240:A:C2	65:SP:100:LYS:HG2	2.42	0.55
51:SA:4:ALA:H	71:SV:79:VAL:HB	1.70	0.55
57:SG:209:TYR:CD1	57:SG:213:LEU:HD23	2.42	0.55
65:SP:55:SER:O	65:SP:58:LYS:HG2	2.07	0.55
3:L5:1244:G:H2'	3:L5:1245:C:H6	1.71	0.55
3:L5:1994:C:H2'	3:L5:1995:G:H8	1.71	0.55
3:L5:2562:G:N2	3:L5:2564:G:H3'	2.22	0.55
14:LI:179:ASP:OD1	14:LI:180:GLU:N	2.40	0.55
41:Lk:5:ILE:HD11	41:Lk:43:TYR:HB3	1.89	0.55
50:S2:568:C:H2'	50:S2:569:A:C8	2.41	0.55
50:S2:857:U:H2'	50:S2:858:A:C8	2.41	0.55
50:S2:1101:U:H2'	50:S2:1102:G:H8	1.72	0.55
50:S2:1538:C:H2'	50:S2:1539:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SA:219:GLU:HA	51:SA:222:VAL:HG12	1.89	0.55
56:SF:28:VAL:HA	56:SF:110:GLN:HE22	1.72	0.55
57:SG:227:GLN:O	57:SG:231:ARG:HG2	2.07	0.55
75:SZ:87:ALA:O	75:SZ:90:GLU:HG3	2.06	0.55
3:L5:4474:A:H5''	43:Lm:125:LYS:HG3	1.87	0.55
35:Le:22:ARG:HB2	35:Le:34:ASN:O	2.07	0.55
41:Lk:66:VAL:O	41:Lk:66:VAL:HG12	2.06	0.55
49:S:202:SER:HB2	54:SD:146:ARG:HG2	1.88	0.55
50:S2:143:U:H4'	50:S2:144:U:H5'	1.89	0.55
50:S2:835:C:O2	74:SY:8:ARG:NH2	2.33	0.55
50:S2:870:A:H5'	50:S2:872:A:H1'	1.89	0.55
50:S2:1653:U:H2'	50:S2:1654:G:C8	2.42	0.55
51:SA:200:ASP:HA	51:SA:203:PHE:CD1	2.42	0.55
56:SF:127:ARG:HD3	56:SF:128:ILE:H	1.71	0.55
61:SK:58:VAL:HG23	61:SK:71:LEU:HA	1.87	0.55
66:SQ:11:GLN:HA	66:SQ:23:ALA:O	2.07	0.55
3:L5:1095:A:H2'	3:L5:1096:C:C6	2.41	0.54
3:L5:2570:U:H2'	3:L5:2571:C:C6	2.41	0.54
3:L5:4732:G:N2	3:L5:4734:A:N7	2.55	0.54
11:LF:114:LEU:HD21	11:LF:121:THR:HG22	1.89	0.54
34:Ld:25:TYR:CE1	34:Ld:88:LEU:HD12	2.41	0.54
50:S2:1320:G:H3'	50:S2:1321:G:H8	1.71	0.54
57:SG:222:GLU:O	57:SG:226:GLU:N	2.32	0.54
60:SJ:162:ARG:NH1	74:SY:31:GLY:HA2	2.17	0.54
2:CB:229:ALA:HA	2:CB:256:MET:CE	2.37	0.54
3:L5:2745:A:H2'	3:L5:2746:A:C8	2.42	0.54
3:L5:2908:U:HO2'	3:L5:3586:G:H1	1.55	0.54
3:L5:3717:A:H2'	3:L5:3718:A:H8	1.70	0.54
6:LA:54:ARG:HH11	6:LA:58:LEU:HD21	1.73	0.54
25:LU:26:THR:HG22	25:LU:68:SER:HB2	1.88	0.54
54:SD:25:LEU:HB3	54:SD:34:TYR:CE1	2.43	0.54
56:SF:165:ASN:OD1	56:SF:166:ILE:N	2.40	0.54
59:SI:77:ARG:HG3	59:SI:77:ARG:HH11	1.71	0.54
72:SW:28:ARG:HB3	72:SW:29:PRO:HD3	1.89	0.54
76:Sa:82:LYS:HZ2	76:Sa:85:ARG:HH11	1.54	0.54
2:CB:434:TYR:HA	2:CB:438:LYS:HZ1	1.72	0.54
3:L5:493:G:HO2'	3:L5:494:U:P	2.29	0.54
3:L5:1194:G:H2'	3:L5:1195:G:H8	1.73	0.54
3:L5:1402:C:N3	3:L5:1415:G:N1	2.48	0.54
3:L5:1930:U:OP2	19:LO:49:ARG:NH2	2.39	0.54
3:L5:2415:U:H2'	3:L5:2416:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2480:G:H2'	3:L5:2481:G:C8	2.41	0.54
25:LU:38:ASN:HA	25:LU:41:GLN:HE22	1.72	0.54
51:SA:132:GLN:NE2	51:SA:136:GLU:OE1	2.30	0.54
55:SE:233:LYS:HD2	55:SE:234:PRO:HD2	1.88	0.54
56:SF:87:LEU:HA	56:SF:90:VAL:HG22	1.88	0.54
58:SH:30:LEU:O	58:SH:33:ASN:ND2	2.40	0.54
60:SJ:3:VAL:CG1	60:SJ:5:ARG:HD3	2.37	0.54
63:SN:25:TRP:CG	77:Sb:82:LYS:HZ2	2.26	0.54
65:SP:43:ARG:NH2	65:SP:47:ARG:HH22	2.04	0.54
81:Sg:154:VAL:O	81:Sg:155:ARG:HD3	2.07	0.54
2:CB:479:LEU:HD11	2:CB:483:GLY:HA3	1.90	0.54
3:L5:1702:C:H3'	3:L5:1703:C:H5''	1.89	0.54
3:L5:2484:A:H62	3:L5:2494:U:H3	1.55	0.54
3:L5:3896:C:O2'	7:LB:268:ARG:NH1	2.28	0.54
17:LM:38:VAL:HG21	17:LM:50:MET:HB3	1.88	0.54
21:LQ:66:MET:HE3	21:LQ:98:LEU:HD13	1.88	0.54
33:Lc:38:ILE:HD11	33:Lc:46:VAL:HG11	1.90	0.54
50:S2:169:U:H4'	57:SG:136:LYS:HZ2	1.73	0.54
50:S2:194:C:H2'	50:S2:195:C:H6	1.71	0.54
50:S2:1583:C:OP2	50:S2:1584:G:O2'	2.26	0.54
52:SB:38:MET:HE2	52:SB:182:LYS:HD2	1.89	0.54
56:SF:133:THR:HG23	56:SF:134:VAL:H	1.71	0.54
57:SG:149:LYS:HG3	57:SG:150:GLU:OE1	2.07	0.54
60:SJ:179:LYS:HA	60:SJ:182:GLN:HG2	1.90	0.54
61:SK:80:ARG:HH21	61:SK:89:ILE:C	2.14	0.54
65:SP:43:ARG:NE	65:SP:47:ARG:HH12	2.06	0.54
73:SX:90:CYS:SG	73:SX:130:LEU:HD21	2.47	0.54
81:Sg:4:GLN:O	81:Sg:313:THR:OG1	2.20	0.54
81:Sg:157:SER:OG	81:Sg:163:PRO:HA	2.07	0.54
81:Sg:270:LEU:HD12	81:Sg:310:TRP:CE3	2.42	0.54
1:5:94:ILE:HD11	1:5:114:LEU:HD22	1.90	0.54
3:L5:4101:C:H1'	3:L5:4109:G:O6	2.07	0.54
50:S2:28:U:H2'	50:S2:29:G:H8	1.71	0.54
50:S2:495:U:H2'	50:S2:496:C:O4'	2.07	0.54
50:S2:1413:G:H2'	50:S2:1414:A:C8	2.43	0.54
50:S2:1534:C:H4'	50:S2:1535:U:H5''	1.88	0.54
55:SE:11:ARG:NH2	55:SE:20:LEU:HD22	2.20	0.54
55:SE:212:ASP:OD1	55:SE:216:ASN:N	2.39	0.54
57:SG:67:VAL:HG12	57:SG:69:THR:HG22	1.89	0.54
58:SH:130:LEU:HD13	58:SH:177:TYR:CE2	2.42	0.54
62:SL:4:ILE:HD12	62:SL:56:ILE:HG12	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SQ:96:TYR:HA	66:SQ:100:VAL:HG12	1.89	0.54
68:SS:103:LEU:HD23	68:SS:107:LEU:HD23	1.89	0.54
81:Sg:11:LEU:N	81:Sg:307:VAL:O	2.33	0.54
3:L5:200:U:OP1	29:LY:36:LYS:NZ	2.41	0.54
3:L5:499:G:H5'	3:L5:500:G:OP2	2.07	0.54
3:L5:4343:U:O2'	45:Lo:31:ASP:OD1	2.24	0.54
7:LB:77:THR:OG1	7:LB:335:GLY:O	2.26	0.54
10:LE:164:PHE:HA	10:LE:175:VAL:HG12	1.88	0.54
22:LR:173:ARG:HG3	22:LR:176:ARG:NH1	2.21	0.54
30:LZ:33:THR:OG1	30:LZ:35:ASP:OD1	2.23	0.54
50:S2:952:G:N2	64:SO:55:ARG:HH12	2.06	0.54
50:S2:1351:G:O2'	50:S2:1378:A:N1	2.31	0.54
53:SC:174:ILE:HG13	53:SC:175:GLY:N	2.22	0.54
54:SD:106:ARG:NH1	54:SD:173:ARG:HB3	2.23	0.54
55:SE:8:HIS:O	55:SE:30:ARG:NH2	2.40	0.54
60:SJ:114:VAL:HG13	60:SJ:126:ALA:HB1	1.89	0.54
68:SS:60:THR:O	68:SS:64:VAL:HG23	2.07	0.54
69:ST:21:PHE:HA	69:ST:24:LYS:HZ3	1.72	0.54
70:SU:61:LEU:HD22	79:Sd:34:TYR:CZ	2.43	0.54
72:SW:94:LEU:HD12	72:SW:100:GLY:HA3	1.90	0.54
2:CB:371:LEU:HD12	2:CB:372:LEU:HD12	1.88	0.54
3:L5:662:C:H2'	3:L5:663:G:H8	1.73	0.54
3:L5:1409:C:O2'	3:L5:1410:U:OP1	2.23	0.54
3:L5:4143:G:N3	3:L5:4145:C:H1'	2.23	0.54
7:LB:139:ASP:O	7:LB:143:LYS:HG3	2.08	0.54
9:LD:191:ASN:HB3	9:LD:194:VAL:HG12	1.90	0.54
21:LQ:150:ARG:HG3	21:LQ:150:ARG:HH11	1.71	0.54
50:S2:355:G:OP1	62:SL:92:TYR:OH	2.24	0.54
50:S2:952:G:H22	64:SO:55:ARG:HH12	1.55	0.54
52:SB:79:VAL:HG22	52:SB:82:ARG:HE	1.71	0.54
55:SE:149:TYR:HB3	57:SG:209:TYR:CD2	2.42	0.54
61:SK:5:LYS:HA	61:SK:8:ARG:HB3	1.89	0.54
67:SR:31:ASN:HA	67:SR:34:VAL:HG22	1.89	0.54
81:Sg:170:TRP:CD1	81:Sg:194:TYR:HD2	2.26	0.54
2:CB:581:GLU:HB2	2:CB:697:MET:HG2	1.89	0.54
3:L5:246:G:OP2	29:LY:132:LYS:NZ	2.40	0.54
7:LB:17:LEU:O	7:LB:19:ARG:N	2.40	0.54
13:LH:106:GLN:HB2	13:LH:111:LEU:HB3	1.89	0.54
14:LI:80:CYS:SG	14:LI:147:HIS:ND1	2.81	0.54
15:LJ:57:VAL:HG11	15:LJ:60:PHE:CE1	2.43	0.54
50:S2:604:A:N3	50:S2:639:C:O2'	2.34	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1562:C:H2'	50:S2:1563:G:H8	1.73	0.54
53:SC:104:ASP:HA	53:SC:216:MET:HE1	1.90	0.54
57:SG:216:ARG:O	57:SG:217:MET:HG3	2.08	0.54
60:SJ:108:ARG:NH1	60:SJ:149:VAL:HG23	2.23	0.54
66:SQ:88:ILE:HG13	66:SQ:89:SER:N	2.22	0.54
3:L5:1444:G:O2'	3:L5:1445:U:O4'	2.26	0.54
9:LD:65:ALA:HB2	9:LD:74:ILE:HD13	1.89	0.54
10:LE:190:HIS:HB3	10:LE:193:PHE:HD2	1.73	0.54
22:LR:173:ARG:NH1	50:S2:910:G:OP1	2.41	0.54
35:Le:91:CYS:O	35:Le:93:LYS:N	2.40	0.54
50:S2:155:G:H2'	50:S2:156:G:C8	2.43	0.54
50:S2:695:C:N4	50:S2:736:C:O2'	2.41	0.54
50:S2:1408:U:H2'	50:S2:1409:A:C8	2.43	0.54
51:SA:89:LYS:HG2	67:SR:81:ARG:HH12	1.73	0.54
57:SG:196:LYS:O	57:SG:199:THR:OG1	2.15	0.54
65:SP:94:VAL:HG22	65:SP:107:ILE:HD11	1.88	0.54
3:L5:162:A:H2'	3:L5:163:A:C8	2.43	0.54
3:L5:661:C:H2'	3:L5:662:C:C6	2.43	0.54
50:S2:129:C:OP2	50:S2:214:U:H2'	2.08	0.54
50:S2:1060:A:O2'	50:S2:1062:A:N7	2.31	0.54
50:S2:1423:C:H41	66:SQ:4:LYS:HE3	1.73	0.54
53:SC:106:VAL:HG22	53:SC:128:VAL:HG22	1.89	0.54
55:SE:68:ARG:NH2	55:SE:76:VAL:HG21	2.22	0.54
64:SO:84:ARG:HH12	64:SO:88:LEU:HB2	1.73	0.54
68:SS:115:LYS:O	68:SS:118:ARG:NH2	2.36	0.54
69:ST:115:LYS:HZ1	69:ST:121:ARG:NH1	2.05	0.54
2:CB:396:MET:HB2	2:CB:485:ILE:HB	1.90	0.53
3:L5:488:G:H8	3:L5:488:G:O5'	1.91	0.53
3:L5:1907:A:H2'	3:L5:1908:A:C8	2.43	0.53
3:L5:1962:A:OP2	3:L5:2024:G:N2	2.32	0.53
3:L5:4347:G:H2'	3:L5:4348:A:C8	2.43	0.53
3:L5:4537:C:H2'	3:L5:4538:G:C8	2.44	0.53
8:LC:66:SER:O	8:LC:66:SER:OG	2.25	0.53
24:LT:48:VAL:HG21	24:LT:94:GLU:HG2	1.90	0.53
25:LU:38:ASN:HA	25:LU:41:GLN:NE2	2.22	0.53
50:S2:693:A:H2'	50:S2:694:G:C8	2.43	0.53
50:S2:1545:A:H2	50:S2:1671:G:H1'	1.73	0.53
51:SA:90:PHE:O	51:SA:94:THR:OG1	2.26	0.53
51:SA:205:ARG:HE	51:SA:210:ILE:HD13	1.73	0.53
67:SR:116:ASN:OD1	67:SR:117:LEU:N	2.35	0.53
81:Sg:44:LYS:NZ	81:Sg:46:THR:HG21	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:976:G:O2'	8:LC:333:LYS:NZ	2.37	0.53
3:L5:1081:C:O2'	3:L5:1082:C:H5'	2.08	0.53
3:L5:1095:A:N1	3:L5:1200:G:C6	2.75	0.53
3:L5:4415:A:H4'	14:LI:74:LYS:HD2	1.90	0.53
3:L5:4492:U:O2'	3:L5:4512:U:O2	2.24	0.53
6:LA:137:ILE:HD11	6:LA:149:LYS:HB2	1.90	0.53
9:LD:41:LYS:HB2	24:LT:68:THR:O	2.09	0.53
11:LF:184:ILE:HG23	11:LF:189:ASP:HB2	1.89	0.53
15:LJ:174:ILE:HG22	15:LJ:175:LEU:H	1.73	0.53
19:LO:54:TYR:CD1	19:LO:145:VAL:HG21	2.43	0.53
48:Lz:120:ILE:O	48:Lz:124:LEU:N	2.39	0.53
49:S:213:SER:O	49:S:217:ASN:ND2	2.38	0.53
50:S2:158:A:N1	50:S2:463:C:O2	2.41	0.53
50:S2:212:C:H2'	50:S2:213:G:C8	2.43	0.53
50:S2:388:U:H2'	50:S2:389:A:C8	2.44	0.53
50:S2:511:U:H2'	50:S2:512:A:C8	2.43	0.53
50:S2:694:G:H2'	50:S2:695:C:O4'	2.08	0.53
50:S2:1531:A:H2'	50:S2:1532:C:C6	2.43	0.53
58:SH:71:SER:HA	58:SH:74:LYS:HZ1	1.73	0.53
61:SK:67:PHE:HB3	61:SK:69:TRP:CZ2	2.43	0.53
71:SV:83:PHE:CD1	71:SV:83:PHE:C	2.86	0.53
2:CB:12:ILE:HA	2:CB:15:LYS:HG2	1.90	0.53
2:CB:307:PHE:CE1	2:CB:331:GLU:HG2	2.43	0.53
3:L5:1097:C:H2'	3:L5:1098:G:C8	2.42	0.53
3:L5:1628:C:H42	6:LA:3:ARG:NH1	2.06	0.53
3:L5:2485:U:H1'	3:L5:2486:G:N1	2.23	0.53
3:L5:3641:U:H5	3:L5:3646:A:N7	2.06	0.53
7:LB:399:LYS:O	7:LB:403:ALA:N	2.42	0.53
50:S2:913:A:N7	58:SH:99:ARG:HB3	2.22	0.53
50:S2:921:G:H3'	72:SW:28:ARG:HH21	1.74	0.53
50:S2:1047:C:H5'	64:SO:143:LYS:HB2	1.90	0.53
55:SE:87:MET:HG3	55:SE:87:MET:O	2.08	0.53
58:SH:63:PHE:HA	58:SH:95:ILE:O	2.08	0.53
79:Sd:24:CYS:O	79:Sd:25:SER:OG	2.22	0.53
81:Sg:212:LYS:HG3	81:Sg:235:ILE:HD12	1.89	0.53
3:L5:1990:A:H3'	3:L5:1991:A:H8	1.72	0.53
7:LB:268:ARG:HG2	7:LB:268:ARG:HH21	1.73	0.53
9:LD:56:THR:HG22	9:LD:57:ASN:N	2.23	0.53
20:LP:85:LYS:O	20:LP:89:GLU:HG2	2.08	0.53
31:La:84:GLU:OE1	31:La:87:ARG:NH2	2.38	0.53
50:S2:559:G:HO2'	50:S2:560:A:H5''	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1554:C:OP2	50:S2:1555:U:O2'	2.26	0.53
55:SE:104:ASP:OD1	55:SE:108:ARG:N	2.33	0.53
57:SG:179:LEU:HD12	57:SG:180:VAL:H	1.71	0.53
58:SH:10:LYS:NZ	58:SH:20:GLU:HG3	2.24	0.53
65:SP:28:MET:HB2	65:SP:32:GLN:NE2	2.10	0.53
65:SP:28:MET:HE3	65:SP:33:LEU:HD23	1.90	0.53
67:SR:58:MET:HA	67:SR:61:ILE:HG12	1.89	0.53
81:Sg:38:LYS:HE3	81:Sg:64:HIS:N	2.23	0.53
3:L5:170:C:H42	3:L5:266:C:H42	1.55	0.53
3:L5:1270:A:O2'	3:L5:1439:C:O2	2.21	0.53
3:L5:3754:G:O6	3:L5:3770:U:O4	2.26	0.53
49:S:284:ASP:OD1	49:S:285:GLU:N	2.42	0.53
50:S2:640:A:H2'	50:S2:641:A:H8	1.70	0.53
50:S2:1139:C:H2'	50:S2:1140:G:O4'	2.09	0.53
53:SC:263:LYS:HD2	53:SC:268:GLU:HG2	1.91	0.53
75:SZ:67:LEU:HD12	75:SZ:67:LEU:O	2.08	0.53
2:CB:66:ARG:HB3	2:CB:68:ILE:HG12	1.91	0.53
3:L5:1268:G:P	32:Lb:107:ARG:HH22	2.31	0.53
3:L5:1480:C:O2'	3:L5:1482:G:OP2	2.27	0.53
3:L5:3910:C:H2'	3:L5:3911:C:C6	2.43	0.53
3:L5:4148:C:H5''	30:LZ:59:LYS:HE3	1.89	0.53
3:L5:4274:A:H2'	3:L5:4275:G:C8	2.43	0.53
3:L5:4742:G:H2'	3:L5:4743:G:H8	1.74	0.53
9:LD:292:GLU:HB3	9:LD:293:ARG:HH12	1.74	0.53
16:LL:50:PRO:O	16:LL:52:SER:N	2.41	0.53
50:S2:38:A:OP1	60:SJ:5:ARG:HG3	2.09	0.53
50:S2:1222:G:H2'	50:S2:1223:A:H8	1.73	0.53
52:SB:60:ASP:HA	52:SB:63:LYS:HG2	1.90	0.53
56:SF:61:PHE:CZ	78:Sc:51:ARG:HB2	2.44	0.53
57:SG:22:ARG:HG2	57:SG:22:ARG:HH21	1.73	0.53
60:SJ:93:LYS:HD3	60:SJ:96:TYR:CE2	2.44	0.53
63:SN:74:ILE:O	63:SN:77:SER:OG	2.17	0.53
66:SQ:34:VAL:N	66:SQ:37:ARG:O	2.41	0.53
67:SR:78:ARG:HD2	67:SR:79:GLU:N	2.24	0.53
76:Sa:4:LYS:HD3	76:Sa:5:ARG:HH12	1.73	0.53
3:L5:268:G:H2'	3:L5:269:G:H8	1.74	0.53
3:L5:1244:G:H2'	3:L5:1245:C:C6	2.44	0.53
3:L5:2448:G:H2'	3:L5:2449:A:C8	2.44	0.53
50:S2:332:G:O6	57:SG:189:ARG:NH2	2.41	0.53
50:S2:1512:C:H5''	79:Sd:8:TRP:HZ3	1.73	0.53
50:S2:1563:G:H5''	69:ST:115:LYS:NZ	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SC:128:VAL:HG11	53:SC:155:ILE:HG22	1.91	0.53
56:SF:20:PHE:CD2	56:SF:94:LYS:HD3	2.41	0.53
56:SF:125:SER:HA	56:SF:138:ALA:HA	1.89	0.53
66:SQ:139:ALA:O	66:SQ:140:ARG:NE	2.41	0.53
75:SZ:64:ASN:O	75:SZ:111:ARG:NH2	2.41	0.53
81:Sg:88:ARG:HH21	81:Sg:100:ARG:NE	2.04	0.53
81:Sg:120:ILE:N	81:Sg:132:TRP:O	2.40	0.53
81:Sg:228:TYR:CE2	81:Sg:230:LEU:HB3	2.42	0.53
3:L5:1076:C:H2'	3:L5:1077:C:H6	1.74	0.53
3:L5:2562:G:N2	3:L5:2565:A:OP2	2.42	0.53
6:LA:131:GLY:H	6:LA:169:VAL:HG13	1.74	0.53
26:LV:99:GLU:OE2	27:LW:21:TYR:OH	2.27	0.53
46:Lp:38:THR:HA	46:Lp:45:THR:HA	1.91	0.53
50:S2:146:G:H1	50:S2:173:A:N6	2.05	0.53
50:S2:693:A:N6	50:S2:738:C:O2'	2.37	0.53
50:S2:1869:A:C5	52:SB:115:LYS:HG2	2.43	0.53
52:SB:168:MET:HA	52:SB:197:ILE:HD11	1.91	0.53
65:SP:49:LEU:HD23	65:SP:54:HIS:CE1	2.43	0.53
70:SU:50:VAL:HA	70:SU:91:LEU:HD23	1.90	0.53
74:SY:54:VAL:HG13	74:SY:76:TYR:CB	2.16	0.53
75:SZ:84:ALA:O	75:SZ:88:LEU:N	2.30	0.53
75:SZ:90:GLU:O	75:SZ:94:LYS:N	2.40	0.53
2:CB:450:THR:HB	2:CB:461:ILE:O	2.09	0.53
3:L5:74:G:H5'	16:LL:59:VAL:HG13	1.91	0.53
3:L5:662:C:H2'	3:L5:663:G:C8	2.44	0.53
3:L5:1437:C:N4	3:L5:1438:U:O4	2.42	0.53
3:L5:2906:G:N2	3:L5:3585:G:N7	2.56	0.53
3:L5:4765:G:O6	17:LM:4:ARG:NH2	2.41	0.53
9:LD:21:ARG:O	9:LD:25:GLU:HG3	2.09	0.53
9:LD:211:LEU:HA	9:LD:214:GLU:HB3	1.91	0.53
16:LL:145:LYS:HG3	16:LL:146:LEU:HD13	1.90	0.53
47:Lr:107:ARG:O	47:Lr:111:ILE:HG12	2.08	0.53
49:S:192:GLU:H	49:S:192:GLU:CD	2.17	0.53
50:S2:948:C:H2'	50:S2:949:G:C8	2.44	0.53
51:SA:119:PRO:HG2	51:SA:142:LEU:HD22	1.91	0.53
52:SB:184:VAL:HA	52:SB:187:LYS:HE2	1.89	0.53
68:SS:24:ARG:HD3	68:SS:29:ALA:HA	1.91	0.53
76:Sa:44:ILE:HG12	76:Sa:65:PRO:O	2.09	0.53
80:Se:6:LEU:HD23	80:Se:6:LEU:H	1.74	0.53
2:CB:9:ILE:HD11	2:CB:45:ILE:HD11	1.90	0.53
2:CB:86:LEU:HD21	2:CB:96:ALA:HA	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:179:G:H2'	3:L5:180:C:C6	2.43	0.53
3:L5:979:C:OP1	10:LE:46:ARG:HD3	2.09	0.53
3:L5:1251:C:H2'	3:L5:1252:C:C6	2.44	0.53
3:L5:1762:C:H5''	3:L5:1764:G:N1	2.24	0.53
3:L5:4967:A:H2'	3:L5:4968:A:C8	2.44	0.53
10:LE:211:HIS:ND1	10:LE:211:HIS:O	2.42	0.53
15:LJ:11:PRO:O	15:LJ:12:MET:HE2	2.09	0.53
50:S2:821:G:C6	60:SJ:150:ARG:HG3	2.44	0.53
50:S2:1781:A:H3'	50:S2:1783:C:C4	2.43	0.53
51:SA:5:LEU:O	51:SA:9:GLN:NE2	2.37	0.53
56:SF:112:LEU:HD13	56:SF:177:LEU:HD11	1.91	0.53
57:SG:52:ILE:HG22	57:SG:111:LEU:HB3	1.91	0.53
59:SI:130:THR:HA	59:SI:133:GLU:HG2	1.90	0.53
59:SI:198:TYR:HE1	62:SL:10:TYR:HB2	1.74	0.53
61:SK:16:PHE:CD2	61:SK:79:LEU:HD22	2.44	0.53
70:SU:19:ARG:NH1	70:SU:90:ASP:OD2	2.42	0.53
79:Sd:13:LYS:O	79:Sd:18:SER:HB3	2.09	0.53
81:Sg:153:CYS:HB2	81:Sg:155:ARG:NH2	2.24	0.53
81:Sg:222:ASN:OD1	81:Sg:223:GLU:N	2.42	0.53
3:L5:258:G:H2'	3:L5:259:C:C6	2.44	0.52
3:L5:993:G:O2'	3:L5:994:G:O4'	2.21	0.52
3:L5:1081:C:N4	3:L5:1219:G:O6	2.42	0.52
3:L5:1084:C:H2'	3:L5:1085:C:H6	1.74	0.52
3:L5:2340:C:H4'	8:LC:42:THR:HG23	1.90	0.52
3:L5:2875:C:OP1	46:Lp:23:ARG:NH2	2.42	0.52
3:L5:3811:G:O2'	3:L5:3814:U:OP2	2.25	0.52
3:L5:3911:C:H2'	3:L5:3912:U:H6	1.74	0.52
3:L5:4363:A:H5''	45:Lo:36:GLN:HG2	1.92	0.52
11:LF:31:LYS:HA	11:LF:34:ARG:NH1	2.24	0.52
36:Lf:37:ASP:N	36:Lf:37:ASP:OD1	2.40	0.52
38:Lh:87:LYS:O	38:Lh:88:THR:OG1	2.18	0.52
50:S2:68:A:H8	50:S2:68:A:OP1	1.92	0.52
50:S2:945:U:H2'	50:S2:946:U:H6	1.74	0.52
50:S2:1652:G:N2	50:S2:1672:U:O2	2.42	0.52
51:SA:5:LEU:HD12	71:SV:79:VAL:HG11	1.90	0.52
54:SD:27:ARG:NH1	61:SK:61:GLN:HB3	2.24	0.52
62:SL:112:HIS:HB3	62:SL:141:ASN:HD22	1.73	0.52
66:SQ:5:GLY:O	66:SQ:27:ARG:NH2	2.34	0.52
68:SS:109:GLU:O	68:SS:113:ARG:HB2	2.09	0.52
70:SU:55:ARG:HG2	70:SU:87:ARG:NE	2.24	0.52
81:Sg:196:ASN:HB2	81:Sg:211:GLY:HA2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4143:G:C4	3:L5:4145:C:H1'	2.44	0.52
7:LB:214:ASP:HA	7:LB:284:ILE:O	2.10	0.52
9:LD:84:PRO:C	9:LD:86:TYR:H	2.17	0.52
14:LI:177:ASN:HB2	14:LI:180:GLU:OE1	2.09	0.52
15:LJ:136:ARG:NH1	15:LJ:156:ARG:O	2.42	0.52
50:S2:114:G:O4'	62:SL:132:ARG:NH2	2.39	0.52
50:S2:570:C:O2'	74:SY:34:THR:O	2.27	0.52
50:S2:940:U:H2'	50:S2:941:C:C6	2.44	0.52
50:S2:1556:A:O2'	50:S2:1557:C:O4'	2.26	0.52
52:SB:36:PRO:C	52:SB:42:ARG:HH12	2.16	0.52
55:SE:128:LYS:HB3	55:SE:140:VAL:HG22	1.91	0.52
56:SF:168:THR:N	56:SF:171:GLU:OE1	2.36	0.52
81:Sg:215:GLN:HA	81:Sg:231:ASP:HA	1.91	0.52
3:L5:171:U:OP2	3:L5:172:C:N4	2.43	0.52
3:L5:1709:C:N4	3:L5:1716:G:H22	2.08	0.52
3:L5:2707:U:O2'	3:L5:2708:U:OP2	2.22	0.52
3:L5:4238:G:H2'	3:L5:4239:A:C8	2.44	0.52
3:L5:4250:G:H5''	15:LJ:98:ASN:HD22	1.74	0.52
3:L5:4591:U:H2'	3:L5:4592:C:C6	2.44	0.52
8:LC:13:GLU:OE2	8:LC:161:TYR:OH	2.21	0.52
37:Lg:41:ALA:O	37:Lg:52:ARG:HD2	2.09	0.52
50:S2:557:U:H3'	50:S2:558:G:H2'	1.92	0.52
50:S2:1088:U:H4'	50:S2:1089:G:OP2	2.09	0.52
50:S2:1122:A:O2'	52:SB:146:ARG:NH1	2.37	0.52
50:S2:1153:C:OP2	72:SW:71:LYS:NZ	2.42	0.52
50:S2:1738:C:OP1	57:SG:92:ARG:NH1	2.33	0.52
52:SB:128:LYS:NZ	52:SB:129:THR:O	2.42	0.52
53:SC:60:TRP:NE1	53:SC:92:GLU:OE2	2.42	0.52
60:SJ:124:HIS:ND1	80:Se:35:ARG:HD3	2.24	0.52
65:SP:58:LYS:HA	65:SP:61:ARG:NH2	2.25	0.52
78:Sc:62:GLU:OE2	78:Sc:62:GLU:N	2.38	0.52
5:L8:83:C:H42	29:LY:50:ARG:NH2	2.08	0.52
10:LE:43:HIS:ND1	10:LE:46:ARG:NH1	2.58	0.52
16:LL:62:PRO:O	16:LL:63:THR:OG1	2.24	0.52
30:LZ:66:SER:HB2	30:LZ:122:TYR:HE2	1.74	0.52
49:S:185:PHE:HB2	49:S:191:ARG:HA	1.91	0.52
50:S2:1134:G:H2'	50:S2:1135:C:H6	1.74	0.52
50:S2:1210:G:OP1	76:Sa:82:LYS:NZ	2.39	0.52
51:SA:107:THR:HG23	51:SA:115:ALA:O	2.10	0.52
56:SF:62:ARG:HG3	56:SF:62:ARG:HH21	1.75	0.52
59:SI:141:ARG:NE	59:SI:142:SER:H	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SN:127:ARG:HH21	63:SN:127:ARG:HG3	1.74	0.52
70:SU:56:MET:HE1	70:SU:86:LYS:HE3	1.91	0.52
3:L5:3949:A:C5	3:L5:3950:U:H1'	2.45	0.52
12:LG:162:ASP:HB3	12:LG:163:PRO:HD3	1.90	0.52
25:LU:71:THR:HG22	25:LU:73:THR:HG23	1.92	0.52
50:S2:519:A:H5''	60:SJ:11:LYS:NZ	2.25	0.52
50:S2:1753:C:H5'	50:S2:1780:G:H22	1.75	0.52
70:SU:21:ARG:HB3	70:SU:115:THR:HG22	1.91	0.52
2:CB:227:GLN:HE21	2:CB:349:ALA:HA	1.74	0.52
2:CB:737:GLN:HE22	2:CB:739:ARG:HH12	1.57	0.52
3:L5:467:U:C2	3:L5:468:U:H1'	2.44	0.52
3:L5:1096:C:H2'	3:L5:1097:C:H6	1.74	0.52
3:L5:4092:G:C5	3:L5:4093:G:C2	2.98	0.52
3:L5:4103:C:H2'	3:L5:4105:A:C6	2.45	0.52
8:LC:8:ILE:HD11	8:LC:257:PHE:CE2	2.45	0.52
48:Lz:203:ALA:HA	48:Lz:217:TYR:HB3	1.90	0.52
50:S2:118:C:H1'	50:S2:445:A:C5	2.45	0.52
50:S2:1595:U:OP1	75:SZ:102:LYS:NZ	2.43	0.52
50:S2:1737:G:H2'	50:S2:1738:C:H6	1.73	0.52
60:SJ:131:ARG:NH2	60:SJ:143:ASN:O	2.42	0.52
61:SK:21:MET:HB2	61:SK:69:TRP:HE3	1.75	0.52
61:SK:49:MET:HE2	61:SK:69:TRP:CD1	2.45	0.52
68:SS:132:ARG:HB2	68:SS:134:GLN:HE22	1.74	0.52
81:Sg:88:ARG:NH2	81:Sg:100:ARG:HE	2.05	0.52
2:CB:232:TYR:HD2	2:CB:256:MET:SD	2.32	0.52
3:L5:683:C:O2'	10:LE:100:LYS:NZ	2.43	0.52
3:L5:756:G:H2'	3:L5:757:G:C8	2.44	0.52
3:L5:1082:C:O2'	3:L5:1083:U:H5''	2.10	0.52
41:Lk:60:LEU:HG	41:Lk:61:PRO:HD2	1.91	0.52
52:SB:105:LEU:CD1	52:SB:213:ARG:HA	2.40	0.52
56:SF:115:ALA:O	56:SF:119:SER:N	2.42	0.52
60:SJ:84:ILE:O	60:SJ:108:ARG:NE	2.43	0.52
61:SK:16:PHE:CE1	61:SK:91:PRO:HD3	2.45	0.52
66:SQ:48:GLN:OE1	66:SQ:48:GLN:HA	2.08	0.52
67:SR:80:ARG:NE	67:SR:80:ARG:HA	2.24	0.52
71:SV:38:GLU:OE2	71:SV:51:LYS:HG3	2.10	0.52
71:SV:47:ASN:OD1	71:SV:48:GLY:N	2.42	0.52
81:Sg:113:PHE:HB3	81:Sg:117:ASN:HD22	1.75	0.52
2:CB:579:TYR:N	2:CB:695:GLU:OE1	2.43	0.52
2:CB:607:ARG:HD2	2:CB:701:ARG:HE	1.74	0.52
3:L5:75:G:O6	16:LL:103:ARG:NH1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1199:G:H2'	3:L5:1200:G:C8	2.45	0.52
3:L5:1208:G:N2	11:LF:74:MET:HE2	2.24	0.52
3:L5:1523:A:N3	3:L5:4389:C:O2'	2.42	0.52
3:L5:1696:C:H2'	3:L5:1697:G:O4'	2.09	0.52
3:L5:2096:G:O2'	3:L5:2098:G:O2'	2.21	0.52
3:L5:4862:G:H2'	3:L5:4863:G:C8	2.45	0.52
11:LF:222:LYS:HB3	11:LF:231:GLY:HA2	1.90	0.52
12:LG:229:ARG:NE	12:LG:232:GLU:OE1	2.40	0.52
31:La:131:ARG:O	31:La:135:GLU:HG3	2.10	0.52
50:S2:124:U:OP1	55:SE:148:ARG:NH1	2.43	0.52
50:S2:433:A:H2'	50:S2:434:G:C8	2.45	0.52
50:S2:559:G:O2'	50:S2:560:A:H5''	2.09	0.52
50:S2:1769:C:OP2	50:S2:1771:G:N1	2.40	0.52
51:SA:80:ARG:O	51:SA:84:GLN:HG3	2.08	0.52
54:SD:211:VAL:O	67:SR:20:TYR:OH	2.21	0.52
55:SE:219:ALA:C	55:SE:220:THR:HG1	2.18	0.52
56:SF:55:ARG:NH2	66:SQ:125:ARG:HG2	2.25	0.52
65:SP:130:ARG:NH1	65:SP:131:PRO:HG2	2.25	0.52
72:SW:11:LEU:HD21	72:SW:37:PHE:CE2	2.45	0.52
3:L5:450:G:OP2	3:L5:450:G:H8	1.93	0.52
3:L5:690:C:H4'	47:Lr:85:ASN:HD22	1.74	0.52
3:L5:1273:G:H8	32:Lb:117:ARG:HD3	1.74	0.52
3:L5:1378:C:C4	16:LL:158:ARG:NH2	2.77	0.52
3:L5:1556:C:O2'	3:L5:2669:C:OP1	2.24	0.52
3:L5:1562:G:H5'	3:L5:1563:A:OP2	2.09	0.52
3:L5:1768:C:H2'	3:L5:1770:A:N7	2.25	0.52
3:L5:4101:C:N4	3:L5:4107:G:O6	2.42	0.52
3:L5:4734:A:O2'	3:L5:4735:G:OP2	2.26	0.52
17:LM:47:ARG:HG2	23:LS:73:LEU:HD22	1.92	0.52
20:LP:108:ASP:OD1	20:LP:111:SER:OG	2.28	0.52
29:LY:109:LEU:HD22	29:LY:115:ARG:NH2	2.25	0.52
48:Lz:58:THR:HG23	48:Lz:152:LYS:HE2	1.90	0.52
50:S2:389:A:H2'	50:S2:390:C:C6	2.45	0.52
50:S2:458:A:H2'	50:S2:459:C:C6	2.44	0.52
50:S2:535:G:C2	50:S2:537:C:H1'	2.45	0.52
50:S2:697:G:H5''	50:S2:698:G:H3'	1.90	0.52
50:S2:964:A:H2'	50:S2:965:U:C6	2.45	0.52
50:S2:1578:U:H4'	50:S2:1579:A:C4	2.44	0.52
53:SC:199:PRO:HG3	60:SJ:58:ARG:HH11	1.74	0.52
58:SH:11:PRO:HD2	58:SH:45:ILE:O	2.08	0.52
66:SQ:89:SER:HB2	66:SQ:112:LEU:HD11	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SR:93:GLN:C	67:SR:95:ILE:H	2.17	0.52
70:SU:66:ARG:HB3	79:Sd:40:ARG:NH1	2.25	0.52
77:Sb:26:GLN:H	77:Sb:26:GLN:CD	2.18	0.52
3:L5:519:C:H1'	3:L5:643:C:N3	2.25	0.52
50:S2:191:A:H5''	59:SI:141:ARG:HH11	1.74	0.52
50:S2:689:U:H2'	50:S2:690:G:C2	2.45	0.52
50:S2:750:C:N4	50:S2:793:G:H21	2.07	0.52
51:SA:103:PHE:CE2	51:SA:133:PRO:HB3	2.44	0.52
58:SH:49:LYS:HD2	58:SH:50:GLU:H	1.75	0.52
60:SJ:79:ARG:NH1	60:SJ:83:ARG:HD2	2.25	0.52
66:SQ:33:LYS:HA	66:SQ:38:PRO:HA	1.91	0.52
81:Sg:44:LYS:HZ2	81:Sg:46:THR:HG21	1.73	0.52
3:L5:1770:A:N7	3:L5:1771:U:N3	2.58	0.51
3:L5:3711:A:H2'	3:L5:3712:A:N7	2.25	0.51
3:L5:4064:C:H2'	3:L5:4065:G:C8	2.45	0.51
5:L8:102:G:OP2	5:L8:104:A:O2'	2.27	0.51
19:LO:180:GLN:NE2	19:LO:184:ASN:OD1	2.43	0.51
50:S2:1119:A:H3'	50:S2:1120:U:H6	1.74	0.51
50:S2:1278:A:H2'	50:S2:1279:C:C6	2.45	0.51
50:S2:1667:U:H2'	50:S2:1668:U:C6	2.45	0.51
51:SA:39:TYR:CD2	51:SA:40:LYS:HG2	2.45	0.51
52:SB:109:LYS:O	52:SB:113:MET:HG3	2.10	0.51
68:SS:43:VAL:HG11	68:SS:83:PHE:CE2	2.45	0.51
70:SU:40:ILE:HG13	70:SU:50:VAL:HG11	1.92	0.51
81:Sg:188:HIS:HB3	81:Sg:219:TRP:CZ3	2.45	0.51
2:CB:788:LEU:HD12	2:CB:789:PRO:HD2	1.91	0.51
3:L5:4459:U:H2'	3:L5:4460:U:C6	2.45	0.51
3:L5:4934:A:H2'	3:L5:4935:C:H6	1.75	0.51
5:L8:67:U:H2'	5:L8:68:G:H8	1.74	0.51
13:LH:54:ARG:HG3	13:LH:54:ARG:HH11	1.75	0.51
15:LJ:85:LYS:HE2	15:LJ:114:ASP:O	2.09	0.51
27:LW:34:ALA:HA	27:LW:37:GLU:HG2	1.93	0.51
59:SI:100:CYS:SG	59:SI:175:ILE:HD12	2.49	0.51
69:ST:132:ASP:HA	69:ST:135:ALA:HB3	1.93	0.51
79:Sd:10:HIS:HB3	79:Sd:12:ARG:NH1	2.24	0.51
81:Sg:106:LYS:HG2	81:Sg:126:ASP:HB3	1.90	0.51
81:Sg:165:ILE:HG23	81:Sg:177:TRP:HB2	1.91	0.51
3:L5:1195:G:H2'	3:L5:1196:G:C8	2.45	0.51
3:L5:2669:C:H2'	3:L5:2670:C:O4'	2.10	0.51
3:L5:3947:A:H61	3:L5:4068:U:H1'	1.76	0.51
3:L5:4093:G:N7	3:L5:4095:G:N1	2.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LA:54:ARG:HG2	6:LA:56:ALA:H	1.75	0.51
10:LE:118:THR:OG1	35:Le:90:MET:O	2.24	0.51
17:LM:135:LEU:HD12	17:LM:136:LEU:HD23	1.91	0.51
21:LQ:121:LEU:HA	21:LQ:125:GLN:HE21	1.75	0.51
50:S2:65:C:C5	57:SG:174:PRO:HB3	2.46	0.51
50:S2:695:C:H41	50:S2:736:C:H1'	1.74	0.51
50:S2:878:G:H22	50:S2:908:A:H2	1.57	0.51
53:SC:199:PRO:HG3	60:SJ:58:ARG:NH1	2.25	0.51
55:SE:136:ILE:HD12	55:SE:148:ARG:HD2	1.91	0.51
57:SG:137:ARG:HD3	57:SG:178:ARG:NH2	2.26	0.51
63:SN:49:GLN:HA	63:SN:52:VAL:HG12	1.91	0.51
67:SR:78:ARG:O	67:SR:82:ASP:N	2.43	0.51
73:SX:28:LYS:HE2	73:SX:32:LEU:HD22	1.92	0.51
74:SY:45:ALA:HB1	74:SY:50:THR:O	2.11	0.51
2:CB:19:ILE:HA	2:CB:99:LEU:O	2.10	0.51
2:CB:224:THR:HG22	2:CB:227:GLN:HG2	1.91	0.51
2:CB:583:VAL:HG12	2:CB:733:VAL:HG13	1.91	0.51
2:CB:626:GLN:HB3	2:CB:631:ARG:HH11	1.76	0.51
3:L5:132:G:H3'	3:L5:133:C:H4'	1.91	0.51
3:L5:493:G:O2'	3:L5:494:U:OP1	2.26	0.51
3:L5:1308:C:H2'	3:L5:1309:C:C6	2.45	0.51
3:L5:1969:G:O6	3:L5:2019:C:N4	2.43	0.51
3:L5:4743:G:H2'	3:L5:4744:A:C8	2.46	0.51
11:LF:219:GLY:O	11:LF:246:ARG:NH2	2.44	0.51
12:LG:136:LEU:HD13	12:LG:202:VAL:HG11	1.92	0.51
28:LX:124:VAL:HG22	28:LX:138:VAL:HG23	1.91	0.51
50:S2:190:G:H5'	59:SI:145:ILE:HG12	1.91	0.51
50:S2:419:G:N2	50:S2:661:U:O2	2.43	0.51
50:S2:1123:C:H4'	52:SB:149:GLN:HE21	1.75	0.51
50:S2:1459:G:H2'	50:S2:1460:C:C6	2.45	0.51
53:SC:259:THR:HG23	53:SC:261:PHE:HE1	1.75	0.51
59:SI:36:THR:OG1	59:SI:96:LEU:O	2.28	0.51
67:SR:22:THR:O	81:Sg:212:LYS:NZ	2.34	0.51
75:SZ:98:LYS:N	75:SZ:110:THR:O	2.28	0.51
77:Sb:40:CYS:HB2	77:Sb:59:CYS:HB2	1.92	0.51
2:CB:313:ALA:O	2:CB:317:GLU:HG2	2.10	0.51
3:L5:994:G:H2'	3:L5:995:C:H4'	1.91	0.51
3:L5:1978:C:H2'	3:L5:1979:A:O4'	2.10	0.51
3:L5:2557:G:N2	3:L5:2570:U:O2	2.35	0.51
5:L8:8:U:H2'	5:L8:9:A:C8	2.45	0.51
7:LB:47:LEU:H	7:LB:84:MET:HE2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LE:50:LEU:HD23	10:LE:50:LEU:H	1.75	0.51
15:LJ:96:LYS:HB3	15:LJ:175:LEU:HA	1.92	0.51
50:S2:609:U:H2'	50:S2:610:G:H8	1.75	0.51
51:SA:77:ILE:HD12	51:SA:122:LEU:HD11	1.91	0.51
57:SG:3:LEU:HD13	57:SG:109:LEU:HB3	1.91	0.51
58:SH:118:ARG:O	58:SH:121:THR:HG22	2.11	0.51
59:SI:123:ARG:HG2	59:SI:123:ARG:HH21	1.76	0.51
60:SJ:175:ARG:O	60:SJ:179:LYS:HE2	2.09	0.51
62:SL:128:VAL:HG12	62:SL:140:PHE:HD2	1.76	0.51
73:SX:60:LYS:HG3	73:SX:116:PRO:HG3	1.93	0.51
78:Sc:20:ARG:NH1	78:Sc:25:GLY:O	2.43	0.51
81:Sg:11:LEU:HD21	81:Sg:53:GLY:HA3	1.91	0.51
2:CB:162:ARG:NE	2:CB:166:GLU:OE1	2.28	0.51
2:CB:429:ILE:HB	2:CB:443:TYR:HB2	1.93	0.51
2:CB:827:ASN:OD1	2:CB:828:SER:N	2.44	0.51
3:L5:407:A:O2'	3:L5:410:A:OP1	2.23	0.51
3:L5:4260:U:H2'	3:L5:4261:C:H6	1.74	0.51
21:LQ:50:ARG:HA	21:LQ:53:MET:HG3	1.93	0.51
50:S2:564:A:C2	50:S2:565:G:H1'	2.45	0.51
50:S2:1001:A:N7	76:Sa:19:GLN:NE2	2.58	0.51
50:S2:1276:A:N7	50:S2:1322:G:H1'	2.26	0.51
50:S2:1540:G:P	69:ST:43:LYS:HE3	2.50	0.51
61:SK:16:PHE:CZ	61:SK:91:PRO:HD3	2.45	0.51
61:SK:41:PRO:HD2	61:SK:44:HIS:HD2	1.76	0.51
61:SK:61:GLN:HG3	61:SK:62:PHE:H	1.75	0.51
73:SX:137:LYS:C	73:SX:138:LYS:HD3	2.35	0.51
3:L5:4966:A:H5'	7:LB:128:LYS:HG3	1.91	0.51
3:L5:4988:U:O2'	3:L5:4989:U:OP2	2.21	0.51
5:L8:122:G:C6	5:L8:123:U:H1'	2.45	0.51
7:LB:220:ILE:HG12	7:LB:278:THR:HG23	1.93	0.51
8:LC:208:CYS:SG	8:LC:230:LEU:HD12	2.51	0.51
22:LR:154:LEU:O	22:LR:158:GLN:HG3	2.10	0.51
50:S2:1518:C:OP1	50:S2:1519:U:O2'	2.22	0.51
51:SA:111:GLN:HA	51:SA:116:PHE:CE1	2.46	0.51
57:SG:159:ARG:HD2	57:SG:173:ALA:HB2	1.93	0.51
65:SP:43:ARG:HH21	65:SP:47:ARG:NH2	2.07	0.51
78:Sc:14:VAL:HG12	78:Sc:54:ASP:O	2.10	0.51
3:L5:1294:A:H1'	3:L5:1296:G:N1	2.26	0.51
3:L5:4524:G:C2	7:LB:252:ALA:HB1	2.46	0.51
5:L8:19:C:H2'	5:L8:20:A:C8	2.46	0.51
15:LJ:95:ARG:HH11	15:LJ:176:PRO:HD2	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:LM:24:LEU:HD21	17:LM:86:TRP:NE1	2.25	0.51
49:S:282:THR:OG1	61:SK:96:ARG:NH1	2.44	0.51
50:S2:186:C:H2'	50:S2:187:G:C8	2.46	0.51
50:S2:1392:U:H2'	50:S2:1393:G:H8	1.75	0.51
50:S2:1616:U:H5	65:SP:43:ARG:NH1	2.08	0.51
51:SA:89:LYS:NZ	51:SA:201:LEU:HG	2.26	0.51
51:SA:128:ARG:HG3	51:SA:128:ARG:HH11	1.76	0.51
69:ST:129:ARG:O	69:ST:133:ARG:HG2	2.10	0.51
71:SV:81:LYS:O	71:SV:81:LYS:HG2	2.10	0.51
81:Sg:24:THR:HG22	81:Sg:71:ILE:HD13	1.93	0.51
1:5:123:ILE:HA	1:5:126:LYS:HD2	1.92	0.51
2:CB:431:GLY:HA3	2:CB:441:ASP:HB3	1.91	0.51
3:L5:172:C:H4'	3:L5:173:C:H5'	1.93	0.51
3:L5:173:C:H2'	3:L5:174:C:C6	2.45	0.51
3:L5:258:G:H2'	3:L5:259:C:H6	1.76	0.51
3:L5:1956:A:H2'	3:L5:1957:U:H6	1.76	0.51
3:L5:4093:G:N1	3:L5:4114:C:C2	2.78	0.51
3:L5:4573:G:H2'	3:L5:4574:U:C6	2.46	0.51
3:L5:4872:G:OP2	17:LM:94:LYS:NZ	2.39	0.51
9:LD:35:ARG:HG3	9:LD:35:ARG:NH1	2.25	0.51
14:LI:213:HIS:ND1	14:LI:213:HIS:O	2.44	0.51
24:LT:44:GLY:HA2	24:LT:95:HIS:ND1	2.26	0.51
50:S2:57:U:OP1	50:S2:504:G:O2'	2.28	0.51
50:S2:1589:A:H2'	50:S2:1590:C:H6	1.76	0.51
50:S2:1705:C:H2'	50:S2:1706:G:C8	2.46	0.51
65:SP:90:VAL:HA	65:SP:107:ILE:HG22	1.93	0.51
3:L5:1080:C:C2	3:L5:1220:G:C2	2.98	0.51
3:L5:1307:A:H2'	3:L5:1308:C:C6	2.46	0.51
3:L5:1500:A:H5''	3:L5:1501:C:H5''	1.92	0.51
3:L5:1693:U:OP2	21:LQ:49:LYS:NZ	2.44	0.51
3:L5:1753:G:H2'	3:L5:1754:U:C6	2.46	0.51
8:LC:285:ILE:HD11	21:LQ:125:GLN:OE1	2.11	0.51
18:LN:8:GLN:HG3	18:LN:50:ARG:NH1	2.26	0.51
38:Lh:73:TYR:HB3	38:Lh:79:LYS:HG2	1.92	0.51
50:S2:90:G:OP1	50:S2:445:A:N6	2.43	0.51
50:S2:528:A:N6	50:S2:558:G:O6	2.43	0.51
50:S2:736:C:H2'	50:S2:737:G:C4	2.45	0.51
52:SB:104:ASP:HB3	52:SB:214:LYS:HG3	1.92	0.51
68:SS:86:ARG:HH11	68:SS:106:LYS:HE3	1.76	0.51
76:Sa:82:LYS:NZ	76:Sa:85:ARG:HH11	2.09	0.51
2:CB:21:ASN:ND2	2:CB:122:THR:HA	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1369:C:OP2	3:L5:1370:G:O2'	2.26	0.50
3:L5:1464:C:H5''	32:Lb:32:LEU:HD12	1.93	0.50
3:L5:2568:C:H2'	3:L5:2569:G:C8	2.45	0.50
3:L5:4934:A:H2'	3:L5:4935:C:C6	2.45	0.50
6:LA:115:CYS:SG	6:LA:124:GLY:HA3	2.51	0.50
10:LE:258:LEU:HA	10:LE:261:ILE:HG22	1.93	0.50
49:S:283:LEU:HD23	61:SK:17:LYS:HB3	1.93	0.50
50:S2:209:A:H2'	50:S2:210:U:O4'	2.12	0.50
50:S2:564:A:H2'	50:S2:565:G:O4'	2.11	0.50
50:S2:1446:A:O2'	50:S2:1447:G:H5''	2.10	0.50
50:S2:1558:C:H2'	50:S2:1559:C:C6	2.46	0.50
65:SP:86:LEU:H	65:SP:89:MET:HE3	1.75	0.50
68:SS:132:ARG:HB2	68:SS:134:GLN:NE2	2.26	0.50
81:Sg:15:ASN:O	81:Sg:37:ASP:HB3	2.10	0.50
3:L5:17:A:OP2	28:LX:60:TYR:OH	2.19	0.50
3:L5:267:G:H2'	3:L5:268:G:C8	2.46	0.50
3:L5:450:G:H2'	3:L5:451:C:C6	2.46	0.50
3:L5:498:C:N4	3:L5:656:C:H42	2.08	0.50
3:L5:983:C:H2'	3:L5:984:C:O4'	2.10	0.50
3:L5:2109:G:H2'	3:L5:2110:C:C6	2.46	0.50
30:LZ:9:LYS:HB2	30:LZ:25:ILE:HD12	1.92	0.50
48:Lz:80:VAL:HG13	48:Lz:82:ILE:HG13	1.93	0.50
48:Lz:123:ILE:HG22	48:Lz:124:LEU:HG	1.93	0.50
50:S2:955:A:N6	50:S2:971:G:O2'	2.29	0.50
50:S2:1229:G:H5''	68:SS:142:ARG:HD3	1.94	0.50
50:S2:1438:A:H2'	50:S2:1439:A:C8	2.45	0.50
51:SA:182:VAL:O	51:SA:186:ARG:HD3	2.11	0.50
67:SR:58:MET:HG3	67:SR:61:ILE:HD11	1.91	0.50
67:SR:79:GLU:HA	67:SR:82:ASP:HB3	1.93	0.50
77:Sb:47:PHE:HE2	77:Sb:49:HIS:HB2	1.75	0.50
2:CB:81:LEU:HB3	2:CB:85:ASP:HB2	1.92	0.50
3:L5:458:C:OP1	10:LE:114:ARG:HG3	2.12	0.50
3:L5:687:U:OP1	10:LE:97:GLY:HA2	2.12	0.50
3:L5:1773:U:H2'	3:L5:1774:C:C6	2.46	0.50
3:L5:1942:A:H2'	3:L5:1943:A:H8	1.76	0.50
3:L5:4139:G:N2	3:L5:4140:C:H41	2.08	0.50
3:L5:4239:A:H2'	3:L5:4240:G:C8	2.46	0.50
5:L8:8:U:H2'	5:L8:9:A:H8	1.76	0.50
8:LC:235:LEU:HD12	8:LC:240:LEU:HD11	1.92	0.50
34:Ld:93:ASN:O	34:Ld:95:ASP:N	2.37	0.50
50:S2:183:G:C2	50:S2:184:G:C8	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1059:G:H1	50:S2:1060:A:H62	1.58	0.50
51:SA:89:LYS:HE3	51:SA:202:TYR:HD1	1.77	0.50
52:SB:103:MET:O	52:SB:214:LYS:HA	2.11	0.50
56:SF:19:LEU:O	56:SF:22:LYS:N	2.42	0.50
64:SO:31:CYS:HA	64:SO:44:VAL:HA	1.93	0.50
65:SP:58:LYS:HA	65:SP:61:ARG:HH21	1.76	0.50
67:SR:24:LEU:C	67:SR:58:MET:HE1	2.36	0.50
73:SX:93:PHE:CD2	73:SX:133:LEU:HB3	2.46	0.50
81:Sg:83:TRP:HE3	81:Sg:107:ASP:OD2	1.95	0.50
2:CB:10:ARG:NE	2:CB:463:ASP:O	2.45	0.50
3:L5:1964:A:H2'	3:L5:1965:G:H8	1.76	0.50
3:L5:2409:U:H5	3:L5:2783:A:N1	2.08	0.50
24:LT:94:GLU:OE2	24:LT:94:GLU:N	2.40	0.50
50:S2:65:C:H4'	57:SG:172:LYS:HE2	1.93	0.50
50:S2:380:G:OP1	59:SI:31:ARG:HD2	2.11	0.50
50:S2:886:A:N6	50:S2:901:G:N9	2.59	0.50
50:S2:1541:G:N2	50:S2:1593:C:C2	2.80	0.50
53:SC:63:VAL:O	53:SC:63:VAL:HG23	2.11	0.50
71:SV:51:LYS:HD2	71:SV:76:ASP:OD1	2.11	0.50
81:Sg:17:TRP:HD1	81:Sg:303:THR:O	1.95	0.50
81:Sg:57:ARG:HD2	81:Sg:58:ALA:N	2.26	0.50
3:L5:923:C:O2'	3:L5:924:C:H5'	2.12	0.50
3:L5:1208:G:H21	11:LF:74:MET:HE2	1.76	0.50
3:L5:2520:C:O2	3:L5:2640:G:N2	2.45	0.50
3:L5:3597:G:H2'	3:L5:3598:C:C6	2.46	0.50
15:LJ:36:ALA:O	15:LJ:39:VAL:HG22	2.12	0.50
19:LO:31:ARG:O	19:LO:33:VAL:HG23	2.10	0.50
50:S2:1541:G:C2	50:S2:1542:C:O2	2.64	0.50
50:S2:1613:G:OP1	65:SP:42:ARG:NH1	2.43	0.50
54:SD:210:ILE:HG12	67:SR:16:ILE:HD11	1.91	0.50
55:SE:126:VAL:HA	55:SE:141:THR:HA	1.94	0.50
56:SF:31:ASN:O	56:SF:36:GLN:NE2	2.44	0.50
59:SI:36:THR:OG1	59:SI:96:LEU:HB2	2.11	0.50
60:SJ:138:ARG:O	60:SJ:139:LYS:HD2	2.11	0.50
66:SQ:96:TYR:HB3	66:SQ:105:LYS:CE	2.42	0.50
68:SS:24:ARG:HG3	68:SS:29:ALA:HB2	1.92	0.50
81:Sg:201:SER:N	81:Sg:206:LEU:O	2.43	0.50
1:5:88:ASP:N	1:5:88:ASP:OD1	2.44	0.50
2:CB:323:LEU:HD11	2:CB:327:ASP:O	2.12	0.50
2:CB:584:SER:OG	2:CB:737:GLN:O	2.29	0.50
3:L5:501:C:OP1	3:L5:503:C:O2'	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:982:U:H2'	3:L5:983:C:C6	2.47	0.50
3:L5:1178:G:H2'	3:L5:1178:G:N3	2.27	0.50
3:L5:1332:C:H2'	3:L5:1333:A:C8	2.47	0.50
3:L5:1686:C:O2'	32:Lb:18:ARG:NH2	2.45	0.50
7:LB:56:ILE:HD12	7:LB:365:LEU:HD22	1.92	0.50
19:LO:186:GLU:OE1	19:LO:186:GLU:N	2.45	0.50
22:LR:173:ARG:O	22:LR:176:ARG:HB2	2.12	0.50
37:Lg:42:PRO:HD2	37:Lg:56:VAL:HG21	1.93	0.50
50:S2:29:G:OP1	73:SX:124:LYS:NZ	2.44	0.50
50:S2:156:G:H1'	57:SG:56:ASN:HD21	1.77	0.50
50:S2:554:A:O2'	50:S2:555:A:H5''	2.11	0.50
50:S2:1179:G:N2	50:S2:1182:A:OP2	2.43	0.50
50:S2:1217:A:H2'	50:S2:1218:C:H6	1.77	0.50
50:S2:1284:A:H5''	50:S2:1286:G:O4'	2.11	0.50
52:SB:145:LYS:HG3	52:SB:149:GLN:OE1	2.11	0.50
56:SF:87:LEU:H	56:SF:87:LEU:HD12	1.76	0.50
57:SG:141:ILE:H	57:SG:141:ILE:HD12	1.77	0.50
74:SY:3:ASP:OD1	74:SY:4:THR:N	2.42	0.50
81:Sg:39:THR:HG21	81:Sg:60:ARG:HH21	1.77	0.50
81:Sg:156:PHE:CD1	81:Sg:165:ILE:HD13	2.46	0.50
1:5:67:LYS:NZ	3:L5:3741:C:OP1	2.43	0.50
2:CB:188:ILE:HA	2:CB:191:THR:HG22	1.93	0.50
2:CB:227:GLN:NE2	2:CB:349:ALA:HA	2.27	0.50
2:CB:256:MET:HB2	2:CB:259:LYS:HZ3	1.77	0.50
3:L5:278:G:H5''	18:LN:8:GLN:NE2	2.26	0.50
3:L5:1076:C:H2'	3:L5:1077:C:C6	2.46	0.50
5:L8:125:C:O2'	5:L8:126:C:H5''	2.12	0.50
5:L8:155:C:H2'	5:L8:156:U:O4'	2.12	0.50
42:Ll:6:THR:HG22	42:Ll:8:ARG:H	1.76	0.50
48:Lz:85:MET:HE1	48:Lz:103:LEU:HD21	1.94	0.50
48:Lz:98:LYS:HA	48:Lz:101:LYS:HE3	1.93	0.50
50:S2:54:A:H3'	50:S2:451:G:H22	1.76	0.50
50:S2:1158:G:H5''	72:SW:76:SER:HB2	1.93	0.50
50:S2:1203:G:H2'	50:S2:1204:A:C8	2.47	0.50
50:S2:1445:U:O2'	70:SU:55:ARG:O	2.24	0.50
50:S2:1486:A:H2'	50:S2:1487:A:C8	2.46	0.50
50:S2:1759:G:N2	50:S2:1760:G:O6	2.45	0.50
52:SB:27:LYS:NZ	52:SB:53:GLN:HG2	2.27	0.50
54:SD:122:VAL:O	54:SD:126:ILE:HG12	2.10	0.50
59:SI:104:ILE:N	59:SI:171:LEU:O	2.40	0.50
59:SI:147:LYS:O	59:SI:150:ASP:HB2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:SP:25:LEU:HD23	65:SP:28:MET:HE2	1.93	0.50
66:SQ:80:GLN:O	66:SQ:84:ILE:HG12	2.11	0.50
81:Sg:34:ALA:HB1	81:Sg:66:VAL:HG13	1.93	0.50
81:Sg:113:PHE:CD1	81:Sg:120:ILE:HD11	2.46	0.50
2:CB:666:THR:C	2:CB:667:LYS:HD3	2.37	0.50
3:L5:989:U:O2'	3:L5:990:C:O5'	2.28	0.50
3:L5:3771:C:C4	3:L5:3772:U:C4	2.99	0.50
3:L5:4625:C:O2'	3:L5:4626:A:H5'	2.11	0.50
15:LJ:95:ARG:HH12	15:LJ:96:LYS:HE2	1.77	0.50
16:LL:87:HIS:HE1	16:LL:89:LYS:HD2	1.77	0.50
28:LX:81:LEU:HB3	28:LX:97:VAL:HG13	1.94	0.50
50:S2:200:G:C2	50:S2:201:C:H1'	2.46	0.50
50:S2:496:C:H2'	50:S2:497:C:C6	2.47	0.50
50:S2:1374:C:O2'	50:S2:1464:C:O2	2.26	0.50
50:S2:1536:G:H2'	50:S2:1537:A:C8	2.47	0.50
52:SB:36:PRO:HA	52:SB:232:HIS:HD2	1.72	0.50
55:SE:67:GLN:HB3	55:SE:69:PHE:CE2	2.47	0.50
58:SH:130:LEU:HD21	58:SH:156:VAL:HG21	1.94	0.50
62:SL:150:GLY:O	62:SL:151:THR:OG1	2.29	0.50
63:SN:99:ARG:O	63:SN:102:LEU:N	2.35	0.50
67:SR:32:LYS:HD2	67:SR:47:ARG:NH2	2.27	0.50
68:SS:28:PHE:HD1	68:SS:38:ARG:HH21	1.60	0.50
68:SS:114:LEU:HD21	68:SS:121:ARG:NH1	2.27	0.50
73:SX:95:GLU:OE1	73:SX:95:GLU:N	2.44	0.50
3:L5:1326:A:H2'	3:L5:1327:C:C6	2.47	0.50
3:L5:3612:C:H1'	3:L5:5016:A:C8	2.47	0.50
7:LB:80:GLU:HG3	7:LB:326:VAL:HG13	1.94	0.50
9:LD:256:LYS:HD2	9:LD:257:PRO:HD2	1.93	0.50
21:LQ:124:ASP:OD1	21:LQ:124:ASP:N	2.43	0.50
30:LZ:71:PHE:HA	30:LZ:111:ARG:HD2	1.93	0.50
40:Lj:2:THR:HB	40:Lj:6:SER:HB2	1.94	0.50
50:S2:512:A:C2	50:S2:513:G:C8	3.00	0.50
50:S2:1579:A:H4'	50:S2:1581:C:H5	1.75	0.50
55:SE:137:PRO:HG2	55:SE:149:TYR:HA	1.94	0.50
61:SK:58:VAL:HG22	61:SK:60:GLU:OE2	2.12	0.50
63:SN:86:GLU:HB3	63:SN:90:HIS:HE1	1.75	0.50
67:SR:35:CYS:HA	67:SR:38:ILE:HG12	1.94	0.50
69:ST:99:VAL:O	69:ST:103:VAL:HG23	2.11	0.50
2:CB:364:ALA:HA	2:CB:367:TYR:CZ	2.47	0.49
2:CB:626:GLN:HB3	2:CB:631:ARG:HD3	1.93	0.49
3:L5:4274:A:H2'	3:L5:4275:G:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LC:361:LEU:O	8:LC:365:SER:N	2.39	0.49
13:LH:61:TRP:CH2	17:LM:33:GLN:HG3	2.46	0.49
13:LH:93:ARG:HG2	13:LH:182:SER:HB3	1.93	0.49
16:LL:46:ILE:O	16:LL:46:ILE:HG13	2.12	0.49
29:LY:47:MET:HE3	29:LY:48:PRO:HD2	1.94	0.49
50:S2:1091:C:OP1	63:SN:9:LYS:NZ	2.44	0.49
50:S2:1304:U:H2'	50:S2:1305:C:C6	2.47	0.49
50:S2:1539:U:H2'	50:S2:1540:G:C8	2.47	0.49
54:SD:48:ILE:O	54:SD:86:LEU:HA	2.12	0.49
56:SF:40:ALA:C	56:SF:45:TYR:HE1	2.20	0.49
60:SJ:124:HIS:CE1	80:Se:35:ARG:HD3	2.47	0.49
65:SP:32:GLN:HA	65:SP:35:GLN:HE22	1.77	0.49
70:SU:54:VAL:HG22	70:SU:88:LEU:O	2.12	0.49
74:SY:105:LYS:HD3	74:SY:105:LYS:C	2.36	0.49
74:SY:105:LYS:HD3	74:SY:106:GLN:N	2.27	0.49
76:Sa:22:ARG:HG3	76:Sa:27:ALA:HA	1.94	0.49
77:Sb:55:LEU:HD11	77:Sb:60:SER:HA	1.93	0.49
81:Sg:153:CYS:SG	81:Sg:197:THR:HA	2.51	0.49
3:L5:217:C:OP2	3:L5:219:G:H1'	2.11	0.49
3:L5:1198:G:H2'	3:L5:1199:G:C8	2.47	0.49
3:L5:1821:G:N3	3:L5:1822:U:H5'	2.26	0.49
3:L5:4538:G:H2'	3:L5:4539:U:C6	2.47	0.49
3:L5:4635:A:H3'	3:L5:4636:U:H4'	1.94	0.49
3:L5:4913:G:H4'	3:L5:4914:C:O5'	2.12	0.49
5:L8:82:A:N7	5:L8:84:A:H3'	2.27	0.49
10:LE:178:PRO:O	10:LE:181:LEU:N	2.30	0.49
13:LH:36:ARG:HB3	13:LH:80:MET:HE1	1.94	0.49
22:LR:105:LEU:HD23	22:LR:138:LEU:HD23	1.94	0.49
31:La:73:VAL:HB	31:La:108:TYR:CD2	2.47	0.49
50:S2:212:C:H2'	50:S2:213:G:H8	1.76	0.49
50:S2:533:A:H2'	50:S2:534:G:C8	2.47	0.49
50:S2:1043:G:H2'	50:S2:1044:G:H8	1.78	0.49
50:S2:1539:U:H2'	50:S2:1540:G:H8	1.77	0.49
50:S2:1620:A:H2'	65:SP:40:ARG:NH2	2.27	0.49
52:SB:216:LYS:HD3	52:SB:217:MET:H	1.78	0.49
55:SE:131:VAL:HA	55:SE:137:PRO:HA	1.94	0.49
56:SF:100:ILE:CD1	56:SF:178:ILE:HG21	2.42	0.49
57:SG:64:LYS:O	57:SG:100:CYS:HB3	2.12	0.49
58:SH:148:LEU:HA	72:SW:42:MET:HE3	1.93	0.49
59:SI:97:VAL:HG22	59:SI:100:CYS:HB3	1.94	0.49
66:SQ:100:VAL:HG22	66:SQ:101:ASP:H	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:139:SER:HA	1:5:144:GLU:HB3	1.94	0.49
17:LM:12:VAL:O	17:LM:58:THR:OG1	2.24	0.49
35:Le:26:ASP:OD1	35:Le:27:ARG:N	2.46	0.49
50:S2:29:G:H2'	50:S2:30:C:C6	2.47	0.49
50:S2:165:G:H2'	50:S2:166:A:H8	1.77	0.49
50:S2:799:U:C5	50:S2:867:G:C2	3.00	0.49
50:S2:1260:A:C5	50:S2:1619:A:C6	3.01	0.49
50:S2:1278:A:H2'	50:S2:1279:C:H6	1.77	0.49
50:S2:1281:G:H2'	50:S2:1282:A:C8	2.48	0.49
50:S2:1505:U:H4'	50:S2:1508:A:H1'	1.94	0.49
50:S2:1533:A:H2	50:S2:1536:G:N3	2.09	0.49
51:SA:198:MET:SD	67:SR:86:PRO:HG2	2.53	0.49
52:SB:175:GLU:OE2	52:SB:193:ILE:HD13	2.12	0.49
66:SQ:31:LEU:HB3	66:SQ:67:ASP:HA	1.94	0.49
70:SU:39:LEU:HD11	70:SU:102:THR:HA	1.93	0.49
1:5:17:THR:HG21	1:5:81:VAL:C	2.38	0.49
2:CB:306:ASN:HB3	2:CB:308:LYS:HZ3	1.76	0.49
3:L5:699:C:H2'	3:L5:700:G:C8	2.48	0.49
3:L5:703:G:H2'	3:L5:704:C:H4'	1.95	0.49
3:L5:1700:G:OP2	3:L5:1704:C:N4	2.45	0.49
3:L5:2639:U:O2'	3:L5:2694:G:O6	2.29	0.49
3:L5:4095:G:H1	3:L5:4114:C:H1'	1.77	0.49
29:LY:26:ARG:HG2	29:LY:78:TYR:CE1	2.48	0.49
40:Lj:67:LEU:HA	40:Lj:70:VAL:HG12	1.95	0.49
48:Lz:120:ILE:HG23	48:Lz:124:LEU:HB2	1.93	0.49
50:S2:941:C:H2'	50:S2:942:G:H8	1.78	0.49
51:SA:148:CYS:HB3	51:SA:152:SER:OG	2.13	0.49
81:Sg:147:HIS:HB2	81:Sg:151:VAL:HG22	1.93	0.49
1:5:17:THR:CB	1:5:81:VAL:O	2.60	0.49
2:CB:653:GLY:HA2	2:CB:660:ASN:HB2	1.94	0.49
2:CB:712:ASP:CG	49:S:198:GLY:HA3	2.38	0.49
3:L5:699:C:O2'	3:L5:968:C:N3	2.37	0.49
3:L5:4378:A:O2'	3:L5:4379:A:H2'	2.12	0.49
7:LB:109:HIS:HB2	7:LB:202:GLU:OE1	2.11	0.49
9:LD:215:ASP:OD1	9:LD:216:GLU:N	2.45	0.49
12:LG:150:LYS:NZ	12:LG:177:MET:O	2.45	0.49
12:LG:210:GLU:CD	12:LG:210:GLU:H	2.20	0.49
17:LM:71:LYS:O	17:LM:75:GLN:HG2	2.13	0.49
25:LU:41:GLN:HA	25:LU:44:GLN:HG3	1.94	0.49
50:S2:735:C:H5''	50:S2:736:C:C2	2.47	0.49
50:S2:900:C:H5'	50:S2:901:G:N7	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:915:G:OP1	58:SH:120:ARG:NH1	2.46	0.49
50:S2:1299:A:O2'	50:S2:1301:A:OP1	2.28	0.49
50:S2:1308:U:H2'	50:S2:1309:C:C6	2.48	0.49
50:S2:1410:C:H2'	50:S2:1411:G:H8	1.74	0.49
50:S2:1648:G:C8	66:SQ:125:ARG:HD2	2.47	0.49
50:S2:1672:U:O3'	66:SQ:76:GLY:HA3	2.12	0.49
53:SC:63:VAL:O	53:SC:64:THR:HG23	2.12	0.49
61:SK:42:ASN:HA	61:SK:45:VAL:HG22	1.95	0.49
63:SN:56:ASP:OD1	77:Sb:50:ALA:HA	2.12	0.49
68:SS:69:THR:HA	68:SS:72:GLN:HB2	1.95	0.49
2:CB:648:LYS:HG2	2:CB:664:ASP:OD1	2.13	0.49
3:L5:162:A:H2'	3:L5:163:A:H8	1.78	0.49
3:L5:467:U:H2'	3:L5:468:U:O4'	2.13	0.49
3:L5:966:A:H3'	3:L5:967:C:C6	2.48	0.49
3:L5:1855:G:OP1	32:Lb:4:SER:HB2	2.11	0.49
3:L5:3759:A:H5'	3:L5:3765:G:H22	1.76	0.49
3:L5:4099:G:H2'	3:L5:4101:C:H42	1.78	0.49
3:L5:4895:C:H3'	3:L5:4895:C:OP2	2.12	0.49
29:LY:50:ARG:HG2	29:LY:115:ARG:NH1	2.28	0.49
50:S2:194:C:H2'	50:S2:195:C:C6	2.47	0.49
50:S2:846:G:OP1	55:SE:106:LYS:NZ	2.31	0.49
50:S2:916:A:C6	63:SN:73:ARG:HD2	2.48	0.49
50:S2:952:G:H2'	50:S2:953:C:C6	2.47	0.49
50:S2:1043:G:H2'	50:S2:1044:G:C8	2.48	0.49
50:S2:1101:U:C2	50:S2:1102:G:N7	2.81	0.49
50:S2:1500:G:H2'	50:S2:1501:C:C6	2.47	0.49
50:S2:1522:A:C5	65:SP:128:HIS:NE2	2.79	0.49
50:S2:1692:U:H2'	50:S2:1693:G:C8	2.47	0.49
50:S2:1703:C:H2'	50:S2:1704:C:O4'	2.12	0.49
52:SB:119:THR:HG23	52:SB:155:TYR:HA	1.94	0.49
62:SL:96:ILE:HD12	73:SX:10:ALA:HB1	1.95	0.49
64:SO:117:ARG:HH22	76:Sa:49:ALA:HA	1.77	0.49
70:SU:31:SER:O	70:SU:34:LYS:HG2	2.12	0.49
74:SY:54:VAL:CG1	74:SY:76:TYR:N	2.75	0.49
81:Sg:191:HIS:CE1	81:Sg:213:ASP:HB2	2.46	0.49
1:5:74:PRO:HB2	1:5:77:HIS:ND1	2.28	0.49
2:CB:20:ARG:HB2	2:CB:100:ILE:HD12	1.93	0.49
2:CB:33:SER:HB3	2:CB:54:THR:HG23	1.94	0.49
3:L5:691:C:H2'	3:L5:692:A:C8	2.47	0.49
3:L5:759:G:O5'	13:LH:50:LYS:NZ	2.31	0.49
3:L5:1258:G:H2'	3:L5:1259:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:LD:211:LEU:HD21	9:LD:223:PHE:HE1	1.78	0.49
10:LE:243:THR:HG22	10:LE:246:ARG:HG2	1.95	0.49
16:LL:43:ALA:O	16:LL:149:GLN:NE2	2.45	0.49
50:S2:786:G:OP2	57:SG:231:ARG:NE	2.45	0.49
50:S2:1568:C:H2'	50:S2:1569:A:C8	2.47	0.49
50:S2:1595:U:H2'	50:S2:1596:U:H6	1.75	0.49
50:S2:1661:A:C8	79:Sd:14:PHE:CD1	3.01	0.49
51:SA:68:ILE:HG13	51:SA:120:ARG:NH2	2.25	0.49
53:SC:68:ARG:HH12	53:SC:72:ASP:HB3	1.78	0.49
59:SI:129:LEU:O	59:SI:129:LEU:HD23	2.13	0.49
63:SN:115:LEU:O	63:SN:119:GLU:HG3	2.13	0.49
66:SQ:132:PHE:CE1	70:SU:76:THR:HA	2.47	0.49
67:SR:76:GLU:O	67:SR:79:GLU:HG2	2.12	0.49
74:SY:102:THR:O	74:SY:107:ARG:NE	2.46	0.49
81:Sg:64:HIS:CE1	81:Sg:65:PHE:HD2	2.31	0.49
3:L5:1248:C:H2'	3:L5:1249:C:C6	2.47	0.49
3:L5:2487:G:OP2	3:L5:2487:G:H8	1.94	0.49
3:L5:3734:U:C2'	3:L5:3735:G:H5'	2.43	0.49
7:LB:308:ASP:OD1	7:LB:309:LEU:N	2.46	0.49
9:LD:146:LEU:HD22	9:LD:163:LEU:HD12	1.93	0.49
32:Lb:13:SER:HA	32:Lb:16:TRP:NE1	2.28	0.49
48:Lz:63:PHE:HB2	48:Lz:152:LYS:NZ	2.28	0.49
50:S2:84:A:N3	50:S2:150:A:O2'	2.45	0.49
50:S2:152:U:H1'	57:SG:132:ARG:CZ	2.43	0.49
50:S2:731:G:H5'	50:S2:732:U:H5''	1.94	0.49
50:S2:733:C:C5	50:S2:734:C:H1'	2.47	0.49
50:S2:1260:A:N7	50:S2:1619:A:N6	2.61	0.49
50:S2:1681:U:H2'	50:S2:1682:C:C6	2.48	0.49
57:SG:209:TYR:HD1	57:SG:213:LEU:HD23	1.76	0.49
58:SH:37:LYS:NZ	58:SH:40:LEU:HD22	2.28	0.49
64:SO:84:ARG:NH2	64:SO:85:CYS:HA	2.27	0.49
76:Sa:87:ARG:NH1	76:Sa:91:ALA:O	2.46	0.49
81:Sg:218:LEU:HD11	81:Sg:228:TYR:HB3	1.95	0.49
3:L5:1825:A:H2'	3:L5:1826:G:C8	2.48	0.49
3:L5:3911:C:H2'	3:L5:3912:U:C6	2.48	0.49
3:L5:4238:G:H2'	3:L5:4239:A:H8	1.78	0.49
3:L5:4635:A:OP1	3:L5:4636:U:O2'	2.28	0.49
3:L5:4967:A:H2'	3:L5:4968:A:H8	1.77	0.49
8:LC:36:ILE:HG21	8:LC:122:TYR:HD2	1.76	0.49
17:LM:96:GLU:O	17:LM:100:ARG:HG2	2.12	0.49
23:LS:173:ASN:OD1	23:LS:174:THR:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Lc:11:LEU:HA	33:Lc:14:ILE:HG22	1.95	0.49
50:S2:1115:U:O4	50:S2:1118:C:N4	2.46	0.49
50:S2:1125:C:H5'	67:SR:126:MET:HB3	1.95	0.49
50:S2:1238:U:O2	50:S2:1242:U:H5	1.95	0.49
51:SA:68:ILE:HD11	51:SA:73:ASP:HB3	1.95	0.49
51:SA:89:LYS:CD	67:SR:81:ARG:HH11	2.23	0.49
62:SL:126:VAL:CG1	62:SL:142:VAL:HG13	2.42	0.49
66:SQ:23:ALA:CB	66:SQ:70:VAL:HG12	2.42	0.49
66:SQ:49:TYR:O	66:SQ:53:GLU:N	2.45	0.49
67:SR:121:GLN:OE1	67:SR:122:PRO:HD2	2.13	0.49
81:Sg:244:ASN:CG	81:Sg:295:GLY:HA3	2.38	0.49
2:CB:762:VAL:HG13	2:CB:763:LEU:HD22	1.95	0.49
3:L5:683:C:H2'	3:L5:684:G:O4'	2.13	0.49
3:L5:1359:G:H4'	18:LN:203:TYR:HB2	1.95	0.49
3:L5:1956:A:H2'	3:L5:1957:U:C6	2.48	0.49
21:LQ:15:ARG:NH1	21:LQ:52:PHE:O	2.46	0.49
50:S2:882:U:H1'	50:S2:905:C:N3	2.27	0.49
50:S2:1051:G:H2'	50:S2:1052:A:H8	1.78	0.49
50:S2:1109:C:H2'	50:S2:1110:G:O4'	2.13	0.49
50:S2:1221:G:H2'	50:S2:1222:G:C8	2.48	0.49
52:SB:134:LEU:HB2	52:SB:219:LYS:HB2	1.94	0.49
54:SD:34:TYR:OH	54:SD:37:VAL:HB	2.12	0.49
56:SF:27:ASP:OD2	56:SF:107:ASN:ND2	2.44	0.49
57:SG:224:ARG:HA	57:SG:224:ARG:CZ	2.43	0.49
58:SH:27:LEU:HA	58:SH:30:LEU:HB2	1.94	0.49
63:SN:25:TRP:HD1	77:Sb:83:GLN:HG3	1.78	0.49
66:SQ:43:GLU:CD	66:SQ:44:PRO:HD3	2.37	0.49
69:ST:39:LEU:HB3	69:ST:43:LYS:NZ	2.27	0.49
73:SX:139:GLU:HG3	73:SX:140:ARG:H	1.77	0.49
78:Sc:21:THR:HG22	78:Sc:22:GLY:N	2.27	0.49
81:Sg:170:TRP:NE1	81:Sg:194:TYR:HD2	2.11	0.49
1:5:88:ASP:HB3	1:5:136:THR:HA	1.95	0.48
2:CB:394:LEU:HD21	2:CB:421:VAL:HG12	1.95	0.48
3:L5:1097:C:H2'	3:L5:1098:G:H8	1.75	0.48
3:L5:1273:G:OP2	32:Lb:117:ARG:NH2	2.46	0.48
3:L5:2465:C:H2'	3:L5:2466:G:O4'	2.13	0.48
3:L5:3732:A:H5''	48:Lz:199:GLN:HE22	1.76	0.48
3:L5:3755:G:H2'	3:L5:3756:A:O4'	2.13	0.48
3:L5:4188:U:H2'	3:L5:4189:U:C6	2.48	0.48
3:L5:4537:C:H2'	3:L5:4538:G:H8	1.78	0.48
10:LE:95:PRO:HA	10:LE:104:THR:HG22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Lz:66:CYS:HB2	48:Lz:107:TYR:CG	2.48	0.48
50:S2:1474:A:H2'	50:S2:1475:G:C8	2.47	0.48
50:S2:1657:G:H2'	50:S2:1658:G:H8	1.78	0.48
51:SA:214:GLU:CD	67:SR:84:TYR:CE1	2.91	0.48
54:SD:76:ARG:HB2	61:SK:22:VAL:HG11	1.95	0.48
55:SE:117:GLU:O	55:SE:120:LYS:HG2	2.12	0.48
81:Sg:17:TRP:HB2	81:Sg:36:ARG:CG	2.41	0.48
81:Sg:178:ASN:OD1	81:Sg:183:LYS:N	2.41	0.48
2:CB:584:SER:OG	2:CB:585:GLU:OE2	2.31	0.48
3:L5:101:A:H1'	31:La:66:ASN:ND2	2.28	0.48
3:L5:1440:U:H3	3:L5:2105:A:H2	1.60	0.48
3:L5:1503:A:H4'	3:L5:1504:G:H5'	1.94	0.48
3:L5:1577:G:H5'	3:L5:1578:U:H5''	1.95	0.48
3:L5:1662:C:H2'	3:L5:1663:C:H6	1.78	0.48
3:L5:3772:U:H3	3:L5:3776:G:H22	1.60	0.48
3:L5:5006:U:H4'	3:L5:5007:A:H5'	1.94	0.48
7:LB:92:TYR:OH	7:LB:182:GLU:OE1	2.31	0.48
9:LD:60:ILE:HD11	9:LD:93:THR:HA	1.95	0.48
10:LE:46:ARG:HB2	10:LE:62:MET:HE1	1.94	0.48
18:LN:140:LYS:HE2	18:LN:144:ARG:HH21	1.78	0.48
29:LY:74:TYR:HE1	29:LY:76:LYS:HB3	1.78	0.48
31:La:119:LYS:HA	31:La:140:VAL:HG23	1.94	0.48
50:S2:39:A:H3'	50:S2:40:A:H8	1.78	0.48
50:S2:328:U:O2'	50:S2:329:G:H8	1.95	0.48
50:S2:958:G:H2'	50:S2:959:G:C8	2.49	0.48
50:S2:1030:A:H2'	50:S2:1031:A:C8	2.44	0.48
50:S2:1435:C:O2'	50:S2:1436:C:O4'	2.26	0.48
50:S2:1436:C:H1'	50:S2:1437:C:N3	2.28	0.48
51:SA:191:ARG:NH1	71:SV:44:GLY:O	2.45	0.48
55:SE:26:VAL:HG23	55:SE:27:PHE:CD1	2.48	0.48
56:SF:61:PHE:CE2	78:Sc:51:ARG:HB2	2.48	0.48
64:SO:46:ASP:OD1	64:SO:49:GLY:N	2.46	0.48
67:SR:32:LYS:HG3	67:SR:33:ARG:HD2	1.95	0.48
74:SY:18:LEU:HD13	74:SY:20:ARG:HE	1.78	0.48
75:SZ:47:LEU:HD11	75:SZ:78:LYS:HD2	1.95	0.48
2:CB:27:HIS:ND1	2:CB:138:GLN:HB2	2.29	0.48
2:CB:743:PRO:HG3	2:CB:817:TRP:CZ3	2.47	0.48
3:L5:268:G:H2'	3:L5:269:G:C8	2.48	0.48
3:L5:1706:A:H3'	3:L5:1707:C:C2	2.48	0.48
3:L5:2501:C:N4	3:L5:2502:G:O6	2.47	0.48
3:L5:2601:A:N6	3:L5:2744:A:OP2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3754:G:C4	3:L5:3755:G:C8	3.02	0.48
3:L5:4503:A:H2'	3:L5:4504:C:C6	2.48	0.48
7:LB:29:VAL:HG13	7:LB:348:ARG:HD3	1.95	0.48
15:LJ:10:ASN:N	15:LJ:11:PRO:HD2	2.27	0.48
18:LN:16:SER:O	18:LN:20:ARG:HG2	2.13	0.48
29:LY:10:ASP:HB3	29:LY:13:LYS:HB2	1.94	0.48
50:S2:152:U:H2'	50:S2:153:G:C8	2.48	0.48
50:S2:168:C:O2'	57:SG:131:ARG:HB3	2.13	0.48
50:S2:386:C:H1'	59:SI:5:ARG:HB2	1.95	0.48
50:S2:563:G:O2'	50:S2:564:A:OP1	2.27	0.48
50:S2:696:G:H5'	50:S2:697:G:P	2.53	0.48
50:S2:748:C:N3	50:S2:795:A:N1	2.61	0.48
50:S2:1101:U:H2'	50:S2:1102:G:C8	2.48	0.48
50:S2:1300:U:H2'	65:SP:51:ARG:NH2	2.28	0.48
50:S2:1516:G:O2'	50:S2:1517:G:H5'	2.14	0.48
50:S2:1588:A:H2'	50:S2:1589:A:H8	1.77	0.48
54:SD:222:PRO:HG2	81:Sg:226:HIS:CE1	2.48	0.48
58:SH:31:GLU:HG3	58:SH:37:LYS:HE3	1.93	0.48
81:Sg:14:HIS:NE2	81:Sg:18:VAL:HG22	2.29	0.48
81:Sg:302:TYR:HE2	81:Sg:308:ARG:HD3	1.78	0.48
3:L5:1267:C:N4	32:Lb:111:ARG:HH22	2.10	0.48
3:L5:2094:G:H2'	3:L5:2095:A:C4	2.48	0.48
3:L5:2101:C:H2'	3:L5:2102:G:C8	2.49	0.48
3:L5:4724:A:O2'	7:LB:104:THR:HG23	2.13	0.48
25:LU:47:ILE:O	25:LU:53:ALA:HA	2.14	0.48
49:S:209:LYS:HD2	50:S2:625:G:OP1	2.13	0.48
50:S2:523:A:P	60:SJ:127:ARG:HH21	2.36	0.48
50:S2:555:A:H2'	50:S2:556:U:C5	2.48	0.48
50:S2:871:U:H5'	63:SN:76:LYS:HZ3	1.78	0.48
50:S2:882:U:N3	50:S2:883:U:C5	2.81	0.48
50:S2:1448:A:H2'	50:S2:1449:G:O4'	2.14	0.48
51:SA:66:VAL:HG12	51:SA:182:VAL:HG23	1.95	0.48
64:SO:42:VAL:HG12	64:SO:56:VAL:O	2.13	0.48
65:SP:34:MET:HE2	65:SP:34:MET:HB2	1.75	0.48
66:SQ:34:VAL:HA	66:SQ:70:VAL:HG22	1.95	0.48
69:ST:49:ASP:OD1	69:ST:50:GLU:N	2.46	0.48
81:Sg:87:LEU:O	81:Sg:100:ARG:HA	2.13	0.48
2:CB:143:LEU:HD11	2:CB:188:ILE:HD12	1.95	0.48
3:L5:1179:U:O2'	3:L5:1180:C:OP1	2.29	0.48
3:L5:1367:C:O2'	3:L5:1369:C:OP2	2.30	0.48
3:L5:4633:G:O3'	3:L5:4634:U:H3'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4769:G:H5''	19:LO:176:ARG:HD3	1.95	0.48
7:LB:302:ASN:HB2	7:LB:313:SER:HA	1.95	0.48
9:LD:215:ASP:OD1	9:LD:218:ALA:N	2.36	0.48
11:LF:102:SER:O	11:LF:106:ARG:HG3	2.13	0.48
13:LH:4:ILE:HG12	13:LH:61:TRP:CH2	2.49	0.48
21:LQ:188:ASN:ND2	21:LQ:188:ASN:O	2.46	0.48
22:LR:15:LEU:HD21	22:LR:52:ARG:HB2	1.95	0.48
22:LR:173:ARG:NH1	22:LR:177:LEU:HD21	2.29	0.48
25:LU:45:GLU:HA	25:LU:54:GLY:HA2	1.95	0.48
52:SB:67:PHE:CZ	64:SO:48:SER:HB2	2.49	0.48
53:SC:206:SER:OG	53:SC:210:PRO:HG2	2.13	0.48
61:SK:49:MET:HG2	61:SK:69:TRP:CE3	2.47	0.48
63:SN:20:ARG:HH21	72:SW:56:HIS:HB3	1.77	0.48
68:SS:107:LEU:HD12	68:SS:108:ARG:N	2.28	0.48
79:Sd:15:GLY:O	79:Sd:18:SER:OG	2.29	0.48
81:Sg:64:HIS:CE1	81:Sg:65:PHE:CD2	3.01	0.48
81:Sg:92:LEU:O	81:Sg:93:THR:OG1	2.24	0.48
13:LH:28:LYS:O	13:LH:28:LYS:HG3	2.14	0.48
22:LR:164:SER:OG	22:LR:167:LYS:HE3	2.13	0.48
28:LX:110:LYS:HE2	28:LX:121:VAL:HG23	1.96	0.48
29:LY:74:TYR:CE1	29:LY:76:LYS:HB3	2.48	0.48
50:S2:187:G:H2'	50:S2:188:C:H6	1.78	0.48
50:S2:443:U:H2'	50:S2:444:G:O4'	2.13	0.48
50:S2:532:C:H5'	50:S2:533:A:OP1	2.13	0.48
50:S2:871:U:OP2	63:SN:76:LYS:NZ	2.36	0.48
50:S2:1599:U:OP1	75:SZ:80:ARG:NH2	2.46	0.48
55:SE:26:VAL:HG11	60:SJ:2:PRO:O	2.13	0.48
55:SE:192:ILE:HB	55:SE:243:GLY:HA3	1.96	0.48
56:SF:54:GLY:HA3	56:SF:56:TYR:CE2	2.48	0.48
59:SI:165:GLN:NE2	59:SI:171:LEU:HA	2.29	0.48
61:SK:58:VAL:HA	61:SK:71:LEU:HA	1.95	0.48
78:Sc:9:ILE:HD12	78:Sc:59:LEU:HA	1.95	0.48
2:CB:227:GLN:HE22	2:CB:352:GLN:HE21	1.60	0.48
2:CB:395:MET:SD	2:CB:417:PHE:HD2	2.37	0.48
2:CB:451:ILE:HD11	2:CB:458:VAL:HB	1.95	0.48
3:L5:185:C:H2'	3:L5:186:G:H8	1.77	0.48
3:L5:452:A:H62	3:L5:1293:G:H3'	1.79	0.48
3:L5:506:C:H2'	3:L5:507:G:H8	1.78	0.48
3:L5:994:G:N7	3:L5:995:C:H1'	2.29	0.48
3:L5:3712:A:C5	3:L5:3713:U:H1'	2.49	0.48
5:L8:140:C:H2'	5:L8:141:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LN:20:ARG:O	18:LN:24:ARG:HG3	2.13	0.48
18:LN:123:GLU:HB3	18:LN:128:LYS:HG3	1.95	0.48
20:LP:36:ILE:HD12	20:LP:44:ALA:HB1	1.95	0.48
28:LX:89:LYS:HG2	28:LX:95:THR:CG2	2.44	0.48
50:S2:555:A:H2'	50:S2:556:U:H5	1.78	0.48
50:S2:1046:U:H2'	50:S2:1047:C:C6	2.48	0.48
50:S2:1520:G:C2	50:S2:1521:C:C4	3.01	0.48
52:SB:113:MET:CE	52:SB:209:ASP:HB3	2.43	0.48
54:SD:16:ILE:HD12	79:Sd:22:ARG:NH1	2.20	0.48
57:SG:218:LYS:O	57:SG:221:LYS:HG2	2.13	0.48
60:SJ:131:ARG:HA	60:SJ:131:ARG:HD2	1.62	0.48
69:ST:21:PHE:HD1	69:ST:22:LEU:HD22	1.78	0.48
69:ST:129:ARG:HG2	69:ST:129:ARG:NH1	2.27	0.48
81:Sg:17:TRP:N	81:Sg:36:ARG:HB2	2.23	0.48
2:CB:461:ILE:HG22	2:CB:463:ASP:H	1.78	0.48
3:L5:62:A:OP1	18:LN:172:ARG:NH1	2.41	0.48
3:L5:455:C:N4	3:L5:456:C:H41	2.11	0.48
3:L5:1202:C:H3'	3:L5:1203:G:H5''	1.94	0.48
3:L5:2079:G:H2'	3:L5:2080:U:C6	2.48	0.48
3:L5:4941:G:OP2	10:LE:188:ARG:NH1	2.41	0.48
8:LC:204:ARG:HG2	8:LC:205:ARG:N	2.29	0.48
14:LI:54:SER:HB2	14:LI:135:ILE:HD11	1.96	0.48
17:LM:49:ALA:HB2	23:LS:100:LEU:HD11	1.96	0.48
50:S2:152:U:H1'	57:SG:132:ARG:NE	2.29	0.48
50:S2:213:G:C6	50:S2:214:U:C4	3.01	0.48
50:S2:519:A:H5''	60:SJ:11:LYS:HZ1	1.79	0.48
50:S2:635:G:H2'	50:S2:636:C:C6	2.49	0.48
50:S2:1495:G:C2	79:Sd:41:GLN:HB3	2.49	0.48
50:S2:1693:G:H2'	50:S2:1694:U:C6	2.49	0.48
51:SA:74:VAL:HG12	51:SA:121:LEU:HB3	1.96	0.48
57:SG:135:PRO:C	57:SG:136:LYS:HD3	2.38	0.48
58:SH:33:ASN:CG	58:SH:36:LEU:HB2	2.38	0.48
61:SK:3:MET:HG3	61:SK:8:ARG:HB2	1.94	0.48
69:ST:5:THR:HG23	69:ST:7:LYS:H	1.77	0.48
74:SY:94:HIS:HD2	74:SY:96:LEU:HD13	1.76	0.48
81:Sg:127:LYS:HG2	81:Sg:149:GLU:O	2.13	0.48
2:CB:28:VAL:HG23	2:CB:68:ILE:HG22	1.96	0.48
3:L5:2858:A:H2'	3:L5:2859:G:O4'	2.13	0.48
3:L5:4765:G:H21	23:LS:173:ASN:HD21	1.60	0.48
9:LD:153:THR:HG23	9:LD:160:PHE:CE2	2.49	0.48
10:LE:118:THR:HG21	35:Le:92:ASN:HB3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:LO:27:VAL:HG13	19:LO:101:ARG:HB3	1.94	0.48
25:LU:54:GLY:C	25:LU:56:LEU:H	2.22	0.48
32:Lb:23:LYS:HD3	32:Lb:24:PRO:O	2.13	0.48
48:Lz:87:ILE:HA	48:Lz:90:LEU:HD12	1.95	0.48
50:S2:15:U:H2'	50:S2:16:G:O4'	2.14	0.48
50:S2:85:A:H2'	50:S2:86:C:H6	1.78	0.48
50:S2:150:A:N6	50:S2:168:C:H42	2.11	0.48
50:S2:187:G:H2'	50:S2:188:C:C6	2.49	0.48
50:S2:606:G:H21	80:Se:58:ASN:HD21	1.60	0.48
50:S2:1567:G:C6	68:SS:82:TRP:CG	3.01	0.48
51:SA:12:GLU:OE2	51:SA:12:GLU:N	2.45	0.48
53:SC:104:ASP:HB3	53:SC:130:ILE:HG13	1.95	0.48
57:SG:95:LYS:HE3	57:SG:95:LYS:HB3	1.67	0.48
60:SJ:137:VAL:HG12	60:SJ:138:ARG:H	1.78	0.48
61:SK:16:PHE:HE2	61:SK:80:ARG:HG3	1.79	0.48
63:SN:63:VAL:HA	63:SN:66:VAL:HG22	1.95	0.48
68:SS:34:LYS:HZ2	68:SS:103:LEU:HD22	1.78	0.48
74:SY:9:THR:OG1	74:SY:23:MET:HB2	2.13	0.48
74:SY:15:ASN:HD21	74:SY:20:ARG:CZ	2.27	0.48
79:Sd:33:LYS:HE3	79:Sd:34:TYR:CZ	2.49	0.48
81:Sg:135:LEU:HD23	81:Sg:135:LEU:H	1.79	0.48
2:CB:595:SER:HB3	2:CB:600:ASN:HB2	1.96	0.48
2:CB:617:ILE:HD12	2:CB:622:VAL:O	2.14	0.48
3:L5:444:G:H2'	3:L5:445:U:C6	2.49	0.48
3:L5:1188:C:H2'	3:L5:1189:G:H8	1.79	0.48
3:L5:4070:U:H2'	3:L5:4071:U:C6	2.49	0.48
3:L5:4738:C:H2'	3:L5:4739:C:O4'	2.13	0.48
13:LH:174:LYS:HG2	13:LH:175:PHE:H	1.79	0.48
23:LS:173:ASN:OD1	23:LS:175:PHE:N	2.47	0.48
48:Lz:68:LEU:O	48:Lz:112:ALA:HA	2.14	0.48
50:S2:51:U:H2'	50:S2:52:G:C8	2.49	0.48
50:S2:303:C:H2'	50:S2:304:C:O4'	2.13	0.48
50:S2:337:C:C4	50:S2:338:G:C8	3.02	0.48
50:S2:367:U:H4'	50:S2:371:A:C8	2.49	0.48
50:S2:396:U:OP2	62:SL:79:LYS:NZ	2.47	0.48
50:S2:574:A:H4'	74:SY:89:HIS:HB2	1.95	0.48
50:S2:605:A:O2'	50:S2:638:C:O2'	2.31	0.48
50:S2:959:G:H2'	50:S2:960:U:C6	2.49	0.48
50:S2:1274:G:OP1	50:S2:1274:G:N2	2.37	0.48
50:S2:1374:C:H2'	50:S2:1375:G:O4'	2.13	0.48
50:S2:1618:C:H4'	65:SP:50:ARG:NH2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SC:114:LYS:HE3	53:SC:114:LYS:HB2	1.70	0.48
55:SE:125:LYS:HB3	55:SE:142:HIS:HB3	1.95	0.48
59:SI:36:THR:HG22	59:SI:57:ALA:O	2.12	0.48
59:SI:190:LEU:HG	59:SI:195:LEU:HA	1.96	0.48
60:SJ:28:GLU:HG3	60:SJ:40:LYS:HE2	1.96	0.48
2:CB:128:VAL:HG23	2:CB:156:MET:HG3	1.96	0.47
3:L5:1587:G:O2'	3:L5:1588:U:OP2	2.32	0.47
3:L5:2260:C:O2	3:L5:2261:G:N1	2.47	0.47
3:L5:2467:U:H4'	3:L5:2468:U:H5'	1.95	0.47
3:L5:4062:A:H2'	3:L5:4063:U:C6	2.49	0.47
3:L5:4475:G:OP2	13:LH:173:ARG:NH1	2.45	0.47
7:LB:65:SER:OG	7:LB:66:LYS:N	2.47	0.47
17:LM:81:ASP:O	17:LM:85:LYS:HD3	2.14	0.47
17:LM:136:LEU:O	17:LM:137:LYS:NZ	2.29	0.47
28:LX:119:ILE:HD12	28:LX:140:LEU:HD22	1.95	0.47
48:Lz:13:ALA:O	48:Lz:17:VAL:HG23	2.13	0.47
50:S2:531:A:C6	50:S2:554:A:N6	2.82	0.47
50:S2:694:G:C6	50:S2:737:G:C2	2.98	0.47
50:S2:1003:U:H5''	52:SB:165:ARG:NH2	2.28	0.47
53:SC:255:LEU:O	71:SV:16:LYS:NZ	2.47	0.47
55:SE:71:LYS:HZ3	55:SE:74:GLY:HA2	1.78	0.47
56:SF:28:VAL:HA	56:SF:110:GLN:OE1	2.14	0.47
57:SG:74:ARG:HD2	57:SG:96:SER:HA	1.95	0.47
62:SL:47:PRO:O	62:SL:51:ILE:HG12	2.14	0.47
62:SL:138:VAL:C	62:SL:139:ARG:HD2	2.38	0.47
64:SO:44:VAL:HG12	64:SO:54:CYS:O	2.14	0.47
68:SS:15:VAL:HG13	68:SS:16:LEU:N	2.26	0.47
73:SX:29:LYS:NZ	73:SX:35:ALA:HB1	2.29	0.47
81:Sg:11:LEU:HA	81:Sg:11:LEU:HD23	1.73	0.47
2:CB:216:SER:OG	2:CB:221:TRP:NE1	2.47	0.47
3:L5:126:C:H2'	3:L5:127:G:H8	1.79	0.47
3:L5:1274:A:H8	3:L5:1274:A:OP2	1.97	0.47
3:L5:1765:A:N7	3:L5:1766:A:O2'	2.47	0.47
3:L5:3736:A:H2'	3:L5:3737:A:C8	2.49	0.47
14:LI:171:TRP:O	14:LI:174:THR:OG1	2.27	0.47
17:LM:127:VAL:HG23	19:LO:177:LEU:HG	1.96	0.47
24:LT:110:LYS:HG3	24:LT:111:GLU:N	2.28	0.47
41:Lk:49:ASP:OD2	41:Lk:51:GLU:HG3	2.14	0.47
48:Lz:34:LEU:N	48:Lz:167:VAL:O	2.41	0.47
50:S2:28:U:H2'	50:S2:29:G:C8	2.48	0.47
50:S2:165:G:H2'	50:S2:166:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1266:C:C4	50:S2:1517:G:N2	2.83	0.47
53:SC:60:TRP:CZ2	53:SC:62:PRO:HB3	2.50	0.47
54:SD:67:ARG:HH12	61:SK:96:ARG:H	1.61	0.47
58:SH:145:ARG:HB2	72:SW:51:GLU:HG3	1.96	0.47
59:SI:110:ARG:HA	59:SI:121:LEU:HD23	1.96	0.47
64:SO:77:ALA:O	64:SO:81:VAL:HG23	2.13	0.47
68:SS:46:ARG:HH12	69:ST:35:ASP:CA	2.27	0.47
74:SY:120:THR:HG23	74:SY:123:ALA:HB3	1.95	0.47
2:CB:438:LYS:NZ	2:CB:440:GLU:HB2	2.30	0.47
3:L5:223:G:N7	8:LC:165:LYS:HE3	2.30	0.47
3:L5:1209:U:H3'	3:L5:1210:C:H5''	1.96	0.47
3:L5:1501:C:O2'	3:L5:1502:G:OP2	2.31	0.47
3:L5:4964:C:H2'	3:L5:4965:U:C6	2.50	0.47
10:LE:67:ALA:HA	10:LE:69:TYR:CE1	2.50	0.47
21:LQ:83:VAL:HG13	21:LQ:83:VAL:O	2.13	0.47
29:LY:127:GLN:O	29:LY:131:GLU:HG2	2.14	0.47
50:S2:1267:C:C2	50:S2:1516:G:C2	3.01	0.47
50:S2:1348:G:H5'	53:SC:145:LYS:HE3	1.96	0.47
54:SD:194:PRO:HG3	54:SD:198:ILE:HG13	1.96	0.47
55:SE:36:HIS:CE1	55:SE:85:GLY:HA3	2.49	0.47
55:SE:118:GLU:HA	55:SE:121:TYR:HE1	1.79	0.47
60:SJ:3:VAL:HG12	60:SJ:5:ARG:HD3	1.96	0.47
72:SW:32:LYS:HA	72:SW:35:VAL:HG22	1.97	0.47
74:SY:125:VAL:O	74:SY:129:LYS:HE2	2.15	0.47
81:Sg:40:ILE:HD12	81:Sg:90:TRP:CZ3	2.48	0.47
1:5:111:ASP:HA	48:Lz:47:LYS:HE3	1.97	0.47
2:CB:50:ARG:O	2:CB:55:ARG:NE	2.47	0.47
2:CB:389:ASP:OD2	2:CB:392:GLY:N	2.47	0.47
3:L5:502:C:H3'	3:L5:504:G:OP1	2.14	0.47
3:L5:2018:C:H2'	3:L5:2019:C:C6	2.49	0.47
3:L5:2520:C:H2'	3:L5:2521:G:H8	1.80	0.47
3:L5:2588:C:OP1	3:L5:2768:C:O2'	2.23	0.47
3:L5:2696:A:OP1	41:Lk:26:LYS:NZ	2.47	0.47
3:L5:2744:A:H2'	3:L5:2745:A:C8	2.49	0.47
3:L5:2884:G:H2'	3:L5:2885:A:H8	1.79	0.47
3:L5:3735:G:O2'	3:L5:3736:A:OP2	2.30	0.47
3:L5:4938:A:P	10:LE:183:ARG:HH21	2.38	0.47
9:LD:129:GLU:OE2	9:LD:131:ASN:ND2	2.32	0.47
25:LU:55:ASN:O	25:LU:58:GLY:N	2.47	0.47
48:Lz:207:LYS:HB3	48:Lz:213:PRO:HA	1.95	0.47
49:S:188:ARG:NH1	50:S2:1247:C:OP2	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:455:A:H2'	50:S2:456:C:H6	1.78	0.47
50:S2:508:A:H3'	50:S2:509:G:H8	1.77	0.47
50:S2:582:U:H2'	50:S2:583:A:O4'	2.14	0.47
50:S2:643:A:H4'	50:S2:644:G:H5'	1.96	0.47
50:S2:696:G:H2'	50:S2:734:C:H2'	1.96	0.47
50:S2:1010:G:H2'	50:S2:1011:A:C8	2.49	0.47
50:S2:1530:U:H1'	69:ST:87:VAL:HG23	1.97	0.47
54:SD:211:VAL:HG12	67:SR:38:ILE:O	2.15	0.47
57:SG:162:LEU:N	57:SG:170:ARG:O	2.46	0.47
59:SI:123:ARG:HH12	59:SI:129:LEU:HD13	1.80	0.47
59:SI:149:TYR:O	59:SI:153:LYS:HG3	2.15	0.47
64:SO:78:ALA:HB3	64:SO:118:ALA:HB3	1.95	0.47
3:L5:264:C:H2'	3:L5:265:C:C6	2.49	0.47
3:L5:1977:C:HO2'	3:L5:1978:C:P	2.37	0.47
3:L5:4405:G:P	14:LI:7:ARG:HH11	2.37	0.47
15:LJ:35:ARG:NH2	15:LJ:122:SER:O	2.42	0.47
16:LL:130:LYS:NZ	16:LL:132:SER:HB2	2.29	0.47
32:Lb:114:LYS:HE3	32:Lb:118:LEU:HD11	1.96	0.47
35:Le:80:HIS:N	35:Le:84:GLU:OE2	2.48	0.47
50:S2:748:C:N4	50:S2:795:A:H61	2.12	0.47
50:S2:1521:C:N4	68:SS:137:LYS:HE3	2.29	0.47
51:SA:85:ARG:CZ	51:SA:205:ARG:HH12	2.28	0.47
52:SB:128:LYS:HD2	52:SB:132:GLY:HA2	1.96	0.47
54:SD:133:GLY:HA3	54:SD:156:LEU:O	2.14	0.47
56:SF:143:PRO:HA	56:SF:146:ARG:HG2	1.95	0.47
63:SN:103:GLU:HA	63:SN:106:ARG:HH21	1.80	0.47
69:ST:140:ALA:HA	69:ST:143:LYS:HE2	1.96	0.47
73:SX:24:ASP:OD1	73:SX:24:ASP:N	2.46	0.47
81:Sg:311:GLN:NE2	81:Sg:312:VAL:O	2.47	0.47
2:CB:415:ARG:HA	2:CB:469:ILE:HA	1.97	0.47
3:L5:185:C:H2'	3:L5:186:G:C8	2.50	0.47
3:L5:492:U:H2'	3:L5:493:G:C8	2.49	0.47
3:L5:1253:G:O2'	3:L5:1257:A:N6	2.34	0.47
3:L5:1846:G:H2'	3:L5:1847:C:C6	2.50	0.47
3:L5:2084:C:N4	21:LQ:14:ARG:HD2	2.29	0.47
3:L5:2520:C:H2'	3:L5:2521:G:C8	2.50	0.47
3:L5:2725:A:H8	3:L5:2725:A:O5'	1.97	0.47
3:L5:4517:A:O2'	7:LB:258:HIS:HB2	2.15	0.47
3:L5:4699:U:H1'	3:L5:4700:A:H5''	1.95	0.47
11:LF:173:ALA:O	11:LF:177:ARG:HG3	2.15	0.47
15:LJ:110:GLN:OE1	15:LJ:110:GLN:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:LO:159:LYS:HB3	19:LO:159:LYS:HE2	1.63	0.47
26:LV:131:ARG:HA	26:LV:131:ARG:NE	2.30	0.47
27:LW:47:ARG:HG3	27:LW:47:ARG:NH1	2.30	0.47
50:S2:526:A:H2'	50:S2:527:C:C6	2.49	0.47
50:S2:556:U:C6	50:S2:557:U:H4'	2.50	0.47
50:S2:1060:A:C4	50:S2:1062:A:C6	3.02	0.47
52:SB:119:THR:OG1	52:SB:143:THR:OG1	2.30	0.47
54:SD:45:ARG:NH1	54:SD:82:GLY:O	2.47	0.47
60:SJ:113:GLN:HG3	60:SJ:149:VAL:HG21	1.96	0.47
68:SS:21:ASP:OD2	68:SS:23:ARG:HB3	2.14	0.47
68:SS:113:ARG:O	68:SS:117:ILE:HG13	2.14	0.47
76:Sa:103:PRO:O	78:Sc:67:ARG:NH1	2.48	0.47
77:Sb:35:VAL:HA	77:Sb:78:SER:O	2.13	0.47
1:5:17:THR:CG2	1:5:83:ASN:N	2.78	0.47
2:CB:434:TYR:HB3	2:CB:493:ASN:HD21	1.79	0.47
2:CB:609:PHE:HE1	2:CB:701:ARG:HB2	1.80	0.47
2:CB:715:HIS:HA	50:S2:1825:A:H61	1.79	0.47
2:CB:746:LEU:HD23	2:CB:746:LEU:H	1.78	0.47
2:CB:753:GLU:OE1	3:L5:2009:A:N6	2.48	0.47
2:CB:800:LEU:HD23	2:CB:810:PRO:HG3	1.97	0.47
3:L5:1084:C:H2'	3:L5:1085:C:C6	2.49	0.47
3:L5:1247:U:H2'	3:L5:1248:C:C6	2.50	0.47
3:L5:1443:A:H61	3:L5:2104:G:H21	0.60	0.47
3:L5:1802:A:H5''	3:L5:1803:G:H5'	1.96	0.47
3:L5:4251:A:H5''	15:LJ:108:GLY:HA3	1.97	0.47
3:L5:4622:A:H4'	7:LB:13:SER:HB2	1.96	0.47
8:LC:60:HIS:NE2	8:LC:100:ARG:HD3	2.29	0.47
11:LF:29:LYS:O	11:LF:33:LEU:HG	2.15	0.47
17:LM:24:LEU:HD11	17:LM:86:TRP:NE1	2.30	0.47
34:Ld:37:GLY:O	34:Ld:41:ARG:HG3	2.15	0.47
36:Lf:45:LYS:HD2	36:Lf:105:LEU:HA	1.96	0.47
38:Lh:88:THR:HG22	38:Lh:90:ALA:N	2.26	0.47
40:Lj:21:ARG:O	40:Lj:22:CYS:SG	2.73	0.47
45:Lo:78:ARG:HD3	45:Lo:78:ARG:HA	1.56	0.47
48:Lz:87:ILE:HG22	48:Lz:91:LYS:HZ2	1.79	0.47
49:S:194:ASP:HB3	50:S2:1489:A:H5'	1.96	0.47
50:S2:65:C:C4'	57:SG:172:LYS:HE2	2.45	0.47
50:S2:200:G:H2'	50:S2:201:C:O4'	2.14	0.47
50:S2:383:G:H5''	50:S2:384:U:OP2	2.15	0.47
50:S2:455:A:H2'	50:S2:456:C:C6	2.49	0.47
50:S2:533:A:H2'	50:S2:534:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:695:C:H5''	50:S2:696:G:H5''	1.96	0.47
50:S2:862:A:C8	72:SW:107:SER:HA	2.49	0.47
50:S2:923:G:H2'	50:S2:924:G:H8	1.79	0.47
50:S2:1221:G:H2'	50:S2:1222:G:H8	1.79	0.47
50:S2:1238:U:H5'	65:SP:129:GLY:H	1.80	0.47
50:S2:1253:A:H4'	50:S2:1254:C:H5''	1.97	0.47
50:S2:1652:G:H1	50:S2:1672:U:H3	1.60	0.47
50:S2:1675:A:N3	56:SF:78:MET:HE2	2.30	0.47
52:SB:126:ASP:OD1	52:SB:136:ARG:HD3	2.14	0.47
53:SC:194:ARG:HD3	53:SC:196:ILE:HD11	1.95	0.47
55:SE:60:GLU:O	55:SE:64:ILE:HG12	2.15	0.47
59:SI:40:PRO:HD2	59:SI:40:PRO:O	2.14	0.47
64:SO:44:VAL:HG13	64:SO:53:ILE:HB	1.96	0.47
65:SP:23:ASP:OD1	65:SP:24:GLN:N	2.47	0.47
67:SR:87:GLU:CD	67:SR:87:GLU:N	2.73	0.47
68:SS:68:ILE:O	68:SS:72:GLN:HG2	2.15	0.47
69:ST:124:THR:HG23	69:ST:127:GLY:N	2.29	0.47
70:SU:22:ILE:O	70:SU:88:LEU:HB2	2.15	0.47
74:SY:20:ARG:NH2	74:SY:22:GLN:HB3	2.30	0.47
77:Sb:8:LEU:H	77:Sb:8:LEU:HD23	1.79	0.47
81:Sg:72:SER:OG	81:Sg:74:ASP:OD1	2.30	0.47
2:CB:352:GLN:O	2:CB:356:ILE:HG22	2.15	0.47
3:L5:163:A:H2'	3:L5:164:G:H8	1.79	0.47
3:L5:188:G:H1'	3:L5:189:G:C8	2.49	0.47
3:L5:461:G:H2'	3:L5:462:G:C8	2.47	0.47
3:L5:920:C:H2'	3:L5:921:C:C6	2.50	0.47
3:L5:1333:A:H2'	3:L5:1334:A:C8	2.50	0.47
3:L5:4097:G:C6	3:L5:4113:U:O2	2.67	0.47
3:L5:4500:U:H2'	3:L5:4501:U:C6	2.49	0.47
3:L5:4523:A:H5''	3:L5:4524:G:H5'	1.97	0.47
3:L5:4919:G:H2'	3:L5:4920:C:C6	2.49	0.47
4:L7:7:G:OP1	9:LD:33:ARG:NE	2.47	0.47
8:LC:318:PRO:C	8:LC:320:LYS:H	2.23	0.47
9:LD:56:THR:HG22	9:LD:57:ASN:H	1.80	0.47
33:Lc:50:ASN:ND2	33:Lc:76:GLY:O	2.48	0.47
38:Lh:10:ARG:HG2	38:Lh:10:ARG:HH11	1.79	0.47
50:S2:201:C:H3'	50:S2:202:G:N2	2.29	0.47
50:S2:344:U:H2'	50:S2:345:U:C6	2.49	0.47
50:S2:434:G:H2'	50:S2:435:A:C8	2.49	0.47
50:S2:1102:G:H2'	50:S2:1103:C:H6	1.78	0.47
50:S2:1134:G:OP2	76:Sa:6:ARG:NH2	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1357:A:H4'	53:SC:112:VAL:HG21	1.96	0.47
50:S2:1389:C:O2'	54:SD:163:PRO:HD3	2.14	0.47
50:S2:1866:A:H61	76:Sa:85:ARG:H	1.62	0.47
54:SD:23:GLU:OE2	61:SK:64:TRP:NE1	2.28	0.47
56:SF:59:LYS:HD3	56:SF:62:ARG:NH1	2.29	0.47
56:SF:91:ARG:HE	75:SZ:103:HIS:CE1	2.33	0.47
57:SG:102:VAL:HG21	57:SG:109:LEU:CD1	2.45	0.47
59:SI:133:GLU:O	59:SI:136:ILE:HG22	2.14	0.47
64:SO:71:PRO:HB3	64:SO:114:SER:HB2	1.96	0.47
66:SQ:100:VAL:HG22	66:SQ:101:ASP:OD1	2.13	0.47
76:Sa:40:VAL:HG12	76:Sa:42:ARG:H	1.79	0.47
81:Sg:302:TYR:CE2	81:Sg:308:ARG:HD3	2.49	0.47
2:CB:183:GLU:O	2:CB:187:VAL:HG23	2.15	0.47
2:CB:765:ARG:HD3	3:L5:4419:U:O2	2.15	0.47
3:L5:228:C:O2'	29:LY:14:ASN:ND2	2.45	0.47
3:L5:1198:G:H2'	3:L5:1199:G:H8	1.80	0.47
3:L5:1754:U:H2'	3:L5:1755:C:H6	1.77	0.47
3:L5:2745:A:H2'	3:L5:2746:A:H8	1.80	0.47
3:L5:3607:U:H2'	3:L5:3608:A:H8	1.80	0.47
3:L5:4765:G:N2	23:LS:173:ASN:HD21	2.13	0.47
12:LG:225:ASN:O	12:LG:229:ARG:NH1	2.43	0.47
16:LL:209:LYS:HG3	16:LL:210:LYS:HG2	1.97	0.47
19:LO:27:VAL:HG12	19:LO:98:ALA:HB1	1.95	0.47
20:LP:40:HIS:NE2	20:LP:110:ASP:O	2.48	0.47
34:Ld:92:ARG:HD3	34:Ld:94:GLU:OE2	2.15	0.47
48:Lz:196:LYS:HD2	48:Lz:199:GLN:OE1	2.15	0.47
50:S2:482:G:N2	50:S2:484:A:H3'	2.30	0.47
50:S2:689:U:H2'	50:S2:690:G:N3	2.29	0.47
51:SA:145:ILE:HG13	51:SA:159:ILE:HB	1.97	0.47
51:SA:158:ASP:OD1	71:SV:65:SER:OG	2.31	0.47
52:SB:183:GLU:HA	52:SB:186:ASN:HB2	1.97	0.47
55:SE:45:ILE:HG13	55:SE:61:VAL:HG11	1.96	0.47
56:SF:143:PRO:O	56:SF:144:LEU:HD22	2.14	0.47
57:SG:116:LYS:HE3	57:SG:116:LYS:HB3	1.70	0.47
58:SH:134:VAL:HG23	58:SH:173:PHE:CE2	2.49	0.47
61:SK:53:LYS:HE2	61:SK:60:GLU:HB2	1.97	0.47
66:SQ:132:PHE:HB2	70:SU:77:TRP:CD1	2.50	0.47
78:Sc:35:MET:HE1	78:Sc:55:VAL:HG13	1.96	0.47
3:L5:1754:U:C2	3:L5:1755:C:C5	3.03	0.47
3:L5:2253:A:H61	11:LF:27:GLU:HG2	1.80	0.47
3:L5:2569:G:H2'	3:L5:2570:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4584:A:H2'	3:L5:4585:U:O4'	2.15	0.47
5:L8:126:C:O2'	5:L8:127:U:O4'	2.29	0.47
7:LB:115:LYS:NZ	7:LB:129:ALA:O	2.45	0.47
10:LE:94:LYS:O	10:LE:104:THR:HB	2.15	0.47
14:LI:82:ARG:NH1	14:LI:82:ARG:HB3	2.30	0.47
22:LR:173:ARG:NH2	22:LR:174:GLU:OE2	2.48	0.47
46:Lp:59:SER:OG	46:Lp:60:CYS:N	2.48	0.47
50:S2:697:G:OP2	50:S2:733:C:N4	2.39	0.47
50:S2:1019:C:H2'	50:S2:1020:A:O4'	2.14	0.47
50:S2:1540:G:C6	50:S2:1594:A:C6	3.03	0.47
50:S2:1650:A:H2'	50:S2:1651:A:O4'	2.14	0.47
54:SD:116:ARG:HA	54:SD:119:CYS:SG	2.55	0.47
56:SF:123:GLU:OE2	56:SF:204:ARG:NH2	2.45	0.47
57:SG:47:GLY:O	57:SG:115:LYS:NZ	2.39	0.47
59:SI:77:ARG:NH1	59:SI:79:ILE:HD13	2.30	0.47
67:SR:111:PHE:CD1	67:SR:114:LEU:HD21	2.45	0.47
69:ST:110:LEU:O	69:ST:110:LEU:HD23	2.15	0.47
70:SU:26:SER:HB2	70:SU:110:VAL:HG12	1.97	0.47
2:CB:426:LYS:NZ	2:CB:444:LEU:O	2.31	0.46
3:L5:2431:A:OP1	42:LI:41:ARG:NH1	2.47	0.46
3:L5:4457:U:O2	7:LB:252:ALA:HB3	2.15	0.46
3:L5:4605:A:H2'	3:L5:4606:G:O4'	2.14	0.46
3:L5:4611:A:H2	13:LH:120:GLU:HB3	1.80	0.46
9:LD:258:LYS:H	9:LD:259:LYS:NZ	2.11	0.46
10:LE:155:GLY:O	10:LE:158:ARG:HG3	2.15	0.46
16:LL:19:GLN:HA	16:LL:22:VAL:HG23	1.97	0.46
16:LL:203:ALA:HA	16:LL:206:ASP:OD2	2.15	0.46
48:Lz:171:HIS:H	48:Lz:174:MET:CE	2.26	0.46
50:S2:155:G:C6	50:S2:164:A:C6	3.03	0.46
50:S2:496:C:H2'	50:S2:497:C:H6	1.80	0.46
50:S2:558:G:HO2'	50:S2:559:G:P	2.35	0.46
50:S2:731:G:OP1	50:S2:733:C:H5'	2.14	0.46
50:S2:1394:G:N2	50:S2:1475:G:H1'	2.30	0.46
50:S2:1398:G:H22	50:S2:1448:A:H2	1.63	0.46
51:SA:12:GLU:HB3	67:SR:111:PHE:CE1	2.50	0.46
54:SD:103:GLU:HG2	54:SD:106:ARG:NH2	2.29	0.46
55:SE:141:THR:HG23	55:SE:143:ASP:N	2.29	0.46
62:SL:22:ARG:NH1	62:SL:23:VAL:H	2.13	0.46
65:SP:92:SER:H	65:SP:107:ILE:HB	1.79	0.46
81:Sg:217:MET:HE2	81:Sg:219:TRP:CZ2	2.44	0.46
3:L5:181:C:H1'	3:L5:256:G:N2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:497:G:N2	3:L5:657:C:H42	2.14	0.46
3:L5:2020:U:H2'	3:L5:2021:G:H8	1.78	0.46
3:L5:2490:U:O2'	3:L5:2491:C:O4'	2.22	0.46
3:L5:2539:C:H2'	3:L5:2540:C:C6	2.49	0.46
3:L5:3762:U:C4	3:L5:3763:A:C5	3.04	0.46
3:L5:3871:A:H2'	3:L5:3872:A:C8	2.51	0.46
3:L5:4106:G:H2'	3:L5:4107:G:H5'	1.97	0.46
3:L5:4717:A:OP2	7:LB:30:LYS:NZ	2.41	0.46
3:L5:4910:G:H4'	7:LB:95:THR:HG22	1.96	0.46
10:LE:206:VAL:HA	10:LE:256:GLN:HE21	1.80	0.46
15:LJ:16:ARG:NH1	15:LJ:16:ARG:HB2	2.30	0.46
17:LM:6:PHE:H	17:LM:11:ARG:NH2	2.13	0.46
21:LQ:150:ARG:HG3	21:LQ:150:ARG:NH1	2.30	0.46
33:Lc:14:ILE:O	33:Lc:18:LEU:HB2	2.16	0.46
41:Lk:17:ARG:HH21	41:Lk:38:CYS:HB3	1.81	0.46
49:S:286:TRP:O	49:S:290:GLN:HG2	2.15	0.46
50:S2:1266:C:N4	50:S2:1517:G:H22	2.13	0.46
50:S2:1624:U:C4	50:S2:1625:U:C4	3.03	0.46
50:S2:1646:C:C2	50:S2:1678:A:C2	3.03	0.46
56:SF:60:ARG:HB3	56:SF:61:PHE:CD2	2.50	0.46
56:SF:85:LYS:HB3	56:SF:88:MET:HB3	1.97	0.46
57:SG:61:PHE:CE1	57:SG:96:SER:HB2	2.50	0.46
57:SG:85:ARG:HD2	57:SG:85:ARG:O	2.15	0.46
57:SG:192:ILE:O	57:SG:195:LYS:HB3	2.15	0.46
58:SH:171:GLU:OE1	58:SH:171:GLU:N	2.36	0.46
63:SN:27:LYS:C	63:SN:28:LEU:HD12	2.40	0.46
68:SS:125:HIS:CE1	68:SS:131:VAL:HG11	2.51	0.46
69:ST:135:ALA:HA	69:ST:138:VAL:HG22	1.98	0.46
74:SY:120:THR:O	74:SY:124:ASN:ND2	2.24	0.46
81:Sg:40:ILE:HD12	81:Sg:90:TRP:HZ3	1.80	0.46
81:Sg:203:ASP:OD1	81:Sg:205:SER:OG	2.32	0.46
2:CB:207:PRO:HA	2:CB:212:VAL:HG22	1.97	0.46
2:CB:308:LYS:HB2	2:CB:308:LYS:HE2	1.75	0.46
2:CB:650:TRP:CE2	2:CB:676:LYS:NZ	2.84	0.46
3:L5:469:C:H2'	3:L5:470:A:H8	1.80	0.46
3:L5:663:G:H2'	3:L5:664:G:C8	2.50	0.46
3:L5:1821:G:N3	3:L5:1821:G:H2'	2.31	0.46
3:L5:3607:U:H2'	3:L5:3608:A:C8	2.51	0.46
3:L5:3722:G:H2'	3:L5:3723:A:H8	1.80	0.46
3:L5:3784:A:O2'	3:L5:3785:A:H3'	2.16	0.46
3:L5:3946:G:N2	3:L5:3947:A:H62	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4515:G:H8	7:LB:3:HIS:HD1	1.59	0.46
8:LC:328:LEU:HD22	11:LF:187:MET:HG3	1.97	0.46
13:LH:95:VAL:HG22	43:Lm:82:LEU:HB3	1.98	0.46
19:LO:7:LEU:HD22	19:LO:31:ARG:HH21	1.80	0.46
20:LP:122:ALA:HB3	20:LP:143:PRO:HG2	1.96	0.46
26:LV:112:MET:HE2	26:LV:135:ASN:OD1	2.16	0.46
30:LZ:68:ILE:O	30:LZ:115:LYS:NZ	2.40	0.46
33:Lc:17:ARG:NH2	33:Lc:103:ASP:HA	2.29	0.46
50:S2:24:C:O2'	50:S2:25:A:H8	1.99	0.46
50:S2:919:A:H5'	63:SN:16:LEU:HD22	1.96	0.46
50:S2:1123:C:C5'	52:SB:149:GLN:HE21	2.28	0.46
50:S2:1248:U:O2'	66:SQ:145:TYR:HB2	2.15	0.46
50:S2:1495:G:H2'	50:S2:1496:U:C6	2.50	0.46
50:S2:1631:U:H5''	68:SS:34:LYS:HG3	1.96	0.46
55:SE:124:CYS:HB3	55:SE:141:THR:OG1	2.16	0.46
56:SF:24:SER:OG	56:SF:26:ASP:OD1	2.33	0.46
57:SG:43:GLU:HA	57:SG:46:LYS:NZ	2.29	0.46
61:SK:46:MET:O	61:SK:50:GLN:N	2.47	0.46
72:SW:77:PRO:HG2	72:SW:79:PHE:CE2	2.50	0.46
3:L5:1092:G:H2'	3:L5:1093:C:C6	2.50	0.46
3:L5:4088:C:H2'	3:L5:4089:G:C8	2.50	0.46
7:LB:223:THR:HA	7:LB:338:VAL:HG22	1.98	0.46
24:LT:49:GLN:HA	24:LT:52:MET:CE	2.45	0.46
25:LU:107:LYS:O	25:LU:108:GLU:HG3	2.15	0.46
36:Lf:22:ARG:HD3	36:Lf:22:ARG:HA	1.77	0.46
42:Ll:27:ILE:HG22	42:Ll:33:ASN:ND2	2.29	0.46
48:Lz:59:PRO:HD2	48:Lz:152:LYS:HE3	1.97	0.46
50:S2:508:A:H5'	50:S2:509:G:OP2	2.14	0.46
50:S2:737:G:N7	50:S2:738:C:O2'	2.46	0.46
50:S2:796:G:H2'	50:S2:797:C:O4'	2.15	0.46
50:S2:899:U:H3'	50:S2:900:C:C5'	2.44	0.46
50:S2:1067:C:H2'	50:S2:1068:G:O4'	2.15	0.46
50:S2:1443:C:H5'	66:SQ:13:PHE:CD1	2.50	0.46
50:S2:1540:G:H2'	50:S2:1541:G:C8	2.51	0.46
52:SB:186:ASN:O	52:SB:190:PRO:HD2	2.15	0.46
53:SC:249:SER:HA	71:SV:23:ILE:HG21	1.97	0.46
55:SE:246:LEU:HB3	55:SE:250:GLU:HG3	1.96	0.46
56:SF:28:VAL:HA	56:SF:110:GLN:NE2	2.30	0.46
62:SL:112:HIS:HB3	62:SL:141:ASN:ND2	2.31	0.46
73:SX:139:GLU:HG3	73:SX:140:ARG:N	2.31	0.46
74:SY:80:ASP:OD1	74:SY:81:TYR:N	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:Sg:177:TRP:CD1	81:Sg:184:LEU:HA	2.50	0.46
1:5:11:ASP:O	45:Lo:25:GLN:NE2	2.45	0.46
2:CB:137:VAL:O	2:CB:141:THR:HG23	2.16	0.46
3:L5:1468:C:H2'	3:L5:1469:C:C6	2.50	0.46
3:L5:4452:U:OP2	3:L5:4522:G:N1	2.43	0.46
3:L5:4492:U:H5''	3:L5:4493:U:H5'	1.96	0.46
3:L5:4499:G:C2	3:L5:4529:G:H1'	2.50	0.46
3:L5:4508:C:N3	3:L5:4512:U:H5	2.13	0.46
7:LB:288:GLY:HA3	7:LB:330:PHE:CE1	2.51	0.46
50:S2:383:G:H4'	62:SL:132:ARG:NH2	2.20	0.46
50:S2:1220:A:H2'	50:S2:1221:G:O4'	2.15	0.46
50:S2:1617:G:H22	50:S2:1619:A:H3'	1.80	0.46
50:S2:1744:G:O3'	50:S2:1745:A:H8	1.99	0.46
51:SA:63:ARG:HH12	71:SV:38:GLU:HA	1.80	0.46
52:SB:224:GLU:HB3	52:SB:227:LYS:HD2	1.97	0.46
56:SF:34:SER:HA	78:Sc:55:VAL:HB	1.97	0.46
59:SI:193:LYS:O	59:SI:196:GLU:HG3	2.15	0.46
63:SN:103:GLU:N	63:SN:103:GLU:OE1	2.47	0.46
65:SP:17:TYR:CE2	65:SP:18:ARG:HG3	2.51	0.46
72:SW:11:LEU:HD21	72:SW:37:PHE:HE2	1.80	0.46
74:SY:87:PRO:HG2	74:SY:90:ARG:NH1	2.30	0.46
75:SZ:47:LEU:HB2	75:SZ:80:ARG:HG3	1.97	0.46
2:CB:37:ASP:CG	2:CB:55:ARG:H	2.23	0.46
2:CB:226:LYS:NZ	2:CB:352:GLN:HG2	2.31	0.46
2:CB:402:VAL:HG12	2:CB:411:TYR:HB2	1.97	0.46
2:CB:598:LYS:HD3	2:CB:598:LYS:N	2.30	0.46
3:L5:188:G:N2	3:L5:189:G:O6	2.48	0.46
3:L5:481:G:H2'	3:L5:482:G:C8	2.50	0.46
3:L5:506:C:H2'	3:L5:507:G:C8	2.50	0.46
3:L5:515:C:H41	3:L5:647:G:H21	1.63	0.46
3:L5:1255:A:N6	3:L5:1257:A:O2'	2.49	0.46
3:L5:1307:A:H2'	3:L5:1308:C:H6	1.80	0.46
3:L5:1481:C:O2'	3:L5:1482:G:O5'	2.34	0.46
3:L5:3762:U:H2'	3:L5:3763:A:O4'	2.16	0.46
3:L5:4919:G:H2'	3:L5:4920:C:H6	1.80	0.46
7:LB:351:LEU:HD23	7:LB:351:LEU:H	1.81	0.46
38:Lh:104:THR:HG22	38:Lh:106:LYS:H	1.80	0.46
48:Lz:121:PRO:HA	48:Lz:125:GLY:CA	2.46	0.46
50:S2:389:A:H2'	50:S2:390:C:H6	1.80	0.46
50:S2:557:U:H2'	50:S2:558:G:C8	2.50	0.46
50:S2:639:C:H2'	50:S2:640:A:C8	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:674:C:H2'	50:S2:675:U:C6	2.50	0.46
50:S2:815:U:C2	50:S2:816:A:C8	3.03	0.46
50:S2:941:C:H2'	50:S2:942:G:C8	2.51	0.46
50:S2:1298:G:H2'	50:S2:1299:A:O4'	2.16	0.46
50:S2:1609:C:OP1	68:SS:131:VAL:HG22	2.15	0.46
50:S2:1656:G:N3	50:S2:1657:G:C8	2.83	0.46
50:S2:1740:C:H2'	50:S2:1741:U:C6	2.51	0.46
50:S2:1811:C:H2'	50:S2:1812:U:H4'	1.98	0.46
54:SD:74:GLN:NE2	54:SD:79:PHE:O	2.49	0.46
55:SE:104:ASP:O	55:SE:190:GLY:HA3	2.15	0.46
62:SL:13:GLN:NE2	62:SL:36:TYR:HB3	2.31	0.46
68:SS:28:PHE:HD1	68:SS:38:ARG:NE	2.10	0.46
70:SU:56:MET:HE1	70:SU:86:LYS:HG3	1.97	0.46
81:Sg:291:TRP:CH2	81:Sg:298:LEU:HD23	2.51	0.46
2:CB:77:LEU:HD23	2:CB:78:PHE:N	2.31	0.46
2:CB:603:TYR:CD1	2:CB:706:ASP:HB3	2.50	0.46
2:CB:664:ASP:OD1	2:CB:664:ASP:N	2.48	0.46
2:CB:722:ILE:H	2:CB:722:ILE:HD12	1.80	0.46
2:CB:815:ASP:OD1	2:CB:816:HIS:N	2.44	0.46
3:L5:1302:U:H3'	3:L5:1303:A:C8	2.50	0.46
3:L5:2102:G:H1'	3:L5:2103:G:C8	2.51	0.46
3:L5:2780:C:OP1	28:LX:134:LYS:NZ	2.37	0.46
5:L8:122:G:H1	5:L8:128:C:N4	2.13	0.46
7:LB:268:ARG:HG2	7:LB:268:ARG:NH2	2.31	0.46
8:LC:361:LEU:O	8:LC:365:SER:OG	2.25	0.46
10:LE:74:SER:OG	32:Lb:119:CYS:N	2.49	0.46
20:LP:24:VAL:HG12	20:LP:86:LYS:HG2	1.98	0.46
21:LQ:71:LYS:HE2	21:LQ:71:LYS:HB2	1.60	0.46
25:LU:107:LYS:C	25:LU:108:GLU:HG3	2.41	0.46
50:S2:72:C:N4	57:SG:170:ARG:HB3	2.28	0.46
50:S2:185:G:H2'	50:S2:186:C:C6	2.50	0.46
50:S2:584:A:H2'	50:S2:585:C:H6	1.81	0.46
50:S2:807:G:H2'	50:S2:808:A:H8	1.80	0.46
50:S2:1073:U:H2'	50:S2:1074:C:H6	1.81	0.46
50:S2:1129:G:H5'	77:Sb:19:HIS:CD2	2.51	0.46
50:S2:1286:G:N2	50:S2:1312:G:O2'	2.42	0.46
50:S2:1605:G:OP1	69:ST:84:ARG:NH2	2.48	0.46
51:SA:169:HIS:ND1	51:SA:203:PHE:HE2	2.13	0.46
59:SI:97:VAL:N	59:SI:100:CYS:SG	2.84	0.46
81:Sg:14:HIS:CE1	81:Sg:18:VAL:HG22	2.50	0.46
2:CB:28:VAL:HG11	3:L5:4606:G:H5''	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:434:TYR:HA	2:CB:438:LYS:HE3	1.97	0.46
2:CB:680:VAL:O	2:CB:684:GLN:HG2	2.15	0.46
3:L5:1241:C:N4	32:Lb:118:LEU:HD12	2.30	0.46
3:L5:1504:G:H2'	3:L5:1505:C:C6	2.51	0.46
3:L5:1662:C:H2'	3:L5:1663:C:C6	2.50	0.46
3:L5:1709:C:C4	3:L5:1716:G:N2	2.83	0.46
3:L5:1962:A:H2	3:L5:2024:G:H21	1.63	0.46
3:L5:4092:G:C2	3:L5:4093:G:C4	3.04	0.46
3:L5:4233:A:H4'	45:Lo:98:LYS:HE3	1.97	0.46
8:LC:66:SER:HA	8:LC:77:PRO:HA	1.97	0.46
9:LD:182:GLY:HA2	9:LD:194:VAL:HG13	1.96	0.46
17:LM:25:VAL:HG11	17:LM:38:VAL:HG13	1.96	0.46
20:LP:67:VAL:O	20:LP:80:GLN:NE2	2.49	0.46
49:S:284:ASP:HA	49:S:287:LYS:HE2	1.98	0.46
50:S2:378:U:H2'	50:S2:379:C:C6	2.51	0.46
50:S2:935:G:H2'	50:S2:936:G:H8	1.81	0.46
50:S2:1593:C:C2	50:S2:1594:A:C8	3.04	0.46
52:SB:32:ASP:OD1	52:SB:95:ASN:HA	2.16	0.46
53:SC:232:THR:O	53:SC:235:ASN:N	2.48	0.46
60:SJ:64:ASP:OD1	60:SJ:67:ASP:HB2	2.16	0.46
68:SS:27:ALA:HB2	68:SS:45:LEU:HD22	1.98	0.46
69:ST:11:GLN:CD	69:ST:62:ARG:HH12	2.19	0.46
81:Sg:61:GLY:O	81:Sg:88:ARG:NH1	2.49	0.46
2:CB:21:ASN:OD1	2:CB:469:ILE:HD11	2.16	0.46
2:CB:200:MET:HE1	2:CB:367:TYR:CE2	2.50	0.46
2:CB:232:TYR:HA	2:CB:235:LYS:HG2	1.98	0.46
2:CB:278:THR:HA	2:CB:284:LYS:HA	1.98	0.46
3:L5:2622:G:OP2	25:LU:84:LYS:NZ	2.49	0.46
3:L5:4538:G:H2'	3:L5:4539:U:H6	1.80	0.46
7:LB:117:ARG:NH2	7:LB:178:ALA:O	2.37	0.46
9:LD:79:TYR:O	9:LD:82:GLU:HG2	2.16	0.46
13:LH:93:ARG:HD2	13:LH:143:GLU:HB3	1.97	0.46
49:S:197:SER:HB2	50:S2:1489:A:H62	1.80	0.46
50:S2:490:C:O2'	50:S2:574:A:N1	2.45	0.46
50:S2:946:U:H2'	50:S2:947:G:C8	2.51	0.46
50:S2:1201:U:H2'	50:S2:1202:U:C6	2.51	0.46
50:S2:1284:A:P	50:S2:1285:G:HO2'	2.39	0.46
50:S2:1680:G:O2'	78:Sc:25:GLY:HA3	2.16	0.46
54:SD:14:ASP:O	54:SD:17:PHE:HB3	2.15	0.46
61:SK:61:GLN:HG3	61:SK:62:PHE:N	2.31	0.46
73:SX:88:ASP:C	73:SX:90:CYS:H	2.24	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SZ:69:THR:HG22	75:SZ:108:ILE:HA	1.98	0.46
81:Sg:247:TRP:HE1	81:Sg:267:VAL:HG11	1.80	0.46
2:CB:50:ARG:HD3	2:CB:51:ALA:O	2.15	0.46
2:CB:633:ARG:NH1	50:S2:1320:G:OP1	2.49	0.46
3:L5:269:G:H2'	3:L5:270:U:H6	1.81	0.46
3:L5:269:G:H2'	3:L5:270:U:C6	2.52	0.46
3:L5:1617:G:H1'	3:L5:2513:A:N6	2.31	0.46
3:L5:2695:A:OP1	41:Lk:35:LYS:NZ	2.42	0.46
3:L5:3937:C:H1'	18:LN:125:SER:HB2	1.97	0.46
3:L5:4088:C:O2'	12:LG:245:LYS:NZ	2.49	0.46
3:L5:4680:G:H2'	3:L5:4681:A:C8	2.51	0.46
3:L5:4922:C:H2'	3:L5:4923:C:C6	2.51	0.46
10:LE:258:LEU:O	10:LE:261:ILE:HG22	2.16	0.46
11:LF:80:ASN:HB3	24:LT:141:VAL:O	2.16	0.46
16:LL:204:GLU:O	16:LL:207:VAL:HG12	2.15	0.46
24:LT:17:ARG:HA	24:LT:17:ARG:HE	1.81	0.46
30:LZ:6:LYS:HD3	30:LZ:6:LYS:HA	1.76	0.46
43:Lm:94:MET:HE3	43:Lm:94:MET:HB3	1.79	0.46
48:Lz:171:HIS:CD2	48:Lz:173:LYS:HB2	2.51	0.46
50:S2:189:U:H2'	50:S2:190:G:O4'	2.16	0.46
50:S2:1311:C:H2'	50:S2:1312:G:C4	2.50	0.46
50:S2:1437:C:O2	50:S2:1437:C:H2'	2.16	0.46
51:SA:85:ARG:HE	67:SR:81:ARG:CD	2.27	0.46
51:SA:169:HIS:HA	51:SA:203:PHE:CE2	2.51	0.46
51:SA:200:ASP:OD2	67:SR:89:SER:HA	2.16	0.46
55:SE:45:ILE:HG13	55:SE:61:VAL:HG21	1.97	0.46
57:SG:197:GLN:HA	57:SG:200:LYS:HG2	1.97	0.46
57:SG:215:LYS:O	57:SG:218:LYS:HB3	2.16	0.46
63:SN:114:ARG:O	63:SN:118:ILE:HG13	2.16	0.46
66:SQ:23:ALA:HA	66:SQ:70:VAL:HA	1.96	0.46
70:SU:83:ARG:HH21	79:Sd:55:LEU:CD2	2.29	0.46
81:Sg:20:GLN:HB3	81:Sg:34:ALA:HB3	1.98	0.46
2:CB:20:ARG:NH2	2:CB:91:GLN:OE1	2.49	0.45
3:L5:93:G:H2'	3:L5:94:A:C8	2.51	0.45
3:L5:174:C:H5'	38:Lh:111:GLU:OE2	2.16	0.45
3:L5:4979:A:OP1	7:LB:228:TYR:HB2	2.16	0.45
5:L8:78:G:H2'	5:L8:79:G:C8	2.51	0.45
11:LF:157:ARG:HE	11:LF:248:ASN:CB	2.28	0.45
16:LL:18:TRP:CD1	16:LL:18:TRP:H	2.32	0.45
27:LW:44:ARG:HG2	27:LW:44:ARG:NH1	2.31	0.45
45:Lo:6:LYS:HG3	45:Lo:94:GLY:HA3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Lz:59:PRO:HA	48:Lz:170:GLY:HA2	1.98	0.45
50:S2:379:C:H2'	50:S2:380:G:C8	2.51	0.45
50:S2:747:U:O2'	50:S2:748:C:H5'	2.16	0.45
50:S2:1276:A:C5	50:S2:1322:G:H1'	2.51	0.45
50:S2:1538:C:H5''	69:ST:44:GLU:OE2	2.16	0.45
50:S2:1845:A:H2'	50:S2:1846:G:C8	2.51	0.45
52:SB:85:LYS:HE2	52:SB:101:HIS:HB3	1.97	0.45
52:SB:109:LYS:C	52:SB:113:MET:HG3	2.40	0.45
53:SC:77:SER:O	53:SC:80:GLU:HG2	2.17	0.45
66:SQ:28:GLY:HA3	66:SQ:67:ASP:CG	2.41	0.45
74:SY:20:ARG:HB3	74:SY:76:TYR:CD2	2.50	0.45
74:SY:54:VAL:CG1	74:SY:76:TYR:CA	2.95	0.45
74:SY:76:TYR:OH	74:SY:85:ASN:O	2.34	0.45
74:SY:105:LYS:O	74:SY:109:GLU:HG2	2.16	0.45
76:Sa:47:ALA:HA	76:Sa:50:VAL:HG13	1.98	0.45
2:CB:331:GLU:HA	2:CB:335:LEU:HB2	1.98	0.45
3:L5:181:C:H3'	3:L5:182:G:C8	2.43	0.45
3:L5:980:U:H2'	3:L5:981:C:C6	2.52	0.45
3:L5:1403:G:H5'	3:L5:1404:G:OP2	2.16	0.45
3:L5:2617:G:P	22:LR:64:ARG:HH22	2.39	0.45
3:L5:3764:U:H2'	3:L5:3765:G:C8	2.51	0.45
3:L5:4242:U:N3	3:L5:4281:A:H2	2.09	0.45
3:L5:5022:U:O2'	3:L5:5024:C:OP2	2.34	0.45
4:L7:58:A:H2'	4:L7:59:G:C8	2.52	0.45
14:LI:192:PRO:HA	14:LI:197:VAL:HG12	1.97	0.45
15:LJ:32:ARG:HG3	15:LJ:35:ARG:HH11	1.81	0.45
25:LU:43:LEU:O	25:LU:47:ILE:HB	2.15	0.45
30:LZ:50:PRO:HD3	30:LZ:68:ILE:HG12	1.98	0.45
35:Le:89:LEU:HD13	35:Le:118:LEU:HD22	1.98	0.45
50:S2:118:C:H1'	50:S2:445:A:C4	2.51	0.45
50:S2:380:G:N1	50:S2:383:G:OP2	2.50	0.45
50:S2:1454:A:N3	67:SR:3:ARG:NH2	2.64	0.45
50:S2:1570:G:H2'	50:S2:1571:G:H8	1.81	0.45
50:S2:1660:C:OP1	79:Sd:19:ARG:NH2	2.49	0.45
50:S2:1806:A:H2'	50:S2:1807:C:C6	2.51	0.45
52:SB:83:LYS:H	52:SB:103:MET:HE1	1.81	0.45
52:SB:97:LEU:HD22	52:SB:232:HIS:ND1	2.31	0.45
53:SC:214:LEU:HD23	53:SC:244:ILE:HD11	1.98	0.45
53:SC:261:PHE:CD2	71:SV:52:THR:HG23	2.51	0.45
57:SG:72:ARG:HD3	57:SG:96:SER:HB3	1.98	0.45
57:SG:205:GLU:HG3	57:SG:206:ALA:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SI:104:ILE:HG22	59:SI:171:LEU:O	2.17	0.45
65:SP:110:GLU:HB2	68:SS:113:ARG:NH2	2.27	0.45
68:SS:62:ASP:OD1	68:SS:62:ASP:N	2.49	0.45
72:SW:23:ARG:HG3	77:Sb:4:ALA:HA	1.97	0.45
74:SY:9:THR:C	74:SY:10:ARG:HD3	2.41	0.45
74:SY:97:TYR:OH	74:SY:101:LYS:NZ	2.49	0.45
77:Sb:36:LYS:HB3	77:Sb:78:SER:HB2	1.98	0.45
81:Sg:7:LEU:HB3	81:Sg:310:TRP:CZ3	2.50	0.45
81:Sg:52:TYR:CE2	81:Sg:309:VAL:HG11	2.51	0.45
2:CB:223:PHE:HB3	2:CB:344:LEU:HD13	1.99	0.45
2:CB:592:LEU:HD11	2:CB:601:ARG:HB2	1.97	0.45
3:L5:406:C:HO2'	3:L5:407:A:P	2.39	0.45
3:L5:1302:U:H4'	35:Le:17:THR:HG22	1.98	0.45
3:L5:2083:C:H5''	3:L5:2084:C:OP2	2.16	0.45
3:L5:3771:C:H2'	3:L5:3772:U:C6	2.51	0.45
3:L5:4122:G:O2'	30:LZ:136:PHE:OXT	2.32	0.45
3:L5:4233:A:C5	3:L5:4235:G:C8	3.04	0.45
17:LM:101:LYS:HE2	19:LO:201:LEU:HD21	1.98	0.45
30:LZ:30:ASP:HA	30:LZ:39:SER:OG	2.17	0.45
48:Lz:51:GLY:N	48:Lz:157:PHE:O	2.49	0.45
50:S2:115:U:H2'	50:S2:116:U:C6	2.52	0.45
50:S2:562:U:H2'	50:S2:563:G:C8	2.51	0.45
50:S2:1226:G:N1	50:S2:1639:G:OP2	2.48	0.45
50:S2:1408:U:H4'	66:SQ:24:HIS:NE2	2.31	0.45
50:S2:1425:G:O3'	66:SQ:33:LYS:NZ	2.45	0.45
50:S2:1466:G:O5'	67:SR:4:VAL:HG22	2.17	0.45
50:S2:1592:C:O2'	66:SQ:44:PRO:HB3	2.17	0.45
50:S2:1845:A:H2'	50:S2:1846:G:H8	1.81	0.45
53:SC:183:LYS:HG2	72:SW:95:PRO:HA	1.98	0.45
54:SD:212:GLU:OE1	54:SD:212:GLU:N	2.48	0.45
55:SE:163:ASP:OD1	55:SE:166:THR:OG1	2.35	0.45
56:SF:17:ILE:HG12	56:SF:46:ALA:HB3	1.98	0.45
57:SG:30:LYS:HD3	57:SG:30:LYS:HA	1.78	0.45
57:SG:149:LYS:N	57:SG:151:ASP:OD2	2.49	0.45
64:SO:22:ALA:N	64:SO:25:GLU:OE2	2.41	0.45
68:SS:26:ILE:HG22	68:SS:45:LEU:HD21	1.99	0.45
74:SY:117:VAL:HG21	74:SY:123:ALA:HB1	1.98	0.45
2:CB:702:PHE:CD2	2:CB:729:LEU:HD22	2.52	0.45
2:CB:745:TYR:CE1	2:CB:790:VAL:HG12	2.51	0.45
3:L5:208:A:N6	3:L5:233:U:H5	2.15	0.45
3:L5:325:U:H2'	3:L5:326:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:753:C:H41	3:L5:910:G:H1	1.64	0.45
3:L5:1070:G:O2'	3:L5:1071:C:H6	2.00	0.45
3:L5:1181:C:H3'	3:L5:1182:C:O2	2.16	0.45
3:L5:2256:C:C5	3:L5:2257:C:H6	2.35	0.45
3:L5:2705:G:H1	3:L5:2710:C:H41	1.62	0.45
3:L5:2705:G:N2	3:L5:2710:C:H5	2.14	0.45
3:L5:3767:C:H2'	3:L5:3768:U:H6	1.80	0.45
3:L5:4107:G:H21	3:L5:4110:C:H42	1.64	0.45
15:LJ:120:ASP:OD1	15:LJ:121:PRO:HD2	2.16	0.45
20:LP:52:THR:HG23	20:LP:85:LYS:HG3	1.98	0.45
22:LR:148:ASP:O	22:LR:152:LYS:N	2.46	0.45
23:LS:85:ASP:HA	23:LS:90:THR:HA	1.99	0.45
37:Lg:82:MET:HE3	37:Lg:82:MET:HB2	1.75	0.45
48:Lz:191:VAL:HG13	48:Lz:197:ASN:O	2.16	0.45
50:S2:849:A:H2'	50:S2:850:C:C6	2.52	0.45
50:S2:874:G:N3	50:S2:875:A:C8	2.85	0.45
50:S2:905:C:H2'	50:S2:906:U:C6	2.52	0.45
50:S2:905:C:H2'	50:S2:906:U:H6	1.80	0.45
50:S2:1454:A:C8	67:SR:3:ARG:HD2	2.51	0.45
50:S2:1598:G:H3'	75:SZ:80:ARG:NH2	2.31	0.45
50:S2:1603:G:C1'	68:SS:38:ARG:HH22	2.27	0.45
50:S2:1679:A:H5''	78:Sc:20:ARG:HH21	1.81	0.45
51:SA:42:LYS:HZ1	51:SA:44:ASP:CG	2.25	0.45
52:SB:163:GLN:OE1	52:SB:163:GLN:HA	2.17	0.45
53:SC:92:GLU:HA	53:SC:95:ASP:OD2	2.15	0.45
55:SE:98:ASN:O	55:SE:114:ILE:HG22	2.16	0.45
59:SI:148:LYS:HB3	59:SI:148:LYS:HE2	1.78	0.45
81:Sg:20:GLN:O	81:Sg:34:ALA:N	2.47	0.45
81:Sg:147:HIS:CG	81:Sg:175:LYS:HZ1	2.33	0.45
2:CB:368:ARG:O	2:CB:372:LEU:HD13	2.17	0.45
3:L5:1217:G:H2'	3:L5:1218:G:C8	2.52	0.45
3:L5:2106:G:H2'	3:L5:2107:C:O4'	2.17	0.45
3:L5:2672:C:OP1	46:Lp:44:LYS:NZ	2.50	0.45
3:L5:3880:G:H2'	3:L5:3881:G:C8	2.51	0.45
3:L5:4968:A:H2'	3:L5:4969:C:C6	2.52	0.45
3:L5:5003:U:H2'	3:L5:5004:C:C6	2.52	0.45
6:LA:5:ILE:HG13	6:LA:6:ARG:O	2.17	0.45
12:LG:164:ILE:HG23	12:LG:164:ILE:O	2.17	0.45
13:LH:8:GLN:NE2	13:LH:71:ARG:HA	2.32	0.45
42:LI:44:TRP:CZ3	42:LI:45:ARG:HD3	2.51	0.45
45:Lo:75:PRO:O	45:Lo:78:ARG:NH1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:96:C:H2'	50:S2:97:U:C6	2.51	0.45
50:S2:588:G:H21	50:S2:588:G:P	2.39	0.45
50:S2:1289:U:H2'	50:S2:1290:G:H8	1.81	0.45
50:S2:1411:G:H2'	50:S2:1412:C:O4'	2.16	0.45
50:S2:1615:U:H2'	50:S2:1616:U:H6	1.81	0.45
50:S2:1621:U:O2'	50:S2:1622:U:H2'	2.17	0.45
50:S2:1634:A:H3'	50:S2:1635:C:C6	2.52	0.45
53:SC:201:GLY:HA3	60:SJ:54:ARG:HH22	1.81	0.45
55:SE:141:THR:HG23	55:SE:143:ASP:H	1.82	0.45
57:SG:14:LYS:HG2	57:SG:124:LEU:HD12	1.97	0.45
57:SG:212:LEU:HD12	57:SG:212:LEU:HA	1.82	0.45
57:SG:218:LYS:NZ	57:SG:221:LYS:HD3	2.31	0.45
60:SJ:137:VAL:O	60:SJ:139:LYS:N	2.49	0.45
64:SO:43:HIS:NE2	64:SO:52:THR:HG23	2.31	0.45
65:SP:23:ASP:HA	65:SP:26:LEU:HB2	1.99	0.45
69:ST:30:VAL:HG22	69:ST:53:PHE:CD2	2.51	0.45
70:SU:53:PRO:HA	70:SU:89:ILE:HG13	1.99	0.45
70:SU:107:GLU:O	70:SU:109:GLY:N	2.49	0.45
74:SY:97:TYR:HE2	74:SY:99:LYS:HB2	1.81	0.45
81:Sg:38:LYS:HE2	81:Sg:62:HIS:O	2.16	0.45
2:CB:776:VAL:HG23	2:CB:777:ALA:N	2.29	0.45
3:L5:739:G:O2'	3:L5:740:G:O4'	2.35	0.45
4:L7:23:A:N3	4:L7:118:C:O2'	2.38	0.45
4:L7:82:G:H2'	4:L7:83:A:C8	2.52	0.45
7:LB:161:ARG:HG2	7:LB:184:GLN:HA	1.98	0.45
8:LC:317:ASN:ND2	8:LC:320:LYS:HD3	2.31	0.45
14:LI:184:MET:HE3	14:LI:190:LEU:CD1	2.47	0.45
15:LJ:9:GLU:OE1	15:LJ:9:GLU:N	2.38	0.45
17:LM:91:TRP:O	17:LM:95:ILE:HG13	2.17	0.45
18:LN:60:VAL:HG23	18:LN:134:LEU:HB2	1.99	0.45
18:LN:104:GLU:HA	18:LN:160:GLU:HG3	1.97	0.45
19:LO:149:TYR:O	19:LO:153:THR:OG1	2.23	0.45
28:LX:95:THR:OG1	28:LX:138:VAL:O	2.26	0.45
35:Le:75:ARG:HB2	35:Le:95:TYR:CD1	2.52	0.45
50:S2:145:G:H2'	50:S2:146:G:H8	1.82	0.45
50:S2:349:A:H2'	50:S2:350:C:C6	2.50	0.45
50:S2:530:U:C4	50:S2:531:A:N7	2.84	0.45
50:S2:642:U:OP2	80:Se:34:ARG:NH2	2.50	0.45
50:S2:693:A:H3'	50:S2:693:A:OP2	2.17	0.45
50:S2:871:U:H5'	63:SN:76:LYS:NZ	2.32	0.45
50:S2:916:A:OP1	58:SH:117:PRO:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SA:215:GLN:OE1	51:SA:215:GLN:N	2.44	0.45
53:SC:113:GLN:OE1	53:SC:122:THR:OG1	2.34	0.45
55:SE:89:VAL:HG12	55:SE:100:ARG:HD2	1.99	0.45
56:SF:134:VAL:HG13	56:SF:135:ARG:N	2.32	0.45
58:SH:160:LYS:HA	58:SH:163:GLN:HB2	1.98	0.45
59:SI:198:TYR:CE1	62:SL:10:TYR:HB2	2.51	0.45
61:SK:15:LEU:HD11	61:SK:71:LEU:HD22	1.97	0.45
66:SQ:102:GLU:OE2	81:Sg:57:ARG:N	2.50	0.45
66:SQ:116:ASP:O	66:SQ:119:LEU:HD23	2.17	0.45
74:SY:31:GLY:C	74:SY:32:LYS:HD3	2.42	0.45
2:CB:81:LEU:HD23	2:CB:85:ASP:HB3	1.99	0.45
2:CB:170:GLU:CD	2:CB:172:GLU:H	2.23	0.45
2:CB:676:LYS:O	2:CB:680:VAL:HG23	2.16	0.45
3:L5:1298:C:N4	3:L5:1299:G:O6	2.49	0.45
3:L5:1418:C:N4	3:L5:1419:G:O6	2.49	0.45
3:L5:2620:G:OP2	25:LU:79:SER:OG	2.34	0.45
3:L5:3816:A:OP1	3:L5:3818:U:H5	2.00	0.45
3:L5:4578:G:H2'	3:L5:4579:U:C6	2.52	0.45
4:L7:57:C:H2'	4:L7:58:A:H8	1.81	0.45
4:L7:113:G:H2'	4:L7:114:U:C6	2.52	0.45
4:L7:120:U:H1'	9:LD:260:GLU:OE1	2.17	0.45
5:L8:96:C:H5''	38:Lh:66:LYS:HG2	1.97	0.45
7:LB:17:LEU:O	7:LB:19:ARG:HG3	2.17	0.45
7:LB:285:TYR:CD1	7:LB:363:ILE:HD13	2.51	0.45
8:LC:293:LEU:HA	8:LC:293:LEU:HD23	1.76	0.45
8:LC:318:PRO:O	8:LC:319:LEU:HB2	2.17	0.45
10:LE:141:ARG:HB2	10:LE:191:GLN:NE2	2.32	0.45
15:LJ:151:ILE:HD11	15:LJ:156:ARG:HG2	1.99	0.45
18:LN:153:LYS:HD3	18:LN:153:LYS:HA	1.74	0.45
20:LP:84:PRO:HB2	20:LP:87:SER:HB2	1.97	0.45
21:LQ:66:MET:O	21:LQ:70:MET:HG2	2.17	0.45
22:LR:164:SER:HA	22:LR:167:LYS:CG	2.46	0.45
24:LT:41:ASP:OD1	24:LT:61:THR:OG1	2.21	0.45
24:LT:80:VAL:HG12	24:LT:81:LYS:H	1.81	0.45
35:Le:38:PRO:HG2	35:Le:45:VAL:HG23	1.99	0.45
35:Le:91:CYS:C	35:Le:93:LYS:H	2.23	0.45
50:S2:79:A:H2'	50:S2:80:G:O4'	2.17	0.45
50:S2:1143:A:H5'	53:SC:190:SER:HB3	1.99	0.45
50:S2:1164:G:O2'	50:S2:1165:G:H5'	2.17	0.45
50:S2:1231:C:H2'	50:S2:1232:U:C6	2.51	0.45
50:S2:1614:A:P	65:SP:42:ARG:HH21	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1858:G:OP1	76:Sa:17:HIS:NE2	2.47	0.45
51:SA:211:GLU:HA	51:SA:215:GLN:HE22	1.81	0.45
52:SB:104:ASP:HA	52:SB:213:ARG:O	2.16	0.45
52:SB:146:ARG:HB2	52:SB:149:GLN:HG3	1.98	0.45
58:SH:76:GLN:HE21	58:SH:94:PHE:HE2	1.65	0.45
69:ST:5:THR:OG1	69:ST:6:VAL:N	2.44	0.45
69:ST:71:GLY:O	69:ST:74:SER:OG	2.32	0.45
69:ST:117:GLN:H	69:ST:117:GLN:CD	2.25	0.45
70:SU:21:ARG:HH11	70:SU:90:ASP:CG	2.24	0.45
1:5:11:ASP:OD1	1:5:11:ASP:N	2.49	0.45
2:CB:77:LEU:O	2:CB:99:LEU:HD12	2.17	0.45
2:CB:214:PHE:HB2	2:CB:223:PHE:CE1	2.52	0.45
2:CB:396:MET:HE1	2:CB:415:ARG:C	2.42	0.45
2:CB:602:LEU:HD13	2:CB:604:MET:HE2	1.98	0.45
3:L5:106:A:H2'	3:L5:107:G:O4'	2.16	0.45
3:L5:137:G:N1	3:L5:138:G:C6	2.85	0.45
3:L5:496:G:C6	3:L5:497:G:C2	3.05	0.45
3:L5:2258:C:H3'	3:L5:2259:G:H8	1.82	0.45
3:L5:4103:C:O2'	3:L5:4106:G:O6	2.25	0.45
9:LD:84:PRO:HA	9:LD:88:VAL:O	2.16	0.45
10:LE:199:THR:HG21	17:LM:107:PHE:HB2	1.98	0.45
10:LE:270:TYR:OH	17:LM:106:ASP:OD2	2.29	0.45
11:LF:221:LYS:O	11:LF:222:LYS:HB2	2.16	0.45
17:LM:130:LEU:O	17:LM:134:ALA:N	2.49	0.45
33:Lc:18:LEU:HD12	33:Lc:18:LEU:HA	1.76	0.45
36:Lf:43:LEU:HD11	36:Lf:76:ARG:HA	1.97	0.45
50:S2:1320:G:C2	50:S2:1321:G:H1'	2.52	0.45
50:S2:1401:A:H2'	50:S2:1402:A:C8	2.51	0.45
50:S2:1412:C:H3'	50:S2:1413:G:H8	1.81	0.45
56:SF:53:ALA:HB1	66:SQ:125:ARG:NH1	2.32	0.45
56:SF:168:THR:HG22	56:SF:171:GLU:CD	2.42	0.45
60:SJ:170:PRO:HD2	60:SJ:170:PRO:O	2.17	0.45
61:SK:64:TRP:CE3	79:Sd:23:VAL:HG22	2.52	0.45
69:ST:40:ALA:O	69:ST:43:LYS:HG2	2.17	0.45
74:SY:76:TYR:OH	74:SY:86:GLU:OE1	2.35	0.45
76:Sa:46:GLU:O	76:Sa:48:ALA:N	2.50	0.45
81:Sg:92:LEU:HA	81:Sg:92:LEU:HD13	1.85	0.45
81:Sg:240:CYS:O	81:Sg:248:LEU:HD12	2.17	0.45
2:CB:61:LYS:HD3	2:CB:62:ASP:H	1.82	0.45
3:L5:513:U:C2	3:L5:516:C:H5	2.35	0.45
3:L5:1248:C:H2'	3:L5:1249:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1837:A:OP2	24:LT:130:ARG:HG2	2.17	0.45
5:L8:148:A:H2'	5:L8:149:G:C8	2.52	0.45
8:LC:291:ARG:HH11	8:LC:291:ARG:HG3	1.82	0.45
9:LD:208:MET:HE2	9:LD:208:MET:HB3	1.74	0.45
10:LE:209:PRO:HB2	10:LE:212:LEU:HD23	1.97	0.45
11:LF:83:VAL:HG12	23:LS:62:VAL:HA	1.99	0.45
12:LG:62:ARG:O	12:LG:66:GLN:HG3	2.17	0.45
13:LH:107:GLU:O	13:LH:107:GLU:HG2	2.15	0.45
14:LI:48:LEU:O	14:LI:139:ARG:HA	2.17	0.45
17:LM:86:TRP:C	17:LM:88:ALA:N	2.75	0.45
21:LQ:154:LYS:HE3	21:LQ:161:SER:HB3	1.99	0.45
31:La:101:ILE:HD12	31:La:122:VAL:HG21	1.99	0.45
50:S2:219:U:O4'	59:SI:184:ARG:NH2	2.49	0.45
50:S2:883:U:O2	50:S2:883:U:H2'	2.17	0.45
50:S2:886:A:C6	50:S2:901:G:N3	2.84	0.45
50:S2:943:U:H2'	50:S2:944:A:C8	2.46	0.45
50:S2:1041:G:C4	50:S2:1042:A:C8	3.05	0.45
50:S2:1491:G:H2'	50:S2:1492:U:C6	2.51	0.45
50:S2:1793:A:H2'	50:S2:1794:C:C6	2.52	0.45
51:SA:41:ARG:NE	51:SA:45:GLY:O	2.44	0.45
51:SA:214:GLU:CG	67:SR:84:TYR:CD1	3.00	0.45
54:SD:37:VAL:HG23	54:SD:50:ILE:HA	1.98	0.45
54:SD:176:LEU:C	54:SD:177:LEU:HD12	2.42	0.45
58:SH:70:LYS:HD2	58:SH:73:GLN:OE1	2.16	0.45
58:SH:72:PHE:O	58:SH:75:ILE:N	2.47	0.45
59:SI:44:HIS:O	59:SI:56:ARG:N	2.45	0.45
61:SK:24:LYS:HG2	61:SK:25:LYS:N	2.32	0.45
62:SL:37:TYR:CZ	62:SL:51:ILE:HD12	2.52	0.45
64:SO:30:VAL:HG23	64:SO:47:LEU:HA	1.99	0.45
65:SP:32:GLN:OE1	65:SP:32:GLN:N	2.48	0.45
65:SP:97:TYR:HB2	65:SP:102:PHE:CE2	2.51	0.45
67:SR:81:ARG:C	67:SR:81:ARG:NE	2.74	0.45
69:ST:40:ALA:HA	69:ST:96:SER:HB2	1.98	0.45
70:SU:23:THR:CG2	70:SU:113:GLU:HB3	2.47	0.45
81:Sg:127:LYS:HA	81:Sg:151:VAL:HG23	1.98	0.45
81:Sg:226:HIS:C	81:Sg:227:LEU:HD22	2.42	0.45
2:CB:77:LEU:N	2:CB:100:ILE:O	2.50	0.45
2:CB:225:LEU:O	2:CB:229:ALA:N	2.48	0.45
3:L5:137:G:C6	3:L5:138:G:C6	3.05	0.45
3:L5:182:G:C2	3:L5:255:C:O2	2.70	0.45
3:L5:450:G:C2	3:L5:1298:C:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1241:C:C5	32:Lb:118:LEU:HB2	2.52	0.45
3:L5:1270:A:H8	3:L5:2106:G:H21	1.64	0.45
3:L5:1825:A:H2'	3:L5:1826:G:H8	1.81	0.45
3:L5:3606:U:H2'	3:L5:3607:U:H6	1.82	0.45
3:L5:4957:C:H2'	3:L5:4958:C:C6	2.52	0.45
4:L7:16:A:H2'	4:L7:17:C:C6	2.52	0.45
16:LL:60:ARG:HD2	16:LL:67:HIS:O	2.17	0.45
42:Ll:6:THR:HB	42:Ll:9:ILE:HG12	1.98	0.45
50:S2:141:A:H4'	50:S2:142:C:H3'	1.99	0.45
50:S2:186:C:H2'	50:S2:187:G:H8	1.82	0.45
50:S2:880:G:H3'	50:S2:881:G:H8	1.82	0.45
50:S2:1208:A:H2'	50:S2:1209:A:C8	2.52	0.45
50:S2:1281:G:C2	50:S2:1317:C:C2	3.05	0.45
50:S2:1688:C:H2'	50:S2:1689:C:H6	1.80	0.45
50:S2:1869:A:P	76:Sa:100:ARG:HH22	2.39	0.45
52:SB:181:LEU:O	52:SB:185:VAL:HG12	2.17	0.45
53:SC:73:MET:HE2	53:SC:73:MET:HB3	1.80	0.45
53:SC:232:THR:O	53:SC:232:THR:HG22	2.16	0.45
55:SE:19:MET:HE2	55:SE:108:ARG:NE	2.26	0.45
60:SJ:97:ILE:O	60:SJ:100:LEU:HG	2.17	0.45
63:SN:87:ASP:OD1	63:SN:87:ASP:N	2.49	0.45
69:ST:37:VAL:HG13	69:ST:38:LYS:N	2.31	0.45
70:SU:37:ALA:HA	70:SU:40:ILE:HG22	2.00	0.45
81:Sg:228:TYR:CZ	81:Sg:264:LYS:HG3	2.52	0.45
1:5:34:LYS:HD2	1:5:69:TYR:CD1	2.52	0.44
1:5:86:ARG:HG2	1:5:138:LEU:HD13	1.99	0.44
3:L5:1401:C:P	32:Lb:51:LYS:HZ2	2.41	0.44
3:L5:3777:G:O2'	3:L5:3815:G:O6	2.21	0.44
3:L5:3856:A:H5''	20:LP:83:TRP:O	2.17	0.44
13:LH:187:VAL:HG12	13:LH:188:GLN:HG3	1.98	0.44
50:S2:223:C:H2'	50:S2:224:A:H8	1.79	0.44
50:S2:291:G:O2'	50:S2:292:A:OP1	2.31	0.44
50:S2:1233:G:C6	50:S2:1526:G:C6	3.05	0.44
50:S2:1306:U:C4	50:S2:1307:U:C4	3.04	0.44
50:S2:1578:U:H2'	54:SD:4:GLN:CD	2.42	0.44
51:SA:49:ILE:HG21	51:SA:162:PRO:O	2.17	0.44
51:SA:99:ILE:HD11	51:SA:117:ARG:HD2	1.98	0.44
51:SA:214:GLU:OE2	67:SR:84:TYR:CD2	2.70	0.44
53:SC:68:ARG:NH2	53:SC:72:ASP:OD2	2.49	0.44
54:SD:226:GLN:HG3	81:Sg:186:THR:HG23	1.98	0.44
55:SE:151:ASP:OD2	55:SE:153:LEU:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SJ:89:GLU:H	60:SJ:89:GLU:CD	2.24	0.44
61:SK:59:LYS:HG2	61:SK:70:TYR:O	2.17	0.44
62:SL:118:ARG:HG2	62:SL:118:ARG:NH1	2.31	0.44
70:SU:19:ARG:NH1	70:SU:92:HIS:HB2	2.32	0.44
73:SX:94:ILE:HG12	73:SX:125:VAL:HG11	1.97	0.44
2:CB:835:VAL:HA	2:CB:838:THR:HG22	1.98	0.44
3:L5:1207:C:H2'	3:L5:1208:G:H8	1.81	0.44
3:L5:2583:C:N4	37:Lg:75:SER:OG	2.50	0.44
3:L5:2759:G:H2'	3:L5:2760:G:C8	2.52	0.44
3:L5:3589:G:N2	3:L5:3590:G:N7	2.64	0.44
3:L5:3903:A:N1	3:L5:4557:U:H5	2.15	0.44
8:LC:189:MET:HE3	8:LC:189:MET:HB2	1.89	0.44
9:LD:62:CYS:HB3	9:LD:105:LEU:HD22	1.99	0.44
15:LJ:111:GLU:HG3	15:LJ:113:ILE:HG12	1.99	0.44
26:LV:13:LYS:HG2	26:LV:14:PHE:O	2.18	0.44
35:Le:91:CYS:HB3	35:Le:95:TYR:HD2	1.82	0.44
50:S2:526:A:H2'	50:S2:527:C:H6	1.81	0.44
50:S2:678:U:C2	50:S2:679:A:C8	3.06	0.44
50:S2:872:A:C6	50:S2:874:G:C5	3.05	0.44
50:S2:1071:G:H2'	50:S2:1072:U:O4'	2.17	0.44
56:SF:148:ASN:HA	56:SF:151:ILE:HG22	1.98	0.44
68:SS:103:LEU:HA	68:SS:106:LYS:HB3	1.99	0.44
69:ST:134:ILE:HA	69:ST:137:GLN:HB2	2.00	0.44
81:Sg:38:LYS:HE3	81:Sg:63:SER:C	2.42	0.44
2:CB:404:THR:HG22	2:CB:411:TYR:CE2	2.53	0.44
3:L5:254:G:N1	3:L5:255:C:O2	2.50	0.44
3:L5:505:G:C2'	3:L5:506:C:H5'	2.47	0.44
3:L5:1504:G:H2'	3:L5:1505:C:H6	1.83	0.44
3:L5:2083:C:P	21:LQ:14:ARG:HH22	2.40	0.44
9:LD:70:GLU:CD	9:LD:70:GLU:H	2.26	0.44
10:LE:112:MET:HE3	10:LE:112:MET:HB3	1.84	0.44
11:LF:96:ARG:HD2	11:LF:138:PRO:O	2.18	0.44
17:LM:38:VAL:O	17:LM:47:ARG:HA	2.17	0.44
25:LU:66:SER:O	25:LU:67:LYS:HG2	2.17	0.44
29:LY:66:GLN:H	29:LY:66:GLN:CD	2.25	0.44
40:Lj:2:THR:O	40:Lj:7:SER:OG	2.28	0.44
42:Ll:33:ASN:OD1	42:Ll:35:ILE:HG12	2.17	0.44
50:S2:140:C:C4	50:S2:144:U:H1'	2.53	0.44
50:S2:156:G:H2'	50:S2:157:U:C6	2.52	0.44
50:S2:164:A:C6	50:S2:165:G:C6	3.05	0.44
50:S2:880:G:H2'	50:S2:881:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1093:A:H2'	50:S2:1094:C:H6	1.81	0.44
50:S2:1626:C:H2'	50:S2:1627:C:H6	1.82	0.44
50:S2:1692:U:H2'	50:S2:1693:G:H8	1.83	0.44
50:S2:1742:C:C4	50:S2:1743:G:C5	3.05	0.44
56:SF:85:LYS:HD3	56:SF:88:MET:SD	2.58	0.44
58:SH:103:LYS:HD3	58:SH:104:PRO:HD2	2.00	0.44
60:SJ:139:LYS:HA	60:SJ:139:LYS:HE2	1.98	0.44
61:SK:13:GLU:O	61:SK:17:LYS:HG2	2.18	0.44
66:SQ:28:GLY:HA3	66:SQ:67:ASP:OD2	2.17	0.44
69:ST:124:THR:O	69:ST:127:GLY:N	2.50	0.44
72:SW:85:ASP:OD1	72:SW:85:ASP:N	2.50	0.44
77:Sb:36:LYS:O	77:Sb:77:CYS:HB3	2.16	0.44
81:Sg:217:MET:HB3	81:Sg:219:TRP:NE1	2.32	0.44
1:5:116:GLU:OE1	1:5:116:GLU:N	2.42	0.44
2:CB:397:TYR:HB2	2:CB:494:MET:CE	2.47	0.44
2:CB:745:TYR:HB2	2:CB:814:PHE:HA	2.00	0.44
3:L5:1306:C:H2'	3:L5:1307:A:C8	2.52	0.44
3:L5:2517:A:N3	3:L5:2539:C:O2'	2.51	0.44
3:L5:4323:A:C8	9:LD:153:THR:HG21	2.52	0.44
13:LH:5:LEU:HB2	13:LH:60:TRP:CZ3	2.53	0.44
17:LM:60:PHE:CZ	17:LM:85:LYS:HB3	2.52	0.44
22:LR:172:ARG:NH1	22:LR:173:ARG:HB2	2.32	0.44
28:LX:149:VAL:O	28:LX:153:ILE:HG12	2.17	0.44
50:S2:83:A:H2'	50:S2:84:A:O4'	2.17	0.44
50:S2:352:U:H2'	50:S2:353:C:C6	2.53	0.44
50:S2:1610:G:P	68:SS:121:ARG:HH21	2.37	0.44
54:SD:171:ALA:HB3	54:SD:186:VAL:HG12	2.00	0.44
55:SE:87:MET:HG2	55:SE:123:LEU:O	2.18	0.44
56:SF:111:VAL:HG21	56:SF:178:ILE:HG22	2.00	0.44
57:SG:44:GLU:HB2	57:SG:45:TRP:CE3	2.52	0.44
57:SG:224:ARG:HH12	57:SG:227:GLN:HB2	1.83	0.44
60:SJ:137:VAL:CG1	60:SJ:138:ARG:H	2.30	0.44
64:SO:45:THR:HG21	64:SO:49:GLY:HA2	1.99	0.44
67:SR:72:LYS:HE3	67:SR:73:LEU:HG	1.99	0.44
68:SS:8:LYS:NZ	68:SS:60:THR:HA	2.33	0.44
74:SY:60:PHE:HA	74:SY:70:THR:O	2.18	0.44
81:Sg:64:HIS:ND1	81:Sg:83:TRP:HB2	2.32	0.44
81:Sg:186:THR:HG21	81:Sg:188:HIS:CE1	2.51	0.44
3:L5:396:A:OP2	3:L5:396:A:H8	2.01	0.44
3:L5:654:C:N4	3:L5:655:C:H41	2.15	0.44
3:L5:1252:C:H2'	3:L5:1254:A:H62	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2696:A:H62	41:Lk:35:LYS:NZ	2.15	0.44
3:L5:2857:A:H8	3:L5:2857:A:O5'	1.99	0.44
3:L5:4148:C:OP1	30:LZ:59:LYS:HE2	2.17	0.44
3:L5:4460:U:H2'	3:L5:4461:C:H6	1.83	0.44
5:L8:56:G:H2'	5:L8:57:C:O4'	2.17	0.44
10:LE:43:HIS:CG	10:LE:44:CYS:N	2.85	0.44
11:LF:182:TYR:HB3	11:LF:200:ARG:HG3	1.99	0.44
19:LO:174:LEU:O	19:LO:178:ARG:N	2.47	0.44
24:LT:71:ALA:HA	24:LT:92:ARG:HA	1.98	0.44
38:Lh:97:LYS:HE2	38:Lh:97:LYS:HB3	1.68	0.44
47:Lr:108:MET:HE3	47:Lr:111:ILE:HB	1.99	0.44
50:S2:962:A:N1	50:S2:1055:A:O2'	2.51	0.44
50:S2:1070:A:H2'	50:S2:1071:G:O4'	2.18	0.44
50:S2:1334:G:H2'	50:S2:1335:G:O4'	2.17	0.44
50:S2:1551:U:P	54:SD:9:ARG:HH12	2.41	0.44
50:S2:1593:C:H2'	50:S2:1594:A:H8	1.83	0.44
50:S2:1650:A:H1'	50:S2:1675:A:H61	1.81	0.44
50:S2:1704:C:H1'	50:S2:1832:A:N1	2.32	0.44
50:S2:1779:G:C2	50:S2:1780:G:C5	3.05	0.44
52:SB:198:GLU:HA	52:SB:201:CYS:SG	2.58	0.44
57:SG:147:LEU:HB3	57:SG:151:ASP:HB2	1.98	0.44
62:SL:104:LYS:HE2	73:SX:8:ARG:NH1	2.32	0.44
68:SS:47:LYS:HZ2	68:SS:79:ILE:HG13	1.81	0.44
81:Sg:29:ASP:OD1	81:Sg:45:LEU:HB2	2.16	0.44
2:CB:401:MET:N	2:CB:401:MET:SD	2.91	0.44
2:CB:411:TYR:CD1	2:CB:473:VAL:HG12	2.52	0.44
2:CB:673:ASN:ND2	50:S2:1502:C:H4'	2.33	0.44
2:CB:837:GLU:HA	2:CB:840:LYS:HE3	1.99	0.44
3:L5:99:A:H2'	3:L5:100:C:O2	2.18	0.44
3:L5:262:G:C2	3:L5:263:G:C5	3.05	0.44
3:L5:495:C:H2'	3:L5:496:G:H8	1.80	0.44
3:L5:2554:U:C2	3:L5:2764:A:N7	2.86	0.44
3:L5:3772:U:H5''	3:L5:3773:U:OP2	2.18	0.44
3:L5:4638:U:H2'	3:L5:4639:G:N3	2.33	0.44
3:L5:4923:C:H2'	3:L5:4924:C:C6	2.52	0.44
5:L8:37:A:OP2	38:Lh:89:ARG:HD2	2.18	0.44
10:LE:117:PRO:O	47:Lr:112:ARG:HD2	2.18	0.44
33:Lc:22:MET:O	33:Lc:23:LYS:HG3	2.17	0.44
35:Le:32:LYS:HE2	35:Le:34:ASN:HD21	1.82	0.44
35:Le:35:TRP:CZ2	35:Le:56:PRO:CD	2.80	0.44
38:Lh:71:LYS:HB2	38:Lh:71:LYS:HE2	1.74	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Lp:48:LYS:HE2	46:Lp:48:LYS:HB2	1.78	0.44
50:S2:51:U:H2'	50:S2:52:G:H8	1.83	0.44
50:S2:380:G:H5''	59:SI:31:ARG:NH1	2.33	0.44
50:S2:420:G:HO2'	50:S2:421:G:P	2.41	0.44
50:S2:694:G:C8	50:S2:696:G:C2	3.04	0.44
50:S2:1267:C:C2	50:S2:1516:G:N2	2.85	0.44
50:S2:1752:C:H2'	50:S2:1780:G:O6	2.17	0.44
51:SA:154:LEU:HD12	51:SA:157:VAL:HB	2.00	0.44
52:SB:88:THR:HA	52:SB:98:THR:HA	1.99	0.44
53:SC:60:TRP:CD2	53:SC:92:GLU:HG3	2.52	0.44
54:SD:67:ARG:NH1	61:SK:97:SER:H	2.16	0.44
55:SE:31:PRO:HA	55:SE:81:THR:OG1	2.18	0.44
55:SE:114:ILE:HG13	55:SE:118:GLU:HB3	2.00	0.44
57:SG:31:ARG:HD3	57:SG:101:ILE:HD13	2.00	0.44
57:SG:35:GLU:OE1	57:SG:50:VAL:N	2.50	0.44
58:SH:58:LYS:HB2	58:SH:90:LYS:HD3	2.00	0.44
58:SH:102:PRO:O	58:SH:116:ARG:NH1	2.51	0.44
66:SQ:12:VAL:HB	66:SQ:90:LYS:HD2	1.99	0.44
67:SR:79:GLU:HG3	67:SR:80:ARG:CZ	2.48	0.44
70:SU:49:LYS:HB3	70:SU:92:HIS:HB3	1.98	0.44
71:SV:40:ASP:OD2	71:SV:43:THR:HG22	2.18	0.44
72:SW:101:PHE:HA	72:SW:113:HIS:CE1	2.53	0.44
74:SY:90:ARG:HA	74:SY:93:ARG:HG2	2.00	0.44
77:Sb:73:LEU:HD11	77:Sb:79:PHE:CD1	2.53	0.44
2:CB:61:LYS:O	2:CB:62:ASP:HB2	2.18	0.44
3:L5:491:G:H2'	3:L5:492:U:C6	2.51	0.44
3:L5:505:G:H2'	3:L5:506:C:H5'	1.99	0.44
3:L5:1273:G:O2'	3:L5:1274:A:H5'	2.18	0.44
3:L5:2557:G:H2'	3:L5:2558:C:C6	2.53	0.44
3:L5:2843:U:O2'	3:L5:4632:U:OP1	2.36	0.44
3:L5:3722:G:H2'	3:L5:3723:A:C8	2.53	0.44
3:L5:4504:C:H2'	3:L5:4505:C:C6	2.52	0.44
3:L5:4684:A:H2'	3:L5:4685:U:O4'	2.18	0.44
6:LA:171:GLY:O	46:Lp:68:ALA:HB2	2.18	0.44
7:LB:214:ASP:OD2	7:LB:362:LYS:HA	2.18	0.44
20:LP:15:CYS:SG	20:LP:102:ALA:HB2	2.58	0.44
20:LP:70:CYS:SG	20:LP:71:ALA:N	2.91	0.44
21:LQ:178:ARG:HA	21:LQ:184:ARG:O	2.17	0.44
36:Lf:78:HIS:HB3	36:Lf:83:MET:O	2.17	0.44
50:S2:812:A:O2'	55:SE:12:VAL:O	2.33	0.44
50:S2:1566:G:O6	69:ST:101:ARG:NH1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SF:38:TYR:CE1	56:SF:144:LEU:HD21	2.53	0.44
60:SJ:122:SER:HG	60:SJ:125:HIS:HB3	1.82	0.44
67:SR:114:LEU:HD12	67:SR:115:SER:N	2.33	0.44
72:SW:111:MET:HE3	72:SW:111:MET:HB2	1.69	0.44
3:L5:1586:G:H2'	3:L5:1587:G:C8	2.52	0.44
3:L5:1824:G:H2'	3:L5:1825:A:C8	2.53	0.44
30:LZ:87:VAL:HG12	30:LZ:127:ASN:ND2	2.33	0.44
45:Lo:56:PHE:CE1	45:Lo:58:LYS:HB2	2.53	0.44
47:Lr:32:LEU:O	47:Lr:33:LYS:HB2	2.18	0.44
50:S2:115:U:H2'	50:S2:116:U:H6	1.83	0.44
50:S2:312:G:C2	50:S2:314:U:C4	3.06	0.44
50:S2:589:G:C5	50:S2:591:U:C4	3.06	0.44
50:S2:928:G:H21	77:Sb:68:GLY:HA2	1.82	0.44
50:S2:1474:A:H5''	66:SQ:121:VAL:HG23	1.99	0.44
51:SA:85:ARG:NH2	51:SA:205:ARG:HH12	2.15	0.44
51:SA:148:CYS:O	51:SA:162:PRO:HA	2.18	0.44
52:SB:105:LEU:HD13	52:SB:213:ARG:HA	1.99	0.44
54:SD:114:ALA:HB3	54:SD:117:ARG:HB2	2.00	0.44
59:SI:87:ASN:HB3	59:SI:90:LEU:HD12	1.98	0.44
59:SI:104:ILE:O	59:SI:171:LEU:N	2.50	0.44
60:SJ:137:VAL:HG12	60:SJ:138:ARG:N	2.33	0.44
77:Sb:36:LYS:HE2	77:Sb:41:TYR:HA	2.00	0.44
81:Sg:17:TRP:NE1	81:Sg:303:THR:OG1	2.51	0.44
2:CB:10:ARG:HD2	2:CB:10:ARG:HA	1.81	0.44
2:CB:750:GLN:N	2:CB:750:GLN:OE1	2.51	0.44
3:L5:1187:G:H2'	3:L5:1188:C:O4'	2.18	0.44
3:L5:1268:G:H8	3:L5:1268:G:OP2	2.01	0.44
3:L5:1749:A:H2'	3:L5:1750:G:C8	2.52	0.44
3:L5:2904:U:H1'	3:L5:3592:G:O4'	2.18	0.44
3:L5:3932:U:H2'	3:L5:3933:G:H8	1.83	0.44
3:L5:4996:C:H4'	34:Ld:26:THR:HG23	1.99	0.44
8:LC:334:THR:HG21	11:LF:51:TYR:OH	2.17	0.44
14:LI:183:ASP:C	14:LI:187:LYS:HZ2	2.26	0.44
19:LO:27:VAL:O	19:LO:101:ARG:NH1	2.51	0.44
32:Lb:8:THR:HG22	32:Lb:10:HIS:H	1.82	0.44
35:Le:35:TRP:NE1	35:Le:56:PRO:HG3	2.33	0.44
39:Li:7:MET:HE3	39:Li:7:MET:HB2	1.83	0.44
47:Lr:47:LYS:O	47:Lr:103:ARG:HD2	2.17	0.44
50:S2:162:C:OP1	57:SG:87:ARG:NH2	2.49	0.44
50:S2:318:A:C8	50:S2:333:G:C2	3.06	0.44
50:S2:327:G:H5''	50:S2:328:U:C2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:525:A:C5	50:S2:590:A:C6	3.06	0.44
50:S2:942:G:H2'	50:S2:943:U:C6	2.53	0.44
50:S2:988:C:O5'	50:S2:988:C:H6	2.01	0.44
50:S2:1266:C:H42	50:S2:1517:G:H22	1.66	0.44
50:S2:1522:A:H62	65:SP:131:PRO:HB3	1.82	0.44
50:S2:1793:A:H2'	50:S2:1794:C:H6	1.82	0.44
56:SF:140:ASP:OD1	56:SF:140:ASP:N	2.49	0.44
58:SH:125:VAL:O	58:SH:129:ILE:N	2.32	0.44
59:SI:48:VAL:HG11	59:SI:54:LYS:HD2	1.99	0.44
63:SN:5:HIS:HE2	63:SN:124:ARG:HH21	1.66	0.44
65:SP:72:LYS:HD2	65:SP:73:PRO:HD2	1.99	0.44
66:SQ:109:LYS:HZ1	66:SQ:112:LEU:HD13	1.83	0.44
79:Sd:33:LYS:O	79:Sd:36:LEU:HG	2.18	0.44
81:Sg:170:TRP:CE2	81:Sg:194:TYR:CD2	3.05	0.44
2:CB:330:LYS:O	2:CB:335:LEU:HB2	2.18	0.43
3:L5:469:C:H2'	3:L5:470:A:C8	2.52	0.43
3:L5:1342:A:O2'	3:L5:1343:A:H5'	2.18	0.43
3:L5:1380:G:H4'	3:L5:1381:U:H6	1.82	0.43
3:L5:2469:C:H5'	3:L5:2470:C:OP2	2.17	0.43
3:L5:3641:U:OP2	3:L5:3646:A:N6	2.48	0.43
3:L5:3722:G:OP1	39:Li:68:ARG:NH2	2.51	0.43
4:L7:58:A:H2'	4:L7:59:G:H8	1.83	0.43
13:LH:8:GLN:HE22	13:LH:71:ARG:HG3	1.83	0.43
18:LN:120:TRP:CH2	18:LN:122:GLY:HA2	2.53	0.43
19:LO:65:ASN:OD1	19:LO:67:SER:OG	2.21	0.43
23:LS:9:GLU:HG3	23:LS:33:PHE:CE2	2.53	0.43
24:LT:127:GLN:OE1	24:LT:127:GLN:HA	2.18	0.43
25:LU:18:VAL:O	25:LU:18:VAL:HG12	2.17	0.43
31:La:10:LYS:HD3	31:La:10:LYS:HA	1.72	0.43
47:Lr:47:LYS:HB2	47:Lr:102:TYR:CE2	2.52	0.43
50:S2:575:A:H2'	50:S2:576:A:O4'	2.18	0.43
50:S2:666:U:H2'	50:S2:667:U:C6	2.53	0.43
50:S2:1300:U:H4'	50:S2:1302:G:OP1	2.17	0.43
50:S2:1303:C:H2'	50:S2:1304:U:C6	2.52	0.43
50:S2:1330:G:O6	50:S2:1492:U:H2'	2.18	0.43
50:S2:1577:G:O2'	50:S2:1582:C:N3	2.48	0.43
50:S2:1618:C:H2'	50:S2:1619:A:C8	2.53	0.43
60:SJ:24:ARG:NE	60:SJ:28:GLU:OE2	2.42	0.43
61:SK:49:MET:HG2	61:SK:69:TRP:CZ3	2.53	0.43
65:SP:32:GLN:O	65:SP:35:GLN:NE2	2.50	0.43
67:SR:12:ALA:O	67:SR:16:ILE:HG12	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:SU:66:ARG:CZ	70:SU:75:LYS:HA	2.47	0.43
71:SV:1:MET:HB3	71:SV:10:ASP:OD2	2.17	0.43
74:SY:23:MET:SD	74:SY:23:MET:N	2.91	0.43
75:SZ:57:LYS:O	75:SZ:61:GLU:HB2	2.18	0.43
76:Sa:5:ARG:HB2	76:Sa:7:ASN:O	2.18	0.43
2:CB:10:ARG:CZ	2:CB:465:PRO:HD3	2.48	0.43
3:L5:499:G:H3'	3:L5:500:G:H5''	2.00	0.43
3:L5:1296:G:H2'	3:L5:1297:U:C6	2.53	0.43
3:L5:1501:C:H2'	21:LQ:68:ARG:HH12	1.83	0.43
3:L5:2504:C:O2'	3:L5:2505:C:H5'	2.18	0.43
3:L5:3754:G:N1	3:L5:3770:U:N3	2.37	0.43
10:LE:50:LEU:HD21	10:LE:54:ILE:HG22	2.01	0.43
12:LG:153:GLN:N	12:LG:204:PHE:O	2.44	0.43
33:Lc:20:LEU:HB3	33:Lc:101:ASP:HB3	1.99	0.43
37:Lg:75:SER:OG	37:Lg:75:SER:O	2.33	0.43
50:S2:146:G:H2'	50:S2:147:A:C8	2.54	0.43
50:S2:458:A:H2'	50:S2:459:C:H6	1.82	0.43
50:S2:561:A:H2'	50:S2:562:U:C6	2.53	0.43
50:S2:963:A:H2	50:S2:1055:A:H4'	1.82	0.43
50:S2:1171:G:O2'	50:S2:1187:G:O6	2.32	0.43
50:S2:1277:C:H5''	61:SK:55:ARG:NH2	2.33	0.43
50:S2:1299:A:OP1	65:SP:59:ARG:NH1	2.51	0.43
50:S2:1305:C:H2'	50:S2:1306:U:C6	2.52	0.43
50:S2:1501:C:H2'	50:S2:1502:C:C6	2.50	0.43
50:S2:1511:U:H2'	50:S2:1512:C:H6	1.83	0.43
50:S2:1549:U:H2'	50:S2:1550:G:C8	2.54	0.43
50:S2:1686:G:H2'	50:S2:1687:C:C6	2.53	0.43
51:SA:215:GLN:O	51:SA:219:GLU:HG2	2.18	0.43
56:SF:77:MET:HE3	56:SF:86:LYS:N	2.33	0.43
56:SF:125:SER:O	56:SF:135:ARG:HG3	2.18	0.43
57:SG:149:LYS:HA	57:SG:149:LYS:HE2	2.01	0.43
58:SH:122:LEU:O	58:SH:125:VAL:HG22	2.19	0.43
59:SI:123:ARG:HG2	59:SI:123:ARG:NH2	2.32	0.43
63:SN:47:PRO:HA	63:SN:50:ILE:HB	2.00	0.43
65:SP:43:ARG:HE	65:SP:47:ARG:NH1	2.11	0.43
67:SR:58:MET:O	67:SR:62:GLN:HG2	2.18	0.43
70:SU:26:SER:HB3	70:SU:32:LEU:HD13	1.99	0.43
81:Sg:164:ILE:HG23	81:Sg:177:TRP:O	2.18	0.43
1:5:89:PHE:HB3	1:5:103:GLN:HA	2.01	0.43
3:L5:652:G:H2'	3:L5:653:U:C6	2.53	0.43
3:L5:689:U:H2'	3:L5:690:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1995:G:H2'	3:L5:1996:C:C6	2.53	0.43
3:L5:2280:G:OP1	35:Le:48:ARG:NH2	2.51	0.43
3:L5:3764:U:C4	3:L5:3765:G:C6	3.06	0.43
3:L5:5016:A:H2	3:L5:5033:G:H21	1.64	0.43
4:L7:38:U:N3	4:L7:41:G:OP2	2.36	0.43
6:LA:132:ASN:O	6:LA:169:VAL:HG12	2.18	0.43
10:LE:99:ASP:C	10:LE:101:ASN:H	2.26	0.43
14:LI:55:ASP:OD2	14:LI:164:LYS:NZ	2.26	0.43
14:LI:96:VAL:HG22	14:LI:125:THR:HG22	1.99	0.43
15:LJ:143:ASP:N	15:LJ:143:ASP:OD1	2.51	0.43
16:LL:145:LYS:HG3	16:LL:146:LEU:CD1	2.48	0.43
20:LP:22:LEU:HD12	20:LP:146:ILE:HD13	2.01	0.43
24:LT:80:VAL:HG12	24:LT:81:LYS:N	2.34	0.43
33:Lc:36:LYS:O	33:Lc:40:GLN:HG2	2.18	0.43
38:Lh:23:ASP:N	38:Lh:23:ASP:OD1	2.48	0.43
46:Lp:32:SER:OG	46:Lp:70:THR:HG22	2.17	0.43
50:S2:84:A:C4	50:S2:85:A:C8	3.06	0.43
50:S2:523:A:OP2	60:SJ:38:ARG:NH1	2.51	0.43
50:S2:687:C:O3'	58:SH:103:LYS:NZ	2.52	0.43
50:S2:752:G:OP2	50:S2:793:G:H1'	2.18	0.43
50:S2:869:A:N3	50:S2:915:G:H1'	2.33	0.43
50:S2:871:U:P	63:SN:76:LYS:HZ1	2.41	0.43
50:S2:884:C:O2	50:S2:904:A:H2	2.01	0.43
50:S2:1174:U:H2'	50:S2:1175:G:C8	2.53	0.43
51:SA:183:LEU:HB3	51:SA:188:THR:OG1	2.17	0.43
51:SA:190:SER:OG	51:SA:192:GLU:HG3	2.19	0.43
57:SG:43:GLU:HA	57:SG:46:LYS:HZ1	1.83	0.43
57:SG:46:LYS:HA	57:SG:46:LYS:HD3	1.84	0.43
69:ST:133:ARG:HG3	69:ST:133:ARG:NH1	2.32	0.43
70:SU:22:ILE:HG22	70:SU:89:ILE:O	2.18	0.43
73:SX:84:PHE:HB2	73:SX:118:VAL:HG11	2.00	0.43
76:Sa:73:TYR:HB3	76:Sa:78:ALA:HB2	2.00	0.43
81:Sg:47:ARG:NH2	81:Sg:52:TYR:CZ	2.85	0.43
2:CB:671:TYR:HB3	2:CB:674:GLU:OE2	2.18	0.43
2:CB:740:LEU:HD13	2:CB:831:PRO:HB3	1.99	0.43
3:L5:453:G:H2'	3:L5:453:G:N3	2.34	0.43
3:L5:1399:G:H2'	3:L5:1400:G:C8	2.47	0.43
3:L5:1742:A:OP2	9:LD:10:LYS:HD3	2.18	0.43
3:L5:1895:G:OP1	11:LF:96:ARG:NH2	2.51	0.43
3:L5:2760:G:H1'	3:L5:2761:U:OP2	2.18	0.43
3:L5:4106:G:H3'	3:L5:4106:G:N3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L8:76:C:H2'	5:L8:77:A:O4'	2.18	0.43
22:LR:182:GLU:HA	22:LR:185:ILE:HG12	2.00	0.43
25:LU:65:ARG:HH11	25:LU:65:ARG:HG3	1.83	0.43
31:La:12:ARG:HG3	31:La:12:ARG:O	2.19	0.43
37:Lg:63:VAL:HG23	37:Lg:66:ARG:CZ	2.48	0.43
48:Lz:12:GLU:O	48:Lz:16:GLU:N	2.45	0.43
48:Lz:103:LEU:HA	48:Lz:106:LYS:NZ	2.33	0.43
49:S:218:TRP:NE1	54:SD:142:LEU:HB3	2.34	0.43
50:S2:1300:U:H2'	65:SP:51:ARG:HH21	1.83	0.43
50:S2:1516:G:N1	50:S2:1517:G:N2	2.66	0.43
50:S2:1535:U:OP2	56:SF:168:THR:OG1	2.28	0.43
50:S2:1568:C:OP2	69:ST:98:SER:OG	2.29	0.43
50:S2:1711:U:H2'	50:S2:1712:A:H8	1.83	0.43
50:S2:1728:U:H2'	50:S2:1729:U:O4'	2.17	0.43
50:S2:1772:C:H2'	50:S2:1772:C:O2	2.17	0.43
52:SB:87:ILE:HG22	52:SB:101:HIS:HB2	2.01	0.43
55:SE:140:VAL:HG12	55:SE:146:THR:HB	1.99	0.43
57:SG:159:ARG:HE	57:SG:171:THR:HG23	1.83	0.43
57:SG:227:GLN:HE22	57:SG:231:ARG:HD2	1.83	0.43
58:SH:37:LYS:HA	58:SH:37:LYS:HD3	1.83	0.43
58:SH:82:GLU:OE1	58:SH:82:GLU:N	2.51	0.43
58:SH:191:GLU:OE2	58:SH:192:PHE:HD1	2.01	0.43
59:SI:129:LEU:C	59:SI:131:PRO:HD2	2.44	0.43
60:SJ:45:ARG:O	60:SJ:49:THR:HG23	2.19	0.43
67:SR:84:TYR:CD2	67:SR:84:TYR:O	2.70	0.43
72:SW:24:GLN:HB2	77:Sb:7:LEU:HD13	2.00	0.43
72:SW:57:ARG:HH21	77:Sb:26:GLN:HG3	1.82	0.43
79:Sd:22:ARG:HG3	79:Sd:23:VAL:HG23	2.00	0.43
81:Sg:155:ARG:O	81:Sg:165:ILE:HD12	2.17	0.43
2:CB:20:ARG:NH1	2:CB:360:SER:HB2	2.33	0.43
2:CB:37:ASP:HB3	2:CB:55:ARG:NH2	2.34	0.43
2:CB:452:LEU:HD23	2:CB:454:MET:SD	2.58	0.43
3:L5:456:C:N4	3:L5:701:G:O6	2.49	0.43
3:L5:690:C:H4'	47:Lr:85:ASN:ND2	2.32	0.43
3:L5:1185:G:O2'	9:LD:278:ASP:OD2	2.32	0.43
3:L5:1274:A:O2'	3:L5:1275:G:H5'	2.19	0.43
3:L5:1664:U:H2'	3:L5:1665:C:C6	2.53	0.43
3:L5:2632:U:H2'	3:L5:2633:U:C6	2.52	0.43
3:L5:3701:C:H4'	3:L5:3702:A:H8	1.83	0.43
7:LB:86:VAL:HG13	7:LB:162:VAL:HG13	2.00	0.43
11:LF:28:LEU:HG	11:LF:32:ARG:NH1	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LI:61:SER:HA	14:LI:126:VAL:HG12	2.00	0.43
26:LV:126:ALA:HB2	26:LV:139:ILE:HD12	2.00	0.43
33:Lc:47:ILE:HD13	33:Lc:72:HIS:HB3	1.99	0.43
50:S2:346:C:H5''	55:SE:38:LEU:HD23	2.00	0.43
50:S2:499:G:C6	50:S2:504:G:C6	3.06	0.43
50:S2:917:U:H2'	50:S2:918:U:C6	2.53	0.43
50:S2:1292:C:C2	50:S2:1293:A:C8	3.06	0.43
50:S2:1702:G:H2'	50:S2:1703:C:O4'	2.18	0.43
55:SE:31:PRO:HG2	55:SE:38:LEU:HB2	2.01	0.43
56:SF:134:VAL:HG22	56:SF:135:ARG:HG2	1.99	0.43
58:SH:163:GLN:HG3	58:SH:189:PHE:CD2	2.53	0.43
59:SI:65:PHE:O	59:SI:109:TYR:OH	2.32	0.43
61:SK:29:MET:HA	61:SK:30:PRO:HD3	1.85	0.43
69:ST:133:ARG:O	69:ST:137:GLN:HG3	2.18	0.43
74:SY:17:LEU:H	74:SY:17:LEU:HD12	1.83	0.43
75:SZ:68:ILE:CG2	75:SZ:109:TYR:HB2	2.48	0.43
81:Sg:5:MET:HE3	81:Sg:312:VAL:HG23	2.01	0.43
81:Sg:21:ILE:HG13	81:Sg:290:ALA:HB2	2.00	0.43
2:CB:693:CYS:HB2	2:CB:838:THR:HG21	2.01	0.43
3:L5:180:C:H2'	3:L5:181:C:H4'	2.00	0.43
3:L5:184:U:H3'	3:L5:189:G:OP1	2.18	0.43
3:L5:1175:A:H2	3:L5:1185:G:N1	2.12	0.43
3:L5:1509:C:H5''	31:La:2:PRO:HD2	2.00	0.43
3:L5:2303:C:OP1	35:Le:107:ASN:ND2	2.47	0.43
3:L5:4071:U:H2'	3:L5:4072:C:C6	2.53	0.43
3:L5:4094:G:H2'	3:L5:4094:G:N3	2.33	0.43
3:L5:4736:C:H2'	3:L5:4737:G:H8	1.83	0.43
6:LA:108:PRO:O	6:LA:111:THR:OG1	2.32	0.43
8:LC:291:ARG:HG3	8:LC:291:ARG:NH1	2.34	0.43
15:LJ:57:VAL:HG11	15:LJ:60:PHE:CZ	2.53	0.43
21:LQ:188:ASN:C	21:LQ:188:ASN:HD22	2.25	0.43
25:LU:20:LYS:H	25:LU:73:THR:HG22	1.83	0.43
50:S2:432:G:H2'	50:S2:433:A:C8	2.53	0.43
50:S2:634:A:H2'	50:S2:635:G:H8	1.82	0.43
50:S2:1134:G:P	76:Sa:6:ARG:HH21	2.42	0.43
52:SB:79:VAL:CG2	52:SB:82:ARG:HE	2.30	0.43
56:SF:142:SER:OG	78:Sc:47:LYS:O	2.24	0.43
63:SN:83:ASP:N	63:SN:83:ASP:OD1	2.48	0.43
70:SU:94:PRO:HB2	70:SU:96:GLU:OE1	2.18	0.43
81:Sg:21:ILE:HG22	81:Sg:33:SER:CB	2.48	0.43
81:Sg:26:GLN:CG	81:Sg:75:GLY:HA3	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:Sg:191:HIS:HD2	81:Sg:217:MET:SD	2.42	0.43
2:CB:813:VAL:HG23	2:CB:814:PHE:N	2.31	0.43
3:L5:302:C:OP1	18:LN:68:ARG:HB2	2.18	0.43
3:L5:468:U:C2	3:L5:686:A:N1	2.87	0.43
3:L5:1563:A:H8	3:L5:1563:A:OP1	2.01	0.43
3:L5:1760:G:O3'	3:L5:1761:G:H2'	2.19	0.43
3:L5:3700:C:O2'	3:L5:3774:A:H1'	2.18	0.43
3:L5:3732:A:H2'	3:L5:3733:A:C8	2.53	0.43
3:L5:4257:A:C4	15:LJ:60:PHE:CE1	3.06	0.43
3:L5:4741:C:H1'	3:L5:4743:G:OP2	2.18	0.43
3:L5:4892:A:H2'	3:L5:4893:A:O4'	2.19	0.43
5:L8:80:A:H5'	5:L8:81:C:OP2	2.19	0.43
9:LD:164:LYS:HA	9:LD:167:VAL:HG12	2.01	0.43
9:LD:198:HIS:HA	9:LD:203:ASN:ND2	2.34	0.43
17:LM:86:TRP:O	17:LM:88:ALA:N	2.52	0.43
22:LR:38:ARG:O	22:LR:39:GLN:HB2	2.19	0.43
33:Lc:60:ILE:HD13	33:Lc:60:ILE:HA	1.86	0.43
48:Lz:194:LEU:HD12	48:Lz:194:LEU:HA	1.90	0.43
50:S2:122:G:OP1	55:SE:75:LYS:NZ	2.33	0.43
50:S2:149:A:H5'	50:S2:150:A:OP2	2.19	0.43
50:S2:606:G:N2	80:Se:58:ASN:HD21	2.16	0.43
50:S2:1004:U:C2	50:S2:1005:G:C8	3.07	0.43
50:S2:1122:A:H4'	52:SB:205:TYR:CE1	2.53	0.43
50:S2:1448:A:C6	50:S2:1449:G:C5	3.07	0.43
50:S2:1526:G:H5''	66:SQ:146:ARG:NH1	2.32	0.43
52:SB:110:MET:O	52:SB:113:MET:N	2.52	0.43
52:SB:158:HIS:HA	52:SB:161:VAL:HG12	2.00	0.43
55:SE:71:LYS:NZ	55:SE:74:GLY:HA2	2.33	0.43
55:SE:112:HIS:HE1	55:SE:237:SER:O	2.01	0.43
57:SG:20:ASP:OD2	57:SG:22:ARG:HB2	2.18	0.43
59:SI:133:GLU:O	59:SI:137:LEU:HG	2.18	0.43
64:SO:67:ASP:HB3	64:SO:70:SER:HB3	1.99	0.43
66:SQ:93:VAL:HG21	66:SQ:109:LYS:NZ	2.33	0.43
68:SS:60:THR:O	68:SS:63:GLU:HG3	2.18	0.43
70:SU:56:MET:HE2	70:SU:86:LYS:O	2.19	0.43
74:SY:83:LYS:NZ	74:SY:96:LEU:HB3	2.33	0.43
78:Sc:10:LYS:NZ	78:Sc:34:PHE:HB3	2.33	0.43
78:Sc:14:VAL:HA	78:Sc:32:VAL:HG12	2.00	0.43
3:L5:132:G:H2'	3:L5:133:C:O2'	2.19	0.43
3:L5:965:G:H1'	3:L5:2093:A:H61	1.84	0.43
3:L5:1217:G:N1	3:L5:1218:G:C6	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1268:G:O2'	3:L5:1269:G:O5'	2.35	0.43
3:L5:1419:G:C5	31:La:116:LYS:HE3	2.53	0.43
3:L5:2411:C:H2'	3:L5:2412:A:C8	2.54	0.43
3:L5:3671:G:OP1	18:LN:72:LYS:NZ	2.52	0.43
3:L5:3717:A:OP2	3:L5:3735:G:N1	2.48	0.43
3:L5:4314:C:O2'	32:Lb:36:ASP:OD1	2.28	0.43
3:L5:4348:A:C6	3:L5:4350:C:C4	3.07	0.43
3:L5:4882:U:O2'	3:L5:4883:C:H4'	2.19	0.43
8:LC:109:ARG:O	8:LC:109:ARG:HG2	2.18	0.43
14:LI:38:ARG:HD3	14:LI:83:ASP:HB2	2.01	0.43
14:LI:189:CYS:C	14:LI:190:LEU:HD12	2.44	0.43
15:LJ:35:ARG:HB2	15:LJ:126:TYR:OH	2.19	0.43
23:LS:76:LYS:HD2	23:LS:131:GLU:CD	2.43	0.43
48:Lz:55:LEU:N	48:Lz:153:SER:O	2.29	0.43
50:S2:176:U:H2'	50:S2:177:G:C8	2.53	0.43
50:S2:1239:U:H2'	50:S2:1241:A:OP2	2.18	0.43
50:S2:1300:U:C4	65:SP:51:ARG:HD2	2.54	0.43
50:S2:1620:A:C5	50:S2:1624:U:C6	3.07	0.43
51:SA:37:TYR:CD1	51:SA:162:PRO:HG3	2.54	0.43
51:SA:69:GLU:OE2	51:SA:69:GLU:N	2.51	0.43
52:SB:27:LYS:O	52:SB:51:ARG:HD2	2.19	0.43
52:SB:65:ARG:CZ	64:SO:50:LYS:HD2	2.49	0.43
52:SB:136:ARG:HG2	52:SB:138:PHE:CE2	2.53	0.43
52:SB:139:CYS:SG	52:SB:168:MET:HB3	2.59	0.43
55:SE:118:GLU:HA	55:SE:121:TYR:CE1	2.54	0.43
57:SG:103:ASP:O	57:SG:106:LEU:HD13	2.18	0.43
57:SG:226:GLU:O	57:SG:230:LYS:HG2	2.19	0.43
58:SH:19:PHE:C	58:SH:21:SER:H	2.25	0.43
58:SH:147:LYS:C	58:SH:149:ASP:H	2.27	0.43
68:SS:23:ARG:O	68:SS:55:ARG:NH2	2.47	0.43
79:Sd:24:CYS:HG	79:Sd:42:CYS:HG	1.66	0.43
2:CB:580:ARG:HA	2:CB:580:ARG:HD3	1.87	0.43
2:CB:715:HIS:HA	50:S2:1825:A:N6	2.34	0.43
3:L5:170:C:N4	3:L5:266:C:H42	2.15	0.43
3:L5:433:A:N1	3:L5:3866:C:O2'	2.48	0.43
3:L5:513:U:O2'	3:L5:646:G:O6	2.25	0.43
3:L5:711:A:H2'	3:L5:712:C:C6	2.54	0.43
3:L5:2029:A:H2'	3:L5:2030:A:C8	2.53	0.43
9:LD:153:THR:HG23	9:LD:160:PHE:CZ	2.53	0.43
10:LE:130:LYS:N	10:LE:130:LYS:HD2	2.34	0.43
13:LH:118:LEU:HD23	13:LH:118:LEU:HA	1.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:LJ:10:ASN:O	15:LJ:11:PRO:C	2.60	0.43
19:LO:31:ARG:HA	19:LO:31:ARG:HD2	1.84	0.43
22:LR:175:GLU:HA	22:LR:178:GLN:HG3	2.00	0.43
23:LS:48:VAL:HG11	23:LS:54:MET:HE2	2.01	0.43
38:Lh:77:LYS:HD3	38:Lh:78:TYR:CZ	2.53	0.43
50:S2:521:A:H2'	50:S2:522:A:O4'	2.19	0.43
50:S2:835:C:N4	74:SY:8:ARG:HG2	2.34	0.43
50:S2:1162:C:H2'	50:S2:1163:C:O4'	2.19	0.43
50:S2:1597:C:H3'	50:S2:1598:G:C8	2.54	0.43
50:S2:1607:A:C5	50:S2:1608:U:C5	3.07	0.43
51:SA:132:GLN:N	51:SA:133:PRO:HD2	2.34	0.43
52:SB:172:MET:HE1	52:SB:212:VAL:HG13	1.99	0.43
54:SD:167:TYR:OH	54:SD:203:PRO:HA	2.18	0.43
56:SF:150:ALA:O	56:SF:154:LEU:HG	2.18	0.43
61:SK:31:LYS:HZ2	61:SK:36:ALA:H	1.66	0.43
64:SO:98:ARG:HD3	64:SO:134:PRO:HD3	2.00	0.43
66:SQ:102:GLU:CA	66:SQ:105:LYS:HD3	2.28	0.43
68:SS:64:VAL:O	68:SS:67:VAL:HG12	2.19	0.43
70:SU:55:ARG:HG2	70:SU:87:ARG:CD	2.49	0.43
75:SZ:68:ILE:HB	75:SZ:109:TYR:C	2.44	0.43
81:Sg:35:SER:HG	81:Sg:37:ASP:CG	2.24	0.43
81:Sg:90:TRP:HE1	81:Sg:97:THR:HG23	1.83	0.43
2:CB:55:ARG:O	2:CB:57:THR:N	2.52	0.43
2:CB:376:PRO:HD2	2:CB:376:PRO:O	2.19	0.43
2:CB:715:HIS:O	2:CB:720:GLN:NE2	2.51	0.43
3:L5:423:G:OP1	20:LP:62:ARG:NH2	2.51	0.43
3:L5:490:C:H2'	3:L5:491:G:C8	2.53	0.43
3:L5:688:U:OP1	10:LE:94:LYS:NZ	2.51	0.43
3:L5:689:U:H2'	3:L5:690:C:H6	1.83	0.43
3:L5:1189:G:H2'	3:L5:1190:C:H6	1.84	0.43
3:L5:1604:G:H2'	3:L5:1605:G:C8	2.54	0.43
3:L5:1697:G:N2	3:L5:2084:C:OP1	2.27	0.43
3:L5:2491:C:H2'	3:L5:2492:C:C6	2.54	0.43
3:L5:2545:U:N3	3:L5:2547:G:OP1	2.51	0.43
3:L5:2583:C:OP1	37:Lg:54:ARG:HB2	2.19	0.43
3:L5:3652:A:H2'	3:L5:3653:A:C8	2.54	0.43
3:L5:4323:A:N7	9:LD:153:THR:HG21	2.34	0.43
3:L5:5004:C:H2'	3:L5:5005:G:O4'	2.19	0.43
3:L5:5024:C:N4	3:L5:5029:C:O4'	2.52	0.43
4:L7:26:C:OP1	9:LD:56:THR:HG21	2.18	0.43
8:LC:221:PHE:O	8:LC:222:ARG:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LG:120:LYS:HA	12:LG:120:LYS:HD2	1.84	0.43
14:LI:184:MET:HE3	14:LI:190:LEU:HD11	2.01	0.43
25:LU:65:ARG:HD2	25:LU:67:LYS:N	2.31	0.43
34:Ld:50:ARG:HG3	34:Ld:62:VAL:CG2	2.48	0.43
41:Lk:64:LEU:O	41:Lk:66:VAL:HG23	2.19	0.43
48:Lz:29:LEU:HD13	48:Lz:173:LYS:HG3	2.01	0.43
48:Lz:121:PRO:HA	48:Lz:125:GLY:HA3	2.01	0.43
50:S2:126:G:H8	57:SG:199:THR:HG21	1.84	0.43
50:S2:152:U:H1'	57:SG:132:ARG:NH1	2.33	0.43
50:S2:164:A:H3'	50:S2:165:G:N2	2.23	0.43
50:S2:293:C:O2'	50:S2:294:U:H3'	2.19	0.43
50:S2:634:A:N6	50:S2:635:G:O6	2.51	0.43
50:S2:659:G:H21	73:SX:17:ARG:HH12	1.65	0.43
50:S2:872:A:N7	50:S2:874:G:C8	2.87	0.43
50:S2:880:G:C6	50:S2:907:G:C6	3.07	0.43
50:S2:1036:A:N3	50:S2:1844:U:O2'	2.52	0.43
50:S2:1398:G:C2	50:S2:1399:C:C6	3.07	0.43
50:S2:1613:G:OP2	65:SP:39:ALA:N	2.50	0.43
57:SG:24:LEU:O	57:SG:27:PHE:N	2.47	0.43
57:SG:221:LYS:O	57:SG:225:GLN:HG2	2.19	0.43
59:SI:93:THR:HG23	59:SI:95:THR:OG1	2.19	0.43
60:SJ:176:LYS:HG2	60:SJ:180:LYS:NZ	2.33	0.43
61:SK:31:LYS:HZ2	61:SK:36:ALA:N	2.16	0.43
62:SL:79:LYS:HE3	62:SL:79:LYS:HB2	1.73	0.43
65:SP:64:LYS:HD3	65:SP:73:PRO:HG2	2.01	0.43
68:SS:26:ILE:HA	68:SS:56:ALA:HB2	2.00	0.43
68:SS:59:LEU:HD12	68:SS:63:GLU:OE2	2.19	0.43
69:ST:10:ASN:HB3	69:ST:13:GLU:HG3	2.01	0.43
73:SX:114:ASP:OD1	73:SX:114:ASP:N	2.51	0.43
75:SZ:91:LEU:HB3	75:SZ:97:ILE:HG12	2.01	0.43
76:Sa:44:ILE:CG2	76:Sa:67:LEU:HB2	2.49	0.43
81:Sg:31:ILE:HD12	81:Sg:299:PHE:CD2	2.54	0.43
2:CB:295:ASP:O	2:CB:299:LYS:HG2	2.18	0.42
2:CB:595:SER:HA	2:CB:724:THR:CG2	2.49	0.42
3:L5:113:A:H2'	3:L5:114:G:O4'	2.19	0.42
3:L5:485:C:O2	3:L5:485:C:H2'	2.18	0.42
3:L5:1980:U:O2'	3:L5:1981:G:H5''	2.18	0.42
3:L5:2539:C:H2'	3:L5:2540:C:H6	1.84	0.42
3:L5:2561:C:C2	3:L5:2562:G:C8	3.06	0.42
3:L5:2743:A:H2'	3:L5:2744:A:C8	2.54	0.42
3:L5:3690:U:H2'	3:L5:3691:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3763:A:H2'	3:L5:3764:U:O4'	2.19	0.42
3:L5:3861:A:H2'	3:L5:3862:A:C8	2.53	0.42
3:L5:4134:C:C2	3:L5:4135:G:C8	3.07	0.42
3:L5:4377:G:O6	31:La:42:ARG:NH2	2.51	0.42
3:L5:4611:A:H2'	3:L5:4612:C:H6	1.82	0.42
8:LC:288:ASP:O	8:LC:292:ILE:HG13	2.19	0.42
9:LD:64:ILE:HG13	9:LD:105:LEU:HD21	2.01	0.42
12:LG:105:GLU:OE2	12:LG:105:GLU:N	2.44	0.42
14:LI:35:ASP:O	14:LI:36:LEU:HD23	2.19	0.42
17:LM:38:VAL:HG21	17:LM:50:MET:CB	2.49	0.42
21:LQ:27:LEU:HA	21:LQ:27:LEU:HD23	1.82	0.42
23:LS:43:ARG:HA	23:LS:43:ARG:HD2	1.74	0.42
35:Le:35:TRP:NE1	35:Le:56:PRO:HG2	2.34	0.42
42:LI:12:PHE:O	42:LI:16:LYS:HG2	2.19	0.42
50:S2:441:C:OP2	59:SI:2:GLY:N	2.52	0.42
50:S2:881:G:N2	50:S2:906:U:H1'	2.34	0.42
50:S2:1310:U:H2'	50:S2:1311:C:C6	2.53	0.42
50:S2:1518:C:H5''	50:S2:1519:U:H2'	2.00	0.42
50:S2:1622:U:O4	65:SP:81:ARG:NH2	2.52	0.42
50:S2:1828:C:H2'	50:S2:1829:G:O4'	2.18	0.42
51:SA:128:ARG:HG3	51:SA:128:ARG:NH1	2.33	0.42
51:SA:208:GLU:O	51:SA:212:LYS:HG2	2.19	0.42
53:SC:79:GLU:HA	53:SC:82:TYR:CD2	2.53	0.42
55:SE:95:THR:CG2	55:SE:97:GLU:HG2	2.46	0.42
56:SF:176:GLU:OE2	56:SF:188:TYR:N	2.52	0.42
57:SG:216:ARG:O	57:SG:218:LYS:N	2.51	0.42
72:SW:53:ILE:H	72:SW:53:ILE:HD12	1.84	0.42
74:SY:20:ARG:CZ	74:SY:74:MET:HE2	2.49	0.42
74:SY:42:GLU:HA	74:SY:42:GLU:OE1	2.17	0.42
2:CB:304:ILE:HG22	2:CB:305:MET:HE2	2.01	0.42
2:CB:417:PHE:O	2:CB:466:CYS:HB2	2.19	0.42
2:CB:593:SER:O	2:CB:601:ARG:HA	2.17	0.42
2:CB:775:GLN:NE2	2:CB:779:THR:O	2.52	0.42
3:L5:161:G:H2'	3:L5:162:A:H8	1.83	0.42
3:L5:497:G:H22	3:L5:658:C:H42	1.66	0.42
3:L5:693:C:H2'	3:L5:694:C:C6	2.54	0.42
3:L5:965:G:H2'	3:L5:2092:G:N2	2.35	0.42
3:L5:1693:U:H2'	3:L5:1694:C:O4'	2.19	0.42
3:L5:2730:U:H2'	3:L5:2731:C:C6	2.54	0.42
8:LC:325:MET:HE1	11:LF:155:TYR:CE2	2.54	0.42
10:LE:264:ILE:HD12	10:LE:264:ILE:HA	1.93	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:LX:110:LYS:HG3	28:LX:121:VAL:CG2	2.49	0.42
34:Ld:67:ARG:HG3	34:Ld:67:ARG:NH1	2.34	0.42
41:Lk:49:ASP:OD2	41:Lk:52:LYS:N	2.34	0.42
43:Lm:93:LYS:HD3	43:Lm:102:ARG:HG2	2.01	0.42
50:S2:388:U:C2	50:S2:389:A:N7	2.87	0.42
50:S2:614:C:H5''	50:S2:615:C:C6	2.54	0.42
50:S2:793:G:H2'	50:S2:794:A:H8	1.82	0.42
50:S2:919:A:O2'	50:S2:920:A:OP2	2.36	0.42
50:S2:1240:A:N6	65:SP:122:THR:O	2.52	0.42
50:S2:1347:U:H2'	50:S2:1348:G:N3	2.34	0.42
50:S2:1397:U:O4	66:SQ:12:VAL:HA	2.19	0.42
50:S2:1631:U:H2'	50:S2:1632:G:C8	2.54	0.42
52:SB:139:CYS:HA	52:SB:212:VAL:HA	2.01	0.42
56:SF:23:TRP:CZ3	56:SF:97:PHE:HB3	2.54	0.42
57:SG:147:LEU:HD11	57:SG:156:TYR:HD2	1.84	0.42
57:SG:159:ARG:HH21	57:SG:171:THR:HG23	1.82	0.42
60:SJ:160:SER:O	60:SJ:163:SER:OG	2.25	0.42
61:SK:22:VAL:O	61:SK:22:VAL:HG12	2.19	0.42
61:SK:50:GLN:O	61:SK:53:LYS:HB3	2.20	0.42
63:SN:25:TRP:CD1	63:SN:25:TRP:H	2.37	0.42
65:SP:75:VAL:HG22	65:SP:93:MET:HB3	2.01	0.42
66:SQ:89:SER:OG	66:SQ:119:LEU:O	2.37	0.42
67:SR:17:ILE:HD11	67:SR:54:VAL:HG13	2.01	0.42
67:SR:96:ILE:O	67:SR:118:GLN:N	2.52	0.42
68:SS:12:ILE:HB	68:SS:19:ASN:OD1	2.20	0.42
69:ST:132:ASP:O	69:ST:136:GLY:N	2.39	0.42
75:SZ:71:ALA:O	75:SZ:74:SER:HB2	2.19	0.42
81:Sg:247:TRP:NE1	81:Sg:267:VAL:HG11	2.34	0.42
2:CB:751:CYS:SG	2:CB:755:VAL:HG23	2.58	0.42
3:L5:497:G:N3	3:L5:498:C:C5	2.87	0.42
3:L5:1548:G:O2'	3:L5:2812:A:N3	2.48	0.42
3:L5:1830:G:O2'	3:L5:1831:G:H5'	2.19	0.42
3:L5:2065:G:H21	36:Lf:80:ASN:HD21	1.67	0.42
3:L5:3766:A:N3	3:L5:3766:A:H2'	2.34	0.42
3:L5:3920:U:H2'	3:L5:3921:U:C6	2.54	0.42
3:L5:4092:G:C5	3:L5:4093:G:N2	2.87	0.42
3:L5:4281:A:H2'	3:L5:4282:A:H2'	2.01	0.42
3:L5:4894:A:H3'	3:L5:4895:C:H5'	2.01	0.42
12:LG:230:TYR:CE2	12:LG:234:ARG:HD3	2.55	0.42
13:LH:59:LYS:HE3	13:LH:66:GLU:CG	2.48	0.42
21:LQ:97:LYS:HE3	21:LQ:97:LYS:HB2	1.69	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LU:42:PHE:CE2	25:LU:90:TYR:HB2	2.55	0.42
32:Lb:90:SER:OG	32:Lb:91:ARG:N	2.51	0.42
34:Ld:26:THR:HB	34:Ld:85:ARG:HH11	1.84	0.42
35:Le:90:MET:HG3	47:Lr:33:LYS:HA	2.01	0.42
42:Ll:33:ASN:O	42:Ll:34:LYS:HG2	2.19	0.42
50:S2:37:C:H3'	50:S2:38:A:H8	1.84	0.42
50:S2:197:U:H5'	50:S2:203:G:H21	1.84	0.42
50:S2:379:C:H5'	59:SI:33:ALA:HA	2.01	0.42
50:S2:528:A:C6	50:S2:558:G:N1	2.87	0.42
50:S2:809:A:OP1	55:SE:186:GLY:HA3	2.19	0.42
50:S2:946:U:H2'	50:S2:947:G:H8	1.85	0.42
50:S2:1199:A:H2'	50:S2:1200:A:C8	2.54	0.42
50:S2:1272:C:H2'	50:S2:1273:C:C6	2.53	0.42
50:S2:1679:A:H3'	56:SF:60:ARG:NH1	2.34	0.42
51:SA:143:PRO:HB3	71:SV:32:ILE:HD12	2.02	0.42
56:SF:16:ASP:N	56:SF:24:SER:OG	2.33	0.42
57:SG:226:GLU:HA	57:SG:229:ALA:HB3	2.02	0.42
58:SH:25:GLN:O	58:SH:28:LEU:N	2.52	0.42
60:SJ:93:LYS:HB2	60:SJ:96:TYR:CD2	2.54	0.42
66:SQ:13:PHE:O	66:SQ:90:LYS:NZ	2.51	0.42
67:SR:61:ILE:HG22	67:SR:66:VAL:HB	2.01	0.42
73:SX:50:ILE:HA	73:SX:98:ASP:O	2.20	0.42
76:Sa:42:ARG:HD2	76:Sa:43:ASN:N	2.34	0.42
79:Sd:26:ASN:HB3	79:Sd:39:CYS:SG	2.59	0.42
79:Sd:42:CYS:O	79:Sd:46:TYR:HD1	2.02	0.42
81:Sg:200:VAL:HA	81:Sg:207:CYS:HA	2.01	0.42
3:L5:1779:U:OP1	9:LD:6:VAL:HG12	2.19	0.42
3:L5:3596:A:O2'	22:LR:143:HIS:ND1	2.52	0.42
3:L5:4244:A:H2'	3:L5:4245:G:O4'	2.19	0.42
3:L5:4600:G:O2'	3:L5:4601:U:P	2.77	0.42
4:L7:39:C:O2'	15:LJ:46:GLN:HB3	2.19	0.42
6:LA:28:ARG:HH11	6:LA:123:ARG:CZ	2.33	0.42
7:LB:200:ARG:HG2	7:LB:200:ARG:HH11	1.84	0.42
29:LY:53:ASP:HB2	29:LY:108:ARG:O	2.18	0.42
48:Lz:60:ARG:O	48:Lz:152:LYS:NZ	2.34	0.42
49:S:204:LEU:O	54:SD:146:ARG:NH1	2.52	0.42
50:S2:291:G:HO2'	50:S2:292:A:P	2.42	0.42
50:S2:878:G:C6	50:S2:879:C:C4	3.07	0.42
50:S2:1003:U:H2'	50:S2:1004:U:H6	1.84	0.42
50:S2:1016:U:O2	50:S2:1016:U:H2'	2.19	0.42
50:S2:1025:U:H2'	50:S2:1026:C:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1122:A:H4'	52:SB:205:TYR:CD1	2.54	0.42
50:S2:1129:G:H2'	50:S2:1130:G:N3	2.33	0.42
50:S2:1533:A:H5'	56:SF:164:ARG:NH2	2.35	0.42
50:S2:1579:A:O2'	50:S2:1581:C:OP2	2.30	0.42
50:S2:1630:A:H2'	50:S2:1630:A:N3	2.34	0.42
50:S2:1672:U:H2'	50:S2:1673:U:H6	1.85	0.42
50:S2:1711:U:H2'	50:S2:1712:A:C8	2.54	0.42
50:S2:1713:C:H2'	50:S2:1714:U:C6	2.53	0.42
50:S2:1838:U:O2	64:SO:150:ARG:NE	2.47	0.42
51:SA:176:TRP:HA	51:SA:202:TYR:CE2	2.53	0.42
54:SD:22:ASN:O	54:SD:26:THR:HG23	2.19	0.42
54:SD:164:VAL:HG23	54:SD:164:VAL:O	2.19	0.42
55:SE:115:THR:HG23	55:SE:118:GLU:H	1.84	0.42
55:SE:162:ILE:HG22	55:SE:169:ILE:HA	2.02	0.42
60:SJ:25:LEU:HD23	60:SJ:25:LEU:HA	1.79	0.42
63:SN:126:ALA:O	63:SN:130:LYS:HG3	2.19	0.42
66:SQ:97:GLN:OE1	81:Sg:60:ARG:NH1	2.52	0.42
72:SW:57:ARG:HE	77:Sb:26:GLN:HE21	1.66	0.42
81:Sg:172:LYS:HA	81:Sg:195:LEU:HD23	2.01	0.42
2:CB:59:THR:HA	2:CB:456:ARG:HH21	1.85	0.42
2:CB:150:ARG:HE	2:CB:194:GLU:HG3	1.84	0.42
2:CB:451:ILE:HD12	2:CB:451:ILE:HA	1.93	0.42
3:L5:184:U:H1'	3:L5:254:G:N2	2.31	0.42
3:L5:268:G:C2	3:L5:269:G:C5	3.08	0.42
3:L5:1444:G:HO2'	3:L5:1445:U:C4'	2.32	0.42
3:L5:2406:G:N7	42:Ll:2:SER:N	2.68	0.42
3:L5:2407:G:H2'	42:Ll:13:LEU:HD22	2.02	0.42
3:L5:4685:U:P	43:Lm:112:LYS:HZ3	2.42	0.42
7:LB:3:HIS:O	7:LB:5:LYS:N	2.53	0.42
10:LE:206:VAL:HA	10:LE:256:GLN:NE2	2.35	0.42
18:LN:123:GLU:H	18:LN:123:GLU:HG2	1.68	0.42
19:LO:3:GLU:HB3	19:LO:5:GLN:OE1	2.19	0.42
21:LQ:22:ASP:O	21:LQ:26:ARG:HG2	2.19	0.42
23:LS:141:ALA:HA	23:LS:144:GLN:HE21	1.84	0.42
24:LT:49:GLN:HA	24:LT:52:MET:HE3	2.01	0.42
30:LZ:33:THR:C	30:LZ:35:ASP:H	2.28	0.42
38:Lh:52:LYS:HA	38:Lh:52:LYS:HD3	1.80	0.42
47:Lr:54:ALA:HA	47:Lr:61:VAL:HG23	2.01	0.42
50:S2:101:U:OP1	59:SI:19:LYS:NZ	2.36	0.42
50:S2:373:G:C6	50:S2:392:A:C6	3.07	0.42
50:S2:381:C:N3	59:SI:49:ARG:HG2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:502:C:C6	55:SE:66:MET:HE1	2.55	0.42
50:S2:1130:G:H21	50:S2:1130:G:P	2.39	0.42
50:S2:1289:U:H4'	61:SK:2:LEU:HD11	2.02	0.42
50:S2:1482:C:OP1	79:Sd:54:LYS:NZ	2.38	0.42
50:S2:1563:G:OP2	69:ST:72:VAL:HG12	2.19	0.42
50:S2:1668:U:P	66:SQ:130:LYS:HZ1	2.41	0.42
50:S2:1827:U:H2'	50:S2:1828:C:H6	1.85	0.42
59:SI:143:LYS:O	59:SI:147:LYS:N	2.32	0.42
62:SL:22:ARG:HH11	62:SL:23:VAL:H	1.67	0.42
65:SP:110:GLU:CB	68:SS:113:ARG:HH22	2.31	0.42
68:SS:2:SER:H	75:SZ:49:LEU:HD11	1.85	0.42
69:ST:96:SER:HB3	69:ST:99:VAL:HG12	2.02	0.42
70:SU:19:ARG:CZ	70:SU:92:HIS:HB2	2.49	0.42
2:CB:13:MET:HE1	2:CB:464:VAL:HG22	2.00	0.42
2:CB:19:ILE:O	2:CB:20:ARG:NH1	2.43	0.42
2:CB:689:GLU:HA	2:CB:694:GLU:O	2.20	0.42
3:L5:1092:G:H2'	3:L5:1093:C:H6	1.84	0.42
3:L5:1412:G:H2'	3:L5:1413:C:H6	1.85	0.42
3:L5:1725:U:H2'	3:L5:1726:U:H6	1.84	0.42
3:L5:1982:G:H8	3:L5:1982:G:OP2	2.01	0.42
3:L5:2268:A:O2'	21:LQ:30:LYS:HE2	2.19	0.42
3:L5:3663:A:N6	3:L5:4168:G:O2'	2.52	0.42
3:L5:4195:G:OP1	3:L5:4221:C:O2'	2.36	0.42
8:LC:36:ILE:HG21	8:LC:122:TYR:CD2	2.54	0.42
11:LF:148:LYS:O	11:LF:152:GLU:HG2	2.19	0.42
13:LH:29:GLY:H	13:LH:84:VAL:HG11	1.85	0.42
15:LJ:30:GLY:O	15:LJ:34:THR:HG23	2.19	0.42
24:LT:81:LYS:HB3	32:Lb:16:TRP:CZ3	2.55	0.42
26:LV:85:ARG:NH1	26:LV:99:GLU:O	2.52	0.42
29:LY:103:LYS:HD3	29:LY:103:LYS:HA	1.87	0.42
31:La:87:ARG:HG3	31:La:120:GLN:NE2	2.34	0.42
32:Lb:105:GLY:O	32:Lb:109:ARG:HG3	2.19	0.42
50:S2:159:A:H2	50:S2:467:G:N3	2.16	0.42
50:S2:215:G:H2'	50:S2:216:C:C6	2.55	0.42
50:S2:475:C:C4	50:S2:476:A:N7	2.88	0.42
50:S2:502:C:C2	55:SE:66:MET:HE3	2.55	0.42
50:S2:696:G:N2	50:S2:737:G:N2	2.67	0.42
50:S2:1119:A:H5'	50:S2:1120:U:OP2	2.19	0.42
50:S2:1238:U:H2'	50:S2:1239:U:C6	2.53	0.42
50:S2:1532:C:O2'	50:S2:1601:A:N1	2.52	0.42
50:S2:1567:G:C6	68:SS:82:TRP:CD1	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SB:106:THR:HG22	52:SB:108:ASP:H	1.84	0.42
54:SD:54:ARG:HH22	54:SD:57:ASN:ND2	2.18	0.42
56:SF:18:LYS:HG2	56:SF:21:GLY:C	2.45	0.42
56:SF:62:ARG:HG3	56:SF:62:ARG:NH2	2.34	0.42
60:SJ:88:ASP:HB3	60:SJ:91:LYS:CB	2.49	0.42
60:SJ:136:ARG:HH11	60:SJ:160:SER:HA	1.84	0.42
62:SL:5:GLN:HE22	62:SL:11:GLN:H	1.67	0.42
64:SO:83:GLN:O	64:SO:86:LYS:HG2	2.20	0.42
66:SQ:15:ARG:HA	66:SQ:19:ALA:O	2.20	0.42
66:SQ:24:HIS:HE1	66:SQ:26:LYS:HZ2	1.67	0.42
66:SQ:117:ARG:NH1	66:SQ:121:VAL:HG11	2.35	0.42
68:SS:23:ARG:HG3	75:SZ:48:VAL:CG2	2.49	0.42
74:SY:8:ARG:HG3	74:SY:9:THR:N	2.34	0.42
74:SY:103:SER:HB3	74:SY:106:GLN:NE2	2.34	0.42
77:Sb:54:VAL:HG22	77:Sb:64:CYS:SG	2.60	0.42
1:5:17:THR:OG1	1:5:80:ASP:HB3	2.19	0.42
2:CB:816:HIS:CD2	2:CB:818:GLN:HB2	2.55	0.42
3:L5:163:A:H2'	3:L5:164:G:C8	2.54	0.42
3:L5:982:U:OP1	10:LE:73:TYR:OH	2.25	0.42
3:L5:1077:C:H4'	3:L5:1215:C:C4	2.55	0.42
3:L5:1972:G:C6	3:L5:1995:G:C6	3.07	0.42
3:L5:2652:G:H22	46:Lp:61:MET:HG2	1.83	0.42
3:L5:2792:C:O2	40:Lj:9:GLY:HA2	2.20	0.42
3:L5:2891:U:P	22:LR:74:ARG:HH11	2.42	0.42
3:L5:3733:A:H2'	3:L5:3734:U:O4'	2.19	0.42
3:L5:3946:G:H21	3:L5:3947:A:H62	1.68	0.42
3:L5:4151:G:H2'	3:L5:4152:G:C8	2.53	0.42
4:L7:12:U:O3'	4:L7:109:U:O2'	2.29	0.42
13:LH:20:LEU:HD23	13:LH:25:VAL:HG12	2.01	0.42
17:LM:93:LYS:HE2	17:LM:93:LYS:HB3	1.69	0.42
19:LO:169:ARG:HB3	19:LO:169:ARG:HH11	1.85	0.42
26:LV:45:ILE:HD13	26:LV:45:ILE:HA	1.92	0.42
33:Lc:13:SER:HA	33:Lc:16:SER:OG	2.19	0.42
50:S2:120:U:H2'	50:S2:121:U:C6	2.55	0.42
50:S2:568:C:H2'	50:S2:569:A:H8	1.85	0.42
50:S2:1036:A:H4'	50:S2:1855:G:N2	2.34	0.42
50:S2:1227:G:H21	50:S2:1635:C:H4'	1.84	0.42
50:S2:1533:A:C5'	56:SF:164:ARG:HH22	2.33	0.42
50:S2:1610:G:H2'	50:S2:1611:G:H8	1.85	0.42
50:S2:1650:A:C6	50:S2:1651:A:C4	3.07	0.42
50:S2:1869:A:H5''	76:Sa:100:ARG:HH12	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SA:42:LYS:NZ	51:SA:44:ASP:OD2	2.52	0.42
52:SB:129:THR:HG21	52:SB:181:LEU:HB2	2.01	0.42
55:SE:86:PHE:CE2	55:SE:87:MET:HE2	2.55	0.42
56:SF:99:ILE:O	56:SF:103:LEU:N	2.53	0.42
56:SF:100:ILE:HD12	56:SF:100:ILE:HA	1.92	0.42
57:SG:38:ALA:N	57:SG:48:TYR:O	2.42	0.42
62:SL:58:LYS:HG3	62:SL:59:LYS:HG3	2.01	0.42
64:SO:72:TYR:O	64:SO:76:LEU:HG	2.19	0.42
65:SP:115:TYR:HB2	65:SP:118:GLU:HG3	2.02	0.42
69:ST:33:TRP:C	69:ST:35:ASP:H	2.26	0.42
71:SV:2:GLN:OE1	71:SV:6:GLY:O	2.38	0.42
74:SY:38:THR:O	74:SY:42:GLU:HG2	2.20	0.42
75:SZ:67:LEU:O	75:SZ:68:ILE:HD13	2.19	0.42
81:Sg:199:THR:HG22	81:Sg:241:PHE:HD2	1.84	0.42
81:Sg:215:GLN:HG3	81:Sg:231:ASP:HB2	2.01	0.42
2:CB:256:MET:O	2:CB:260:LEU:N	2.53	0.42
2:CB:484:THR:OG1	2:CB:494:MET:HE2	2.20	0.42
2:CB:759:ILE:H	2:CB:759:ILE:HD12	1.84	0.42
3:L5:120:A:H2'	3:L5:149:A:N6	2.35	0.42
3:L5:494:U:N3	3:L5:660:A:C2	2.88	0.42
3:L5:513:U:O2	3:L5:516:C:H5	2.03	0.42
3:L5:1180:C:OP1	3:L5:1180:C:H4'	2.19	0.42
3:L5:1427:A:OP2	3:L5:1457:G:N2	2.41	0.42
3:L5:1811:G:H2'	3:L5:1812:C:C6	2.55	0.42
3:L5:3904:G:H5''	3:L5:3905:A:OP2	2.19	0.42
3:L5:4148:C:H5''	30:LZ:59:LYS:CE	2.50	0.42
3:L5:4320:G:H2'	3:L5:4321:U:C6	2.55	0.42
3:L5:4518:A:OP1	3:L5:4520:G:O2'	2.26	0.42
3:L5:4612:C:C2	13:LH:120:GLU:HB2	2.55	0.42
3:L5:4740:G:C4	3:L5:4742:G:C8	3.08	0.42
5:L8:139:G:H2'	5:L8:140:C:O4'	2.19	0.42
7:LB:108:GLU:HG2	7:LB:109:HIS:ND1	2.34	0.42
9:LD:279:ARG:O	9:LD:283:LYS:HG3	2.20	0.42
13:LH:9:THR:CG2	13:LH:54:ARG:HB3	2.49	0.42
14:LI:74:LYS:HB2	14:LI:74:LYS:HE2	1.86	0.42
18:LN:178:HIS:HA	18:LN:181:HIS:NE2	2.35	0.42
21:LQ:154:LYS:HE3	21:LQ:158:THR:OG1	2.20	0.42
23:LS:70:LYS:HB3	23:LS:70:LYS:HE3	1.81	0.42
43:Lm:99:CYS:HB2	43:Lm:114:LYS:HD2	2.02	0.42
48:Lz:157:PHE:CE1	48:Lz:167:VAL:HG21	2.54	0.42
48:Lz:193:LEU:HD23	48:Lz:193:LEU:HA	1.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:158:A:H2	50:S2:463:C:O2	2.02	0.42
50:S2:1144:A:H2'	50:S2:1145:A:C8	2.54	0.42
50:S2:1286:G:C6	50:S2:1312:G:C5	3.08	0.42
51:SA:207:PRO:HA	51:SA:210:ILE:HG22	2.02	0.42
56:SF:67:PRO:HG2	56:SF:70:GLU:CB	2.49	0.42
56:SF:72:LEU:O	56:SF:76:MET:HG2	2.20	0.42
56:SF:79:HIS:CG	56:SF:79:HIS:O	2.73	0.42
56:SF:176:GLU:CD	56:SF:188:TYR:H	2.28	0.42
58:SH:142:LYS:O	58:SH:143:ARG:NH2	2.43	0.42
60:SJ:63:LEU:HD22	60:SJ:70:ARG:HB2	2.02	0.42
60:SJ:88:ASP:HB3	60:SJ:91:LYS:HB2	2.01	0.42
66:SQ:38:PRO:HB2	66:SQ:40:GLU:OE2	2.19	0.42
71:SV:16:LYS:HD2	71:SV:21:ASN:OD1	2.19	0.42
73:SX:137:LYS:O	73:SX:138:LYS:HD3	2.20	0.42
75:SZ:79:ILE:HG21	75:SZ:84:ALA:HB2	2.02	0.42
81:Sg:18:VAL:HG21	81:Sg:307:VAL:HG22	2.01	0.42
2:CB:855:LEU:HD23	2:CB:855:LEU:HA	1.82	0.42
3:L5:1217:G:C6	3:L5:1218:G:C6	3.08	0.42
3:L5:1327:C:H2'	3:L5:1328:G:C8	2.55	0.42
3:L5:2062:C:O2'	23:LS:111:ARG:NH1	2.53	0.42
3:L5:2908:U:O2'	3:L5:3586:G:N1	2.49	0.42
3:L5:4582:C:O2'	3:L5:4583:C:H5'	2.20	0.42
3:L5:4968:A:H2'	3:L5:4969:C:H6	1.84	0.42
5:L8:82:A:C8	5:L8:84:A:H5''	2.54	0.42
16:LL:29:PRO:O	16:LL:33:ILE:HG13	2.19	0.42
16:LL:110:LEU:O	16:LL:114:VAL:HG23	2.20	0.42
18:LN:68:ARG:NH1	18:LN:124:ASP:O	2.53	0.42
22:LR:172:ARG:HH22	50:S2:909:G:P	2.43	0.42
32:Lb:49:HIS:C	32:Lb:51:LYS:H	2.28	0.42
32:Lb:65:MET:HE3	32:Lb:65:MET:HB3	1.93	0.42
34:Ld:78:ARG:HG3	34:Ld:79:ASN:OD1	2.18	0.42
36:Lf:43:LEU:HD12	36:Lf:43:LEU:HA	1.72	0.42
50:S2:216:C:C4	50:S2:217:A:N7	2.88	0.42
50:S2:1093:A:H2'	50:S2:1094:C:C6	2.54	0.42
50:S2:1095:C:O2	50:S2:1149:A:N6	2.33	0.42
50:S2:1389:C:OP1	67:SR:45:LYS:HB3	2.20	0.42
50:S2:1587:G:C6	69:ST:67:ARG:HD3	2.55	0.42
50:S2:1758:G:H5'	50:S2:1759:G:OP2	2.19	0.42
50:S2:1780:G:H2'	50:S2:1781:A:O4'	2.20	0.42
52:SB:172:MET:HE1	52:SB:212:VAL:HG22	2.02	0.42
53:SC:195:LEU:HB3	53:SC:222:CYS:SG	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SE:26:VAL:HG13	60:SJ:4:ALA:HB2	2.02	0.42
57:SG:50:VAL:HG23	57:SG:112:VAL:C	2.45	0.42
57:SG:75:LEU:HD12	57:SG:97:VAL:HG11	2.00	0.42
59:SI:79:ILE:HG21	59:SI:170:LYS:HD2	2.01	0.42
60:SJ:79:ARG:HH12	60:SJ:83:ARG:NH2	2.18	0.42
62:SL:16:ILE:HD13	62:SL:34:PRO:HG2	2.01	0.42
62:SL:57:ASP:HB3	62:SL:60:CYS:HB2	2.02	0.42
66:SQ:38:PRO:CB	66:SQ:40:GLU:OE1	2.65	0.42
70:SU:97:ILE:HA	70:SU:100:GLN:HE22	1.85	0.42
72:SW:55:ASP:N	72:SW:55:ASP:OD1	2.52	0.42
75:SZ:47:LEU:HD21	75:SZ:79:ILE:HD13	2.02	0.42
75:SZ:94:LYS:O	75:SZ:94:LYS:HD3	2.20	0.42
81:Sg:20:GLN:HG2	81:Sg:68:ASP:OD1	2.20	0.42
2:CB:27:HIS:ND1	2:CB:136:CYS:HB2	2.35	0.42
2:CB:580:ARG:HG2	2:CB:817:TRP:CZ3	2.55	0.42
3:L5:282:C:H2'	3:L5:283:G:O4'	2.19	0.42
3:L5:737:C:C5	3:L5:739:G:H5''	2.55	0.42
3:L5:1082:C:O2'	3:L5:1083:U:H6	2.03	0.42
3:L5:1182:C:H3'	3:L5:1183:C:C5'	2.50	0.42
3:L5:1609:U:H2'	3:L5:1610:C:O4'	2.20	0.42
3:L5:4587:G:OP1	19:LO:61:ARG:HD2	2.20	0.42
5:L8:80:A:H4'	38:Lh:3:LYS:NZ	2.34	0.42
7:LB:300:LYS:NZ	7:LB:309:LEU:O	2.53	0.42
21:LQ:3:VAL:HG23	21:LQ:5:ILE:HG12	2.01	0.42
24:LT:56:CYS:O	24:LT:60:LYS:HE2	2.20	0.42
25:LU:19:LEU:HB2	25:LU:73:THR:HB	2.02	0.42
25:LU:91:LEU:HB3	25:LU:97:ARG:HG3	2.02	0.42
28:LX:63:LYS:HB2	28:LX:63:LYS:HE2	1.86	0.42
28:LX:110:LYS:HG3	28:LX:121:VAL:HG21	2.01	0.42
29:LY:55:VAL:HG22	29:LY:104:VAL:HB	2.02	0.42
41:Lk:61:PRO:HA	41:Lk:62:PRO:HD3	1.82	0.42
50:S2:980:A:H2'	50:S2:981:A:C8	2.55	0.42
50:S2:1127:C:O3'	77:Sb:17:ARG:NH2	2.52	0.42
50:S2:1238:U:C5'	65:SP:129:GLY:H	2.32	0.42
52:SB:36:PRO:HB3	52:SB:231:LEU:CG	2.50	0.42
52:SB:133:TYR:CG	52:SB:181:LEU:HD22	2.54	0.42
52:SB:139:CYS:SG	52:SB:168:MET:HE2	2.59	0.42
54:SD:18:LYS:HA	54:SD:21:LEU:HB3	2.02	0.42
56:SF:55:ARG:HH21	66:SQ:125:ARG:HG2	1.85	0.42
61:SK:73:ASN:HA	61:SK:76:ILE:HD12	2.00	0.42
64:SO:130:GLU:HG3	64:SO:131:ASP:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:SP:75:VAL:HG13	65:SP:104:GLN:HE22	1.85	0.42
65:SP:126:VAL:O	65:SP:126:VAL:HG13	2.20	0.42
66:SQ:105:LYS:N	66:SQ:105:LYS:HD2	2.35	0.42
67:SR:78:ARG:O	67:SR:82:ASP:HB3	2.20	0.42
68:SS:59:LEU:HB3	68:SS:63:GLU:OE2	2.20	0.42
68:SS:92:ASP:OD1	68:SS:94:LYS:HG3	2.20	0.42
68:SS:113:ARG:C	68:SS:113:ARG:HD3	2.44	0.42
74:SY:126:GLY:HA2	74:SY:129:LYS:HG2	2.02	0.42
75:SZ:54:THR:HA	75:SZ:57:LYS:HE3	2.02	0.42
76:Sa:12:LYS:HE2	76:Sa:15:ARG:O	2.20	0.42
81:Sg:45:LEU:O	81:Sg:47:ARG:HD2	2.20	0.42
81:Sg:271:LYS:HD3	81:Sg:271:LYS:C	2.45	0.42
2:CB:27:HIS:HB3	2:CB:30:HIS:CG	2.55	0.41
2:CB:51:ALA:HA	2:CB:55:ARG:NH2	2.35	0.41
2:CB:678:SER:O	2:CB:722:ILE:HG13	2.20	0.41
3:L5:98:A:OP1	18:LN:195:ARG:HD3	2.20	0.41
3:L5:184:U:C2	3:L5:253:G:N1	2.88	0.41
3:L5:288:G:H2'	3:L5:289:C:C6	2.55	0.41
3:L5:496:G:H3'	3:L5:497:G:O4'	2.19	0.41
3:L5:513:U:O2	3:L5:515:C:H3'	2.21	0.41
3:L5:1093:C:H2'	3:L5:1094:G:O4'	2.20	0.41
3:L5:1278:C:H2'	3:L5:1279:A:O4'	2.20	0.41
3:L5:2400:G:H21	37:Lg:6:THR:HG22	1.85	0.41
3:L5:2409:U:C5	3:L5:2783:A:N1	2.88	0.41
3:L5:4113:U:O2'	3:L5:4115:G:OP2	2.35	0.41
3:L5:4141:G:O2'	3:L5:4143:G:O6	2.26	0.41
3:L5:4572:U:H2'	3:L5:4573:G:C8	2.55	0.41
3:L5:4918:C:H2'	3:L5:4919:G:C8	2.55	0.41
3:L5:5001:U:H2'	3:L5:5002:U:O4'	2.20	0.41
4:L7:3:C:H2'	4:L7:4:U:H6	1.85	0.41
6:LA:234:LYS:HG3	6:LA:234:LYS:O	2.20	0.41
7:LB:257:TRP:CD1	7:LB:257:TRP:C	2.98	0.41
8:LC:334:THR:HG22	8:LC:337:ARG:HH11	1.85	0.41
23:LS:127:MET:HA	24:LT:153:PRO:HG2	2.01	0.41
35:Le:114:ARG:HH11	35:Le:117:GLN:HE21	1.66	0.41
41:Lk:55:LYS:HG3	41:Lk:56:LEU:N	2.34	0.41
48:Lz:49:PHE:CZ	48:Lz:159:MET:HB2	2.55	0.41
50:S2:200:G:N3	50:S2:201:C:H1'	2.35	0.41
50:S2:629:A:O2'	50:S2:631:U:OP1	2.37	0.41
50:S2:692:G:O6	50:S2:693:A:N6	2.53	0.41
50:S2:931:C:H2'	50:S2:932:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1062:A:H2'	50:S2:1063:C:C6	2.55	0.41
50:S2:1242:U:C5	50:S2:1520:G:C5	3.08	0.41
50:S2:1422:G:C4	50:S2:1424:G:N7	2.88	0.41
50:S2:1490:G:H2'	50:S2:1491:G:H8	1.84	0.41
50:S2:1502:C:C2	50:S2:1503:C:C5	3.08	0.41
50:S2:1563:G:C2	50:S2:1573:G:C2	3.08	0.41
50:S2:1576:G:H2'	50:S2:1577:G:O4'	2.20	0.41
50:S2:1650:A:C2	50:S2:1651:A:H1'	2.54	0.41
52:SB:180:ASP:O	52:SB:184:VAL:HG23	2.20	0.41
53:SC:137:VAL:O	53:SC:162:ILE:HG13	2.19	0.41
53:SC:213:LEU:O	53:SC:217:ALA:N	2.53	0.41
54:SD:55:THR:HA	54:SD:58:VAL:HG22	2.02	0.41
55:SE:127:ARG:NE	55:SE:142:HIS:HA	2.29	0.41
57:SG:201:LYS:O	57:SG:205:GLU:HG2	2.20	0.41
58:SH:24:SER:O	58:SH:28:LEU:HD23	2.20	0.41
59:SI:124:LYS:HG3	59:SI:125:LYS:N	2.35	0.41
62:SL:80:MET:HG2	62:SL:122:ILE:CD1	2.50	0.41
64:SO:75:MET:O	64:SO:79:GLN:HG3	2.19	0.41
76:Sa:42:ARG:HH21	76:Sa:67:LEU:HD23	1.85	0.41
78:Sc:18:LEU:HB2	78:Sc:29:GLN:HB2	2.02	0.41
81:Sg:24:THR:OG1	81:Sg:27:PHE:O	2.37	0.41
2:CB:120:ARG:HH22	2:CB:495:ARG:C	2.28	0.41
2:CB:301:PHE:CD1	2:CB:336:LEU:HD11	2.55	0.41
2:CB:333:LYS:N	2:CB:334:PRO:HD2	2.35	0.41
2:CB:396:MET:O	2:CB:484:THR:OG1	2.24	0.41
3:L5:1577:G:OP1	46:Lp:17:ARG:NH1	2.49	0.41
3:L5:2107:C:N4	3:L5:2108:G:O6	2.53	0.41
3:L5:2498:C:H2'	3:L5:2499:C:H6	1.85	0.41
3:L5:4135:G:C2	3:L5:4136:G:C5	3.08	0.41
3:L5:4910:G:N2	19:LO:106:ASP:O	2.53	0.41
7:LB:135:LYS:HD3	7:LB:135:LYS:HA	1.83	0.41
10:LE:183:ARG:HA	10:LE:183:ARG:HD2	1.88	0.41
15:LJ:14:GLU:OE1	15:LJ:14:GLU:N	2.52	0.41
16:LL:93:THR:CG2	38:Lh:117:ARG:HG2	2.49	0.41
45:Lo:15:CYS:SG	45:Lo:19:GLN:HG3	2.61	0.41
50:S2:376:A:OP2	62:SL:58:LYS:NZ	2.53	0.41
50:S2:695:C:H5''	50:S2:696:G:O4'	2.19	0.41
50:S2:1240:A:H1'	50:S2:1267:C:O2'	2.20	0.41
50:S2:1332:A:C2	50:S2:1500:G:C4	3.08	0.41
50:S2:1433:C:H5'	50:S2:1437:C:N3	2.35	0.41
50:S2:1742:C:H3'	50:S2:1743:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1828:C:H2'	50:S2:1829:G:C8	2.55	0.41
51:SA:184:ARG:HH21	51:SA:191:ARG:CG	2.32	0.41
52:SB:140:VAL:HG22	52:SB:141:GLY:N	2.35	0.41
54:SD:222:PRO:HB3	81:Sg:190:GLY:HA3	2.02	0.41
60:SJ:163:SER:C	60:SJ:165:TYR:H	2.28	0.41
61:SK:57:TYR:O	61:SK:75:GLY:HA3	2.20	0.41
68:SS:9:PHE:CE1	68:SS:57:GLY:HA3	2.56	0.41
68:SS:70:ILE:HG22	68:SS:77:TYR:CE2	2.54	0.41
78:Sc:46:VAL:HG22	78:Sc:47:LYS:N	2.35	0.41
81:Sg:113:PHE:HA	81:Sg:120:ILE:HD13	2.02	0.41
81:Sg:196:ASN:ND2	81:Sg:236:ILE:O	2.53	0.41
2:CB:18:ASN:HD22	2:CB:98:PHE:HE1	1.68	0.41
3:L5:170:C:H42	3:L5:266:C:N4	2.18	0.41
3:L5:1383:G:H2'	3:L5:1384:C:C6	2.55	0.41
3:L5:1412:G:C2	3:L5:1413:C:C5	3.08	0.41
3:L5:1895:G:H2'	3:L5:1896:A:O4'	2.19	0.41
3:L5:1964:A:H2'	3:L5:1965:G:C8	2.54	0.41
3:L5:2407:G:O6	42:L1:2:SER:N	2.53	0.41
3:L5:5050:C:H2'	3:L5:5051:C:H6	1.85	0.41
4:L7:94:C:H2'	4:L7:95:C:H6	1.85	0.41
7:LB:153:MET:HE3	7:LB:153:MET:HB2	1.89	0.41
8:LC:66:SER:O	8:LC:68:GLY:N	2.53	0.41
11:LF:242:ARG:O	11:LF:246:ARG:HG3	2.20	0.41
16:LL:142:GLU:O	16:LL:146:LEU:HB2	2.20	0.41
18:LN:198:LEU:HD12	18:LN:198:LEU:HA	1.89	0.41
22:LR:16:ARG:HH22	37:Lg:29:ARG:HH22	1.68	0.41
33:Lc:18:LEU:O	33:Lc:22:MET:HG2	2.20	0.41
36:Lf:9:ALA:HB2	36:Lf:30:ILE:HG12	2.02	0.41
39:Li:19:LYS:HE3	39:Li:19:LYS:HB3	1.78	0.41
50:S2:323:C:H2'	50:S2:327:G:H22	1.85	0.41
50:S2:737:G:C8	50:S2:738:C:H4'	2.55	0.41
50:S2:841:G:O2'	50:S2:842:C:H6	2.03	0.41
50:S2:974:C:C2	50:S2:975:G:C8	3.09	0.41
50:S2:1149:A:H2'	50:S2:1149:A:N3	2.35	0.41
50:S2:1244:U:H2'	50:S2:1245:G:C8	2.53	0.41
50:S2:1298:G:C6	50:S2:1299:A:C6	3.08	0.41
50:S2:1469:A:H2'	50:S2:1470:C:O4'	2.20	0.41
50:S2:1615:U:H2'	50:S2:1616:U:C6	2.55	0.41
50:S2:1673:U:H2'	50:S2:1674:G:O4'	2.20	0.41
51:SA:53:ARG:NE	71:SV:83:PHE:CD1	2.66	0.41
51:SA:80:ARG:HH11	51:SA:80:ARG:HG3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SB:170:GLU:HA	52:SB:173:THR:HG22	2.01	0.41
56:SF:22:LYS:HD2	56:SF:94:LYS:HE2	2.02	0.41
56:SF:126:THR:HA	56:SF:135:ARG:HE	1.85	0.41
57:SG:78:SER:OG	57:SG:81:HIS:NE2	2.32	0.41
59:SI:118:ALA:HB3	59:SI:153:LYS:HZ1	1.84	0.41
63:SN:34:LYS:O	63:SN:38:TYR:HD1	2.03	0.41
64:SO:34:PHE:HB3	64:SO:41:PHE:HB2	2.01	0.41
64:SO:60:MET:C	64:SO:61:LYS:HD2	2.45	0.41
65:SP:49:LEU:O	65:SP:54:HIS:NE2	2.53	0.41
65:SP:68:PRO:HD2	65:SP:71:GLU:OE1	2.20	0.41
70:SU:48:LEU:HB3	70:SU:93:SER:OG	2.21	0.41
2:CB:252:LYS:HA	2:CB:255:ASP:OD2	2.20	0.41
3:L5:468:U:C5	3:L5:469:C:H5	2.39	0.41
3:L5:1253:G:H4'	3:L5:1254:A:N7	2.36	0.41
3:L5:1417:C:H2'	3:L5:1418:C:O4'	2.20	0.41
3:L5:1577:G:O2'	3:L5:1612:G:H4'	2.20	0.41
3:L5:2333:G:N7	8:LC:189:MET:HE3	2.34	0.41
3:L5:3938:G:N2	3:L5:4171:C:OP2	2.53	0.41
3:L5:4582:C:H4'	7:LB:99:LEU:O	2.19	0.41
5:L8:67:U:H2'	5:L8:68:G:C8	2.54	0.41
10:LE:178:PRO:O	10:LE:180:VAL:N	2.53	0.41
11:LF:125:LEU:HD23	11:LF:125:LEU:HA	1.91	0.41
11:LF:136:VAL:HG23	11:LF:136:VAL:O	2.21	0.41
12:LG:159:HIS:CE1	12:LG:185:LYS:HG3	2.55	0.41
23:LS:95:ARG:NH2	23:LS:112:ASP:OD2	2.53	0.41
25:LU:45:GLU:H	25:LU:45:GLU:CD	2.26	0.41
34:Ld:83:ARG:HH11	34:Ld:83:ARG:HG3	1.84	0.41
39:Li:103:LYS:HA	39:Li:103:LYS:HD3	1.87	0.41
40:Lj:28:HIS:HD1	40:Lj:31:LYS:H	1.69	0.41
48:Lz:96:ASN:O	48:Lz:100:VAL:HG23	2.21	0.41
50:S2:292:A:H4'	62:SL:39:ASN:O	2.21	0.41
50:S2:303:C:H5''	59:SI:75:LYS:HE2	2.02	0.41
50:S2:573:U:O2'	50:S2:575:A:N7	2.49	0.41
50:S2:594:A:C6	50:S2:643:A:C8	3.09	0.41
50:S2:823:U:O2	60:SJ:142:VAL:HA	2.20	0.41
50:S2:1017:U:H2'	50:S2:1018:U:C6	2.56	0.41
50:S2:1035:A:H2'	50:S2:1036:A:O4'	2.19	0.41
50:S2:1139:C:H5	50:S2:1149:A:H62	1.69	0.41
50:S2:1407:U:H2'	50:S2:1408:U:C5	2.56	0.41
50:S2:1515:G:N1	50:S2:1516:G:C5	2.88	0.41
50:S2:1541:G:C2	50:S2:1593:C:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1679:A:O5'	56:SF:60:ARG:NH1	2.53	0.41
51:SA:125:THR:HG22	51:SA:175:TRP:HZ2	1.84	0.41
53:SC:156:ILE:O	53:SC:160:LEU:HD23	2.20	0.41
55:SE:53:LYS:HD2	55:SE:53:LYS:N	2.35	0.41
56:SF:23:TRP:CH2	56:SF:97:PHE:HB3	2.56	0.41
56:SF:134:VAL:HG13	56:SF:135:ARG:H	1.85	0.41
57:SG:28:TYR:CE1	57:SG:104:ALA:HA	2.53	0.41
74:SY:20:ARG:HD2	74:SY:74:MET:CG	2.51	0.41
81:Sg:42:MET:O	81:Sg:55:PRO:HA	2.20	0.41
81:Sg:225:LYS:HD3	81:Sg:225:LYS:HA	1.75	0.41
2:CB:152:LYS:NZ	2:CB:357:HIS:HB3	2.35	0.41
2:CB:580:ARG:HB3	2:CB:698:ARG:HG2	2.03	0.41
3:L5:1252:C:C4	3:L5:1253:G:H1'	2.55	0.41
3:L5:1653:A:H5''	3:L5:1654:G:OP1	2.20	0.41
3:L5:2306:G:H1'	3:L5:2332:A:N6	2.36	0.41
3:L5:2506:G:H4'	3:L5:2507:A:OP1	2.19	0.41
3:L5:4460:U:H2'	3:L5:4461:C:C6	2.55	0.41
4:L7:63:C:H3'	14:LI:204:GLY:O	2.20	0.41
7:LB:29:VAL:O	7:LB:30:LYS:HB2	2.21	0.41
8:LC:29:LYS:HA	8:LC:29:LYS:HD2	1.88	0.41
9:LD:186:GLU:HA	9:LD:186:GLU:OE2	2.20	0.41
16:LL:117:LEU:HA	16:LL:117:LEU:HD23	1.84	0.41
21:LQ:175:GLU:HA	31:La:51:GLY:O	2.21	0.41
50:S2:106:C:H2'	50:S2:107:A:H8	1.85	0.41
50:S2:155:G:C6	50:S2:164:A:C5	3.08	0.41
50:S2:543:C:H2'	50:S2:544:G:C8	2.56	0.41
50:S2:1513:C:H2'	50:S2:1514:G:C8	2.46	0.41
50:S2:1610:G:H2'	50:S2:1611:G:C8	2.56	0.41
54:SD:159:HIS:O	54:SD:164:VAL:HG21	2.19	0.41
55:SE:35:PRO:HG2	55:SE:36:HIS:ND1	2.35	0.41
56:SF:133:THR:HG23	56:SF:134:VAL:N	2.34	0.41
57:SG:136:LYS:O	57:SG:176:ILE:HD12	2.20	0.41
58:SH:22:GLY:O	58:SH:26:ALA:HB2	2.21	0.41
58:SH:70:LYS:HA	58:SH:73:GLN:OE1	2.20	0.41
58:SH:91:HIS:CD2	58:SH:172:THR:HG21	2.55	0.41
59:SI:173:ALA:HA	59:SI:190:LEU:H	1.85	0.41
59:SI:194:GLU:HG3	62:SL:10:TYR:CD2	2.55	0.41
59:SI:197:PHE:HD2	59:SI:198:TYR:CD1	2.38	0.41
81:Sg:11:LEU:HD22	81:Sg:43:TRP:CE3	2.56	0.41
81:Sg:27:PHE:CE2	81:Sg:29:ASP:HB3	2.55	0.41
2:CB:394:LEU:HA	2:CB:418:SER:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:416:VAL:HG22	2:CB:468:ASN:H	1.85	0.41
3:L5:759:G:N3	3:L5:759:G:H2'	2.35	0.41
3:L5:1299:G:H2'	3:L5:1300:G:H8	1.85	0.41
3:L5:1435:G:O2'	3:L5:1708:G:OP2	2.20	0.41
3:L5:1846:G:H2'	3:L5:1847:C:H6	1.85	0.41
3:L5:3767:C:H2'	3:L5:3768:U:C6	2.55	0.41
3:L5:3932:U:H2'	3:L5:3933:G:C8	2.55	0.41
9:LD:234:ASP:O	9:LD:236:MET:N	2.53	0.41
15:LJ:52:LYS:HB3	15:LJ:65:ASN:HA	2.02	0.41
29:LY:82:ILE:HG22	29:LY:83:GLU:N	2.36	0.41
35:Le:35:TRP:HH2	35:Le:55:MET:HG2	1.86	0.41
37:Lg:33:LEU:HD23	37:Lg:33:LEU:HA	1.87	0.41
48:Lz:171:HIS:NE2	48:Lz:174:MET:SD	2.94	0.41
49:S:216:HIS:ND1	50:S2:628:A:C4	2.88	0.41
50:S2:695:C:C5'	50:S2:696:G:H5''	2.50	0.41
50:S2:960:U:O2'	50:S2:962:A:N7	2.43	0.41
50:S2:1415:C:H3'	50:S2:1416:C:C6	2.55	0.41
50:S2:1529:C:O2'	69:ST:87:VAL:O	2.36	0.41
50:S2:1781:A:O2'	50:S2:1782:G:N7	2.53	0.41
51:SA:184:ARG:O	51:SA:191:ARG:NH1	2.54	0.41
52:SB:57:ILE:HG12	52:SB:59:SER:H	1.85	0.41
53:SC:244:ILE:O	53:SC:247:THR:HG22	2.21	0.41
56:SF:32:ASP:HB3	56:SF:35:LEU:HD23	2.01	0.41
58:SH:100:ILE:HD11	58:SH:125:VAL:HG21	2.01	0.41
59:SI:55:TYR:HB2	59:SI:182:CYS:C	2.45	0.41
63:SN:110:ASP:O	63:SN:114:ARG:HG2	2.21	0.41
69:ST:139:ALA:O	69:ST:143:LYS:HG3	2.20	0.41
74:SY:88:LYS:HE3	74:SY:97:TYR:CE2	2.55	0.41
76:Sa:22:ARG:HD2	76:Sa:27:ALA:O	2.20	0.41
81:Sg:238:ALA:HB3	81:Sg:289:LEU:HG	2.03	0.41
2:CB:20:ARG:NE	2:CB:358:LEU:O	2.53	0.41
2:CB:351:LEU:O	2:CB:355:THR:HG23	2.21	0.41
2:CB:604:MET:HG2	2:CB:704:VAL:HA	2.02	0.41
2:CB:850:ALA:HB3	2:CB:853:ASN:OD1	2.19	0.41
3:L5:108:A:H4'	3:L5:109:G:OP1	2.20	0.41
3:L5:310:G:H5''	39:Li:85:ARG:NH2	2.35	0.41
3:L5:644:G:H2'	3:L5:645:G:O4'	2.20	0.41
3:L5:728:U:P	11:LF:73:ARG:HH21	2.43	0.41
3:L5:924:C:H2'	3:L5:925:C:O4'	2.21	0.41
3:L5:1178:G:N2	9:LD:287:PHE:HA	2.36	0.41
3:L5:1179:U:H6	3:L5:1179:U:H2'	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1306:C:H2'	3:L5:1307:A:H8	1.86	0.41
3:L5:2474:G:H2'	3:L5:2502:G:N2	2.36	0.41
3:L5:3700:C:H2'	3:L5:3746:A:H61	1.86	0.41
3:L5:3879:G:O2'	3:L5:3881:G:OP2	2.31	0.41
3:L5:4524:G:N3	7:LB:252:ALA:HB1	2.36	0.41
3:L5:4760:G:H2'	3:L5:4761:G:O4'	2.21	0.41
16:LL:63:THR:HG22	16:LL:64:VAL:N	2.36	0.41
17:LM:24:LEU:CD2	17:LM:86:TRP:HE1	2.32	0.41
25:LU:58:GLY:O	25:LU:60:VAL:HG23	2.21	0.41
34:Ld:50:ARG:HG3	34:Ld:62:VAL:HG21	2.01	0.41
41:Lk:8:ILE:H	41:Lk:8:ILE:HD12	1.85	0.41
48:Lz:194:LEU:HB3	48:Lz:197:ASN:HA	2.03	0.41
50:S2:191:A:OP1	59:SI:141:ARG:NH1	2.54	0.41
50:S2:944:A:H2'	50:S2:945:U:H6	1.84	0.41
50:S2:1120:U:OP1	77:Sb:72:ARG:NE	2.53	0.41
50:S2:1302:G:N2	50:S2:1307:U:O4	2.54	0.41
50:S2:1365:G:H2'	50:S2:1366:G:H8	1.85	0.41
50:S2:1422:G:O3'	50:S2:1423:C:H3'	2.21	0.41
50:S2:1473:G:N1	50:S2:1476:A:OP2	2.54	0.41
50:S2:1657:G:H2'	50:S2:1658:G:C8	2.55	0.41
51:SA:81:ASN:O	51:SA:83:GLY:N	2.54	0.41
52:SB:83:LYS:N	52:SB:103:MET:HE1	2.36	0.41
52:SB:90:ASP:OD1	52:SB:97:LEU:HB2	2.21	0.41
52:SB:179:ASN:HD21	52:SB:183:GLU:CB	2.32	0.41
54:SD:42:THR:OG1	54:SD:45:ARG:O	2.39	0.41
54:SD:132:LYS:HE2	54:SD:192:TRP:H	1.85	0.41
59:SI:85:ALA:O	62:SL:8:ARG:HD3	2.21	0.41
67:SR:100:PRO:HG3	67:SR:122:PRO:HG3	2.02	0.41
70:SU:56:MET:CE	70:SU:86:LYS:HG3	2.50	0.41
72:SW:80:ASP:OD1	72:SW:80:ASP:N	2.43	0.41
74:SY:104:ARG:HA	74:SY:107:ARG:HB2	2.03	0.41
75:SZ:58:LEU:HA	75:SZ:62:VAL:HG23	2.02	0.41
2:CB:51:ALA:HA	2:CB:55:ARG:CZ	2.51	0.41
2:CB:396:MET:SD	2:CB:416:VAL:HA	2.61	0.41
3:L5:152:U:P	18:LN:49:ARG:HH22	2.44	0.41
3:L5:263:G:H3'	3:L5:264:C:C5	2.56	0.41
3:L5:497:G:N3	3:L5:498:C:H5	2.19	0.41
3:L5:658:C:C5	3:L5:659:G:C8	3.09	0.41
3:L5:717:U:H2'	3:L5:718:C:C6	2.56	0.41
3:L5:1268:G:P	32:Lb:107:ARG:HH12	2.44	0.41
3:L5:1401:C:P	32:Lb:51:LYS:NZ	2.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1677:U:H4'	3:L5:1680:G:C2	2.56	0.41
3:L5:1921:C:H42	17:LM:16:SER:HB2	1.86	0.41
3:L5:2608:G:H2'	3:L5:2609:G:H8	1.85	0.41
11:LF:90:ALA:HB2	11:LF:125:LEU:HD11	2.02	0.41
19:LO:7:LEU:HD22	19:LO:31:ARG:NH2	2.35	0.41
20:LP:30:ARG:NH2	20:LP:31:GLU:OE2	2.53	0.41
50:S2:115:U:O2'	50:S2:382:C:O2	2.26	0.41
50:S2:574:A:H4'	74:SY:89:HIS:CB	2.51	0.41
50:S2:1115:U:O2'	50:S2:1116:C:OP2	2.24	0.41
50:S2:1228:A:C4	50:S2:1229:G:N7	2.88	0.41
50:S2:1338:G:H2'	50:S2:1339:U:C6	2.56	0.41
50:S2:1540:G:OP1	69:ST:39:LEU:HD23	2.21	0.41
50:S2:1829:G:H1'	50:S2:1850:A:H2	1.86	0.41
52:SB:138:PHE:N	52:SB:214:LYS:O	2.54	0.41
55:SE:22:LYS:HB2	55:SE:23:LEU:HD12	2.03	0.41
55:SE:129:ILE:O	55:SE:129:ILE:HG13	2.21	0.41
57:SG:63:MET:HA	57:SG:98:ARG:O	2.21	0.41
58:SH:15:LYS:HG3	58:SH:15:LYS:O	2.20	0.41
65:SP:32:GLN:CA	65:SP:35:GLN:HE22	2.34	0.41
72:SW:11:LEU:HD22	72:SW:72:CYS:O	2.21	0.41
76:Sa:103:PRO:C	78:Sc:67:ARG:HH12	2.29	0.41
2:CB:267:ASP:OD2	2:CB:269:ALA:HB3	2.21	0.41
2:CB:582:THR:HG21	2:CB:741:MET:HE3	2.01	0.41
2:CB:674:GLU:OE2	2:CB:716:ARG:NH1	2.53	0.41
2:CB:737:GLN:HE22	2:CB:739:ARG:CZ	2.34	0.41
3:L5:102:G:O2'	3:L5:1381:U:O2'	2.35	0.41
3:L5:137:G:C2	3:L5:138:G:C5	3.09	0.41
3:L5:182:G:H22	3:L5:254:G:H22	1.68	0.41
3:L5:351:C:H2'	3:L5:352:G:O4'	2.21	0.41
3:L5:674:G:H2'	3:L5:675:C:C6	2.56	0.41
3:L5:697:G:C2	3:L5:698:G:C8	3.09	0.41
3:L5:1175:A:H2	3:L5:1185:G:N2	2.18	0.41
3:L5:1182:C:H3'	3:L5:1183:C:H5''	2.03	0.41
3:L5:1346:C:H2'	3:L5:1347:G:H8	1.85	0.41
3:L5:1375:C:O2'	3:L5:1376:C:H5'	2.21	0.41
3:L5:1406:G:N1	3:L5:1411:C:O2'	2.25	0.41
3:L5:2411:C:H2'	3:L5:2412:A:H8	1.86	0.41
3:L5:2602:G:H2'	3:L5:2603:C:C6	2.56	0.41
3:L5:2732:G:H2'	3:L5:2733:C:C6	2.56	0.41
3:L5:2898:G:H2'	3:L5:2899:C:H6	1.86	0.41
3:L5:2910:G:H21	3:L5:3586:G:H1'	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3619:G:H4'	22:LR:79:GLY:O	2.21	0.41
3:L5:4954:G:H2'	3:L5:4955:A:C8	2.56	0.41
4:L7:113:G:H2'	4:L7:114:U:H6	1.86	0.41
8:LC:150:LEU:HA	8:LC:150:LEU:HD12	1.68	0.41
9:LD:215:ASP:OD1	9:LD:217:ASP:N	2.54	0.41
10:LE:243:THR:CG2	10:LE:246:ARG:HG2	2.51	0.41
11:LF:54:ALA:HB2	11:LF:188:GLU:HG3	2.03	0.41
12:LG:215:LEU:O	12:LG:219:VAL:HG23	2.21	0.41
16:LL:139:SER:HB3	16:LL:142:GLU:OE2	2.20	0.41
18:LN:200:LEU:HA	18:LN:200:LEU:HD23	1.77	0.41
22:LR:177:LEU:HD22	22:LR:180:LYS:NZ	2.36	0.41
30:LZ:12:LEU:HD23	30:LZ:12:LEU:HA	1.80	0.41
38:Lh:110:LYS:HE3	38:Lh:110:LYS:HB2	1.77	0.41
40:Lj:85:LYS:O	40:Lj:85:LYS:HD3	2.20	0.41
46:Lp:70:THR:OG1	46:Lp:72:ASN:O	2.25	0.41
49:S:192:GLU:HG2	49:S:193:PHE:CD2	2.56	0.41
50:S2:163:U:H2'	50:S2:164:A:H8	1.85	0.41
50:S2:191:A:OP2	50:S2:192:C:N4	2.54	0.41
50:S2:813:A:OP1	55:SE:16:LYS:NZ	2.33	0.41
50:S2:867:G:H2'	50:S2:868:G:N3	2.36	0.41
50:S2:1073:U:H2'	50:S2:1074:C:C6	2.55	0.41
50:S2:1103:C:H2'	50:S2:1104:G:H8	1.85	0.41
50:S2:1422:G:H1'	50:S2:1424:G:OP2	2.21	0.41
50:S2:1508:A:C5	50:S2:1510:G:C6	3.09	0.41
50:S2:1658:G:OP2	50:S2:1660:C:N4	2.54	0.41
50:S2:1862:G:N7	76:Sa:34:LYS:NZ	2.61	0.41
51:SA:169:HIS:ND1	51:SA:203:PHE:CE2	2.89	0.41
51:SA:189:ILE:HG22	51:SA:191:ARG:H	1.85	0.41
52:SB:188:LEU:C	52:SB:191:ASP:H	2.29	0.41
54:SD:67:ARG:HH12	61:SK:96:ARG:N	2.19	0.41
54:SD:67:ARG:NH1	61:SK:96:ARG:H	2.19	0.41
54:SD:142:LEU:HG	54:SD:143:ARG:H	1.86	0.41
55:SE:36:HIS:CG	55:SE:85:GLY:HA3	2.55	0.41
55:SE:247:THR:HG22	55:SE:250:GLU:CG	2.50	0.41
56:SF:63:LYS:HE3	56:SF:71:ARG:HH12	1.85	0.41
56:SF:114:ASN:O	56:SF:118:ASN:ND2	2.53	0.41
57:SG:22:ARG:NH2	57:SG:22:ARG:HG2	2.36	0.41
57:SG:211:LYS:HB2	57:SG:211:LYS:HE2	1.88	0.41
59:SI:126:GLY:O	59:SI:128:LYS:HE2	2.21	0.41
59:SI:142:SER:O	59:SI:146:GLN:HG2	2.20	0.41
59:SI:177:SER:OG	59:SI:178:ARG:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SJ:67:ASP:OD1	60:SJ:68:PRO:HD2	2.20	0.41
60:SJ:129:LEU:HD12	60:SJ:134:HIS:CD2	2.56	0.41
61:SK:12:TYR:HB3	61:SK:79:LEU:HD11	2.03	0.41
62:SL:104:LYS:O	73:SX:11:ARG:NH2	2.27	0.41
64:SO:133:THR:HA	64:SO:134:PRO:HD3	1.98	0.41
66:SQ:25:CYS:HB2	66:SQ:68:ILE:HG22	2.01	0.41
68:SS:28:PHE:HD1	68:SS:38:ARG:NH2	2.19	0.41
74:SY:56:PHE:CD1	74:SY:94:HIS:CE1	3.08	0.41
74:SY:103:SER:HB3	74:SY:106:GLN:HE22	1.85	0.41
75:SZ:86:ALA:O	75:SZ:89:GLN:HG3	2.20	0.41
76:Sa:41:ILE:HA	76:Sa:67:LEU:O	2.21	0.41
77:Sb:11:SER:O	77:Sb:14:GLU:HG2	2.20	0.41
81:Sg:32:LEU:HA	81:Sg:42:MET:HA	2.02	0.41
81:Sg:38:LYS:HE3	81:Sg:64:HIS:CA	2.51	0.41
81:Sg:199:THR:OG1	81:Sg:239:LEU:O	2.34	0.41
1:5:42:GLU:HB3	1:5:59:VAL:HB	2.03	0.41
2:CB:322:LYS:HE3	2:CB:342:ARG:NH2	2.36	0.41
2:CB:609:PHE:CD2	2:CB:613:LEU:HD22	2.55	0.41
3:L5:1382:G:OP1	16:LL:66:TYR:OH	2.35	0.41
3:L5:1819:G:O2'	9:LD:140:GLY:O	2.36	0.41
3:L5:4093:G:C5	3:L5:4095:G:C2	3.05	0.41
3:L5:4345:C:H2'	3:L5:4346:U:C6	2.56	0.41
3:L5:4897:G:H2'	3:L5:4898:G:C8	2.56	0.41
3:L5:5010:U:H2'	3:L5:5011:A:H8	1.86	0.41
3:L5:5053:U:H5'	3:L5:5054:C:C5	2.55	0.41
11:LF:142:TRP:CE2	11:LF:235:ASN:HB2	2.57	0.41
11:LF:240:ILE:HD12	11:LF:240:ILE:HA	1.92	0.41
18:LN:120:TRP:CZ2	18:LN:122:GLY:HA2	2.56	0.41
20:LP:37:LYS:HE2	20:LP:37:LYS:HB3	1.82	0.41
28:LX:145:ASP:O	28:LX:149:VAL:HG23	2.21	0.41
32:Lb:49:HIS:C	32:Lb:51:LYS:N	2.78	0.41
32:Lb:65:MET:O	32:Lb:68:ARG:HG3	2.20	0.41
34:Ld:65:ASP:OD1	34:Ld:66:THR:N	2.54	0.41
38:Lh:47:ILE:O	38:Lh:51:ARG:HG3	2.21	0.41
48:Lz:32:VAL:HG12	48:Lz:170:GLY:C	2.45	0.41
50:S2:221:A:H2'	50:S2:222:U:H6	1.86	0.41
50:S2:381:C:C2	59:SI:49:ARG:HG2	2.56	0.41
50:S2:540:U:H5	50:S2:544:G:C6	2.39	0.41
50:S2:919:A:H4'	72:SW:57:ARG:HD2	2.02	0.41
50:S2:1114:U:HO2'	50:S2:1115:U:C5'	2.33	0.41
50:S2:1174:U:H2'	50:S2:1175:G:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1549:U:H2'	50:S2:1550:G:H8	1.86	0.41
50:S2:1671:G:C2	50:S2:1672:U:C6	3.09	0.41
50:S2:1777:G:H8	50:S2:1777:G:OP2	2.04	0.41
50:S2:1864:U:H3'	76:Sa:5:ARG:HH21	1.86	0.41
51:SA:120:ARG:NH1	53:SC:267:GLN:HB3	2.36	0.41
52:SB:42:ARG:O	52:SB:44:ILE:HD12	2.20	0.41
54:SD:66:ILE:HD11	54:SD:86:LEU:HB2	2.02	0.41
54:SD:168:VAL:HA	54:SD:188:ILE:O	2.21	0.41
55:SE:114:ILE:HD12	55:SE:114:ILE:HA	1.92	0.41
56:SF:127:ARG:HD3	56:SF:128:ILE:N	2.34	0.41
59:SI:124:LYS:O	59:SI:125:LYS:HD3	2.21	0.41
59:SI:170:LYS:HB2	59:SI:170:LYS:HE2	1.76	0.41
65:SP:114:HIS:HB3	65:SP:118:GLU:OE1	2.21	0.41
66:SQ:96:TYR:HB3	66:SQ:105:LYS:HE3	2.03	0.41
70:SU:25:THR:HA	70:SU:86:LYS:HB3	2.03	0.41
72:SW:12:LYS:HA	72:SW:12:LYS:HD3	1.95	0.41
72:SW:55:ASP:OD1	72:SW:59:GLY:HA2	2.21	0.41
2:CB:91:GLN:NE2	2:CB:359:PRO:HA	2.36	0.40
3:L5:120:A:H2'	3:L5:149:A:H61	1.86	0.40
3:L5:132:G:C2	3:L5:137:G:C6	3.09	0.40
3:L5:1242:G:C4	3:L5:1243:C:C5	3.09	0.40
3:L5:1762:C:N4	3:L5:1770:A:H2	2.19	0.40
3:L5:1763:C:H2'	3:L5:1764:G:H5'	2.03	0.40
3:L5:1961:G:O2'	3:L5:2025:A:N6	2.49	0.40
3:L5:2289:C:O2'	47:Lr:22:LYS:HE3	2.22	0.40
3:L5:3709:U:O2	3:L5:3709:U:H2'	2.21	0.40
3:L5:3754:G:H2'	3:L5:3755:G:H8	1.87	0.40
3:L5:3774:A:H3'	3:L5:3774:A:OP2	2.20	0.40
3:L5:4928:C:H2'	3:L5:4929:C:H6	1.86	0.40
4:L7:12:U:OP2	4:L7:67:C:O2'	2.34	0.40
9:LD:152:ARG:HG3	9:LD:154:THR:HG23	2.02	0.40
10:LE:74:SER:HA	32:Lb:118:LEU:HA	2.03	0.40
10:LE:153:LEU:HD23	10:LE:153:LEU:HA	1.83	0.40
18:LN:68:ARG:HG2	18:LN:126:THR:O	2.21	0.40
20:LP:26:PHE:CE2	20:LP:121:LYS:HE2	2.56	0.40
47:Lr:85:ASN:O	47:Lr:89:THR:OG1	2.27	0.40
50:S2:614:C:H2'	50:S2:626:G:C8	2.56	0.40
50:S2:681:U:OP2	62:SL:104:LYS:NZ	2.43	0.40
50:S2:1025:U:OP1	50:S2:1090:C:O2'	2.39	0.40
50:S2:1427:C:O2'	50:S2:1429:G:OP1	2.37	0.40
55:SE:69:PHE:HE1	74:SY:17:LEU:HD23	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SH:177:TYR:CE1	58:SH:181:THR:HG21	2.56	0.40
66:SQ:108:ILE:HG13	66:SQ:109:LYS:HD2	2.03	0.40
67:SR:33:ARG:HG3	81:Sg:125:ARG:HH12	1.86	0.40
77:Sb:42:LYS:HZ3	77:Sb:43:ILE:H	1.70	0.40
2:CB:745:TYR:CB	2:CB:814:PHE:HA	2.51	0.40
3:L5:138:G:C4	3:L5:139:G:C8	3.09	0.40
3:L5:923:C:O2'	3:L5:924:C:H6	2.03	0.40
3:L5:2565:A:H3'	3:L5:2566:G:H8	1.86	0.40
3:L5:2847:G:OP1	26:LV:85:ARG:HD3	2.21	0.40
3:L5:2884:G:H2'	3:L5:2885:A:C8	2.54	0.40
3:L5:3887:C:OP2	19:LO:85:ARG:NH2	2.50	0.40
3:L5:4088:C:H2'	3:L5:4089:G:H8	1.86	0.40
3:L5:5010:U:H2'	3:L5:5011:A:C8	2.57	0.40
5:L8:89:U:H2'	5:L8:90:C:C6	2.56	0.40
9:LD:44:TYR:O	24:LT:33:ILE:HG21	2.22	0.40
10:LE:264:ILE:HG23	10:LE:267:LEU:HB2	2.03	0.40
13:LH:96:TYR:HA	13:LH:177:ASP:OD1	2.21	0.40
16:LL:111:GLN:O	16:LL:115:GLN:HG2	2.21	0.40
17:LM:3:PHE:H	23:LS:175:PHE:HZ	1.69	0.40
50:S2:78:C:H1'	57:SG:175:LYS:CE	2.50	0.40
50:S2:168:C:OP1	57:SG:131:ARG:NE	2.29	0.40
50:S2:323:C:H4'	50:S2:324:C:C5	2.57	0.40
50:S2:511:U:C2	50:S2:512:A:C8	3.09	0.40
50:S2:529:A:O5'	50:S2:529:A:H8	2.04	0.40
50:S2:655:A:H4'	50:S2:656:G:H3'	2.03	0.40
50:S2:845:G:C6	50:S2:846:G:C6	3.09	0.40
50:S2:871:U:H6	50:S2:871:U:H2'	1.75	0.40
50:S2:871:U:H3'	50:S2:872:A:H4'	2.02	0.40
50:S2:1486:A:H2'	50:S2:1487:A:H8	1.87	0.40
50:S2:1563:G:C4	50:S2:1573:G:N2	2.89	0.40
50:S2:1865:C:C6	76:Sa:5:ARG:HB3	2.55	0.40
58:SH:50:GLU:HG2	58:SH:60:ILE:CD1	2.51	0.40
59:SI:67:TRP:O	59:SI:67:TRP:HD1	2.04	0.40
61:SK:17:LYS:HG3	61:SK:18:GLU:N	2.36	0.40
63:SN:23:PRO:HB2	63:SN:26:LEU:HD23	2.03	0.40
65:SP:103:ASN:HB2	65:SP:120:SER:HB2	2.01	0.40
67:SR:97:GLU:OE2	67:SR:97:GLU:HA	2.22	0.40
69:ST:13:GLU:HA	69:ST:16:ARG:HD3	2.03	0.40
69:ST:133:ARG:O	69:ST:137:GLN:N	2.50	0.40
71:SV:35:ASN:ND2	71:SV:52:THR:HB	2.36	0.40
74:SY:130:LYS:CG	74:SY:131:PRO:HD3	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:Sg:126:ASP:OD1	81:Sg:126:ASP:N	2.48	0.40
81:Sg:206:LEU:HD21	81:Sg:218:LEU:HB2	2.03	0.40
81:Sg:292:SER:OG	81:Sg:294:ASP:OD1	2.23	0.40
2:CB:360:SER:OG	2:CB:362:VAL:HG22	2.20	0.40
3:L5:25:A:H2'	3:L5:26:C:H6	1.87	0.40
3:L5:271:C:H2'	3:L5:272:U:C6	2.56	0.40
3:L5:1378:C:N3	16:LL:158:ARG:NH2	2.70	0.40
3:L5:1633:G:H5'	3:L5:1634:A:OP1	2.21	0.40
3:L5:1634:A:N6	6:LA:3:ARG:HH12	2.19	0.40
3:L5:1770:A:H3'	3:L5:1771:U:C6	2.57	0.40
3:L5:2484:A:C5	3:L5:2486:G:N1	2.90	0.40
3:L5:2905:C:O2	3:L5:3591:C:O2'	2.33	0.40
3:L5:3611:A:H2	3:L5:5016:A:C8	2.39	0.40
3:L5:4637:G:H2'	3:L5:4638:U:C6	2.56	0.40
3:L5:4734:A:H1'	3:L5:4735:G:C8	2.56	0.40
4:L7:66:G:OP1	9:LD:10:LYS:HE3	2.22	0.40
6:LA:83:HIS:HB3	46:Lp:64:VAL:HG22	2.02	0.40
7:LB:285:TYR:HA	7:LB:363:ILE:HD11	2.03	0.40
22:LR:173:ARG:HD2	50:S2:910:G:OP1	2.21	0.40
26:LV:26:ILE:HG22	26:LV:101:ASN:HB3	2.03	0.40
26:LV:37:LEU:HD23	26:LV:37:LEU:HA	1.87	0.40
28:LX:156:ILE:HD12	28:LX:156:ILE:HA	1.89	0.40
30:LZ:89:ILE:HA	30:LZ:90:PRO:HD3	1.94	0.40
35:Le:26:ASP:OD1	35:Le:27:ARG:HG3	2.22	0.40
35:Le:35:TRP:HE1	35:Le:56:PRO:HG2	1.86	0.40
48:Lz:171:HIS:N	48:Lz:174:MET:HE1	2.31	0.40
50:S2:302:A:H2'	50:S2:303:C:C6	2.56	0.40
50:S2:549:C:C5	50:S2:550:C:N4	2.88	0.40
50:S2:865:A:H2'	50:S2:866:U:O4'	2.21	0.40
50:S2:1010:G:H2'	50:S2:1011:A:H8	1.85	0.40
50:S2:1148:A:OP2	76:Sa:6:ARG:NH1	2.50	0.40
50:S2:1336:C:H2'	50:S2:1337:C:C6	2.56	0.40
50:S2:1604:G:C5	50:S2:1605:G:C5	3.10	0.40
52:SB:69:VAL:C	52:SB:83:LYS:HD2	2.46	0.40
54:SD:94:ARG:HG2	54:SD:94:ARG:O	2.21	0.40
57:SG:133:LEU:HB3	57:SG:136:LYS:HZ1	1.87	0.40
58:SH:39:GLN:OE1	58:SH:39:GLN:N	2.55	0.40
58:SH:62:ILE:HB	58:SH:94:PHE:CD1	2.57	0.40
63:SN:93:LYS:HB2	63:SN:150:VAL:HG21	2.03	0.40
64:SO:28:PHE:HA	64:SO:92:ALA:HB3	2.03	0.40
64:SO:55:ARG:HH11	64:SO:55:ARG:HD3	1.77	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:SU:19:ARG:HD3	70:SU:19:ARG:HA	1.89	0.40
75:SZ:101:SER:OG	75:SZ:102:LYS:N	2.55	0.40
76:Sa:86:ASN:O	76:Sa:86:ASN:OD1	2.39	0.40
81:Sg:114:SER:HA	81:Sg:156:PHE:HD2	1.86	0.40
2:CB:20:ARG:HA	2:CB:20:ARG:HD3	1.87	0.40
2:CB:338:ALA:O	2:CB:341:ARG:HG2	2.22	0.40
2:CB:730:TYR:HB3	2:CB:854:PHE:CD2	2.56	0.40
3:L5:233:U:O4	3:L5:2304:U:O2'	2.33	0.40
3:L5:473:C:H2'	3:L5:474:C:C6	2.56	0.40
3:L5:499:G:H3'	3:L5:500:G:C5'	2.50	0.40
3:L5:667:A:O4'	47:Lr:46:ARG:NH1	2.55	0.40
3:L5:687:U:C2	10:LE:95:PRO:HD2	2.57	0.40
3:L5:691:C:H2'	3:L5:692:A:H8	1.86	0.40
3:L5:962:C:C2	3:L5:2095:A:C6	3.09	0.40
3:L5:993:G:H2'	3:L5:994:G:C8	2.57	0.40
3:L5:1444:G:H22	3:L5:2103:G:N2	2.19	0.40
3:L5:1921:C:N4	17:LM:17:PHE:HB3	2.36	0.40
3:L5:4261:C:OP1	15:LJ:19:LYS:NZ	2.46	0.40
7:LB:337:VAL:HG11	7:LB:345:LEU:HD13	2.03	0.40
10:LE:92:VAL:HG23	10:LE:109:LEU:HD11	2.03	0.40
12:LG:176:LYS:HD3	39:Li:43:MET:HE1	2.03	0.40
18:LN:24:ARG:HB3	18:LN:24:ARG:CZ	2.51	0.40
19:LO:81:TRP:CZ2	19:LO:99:LEU:HD21	2.57	0.40
20:LP:55:LYS:HD2	20:LP:55:LYS:HA	1.87	0.40
23:LS:76:LYS:HD2	23:LS:131:GLU:OE2	2.21	0.40
26:LV:107:ASN:HD21	26:LV:109:LYS:HE2	1.85	0.40
48:Lz:63:PHE:CZ	48:Lz:108:ASP:HB3	2.56	0.40
50:S2:177:G:C2	50:S2:313:A:C8	3.09	0.40
50:S2:1014:G:C6	50:S2:1015:U:C4	3.10	0.40
50:S2:1075:C:H2'	50:S2:1076:G:H8	1.86	0.40
50:S2:1121:G:C4	50:S2:1122:A:C8	3.09	0.40
50:S2:1265:A:N3	50:S2:1265:A:H2'	2.36	0.40
50:S2:1446:A:H1'	70:SU:55:ARG:HD3	2.03	0.40
50:S2:1620:A:H1'	50:S2:1624:U:OP2	2.22	0.40
54:SD:42:THR:C	54:SD:44:THR:H	2.29	0.40
55:SE:11:ARG:HD2	55:SE:25:GLY:O	2.20	0.40
55:SE:87:MET:HE2	55:SE:87:MET:HB2	1.96	0.40
57:SG:78:SER:H	57:SG:81:HIS:CD2	2.39	0.40
59:SI:177:SER:OG	59:SI:182:CYS:SG	2.79	0.40
61:SK:57:TYR:HB3	61:SK:75:GLY:CA	2.51	0.40
65:SP:51:ARG:NH1	65:SP:55:SER:OG	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SQ:8:GLN:HE21	66:SQ:99:TYR:HB3	1.87	0.40
68:SS:94:LYS:NZ	68:SS:96:SER:OG	2.41	0.40
69:ST:130:ASP:O	69:ST:134:ILE:HG22	2.21	0.40
74:SY:114:MET:HE1	74:SY:124:ASN:HB3	2.03	0.40
80:Se:37:GLN:O	80:Se:41:ARG:HG3	2.22	0.40
81:Sg:11:LEU:CB	81:Sg:307:VAL:HB	2.50	0.40
81:Sg:27:PHE:HD2	81:Sg:30:MET:HB2	1.87	0.40
81:Sg:286:CYS:HB3	81:Sg:302:TYR:HE1	1.86	0.40
2:CB:55:ARG:HB3	2:CB:56:PHE:H	1.72	0.40
2:CB:161:ASP:O	2:CB:165:LEU:HD12	2.21	0.40
2:CB:418:SER:HA	2:CB:466:CYS:HB2	2.04	0.40
3:L5:85:G:O2'	3:L5:97:G:O6	2.33	0.40
3:L5:413:G:N7	42:L1:36:ARG:NH1	2.65	0.40
3:L5:424:U:H2'	3:L5:425:U:C6	2.57	0.40
3:L5:515:C:H41	3:L5:647:G:N2	2.20	0.40
3:L5:1094:G:C6	3:L5:1203:G:C5	3.10	0.40
3:L5:1220:G:C2	3:L5:1221:G:C6	3.09	0.40
3:L5:1260:G:N1	3:L5:1261:G:C5	2.90	0.40
3:L5:1628:C:N4	6:LA:3:ARG:HH11	2.15	0.40
3:L5:2486:G:N7	3:L5:2493:G:C2	2.86	0.40
3:L5:3757:G:C2	3:L5:3758:U:H1'	2.56	0.40
3:L5:3937:C:H1'	18:LN:125:SER:CB	2.51	0.40
3:L5:4992:G:H2'	3:L5:4993:G:C8	2.57	0.40
7:LB:14:LEU:O	7:LB:17:LEU:HB2	2.22	0.40
7:LB:28:LYS:O	7:LB:220:ILE:HG21	2.21	0.40
13:LH:65:LYS:HD3	13:LH:65:LYS:HA	1.81	0.40
15:LJ:7:GLU:HA	15:LJ:7:GLU:OE1	2.19	0.40
17:LM:31:ILE:HG22	17:LM:32:ASP:CG	2.46	0.40
17:LM:33:GLN:O	17:LM:33:GLN:HG2	2.21	0.40
18:LN:85:VAL:HA	45:Lo:49:GLY:HA2	2.04	0.40
18:LN:140:LYS:HA	18:LN:140:LYS:HD2	1.84	0.40
18:LN:149:GLN:O	18:LN:152:THR:OG1	2.37	0.40
21:LQ:70:MET:SD	21:LQ:137:VAL:HG11	2.61	0.40
50:S2:12:U:H2'	50:S2:13:C:C6	2.56	0.40
50:S2:130:G:O2'	50:S2:132:U:OP2	2.31	0.40
50:S2:558:G:C6	50:S2:559:G:C6	3.09	0.40
50:S2:1282:A:H2'	50:S2:1283:C:H1'	2.02	0.40
50:S2:1319:U:H2'	50:S2:1320:G:O4'	2.21	0.40
50:S2:1469:A:OP1	56:SF:59:LYS:HE3	2.21	0.40
50:S2:1688:C:H2'	50:S2:1689:C:C6	2.56	0.40
52:SB:82:ARG:NH2	52:SB:189:ILE:O	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SC:74:LYS:HB3	53:SC:269:PHE:CE1	2.56	0.40
54:SD:136:VAL:HG12	54:SD:186:VAL:HG23	2.04	0.40
55:SE:63:LYS:HB3	55:SE:63:LYS:HE2	1.73	0.40
58:SH:159:ASP:C	58:SH:161:ALA:H	2.29	0.40
59:SI:117:TYR:CD1	59:SI:152:ARG:HB3	2.57	0.40
62:SL:35:ARG:NH1	62:SL:53:GLY:O	2.55	0.40
62:SL:57:ASP:OD1	62:SL:60:CYS:N	2.55	0.40
64:SO:54:CYS:SG	64:SO:81:VAL:HG13	2.62	0.40
64:SO:98:ARG:HG3	64:SO:132:VAL:HG23	2.03	0.40
66:SQ:8:GLN:HA	66:SQ:99:TYR:CZ	2.57	0.40
66:SQ:105:LYS:N	66:SQ:105:LYS:CD	2.84	0.40
69:ST:51:ASN:HB3	69:ST:54:TYR:CD1	2.56	0.40
70:SU:101:ILE:HD12	70:SU:101:ILE:HA	1.96	0.40
74:SY:20:ARG:HA	74:SY:76:TYR:HA	2.04	0.40
74:SY:121:ALA:O	74:SY:125:VAL:HG22	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	5	123/154 (80%)	113 (92%)	10 (8%)	0	100	100
2	CB	762/858 (89%)	711 (93%)	51 (7%)	0	100	100
6	LA	246/257 (96%)	225 (92%)	21 (8%)	0	100	100
7	LB	400/403 (99%)	370 (92%)	29 (7%)	1 (0%)	36	65
8	LC	364/427 (85%)	335 (92%)	28 (8%)	1 (0%)	36	65
9	LD	291/297 (98%)	266 (91%)	25 (9%)	0	100	100
10	LE	224/288 (78%)	201 (90%)	23 (10%)	0	100	100
11	LF	223/248 (90%)	212 (95%)	11 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	LG	226/266 (85%)	217 (96%)	9 (4%)	0	100	100
13	LH	188/192 (98%)	173 (92%)	15 (8%)	0	100	100
14	LI	198/214 (92%)	181 (91%)	17 (9%)	0	100	100
15	LJ	170/178 (96%)	155 (91%)	15 (9%)	0	100	100
16	LL	208/211 (99%)	190 (91%)	18 (9%)	0	100	100
17	LM	137/215 (64%)	127 (93%)	10 (7%)	0	100	100
18	LN	201/204 (98%)	188 (94%)	12 (6%)	1 (0%)	24	54
19	LO	199/203 (98%)	190 (96%)	9 (4%)	0	100	100
20	LP	151/184 (82%)	141 (93%)	10 (7%)	0	100	100
21	LQ	181/188 (96%)	170 (94%)	11 (6%)	0	100	100
22	LR	185/196 (94%)	178 (96%)	7 (4%)	0	100	100
23	LS	169/176 (96%)	158 (94%)	11 (6%)	0	100	100
24	LT	157/160 (98%)	149 (95%)	8 (5%)	0	100	100
25	LU	99/128 (77%)	76 (77%)	23 (23%)	0	100	100
26	LV	129/140 (92%)	123 (95%)	6 (5%)	0	100	100
27	LW	61/157 (39%)	59 (97%)	2 (3%)	0	100	100
28	LX	113/156 (72%)	111 (98%)	2 (2%)	0	100	100
29	LY	132/145 (91%)	124 (94%)	8 (6%)	0	100	100
30	LZ	133/136 (98%)	117 (88%)	16 (12%)	0	100	100
31	La	141/148 (95%)	136 (96%)	5 (4%)	0	100	100
32	Lb	105/159 (66%)	96 (91%)	9 (9%)	0	100	100
33	Lc	96/115 (84%)	87 (91%)	9 (9%)	0	100	100
34	Ld	105/125 (84%)	100 (95%)	5 (5%)	0	100	100
35	Le	126/135 (93%)	123 (98%)	3 (2%)	0	100	100
36	Lf	107/110 (97%)	97 (91%)	10 (9%)	0	100	100
37	Lg	112/117 (96%)	110 (98%)	2 (2%)	0	100	100
38	Lh	120/123 (98%)	116 (97%)	3 (2%)	1 (1%)	16	44
39	Li	100/105 (95%)	94 (94%)	6 (6%)	0	100	100
40	Lj	84/97 (87%)	78 (93%)	6 (7%)	0	100	100
41	Lk	67/70 (96%)	63 (94%)	4 (6%)	0	100	100
42	Ll	48/51 (94%)	47 (98%)	1 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
43	Lm	50/128 (39%)	48 (96%)	2 (4%)	0	100	100
44	Ln	22/25 (88%)	22 (100%)	0	0	100	100
45	Lo	100/106 (94%)	93 (93%)	7 (7%)	0	100	100
46	Lp	89/92 (97%)	84 (94%)	5 (6%)	0	100	100
47	Lr	123/137 (90%)	113 (92%)	10 (8%)	0	100	100
48	Lz	197/217 (91%)	187 (95%)	10 (5%)	0	100	100
49	S	51/402 (13%)	43 (84%)	8 (16%)	0	100	100
51	SA	213/295 (72%)	187 (88%)	26 (12%)	0	100	100
52	SB	212/264 (80%)	197 (93%)	15 (7%)	0	100	100
53	SC	216/293 (74%)	200 (93%)	16 (7%)	0	100	100
54	SD	225/243 (93%)	201 (89%)	24 (11%)	0	100	100
55	SE	260/263 (99%)	244 (94%)	16 (6%)	0	100	100
56	SF	187/204 (92%)	162 (87%)	25 (13%)	0	100	100
57	SG	235/249 (94%)	221 (94%)	14 (6%)	0	100	100
58	SH	182/194 (94%)	160 (88%)	22 (12%)	0	100	100
59	SI	204/208 (98%)	189 (93%)	15 (7%)	0	100	100
60	SJ	183/194 (94%)	168 (92%)	15 (8%)	0	100	100
61	SK	96/165 (58%)	79 (82%)	17 (18%)	0	100	100
62	SL	141/158 (89%)	124 (88%)	17 (12%)	0	100	100
63	SN	148/151 (98%)	140 (95%)	8 (5%)	0	100	100
64	SO	132/151 (87%)	116 (88%)	16 (12%)	0	100	100
65	SP	119/145 (82%)	108 (91%)	11 (9%)	0	100	100
66	SQ	142/146 (97%)	122 (86%)	19 (13%)	1 (1%)	18	47
67	SR	128/135 (95%)	114 (89%)	14 (11%)	0	100	100
68	SS	143/152 (94%)	127 (89%)	16 (11%)	0	100	100
69	ST	138/145 (95%)	124 (90%)	13 (9%)	1 (1%)	18	47
70	SU	101/119 (85%)	94 (93%)	7 (7%)	0	100	100
71	SV	81/83 (98%)	69 (85%)	9 (11%)	3 (4%)	2	16
72	SW	127/130 (98%)	123 (97%)	4 (3%)	0	100	100
73	SX	139/143 (97%)	125 (90%)	12 (9%)	2 (1%)	9	31
74	SY	129/133 (97%)	122 (95%)	7 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
75	SZ	67/125 (54%)	57 (85%)	10 (15%)	0	100	100
76	Sa	100/115 (87%)	87 (87%)	12 (12%)	1 (1%)	12	40
77	Sb	81/84 (96%)	70 (86%)	11 (14%)	0	100	100
78	Sc	62/69 (90%)	45 (73%)	17 (27%)	0	100	100
79	Sd	51/56 (91%)	48 (94%)	3 (6%)	0	100	100
80	Se	56/59 (95%)	49 (88%)	7 (12%)	0	100	100
81	Sg	311/317 (98%)	268 (86%)	43 (14%)	0	100	100
All	All	12122/14031 (86%)	11137 (92%)	973 (8%)	12 (0%)	49	78

All (12) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
18	LN	124	ASP
66	SQ	43	GLU
71	SV	79	VAL
73	SX	89	GLY
7	LB	10	ARG
71	SV	77	GLY
69	ST	41	LYS
38	Lh	88	THR
71	SV	80	SER
76	Sa	47	ALA
73	SX	86	PRO
8	LC	232	VAL

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	5	110/128 (86%)	109 (99%)	1 (1%)	70	76
2	CB	655/730 (90%)	655 (100%)	0	100	100
6	LA	190/199 (96%)	190 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	LB	348/349 (100%)	348 (100%)	0	100	100
8	LC	305/348 (88%)	305 (100%)	0	100	100
9	LD	246/250 (98%)	246 (100%)	0	100	100
10	LE	206/252 (82%)	206 (100%)	0	100	100
11	LF	194/215 (90%)	194 (100%)	0	100	100
12	LG	198/223 (89%)	198 (100%)	0	100	100
13	LH	169/171 (99%)	169 (100%)	0	100	100
14	LI	172/181 (95%)	172 (100%)	0	100	100
15	LJ	147/149 (99%)	147 (100%)	0	100	100
16	LL	176/177 (99%)	176 (100%)	0	100	100
17	LM	118/161 (73%)	118 (100%)	0	100	100
18	LN	171/172 (99%)	171 (100%)	0	100	100
19	LO	173/174 (99%)	173 (100%)	0	100	100
20	LP	134/163 (82%)	134 (100%)	0	100	100
21	LQ	162/165 (98%)	161 (99%)	1 (1%)	78	80
22	LR	166/175 (95%)	166 (100%)	0	100	100
23	LS	154/157 (98%)	154 (100%)	0	100	100
24	LT	139/140 (99%)	139 (100%)	0	100	100
25	LU	91/115 (79%)	91 (100%)	0	100	100
26	LV	101/107 (94%)	101 (100%)	0	100	100
27	LW	55/126 (44%)	55 (100%)	0	100	100
28	LX	103/133 (77%)	103 (100%)	0	100	100
29	LY	124/135 (92%)	124 (100%)	0	100	100
30	LZ	117/118 (99%)	117 (100%)	0	100	100
31	La	119/121 (98%)	119 (100%)	0	100	100
32	Lb	88/126 (70%)	88 (100%)	0	100	100
33	Lc	83/97 (86%)	83 (100%)	0	100	100
34	Ld	98/110 (89%)	98 (100%)	0	100	100
35	Le	114/121 (94%)	113 (99%)	1 (1%)	70	76
36	Lf	88/89 (99%)	88 (100%)	0	100	100
37	Lg	98/100 (98%)	98 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	Lh	109/110 (99%)	109 (100%)	0	100	100
39	Li	86/89 (97%)	86 (100%)	0	100	100
40	Lj	73/80 (91%)	73 (100%)	0	100	100
41	Lk	64/65 (98%)	64 (100%)	0	100	100
42	Ll	47/48 (98%)	47 (100%)	0	100	100
43	Lm	48/116 (41%)	48 (100%)	0	100	100
44	Ln	23/24 (96%)	23 (100%)	0	100	100
45	Lo	90/94 (96%)	90 (100%)	0	100	100
46	Lp	74/75 (99%)	74 (100%)	0	100	100
47	Lr	109/121 (90%)	109 (100%)	0	100	100
48	Lz	185/196 (94%)	185 (100%)	0	100	100
49	S	46/322 (14%)	46 (100%)	0	100	100
51	SA	181/243 (74%)	181 (100%)	0	100	100
52	SB	195/231 (84%)	195 (100%)	0	100	100
53	SC	184/225 (82%)	184 (100%)	0	100	100
54	SD	190/202 (94%)	190 (100%)	0	100	100
55	SE	224/225 (100%)	224 (100%)	0	100	100
56	SF	159/170 (94%)	159 (100%)	0	100	100
57	SG	207/218 (95%)	207 (100%)	0	100	100
58	SH	166/174 (95%)	166 (100%)	0	100	100
59	SI	178/180 (99%)	178 (100%)	0	100	100
60	SJ	161/168 (96%)	161 (100%)	0	100	100
61	SK	89/136 (65%)	89 (100%)	0	100	100
62	SL	131/142 (92%)	131 (100%)	0	100	100
63	SN	130/131 (99%)	130 (100%)	0	100	100
64	SO	104/119 (87%)	104 (100%)	0	100	100
65	SP	107/130 (82%)	107 (100%)	0	100	100
66	SQ	119/121 (98%)	117 (98%)	2 (2%)	53	67
67	SR	120/122 (98%)	116 (97%)	4 (3%)	33	57
68	SS	126/132 (96%)	126 (100%)	0	100	100
69	ST	111/115 (96%)	111 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
70	SU	94/107 (88%)	94 (100%)	0	100	100
71	SV	67/67 (100%)	63 (94%)	4 (6%)	17	43
72	SW	112/113 (99%)	112 (100%)	0	100	100
73	SX	113/115 (98%)	112 (99%)	1 (1%)	70	76
74	SY	112/115 (97%)	110 (98%)	2 (2%)	51	67
75	SZ	60/103 (58%)	60 (100%)	0	100	100
76	Sa	89/98 (91%)	89 (100%)	0	100	100
77	Sb	75/76 (99%)	75 (100%)	0	100	100
78	Sc	57/62 (92%)	57 (100%)	0	100	100
79	Sd	47/49 (96%)	47 (100%)	0	100	100
80	Se	47/48 (98%)	47 (100%)	0	100	100
81	Sg	271/275 (98%)	271 (100%)	0	100	100
All	All	10592/11929 (89%)	10576 (100%)	16 (0%)	85	85

All (16) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	5	17	THR
21	LQ	188	ASN
35	Le	34	ASN
66	SQ	42	ILE
66	SQ	47	LEU
67	SR	81	ARG
67	SR	82	ASP
67	SR	85	VAL
67	SR	87	GLU
71	SV	74	LYS
71	SV	79	VAL
71	SV	81	LYS
71	SV	83	PHE
73	SX	85	VAL
74	SY	49	LYS
74	SY	50	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (97) such sidechains are listed below:

Mol	Chain	Res	Type
1	5	125	GLN
2	CB	64	GLN
2	CB	179	GLN
2	CB	227	GLN
2	CB	270	ASN
2	CB	291	GLN
2	CB	493	ASN
2	CB	720	GLN
2	CB	737	GLN
6	LA	22	HIS
6	LA	205	ASN
7	LB	184	GLN
8	LC	21	ASN
8	LC	43	ASN
8	LC	317	ASN
9	LD	57	ASN
9	LD	122	GLN
9	LD	138	GLN
9	LD	202	GLN
9	LD	203	ASN
9	LD	282	GLN
10	LE	191	GLN
10	LE	256	GLN
10	LE	266	GLN
10	LE	279	ASN
12	LG	141	ASN
12	LG	208	ASN
13	LH	8	GLN
13	LH	138	GLN
14	LI	123	GLN
15	LJ	23	ASN
15	LJ	46	GLN
15	LJ	98	ASN
16	LL	115	GLN
16	LL	205	GLN
17	LM	44	GLN
17	LM	48	GLN
18	LN	199	GLN
19	LO	50	ASN
20	LP	34	GLN
20	LP	80	GLN
21	LQ	188	ASN
24	LT	66	ASN

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Mol	Chain	Res	Type
24	LT	144	ASN
25	LU	105	ASN
31	La	60	HIS
32	Lb	60	ASN
34	Ld	116	ASN
35	Le	34	ASN
35	Le	52	GLN
35	Le	101	HIS
36	Lf	80	ASN
36	Lf	99	HIS
38	Lh	98	HIS
41	Lk	28	ASN
42	Ll	17	GLN
42	Ll	33	ASN
42	Ll	43	HIS
43	Lm	109	ASN
45	Lo	102	GLN
49	S	206	HIS
51	SA	33	GLN
51	SA	193	HIS
52	SB	40	ASN
52	SB	76	ASN
52	SB	149	GLN
53	SC	267	GLN
54	SD	22	ASN
54	SD	74	GLN
55	SE	157	ASN
55	SE	188	ASN
56	SF	118	ASN
56	SF	179	ASN
57	SG	187	HIS
57	SG	227	GLN
58	SH	165	ASN
59	SI	52	ASN
60	SJ	125	HIS
62	SL	141	ASN
66	SQ	24	HIS
68	SS	10	GLN
68	SS	87	GLN
68	SS	125	HIS
69	ST	91	HIS
69	ST	142	ASN

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Mol	Chain	Res	Type
70	SU	92	HIS
71	SV	2	GLN
72	SW	44	HIS
72	SW	90	GLN
73	SX	61	GLN
75	SZ	106	GLN
77	Sb	9	HIS
77	Sb	26	GLN
77	Sb	29	ASN
77	Sb	65	GLN
80	Se	58	ASN
81	Sg	191	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
3	L5	3654/5070 (72%)	841 (23%)	24 (0%)
4	L7	119/121 (98%)	12 (10%)	0
5	L8	155/157 (98%)	30 (19%)	0
50	S2	1709/1869 (91%)	465 (27%)	7 (0%)
All	All	5637/7217 (78%)	1348 (23%)	31 (0%)

All (1348) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
3	L5	2	G
3	L5	17	A
3	L5	25	A
3	L5	26	C
3	L5	30	C
3	L5	39	A
3	L5	42	A
3	L5	48	G
3	L5	56	A
3	L5	59	A
3	L5	64	A
3	L5	65	A
3	L5	69	A
3	L5	73	A
3	L5	91	G
3	L5	98	A

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Mol	Chain	Res	Type
3	L5	104	G
3	L5	108	A
3	L5	109	G
3	L5	110	C
3	L5	119	G
3	L5	120	A
3	L5	132	G
3	L5	133	C
3	L5	134	G
3	L5	135	G
3	L5	140	G
3	L5	141	C
3	L5	143	C
3	L5	150	U
3	L5	152	U
3	L5	159	C
3	L5	164	G
3	L5	165	A
3	L5	171	U
3	L5	172	C
3	L5	173	C
3	L5	177	G
3	L5	181	C
3	L5	182	G
3	L5	183	C
3	L5	184	U
3	L5	185	C
3	L5	186	G
3	L5	187	U
3	L5	188	G
3	L5	189	G
3	L5	200	U
3	L5	209	U
3	L5	213	G
3	L5	216	C
3	L5	218	A
3	L5	219	G
3	L5	220	C
3	L5	234	G
3	L5	255	C
3	L5	256	G
3	L5	258	G

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Mol	Chain	Res	Type
3	L5	263	G
3	L5	264	C
3	L5	265	C
3	L5	266	C
3	L5	267	G
3	L5	269	G
3	L5	275	C
3	L5	280	G
3	L5	297	U
3	L5	306	A
3	L5	315	G
3	L5	316	U
3	L5	340	C
3	L5	373	G
3	L5	387	G
3	L5	388	A
3	L5	407	A
3	L5	409	G
3	L5	410	A
3	L5	411	G
3	L5	412	G
3	L5	413	G
3	L5	414	C
3	L5	431	G
3	L5	432	U
3	L5	449	C
3	L5	450	G
3	L5	452	A
3	L5	453	G
3	L5	454	U
3	L5	456	C
3	L5	457	G
3	L5	465	G
3	L5	467	U
3	L5	472	C
3	L5	484	U
3	L5	485	C
3	L5	486	C
3	L5	489	C
3	L5	493	G
3	L5	494	U
3	L5	497	G

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Mol	Chain	Res	Type
3	L5	498	C
3	L5	499	G
3	L5	500	G
3	L5	501	C
3	L5	502	C
3	L5	503	C
3	L5	505	G
3	L5	506	C
3	L5	507	G
3	L5	509	A
3	L5	510	U
3	L5	512	U
3	L5	513	U
3	L5	514	U
3	L5	517	C
3	L5	518	G
3	L5	519	C
3	L5	643	C
3	L5	645	G
3	L5	646	G
3	L5	654	C
3	L5	655	C
3	L5	657	C
3	L5	658	C
3	L5	659	G
3	L5	665	C
3	L5	666	G
3	L5	667	A
3	L5	668	C
3	L5	669	C
3	L5	673	C
3	L5	683	C
3	L5	685	C
3	L5	686	A
3	L5	687	U
3	L5	696	C
3	L5	703	G
3	L5	704	C
3	L5	706	C
3	L5	730	G
3	L5	731	G
3	L5	738	C

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Mol	Chain	Res	Type
3	L5	739	G
3	L5	742	G
3	L5	744	G
3	L5	746	A
3	L5	753	C
3	L5	754	U
3	L5	758	G
3	L5	759	G
3	L5	760	G
3	L5	904	C
3	L5	907	C
3	L5	913	U
3	L5	914	U
3	L5	915	A
3	L5	917	A
3	L5	918	G
3	L5	923	C
3	L5	924	C
3	L5	932	A
3	L5	933	G
3	L5	934	C
3	L5	935	A
3	L5	936	C
3	L5	943	A
3	L5	944	A
3	L5	945	U
3	L5	959	G
3	L5	960	A
3	L5	961	G
3	L5	962	C
3	L5	965	G
3	L5	967	C
3	L5	968	C
3	L5	969	C
3	L5	970	G
3	L5	977	C
3	L5	979	C
3	L5	982	U
3	L5	984	C
3	L5	985	C
3	L5	989	U
3	L5	990	C

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Mol	Chain	Res	Type
3	L5	992	C
3	L5	993	G
3	L5	995	C
3	L5	996	G
3	L5	1048	G
3	L5	1049	C
3	L5	1050	C
3	L5	1051	G
3	L5	1065	G
3	L5	1067	G
3	L5	1070	G
3	L5	1071	C
3	L5	1072	C
3	L5	1075	G
3	L5	1082	C
3	L5	1083	U
3	L5	1094	G
3	L5	1095	A
3	L5	1168	G
3	L5	1169	G
3	L5	1170	G
3	L5	1171	G
3	L5	1172	C
3	L5	1173	G
3	L5	1179	U
3	L5	1180	C
3	L5	1181	C
3	L5	1182	C
3	L5	1183	C
3	L5	1184	A
3	L5	1200	G
3	L5	1202	C
3	L5	1203	G
3	L5	1204	C
3	L5	1211	G
3	L5	1214	C
3	L5	1215	C
3	L5	1218	G
3	L5	1219	G
3	L5	1221	G
3	L5	1222	A
3	L5	1241	C

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Mol	Chain	Res	Type
3	L5	1242	G
3	L5	1243	C
3	L5	1246	G
3	L5	1247	U
3	L5	1253	G
3	L5	1254	A
3	L5	1255	A
3	L5	1256	G
3	L5	1257	A
3	L5	1258	G
3	L5	1262	G
3	L5	1266	G
3	L5	1267	C
3	L5	1268	G
3	L5	1270	A
3	L5	1271	G
3	L5	1272	C
3	L5	1273	G
3	L5	1274	A
3	L5	1275	G
3	L5	1277	G
3	L5	1280	C
3	L5	1284	G
3	L5	1285	U
3	L5	1287	G
3	L5	1294	A
3	L5	1295	C
3	L5	1301	C
3	L5	1302	U
3	L5	1303	A
3	L5	1312	A
3	L5	1314	C
3	L5	1324	A
3	L5	1326	A
3	L5	1337	A
3	L5	1354	A
3	L5	1358	G
3	L5	1359	G
3	L5	1365	C
3	L5	1367	C
3	L5	1370	G
3	L5	1377	G

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Mol	Chain	Res	Type
3	L5	1378	C
3	L5	1379	C
3	L5	1387	A
3	L5	1394	G
3	L5	1397	A
3	L5	1401	C
3	L5	1403	G
3	L5	1404	G
3	L5	1405	C
3	L5	1407	C
3	L5	1409	C
3	L5	1410	U
3	L5	1411	C
3	L5	1414	C
3	L5	1415	G
3	L5	1417	C
3	L5	1420	A
3	L5	1436	C
3	L5	1437	C
3	L5	1439	C
3	L5	1441	C
3	L5	1443	A
3	L5	1444	G
3	L5	1446	C
3	L5	1447	C
3	L5	1482	G
3	L5	1483	C
3	L5	1493	G
3	L5	1497	A
3	L5	1498	G
3	L5	1502	G
3	L5	1514	U
3	L5	1516	G
3	L5	1517	G
3	L5	1534	A
3	L5	1547	A
3	L5	1563	A
3	L5	1566	C
3	L5	1578	U
3	L5	1591	U
3	L5	1596	U
3	L5	1613	A

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Mol	Chain	Res	Type
3	L5	1624	G
3	L5	1625	G
3	L5	1631	A
3	L5	1633	G
3	L5	1634	A
3	L5	1640	C
3	L5	1654	G
3	L5	1661	C
3	L5	1676	C
3	L5	1677	U
3	L5	1678	C
3	L5	1691	G
3	L5	1694	C
3	L5	1697	G
3	L5	1698	C
3	L5	1699	A
3	L5	1700	G
3	L5	1703	C
3	L5	1704	C
3	L5	1705	G
3	L5	1707	C
3	L5	1708	G
3	L5	1709	C
3	L5	1715	C
3	L5	1718	C
3	L5	1726	U
3	L5	1731	C
3	L5	1734	G
3	L5	1740	C
3	L5	1741	G
3	L5	1742	A
3	L5	1750	G
3	L5	1757	U
3	L5	1758	G
3	L5	1760	G
3	L5	1761	G
3	L5	1762	C
3	L5	1763	C
3	L5	1764	G
3	L5	1765	A
3	L5	1766	A
3	L5	1767	A

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Mol	Chain	Res	Type
3	L5	1768	C
3	L5	1769	G
3	L5	1770	A
3	L5	1775	A
3	L5	1787	A
3	L5	1792	U
3	L5	1797	G
3	L5	1804	A
3	L5	1810	G
3	L5	1815	G
3	L5	1820	C
3	L5	1821	G
3	L5	1822	U
3	L5	1836	G
3	L5	1837	A
3	L5	1842	G
3	L5	1843	A
3	L5	1855	G
3	L5	1869	G
3	L5	1882	U
3	L5	1889	U
3	L5	1897	A
3	L5	1918	U
3	L5	1919	G
3	L5	1920	C
3	L5	1921	C
3	L5	1922	G
3	L5	1925	G
3	L5	1931	C
3	L5	1932	A
3	L5	1936	C
3	L5	1940	G
3	L5	1948	G
3	L5	1949	U
3	L5	1951	G
3	L5	1959	U
3	L5	1961	G
3	L5	1962	A
3	L5	1965	G
3	L5	1968	G
3	L5	1974	U
3	L5	1975	G

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Mol	Chain	Res	Type
3	L5	1976	G
3	L5	1978	C
3	L5	1979	A
3	L5	1980	U
3	L5	1981	G
3	L5	1982	G
3	L5	1984	A
3	L5	1985	G
3	L5	1986	U
3	L5	1990	A
3	L5	1991	A
3	L5	1992	U
3	L5	1993	C
3	L5	1997	U
3	L5	2002	A
3	L5	2011	C
3	L5	2014	C
3	L5	2017	A
3	L5	2018	C
3	L5	2024	G
3	L5	2026	A
3	L5	2034	G
3	L5	2046	G
3	L5	2048	U
3	L5	2055	G
3	L5	2056	G
3	L5	2069	A
3	L5	2084	C
3	L5	2085	G
3	L5	2091	C
3	L5	2092	G
3	L5	2093	A
3	L5	2095	A
3	L5	2096	G
3	L5	2097	U
3	L5	2098	G
3	L5	2101	C
3	L5	2102	G
3	L5	2103	G
3	L5	2106	G
3	L5	2107	C
3	L5	2108	G

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Mol	Chain	Res	Type
3	L5	2110	C
3	L5	2111	G
3	L5	2112	G
3	L5	2250	C
3	L5	2251	G
3	L5	2252	G
3	L5	2253	A
3	L5	2255	C
3	L5	2256	C
3	L5	2258	C
3	L5	2259	G
3	L5	2260	C
3	L5	2263	A
3	L5	2277	C
3	L5	2289	C
3	L5	2300	A
3	L5	2301	G
3	L5	2313	A
3	L5	2332	A
3	L5	2333	G
3	L5	2348	G
3	L5	2351	C
3	L5	2360	A
3	L5	2364	G
3	L5	2369	U
3	L5	2395	A
3	L5	2397	G
3	L5	2404	A
3	L5	2417	A
3	L5	2418	A
3	L5	2419	C
3	L5	2421	G
3	L5	2425	U
3	L5	2437	C
3	L5	2441	C
3	L5	2447	U
3	L5	2450	G
3	L5	2464	C
3	L5	2465	C
3	L5	2469	C
3	L5	2474	G
3	L5	2475	G

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Mol	Chain	Res	Type
3	L5	2478	C
3	L5	2479	G
3	L5	2483	G
3	L5	2484	A
3	L5	2485	U
3	L5	2486	G
3	L5	2487	G
3	L5	2488	C
3	L5	2489	C
3	L5	2490	U
3	L5	2491	C
3	L5	2494	U
3	L5	2503	G
3	L5	2504	C
3	L5	2505	C
3	L5	2513	A
3	L5	2519	U
3	L5	2520	C
3	L5	2537	A
3	L5	2544	G
3	L5	2546	G
3	L5	2547	G
3	L5	2554	U
3	L5	2555	G
3	L5	2559	G
3	L5	2560	C
3	L5	2565	A
3	L5	2567	G
3	L5	2573	A
3	L5	2583	C
3	L5	2587	A
3	L5	2589	C
3	L5	2601	A
3	L5	2623	A
3	L5	2627	C
3	L5	2653	C
3	L5	2662	G
3	L5	2669	C
3	L5	2676	A
3	L5	2686	G
3	L5	2687	U
3	L5	2695	A

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Mol	Chain	Res	Type
3	L5	2696	A
3	L5	2707	U
3	L5	2708	U
3	L5	2710	C
3	L5	2711	G
3	L5	2723	U
3	L5	2724	G
3	L5	2726	G
3	L5	2739	C
3	L5	2742	G
3	L5	2743	A
3	L5	2761	U
3	L5	2763	U
3	L5	2764	A
3	L5	2769	U
3	L5	2770	C
3	L5	2787	A
3	L5	2788	U
3	L5	2790	U
3	L5	2814	C
3	L5	2815	A
3	L5	2826	U
3	L5	2827	G
3	L5	2829	U
3	L5	2838	G
3	L5	2846	G
3	L5	2848	G
3	L5	2855	G
3	L5	2867	C
3	L5	2877	G
3	L5	2892	C
3	L5	2895	A
3	L5	2897	G
3	L5	2899	C
3	L5	2900	U
3	L5	2902	G
3	L5	2903	G
3	L5	2904	U
3	L5	2905	C
3	L5	2906	G
3	L5	2908	U
3	L5	3589	G

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Mol	Chain	Res	Type
3	L5	3590	G
3	L5	3591	C
3	L5	3594	C
3	L5	3595	U
3	L5	3596	A
3	L5	3597	G
3	L5	3598	C
3	L5	3599	A
3	L5	3605	C
3	L5	3614	G
3	L5	3615	G
3	L5	3618	C
3	L5	3626	G
3	L5	3635	A
3	L5	3644	U
3	L5	3646	A
3	L5	3662	A
3	L5	3664	G
3	L5	3667	C
3	L5	3670	C
3	L5	3673	C
3	L5	3674	G
3	L5	3685	C
3	L5	3692	A
3	L5	3711	A
3	L5	3713	U
3	L5	3714	G
3	L5	3727	A
3	L5	3735	G
3	L5	3740	G
3	L5	3750	G
3	L5	3753	G
3	L5	3756	A
3	L5	3759	A
3	L5	3773	U
3	L5	3774	A
3	L5	3776	G
3	L5	3777	G
3	L5	3783	A
3	L5	3784	A
3	L5	3786	U
3	L5	3788	C

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Mol	Chain	Res	Type
3	L5	3802	U
3	L5	3811	G
3	L5	3812	C
3	L5	3814	U
3	L5	3817	A
3	L5	3818	U
3	L5	3819	G
3	L5	3838	U
3	L5	3840	U
3	L5	3867	A
3	L5	3877	A
3	L5	3878	C
3	L5	3879	G
3	L5	3885	G
3	L5	3887	C
3	L5	3890	A
3	L5	3897	G
3	L5	3901	A
3	L5	3906	A
3	L5	3907	G
3	L5	3908	A
3	L5	3915	U
3	L5	3916	G
3	L5	3930	U
3	L5	3938	G
3	L5	3939	G
3	L5	3942	A
3	L5	3943	A
3	L5	3947	A
3	L5	3948	C
3	L5	3949	A
3	L5	3950	U
3	L5	3951	G
3	L5	3953	G
3	L5	4062	A
3	L5	4063	U
3	L5	4064	C
3	L5	4065	G
3	L5	4069	U
3	L5	4076	G
3	L5	4084	G
3	L5	4086	G

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Mol	Chain	Res	Type
3	L5	4091	G
3	L5	4092	G
3	L5	4093	G
3	L5	4095	G
3	L5	4096	C
3	L5	4097	G
3	L5	4099	G
3	L5	4100	C
3	L5	4101	C
3	L5	4102	C
3	L5	4104	G
3	L5	4108	G
3	L5	4111	U
3	L5	4113	U
3	L5	4114	C
3	L5	4115	G
3	L5	4116	C
3	L5	4119	C
3	L5	4121	G
3	L5	4122	G
3	L5	4127	A
3	L5	4133	C
3	L5	4134	C
3	L5	4138	C
3	L5	4140	C
3	L5	4141	G
3	L5	4142	C
3	L5	4143	G
3	L5	4144	C
3	L5	4146	G
3	L5	4150	G
3	L5	4157	A
3	L5	4160	C
3	L5	4162	C
3	L5	4163	U
3	L5	4170	A
3	L5	4183	G
3	L5	4184	G
3	L5	4191	G
3	L5	4196	G
3	L5	4197	G
3	L5	4203	A

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Mol	Chain	Res	Type
3	L5	4229	U
3	L5	4232	U
3	L5	4233	A
3	L5	4237	C
3	L5	4249	G
3	L5	4250	G
3	L5	4251	A
3	L5	4254	G
3	L5	4257	A
3	L5	4265	U
3	L5	4268	A
3	L5	4273	A
3	L5	4281	A
3	L5	4291	G
3	L5	4304	A
3	L5	4305	G
3	L5	4314	C
3	L5	4330	G
3	L5	4332	C
3	L5	4349	C
3	L5	4373	G
3	L5	4377	G
3	L5	4378	A
3	L5	4380	A
3	L5	4387	C
3	L5	4391	G
3	L5	4394	A
3	L5	4420	U
3	L5	4421	C
3	L5	4422	A
3	L5	4444	C
3	L5	4448	G
3	L5	4449	A
3	L5	4452	U
3	L5	4453	C
3	L5	4464	A
3	L5	4488	A
3	L5	4500	U
3	L5	4512	U
3	L5	4513	A
3	L5	4518	A
3	L5	4519	C

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Mol	Chain	Res	Type
3	L5	4523	A
3	L5	4524	G
3	L5	4545	G
3	L5	4548	A
3	L5	4549	G
3	L5	4560	C
3	L5	4567	G
3	L5	4573	G
3	L5	4575	G
3	L5	4584	A
3	L5	4590	A
3	L5	4600	G
3	L5	4601	U
3	L5	4617	G
3	L5	4636	U
3	L5	4637	G
3	L5	4652	G
3	L5	4656	A
3	L5	4670	C
3	L5	4672	A
3	L5	4694	G
3	L5	4695	C
3	L5	4700	A
3	L5	4708	A
3	L5	4709	U
3	L5	4719	G
3	L5	4720	C
3	L5	4733	C
3	L5	4734	A
3	L5	4740	G
3	L5	4741	C
3	L5	4742	G
3	L5	4745	G
3	L5	4747	C
3	L5	4751	G
3	L5	4754	G
3	L5	4757	C
3	L5	4759	C
3	L5	4761	G
3	L5	4765	G
3	L5	4770	U
3	L5	4771	C

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Mol	Chain	Res	Type
3	L5	4772	C
3	L5	4773	C
3	L5	4775	C
3	L5	4776	G
3	L5	4859	C
3	L5	4860	G
3	L5	4863	G
3	L5	4870	G
3	L5	4871	C
3	L5	4875	G
3	L5	4877	G
3	L5	4881	U
3	L5	4882	U
3	L5	4883	C
3	L5	4889	G
3	L5	4895	C
3	L5	4896	G
3	L5	4897	G
3	L5	4900	C
3	L5	4901	G
3	L5	4910	G
3	L5	4911	A
3	L5	4912	G
3	L5	4914	C
3	L5	4922	C
3	L5	4924	C
3	L5	4927	G
3	L5	4928	C
3	L5	4934	A
3	L5	4935	C
3	L5	4940	C
3	L5	4941	G
3	L5	4943	A
3	L5	4955	A
3	L5	4960	G
3	L5	4961	G
3	L5	4963	G
3	L5	4966	A
3	L5	4973	U
3	L5	4976	U
3	L5	4985	U
3	L5	4988	U

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Mol	Chain	Res	Type
3	L5	4989	U
3	L5	4991	U
3	L5	5007	A
3	L5	5009	G
3	L5	5013	C
3	L5	5014	A
3	L5	5017	G
3	L5	5022	U
3	L5	5024	C
3	L5	5025	C
3	L5	5026	U
3	L5	5027	C
3	L5	5028	G
3	L5	5029	C
3	L5	5030	U
3	L5	5031	G
3	L5	5032	C
3	L5	5034	A
3	L5	5040	U
3	L5	5041	G
3	L5	5050	C
3	L5	5054	C
3	L5	5055	G
3	L5	5058	A
3	L5	5061	A
3	L5	5062	G
3	L5	5069	U
4	L7	5	A
4	L7	7	G
4	L7	24	C
4	L7	33	U
4	L7	38	U
4	L7	53	U
4	L7	54	A
4	L7	64	G
4	L7	100	A
4	L7	109	U
4	L7	110	G
4	L7	111	C
5	L8	25	G
5	L8	34	U
5	L8	35	C

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Mol	Chain	Res	Type
5	L8	38	U
5	L8	48	A
5	L8	59	A
5	L8	62	A
5	L8	63	U
5	L8	68	G
5	L8	77	A
5	L8	80	A
5	L8	82	A
5	L8	84	A
5	L8	85	U
5	L8	87	G
5	L8	103	A
5	L8	105	C
5	L8	110	U
5	L8	111	U
5	L8	114	G
5	L8	123	U
5	L8	124	U
5	L8	125	C
5	L8	126	C
5	L8	127	U
5	L8	128	C
5	L8	147	G
5	L8	150	C
5	L8	151	G
5	L8	156	U
50	S2	25	A
50	S2	33	G
50	S2	39	A
50	S2	41	G
50	S2	42	A
50	S2	44	U
50	S2	46	A
50	S2	49	C
50	S2	56	G
50	S2	58	C
50	S2	59	U
50	S2	62	G
50	S2	64	A
50	S2	67	C
50	S2	68	A

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Mol	Chain	Res	Type
50	S2	72	C
50	S2	73	C
50	S2	74	G
50	S2	76	U
50	S2	83	A
50	S2	92	A
50	S2	103	A
50	S2	113	G
50	S2	114	G
50	S2	115	U
50	S2	126	G
50	S2	130	G
50	S2	140	C
50	S2	143	U
50	S2	149	A
50	S2	155	G
50	S2	158	A
50	S2	159	A
50	S2	160	U
50	S2	162	C
50	S2	175	A
50	S2	182	C
50	S2	186	C
50	S2	187	G
50	S2	190	G
50	S2	191	A
50	S2	196	C
50	S2	197	U
50	S2	198	U
50	S2	199	C
50	S2	200	G
50	S2	203	G
50	S2	204	G
50	S2	206	G
50	S2	208	G
50	S2	209	A
50	S2	211	G
50	S2	212	C
50	S2	214	U
50	S2	290	U
50	S2	291	G
50	S2	292	A

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Mol	Chain	Res	Type
50	S2	295	C
50	S2	306	C
50	S2	307	G
50	S2	308	G
50	S2	309	G
50	S2	310	C
50	S2	311	C
50	S2	312	G
50	S2	313	A
50	S2	316	G
50	S2	318	A
50	S2	319	C
50	S2	322	C
50	S2	323	C
50	S2	324	C
50	S2	325	C
50	S2	326	C
50	S2	328	U
50	S2	329	G
50	S2	332	G
50	S2	335	G
50	S2	339	A
50	S2	340	C
50	S2	347	G
50	S2	360	A
50	S2	362	C
50	S2	363	A
50	S2	364	A
50	S2	368	U
50	S2	369	C
50	S2	370	G
50	S2	375	U
50	S2	383	G
50	S2	385	G
50	S2	386	C
50	S2	407	G
50	S2	409	C
50	S2	421	G
50	S2	429	C
50	S2	438	G
50	S2	448	A
50	S2	449	A

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Mol	Chain	Res	Type
50	S2	450	C
50	S2	452	G
50	S2	459	C
50	S2	464	A
50	S2	465	A
50	S2	467	G
50	S2	471	G
50	S2	472	C
50	S2	473	A
50	S2	474	G
50	S2	487	U
50	S2	488	U
50	S2	492	C
50	S2	502	C
50	S2	516	A
50	S2	525	A
50	S2	528	A
50	S2	530	U
50	S2	531	A
50	S2	532	C
50	S2	533	A
50	S2	536	A
50	S2	537	C
50	S2	538	U
50	S2	540	U
50	S2	541	U
50	S2	542	U
50	S2	546	G
50	S2	547	G
50	S2	551	U
50	S2	553	U
50	S2	554	A
50	S2	556	U
50	S2	557	U
50	S2	558	G
50	S2	559	G
50	S2	560	A
50	S2	563	G
50	S2	564	A
50	S2	566	U
50	S2	576	A
50	S2	583	A

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Mol	Chain	Res	Type
50	S2	587	A
50	S2	589	G
50	S2	590	A
50	S2	591	U
50	S2	592	C
50	S2	596	U
50	S2	597	G
50	S2	606	G
50	S2	614	C
50	S2	617	G
50	S2	623	G
50	S2	628	A
50	S2	629	A
50	S2	631	U
50	S2	643	A
50	S2	644	G
50	S2	659	G
50	S2	660	C
50	S2	664	A
50	S2	668	A
50	S2	669	A
50	S2	671	A
50	S2	672	A
50	S2	673	G
50	S2	679	A
50	S2	683	G
50	S2	687	C
50	S2	688	U
50	S2	689	U
50	S2	692	G
50	S2	693	A
50	S2	695	C
50	S2	696	G
50	S2	697	G
50	S2	698	G
50	S2	732	U
50	S2	733	C
50	S2	736	C
50	S2	738	C
50	S2	748	C
50	S2	749	U
50	S2	751	G

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Mol	Chain	Res	Type
50	S2	752	G
50	S2	753	C
50	S2	788	G
50	S2	789	G
50	S2	791	C
50	S2	792	C
50	S2	794	A
50	S2	797	C
50	S2	798	G
50	S2	799	U
50	S2	810	A
50	S2	821	G
50	S2	822	U
50	S2	823	U
50	S2	824	C
50	S2	830	A
50	S2	834	C
50	S2	835	C
50	S2	842	C
50	S2	847	A
50	S2	851	C
50	S2	869	A
50	S2	870	A
50	S2	872	A
50	S2	874	G
50	S2	877	C
50	S2	880	G
50	S2	882	U
50	S2	885	U
50	S2	886	A
50	S2	887	U
50	S2	888	U
50	S2	889	U
50	S2	891	G
50	S2	892	U
50	S2	896	U
50	S2	898	U
50	S2	899	U
50	S2	900	C
50	S2	901	G
50	S2	903	A
50	S2	904	A

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Mol	Chain	Res	Type
50	S2	905	C
50	S2	907	G
50	S2	913	A
50	S2	914	U
50	S2	919	A
50	S2	920	A
50	S2	922	A
50	S2	930	C
50	S2	933	G
50	S2	934	G
50	S2	939	U
50	S2	940	U
50	S2	948	C
50	S2	950	C
50	S2	954	U
50	S2	963	A
50	S2	966	U
50	S2	970	G
50	S2	971	G
50	S2	972	A
50	S2	989	C
50	S2	990	A
50	S2	992	A
50	S2	997	A
50	S2	999	G
50	S2	1001	A
50	S2	1002	U
50	S2	1008	A
50	S2	1017	U
50	S2	1018	U
50	S2	1023	A
50	S2	1027	A
50	S2	1033	G
50	S2	1044	G
50	S2	1045	U
50	S2	1047	C
50	S2	1061	U
50	S2	1062	A
50	S2	1081	U
50	S2	1083	A
50	S2	1085	C
50	S2	1088	U

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Mol	Chain	Res	Type
50	S2	1109	C
50	S2	1114	U
50	S2	1115	U
50	S2	1116	C
50	S2	1118	C
50	S2	1119	A
50	S2	1123	C
50	S2	1133	A
50	S2	1138	C
50	S2	1139	C
50	S2	1148	A
50	S2	1153	C
50	S2	1154	U
50	S2	1195	A
50	S2	1200	A
50	S2	1207	G
50	S2	1208	A
50	S2	1215	C
50	S2	1216	C
50	S2	1217	A
50	S2	1224	G
50	S2	1227	G
50	S2	1240	A
50	S2	1242	U
50	S2	1243	U
50	S2	1251	A
50	S2	1253	A
50	S2	1256	G
50	S2	1257	G
50	S2	1259	A
50	S2	1263	U
50	S2	1264	C
50	S2	1265	A
50	S2	1274	G
50	S2	1275	G
50	S2	1276	A
50	S2	1283	C
50	S2	1286	G
50	S2	1290	G
50	S2	1294	G
50	S2	1295	A
50	S2	1298	G

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Mol	Chain	Res	Type
50	S2	1301	A
50	S2	1302	G
50	S2	1303	C
50	S2	1304	U
50	S2	1308	U
50	S2	1309	C
50	S2	1312	G
50	S2	1313	A
50	S2	1315	U
50	S2	1320	G
50	S2	1322	G
50	S2	1327	G
50	S2	1342	U
50	S2	1348	G
50	S2	1364	U
50	S2	1371	U
50	S2	1372	U
50	S2	1373	C
50	S2	1376	A
50	S2	1378	A
50	S2	1382	A
50	S2	1401	A
50	S2	1402	A
50	S2	1408	U
50	S2	1412	C
50	S2	1413	G
50	S2	1414	A
50	S2	1415	C
50	S2	1419	C
50	S2	1420	G
50	S2	1421	A
50	S2	1422	G
50	S2	1423	C
50	S2	1424	G
50	S2	1428	G
50	S2	1429	G
50	S2	1433	C
50	S2	1435	C
50	S2	1436	C
50	S2	1437	C
50	S2	1438	A
50	S2	1447	G

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Mol	Chain	Res	Type
50	S2	1449	G
50	S2	1454	A
50	S2	1463	U
50	S2	1474	A
50	S2	1476	A
50	S2	1486	A
50	S2	1489	A
50	S2	1490	G
50	S2	1495	G
50	S2	1497	G
50	S2	1498	A
50	S2	1504	U
50	S2	1505	U
50	S2	1507	G
50	S2	1508	A
50	S2	1509	U
50	S2	1518	C
50	S2	1520	G
50	S2	1521	C
50	S2	1522	A
50	S2	1533	A
50	S2	1534	C
50	S2	1535	U
50	S2	1536	G
50	S2	1537	A
50	S2	1543	U
50	S2	1552	G
50	S2	1553	C
50	S2	1556	A
50	S2	1569	A
50	S2	1570	G
50	S2	1573	G
50	S2	1574	C
50	S2	1575	G
50	S2	1580	A
50	S2	1585	U
50	S2	1586	U
50	S2	1587	G
50	S2	1588	A
50	S2	1599	U
50	S2	1601	A
50	S2	1606	G

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Mol	Chain	Res	Type
50	S2	1618	C
50	S2	1621	U
50	S2	1623	A
50	S2	1630	A
50	S2	1634	A
50	S2	1637	A
50	S2	1638	G
50	S2	1639	G
50	S2	1640	A
50	S2	1646	C
50	S2	1648	G
50	S2	1654	G
50	S2	1663	A
50	S2	1665	G
50	S2	1668	U
50	S2	1671	G
50	S2	1675	A
50	S2	1680	G
50	S2	1683	C
50	S2	1698	C
50	S2	1699	A
50	S2	1712	A
50	S2	1715	A
50	S2	1719	A
50	S2	1721	U
50	S2	1722	G
50	S2	1729	U
50	S2	1742	C
50	S2	1743	G
50	S2	1744	G
50	S2	1745	A
50	S2	1748	G
50	S2	1752	C
50	S2	1753	C
50	S2	1754	G
50	S2	1756	C
50	S2	1757	G
50	S2	1758	G
50	S2	1761	U
50	S2	1772	C
50	S2	1773	C
50	S2	1774	C

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Mol	Chain	Res	Type
50	S2	1776	G
50	S2	1777	G
50	S2	1780	G
50	S2	1782	G
50	S2	1783	C
50	S2	1784	G
50	S2	1785	C
50	S2	1786	U
50	S2	1788	A
50	S2	1798	C
50	S2	1809	A
50	S2	1810	U
50	S2	1812	U
50	S2	1813	A
50	S2	1822	A
50	S2	1823	A
50	S2	1824	A
50	S2	1826	G
50	S2	1829	G
50	S2	1831	A
50	S2	1832	A
50	S2	1835	A
50	S2	1838	U
50	S2	1849	G
50	S2	1851	A
50	S2	1852	C
50	S2	1861	G
50	S2	1862	G
50	S2	1863	A
50	S2	1865	C

All (31) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
3	L5	185	C
3	L5	406	C
3	L5	493	G
3	L5	504	G
3	L5	914	U
3	L5	935	A
3	L5	1082	C
3	L5	1240	G

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Mol	Chain	Res	Type
3	L5	1445	U
3	L5	1633	G
3	L5	1977	C
3	L5	2033	A
3	L5	2084	C
3	L5	2416	G
3	L5	2485	U
3	L5	2675	G
3	L5	2760	G
3	L5	2786	C
3	L5	3614	G
3	L5	3673	C
3	L5	4600	G
3	L5	4699	U
3	L5	4913	G
3	L5	5061	A
50	S2	75	G
50	S2	112	U
50	S2	291	G
50	S2	420	G
50	S2	563	G
50	S2	688	U
50	S2	1434	C

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 231 ligands modelled in this entry, 231 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

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

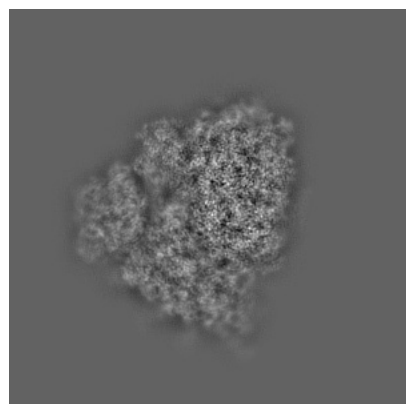
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-37991. These allow visual inspection of the internal detail of the map and identification of artifacts.

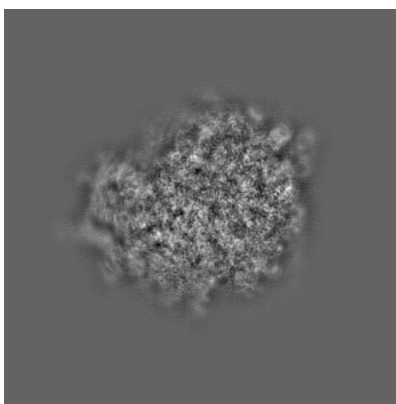
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

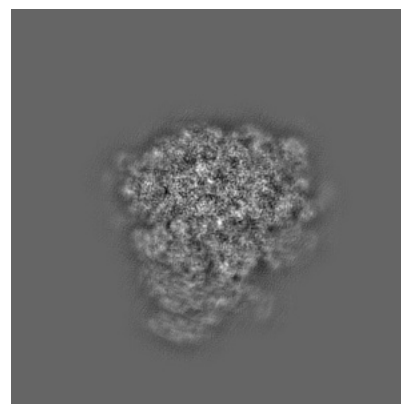
6.1.1 Primary map



X

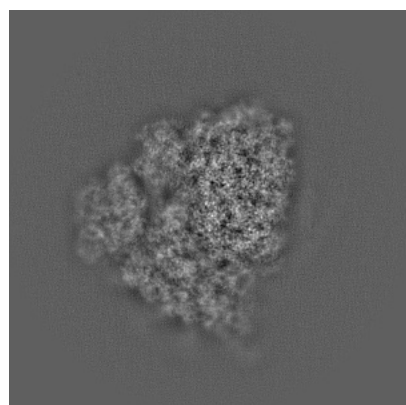


Y

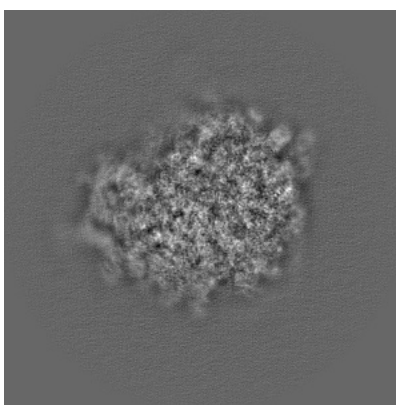


Z

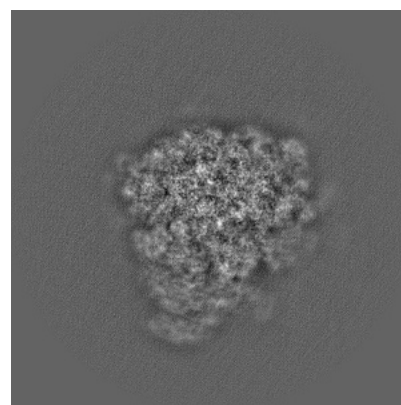
6.1.2 Raw map



X



Y

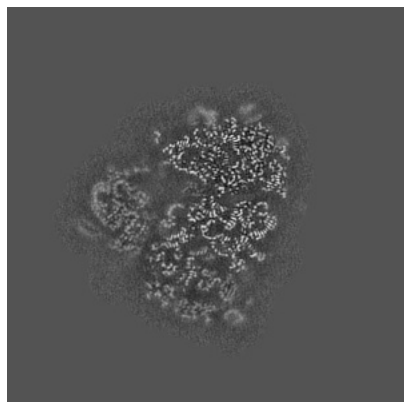


Z

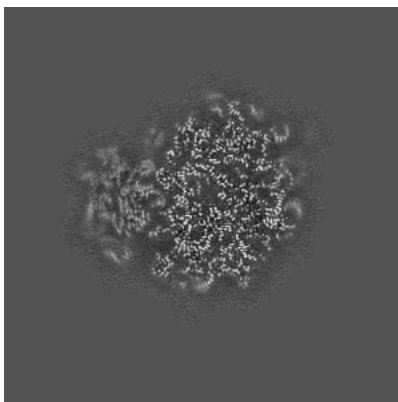
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

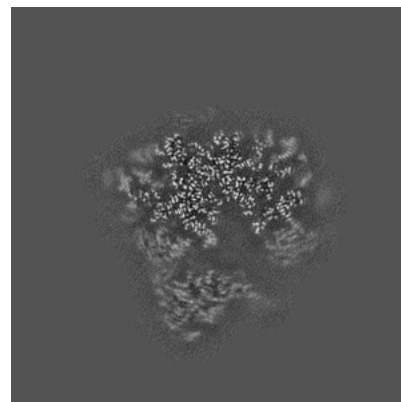
6.2.1 Primary map



X Index: 224

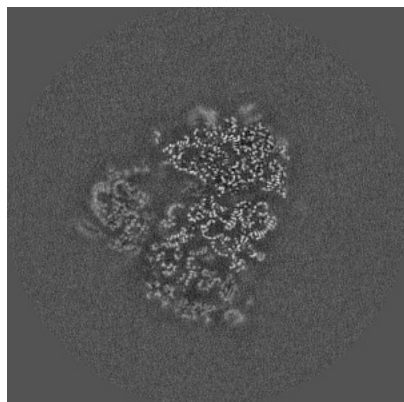


Y Index: 224

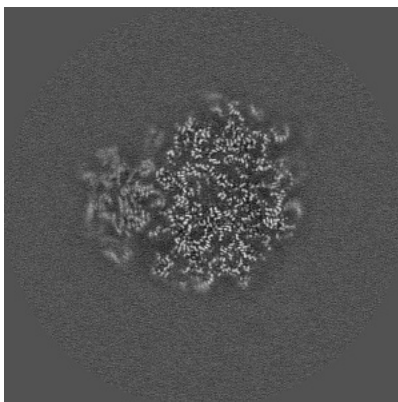


Z Index: 224

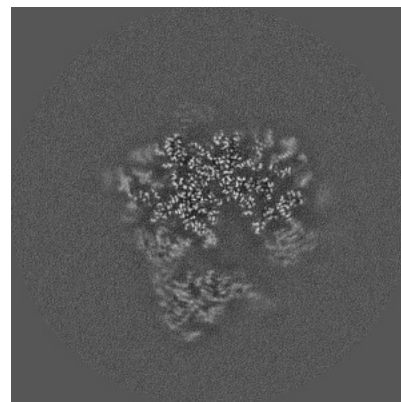
6.2.2 Raw map



X Index: 224



Y Index: 224

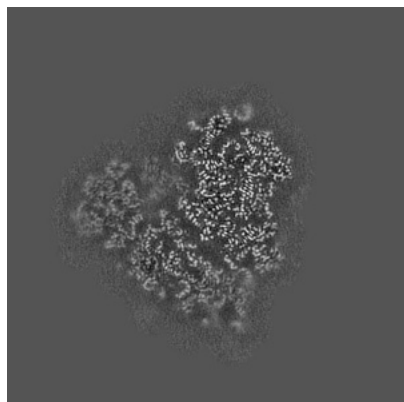


Z Index: 224

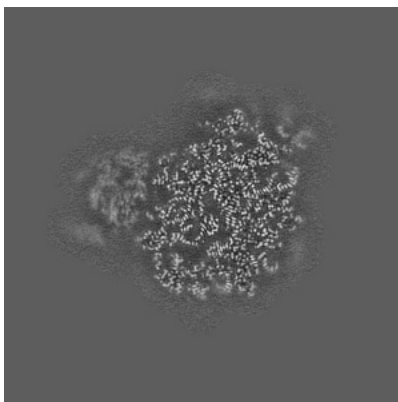
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

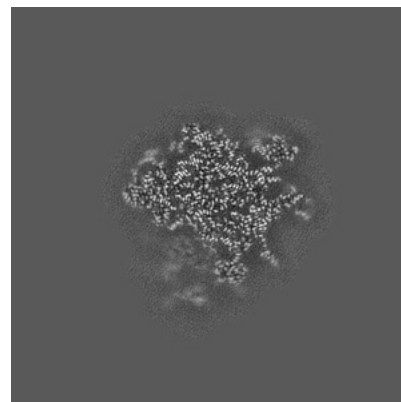
6.3.1 Primary map



X Index: 210

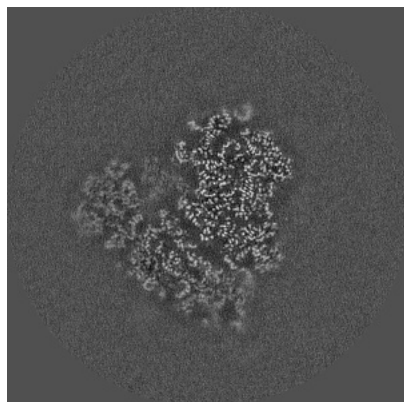


Y Index: 243

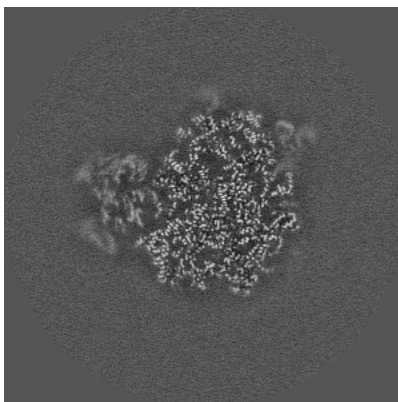


Z Index: 272

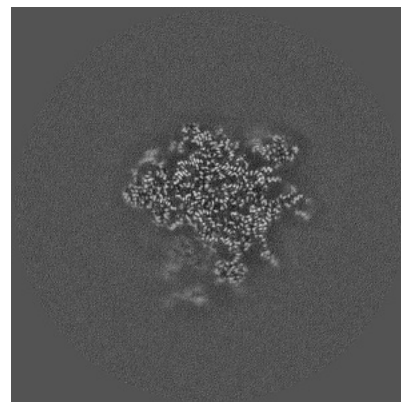
6.3.2 Raw map



X Index: 210



Y Index: 236

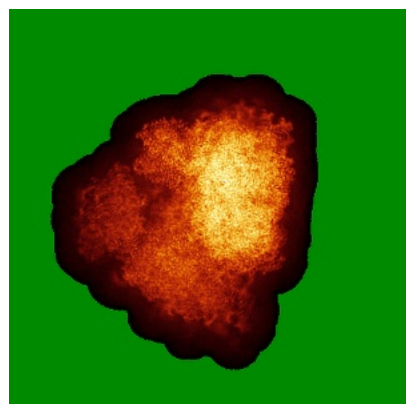


Z Index: 272

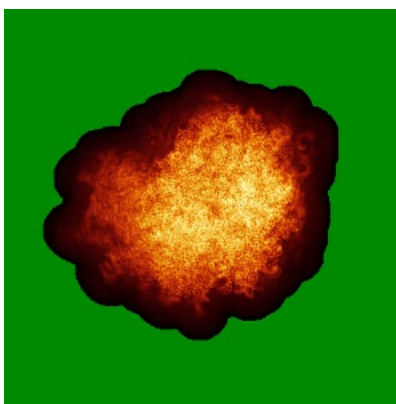
The images above show the largest variance slices of the map in three orthogonal directions.

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

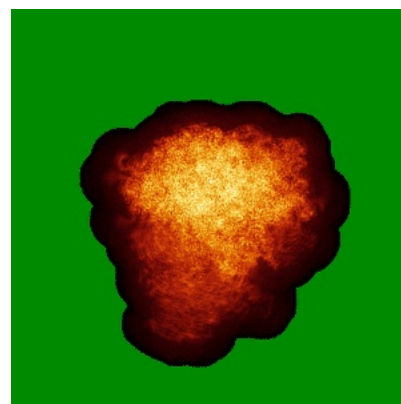
6.4.1 Primary map



X

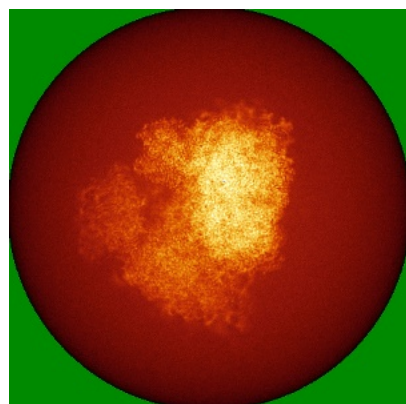


Y

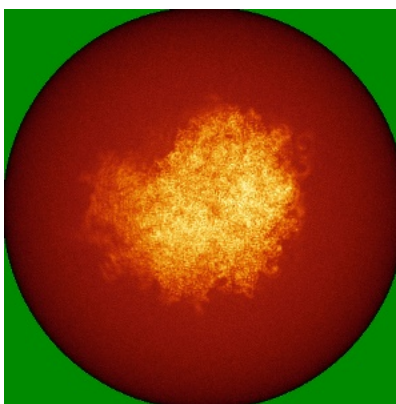


Z

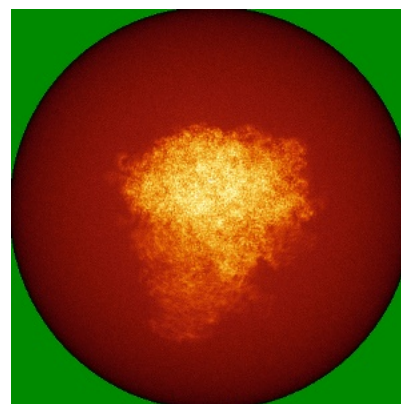
6.4.2 Raw map



X



Y



Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



X



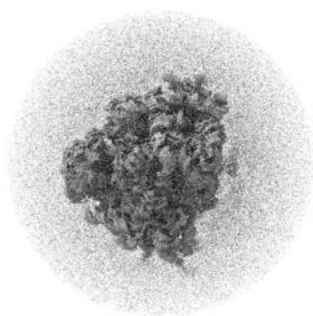
Y



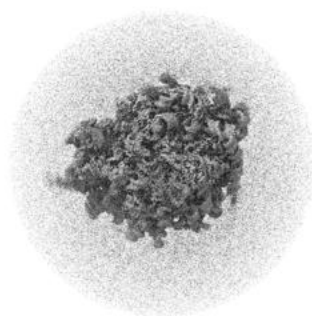
Z

The images above show the 3D surface view of the map at the recommended contour level 0.005. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

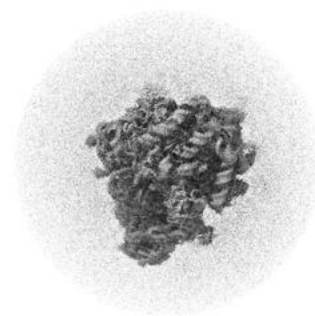
6.5.2 Raw map



X



Y



Z

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

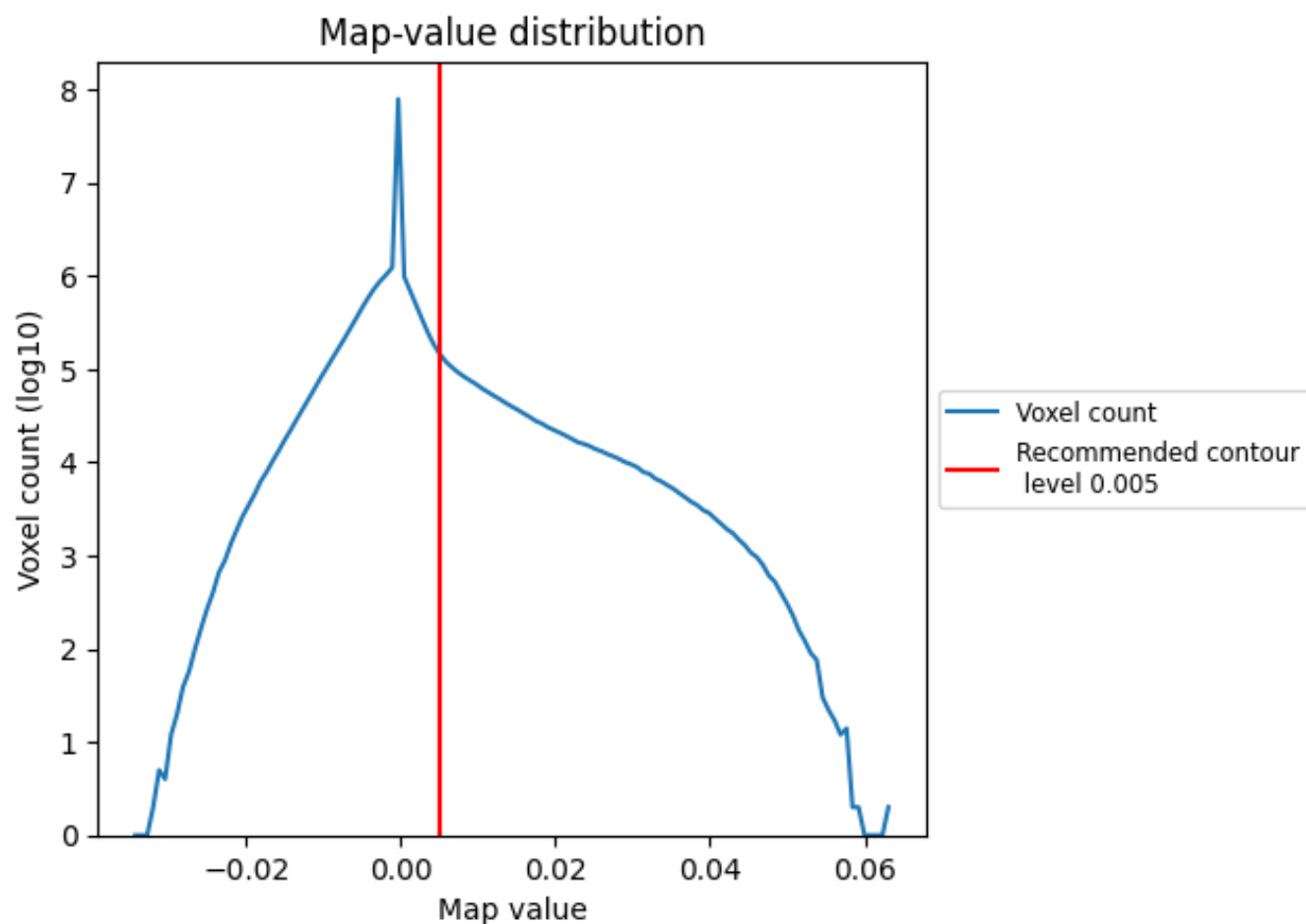
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

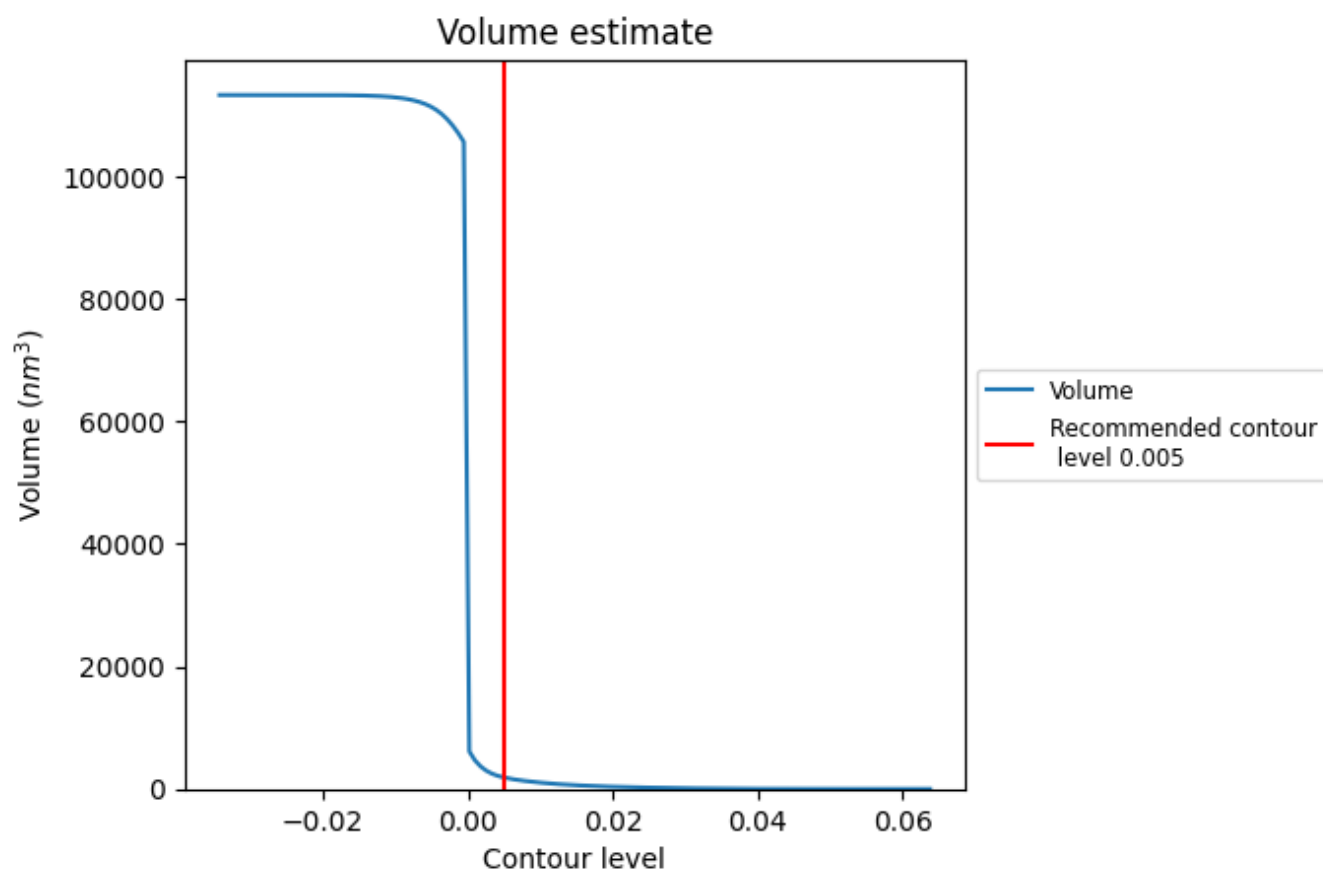
This section contains the results of statistical analysis of the map.

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.

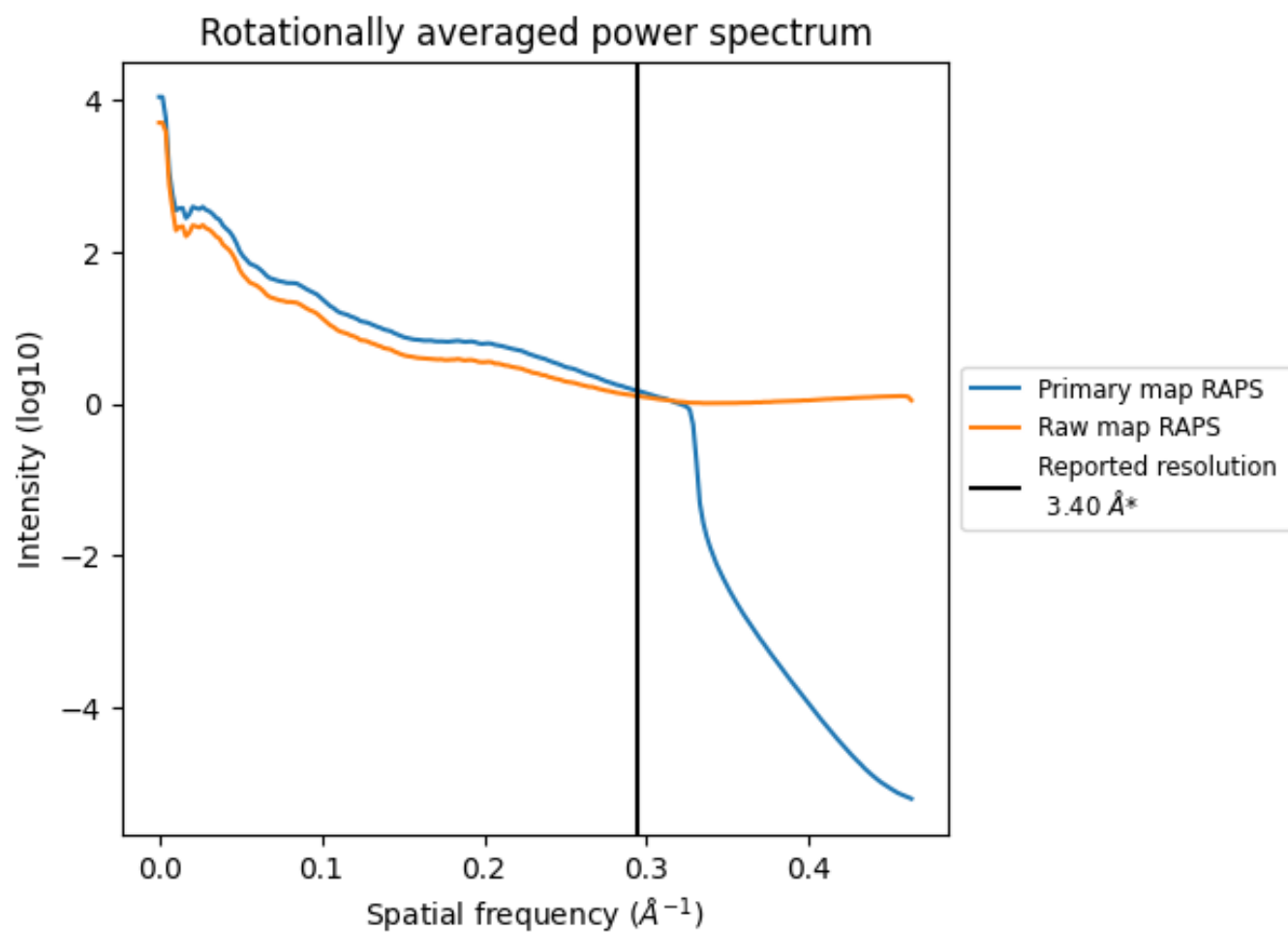
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1877 nm^3 ; this corresponds to an approximate mass of 1696 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 ⓘ

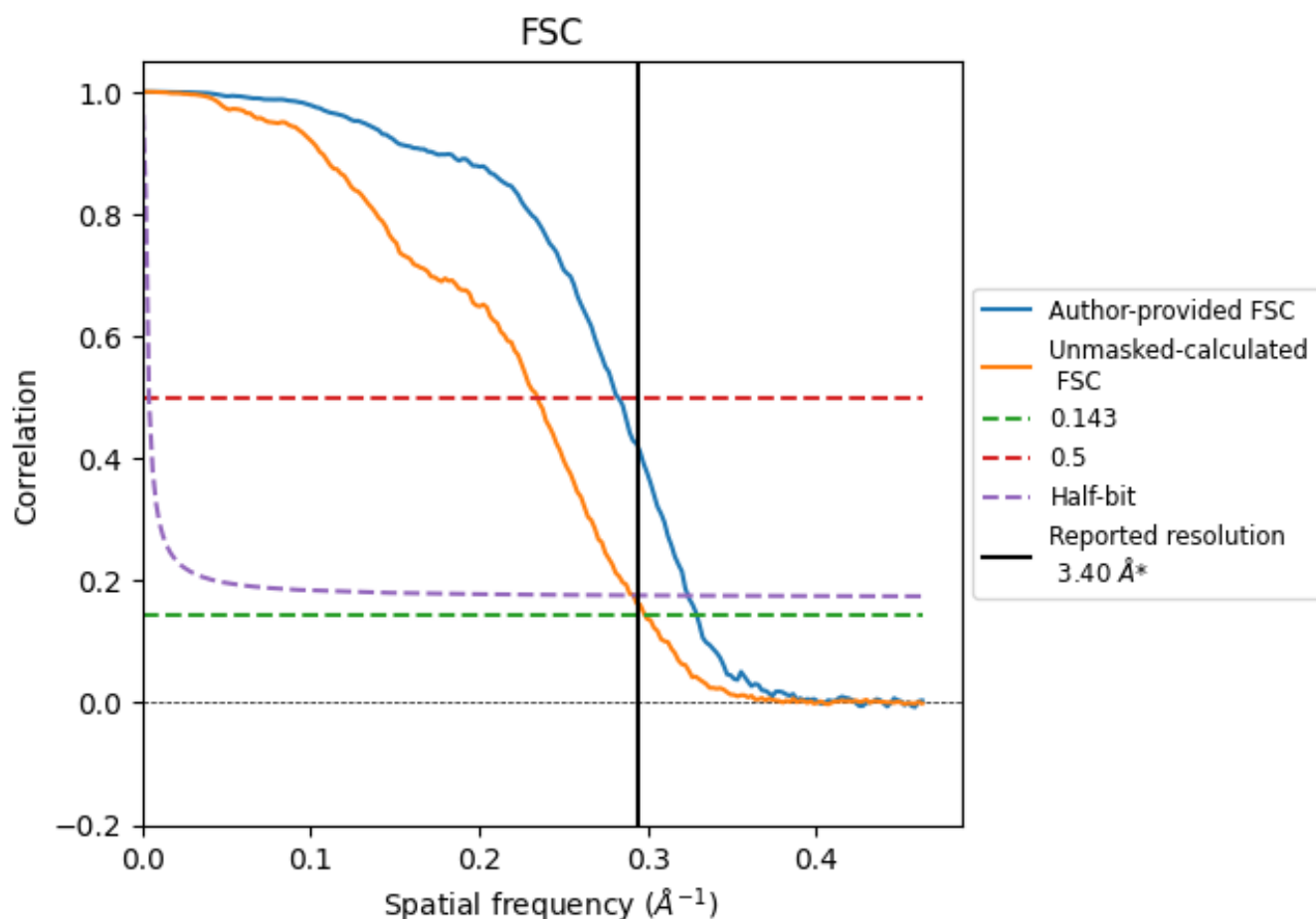


*Reported resolution corresponds to spatial frequency of $0.294 \text{\AA}^{-1}$

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 0.294 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

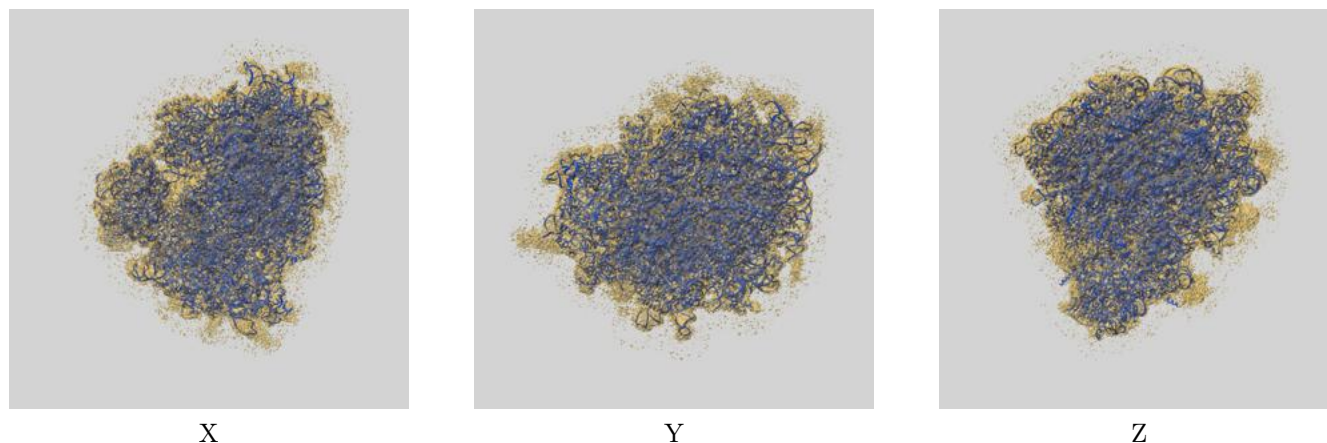
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.40	-	-
Author-provided FSC curve	3.04	3.54	3.09
Unmasked-calculated*	3.35	4.26	3.43

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from author-provided FSC intersecting FSC 0.143 CUT-OFF 3.04 differs from the reported value 3.4 by more than 10 %

9 Map-model fit [i](#)

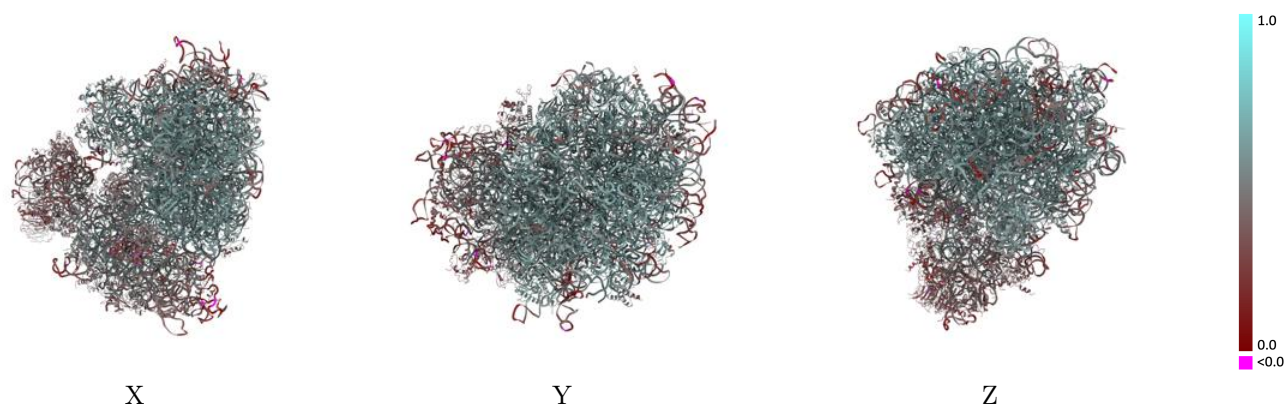
This section contains information regarding the fit between EMDB map EMD-37991 and PDB model 8Y0W. Per-residue inclusion information can be found in [section 3](#) on [page 20](#).

9.1 Map-model overlay [i](#)



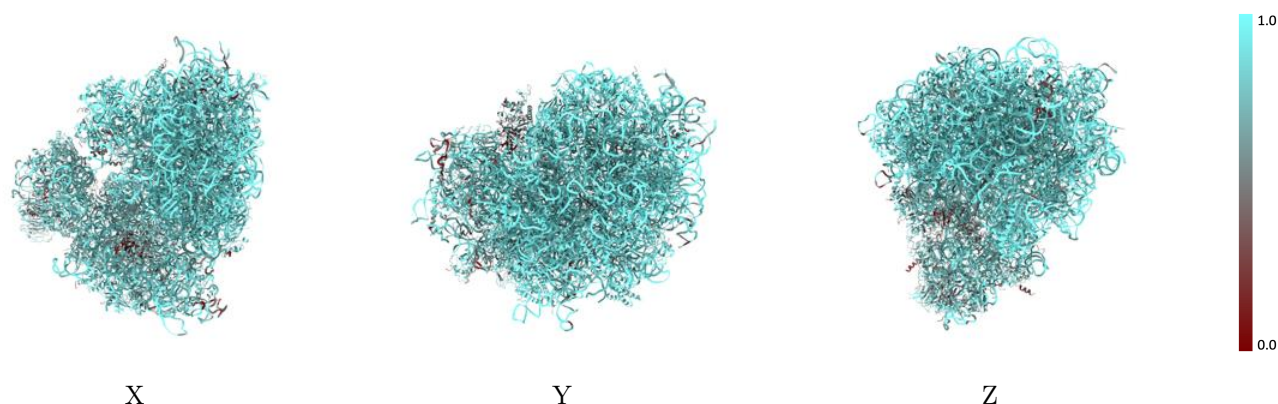
The images above show the 3D surface view of the map at the recommended contour level 0.005 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



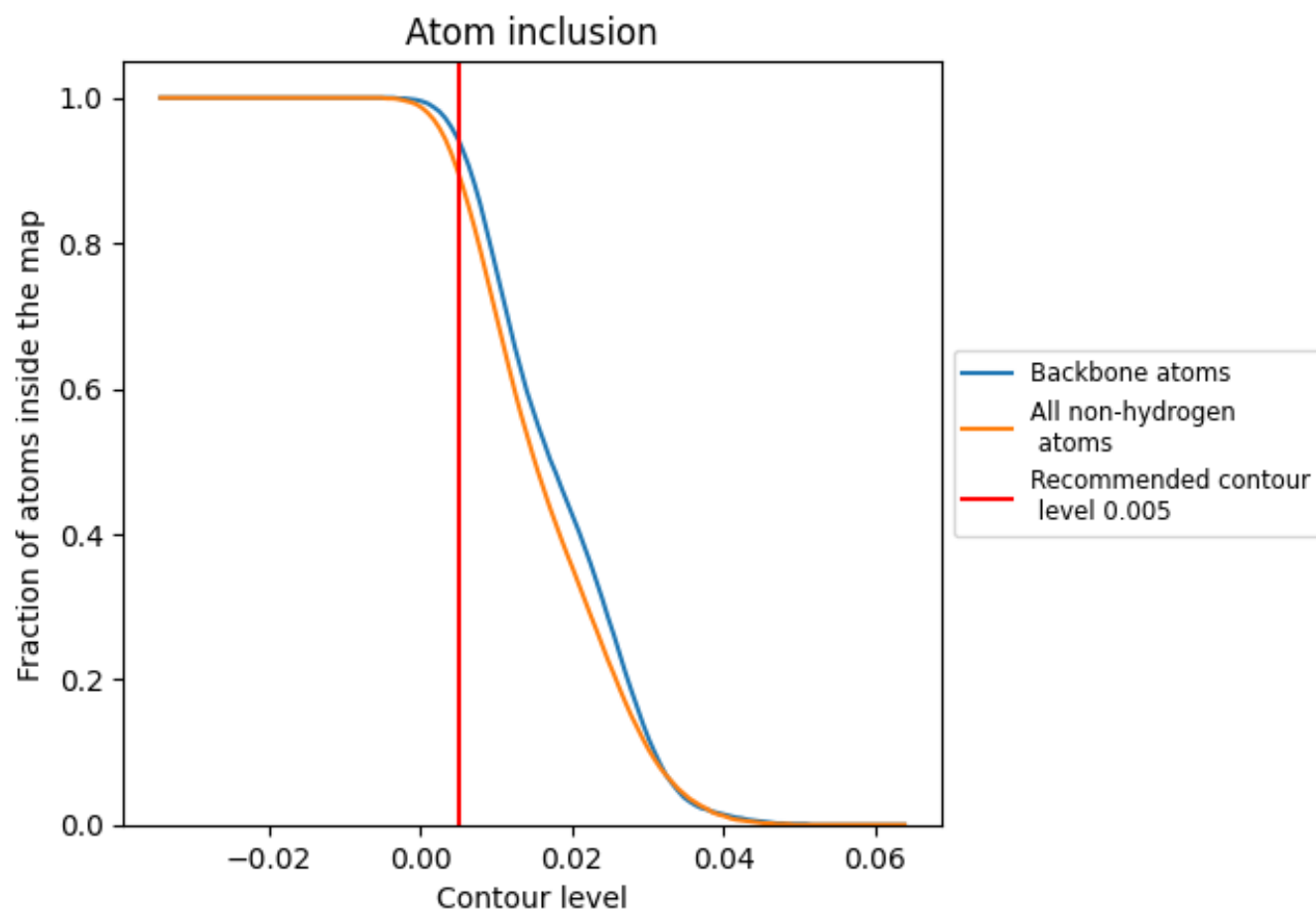
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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, 94% of all backbone atoms, 90% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.005) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8960	 0.5050
5	 0.5500	 0.4350
CB	 0.5540	 0.3760
L5	 0.9600	 0.5390
L7	 0.9970	 0.5850
L8	 0.9770	 0.5620
LA	 0.9420	 0.6020
LB	 0.9430	 0.5830
LC	 0.9500	 0.5860
LD	 0.9480	 0.5590
LE	 0.8960	 0.5330
LF	 0.9250	 0.5840
LG	 0.9260	 0.5470
LH	 0.9410	 0.5760
LI	 0.9420	 0.5760
LJ	 0.8700	 0.4970
LL	 0.9310	 0.5630
LM	 0.9330	 0.5610
LN	 0.9470	 0.6080
LO	 0.9440	 0.5870
LP	 0.9520	 0.5930
LQ	 0.9530	 0.6060
LR	 0.8860	 0.5330
LS	 0.9570	 0.5980
LT	 0.9300	 0.5730
LU	 0.9190	 0.5030
LV	 0.9460	 0.5920
LW	 0.9330	 0.5930
LX	 0.9270	 0.5840
LY	 0.9370	 0.5790
LZ	 0.9380	 0.5720
La	 0.9590	 0.6050
Lb	 0.8230	 0.5000
Lc	 0.9170	 0.5390
Ld	 0.9450	 0.5680



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Chain	Atom inclusion	Q-score
Le	 0.9430	 0.5970
Lf	 0.9540	 0.6040
Lg	 0.9100	 0.5710
Lh	 0.9290	 0.5710
Li	 0.9290	 0.5610
Lj	 0.9570	 0.6040
Lk	 0.9080	 0.5390
Ll	 0.9170	 0.5850
Lm	 0.9110	 0.5780
Ln	 0.8610	 0.5680
Lo	 0.9440	 0.5850
Lp	 0.9380	 0.5850
Lr	 0.9540	 0.5840
Lz	 0.4630	 0.3770
S	 0.5140	 0.3990
S2	 0.9190	 0.4440
SA	 0.8320	 0.4690
SB	 0.7360	 0.3740
SC	 0.8830	 0.5310
SD	 0.7550	 0.4260
SE	 0.7970	 0.4830
SF	 0.6470	 0.3310
SG	 0.7420	 0.3760
SH	 0.7820	 0.4040
SI	 0.7580	 0.4340
SJ	 0.8260	 0.4720
SK	 0.6980	 0.3550
SL	 0.7950	 0.4910
SN	 0.7880	 0.4600
SO	 0.7170	 0.4020
SP	 0.7410	 0.3600
SQ	 0.6300	 0.3740
SR	 0.7340	 0.4060
SS	 0.7420	 0.3670
ST	 0.6750	 0.3810
SU	 0.6910	 0.3870
SV	 0.8810	 0.5010
SW	 0.8560	 0.5460
SX	 0.8530	 0.5360
SY	 0.7510	 0.3880
SZ	 0.6810	 0.3000
Sa	 0.7700	 0.4460

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Chain	Atom inclusion	Q-score
Sb	 0.7710	 0.3780
Sc	 0.6960	 0.3230
Sd	 0.7000	 0.4460
Se	 0.7050	 0.4390
Sg	 0.7130	 0.3450